Acer AL1716
Service Guide

Service Guide Version and Revision

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1	1.0	Jun.-24-2005	Initial release

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Conventions

The following conventions are used in this manual:

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

Preface

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

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

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

Warning: (For FCC Certified Models)

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

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

Notice:

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

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

Warning:

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

Precautions

- Do not use the monitor near water, e.g. near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool or in a wet basement.
- Do not place the monitor on an unstable trolley, stand, or table. If the monitor falls, it can injure a person and cause serious damage to the appliance. Use only a trolley or stand recommended by the manufacturer or sold with the monitor. If you mount the monitor on a wall or shelf, 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

Chapter 1	**Monitor Features**	……	6
	Induction	……	6
	Electrical Requirements	……	7
	LCD Monitor General Specification	……	8
	LCD Panel Specification	……	9
	Support Timing	……	10
	Block Diagram	……	11
	Main Board Diagram	……	12
	Software Flow chart	……	13
	Main Board Layout	……	15
	Front Bezel	……	16
	Rear Bezel	……	17
Chapter 2	**Operating Instructions**	……	18
	External Controls	……	18
	Front Panel Controls	……	19
	Adjusting the picture	……	20
	Hot-Key Menu	……	23
	OSD Message	……	23
	LOGO	……	24
Chapter 3	**Machine Disassembly**	……	25
Chapter 4	**Troubleshooting**	……	32
Chapter 5	**Connector Information**	……	37
Chapter 6	**FRU (Field Replacement Unit) List**	……	38
	Exploded Diagram	……	39
Chapter 7	**Schematic Diagram**	……	41
	Analog	……	41
	TSUM16AK	……	42
	LVDS	……	43
	Main board power supply	……	44
	Power Board	……	45

Monitor Features

Introduction

Scope

This specification defines the requirements for the 17” MICROPROCESSOR based Multi-mode supported high resolution color LCD monitor. This monitor can be directly connected to general 15 pin D-sub VGA connector. It 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 AL1716

Panel	M170EG01 V.8
Signal Interface	D-SUB
Sync Type	Separate / Compatible
Color Temp User Adjust	Support
DDC	VESA DDC2B
Speaker	No
Headphone Jack	No
Microphone Jack	No
USB Hub	Not support
Tilt / Swivel	Yes / No
Height Adjust	Option

Electrical Requirements

Standard Test Conditions

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

Ambient light		225 lux
Viewing distance		40 cm in front of LCD panel
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.
Control settings	User brightness control	Maximum (unless otherwise specified)
	User contrast control	Typical (unless otherwise specified)
	User red/white balance, Green/white balance and Blue/white balance control	In the center (unless otherwise specified)
Power input		100VAC or 264VAC
Ambient temperature		20±5°C
Analog input mode		1280 x1024 /75 Hz
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 type	17 “ active matrix color TFT LCD
	M170EG01 V.8
Display size	337.920mm (H) X 270.336mm(V)
Display mode	VGA 640 X 480 (60/75 Hz)
	SVGA 800 X 600 (60/75 Hz)
	XGA 1024 X 768 (60/70/75 Hz)
	SXGA 1280 X 1024 (60/75 Hz)
Pixel pitch	0.264mm(H) X 0.264mm(V)
Display dot	1280 x (RGB) X 1024
Pixel clock	135MHz(max.)
Contrast ratio	500:1(typ.)
Brightness	300 cd/m^2 (typ.)
Response time (Tr+Tf)	8ms(Typ.)
Display color	16.2M(6-bits+FRC)
Viewing angle	H: 140 / V: 130 (typ.) (CR=10)
Pc interface	RGB Analog Interface
Signal connector	D-Sub 15pin
Interface frequency	Horizontal Frequency 30KHz ----80KHz
	Vertical Frequency 55Hz ------75Hz
Plug & play	VESA DDC2B
Power Input voltage	47-63HZ, 100 VAC to 264VAC ±10%
Power Consumption	40 Watts (max.)

LCD Panel Specification

LCD Panel Model (M170EG01 V.8)

- Display Type active matrix color TFT LCD
- Resolution 1280x1024 pixels
- Display Dot 1280x (RGB) x 1024
- Display Area 337.920mm(H) x 270.336mm(V)
- Pixel Pitch 0.264mm(H) x 0.264mm(V)
- Display Color 16.2M Colors
- Lamp Frequency 60KHz(typ.)
- Lamp Current 7.5mArms (typ.)
- Weight 1900g (typ.)

Optical Specifications

Measuring Condition: Ta = 25°C(Room Temperature).

Item	Unit	Conditions	Min.	Typ.	Max.	Note
Viewing Angle	[degree]	Horizontal (Right) CR = 10 (Left)	60 60	70 70		-
		Vertical (Up) CR = 10 (Down)	60 50	70 60		-
		Horizontal (Right) CR = 5 (Left)	70 70	80 80		
		Vertical (Up) CR = 5 (Down)	70 70	80 80		
Contrast ratio		Normal Direction	300	500		-
Response Time	[msec]	Rising Time	-	6	9	*Note 1*
		Falling Time	-	2	4	
		Rising + Falling	-	8	13	
Color / Chromaticity Coordinates (CIE)		Red x	0.61	0.64	0.67	
		Red y	0.31	0.34	0.37	
		Green x	0.26	0.29	0.32	
		Green y	0.58	0.61	0.64	
		Blue x	0.11	0.14	0.17	
		Blue y	0.04	0.07	0.10	
Color Coordinates (CIE) White		White x	0.28	0.31	0.34	
		White y	0.30	0.33	0.36	
White Luminance @ CCFL 7.5mA (center)	[cd/m^2]		240	300		-
Luminance Uniformity	[%]		75	80		*Note 2*
Crosstalk (in 75Hz)	[%]				1.5	*Note 3*
Flicker	dB				-20	*Note 4*

Supported Timing

STANDARD		RESOLUTION	HORIZONTAL FREQUENCY(kHz)	VERTICAL FREQUENCY(Hz)
VESA	VGA	640 × 480	31.469	59.940
		640 × 480	37.500	75.000
	SVGA	800 × 600	37.879	60.317
		800 × 600	46.875	75.000
	XGA	1024 × 768	48.363	60.004
		1024 × 768	56.476	70.069
		1024 × 768	60.023	75.029
	SXGA	1280 × 1024	64.000	60.000
		1280 × 1024	80.000	75.000
IBM	DOS	720 × 400	31.469	70.087
MAC	XGA	1024 × 768	48.780	60.001
		1024 × 768	60.241	74.927

Support Modes

There will be 20 total support modes to accommodate the above mode and other video modes within the frequency range of the monitor.

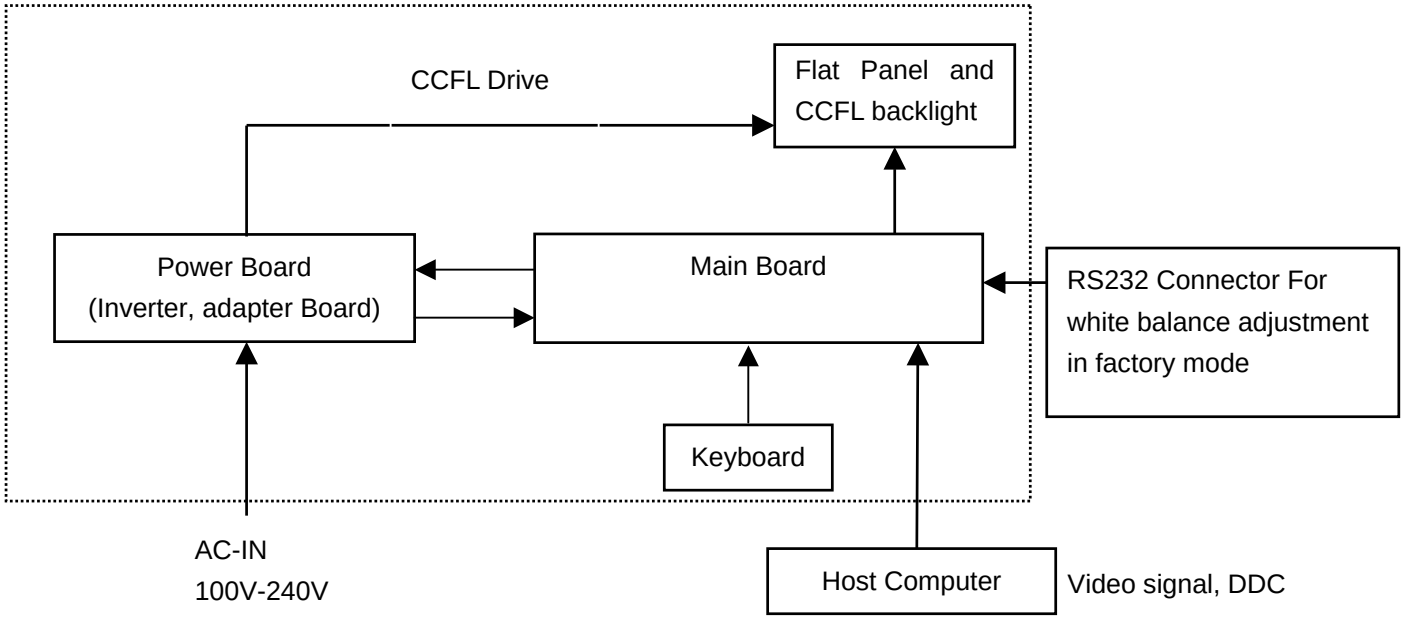
85Hz refresh rate Support

Monitor should display 85Hz refresh rate mode as emergency mode. Monitor should display " Out of Range" warning menu at this mode.

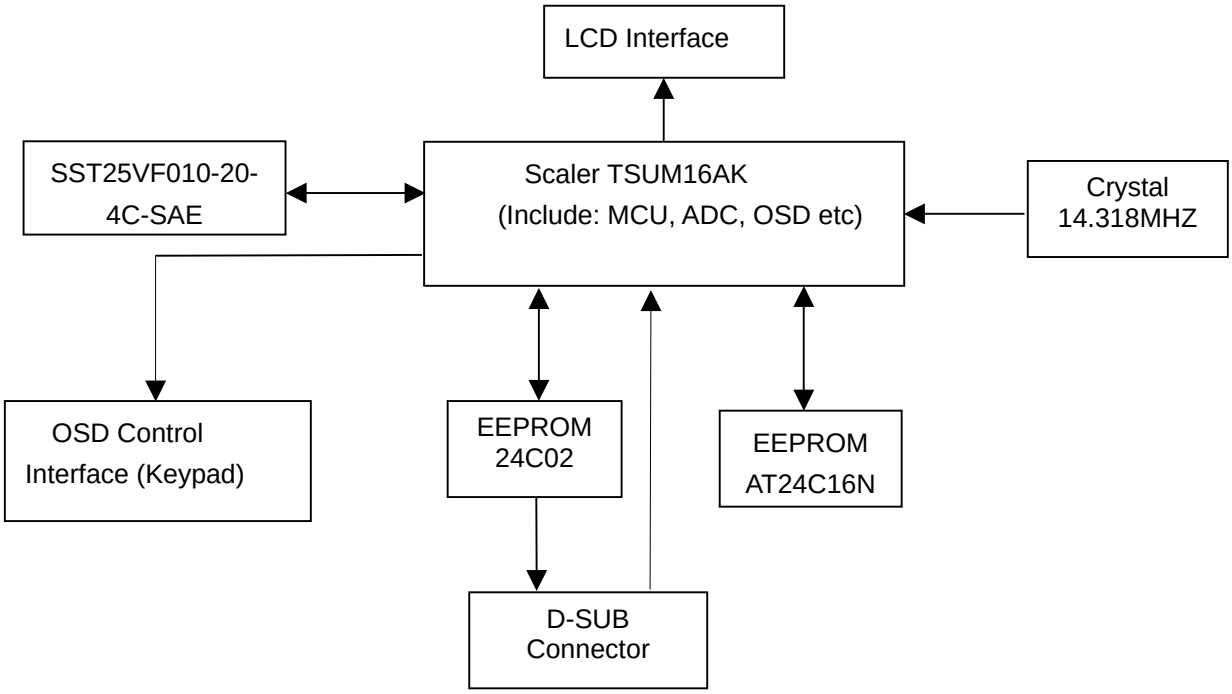
Monitor Block Diagram

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

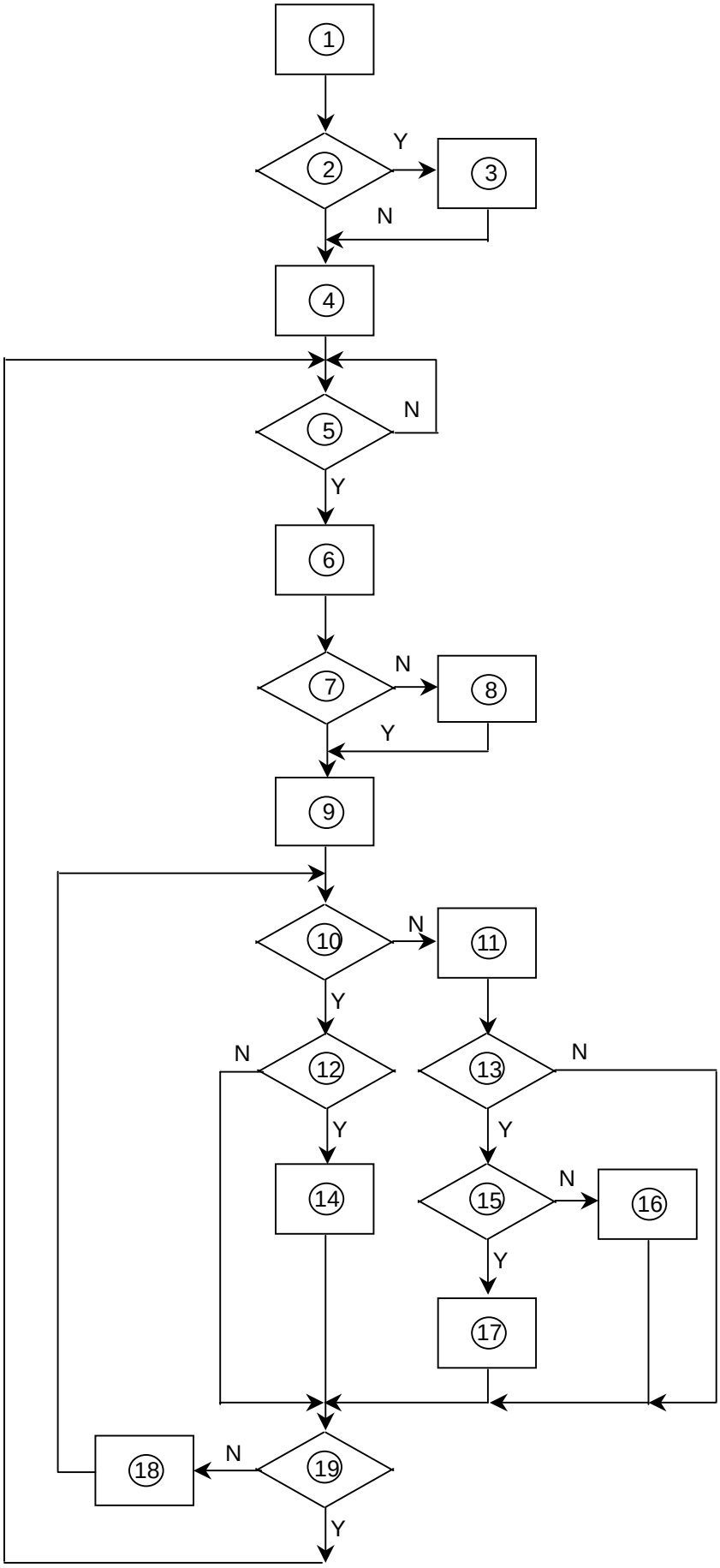
The Inverter board will drive the backlight of panel.



Main Board Diagram



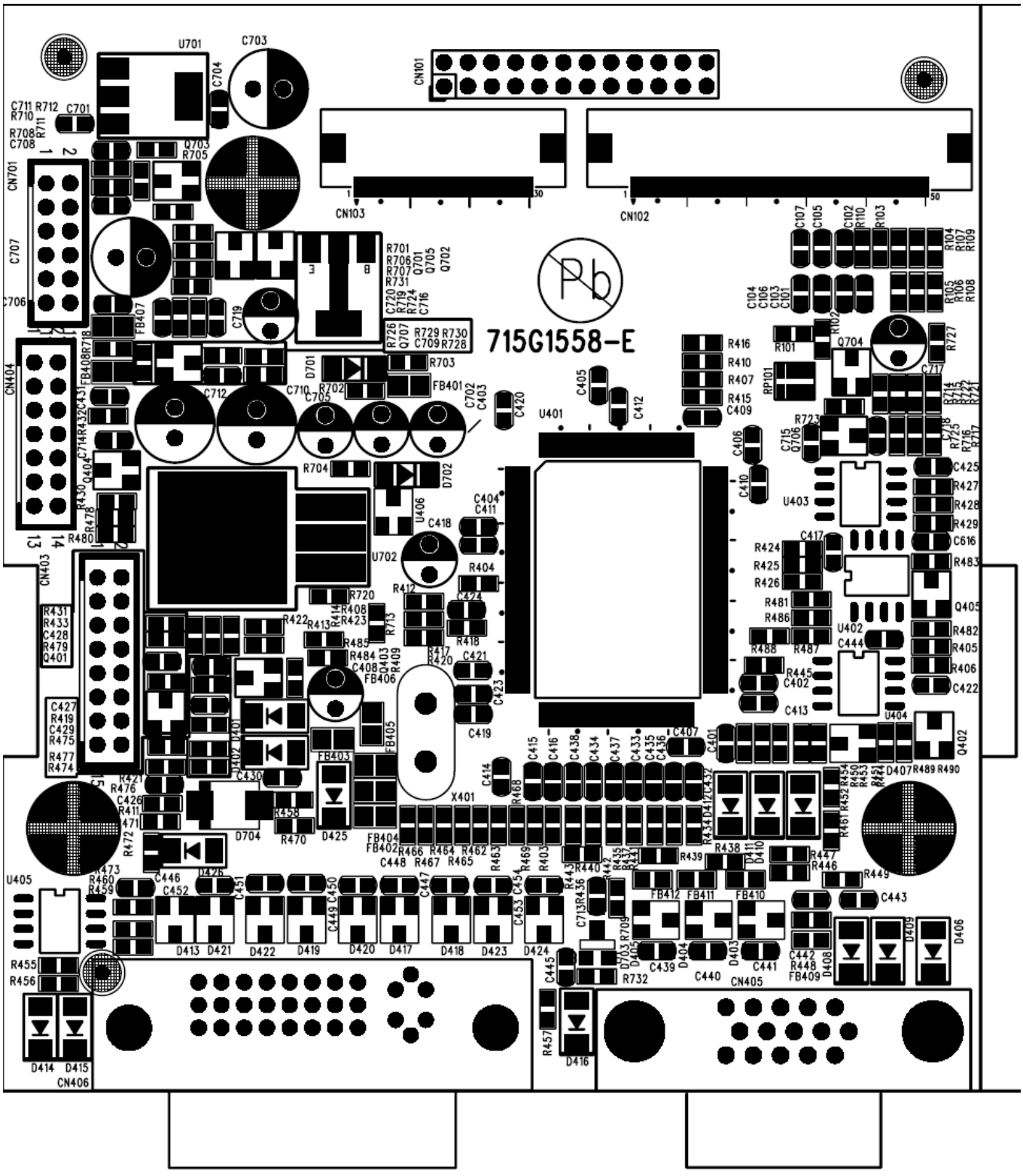
Software Flow Chart



Remark:

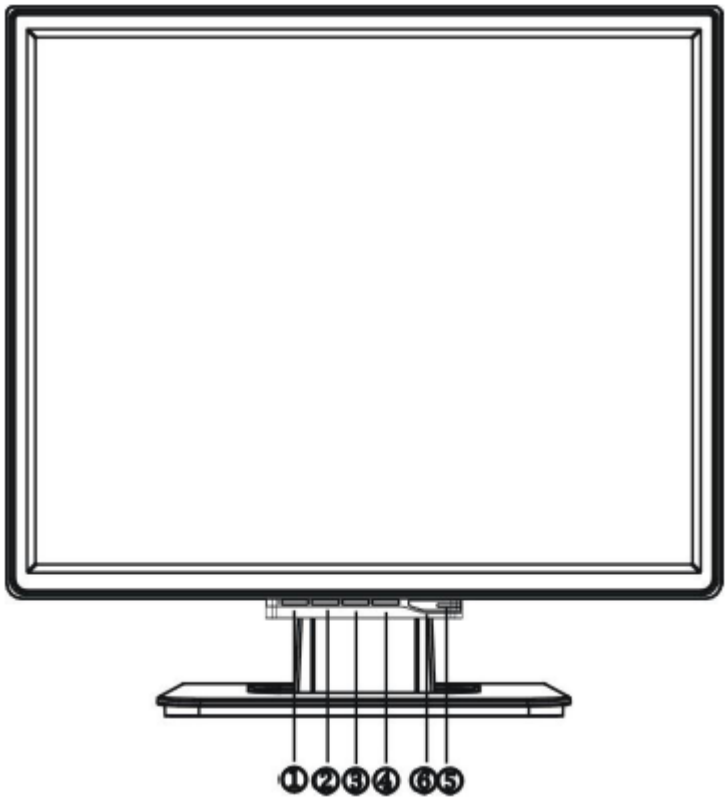
1) MCU initializes.
2) Is the EEPROM blank?
3) Program the EEPROM by default values.
4) Get the PWM value of brightness from EEPROM.
5) Is the power key pressed?
6) Clear all global flags.
7) Are the AUTO and SELECT keys pressed?
8) Enter factory mode.
9) Save the power key status into EEPROM. Turn on 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



Label	Part number	Description
CN405	88G 35315F H	D-SUB 15PIN
CN101	33G802724B H	WAFER
U401	56G 562100	TSUM16AK
X401	93G 22 53	CRYSTAL 14.318MHzHC-49U

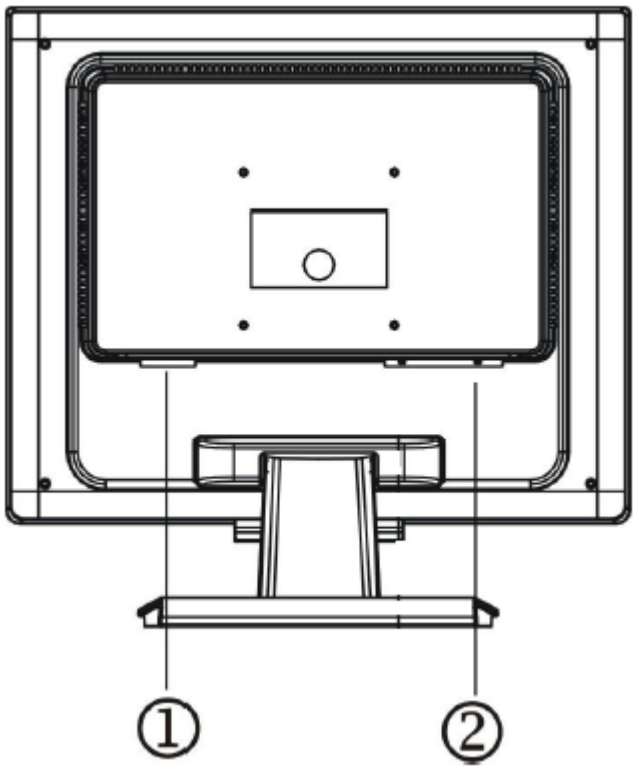
Front Bezel



EXTERNAL CONTROLS FRONT PANEL CONTROL

Item	Description	Item	Description
1.	Auto Adjust / Exit	4.	MENU/ENTER
2.	<	5.	Power Indicator
3.	>	6.	Power Button

Rear Bezel



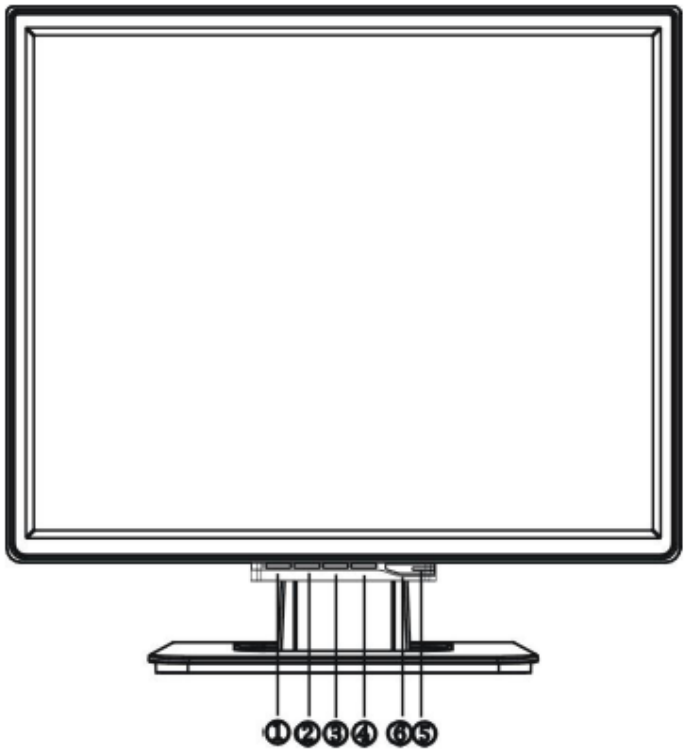
Item	Description
1.	Power Cable
2.	Signal Cable

Operating Instructions

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

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

External Controls



Item	Description	Item	Description
1.	Auto Adjust / Exit	4.	MENU/ENTER
2.	<	5.	Power Indicator
3.	>	6.	Power Button

Front Panel Control

- **⏻/Power Button:**
  Press this button to turn the monitor ON or OFF. And display the monitor's state.

- Power Indicator:
  Green – Power on mode.
  Orange – Off mode.

- **Menu / Enter:**
  Activate OSD menu when OSD is OFF or activate/de-activate adjustment function when OSD is ON or Exit OSD menu when in Volume Adjust OSD status.

- **<:**
  Negative through adjustment icons when OSD is ON or adjust a function when function is activated.

- **>:**
  Navigate through adjustment icons when OSD is ON or adjust a function when function is activated.

- **Auto Adjust button / Exit:**
  1. When OSD menu is in active status, this button will act as EXIT-KEY (EXIT OSD menu).
  2. When OSD menu is in off status, press this button for 2 seconds to activate the Auto Adjustment function.
     The Auto Adjustment function is used to set the HPos, VPos, Clock and Focus.

NOTES

- Do not install the monitor in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, or excessive dust or mechanical vibration or shock.
- Save the original shipping carton and packing materials, as they will come in handy if you ever have to ship your monitor.
- For maximum protection, repackage your monitor as it was originally packed at the factory.
- To keep the monitor looking new, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use strong solvents such as thinner, benzene, or abrasive cleaners, since these will damage the cabinet. As a safety precaution, always unplug the monitor before cleaning it.

Adjusting the Picture

a. How to Adjust a Setting

1. Press the MENU-button to activate the OSD window.
2. Press < or > to select the desired function.
3. Press the MENU-button to select the function that you want to adjust.
4. Press < or > to change the settings of the current function.
5. To exit and save, select the exit function. If you want to adjust any other function, repeat steps 2-4.

Analog-Only Mode

b. The Description For Control Function

Main Menu Icon	Sub Menu Item	Sub Menu Icon	Description
	Contrast		Contrast from Digital-register.
	Brightness		Backlight Adjustment
	Focus		Adjust Picture Phase to reduce Horizontal-Line noise
	Clock		Adjust picture Clock to reduce Vertical-Line noise.
	H. Position		Adjust the horizontal position of the picture.
	V. Position		Adjust the vertical position of the picture.
	Warm	N/A	Recall Warm Color Temperature from EEPROM.
	Cool	N/A	Recall Cool Color Temperature from EEPROM.
	User / Red		Red Gain from Digital-register.
	User/ Green		Green Gain Digital-register.
	User / Blue		Blue Gain from Digital-register.
	English	N/A	Set OSD display language to English.
	Traditional Chinese	N/A	Set OSD display language to Traditional Chinese.
	Deutsch	N/A	Set OSD display language to German.
	Français	N/A	Set OSD display language to French.
	Español	N/A	Set OSD display language to Spain.
	Italiano	N/A	Set OSD display language to Italian.
	Simplified Chinese	N/A	Set OSD display language to Simplified Chinese.
	Japanese	N/A	Set OSD display language to Japanese.
	H. Position		Adjust the horizontal position of the OSD.
	V. Position		Adjust the vertical position of the OSD.
	OSD Timeout		Adjust the OSD timeout.

Main Menu Icon	Sub Menu Item	Sub Menu Icon	Description
(Analog-Only Model)	Auto Config	N/A	Auto Adjust the H/V Position, Focus and Clock of picture.
	Information	N/A	Show the resolution, H/V frequency and input port of current input timing.
	Reset	N/A	Clear each old status of Auto-configuration and set the color temperature to Cool.
	Exit	N/A	Exit OSD

OSD Message

a. Outline

b. The Description For OSD Message

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

Logo

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

How To Optimize The DOS-Mode

Plug And Play

Plug & Play DDC2B Feature

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

The DDC2B is a bi-directional data channel based on the I²C protocol. The host can request EDID information over the DDC2B channel.

This monitor will appear to be non-functional if there is no video input signal. In order for this monitor to operate properly, there must be a video input signal.

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

Using The Right Power Cord

The accessory power cord for the Northern American region is the wallet plug with NEMA 5-15 style and is UL listed and CSA labeled. The voltage rating for the power cord shall be 125 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, 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.

Machine Disassembly

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

Disassembly Procedure

Disassemble the base

1. Remove hinge cover. (Fig 1)
2. Remove four screws to release stand base. (Fig 2)

Fig 1

Fig 2

Disassemble the front cover and rear bezel

1. Remove five screws to release back cover and front bezel. (Fig 3)
2. Remove connector wire with keyboard and main board. (Fig 4)

Fig 3

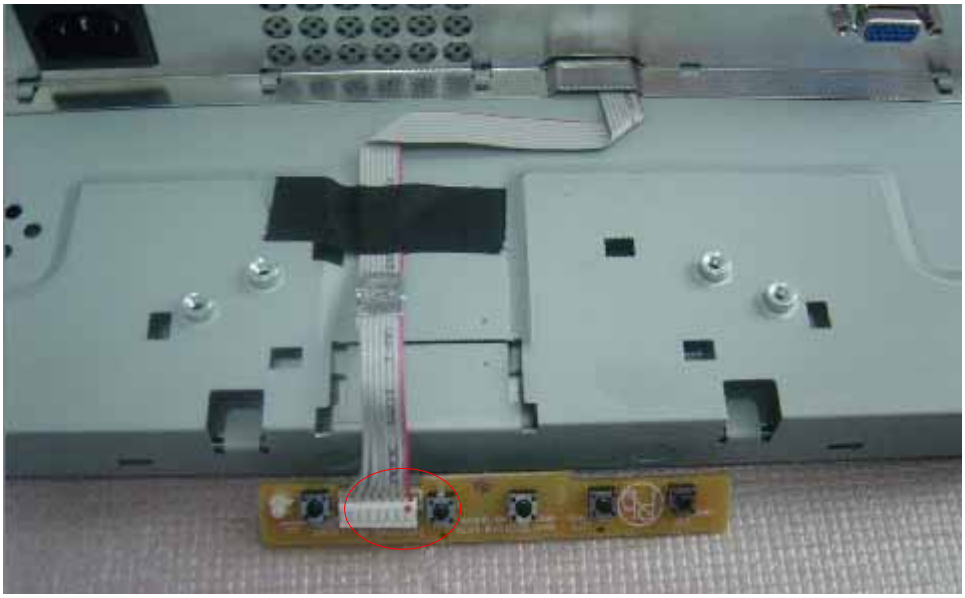


Fig 4

Disassemble the shield

Remove two screws to release the shield. (Fig 5)

(Remove the shield as arrow direction).

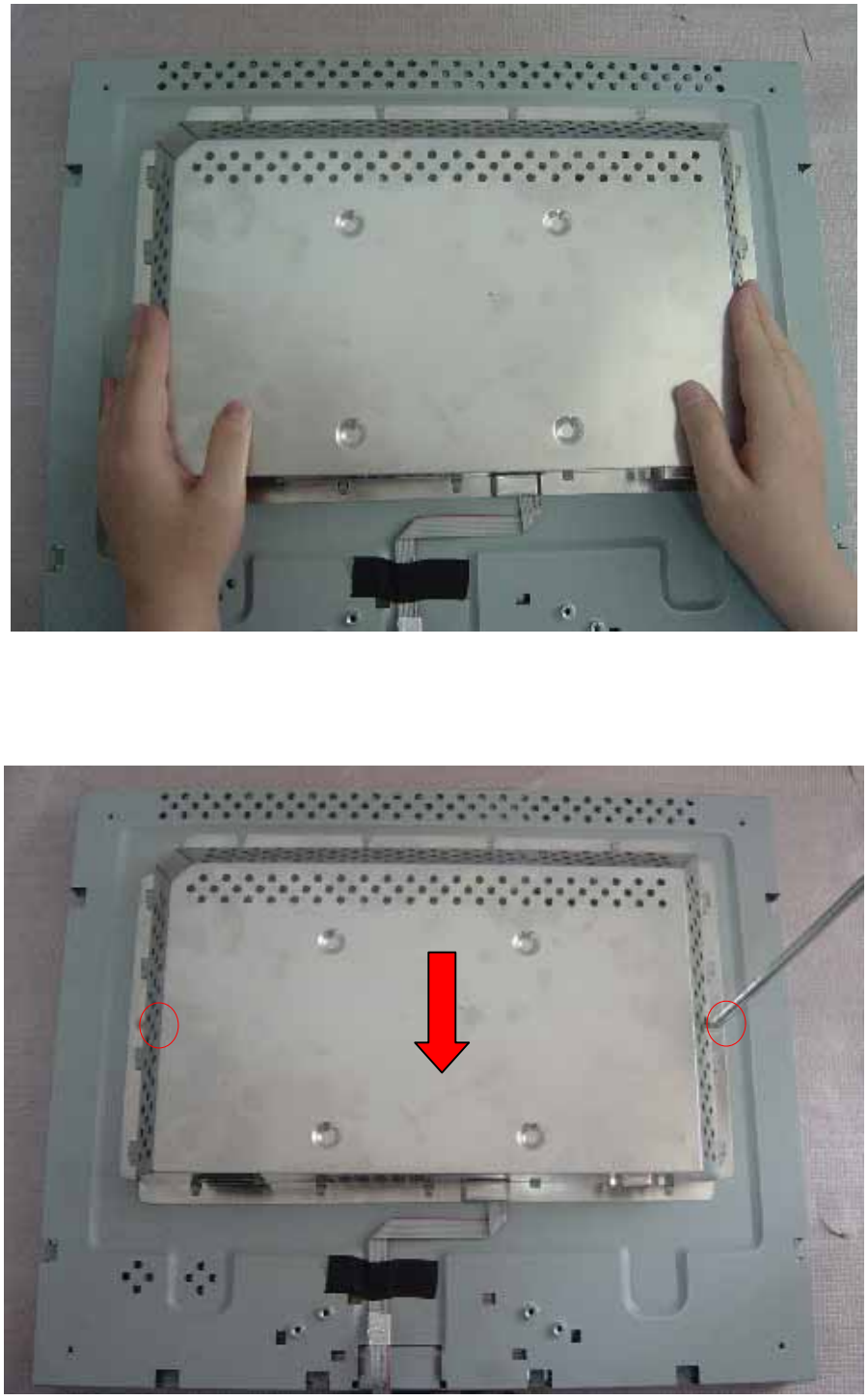


Fig 5

Disassemble the main board

1. Remove three screws to release main board. (Fig 6)
2. Remove connector wire with main board and panel. (Fig 7)

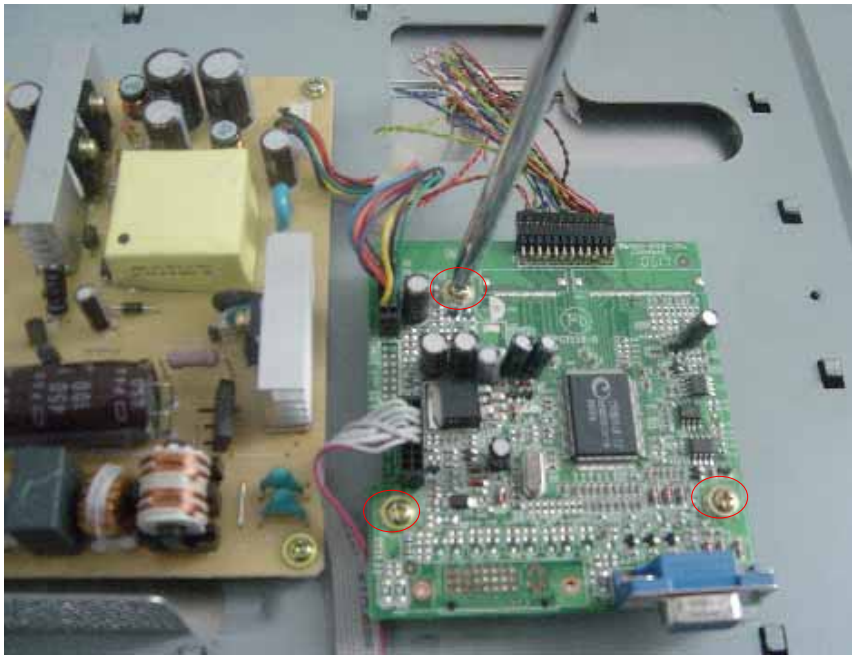


Fig 6

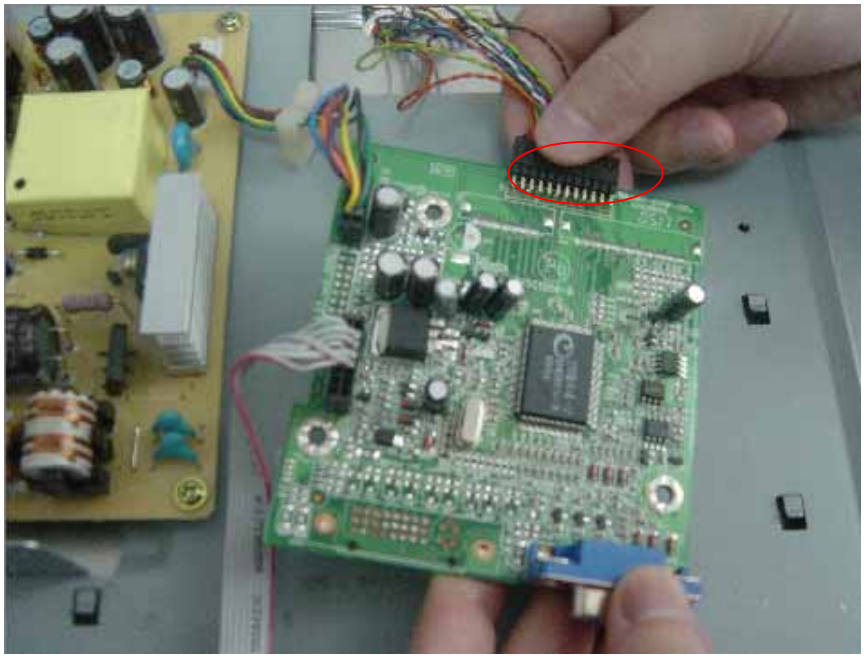


Fig 7

3. Remove connector wire with main board and power board. (Fig 8)
4. Remove connector wire with main board and KEPC board. (Fig 9)

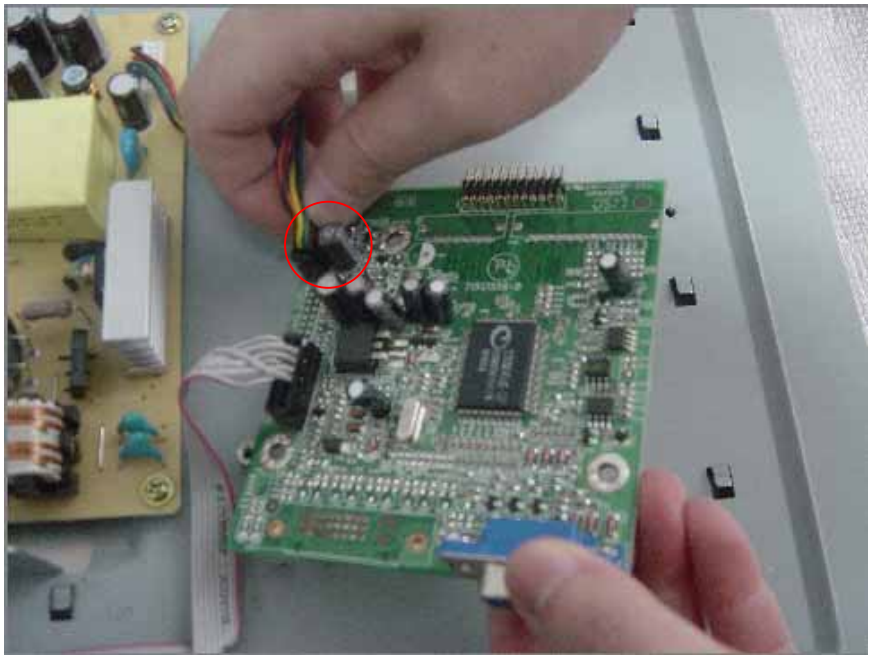


Fig 8

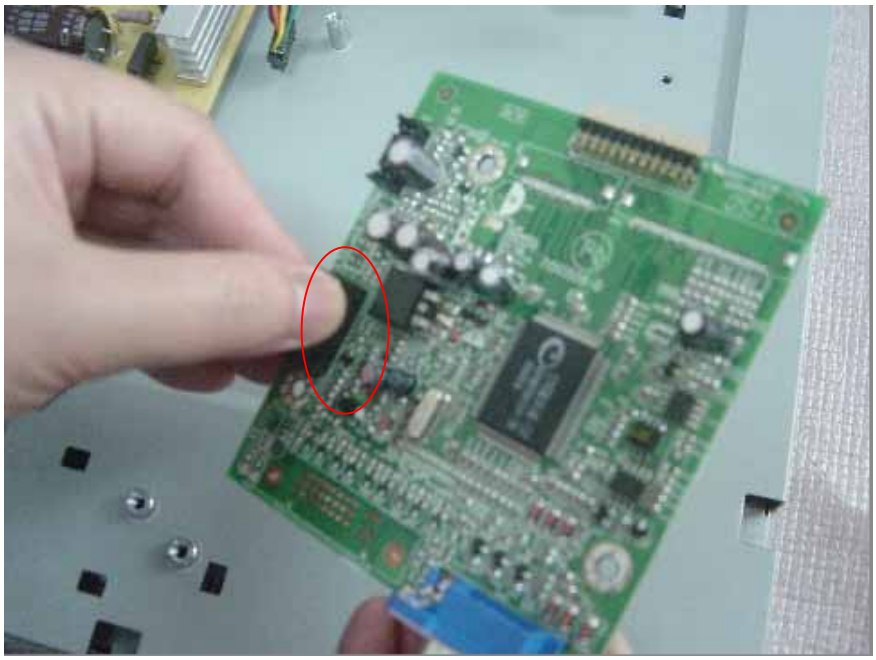


Fig 9

Disassemble the power board

1. Remove four screws to release power board. (Fig 10)
2. Remove connector wire with power board and panel. (Fig 11)

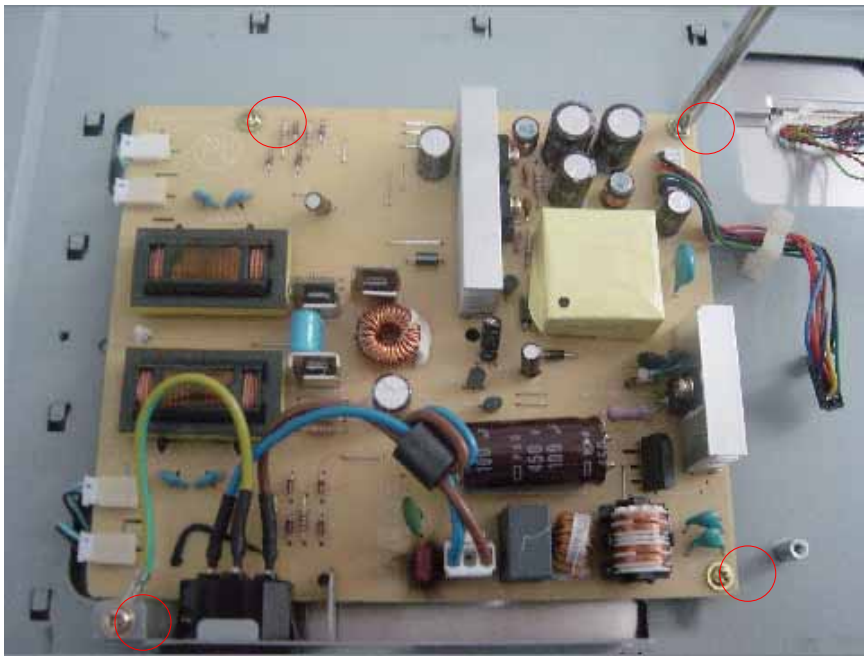


Fig 10

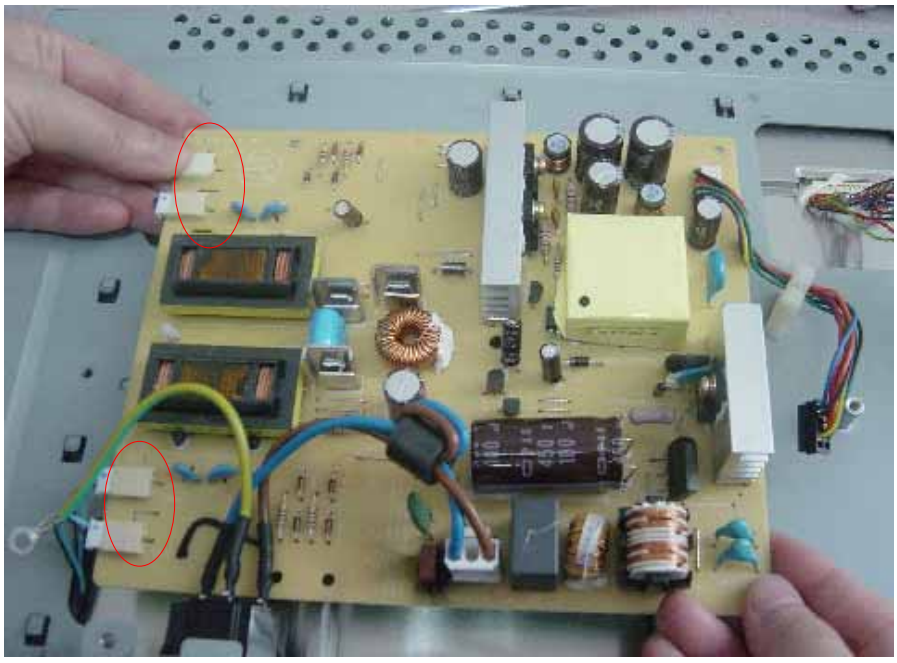


Fig 11

Disassemble the panel

Remove four screws to release metal frame. (Fig 12)

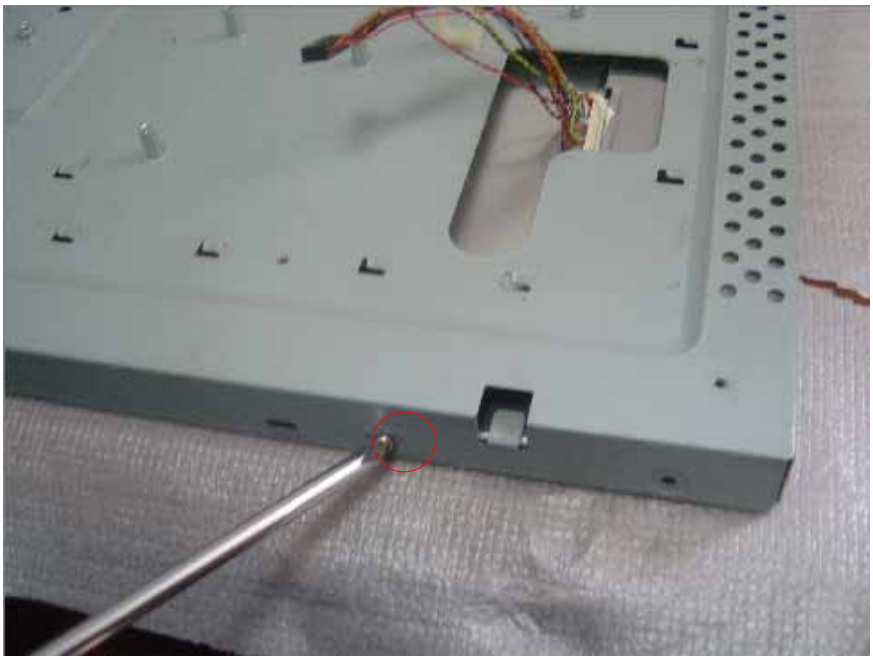
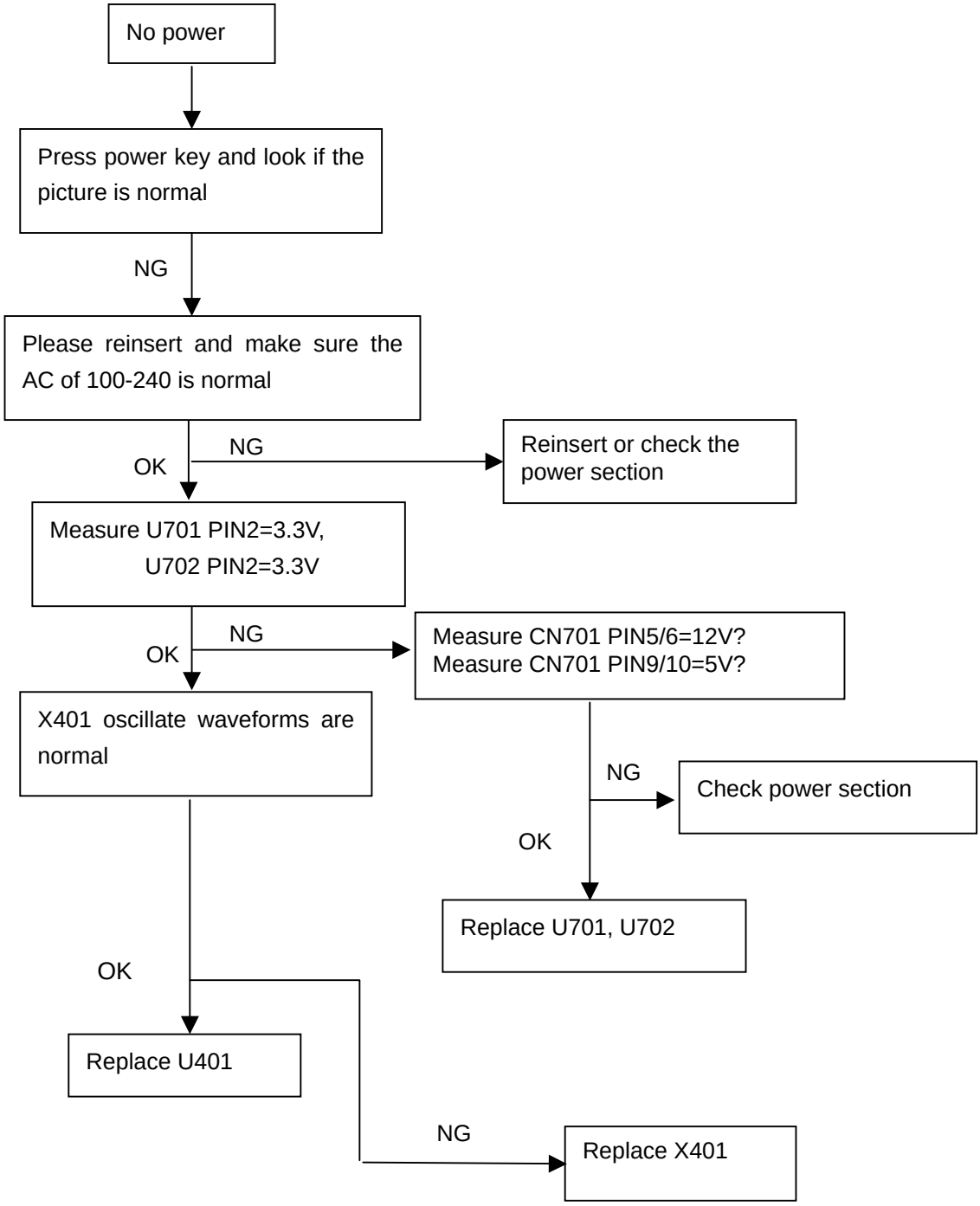


Fig 12

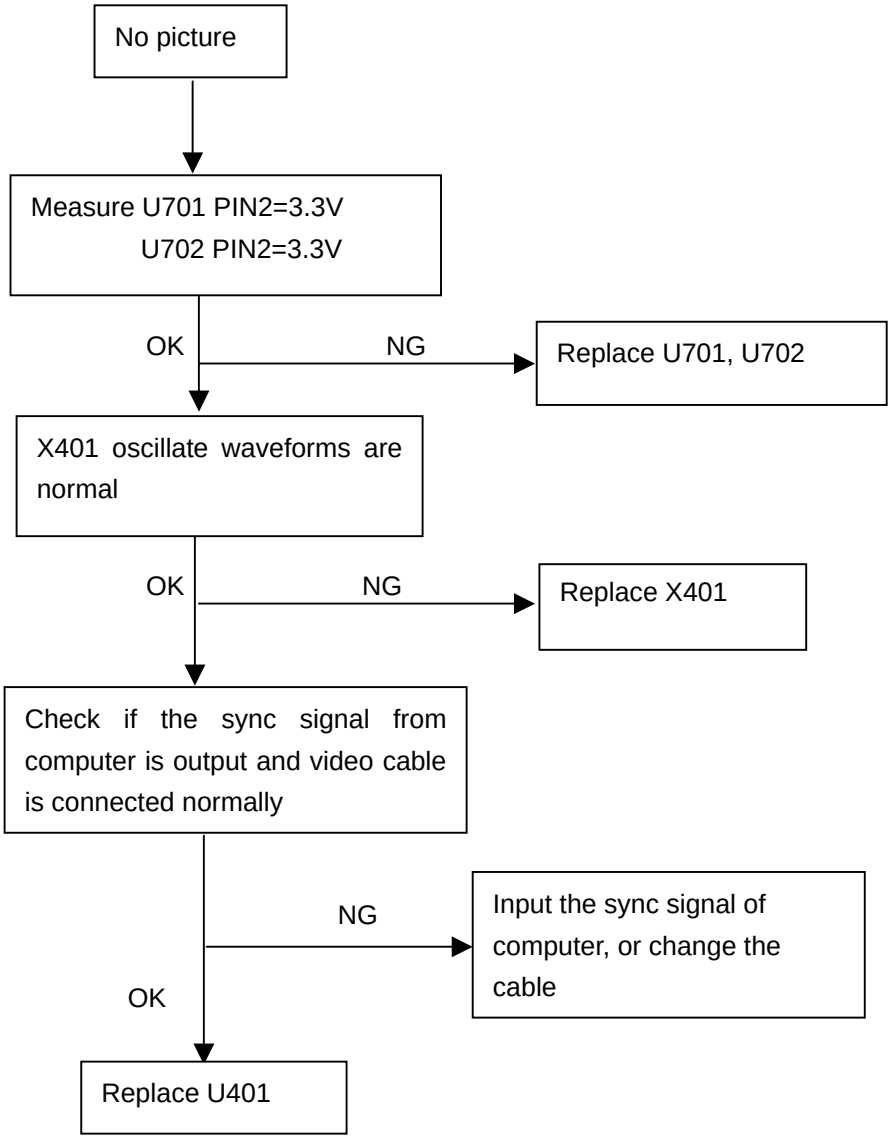
Troubleshooting

This chapter provides troubleshooting information for the AL1716:

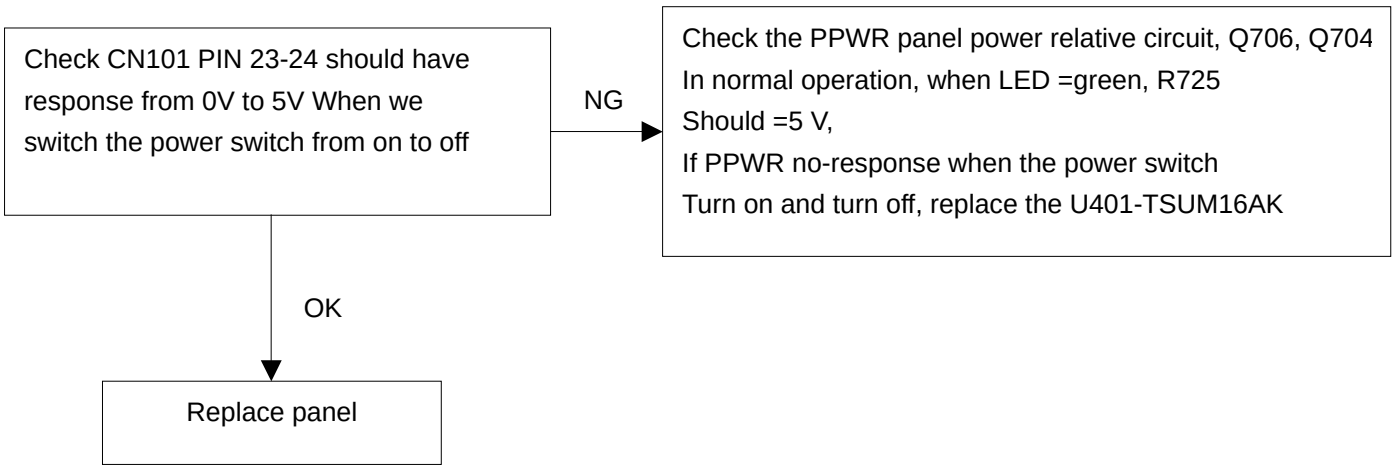
1. No power



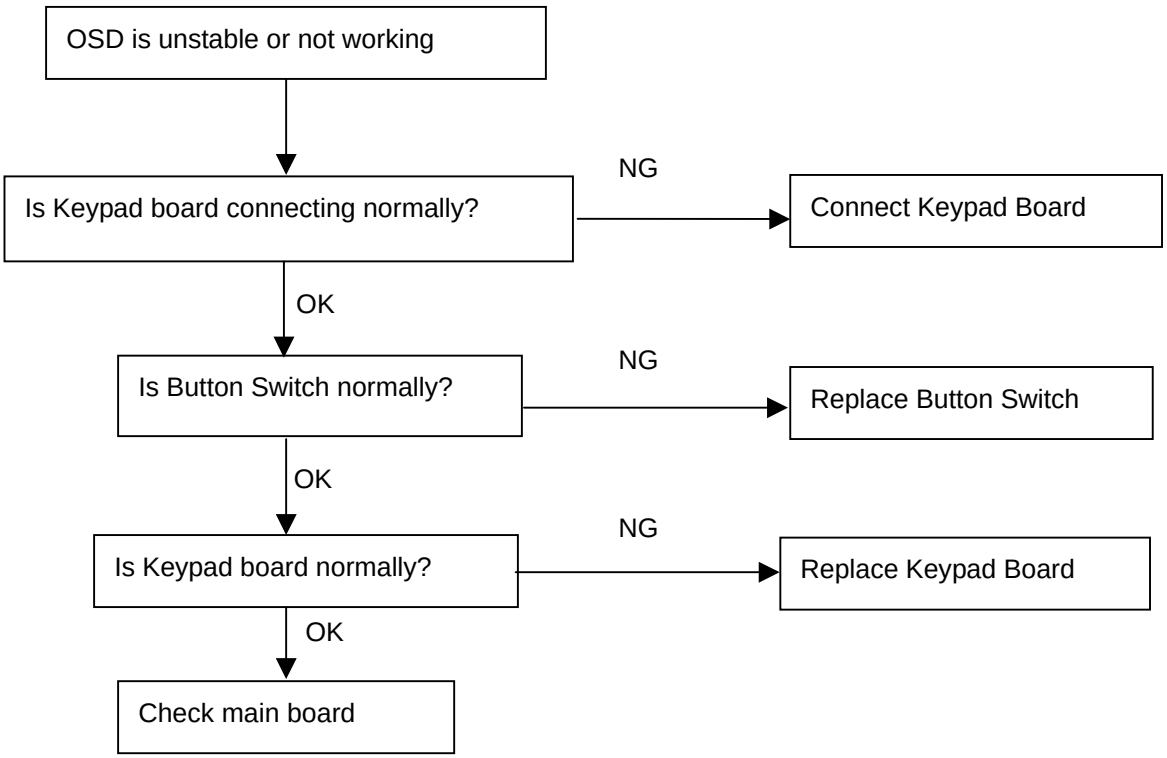
2. No picture (LED is orange)



3. Panel Power Circuit

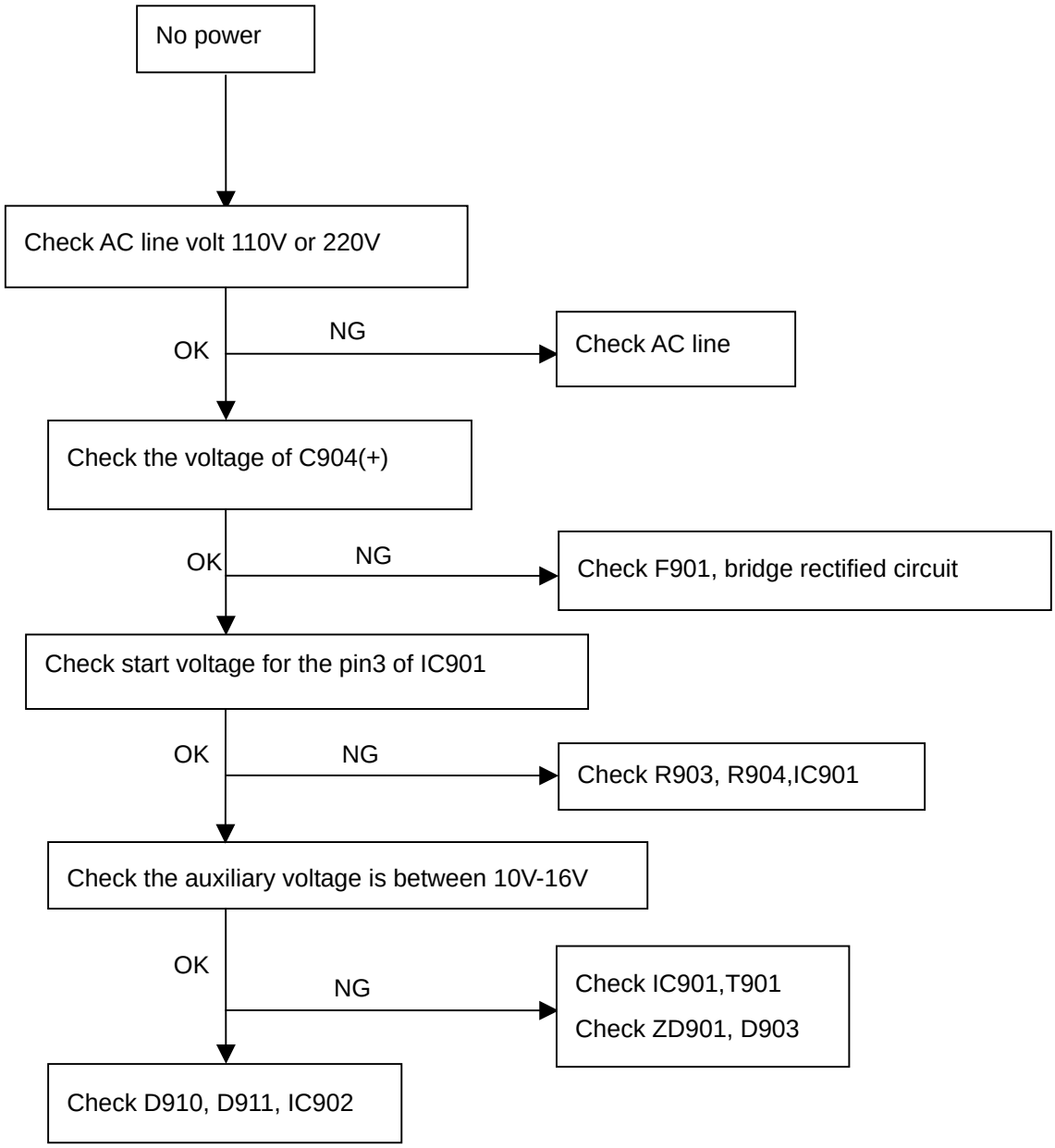


4. Keypad Board

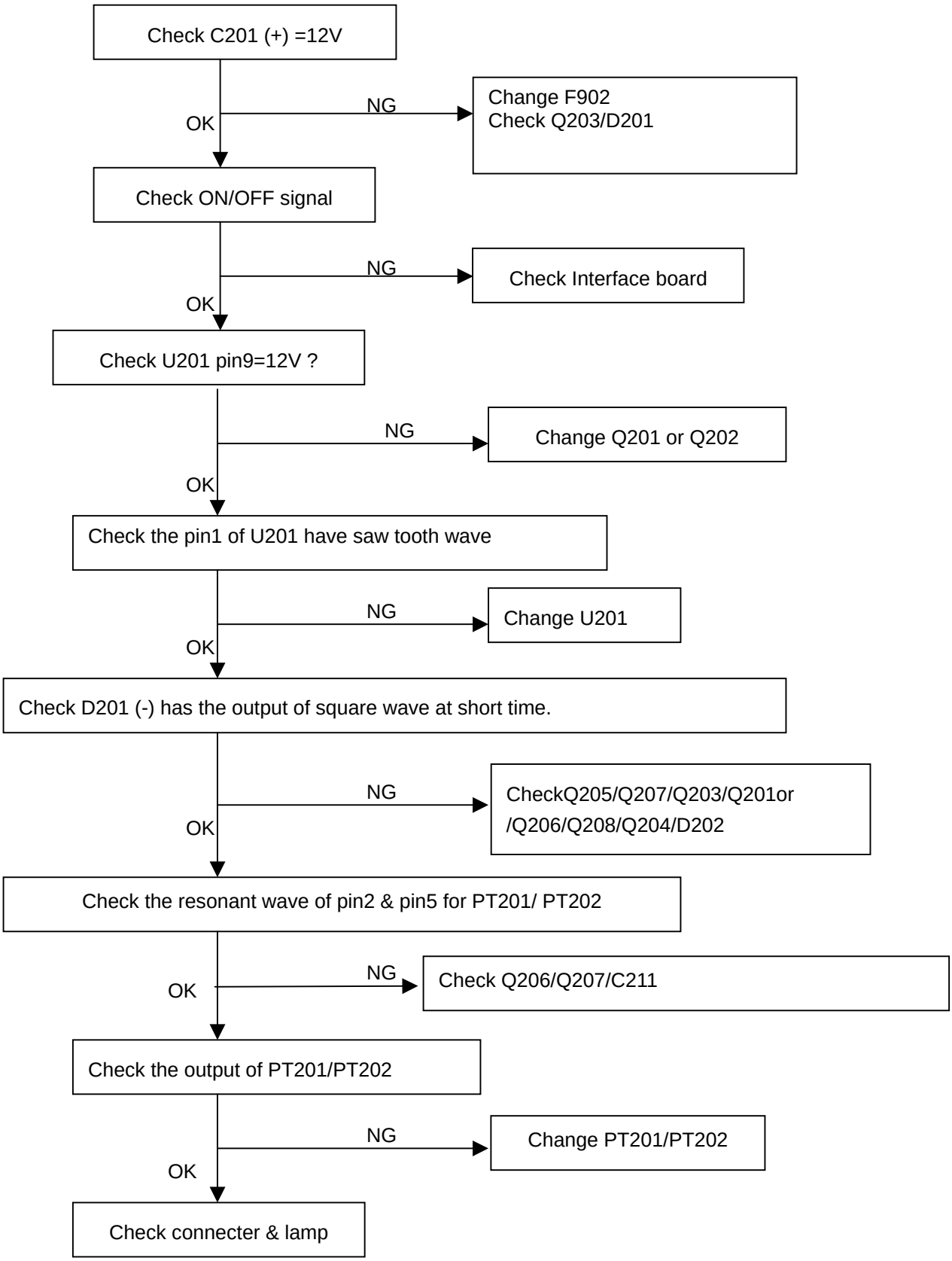


5. PWPC

No Power

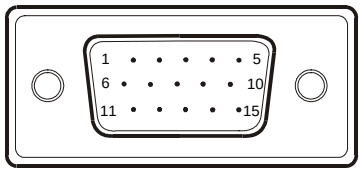


No Backlight



Connector Information

The following figure shows the connector locations on the monitor board:



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

PIN NO.	DESCRIPTION	PI N 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		

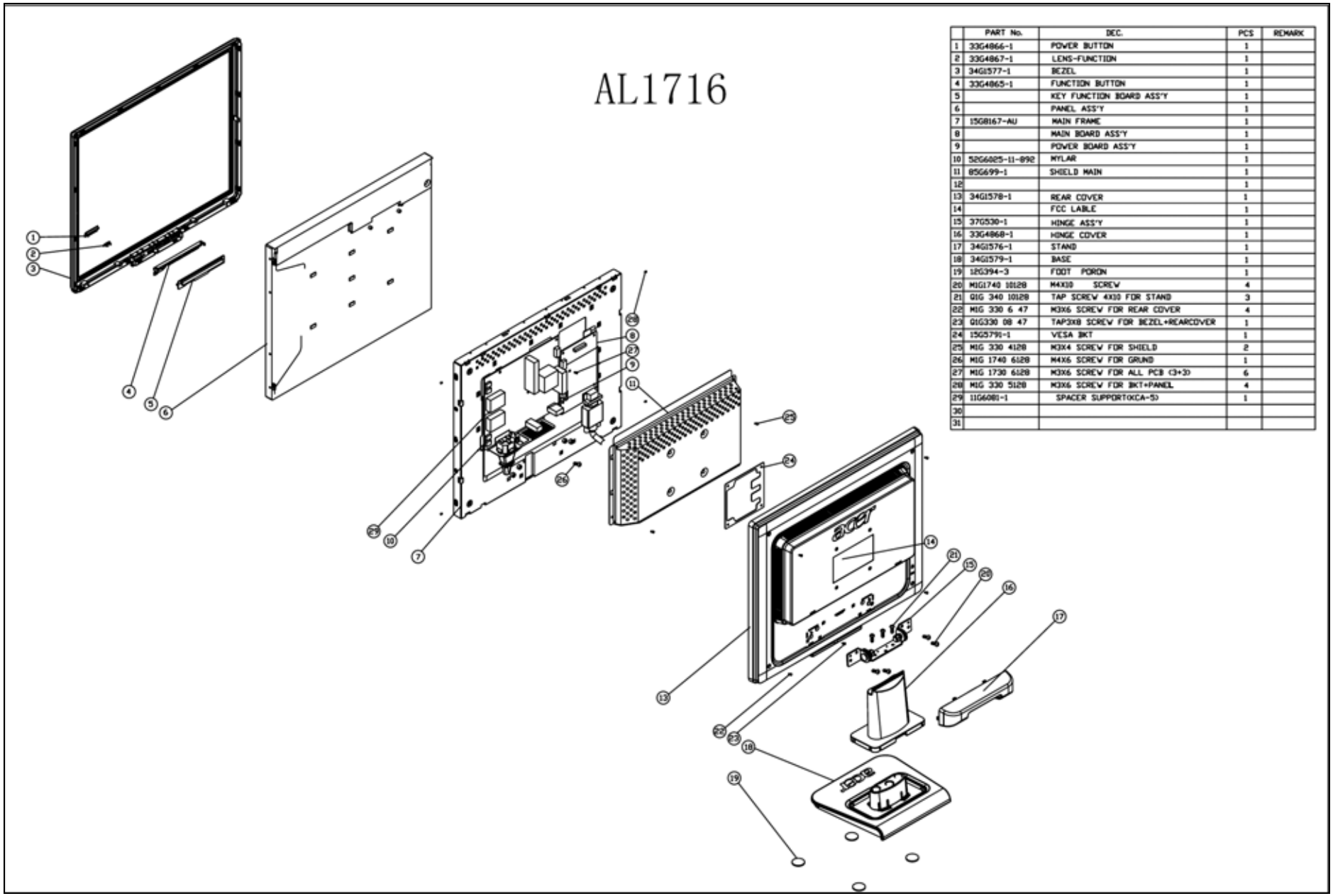
FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of AL1716. 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: AL1716)



	PART No.	DEC.	PCS	REMARK
1	33G4866-1	POWER BUTTON	1	
2	33G4867-1	LENS-FUNCTION	1	
3	34G1577-1	BEZEL	1	
4	33G4865-1	FUNCTION BUTTON	1	
5		KEY FUNCTION BOARD ASS'Y	1	
6		PANEL ASS'Y	1	
7	15G8167-AU	MAIN FRAME	1	
8		MAIN BOARD ASS'Y	1	
9		POWER BOARD ASS'Y	1	
10	52G6025-11-892	MYLAR	1	
11	85G699-1	SHIELD MAIN	1	
12			1	
13	34G1578-1	REAR COVER	1	
14		FCC LABLE	1	
15	37G530-1	HINGE ASS'Y	1	
16	33G4868-1	HINGE COVER	1	
17	34G1576-1	STAND	1	
18	34G1579-1	BASE	1	
19	12G394-3	FOOT PORON	1	
20	MIG1740 10120	M4X10 SCREW	4	
21	GIG 340 10120	TAP SCREW 4X10 FOR STAND	3	
22	MIG 330 6 47	M3X6 SCREW FOR REAR COVER	4	
23	GIG330 08 47	TAP3X8 SCREW FOR BEZEL+REARCOVER	1	
24	15G5791-1	VESA BKT	1	
25	MIG 330 4120	M3X4 SCREW FOR SHIELD	2	
26	MIG 1740 6120	M4X6 SCREW FOR GRUND	1	
27	MIG 1730 6120	M3X6 SCREW FOR ALL PCB (3+3)	6	
28	MIG 330 5120	M3X6 SCREW FOR BKT+PANEL	4	
29	11G6081-1	SPACER SUPPORTXCA-5)	1	
30				
31				

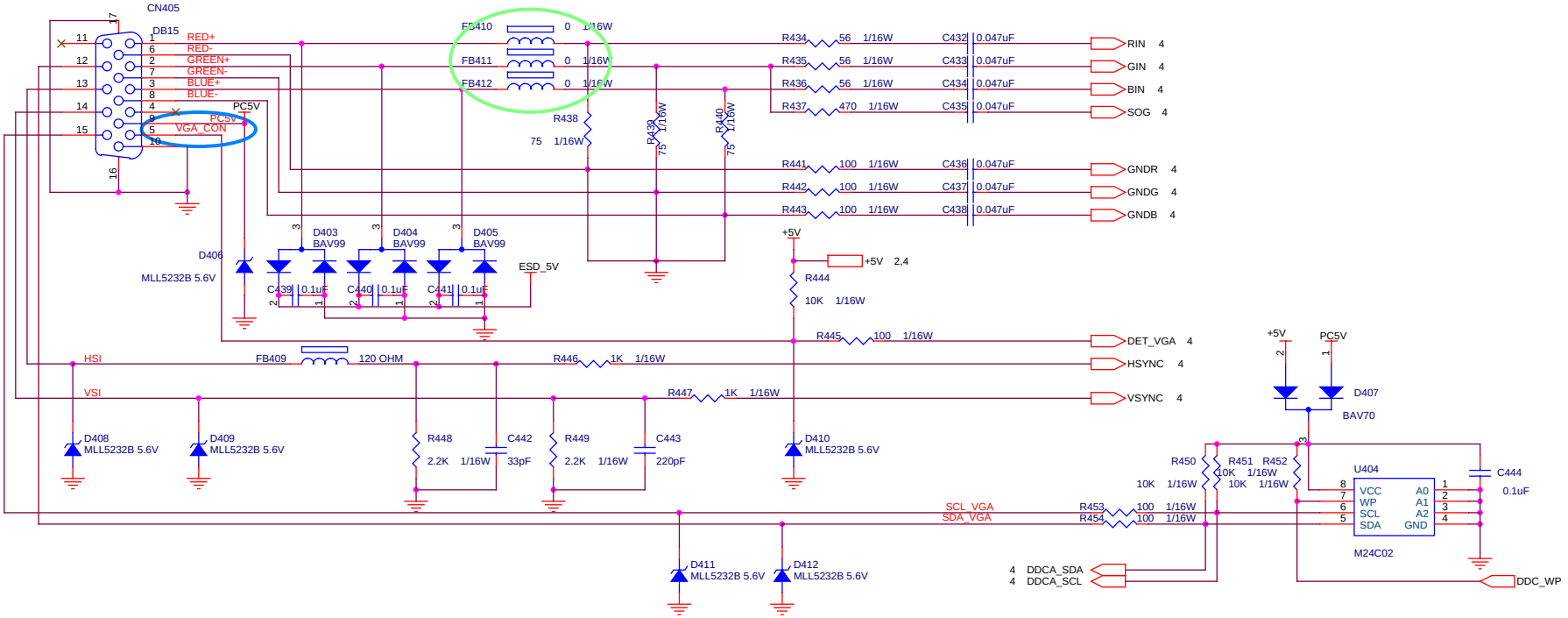
Part List

Above picture show the description of the following component.

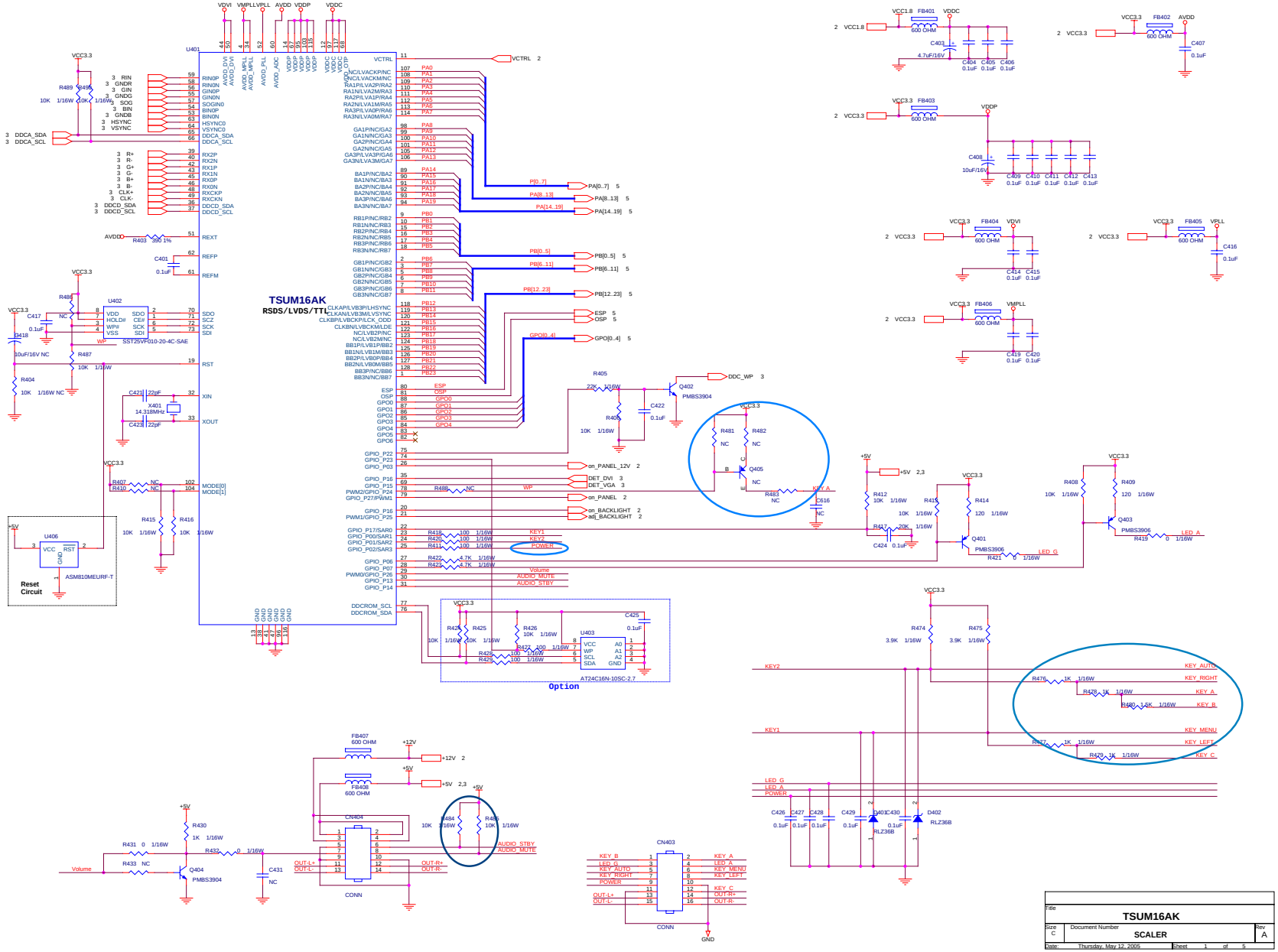
Item	Picture	Description	Part No.
1		BACK COVER	34G1578 RX B
2		STAND	34G1576 RX B
3		BEZEL	34G1577AQW B
4		BASE	34G1579 RX B
5		SCREW	M1L1730 8128
6		SCREW	Q1G 340 10128

Schematic Diagram

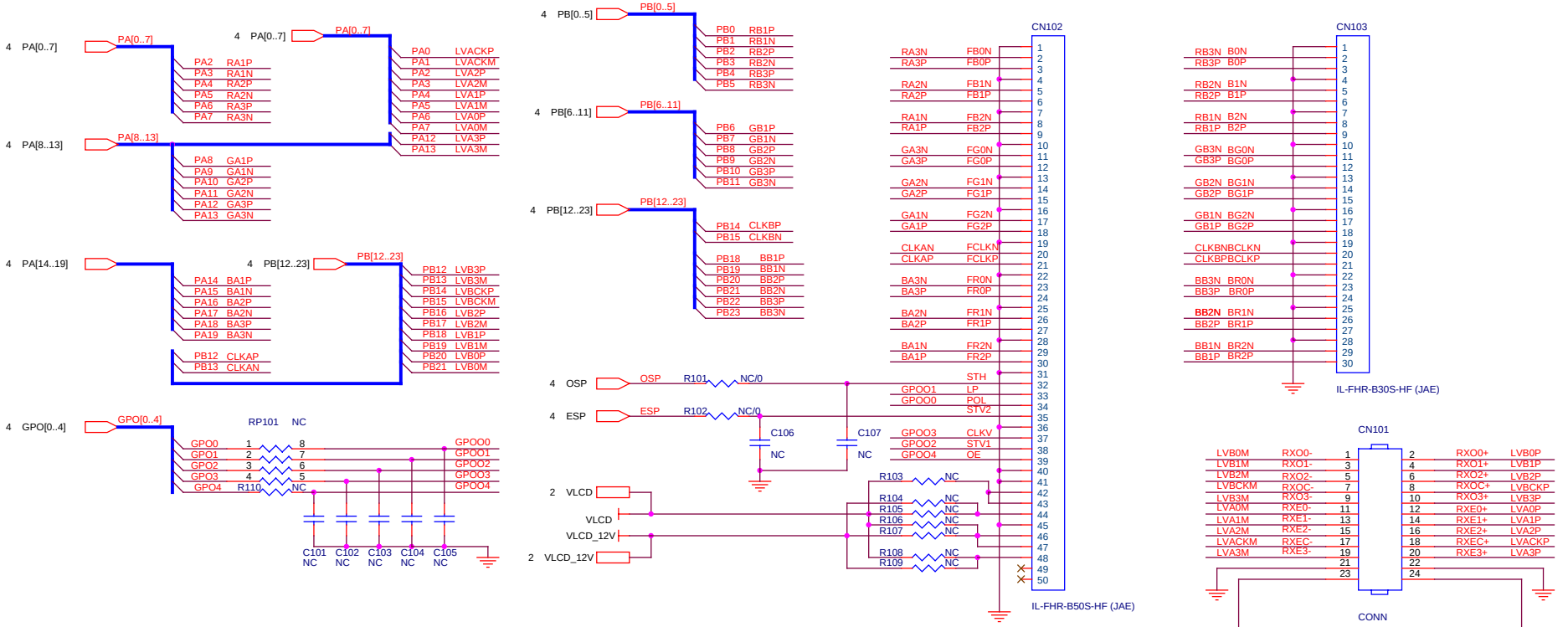
Analog Input



TSUM16AK


TSUM16AK
RSDS/LVDS/TTL
U401
U402
U403
U406
SST25VF010-20-4C-SAE
ASM810MEURF-T
Reset Circuit
AT24C16N-10SC-2.7
Option
X401
14.318MHz
Q402
PMBS3904
Q403
PMBS3906
Q404
PMBS3904
Q405
Q401
PMBS3906
D402
RLZ36B
D403
RLZ36B
CN403
CN404
CONN
KEY_A
KEY_B
KEY_C
KEY_MENU
KEY_AUTO
KEY_RIGHT
KEY_LEFT
LED_G
LED_A
POWER
AUDIO_STBY
AUDIO_MUTE
Volume
Title
TSUM16AK
Size C
Document Number
SCALER
Rev A
Date: Thursday, May 12, 2005
Sheet 1 of 5

LVDS

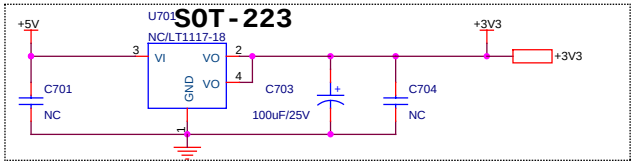


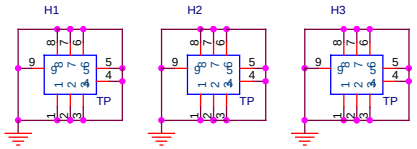
	CN7	CN8	CN9	RP1	R88	R89	R91	Table 1
LVDS Panel	X	X	V	X	X	X	X	X
RSDS Panel	V	V	X	V	V	V	V	V

Table 1	R90	R92	R93	R94	R95	R96	R97
AU 17	NC	NC	5V 0R	5V 0R	NC	5V 0R	NC
QDI 17 CPT 17	3.3V 0R	12V 0R	NC	NC	12V 0R	NC	12V 0R
INNOLUX 15	3.3V 0R	NC	3.3V 0R	NC	NC	NC	NC
HannStar 15 CPT 15	3.3V 0R	NC	3.3V 0R	NC	12V 0R	NC	NC
LG 15	3.3V 0R	NC	3.3V 0R	NC	NC	NC	NC
Innolux 17"	NC	NC	3.3V 0R	3.3V 0R	NC	3.3V 0R	NC

Title	TSUM16AK		
Size B	Document Number PANEL INTERFACE		Rev A
Date: Monday, May 09, 2005	Sheet 1 of 5		

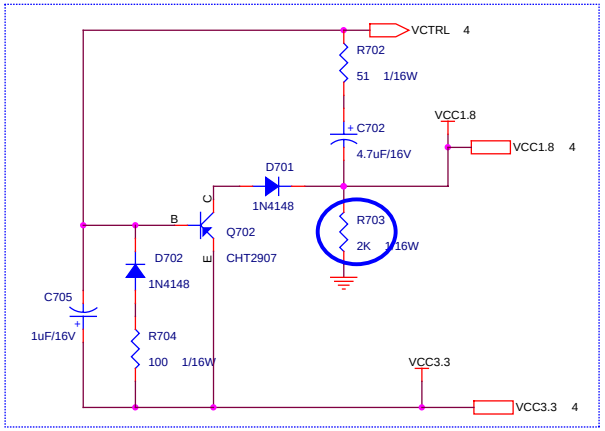
Main Board Power Supply

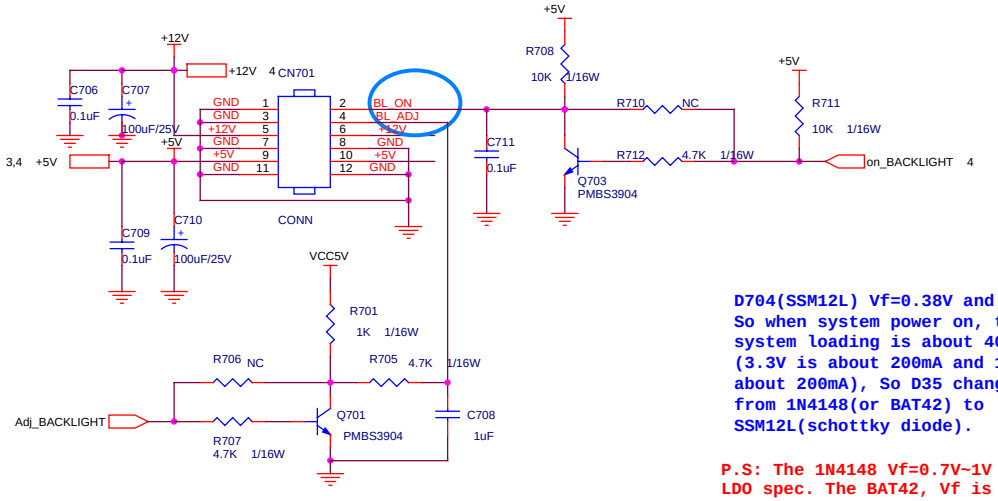




BL_ADJ(DC)	R31	C51	R32	R29	R33	Q4
0V ~ 3.3V	4.7K	1UF	0	X	X	X
0V ~ 5V	4.7K	1UF	X	1K	4.7K	MMBT3904

BL_ADJ	R31	C32
P W M	47	N.C
D C	4K7	1uF

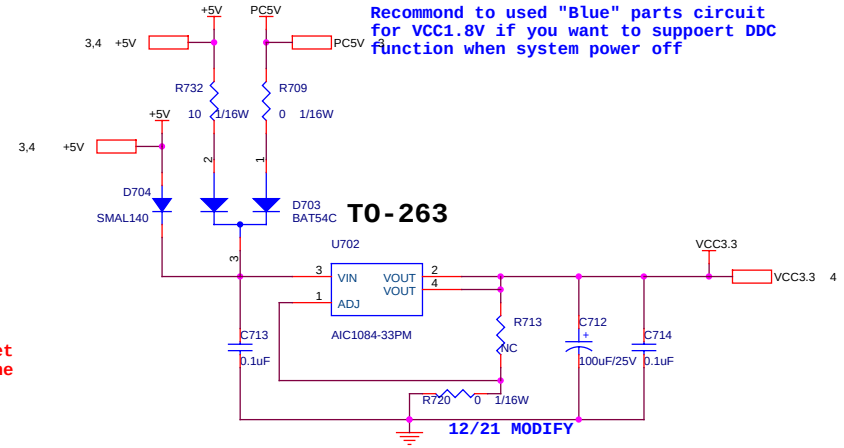




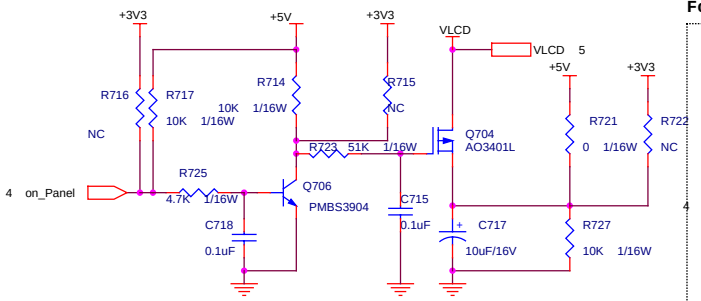
D704(SSM12L) Vf=0.38V and If=1A. So when system power on, the system loading is about 400mA (3.3V is about 200mA and 1.8V is about 200mA), So D35 changed from 1N4148(or BAT42) to SSM12L(schottky diode).

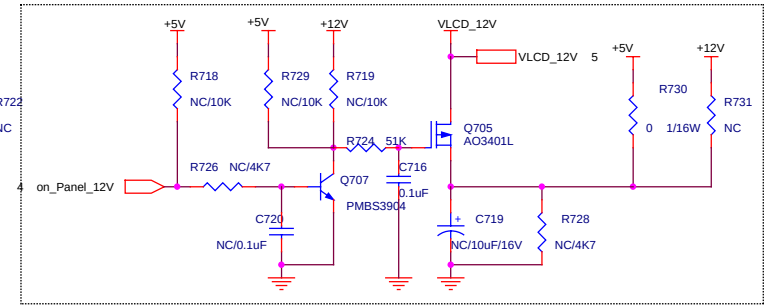
P.S: The 1N4148 Vf=0.7V~1V can't meet LDO spec. The BAT42, Vf is OK but the If=200mA(forward current) can not meet current spec.

Recommond to used "Blue" parts circuit for VCC1.8V if you want to suppoert DDC function when system power off



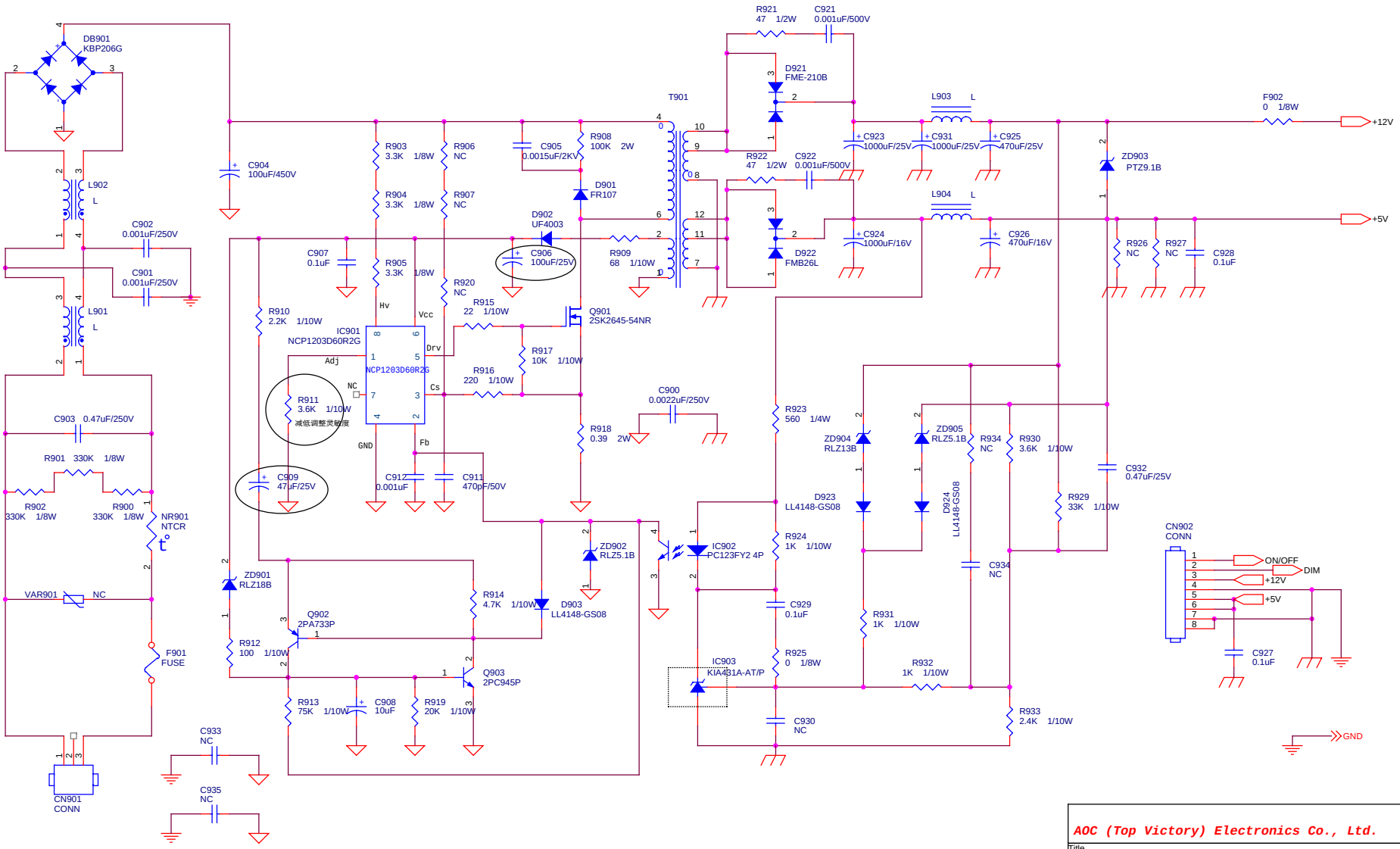
For RSDS and Panel VCC=12V





Title	TSUM16AK		
Size B	Document Number POWER		Rev A
Date: Monday, May 09, 2005	Sheet 1 of 5		

Power board (adapter + inverter)



AOC (Top Victory) Electronics Co., Ltd.		
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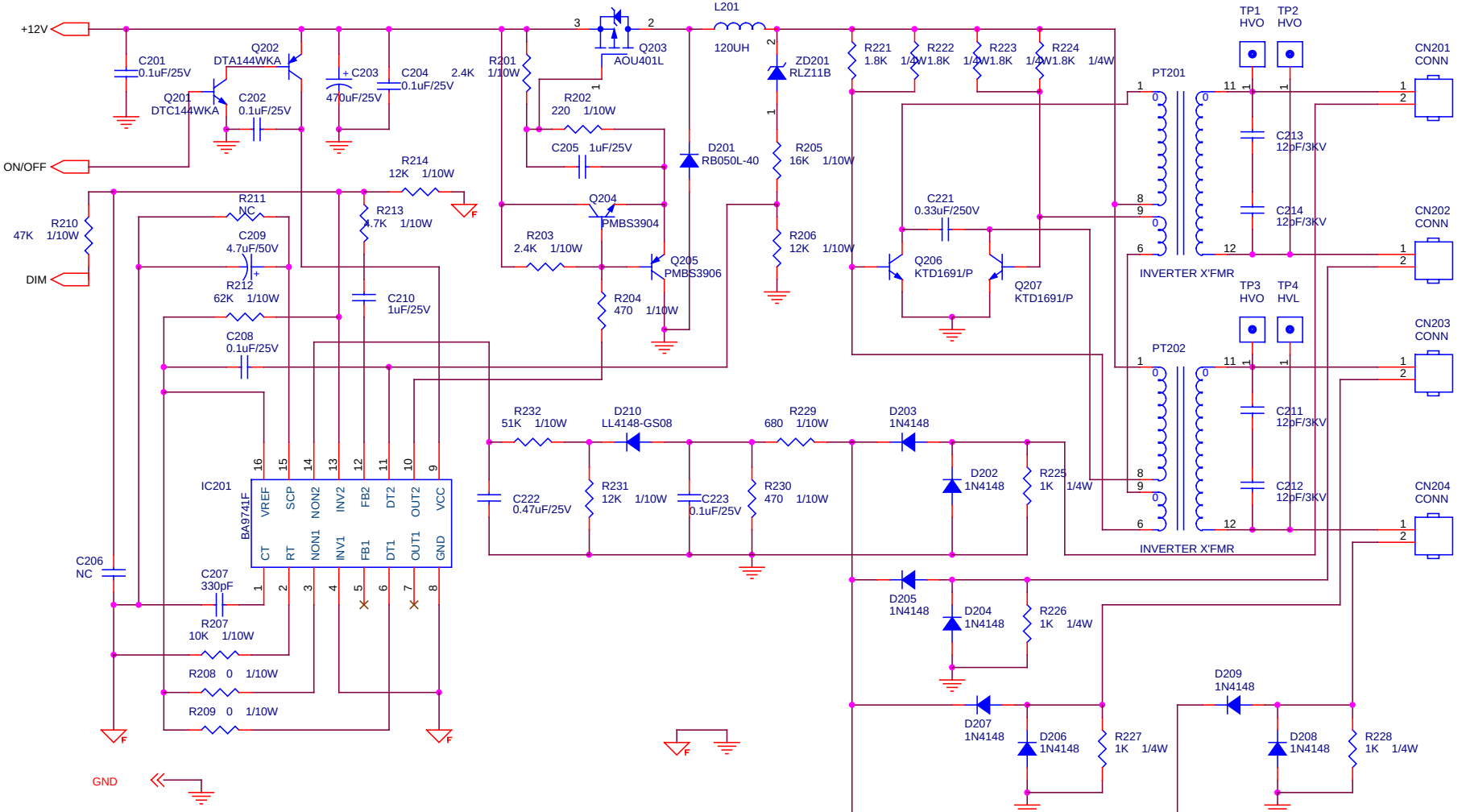
Size: B	Document Number: PWPC1942AUA11P(715G1492-1)	Rev: A
Date: Sunday, May 22, 2005	Sheet 1 of 2	



AOC (Top Victory) Electronics Co., Ltd.	
Title: 2. FOR 19" 4 LAMPS INVERTER	
Size	Document Number: PWPC1942AUA11P(715G1492-1) Rev A
Date: Sunday, May 22, 2005	Sheet 2 of 2

is power GND

is signal GND