E-machine

E191W
E191HQ
E181H
E161HQ

Service Guide

Service Guide Version and Revision

Version	Release Date	Revision History	Customer Model	TPV model
A00	Jul.-25-2008	Initial Release	E191W	T9RMNFH8X7GYAN
			E191HQ &E181H	T9RMNFH8X7GKAN
			E161HQ	T6RMNFH8X7GYAN

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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 Emachine'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 Emachine -AUTHORIZED SERVICE PROVIDERS, your Emachine 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 Emachine office to order FRU parts for repair and service of customer machines.

Warning: (For FCC Certified Models)

This device 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 or television reception.However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and 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:

■ Reorient or relocate the receiving antenna

■ Increase the separation between the equipment and receiver

■ Connect the equipment to an outlet on a different circuit from that to which the receiver is connected

■ Consult the dealer or an experienced radio/TV technician for help.

Compliance Accessories: The accessories associated with this equipment are: shielded video cable. These accessories are required to

be used in order to ensure compliance with FCC rules.

Care during use

■ Do not walk on the power cord or allow anything to rest on it.

■ Do not spill anything on the system. The best way to avoid spills is to avoid eating and drinking near your system.

■ Do not expose the monitor to rain or use near water. If the monitor does get exposed to moisture, unplug it and allow it to dry for 24 hours. Call eMachines Customer Care for advice on whether the monitor is safe to turn back on.

■ When the monitor is turned off, a small amount of electrical current still flows through the monitor. To avoid electrical shock,

always unplug all power cables and modem cables from the wall outlets before cleaning the system.

■ Unplug the system from the wall outlet and refer servicing to qualified personnel if:

■ The power cord or plug is damaged.

■ Liquid has been spilled into the system.

■ The system does not operate properly when the operating instructions are followed.

■ The system was dropped or the cabinet is damaged.

■ The system performance changes.

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, uses 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

Monitor Features

Chapter 1

Introduction

Scope

This specification defines the requirements for the 19” MICROPROCESSOR based Multi-mode supported high resolution color LCD monitor. This monitor can be directly connected to general 15-pin D-sub VGA connector and 24-pin DVI 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 E191W &(E181H /E191HQ)&E161Q

Panel	M190PW01 (E191W)
	M185B1-L01 T(E181H /E191HQ)
	M156B1-L01(E161HQ)
Signal Interface	D-Sub 15-pin
Sync Type	Separate / Compatible
Color Temp User Adjust	Support
DDC	DDC2B
Headphone Jack	Yes
Microphone Jack	Yes
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 (<1 cd/m2)
Viewing distance	:	40 cm for LCD performance, 20 cm for LCD failures
Warm up time		
All specifications	:	＞30 minutes
Fully functional	:	5 seconds
Measuring equipment	:	Chroma 7120 signal generator or equivalent, directly
		Connected to the monitor under test.
		Minolta CA100 photometer, or equivalent
Control settings		
User brightness control	:	Set to Factory preset value (cut off raster)
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)
Power input	:	230V± 5％
Ambient temperature	:	20±5℃
Analog input mode	:	1280x1024, 60 Hz, 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

Panel size and type	E161HQ: 15.6 inch (diagonal) viewable TFT E191HQ/E181H: 18.5 inch (diagonal) viewable TFT E191W: 19.0 inch (diagonal) viewable TFT
Pixel resolution	E161HQ and E191HQ/E181H: 1366 × 768 (native) E191W: 1440 × 900 (native)
Pixel pitch	E161HQ: 0.0099 × 0.0099 inches (0.252 mm × 0.252 mm) E191HQ/E181H: 0.0118 × 0.0118 inches (0.3 mm × 0.3 mm) E191W: 0.0112 × 0.0112 inches (0.2835 mm × 0.2835 mm)
Aspect ratio	E161HQ and E191HQ/E181H: 16:9 E191W: 16:10
Brightness and contrast ratio	E161HQ: 250 cd/m^2, 500:1 E191HQ/E181H: 300 cd/m^2, 10000:1 Max E191W: 300 cd/m^2, 10000:1 Max
Viewing angles	E161HQ: 90° horizontal, 65° vertical E191HQ/E181H: 170° horizontal, 160° vertical E191W: 160° horizontal, 160° vertical
Response time	E161HQ: 8 ms E191HQ/E181H: 5 ms E191W: 5 ms
Lamp type/life	40,000 hours
Colors	16.7 million
Audio output	1W (2)
OSD languages	▪ EMEA: English, French, German, Spanish, Italian, Dutch, Finnish, Russian ▪ non-EMEA: Japanese, Traditional Chinese, Simplified Chinese, English, French, German, Spanish, Italian ▪ Russia: Russian
Connections and inputs	Analog (VGA): 15-pin d-sub VGA AC power
Included cables	15-pin d-sub analog VGA AC power
Power consumption	E161HQ: Normal: <25 W, Off (power-save): <2 W E191HQ/E181H and E191W: Normal: <36 W, Sleep <2 W, Off (power-save): <1 W
Power input	100-240 VAC, 50/60 Hz
Power management	Energy Star®
Certifications	CB, CE, UL/cUL, FCC Class B, BSMI, VCCI, CCC, TUV/GS, TCO99, C-Tick, NOM
Wall mount bracket	E161HQ: VESA 2.95 × 2.95 inches (75 × 75 mm) E191HQ/E181H and E191W: VESA 3.937 × 3.937 inches (100 × 100 mm)
Dimensions with basic stand	E161HQ: 14.78 × 12.27 × 6.28 inches (37.54 × 31.17 × 15.96 cm) E191HQ/E181H: 17.45 × 13.26 × 7.09 inches (44.32 × 33.67 × 18.01 cm) E191W: 17.33 × 14.22 × 7.10 inches (44.02 × 36.11 × 18.04 cm)

LCD Panel Specification

1.M19PW01(E191W)

This specification applies to the 19 inch-wide clor TFT-LCD Module M19PW01.

The display supports the WXGA+（1440（H）X 900(V)screen format and 16.7 colors。All input signals are 2 Channel LVDS interface comlatible。

This module does not contain an inverter card for backlight

LCD Panel Model

Items	Unit	Specifications
Active Area	[mm]	408.24 (H) x 255.15(V)
Pixels H x V		1440x3(RGB) x 900
Pixel Pitch	[mm]	0.2835x 0.2835
Pixel Arrangement		R.G.B. Vertical Stripe
Display Mode		TN Mode,Normally White
White Luminance	[cd/m^2]	300 cd/m2 @ 6.5mA (Typ)
Contrast Ratio		800
Optical ResponseTime	[msec]	5 (Typ, on/off)
Nominal Input Voltage VDD	[Volt]	+5.0 (Typ)
Power Consumption (VDD line + CCFL line)	[Watt]	24.04(Typ)
Weight	[Grams]	2500 (Typ)
Physical Size (H x V x D)	[mm]	428.0(W) x 278.0(H) x 18.5(D) (Typ)
Electrical Interface		Dual Channel LVDS
Surface Treatment		Anti-glare type, Hardness 3H
Support Colors		16.7M colors (RGB 6-bits+HiFRC)
RoHS Compliance		RoHS Compliance

Optical Specifications

Item	Unit	Conditions	Min.	Typ.	Max.	Note
Viewing Angle	[degree]	Horizontal (Right) CR = 10 (Left)	75 75	80 80	-	1
		Vertical (Up) CR = 10 (Down)	75 75	80 80	-	
Luminance Uniformity	[%]	9 Points	75	80	-	2, 3
Optical Response Time	[msec]	Rising	-	3.6	5.7	4, 6
		Falling	-	1.4	2.3	
		Rising + Falling	-	5	8	
Color / Chromaticity Coordinates (CIE 1931)		Red x Red y	0.620 0.310	0.650 0.340	0.680 0.370	4
		Green x Green y	0.260 0.580	0.290 0.610	0.320 0.640	
		Blue x Blue y	0.120 0.040	0.150 0.070	0.180 0.100	
		White x White y	0.283 0.299	0.313 0.329	0.343 0.359	
White Luminance (At CCFL= 6.5mA)	[cd/m^2]		250	300	-	4
Contrast Ratio			600	800	-	4
Cross Talk (At 75Hz)	[%]		-	-	1.5	5
Flicker	[dB]		-	-	-20	7

2.M185B1-L01（E191HQ/E181H）

M185B1-L01 is a 18.5” TFT Liquid Crystal Display module with 4 CCFL Backlight unit and 30pin1ch-LVDS interface. This module supports 1366 x 768 WXGA mode and can display up to 16.7M colors.The inverter module for Backlight is not built in。

LCD Panel Model

Item	Specification	Unit
Active Area	409.8 (H) × 230.4(V) (18.5” diagonal)	mm
Bezel Opening Area	413.4(H) x 234 (V)	mm
Driver Element	a-Si TFT active matrix	-
Pixel Number	1366 x R.G.B. x 768	pixel
Pixel Pitch	0.3 (H) x 0.3 (V)	mm
Pixel Arrangement	RGB vertical stripe	-
Display Colors	16.7M	color
Transmissive Mode	Normally White	-
Surface Treatment	AG type, 3H hard coating, Haze 25	-

Optical Specifications

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Color Chromaticity (CIE 1931)	Red	Rx	θ_x=0°, θ_Y =0° CS-1000T	Typ - 0.03	0.646	Typ + 0.03	-
		Ry			0.334		
	Green	Gx			0.284		
		Gy			0.602		
	Blue	Bx			0.152		
		By			0.076		
	White	Wx			0.313		
		Wy			0.329		
Center Luminance of White (Center of Screen)		L_C		230	300	-	cd/m^2
Contrast Ratio		CR		630	1000	-	-
Response Time		T_R	θ_x=0°, θ_Y =0°	-	1.5	3.5	ms
		T_F		-	3.5	6.5	
White Variation		δW	θ_x=0°, θ_Y =0° USB2000	-	1.3	1.5	-
Viewing Angle	Horizontal	θ_x+	CR • •10 USB2000	75	85	-	Deg.
		θ_x-		75	85	-	
	Vertical	θ_Y+		70	80	-	
		θ_Y-		70	80	-	

3. M156B1-L01 (E161HQ)

M156B1-L01 is a 15.6” TFT Liquid Crystal Display module with 2 CCFL Backlight unit and 30pin 1ch-LVDS interface. This module supports 1366 x 768 WXGA mode and can display up to 16.7M colors. The inverter module for Backlight is not built in.

LCD Panel Model

Item	Specification	Unit
Active Area	344.232(H) × 193.536(V) (15.6” diagonal)	mm
Bezel Opening Area	347.5(H)x196.8(V)	mm
Driver Element	a-Si TFT active matrix	-
Pixel Number	1366 x R.G.B. x 768	pixel
Pixel Pitch	0.252 (H) x 0.252 (V)	mm
Pixel Arrangement	RGB vertical stripe	-
Display Colors	16.7M	color
Transmissive Mode	Normally White	-
Surface Treatment	AG type, 3H hard coating, Haze 25	-

Optical Specifications

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Color Chromaticity (CIE 1931)	Red	Rx	θ_x=0°, θ_Y =0° CS-1000T	Typ - 0.03	0.638	Typ + 0.03	-
		Ry			0.333		
	Green	Gx			0.290		
		Gy			0.591		
	Blue	Bx			0.153		
		By			0.082		
	White	Wx		0.283	0.313	0.343	
		Wy		0.299	0.329	0.359	
Center Luminance of White (Center of Screen)		L_C		210	250	-	cd/m^2
Contrast Ratio		CR		350	500	-	-
Response Time		T_R	θ_x=0°, θ_Y =0°	-	2	4	ms
		T_F		-	6	12	
		$T_{GtG\ AVE}$		-	-		
White Variation		δW	θ_x=0°, θ_Y =0° USB2000	-	1.4	1.5	-
Viewing Angle	Horizontal	θ_x+	CR ≧ 5 USB2000	50	55	-	Deg.
		θ_x-		50	55	-	
	Vertical	θ_Y+		25	30	-	
		θ_Y-		50	55	-	
Viewing Angle	Horizontal	θ_x+	CR ≧ 10 USB2000	40	45	-	Deg.
		θ_x-		40	45	-	
	Vertical	θ_Y+		15	20	-	
		θ_Y-		40	45	-	

Supported Timing

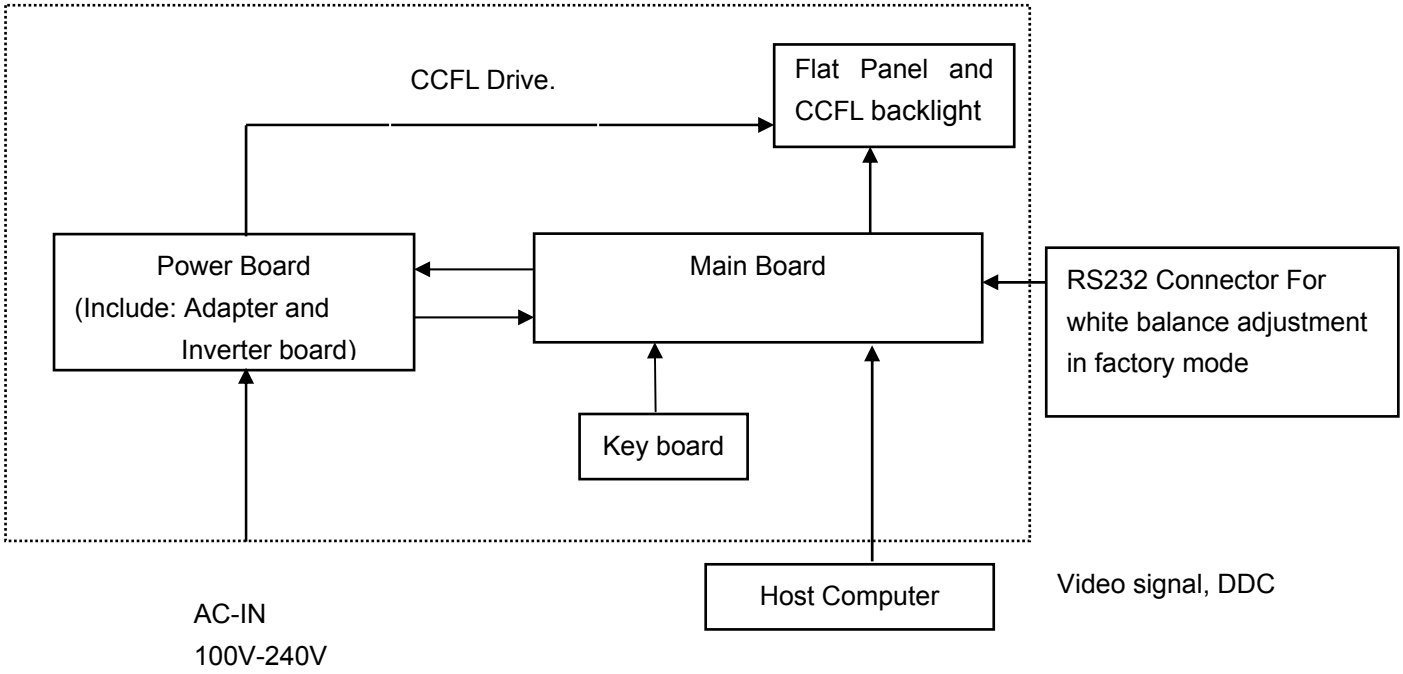
E191W			
Mode	**Mode name and resolution**	**Horizontal frequency (kHz)**	**Vertical frequency (Hz)**
1	VGA 640 × 480	31.469	59.941
2	VGA 640 × 480	37.861	72.809
3	VGA 640 × 480	37.5	75.0
4	MAC 640 × 480	35.0	66.66
5	VESA 720 × 400	31.469	70.087
6	SVGA 800 × 600	35.156	56.25
7	SVGA 800 × 600	37.879	60.317
8	SVGA 800 × 600	48.077	72.188
9	SVGA 800 × 600	46.875	75.0
10	MAC 832 × 624	49.722	74.55
11	XGA 1024 × 768	48.363	60.004
12	XGA 1024 × 768	56.476	70.069
13	XGA 1024 × 768	60.023	75.029
14	MAC 1152 × 870	68.7	75.0
15	VESA 1152 × 864	67.5	75.0
16	VESA 1280 × 960	60.0	60.0
17	SXGA 1280 × 1024	63.981	60.02
18	SXGA 1280 × 1024	79.976	75.025
19	VESA 1280 × 720	44.955	59.94
20	VESA 1280 × 768	47.776	59.87
21	VESA 1280 × 768	60.289	74.893
22	WXGA 1280 × 800	49.702	59.81
23	WXGA 1360 × 768	47.712	60.015
24	WXGA+ 1440 × 900	55.935	59.887
25	WXGA+ 1440 × 900	70.635	75.0

E161HQ/E191HQ/E181H			
Mode	**Mode name and resolution**	**Horizontal frequency (kHz)**	**Vertical frequency (Hz)**
1	VGA 640 × 480	31.469	59.941
2	VGA 640 × 480	37.861	72.809
3	VGA 640 × 480	37.5	75.0
4	MAC 640 × 480	35.0	66.66
5	VESA 720 × 400	31.469	70.087
6	SVGA 800 × 600	35.156	56.25
7	SVGA 800 × 600	37.879	60.317
8	SVGA 800 × 600	48.077	72.188
9	SVGA 800 × 600	46.875	75.0
10	MAC 832 × 624	49.722	74.55
11	XGA 1024 × 768	48.363	60.004
12	XGA 1024 × 768	56.476	70.069
13	XGA 1024 × 768	60.023	75.029
14	MAC 1152 × 870	68.7	75.0
15	VESA 1152 × 864	67.5	75.0
16	VESA 1280 × 960	60.0	60.0
17	SXGA 1280 × 1024	63.981	60.02
18	SXGA 1280 × 1024	79.976	75.025
19	VESA 1280 × 720	44.955	59.94
20	VESA 1280 × 768	47.776	59.87
21	VESA 1280 × 768	60.289	74.893
22	WXGA 1280 × 800	49.702	59.81
23	WXGA 1360 × 768	47.712	60.015

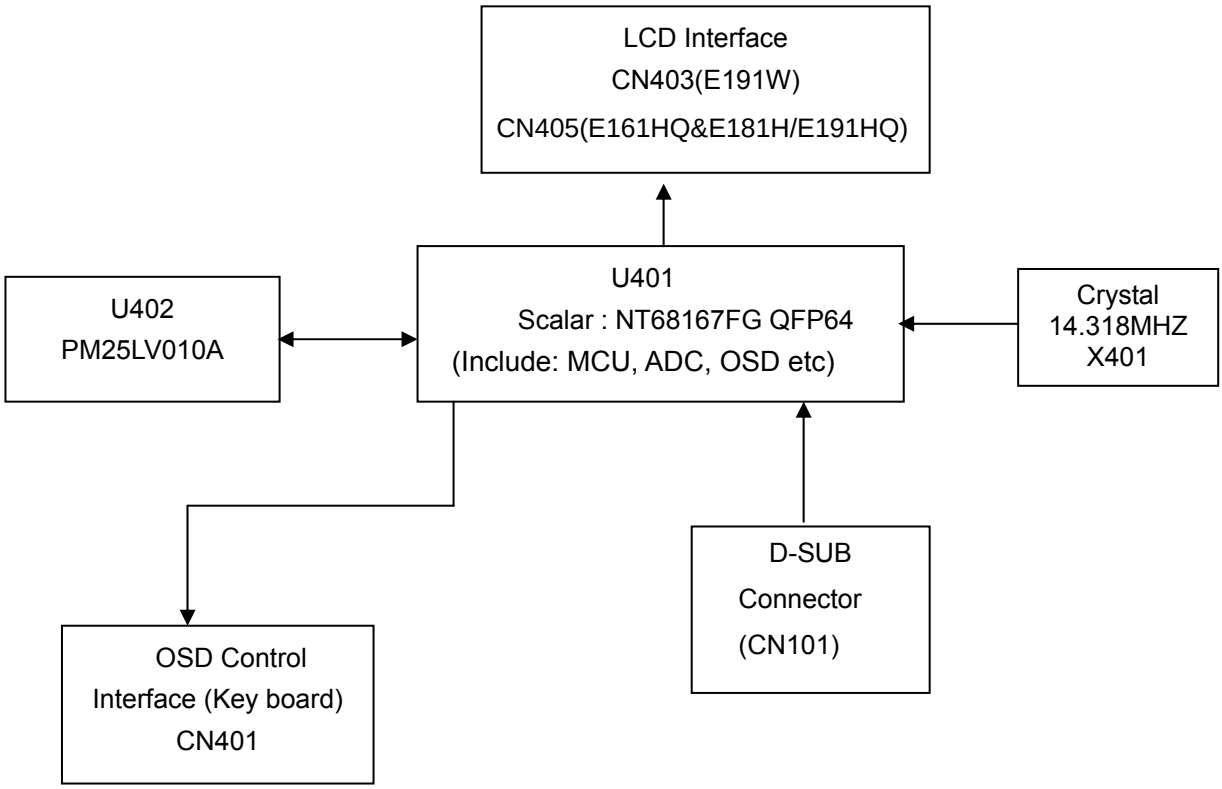
Monitor Block Diagram

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.

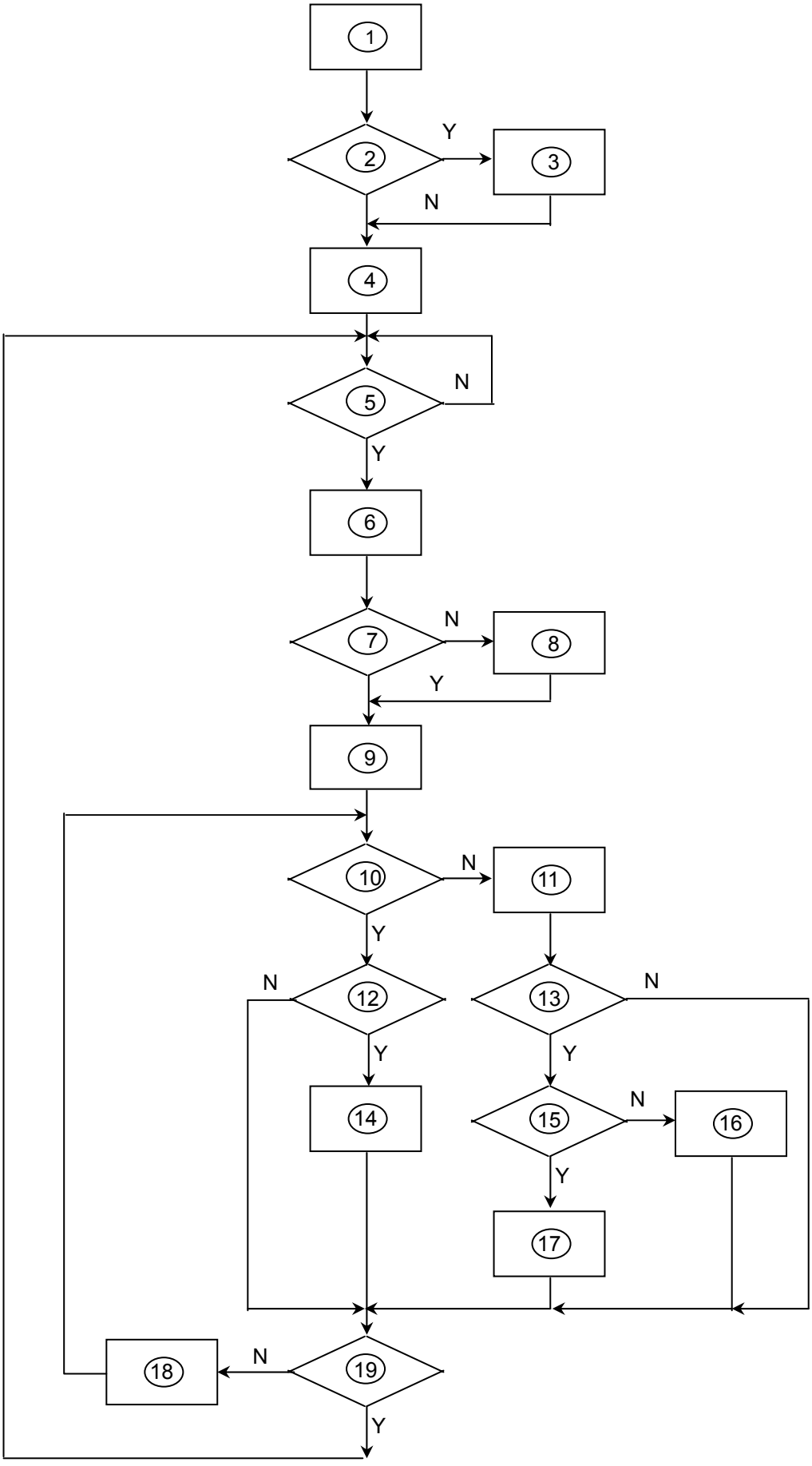
The Inverter board will drive the backlight of panel.



Main Board Diagram



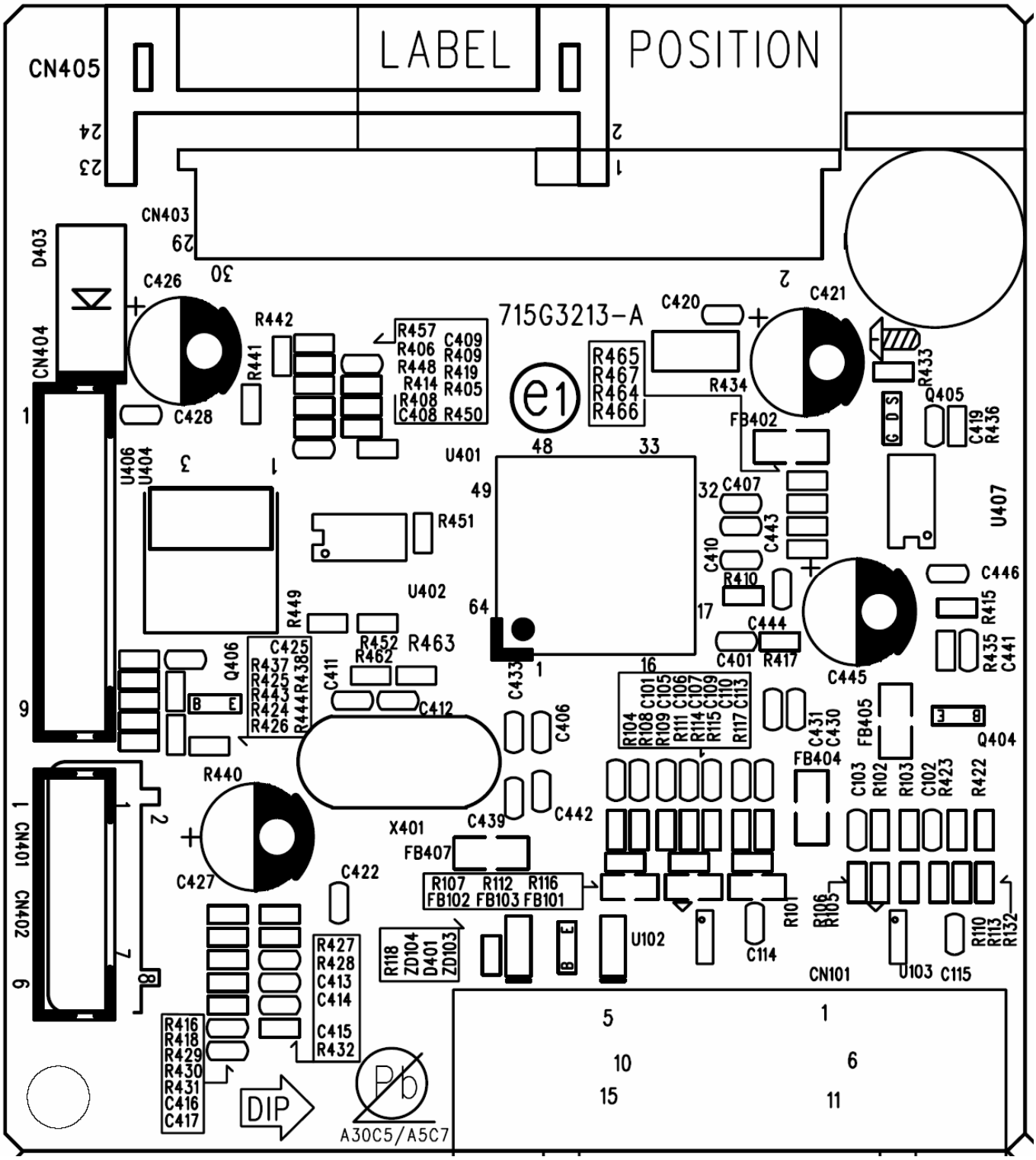
Software Flow Chart



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

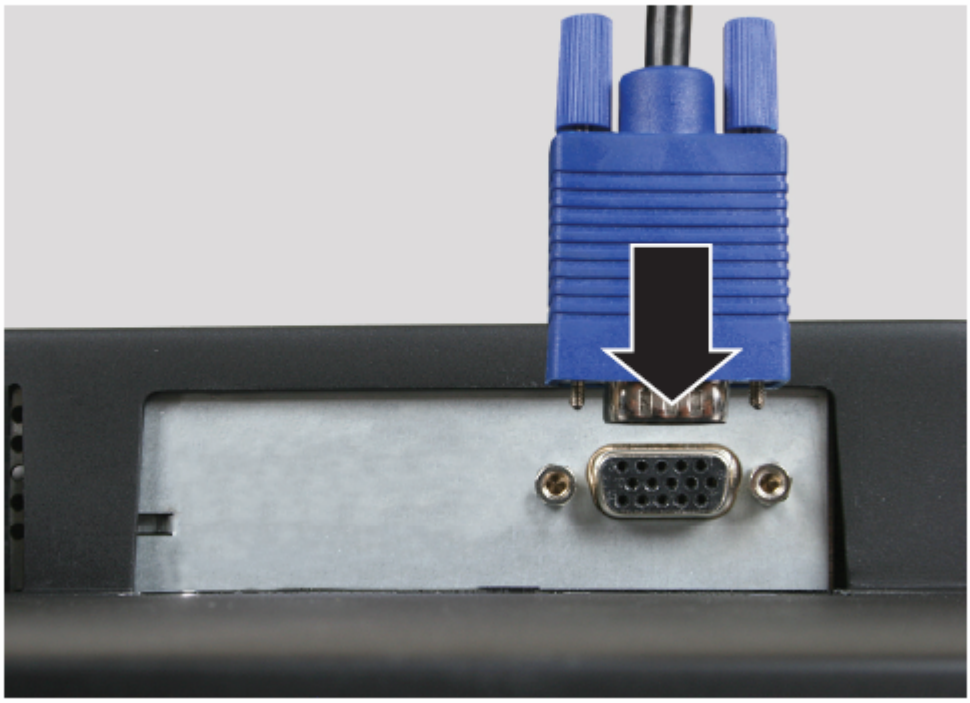


Symbol	Description	Symbol	Description
U401	IC NT68167FG QFP64	CN404	WAFER 2*6P 2.0MM R/A
X401	NXS12.000AC30F-BT-2	CN101	D-SUB 15PIN
U401	IC NT68167FG QFP64	CN401	WAFER
U404	IC AP1117D33L-13 TO252-3L DIODES	CN403	WAFER(E191W)
U102/U103	IC AZC099-04S SOT23-6L	CN405	WAFER(E161HQ&E181H/E191HQ)
U402	IC PM25LV010A-100SCE SOIC-8		

Cable Connections

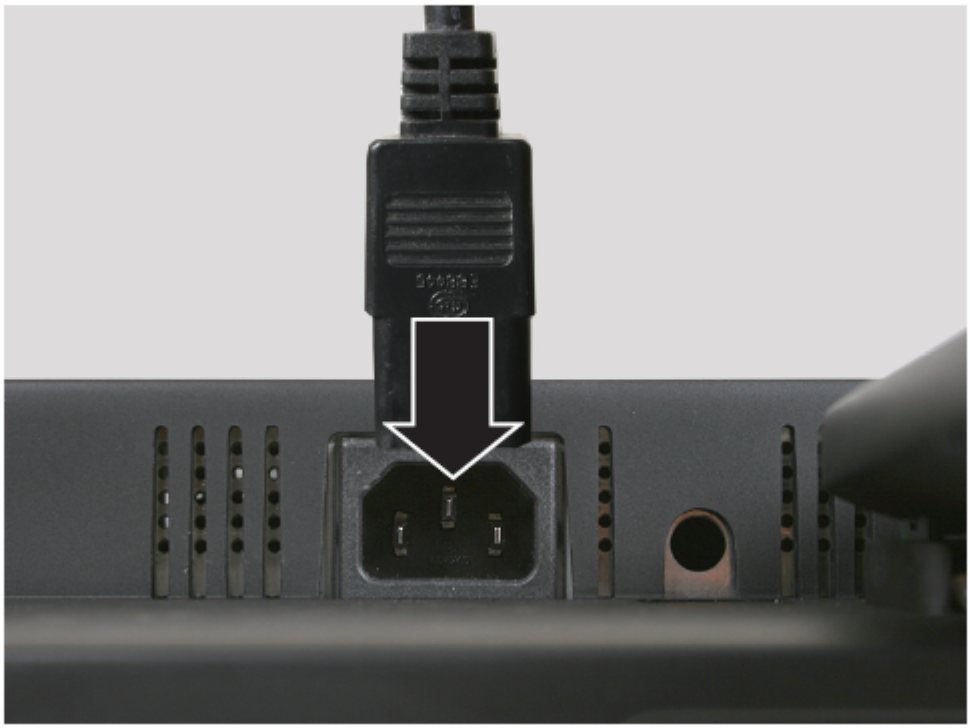
▶ **To connect video and power cables:**

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.

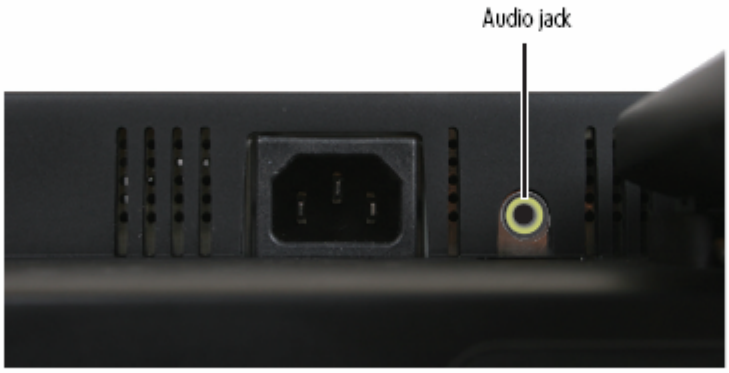


2 Make sure that your computer is turned off, then connect the other end of the video cable to the matching video port on the back of your computer.

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.

Adjusting the viewing angle

1、For optimal viewing it is recommended to look at the full face of the monitor, then adjust the monitor's angle to your own preference.

2、 Hold the stand so you do not topple the monitor when you change the monitor's angle.

3、 You are able to adjust the monitor's angle from -5° to 15°.

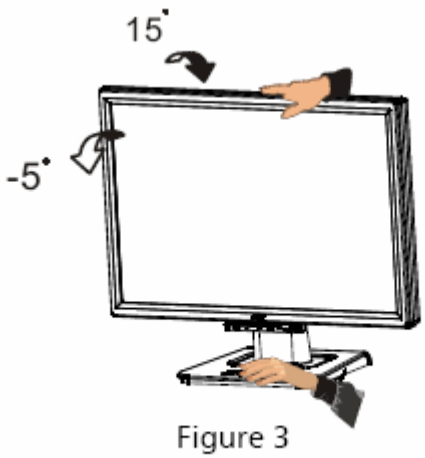


Figure 3

NOTES

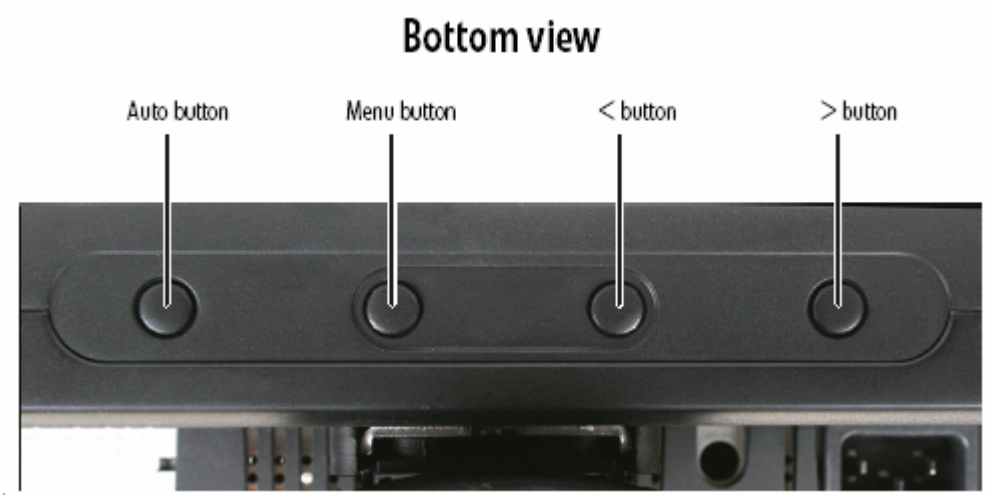
1、 Do not touch the LCD screen when you change the angle. It may cause damage or break the LCD screen.

2、 Careful attention is required not to catch your fingers or hands when you change the angle.

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



- **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.

Adjusting the Picture

▶ **To adjust the OSD settings:**

1. Press **Auto**. The display image is automatically adjusted to the ideal settings for your current screen resolution.
2. Press **Menu**. The OSD opens.
3. Press < and > to highlight a setting, then press **Menu** to open the selected menu or setting. You can configure settings in the following menus:

Menu icon	Name	Description
	Brightness and Contrast	Adjusts the brightness and contrast (by selecting User) or selects a color mode (by selecting Scenario Mode).
	Focus and Clock	Adjusts focus and clock settings.
	Position	Adjusts horizontal and vertical screen image position.
	Color Temperature	Selects a warm, cool, or user-defined color temperature.
	Language	Selects the language for the OSD.
	OSD Settings	Adjusts the horizontal and vertical position of the OSD and sets the timeout.
	DDC/CI Settings	Turns DDC/CI support on or off.
	Mode Information	Displays the monitor's current resolution, timing, input type, and serial number.
	Reset to Defaults	Resets all OSD settings to defaults.
	Exit	Exits the OSD.

4 Press < and > to adjust the setting to the desired level or change the option.

5 When you have finished making all adjustments, press **Auto** repeatedly to exit.

▶ **To set the scenario mode:**

1 Press **Menu** to open the OSD, then press **Menu** again to select the Brightness and Contrast menu.

2 Press > to highlight **Scenario Mode**, then press **Menu**. The *Scenario Mode* menu opens.

3 Press < and > to highlight a scenario mode, then press **Auto** to keep the setting.

Menu icon	Mode	Description
	User	User-defined (custom) settings, which can be adjusted to suit your needs.
	Text	This is the best balance of brightness and contrast to prevent eye strain while reading on-screen text.
	Standard	This uses default settings, and is the best general-purpose mode.
	Graphic	This enhances color and emphasizes fine detail.
	Movie	This displays full-motion scenes in the clearest detail.

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.

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 counties.

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

Disassembly Procedure

1. Remove hinge cover, then remove two screws marked A-C to remove base. (Fig 1)

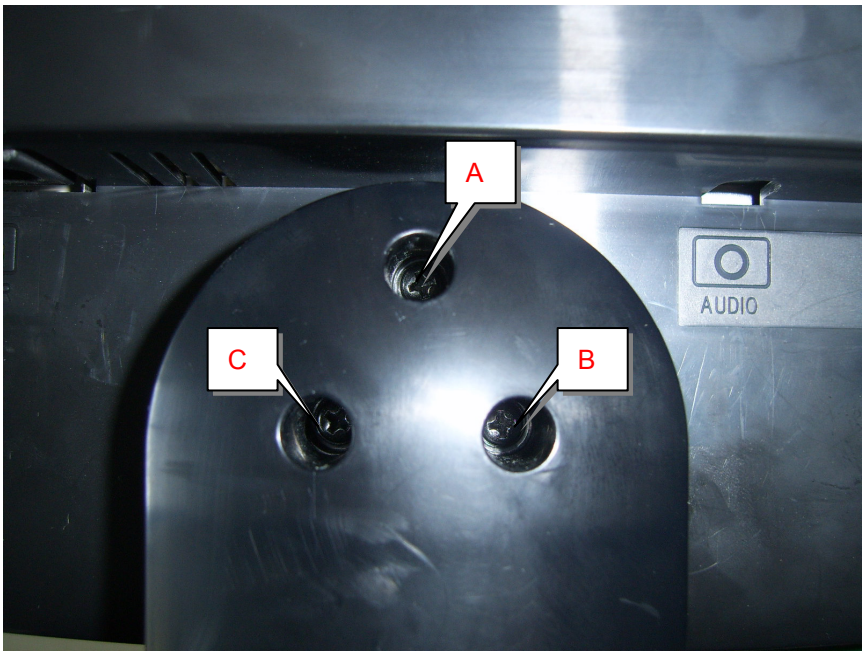


Fig 1

2. Remove the back cover. (Fig 2-3)

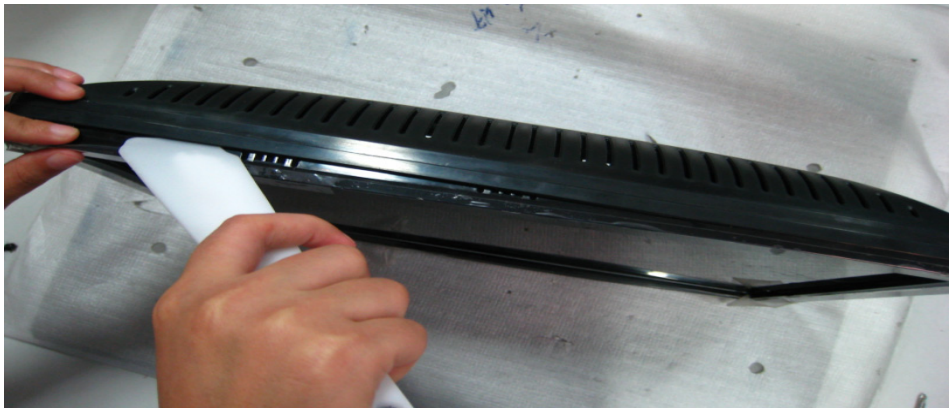


Fig 2

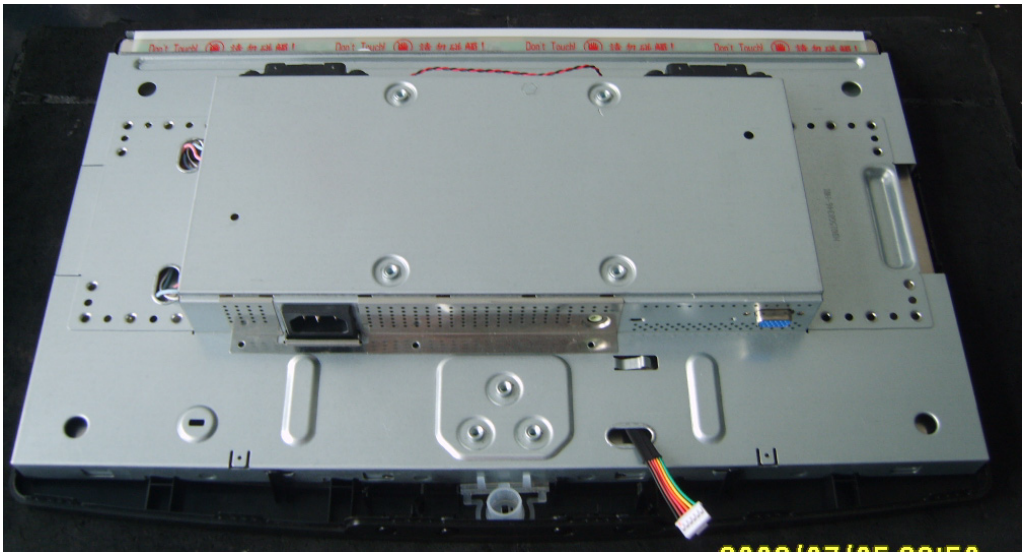


Fig 3

1. Remove the front bezel,disconnect the connector remarked in green (Fig 4,5)

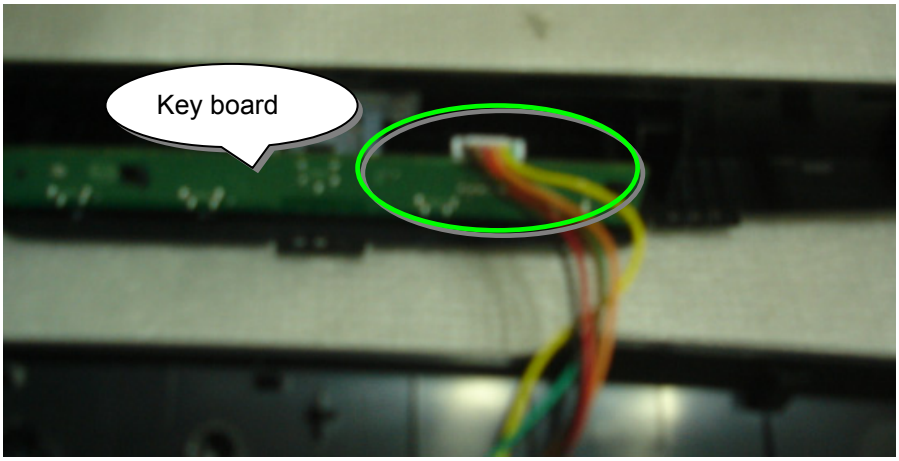


Fig 4

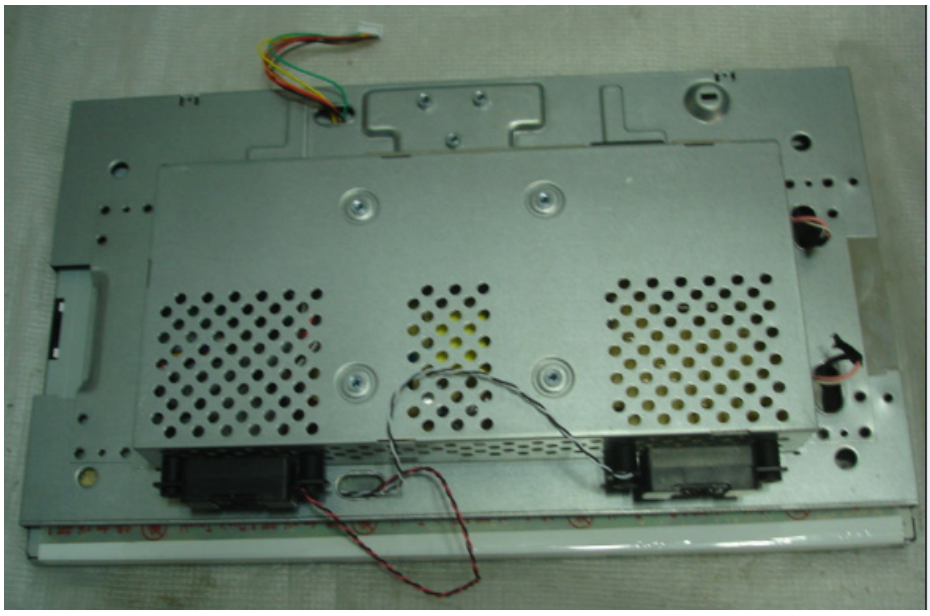


Fig 5

2.

3. Remove the screws marked in red and disconnect lamp connections to remove shield. (Fig 6-9)

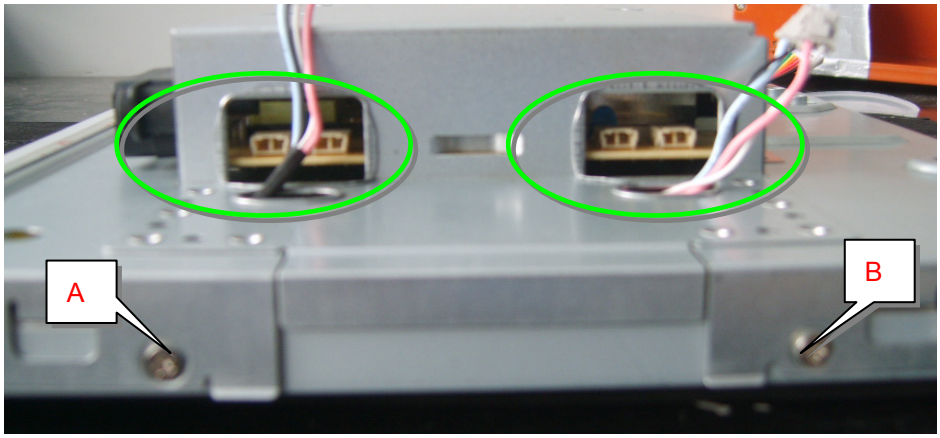


Fig 6

Fig 7

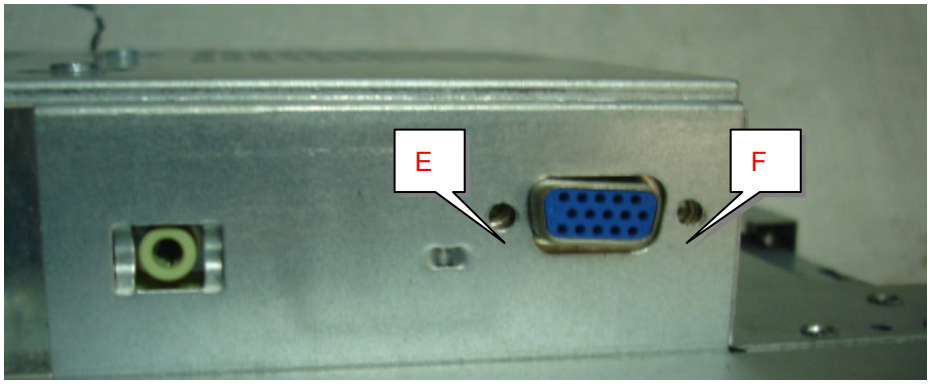


Fig 8

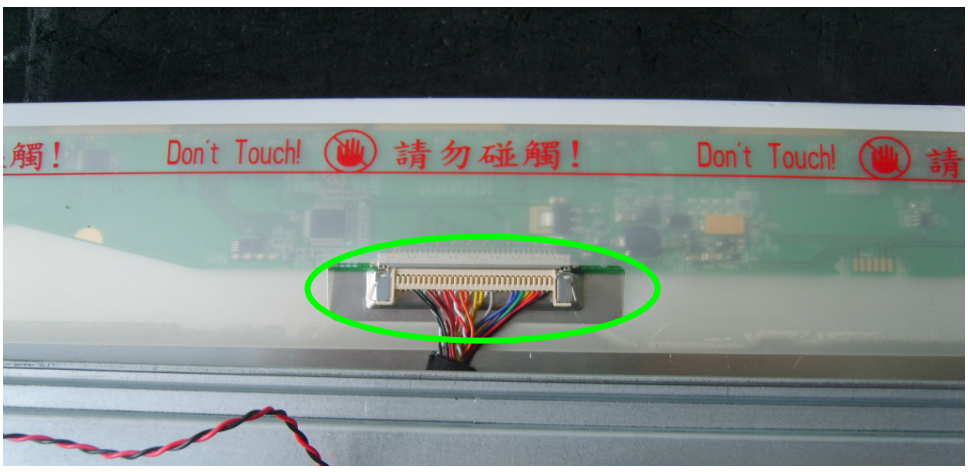


Fig 9

4. Remove the screws marked in red and the wire connect with power board to remove the boards. (Fig 10,11)

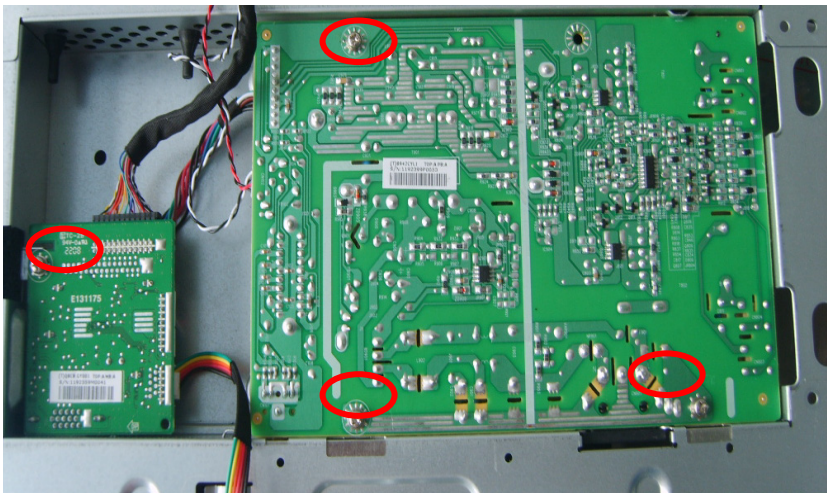


Fig 10

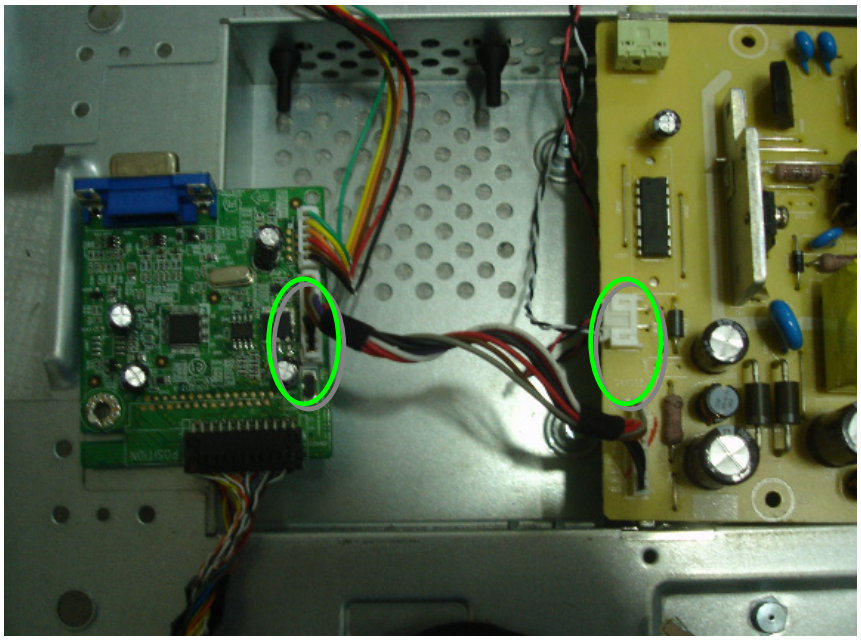


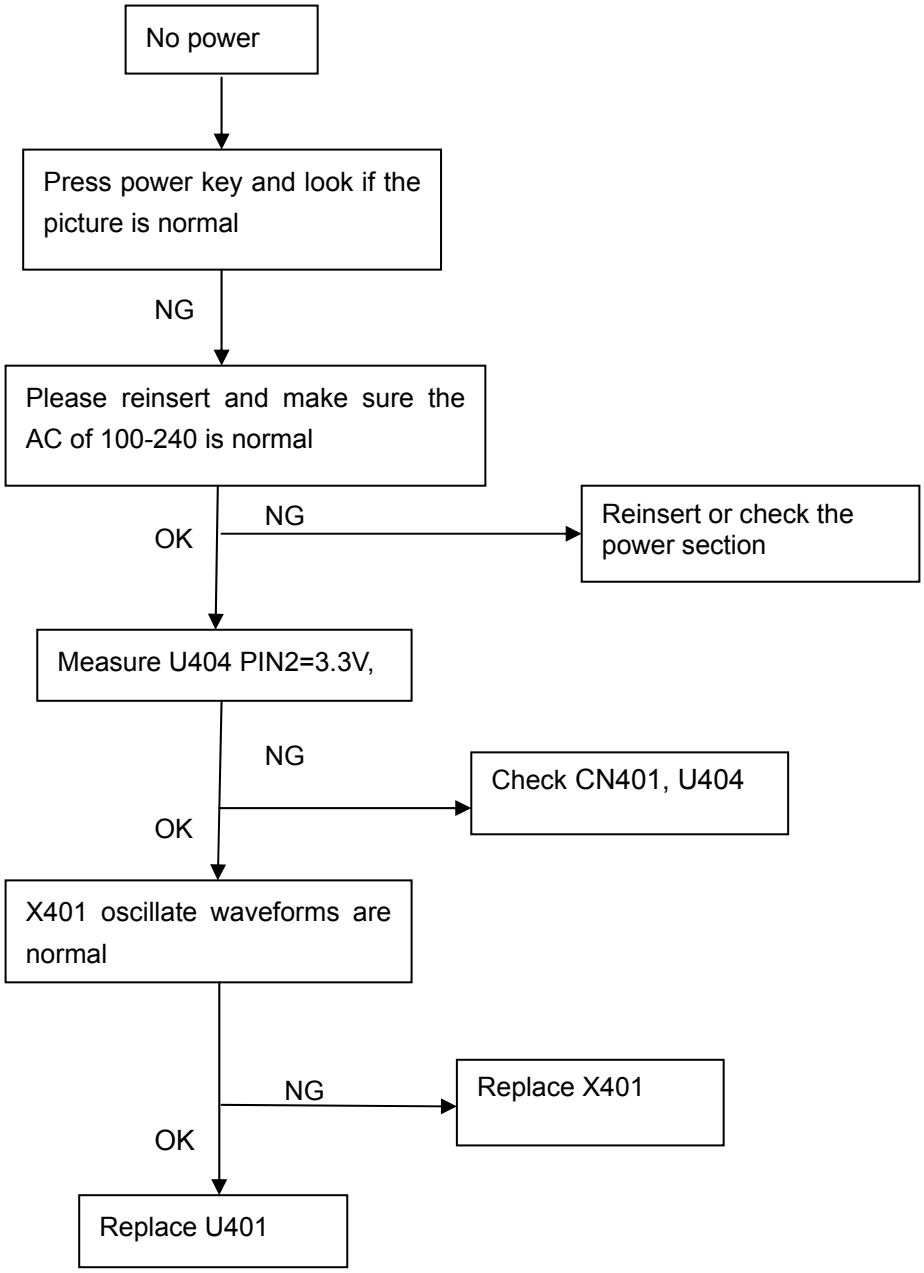
Fig 11

6. The monitor disassembly completely. (Fig 12)

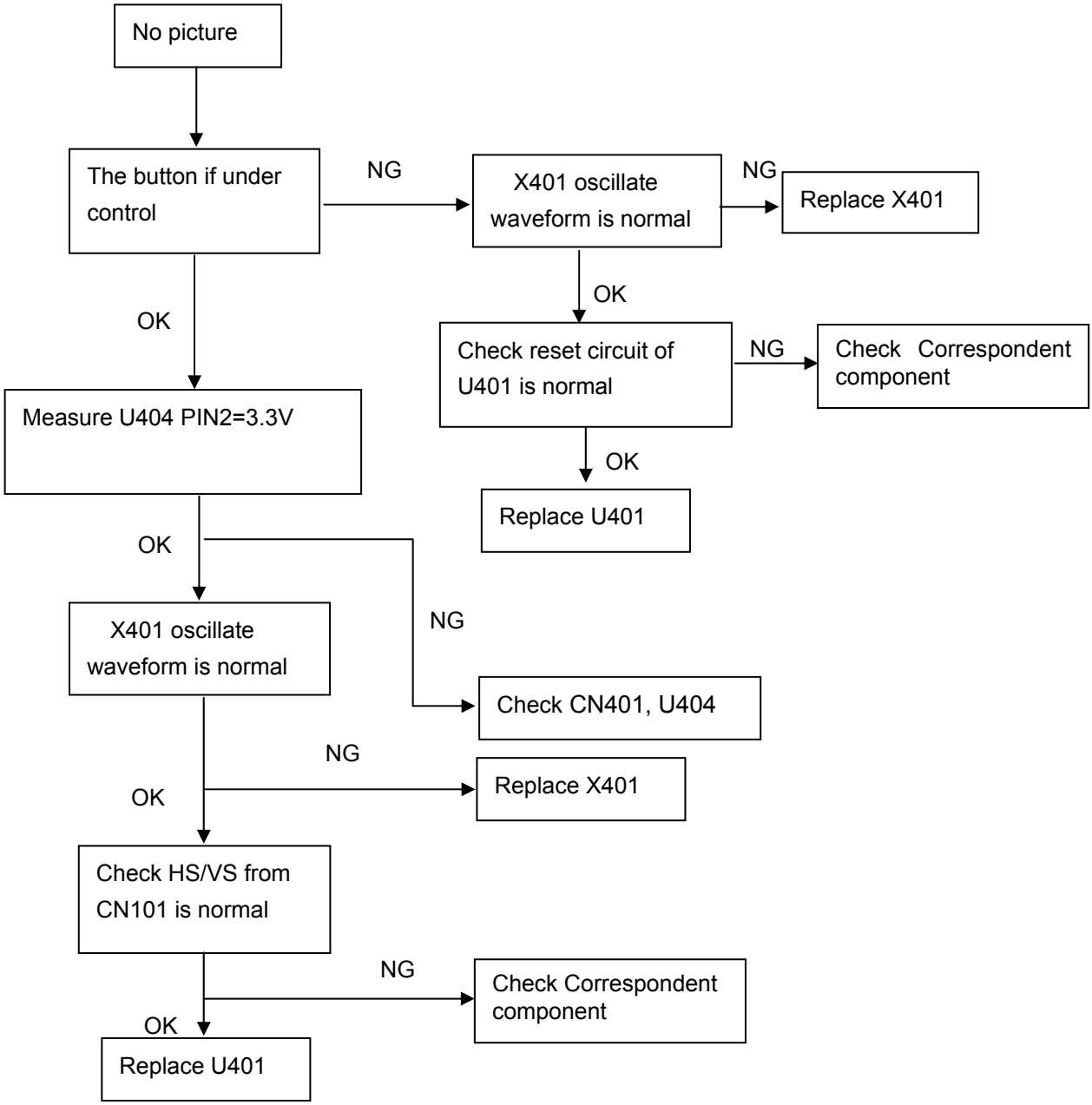
Fig 12

This chapter provides troubleshooting information for the E191W:

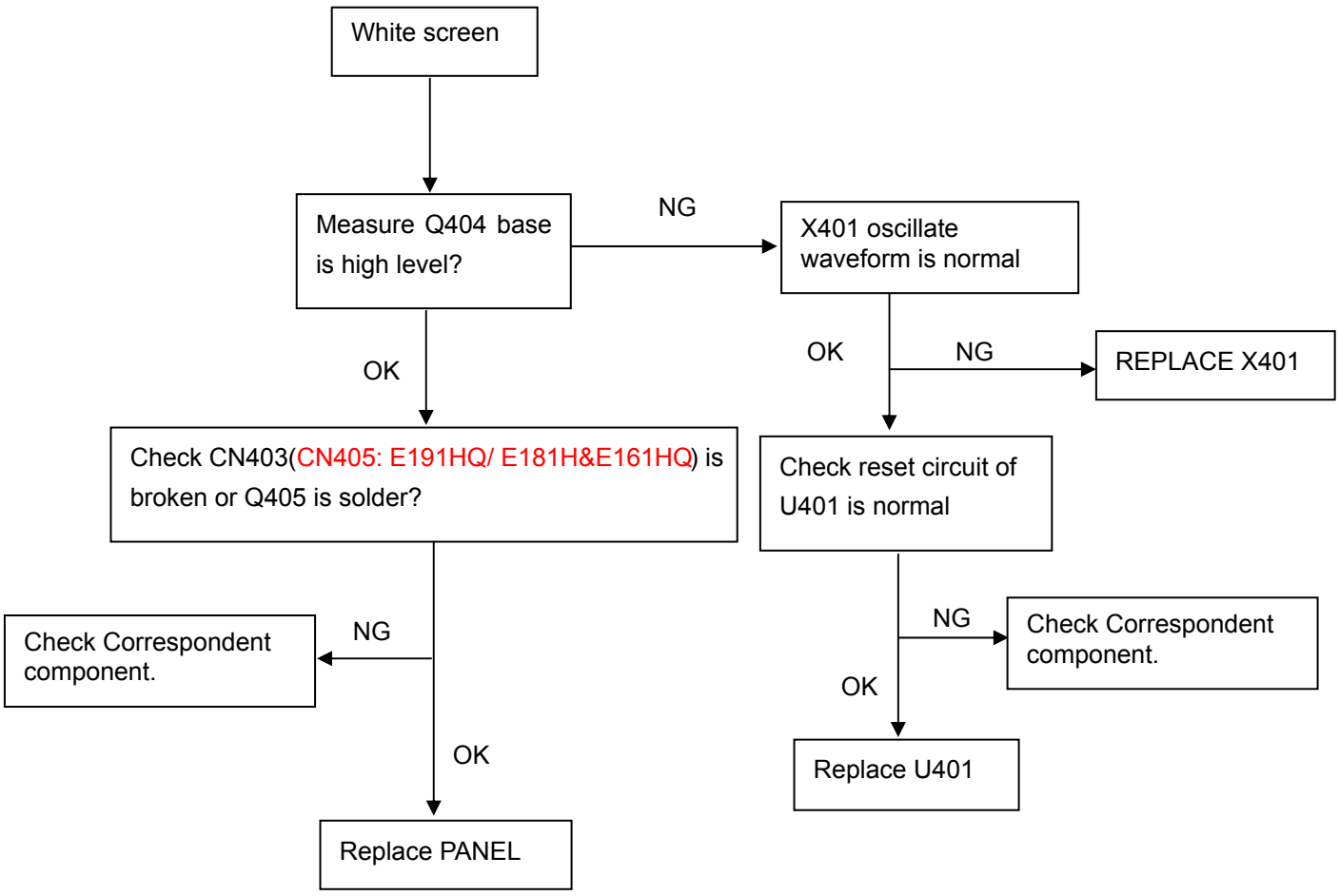
1. No Power



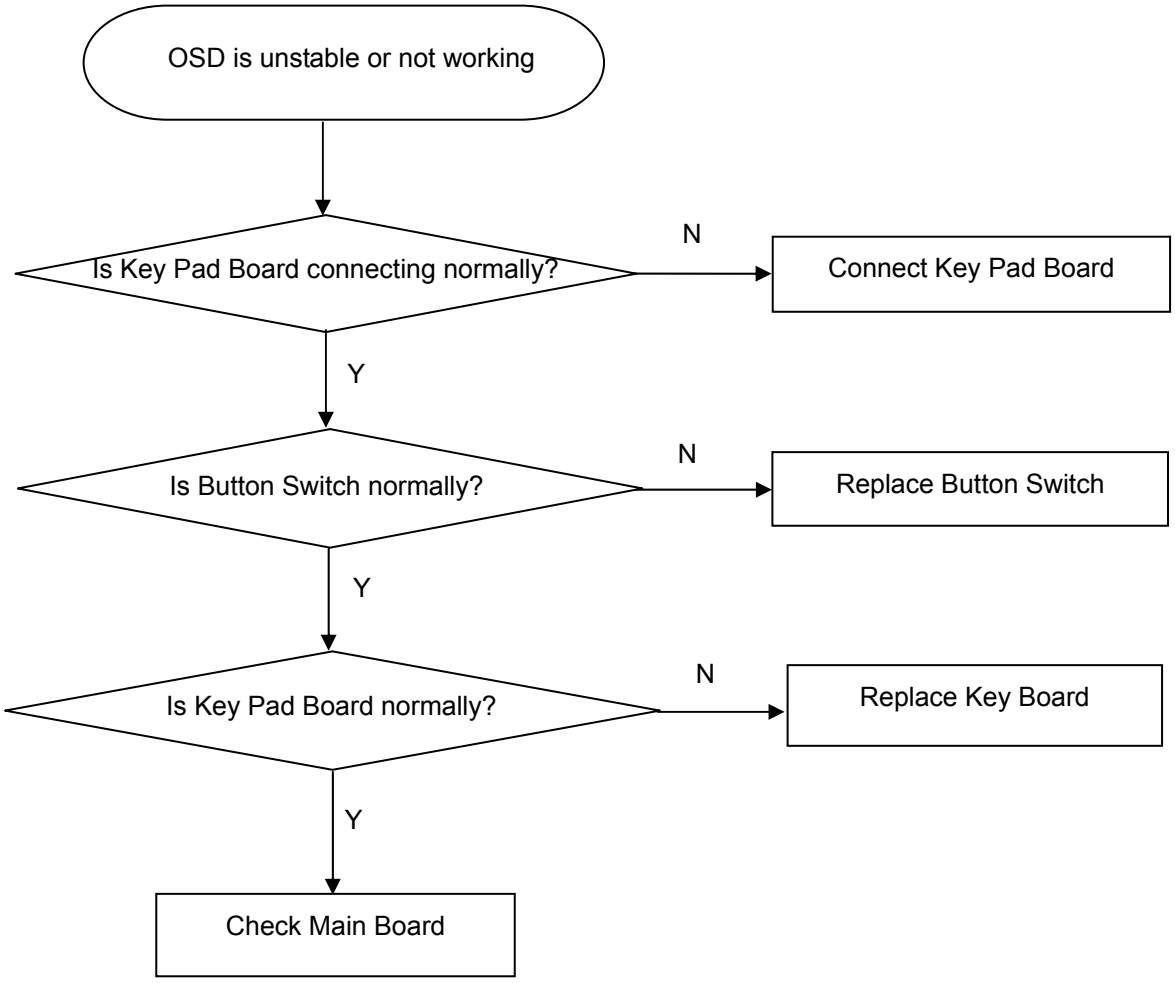
2. No Picture (LED is orange)



3. Panel Power Circuit



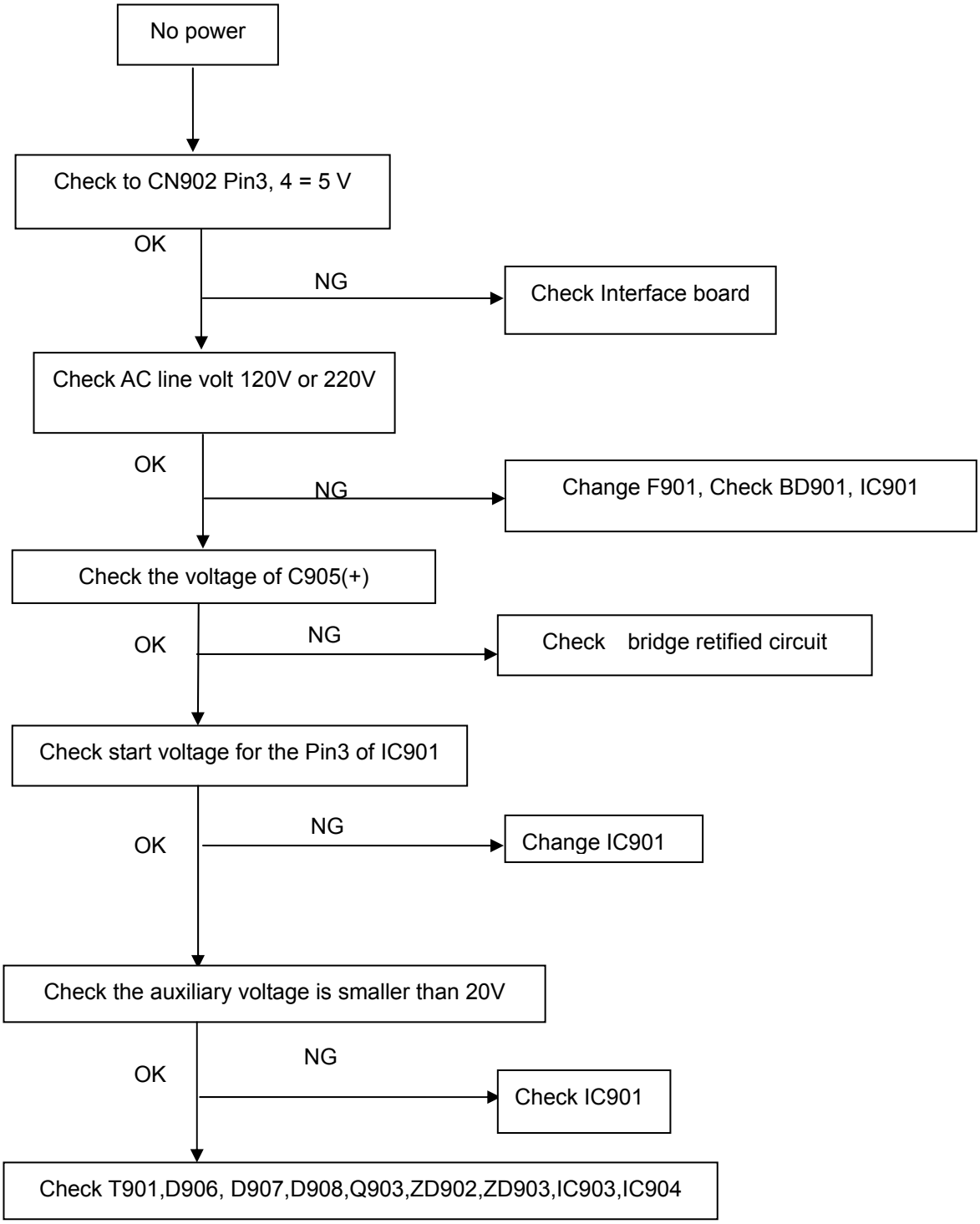
4. Key Board


OSD is unstable or not working
Is Key Pad Board connecting normally?
N
Connect Key Pad Board
Y
Is Button Switch normally?
N
Replace Button Switch
Y
Is Key Pad Board normally?
N
Replace Key Board
Y
Check Main Board

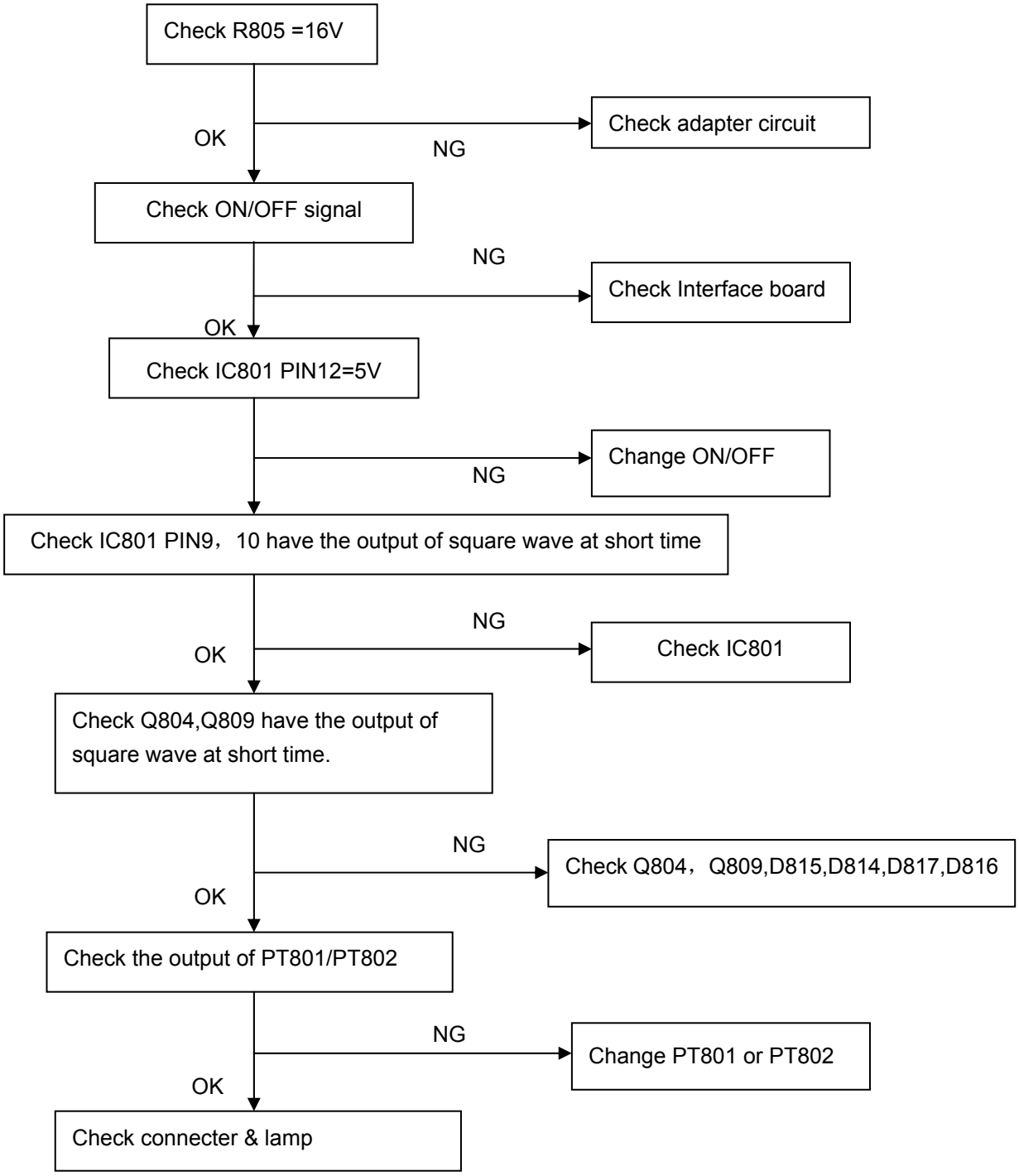
5. Power board

715G2824 1C 2(E191W)

1. No Power

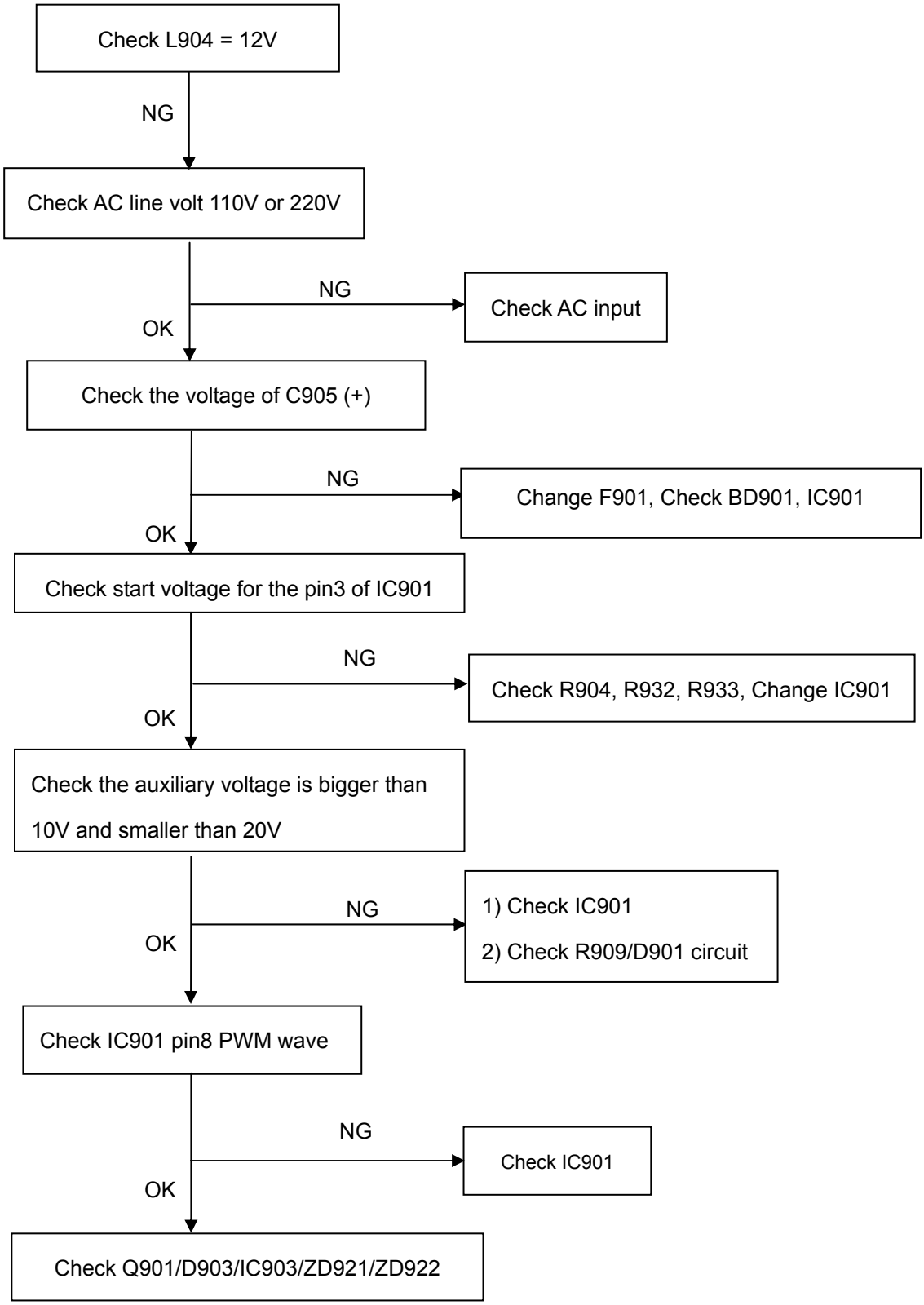


(L) 2. W/LED No Backlight

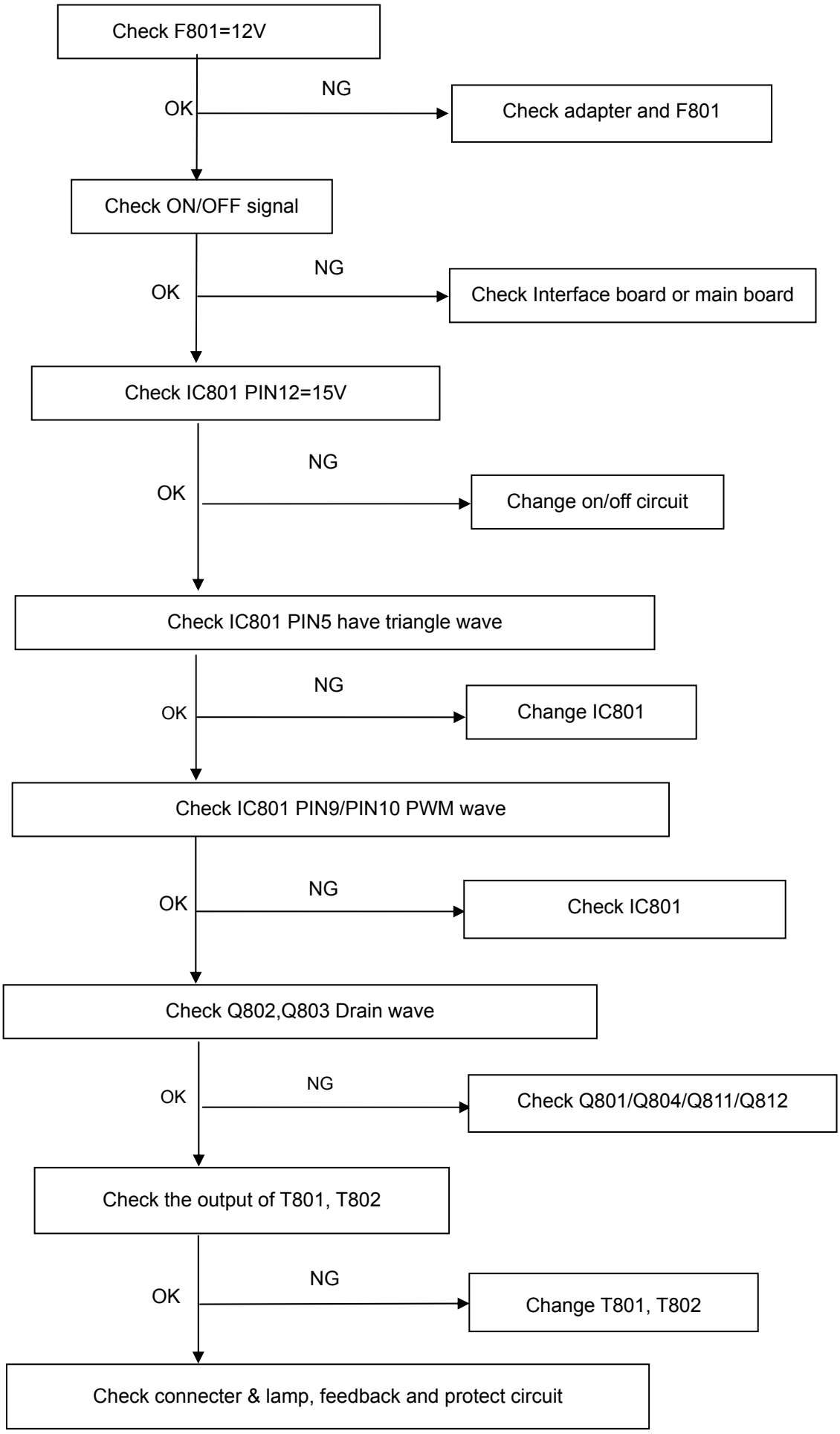


715G2510 1 AO(E191HQ&E181H)

1) No power

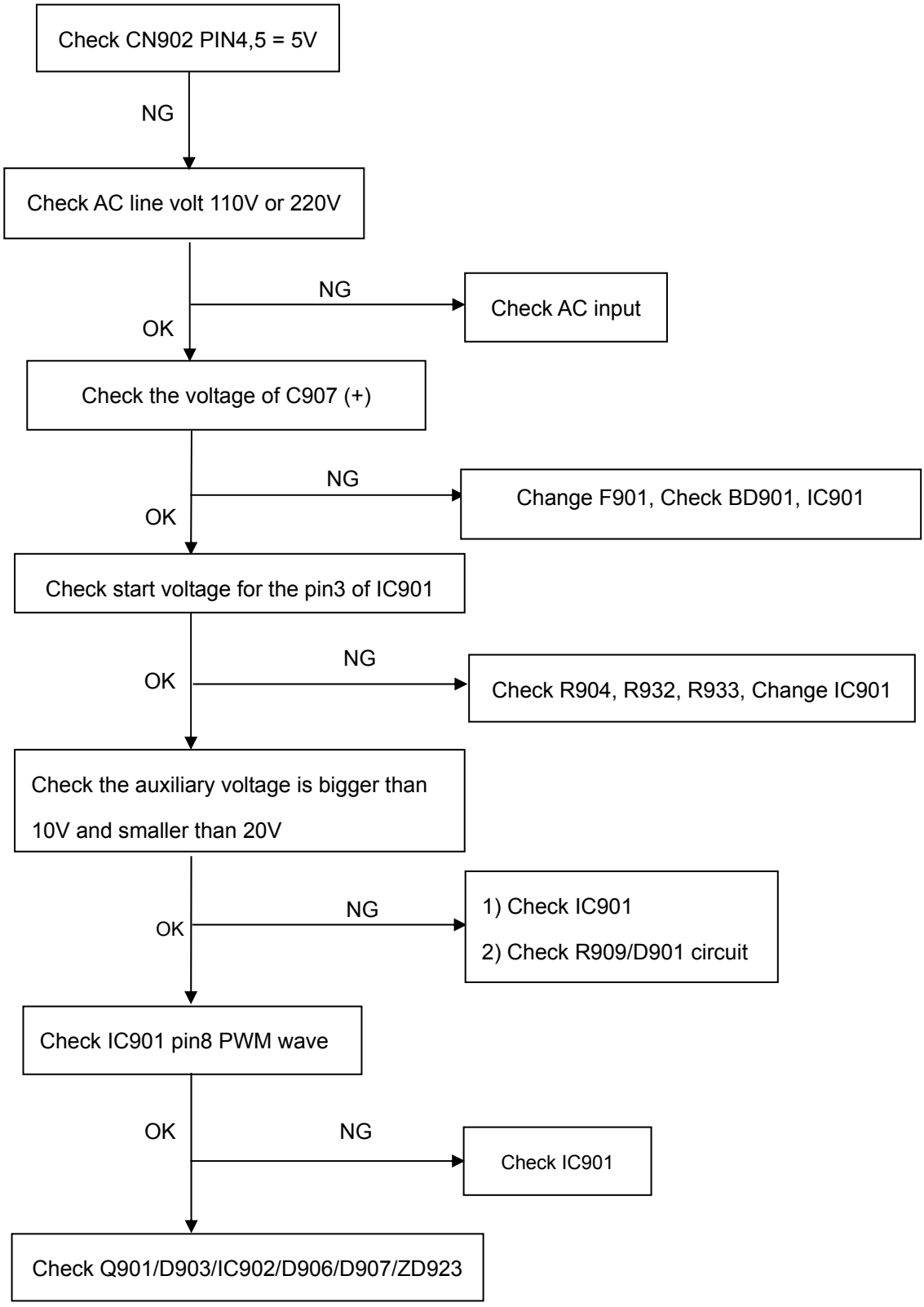


2.) No Backlight

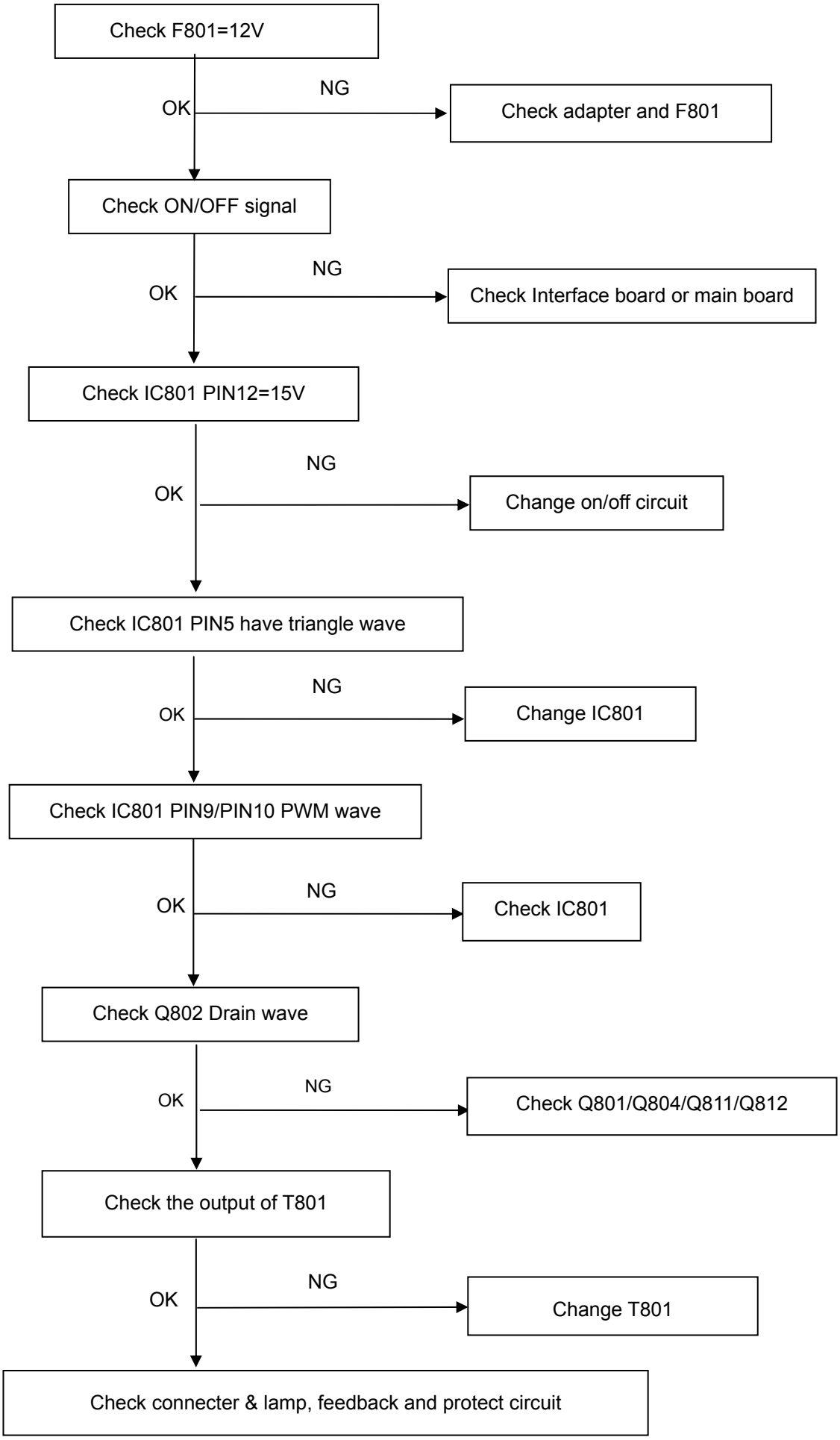


715G2852 2(E161HQ)

1) No power



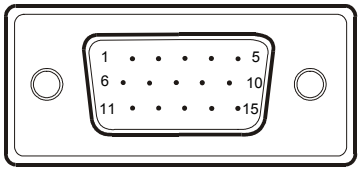
2.) No Backlight



Connector Information

Chapter 5

The following figure shows the connector locations on the monitor:



15 – Pin Color Display Signal Cable (D-sub)

Pin No.	Description	Pin No.	Description
1.	Red	9.	+5V
2.	Green	10.	RS232
3.	Blue	11.	Monitor Ground
4.	RS232	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		

43

FRU (Field Replaceable Unit) List

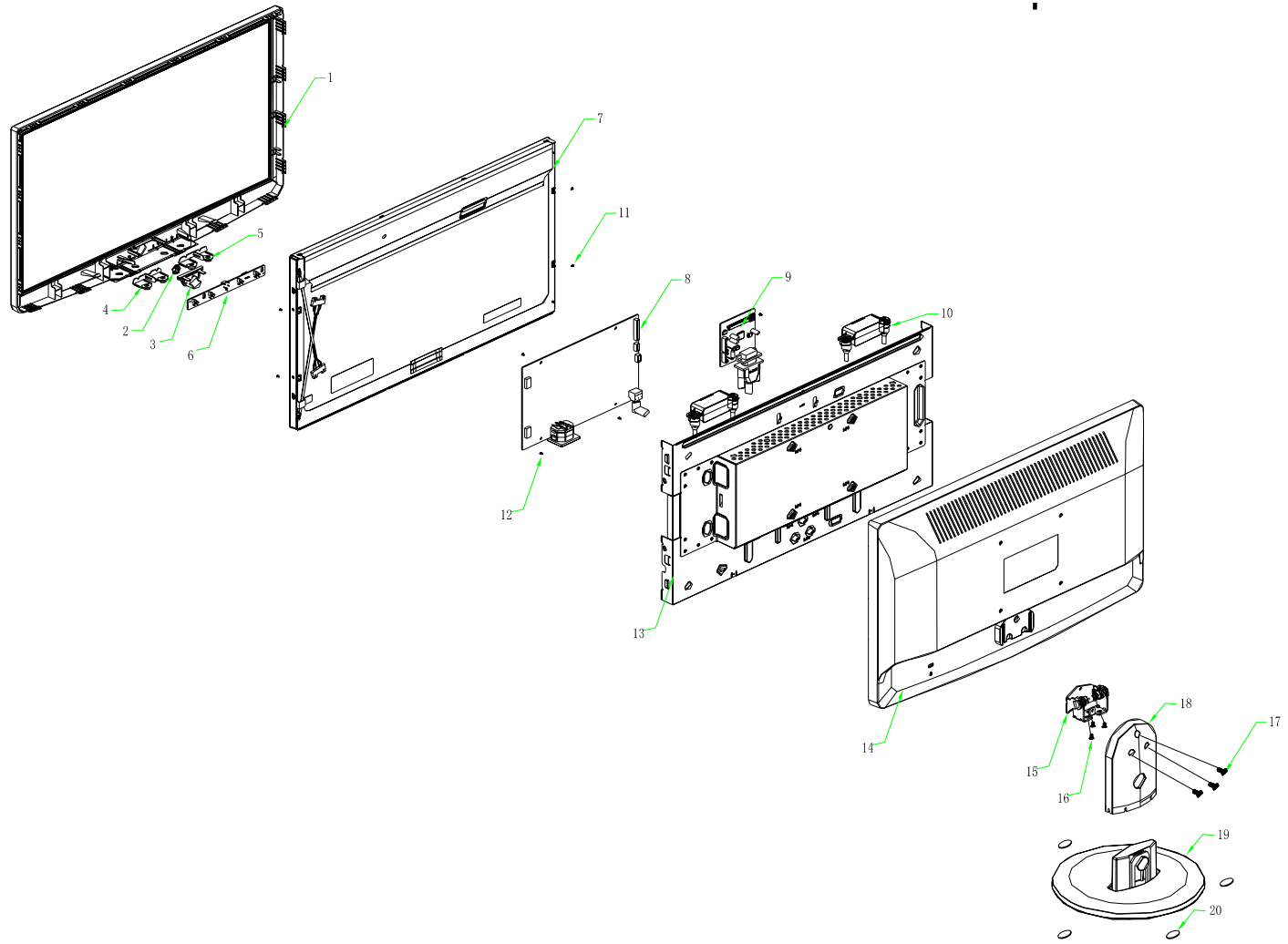
Chapter 6

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations.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.emachine.com.tw/spl/). For whatever reasons a part number change is made, it will not be noted in the printed Se
rvice Guide. For EMACHINE AUTHORIZED SERVICE PROVIDERS, your Emachine 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 Emachine 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 Emachine office on how to return it.

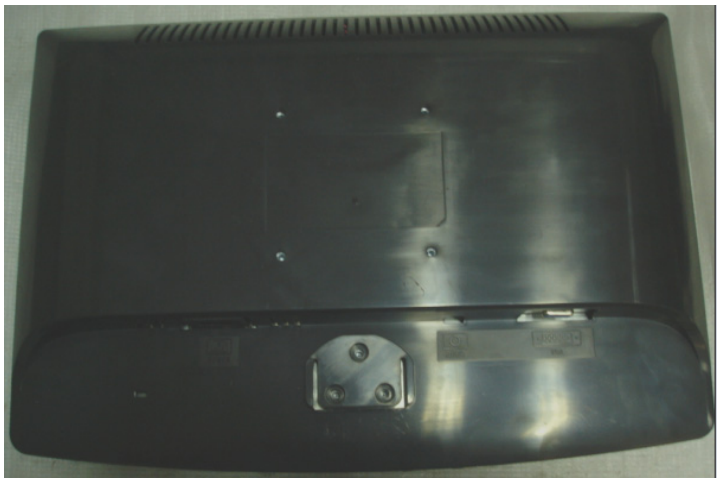
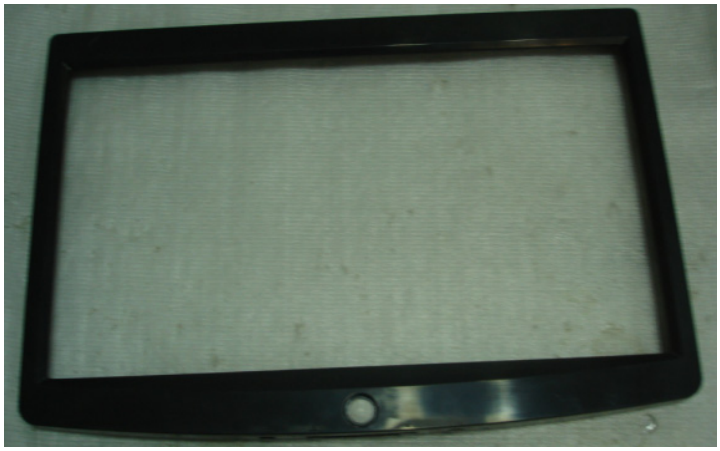
Exploded Diagram

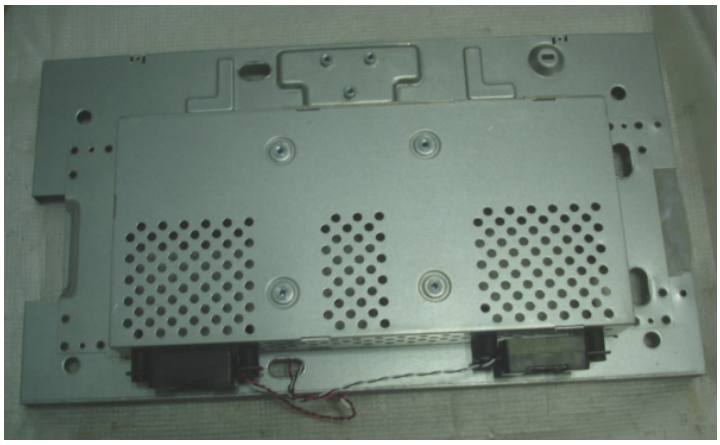
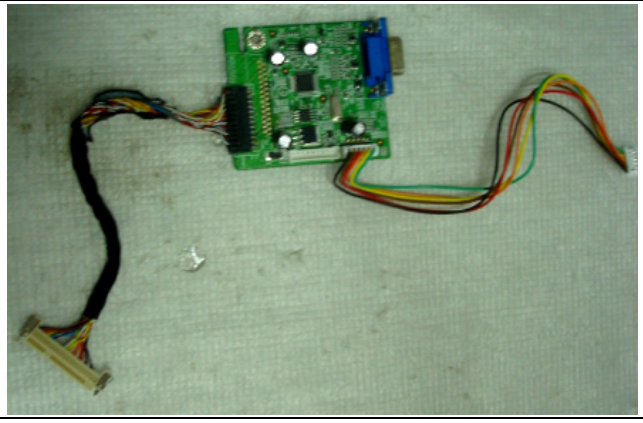


Item	Descripiton	Item	Descripiton
1	BEZEL L19WA-8GEM-1	11	SCREW
2	POWER LOGO	12	SCREW
3	POWER-LENS	13	MAIN FRAME
4	FUNCTION-BUTTON-R	14	REAR COVER
5	FUNCTION-BUTTON-L	15	HINGE ASS'Y
6	KEPC	16	SCREW
7	PANEL	17	SCREW
8	PWPC	18	STAND
9	CBPC	19	BASE
10	SPK	20	FOOT

Part List

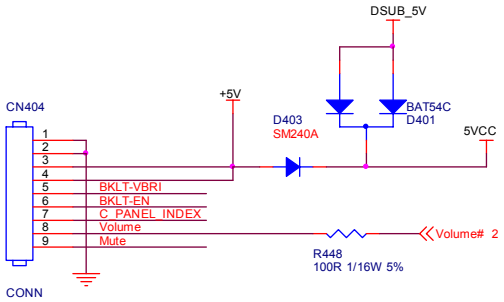
Above picture show the description of the following component.

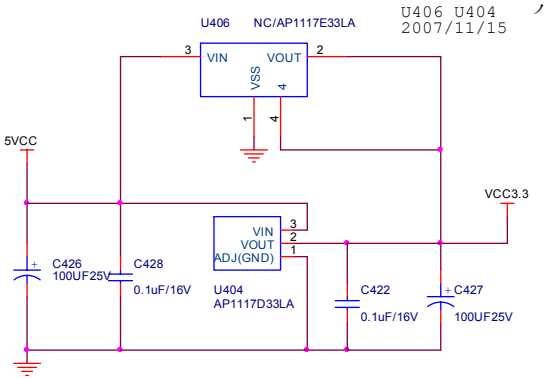
Item	Picture	Description
1		Hinge&base
2		Back Cover
3		bezel

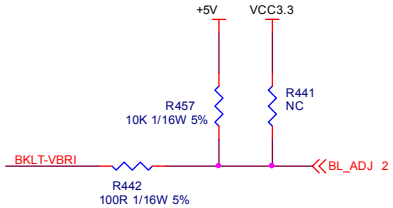
4		Shield
5		Panel
6		Power Board
7		Main board

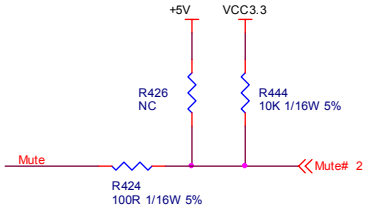
Main Board

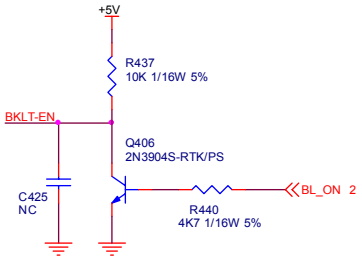
Power

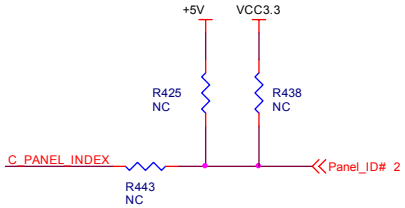






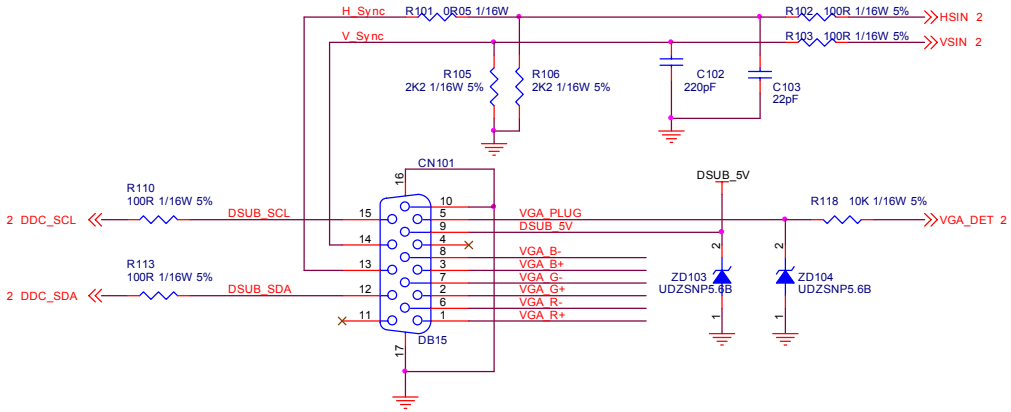


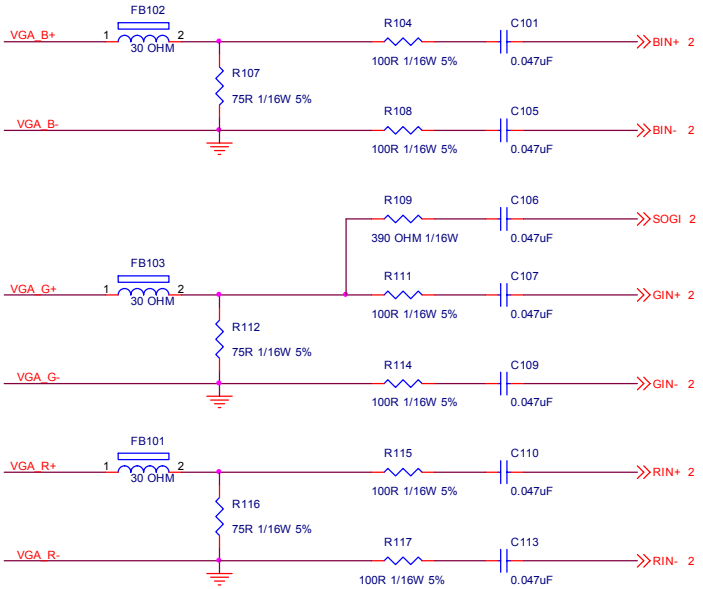


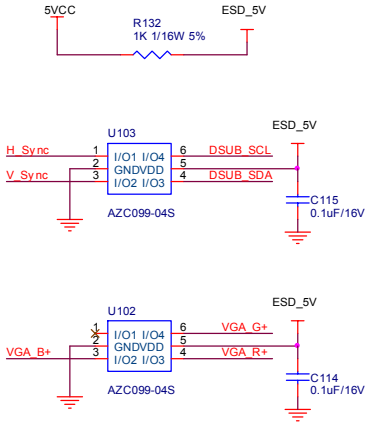


T P V （Top Victory Electronics Co . , Ltd. ）		OEM MODEL	e-Machine	Size	B
結 隔 瓜 銅 腹	G3213-A-X-X-2-080707	TPV MODEL	ACER	Rev	A
Key Component	05.Power	PCB NAME	715G3213-A	称爹	<称爹>
Date	Monday, July 07, 2008	Sheet	5 of 5		

Input

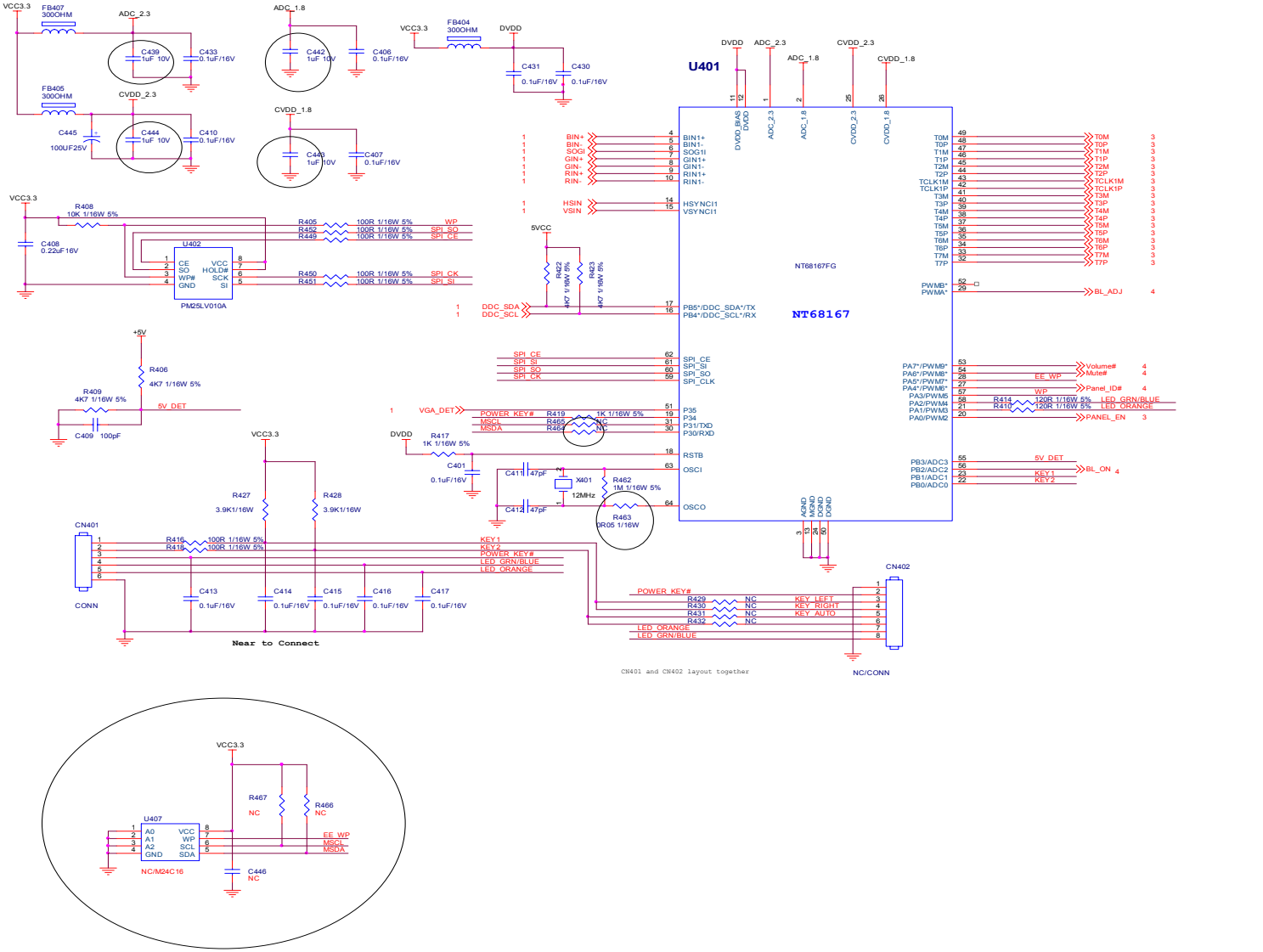






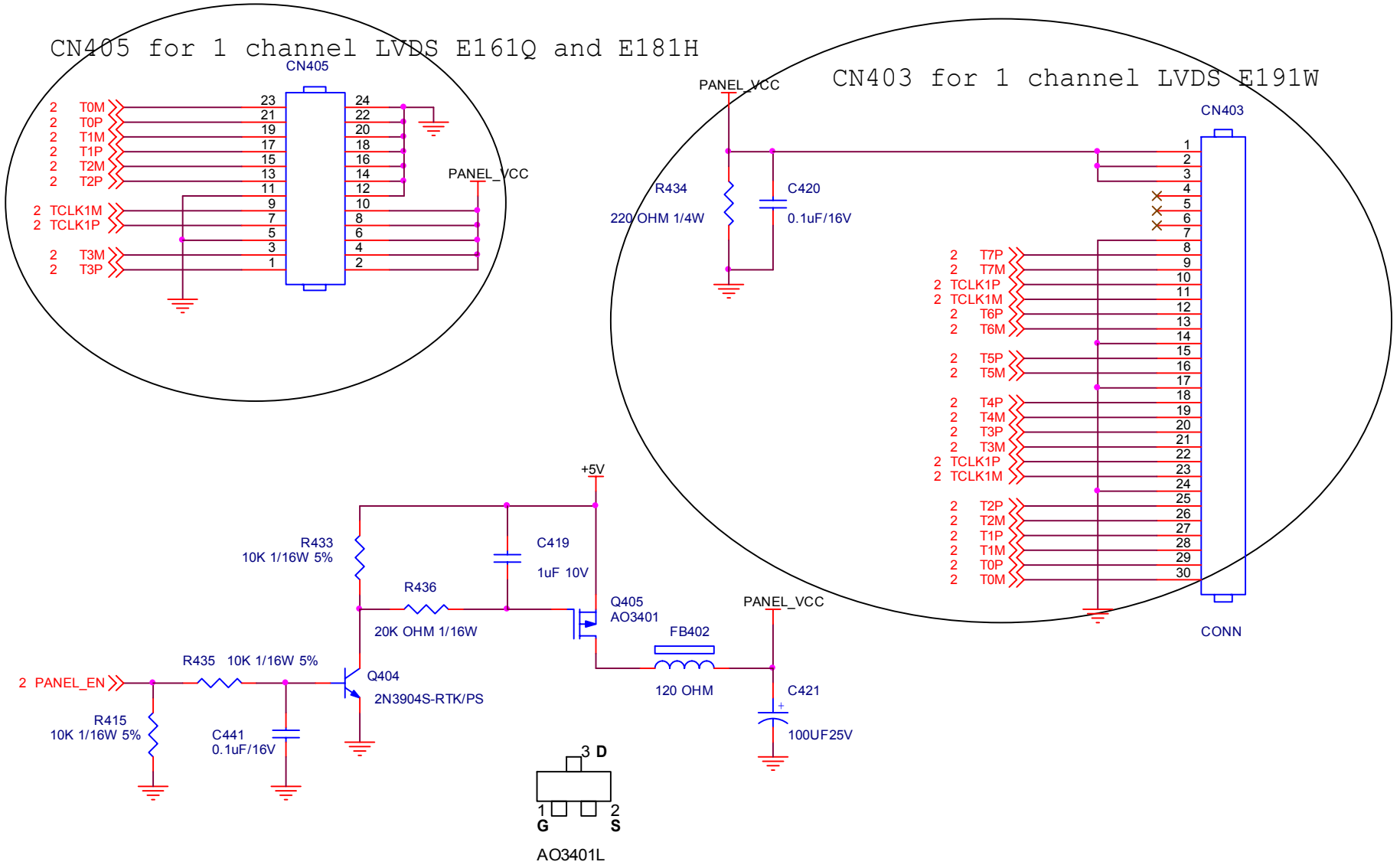
T P V （Top Victory Electronics Co., Ltd.）		OEM MODEL	e-Machine	Size	B
結 隔 瓜 網 腹	G3213-A-X-X-2-080707	TPV MODEL	ACER	Rev	A
Key Component	02.Input	PCB NAME	715G3213-A	称爹	<称爹>
Date	Monday, July 07, 2008	Sheet	2 of 5		

Scaler



T P V （Top Victory Electronics Co . , Ltd. ）		OEM MODEL	e-Machine	Size	C
結 陽 瓜 願 腹	G3213-A-X-X-2-080707	TPV MODEL	ACER	Rev	A
Key Component	03.Scalar	PCB NAME	715G3213-A	称 峯	<称峯>
Date	Monday , July 07, 2008	Sheet	3 of 5		

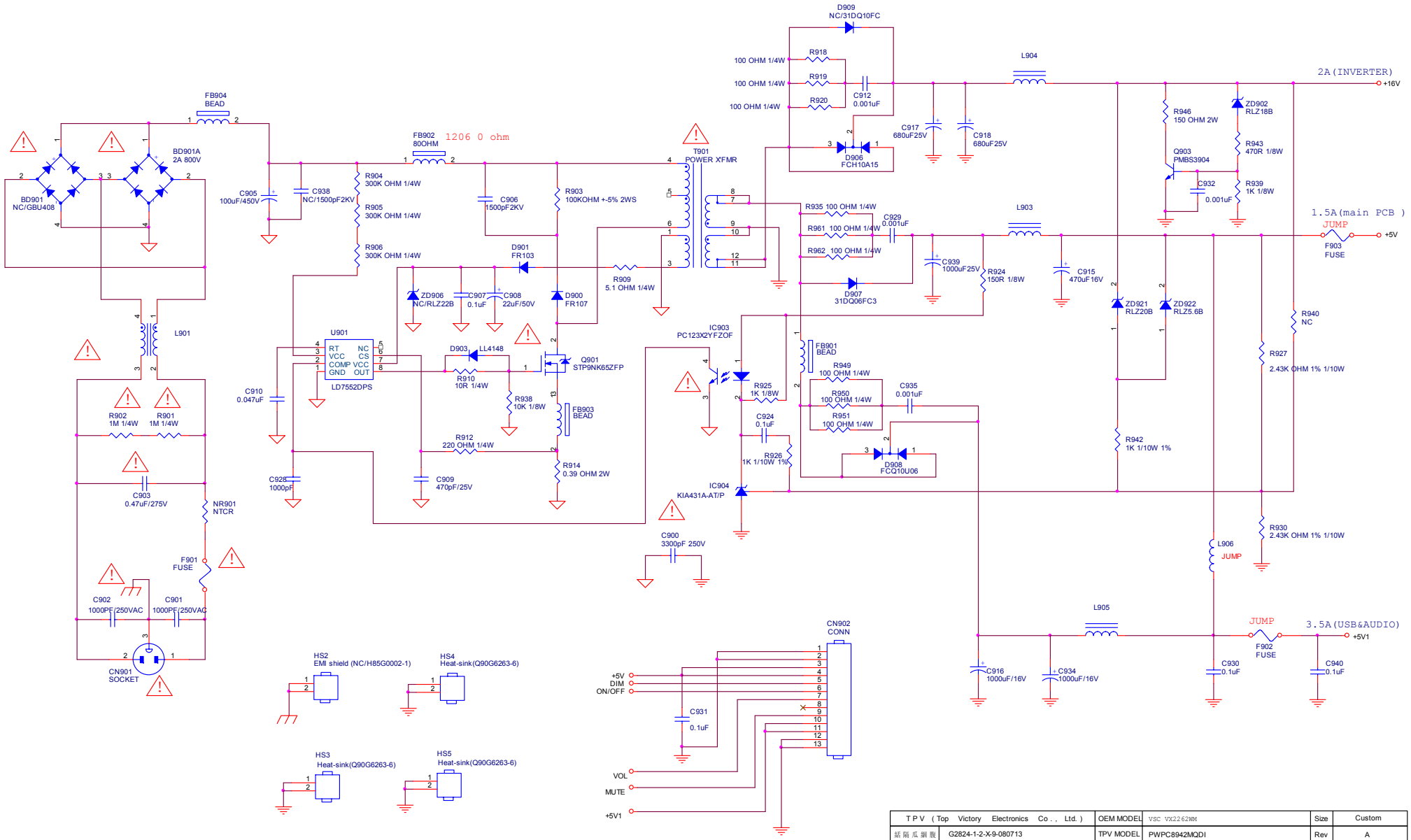
Panel Interface



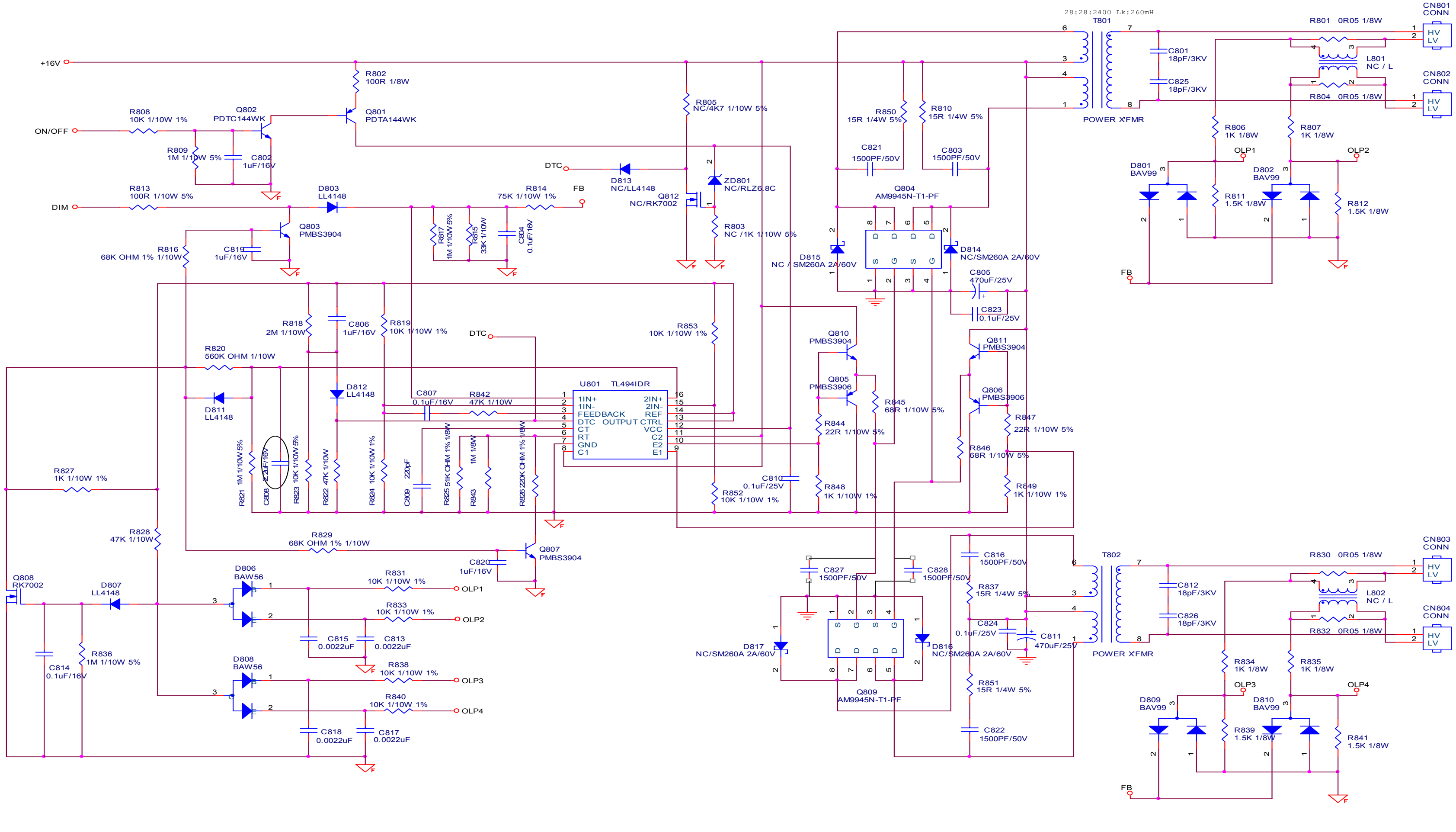
T P V （Top Victory Electronics Co., Ltd.）		OEM MODEL	e-Machine	Size	A
結隔瓜網腹	G3213-A-X-X-2-080707	TPV MODEL	ACER	Rev	A
Key Component	04.Output	PCB NAME	715G3213-A	称爹	<称爹>
Date	Monday, July 07, 2008	Sheet	4 of 5		

Power board

715G2824 1C　2（E191W）

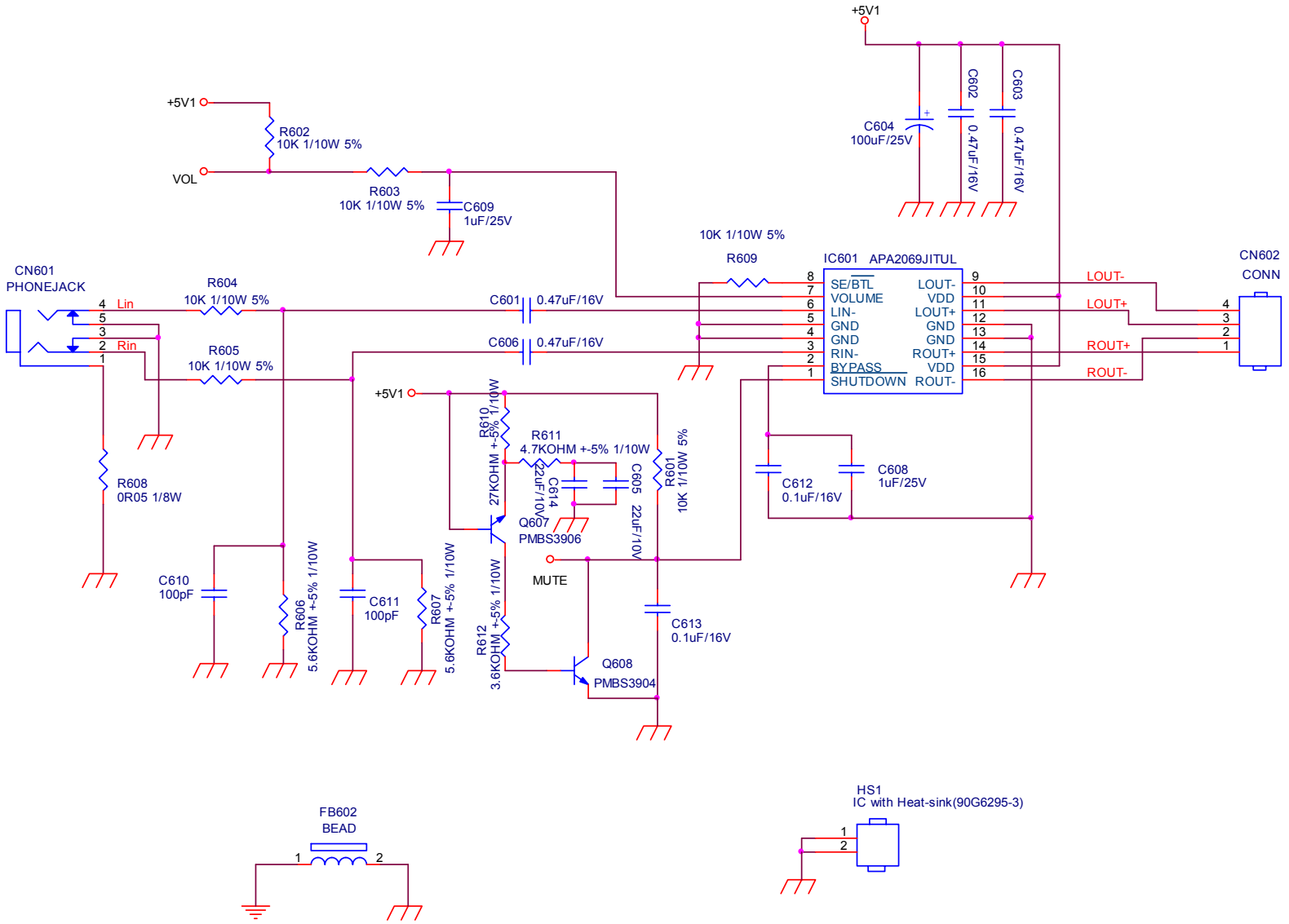


T P V （Top Victory Electronics Co . , Ltd. ）		OEM MODEL	VSC VX2262WM	Size	Custom
結 陽 瓜 蘭 覆	G2824-1-2-X-9-080713	TPV MODEL	PWPC8942MQDI	Rev	A
Key Component	2.POWER	PCB NAME	715G2824-G-2	称 爹	ODM MODEL
Date	Sunday , July 13, 2008	Sheet	2 of 4		



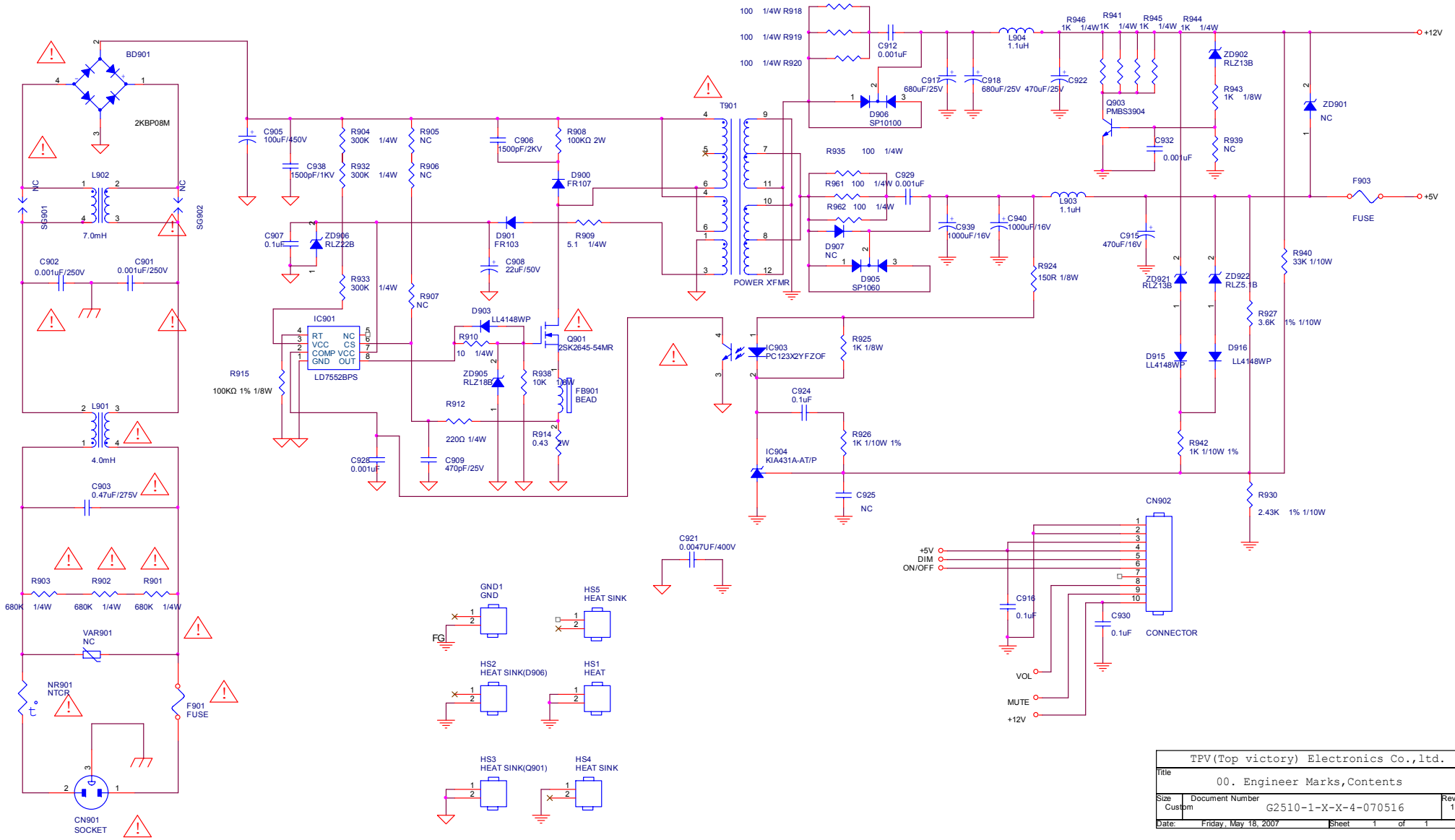
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	VSC VX2262WM	Size	Custom
[illegible]	G2824-1-2-X9-080713	TPV MODEL	PWPC8942MQDI	Rev	A
Key Component	03.INVERTER	PCB NAME	715G2824-1-2	[illegible]	ODM MODEL
Date	Sunday, July 13, 2008	Sheet	3 of 4		

AOC (Top Victory) Electronics Co., Ltd.		
Title: PWPC942GR1P		
Size	Document Number	Rev B
Date: Sunday, July 13, 2008	Sheet 1 of 2	

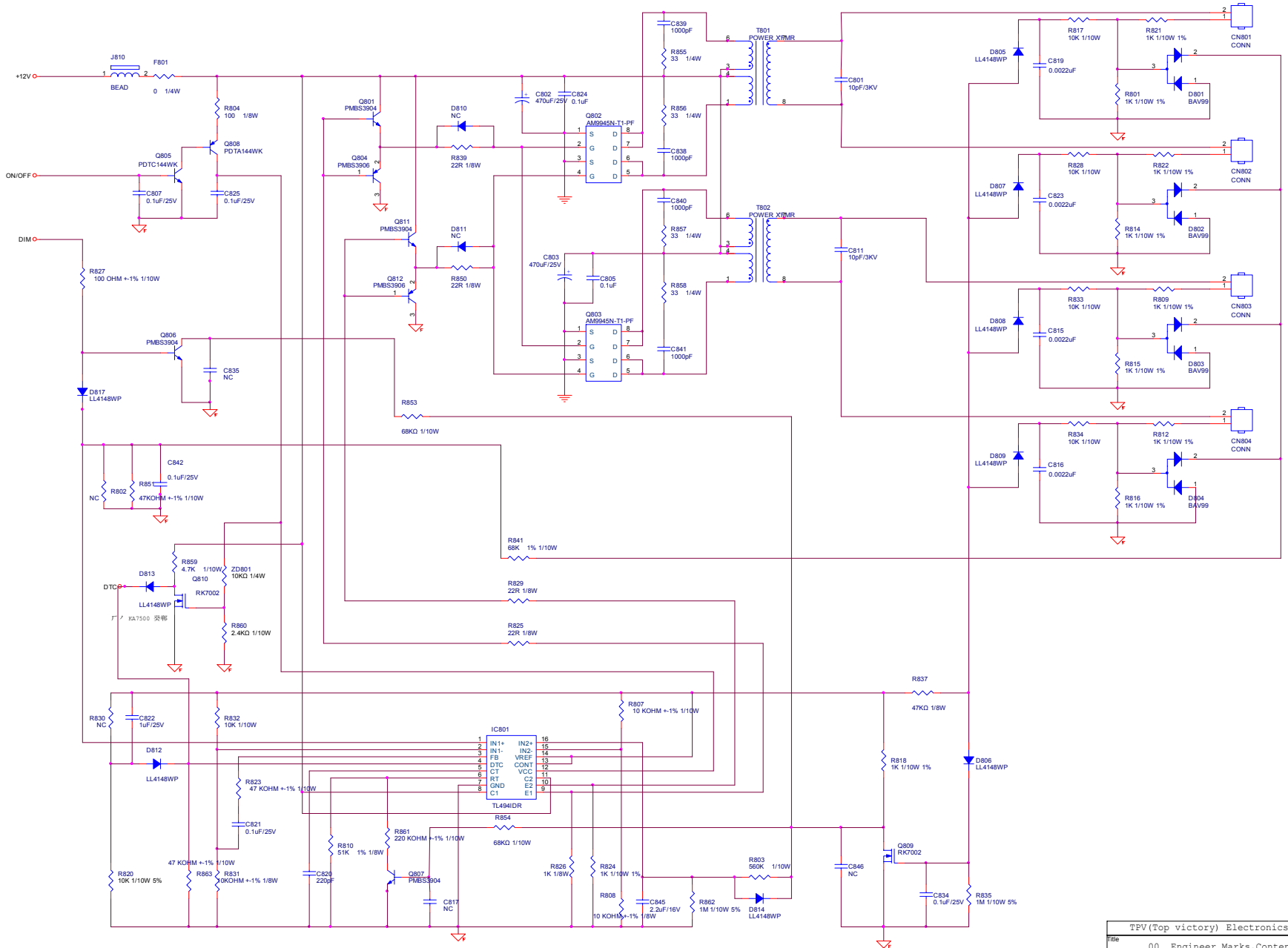


T P V （Top Victory Electronics Co.， Ltd.）		OEM MODEL	VSC VX2262WM	Size	Custom
結 隔 瓜 網 腹	G2824-1-2-X-9-080713	TPV MODEL	PWPC8942MQDI	Rev	D
Key Component	04.AUDIO	PCB NAME	715G2824-1-2	称爹	ODM MODEL
Date	Sunday，July 13, 2008	Sheet	4 of 4		

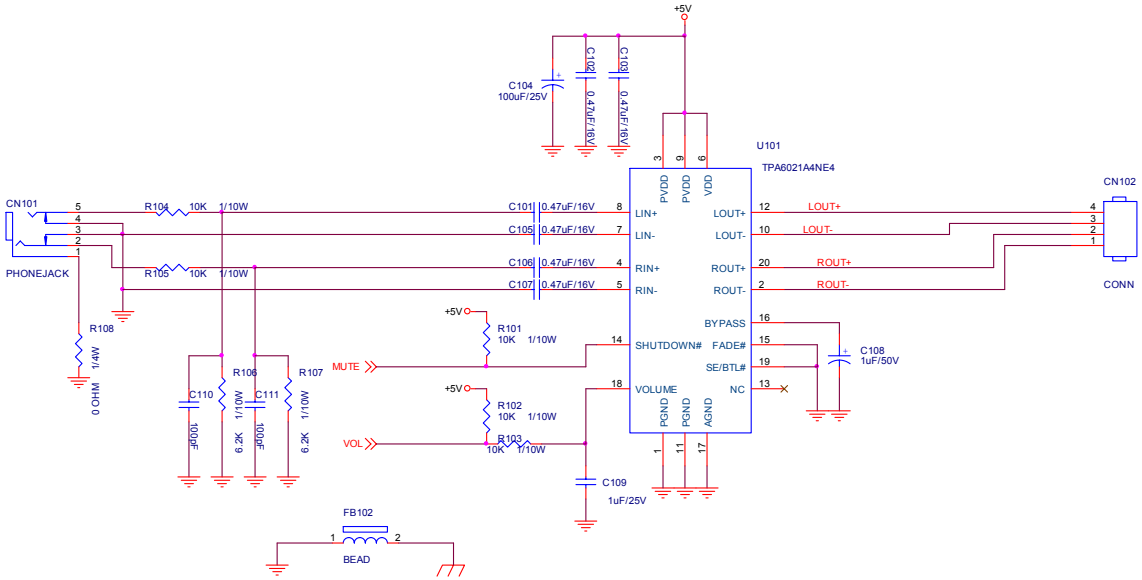
715G2510 1 AO（E191HQ&E181H）



TPV(Top victory) Electronics Co.,ltd.		
Title: 00. Engineer Marks,Contents		
Size: Custom	Document Number: G2510-1-X-X-4-070516	Rev: 1
Date: Friday, May 18, 2007	Sheet 1 of 1	

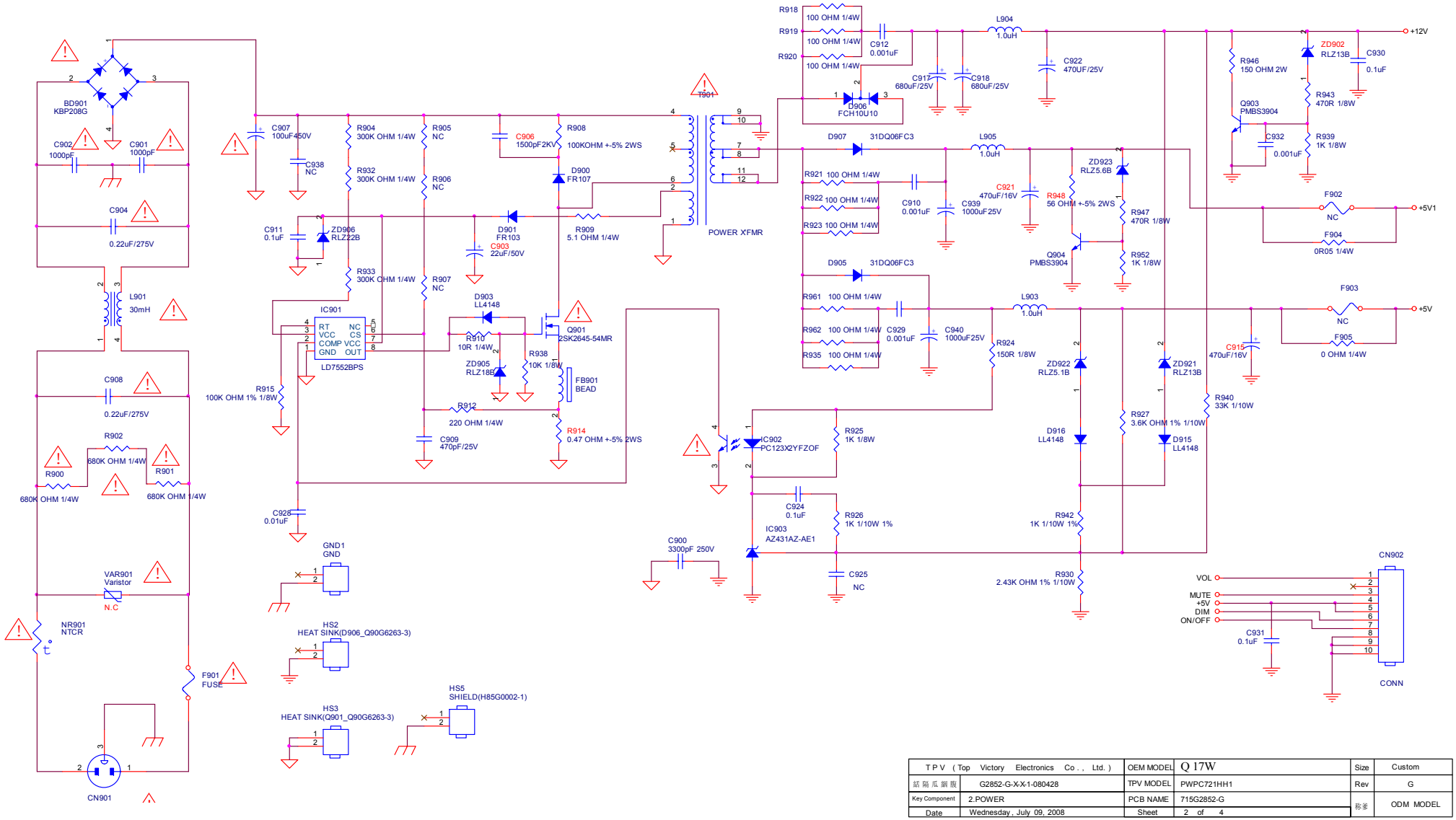


TPV(Top victory) Electronics Co.,ltd.		
Title: 00. Engineer Marks,Contents		
Size: Custom	Document Number: G2510-1-X-X-4-070516	Rev: 1
Date: Wednesday, May 16, 2007	Sheet 1 of 1	

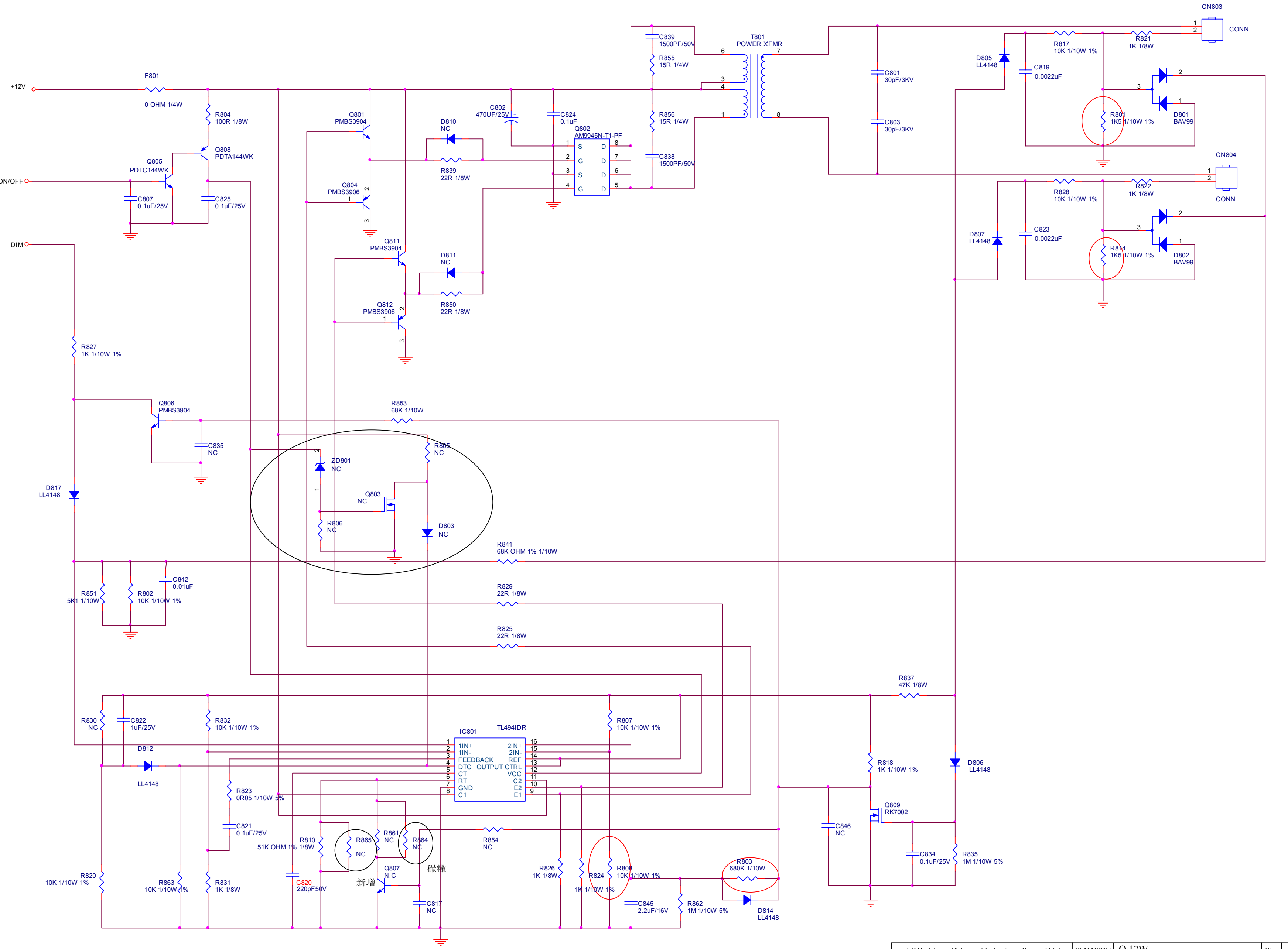


TPV(Top victory) Electronics Co.,ltd.		
Title: 00. Engineer Marks,Contents		
Size: Custom	Document Number: G2510-1-X-X-4-070516	Rev: G
Date: Wednesday, May 16, 2007	Sheet 1 of 1	

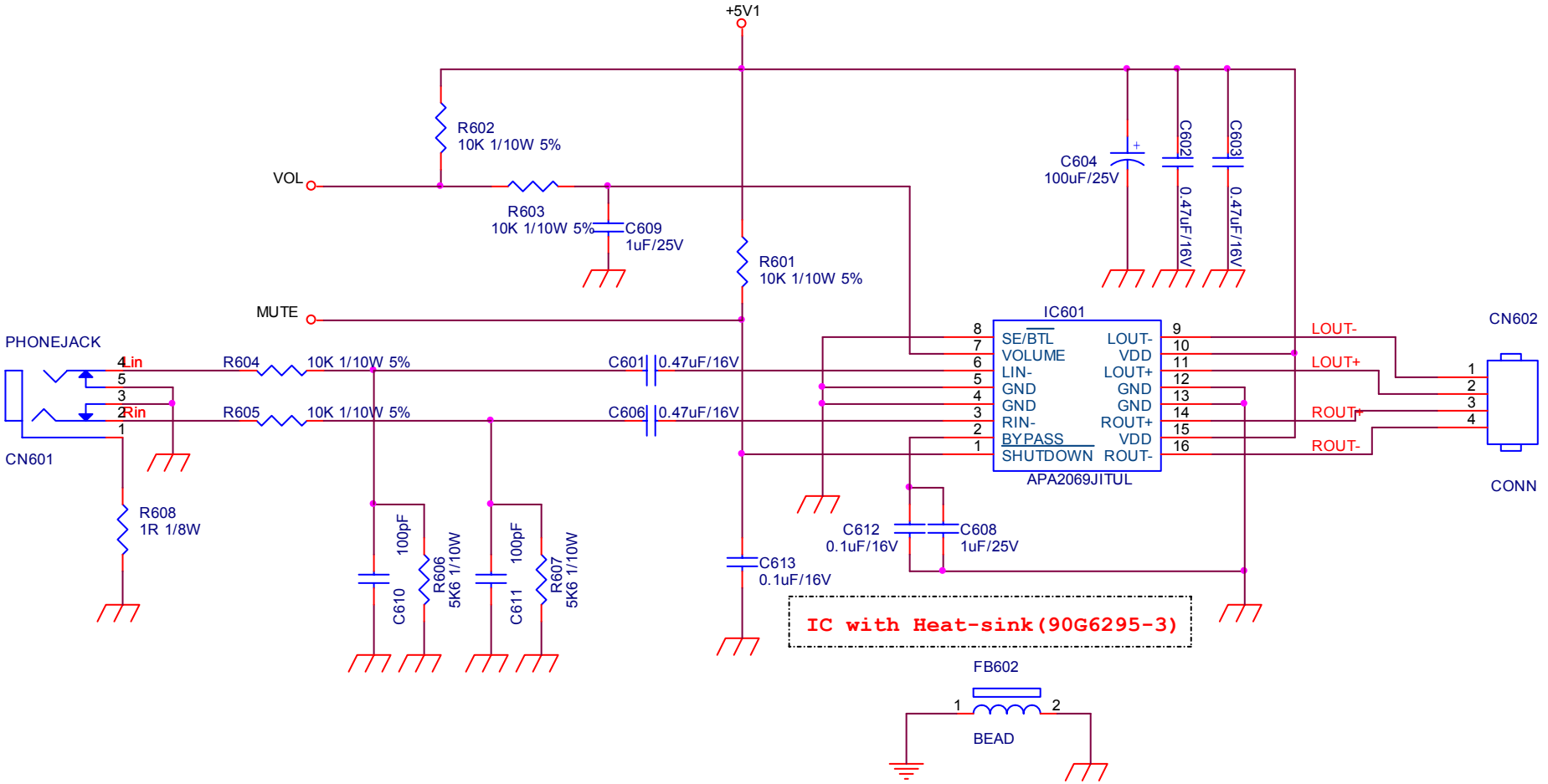
715G2852 2（E161HQ）



T P V （Top Victory Electronics Co., Ltd.）		OEM MODEL	Q 17W	Size	Custom
結 陽 瓜 鎮 腹	G2852-G-X-X-1-080428	TPV MODEL	PWPC721HH1	Rev	G
Key Component	2.POWER	PCB NAME	715G2852-G	称 爹	ODM MODEL
Date	Wednesday, July 09, 2008	Sheet	2 of 4		



TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	Q 17W	Size	Custom
[illegible]	G2852-G-X-X-1-080428	TPV MODEL	PWPC721HH1	Rev	G
Key Component	3.INVERTER	PCB NAME	715G2852-G	[illegible]	ODM MODEL
Date	Monday, April 28, 2008	Sheet	3 of 4		



T P V （Top Victory Electronics Co . , Ltd. ）		OEM MODEL	Q 17W	Size	A
結 隔 瓜 綑 腹	G2852-G-X-X-1-080428	TPV MODEL	PWPC721HH1	Rev	G
Key Component	4.AUDIO	PCB NAME	715G2852-G	称爹	ODM MODEL
Date	Monday , April 28, 2008	Sheet	4 of 4		