

# **Monitor Service Manual**

## **Model: VA249QG**

Version no.: 0

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# 1. Safety Precautions

## FOR PRODUCTS CONTAINING LASER:

**DANGER-** Invisible laser radiation when open.

**AVOID DIRECT EXPOSURE TO BEAM.**

**CAUTION-** Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

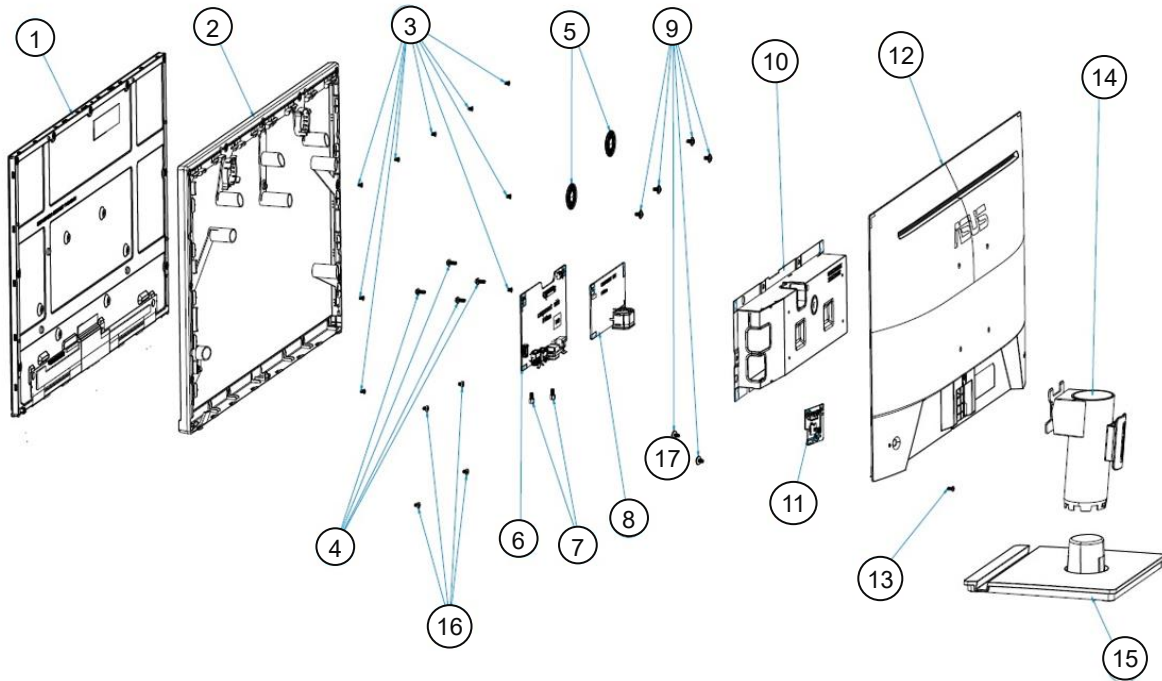
**CAUTION-** The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL

Take care during handling the LCD module with backlight unit

- Must mount the module using mounting holes arranged in four corners.
- Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
- Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
- Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
- Make certain that treatment body are grounded through wrist band.
- Do not leave the module in high temperature and in areas of high humidity for a long time.
- Avoid contact with water as it may as hort circuit within the module.
- If the surface of panel became dirty, please wipe it off with a soft material. (Cleaning with a dirty or rough cloth may damage the panel.)

## 2. Exploded View



Item	Description	Q'ty
1	PANEL	1
2	MIDDLE FRAME	1
3	#SCREW MACH FLATM3*0.5P*4.5L ZN	9
4	#SCREW PH INT/TOO M3*9TP-S C ZN	4
5	SPEAKER	1
6	MAIN BOARD	1
7	#SCREW MACH STELL HEX #4-40NI	2
8	POWER BOARD	1
9	#SCREW TAP-P PH W/FL M3*6L B-ZN	6
10	SHIELDING	1
11	KEY BOARD	1
12	REAR CASE	1
13	#SCREW FPH M2.5*6 B-ZN	1
14	STAND	1
15	BASE	1
16	#SCREW TAP FPH M3*3.5L NI	4

### 3. Disassembly and Assembly Procedures

#### 3.1 Disassembly SOP

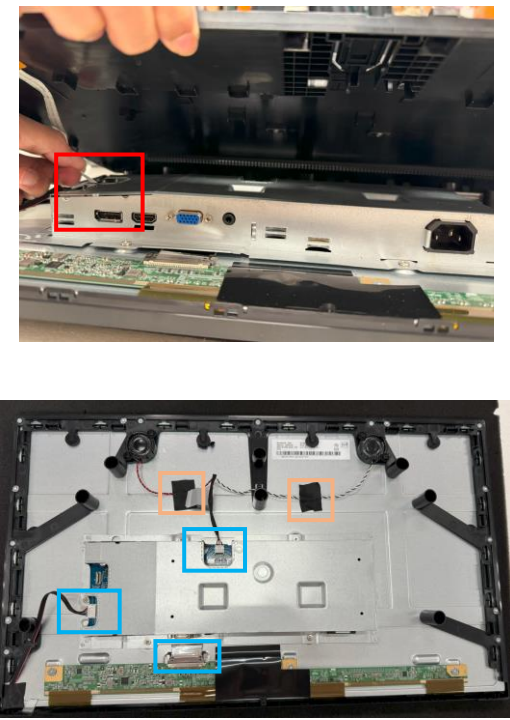
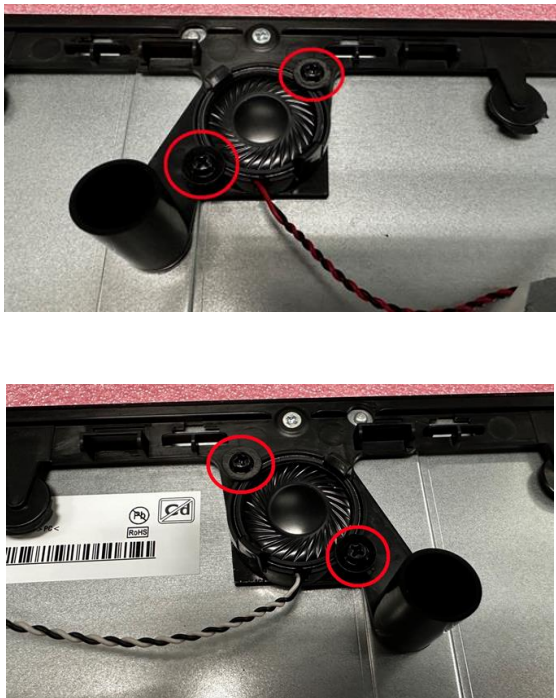
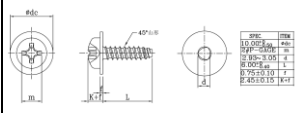
Preparation before disassemble

1. Clean the room for disassemble
2. Identify the area for monitor
3. Check the position that the monitors be placed and the quantity of the monitor; prepare the area for material flow; according to the actual condition plan the disassemble layout
4. Prepare the implement, equipment and materials as bellow:
  - 1) Working table
  - 2) Screw-driver
  - 3) Teardown lever \*1
  - 4) Glove
  - 5) Cleaning cloth
  - 6) ESD protection


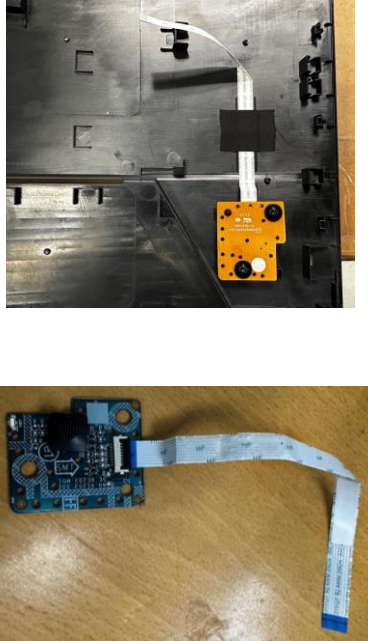
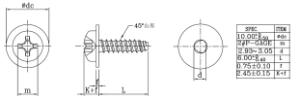



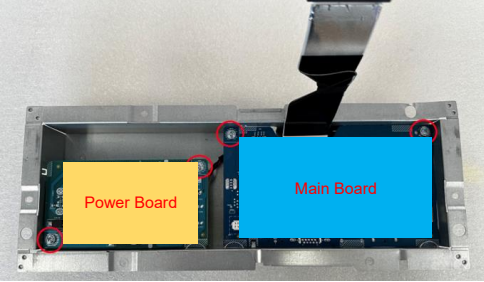
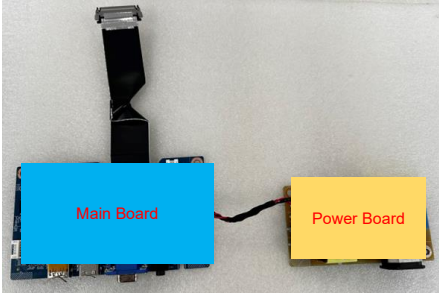
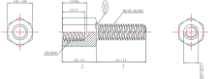
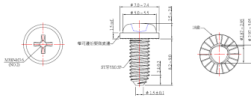
After unplugging the power cord, the power Board still have power energy. Please pay attention when disassembling/assembling.

Item	Picture	Operation	Tool	Notes
1		<ol style="list-style-type: none"> <li>1. Have the front of the monitor face down on a table.</li> <li>2. Press the release button and detach the stand (arm and base) from the monitor.</li> </ol>		
2		<ol style="list-style-type: none"> <li>1. Unlock 1 screw on Rear Cover.</li> </ol> <p>Screw: (SCRW FPH M2.5*6 B-ZN)</p> <ol style="list-style-type: none"> <li>2. Disassemble the Rear Cover from Bezel.</li> </ol>	Screw driver	Torque: 4.5±0.5(KG-CM)

<p>3</p>		<ol style="list-style-type: none"> <li>1. Take off KEY Board FFC Cable from Main Board.</li> <li>2. Take off Tape &amp; Speaker wire from Main Board.</li> <li>3. Take off Lamp wire from Main Board.</li> <li>4. Take off LVDS Cable from Main Board.</li> </ol>		
<p>4</p>		<p>1 · Unlock 4 screws on Speaker.</p> <p>Screw:        (#SCRW TAP-P PH        W/FL M3*6L B-ZN Y)</p> 	<p>Screw driver</p>	<p>Torque:        4.5±0.5(KG-CM)</p>



<p>7</p>		<ol style="list-style-type: none"> <li>1. Tear off the adhesive tape*1 then remove Lamp wire.</li> </ol>		
		<ol style="list-style-type: none"> <li>1. Unlock 2 screws on Middle frame. Screw: (#SCRW TAP-P PH W/FL M3*6L B-ZN Y)</li> </ol>  <ol style="list-style-type: none"> <li>2. Take off the FFC Cable from Key Board.</li> </ol>		<p>Torque : 4.5±0.5 Kg-cm</p>

<p>8</p>	  	<ol style="list-style-type: none"> <li>1. Unlock 2 screws on Shielding. Screw: (#SCRW MACH STEEL HEX #4-40 NI) </li> <li>2. Unlock 4 screw on shielding. Screw: (#SCRW PH INT/TOO M3*9TP-S C-ZN) </li> <li>3. Take off the wires from Board.</li> </ol>	<p>Screw driver</p>	<p>Torque- HEX: 5.0±0.6Kgf</p> <p>Torque : 4.5±0.5 Kg- cm</p>
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### 3.2 Assembly SOP

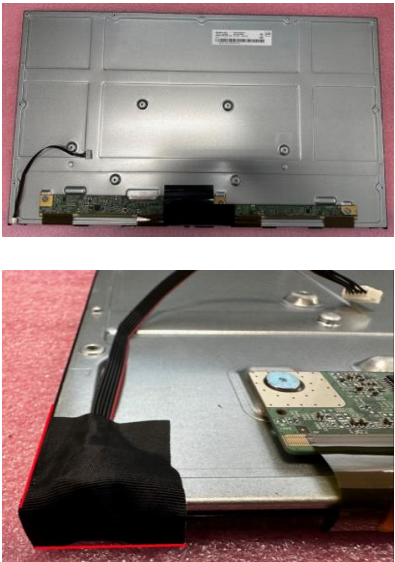
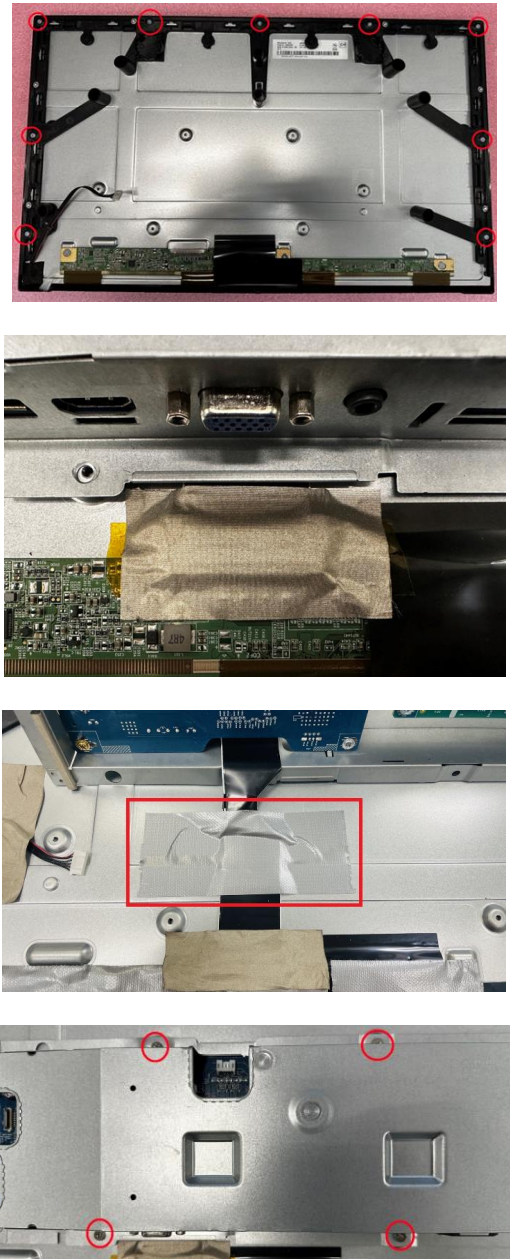
Preparation before assemble

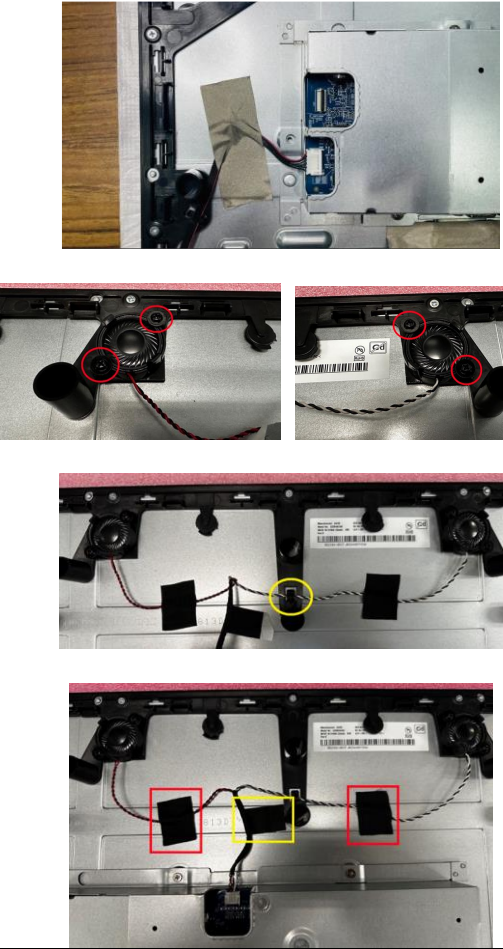
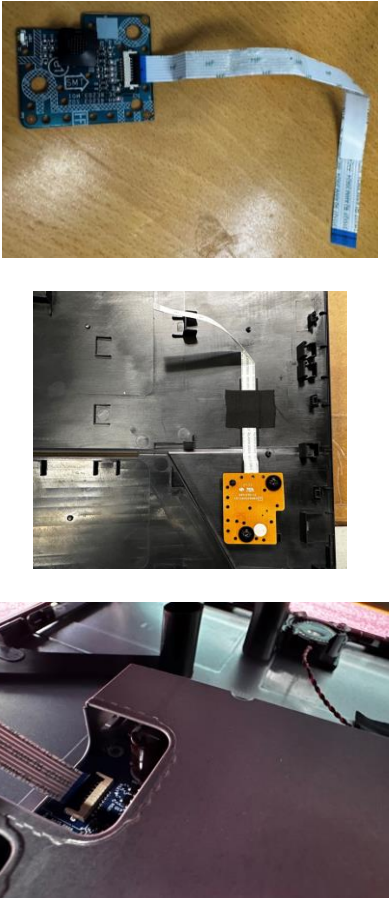
1. Clean the room for work
2. Identify the area for material
3. Prepare the implement, equipment and materials as bellow:
  - 1) Working table
  - 2) Screw-driver
  - 3) Glove
  - 4) Cleaning cloth
  - 5) ESD protection



After unplugging the power cord, the power Board still have power energy. Please pay attention when disassembling/assembling.

No.	Picture	Operation	Tool	Note
1		<ol style="list-style-type: none"> <li>1. Insert the Power Board wire to Main Board.</li> <li>2. Insert LVDS wire to Main Board.</li> <li>3. Assemble Main Board and power Board to the shielding.</li> <li>4. Lock 4 screws on shielding and Board. Screw: (#SCRW PH INT/TOO M3*9TP-S C-ZN)</li> </ol> <ol style="list-style-type: none"> <li>5. lock 2 screws on Shielding. Screw: (#SCRW MACH STEEL HEX #4-40 NI)</li> </ol>	Screw driver	<p>Torque : 4.5±0.5 Kg-cm</p> <p>Torque- HEX: 5.0±0.6KgF</p>

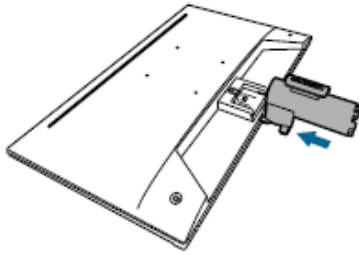
<p>2</p>		<ol style="list-style-type: none"> <li>1. Insert the Lamp wire to Panel.</li> <li>2. Paste tape *1 align the edge of Panel.</li> </ol>		
<p>3</p>		<ol style="list-style-type: none"> <li>1. Assemble Middle frame to panel.</li> <li>2. Lock 9 screws on Middle frame. Screw: (#SCRW MACH FLATM3*0.5P*4.5L ZN)</li> <li>3. Locate shielding on Panel.</li> <li>4. Insert LVDS wire to panel then paste yellow tape *1 &amp; adhesive tape*1 on the LVDS Cable.</li> <li>5. Paste adhesive tape*1 with LVDS cable &amp; Panel.</li> <li>6. Locate shielding on the Panel then lock screw*4. Screw: (#SCRW TAP FPH M3*3.5L NI)</li> </ol>	<p>Screw driver</p>	<p>Torque-Board: 7±0.5Kgf</p> <p>Torque: 4.5±0.5(KG-CM)</p>

		<ol style="list-style-type: none"> <li>1. Insert Lamp wire to Main Board then paste tape*1.</li> <li>2. Put Speaker on the Middle frame then lock screw*4. Screw: (#SCRW TAP-P PH W/FL M3*6L B-ZN Y)</li> <li>3. Put Speaker wire into clamp of Middle frame then paste tape*3.</li> </ol>		
2		<ol style="list-style-type: none"> <li>1. Insert FFC Cable to Key Board.</li> <li>2. Assemble Key Board on the Rear Cover with 2 screws then paste tape*1. Screw: (#SCRW TAP-P PH W/FL M3*6L B-ZN Y)</li> <li>3. Insert Key Board FFC Cable to Main Board.</li> </ol>	Screw driver	Torque : 4.5±0.5 Kg-cm



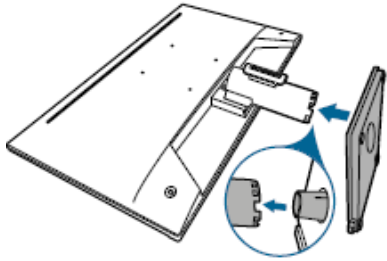
1. Lock 1 screws on Rear Cover.

Screw:  
(SCRW FPH M2.5\*6 B-ZN)



2. Insert the arm hinge into the rear of the monitor.

3. Attach the base into the arm, making sure the tab on the base fits into the groove on the arm.



3




4. Finish



Torque:  
4.5±0.5(KG-CM)

Screw driver

## 4. Trouble Shooting

Problem	Possible Solution
Power LED is not ON	<ul style="list-style-type: none"> <li>• Press the  button to check if the monitor is in the ON mode.</li> <li>• Check if the power cord is properly connected to the monitor and the power outlet.</li> <li>• Check if the power switch is ON.</li> </ul>
The power LED lights amber and there is no screen image	<ul style="list-style-type: none"> <li>• Check if the monitor and the computer are in the ON mode.</li> <li>• Make sure the signal cable is properly connected the monitor and the computer.</li> <li>• Inspect the signal cable and make sure none of the pins are bent.</li> <li>• Connect the computer with another available monitor to check if the computer is properly working.</li> </ul>
Screen image is too light or dark	<ul style="list-style-type: none"> <li>• Adjust the Contrast and Brightness settings via OSD.</li> </ul>
Screen image is not centered or sized properly	<ul style="list-style-type: none"> <li>• Adjust the H-Position or V-Position settings via OSD (if available).</li> </ul>
Screen image bounces or a wave pattern is present in the image	<ul style="list-style-type: none"> <li>• Make sure the signal cable is properly connected to the monitor and the computer.</li> <li>• Move electrical devices that may cause electrical interference.</li> </ul>
Screen image has color defects (white does not look white)	<ul style="list-style-type: none"> <li>• Inspect the signal cable and make sure that none of the pins are bent.</li> <li>• Perform All Reset via OSD.</li> <li>• Adjust the R/G/B color settings or select the Color Temperature via OSD.</li> </ul>
Screen image is blurry or fuzzy	<ul style="list-style-type: none"> <li>• Adjust the Phase and Clock settings via OSD (if available).</li> </ul>
No sound or sound is low	<ul style="list-style-type: none"> <li>• Ensure that the signal cable is properly connected to the monitor and the computer.</li> <li>• Adjust the volume settings of both your monitor and signal source.</li> <li>• Ensure that the computer sound card driver is properly installed and activated.</li> </ul>