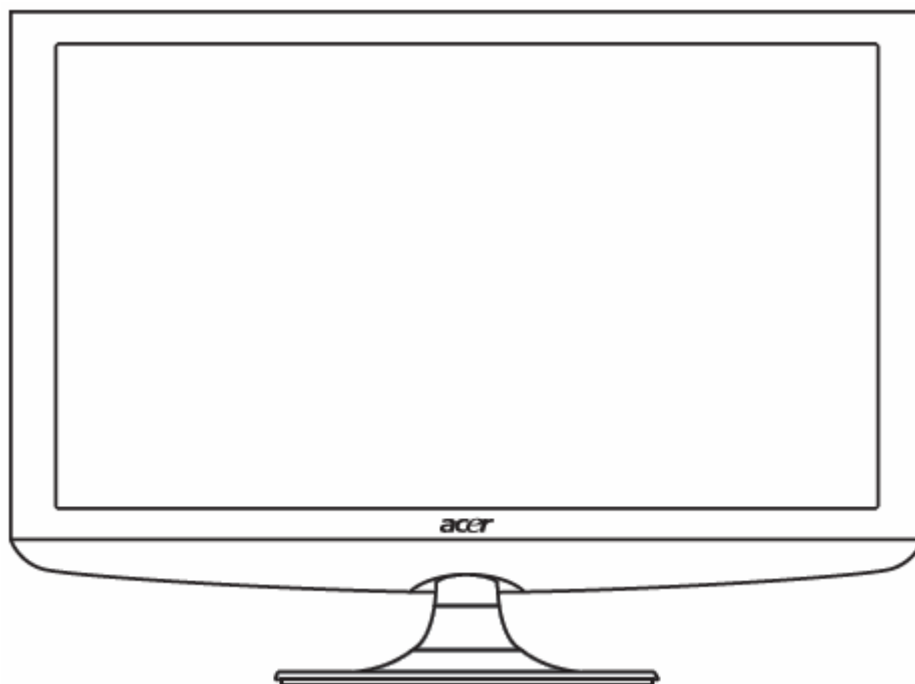




Acer AT2055 & AT2056 Service Guide

Service Guide Version and Revision

[illegible]

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ACER AT2055 & AT2056 Service Manual. printed in Fujian.

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Conventions

The following conventions are used in this manual:

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

Preface

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

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office may have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.
2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

Warning: (For FCC Certified Models)

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

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

Notice:

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

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

Warning:

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

Precautions

- Do not use the monitor near water, e.g. near a bathtub, washbowl, kitchen sink, laundry tub, swimming pool or in a wet basement.
- Do not place the monitor on an unstable trolley, stand, or table. If the monitor falls, it can injure a person and cause serious damage to the appliance. Use only a trolley or stand recommended by the manufacturer or sold with the monitor. If you mount the monitor on a wall or shelf, use a mounting kit approved by the manufacturer and follow the kit instructions.
- Slots and openings in the back and bottom of the cabinet are provided for ventilation. To ensure reliable operation of the monitor and to protect it from overheating, be sure these openings are not blocked or covered. Do not place the monitor on a bed, sofa, rug, or similar surface. Do not place the monitor near or over a radiator or heat register. Do not place the monitor in a bookcase or cabinet unless proper ventilation is provided.
- The monitor should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- The monitor is equipped with a three-pronged grounded plug, a plug with a third (grounding) pin. This plug will fit only into a grounded power outlet as a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install the correct outlet, or use an adapter to ground the appliance safely. Do not defeat the safety purpose of the grounded plug.
- Unplug the unit during a lightning storm or when it will not be used for long periods of time. This will protect the monitor from damage due to power surges.
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- Never push any object into the slot on the monitor cabinet. It could short circuit parts causing a fire or electric shock. Never spill liquids on the monitor.
- Do not attempt to service the monitor yourself; opening or removing covers can expose you to dangerous voltages and other hazards. Please refer all servicing to qualified service personnel
- To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100 - 240V AC, Min. 5A.
- The wall socket shall be installed near the equipment and shall be easily accessible.

Special Notes on LCD TV Monitors

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

Notes

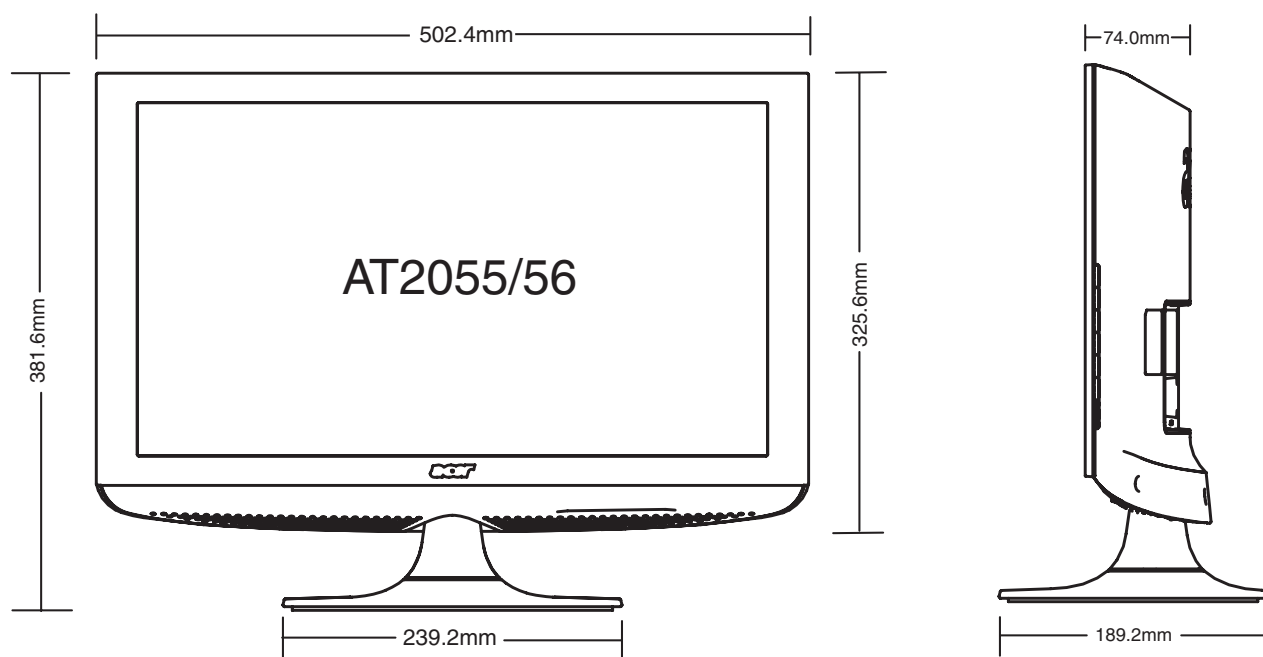
- Due to the nature of the fluorescent light, the screen may flicker during initial use. Turn off the Power Switch and then turn it on again to make sure the flicker disappears.
- You may find slightly uneven brightness on the screen depending on the desktop pattern you use.
- The LCD TV screen has effective 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 TV screen, an afterimage of the previous screen may remain after switching the image, when the same image is displayed for hours. In this case, the screen is recovered slowly by changing the image or turning off the Power Switch for hours.

Table of Contents

Chapter 1	Monitor Features	.....	7
	General Specifications	.....	7
	LCD TV Description	.....	9
	Precautions And Notices	.....	9
	D-SUB / HDMI Digital connector	.....	10
	Factory Preset Display Modes	.....	11
	LCD TV Panel Specification	.....	12
	Panel Features	.....	12
	General Specifications	.....	11
	Mechanical Specifications	.....	11
	Optical Specifications	.....	12
Chapter 2	Connecting Peripherals	.....	14
	Front Panel Controls	.....	14
Chapter 3	Remote Control & OSD Operating Instructions	.....	15
	Using The Remote Control	.....	15
	Using The OSD Menus		17
Chapter 4	Machine Disassembly	.....	25
Chapter 5	Trouble Shooting	.....	32
Chapter 6	Upgrade Firmware	.....	38
Chapter 7	White-Balance, Luminance Adjustment	.....	42
Chapter 8	FRU (Field Replaceable Unit) List	.....	44
	Exploded Diagram	.....	44
	EDID Data	.....	49
Chapter 9	PCB Layout	.....	50
Chapter 10	Schematic Diagram	.....	56

Model	AT2355	AT2356	AT2055	AT2056
Panel spec				
Resolution (pixels)	1920 x 1080		1600 x 900	
Brightness (tpe.)	300 nit			
Contrast Ratio (tpe.)	1000 : 1			
Dynamic Contrast Ratio (max.)	20000 : 1			
Viewing angle (tpe.)	H: 170° ; V:160°			
Response (tpe.)	5 ms (Gray to Gray)			
Power supply				
Input	100 to 240 V AC (50/60 Hz)			
Max. power consumption	50 W	50 W	50 W	50 W
Power saving	<1 W			
Mechanical				
Dimensions (W x H x D mm)	570 x 411 x 180		502.4 x 381.6 x189.2	
Dimensions (W x H x D mm) (no stand)	569.43 x 363.18 x 88.87		502.4 x 325.6 x 74	
Weight (kg)	5.8		4.9	
weight(no stand)	5.1		4.6	
Gross weight (Kg)	7.9		6.5	
Gross weight (lbs)	16.54		14.33	
Analog TV system				
Colour system	PAL, SECAM			
Sound system	B/G/D/K/I/L/L'			
Stereo system	NICAM/A2			
Subtitle	Teletext 1.5 (1000 pages)			
Digital TV system				
Digital TV standard	DVB-T SD	DVB-T HD (H.264)	DVB-T SD	DVB-T HD (H.264)
Sound system	ISO11172-3 layer1 & layer2 32KHz,44.1KHz,48KHz			
Stereo system	PCM / MPEG (Layer I & II) Stereo 32 / 44.1 / 48KHz	PCM / MPEG (Layer I & II) Stereo 32 / 44.1 / 48KHz, Dolby AC-3	PCM / MPEG (Layer I & II) Stereo 32 / 44.1 / 48KHz	PCM / MPEG (Layer I & II) Stereo 32 / 44.1 / 48KHz, Dolby AC-3
Frequency	7/8 MHz			

Terminal		
Analog/ Digital Tuner In	Hybird	
SCART 1	CVBS(In/Out), RGB(In), Audio R/L	
Component in	YPbPr, Audio (R/L)	
AV-in	CVBS, S Video, Audio (R/L)	
HDMI 1	Yes (HDMI 1.3)	
HDMI 2	Yes (HDMI 1.3)	
PC D-sub in	Yes	
PC audio-in	Yes	
SPDIF out	Yes (Coaxial)	
Headphone out	Yes	
Service Port	Yes	
Resolution		
HDMI	480i/p, 576i/p, 720p, 1080i, 1080p	480i/p, 576i/p, 720p, 1080i
Audio system		
Speakers	5W + 5 W	



LCD TV Description

The LCD TV will contain a main board, a power board a function keyboard and an IR board. The main board and power board will house the flat panel to control logic I²C bus, DDC, brightness control logic for LCD panel, DC-DC conversion to supply the appropriate power to the whole board and transmitting TTL level signals into LCD Module to drive the LCD display circuit.

The inverter board will drive the five CCFLs (Cold Cathode Fluorescent Lamp).

The function keyboard and Remote Control will provide the OSD control signal to the Main Board.

Precautions and Notices

1-1 Assembly Precaution

- (1) Please do not press or scratch LCD panel surface with anything hard. And do not soil LCD panel surface by touching with bare hands (Polarize film, surface of LCD panel is easy to be flawed)
In the LCD panel, the gap between two glass plates is kept perfectly even to maintain display characteristic and reliability. If this panel is subject to hard pressing, the following occurs :
 - (a) Uniform color (b) Orientation of liquid crystal becomes disorder
- (2) Please wipe out LCD panel surface with absorbent cotton or soft cloth in case of it being soiled.
- (3) Please wipe out drops of adhesive like saliva and water in LCD panel surface immediately.
They might damage to cause panel surface variation and color change.
- (4) Do not apply any strong mechanical shock to the LCD panel.

1-2 Operating Precaution

- (1) Please be sure to unplug the power cord before remove the back-cover. (be sure the power is turn-off)
- (2) Please do not change variable resistance settings in MAIN-BOARD; they are adjusted to the most suitable value. If they are changed, it might happen LUMINANCE does not satisfy the white balance spec.
- (3) Please consider that LCD backlight takes longer time to become stable of radiation characteristic in low temperature than in room temperature.
- (4) Please pay attention to displaying the same pattern for very long-time. Image might stick on LCD.

1-3 Storage Precaution

- (1) When you store LCD for a long time, it is recommended to keep the temperature between -20°C - 60°C without the exposure of sunlight and to keep the humidity less than 85% RH.
- (2) Please do not leave the LCD in the environment of high humidity and high temperature such as 60°C, 95%RH.
- (3) Please do not operate the LCD in the environment of abnormal temperature, below 0°C.

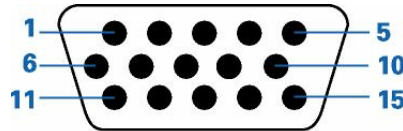
1-4 High Voltage Warning

The high voltage was only generated by Power support part, if carelessly contacted the transformer on this module, can cause a serious shock.

D-SUB Pin Distribution

This procedure gives you instructions for installing and using the LCD TV display.

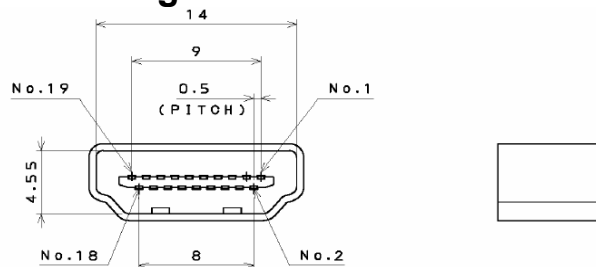
- (1) Position the display on the desired operation and plug the power cord into a convenient AC outlet. Three-wire power cord must be shielded and is provided as a safety precaution as it connects the chassis and cabinet to the electrical conduct ground. If the AC outlet in your location does not have provisions for the grounded type plug, the installer should attach the proper adapter to ensure a safe ground potential.
- (2) Connect the 15-pin color display shielded signal cable to your signal system device and lock both screws on the connector to ensure firm grounding. The connector information is as follow:



15 - Pin Color Display Signal Cable

Pin NO.	Description	Pin NO.	Description
1	Red video input	9	+5V (supply from PC)
2	Green video input	10	Sync GND
3	Blue video input	11	N.C
4	N.C	12	Bi-directional data (SDA)
5	GND	13	H. Sync / H+V
6	Red video ground	14	V. Sync
7	Green video ground	15	Data clock line (SCL)
8	Blue video ground		

HDMI Digital Connector Pin Assignments



Pin No.	Description	Pin No.	Description
1	TMDS Data2+	2	TMDS Data2 Shield
3	TMDS Data2-	4	TMDS Data1+
5	TMDS Data1 Shield	6	TMDS Data1-
7	TMDS Data0+	8	TMDS Data0 Shield
9	TMDS Data0-	10	TMDS Clock+
11	TMDS Clock Shield	12	TMDS Clock-
13	CEC	14	Reserved (N.C. on device)
15	SCL	16	SDA
17	DDC/CEC Ground	18	+5V Power
19	Hot Plug Detect		

Factory Preset Display Modes:

	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Standard
1	640 x 480	31.5	60.0	VGA
2	640 x 480	37.9	72.8	VGA
3	640 x 480	37.5	75.0	VGA
4	640 x 480	35.0	66.7	MAC
5	720 x 400	31.5	70.1	VESA
6	800 x 600	35.2	56.3	SVGA
7	800 x 600	37.9	60.3	SVGA
8	800 x 600	46.9	75.0	SVGA
9	832 x 624	49.7	74.6	MAC
10	1024 x 768	48.4	60.0	XGA
11	1024 x 768	56.5	70.1	XGA
12	1024 x 768	60.0	75.0	XGA
13	1152 x 864	67.5	75.0	VESA
14	1280 x 720	45.0	59.9	VESA
15	1280 x 768	47.8	59.9	VESA
16	1600 x 900	60.0	59.9	VESA

LCD TV Panel Specification

LTM200KT01 is a color active matrix liquid crystal display (LCD) that uses amorphous silicon TFT (Thin Film Transistor) as switching components. This model is composed of a TFT LCD panel, a driver circuit and a back light unit. The resolution of a 20" is 1600 x 900 and this model can display up to 16.7 millions colors.

Panel Features

High contrast ratio, high aperture structure
TN (Twisted Nematic) mode
Wide Viewing Angle
High speed response
FHD (1600 x 900 pixels) resolution
Low power consumption
DE (Data Enable) only mode
LVDS (Low Voltage Differential Signaling) interface (2pixel/clock)
Compact Size Design
RoHS, TCO 03' compliance

General Specifications

Items	Specification	Unit
Pixel Pitch	0.2768(H) x 0.2768(W)	mm
Active Display Area	442.8(W) x 249.075(H)	mm
Surface Treatment	Haze 25%, Hard-coating(3H)	
Display Colors	16.7M (6bit Hi-FRC)	colors
Number of Pixels	1600 x 900	pixel
Pixel Arrangement	RGB vertical stripe	
Display Mode	Normally White	
Power Consumption	28.4 Watt (Typ.)	
Luminance of White	300(Typ.)	cd/m ²

Mechanical Specification

Item		Min.	Typ.	Max.	Unit
Module size	Horizontal (H)	462.3	462.8	463.3	mm
	Vertical (V)	271.5	272.0	272.5	mm
	Depth (D)	-	-	17.5	mm
Weight		-	-	2,600	g

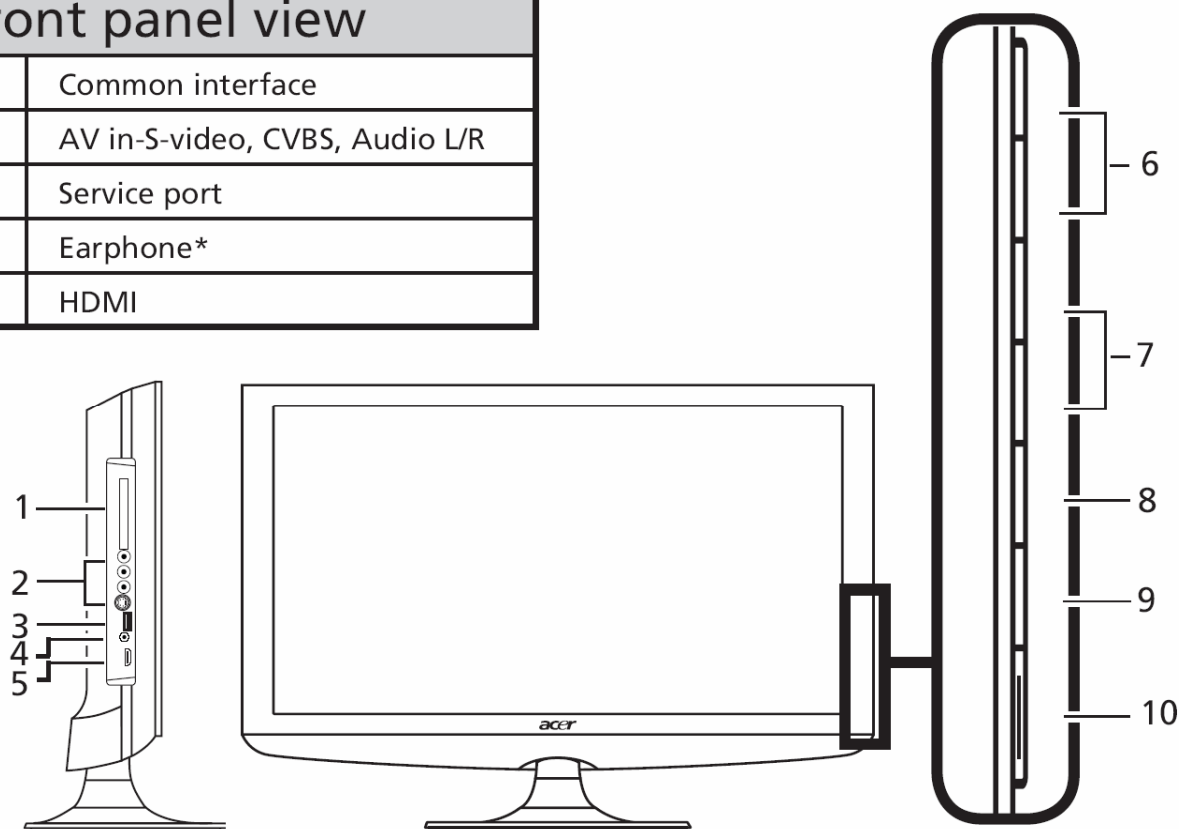
Optical Specifications

(Ta = 25 ± 2°C, VDD=5V, fv= 60Hz, fDCLK=69.3MHz, IL = 7.5mAms)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit			
Contrast Ratio (Center of screen)		C/R	Normal θ _{L,R} =0 θ _{U,D} =0 Viewing Angle	600	1000	-				
Response Time	On/Off	Tr+Tf		-	5	10	msec			
							msec			
Luminance of White (Center of screen)		Y _L		250	300	-	cd/m2			
Color Chromaticity (CIE 1931)	Red	Rx		-0.030	0.650	+0.030				
		Ry			0.335					
	Green	Gx			0.295					
		Gy			0.605					
	Blue	Bx			0.145					
		By			0.075					
	White	Wx			0.313					
		Wy			0.329					
	Color Chromaticity (CIE 1976)	Red			Ru'		-	0.455	-	
					Rv'		-	0.527	-	
Green		Gu'		-	0.122	-				
		Gv'		-	0.563	-				
Blue		Bu'		-	0.161	-				
		Bv'		-	0.187	-				
White		Wu'		-	0.198	-				
		Wv'		-	0.468	-				
C.G.L		White		△u'v'	-	-	0.02			

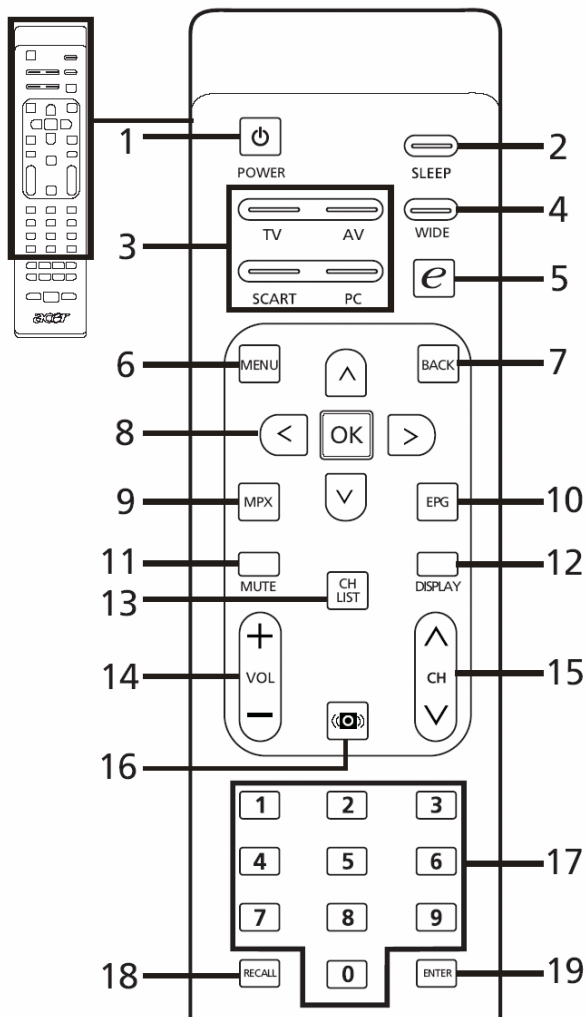
Front panel controls

Front panel view	
1	Common interface
2	AV in-S-video, CVBS, Audio L/R
3	Service port
4	Earphone*
5	HDMI



6		Volume up	When the OSD is on, functions the same as the Right arrow.
		Volume down	When the OSD is on, functions the same as the Left arrow.
7		Channel up	When the OSD is on, functions the same as the Up arrow.
		Channel down	When the OSD is on, functions the same as the Down arrow.
8		Menu key	Turns the OSD menu ON and OFF.
9		Input key	Press to change input source. When the OSD is on, press this button to confirm selection.
10		Power On/Off	Turns the power ON and OFF.

Using the Remote Control

**1 POWER**

Press to turn your TV on/off.

2 SLEEP

Press to set a time period after which the TV will switch itself to standby (5, 0, 5, 20, 25 ... 80 minutes).

3 Input buttons (TV/AV/SCART/PC)

Press to select correct input mode.

4 WIDE

Press to toggle scaling mode between Wide detect, 4:3, 6:9, Panorama and Letterbox , 2, 3 modes.

5 e (Empowering Technology)

Press to activate Acer Empowering Technology. See page 18.

6 MENU

Press to open or close the Menu.

7 Back

Press to back to previous Menu.

8 Directional keys/OK**9 MPX**

Press to select the audio type, displayed in the top right-hand corner.

10 EPG (No function for these models)**11 MUTE**

Press to toggle audio on and off.

12 DISPLAY

Press to display or change input/ channel information (dependent on input/source type).

13 CH LIST

Press to launch the channel/program list.

14 VOL (+/-)

Press to increase or decrease the volume.

15 CH (up/down)

Press to sequentially select the TV channel.

16 Audio effects

Press to turn audio mode to virtual audio effect mode.

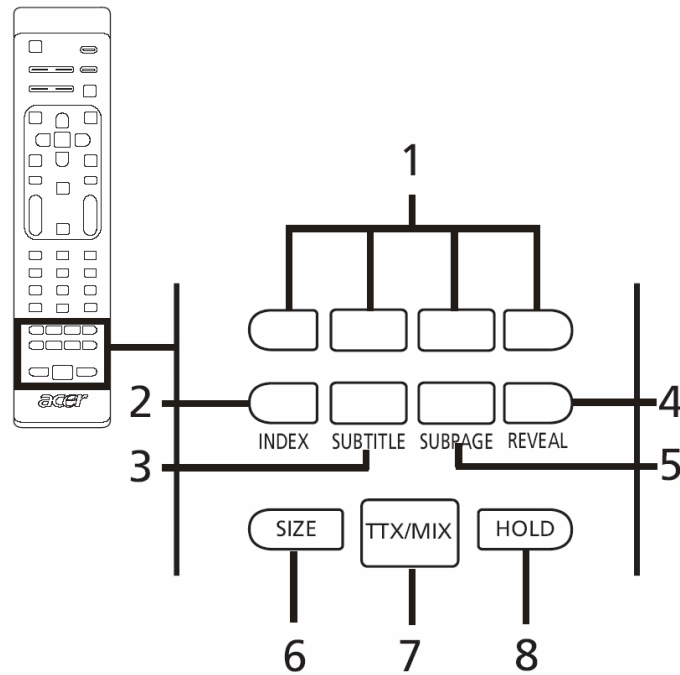
17 Number keys.**18 RECALL**

Press to return to the previous channel.

19 ENTER

Press to confirm channel number selection.

Teletext



1 Colour buttons (R/G/Y/B)

Operates corresponding button on the teletext page.

2 INDEX

Press to go to the index page.

3 SUBTITLE

Press to view subtitles on the screen.

4 REVEAL

Press to reveal hidden teletext information.

5 SUBPAGE

Press to access the teletext's subpages directly.

6 SIZE

Press once to zoom teletext page to 2X. Press again to resume.

7 TTX/MIX (TELETEXT/MIX)

Press to switch from TV/AV to Teletext mode.

Press to overlay teletext page on the TV image.

8 HOLD

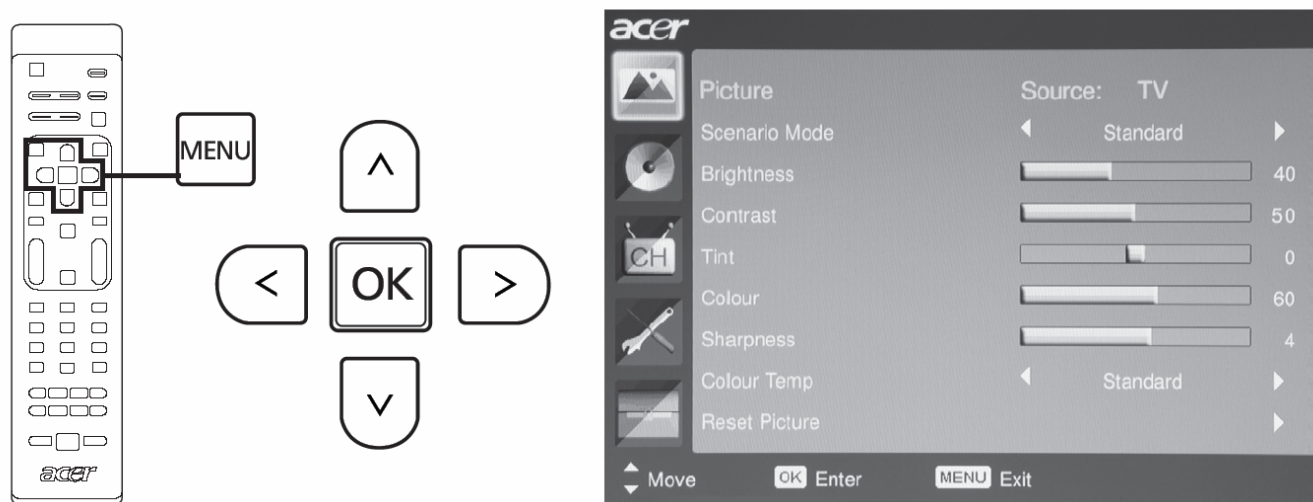
Press to pause the current teletext page in multi-page viewing mode. When watching TV, press to freeze the image on the screen.

Using the OSD Menus

Many of the advanced settings and adjustments are available through using the OSD (onscreen display) menus, as shown in the example screenshot below.

Basic operations required to navigate these menus (Picture, Sound, Channel management, Settings and Advance) are described in this section.

Navigating the OSD with the remote control



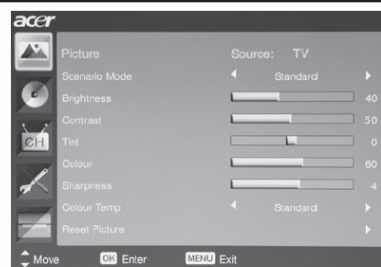
There are five main OSD menus. These are: Picture, Sound, Channel management, Settings and Advance. Use the following method to navigate these menus.		
1		Press the MENU button on the remote control or the MENU button on the control panel.
2		Select your desired menu by using the up and down directional keys to switch between the five menus.
3		Use the directional keys to interact with the menu. The up / down directions will scroll through the menu options, while left/right will adjust the different settings (for example, in the Picture menu, settings such as brightness, contrast, etc.). Press MENU to exit.

Adjusting the OSD settings

The OSD can be used for adjusting the settings of your LCD TV.

Press the **MENU** key to open the OSD. You can use the OSD to adjust the picture quality, audio settings, channel settings and general settings. For advanced settings, please refer to following page:

Adjusting the picture quality



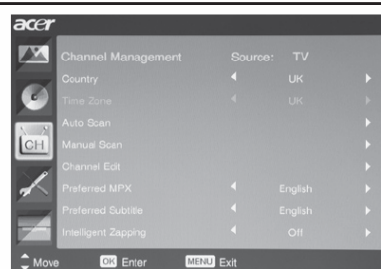
- 1 Press the **MENU** key to bring up the OSD.
- 2 Using the directional keys, select **Picture** from the OSD. Then navigate to the picture element you wish to adjust.
- 3 Use the left or right keys to adjust the sliding scales.
- 4 The **Picture** menu can be used to adjust the current **Scenario Mode, Brightness, Contrast, Hue, Colour, Sharpness** and other image-related qualities.

Adjusting the sound settings



- 1 Press the **MENU** key to bring up the OSD.
- 2 Using the directional keys, select **Sound** from the onscreen display. Then navigate to the feature you wish to adjust.
- 3 Use the left or right keys to adjust the sliding scale. Press **OK** to save.
- 4 The **Sound** menu can also be used to adjust the the current **Scenario Mode, Treble, Bass, Balance, Steady Sound, Sound Effect** and other important sound-related settings.

Adjusting the channel management



- 1 Press the **MENU** key to bring up the OSD.
- 2 Using the directional keys, select **Channel Management** from the OSD.
- 3 Use the directional keys to navigate the menus.
- 4 The **Channel management** menu can be used to adjust **Country, Time Zone, Auto Scan, Manual Scan, Channel Edit** and other important channel-related settings.

Adjusting the settings



- 1 Press the **MENU** key to bring up the OSD.
- 2 Using the directional keys, select **Setting** from the OSD. Then navigate to the feature you wish to adjust.
- 3 The **Setting** menu can be used to adjust the screen **Wide Mode, Menu Language, Sleep, Empowering Key Settings** and other important settings.

Default setting in different Empowering mode

Scenario mode in TV

Scenario mode has five preset viewing modes designed to give you the best picture quality when watching a particular kind of programme. There are five pre-defined audio and video settings for optimal enjoyment of the following scenarios: Standard TV, Movie, Sport, Concert, Game, NICE and User.

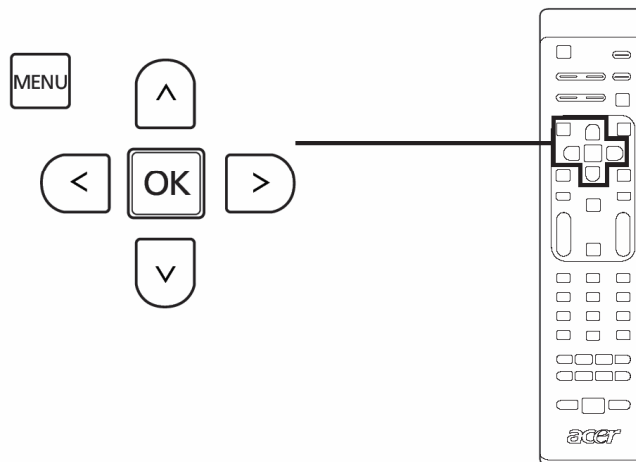


Pressing the **Empowering Key** will toggle between the different modes.

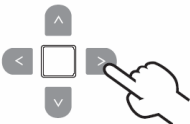
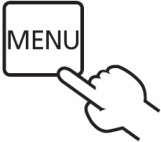
Mode	Information
Standard	Standard mode allows you to watch your favourite channels with sharp, brilliant imagery via adaptive brightness and contrast adjustments, and listen to clear-sounding audio.
Movie	For comfortably enjoying movies at home, Movie mode displays dim scenes in clear detail; compensates for colour; and smoothly presents motion images. This is accomplished through optimal Gamma correction plus saturation, brightness and contrast adjustments. Movie mode makes the most of high-definition movie soundtracks.
Sport	Sport mode is suited for outdoor sports programmes, with accurate background depth and clear gradation between the bright, outdoor playing field and darker auditoriums. Sports mode also brilliantly enhances colours and presents swiftly moving pictures without residual images. All of this is achieved via specific Gamma corrections and saturation adjustments. Precise audio can be heard.
Concert	Concert mode places you in a virtual concert hall, opera house or other dim environment by means of adaptive brightness and contrast adjustments. Concert mode accentuates symphonic harmonies and the tenor audio range.
Game	Game mode carefully details the exquisite graphics of modern video games, providing lifelike entertainment while protecting your eyesight by adjusting brightness and contrast. What's more, Game mode provides a heightened audio experience.
NICE	NICE mode dynamically adjusts picture parameters according to the viewing distance set (see p21) and information transmitted with video signals. When this happens, a popup dialog will indicate that the display is being optimized.
User	User mode allows you to save your favourite video and audio settings.

Advanced features

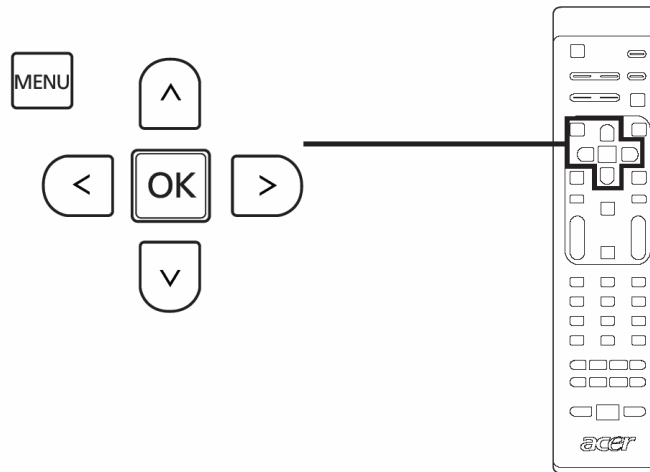
Advanced Picture Adjustment

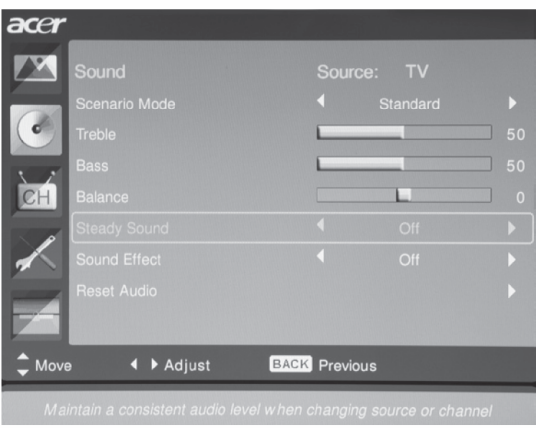


Advanced Picture Adjustment			
1		Press the Menu key from the remote control hand set, to invoke the OSD (On Screen Display).	
2		The OSD menu shows the following options: Advance, Parental Control, Advanced Picture Adjust (highlighted), SCART, Caring, Blue Mute, and Reset Advance. The 'Source' is set to TV. At the bottom, there are controls for 'Move', 'OK Enter', and 'BACK Previous'.	Using the directional keys to navigate, select Advance from the OSD. Scroll to ' Advanced Picture Adjust ' sub-menu to adjust picture settings.
3		The 'Advanced Picture Adjust' sub-menu shows the following settings: Noise Reduction (High), ACM (Off), Back Light Control (65), and Viewing Distance (Far). At the bottom, there are controls for 'Move', 'Adjust', and 'BACK Previous'.	Using the directional keys , to navigate through ' Noise Reduction ', ' Back Light Control ', ' ACM ' or ' Viewing Distance '.

4		* Noise Reduction: This function filters noise from a signal. You can set to Off, Low, Medium, High or Auto depending on your preference. * Back Light Control: This setting adjusts the picture displays 'backlight / brightness'. Use the Left or Right direction keys to adjust this feature. * ACM: This function (Adaptive Contrast Management) automatically adjusts picture contrast, depending on the brightness of the video content. You can turn this feature either to 'on' or 'off'. * Viewing Distance: Use the Left or Right direction keys to set the distance between you and the screen. This will affect how NICE mode (see page 19) adjusts the picture settings.
5		Press MENU to exit.

Steady Sound



Steady Sound		
1		Press the Menu key from the remote control hand set, to invoke the OSD (On Screen Display).
2		 Using the directional keys, navigate to and select Sound from the OSD. Navigate to 'Steady Sound' to adjust settings.
3		This function prevents sudden changes in the audio output level. If this function is selected as ' On ,' volume levels will be consistent when switching between input sources and changing channels.
4		Press MENU to exit.

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.

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

The tools listed as below are that we may use during this procedure:

1. A proper screwdriver
2. A pair of glove
3. A pliers
4. A putty knife

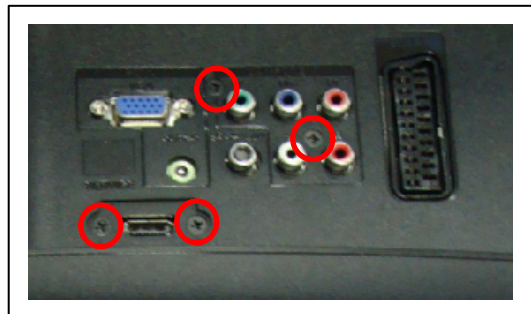
Disassembly Procedure

1. Put the monitor on a clean soft cloth with panel facing to the table. (Fig 1)

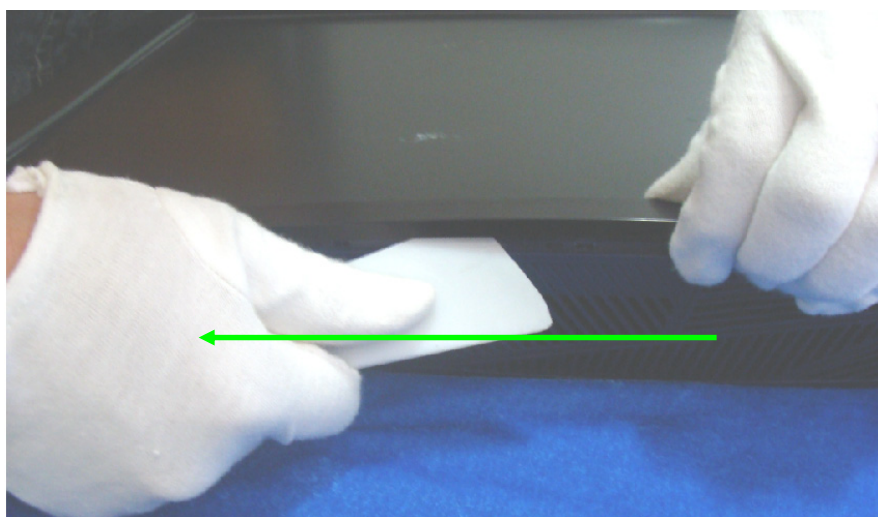


2. Disassemble the back cover

- (1). Remove eight screws to remove back cover.



(2) Pry the monitor up then find out the hooks' position, use the tool (like the picture or other card) to insert into the gap of bezel and rear cover.

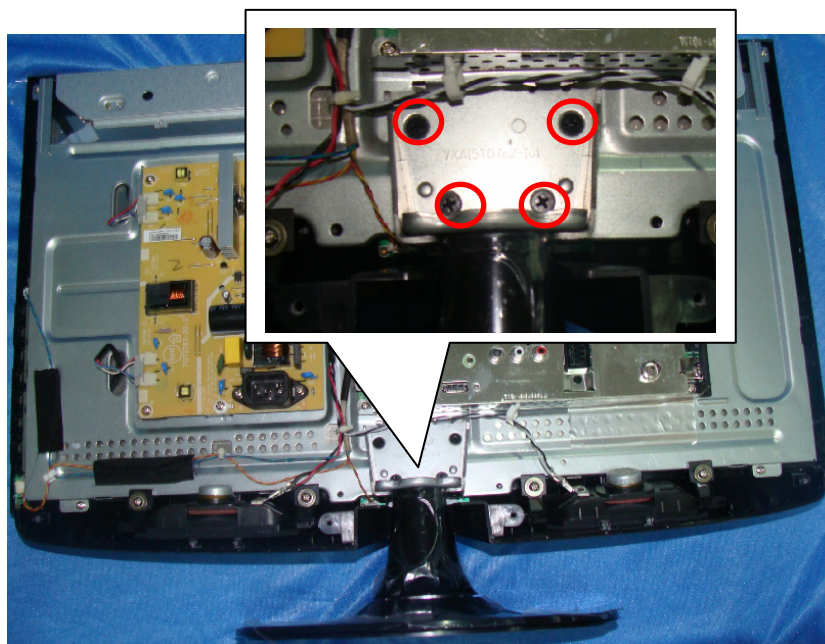




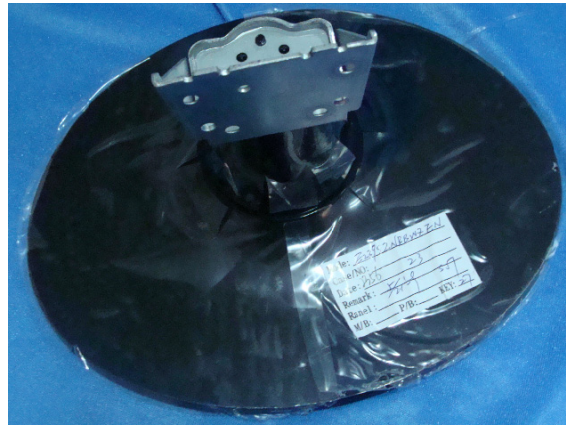
(3) Turn over the monitor and take off the rear cover.



Remove the base

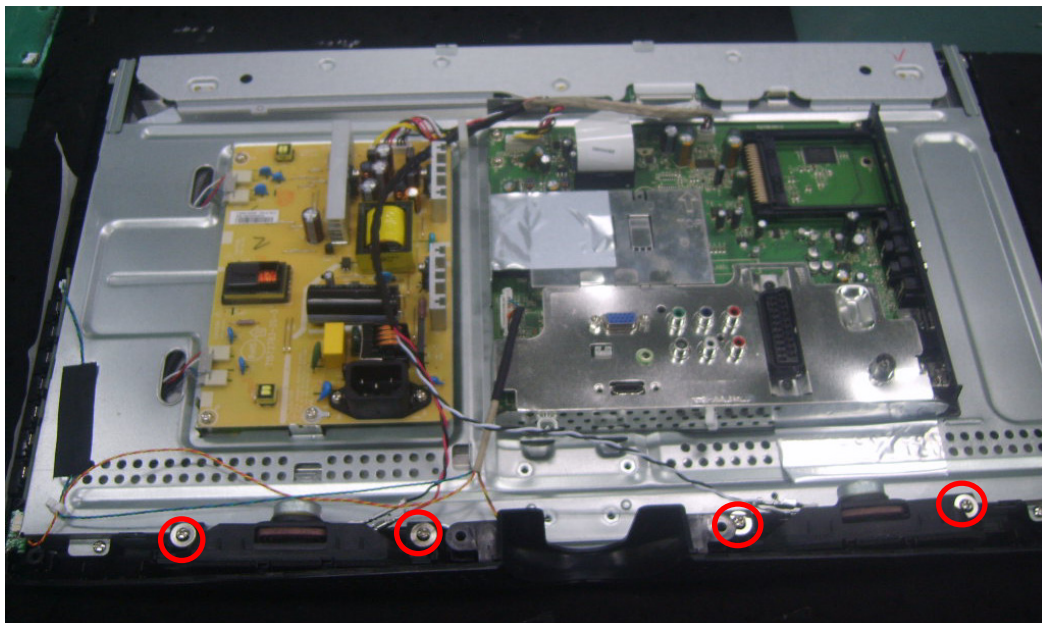


The base

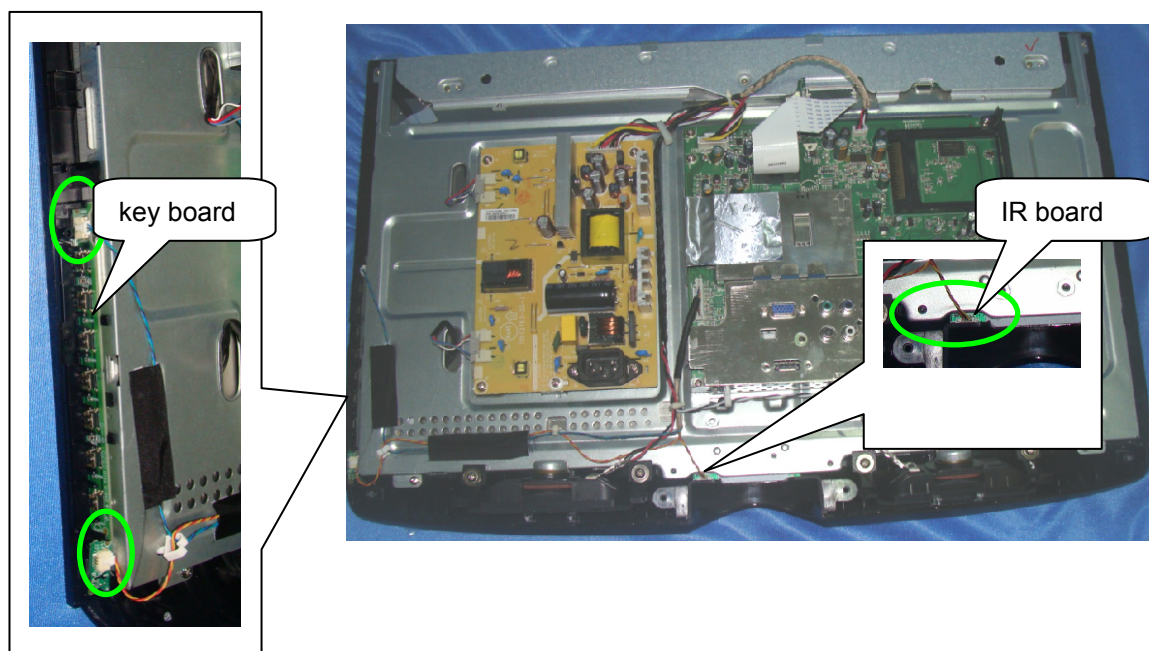


Remove the speakers

- (1) Remove the four screws marked in red to remove the speakers.
- (2) Remove the four screws marked in red.

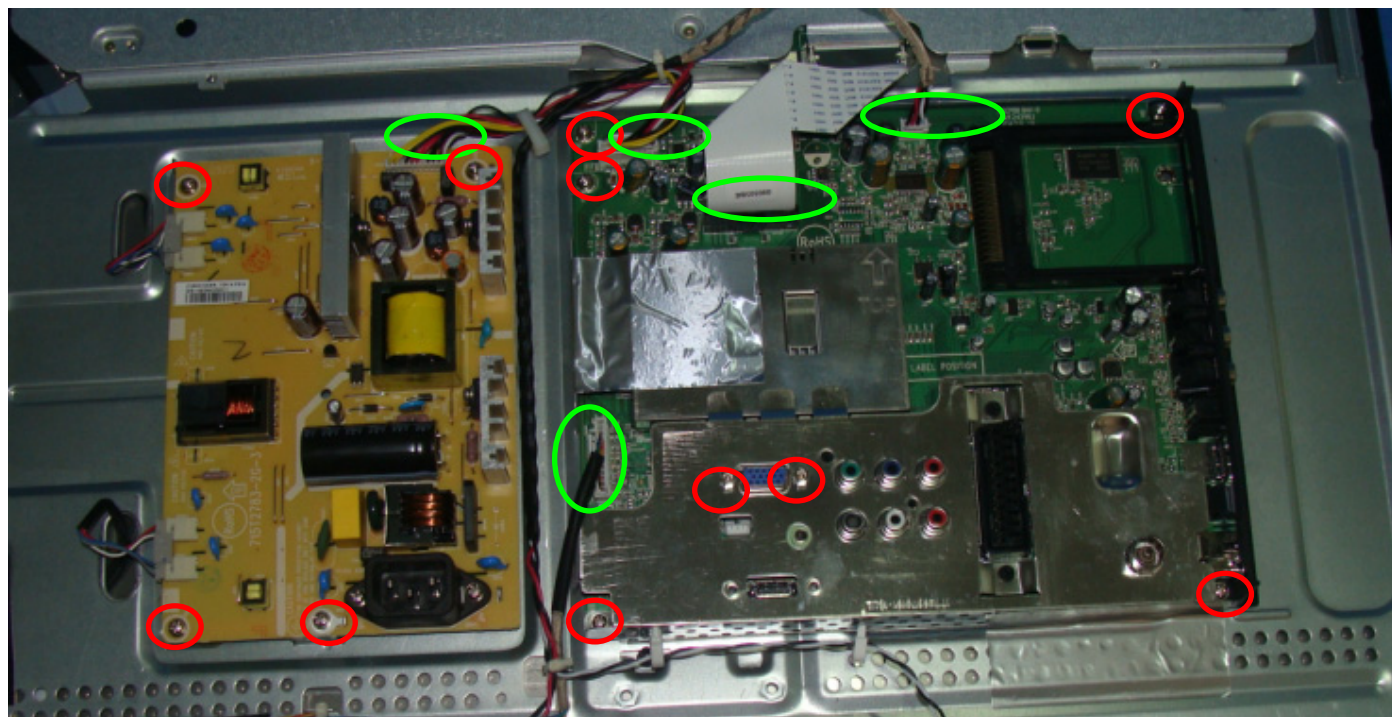


Remove the key board and IR board.



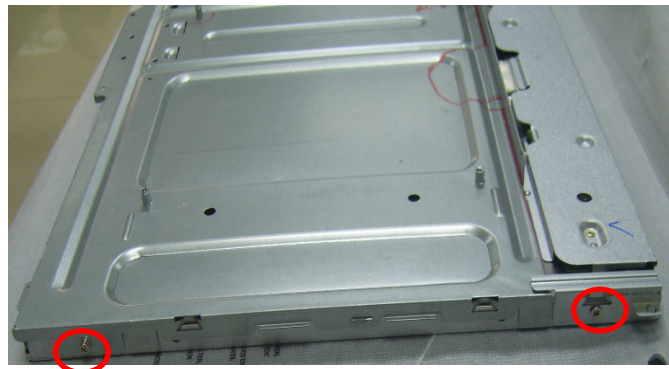
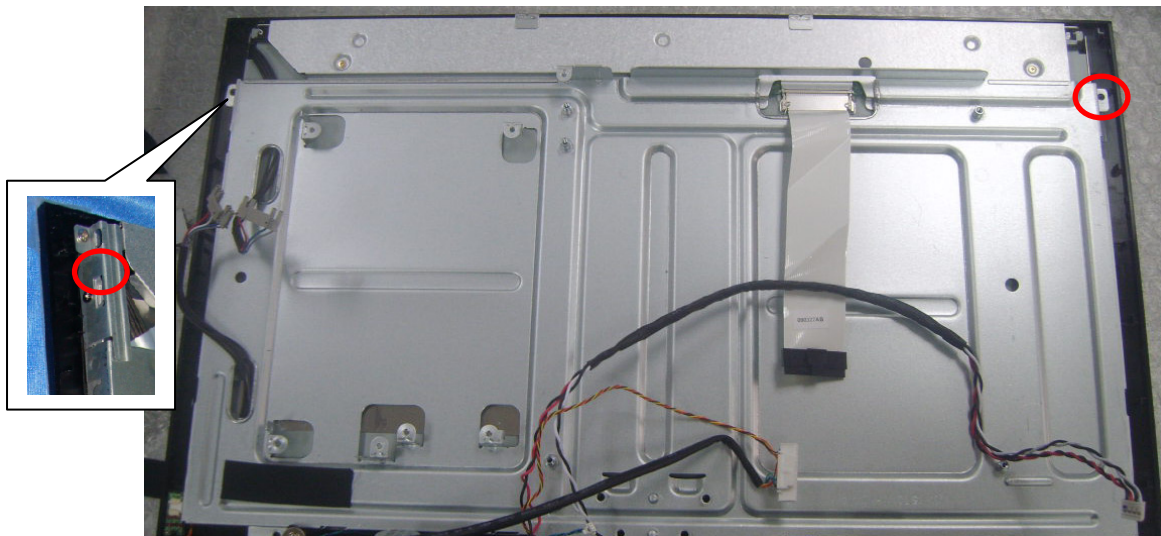
Disassemble the boards.

- (1) Remove the eleven screws marked in red to remove the speakers.
- (2) Release all the connecting wires marked in blue for these boards.

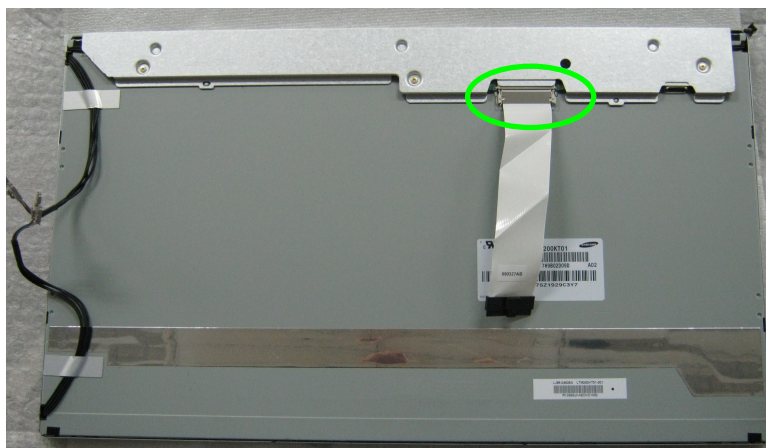


Remove the main frame

Remove the six screws marked in red to remove the main frame.



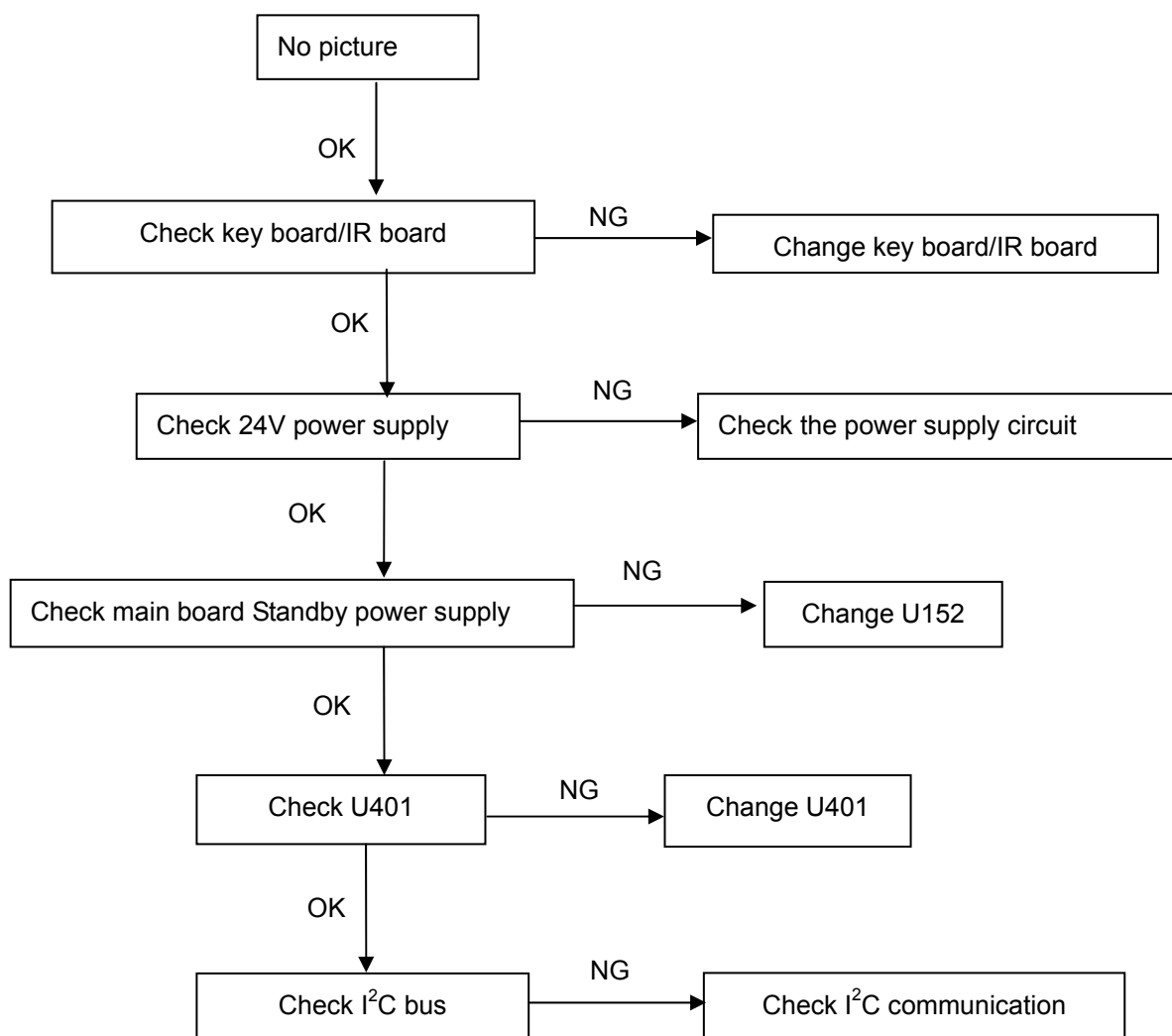
Disconnect the LVDS cable



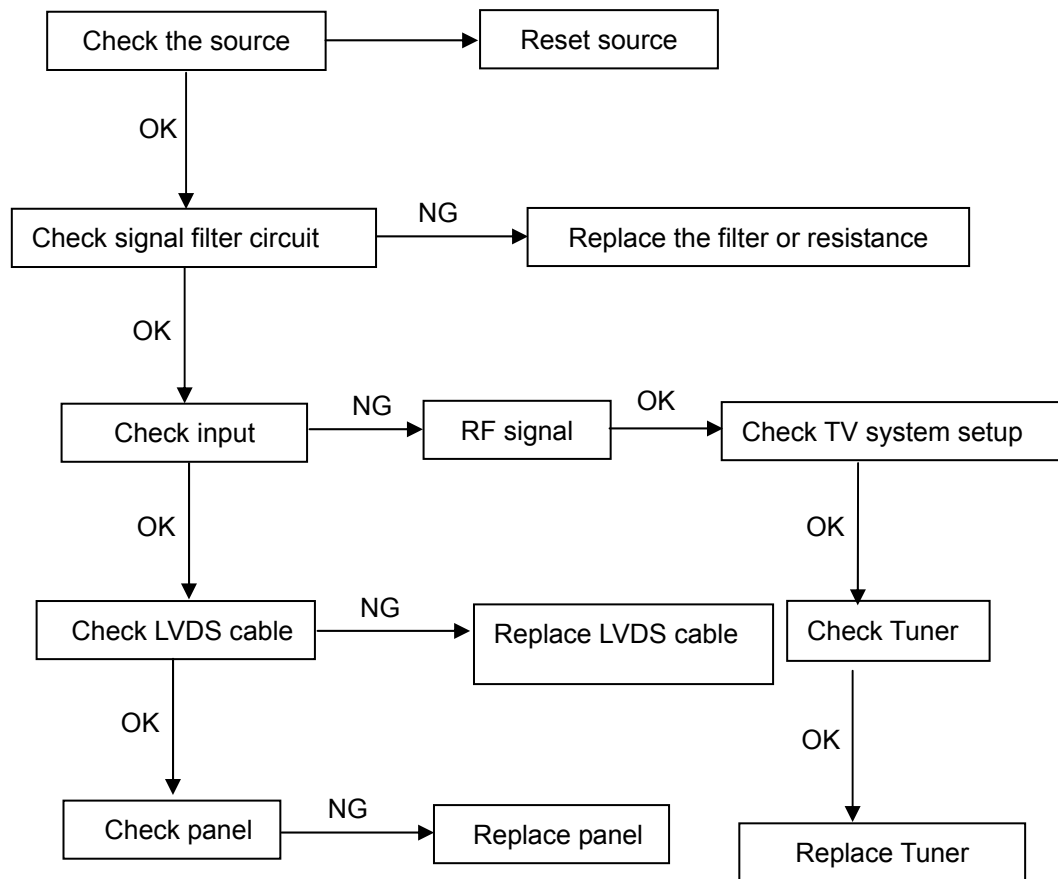
Disassemble the front panel



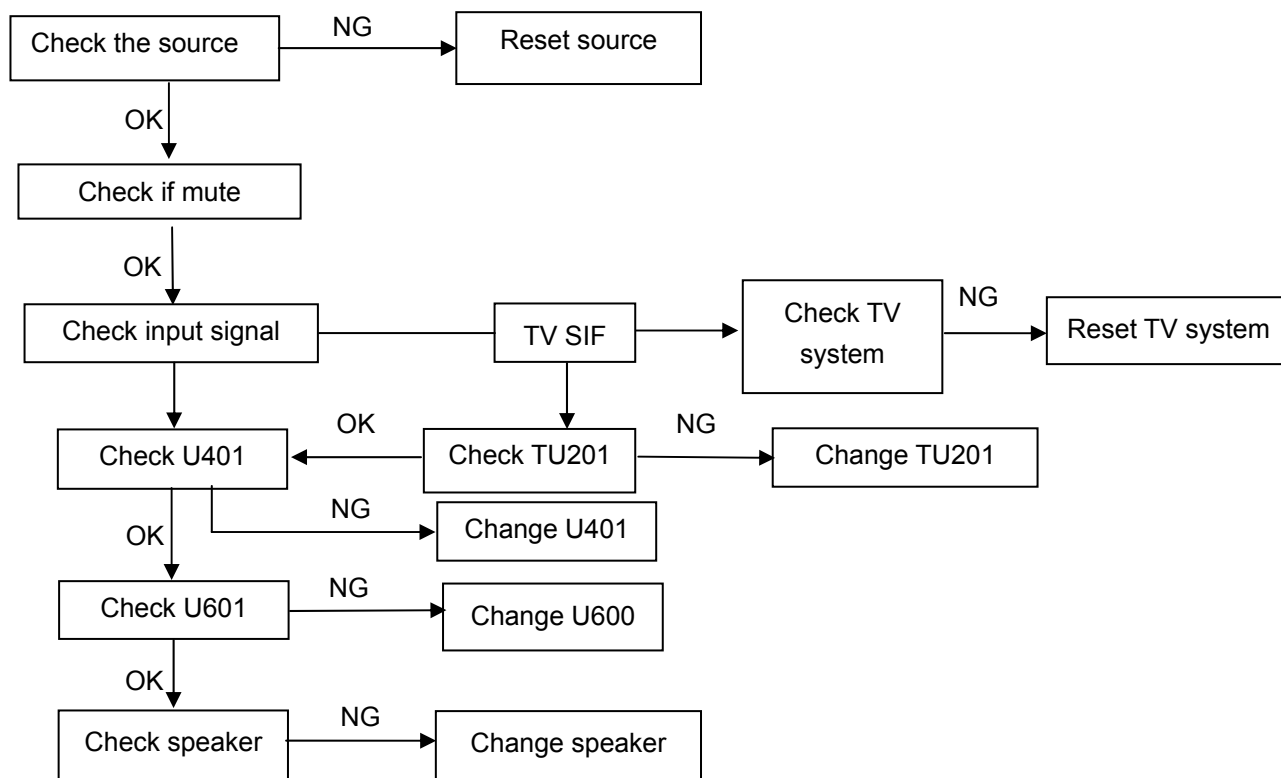
No picture (LED orange)



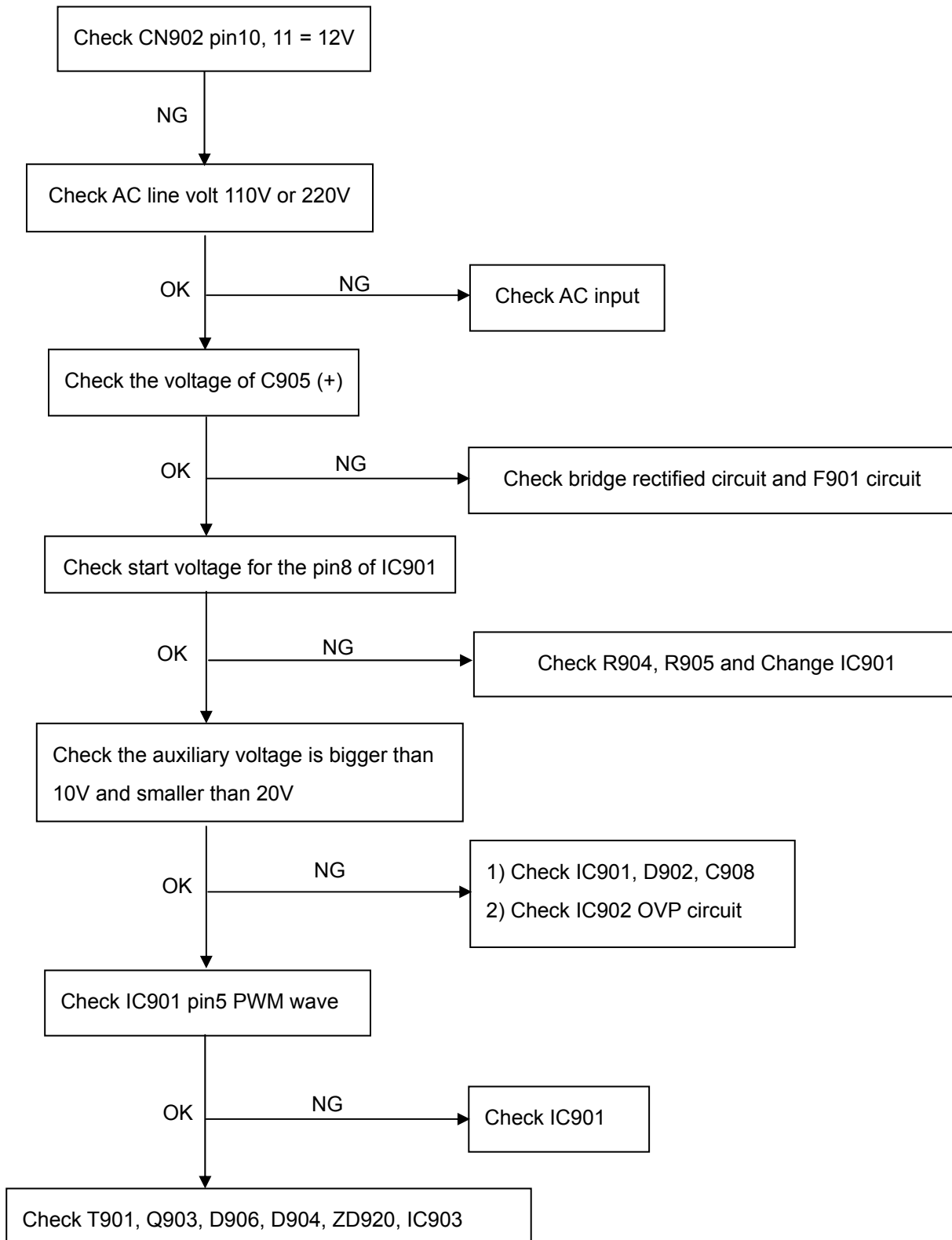
Abnormal display



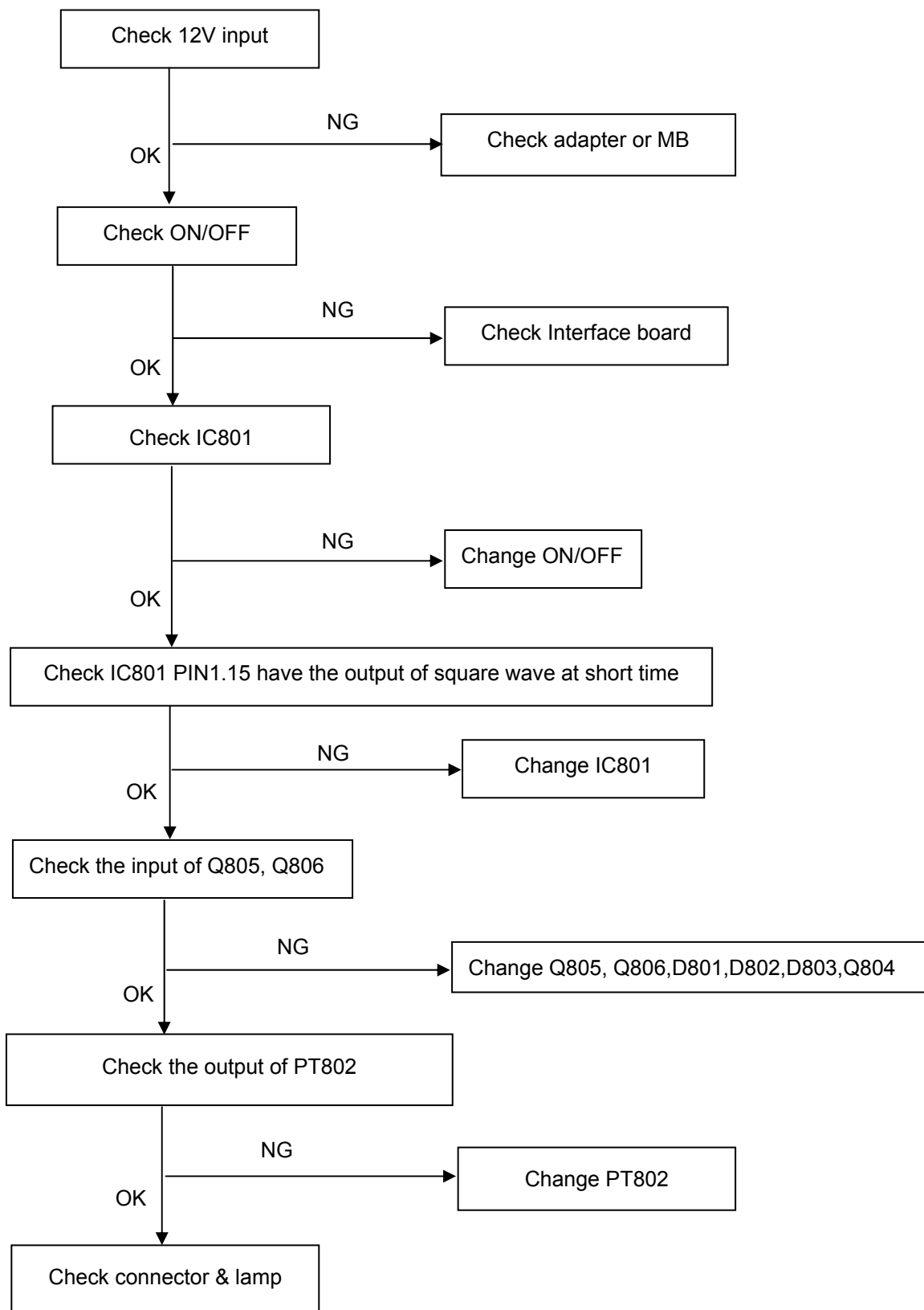
No sound



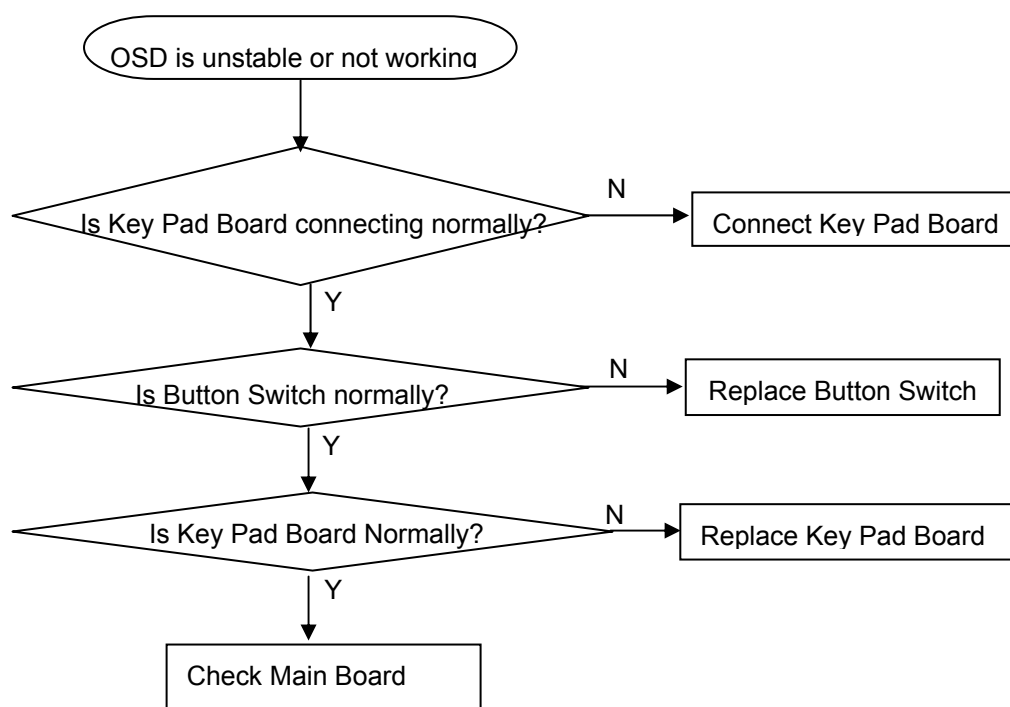
No Power (No LED indicator)



W / LED, No Backlight



Key Board



1.U390 FW update

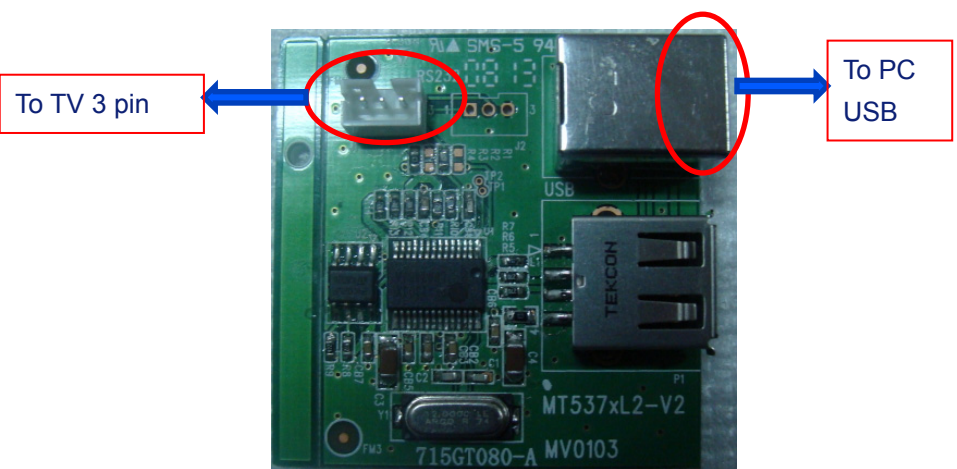
We must update U390 first, because the U390 firmware is the base of the system.

When we update U390, the soft tool is MTK Tool, the hardware tool is 715T080-A



Software tool

Version : mtk_tool-2.47.02.12_2

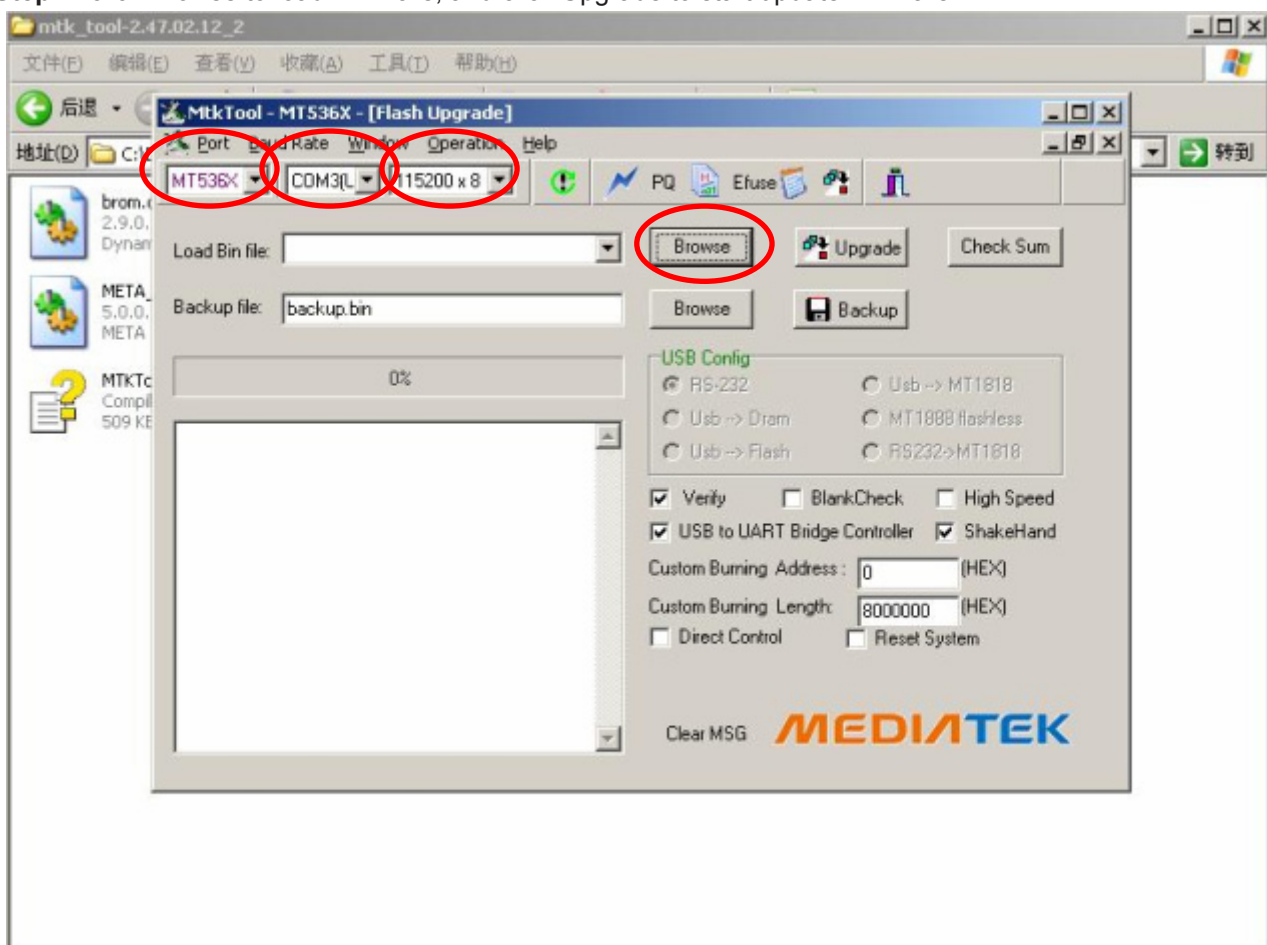


Hardware tool

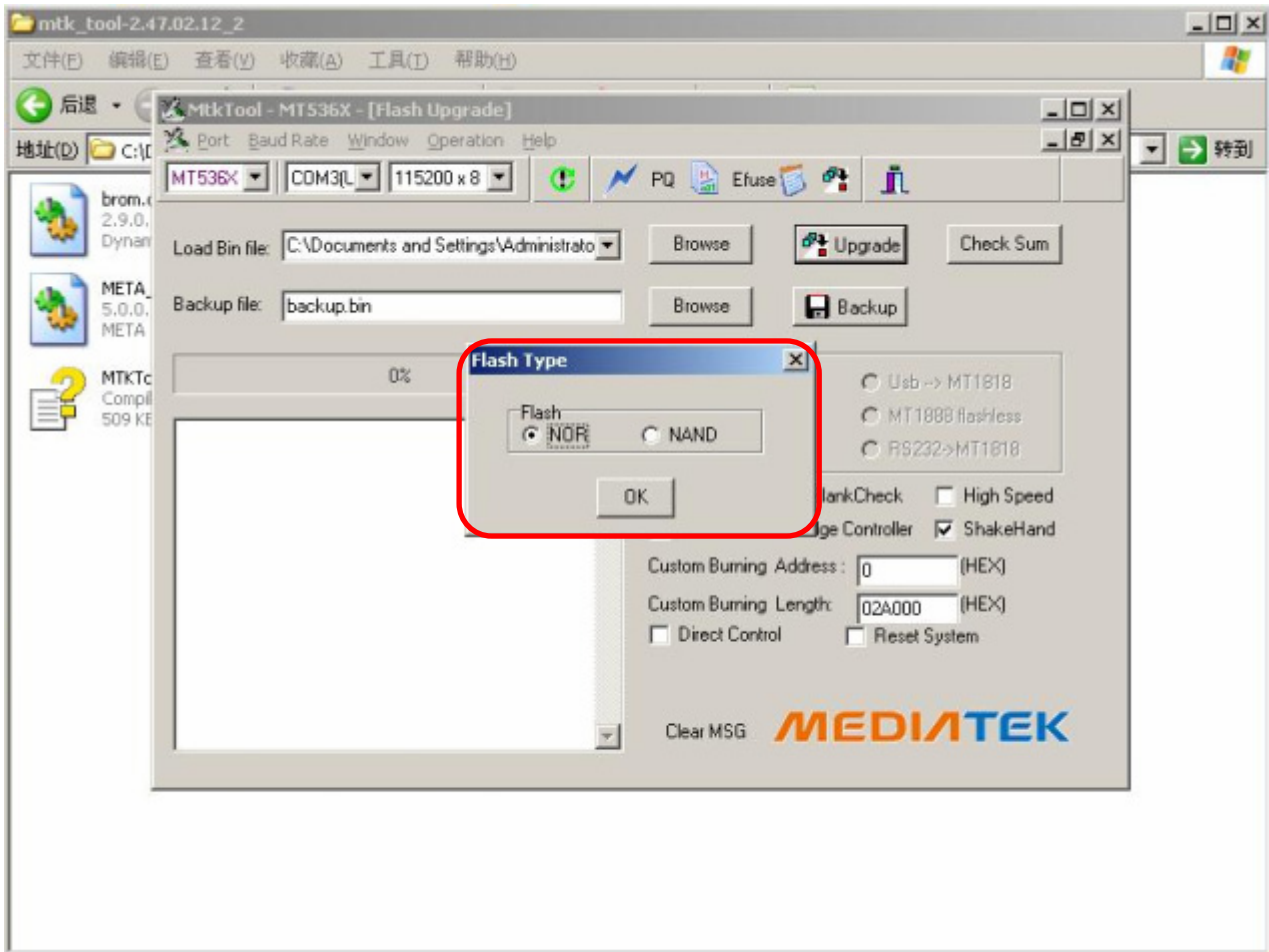
Part NO. : 715T080-A

Step1: double-click MTK.exe ,select IC type MT536X,com port is COM3(USB),the baud rate is 115200.

Step 2: click Browse to load firmware, and click Upgrade to start update firmware.



Step 3: After we click upgrade, there will be a small window, we must select Flash Type. The correct type is NOR , Click OK .



Step 4 :When we see this picture, show program OK ,then AC ON/OFF , program finished.

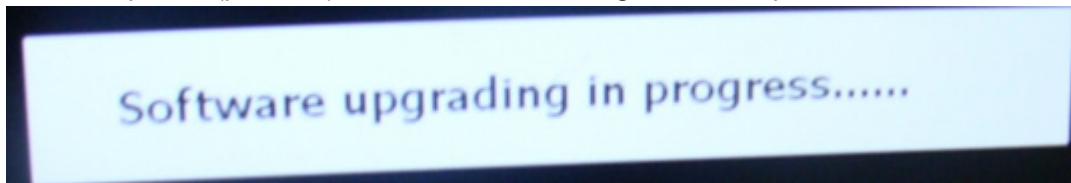
2. U391 FW update

After we update u390, next we update u391. We need not any other hardware tool , we only use USB disk to update FW.

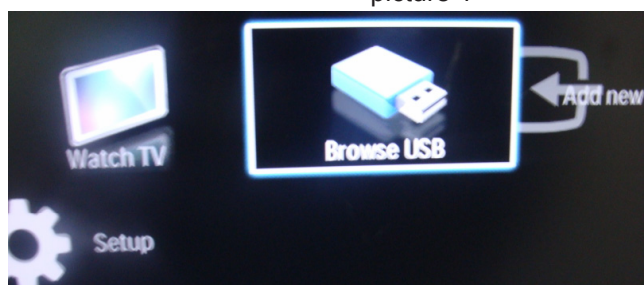
Step1:get the correct FW and save it in USB disk;

Step2:re-named the FW file, the system only recognize upgrade.pkg

Step3:when TV is standby, put the USB disk into TV USB port, then press power key on remote control , we can see the below picture (picture 1) and the LED is flickering . after the update is end, TV will be on (picture 2) .



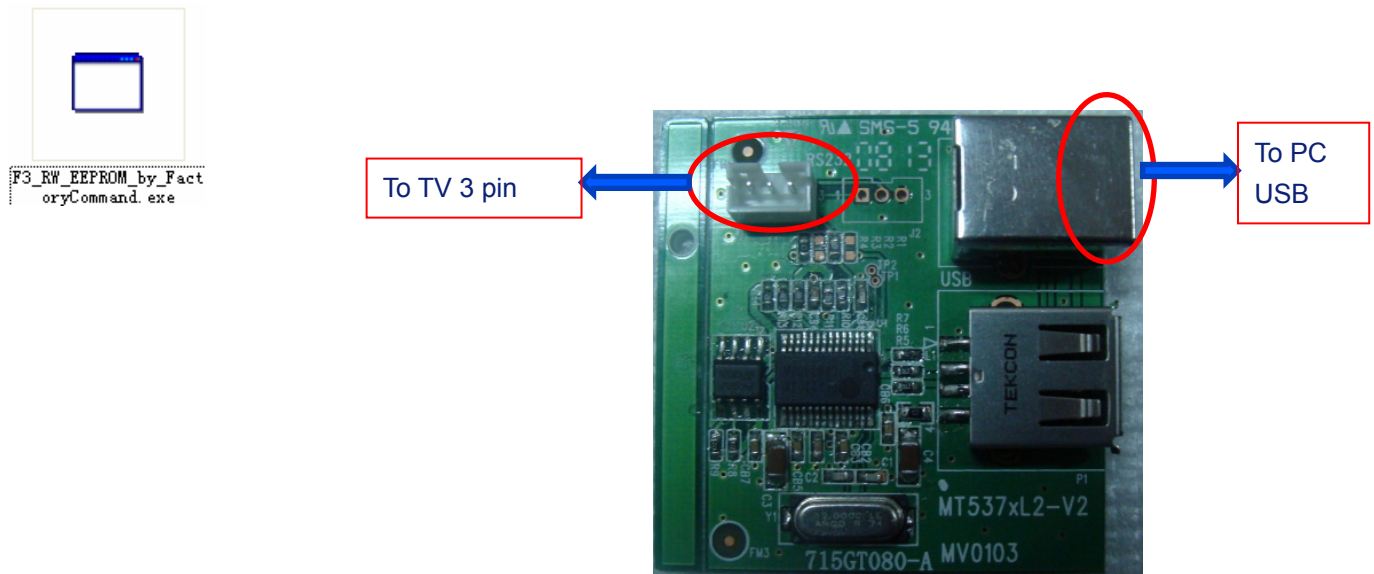
picture 1



picture 2

3. U301 FW update

When we update u301, we use software tool is NVM_Tool, the hardware tool is 715T080-A.



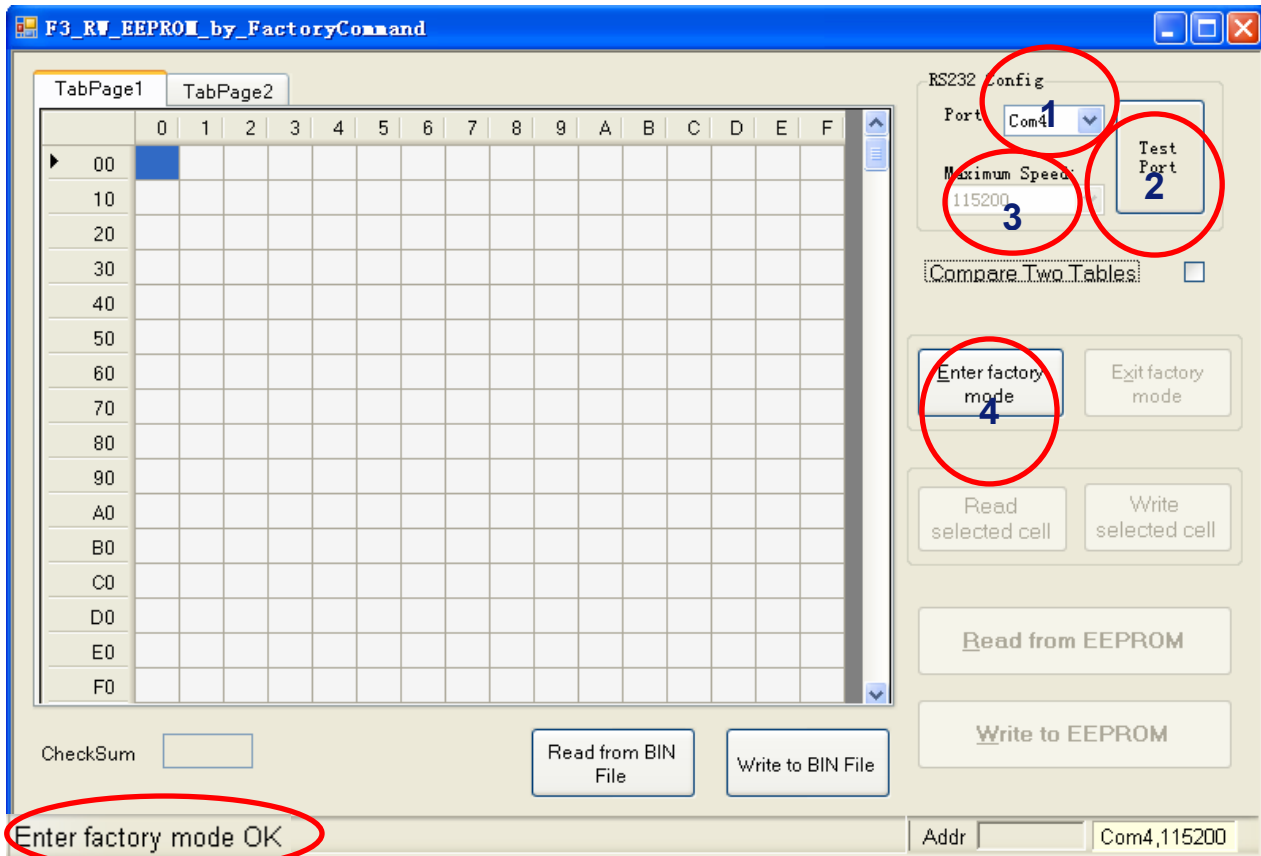
Hardware tool
Part NO. : 715T080-A

Step 1: select the correct port . for example, this time we select COM4

Step 2:click test port , if the port is correct , then we can see the below information.

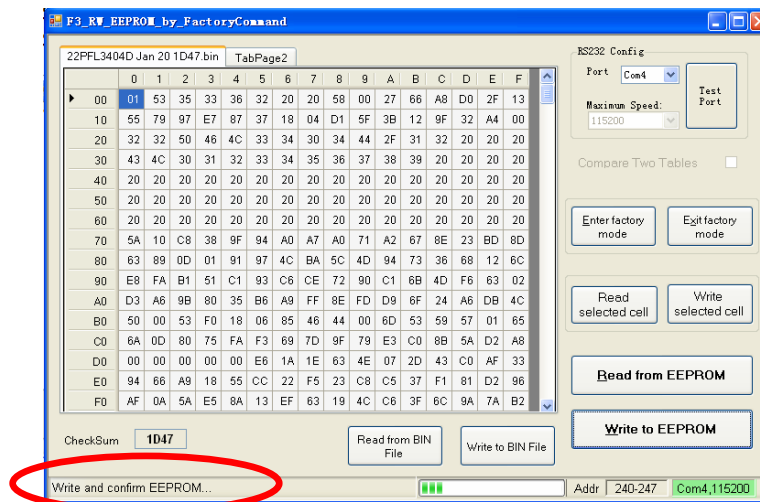
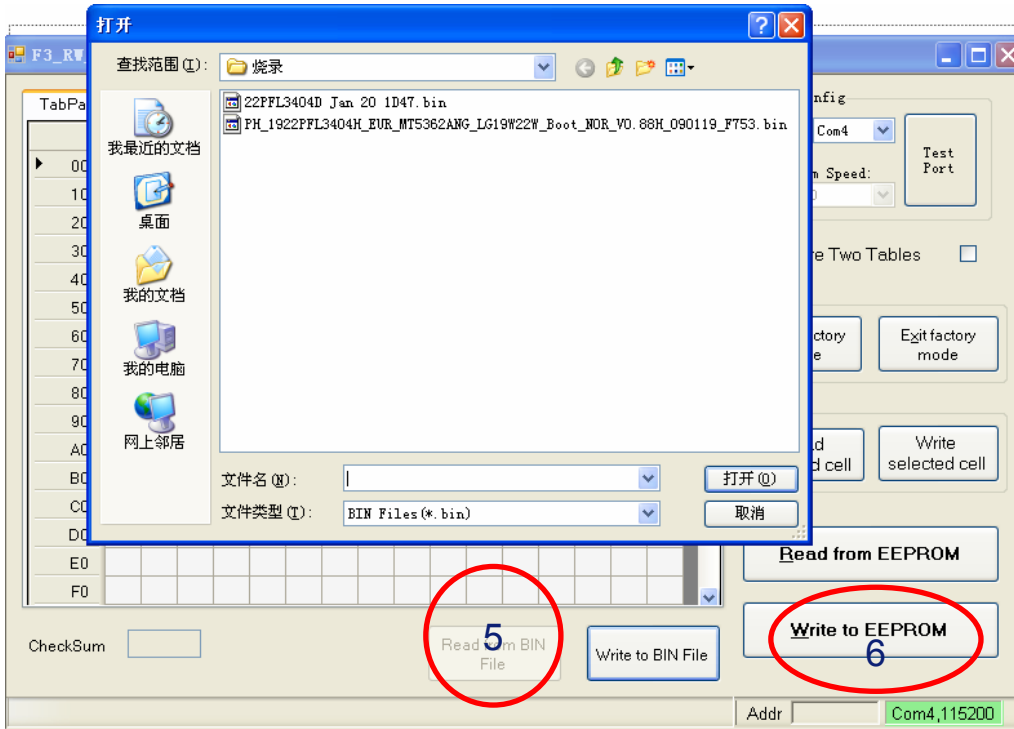
Step 3: The baud rate must be “115200”

Step 4: click Enter factory mode, we can see Enter Factory OK, and on TV screen top-right there is a green letter “F”

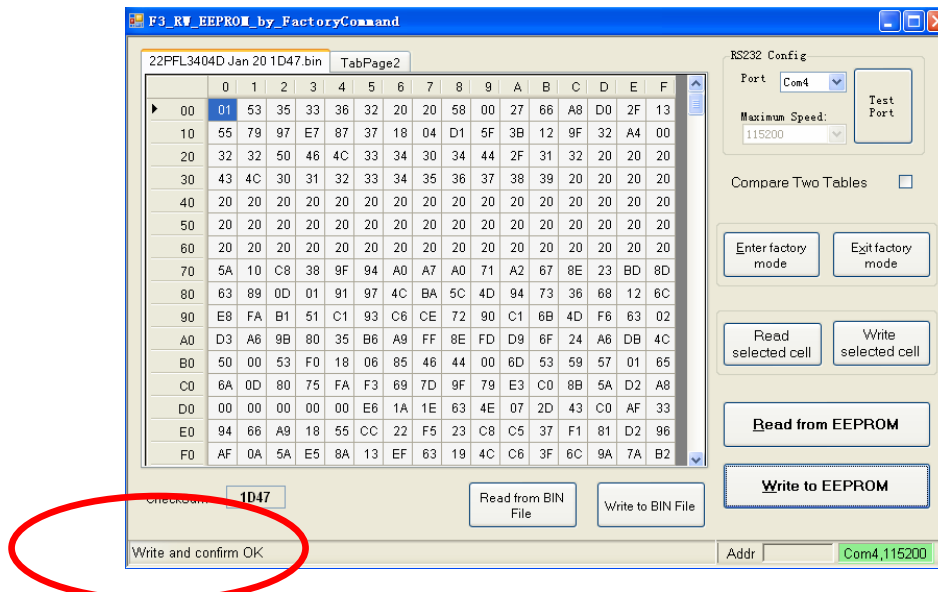


Step 5: click Read from BIN file, and load the FW file, click “open”

Step 6: click Write to EEPROM, then the data are writing to EEPROM.



Until it is Finished, It will we show” Write and confirm OK”, you must AC OFF/ONN for restart the TV SET



Approximately 30 minutes should be allowed for warm up before proceeding white balance adjustment.

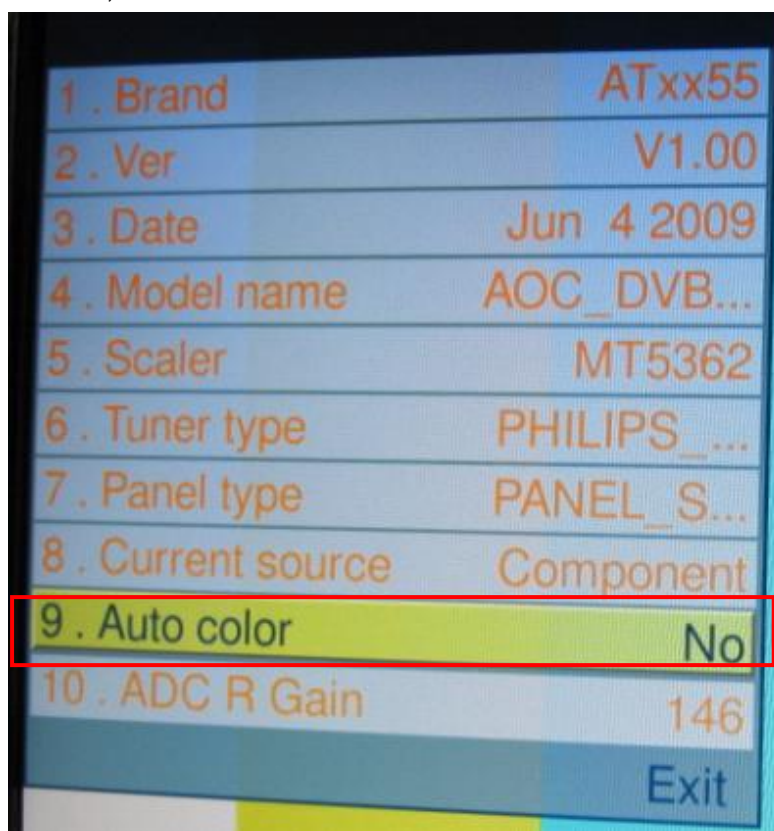
It's no need to adjust the white balance for this model.

1. Enter into the factory mode:

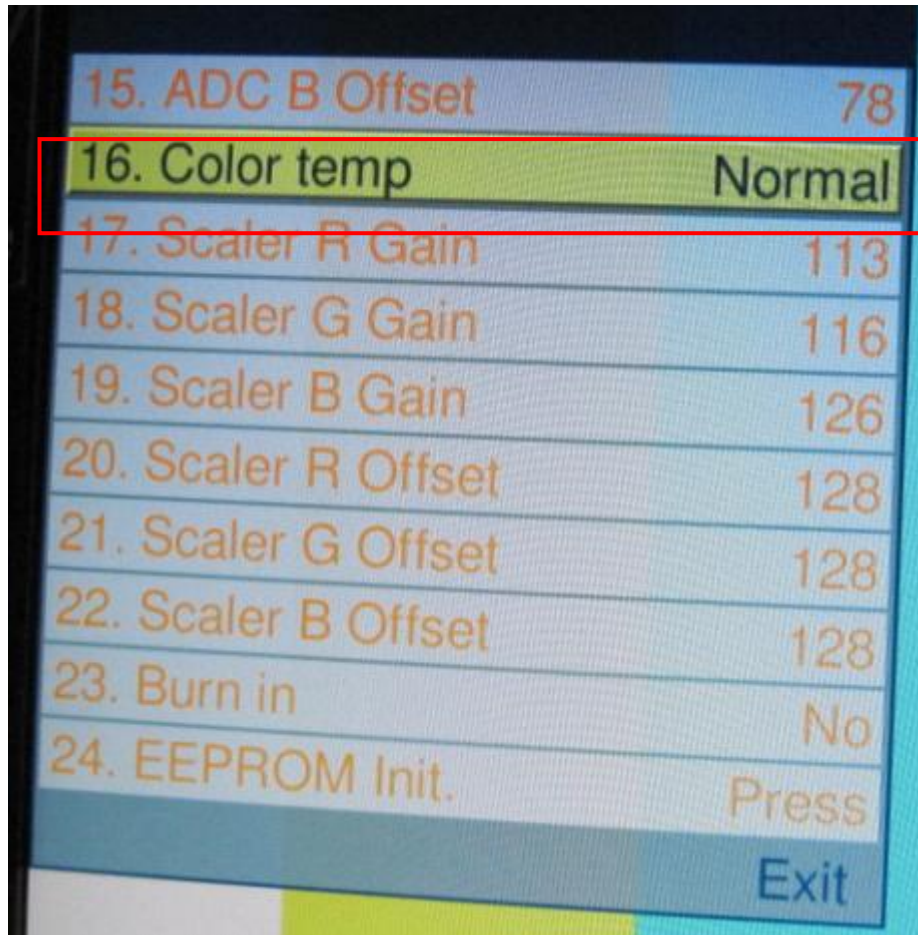
Turn on the TV, press MENU key with remote control, then press number key 1 → 9 → 9 → 9. It will achieve the factory mode

2. Click on "Auto Color" in the COMPONENT models:

COMPONENT mode: TIM = 314; PAT = 185



3. White balance adjustment in the HDMI models:



Item 16→for color temp select.

Item 17/item 18/item 19 Gain → for Red, Green and Blue gain tuning, those values will available for All input and All picture mode. The adjust range is 0 ~ 255.

Item 20/item 21/item 22 Offset → for Red, Green and Blue offset tuning, those values will available for all input and All picture mode. The adjust range is 0 ~ 255.

White pattern: HDMI timing 355 pattern 105(100ire white)

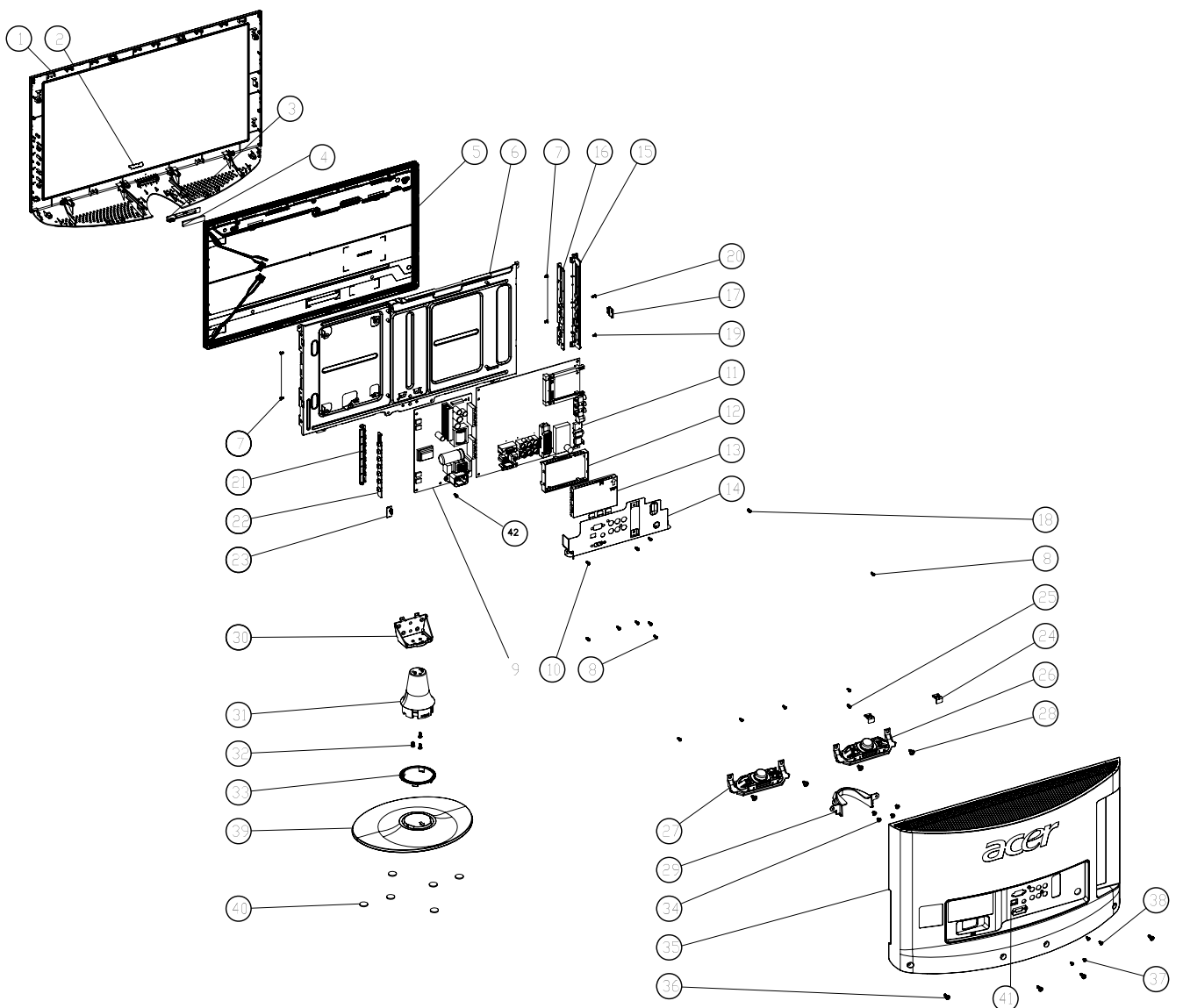
Color temp	x	y	LV cd/m2
normal	300	310	350
warm	314	329	350
cool	285	293	350

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of AT2055 & AT2056. 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.

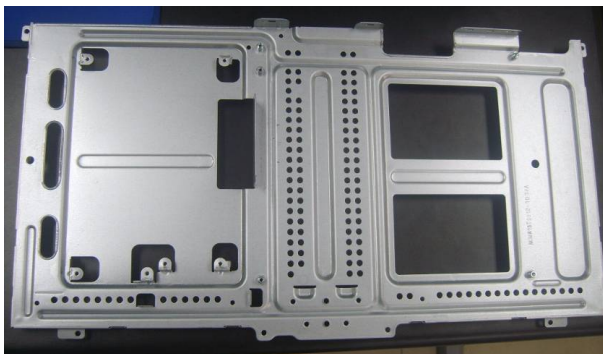
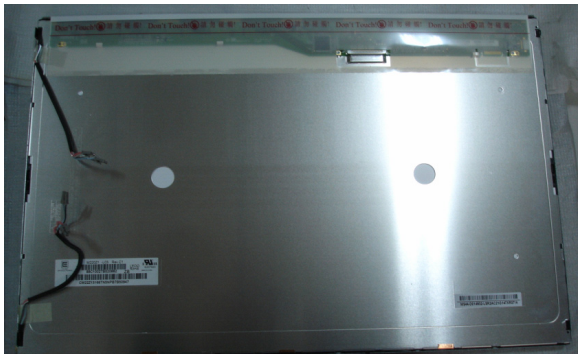
Exploded Diagram (Model: AT2055 & AT2056)

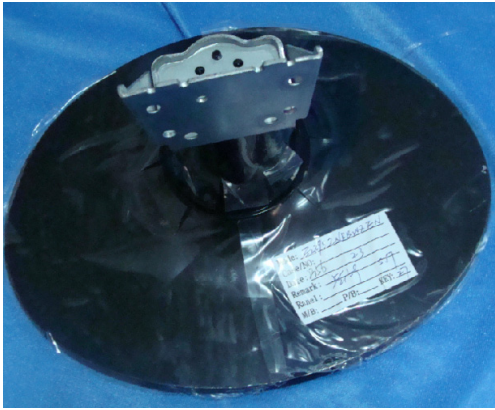
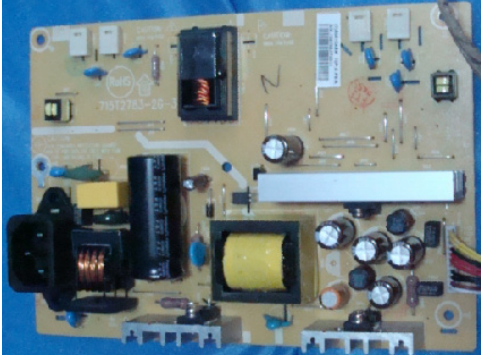
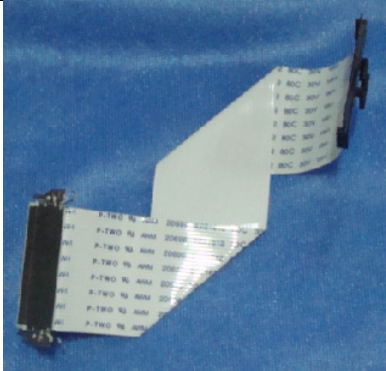


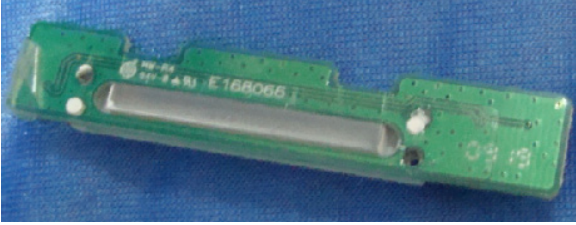
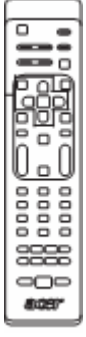
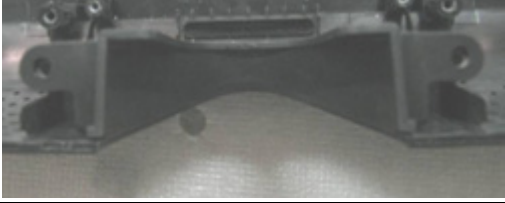
Item	Description	TPV Part No.	ACER Part No.	Q'ty
1	BEZEL 20"	A34T1342AEO 1M0128	60.MA00B.001	1
2	ACER LOGO	A23G0002 1 B	N/A	1
3	LED BOARD	IRPF9QA9	55.MA00B.003	1
4	LED BACKLIGHT	A33T0690BEC 1L0100	N/A	1
5	PANEL	750TVS200KT1BCN0AC	LK.20006.014	1
6	MAINFRAME SAMSUNG	A15T0812101	60.MA00B.005	1
7	SCREW(MF TO PANEL)	0M1G 130 6 47 CR3	N/A	4
8	SCREW(MF TO PANEL)	0Q1G 330 8120	N/A	6
9	POWER BOARD	PWTV8A41EABL	55.MA00B.002	1
10	SCREW(PB TO MF)	0M1G1730 8120		4
11	MAIN BOARD	CBPF92LBQ7	55.MA00B.001	1
12	SHIELDING COVER BOTTOM(DDR)	A85T0196101	N/A	1
13	SHIELDING COVER TOP(DDR)	A85T0184101	N/A	1
14	SHIELDING COVER EMI	A85T0181101	N/A	1
15	IO SIDE COVER	A33T0675AEM 1L0130	N/A	1
16	SHIELDING COVER SIDE(IO-SIDE)	A85T0185101	N/A	1
17	USB COVER FOR BBY	Q12G7041 3	N/A	1
18	SCREW(MB TO MF)	0M1G1730 8120	N/A	3
19	SCREW(SIDE COVER TO HDMI CONNECTOR)	0M1G 130 6 47 CR3	N/A	1
20	SCREW(SIDE COVER TO AUDIO CONNECTOR)	0Q1G 130 8 47 CR3	N/A	1
21	KEY FUNCTION	A33T0671AEP 1M0100	N/A	1
22	KEY BOARD	KEPF9QA7	55.M990B.004	1
23	IR BOARD	IRPF9QA8	55.M990B.003	1
24	BRACKET PRESS PANEL	A15T0783101	N/A	2
25	SCREW(IO SIDE COVER TO MF)	0D1G1730 10120	N/A	2
26	SPEAKER	078G0055 2 GR	23.M990B.002	1
27	SPEAKER	078G0055 2 GL	23.M990B.001	1
28	SCREW(SPEAKER TO BEZEL)	001G6021 1	N/A	4
29	COVER STNAD	A33T1344AEM 1L0100	60.MA00B.006	1
30	BRACKET HINGE	A15T0813101	60.MA00B.007	1
31	STAND	A34T1306AEP 1M0100	60.MA00B.003	1
32	SCREW(STAND TO BRACKET HINGE)	0M1G 340 8 47 CR3	N/A	3
33	LED RING	A33T0674BCC 1L0100	N/A	1
34	SCREW(BRACKET HINGE TO MF)	0M1G 140 6 47 CR3	N/A	4
35	REAR COVER 20	A34T1343AEMA1L0100	60.MA00B.002	1
36	SCREW(REAR COVER TO BEZEL)	0Q1G 940 10 47 CR3	N/A	4
37	SCREW(R/C TO HDMI CONNECTOR)	0M1G 130 6 47 CR3	N/A	2
38	SCREW(R/C TO AUDIO CONNECTOR)	0Q1G 130 8 47 CR3	N/A	2
39	BASE	A34T1307AEP 1M0133	60.MA00B.004	1
40	FOOT PAD	Q12G6082 1	N/A	6
41	SERVICE COVER	Q12G7041 4	N/A	1
42	SCREW(AC SOCKET TO MF)	0D1G1730 10120	N/A	2

Part List

Above picture show the description of the following component.

Description	Picture	TPV Part NO.	Acer Part NO.
Bezel		A34T1342AEO 1M0128	60.MA00B.001
Main Frame		A15T0812101	60.MA00B.005
Panel		750TVS200KT1BCN0AC	LK.20006.014
Rear Cover		A34T1343AEMA1L0100	60.MA00B.002

STAND ASS'Y		705TQ934A14	N/A
Power Board		PWTV8A41EABL	55.MA00B.002
Main Board		CBPF92LBQ7	55.MA00B.001
Speaker		078G0055 2 GL/ 078G0055 2 GR	23.M990B.001 /23.M990B.002
FFC Cable		089G179E30N 35	50.MA00B.001

LED Board		IRPF9QA9	55.MA00B.003
IR board		IRPF9QA8	55.M990B.003
Key Board		KEPF9QA7	55.M990B.004
Remote Control		098TR7BDYNTARD	N/A
Power Cord		089G404A18N IS	27.L40VB.005
Cover Stand		A33T1344AEM 1L0100	60.MA00B.006

EDID Data

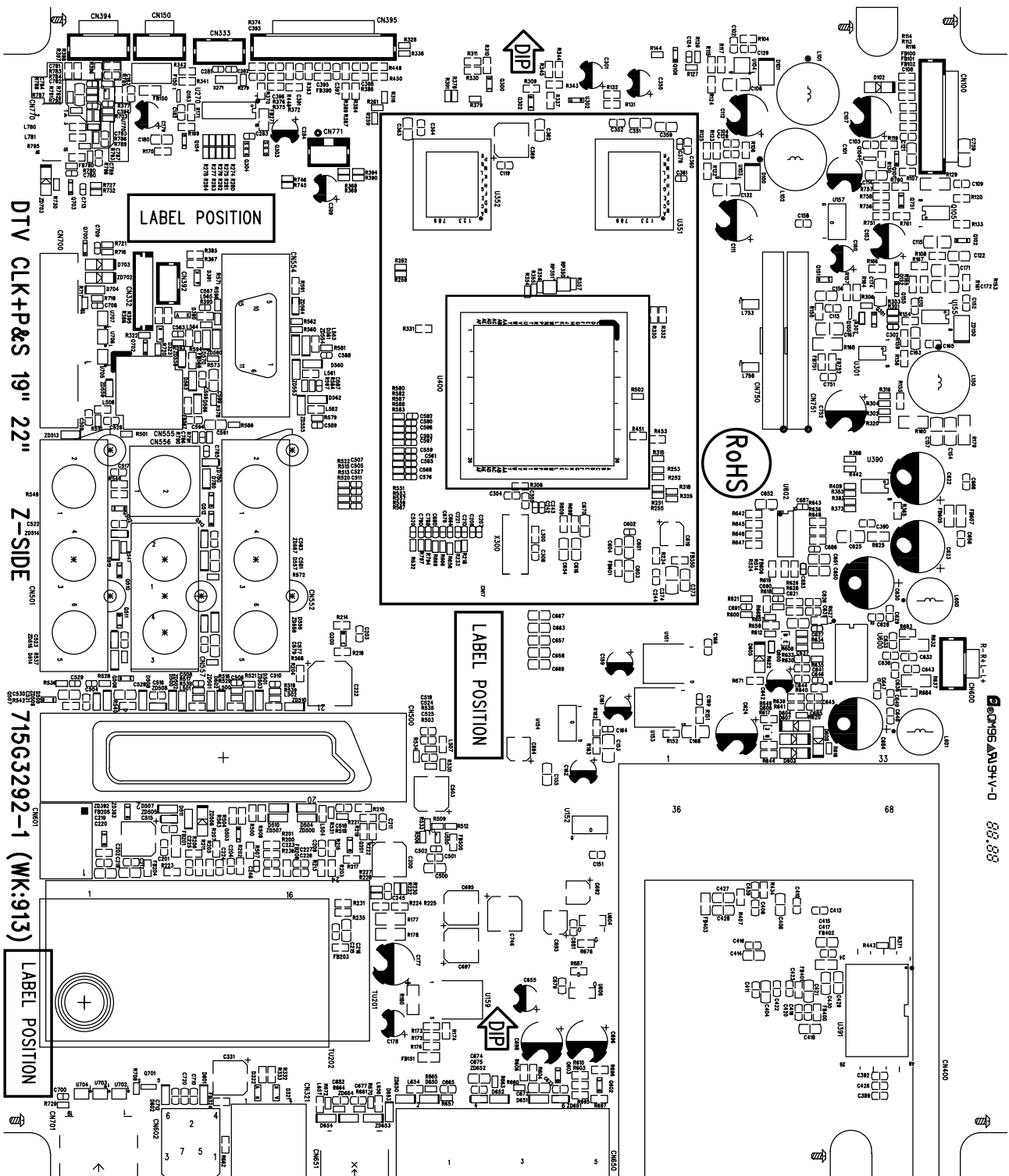
DDC DATA for D-Sub Input

00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F

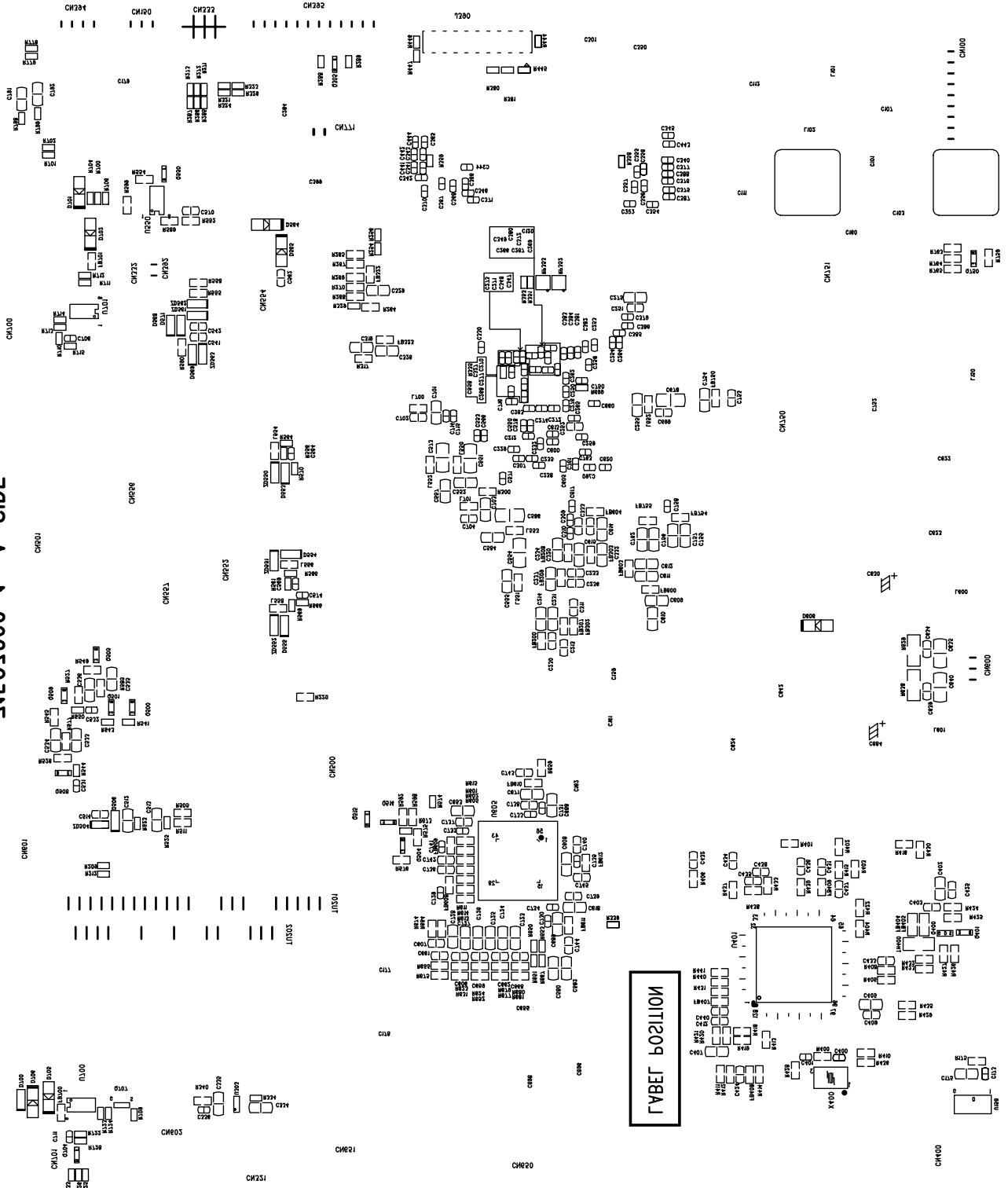
00| 00 FF FF FF FF FF FF 00 04 72 55 20 01 01 01 01
10| 00 13 01 03 68 28 1E 78 2A 8E 60 A5 55 44 99 24
20| 12 49 4B BF EE 00 71 4F 81 C0 81 00 01 01 01 01
30| 01 01 01 01 01 01 31 2E 40 00 62 84 22 30 58 A8
40| 1B 00 90 2C 11 00 00 1E 00 00 00 FF 00 0A 20 20
50| 20 20 20 20 20 20 20 20 20 20 00 00 00 FD 00 38
60| 4C 0F 44 0F 00 0A 20 20 20 20 20 20 00 00 00 FC
70| 00 41 54 32 30 35 35 0A 20 20 20 20 20 20 00 AE

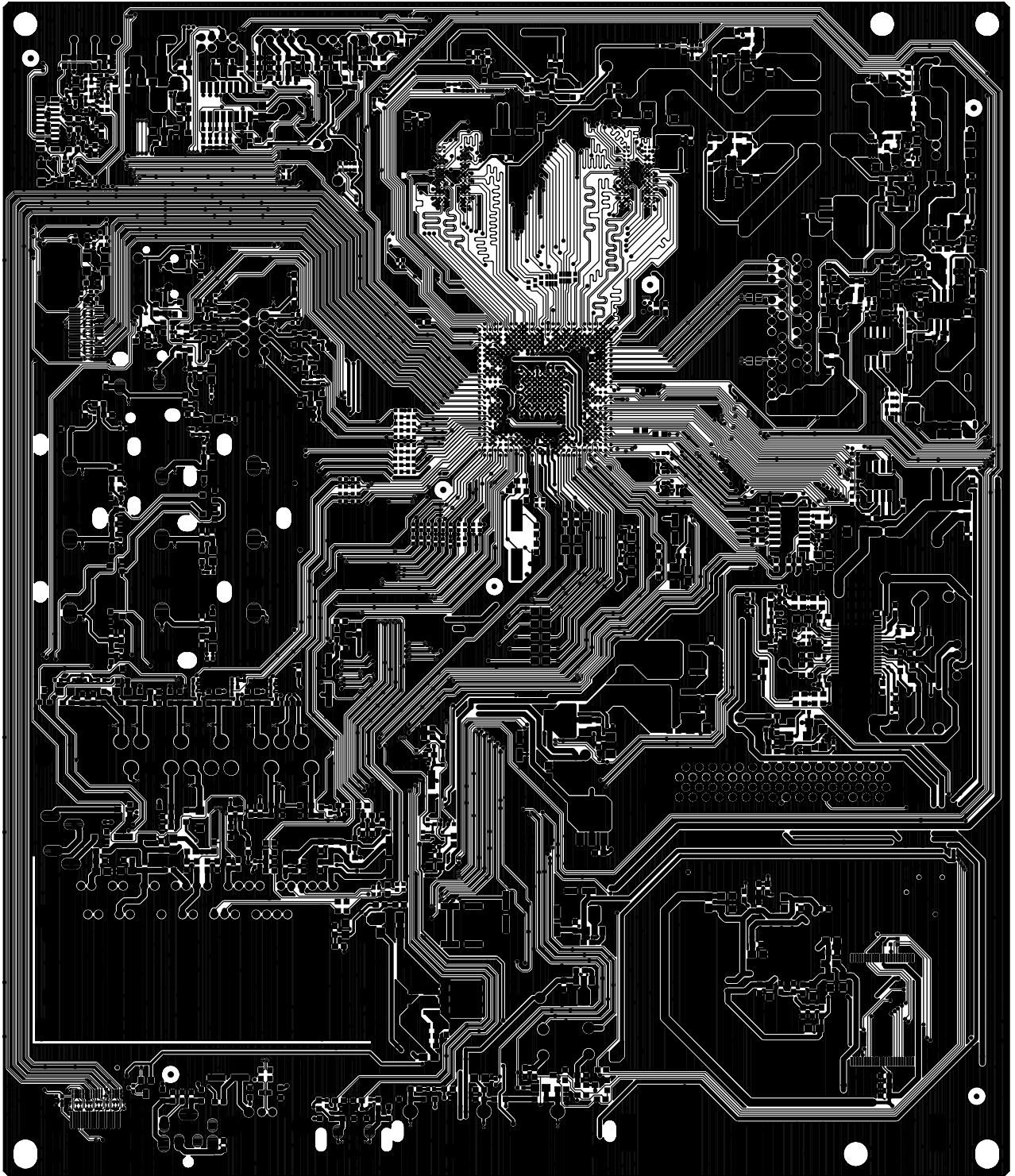
PCB Layout

Main Board

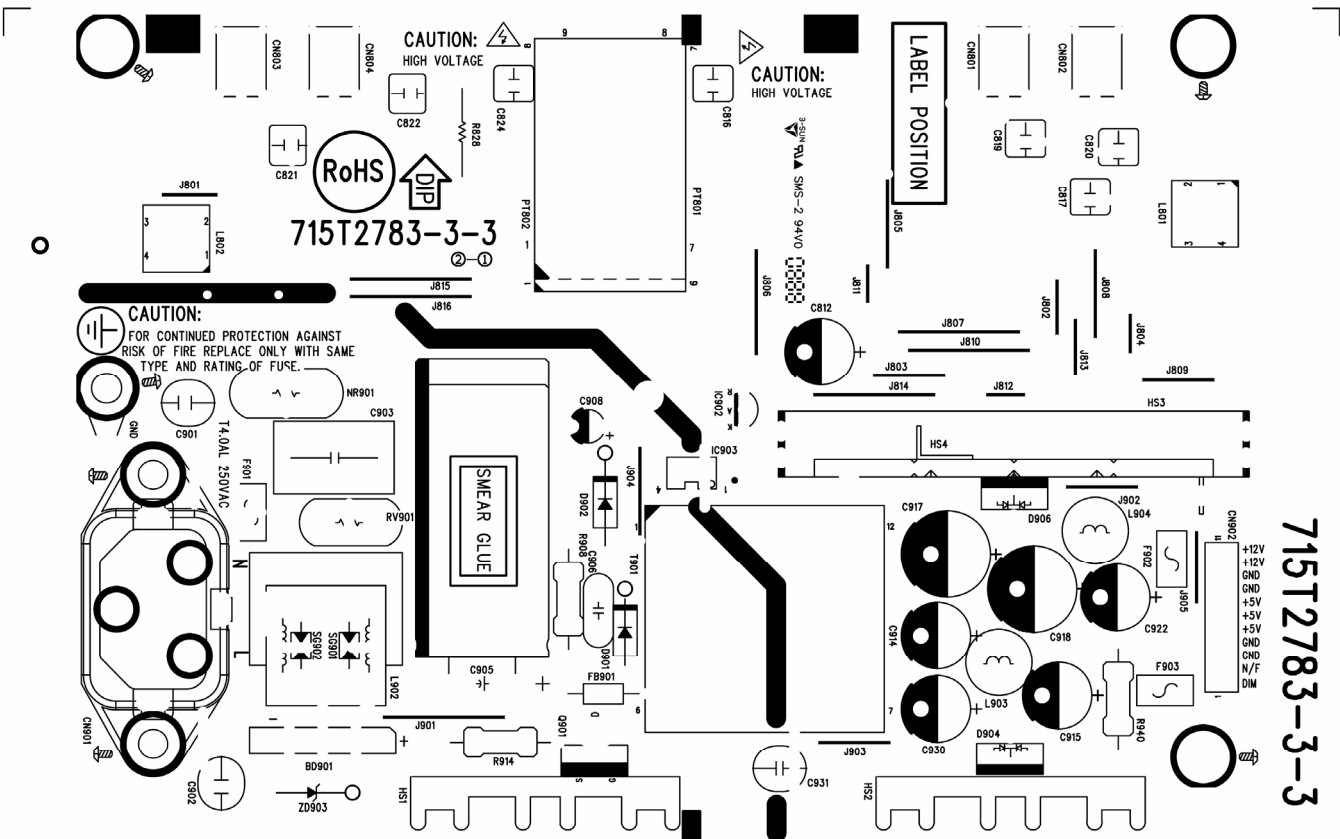


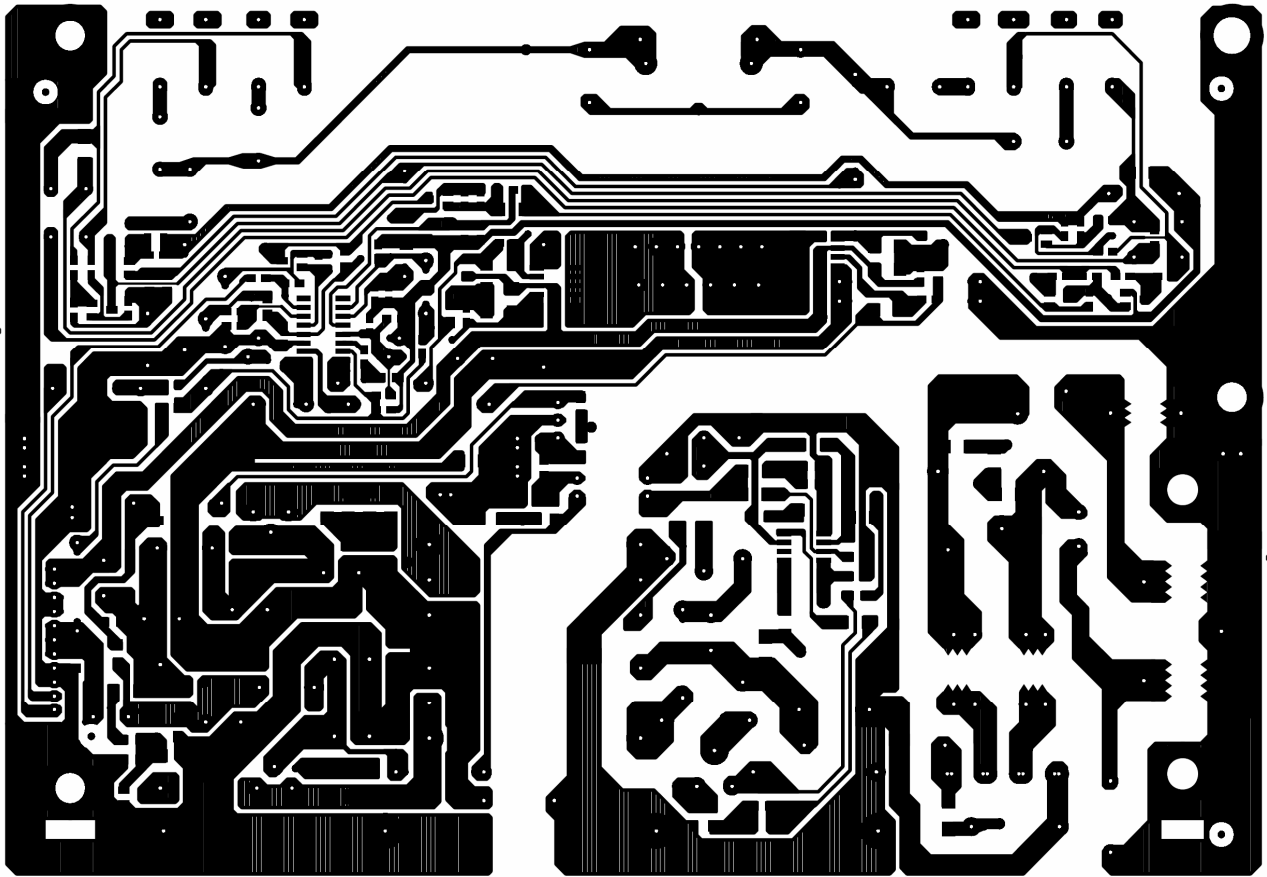
1203505-1 A-SIDE



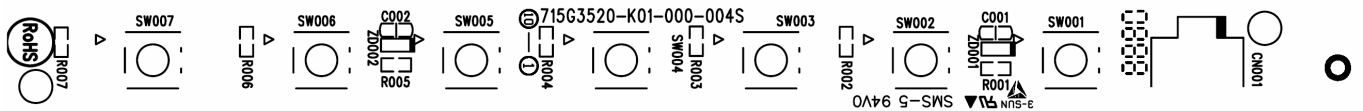


Power Board





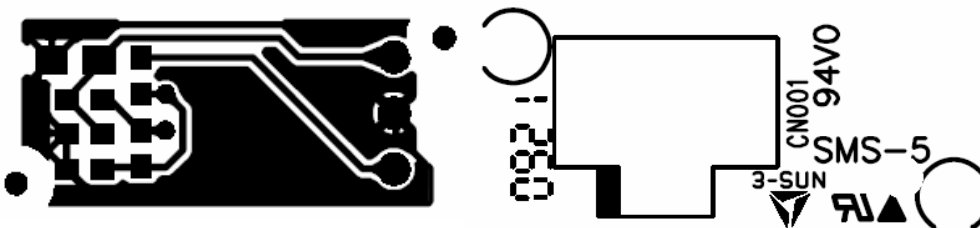
Key Board



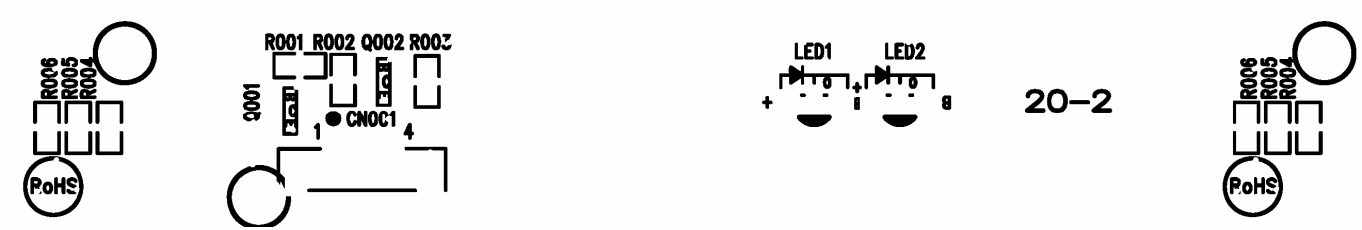
715G3520-K01-000-004S



IR board



LED Board



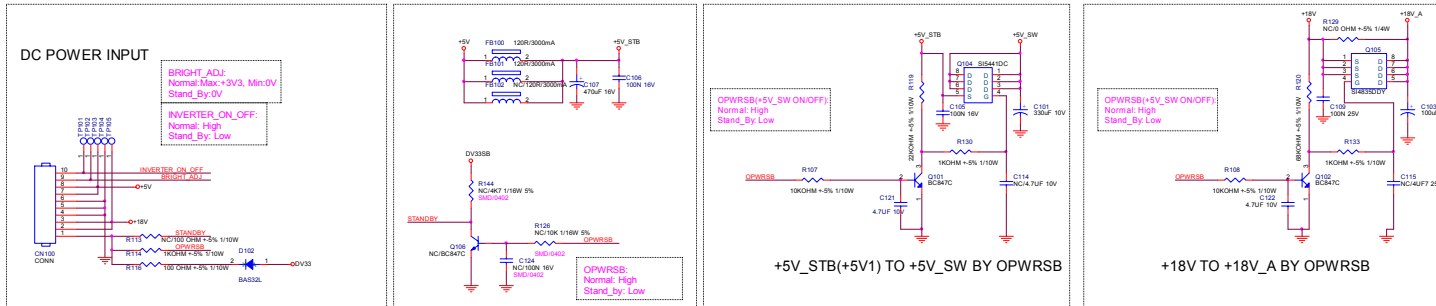
Schematic Diagram

Chapter 10

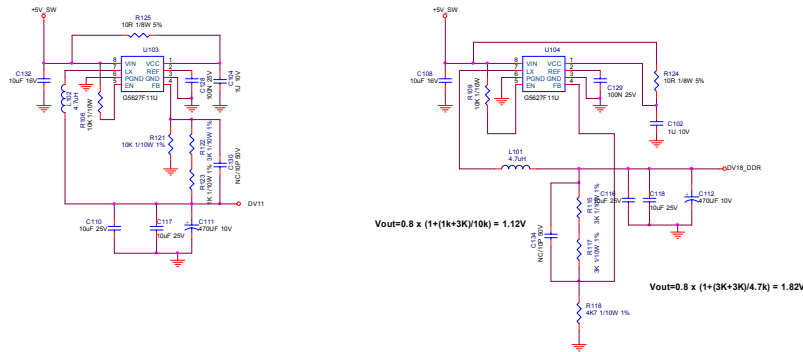
Main Board

EU DTV SMALL MT5362 - 4 LAYERS

6 OPWRSB << OPWRSB
14 STAND_BY << STAND_BY
15 BRIGHT_ADJ << BRIGHT_ADJ
15 INVERTER_ON_OFF << INVERTER_ON_OFF
7 MEM_VREF << MEM_VREF
3.15.14 +18V_A << +18V_A

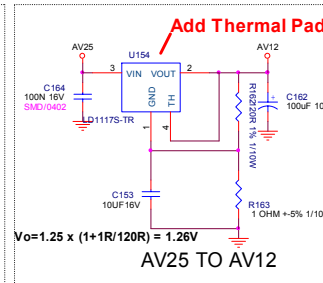
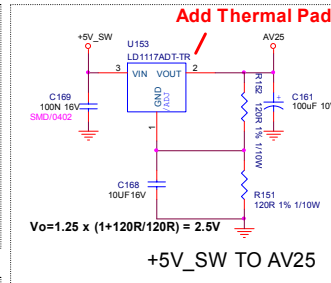
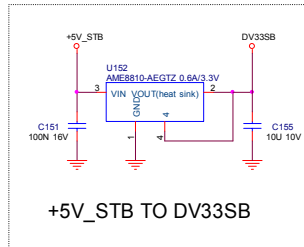
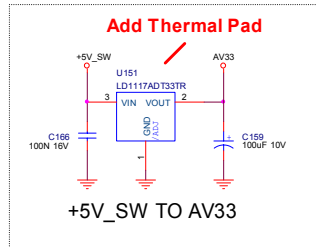


Parts	Brand	PnS	Click
R108,R120,R133, C122, Q102,Q105	NC	Yes	
RT29	Yes	NC	

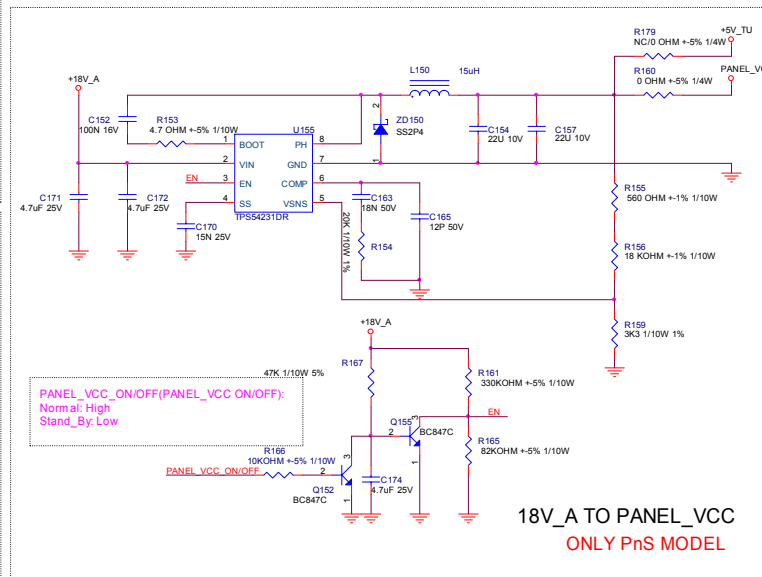
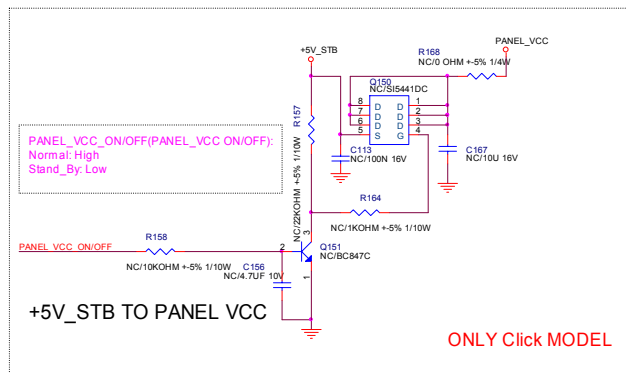
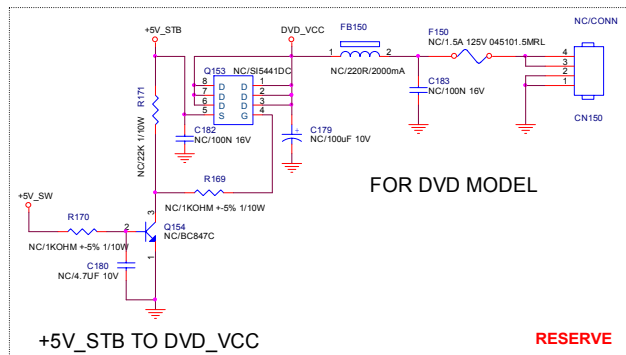
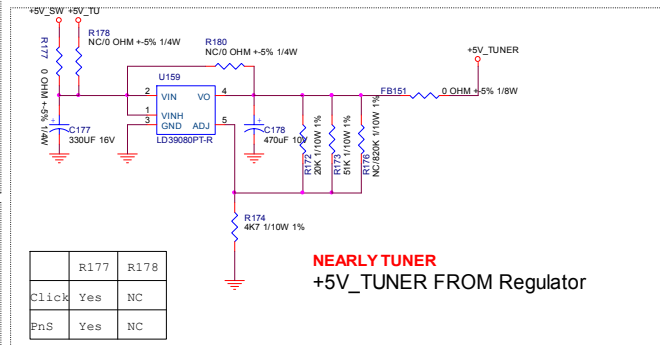
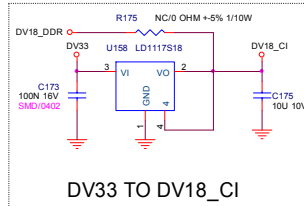
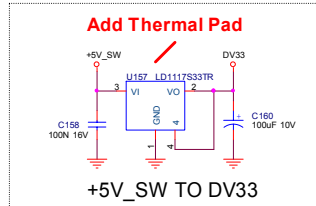


The item of this page start from "100"

T.P.V. (Top Victory Electronics Co., Ltd.)	DEM MODEL	Rev	Custom
SI B. S. B. B.	71802902-1-A-42-00010	REV MODEL	
Rev: 00000001	SD: POWER-A.1	PCB NAME	71802902-1
Date: Wednesday, June 03, 2008	10:02	2.2	15

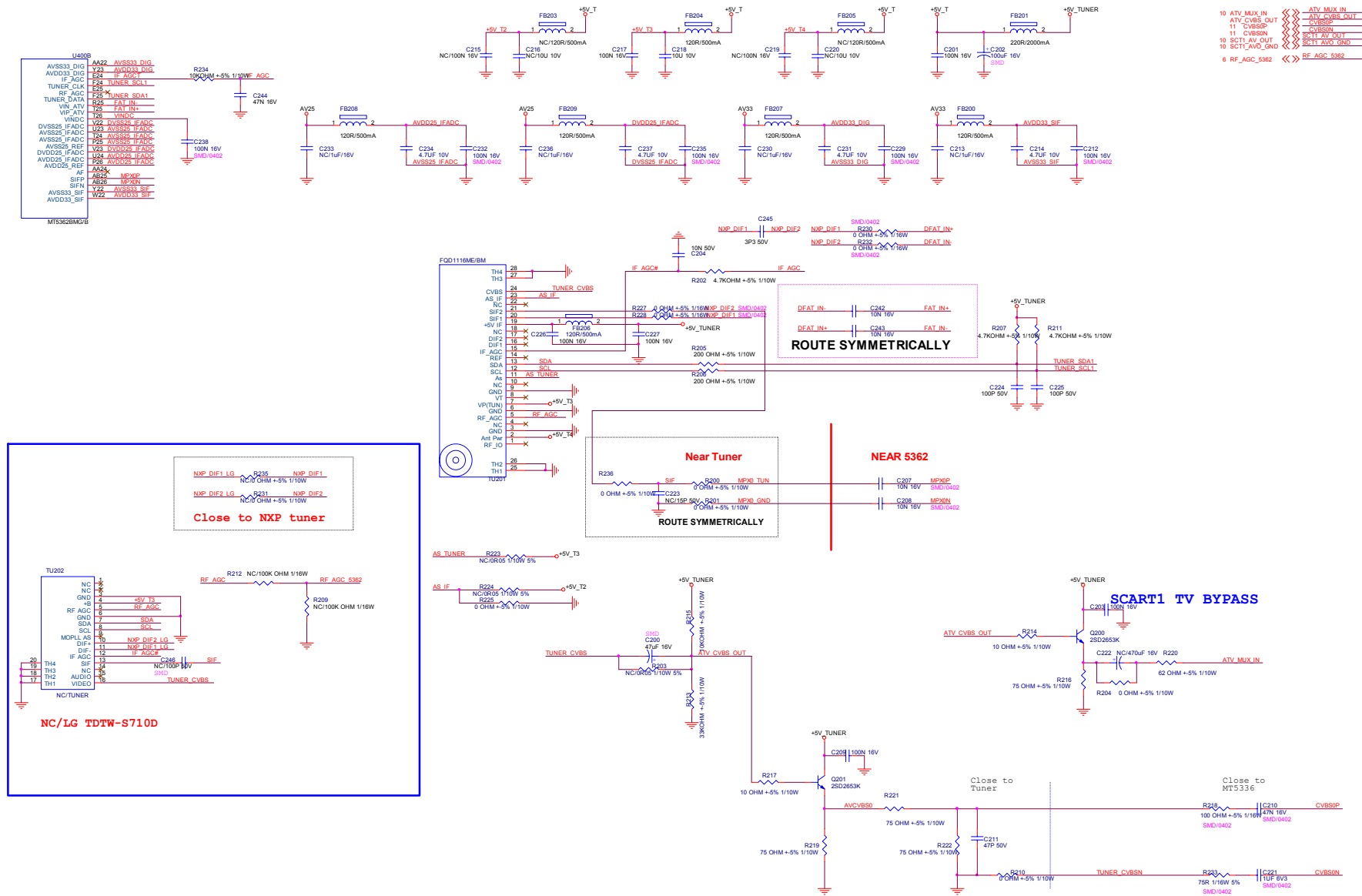


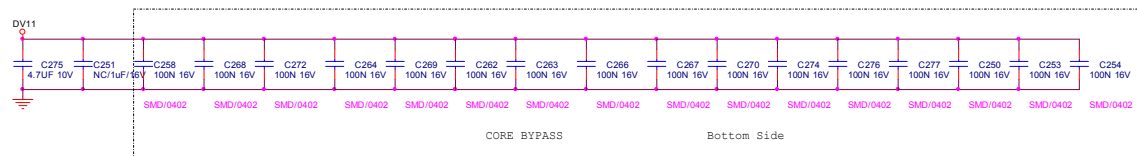
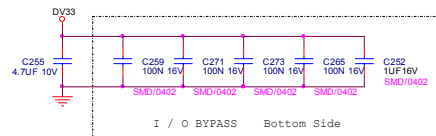
6 PANEL_VCC_ON/OFF
2.6 OPWRSB
2.10.14 +18V_A



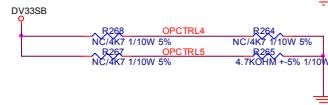
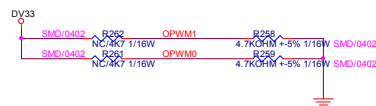
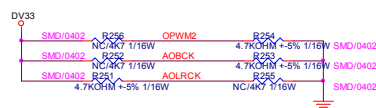
The item of this page start from "150"

TPV (Top Victory Electronics Co., Ltd.)	OEM MODEL	Size	C
规格书编号	715G3292-1-XX-2-090310	Rev	1
Key Component	03. POWER-2	PCB NAME	715G3292-1
Date	Wednesday, June 03, 2009	Sheet	3 of 15
		图章	xx





Trap Mode	OPWM2	AOBCK	AOLRCK
Normal mode	0	0	0
ICE mode	0	0	1
CPU model mode	0	1	0

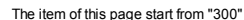
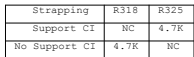


Trap Mode	OPWM0	OPWM1
NOR BOOT	0	0
NAND BOOT	0	1
LARGE NAND BOOT	1	0

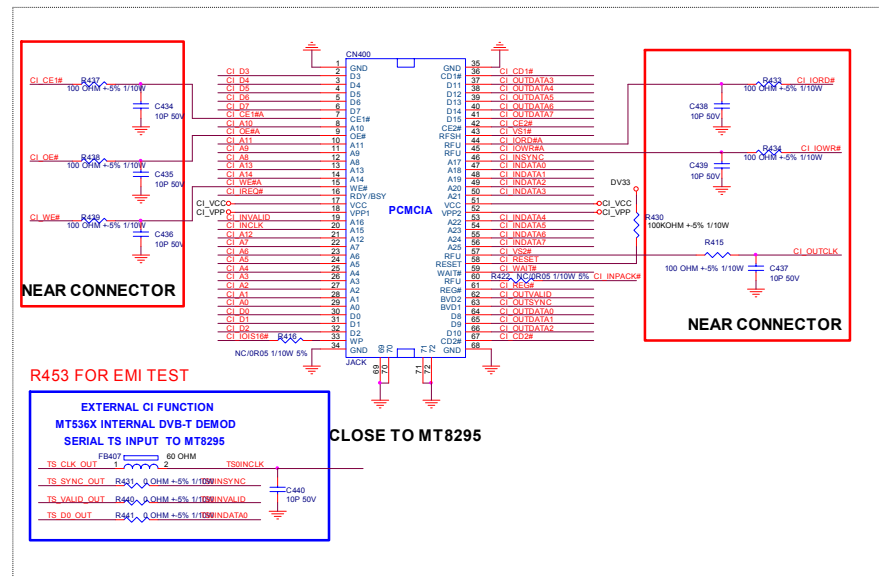
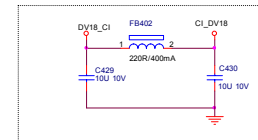
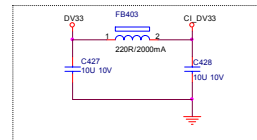
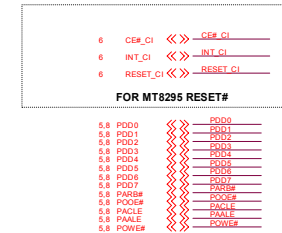
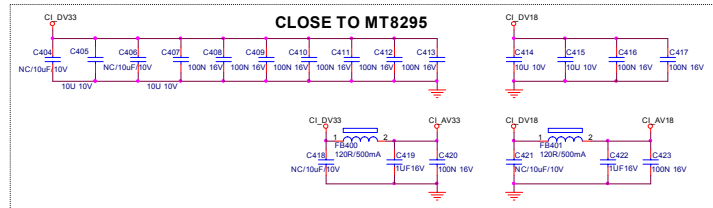
Trap Mode	OPCTRL5	OPCTRL4
Core Reset 1us	0	0
Core Reset 3.3V	0	1
SCAN mode	1	0
Core Reset 0.9V	1	1

Strapping Mode	OPCTRL3 (O)	OPCTRL2 (O)
XTAL 54MHz	0	0
XTAL 27MHz	1	0

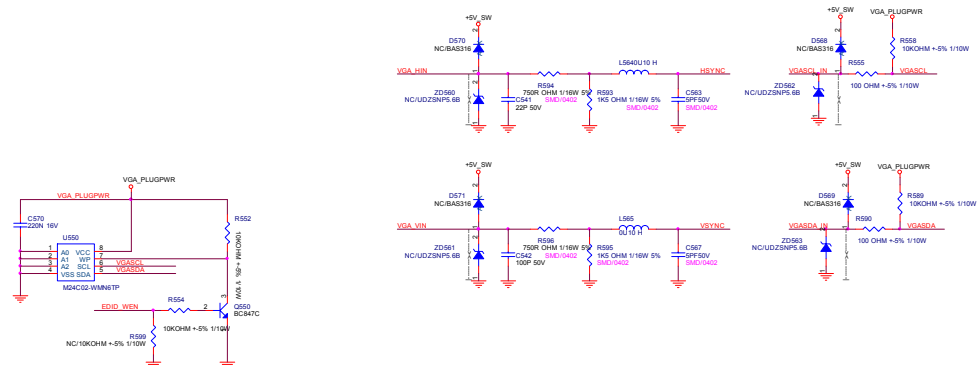
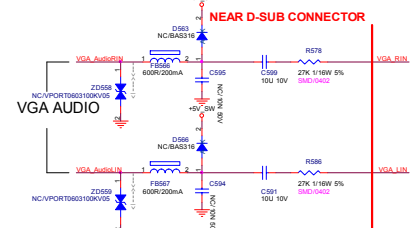
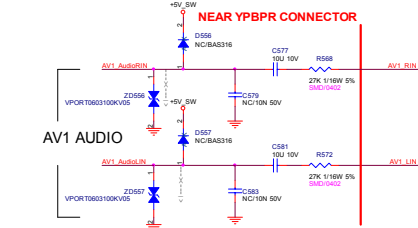
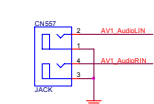
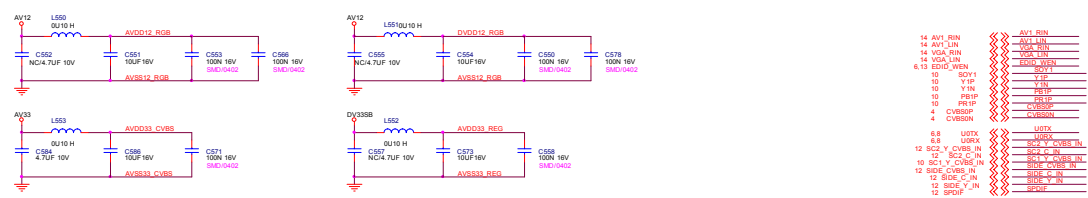
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL	Size	Custom
結晶広電機	715G3292-1-X-2-090310	TPV MODEL	Rev	1
Key Component	05. MT5362 BYPASS/TRAP.	PCB NAME	715G3292-1	彭彦
Date	Frid. March 20. 2009	Sheet	5 of 15	xx



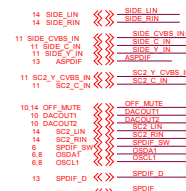
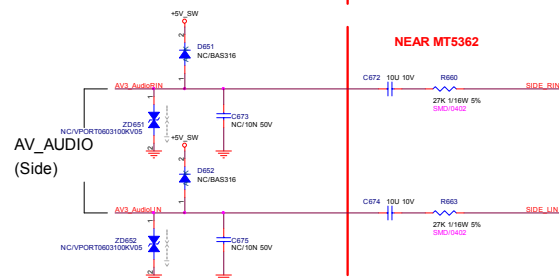
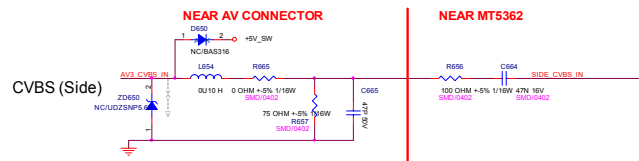
結核菌培養



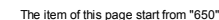
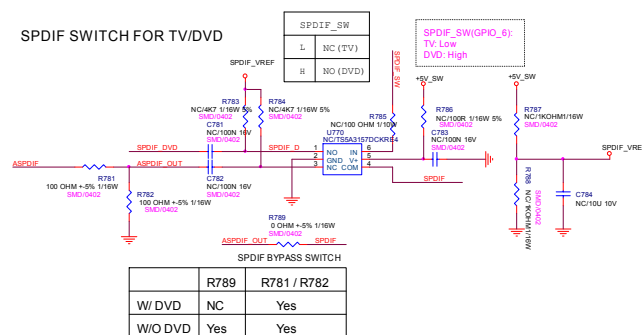
TPV (Top Victory Electronics Co., Ltd.)	OEM MODEL	Size	Custom
715G3292-1-XX-2-090310	TPV MODEL	Rev	1
Key Component	09: MT8259/C1 CARD	PCB NAME	715G3292-1
Date	09: Mar 08, 2009	Sheet	9 of 16
		Rev	XX

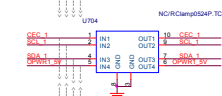
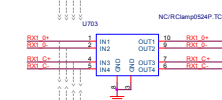
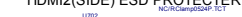
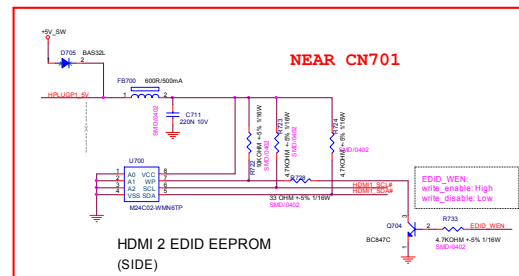
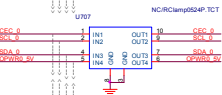
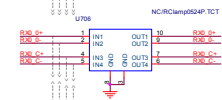
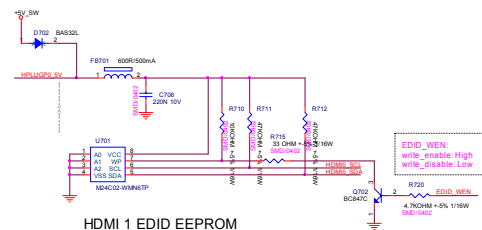


TP V (Top Victory Electronics Co., Ltd.)		DEM MODEL		Size	Custom
晶圆品番	71503292-1.XX2-090310	TPV MODEL		Rev	1
Key Component	11_YPBPR/VA INPUT	PCB NAME	71503292-1	商家	XX
Date	2024/04/10 Mon. 16: 50:00	Sheet	51 of 16		



FROM DVD AV & TX/RX

66



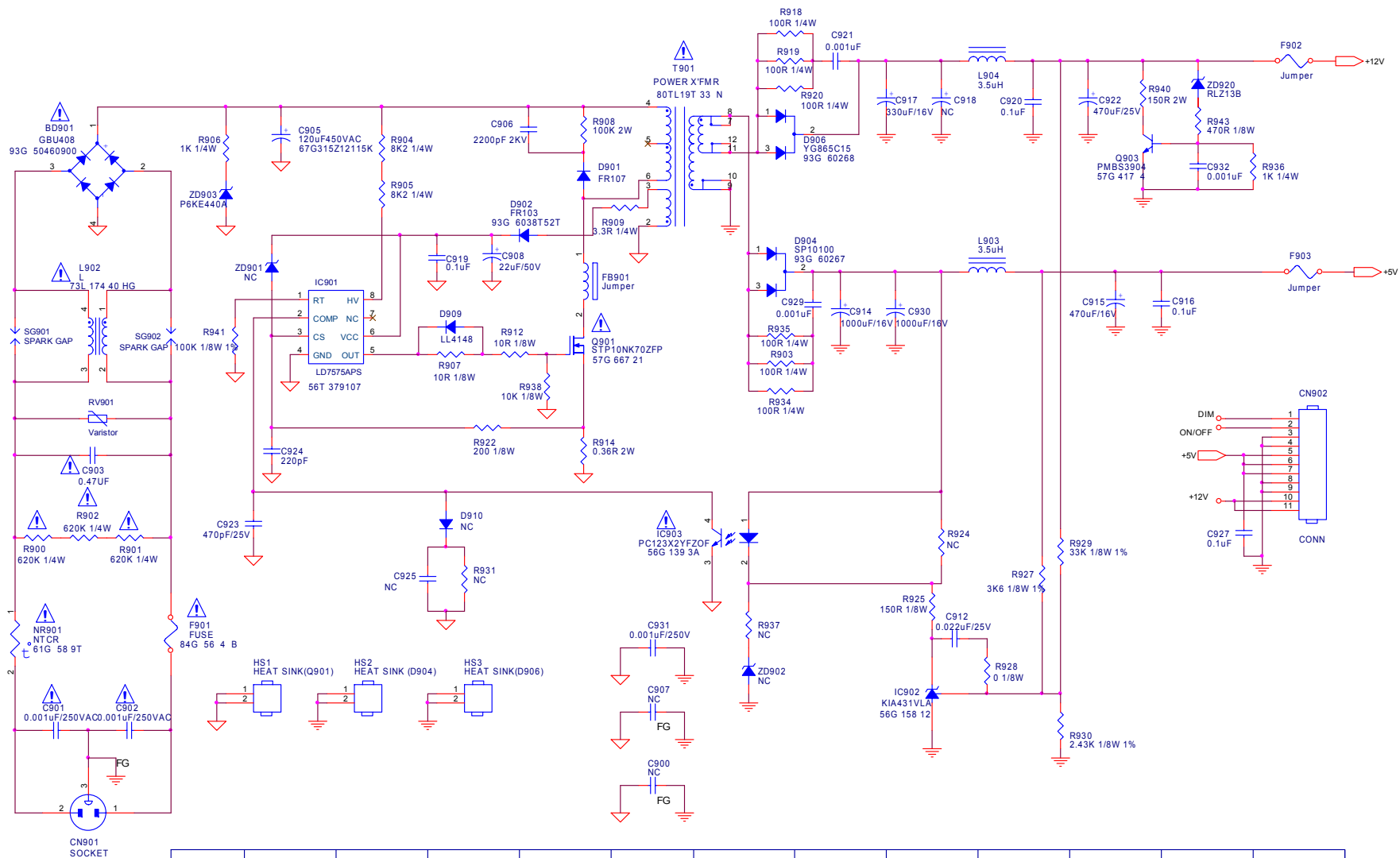
NEAR CN701

Top Diagram: 74VHC04M2 inverter. Input pin 1 is connected to DVDD3. Output pin 2 is connected to DVSS3 through a 20K163B resistor. A 100N01M2 MOSFET is connected to the input pin 1.

Bottom Diagram: 74VHC04M2 inverter. Input pin 1 is connected to DVDD3. Output pin 2 is connected to DVSS3 through a 20K163B resistor. A 100N01M2 MOSFET is connected to the input pin 1.

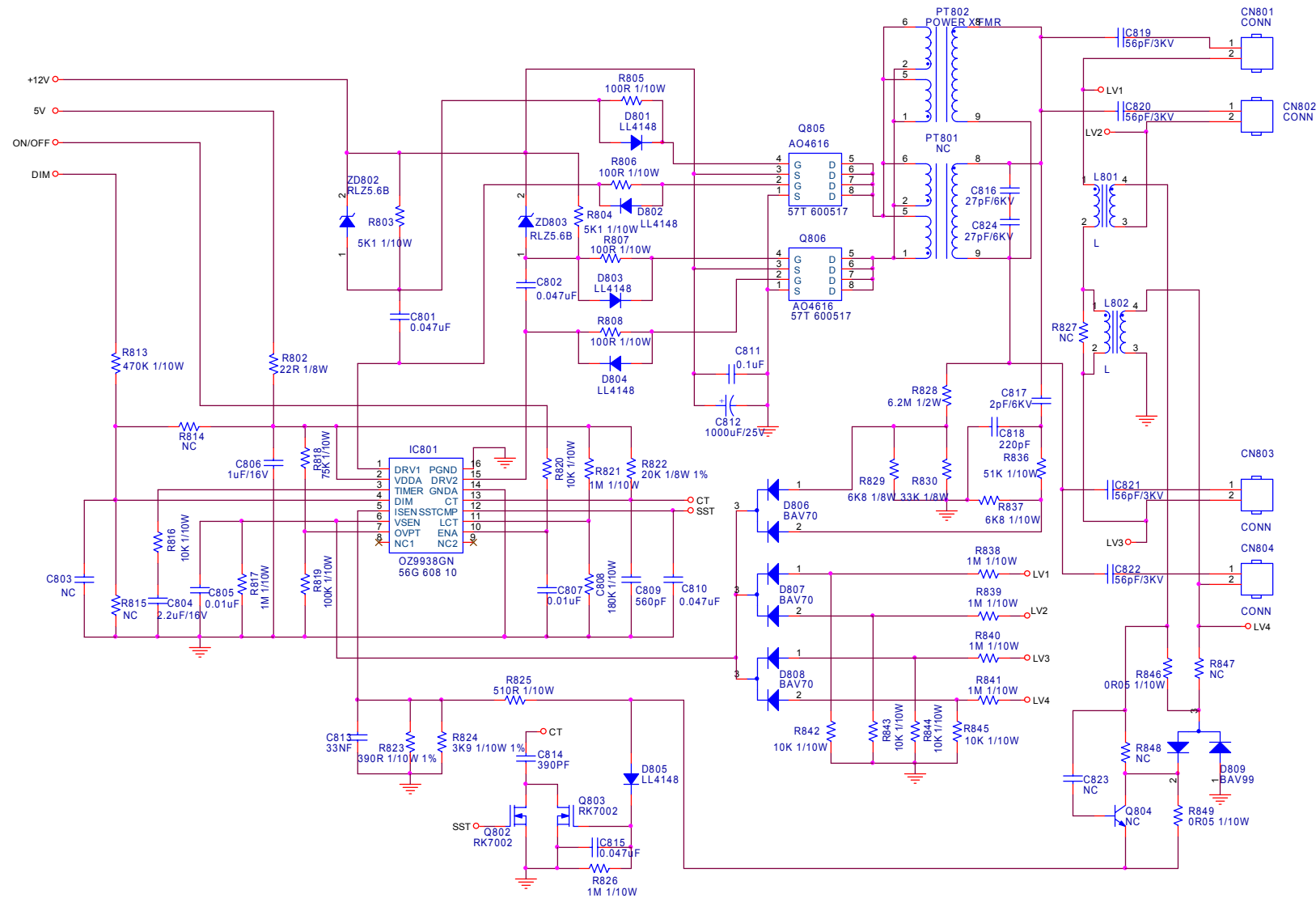
T P V (Top Victory Electronics Co., Ltd.)		OEM MODEL		Size	Custom
71503292-1-X-X2-090310	TPV MODEL			Rev	1
Key Component:	13. HDMI1/SIDE HDMI INPUT	PCB NAME	71503292-1		
Date:	Tuesday, March 24, 2009	Sheet	13 of 15	Rev	xx

Power board



MODE	ZD920	R929	T901	C917	C918	C914	C930	D906	C905			
ATV (12V)	93G 39S 40 T RL213B ROHM	61G0805330 2F 33K 1/8W 1%	80TL19T 33 N	67T 2043313KT	NC	67G215S1023KV	67G215S1023KV	93G 60268 YG865C15RSC	067G315212115K			
DTV (16V)	93G 39S 44 T RL218B	61G0805430 2F 43K 1/8W 1%	80TL22T 5 L	67G215S1024KV	67G215S1024KV	NC	67T 2046812KT	93G 64 53 F YG906C2R8C	067G 41215115K			

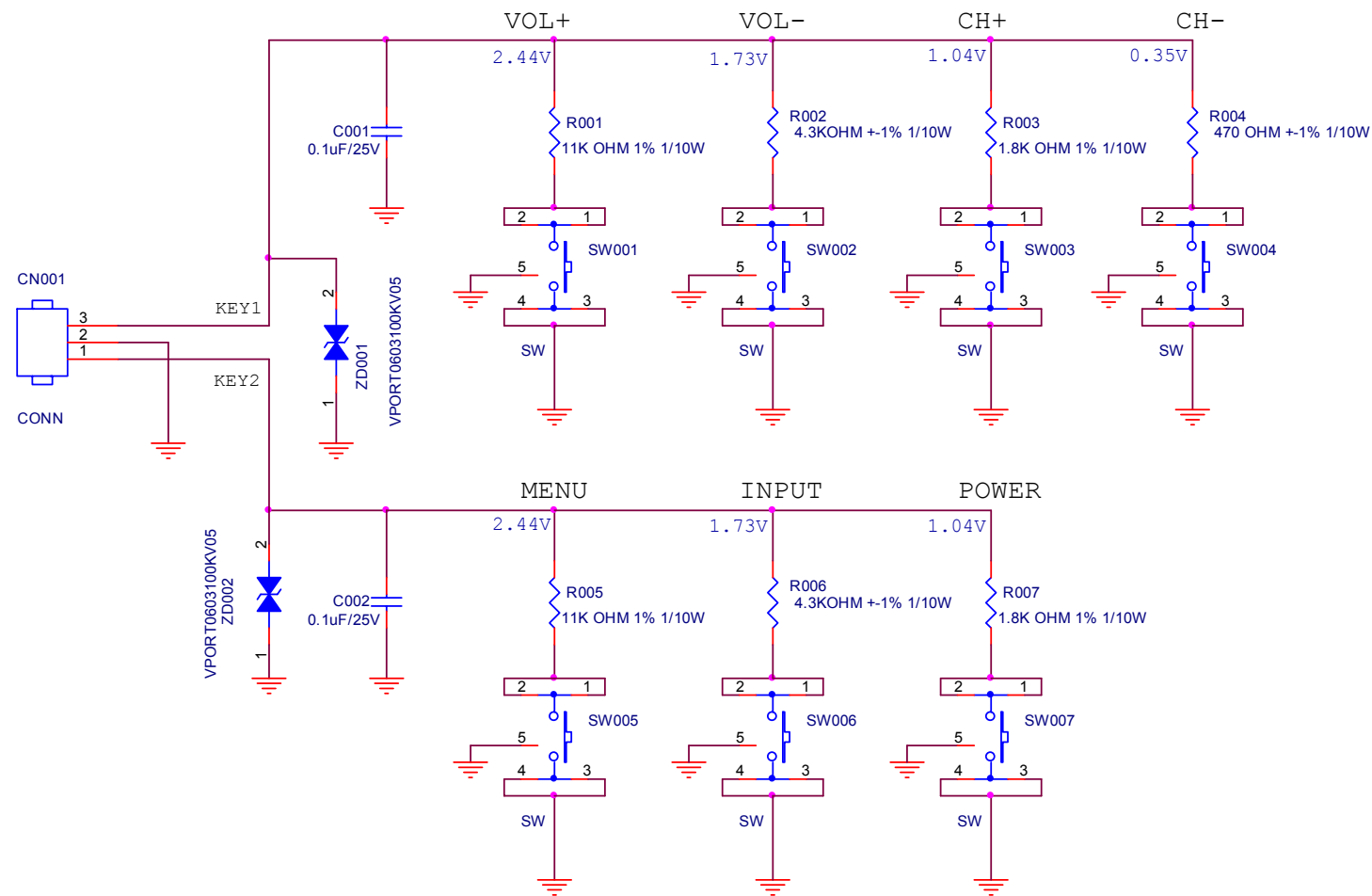
TPV (Top Victory Electronics Co., Ltd.)	OEM MODEL		Size	Custom
振興電子	TPV MODEL		Rev	K
Key Component	02:POWER	PCB NAME	715T2783-1-3	ODM MODEL
Date	Tuesday, July 22, 2008	Sheet	2 of 3	



MODE	PT801	PT802	C819,C820,C821,C822	C816,C824	R824
ATV	22NC	19 NC	065G 3J5606ET	065G 3J2706ET	061G0603390 1F
DTV	80GL20T 33 DN		065G 3J6806ET	065G 3J2206ET	061G0603620 1F

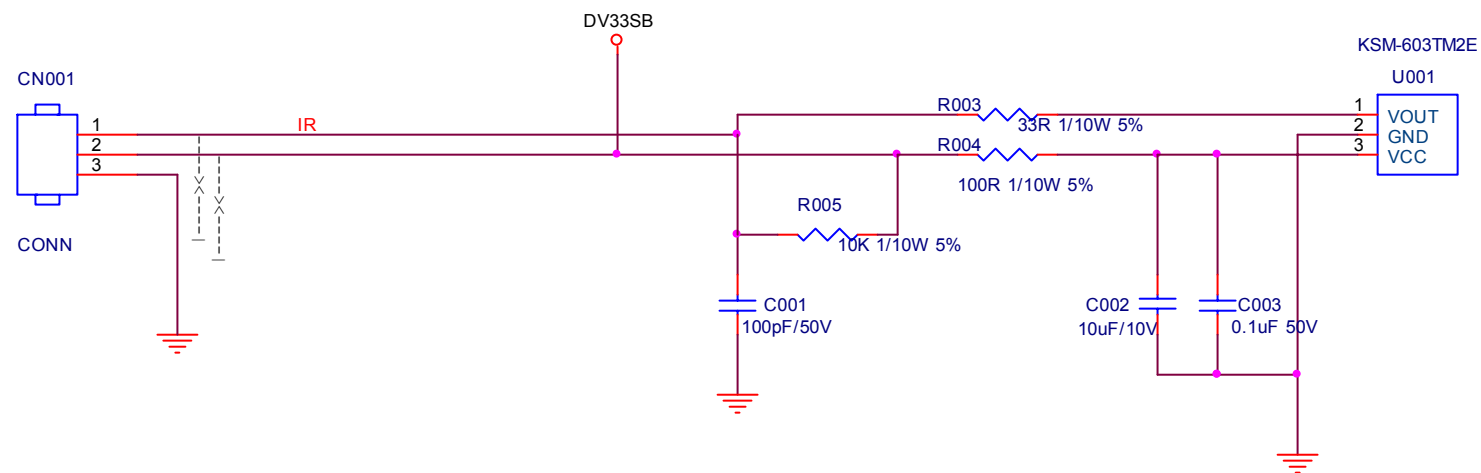
TPV (Top Victory Electronics Co., Ltd.)		OEM MODEL		Size	B
話隔瓜銅版		T2783-1-3-X-3-080409	TPV MODEL	Rev	K
Key Component		03.INVERTER	PCB NAME	715T2783-1-3	ODM MODEL
Date	Wednesday, April 09, 2008	Sheet	3 of 3	称多	

Key board

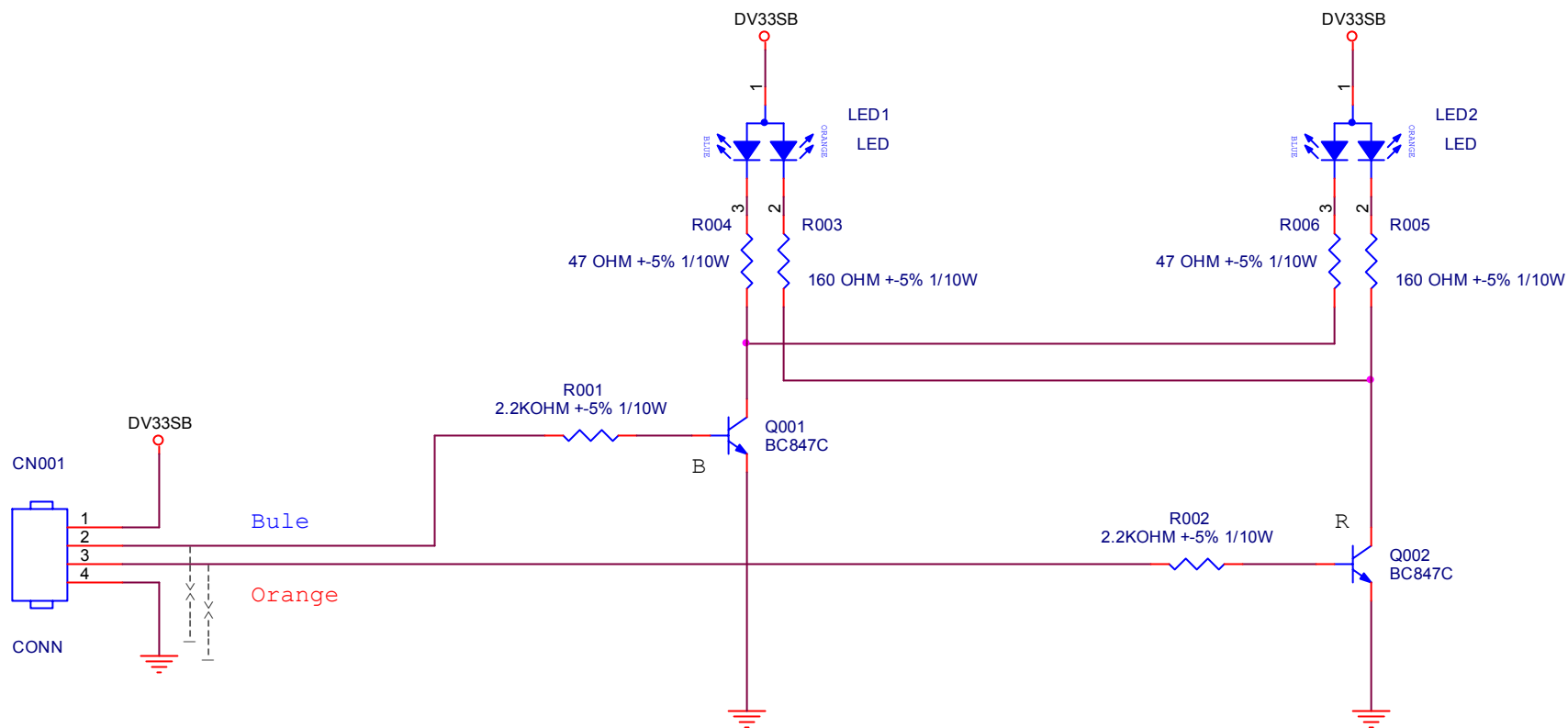


T P V (Top Victory Electronics Co., Ltd.)		OEM MODEL	Acer	Size	A
紙隔瓜網腹	715G3520-A-X-X-1-090115	TPV MODEL	AT2355	Rev	A
Key Component	02. KEYPAD	PCB NAME	715G3520-A	稱爹	<稱爹>
Date	Friday, February 20, 2009	Sheet	2 of 2		

IR board



T P V (Top Victory Electronics Co . , Ltd.)		OEM MODEL	AT2355		Size	A
結構瓜網腹	715T3520-B-X-X-1-090310	TPV MODEL	N/A		Rev	B
Key Component	IR	PCB NAME	715T3519-B		称爹	<称爹>
Date	Wednesday , March 18, 2009	Sheet	2 of 2			



TPV (Top Victory Electronics Co., Ltd.)	OEM MODEL	AT2355	Size	A
結構瓜網腹	715T3524-B-X-X-1-090310	TPV MODEL	N/A	Rev
Key Component	LED	PCB NAME	715T3524-B	称爹
Date	Wednesday, March 11, 2009	Sheet	2 of 2	<称爹>