

Acer AT4250DTV LCD TV Service Guide

Service guide files and updates are available on the ACER/CSD web. For more information, please refer to <http://csd.acer.com.tw>

Revision History

Please refer to the table below for the updates of LCD TV AT4250DTV service guide.

Date	Chapter	Updates
December 11, 2006		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	Reminds 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, you should check the most up-to-date information available on your regional web or channel. For whatever reason, if 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.

System Specification

Overview

LCD Panel

- Max. resolution: 1920 x 1080
- 20 CCFTs backlight system
- Display area: 42 inches
- Display color: 16.7 million colors
- Input signal: two-channel LVDS
- Contrast ratio: 1200/1 (typical)
- Brightness: 500 Cd/m² (typical)
- Response time: 6.5 ms
- Viewing angle: 88° (L)/ 88° (R), 88° (U)/ 88° (D)

I/O Functions

- 21-pin Euro-SCART (RGB) for Video, S-Video, R.G.B. and Audio
- RCA jack (YUV and CVBS) for YPbPr, YCbCr, Video and Audio
- 15-pin D-sub for VGA
- 19-pin HDMI connector
- DIN45325 (IEC169-2) terminal for TV/CATV input
- DIN45325 (IEC169-2) terminal for DVB-T input

Video Functions

- PAL/NTSC/SECAM video format support
- 480i/576i, 480p/576p, 1080i and 720p, 1080p format support
- Built-in Teletext functions
- Built-in dynamic adaptive smoothing filter
- Built-in dynamic temporal frame-filter noise reduction
- Built-in dynamic motion and edge adaptive de-interlacing
- Film mode 3/2 & 2/2 pull down
- Screen display model 16/9 & 4/3 & panorama & zoom

Mechanical

- VESA mounting holes

Multi-Sound System

- NICAM
- FM Stereo (A2)

Power Source

- Input voltage: 90~264V, 47~63Hz
- Input current: 2.71A
- Power consumption: 291W

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- Stand-by: 5W Max.

Remote Control

- Multi-function remote control

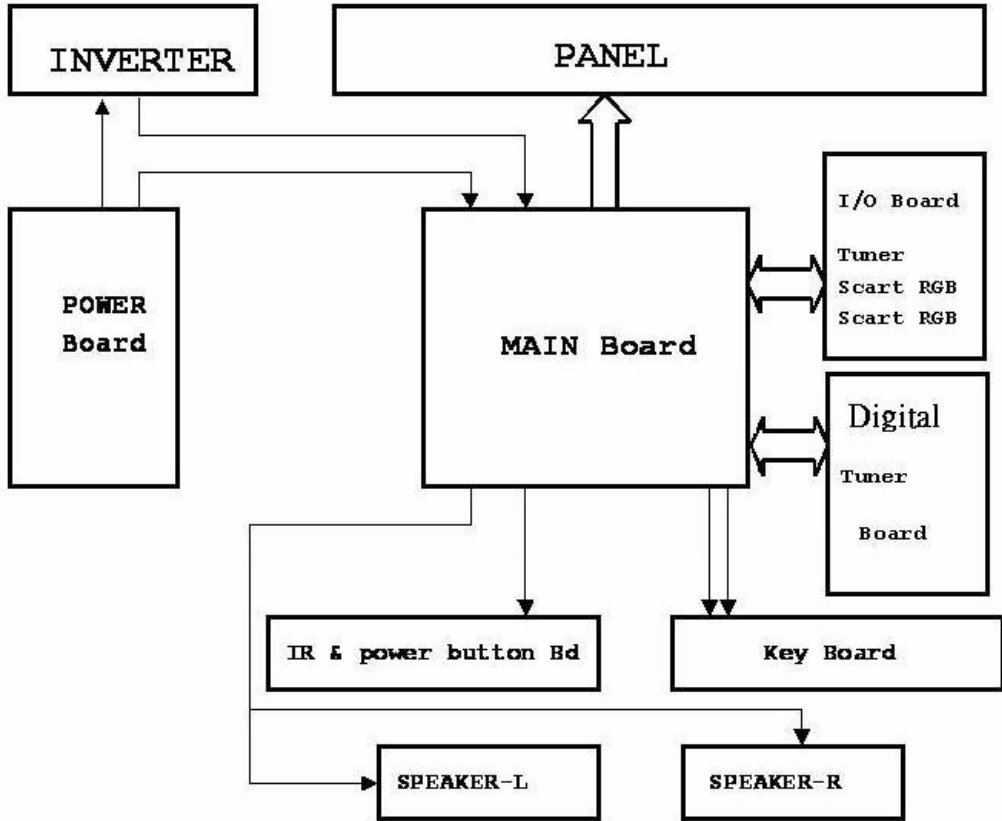
Speaker

- Internal speaker: 10W x 2 stereo, adjustable volume

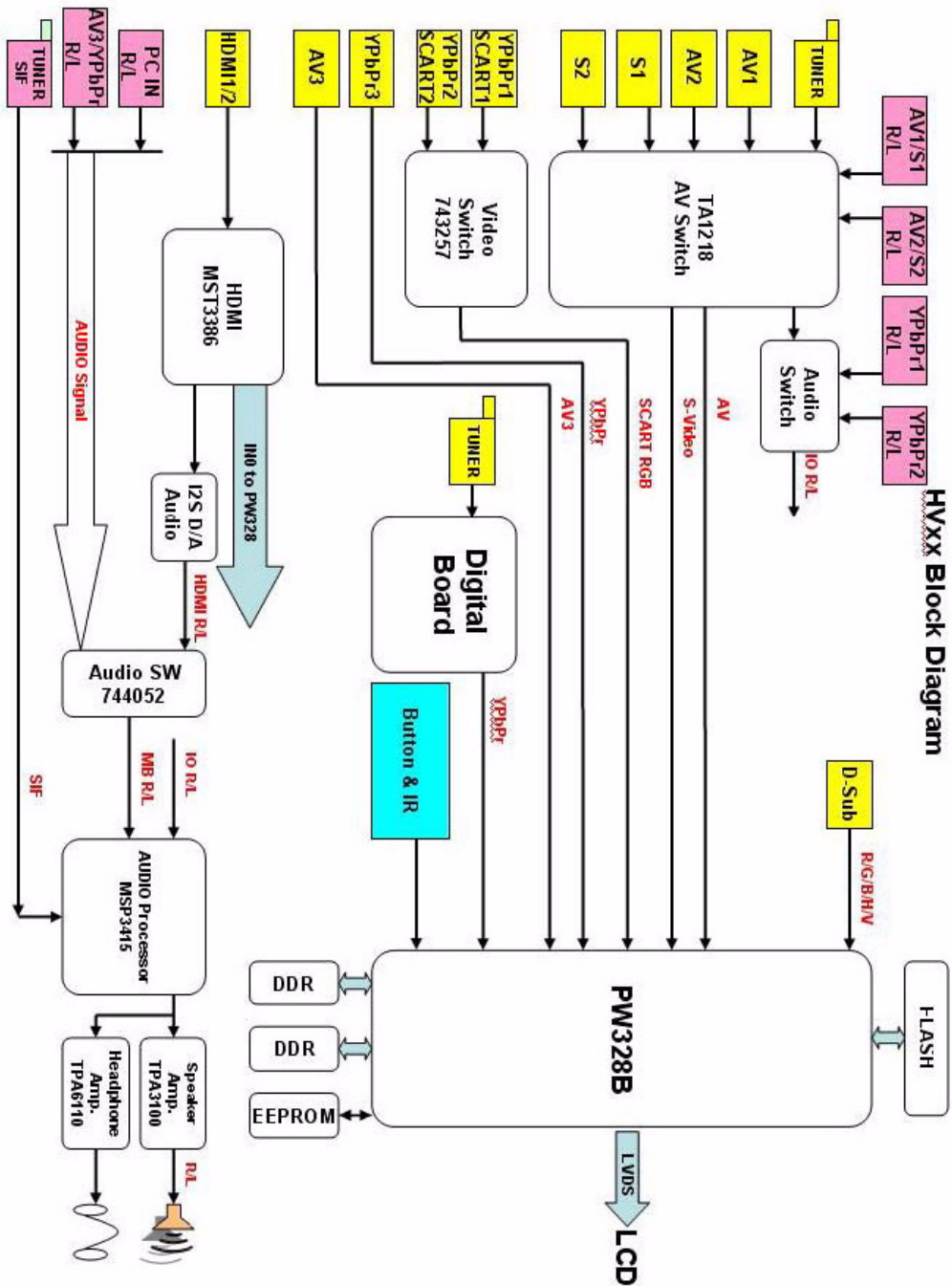
Others

- On-screen display adjustment function
- ISP (In System Programming) function available for revising driver easily

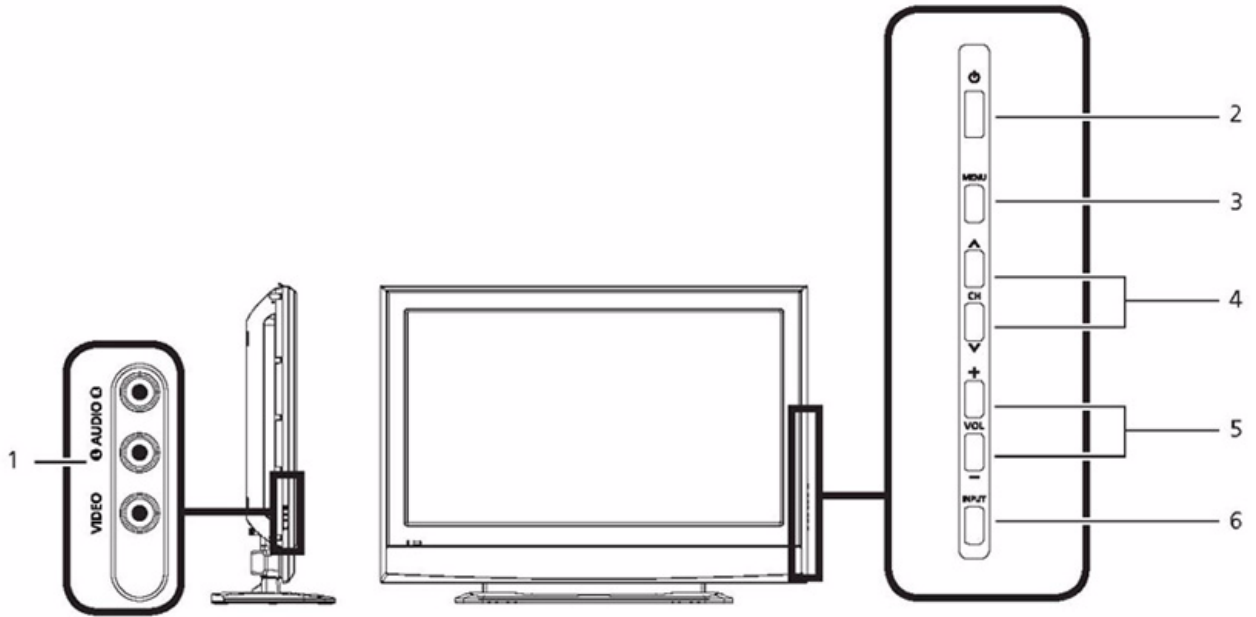
System Block and Wiring Diagram



LCD Main Board Block Diagram



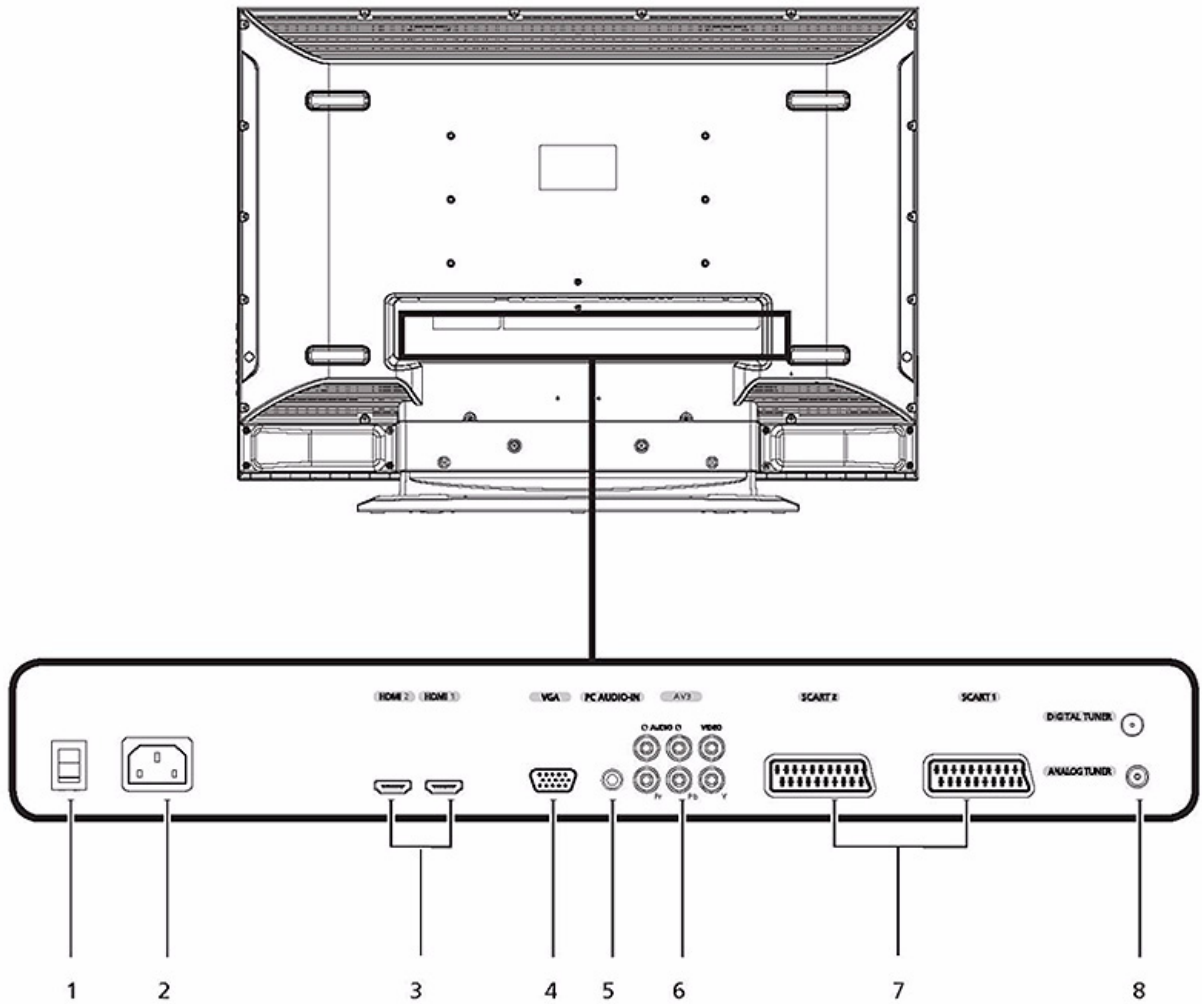
Front Panel View



#	Item
1	AV4-Audio L/R + CVBS
2	Power On/Off
3	Menu key
4	Channel up/down
5	Volume +/-
6	Input key

#	Item	Description
3	Menu key	Turns the OSD menu ON and OFF.
4	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.
5	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.
6	Input key	When the OSD is on, press this button to confirm selection.

Rear Panel View

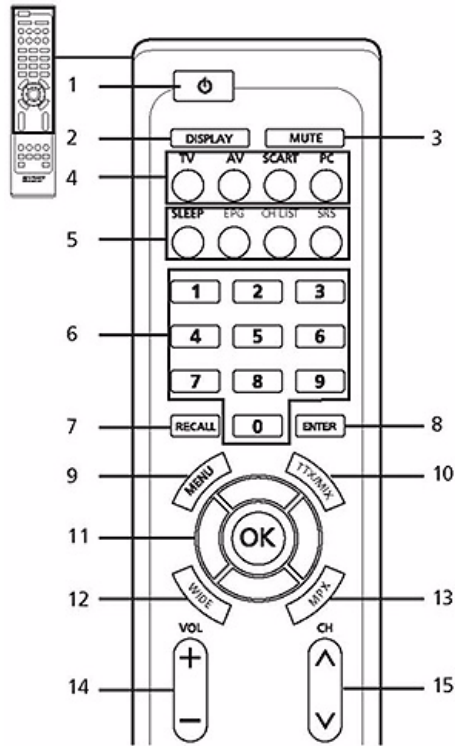


#	Item	#	Item
1	Power switch	2	AC-in
3	HDMI	4	VGA-in
5	PC Audio-in	6	AV3-Audio L/R + CVBS + COMPONENT *
7	SCART	8	Analog antenna/ Digital antenna

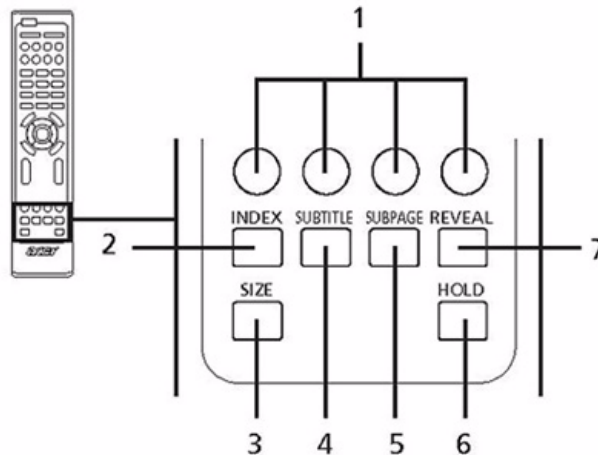
Note: For AV3, Composite and component inputs share the same audio ports.

Remote Control

General Keys



Teletext



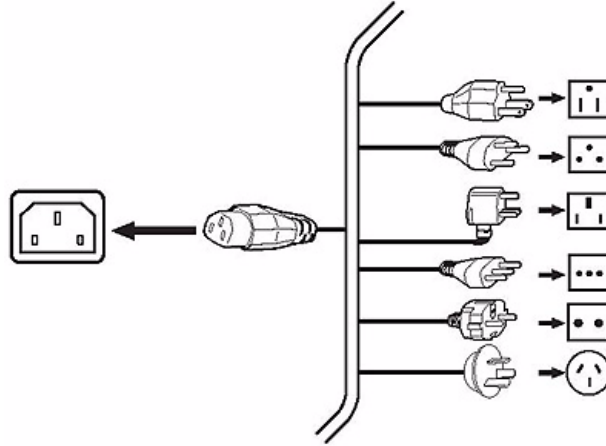
#	Item	Description
General Keys		
1	POWER	Press to turn your TV on/off.
2	DISPLAY	Press once to display input/channel information (dependent on input/source type). Press twice to show more information.

3	MUTE	Press to toggle audio on and off.
4	Input buttons (TV/ AV/ SCART/ PC)	Press to select correct input mode.
5-1	SLEEP	Press to set a time period after which the TV will switch itself to standby (15, 30, 45, 60, 90 or 120 minutes).
5-2	EPG	Press to launch Electronic Programme Guide (EPG) mode (digital TV mode only).
5-3	CH LIST	Press to launch the channel list.
5-4	SRS	Press to turn audio mode to SRS mode.
6	Number keys	N/A
7	RECALL	Press to return to the previous channel.
8	ENTER	Press to confirm channel number selection.
9	MENU	Press to open or close the Menu.
10	TTX/ MIX (TELETEXT/ MIX)	Press to switch from TV/AV to Teletext mode. Press to overlay teletext page on the TV image.
11	Directional keys/OK VOL (up/down) CH (up/down)	N/A
12	WIDE	Press to toggle scaling mode between 4/3, 16/9, Panorama and Letterbox 1, 2, 3 modes.
13	MPX	Press to select the sound input, displayed on the top right-hand side (mono, stereo, bilingual).
14	VOL (+/-)	Press to increase or decrease the volume.
15	CH (up/down)	Press to sequentially select the TV channel.
Teletext		
1	Color buttons (R/ G/ Y/ B)	Operates corresponding button on the teletext page.
2	INDEX	Press to go to the index page.
3	SIZE	Press once to zoom teletext page to 2X. Press again to resume.
4	SUBTITLE	Press to view subtitles on the screen.
5	SUBPAGE	Press to access the teletext's subpages directly.
6	HOLD	Press to pause the current teletext page in multi-page viewing mode.
7	REVEAL	Press to reveal hidden teletext information.

Basic Connection

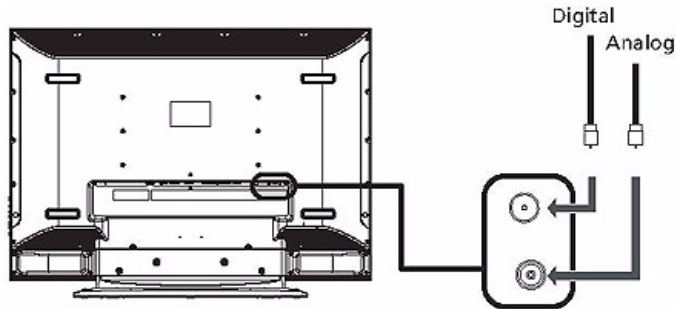
Connecting the Power Cord

1. Connect the AC cord into the AC input on the back of the set.
2. Connect the male plug to the wall outlet as shown.

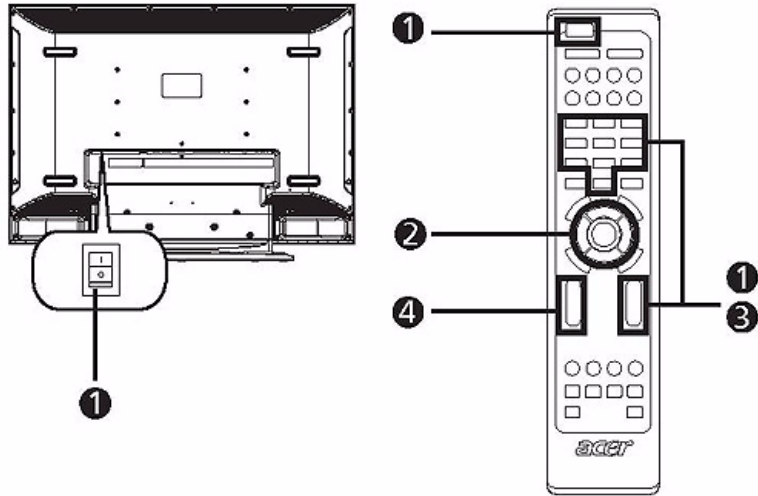


Connecting an Antenna/Cable

Connect the antenna cable to the appropriate antenna terminal on the back of the TV set as shown below.



Getting Started Watching Your TV



#	Item	Description
1	Power	<ul style="list-style-type: none"> a. Turn on the power switch beneath the screen. b. Press the power button, number keys or channel up/down button on the remote control.
2	Setup Wizard	<p>The first time you switch on the TV, the Setup Wizard will guide you to complete the language selection and channel scanning. Press OK key to begin the setup process.</p> <ul style="list-style-type: none"> a. Select the setup language your prefer. b. Please select country. c. Enter the correct time zone using the remote control. d. Enable or disable daylight saving time. e. Ensure that your co-axial cables are connected correctly before proceeding. f. Scan for digital channels. g. Scan for analog channels. h. Setup is now complete. You are ready to begin watching TV. <p>You can also adjust these settings using the front control panel. Please see Front Panel View,</p>
3	Changing channels	<ul style="list-style-type: none"> a. Press 0-9 on the remote control to select a channel. The channel changes after 2 seconds. Press ENTER to select the select the channel immediately. b. Pressing the channel (CH) up/down button on the remote control will also change the channel.
4	Adjusting the volume	Adjust the volume level using the (VOL) up/down button on the remote control.

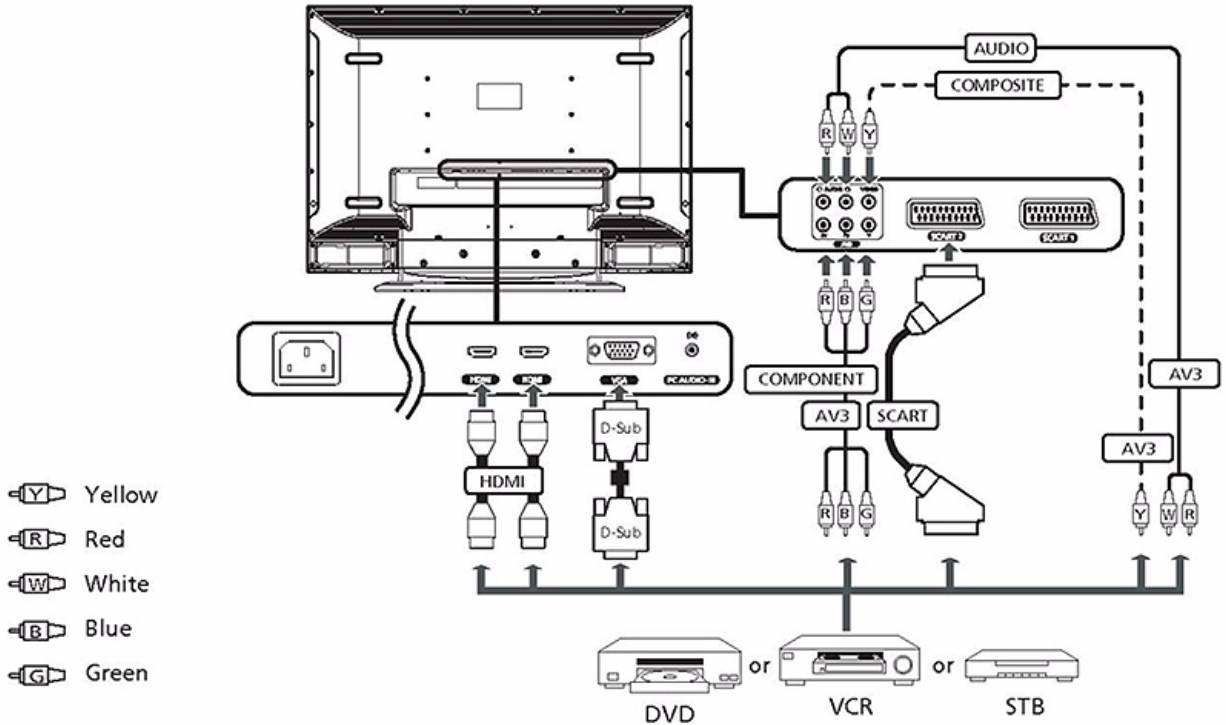
Note: Setup may vary due to local broadcast differences.

Connecting External Audio/ Video Device

Connecting a DVD, VCR, STB or Audio/ Video Equipment

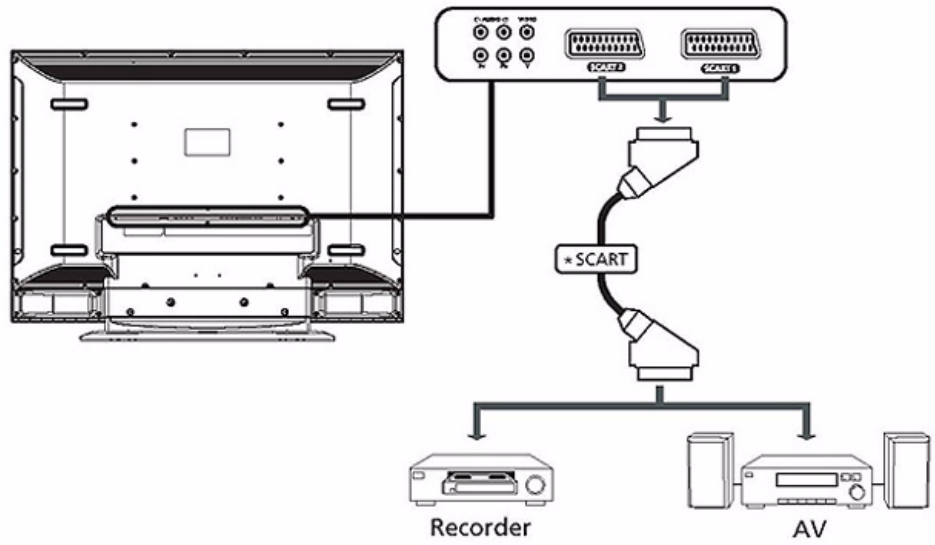
Connect your DVD player, VCR or audio/video equipment using the SCART port located at the rear of your LCD TV as shown below.

Source-IN



Note: 1. Acer recommends the following priority for connection types: HDMI > COMPONENT > SCART > Composite. 2. For AV3, Composite and component inputs share the same audio ports.

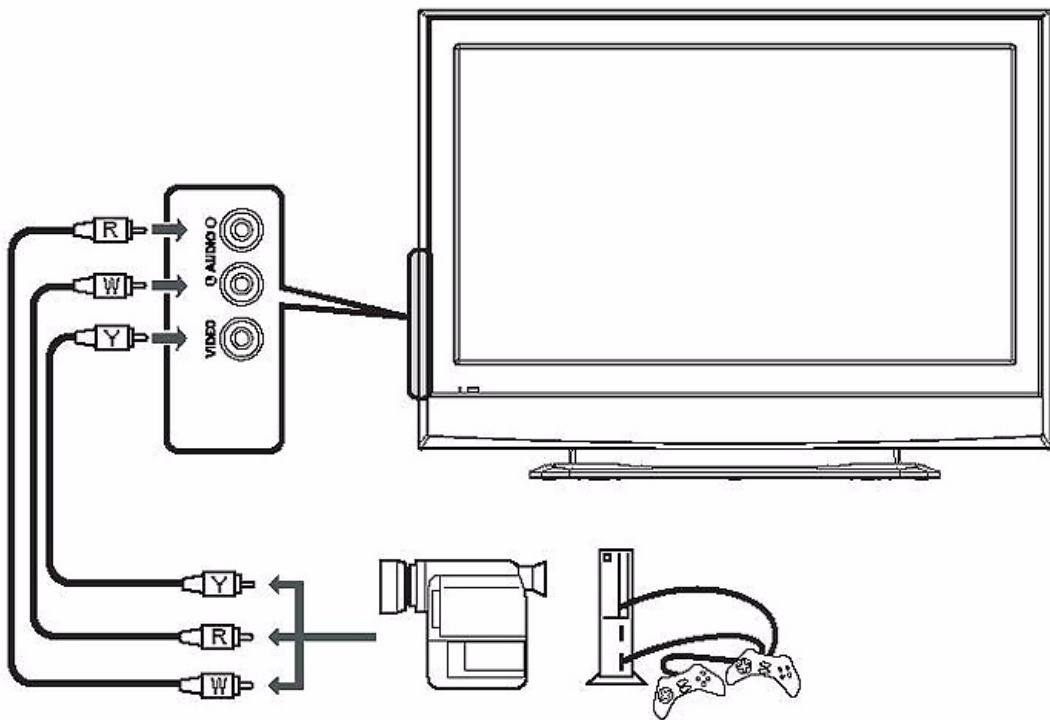
TV-OUT



Note: SCART-out only works with analog broadcasts.

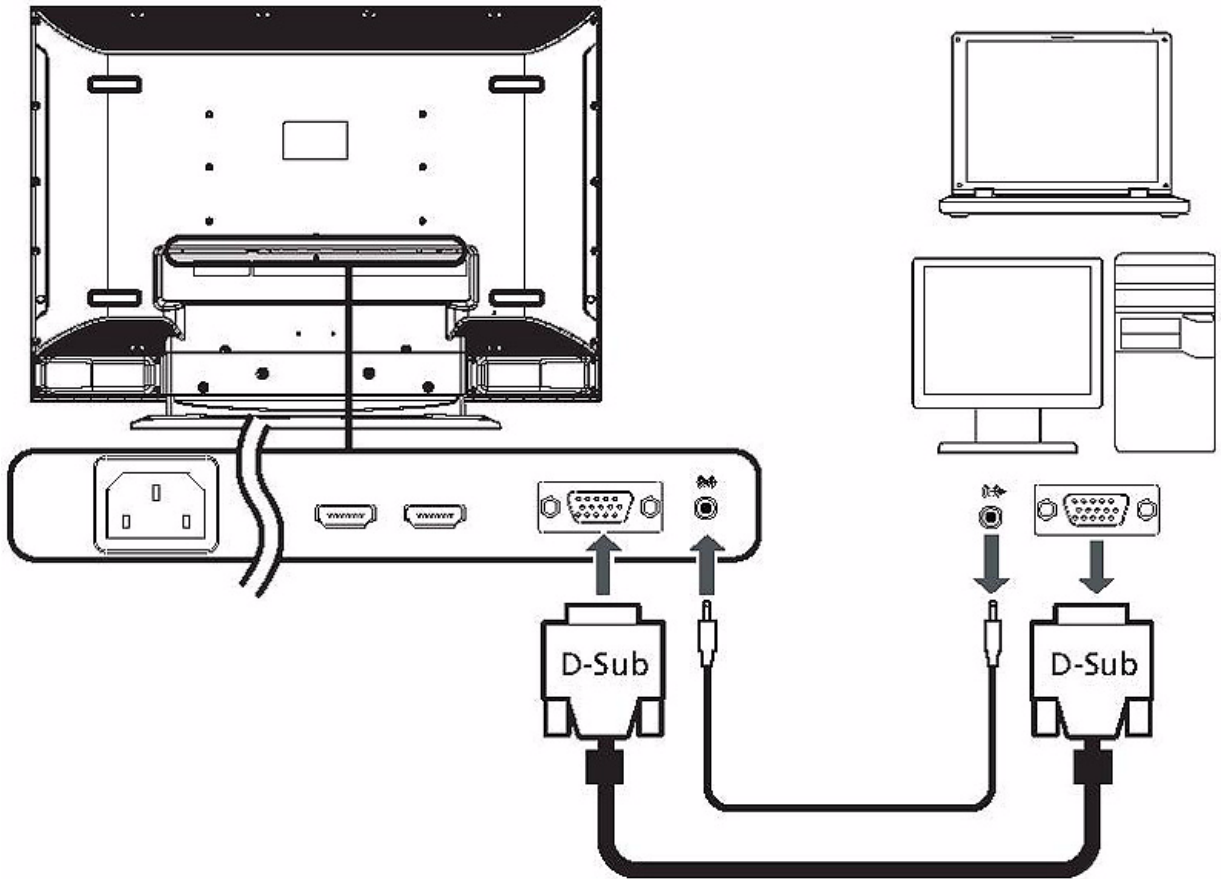
Connecting a Camera, Camcorder or Video Game

Connect your camera or camcorder to the video/audio ports on the rear of the TV set as shown below.



Connecting a PC or Notebook Computer

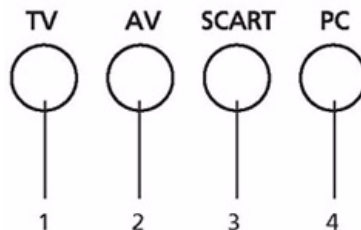
To display PC output on your TV, please connect your PC or notebook computer to the TV as shown below.



Note: For VGA input, Acer recommends setting your PC's external monitor resolution to 1920 x 1080 pixels at 30Hz refresh rate.

Selecting the Input Source

Once you have connected your antenna or external equipment to the TV, you need to select the correct input source. Press the corresponding button on the remote control to select the correct input source.



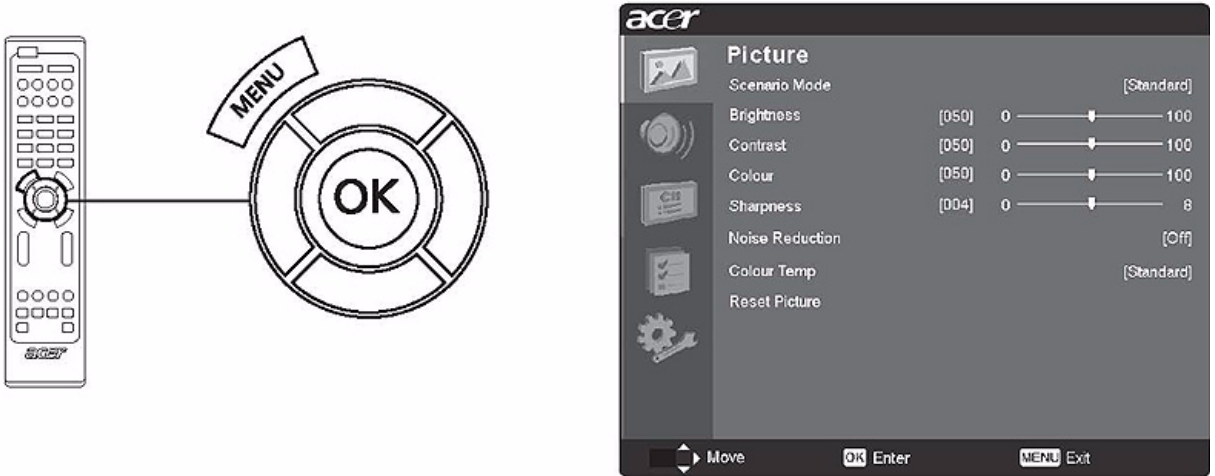
#	Item	Input Button Guide
1	TV key	Toggle Analog TV (ATV) and Digital TV (DTV) between input sources.
2	AV key	Toggle AV3, AV4, HDMI1 and HDMI2 between input sources.
3	SCART key	Toggle SCART1 and SCART2 between input sources.

#	Item	Input Button Guide
4	PC key	Toggle VGA between input sources.

OSD Navigation

Many of the advanced settings and adjustments are available through using the OSD (on-screen display) menus, as shown in the example screenshot below. Basic operations required to navigate these menus (Picture, Audio, Channel management, Options, Settings) are described in this section. There are five main OSD menus. These are Picture, Audio, Channel Management, Options and Settings.

Navigating the OSD with the Remote Control

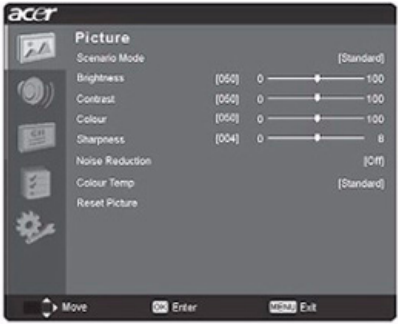





Note: You can also interact with these menus using the front panel controls. Please see **Front Panel View** for details.

#	Icon or Display	Instruction
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 menus, 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, options and general settings. For advanced settings, please refer to following page.

<p>Adjusting the Picture Quality</p> 	<ol style="list-style-type: none">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, color, sharpness and other image-related qualities.
<p>Adjusting the Audio Settings</p> 	<ol style="list-style-type: none">1. Press the MENU key to bring up the OSD.2. Using the directional keys, select Audio 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 Audio menu can also be used to adjust the treble, balance, sound effects and other important sound-related settings.
<p>Adjust the Channel Management</p> 	<ol style="list-style-type: none">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 set channel skipped, select TV system and scan channels automatically.
<p>Adjusting other Options</p> 	<ol style="list-style-type: none">1. Press the MENU key to bring up the OSD.2. Using the directional keys, select Options from the OSD.3. Use the directional keys to navigate the menus.4. The Options menu can be used to select the picture aspect-ratio mode, set the sleep timer and other important options.

Adjusting the Settings



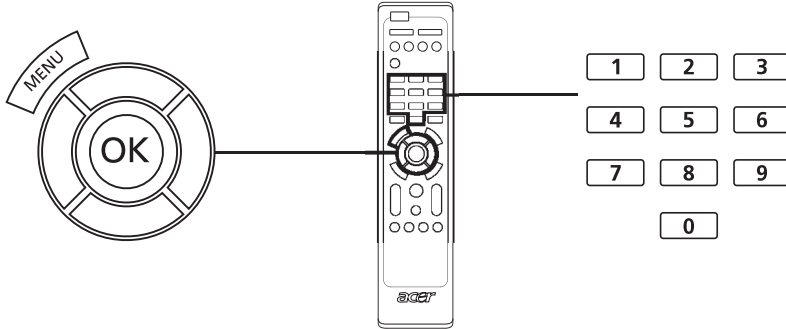
1. Press the MENU key to bring up the OSD.
2. Using the directional keys, select Settings from the OSD. Then navigate to the feature you wish to adjust.
3. The Settings menu can be used to adjust the menu language and other important settings.

Note: The options available on the OSD may vary depending on the TV signal source. Some digital options may not be available with an analog signal and vice versa.

Advanced Features




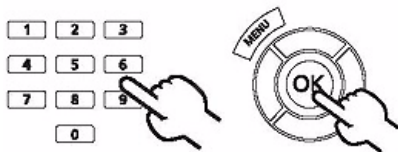
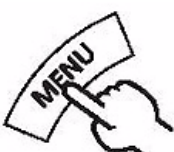
Lock TV

Lock TV is a handy feature that can block all TV sources. Lock TV allows you to enter a password and effectively stop anyone without the password from watching TV.



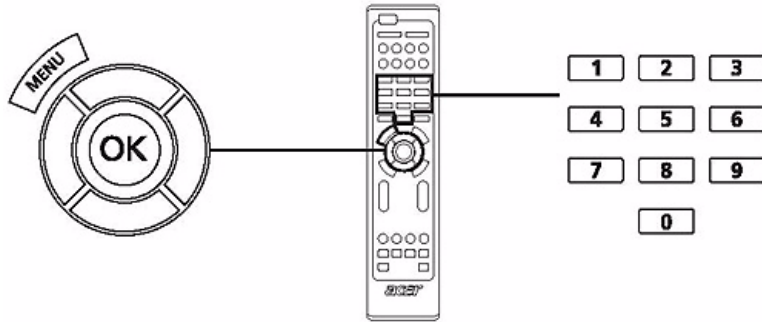
Setting a Personal PIN		
1		<p>Press the MENU button on the remote control or the MENU button on the control panel.</p>
2		Use the directional keys to navigate to the Settings menu. Then select Set PIN.
3		Enter a four-digit password. Type it again and press OK to confirm.
4		Press MENU to exit.


Note: The default PIN for this TV is 0000. First enter 0000 when you want to change the PIN. If you forget your PIN, please enter 6163 to reset.

Locking your TV		
1		 <p>Press the MENU key on the remote control to bring up the OSD.</p>
2		<p>Use the directional keys to navigate to the Settings menu. Then select Lock TV.</p>
3		<p>Enter your PIN. Type it again and press OK to reconfirm.</p>
4		<p>Press MENU to exit.</p>

Reorder for Channels

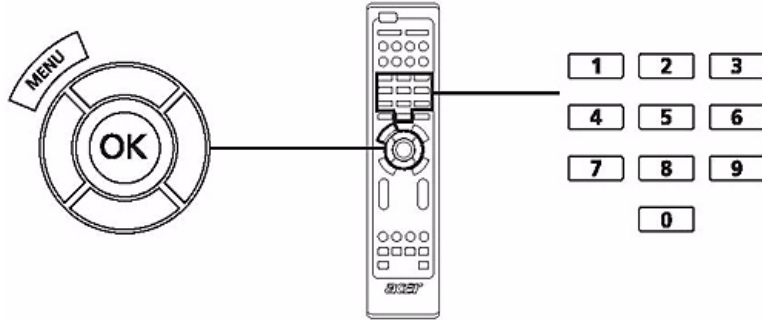
The first time you completed the setup wizard, all available channels were listed. If you need to reorder for new channels, Please follow the steps below.




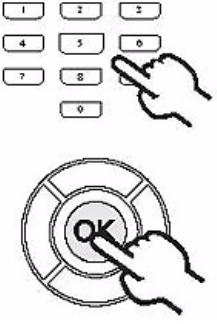



Reordering for Channels		
1		Press the MENU key on the remote control to bring up the OSD.
2		Use the directional keys to navigate and select Channel Management.
3		 <p>Highlight Reorder. Then select the channel you wish to reorder and press OK to confirm. Move to the right channel number and press OK to reconfirm.</p>
4		Press MENU to exit.

TV Ratings (for Digital TV Mode)

Most digital TV allows you to block content according to rating system. The rating system available is dependent on region.

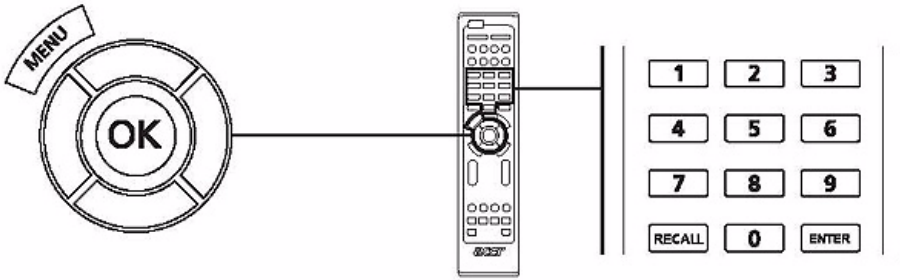


Setting or Changing TV Ratings Settings		
1		Navigate to the channel you wish to manage and make sure that the channel is unlocked.
2		Press the MENU key then select Channel Management from the OSD.
3		Navigate down to TV rating system and then select the categories you wish to block.
4		You will need to enter your PIN before you make any adjustments to the settings. Press OK to set the age-rating yourself using the directional keys. Press OK to confirm your settings.
5		Press MENU to exit.

Note: The default PIN for this TV is 0000. First enter 0000 when you want to change the PIN. If you forget the PIN, please enter 6163 to reset.

Rescan for Channels

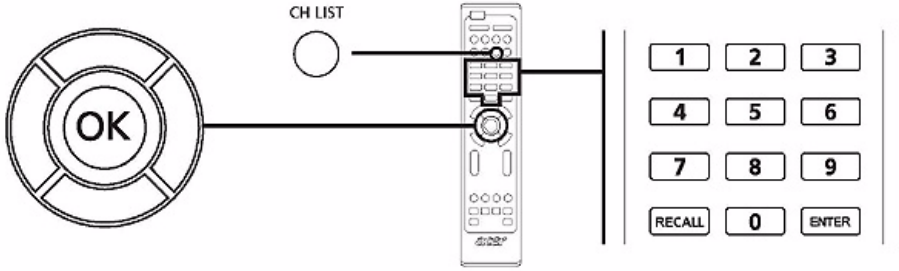
The first time you completed the setup wizard, all available channels were listed. If you need to rescan for new channels. Please follow the steps below.


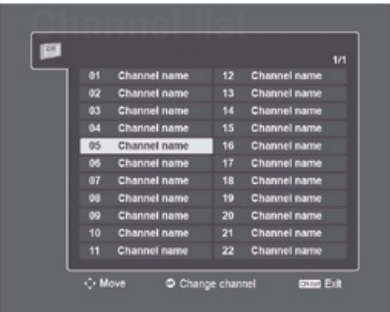




Scanning for Channels		
1		Press the MENU key on the remote control to bring up the OSD.
2		Use the directional keys to navigate and select Channel Management.
3		Highlight Auto Scan. Then select Start and press OK to begin.
4	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Analog TV</p> </div> <div style="text-align: center;"> <p>Digital TV</p> </div> </div>	
5		Press MENU to exit.

Channel List (for Digital TV Mode)

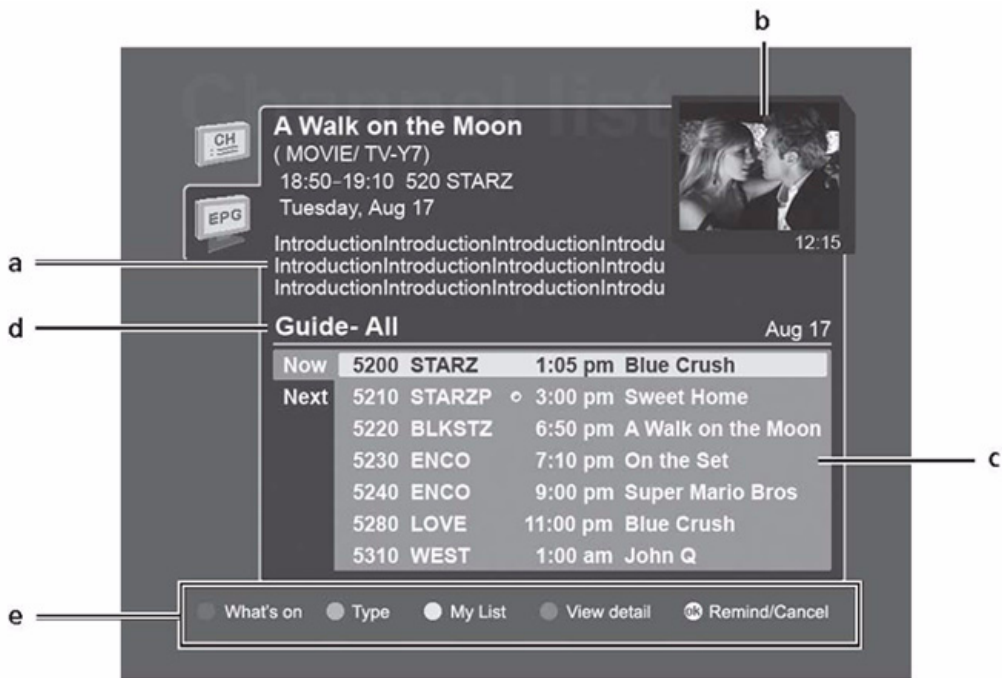
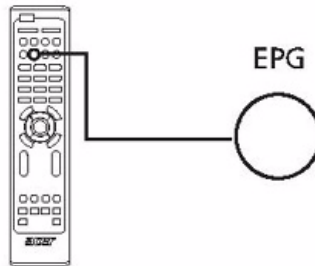
Channel list allows you to quickly find the TV channel you are searching for.



Opening the Channel list feature		
1	<p>CH LIST</p> 	Press the CH LIST key on the remote control. This will bring up the channel list menu.
2		The current channel will be highlighted.
3		Use the directional keys to navigate the list and select the channel you wish to watch. Press OK to select your desired channel and exit the channel list.
4		Press OK to select your desired channel and exit the channel list.

Electronic Programme Guide (for Digital TV Mode)

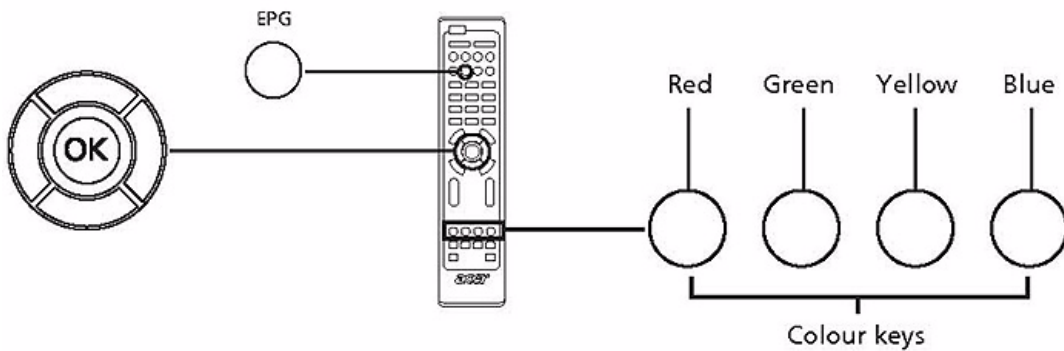
The electronic programme guide (EPG) is an onscreen service available on digital and cable TV that provides information about scheduled broadcast programmes on all channels by time, title, channel and genre. There are three main areas of the EPG screen.



#	Item	Description
a	Programme introduction area	A short description of the highlighted programme is located at the top center of the EPG page; lengthy descriptions will be cut short using "... " to indicate extra text. Highlight the introduction and press OK to view the whole introduction section on a separate page.
b	Preview area	On the top right-hand side of the EPG screen is the preview area. The preview area will show live TV content from the channel currently highlighted. Highlight a new channel or programme and press OK to display it in the preview area.

#	Item	Description
c	Content area	The content area is divided into three columns: date, channel and programme. Use the directional keys and the OK key to navigate between the items in the content area. Highlight a new programme and press OK or the blue key to display the programme in the preview and introduction areas.
d	Type	The type area indicates the genre that has been selected. The selection of available genres depends on your service provider.
e	Indication	This area of the EPG indicates which shortcut keys can be used while on an EPG screen.

Navigating the EPG (for Digital TV Mode)

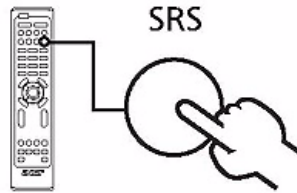



1	<p>EPG</p>	Press the EPG key on the remote control.
2		Use the directional keys to navigate around the EPG menu and press OK to select your highlighted option.

short-cuts		EPG features	
When in EPG mode the colour shortcut buttons can be used for special functions.			
Red	Press the red key to go to the "What's On" screen. This contains a list of channels and scheduled programmes.	⇒ What's On	In the "What's On" screen you can also view upcoming shows by selecting Next .
Green	Press the green key to go to the "Type" selection screen.	⇒ Type	The type feature can help you to select a certain category of programmes that you may wish to watch. Select a programme type and press OK to show all the programmes that are listed in that category.
Yellow	Press the yellow key to go to the "My List" page.	⇒ My List	The "My List" page contains a list of programmes that you have selected to watch.
Blue	Press the blue key to view details of the selected item.	⇒ View detail	The "View detail" screen allows you to view programme information like time, date, and channel.
OK	Press the OK key to view details of the selected item	⇒ Remind Feature	While in the EPG pages, pressing OK will enable the remind feature. Each time you select a show and push OK , a marker will appear on the left side of the programme name. Then, when your selected programme is due to start, a reminder will flash on the screen to warn you. The remind feature will also warn you of any conflicts in your selections, e.g., if you select two shows that are due to be broadcast at the same time.

Audio Effects

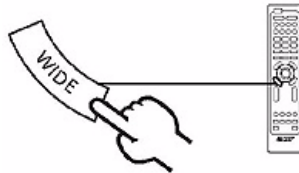
Your Acer LCD TV is equipped with high-quality sound specifications to ensure that you enjoy the best audio experience possible.



	<p>SRS WOW is a special combination of SRS audio technologies that create a thrilling experience with deep, rich bass from any stereo sound source. Your audio sounds fuller, richer and wider. Based on the elements of SRS 3D technology, WOW restores the spatial cues and ambient information that are lost during standard stereo playback. To enable SRS WOW, press the SRS key on the remote control.</p>
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Widescreen Display Mode

Your Acer LCD TV has a special widescreen mode that allows you to toggle between 4/3, 16/9, Panorama, and Letterbox 1, 2, and 3 type views. Press the WIDE key on the remote control to toggle the display between the four side modes.



	<p>For 4/3 (4:3) standard pictures, a side bar appears on each side.</p>
	<p>In 16/9 (16:9) mode, the whole picture is stretched toward each side of the screen.</p>
	<p>In panorama mode, the picture is progressively stretched toward each side of the screen.</p>
	<p>In this mode (Letterbox 1, 2 and 3), the picture is enlarged linearly to fit the screen. The top and bottom portions of the picture may be cut off.</p>

Hardware Specification and Configuration

1. Main Feature Table

Panel specification	
Resolution (pixels)	1920 x 1080
Power supply	
Input	100 to 240VAC
Max. power consumption	291W
Power saving	< 5W
Mechanical	
Dimensions (W x H x D mm)	1071 x 794 x 311
Weight (Kg)	32.3
Weight (lbs)	71.15
Wall mounting	400 mm x 200 mm
Analog TV system	
Color system	PAL, SECAM
Sound system	B/ G/ D/ K/ I/ L (multi-European)
Stereo system	NICAM/A2
Subtitle	Teletext 1.5
Analog TV-tuner quantity	1
Digital TV system	
Digital TV standard	DVB-T
TV-tuner quantity	1
Frequency	7/8MHz
Terminal	
Analog tuner in	Yes
Digital tuner in	Yes
AV1-SCART	S-Video, FB (Fast Blanking), CVBS, Audio R/L
AV2-SCART	S-Video, FB (Fast Blanking), CVBS, Audio R/L
AV3-COMPONENT	YPbPr, YCbCr, Audio R/L
AV3-CVBS	CVBS, Audio R/L share with AV3-COMPONENT
AV4	CVBS, Audio R/L
HDMI 1	Yes
HDMI 2	Yes
PC D-sub in	Yes
PC audio-in	Yes
Audio system	
Speakers	10W + 10W
Sound effects	SRS WOW

2. LCD Panel Specification

Panel specification	
Outline dimension	983.0 (H) x 576.0 (V) x 52.3 (D)
Display area	42.02 inch
Resolution (pixels)	1920 x 1080
Pixel pitch	0.1615 (H) x 0.4845 (V) mm
Pixel arrangement	R, G, B vertical stripe
Display color	16.7 million
Display mode	Normally black
Surface treatment	Anti-glare and hard coating (3H)
Backlight	20 CCFTs
Input signal	2-channel LVDS
Optimum viewing direction	6 o'clock
Power consumption	182W (typical)
Contrast ratio	1200/1 (typical)
Response time	6.5 ms (typical)
Center luminance of white	500 (typical)

3. Display Electrical and Functional Specification

3.1 Input and Output Signals

This LCD TV shall have the ability to operate under following range with stable green color of LED indicated.

CVBS and Y/C	<ul style="list-style-type: none">• PAL (4.43M, 50Hz) B/G/D/K/H/I and PAL (4.43M, 60Hz) SECAM D/K• NTSC (3.58M), NTSC (4.43M), Japan (50Hz)
Analog TV Systems	<ul style="list-style-type: none">• PAL and SECAM system receivable• Full frequency range from channel E2 (48.25MHz) to channel E69 (855.25MHz)
Digital TV Systems	<ul style="list-style-type: none">• DVB-T (ETS 300 744) broadcasting system receivable• Full frequency range from channel E2 (50MHz) to channel E69 (858MHz)
YUV inputs	<ul style="list-style-type: none">• YCbCr (480i/576i)• YPbPr (480P/576p, 1080i, 720p, 1080p)
VGA inputs	<ul style="list-style-type: none">• Horizontal input frequency range: 30KHz to 70KHz• Vertical input frequency range: 56Hz to 85Hz• Max. resolution: 1920 x 1080 60Hz

HDMI inputs	<ul style="list-style-type: none"> • Video mode (480p, 720p, 1080i) • Horizontal input frequency range: 30KHz to 70KHz • Vertical input frequency range: 56Hz to 85Hz • Max resolution: 1920 x 1080 60Hz
--------------------	--

3.2 Video Input

CVBS Input Signal

Type	Analog
Polarity	Positive
Level	1 Vp-p (with Sync.)
Impedance	75Ω +/- 5%
Interface	Euro-SCART/ RCA Jack

S-Video Input Signal

Type	Analog
Polarity	Positive
Level	Y: 1 Vp-p (with Sync.) C: 0.286 Vp-p
Impedance	75Ω +/- 5%
Interface	Euro-SCART/ S-Din

RGB Input Signal

Type	Analog
Polarity	Positive
Level	0.7 Vp-p
Impedance	75Ω +/-5%
Interface	Euro-SCART

YUV (YCbCr or YPbPr) Input Signal

Type	Analog
Polarity	Positive
Level	Y: 1 Vp-p (with Sync.) U/V: 0.7 Vp-p
Impedance	75Ω +/- 5%
Interface	Euro-SCART/ RCA Jack

3.3 Audio Input/Output & Speaker

Audio input

Level	500 mVrms
Type	Stereo R/L channels
Impedance	More than 22KΩ
Interface	Euro-SCART/ RCA Jack

Built-in Speaker

Speaker	20W (10W + 10W)
Speaker impedance	4Ω at 1KHz

Residual hum at min. volume	500uW max.
Max. hum at max. volume	1000 uW max.

4. Power Supply Electrical Specification

This power supply for this product is an internal converter with a non-replaceable fuse internally. This converter is well designed to meet CE mark requirement.

Input voltage and frequency range	<ul style="list-style-type: none"> • Operating range of line voltage: AC 90V to 264V, 47Hz to 63Hz • Power consumption: under 291W
Line fuse	The AC input is fused and becomes electrically open as a result of an unsafe current condition. This fuse is inside the power supply converter and is not user replaceable, and must be returned for replacement. This fuse is selected to handle inrush current for all combinations of line voltage and frequency.
Hot plug and power on/off sequence	Once hot plug occurs, at the very first time, the initial current is limited at 2.3 amps or lower when power off. Current will stay below 100 m amps while power on, then ramp up to full power (about 2.3 amps at AC 120V) within five seconds when power-up signal is triggered. For the shut down sequence, the current will stay at full power for about 150 m seconds or less, then ramp down to 100 m amps within 1 second.
Power on LED location and type	Power on indicator is easily visible from the front of the display.
Inverter	The inverter which is used to light up backlight of LCD panel is designed to meet the requirement of panel's specification.

5. Firmware Specification

5.1 Preset Mode for VGA Input

There are 14 support modes for VGA inputs.

Preset Mode	Pixel Format	Horizontal Frequency (KHz)	Horizontal Polarity	Vertical Frequency (Hz)	Vertical Polarity	Standard
1	720 * 400	31.47	-	70	+	VGA
2	640 * 480	31.47	-	60	-	VGA
3	640 * 480	37.861	-	72	-	VESA
4	640 * 480	37.50	-	75	-	VESA
5	640 * 480	43.4	-	85	-	VESA
6	800 * 600	35.156	-	56	+	VESA
7	800 * 600	37.879	+	60	+	VESA
8	800 * 600	48.077	+	72	+	VESA
9	800 * 600	46.875	+	75	+	VESA
10	800 * 600	53.7	+	85	+	VESA
11	1024 * 768	48.363	-	60	-	VESA
12	1024 * 768	56.476	-	70	-	VESA
13	1024 * 768	60.023	+	75	+	VESA
14	1360 * 768	47.7	+	60	+	VESA

5.2 Power Saving

While VGA is selected to input, this LCD TV is equipped with a power management according to VESA DPMS. There is a delay of 30 seconds before the transition from on-state to power saving state to avoid unintentionally entering of a power saving state during display resolution and timing mode changes. During the period of delay, the LED shall indicate green color and OSD will show **No VGA connection**. Transition from any power saving state to another can be instantaneous. The recovery from off-state requires no manual power on.

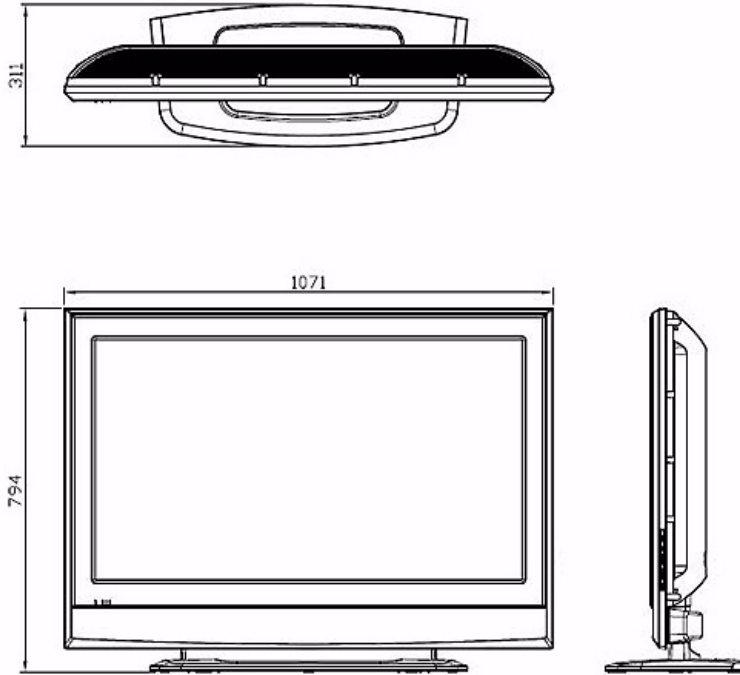
Mode	Hsync	Vsync	Video	Power	Indication	Recovery time
Power-on	On	On	Active	< 291W	Green	-
Stand-by	Off	On	Off	< 5W	Red	< 5s
Suspend	On	Off	Off	< 5W	Red	< 5s
Off-state	Off	Off	Off	< 5W	Red	< 5s
Power off	x	x	x	< 5W	Dark	Turn on < 5s

Note: 1. Sync on means normal operation. 2. Sync off means (1) Hsync: $f < 1\text{KHz}$; (2) duty cycle $> 25\%$; (3) Vsync: $f < 10\text{Hz}$; (4) duty cycle $> 25\%$.

The power consumption is valid over the specified voltage and frequency range. Power consumption is measured from AC source. There are no power saving modes for TV, SCART1/2, HDMI1/2, AV3 and AV4 inputs.

6. Physical Specification

Overall dimensions	794 (H) x 1071 (W) x 311 (D) mm
Mass of display with cable	38.6 Kg approx.
VESA mounting holes	Compliant to VESA FPM PMI standard, 6 holes, 400 mm x 200 mm (6 mm, 1.0 pitch threaded) in the rear center for ARM



7. Environment Requirements

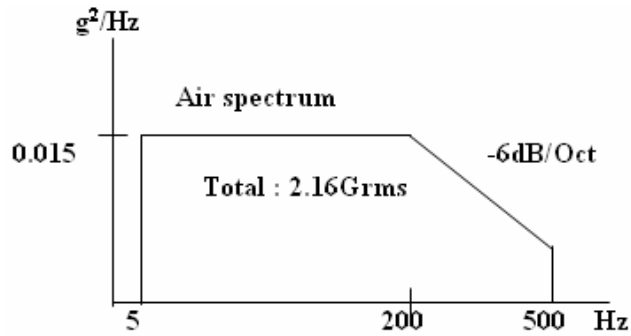
Operating	25° +/- 5° for purity, white point, mis-convergence, luminance measurements and white uniformity measurement
	Operating temperature: 0°C to 35°C
Storage and Shipping	Operating humidity: 10% to 90% (non-condensing)
	Storage temperature: -20°C to 60°C
	Shipping temperature: -20°C to 60°C
	Storage humidity: 10% to 90% (non-condensing)
	Shipping humidity: 10% to 90% (non-condensing)
Altitude	Operating altitude: 0 to 12,000 feet
	Shipping altitude: 0 to 40,000 feet
	Storage altitude: 0 to 40,000 feet

Units tested at an altitude up to 12,000 feet must operate at normal conditions without exhibiting abnormal behavior such as arcing or shutdown.

Vibration Test

The packaged display shall be capable of passing sinusoidal vibration test below.

- Test conditions



- A duration of 30 minutes in each orientation for the tested unit
 - Top and bottom side (z axis)
 - Left and right side (x axis)
 - Front and rear side (y axis)

Drop Test

The packaged display shall be capable of passing drop test as specified in following specification without any measurable degradation in performance or detectable mechanical or cosmetic damage.

Filter: 330 Hz

Dropping way: 1 corner, 3 edges, 6 flats

Dropping height: see the table below

Weight(kg)	Corner, edge, F,R,Btm(cm)	L,R,Up side(cm)
0~9	76	76
9~1	61	61
18~27	46	46
27~45	31	20
45~100	25	15

Machine Disassembly and Replacement

General Information

This chapter contains step-by-step procedures on how to disassemble the AT4250DVT for maintenance and troubleshooting. To disassemble the TV, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge
- Small Philips screwdriver
- Philips screwdriver
- Hexagonal screwdriver
- Tweezers

Note: The screws for the different components vary in size. During the disassembly process, please group the screws with the corresponding components to avoid mismatch when doing assembly. When you remove the boards, please be careful not to scrape them.

Warning! The module is driven by high voltage. If you need to handle the module during operation or just after powered off, you must take proper precautions against electric shock and must not touch the drive circuit portion and metallic part of module within 10 minutes. The capacitors in the drive circuit portion remain temporarily charged even after the unit is powered off. If the residual voltage is strong enough, it could result in electric shock. Thus, we strongly suggest that you put on the wrist ground strap and put the component on the conductive mat or bag. Besides, please keep the unit grounded during the whole process of disassembly and assembly.

Before You Begin

Before you proceed with the disassembly procedure, make sure that you do the following steps:

1. Turn off the power to the TV and all peripherals.
2. Unplug the AC adaptor and all power and signal cables from the TV.

AT4250

CHASSIS ASSY(7)

NO. [OPERATION INSTRUCTION]

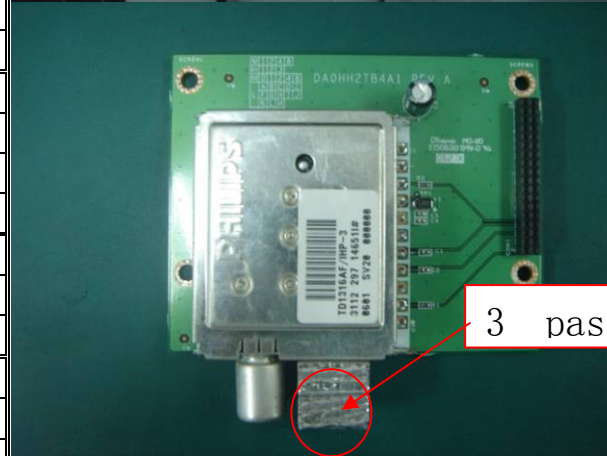
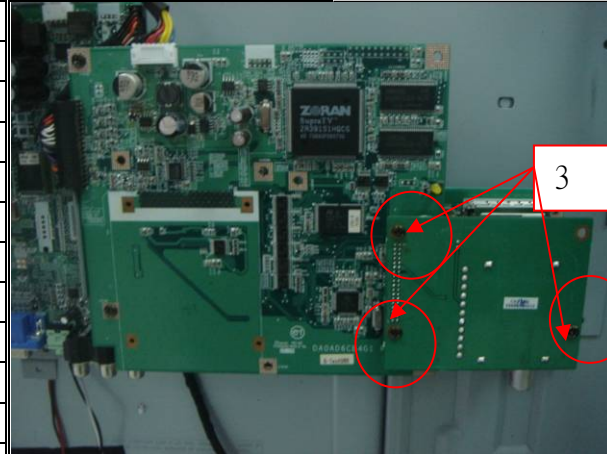
1

[FETCH TUNER AND ASSY ON CHASSIS]

2

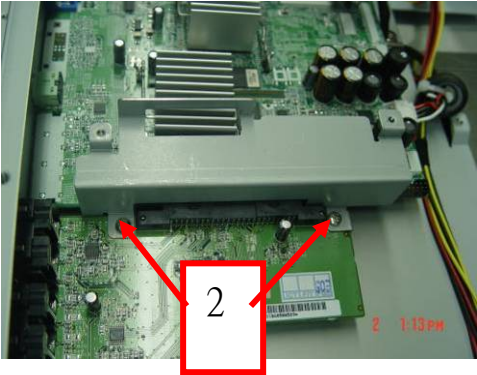
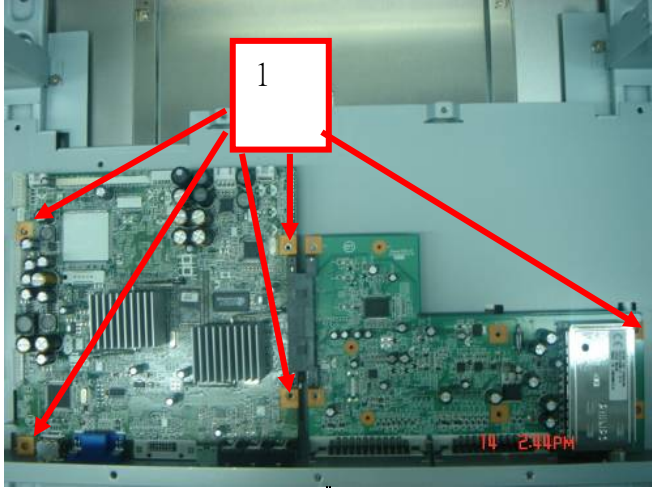
[FASTEN 3PCS SCREW M3*6 ON TUNER]

3



3 paste 2 PCS

	AT4250								TV MODULE ASSY(9)			
NO.	[OPERATION INSTRUCTION]											
1	[FASTEN 5PCS SCREW M3*6 ON M/B]											
2	[FETCH D TUNER BKT AND ASSY TO IO/B, FASTEN 2PCS M3*6 FIXED]											



AT4250

CHASSIS ASSY(2.2)

NO. [OPERATION INSTRUCTION]

1

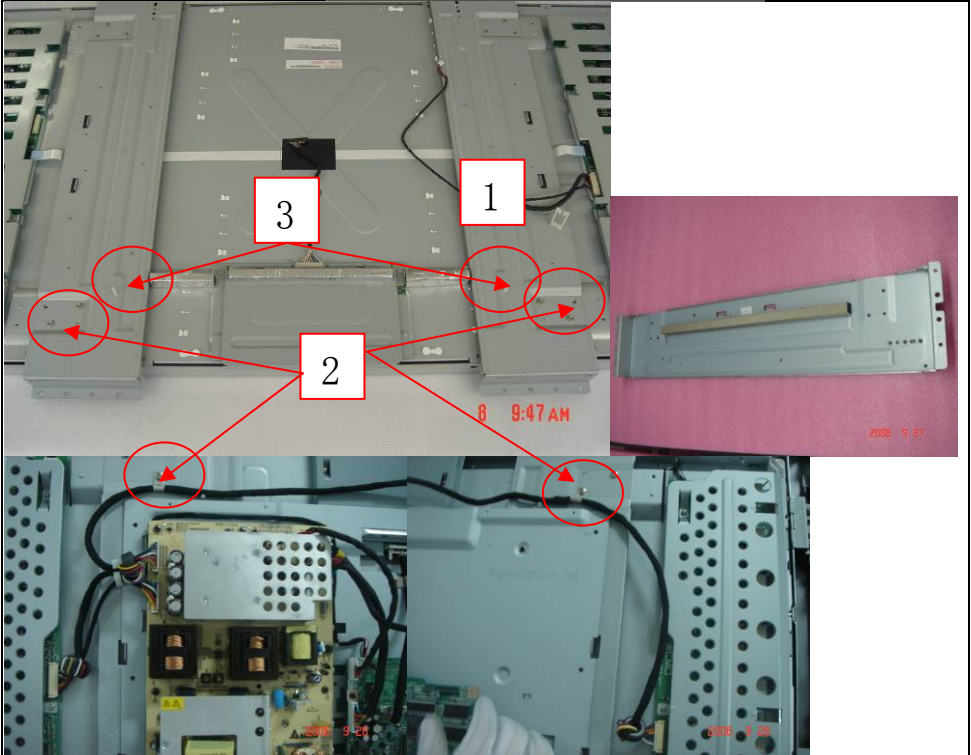
[GET PANEL BKT L&R, PUT ON THE PANEL]

2

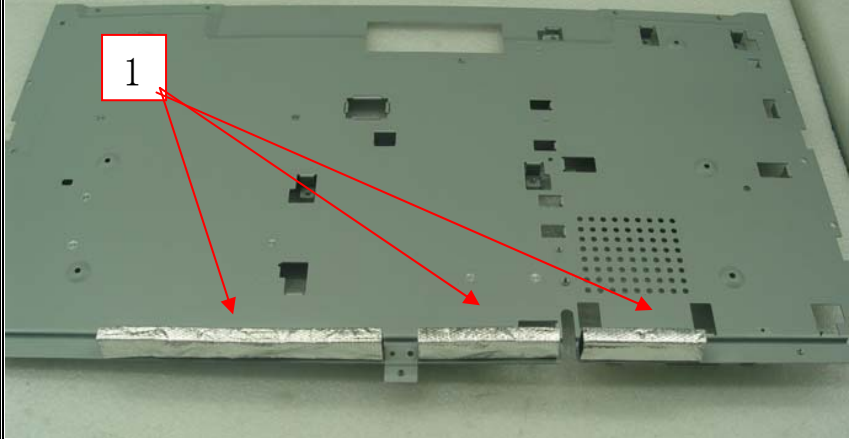
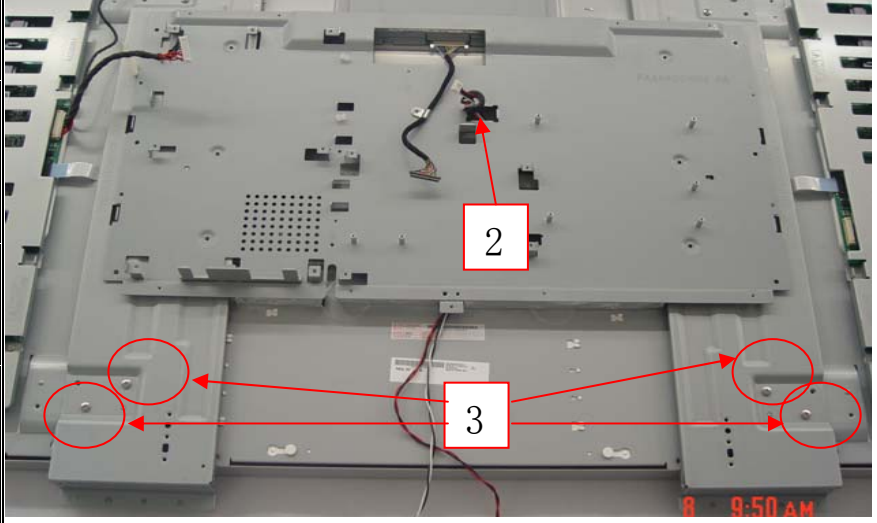
[LOCK SCREW (M4*6) *4 TO FASTEN PANEL BKT L&R AND CLAMPS]

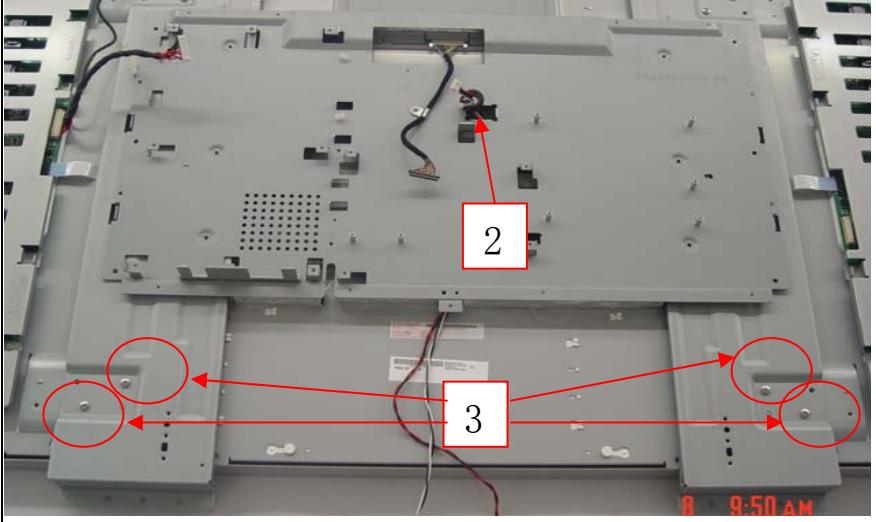
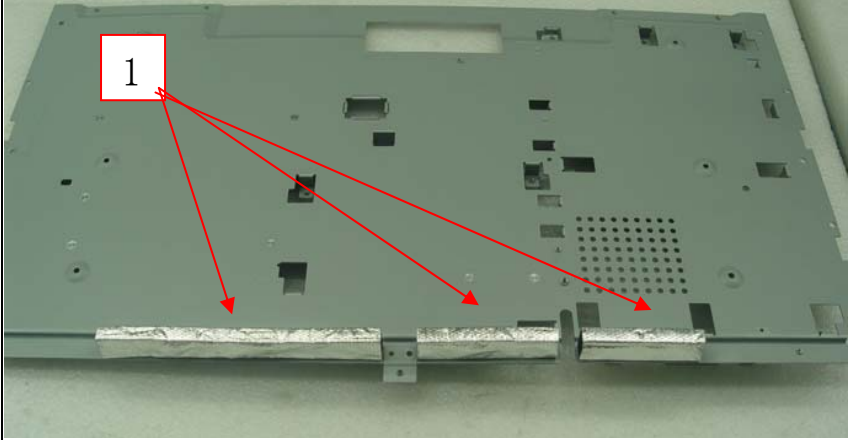
3

[INSERT WIRE CLIP IN L/R BKT]

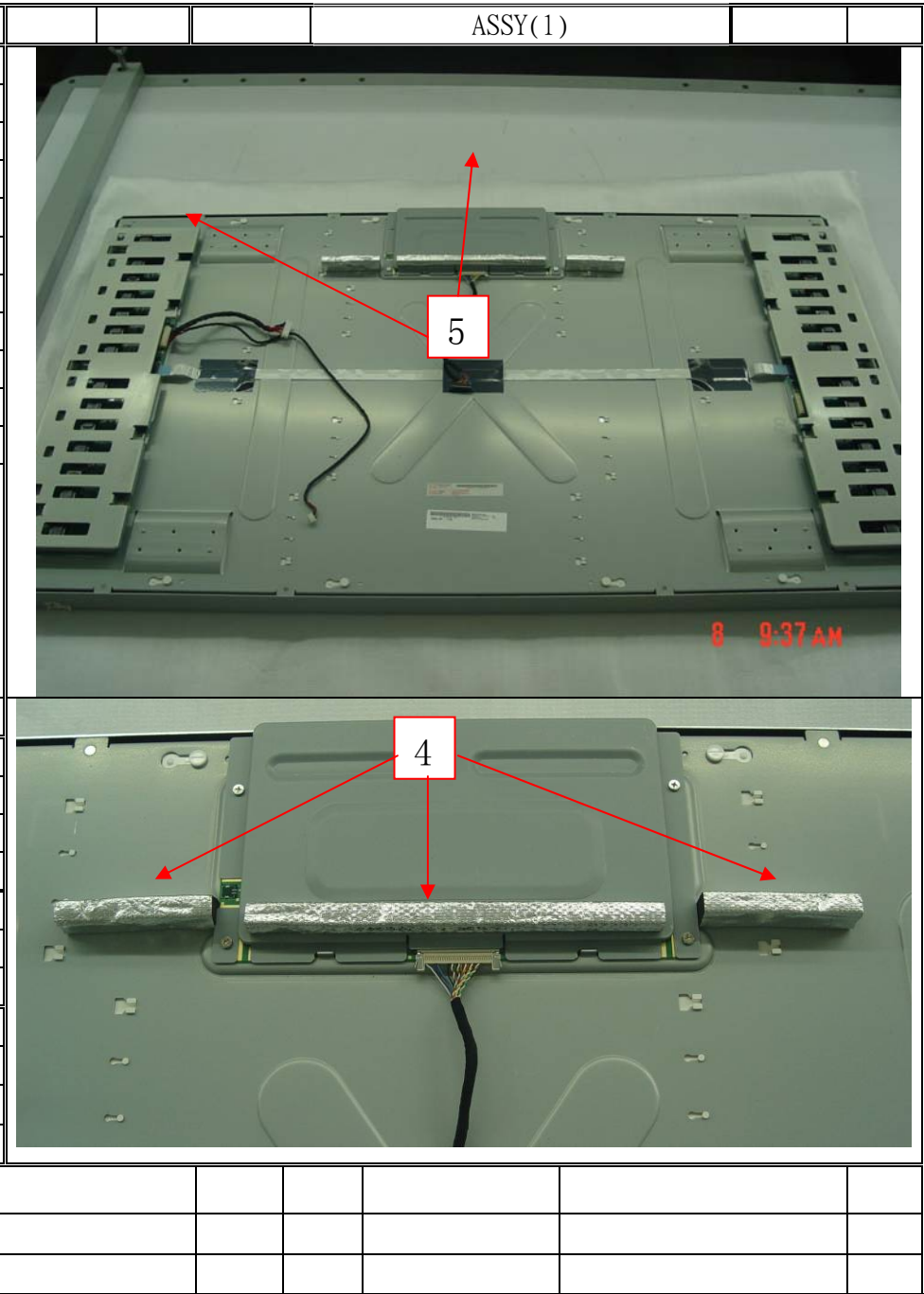


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	AT4250					CHASSIS ASSY(2. 1)		
NO.	[OPERATION INSTRUCTION]							
1	[GET EMI GASKET *3 STICKED ON THE PCB TRAY]							
2	[GET SPEAKER CABLE THROUGH CHASSIS , ASSEMBLE IT]							
3	[LOCK SCREW (M4*6) *4 TO FASTEN PANEL BKT L&R]							
								



	AT4250				
NO.	[OPERATION INSTRUCTION]				
1					
	[CLEAN THE SPONGE AND PUT IT ON LINE]				
2					
	[PUT TRAVEL CARD ON THE LINE]				
3					
	[FETCH PANEL AND INSPECT IT]				
4					
	[GET EMI GASKET *3 STICKED ON THE PANEL]				
5					
	[INSERT LVDS CABLE INV CABLE AND SCAN TRAVEL CARD]				
	[PRESS DOWN THE COUNTER ONCE AGAIN]				



Troubleshooting

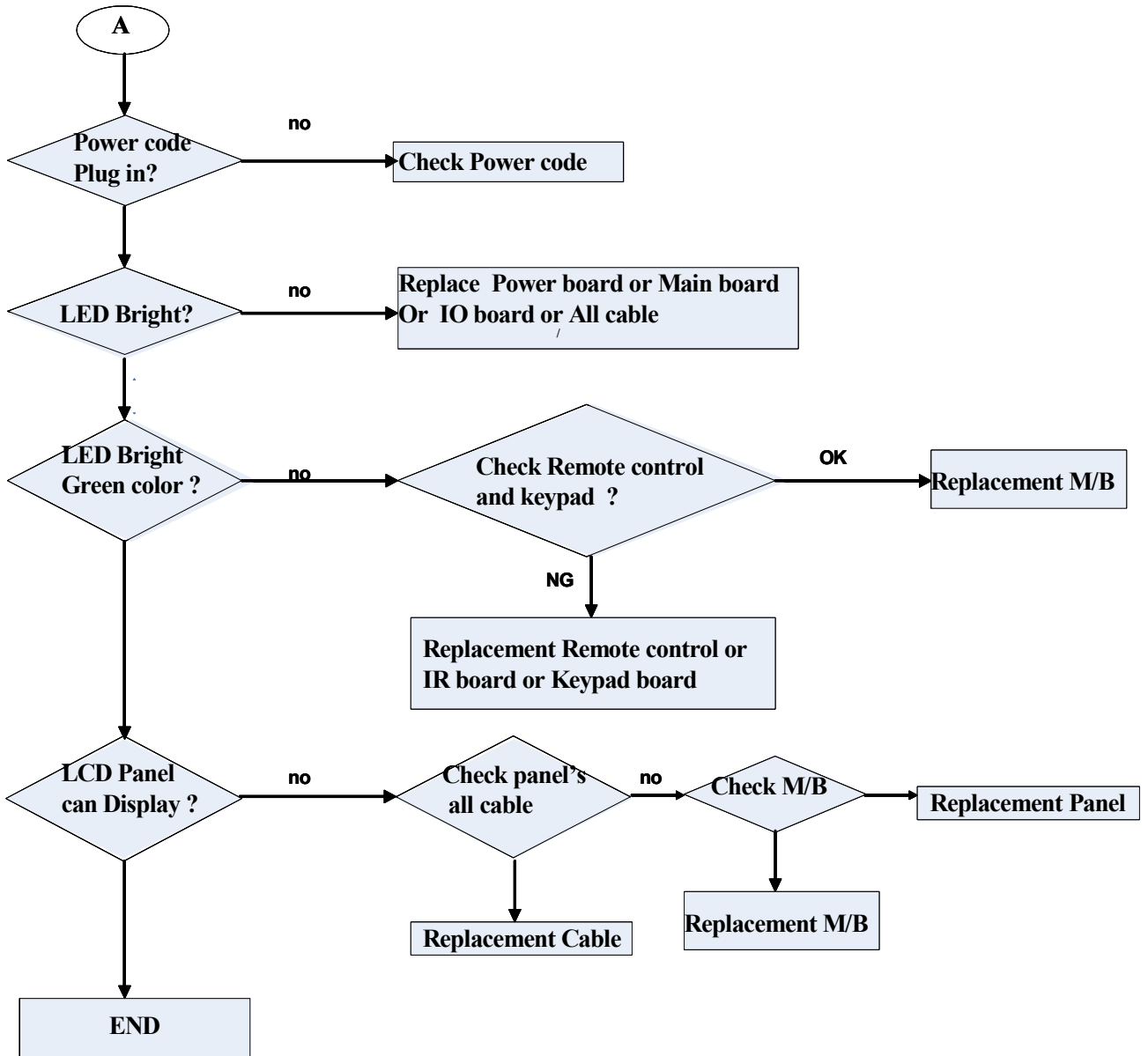
Use the following procedure as a guide for Acer LCD TV AT4250DTV problems.

Note: The diagnostic tests are intended to test this model. Non-Acer products, prototype cards, or modified options could occur false errors and invalid system responses.

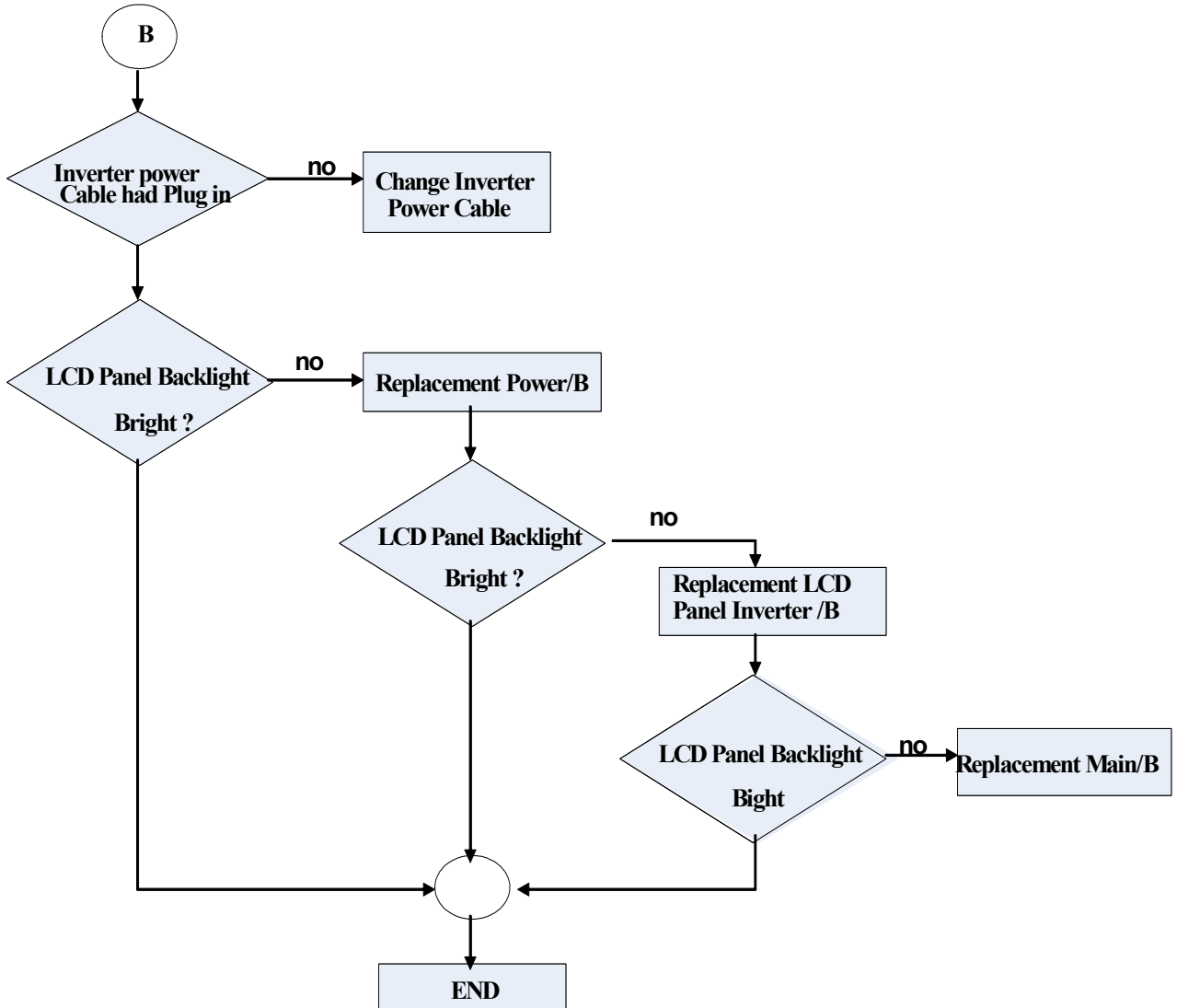
1. Duplicate symptom and obtain the failing symptoms in as much detail as possible.
2. Distinguish symptom. Verify the symptoms by attempting to re-create the failure by running the diagnostic test or by repeating the same operation.
3. Disassemble and assemble the unit without any power sources.
4. If any problem occurs, you can perform visual inspection before you follow this chapter's instructions. You can check the following:
 - Power cords are properly connected and secured;
 - There are no obvious shorts or opens;
 - There are no obviously burned or heated components;
 - All components appear normal.
5. Use the following flow chart determine which part to be replaced.

Symptoms

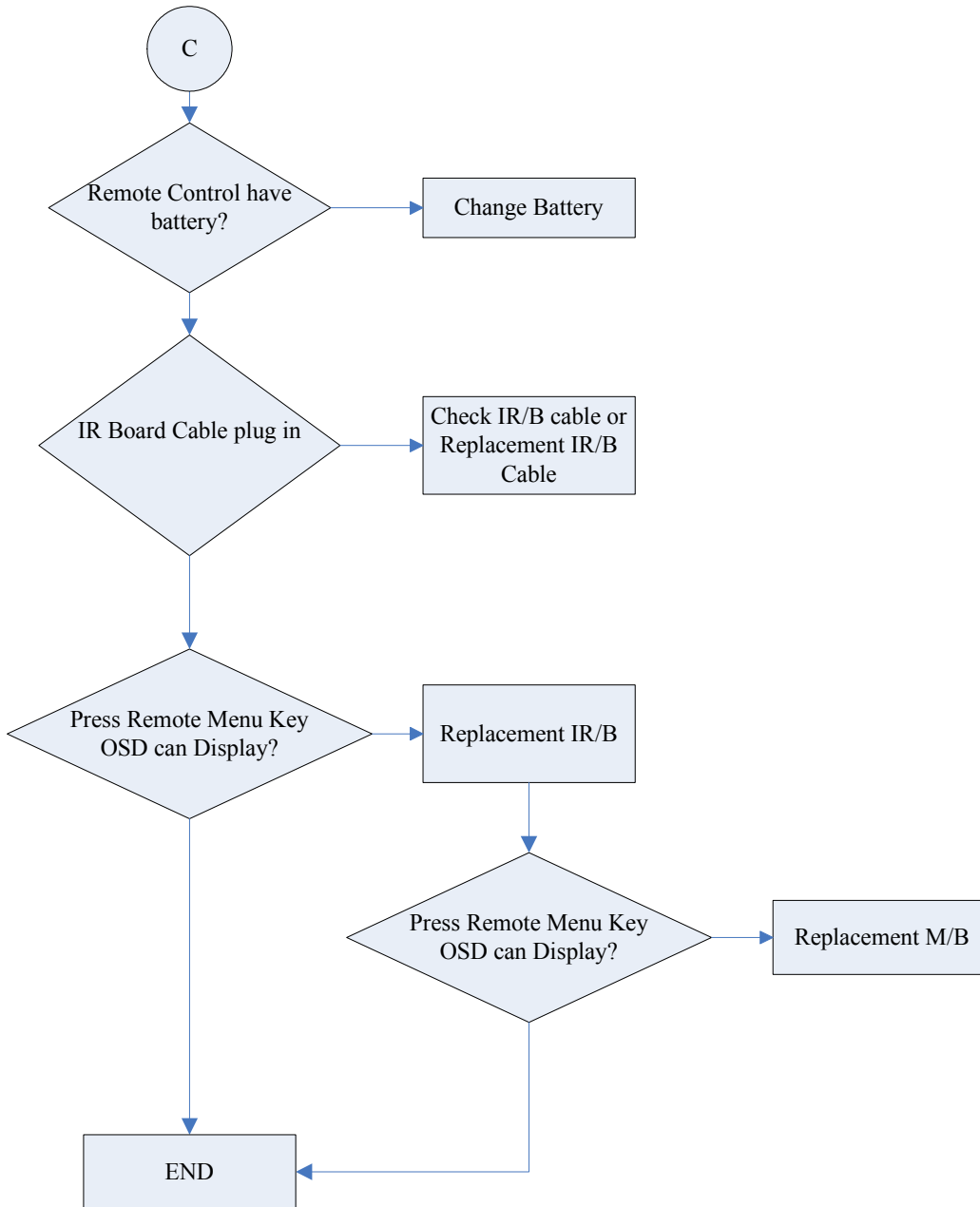
Can Not Power on



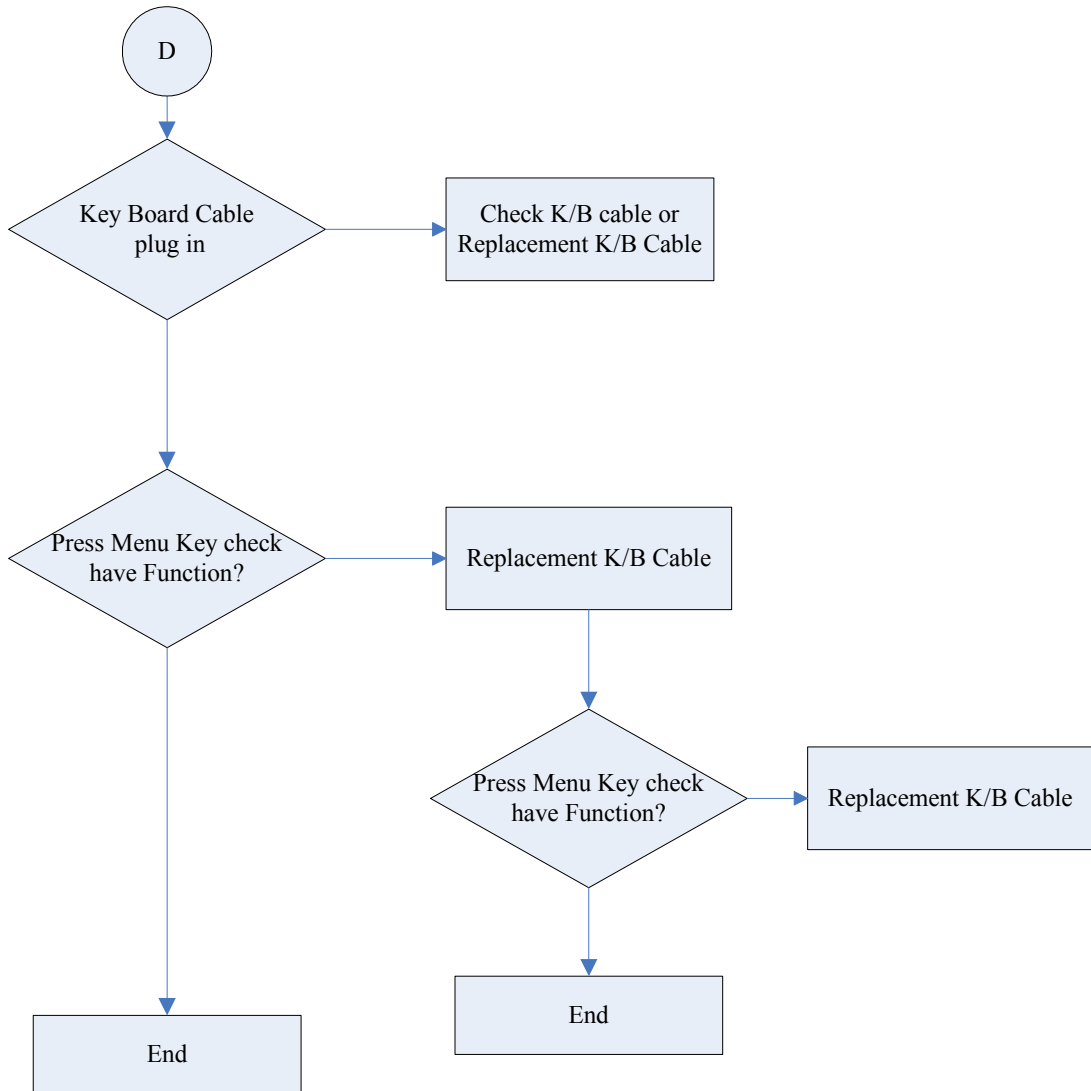
LCD No Backlight



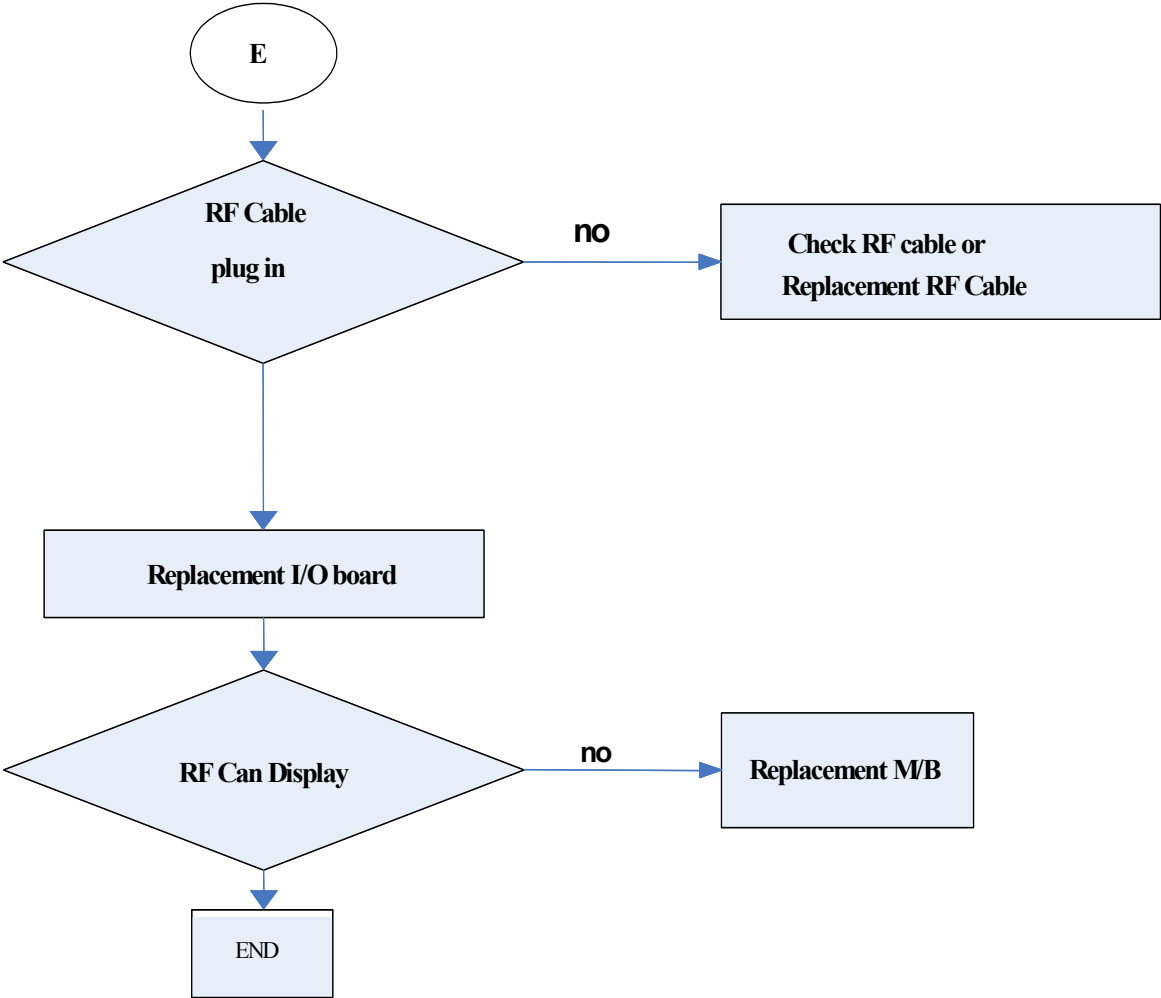
Remote Control No Function



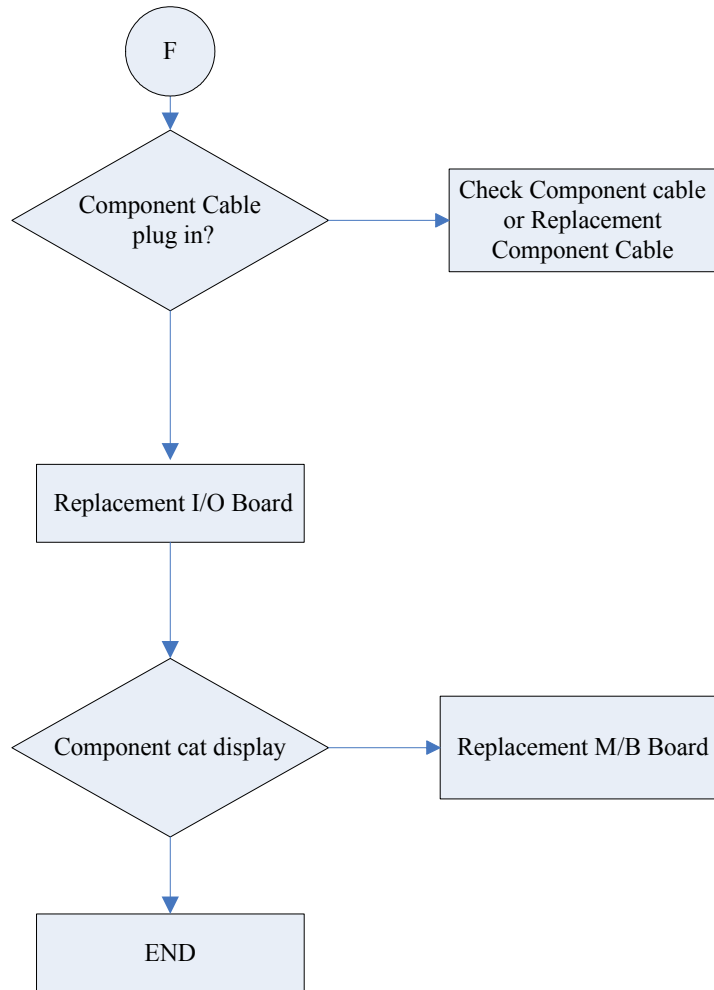
Button Keys No Function



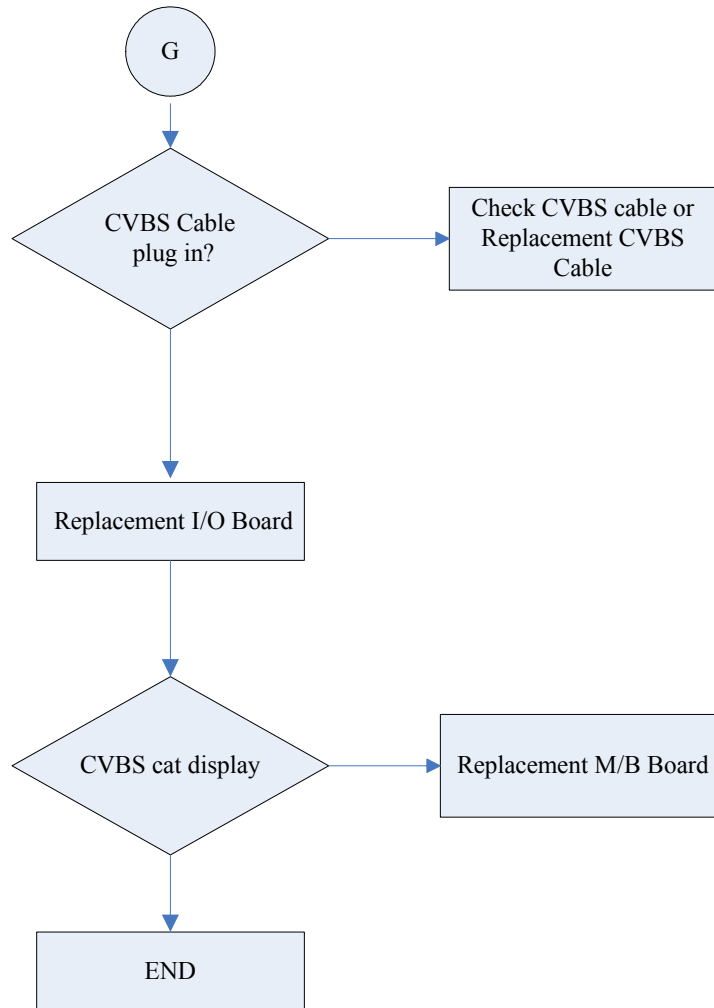
Analog/Digital RF No Display



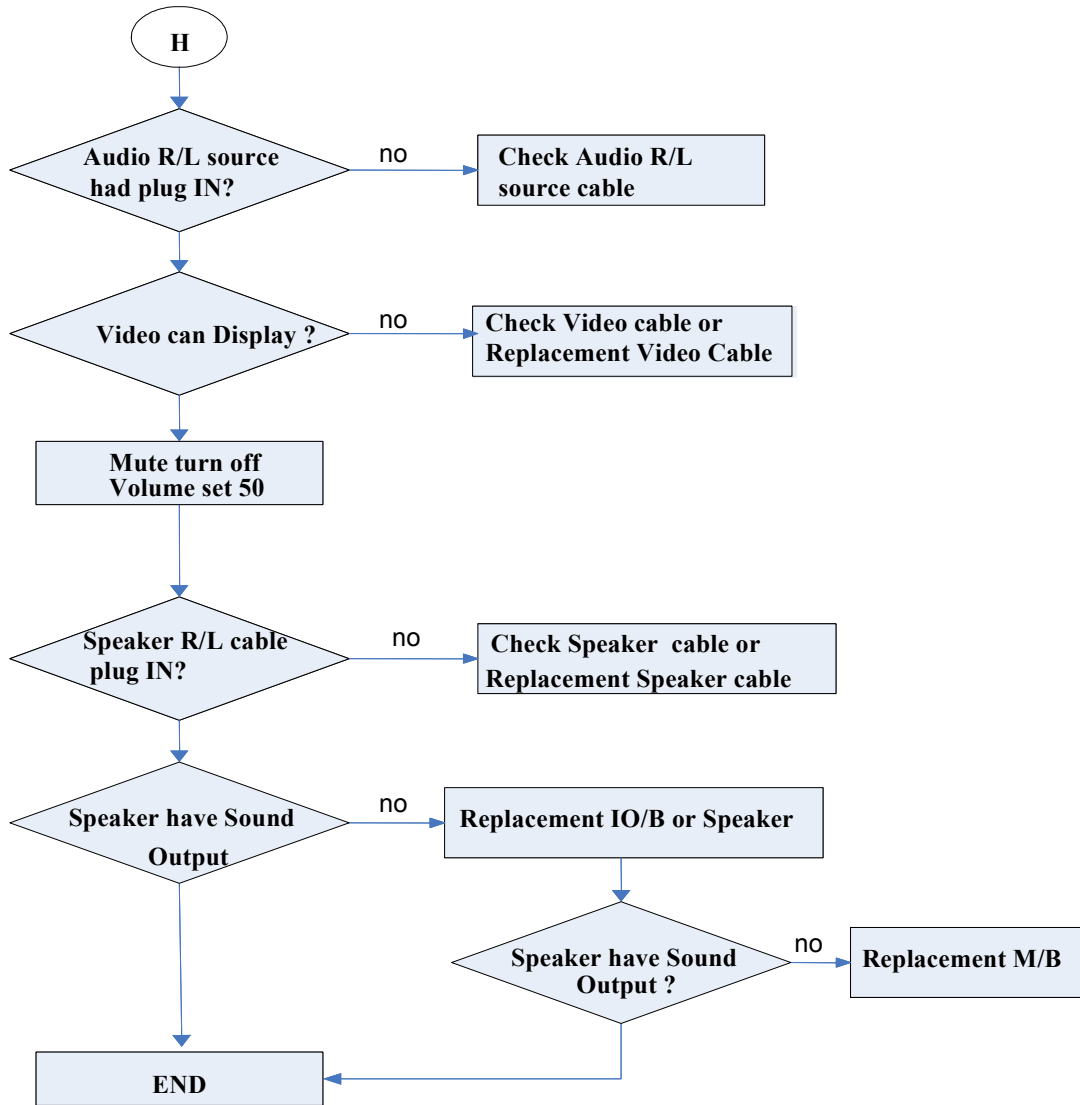
COMPONENT1 and COMPONENT2 No Display



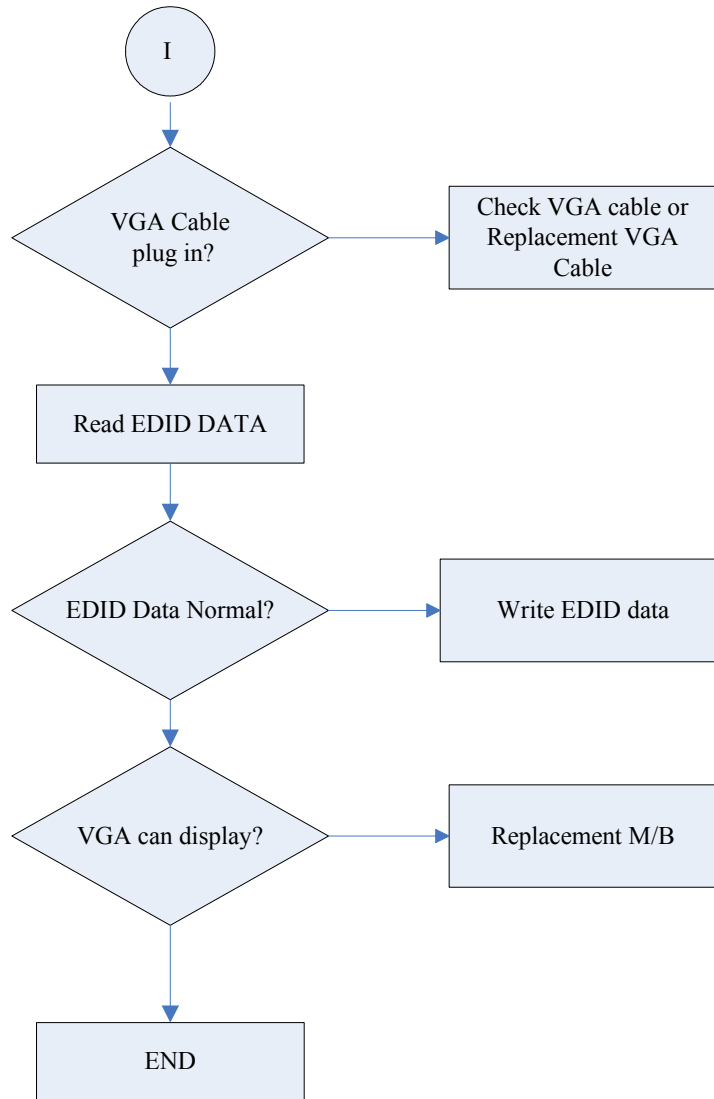
AV1 and AV2 No Display



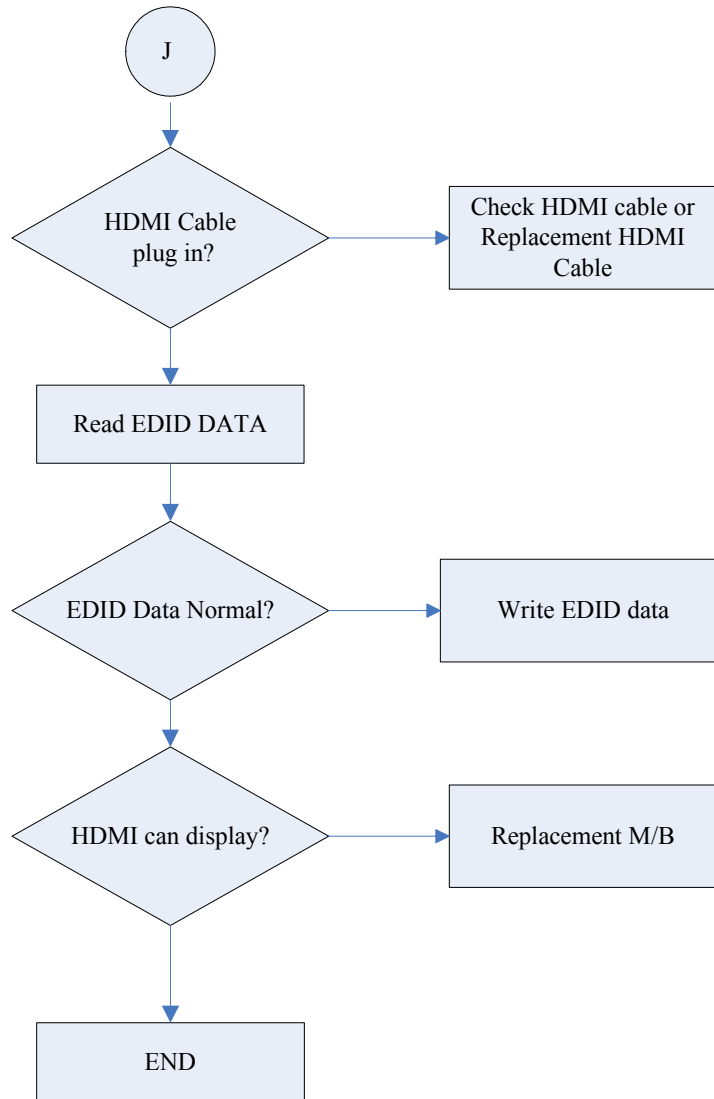
Speaker No Sound



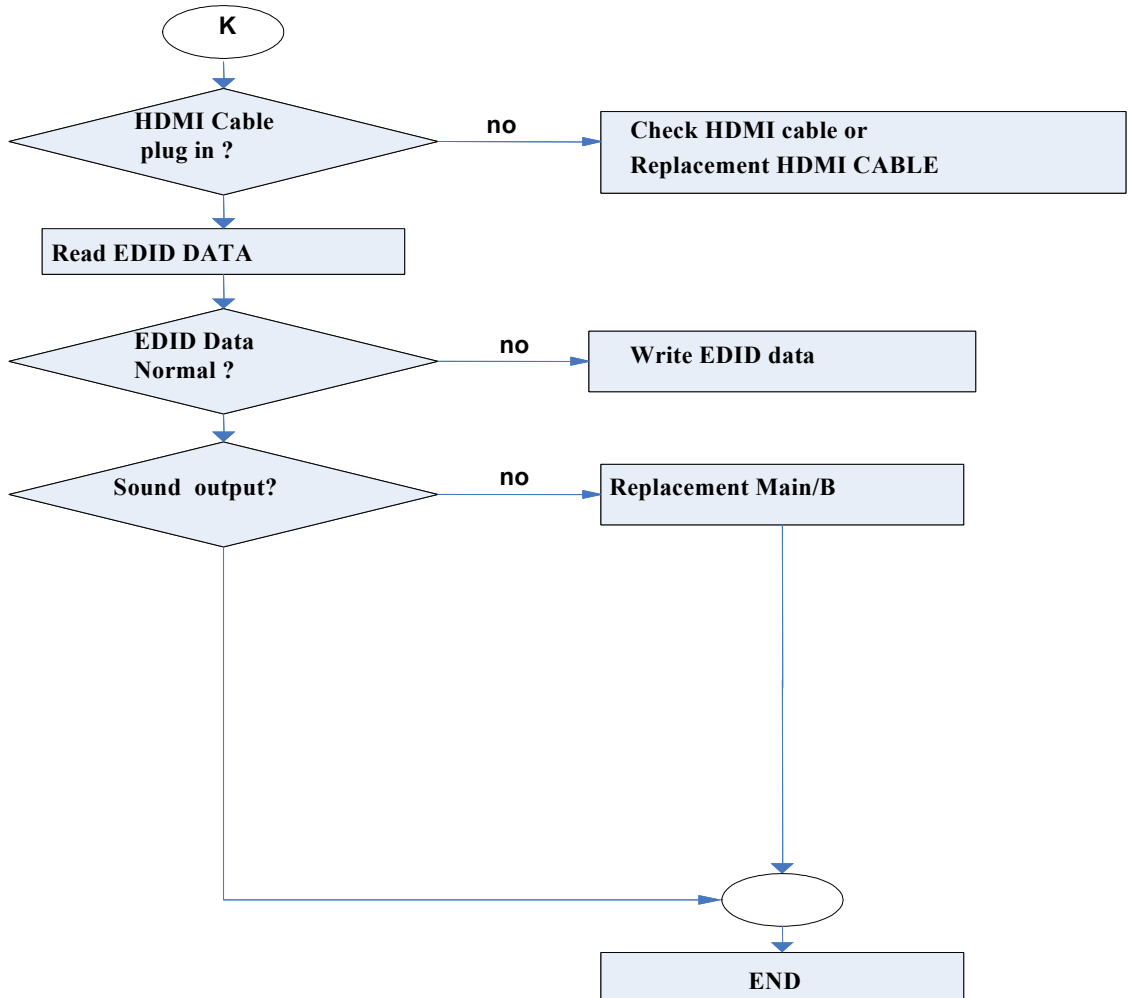
VGA No Display



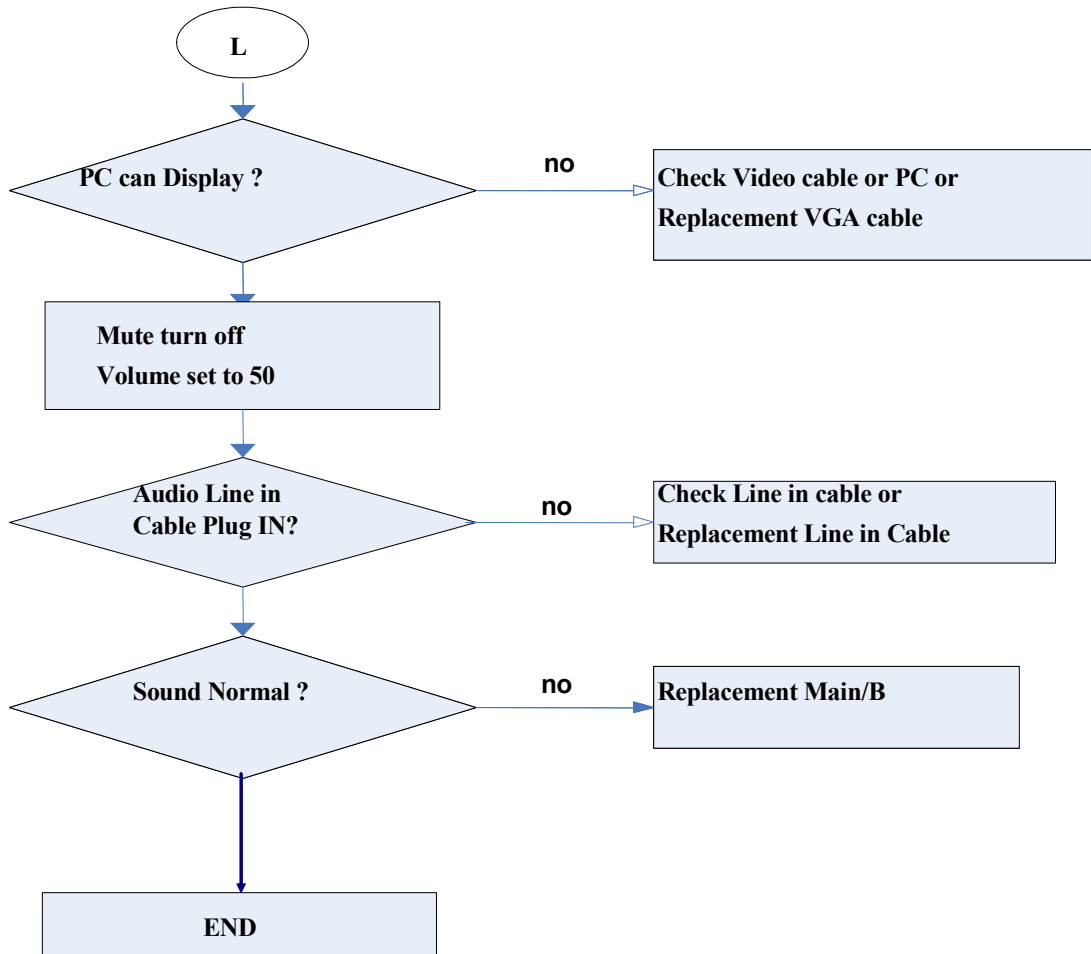
HDMI No Display



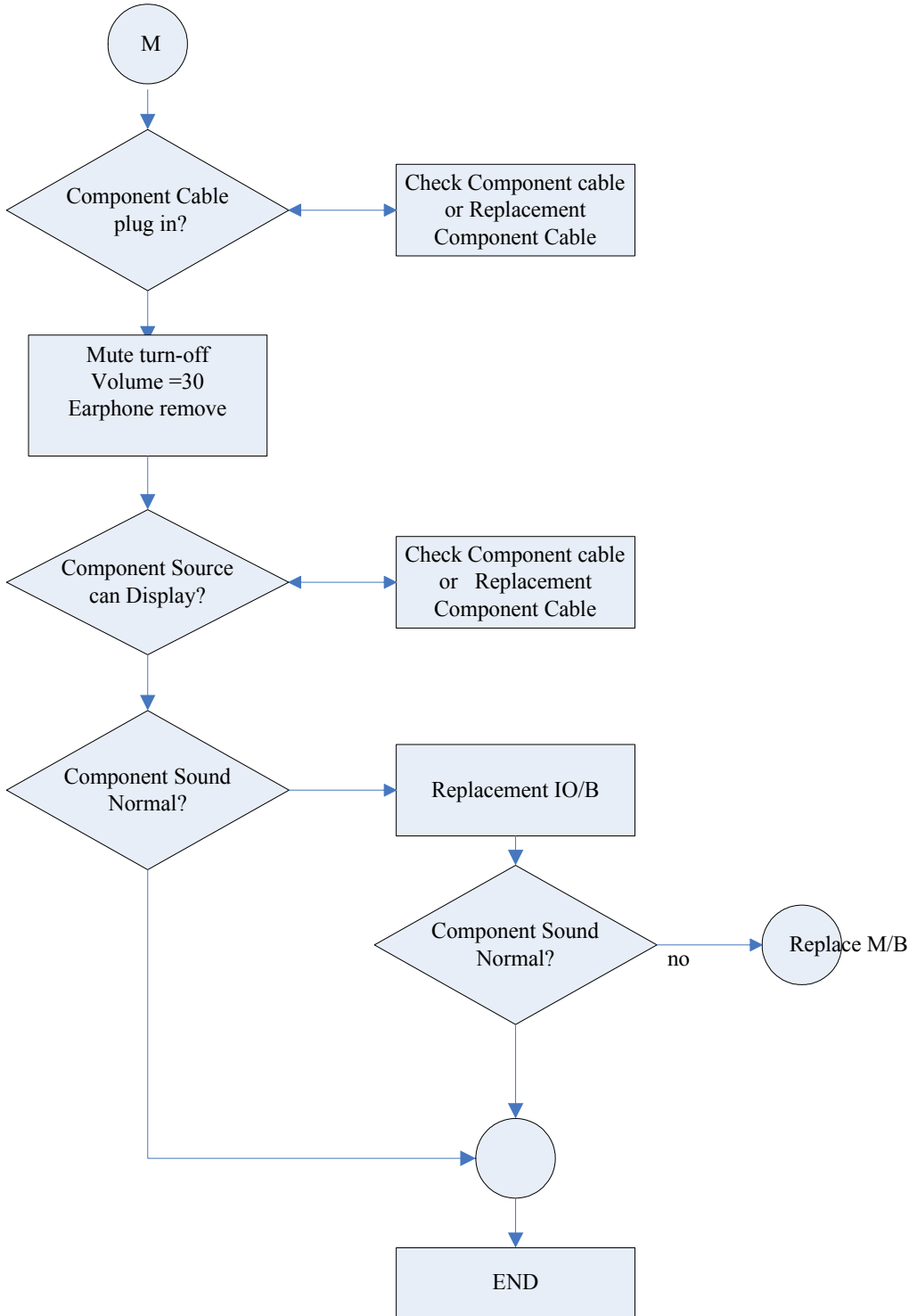
HDMI No Sound



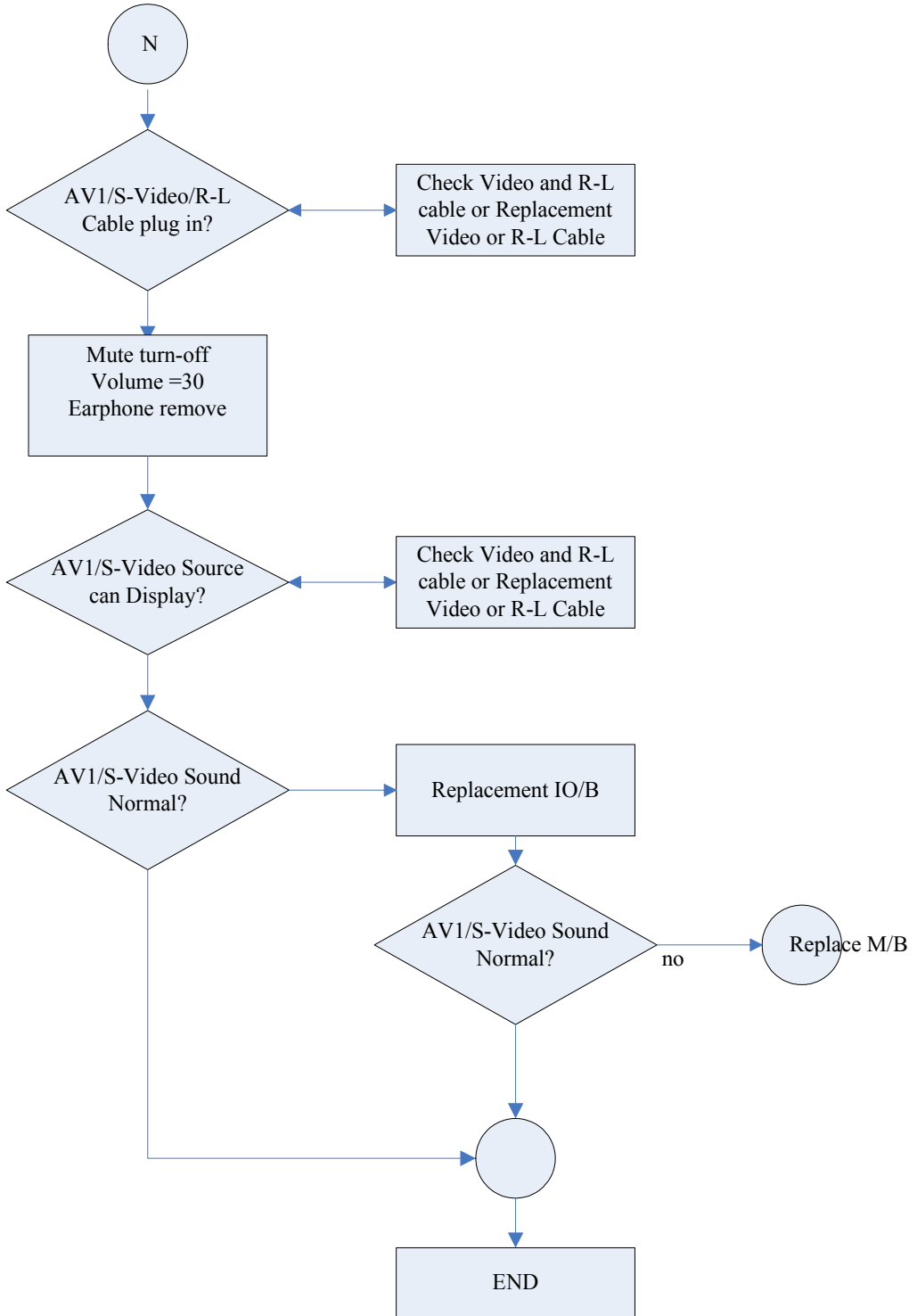
VGA No Sound



COMPONENT No Sound



SCART/AV/S-Video No Sound



FRU (Field Replaceable Unit) List

This section gives you the FRU (Field Replaceable Unit) list in global configurations of AT4250DTV. Please refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization). Please note that **WHEN ORDERING FRU PARTS**, you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will **NOT** be noted on the 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.

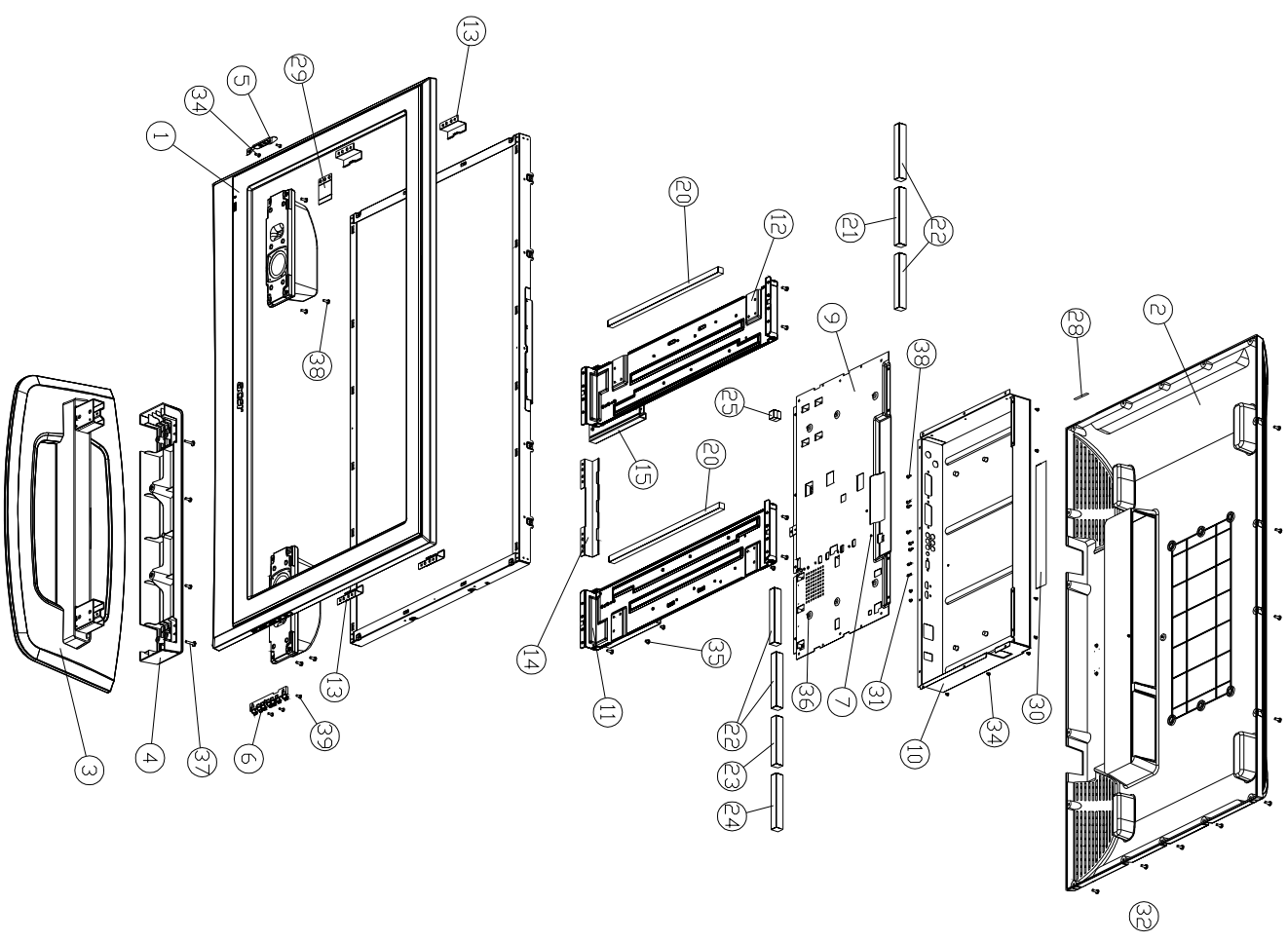
Parts

PARTNAME	DESCRIPTION	ACER PART NO.
ACCESSORY		
REMOTE CONTROLLER - EU	REMOTE CONTROL EURT54B005	25.M3507.001
BOARD		
IO/TURNER BOARD - PAL EU	HH6 IO/B ASSY(EU)	55.M12V7.004
FUNCTION BOARD	JL7 KEYPAD/B ASSY	55.M25V7.002
IR BOARD	JL7 IR/B ASSY(FOR HV7)	55.M25V7.003
POWER BOARD	"PWR 291W,DPS-291AP A(90~264VAC)"	55.M34V7.001
AV3 BOARD	JL7 AV3/B ASSY(FOR HV4E)FHD	55.M3507.001
CPU BOARD - DVB-T AUS	"AD6 CPU/B ASSY(FOR HH2A)(DVB-T,AUS)"	55.M3507.002
DVB-T TURNER BOARD	HH2 DVB-T TUNER/B ASSY(FOR HH2A)	55.M3507.003
MAIN BOARD - PAL EU FOR CMO	HV4E M/B ASSY(EU)CMO	55.M3507.004
CABLE		
LVDS CABLE - PANEL TO MB FOR CMO	"CABLE ASSY HV4E LVDS-PAN (50P/51P,REV2A)"	50.M3507.001
INVERTER CABLE - 14P/10P	"CABLE ASSY HV4E INV (14P/10P/4P,REV2A)"	50.M3507.002
INVERTER CABLE - 12P/10P	"CABLE ASSY HV4E INV (12P/10P,REV2A)"	50.M3507.003
CABLE - POWER/B TO MB TO DT	"CABLE ASSY HX7 P/MB/DT(14P/10P/8P,REV1A)"	50.M3507.004
CABLE - MB TO DT	"CABLE ASSY HV4E MB/DT(36P/36P,3A)"	50.M3507.005
CABLE - AV4	"CABLE ASSY HV4E AV4(11P/7P,REV2A)"	50.M3507.006
CABLE - MB TO KEY TO IR	"CABLE ASSY HV4 MB/IR/BTN(10/9/8,REV1A)"	50.M34V7.004
SPEAKER CABLE	"CABLE ASSY HH2 SPEAKER 2P/3P,4P,1A"	50.M12V7.005
CABLE - ADUIO TO POWER BOARD 8P/7P	CABLE ASSY HX4 AUDIO/POWER(8P/7P REV1A)	50.M34V7.005
GROUND CABLE	"CABLE ASSY HV9 GND(1P/1P,2A)"	50.M34V7.006
POWER CORD EU 3 PIN	POWER CORD SP-023+IS-14H05VV-F3P 1.8M EU	27.L13VE.007
CASE/ COVER/ BRACKET ASSEMBLY		
FRONT BEZEL ASSY	HV4E LCD-BEZEL ASSY (FHD)	60.M3507.001
BACK COVER ASSY	AH4T BACK COVER ASSY	60.M34V7.002
LCD BRACKET CMO - L	"PANEL BKT CMO L HX4(FAHX4007,REV3A)"	33.M3507.001
LCD BRACKET CMO - R	"PANEL BKT CMO R HX4(FAHX4006,REV3A)"	33.M3507.002
D-TUNNER BRACKET	"D-TUNNER BKT AH2(FBAH2001,REV3A)"	33.M3507.003
PCB MAIN CHASSIS	"CHASSIS HX4(FAHX4001,REV3B)"	33.M34V7.004
SHIELD TRAY	"SHIELDING (FHD) HV4(FAHV4004,REV3B)"	33.M3507.004

PARTNAME	DESCRIPTION	ACER PART NO.
STAND BRACKET	"STAND BKT HX4(FAHX4008,REV3A)"	33.M34V7.001
STAND ASSY	HV4 STAND ASSY	60.M34V7.003
STAND COVER	"STAND COVER HX4(EAHX4004,REV3B)"	42.M34V7.001
WIRE SADDLE CHA-4	"WIRE SADDLE CHA-4 VV3(EBVV3006,REV3A)"	42.M03V7.012
WIRE SADDLE MWS-7	"WIRE SADDLE MWS-7 VV3(EBVV3010,REV3A)"	42.M03V7.013
FRONT COVER	"FRONT COVER (FHD) HV4(EAHV4003,REV3A)"	42.M3507.001
FUNCTION KEY	"FUNCTION KEY HV7E(EBHV7001,REV3B)"	42.M25V7.001
AV3 FRAME	"AV3 FRAME HV4(EBHV4002,REV3A)"	42.M3507.002
MISCELLANEOUS		
"EMI CONTACT PAD HX4(JXHX4001,3A)"	"EMI CONTACT PAD HX4(JXHX4001,3A)"	47.M34V7.003
"EMI GASKET LVDS HX4(GBHX4002,3A)"	"EMI GASKET LVDS HX4(GBHX4002,3A)"	47.M34V7.004
"EMI GASKET UP HX4(GBHX4003,3A)"	"EMI GASKET UP HX4(GBHX4003,3A)"	47.M34V7.005
"EMI GASKET DOWN HX4(GBHX4004,3A)"	"EMI GASKET DOWN HX4(GBHX4004,3A)"	47.M34V7.006
"EMI GASKET POWER HX4(GBHX4005,3A)"	"EMI GASKET POWER HX4(GBHX4005,3A)"	47.M34V7.007
"GASKET 385X15X14 HV4E(GBHV4004,3A)"	"GASKET 385X15X14 HV4E(GBHV4004,3A)"	47.M3507.001
CLAMP CMO-D HX4	"CLAMP CMO-D HX4(FBHX4005,REV3A)"	47.M3507.002
CLAMP CMO-R/L HX4	"CLAMP CMO-R/L HX4(FBHX4004,REV3A)"	47.M3507.003
CABLE CLIP	"CABLE CLIP FAA-51 VV3(EBVV3004,REV3A)"	47.M3507.004
BUTTON LABEL	"LABEL (BUTTONS) HV9(HCHV9006,REV3B)"	40.M3507.001
POWER LABEL	"LABEL (POWER) HV4(HCHV4001,REV3A)"	40.M34V7.001
AV4 LABEL	"AV4 LABEL HV4E(HCHV4006,REV3A)"	40.M3507.002
IO LABEL	"IO LABEL (FHD) HV4(HCHV4004,REV3A)"	40.M3507.003
RUBBER FOOT GAHH7001	"RUBBER FOOT HH7 (GAHH7001,REV3A)"	47.M3507.005
RUBBER FOOT GAHX2001	"RUBBER FOOT HX2(GAHX2001,REV3A)"	47.M3507.006
LCD		
LCD TFT 42 IN. CMO V420H1-L05	"LCD(TFT) 42"" V420H1-L05(1920*1080)"	LK.4200D.001
SPEAKER		
SPEAKER ASSY L	SPEAKER ASSY HX4E (FS-0000085AB)	23.M34V7.001
SPEAKER ASSY R	SPEAKER ASSY HX4E (FS-0000085AA)	23.M34V7.002
SCREW		

PARTNAME	DESCRIPTION	ACER PART NO.
STANDOFF M3L6.5	"STANDOFF M3L6.5 AH2(FBAH2007,REV3A)"	86.M3507.001
STANDOFF M3L29.4	"STANDOFF M3L29.4 AH2(FBAH2008,REV3A)"	86.M3507.002
STANDOFF M3L37.5	"STANDOFF M3L37.5 AH2(FBAH2009,REV3A)"	86.M3507.003
SCREW T3*12-P	SCREW T3*12-P	86.M3507.004
SCREW M4.0*6.0-B(NI)	SCREW M4.0*6.0-B(NI)	86.M08V7.005
SCREW M4*6 P (NI)	SCREW M4*6 P (NI)	86.M01V7.002
SCREW M4*22- B(BNI+WASHER+SPRING)	SCREW M4*22- B(BNI+WASHER+SPRING)	86.M34V7.002
SCREW T4*12-B(BNI)	SCREW T4*12-B(BNI)	86.M25V7.003
"NUT IO EA1(MBEA1001,REV3D)"	"NUT IO EA1(MBEA1001,REV3D)"	86.M25V7.001
SCREW T3*8-B(BNI)	SCREW T3*8-B(BNI)	86.M08V7.007
SCREW M3*6-B(BNI)	SCREW M3*6-B(BNI)	86.M08V7.003
SCREW F3.0*6-B(NI)	SCREW F3.0*6-B(NI)	86.M25V7.002
PACKING		
"PE BAG FOR ACC.,QN4C(HAQN4004,REV3A)LF "	"PE BAG FOR ACC.,QN4C(HAQN4004,REV3A)LF"	47.M24V7.006
"EPE BAG AH4(HAAH4001,3A)1200*950"	"EPE BAG AH4(HAAH4001,3A)1200*950"	47.M34V7.013
"EPE SHEET(970WX700L)VEW7(HAVW E001,REV3A)"	"EPE SHEET(970WX700L)VEW7(HAVWE001,R EV3A)"	47.M34V7.014
"EPS FOAM(TOP- R)HX4(HBHX4006,3A)"	"EPS FOAM(TOP-R)HX4(HBHX4006,3A)"	47.M34V7.015
"EPS FOAM(BASE- L)HX4(HBHX4007,3A)"	"EPS FOAM(BASE- L)HX4(HBHX4007,3A)"	47.M34V7.016
"EPS FOAM(TOP- L)HX4(HBHX4005,3A)"	"EPS FOAM(TOP-L)HX4(HBHX4005,3A)"	47.M34V7.017
"EPS FOAM(BASE- R)HX4(HBHX4008,3A)"	"EPS FOAM(BASE- R)HX4(HBHX4008,3A)"	47.M34V7.018
CARTON(BASE)AH4	"CARTON(BASE)AH4(HFAH4002,3A)"	47.M3507.007
CARTON COVER HV4 ACER AT4250	"CARTON COVER HV4(HFHV4006,3A)ACER AT4250"	47.M3507.008
CARTON CLASP VW7	"CARTON CLASP VW7(JXVW7001,3A)"	47.M08V7.020

REVISIONS			
LTR	DESCRIPTION	DATE	APP
△			
△			
△			



39	NT30080BUBJ20	SCREW T3*8-B(B/N/D)	8
38	KS30120PLCT3	SCREW T3*12-P	8
37	NM40220BK82	SCREW M4*22-B	10
36	NM40060PCE2	SCREW M4*6 P (N/D)	3
35	NM40060BBJ5	SCREW M4*6-B(B/N/D)	8
34	NM30060BJ25	SCREW M3*6-B(B/N/D)	39
33	MF30060BBJ6	SCREW F3.0*6-B(B/N/D)	5
32	ME40120BJ24	SCREW T4*12-B(B/N/D)	39
31	MBEA1001012	NUT ID E41	2
30	JXH44001015	EMI CONTACT PAD HX4	1
29	JXH44001010	AV4 CONTACT PAD HV4	1
28	HCHV4006011	AV4 LABEL HV4E	1
27	HCHV4004019	ID LABEL (FHD) HV4	1
26	HCHV4001010	LABEL (POWER) HV4	1
25	GBHX7003018	GASKET TUNER ESD HX7E	2
24	GBHX4005010	EMI GASKET POWER HX4	1
23	GBHX4004013	EMI GASKET DOWN HX4	1
22	GBHX4003017	EMI GASKET UP HX4	3
21	GBHX4002011	EMI GASKET LVDS HX4	1
20	GBHV4004018	GASKET 385X15X14 HV4E	2
19	FBAH2009019	STANDOFF M3L37.5 AH2	1
18	FBAH2008012	STANDOFF M3L29.4 AH2	2
17	FBAH2007016	STANDOFF M3L6.5 AH2	2
16	FBAH2001018	D-TUNNER BKT AH2	1
15	FAHX4008018	STAND BKT HX4	2
14	FHX4005010	CLAMP CMD-D HX4	1
13	FHX4004013	CLAMP CMD-R/L HX4	4
12	FAHX4007011	PANEL BKT CMD L HX4	1
11	FAHX4006015	PANEL BKT CMD R HX4	1
10	FAHV4004017	SHIELDING (FHD) HV4	1
9	FAHX4001013	CHASSIS HX4	1
8	EBVV43010011	WIRE SADDLE MWS-7 VV3	6
7	EBVV43006014	WIRE SADDLE CHA-4 VV3	1
6	EBHV7001010	FUNCTION KEY HV7E	1
5	EBHV4002015	AV3 FRAME HV4	1
4	EAHX4004012	STAND COVER HX4	1
3	E7HV4S41N07	HV4 STAND ASSY	1
2	47AH4BC0106	AH4T BACK COVER ASSY	1
1	36HV4LBTN12	HV4E LCD-BEZEL ASSY (FHD)	1
ITEM	PART NO.	DESCRIPTION	Q'TY

1	JHV4ECAST39	LCD TV, AMEDIA 40" AND 42" JIVEU	
ITEM	PART NO.	DESCRIPTION	MODEL
			HV4E
NAME		ID BDX BKT-DUMMY HR7	APPROVE
T.D.L.		1 P.C. 2 P.C.	DESIGNED
MATERIAL		UNIT	SCALE
FINISH		DATE	10/16/06
DWG		REV	3A
THE 3RD PROJECTION		DWG	1/1



THE 3RD PROJECTION