

Acer AT4230C 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 AT4220A service guide.

Date	Chapter	Updates
January 15, 2007		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: 1366 x 768
- 20 CCFTs backlight system
- Display area: 42 inches
- Display color: 16.7 million colors
- Input signal: one-channel LVDS
- Contrast ratio: 1200/1 (typical)
- Brightness: 500 Cd/m² (typical)
- Response time (Tr + Tf): 8 ms
- Viewing angle: 89° (L)/ 89° (R), 89° (U)/ 89° (D)

I/O Functions

- RCA jack for YPbPr, YCbCr, video and audio input
- RCA jack for YPbPr, YCbCr, CVBS input
- 4-pin S-Din for S-Video input
- 15-pin D-sub for VGA
- 19-pin HDMI connector
- RCA jack for HDMI analog audio input
- RCA jack for all source audio output
- F type terminal for DVB-T digital TV input
- F type terminal for analog TV/CATV input
- 3.5mm jack for PC audio line input

Video Functions

- NTSC video format support
- 480i, 480p/576p, 1080i and 720p format support
- Built-in motion adaptive 3D digital comb filter, high performance 5-line comb filter, Y/C separator
- 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 pull down
- Video enhancement feature including: DCTI/ DLTI/ H&V peaking
- Full 10-bit data path to ensure greater quality and minimalization of round-off errors

Mechanical

- VESA mounting holes
- Swivel: 0°

Compatibility

Multi-Sound System

- MTS (NTSC), (Stereo/ SAP/ Mono sound system)

Power Source

- Input voltage: 90 ~ 264V, 47 ~ 63Hz
- Input current: 3.47A (Max.)
- Power consumption: 347W (Max.)
- Stand-by: 3W (Max.)

Remote Control

- Multi-function remote control

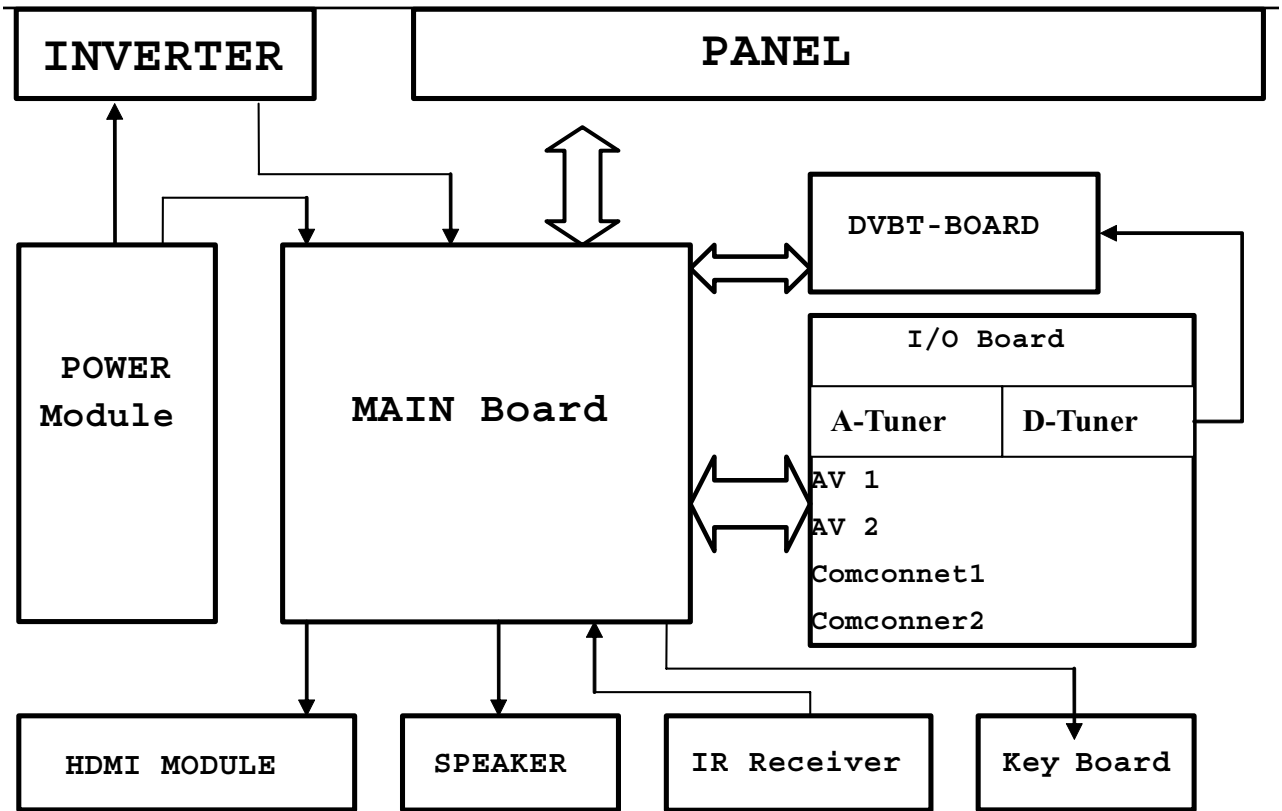
Speaker

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

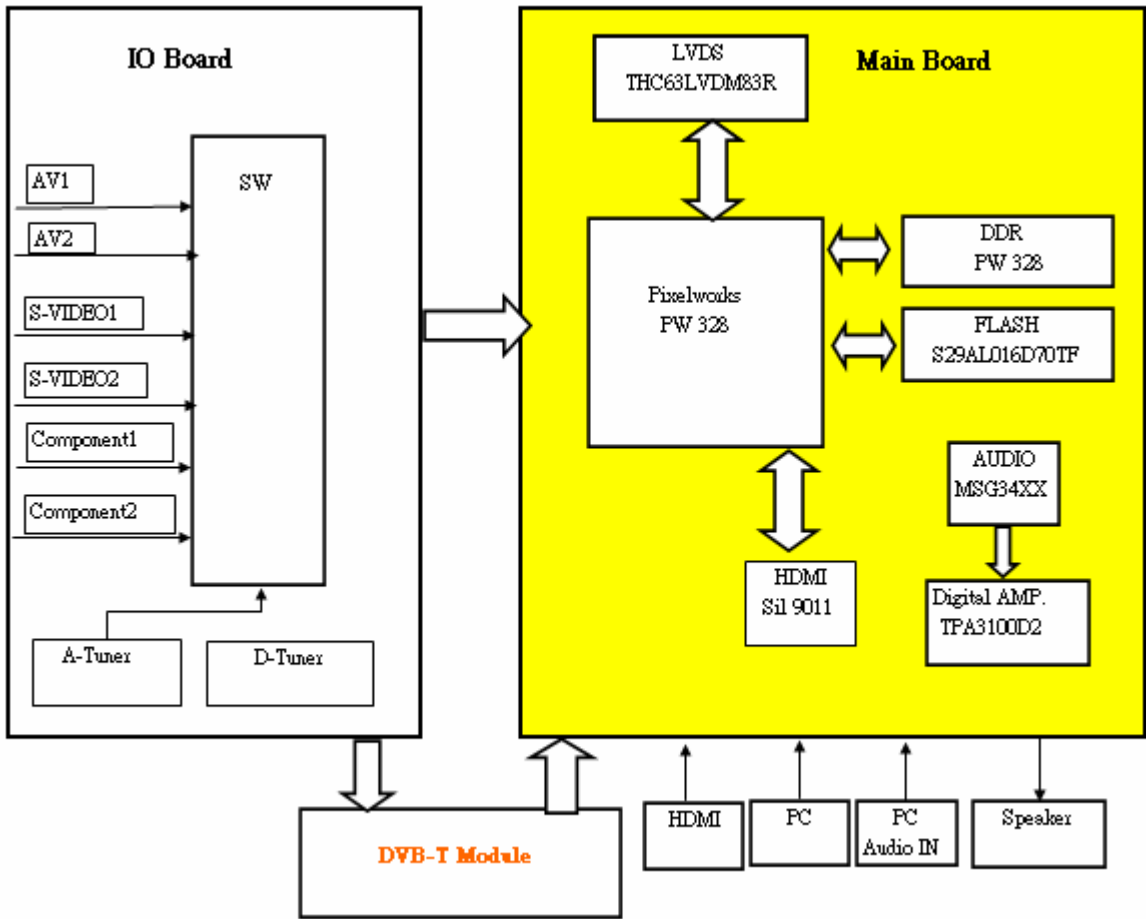
Others

- 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



Hardware Specification and Configuration

1. LCD Panel Specification

Panel specification	
Outline dimension	983.0 (H) x 576.0 (V) x 52.7 (D)
Display area	42.02 inch
Resolution (pixels)	1366 x 768
Pixel pitch	0.6 (H) x 0.6 (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)
Weight	15000g (typical)
Backlight	20 CCFTs
Input signal	1-channel LVDS
Optimum viewing direction	6 o'clock
Backlight Power consumption	174W (typical)

2. Display Electrical and Functional Specification

2.1 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">• NTSC (3.58M) color system
TV Systems	<ul style="list-style-type: none">• NTSC-M (3.58M) system receivable• VHF/ UHF/ CATV, 181 channels auto-preset tuning• Full frequency range from 54MHz to 806MHz
YUV inputs	<ul style="list-style-type: none">• YCbCr (480i)• YPbPr (480P, 1080i, 720p)
VGA inputs	<ul style="list-style-type: none">• Horizontal input frequency range: 30KHz to 70KHz• Vertical input frequency range: 56Hz to 75Hz• Max. resolution: 1360 x 768
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

2.2 Video Input

CVBS Input Signal

Type	Analog
Polarity	Positive
Level	1 Vp-p (with Sync.)
Impedance	75 Ω +/- 5%
Interface	RCA jack, yellow color

S-Video Input Signal

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

YUV (YCbCr or YPbPr) Input Signal

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

2.3 Audio Input/Output & Speaker

Audio input (for Y/ Pb/ Pr & Video)

Level	500 mVrms
Type	Stereo R/L channels
Impedance	More than 22K Ω
Interface	RCA Jack, R: Red color, L: White color

Audio output (for all source)

Level	500 mVrms (typical)
Type	Stereo R/L channels
Impedance	Low Impedance
Interface	RCA Jack, R: Red color, L: White color

PC line In

Level	500 mVrms
Type	Stereo R/L channels
Impedance	More than 22K Ω
Interface	3.5mm Stereo jack, Pantone 577C, Lime color

Audio Amplifier and Built-in Speaker

Audio Amp:	8W + 8W (at 500m Vrms input)
Speaker	20W (10W + 10W)
Speaker impedance	4 Ω at 1KHz

2.4 DVB-T RF Input: Technical Brief for SD DVB-T Module

Features	Specifications	Parameters
Terrestrial Tuner/Demodulator	Input frequency	VHF, UHF Band (Full Band)
	Standard	DVB-T (ETS 300 744)
	Channel Bandwidth	6 MHz, Taiwan Channel
	COFDM System	2K, 8K carrier Hierarchical supported
	Demodulation type	QPSK, 16QAM, 64QAM
	Guard Interval	1/32, 1/16, 1/8, 1/4 active symbol duration
	FEC	1/2, 2/3, 3/4, 5/6, 7/8
System	Antenna power	N/A
	CPU	ZR39151
	Transport	DVB compliant
	Flash memory	2Mbytes
Video	System memory	16Mbytes
	Bitstream accepted for Video	MPEG-1 Video (ISO / IEC 11172-2) MPEG-2 Video (ISO / IEC 13818-2)
	MPEG-2 profiles / levels Supported	MP@ML, SP@ML, MP@LL
	Frame / Field rate	30/ 60 Hz
	Video data rate supported	1 ~ 15 Mbps
	Aspect ratio	4:3 and 16:9 with Pan and Scan
Audio	Output Video for digital programs	NTSC Y/U/V
	Format	Compliant with ISO11172-3 layer I and layer II
	Sampling rate	32, 44.1, 48K Hz
	Bit rates	Layer I 32-448KHz Layer II 32-384KHz
	Audio outputs for digital programs	Stereo for AL, AR
Communication Interface	UART	TXD / RXD Bit Rate: up to 115200bps
	Rear panel	RF IN F-type, Female
Power Interface	Input voltage	5V@ 1A max., 12V@ 0.26A max.
	Power consumption	TBD
Interface with LCDTV	36 pins QCI standard interface	

3. 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

- Operating range of line voltage: AC 90V to 264V, 47Hz to 63Hz
- Power consumption: under 347W

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.
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.

4. Firmware Specification

4.1 Preset Mode for VGA Input

There are 14 support modes for VGA inputs during the manufacturing process.

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

4.2 Preset Mode for HDMI Input

There are 20 factory preset modes for HDMI inputs are saved during the manufacturing process.

Preset Mode	Pixel Format	Horizontal Frequency (KHz)	Horizontal Polarity	Vertical Frequency (Hz)	Vertical Polarity	Standard
1	640 * 480 60	31.47	-	59.94	-	
2	640 * 480 72	37.86	-	72.81	-	
3	640 * 480 75	37.5	-	75	-	
4	640 * 480 85	43.27	-	85	-	
5	800 * 600 56	35.15	-	56.25	+	
6	800 * 600 60	37.88	+	60.31	+	
7	800 * 600 72	48.07	+	72.18	+	

Preset Mode	Pixel Format	Horizontal Frequency (KHz)	Horizontal Polarity	Vertical Frequency (Hz)	Vertical Polarity	Standard
8	800 * 600 75	46.87	+	75	+	
9	800 * 600 85	53.67	+	85	+	
10	1024 * 768 60	48.36	-	60	-	
11	1024 * 768 70	56.47	-	70	-	
12	1024 * 768 75	60.02	+	75.02	+	
13	1024 * 768 85	68.67	+	84.99	+	
14	1280 * 768 60					
15	1360 * 769 60					
16	1280 * 720 50					
17	1280 * 720 60	45		60		
18	576P 50					
19	1920 * 1080i 50					
20	1920 * 1080i 60	33.75		60		

4.3 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.

5. VESA DDC

The VGA/ DVI/ HDMI inputs will be capable of continuously transmitting its Extended Display Identification (EDID) information using Display Data Channel. It will automatically switch to DDC2 mode if a DDC2 capable host is detected in accordance with the VESA DDC standard.

In addition, the display can respond to a request for EDID, to be transmitted using DDC2, level B commands. If a DDC2 capable host is detected by the display, the display will switch to DDC2 communication.

The EDID will contain the manufacture name code QCI, product code, date of manufacture, and serial number.

For complete EDID data structure, please refer to VESA Extended Display Identification Data Standard.

Hardware implementation will be either integrate into micro-controller or be a separate electrical component. EDID memory will be protected against writing or other corruption through customer-accessible electrical connection and required communication channels. Password protection, use of an unpublished enable register, or use of direct electrical connection is acceptable levels of protection provided that the power-on Default State is that disabling writing. The serial number fields in the EDID will contain a unique identifying numbers among units of the same model. EDID table is defined as below.

5.1 For VGA Input

Product																
Revision																
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	00	FF	FF	FF	FF	FF	FF	FF	00	04	72	02	32	00	00	00
1	2D	DF	01	03	68	46	28	78	E8	DC	10	A2	58	45	9C	25
2	13	49	4B	AF	EE	00	31	40	45	40	61	40	00	00	00	00
3	00	00	00	00	00	00	69	21	50	B0	51	00	1B	30	40	70
4	36	00	02	90	31	00	00	1E	00	00	00	FD	00	32	55	1E
5	50	08	00	0A	20	20	20	20	20	20	00	00	00	FF	00	30
6	30	30	30	30	0A	20	20	20	20	20	20	20	00	00	00	FC
7	00	61	63	65	72	20	41	54	33	32	30	32	0A	20	00	5A

5.2 For HDMI Input (Optional)

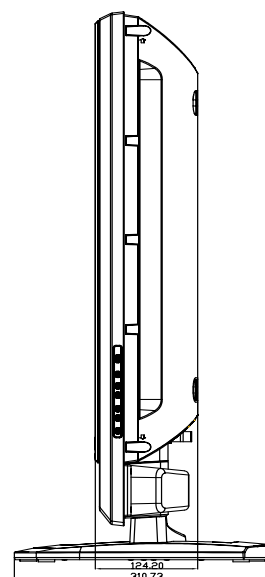
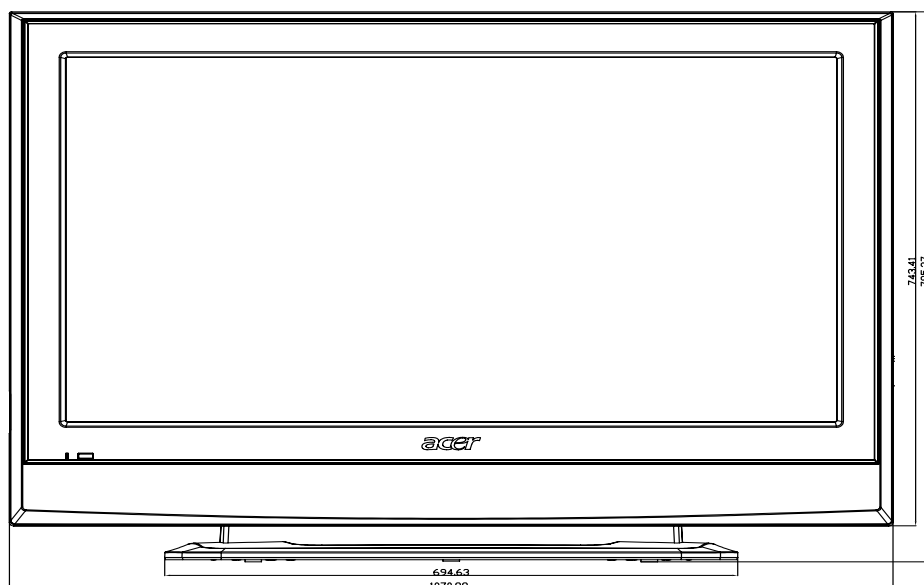
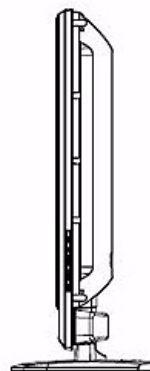
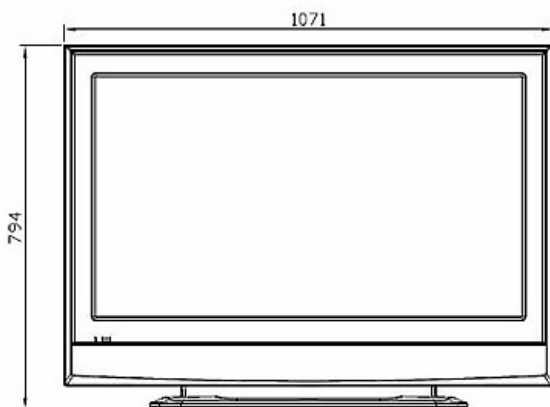
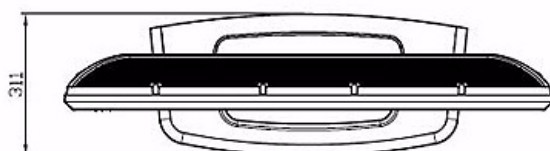
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	00	FF	FF	FF	FF	FF	FF	00	04	72	04	27	01	01	01	01
10	00	0F	01	03	80	3C	22	78	2A	3E	90	A7	54	46	98	24
20	10	49	4B	20	00	00	01	01	01	01	01	01	01	01	01	01
30	01	01	01	01	01	01	01	1D	80	18	71	1C	16	20	58	2C
40	25	00	C4	8E	21	00	00	9E	00	00	00	FD	00	32	55	1E
50	50	0B	00	0A	20	20	20	20	20	20	00	00	00	FF	00	31
60	32	33	34	0A	20	20	20	20	20	20	20	20	00	00	00	FC
70	00	41	63	65	72	20	41	54	32	37	30	34	0A	20	01	41
	02	03	19	71	46	85	14	04	13	12	03	23	09	07	07	83
	01	00	00	65	03	0C	00	10	00	01	1D	80	D0	72	1C	16
	20	10	2C	25	80	C4	8E	21	00	00	9E	01	1D	00	72	51
	D0	1E	20	6E	28	55	00	C4	8E	21	00	00	1E	01	1D	00
	8C	52	D0	1E	20	88	28	55	40	C4	8E	21	00	00	1E	8C
	0A	D0	90	20	40	31	20	0C	40	55	00	C4	8E	21	00	00
	18	8C	0A	D0	8A	20	80	2D	10	10	3E	96	00	C4	8E	21
	00	00	18	00	00	00	00	00	00	00	00	00	00	00	00	86

6. Factory Mode and Factory Default

- Factory mode entrance SOP: press “Volume-“ + “Channel+“ + “Power“ then you can enter the factory mode.
- Factory default reset SOP: press “Volume-“ + “Channel-“ + “Menu“ and all data will be recalled.

7. Physical Specification

Overall dimensions	794 (H) x 1071 (W) x 311 (D) mm
Overall dimension without stand	744 (H) x 1071 (W) x 125 (D) mm
Mass of display with cable	34.5 Kg approx.
VESA mounting holes	Compliant to VESA FPMPMI standard, 6 holes, 400 mm x 200 mm (6 mm, 1.0 pitch threaded) in the rear center for ARM



8. Environment Requirements

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)

Storage temperature: -20°C to 60°C

Storage and Shipping

Shipping temperature: -20°C to 60°C

Storage humidity: 10% to 90% (non-condensing)

Shipping temperature: 10% to 90% (non-condensing)

Altitude

Operating altitude: 0 to 10,000 feet
Shipping altitude: 0 to 40,000 feet
Storage altitude: 0 to 40,000 feet

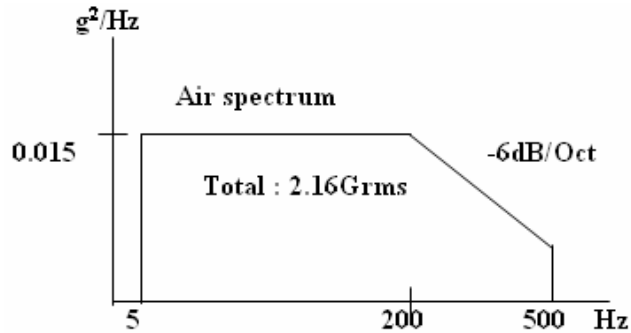
Units tested at an altitude up to 12,000 feet must operate at normal conditions without exhibiting abnormal behavior such as arcing or shutdown.

9. Transportation

9.1 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)

9.2 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 AT4230C series 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.

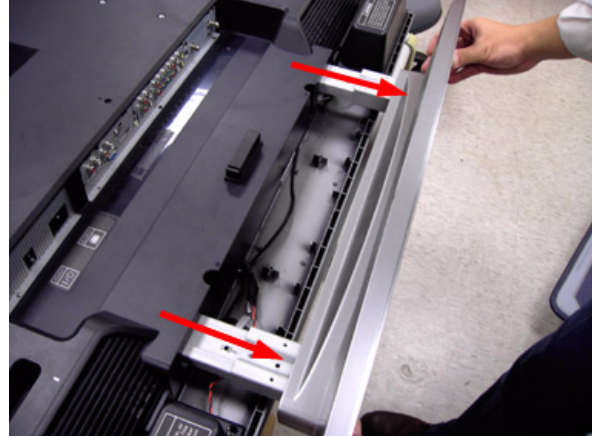
Before You Begin

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

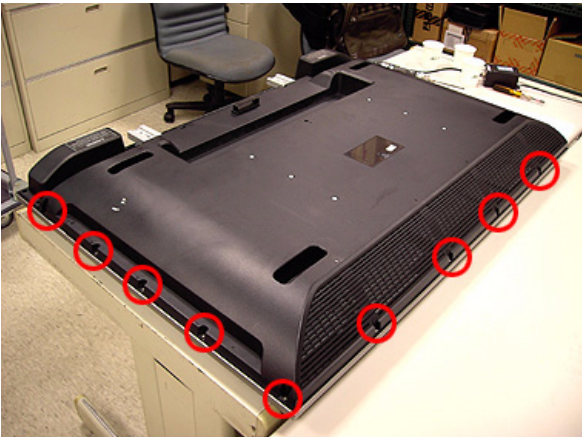
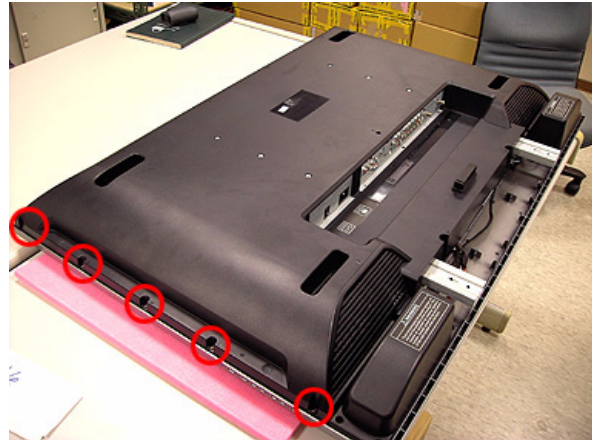
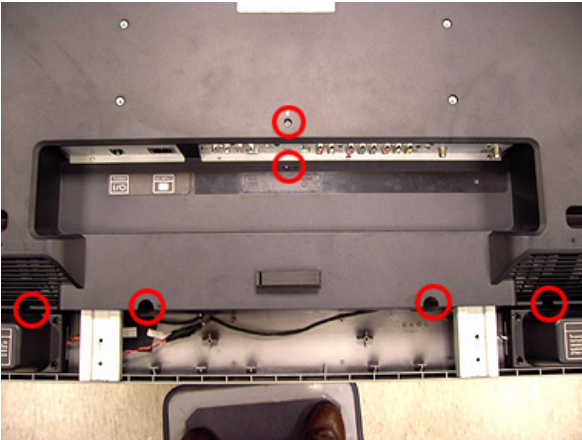
1. Turn off the power to the TV and all peripherals.
2. Unplug the AC adaptor and all power and signal cables from the TV.

Disassembly Procedures

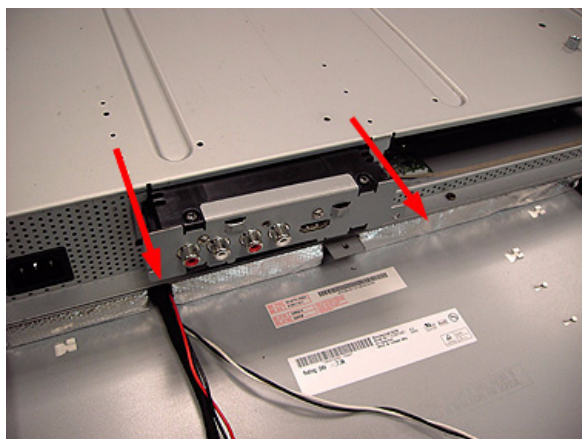
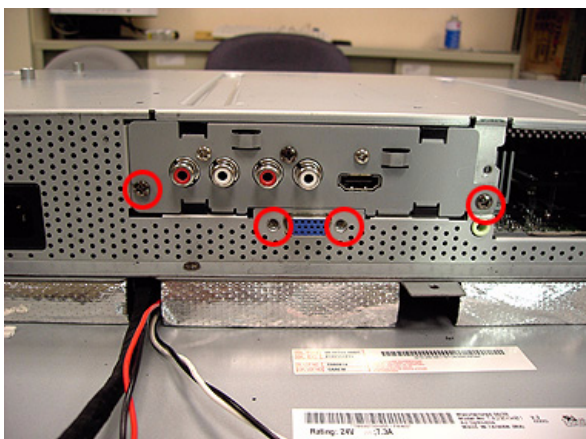
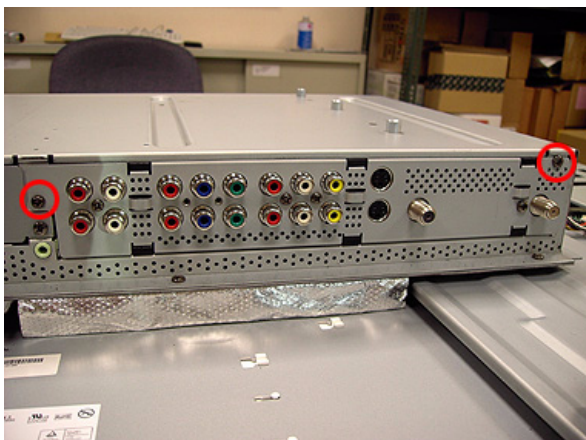
1. Release the six screws securing the TV Stand.
2. Then remove the TV Stand as the arrows indicate.



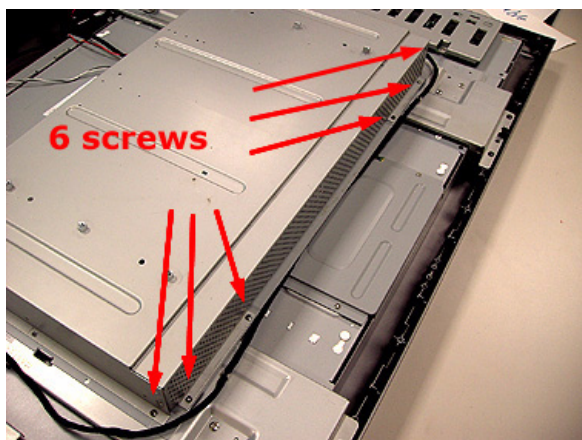
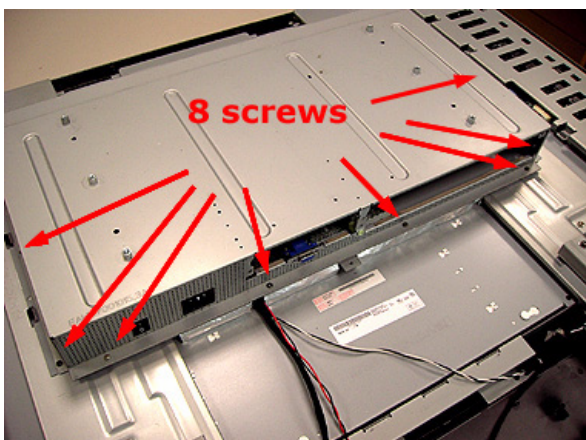
3. Release all the screws marked in red. Then remove the TV back cover.

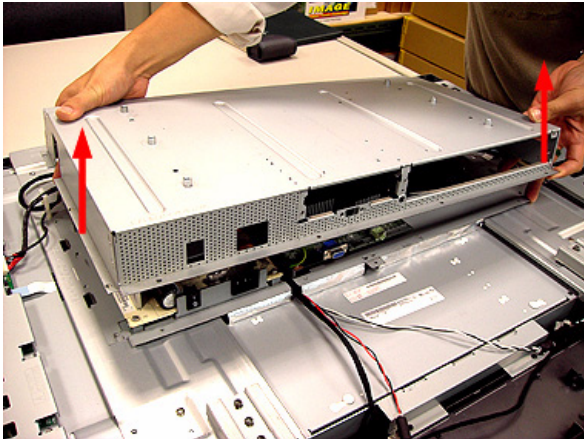


4. Release the two screws fastening the I/O box then you can pull out the I/O box.
5. Release the four screws fastening the HDMI box then you can pull out the HDMI box.

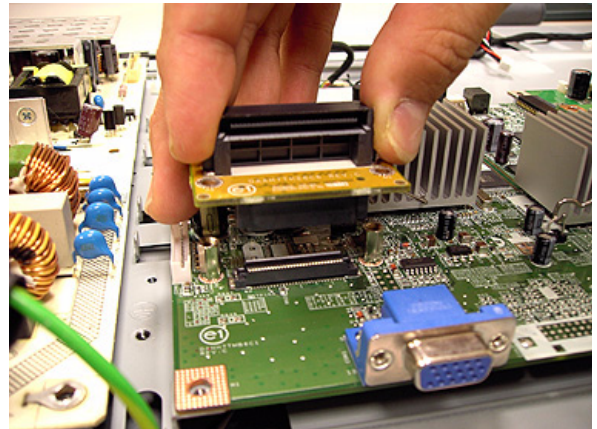
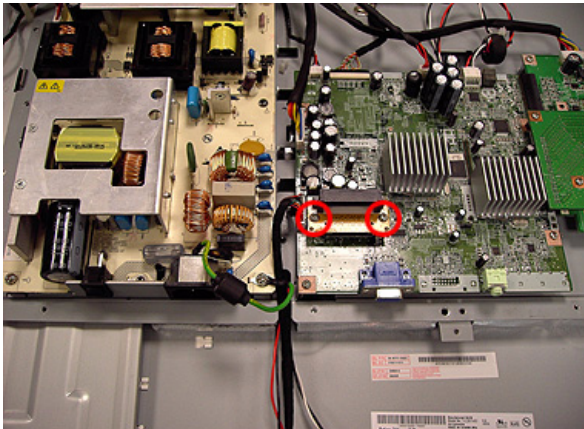
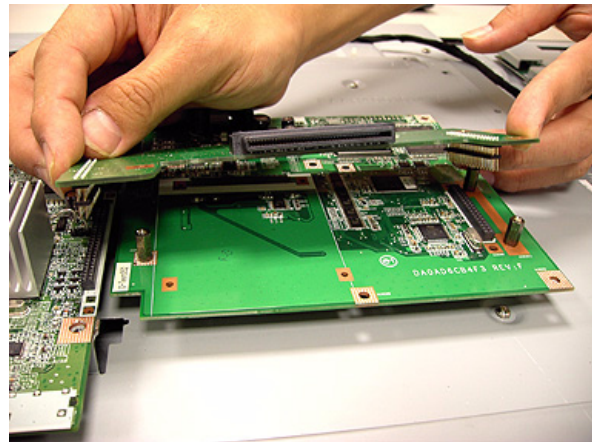
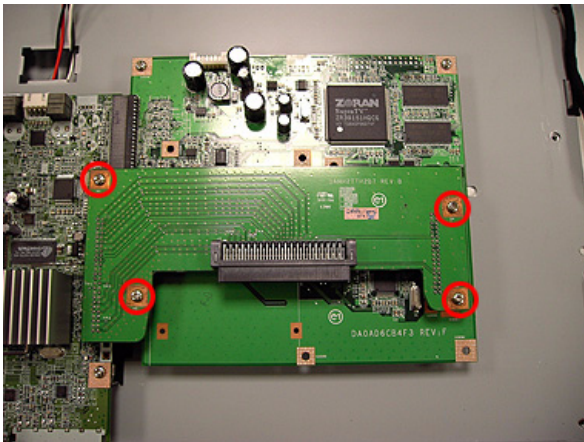


6. Release all screws securing the PCB holder, **14 screws in total**.
7. Then remove the PCB holder as the arrows indicate.

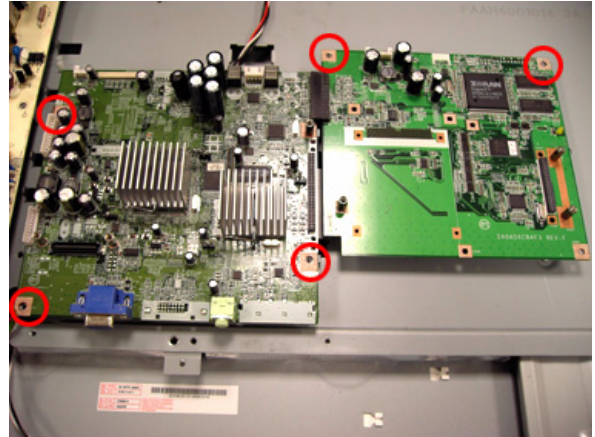
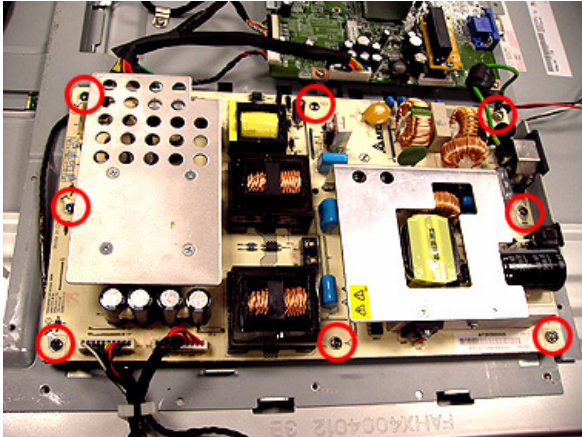




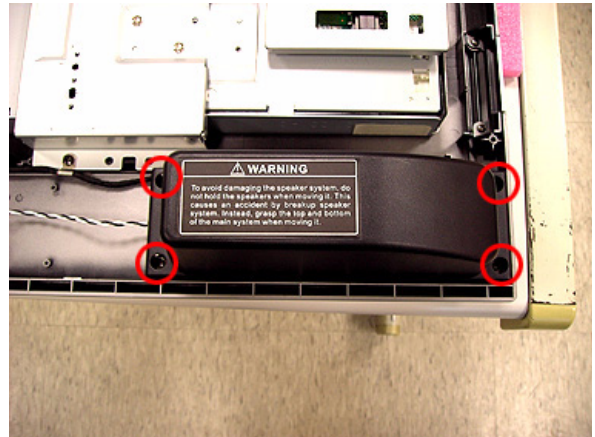
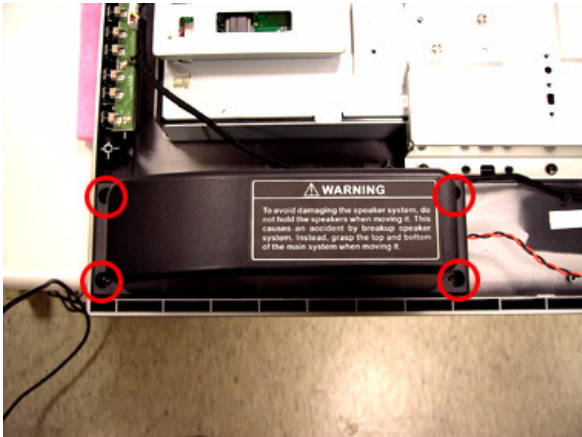
8. Release the four screws securing the I/O transfer board and slightly detach the I/O transfer board.
9. Release the two screws holding the HDMI transfer board and slightly detach the HDMI transfer board.



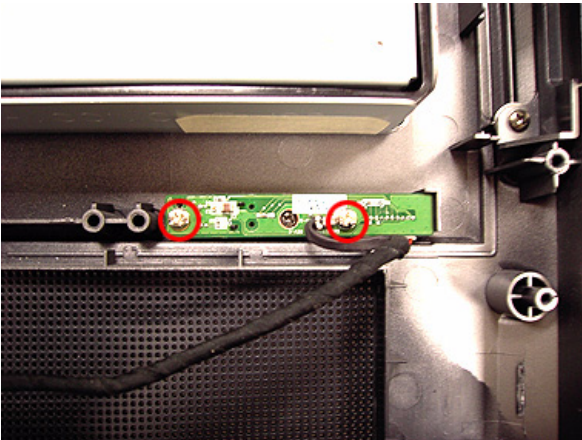
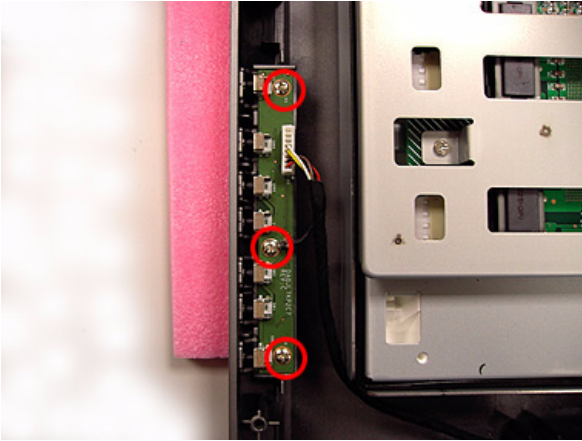
10. Disconnect and remove all the cables on the power board and main board and I/O board.
11. Then release the eight screws securing the power board and remove the power board.
12. Release the five screws holding the main board and the I/O board. Then remove the main board and the power board altogether.



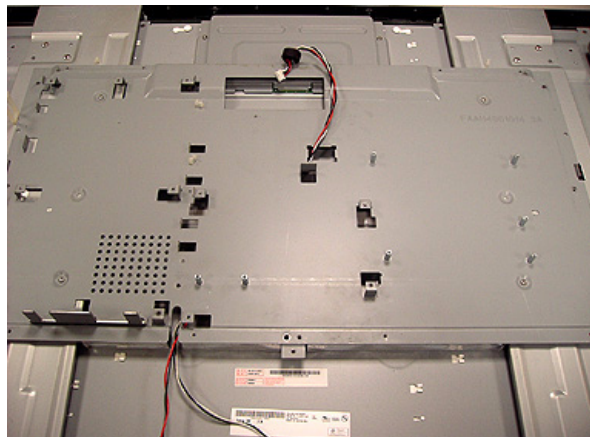
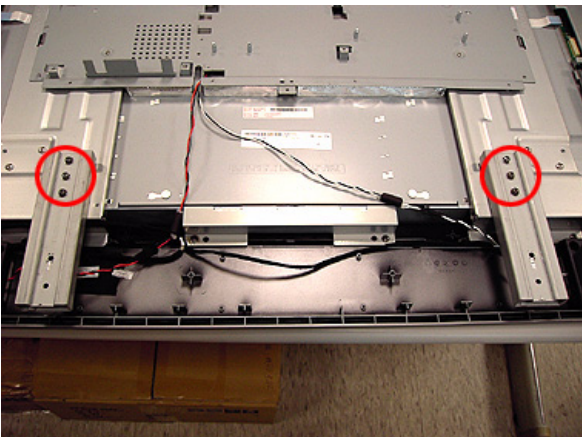
13. Release the four screws fastening the right speaker. Disconnect the right speaker cable then remove the right speaker.
14. Release the four screws holding the left speaker. Disconnect the left speaker cable then remove the left speaker.



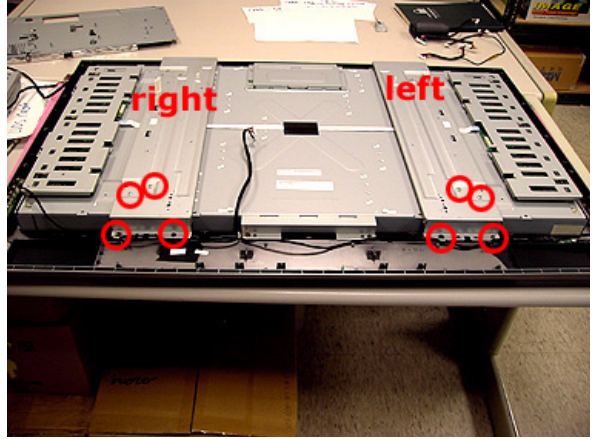
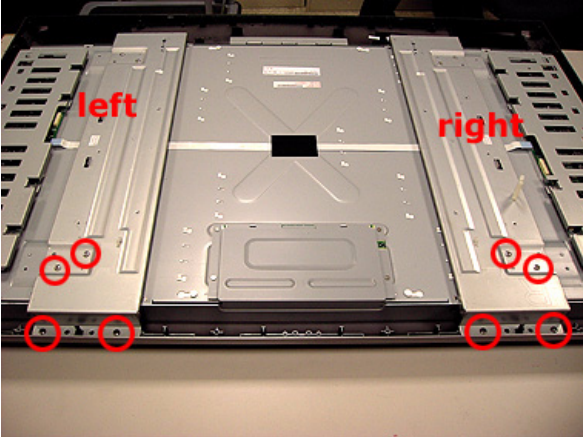
15. Release the three screws holding the button board then detach the function board.
16. Detach function key.
17. Release the two screws holding the IR board then detach the IR board.



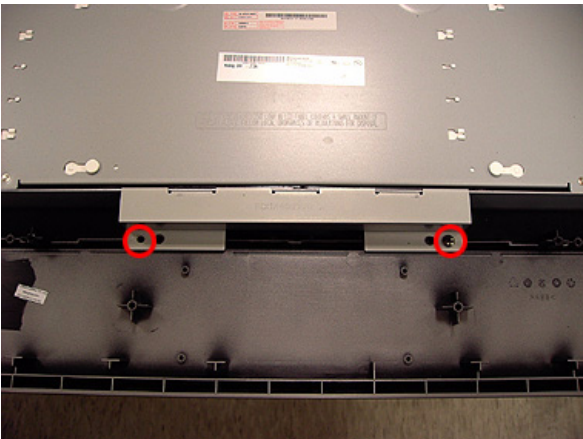
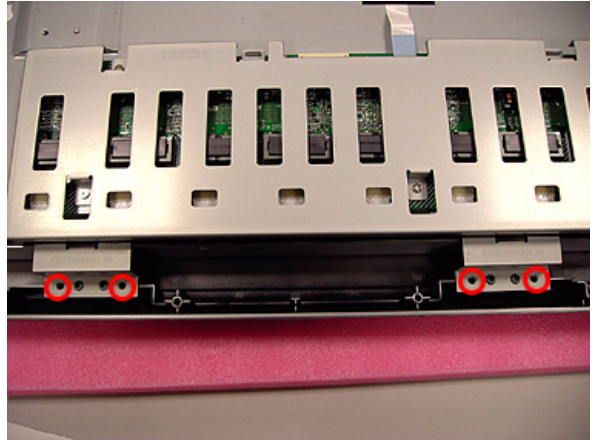
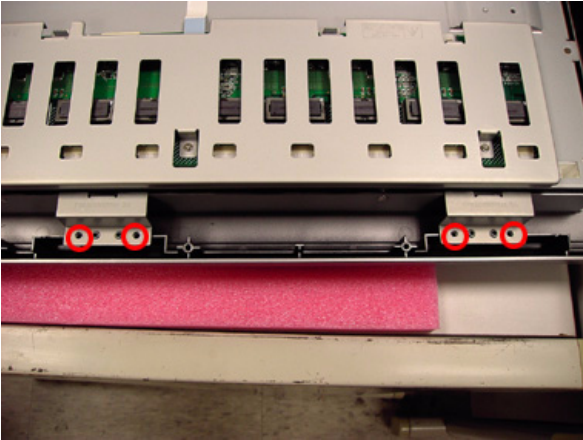
18. Release the six screws holding the TV stand bracket then remove the TV stand bracket.
19. Release the four screws holding the PCB tray then remove the PCB tray.



20. Release the 8 screws marked in red then remove the right and the left LCD brackets.



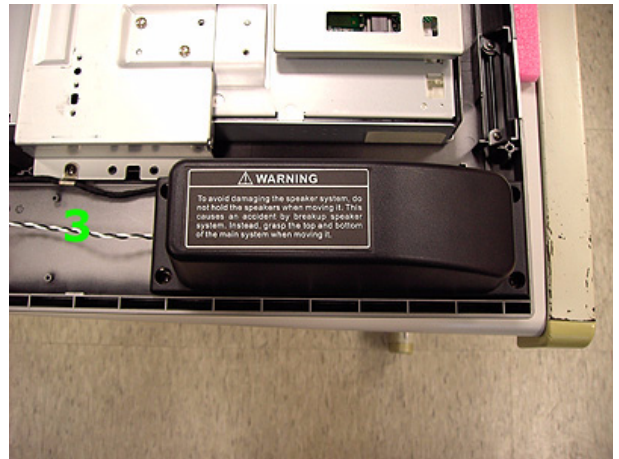
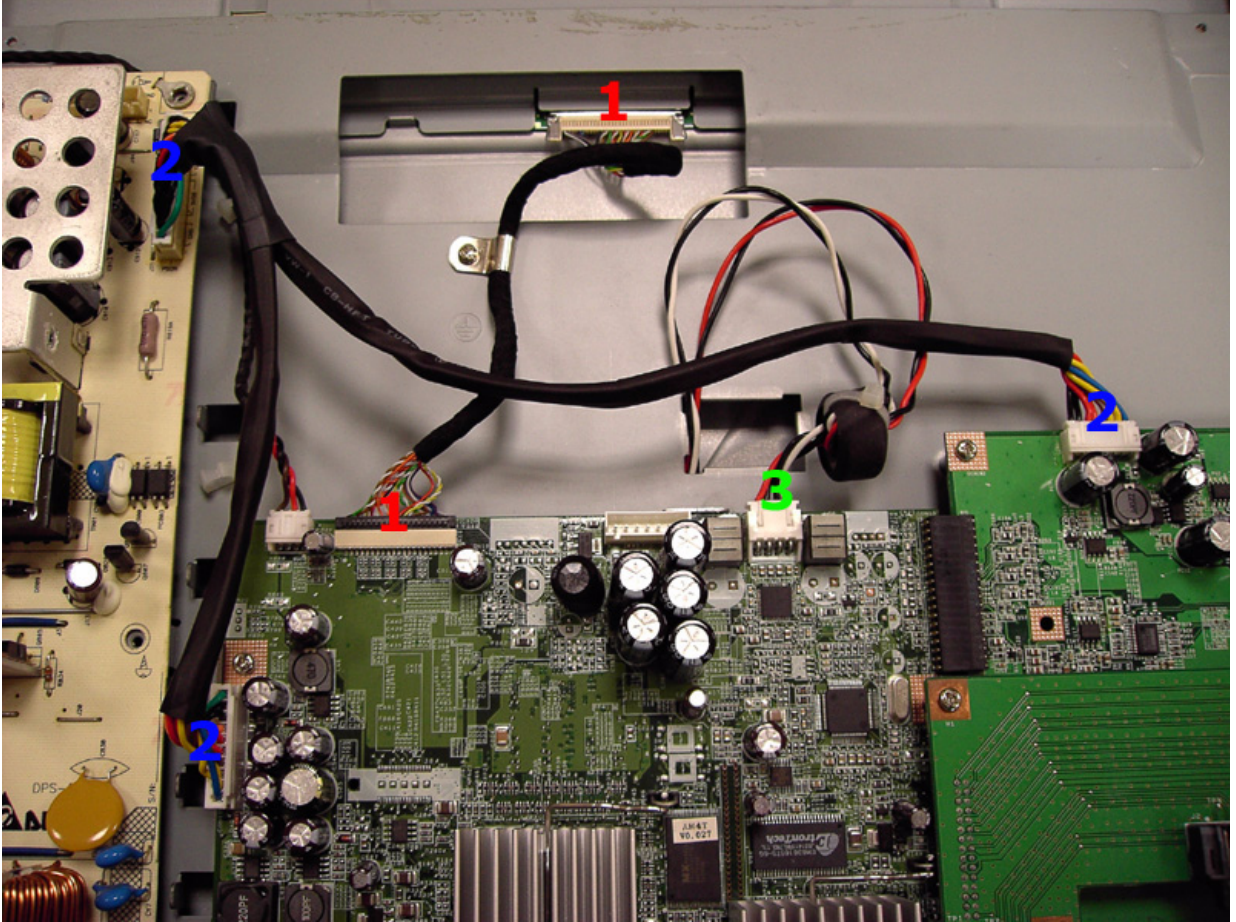
21. Release the screws holding the LCD then you can remove the LCD.



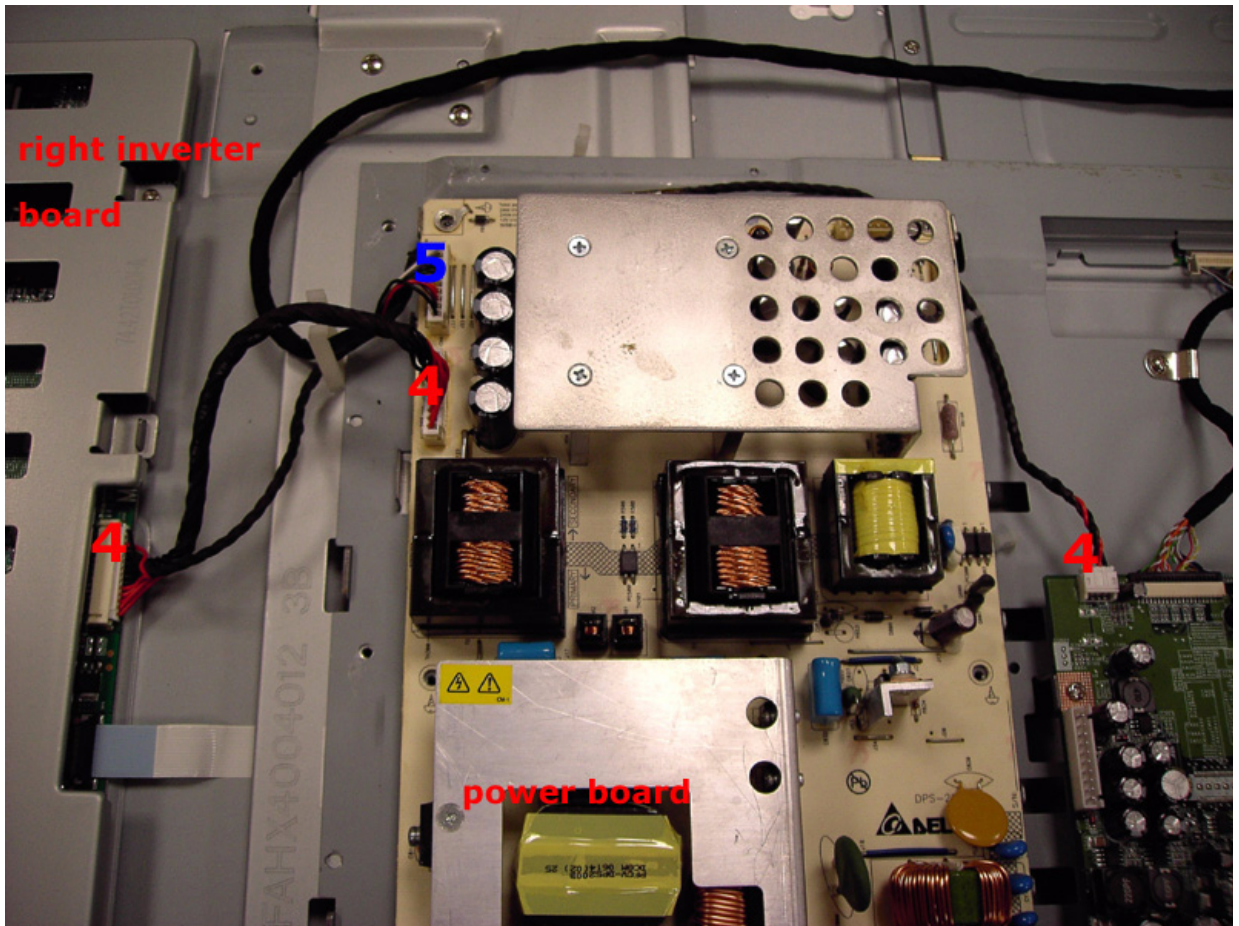
Board and Cable Placement

Please refer to this section to reconnect all cables when you do the assembly.

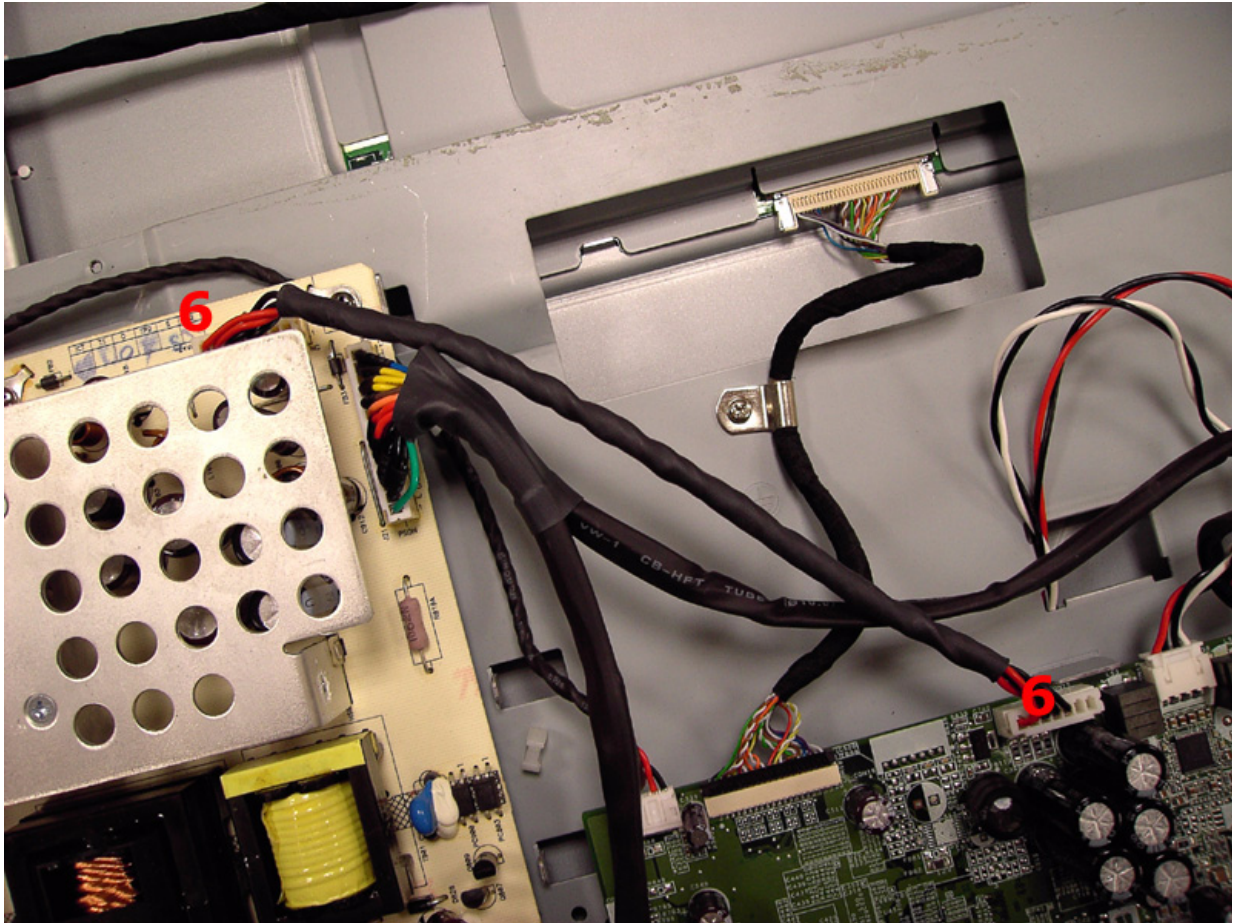
1. LVDS cable
2. Power board to main board to I/O board cable (14 pins/ 10 pins/ 8 pins)
3. Speaker cables: red/blace cable connected to right speaker, white/black connected to left speaker



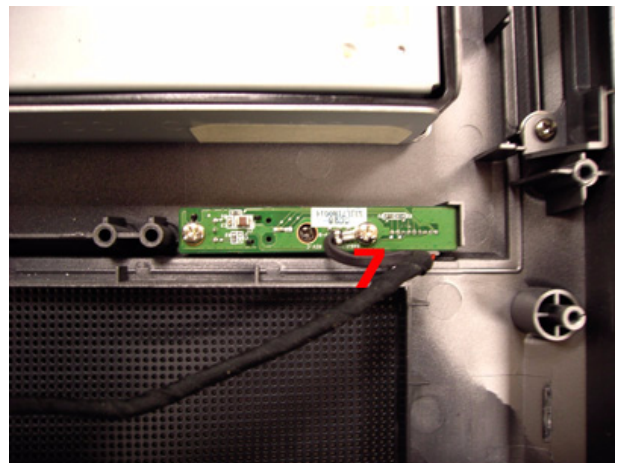
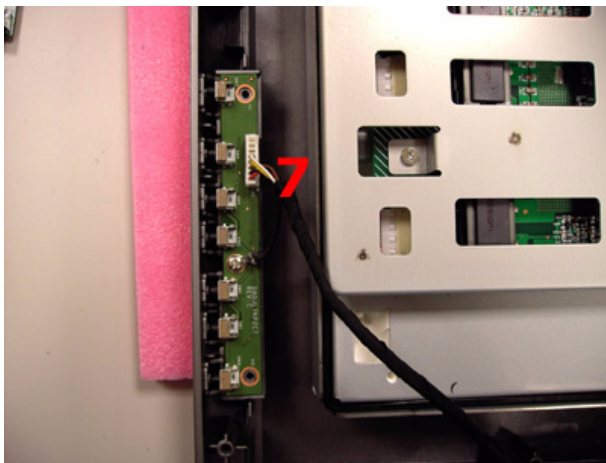
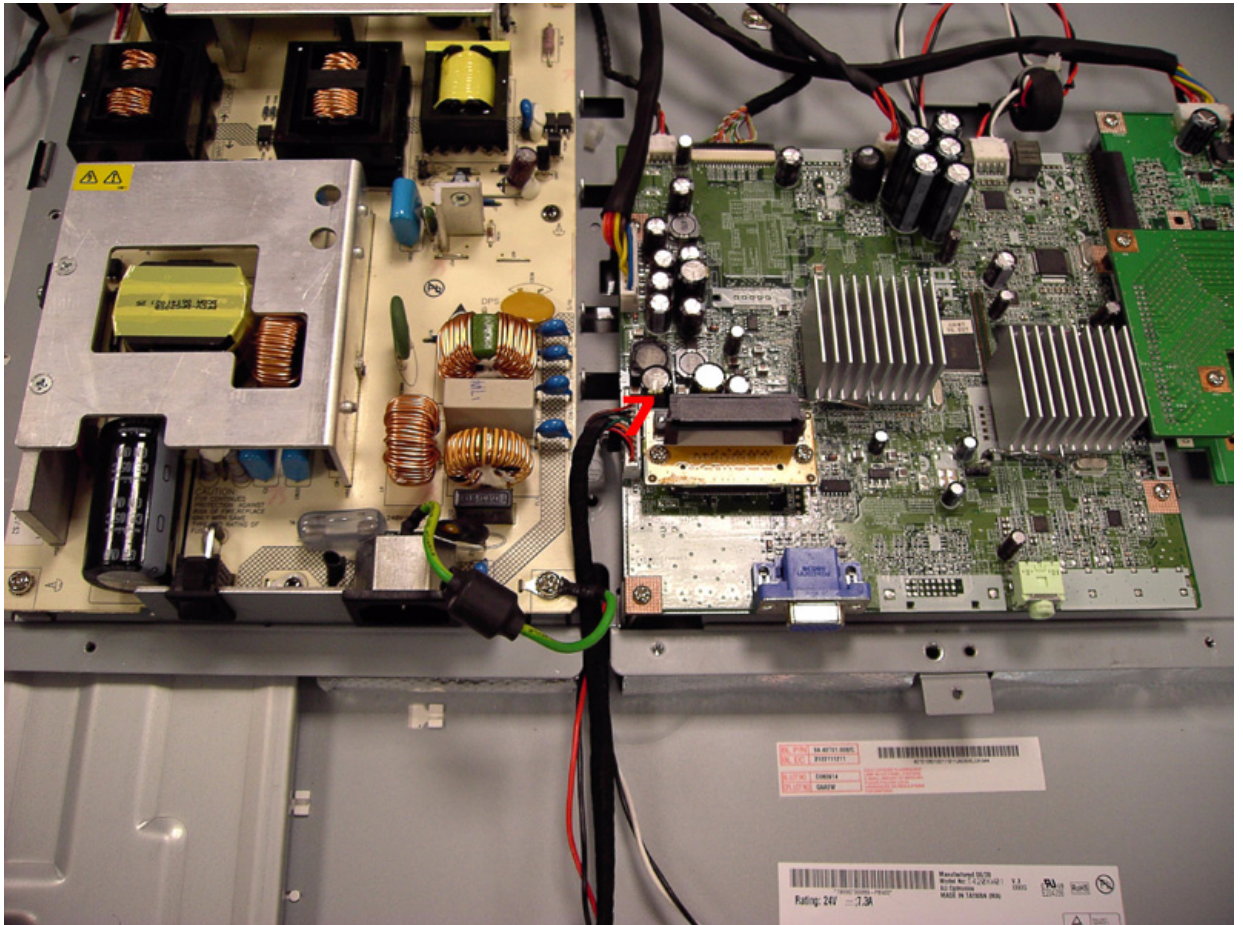
- 4. Power board to right inverter board to main board cable (14 pins/ 10 pins/ 4 pins)
- 5. Power board to left inverter board cable (12 pins/ 10pins)



6. Audio to main board cable (8 pins/ 7pins)



7. Main board to function key board to IR board cable (10 pins/ 9 pins/ 8 pins). The other two ends of this cable link to function key board and IR board.



Troubleshooting

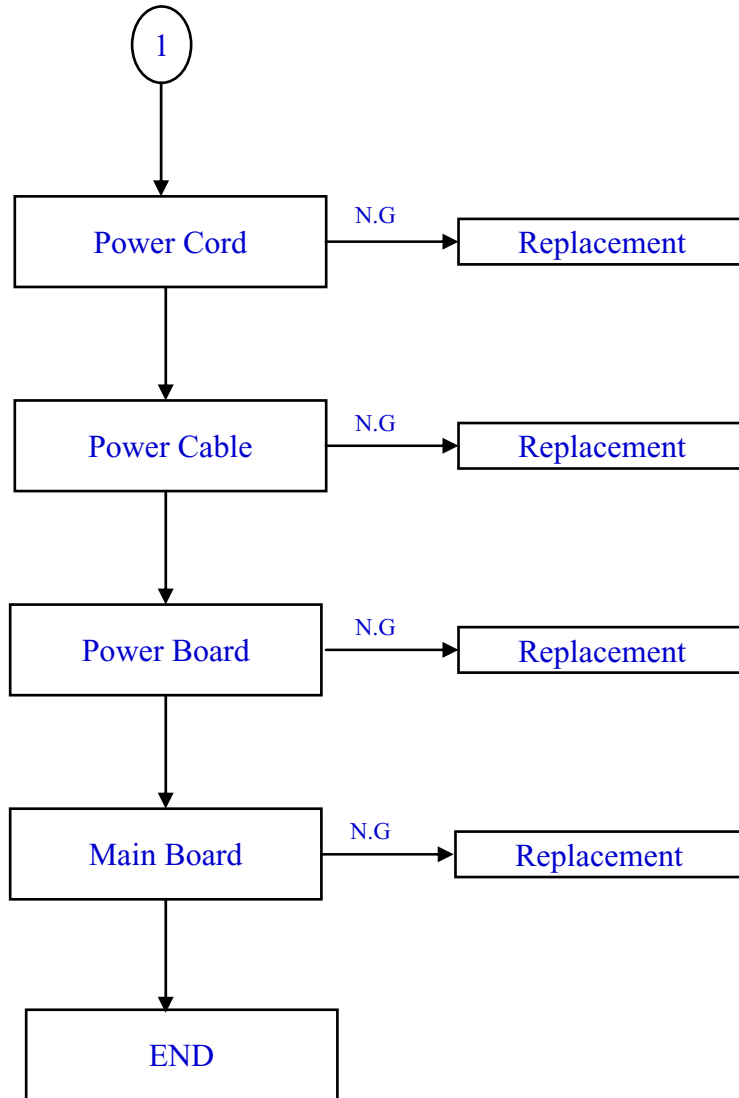
Use the following procedure as a guide for Acer LCD TV AT4230C series problems.

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.

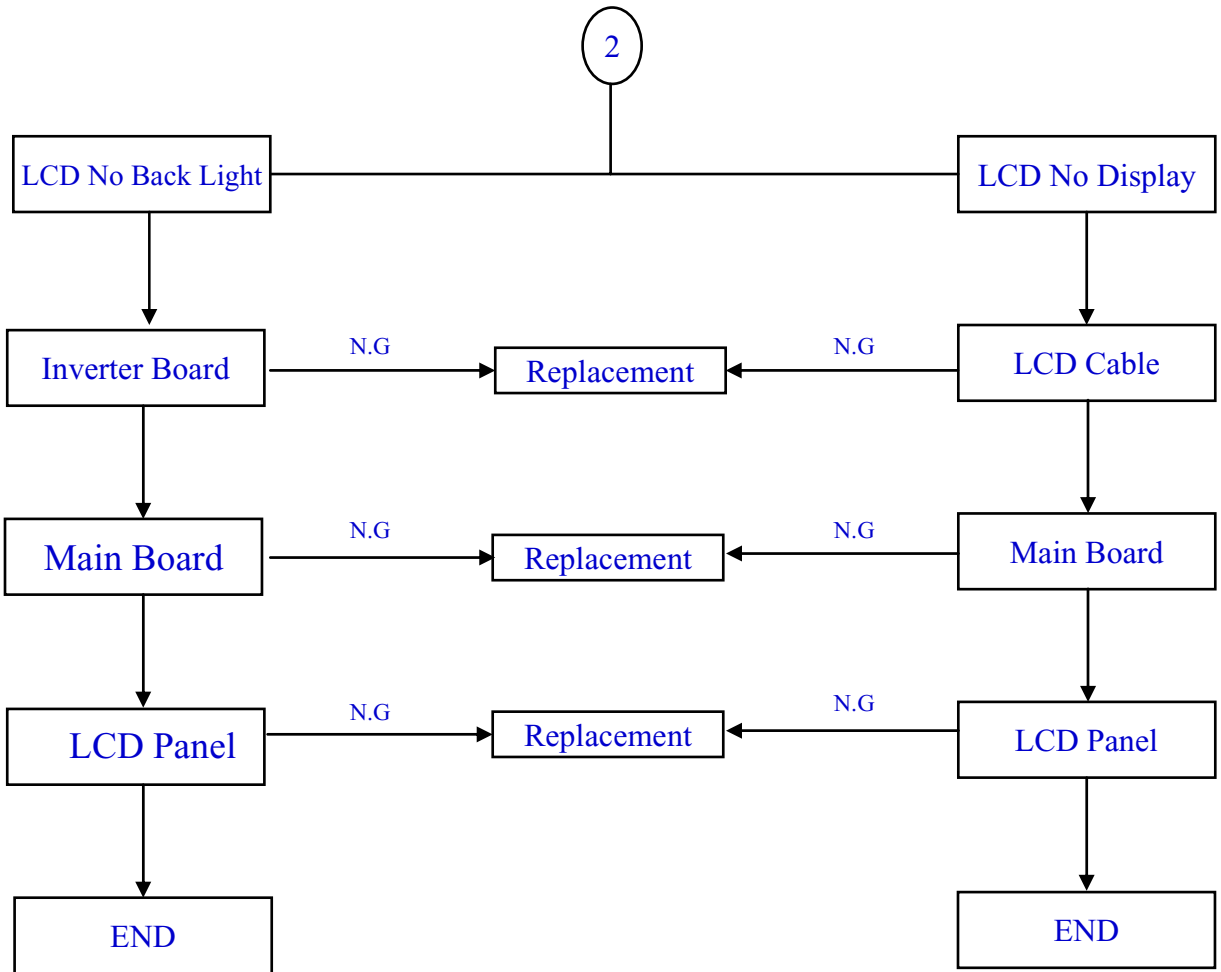
1. Duplicate symptom and obtain the failing symptoms in as much detail as possible.
2. Distinguish symptom. Verify the symptoms by attempting to re-create the failure by running the diagnostic test or by repeating the same operation.
3. Disassemble and assemble the unit without any power sources.
4.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

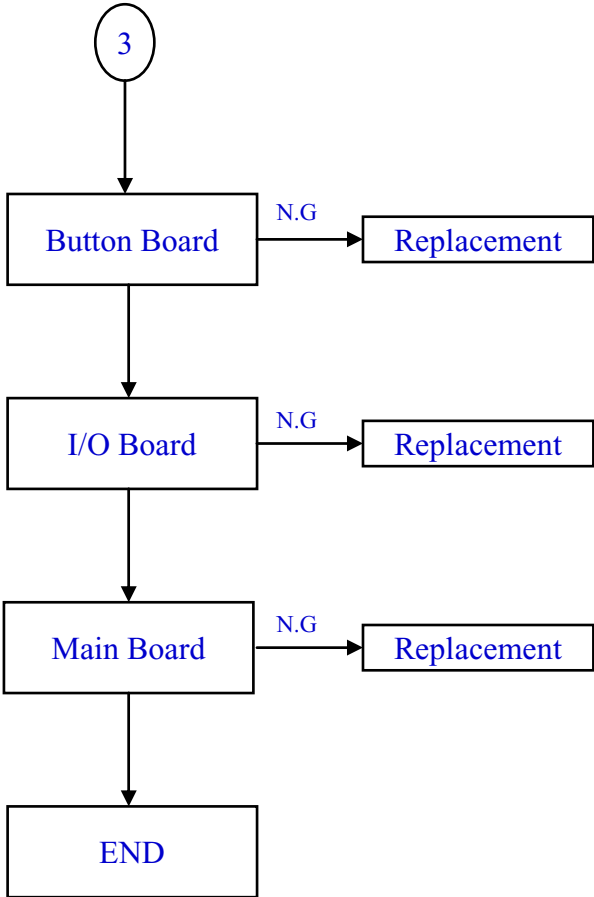
No Power on



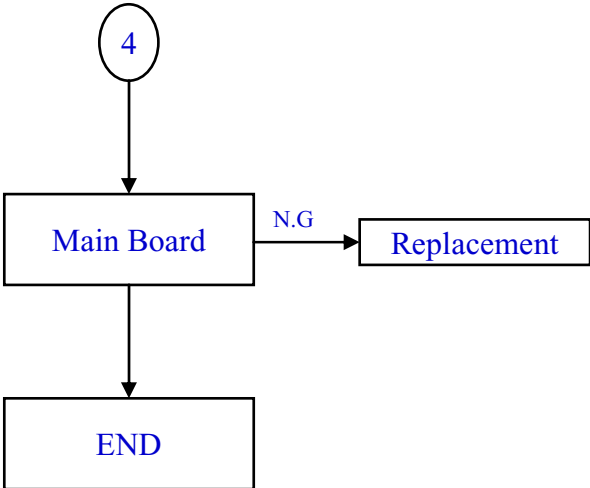
LCD Fails



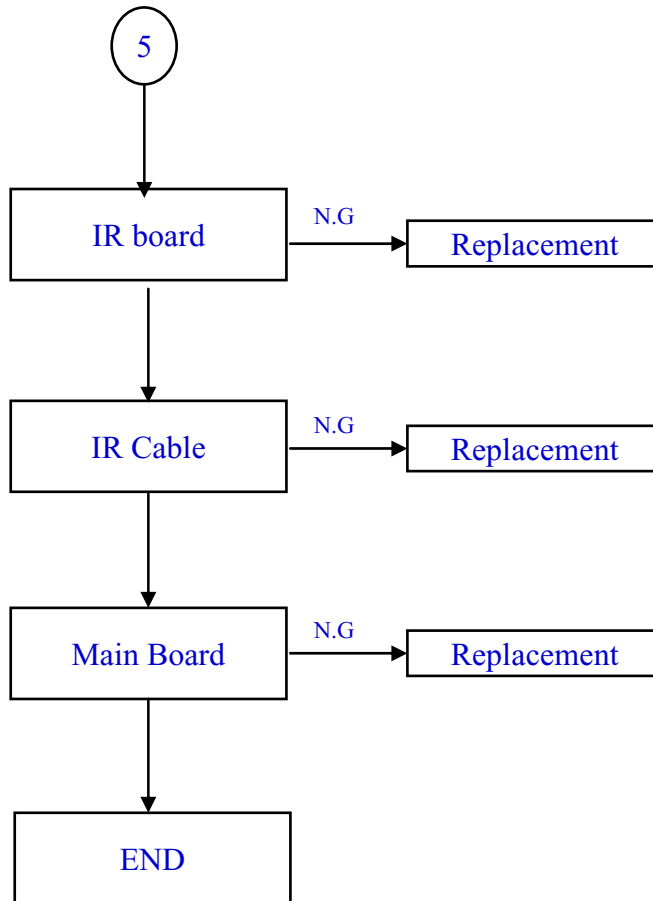
ATV Channel Fails



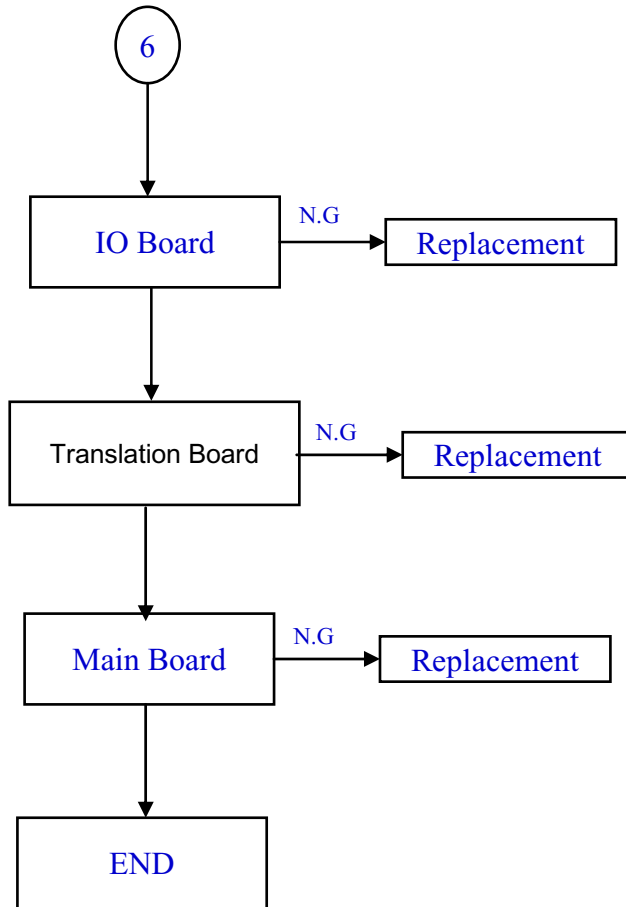
DDC/ POP PIP Fails



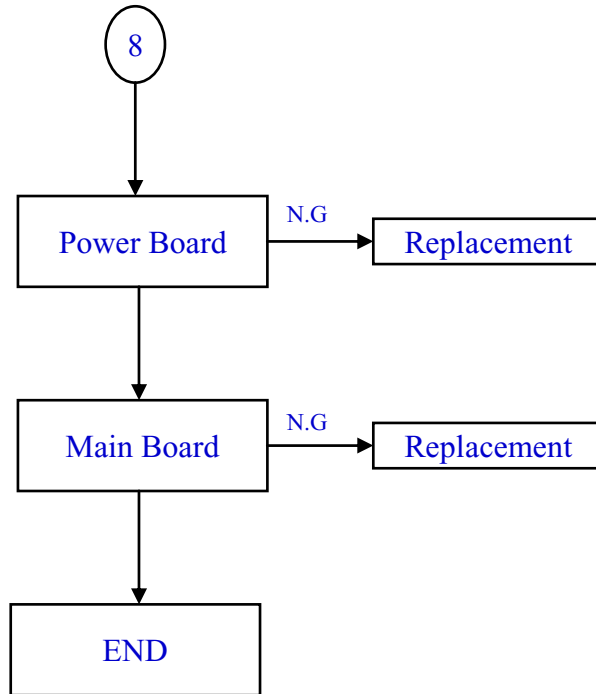
Remote Control Fails



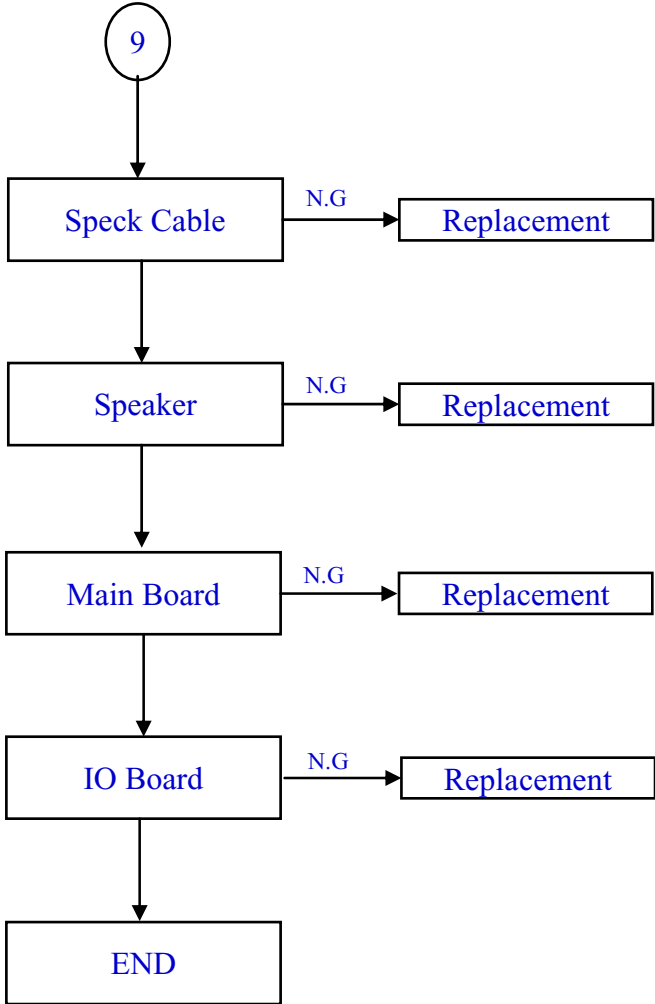
RF No Signal/ HDMI Fails



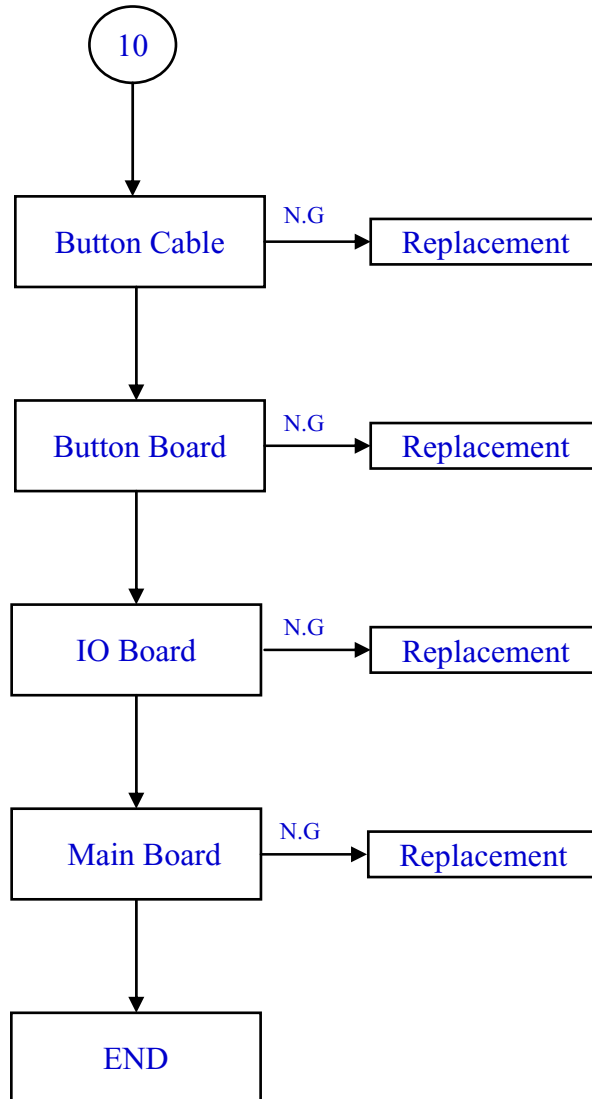
Unit Hang Up Suddenly



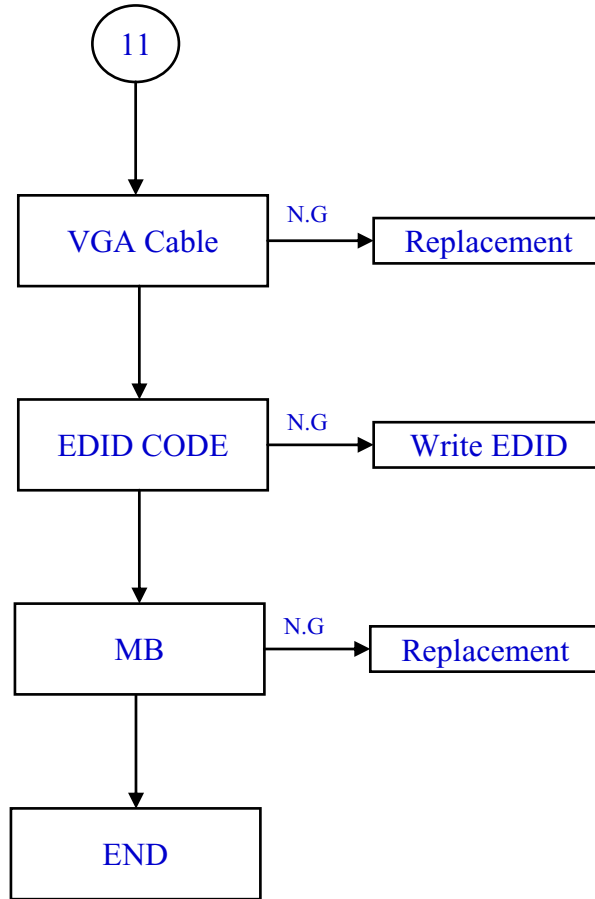
AV1, AV2, AV3 Speaker No Sound



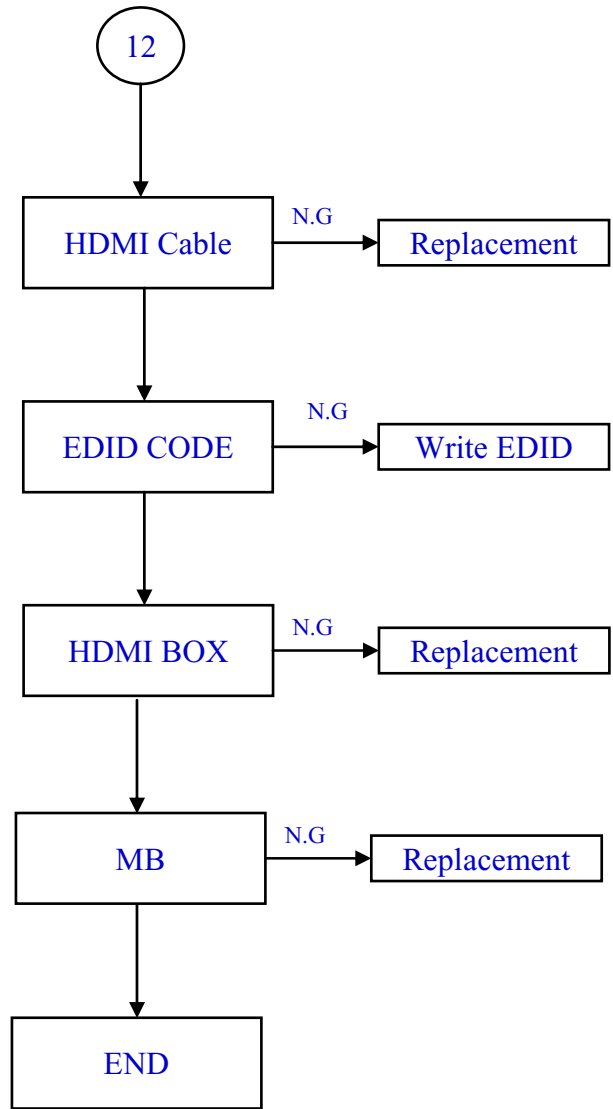
Can Not Enter Factory Mode



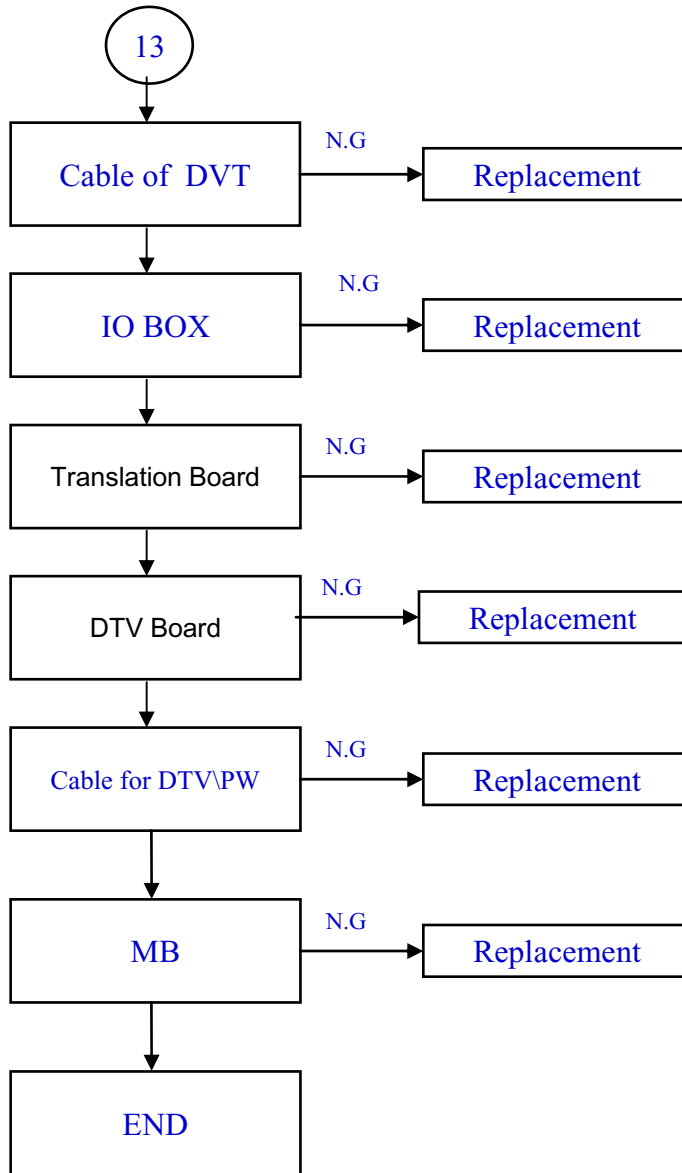
VGA No Display



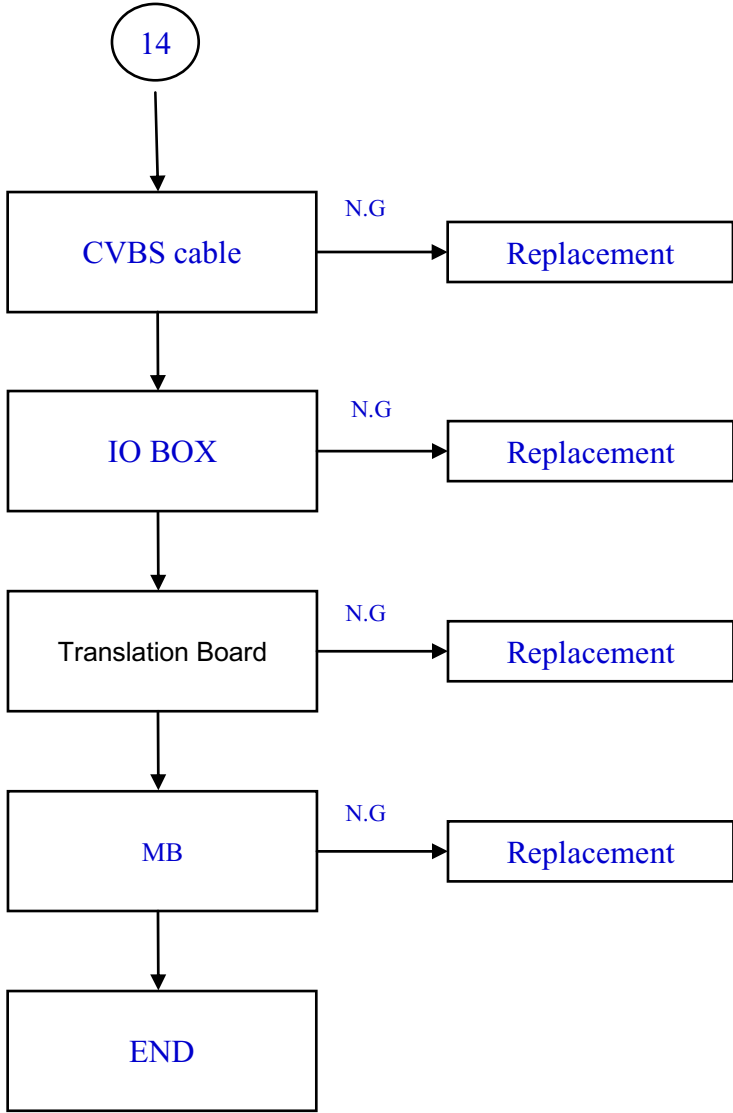
HDMI No Display



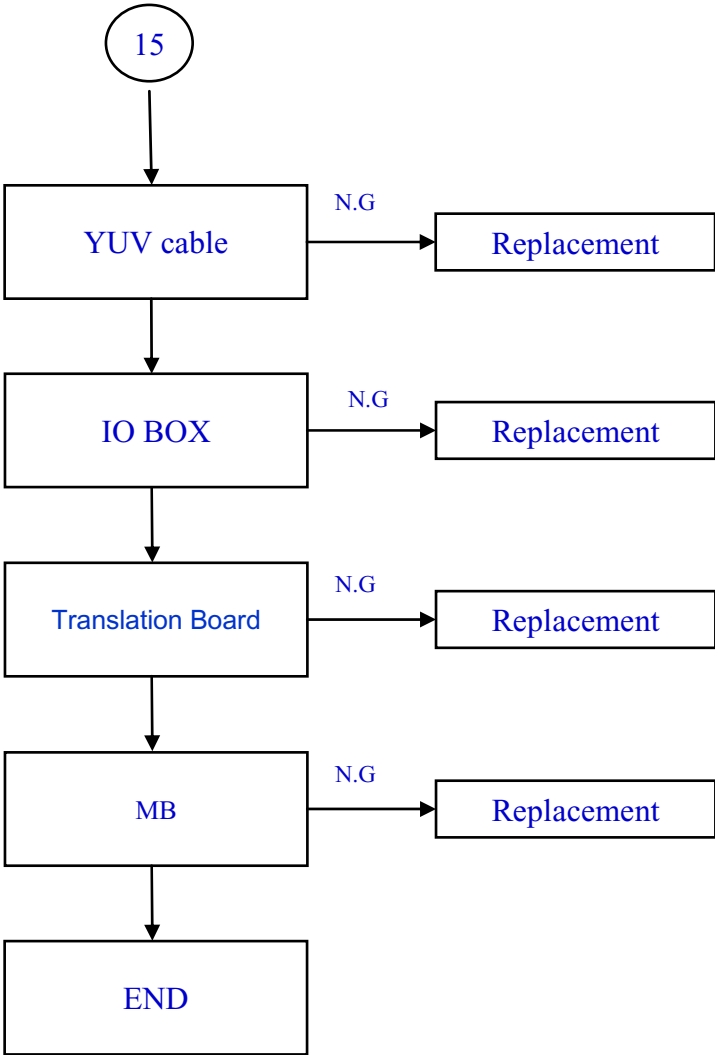
DVT No Display



AV(CABS) No Display



YUV No Display



FRU (Field Replaceable Unit) List

This section gives you the FRU (Field Replaceable Unit) list in global configurations of AT4230C. 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 - TWN	REMOTE CONTROL EURT54B007	25.M4207.001
BOARD		
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
CPU BOARD	"AD6 CPU/B (DVB-T,TWN) ASSY"	55.M4207.001
I/O TUNER MODULE - NTSC & DVB-T	HH2T TUNER MODULE(W/ PACKING)(TWN)SKD	6M.M4207.001
HDMI MODULE - TWN	HH2T HDMI/B ASSY(W/PACKING)(TWN)SKD	6M.M4207.002
HDMI TRANSLATION BOARD	AH7T TRANSLATION/B ASSY(HDMI)	55.M4207.002
I/O TRANSLATION BOARD	HH2T TRANSLATION/B ASSY	55.M4207.003
MAIN BOARD FOR AUO - NTSC TWN	HH7T M/B ASSY(TWN)(FOR HV4T)	55.M4207.004
CABLE		
LVDS CABLE - PANEL TO MB FOR AU	CABLE ASSY HX4E LVDS AUO(20P/30P REV1A)	50.M34V7.001
INVERTER CABLE - INVERTER L TO POWER	"CABLE ASSY HX4E INV-PANEL AUO 12P/10P,2A"	50.M34V7.002
INVERTER CABLE - INVERTER R TO POWER TO MB	"CABLE ASSY HX4E INV AU(14P/10P/4P,2A)"	50.M34V7.003
SPEAKER CABLE	"CABLE ASSY HH2 SPEAKER 2P/3P,4P,1A"	50.M12V7.005
CABLE - MB TO KEY TO IR	"CABLE ASSY HV4 MB/IR/BTN(10/9/8,REV1A)"	50.M34V7.004
CABLE - POWER/B TO MB TO DT	"CABLE ASSY HX7 P/MB/DT(14P/10P/8P,REV1A)"	50.M3507.004
CABLE - AUDIO 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.M26V7.004
POWER CODE 3PIN 1.8M US TWN	POWER CORD SP-305+IS-14 3P 1.8M BK TW EU	27.M4207.001
CASE/ COVER/ BRACKET ASSEMBLY		
LCD BEZEL ASSY	HV4T LCD-BEZEL ASSY	60.M4207.001
BACK COVER ASSY	AH4T BACK COVER ASSY	60.M34V7.002
FUNCTION KEY	"FUNCTION KEY HV7E(EBHV7001,REV3B)"	42.M25V7.001
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
LCD BRACKET - R	"PANEL BKT AUO R HX4(FAHX4004,REV3C)"	33.M34V7.003
LCD BRACKET - L	"PANEL BKT AUO L HX4(FAHX4005,REV3C)"	33.M34V7.002

PARTNAME	DESCRIPTION	ACER PART NO.
PCB SHIELDING	AH4T SHIELDING ASSY	60.M4207.002
PCB CHASSIS	"CHASSIS AH4T(FAAH4001,REV3B)"	60.M4207.003
DUMMY IO BOX BRACKET	"IO BOX BKT-DUMMY HR7(FBHR7002,REV3C)"	33.M4207.001
DUMMYHDMI IO BRACKET	"HDMI IO BKT-DUMMY HR7(FBHR7003,REV3B)"	33.M4207.002
STAND COVER	"STAND COVER HX4(EAHX4004,REV3B)"	42.M34V7.001
STAND BRACKET	"STAND BKT HX4(FAHX4008,REV3A)"	33.M34V7.001
STAND ASSY	HV4 STAND ASSY	60.M34V7.003
LCD		
LCD 42 IN. AUO T420XW01 V3	"LCD(TFT)42"" T420XW01 V3 (QCI)"	LK.42005.001
SPEAKER		
SPEAKER ASSY L	SPEAKER ASSY HX4E (FS-0000085AB)	23.M34V7.001
SPEAKER ASSY R	SPEAKER ASSY HX4E (FS-0000085AA)	23.M34V7.002
MISCELLANEOUS		
"CLAMP AUO-R/L HX4(FBHX4002,REV3A)"	"CLAMP AUO-R/L HX4(FBHX4002,REV3A)"	47.M34V7.001
"CLAMP AUO-D HX4(FBHX4003,REV3A)"	"CLAMP AUO-D HX4(FBHX4003,REV3A)"	47.M34V7.002
"ID CARD-STN ZG1S(HCZG1036,REV3A)"	"ID CARD-STN ZG1S(HCZG1036,REV3A)"	47.M25V7.006
"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
"EMI CONTACT PAD HX4(JXHX4001,3A)"	"EMI CONTACT PAD HX4(JXHX4001,3A)"	47.M34V7.003
BUTTON LABEL	"LABEL (BUTTONS) HV9(HCHV9006,REV3B)"	40.M3507.001
POWER LABEL	"LABEL (POWER) HV4(HCHV4001,REV3A)"	40.M34V7.001
SPEAKER LABEL	"SPEAKER LABEL AH4(HCAH4005,REV3A)"	40.M4207.001
I/O LABEL	"LABEL(I/O.TUNER) AH2T(HCAH2003,REV3A)"	40.M4207.002
RATING LABEL	"RATING LABEL HV4(HCHV4008,3A)MIT AT4230C"	40.M4207.003
SCREW		
NUT SCREW - M3 L10.8	"NUT M3 L10.8 HH2(MBHH2006,REV3A)"	86.M4207.001
NUT SCREW - M3 L10	"NUT M3 L10 HH2(MBHH2007,REV3A)"	86.M4207.002
SCREW M4*8- B(BNI)(WASHER+SPRING)	SCREW M4*8-B(BNI)(WASHER+SPRING)	86.M4207.003
SCREW M3*6-B(BNI)	SCREW M3*6-B(BNI)	86.M08V7.003
SCREW M4*6 P (NI)	SCREW M4*6 P (NI)	86.M01V7.002

PARTNAME	DESCRIPTION	ACER PART NO.
SCREW M4*22-B(BNI+WASHER+SPRING)	SCREW M4*22-B(BNI+WASHER+SPRING)	86.M34V7.002
SCREW F3.0*6-B(NI)	SCREW F3.0*6-B(NI)	86.M25V7.002
SCREW T3*12-P	SCREW T3*12-P(BNI)(WASHER)	86.M3507.004
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 T4*12-B(BNI)	SCREW T4*12-B(BNI)	86.M25V7.003
SCREW M3*6-B(BNI)	SCREW M3*6-B(BNI)	86.M08V7.003
SCREW M4*22-B(BNI+WASHER+SPRING)	SCREW M4*22-B(BNI+WASHER+SPRING)	86.M34V7.002
SCREW M3.0*6.0-I-NI	SCREW M3.0*6.0-I-NI	86.M04V7.003
PACKING		
"EPE BAG AH4(HAAH4001,3A)1200*950"	"EPE BAG AH4(HAAH4001,3A)1200*950"	47.M34V7.013
EPS FOAM(BASE-R)AH4(HBAH4001)	"EPS FOAM(BASE-R)AH4(HBAH4001,3A)"	47.M4207.001
EPS FOAM(BASE-L)AH4(HBAH4002)	"EPS FOAM(BASE-L)AH4(HBAH4002,3A)"	47.M4207.002
EPS FOAM(TOP-R)AH4(HBAH4003)	"EPS FOAM(TOP-R)AH4(HBAH4003,3A)"	47.M4207.003
EPS FOAM(TOP-L)AH4(HBAH4004)	"EPS FOAM(TOP-L)AH4(HBAH4004,3A)"	47.M4207.004
"EPE BAG AH4(HAAH4001,3A)1200*950"	"EPE BAG AH4(HAAH4001,3A)1200*950"	47.M34V7.013
"CARTON COVER HV4(HFHV4007,3A)MIT AT4230C"	"CARTON COVER HV4(HFHV4007,3A)MIT AT4230C"	47.M4207.005
"CARTON(BASE)AH4(HFAH4002,3A)"	"CARTON(BASE)AH4(HFAH4002,3A)"	47.M3507.007
CARTON CLASP	"CARTON CLASP VW7(JXVW7001,3A)"	47.M08V7.020

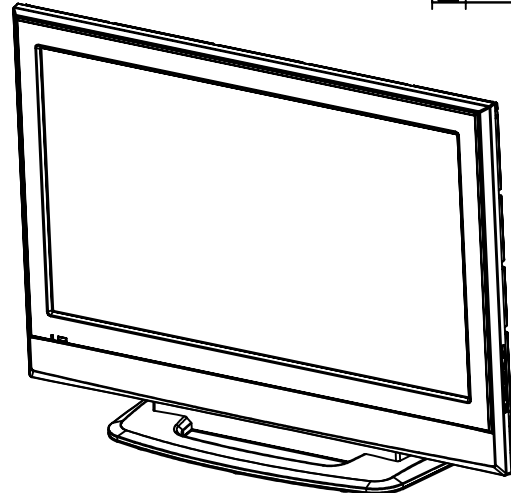
Exploded Diagram of AT4230C

Please refer to the following table and exploded diagram.

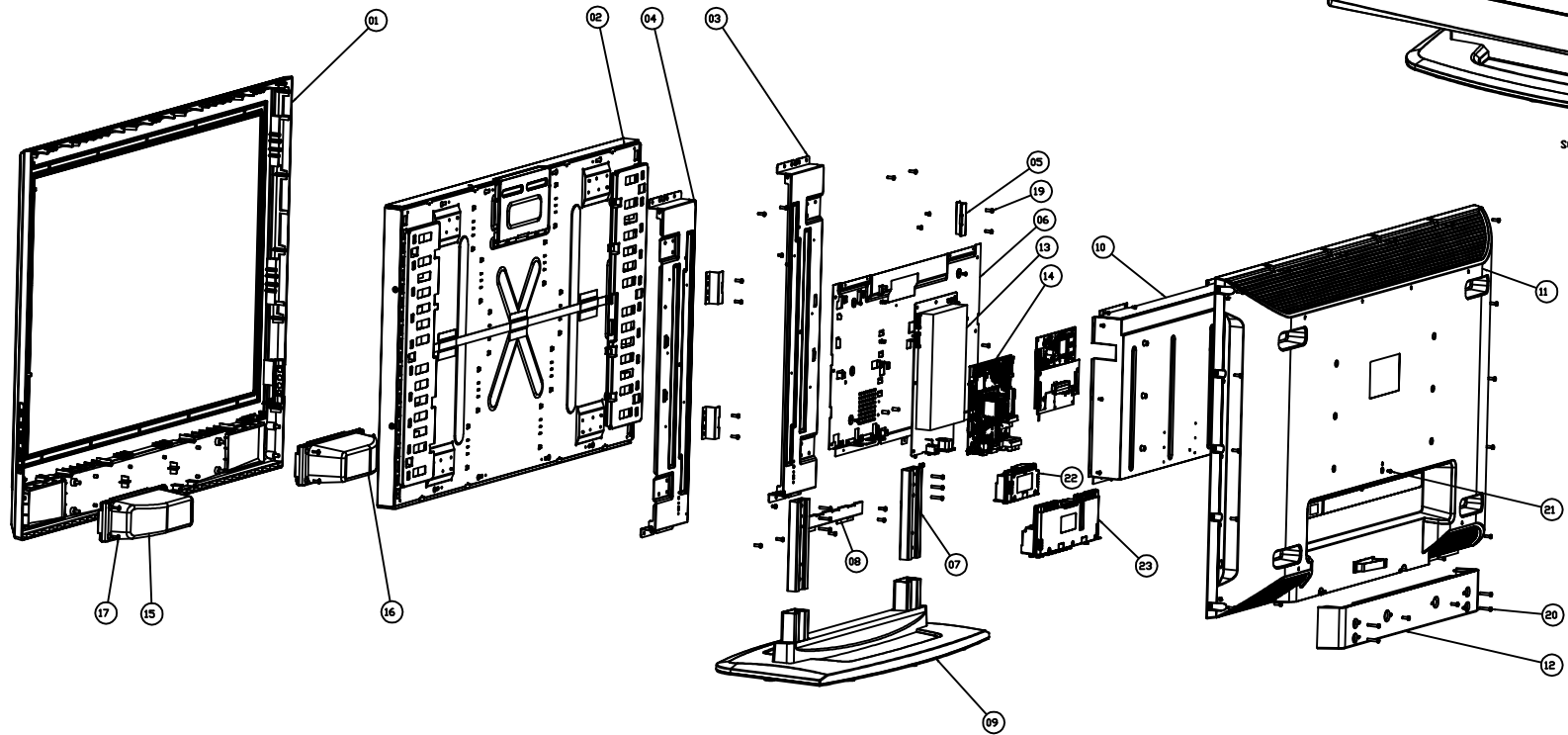
#	Partname	Description	Acer Part No.	Q'TY
1	LCD BEZEL ASSY	HV4T LCD-BEZEL ASSY	60.M4207.001	1
2	LCD 42 IN. AUO T420XW01 V3	LCD (TFT) 42" T420XW01 V3 (QCI)	LK.42005.001	1
3	LCD BRACKET L	PANEL BKT AUO L HX4 (FAHX4004, REV3C)	33.M34V7.002	1
4	LCD BRACKET R	PANEL BKT AUO R HX4 (FAHX4005, REV3C)	33.M34V7.003	1
5	CLAMP AUO-R/L HX4 (FBHX4002 , REV3A)	CLAMP AUO-R/L HX4 (FBHX4002, REV3A)	47.M34V7.001	4
6	PCB CHASSIS	CHASSIS AH4T (FAHH4001, REV3B)	60.M4207.003	1
7	STAND BRACKET	STAND BKT HX4 (FAHX4008, REV3A)	33.M34V7.001	2
8	CLAMP AUO-D HX4 (FBHX4003, REV3A)	CLAMP AUO-D HX4 (FBHX4003, REV3A)	47.M34V7.002	1
9	STAND ASSY	HV4 STAND ASSY	60.M34V7.003	1
10	PCB SHIELDING	AH4T SHIELDING ASSY	60.M4207.002	1
11	BACK COVER ASSY	AH4T BACK COVER ASSY	60.M34V7.002	1
12	STAND COVER	STAND COVER HX4 (EAHX4004, REV3B)	42.M34V7.001	1
13	POWER BOARD	PWR 291W, DPS-291AP A (90~264VAC)	55.M34V7.001	1
14	MAIN BOARD FOR AUO NTSC TWN	HH7T M/B ASSY (TWN) (FOR HV4T)	55.M4207.004	1
15	SPEAKER ASSY R	SPEAKER ASSY HX4E (FS- 0000085AA)	23.M34V7.002	1
16	SPEAKER ASSY L	SPEAKER ASSY HX4E (FS- 0000085AB)	23.M34V7.001	1
17	SCREW T3*12-P	SCREW T3*12-P (BNI) (WASHER)	86.M3507.004	8
19	SCREW T4*12-B (BNI)	SCREW T4*12-B (BNI)	86.M25V7.003	28
20	SCREW M4*22-B (BNI+WASHER+SPRING)	SCREW M4*22-B (BNI+WASHER+SPRING)	86.M34V7.002	10
21	SCREW M3*6-B (BNI)	SCREW M3*6-B(BNI)	86.M08V7.003	2
22	HDMI MODULE - TWN	HH2T HDMI/B ASSY (W/PACKING) (TWN) SKD	6M.M4207.002	1
23	I/O TUNER MODULE - NTSC & DVB-T	HH2T TUNER MODULE (W/ PACKING) (TWN) SKD	6M.M4207.001	1

A B C D E F G H I J K L M N D

REVISIONS			
LTR	DESCRIPTION	DATE	APP
A	/	/	/
B	/	/	/
C	/	/	/



SCALE 1:5



23	21M17A0010	HMET TUNER MODULE(V/PACKING)TVNDSKO	1
22	21M11B0002	HMET HDMI/B ASSY(V/PACKING)TVNDSKO	1
21	MM30060BJE5	SCREW M3*6-B(BND)	2
20	MM40220BK82	SCREW M4*22-B(BND)+WASHER+SPRING	10
19	ME 401203-J24	SCREW T4*12-B(BND)	28
17	MS30129PCT3	SCREW T3*12-P(BND)+WASHER	8
16	DN0085A3004	SPEAKER ASSY HK4E (FS-0000085AA)	1
15	DN0085A3008	SPEAKER ASSY HK4E (FS-0000085AA)	1
14	210MB016B	AH4T M/B ASSY(V/HDMI TL/BX)AUD SKD	1
13	AF291B00007	PWR 291W_DPS-291AP AC90-264VAC	1
12	EAXH4004012	STAND COVER HK4	1
11	47AH4B00106	AH4T BACK COVER ASSY	1
10	43AH45A0109	AH4T SHIELDING ASSY	1
09	27HV4SATN07	HV4 STAND ASSY	1
08	FBHX4003017	CLAMP ALU-D HK4	1
07	FAHX4008018	STAND BKT HK4	2
06	FAAH4001014	CHASSIS AH4T	1
05	FBHX4002011	CLAMP ALU-D/L HK4	4
04	FAHX4004012	PANEL BKT ALU R HK4	1
03	FAHX4005019	PANEL BKT ALU L HK4	1
02	AA0420XV009	LCD(T)T42" T420XW01	1
01	49HV4LBTN00	HV4T LCD-BEZEL ASSY	1
NO.	PART NO.	DESCRIPTION	Q'ty

MILITARY

RANGE	TOLEREN
0-10	±0.10
10-50	±0.15
50-100	±0.20
100-	±0.25

1	3HV4TATN00	LCB MONITOR/HV4T/M/HD/AT/ESC/TM
ITEM	PART NO.	DESCRIPTION
Quanta Computer Inc.		
7F, 316 NEIU KANG ST. SHIH LUN TAIPEI T. TAIWAN, R.O.C.		
NAME	NAME	APPROVED
TOL. ±	1 P.L.C. 2 P.L.C. ANGLE	DESIGNED
MATERIAL	SCALE	UNIT MM
FINISH	DATE	REV 3A
THE 3RD PROJECTION		

A B C D E F G H I J K L M N D