

Acer AT3205/2605 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>

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Revision History

Please refer to the table below for the updates made on Acer LCD TV AT3205/AT2605 service guide.

Date	Chapter	Updates

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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, 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.

System Specifications

Features

This LCD TV was designed with the user in mind. Here are just a few of its many features:

Benefits

- ☐ Widescreen display with HDMI-/HD-ready display
- ☐ Four different picture-in-picture modes for simultaneous previewing of programs
- ☐ Remote control for ultimate convenience
- ☐ Gamma Correction for brilliant color
- ☐ 3D motion-adaptive de-interlacing for exquisite details up to 1080p
- ☐ DCTI, DLTi and 3D comb filtering for sharp and accurate images
- ☐ SRS WOW, BBE Digital and Dolby Digital audio technology for awesome audio performance
- ☐ Acer Empowering Technology for selecting and defining personalized user preferences
- ☐ Card reader for easy enjoyment of multimedia (for MGW models only)
- ☐ Integrated media gateway for playback of PC content and web radio (for MGW models only)

LCD Panel

- ☐ Max. resolution: 1366x768
- ☐ Display area: 32 inches diagonal/26 inches diagonal
- ☐ Display color: 16.7 M colors (8 real bits per color)
- ☐ Panel interfacer: 1-ch LVDS
- ☐ Contrast ratio: 800:1 (Typical)
- ☐ Brightness: 500 cd/m² (Typical)
- ☐ Response Time: 25ms
- ☐ Ultra wide viewing angle: 176° (H) / 176° (V) (CR>20)

I/O Functions

- | | |
|---------------------------|--|
| 1. RF | 75 ohms input, according to CE regulation |
| 2. AV (SCART input) | 2 RGB SCART
Input signals: RGB, S-Video, CVBS, Left Right, permitted to be used in RGB mode or CVBS mode
1 S-Video SCART
Input signals: S-Video, CVBS, Left Right, permitted to be used in CVBS mode or YC mode |
| 3. AV (SCART output) | Output signals: TV CVBS out, Left Right |
| 4. AV level compatibility | Video |

	Type: Polarity: Level: Impedance: Interface:	CVBS / Analog Positive 1Vp-p (with sync.) 75 omega +/- 5% • RCA jack, yellow color • Euro_SCART, black
	Type: Level: Impedance: Interface:	YC / Analog Y: 1Vp-p (with sync.) C: 0.286Vp-p 75 omega +/- 5% • mini-DIN jack, black color • Euro_SCART, black
	Type: Polarity: Level: Impedance: Interface:	RGB / Analog Positive 0.7Vp-p 75 omega +/- 5% Euro_SCART
	Type: Polarity: Level: Impedance: Interface:	YUV / Analog Positive Y: 1Vp-p (with sync.) C: 0.286Vp-p 75 omega +/- 5% • RCA jack • Y: green color • U: blue color • V: red color
	Type: Output level: Interface:	TV CVBS output / Analog 2Vp-p (with sync.) • RCA jack, yellow color • Euro_SCART, black
	Audio	
	Type: Level: Impedance: Interface:	PC line in (stereo R / L channels) 500 mVrms more than 220kohm 3.5mm stereo jack, bluish color
	Type: Level: Impedance: Jack:	Stereo R / L channels 500 mVrms more than 200k omega • RCA jack • Right: red color • Left: white color
	SPDIF output level: Jack:	400 mVrms RCA jack (orange)
5. AV (YC CVBS)	one input Input signals: CVBS, Left Right or YC Left Right	
6. Components	one input Input signals: YPbPr Left Right or YCbCr Left Right	

Format	Resolution	Type	Vertical frequency
480i	720 x 480	SD	59.940Hz, 60Hz
480p	720 x 480	SD	50Hz, 59.940Hz, 60Hz
576i	720 x 576	SD	50Hz
576p	720 x 576	SD	50Hz
720p	1280 x 720	HD	50Hz, 59.940Hz, 60Hz
1080i	1920 x 1080	HD	50Hz, 59.940Hz, 60Hz

7. HDMI one input

Format	Resolution	Type	Vertical frequency
VGA	640 x 480		59.94Hz, 60Hz
	800 x 600		60Hz, 72Hz, 75Hz
XGA	1024 x 768		60Hz, 75Hz.
480p	720 x 480	SD	50Hz, 59.940Hz, 60Hz
576p	720 x 576	SD	50Hz
720p	1280 x 720	HD	50Hz, 59.940Hz, 60Hz
1080i	1920 x 1080	HD	50Hz, 59.940Hz, 60Hz

8. DVI-D one input
Input signals DVI-D, Left Right (shared with VGA input)

NO	Timing	V-Freq(Hz)
1	720X400 (DOS)	70 Hz
2	640X480 (DOS)	60 Hz
3	640X480(VESA)	72 Hz
4		75 Hz
5		85 Hz
6	800X600(VESA)	56 Hz
7		60 Hz
8		72 Hz
9		75 Hz
10		85 Hz
11	1024X768(VESA)	60 Hz
12		70 Hz
13		75 HZ
14		85 Hz
15	1152 X864(VESA)	75 Hz
16	1280 X960(VESA)	60 Hz
17	1280 X1024(VESA)	60 Hz
18	1920 X 1080 (HD)	Interlace, 60Hz

9. VGA

one input
Input signal VGA, Left Right

NO	Timing	V-Freq(Hz)
1	640X350	85Hz
2	640X400	85Hz
3	720X400	85Hz
4	640X480	60Hz
5		72Hz
6		75Hz
7		85Hz
8	800X600	56Hz
9		60Hz

10		72Hz
11		75Hz
12		85Hz
13	1024X768	43Hz
14		60Hz
15		70Hz
16		75Hz
17	1024X768	85Hz
18	1152X864	75Hz
19	1280X960	60Hz
20	1280X1024	60Hz
21	1920 X 1080 (HD)	Interlace, 60Hz

- 10. Sound management in graphic** In HDMI, the audio source is inside the HDMI signal.
In VGA and DVI-D, the audio comes from the audio graphic connector.
- 11. EDID management** EDID data format version1.3
EDID update available from VGA plug, DVI, HDMI
- 12. Head phone** The user can adjust separately the headphone volume.
The load impedance is 32 ohms, with 0.5W max. output.
The audio signal can be any input source displayed in active window.
- 13. HIFI** On the HIFI outputs, the user can connect an external audio amplifier, the selected signal is the same as the loudspeaker.
The output level is 500mV RMS.
- 14. Loudspeakers** Max. audio input (at 10% THD max.) at 1.0Vp-p / 1KHz input: 10W + 10W
Sound distortion at 1W / 1KHz: 1% THD max.
Speaker: Two of 10W
Speaker impedance: 4 ohms at 1KHz
Residual hum at min. volume: 500uW max.
Max. hum at max. volume: 1000 uW max.

Mechanical

- ☐ Dimensions (W x H x D mm): 1185 x 724 x 285
- ☐ Weight (kg/lbs.): 36/79.4
- ☐ Wall-mounting holes 400mm x 200mm

Power Source

- ☐ Input voltage: 90 ~ 264 V, 47 ~ 63 Hz
- ☐ Standby consumption is under 5 Watts
- ☐ Power consumption is under 213 Watts

Speaker

- ❑ Internal speaker: 10 W * 2 stereo, volume adjustable

System Block Diagram

System Block and Wiring Diagram

LCD Main Board Block Diagram

Audio Board Block Diagram

Board Layout

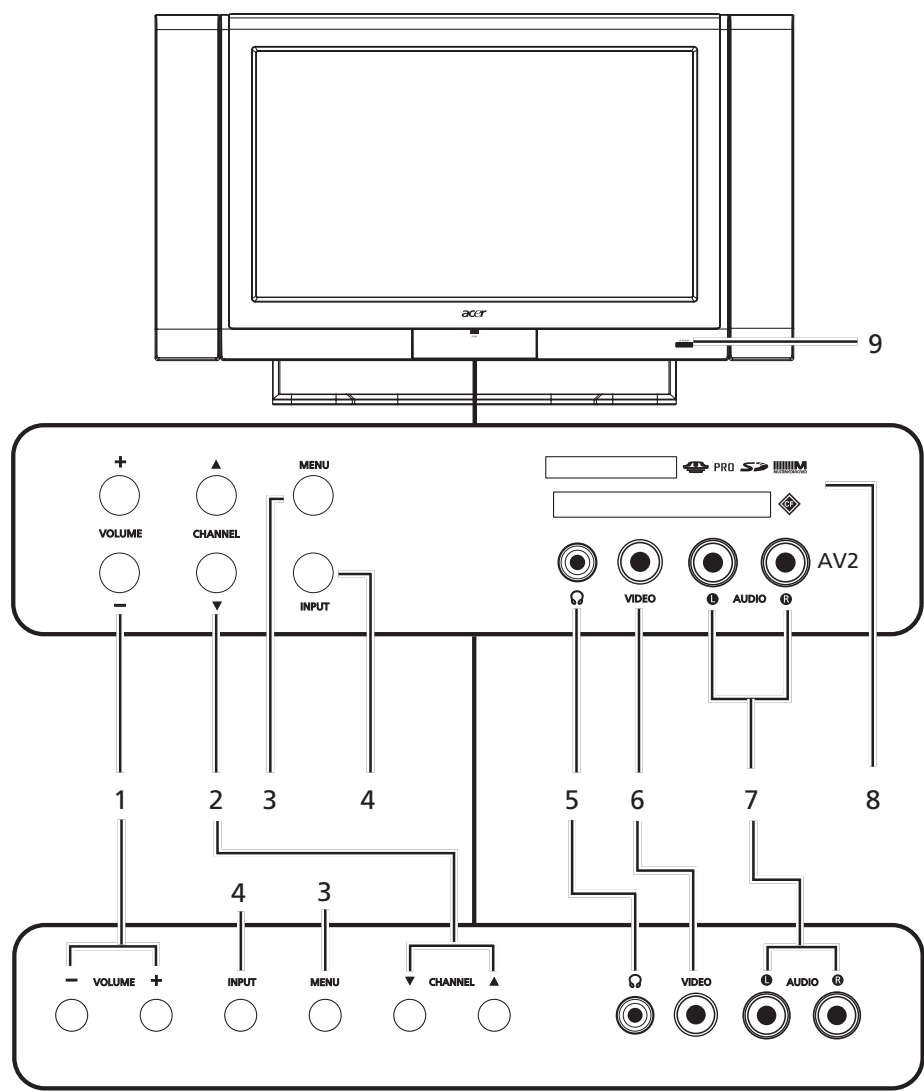
Board Layout is not ready as the service guide released.

LCD TV Overview

A general introduction to Acer LCD TV ports, functions and indicators.

Front panle view

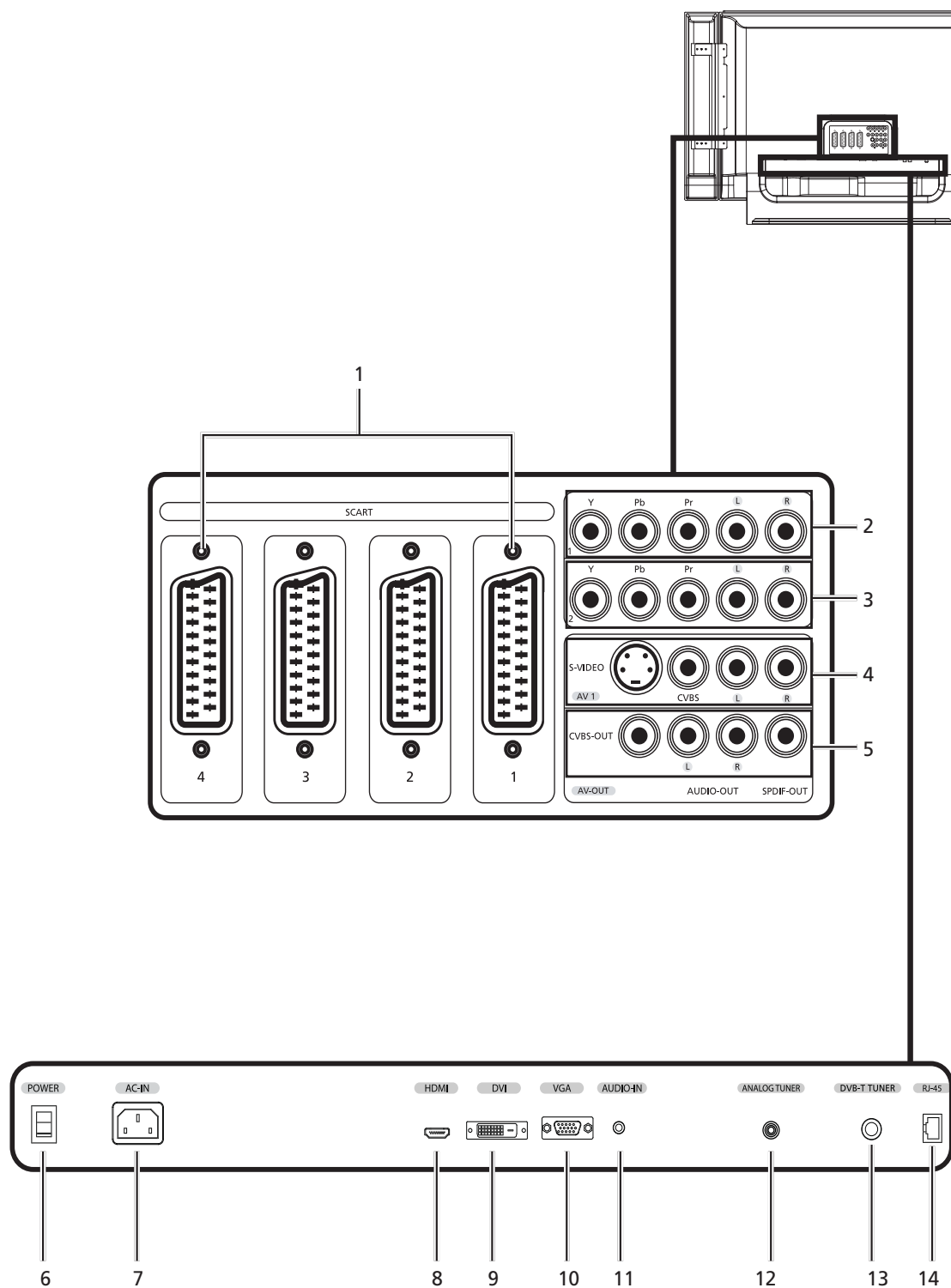
The panel view below are for AT3705-MGW/AT3705-DTVAT/3205-DTV/AT2605-DTV



#	Item	Description
1	Volume up/dow	Volumn up:When the OSD is on functions the same as the Right arrow Volumnn down:When the OSD is on functions the same as the Left arrow.
2	Input key	When the OSD is on, press this button to confirm selection.

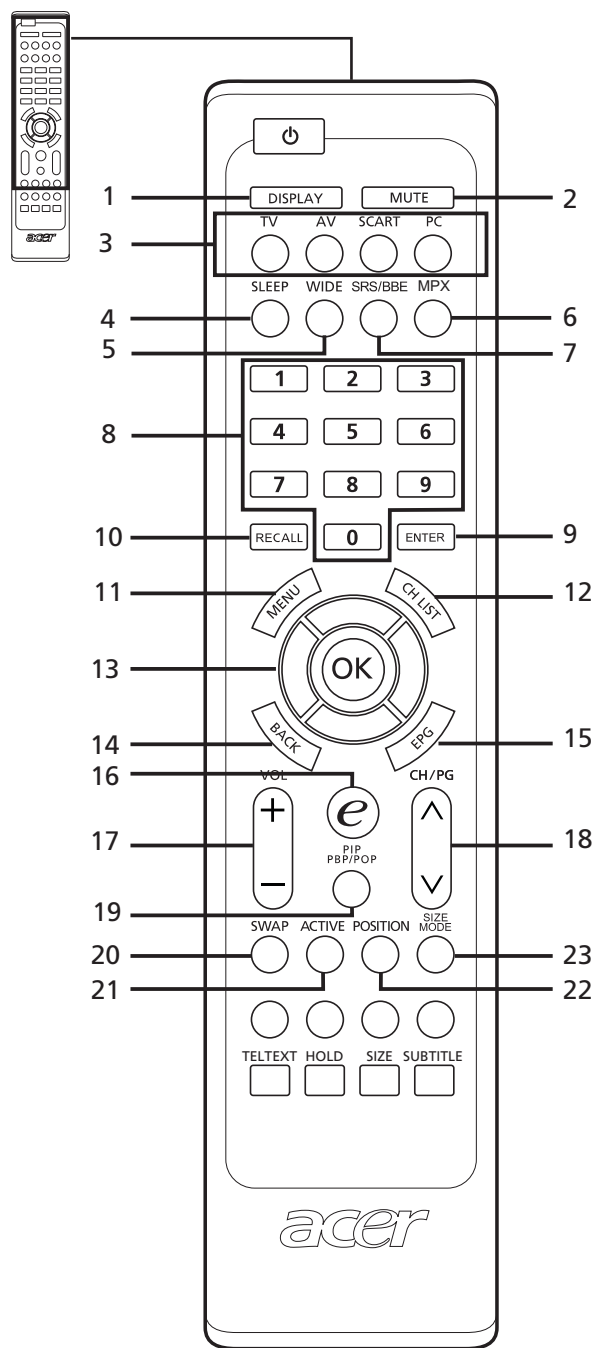
3	Menu key	Turns the OSD menu on and off.
4	Channel up/down	Channel Up:When the OSD is on functions the same as the Up arrow Channel down:When the OSD is on functions the same as the Down arrow
5	Headphone jack	Channel Down. When OSD is on: Also functins the sam as Down directional arrow.
6	Video jack	
7	Audio L/R jacks	Outputs audio signals to external audio devices such as headset.
8	Card reader	
9	Power ON/OFF	Power on/off the LCD TV.

Rear/Bottom panel view



#	Item	Description
Rear panel view		
1	SCART-in/out	SCART1/CVBS (in/out), S-video (in), RGB (in), Audio R/L SCART2/CVBS (in/out), S-video (in), Audio R/L SCART3/CVBS (in/out), S-video (in), RGB (in), Audio R/L SCART4/CVBS (in/out), S-video (in), Audio R/L (for AT3705 models only)
2	Component1-in	Select source. When OSD is on: Press this button to confirm selection.
3	Component2-in	(for AT3705 models only)
4	AV1-in	
5	AV-out	
Bottom panel view		
6	Power switch	
7	AC-in	
8	HDMI-in	
9	DVI-in	
10	VGA-in	
11	Audio-in	
12	Analog antenna-in	
13	DVB-T antenna-in	
14	RJ45	LAN in jack

Remote controller



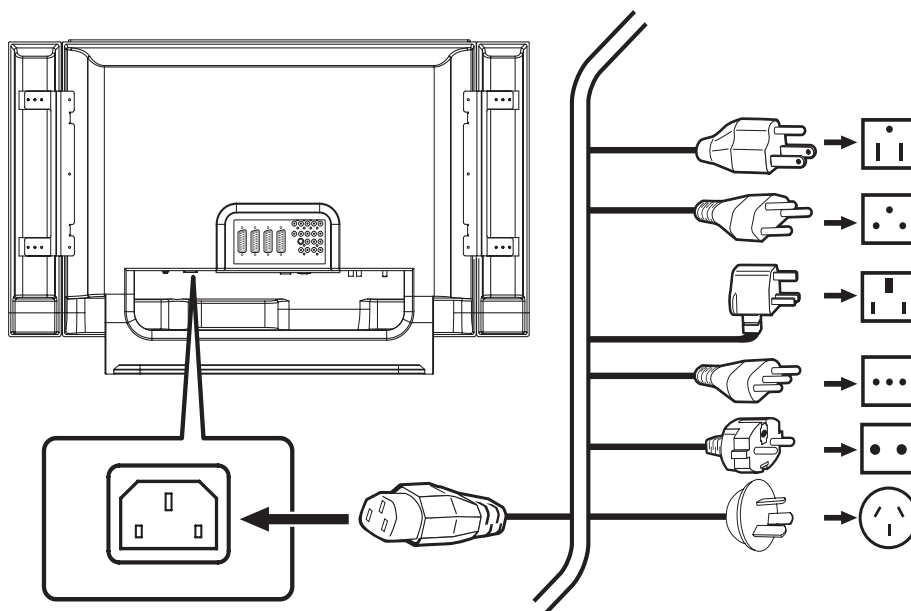
No.	Item	Description
1	DISPLAY	Press to display input/channel information (dependent on input/source type).
2	MUTE	Press to toggle audio on and off.
3	Input buttons (TV/AV/SCART/PC)	Press to select correct input mode.

4	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	WIDE	Press to toggle scaling mode between 4:3, 16:9, Panorama and Letterbot 1, 2, 3 mode.
6	MPX	Press to select the sound input, displayed in the top right-hand corner (mono, stereo, bilingual).
7	SRS/BBE	Press to toggle audio mode between Stereo, SRS and BBE modes.
8	Number keys	Press to select TV channels.
9	ENTER	Press to confirm channel number selection.
10	RECALL	Press to return to the previous channel.
11	MENU	Press to open or close the Menu.
12	CH List	Press to launch the channel list.
13	Directional keys/OK	
14	BACK	Press to return to previous screen.
15	EPG	Press to launch Electronic Program Guide (EPG) mode (Digital TV mode only).
16	e (Empowering Technology)	Press to activate Acer Empowering Technology.
17	VOL (+/-)	Press to increase or decrease the volume.
18	CH (up/down)	Press to sequentially select the TV channel.
18	PIP/PBP/POP	Press to toggle between PIP/PBP/POP modes.
20	SWAP	For PIP/PBP mode: Press to toggle between the primary and subscreens.
21	ACTIVE	Press to toggle between primary and subscreens.
22	POSITION	When in PIP mode: Change subscreen position.
23	SIZE/MODE	When in PIP mode: Change subscreen size. When in POP mode: Switch POP mode from 1+5 to 1+12.

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

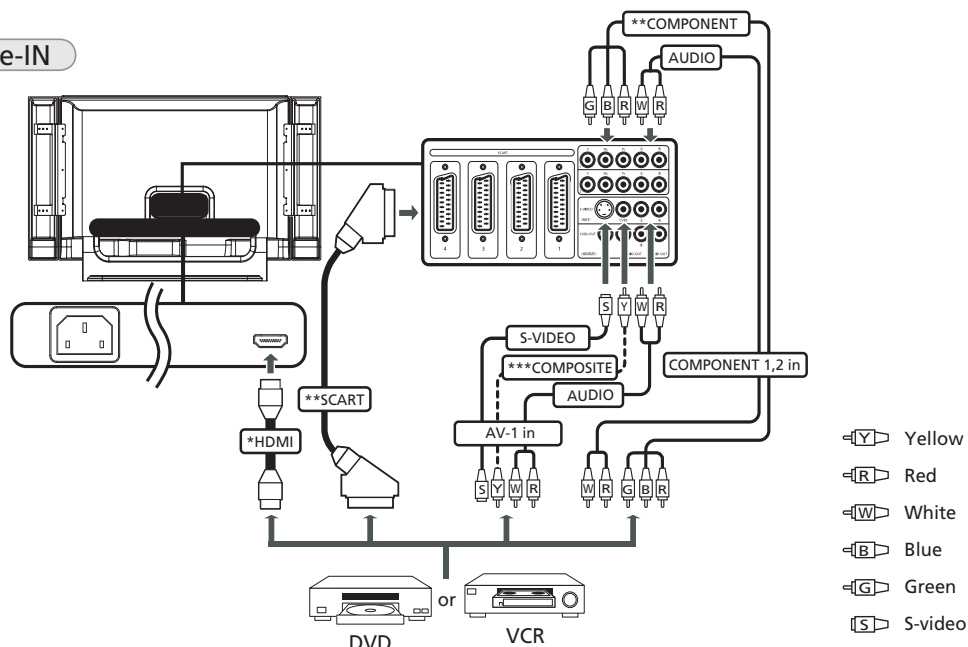
Connect the antenna cable to the appropriate antenna terminal on the back of the TV set as shown below.



Connecting a DVD, VCR or audio/video equipment

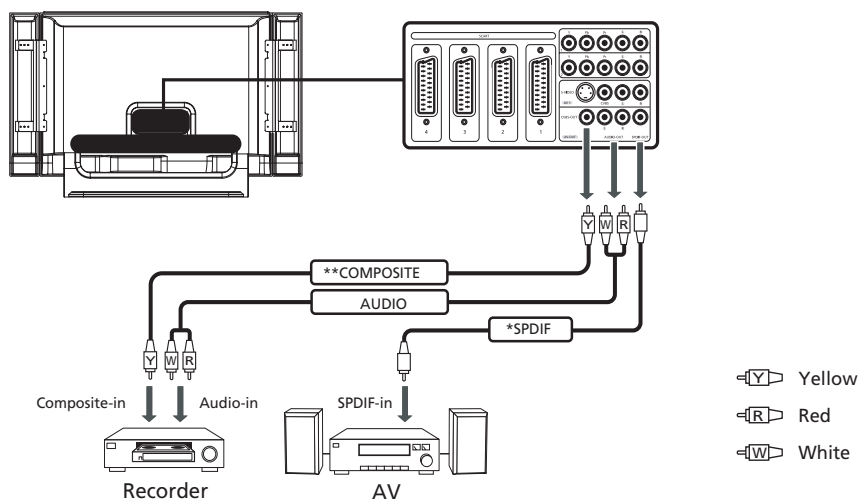
Connect your DVD player, VCR or audio/video equipment using the SCART port located at the rear of your LCD TV as shown below.

Source-IN



- * If your audio/video device is HDMI-ready, it is recommended that you use the HDMI cable. The HDMI port is located under the back panel of your TV, as shown above.
- ** Acer recommends the following priority for connection types: HDMI -> Component -> SCART -> S-video -> Composite.
- *** Use the composite cable if your equipment does not have S-video-out.

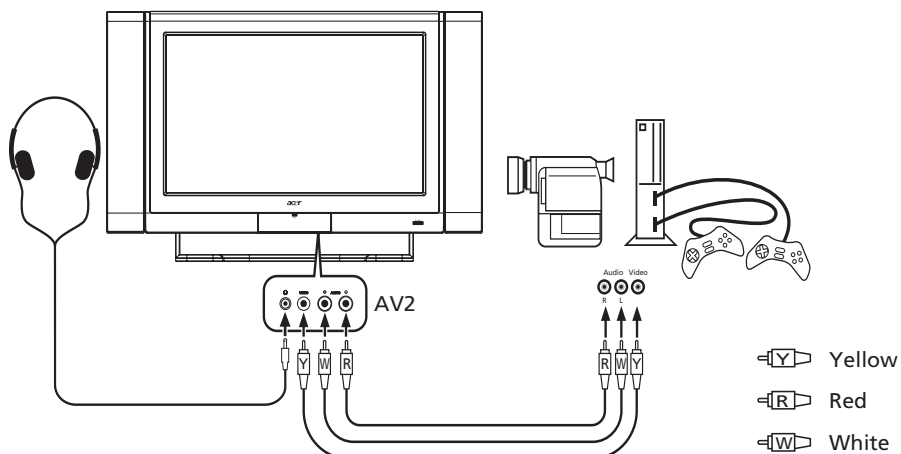
AV-OUT



- * Acer recommends using the SPDIF connector to connect to your AV amplifier for 5.1 surround sound while watching digital TV programs, since your LCD TV supports Dolby digital sound. For details please see "audio effects" on page 32.
- ** Composite-out only works with analog broadcasts.
- *** If you need the TV speakers to be turned off when connecting an external AV device, please use the OSD to set "Internal speaker" to "off".

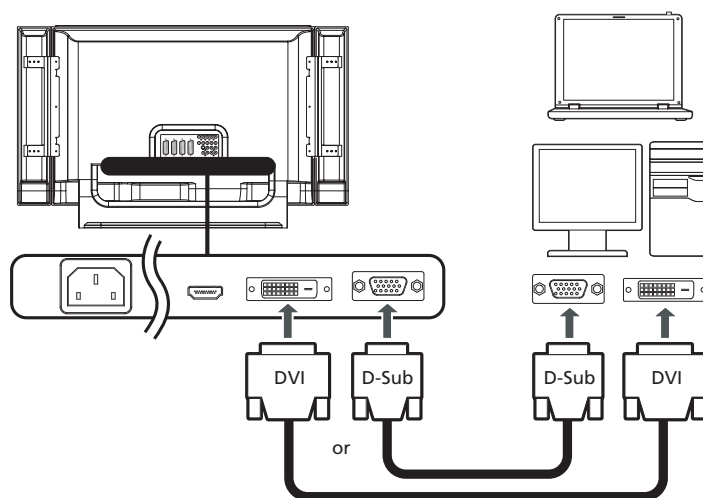
Connecting a camera, camcorder, video gam or headphones

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

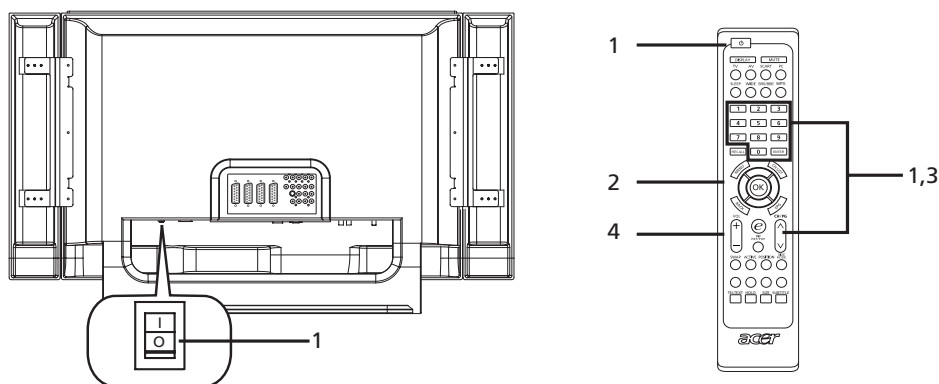


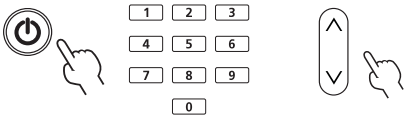
Connecting a PC or notebook computer

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

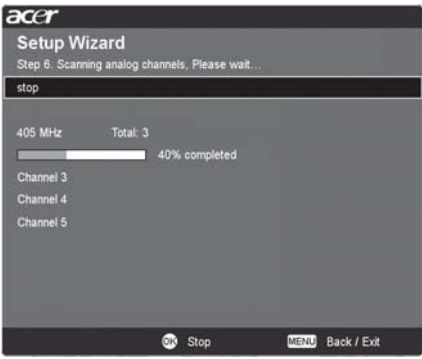
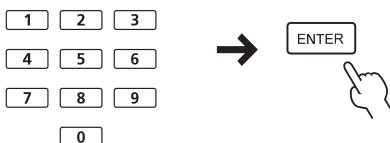
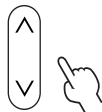
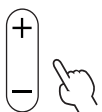


Getting started watching your TV



1	Power	
		a. Turn on the power switch beneath the screen.
2		b. Press the power button, number keys or channel up/down button on the remote control.
2	Setup Wizard	The first time you switch on the TV, the Setup Wizard will guide you to complete the language selection and channel scanning.
		Press the OK key to begin the setup process.

Setup Wizard	
2	 Step 1. Select the setup language you prefer.
	 Step 2. Please select country.
	 Step 3. Enter the correct local time and time zone using the remote control.
	 Step 4. Ensure that your co-axial cables are connected correctly before proceeding (see page 13 for details).

Setup Wizard		
2		Step 5. Scan for digital channels. If you do not have digital service, press OK to skip this stage. The onscreen menu will ask you for confirmation.
		Step 6. Scan for analog channels.
Step 7. Setup is now complete. You are ready to begin watching TV. If you leave the setup process before it is complete, you will be given a choice of options: 1. Resume setup 2. Resume setup at next startup 3. Exit and don't remind me Select an option and press OK to exit.		
Changing channels		
3		a. Press 0-9 on the remote control to select a channel. The channel changes after 2 seconds. Press ENTER to select the channel immediately.
		b. Pressing the channel (CH) up/down button on the remote control will also change the channel.
Adjusting the volume		
4		Adjust the volume level using the volume (VOL) +/- button on the remote control.

Scanning the channels

The first time you use your TV, use the following method: Menu -> Settings -> Channel settings -> Scan -> "Yes". The TV will auto-detect available channels and store them in memory.



NOTE: The first time you access the OSD, a language setting subwindow will pop up, and you will be asked to choose your language settings.

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.



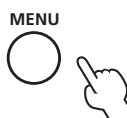
Basic operations required to navigate these menus (Picture, Audio, Settings, Options, Empowering) are described in this section. The first time you access the OSD, you will be asked to choose your language settings.

NOTE: You can also interact with these menus using the front panel controls.

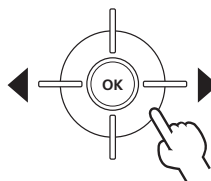
Navigating the OSD with Remote Control

There are five main OSD menus. These are: Picture , Audio , Settings , Options  and Empowering . Use the following method to easily 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 Left/Right sides of the directional pad to switch between the five menus.



3. Use the directional pad 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). If there are no adjustments, press Enter to select.

Teletext

Most TV channels also broadcast information via the teletext feature. This Acer LCD TV has 252 pages of memory which will store pages and subpages, thereby reducing waiting time. The teletext buttons on the remote control are listed below.

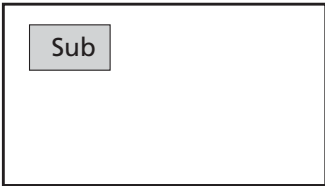
Item	Description
INDEX	Go to index page
SUBTITLE	Show subtitle on the screen
TELETEXT	Press to switch from TV/AV to Teletext mode.
REVEAL	Press to reveal hidden teletext information.
SIZE	Press once to zoom teletext page to 2X; press again to resume.
MIX	Press to overlay teletext page on the TV image, i.e. subtitle
HOLD	Press to pause the current teletext page in multi-page viewing mode.
Color buttons (R/G/Y/B)	Operates corresponding button on the teletext page.

Advanced Features

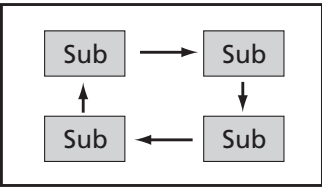
PIP/PBP/POP

PIP (Picture in Picture)

- 1. Press “PIP/PBP/POP” key once to display picture in picture as shown in the image above. Press “Active” key to switch between main display pictures, and press TV/SCART/AV/PC or channel selection to change the content of the subscreen.



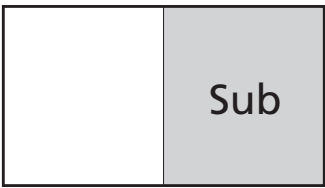
- 2. Press “swap” key to change the content between the primary and the subscreen.



- 3. When in PIP mode, press “Position” key to select the location of the subscreen, from Upper Left > Upper Right> Lower Right> Lower Left, as shown in the image above.

PBP (Picture by Picture)

Press “PIP/PBP/POP” key twic to display picture as shown in the image above. Press “Activate” to toggle the screen in focus and press TV/SCART/AV/PC or channel selection to change the content of the sub screen.



POP (Picture on Picture)

- 1. Press “Size/Mode” key to display the 1+ 12 picture on picture mode as shown in the image above. Press “Activate” key to toggle focus on subscreen and press TV/SCART/AV/PC or channel selection to change the content of the subscreen.

Sub	Sub	Sub	Sub
Sub			Sub
Sub			Sub
Sub	Sub	Sub	Sub

1. Press “Size/Mode key to display the 1 +5 picture on picture mode as shown in the image above.

Sub	Sub	Sub
		Sub
		Sub

2. Press “Activate” key to toggle focus on subscreen and press TV/SCART/AV/PC or channel selection to change the content of the subscreen.

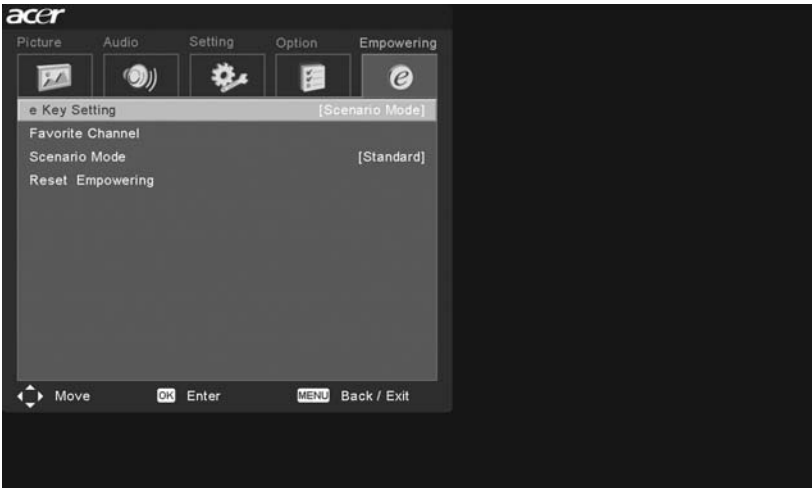
Parental Control

When in TV mode, you can find a Parental Control feature in the Options  menu. Enter a four digit PIN number using the number keys on your remote control. Use this number to adjust the Parental Control settings, to prevent access to certain channels.

If you forget your PIN number, please enter 6163 to rest.



Empowering Key: Scenario Mode and Favorite Channels



Use the OSD to define your “e” Empowering key setting: Scenario mode and Favorite channel. The default value for the “e” key is the Scenario mode. Use the following method: Menu -> Empowering -> e key Setting.

Choose between "Favorite channel" or "Scenario Mode". Now, when you press the "e" key, your chosen selection will be accessed.

Scenario Mode

Press the "e" Empowering key and use the Scenario Mode to select pre-defined audio and video settings for optimal enjoyment of the following scenarios: Standard, Movie, Sport, Concert, Game, User.

Favorite Channels

One the remote control, pressing the "e" Empowering key for less than 1 second will toggle TV programs sequentially according to your favorite list. There are five slots in which you can store TV programs. Press "e" Empowering key for more than 2 seconds.

- ☐ When current program is not stored in favorite list, pressing the "e" key for more than 2 seconds stores the TV program information at the bottom of the favorite list. If there is no empty slot in the favorite list, the first program will be wiped out and the new TV program is added at the bottom of the favorite list. Simply put, it's "First in, first out".
- ☐ When the current program is stored in the favorite list, pressing "e" key for more than 2 seconds will remove the program from the favorite list.
- ☐ To view currently stored favorite channels, press the "e" Empowering key.

Hardware Specifications and Configurations

Electro / Optical

1.	Size of screen	26 inches		
2.	LCD panel supplier	QDI, AUO		
3.	Screen aspect ratio	16 : 9		
4.	Type of screen	TFT with Super MVA technology or SIPS or QSV		
5.	Screen resolution	1366 x 768		
6.	Display colors	16.7 M colors (8 real bits per color)		
7.	Chromaticity	Red	0.638	0.335
		Green	0.271	0.597
		Blue	0.145	0.065
		White	0.275	0.298
		Data from QDI panel specification		
8.	Color temperature	Five models are adjustable,		
		Cold	16,000 degree K	
		Middle-cold	14,000 degree K	
		Standard	12,000 degree K	
		Middle-warm	10,000 degree K	
		Warm	8,000 degree K	
9.	White uniformity	+/- 5% of the white average color temperature at 100% luminance		
10.	White dispersion	+/- 5% of the white color temperature desired at 100% luminance		
11.	Brightness	500 Cd/m ² (typical)		
12.	Contrast	800 : 1 (typical)		
13.	Uniformity	>= 85% (white and color uniformity measured on 9 points)		
14.	Overscan	Video source with overscan supported Graphic source without overscan supported		
15.	Vision angle	Ultra wide viewing angle: 176 (H), 176 (V) (CR>20)		
16.	Gamma	The gamma value (global value) must be between 2.2 and 2.6 measured from DVI.		
17.	Response time (T _R / T _F)	25ms		
18.	Screen (lamp + LCD) life	>50,000 hrs at nominal backlight intensity		
19.	Panel interface	1-ch LVDS		

NOTE: Item, 9 to 13, 15, 17 to 19, provided from AUO panel specification

Mains

- | | |
|--|--|
| 1. Power supply electrical specification | <p>The power supply for this product is an internal converter, with a non-replaceable fuse internally. This converter is designed to meet CE mark requirement.</p> <ul style="list-style-type: none">• Input voltage and frequency range: <p>The operating range of line voltage is AC 90 volts to 264 volts, 47Hz to 63 Hz. Power consumption is under 213W.</p> <ul style="list-style-type: none">• Line fuse: <p>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 use replaceable, and must be returned for replacement. This fuse is well selected to handle inrush current for all combinations of line voltage and frequency.</p> |
| 2. Stand-by consumption | <5W |
| 3. Power consumption | <213W |
| 4. Mains disturbance behaviour | <p>No disjunction during 0 to 40ms mains interrupt, with max load, min mains voltage.</p> <p>No software reboot during the test.</p> <p>No over voltage causing any damage during mains interrupt (0 to any time).</p> |
| 5. Inverter | <p>The inverter which is used to light up backlight of LCD panel is well designed to meet requirement of panel specification.</p> |

Acoustical / Audio

- | | | |
|-----------|---------------------------------------|---|
| 1. | Audio power amplifier | 2 x 10W rms on 4 ohm load impedance |
| 2. | Loudspeakers | Attachable (1 x full range + 1 x sub-woofer speakers) x 2 |
| 3. | Loudspeaker performances | Max. audio output (at 10% THD max.) at 1.0Vp-p / 1KHz input:
10W + 10W

Sound distortion at 1W / 1KHz 1% THD max.
Two of 10W
Speaker 4 ohms at 1KHz
Speaker impedance 500uW max.
Residual hum at min. volume 1000uW max.
Max. hum at max. volume |
| 4. | Analog TV audio modes | AM / FM mono, stereo, sound1, sound2 |
| 5. | Audio enhancement | Stereo
SRS WOW
BBE
* Audio enhancement effect is audible at 5M in front of the screen. |
| 6. | acoustical noise (complete TV) | Audible noise in standby mode <35dBA (ISO-7779)
Audible noise in power ON mode <35dBA (ISO-7779)
Parasitic noise due to mechanical vibration during audio sweep must be inaudible at 1m around the TV. |

Hard / Soft Performance

- | | |
|-----------------------------|---|
| 1. Languages supported | Czech, Danish, Dutch, English, French, German, Italian, Polish, Portuguese, Russian, Spanish and Swedish |
| 2. Starting time | A correct picture (color, aspect ratio, stability) can be displayed <6 second after power on |
| 3. Wake-up behaviour | The system can be waken up if the button Standby is pressed (keypad "power" or remote control "power", "0 ~ 9", "CH +/-"). |
| 4. Stand-by reason | <p>The TV pass in standby mode upon:</p> <ul style="list-style-type: none"> • The button "power" is pressed (keypad or remote control). • On the selected source: no sync signal after 8 minutes. |
| 5. Analog tuner performance | |

No.	PARAMETER		MIN	TYP	MAX	UNIT
1	Video output level		0.7	1.0	1.3	Vp-p
2	Video S/N		40	45	---	dB
3	Noise limiting		---	38	45	dbuV
4	Video frequency characteristics	2Mhz		0.0	-1.5	dB
		3Mhz		-0.5	-2.5	dB
		3.58Mhz		-1.0	-4.0	dB
5	Audio output level		0.350	0.450	0.550	Vrms
6	Audio S/N		50	63	---	dB
7	Frequency Range		48.25		863.25	MHZ

- | | | | |
|----|---------------------------|-----------------------|---|
| 6. | Scanning mode | Automatic: | <ul style="list-style-type: none"> • Multi-standard, frequency based • Level range: 55dBuV to 100dBuV • Abort possible during scanning process |
| | | Manual: | <ul style="list-style-type: none"> • Frequency setting is available. |
| 7. | Analog TV naming function | Automatic: | CNI recognition |
| | | Manual: | 5 characters |
| 8. | PIP / POP / PBP function | PIP | |
| | | PIP multiple size | 20%, 30% |
| | | PIP multiple position | 4 corners |
| | | POP | |
| | | POP source | video / graphic (main) by ATV (sub) |
| | | POP (main + sub) | 1 + 5, 1 + 12 |

In PIP / POP / PBP mode, de-interlacer does not support to 1080i.
PIP / PBP

- Support video by video
- Support video by graphic (support graphic signal up to 1080i and no de-interlacer in 1080i)
- No auto SCART supported
- VGA and DVI support only up to 1024 x 768 @ 60Hz

NOTE: Video includes ATV, SCART1-3 (CVBS and S-Video), AV1, AV2 and DTV. Graphic includes component1, VGA, DVI and HDMI.

Main Sub	TV	SCART1	SCART2	SCART3	Component 1	AV1	AV2	DTV	VGA	DVI	HDMI
TV	×	●	●	●	●	●	●	●	●	●	●
SCART1	●	×	●	●	●	●	●	●	●	●	●
SCART2	●	●	×	●	●	●	●	●	●	●	●
SCART3	●	●	●	×	●	●	●	●	●	●	●
Component 1	×	×	×	×	×	×	×	×	×	×	×
AV1	●	●	●	●	●	×	●	●	●	●	●
AV2	●	●	●	●	●	●	×	●	●	●	●
DTV	●	●	●	●	●	●	●	×	●	●	●
VGA	●	●	●	●	×	●	●	●	×	×	×
DVI	●	●	●	●	×	●	●	●	×	×	×
HDMI	●	●	●	●	×	●	●	●	×	×	×

POP

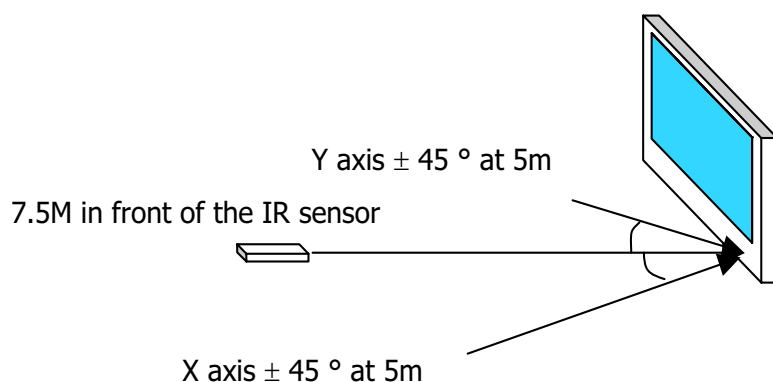
- POP sub window only Analog TV support
- No auto SCART supported in POP mode
- In POP12 mode, support component1 (up to 1080i), VGA / DVI (up to 1024 x 768 @ 60Hz) and HDMI (up to 1080i)
- In POP5 mode, VGA, DVI and HDMI supported²
- Component1 can support up to 576P in POP5 mode¹.

Main Sub	TV	SCART1	SCART2	SCART3	Component 1	AV1	AV2	DTV	VGA	DVI	HDMI
TV	x	●	●	●	● ¹	●	●	●	● ²	● ²	● ²
SCART1	x	x	x	x	x	x	x	x	x	x	x
SCART2	x	x	x	x	x	x	x	x	x	x	x
SCART3	x	x	x	x	x	x	x	x	x	x	x
Component 1	x	x	x	x	x	x	x	x	x	x	x
AV1	x	x	x	x	x	x	x	x	x	x	x
AV2	x	x	x	x	x	x	x	x	x	x	x
DTV	x	x	x	x	x	x	x	x	x	x	x
VGA	x	x	x	x	x	x	x	x	x	x	x
DVI	x	x	x	x	x	x	x	x	x	x	x
HDMI	x	x	x	x	x	x	x	x	x	x	x

9. TTX level
 - FLOF level 1.5 source can be RF, DVBT or AV.
 - TTX characters set must follow the country language selection.
10. TTX keys function
 - Full screen, Subtitle, Hold, Size, 4 color keys (R, G, Y, B)
11. Video standard supported
 - PAL, SECAM (automatic detection)
 - PAL (4.43 M, 50Hz) B G D K
 - SECAM L
12. Video ADC and processing
 - 10 bits (chroma and luma)
 - Luma / chroma AGC
 - 10 bits processing
 - Noise reduction
 - Chroma transient improvement
 - Luma transient improvement
 - 3D comb filter
 - De-interlacer
13. Time to synchronize
 - During a source / channel change, within 4 second to obtain a stable display
14. Video management
 - User adjustments: contrast, brightness, color, tint (NTSC), sharpness
 - Color temperature: cold, middle-cold, standard, middle-warm, warm
15. Aspect ratio
 - Aspect ratio available for all the video sources
 - 4/3, 16/9, panorama, letterbox1, letterbox2, letterbox3

NOTE: PC & DVI only support 4/3 & 16/9

16. Scenario functions	Settings:	Standard, movie, sport, concert, game, user
	Noise reduction:	Off, Low, Middle, High
17. Audio management	User adjustment:	Volume, Balance, Bass, Treble, Mute, Mono / Stereo / Sound1 / Sound2
18. Audio enhancement	Stereo, SRS, WOW, BBE	
19. AV sub-format supported	CVBS, YC, RGB, YUV	
20. Copy protection management	HDCP (HDMI)	
21. IR performance	The reception distance indicates the distance between IR emitter and receptor which allow to recognize 85% or more IR frames.	
	Reception distance:	>7.5M perpendicular to the IR sensor >5M at 45° horizontally >5M at 45° vertically



Connectors

1. Tuner type	IEC 69-2 fem following:	IEC 600169-2
2. AV type	SCART following:	EN 50 049-1
	RCA following:	IEC 933-5
	Jack:	3.5mm
	VGA connector fem following:	VESA
	DVI-D connector HDMI type A following:	EIA / CEA 861B
3. Color	SCART	black
	Jack	black
	Mini Din	black
	Audio Left	white
	Audio Right	red
	CVBS	yellow
	Y	green
	P _B / C _B	blue
	P _R / C _R	red
4. Accessibility	Front side	

Function	Video connector	Audio connector
AV2	CVBS input (RCA)	Audio Right / Left (2 x RCA)
Headphone output	-	Audio Right / Left Jack fem 3,5mm

Rear side

Function	Video connector	Audio connector
RF analog input	IEC69-2 fem	
RF digital input	IEC69-2 fem	
SCART1 RGB/CVBS	SCART (EN 50 049 –1)	
SCART2 YC/CVBS	SCART (EN 50 049 –1)	
SCART3 RBG/CVBS	SCART (EN 50 049 –1)	
Component1	Y, U, V (3 x RCA)	
AV1	YC (1 x mini-DIN) CVBS (1 x RCA)	Audio Right / Left (2 x RCA)
HDMI	HDMI	Audio Right / Left (2 x RCA)
DVI-D	DVI-D	
VGA	SUB-D15	Audio Right / Left (Jack fem 3,5mm)
AV output	TV CVBS out (1 x RCA)	

Environmental Requirements

The TV shall meet the following environmental requirements under normal operating conditions.

1. Operating 25° +/- 5° for purity, white point, mis-convergence, luminance measurements and white uniformity measurement

	Operating temperature:	0°C to 40°C
	Operating humidity:	10% to 90% (non-condensing)
2. Storage and Shipping	Storage temperature:	-10°C to 60°C
	Shipping temperature:	-10°C to 60°C
	Storage humidity:	10% to 90% (non-condensing)
	Shipping humidity:	10% to 90% (non-condensing)
3. 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.		

IMPORTANT:For more detailed product specifications, please refer to “VWE2 Service Data”. You can double click Acrobat Document icon below to read the document. The document is provided by our vendor, please keep it as internal use only.

Machine Disassembly and Replacement

This chapter contains step-by-step procedures on how to disassemble the notebook computer for maintenance and troubleshooting.

To disassemble the computer, you need the following tools:

- ☐ Wrist grounding strap and conductive mat for preventing electrostatic discharge
- ☐ small Philips screwdriver
- ☐ flat head screwdriver
- ☐ Philips screwdriver
- ☐ tweezers

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components. When you remove the stripe cover, please be careful not to scrape the cover.

General Information

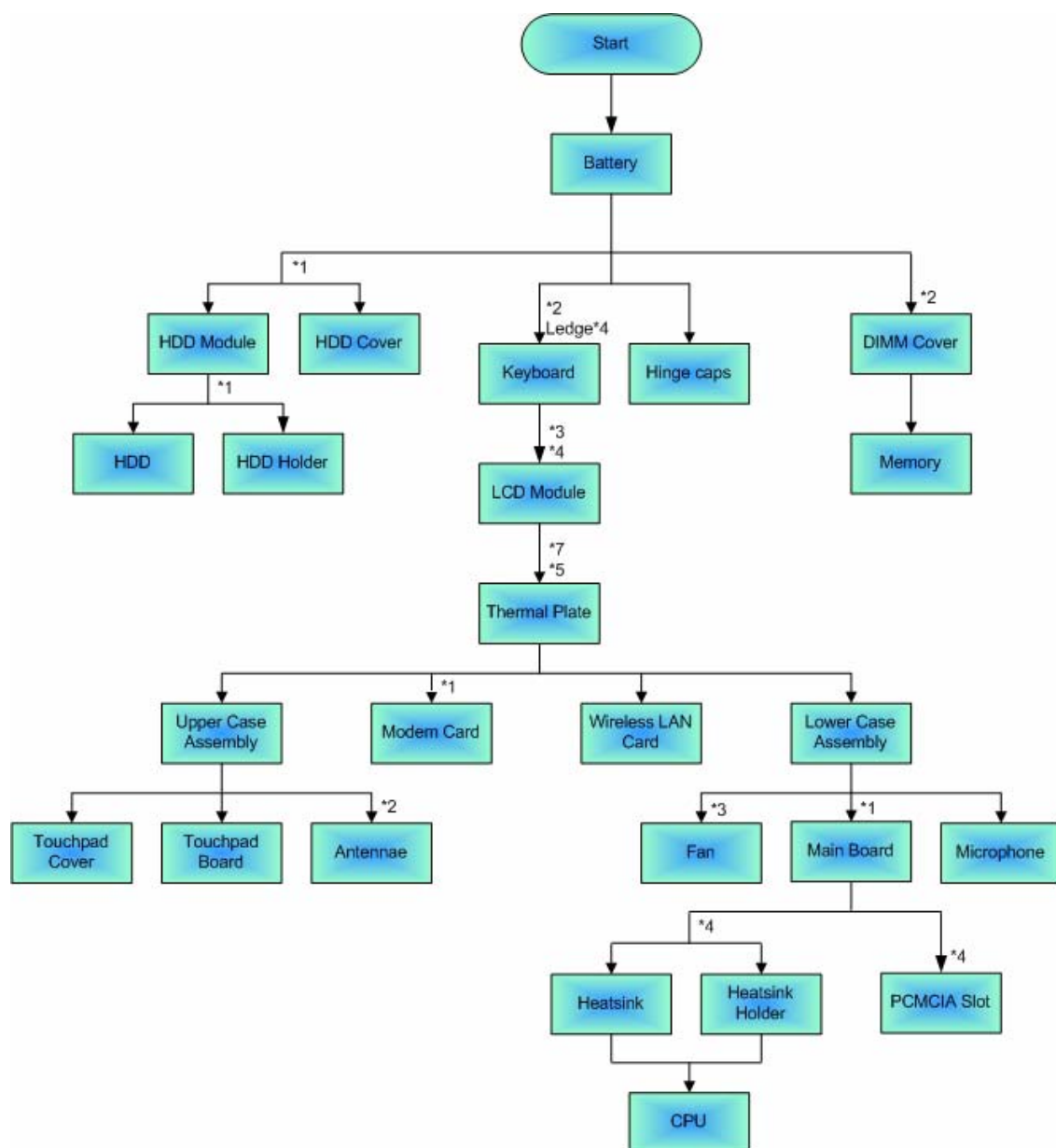
Before You Begin

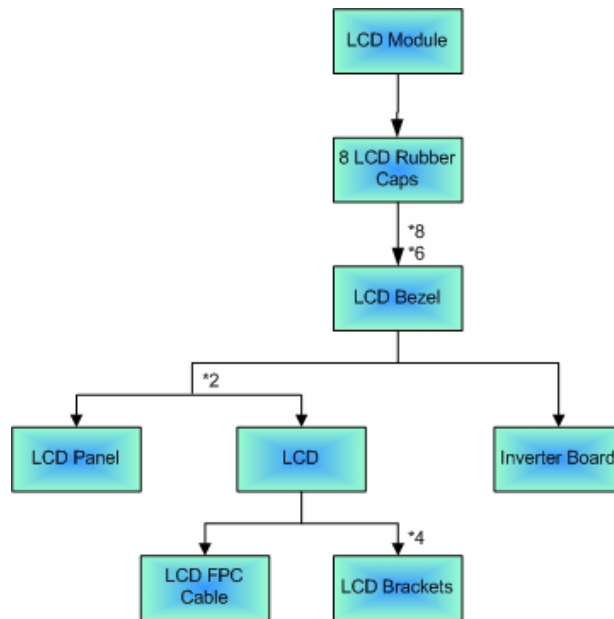
Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.
3. Remove the battery pack.

Disassembly Procedure Flowchart

The flowchart on the succeeding page gives you a graphic representation on the entire disassembly sequence and instructs you on the components that need to be removed during servicing. For example, if you want to remove the system board, you must first remove the keyboard, then disassemble the inside assembly frame in that order.





Removing the Speakers/Speaker Brackets and Speaker Caps

1. Remove the three screws holding the right speaker to the LCD TV then disconnect right speaker cable.
2. Remove the three screws fastening the left speaker to the LCD TV and disconnect left speaker cable..
3. Then detach the right and the left speakers carefully.



4. Remove the four screws fastening the speaker bracket. (Repeat the same step to remove the speaker bracket on the other speaker).
5. Detach the speaker bracket from the speakers. (Repeat the same step to detach the speaker bracket on the other side).
6. Remove the screw holding the speaker cap then take out the speaker cap from the speaker.



Removing the Stand Assy

1. Remove the four screws fastening the stand assembly to the LCD TV.
2. Then detach the stand assembly from the LCD TV.



3. Remove the six screws fastening the IO cover to the LCD TV.
4. Then remove the IO cover.
5. Remove the four screws holding the IO bracket then remove the IO bracket.



6. Remove the 16 screws fastening IO shielding on the back and attach the IO shielding. (M3x8 in red; M3x5 in yellow and screw nutx4 in light blue).
7. Remove the 14 screws holding the LCD back cover.
8. Remove the LCD back cover carefully.



Removing the Back Cover and Wall Mount Assembly

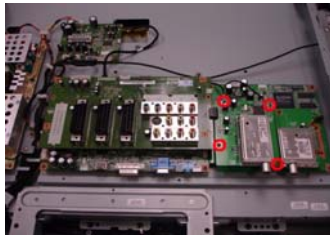
9. Remove the eight screws fastening the top shielding and detach the top shielding.
10. Remove the two screws holding the speaker board on the left.
11. Disconnect the speaker board cable the remove the speaker on the left side.



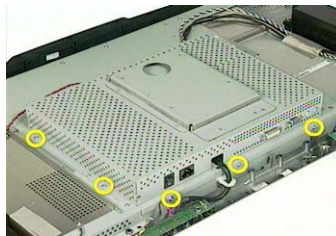
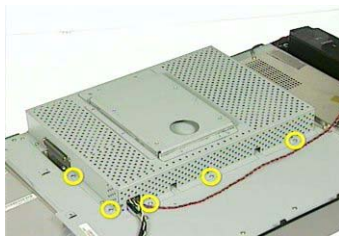
12. Remove the two screws holding the right speaker cable, then disconnect the speaker cable and remove the board.
13. Disconnect the cables on the IO board.
14. Remove the four screws fastening the IO board.



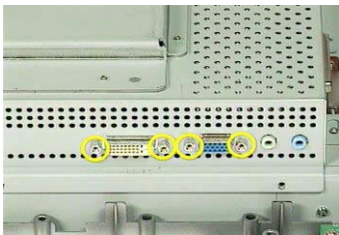
1. Remove the four screws holding the D tuner.
2. Take out the IO board with the D tuner, then disconnect IO board and D tuner.



3. Remove the five screws holding the wall mount assembly.
4. Remove another five screws that secure the wall mount assembly.

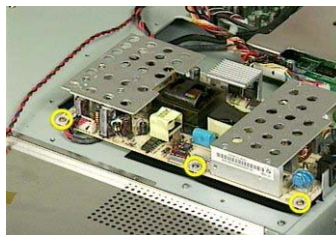
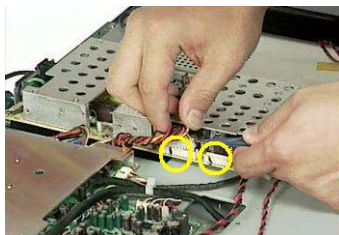


5. Remove four screw nuts holding the wall mount assembly as shown.
6. Then remove the last screw that secure the wall mount assembly.
7. Detach the wall mount assembly.



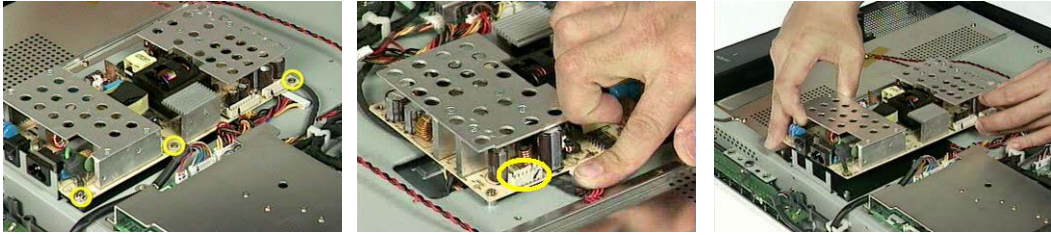
Removing the Power Board

1. Disconnect the cables (audio to power board; on the right/main board to power board; on the left).
2. Remove the three screws that fasten the power board.



3. Remove another three screws holding power board.
4. Disconnect the inverter cable.

5. Remove the power board.

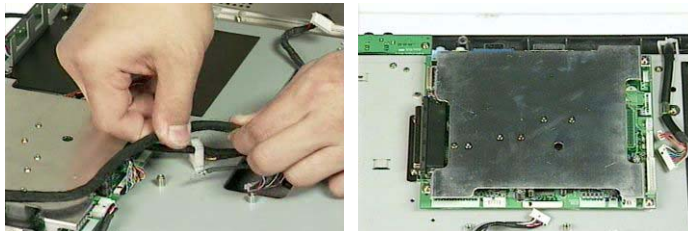


Removing the Audio Board and the Main Board

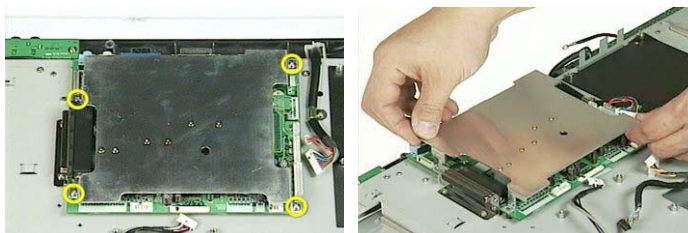
1. Disconnect all cables connected to the audio board.
2. Remove the four screws fastening the audio board.
3. Then remove the audio board.



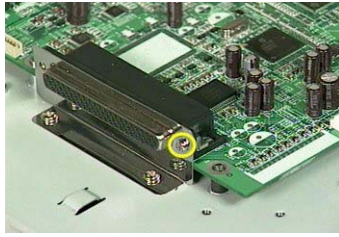
4. Take out the cables from the cable clip as shown.
5. Disconnect all cables connected to the main board.



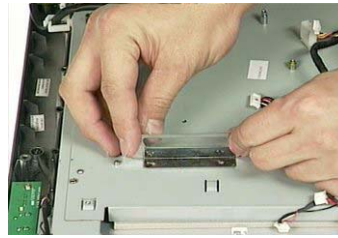
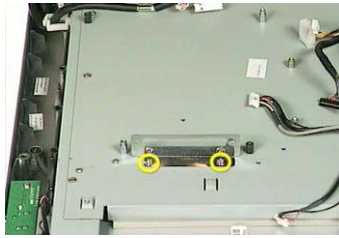
6. Remove the four screws holding the main board heatsink.
7. Then detach the main board heatsink carefully.



8. Remove one screw that secures the I/O bracket.
9. Detach the main board from the LCD TV.



10. Remove the two screws holding the I/O bracket.
11. Then detach the I/O bracket from the LCD TV.

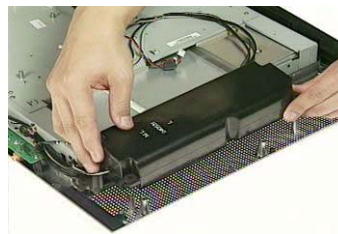
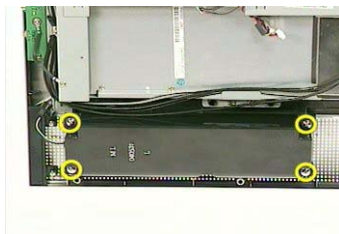


Removing the Speakers

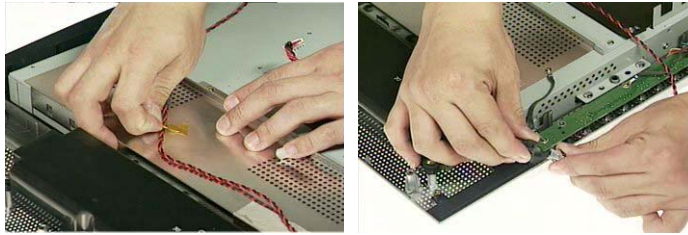
1. Tear off the tape that fastens the left speaker cable.
2. Disconnect the left speaker cable.



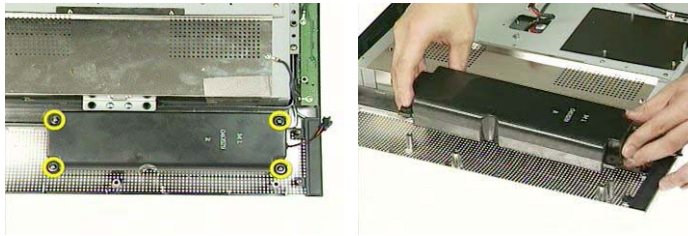
3. Remove the four screws holding the left speaker.
4. Then remove the left speaker from the LCD TV.



5. Tear off the tape that fastens the right speaker cable.
6. Disconnect the right speaker cable.



7. Remove the four screws holding the right speaker.
8. Then remove the right speaker from the LCD TV.

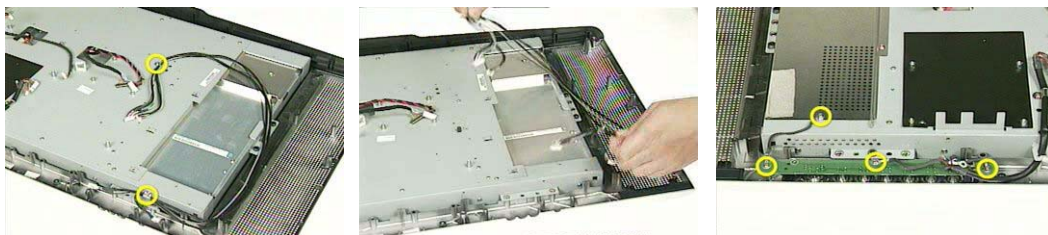


Removing the AV3 Board and the Button Board

1. Remove the four screws holding the ground wire and the AV3 board.
2. Turn over the AV3 board as shown.
3. Disconnect the cables connected to the AV3 board then remove the AV3 board.

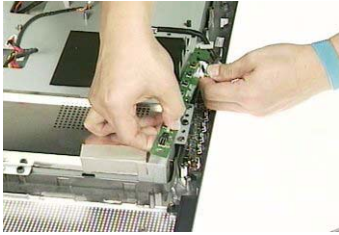


4. Remove the two screws holding the AV3 cable.
5. Take off the AV3 cable.
6. Remove the four screws that fasten the button board and the ground wire.



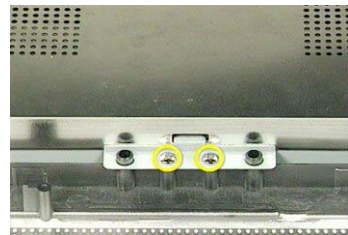
7. Turn over the button and disconnect the cables connected to the button board.
8. Take the cable out of the cable clip.

9. Remove one screw holding the cable then remove the cable.

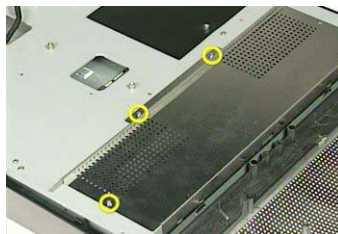


Removing the LCD Module

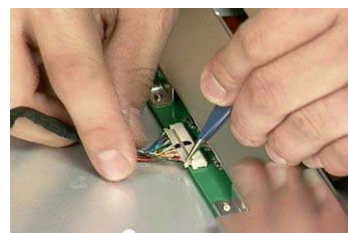
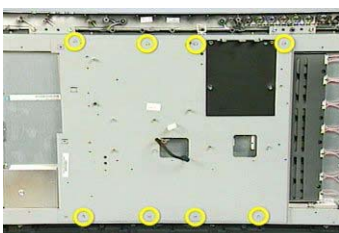
1. Disconnect the inverter cable.
2. Tear off the tape on the inverter shielding.
3. Remove the two screws holding the LCD right bracket.



4. Remove the LCD right bracket.
5. Remove the three screws holding the inverter shielding.
6. Detach the inverter shielding carefully.



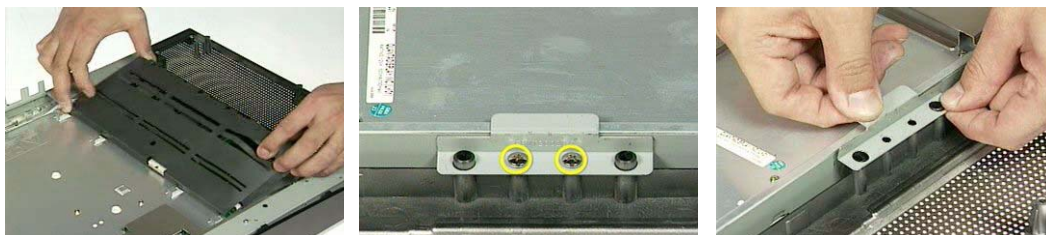
7. Remove the eight screws that secure the PCB tray.
8. Detach the PCB tray as shown.
9. Then disconnect the cable (main board to LCD).



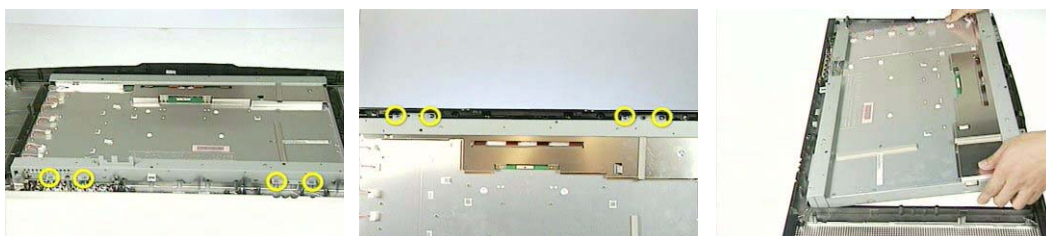
10. Disconnect the inverter board cable one by one.
11. Disconnect the inverter board cable on the another side as shown.
12. Remove the five screws holding the inverter board.



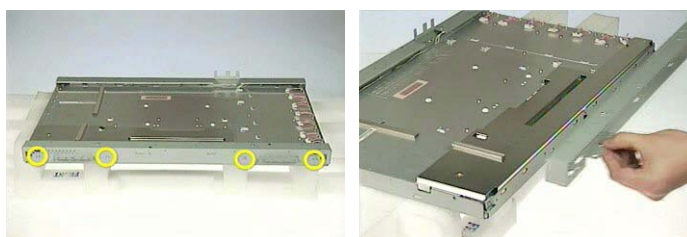
13. Then detach the inverter board.
14. Remove the two screws that secure the LCD left bracket.
15. Detach the LCD left bracket.



16. Remove the four screws that secure the LCD lower chassis.
17. Remove the four screws that secure the LCD upper chassis.
18. Detach the LCD module from the LCD front cover. **Note: The LCD module is heavy, please hold it with enough strength.**

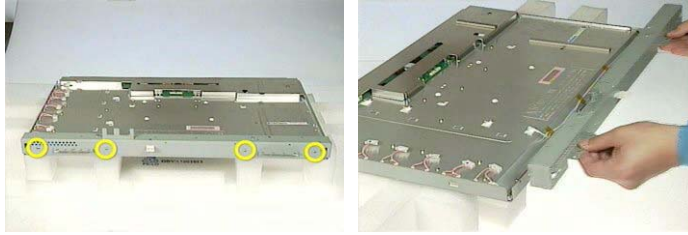


19. Remove the four screws that secure the LCD upper chassis.
20. Detach the LCD upper chassis.



21. Remove the four screws holding the LCD lower chassis.

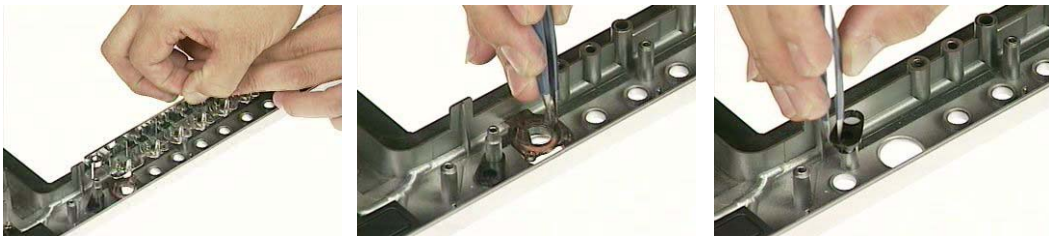
22. Detach the LCD lower chassis.



23. Detach the LCD button kit as shown. (LCD button)

24. Take the LCD button kit out off the front cover.

25. Take the LCD button kit out off the front cover. **Note: LCD button kit has three small parts.**



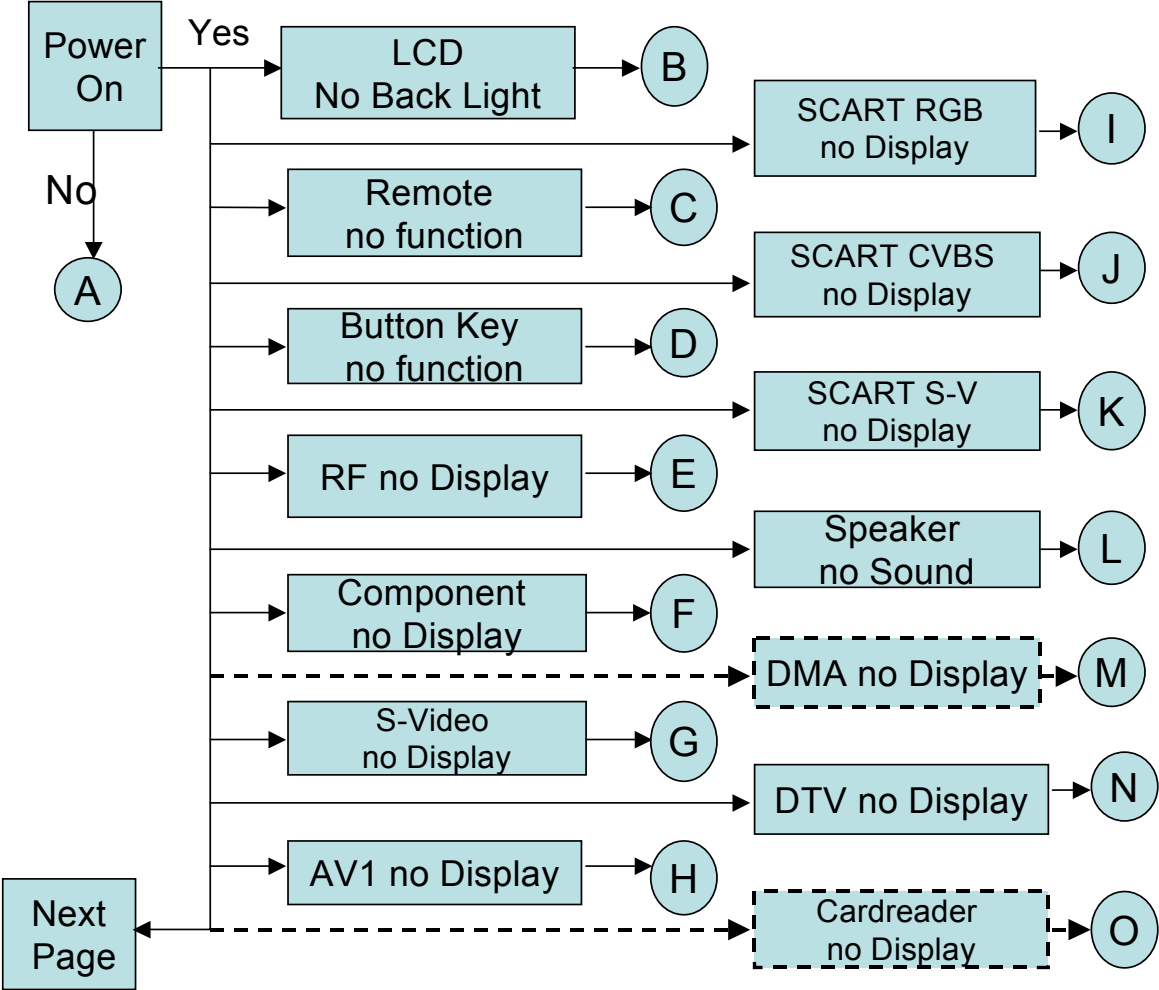
Troubleshooting

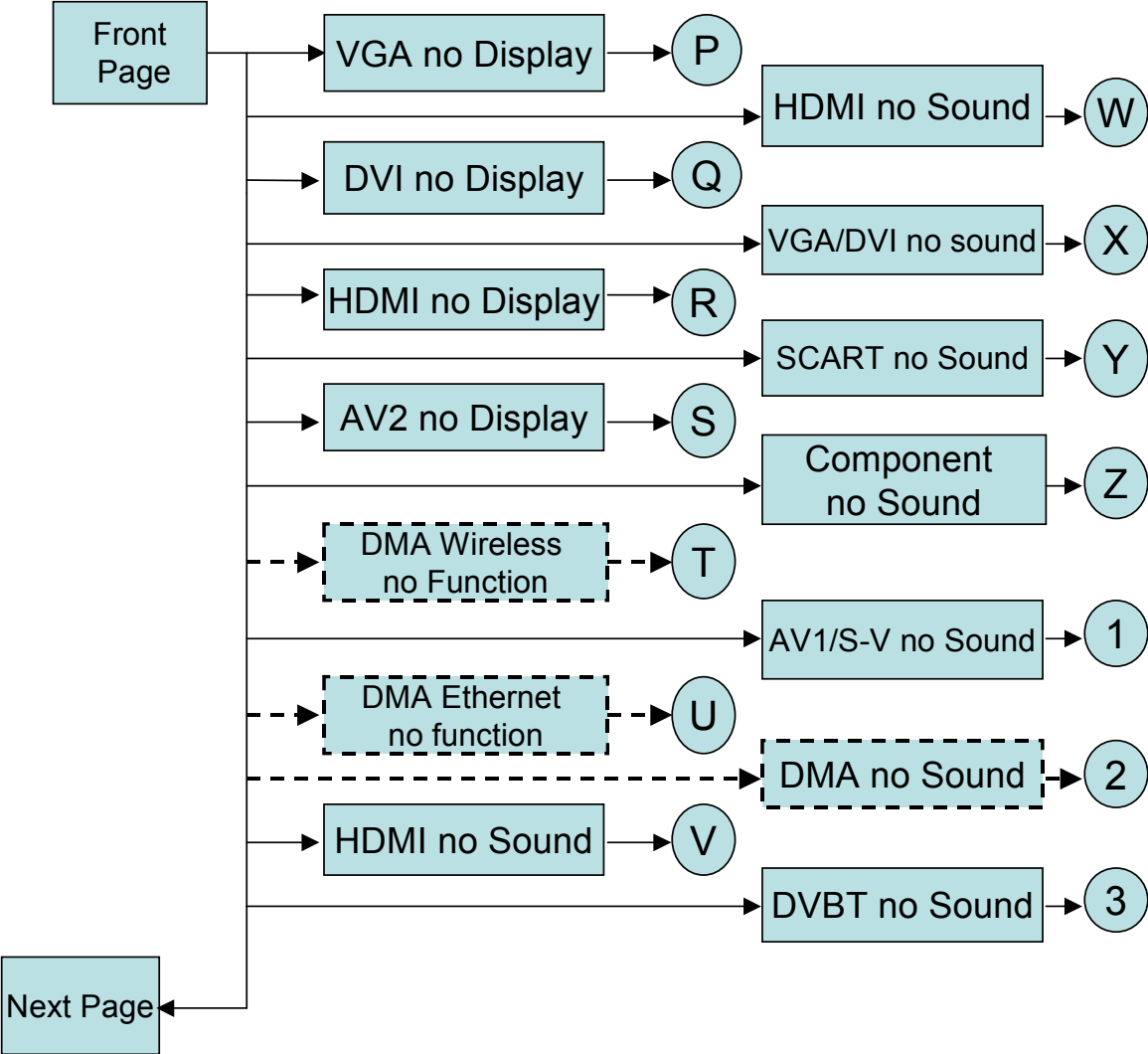
Use the following procedure as a guide for Acer LCD TV AT3205/AT2605 problems.

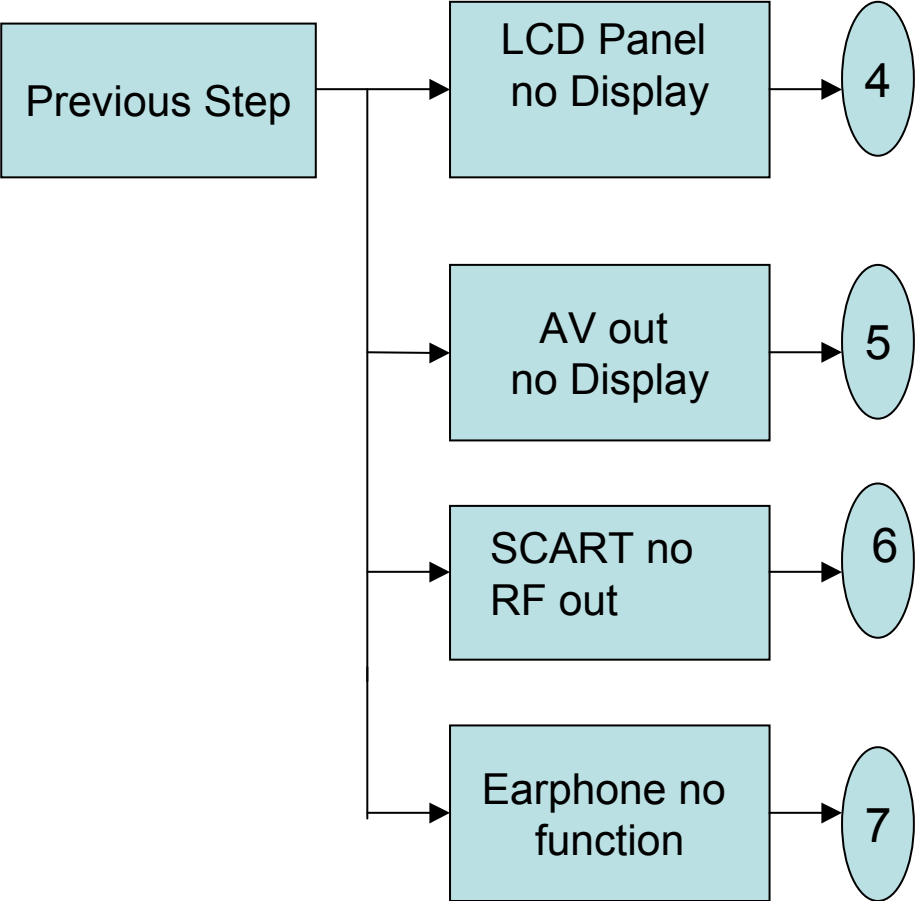
NOTE: The diagnostic tests are intended to test this model. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

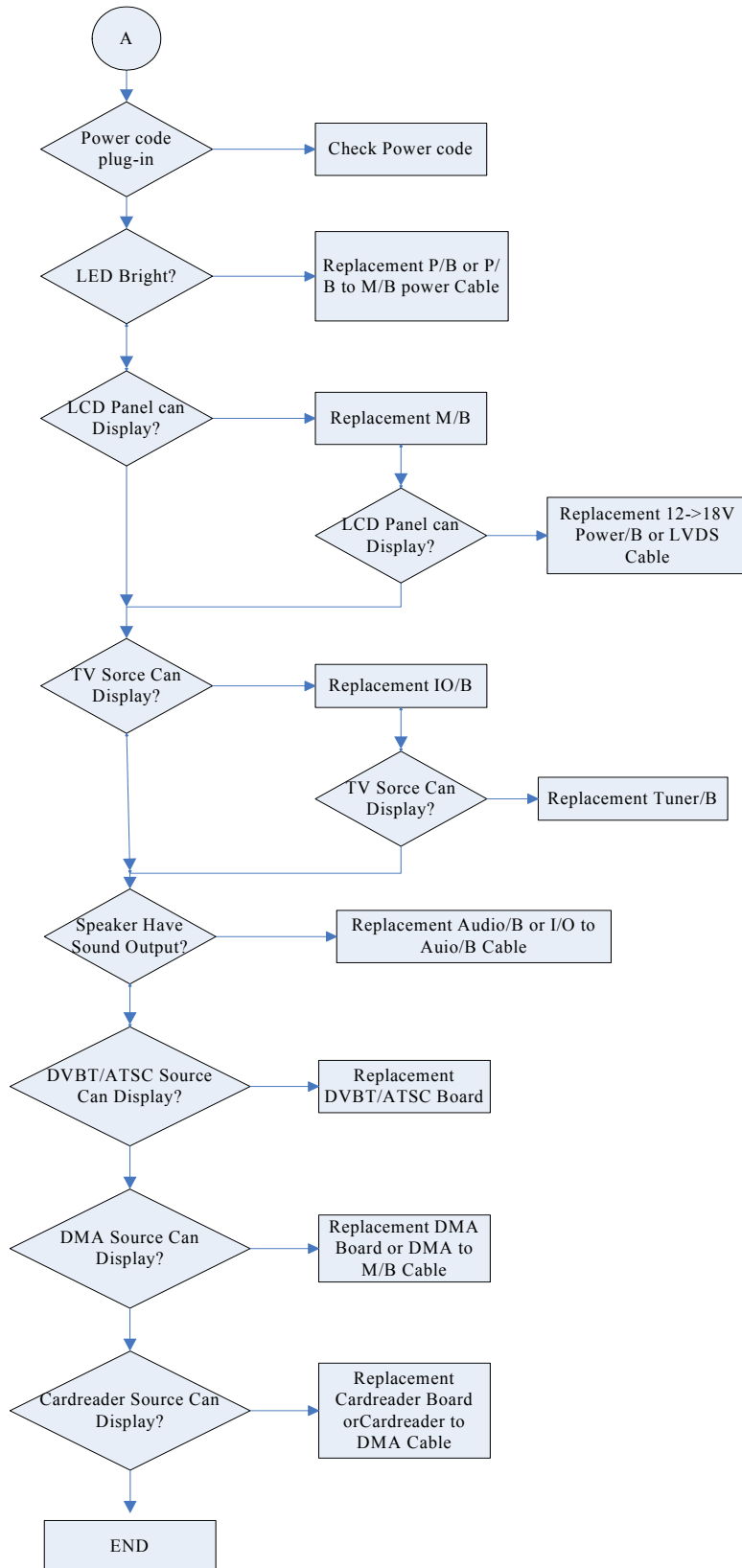
1. Duplicate symptom and obtain the failing symptoms in as much detail as possible.
2. Distinguish symptom. Verify the symptoms by attempting to re-create the failure by running the diagnostic test or by repeating the same operation.
3. Disassemble and assemble the unit without any power sources.
4. 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.

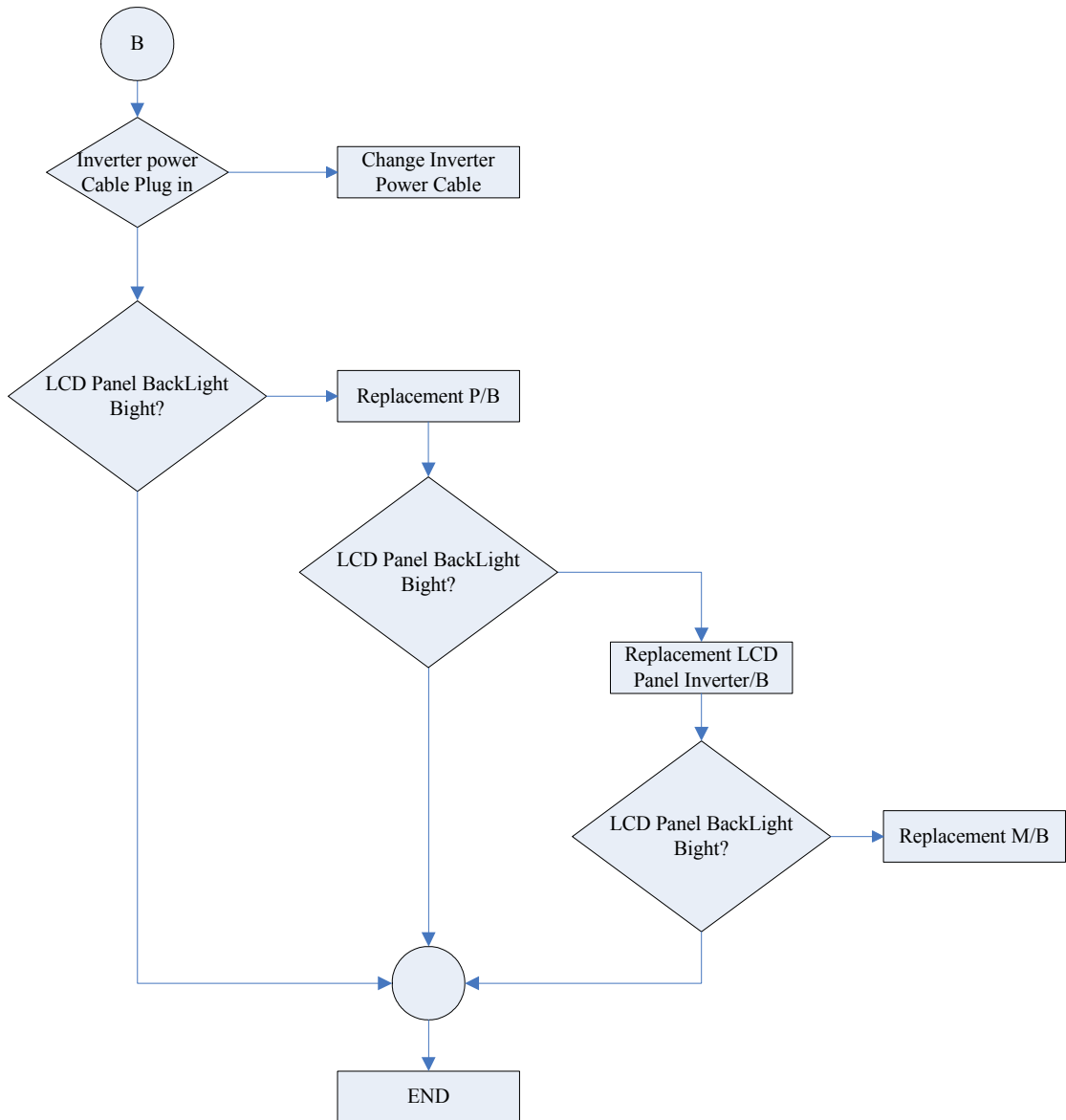
NOTE: N.G. in the below figures means "No Good".

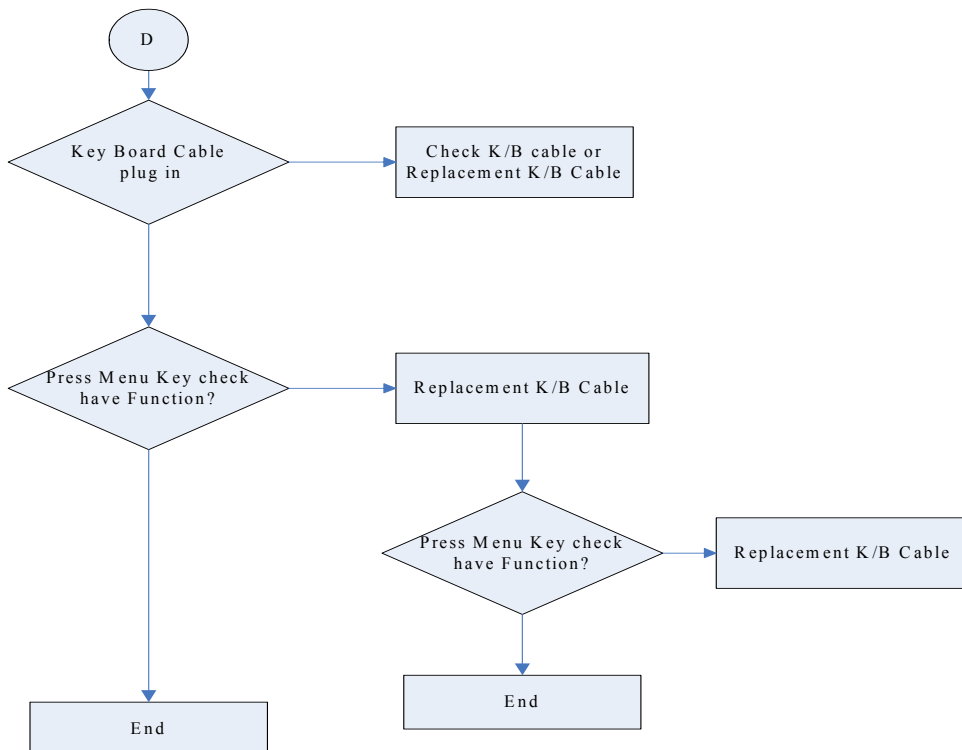
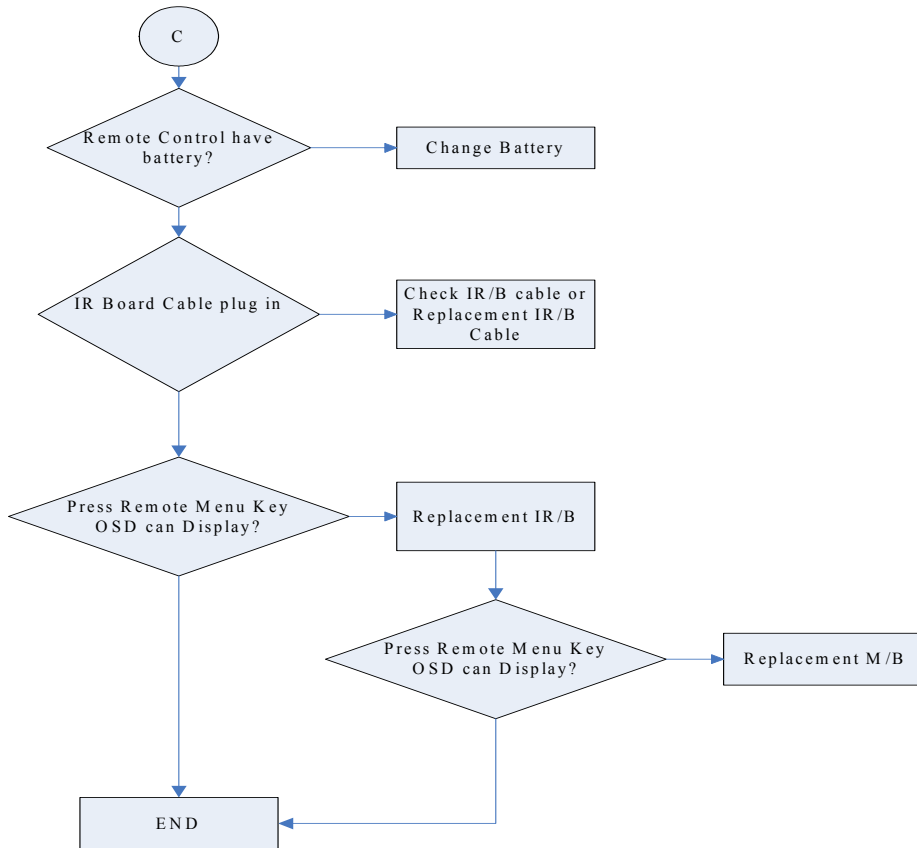


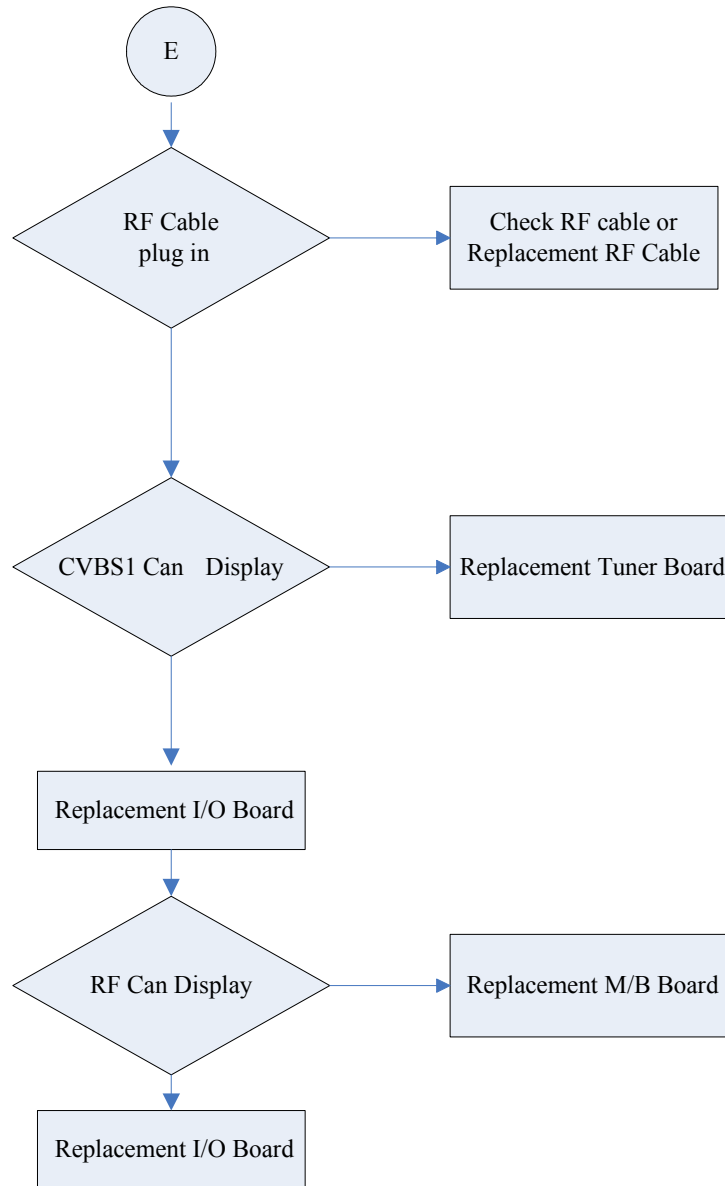


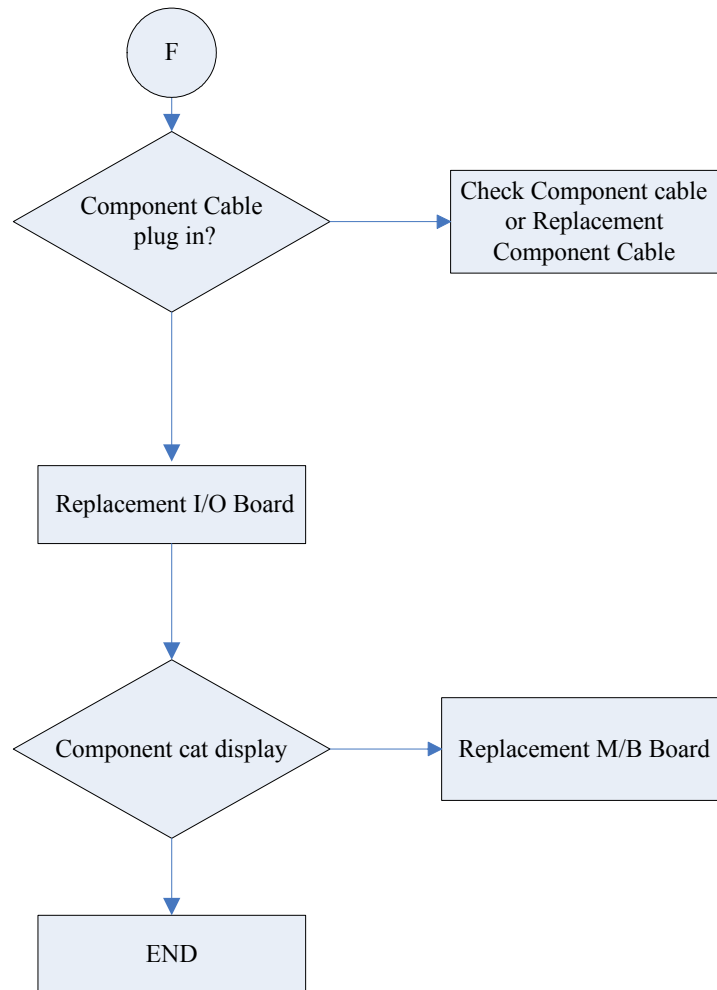


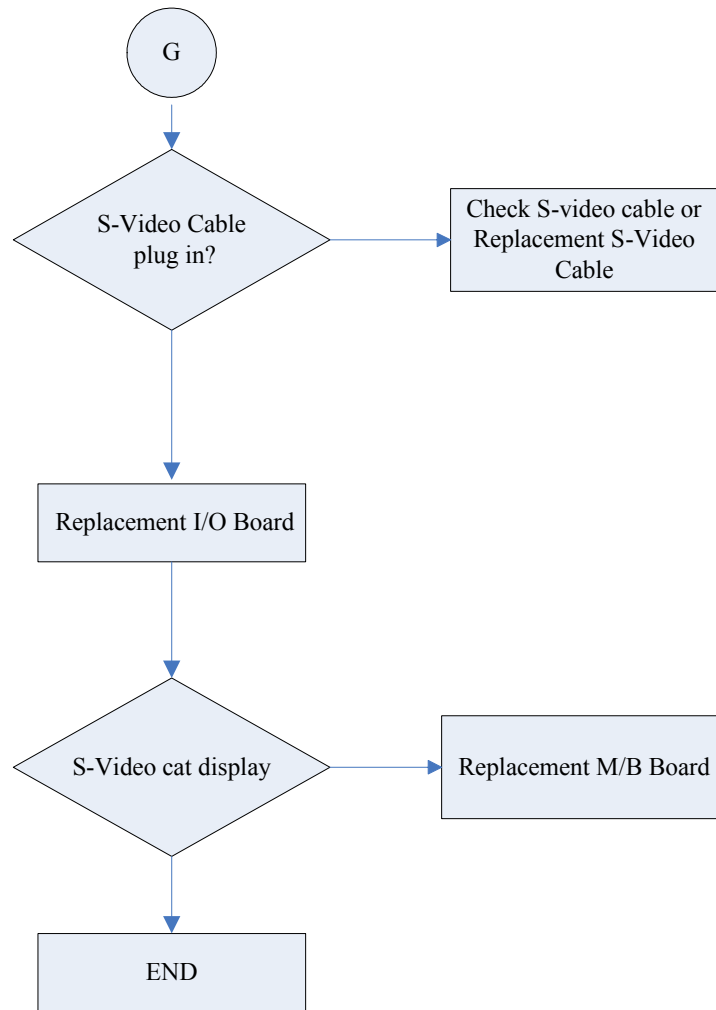


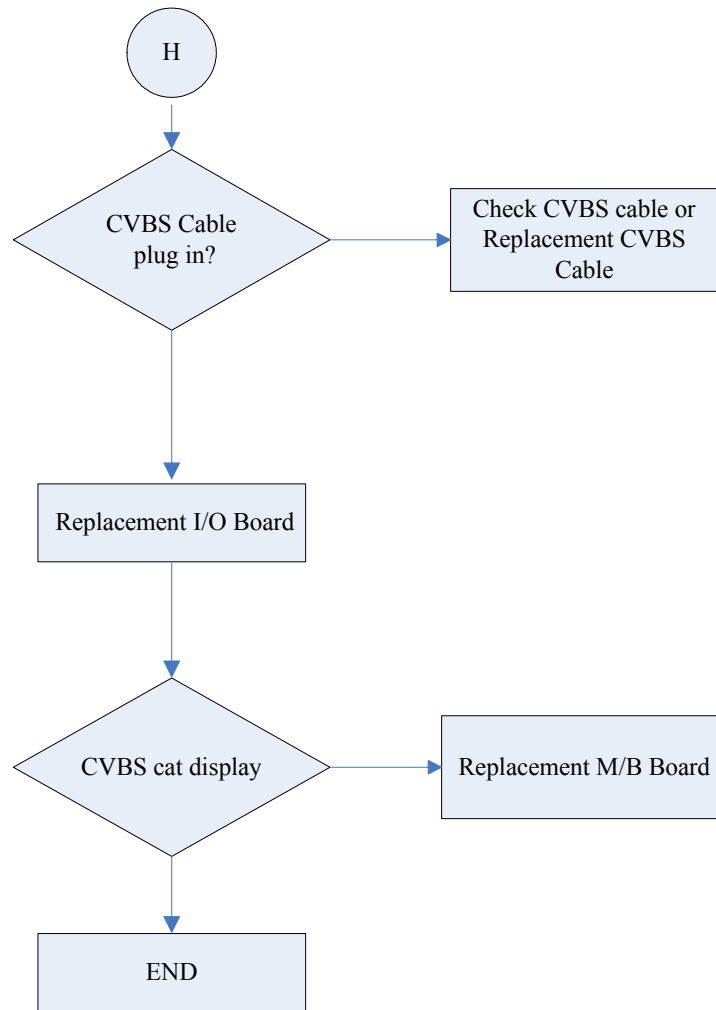


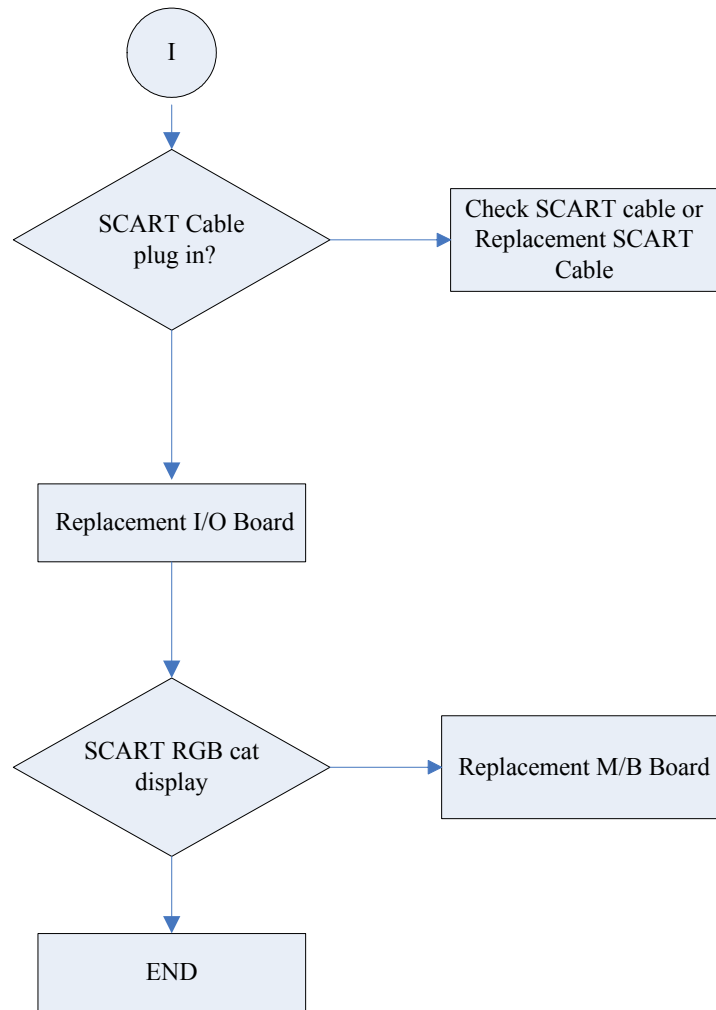


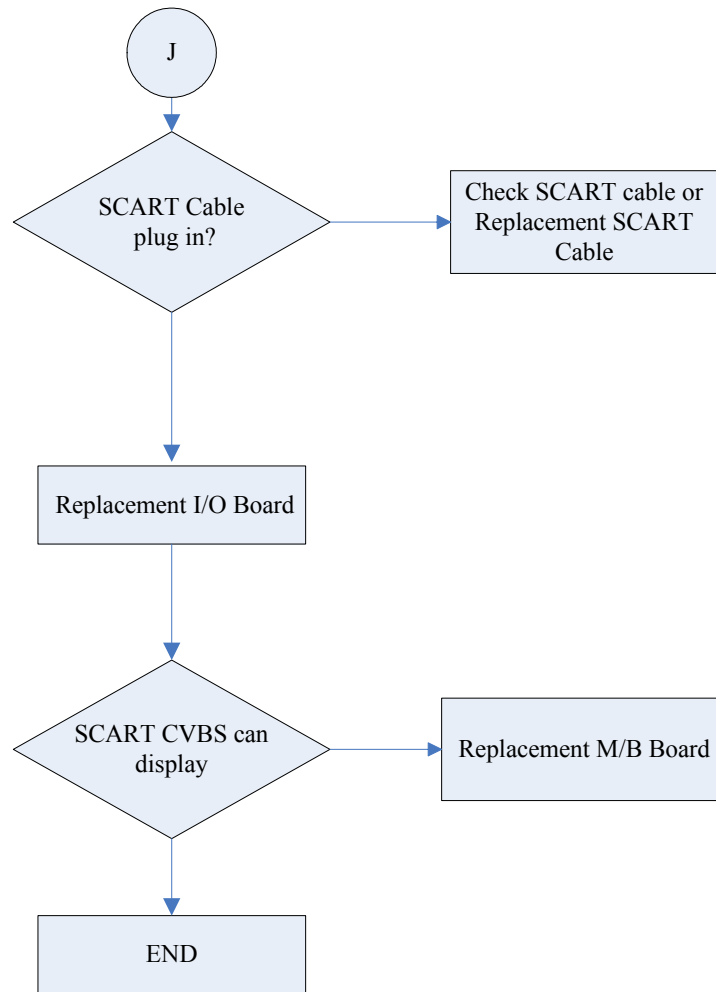


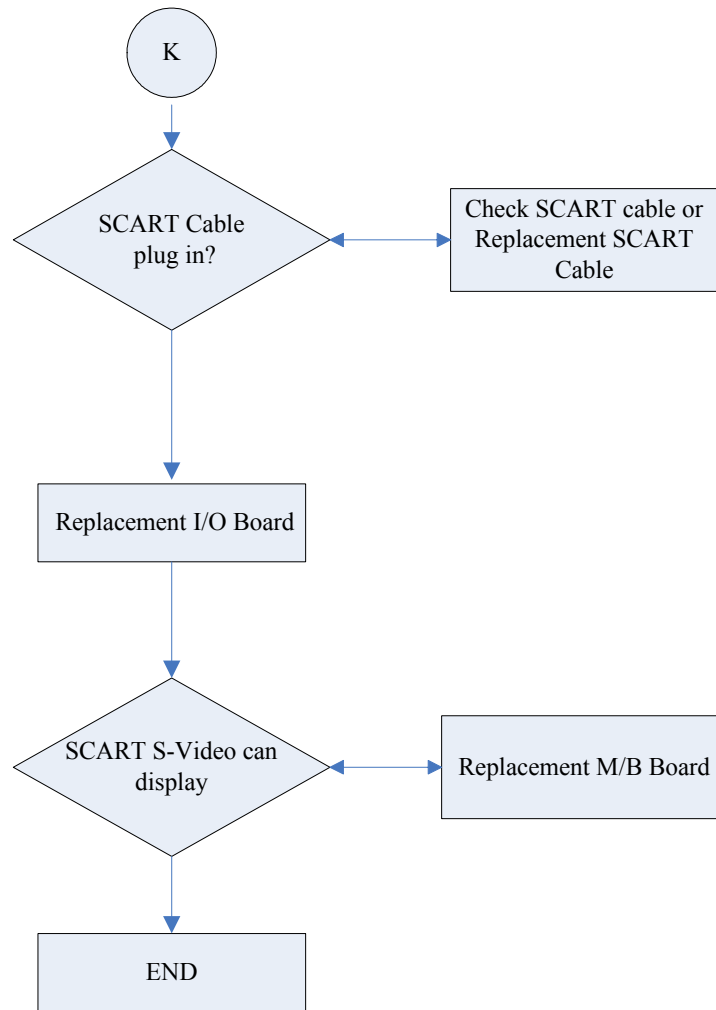


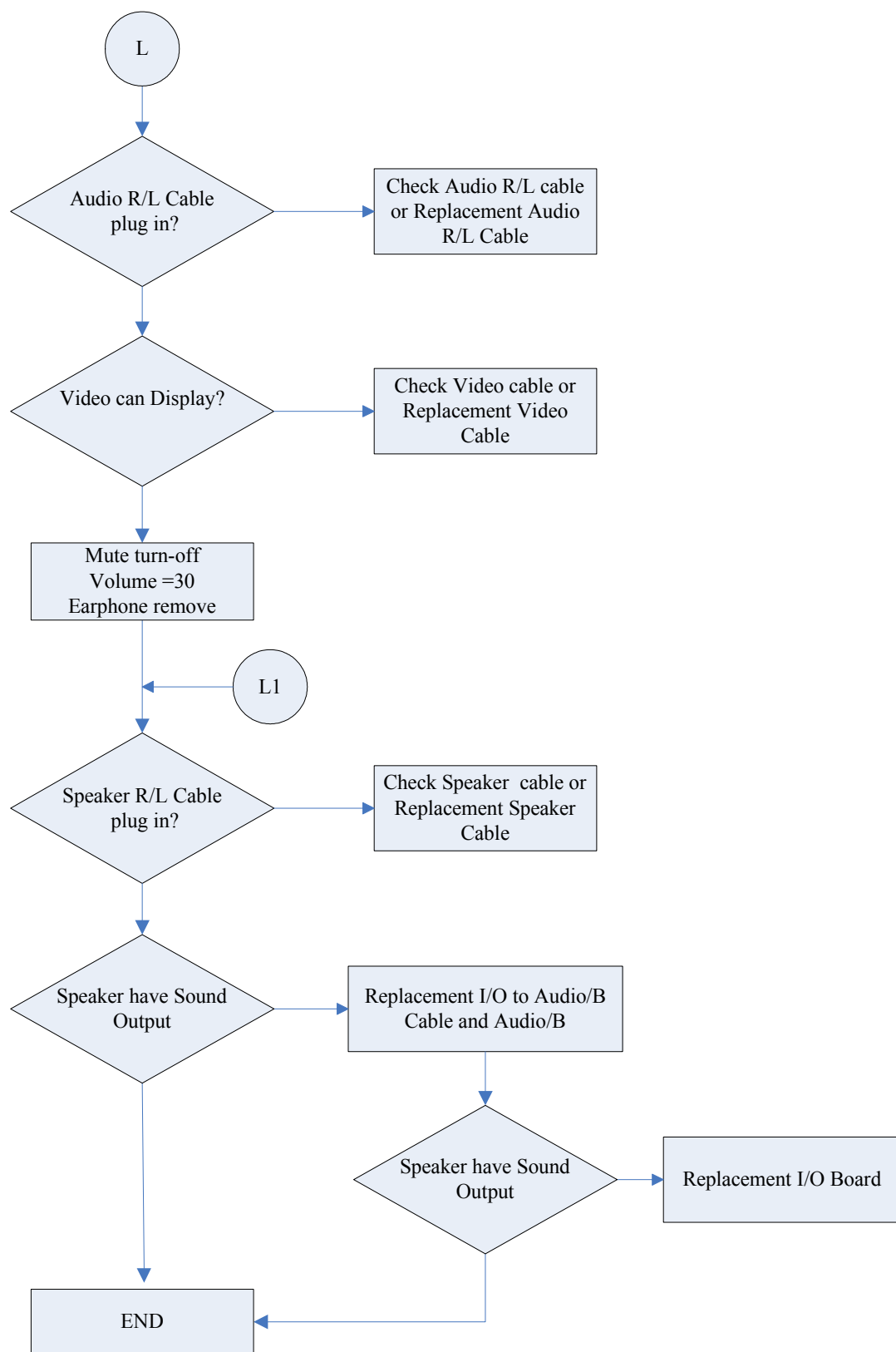


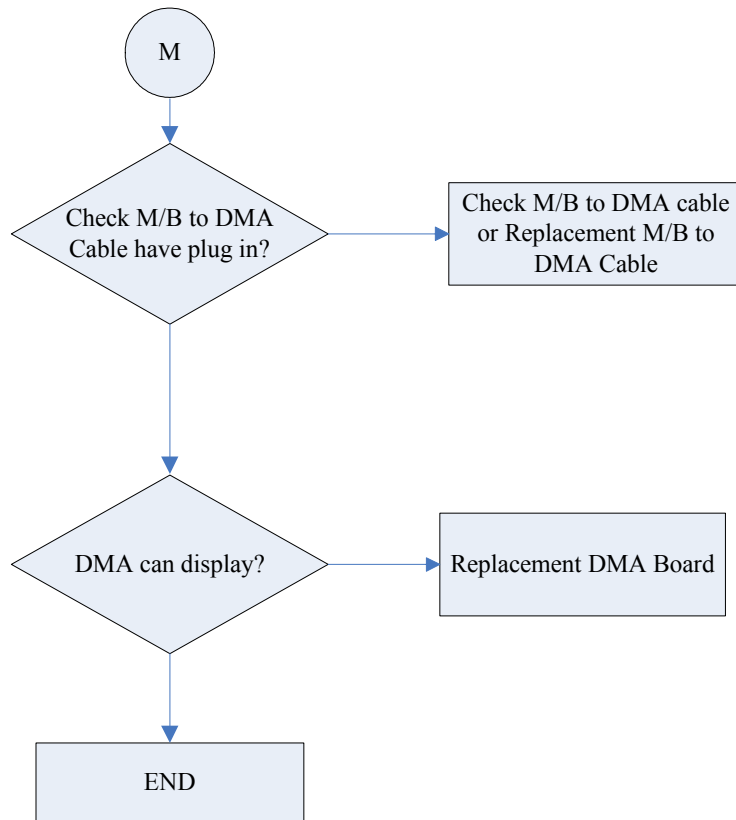


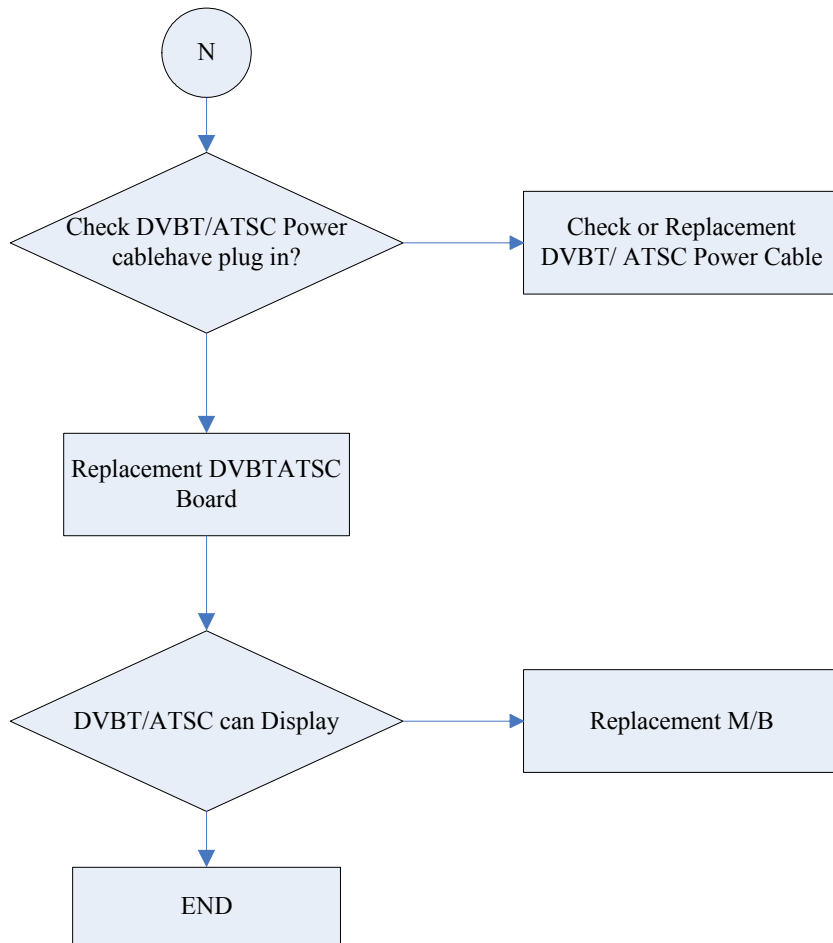


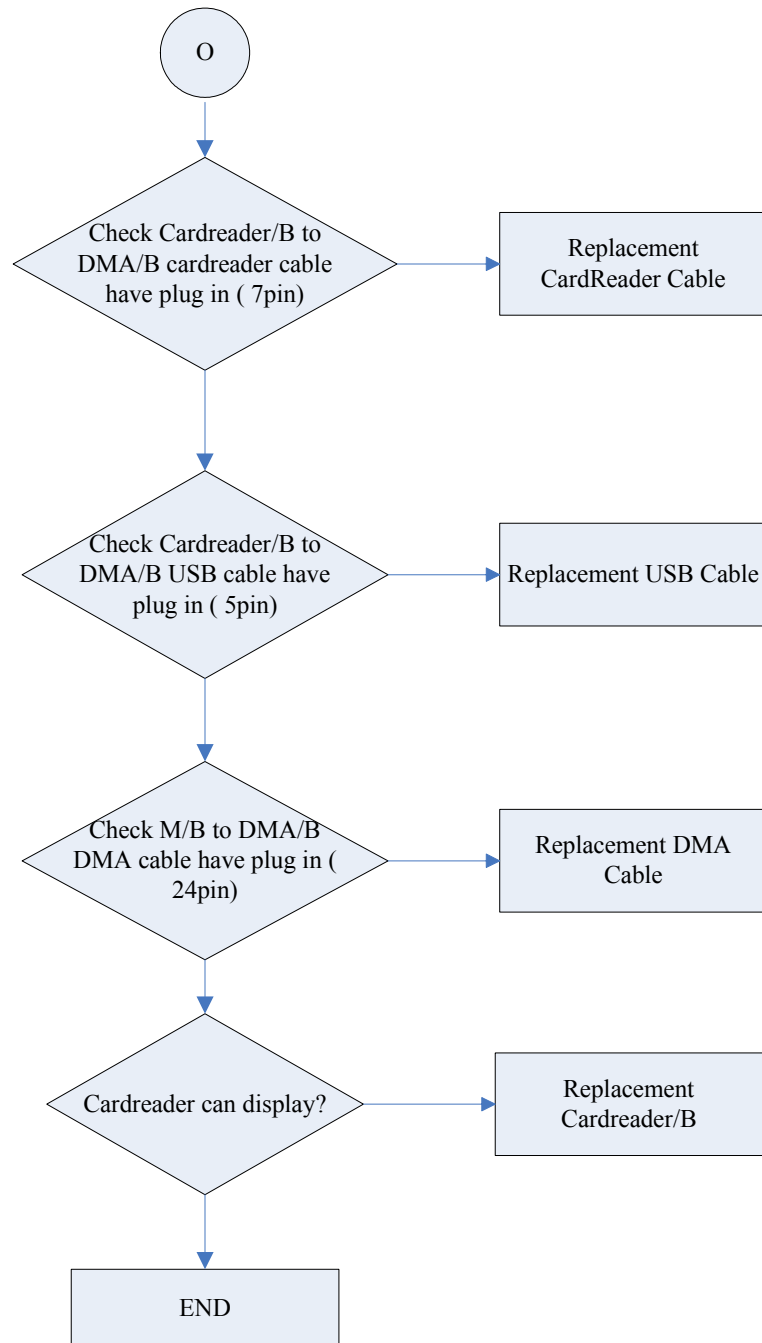


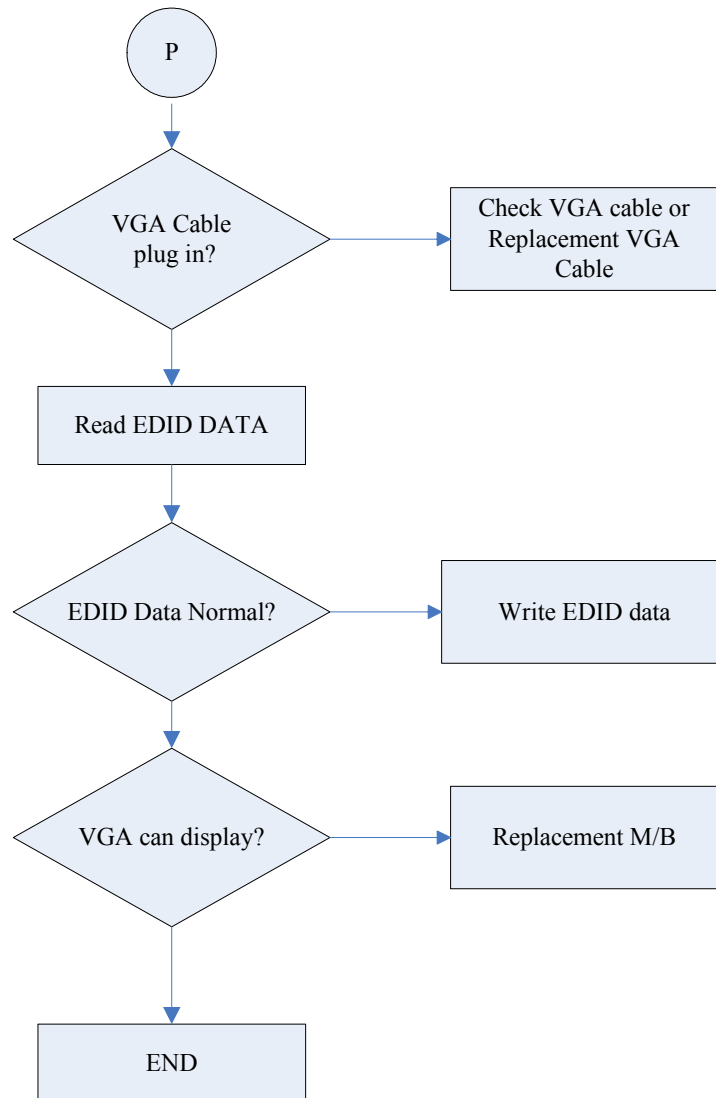


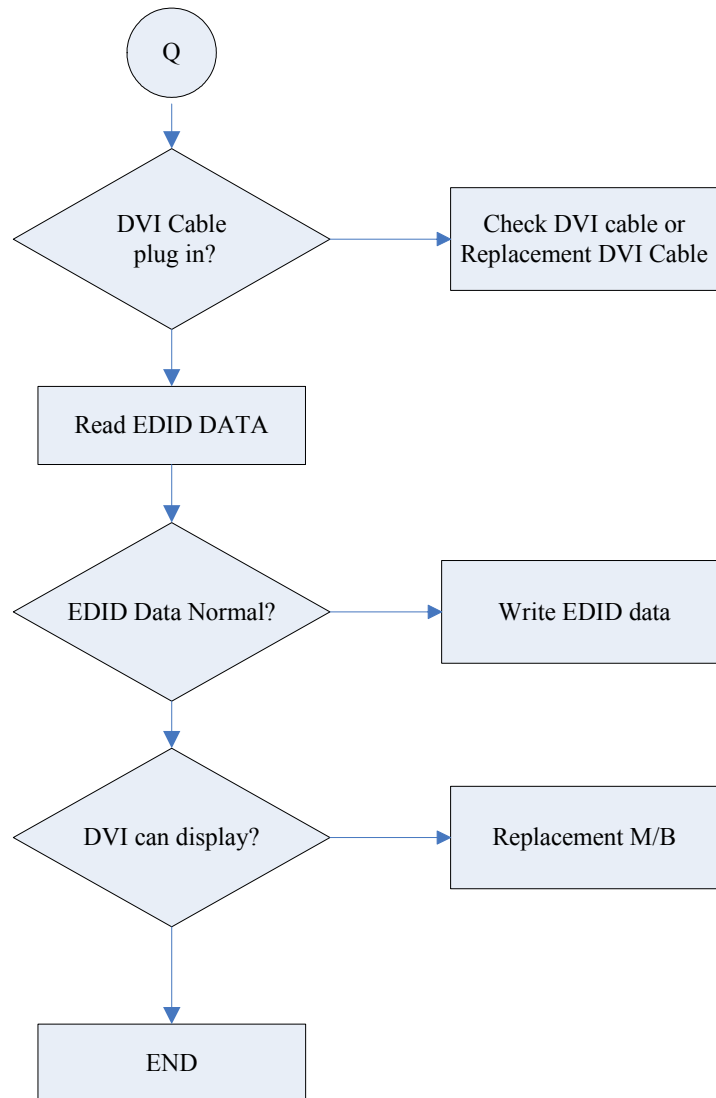


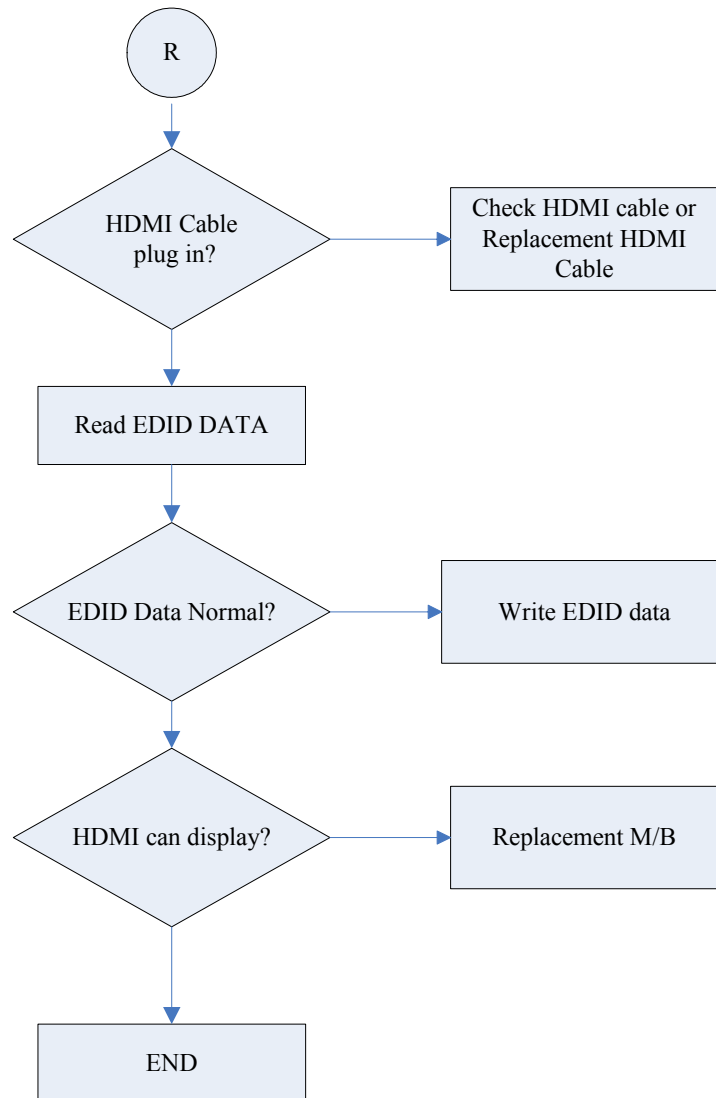


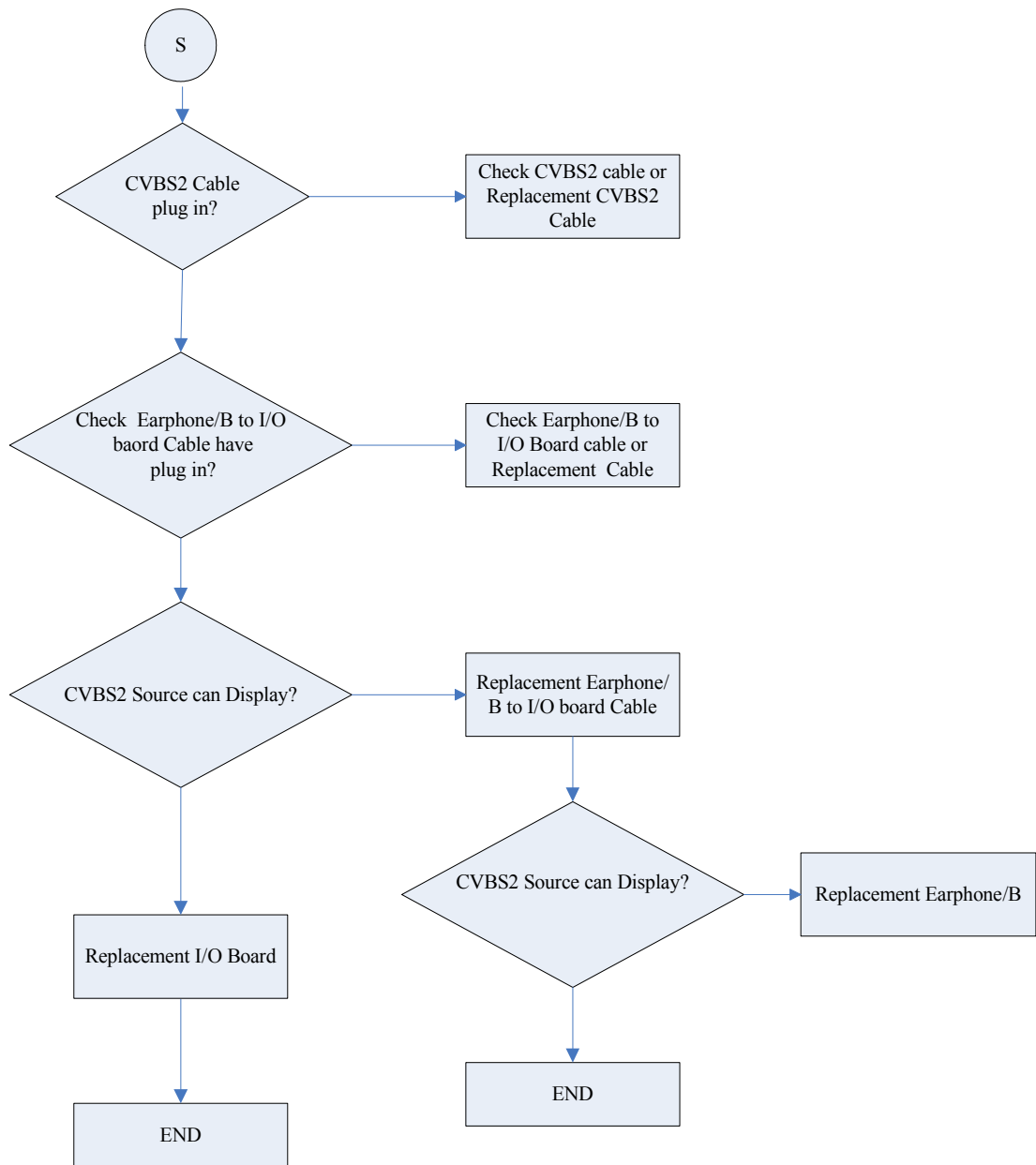


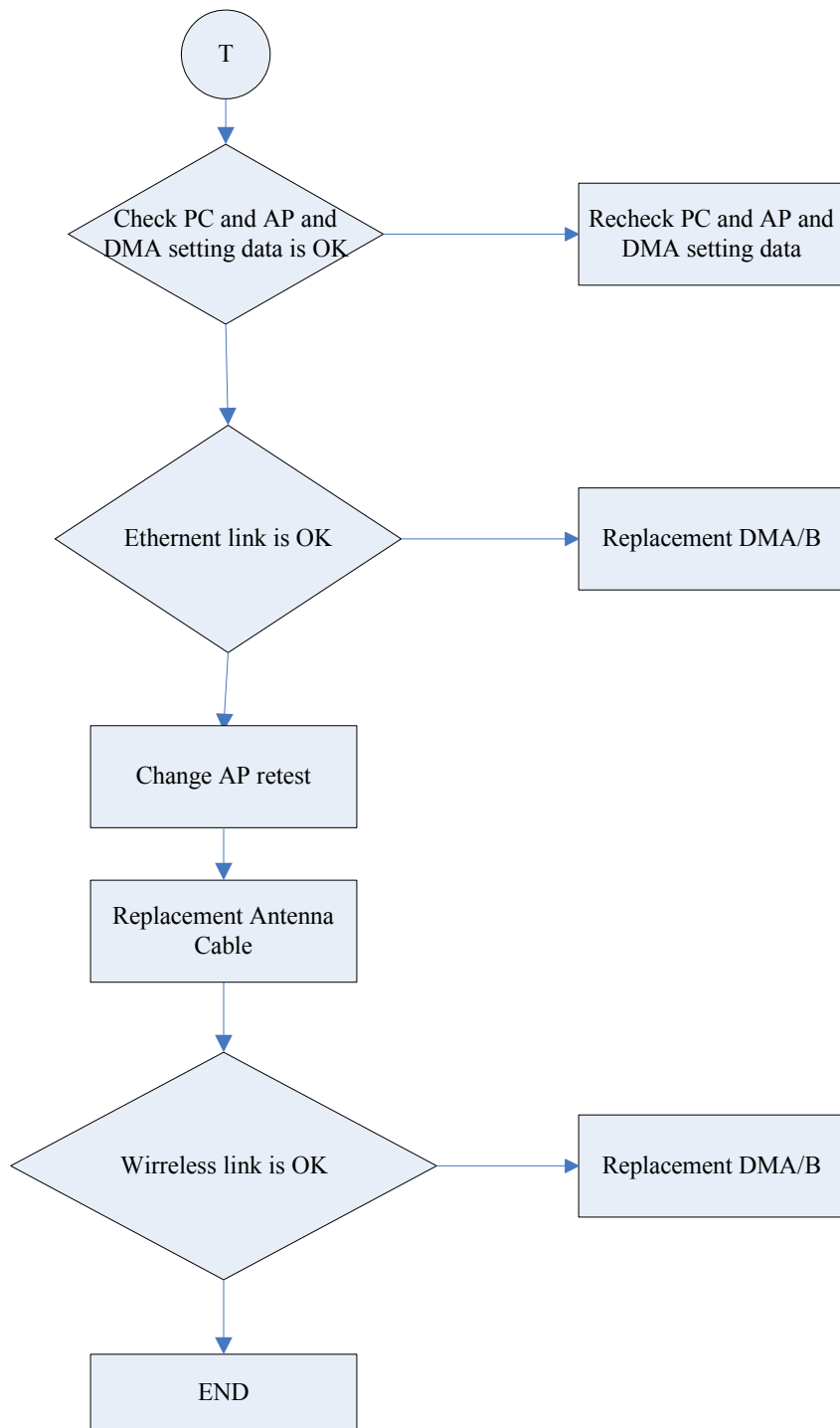


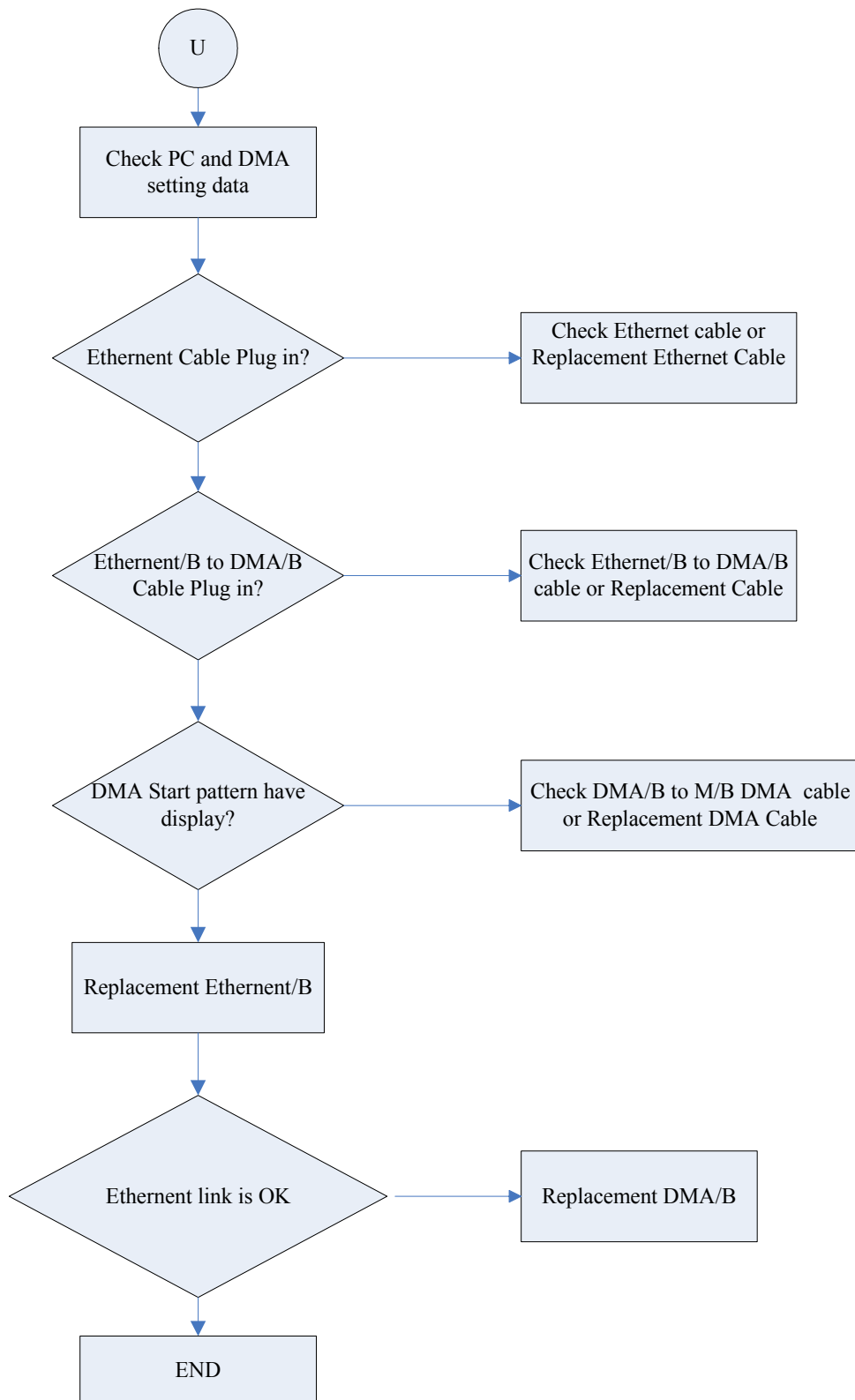


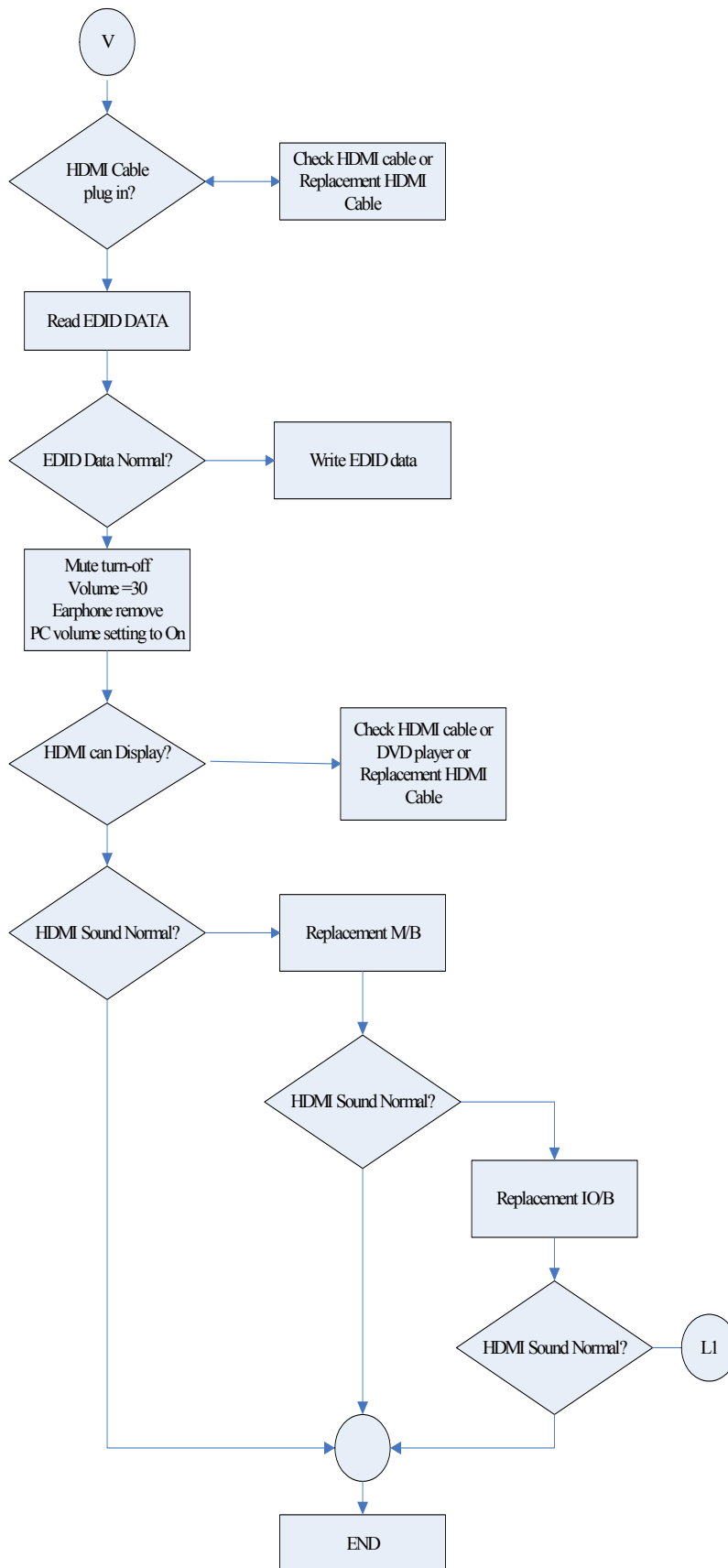


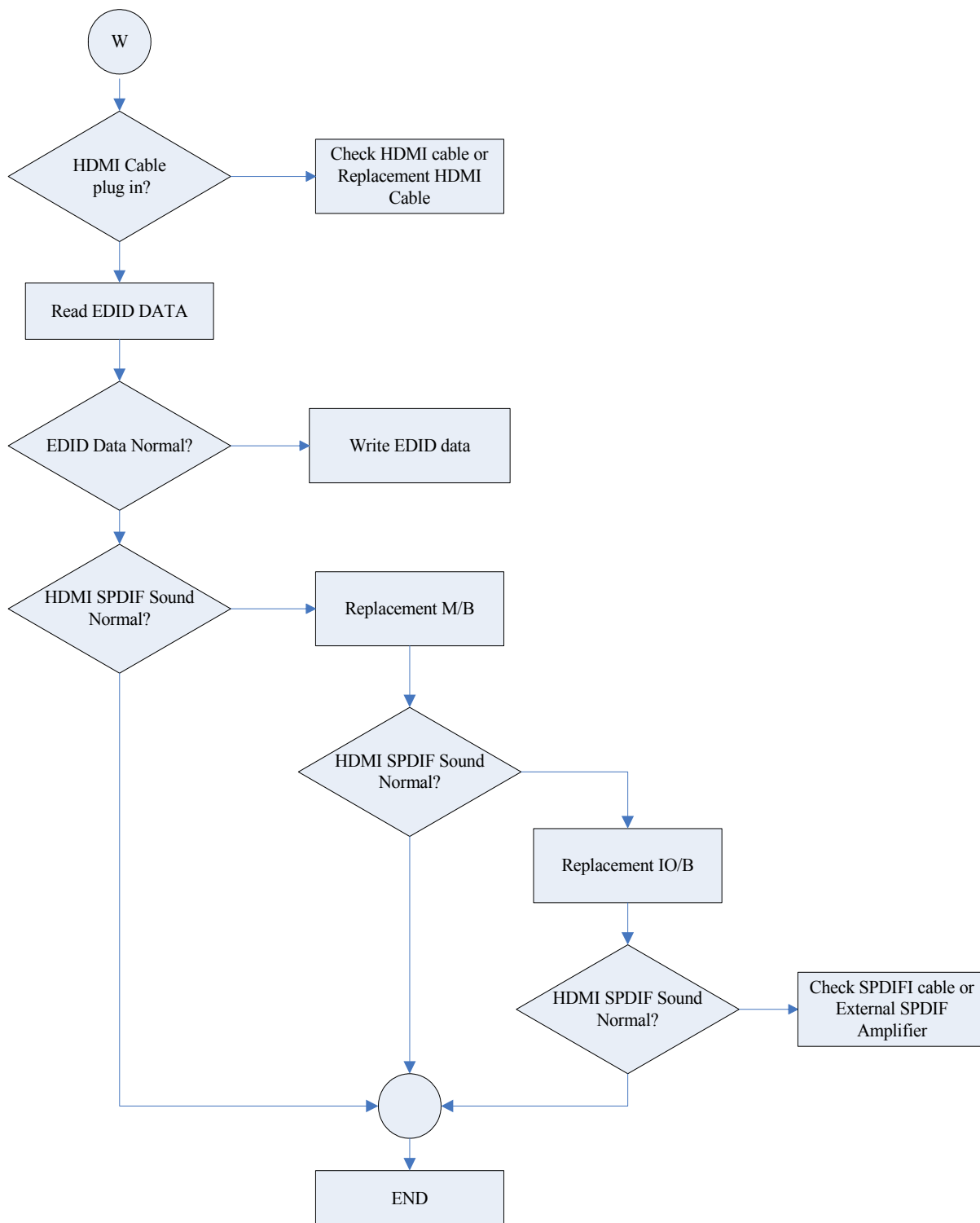


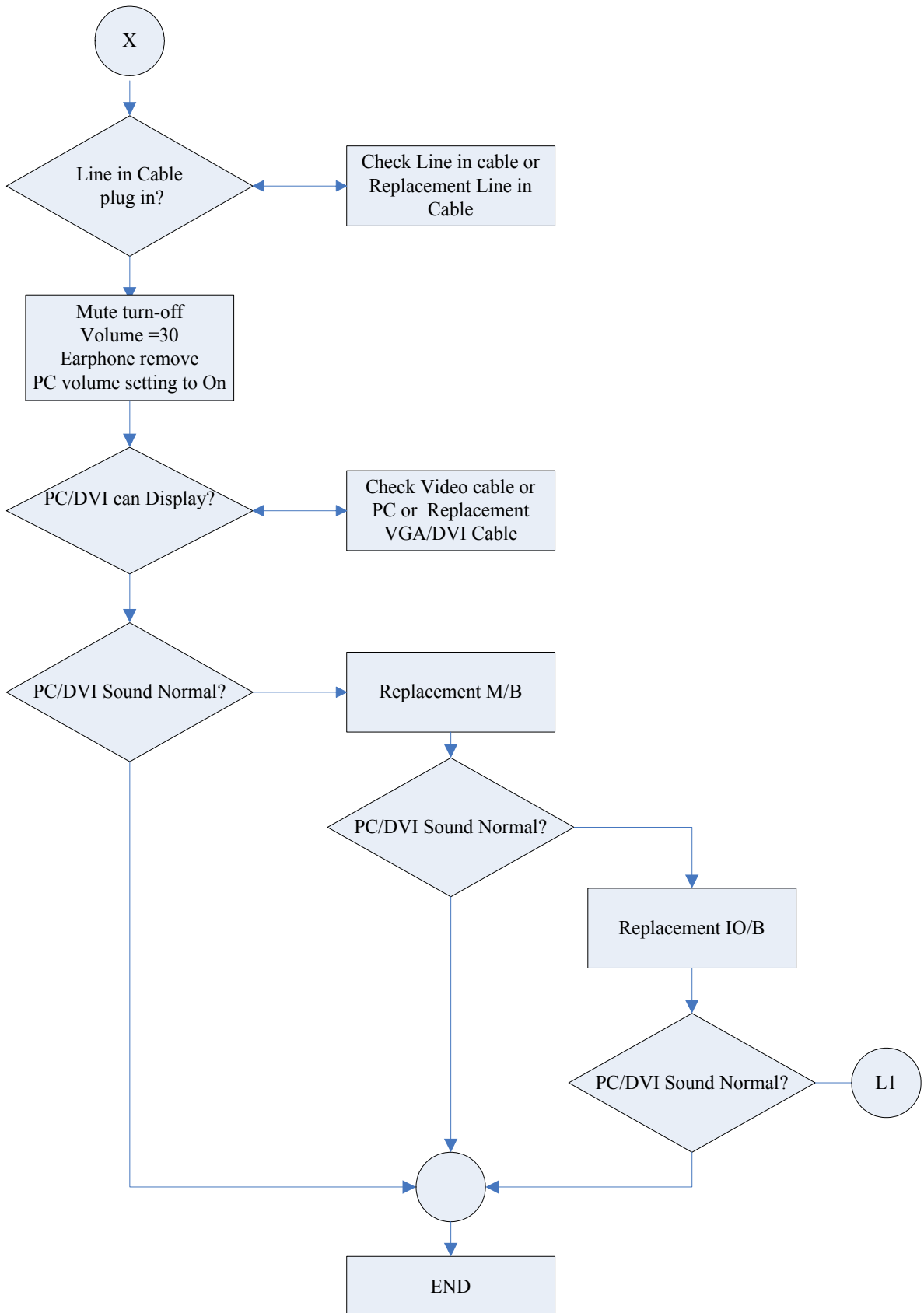


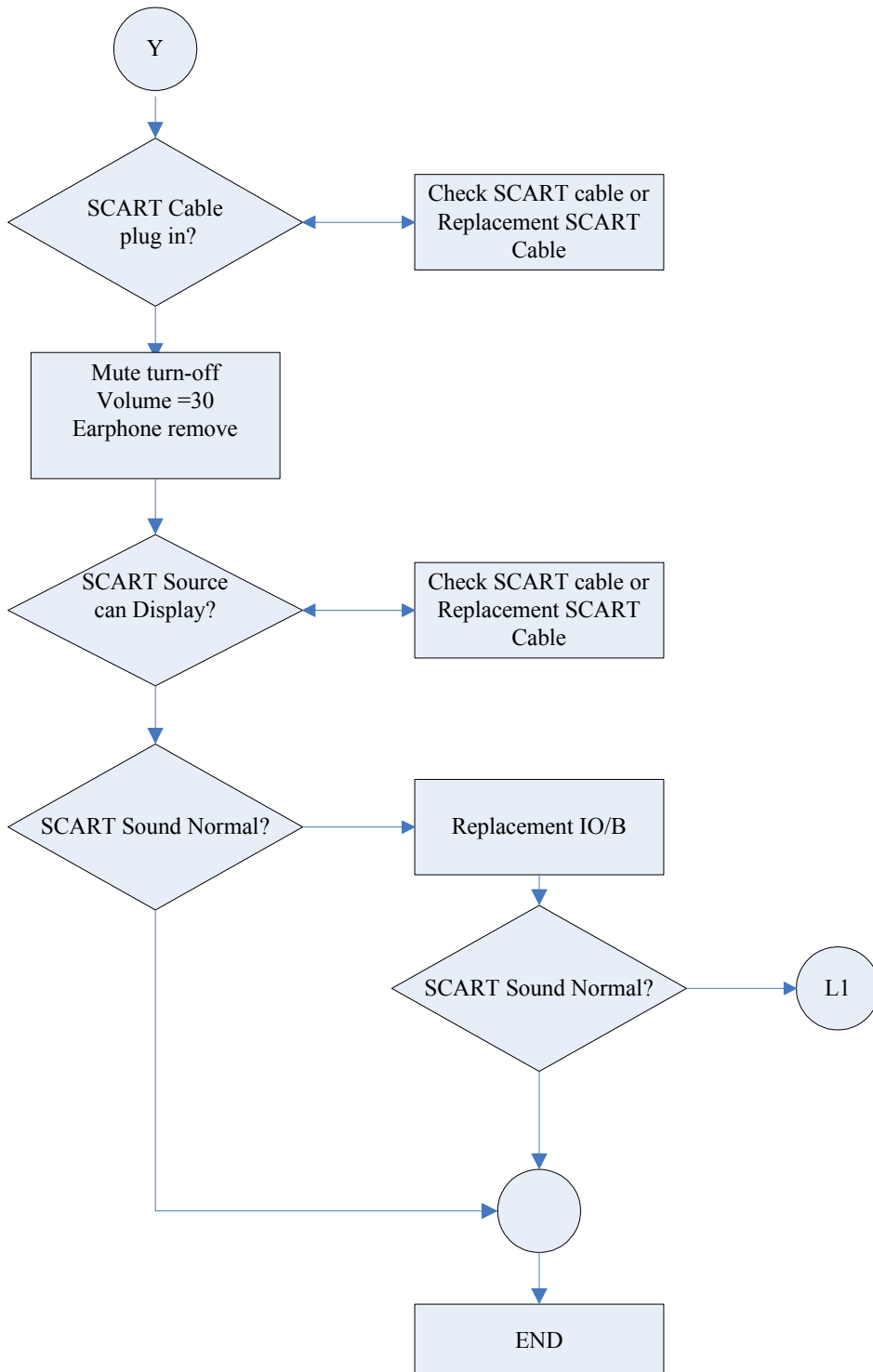


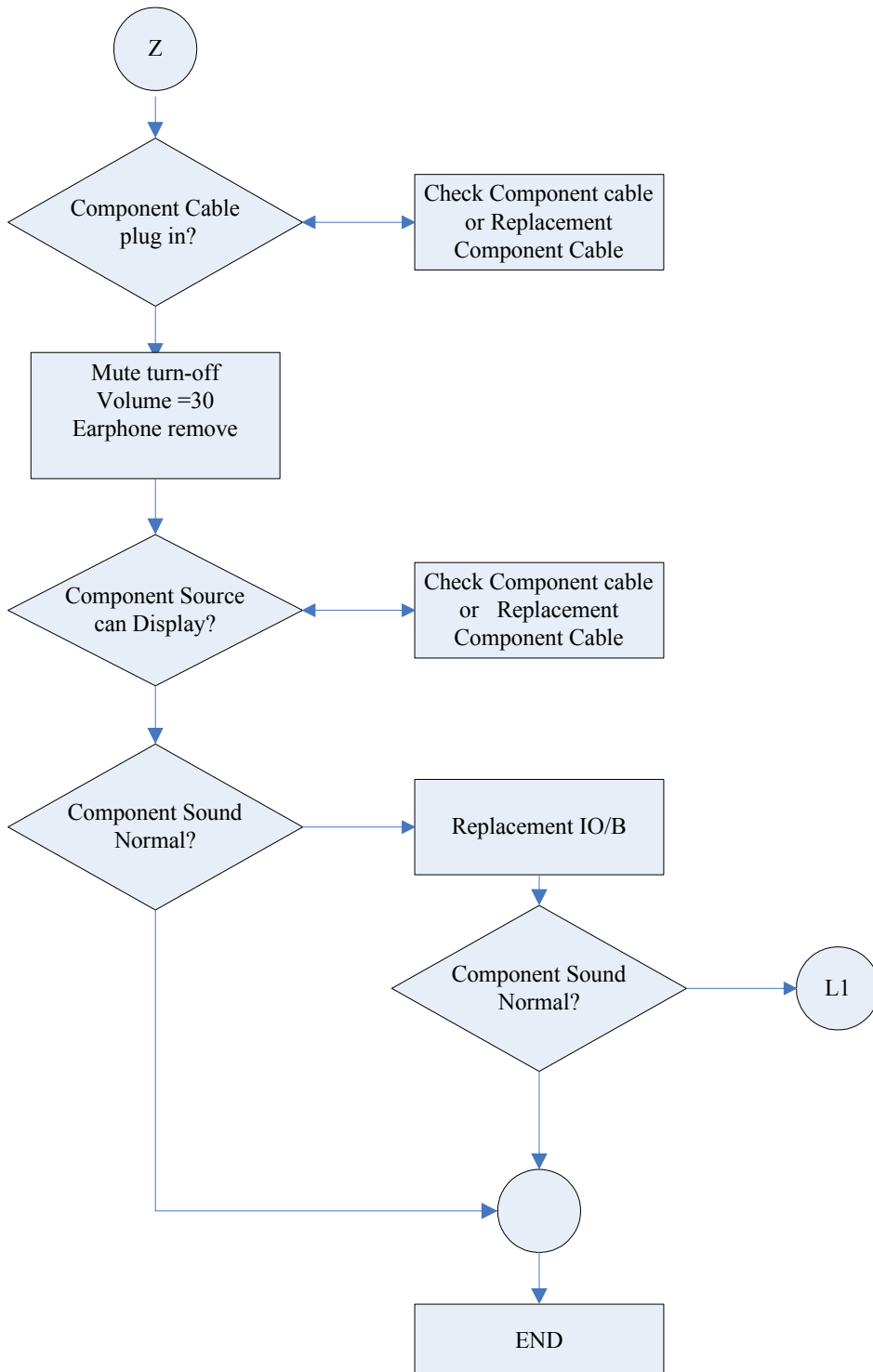


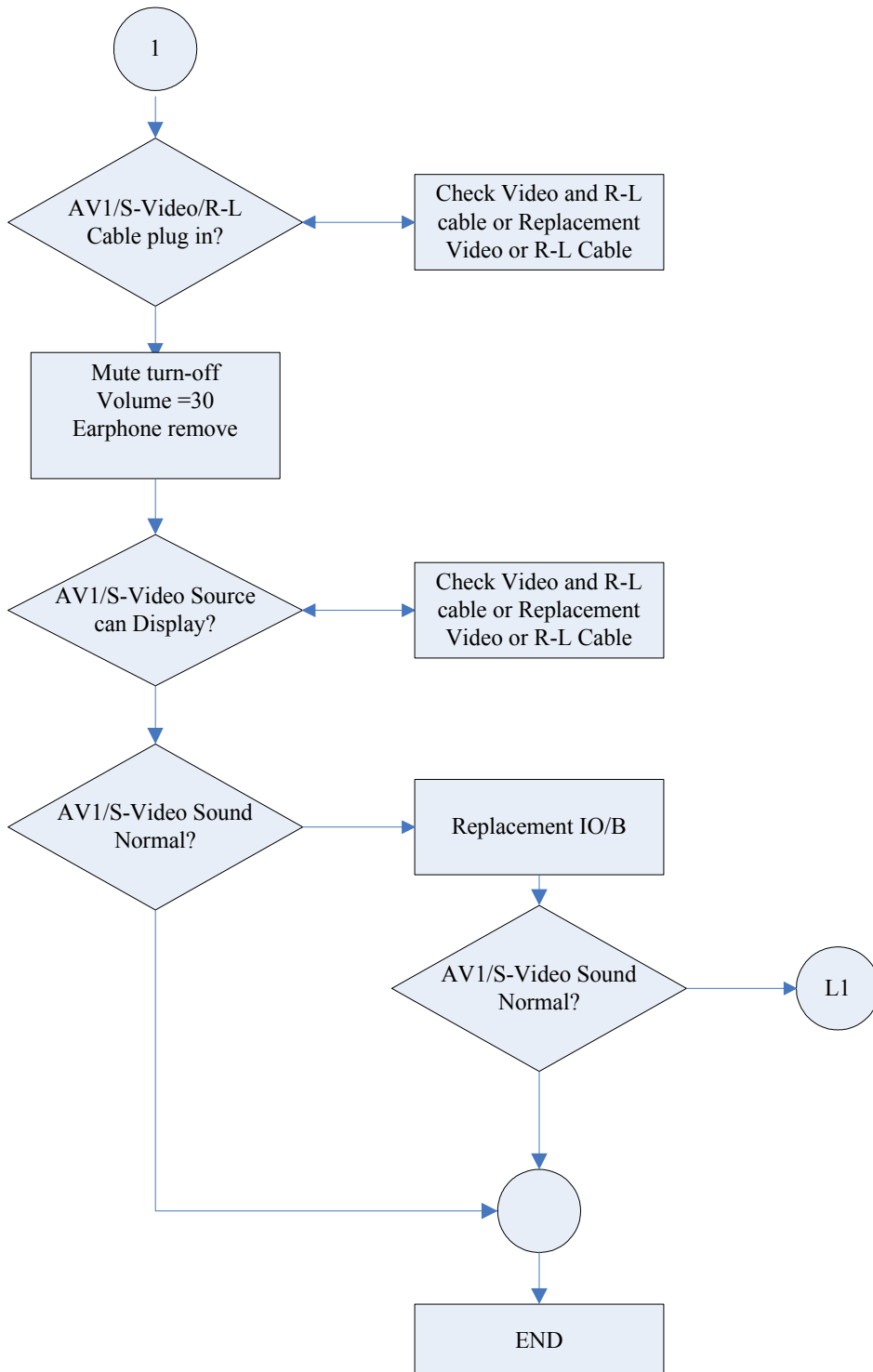


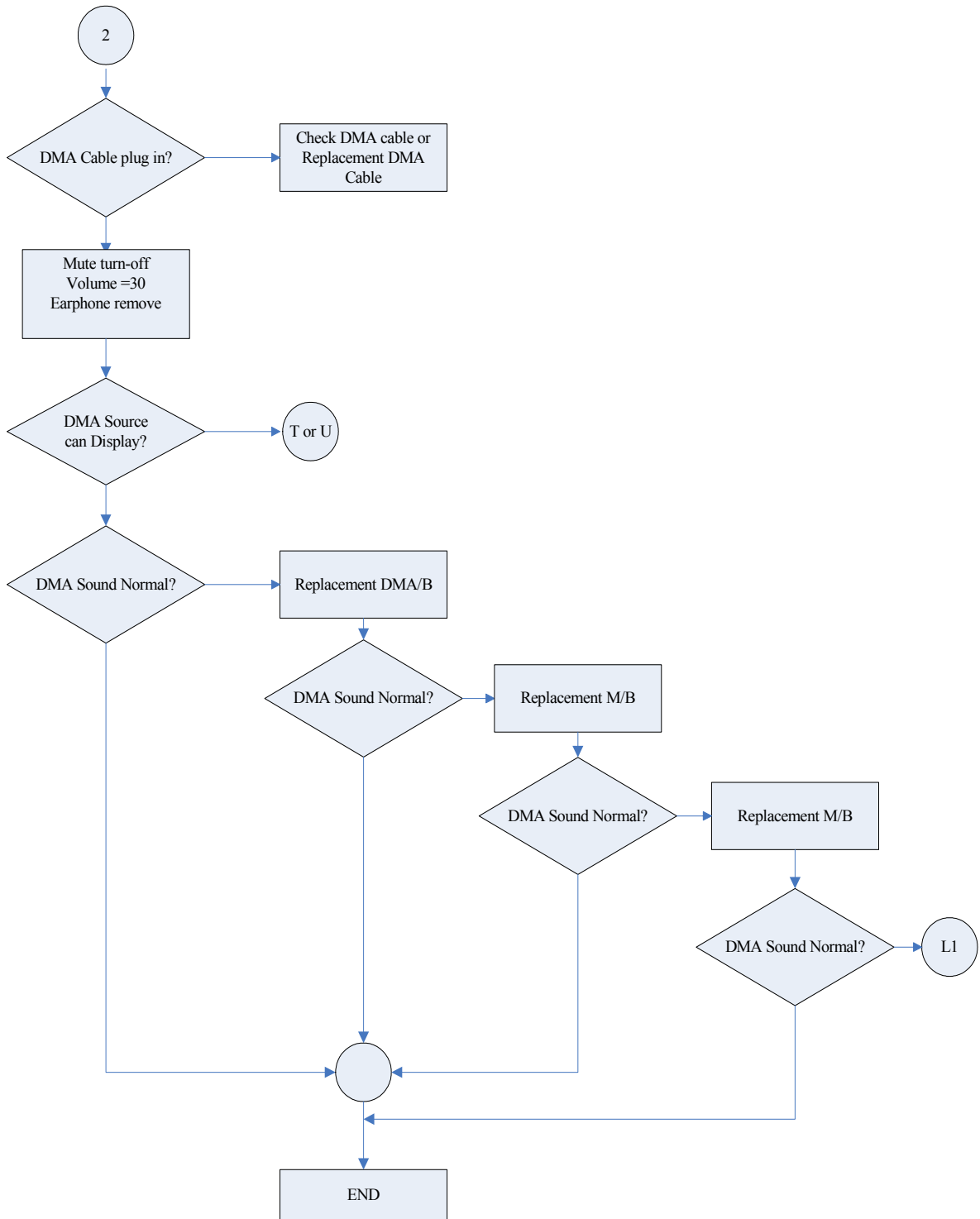


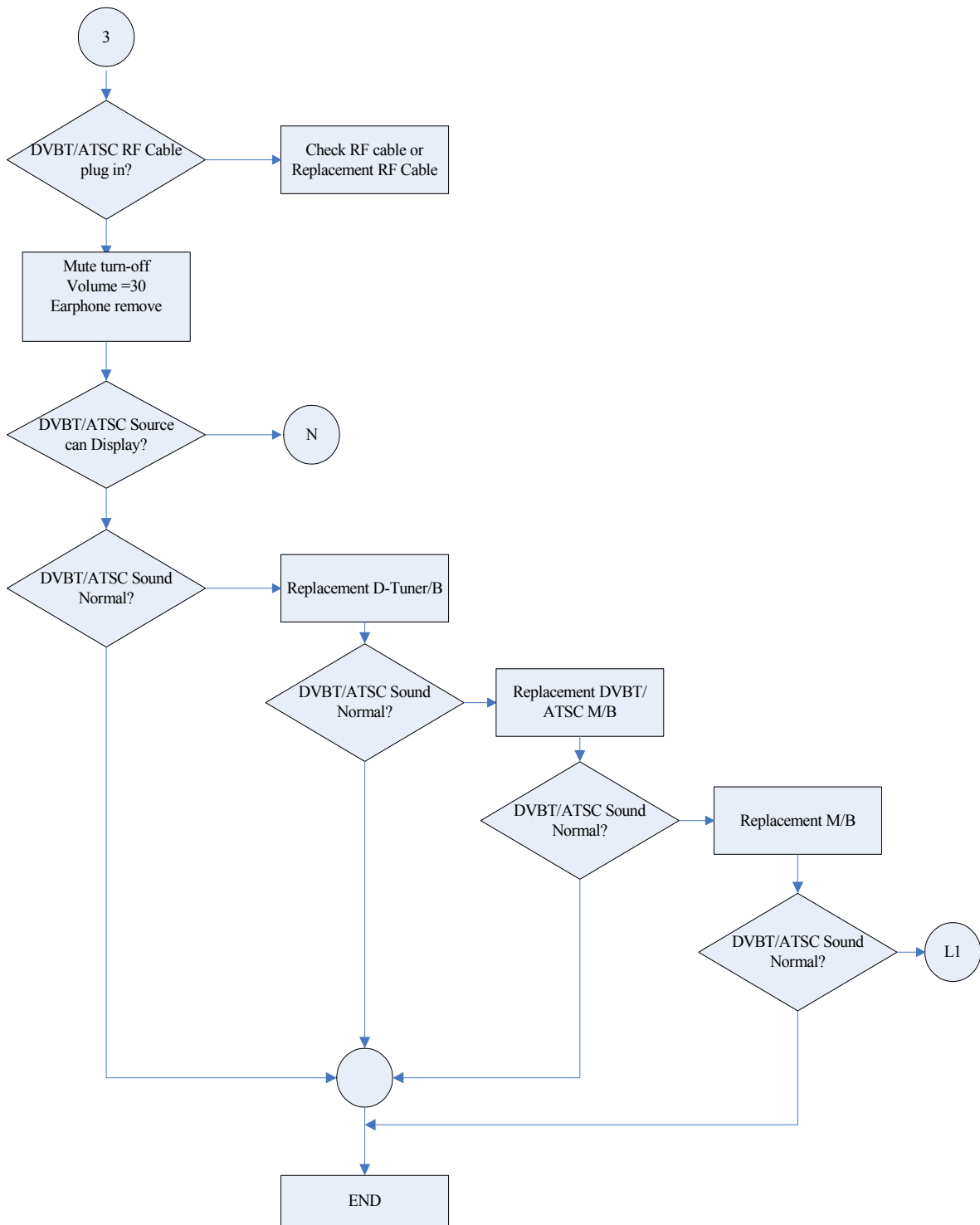




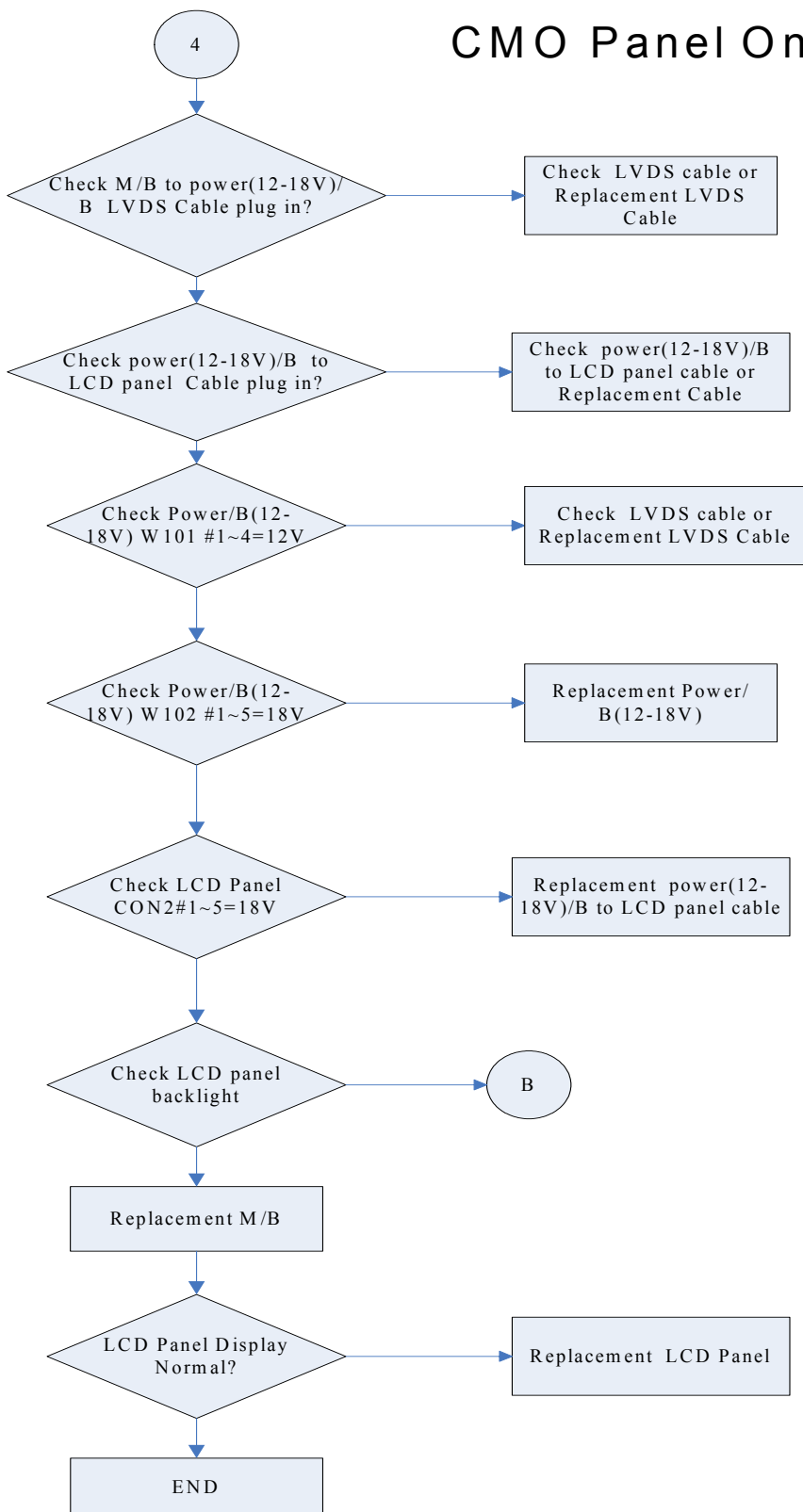




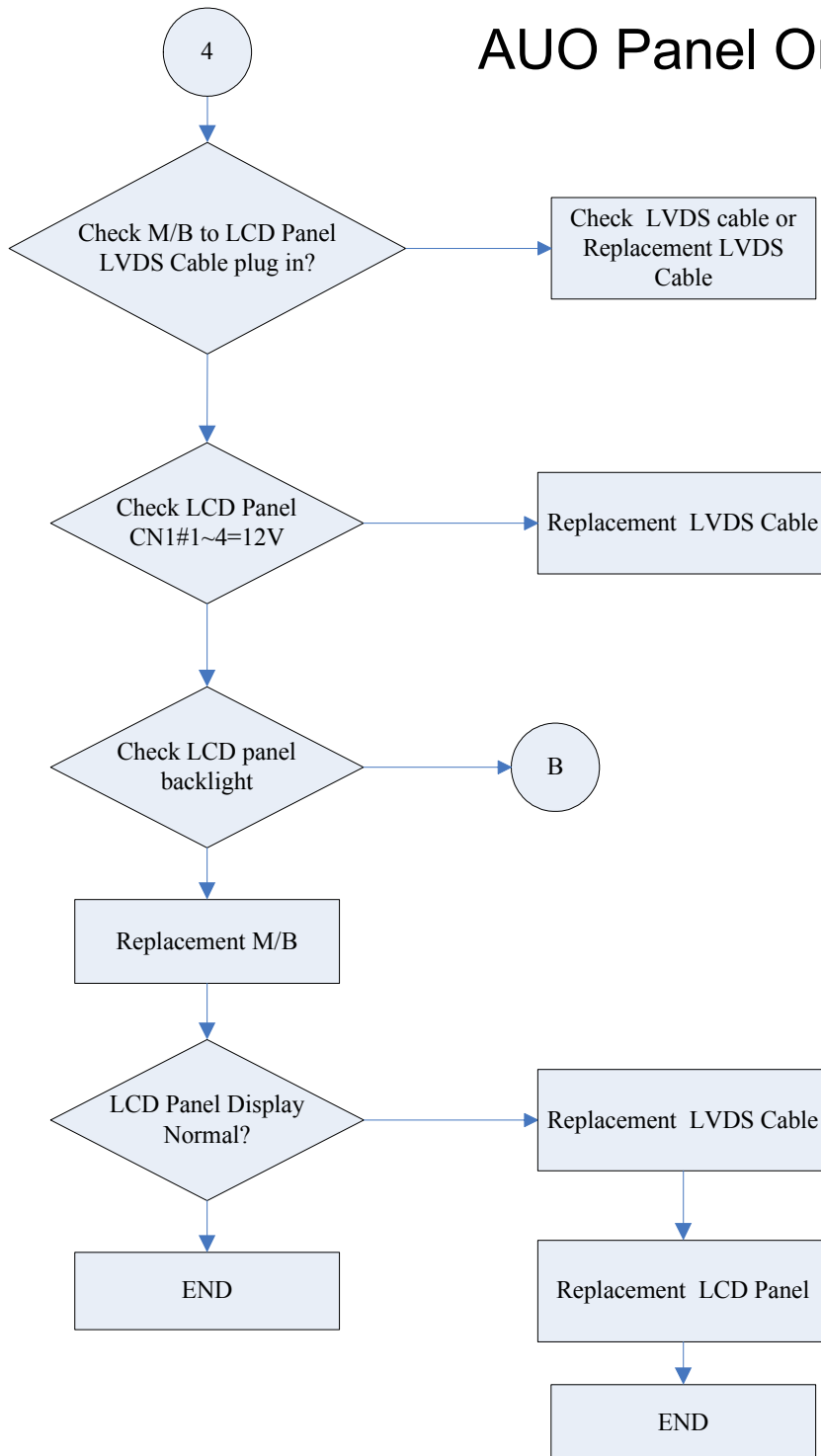


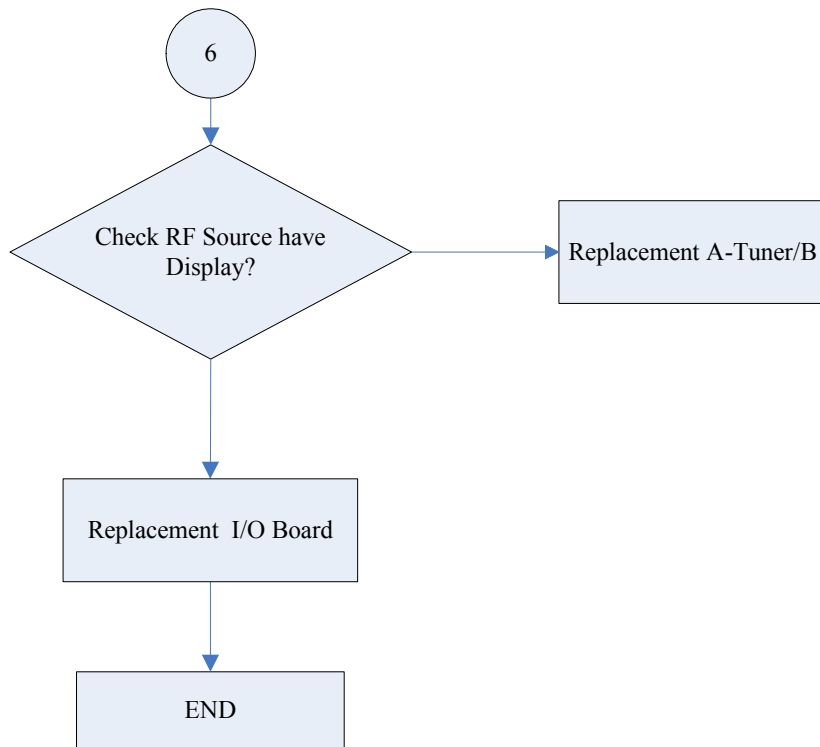
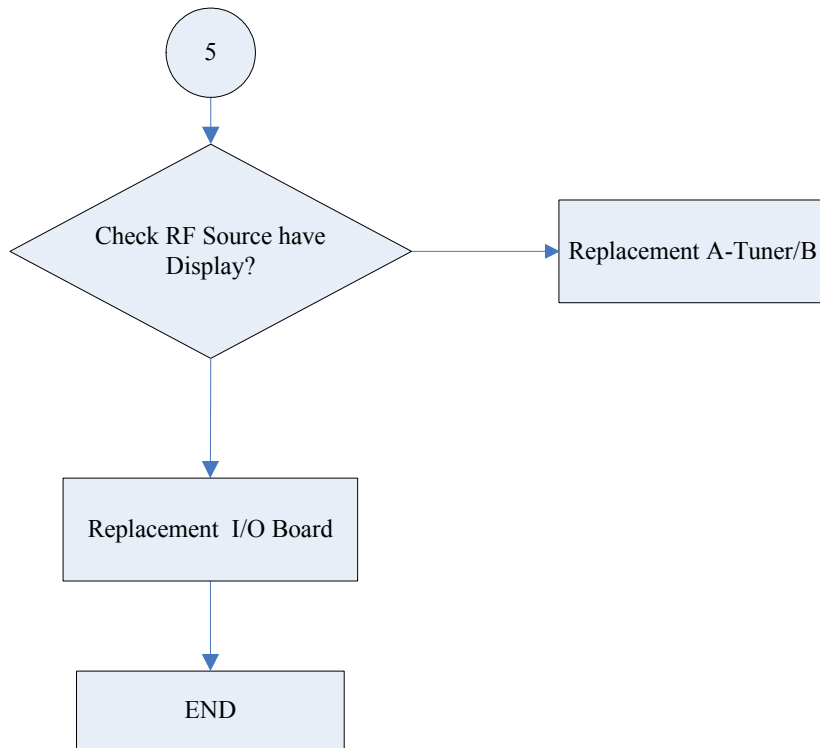


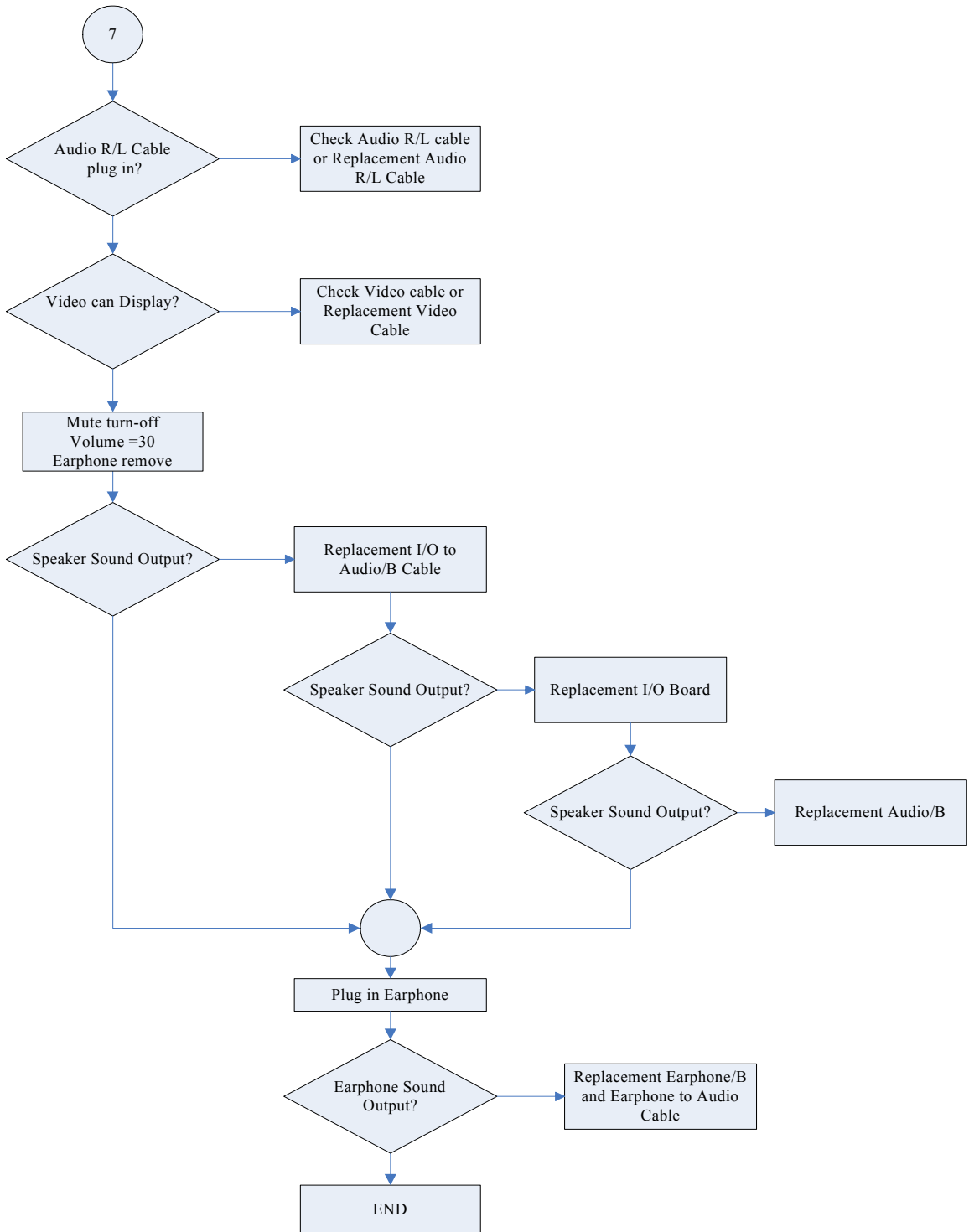
CMO Panel Only



AUO Panel Only





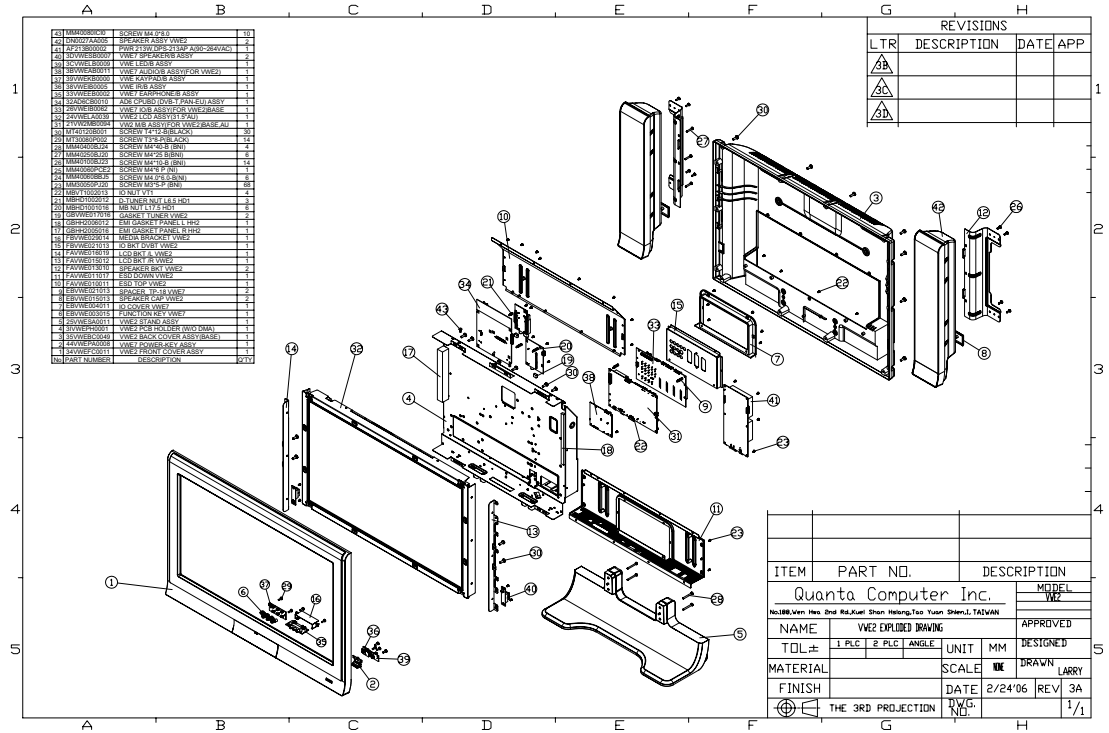


FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of AT3205/AT2605. 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.

AT3205 Exploded Diagram



AT3205 FRU List

Picture		Partname (Description)	Part Number
ACCESSORY			
		REMOTE CONTROL - EU DTV LF	25.M08V7.005
		BATTERY LR03G/2SK	23.M09V7.011
		BATTERY LR03	23.M09V7.012
BOARD			
		KEYPAD BOARD	55.M08V7.004
		IR BOARD	55.M08V7.003
		AV3/EARPHONE BOARD	55.M08V7.005
		LED BOARD	55.M08V7.002
		SPEAKER BOARD	55.M08V7.006
		AUDIO BOARD	55.M09V7.001

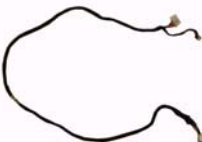
AT3205 FRU List

Picture		Partname (Description)	Part Number
		POWER BOARD	55.M09V7.002
		IO BOARD - PAL	55.M09V7.003
		DVB-T BOARD - EU AUS TWN	55.M08V7.007
		A-TUNER BOARD - PAL	55.M08V7.014
		D-TUNER BOARD - DVB-T	55.M08V7.015
		MAINBOARD DTV- PAL EU FOR AU	55.M09V7.004
CABLE			

AT3205 FRU List

Picture		Partname (Description)	Part Number
		CABLE - LVDS(AUO32) TO MB	50.M09V7.001
		INVERTER CABLE - AU	50.M09V7.002
		CABLE - POWER/B TO AUDIO	50.M09V7.003
		CABLE - POWER/B TO IO/B TO MB TO DVBT	50.M09V7.004
		CABLE - SPEAKER L	50.M09V7.005
		CABLE - SPEAKER R	50.M09V7.006
		CABLE - IO/B TO AUDIO	50.M09V7.007
		CABLE - IO/B TO AV3 6P/6P , EARPHONE TO AUDIO 4P/4P	50.M09V7.008

AT3205 FRU List

Picture		Partname (Description)	Part Number
		CABLE - EARPHONE TO AUDIO	50.M09V7.009
		CABLE - MB TO KEY TO IR TO LED	50.M09V7.009
		CABLE - GROUND 1P/1P	50.M12V7.007
		CABLE - GROUND	50.M11V7.009
		CABLE- SCART BLC AK	50.M03V7.019
		POWER CODE UK 3P 1.8M	27.M03V7.003
		POWER CODE ITALY 3P 1.8M	27.M03V7.001
		POWER CODE EU 3P 1.8M	27.M03V7.002
		POWER CORD SWISS 3 PIN	27.M11V7.001
CASE/COVER/BRAKET ASSEMBLY			
		LC BEZEL ASSY	60.M09V7.001
		FRONT DOOR	42.M09V7.002
		BACK COVER	60.M09V7.002

AT3205 FRU List

Picture		Partname (Description)	Part Number
		VWE7 POWER-KEY ASSY	47.M08V7.001
		FUNCTION KEY VWE7(EBVWE003,REV3B)	47.M08V7.002
		MEDIA BRACKET	33.M09V7.001
		IO COVER	42.M08V7.002
		SPEAKER CAP	42.M09V7.001
		TOP SHIELDING	33.M09V7.002
		SPEAKER BRACKET R=L	33.M09V7.003
		LCD BRACKET R	33.M09V7.004
		LCD BRACKET L	33.M09V7.005
		IO SHIELDING - EU	33.M09V7.006

AT3205 FRU List

Picture		Partname (Description)	Part Number
		IO BRACKET - DVBT	33.M09V7.007
		PCB HOLDER	60.M09V7.003
		STAND ASSY	60.M09V7.004
LCD			
		LCD(TFT) 31.5 IN. T315XW01 V5 MODULE	56.M03V7.002
MISCELLANEOUS			
		EMI GASKET PANEL R HH2(GBHH2005,REV3A)	47.M12V7.002
		EMI GASKET PANEL L HH2(GBHH2006,REV3A)	47.M12V7.001
		SPACER_TP-17 VWE7(EBVWE021,REV3A)	47.M09V7.001
		GASKET TUNER VWE2(GBVWE017,REV3A)	47.M09V7.002
		LCD PANEL PROTECT FILM	47.M09V7.003
SPEAKER			
		SPEAKER 10W	23.M09V7.001
LABEL			
		LABEL POWER	40.M12V7.001
		IO LABEL - PAL	40.M09V7.001
		RATING LABEL	40.M09V7.002
SCREW			
		SCREW M4.0*8.0-I(NI)-NYLOK	86.M11V7.002
		MB NUT L17.5 HD1(MBHD1001,REV3A)	86.M08V7.001

AT3205 FRU List

Picture		Partname (Description)	Part Number
		D-TUNER NUT L6.5 HD1(MBHD1002,REV3A)	86.M08V7.002
		IO NUT VT1(MBVT1002,REV3A)	86.M01V7.010
		SCREW M4*6 P (NI)	86.M01V7.002
		SCREW M4*10-B (BNI)	86.M03V7.002
		SCREW M4*25 B(BNI)	86.M09V7.001
		SCREW M4*40-B (BNI)	86.M09V7.002
		SCREW T4*12-B(BLACK)	86.M03V7.004
		SCREW M3*5-P (BNI)	86.M12V7.003
		SCREW T3*8-P(BLACK)	86.M03V7.003
PACKING			
		EPE SHEET - AT3205	47.M09V7.004
		EPE BAG(1180WX780L)	47.M09V7.005
		EPS FOAM(T-L)	47.M09V7.006
		EPS FOAM(B-L)	47.M09V7.007
		EPS FOAM(B-R)	47.M09V7.008
		EPS FOAM(T-R)	47.M09V7.009
		CARTON(COVER)	47.M09V7.010
		EPE SPONGE(MONITOR) VWE2(GBVWE021,REV3A)	47.M09V7.011
		CARTON (BASE) - AT3205	47.M09V7.012
		CARTON CLASP VW7(JXVW7001,3A)	47.M08V7.020