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Repair Guide

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Basic Model

LS34H550GANXZA

Applicable Mode

LS34H55*GANXZA

Ver.1.0

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1. Precautions

1-1. Safety Precautions

- Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

1-1-1. Warnings

WARNING

For continued safety, do not attempt to modify the circuit board.
Disconnect the AC power and DC power jack before servicing.
Discharge residual voltage before removing or handling the printed circuit board assembly(PCBA)

1-1-2. Servicing the Product

1. When servicing the Product, Disconnect the AC line cord from the AC outlet.
2. It is essential that service technicians have an accurate voltage meter available at all times. Check the calibration of this meter periodically.

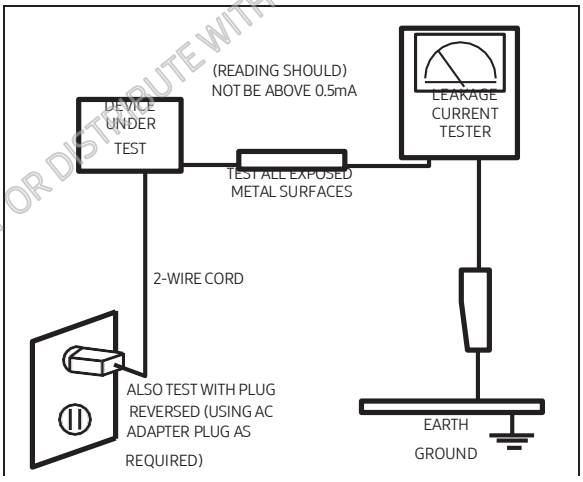
1-1-3. Fire and Shock Hazard

- After completion of repair, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistorcapacitor networks, mechanical insulators, etc.
3. Design Alteration Warning: Never alter or add to the mechanical or electrical design of the unit.
   Example: Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.
4. Leakage Current Hot Check:

WARNING

Do not use an isolation transformer during this test.
Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).



5. With the unit completely reassembled, plug the AC line cord directly into a 120V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts.
   The current measured should not exceed 0.5 milliamp.
   Reverse the power-plug prongs in the AC outlet and repeat the test.

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6. Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that no wires or components touch thermally hot parts.

1-1-4. Product Safety Notices

Some electrical and mechanical parts have special safetyrelated characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by ⚠ on Disassembly and Reassembly. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.



WARNING

Wear protective equipment(gloves, safety goggles, etc) all time and discharge residual voltage from printed circuit board assembly(PCBA) before removing or handling to prevent injuries and electrical shock that may occur during product disassembly/repair.

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1-2. Servicing Precautions

 WARNING	An electrolytic capacitor installed with the wrong polarity might explode.
 CAUTION	Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.
 NOTE	If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.
 NOTE	Following the repair by a non-authorised service provider, self-repair or non-professional repair of the product, Samsung is not liable for any damage to the product, any injury or any other product safety issue caused by any attempt to repair the product which does not carefully follow these repair and maintenance instructions. Any damage to the product caused by an attempt to repair the product by any person other than a Samsung certified service provider will not be covered by the warranty

1-2-1. General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to: (a) remove or reinstall any component or assembly, (b) disconnect PCB plugs or connectors, (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to theblades of the AC plug. The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

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1-3. Electrostatically Sensitive Devices (ESD) Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components are commonly called Electrostatically Sensitive Devices (ESD). Examples of typical ESD are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as “anti-static” can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.



CAUTION Be sure no power is applied to the chassis or circuit and observe all other safety precautions.

8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

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1-4. Installation Precautions

1. For safety reasons, more than one person is required for carrying the product.
2. Keep the power cord away from any heat emitting devices, as a melted covering may cause fire or electric shock.
3. Do not place the product in areas with poor ventilation such as a bookshelf or closet. The increased internal temperature may cause fire.
4. Do not install the product on a place that is shaking, tilted, unstable, or seriously vibrating. The product may drop to get damaged or injure a person. If using the product in a highly vibrating place, it may be broken or cause fire.
5. Bend the external antenna cable when connecting it to the product. This is a measure to protect it from being exposed to moisture. Otherwise, it may cause a fire or electric shock.
6. Make sure to turn the power off and unplug the power cord from the outlet before repositioning the product. Also check the antenna cable or the external connectors if they are fully unplugged. Damage to the cord may cause fire or electric shock.
7. Keep the antenna far away from any high-voltage cables and install it firmly. Contact with the highvoltage cable or the antenna falling over may cause fire or electric shock.
8. When installing the product, leave enough space between the product and the wall for ventilation purposes. A rise in temperature within the product may cause fire.
9. If an equipment is provided with a replaceable battery, and if replacement by an incorrect type could result in an explosion (for example, with some lithium batteries), the following applies:
10. Keep the packaging plastic wrapper out of children's reach. If children play with it improperly, they may get suffocated.
11. If installing the product on a display cabinet, shelf, desk, etc., keep the product from protruding on its lower side. If the product falls, it may break or cause physical injury. Use only the display cabinet or shelf that fully covers the product.



CAUTION

- Risk of explosion if battery is replaced by an incorrect type dispose of used batteries according to the instructions.
- Do not dispose of batteries in a fire.
- Do not short circuit, disassemble or overheat the batteries.
- Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.
- Do not be exposed to excessive heat such as sunshine, fire or the like.

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2. Disassembly and Reassembly

WARNING

- As this monitor has parts that are sensitive to static electricity, be careful when handling them.

CAUTION

- Disconnect the product from the power source before disassembly.
- Follow these directions carefully; never use metal instruments to pry apart the cabinet.
- When disassembling the product, do not use any metal tools except for the provided jig.

- For information about purchasing parts and jigs, please visit https://www.samsung.com/ca/support/self-repair/

			
Delphinus (BH81-00001A)	Assembly Misc P-jig-2017 (BN81-14946A)	Assembly Misc P-jig-2017 TV OCB Models (BN81-14946B)	Service Jig-Capacitor Discharge (BN81-16292A)

2-1. Stand Disassembly

1

- For disassembly, use a cushion when placing the product on a flat surface to prevent damage to the product's surface.



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2	• Remove 2 screws on the bottom and then remove the stand.





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3	• Remove the 4 screws from the rear cover.



2-2. Cover Rear Disassembly

1

- Insert the Delphinus jig into the lower-left slot of the rear cover (the area indicated by the red circle) and lift until you hear the snap release.

  ※Insert the Delphinus jig deeply into the deco support (COF protective device) of the open jig hole, then open the hook clip. When disassembling the jig, take care not to affect the source PCB.



2

- Using the jig, lift sequentially in the directions shown in the figure to disassemble the rear cover.



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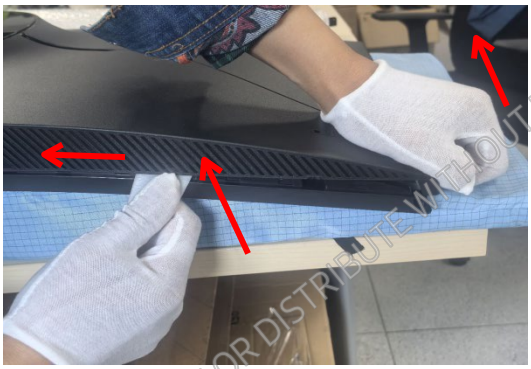
3	• Open the clips on the left/right/top, then lift up the top of the monitor's rear cover.



For ④, open sequentially from left to right, or from right to left. Opening the rear cover simultaneously from both sides may damage internal components.

For detailed disassembly instructions, see the next page.

4	• Lift the rear cover upward with one hand and, using the jig, open it from the edge of the set toward the center, lifting it sequentially.



* Caution: If you lift the rear cover all at once, internal components of the unit may be damaged. Please be careful.

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5

- Open sequentially up to the center keypad, then lift the rear cover upward to complete disassembly.

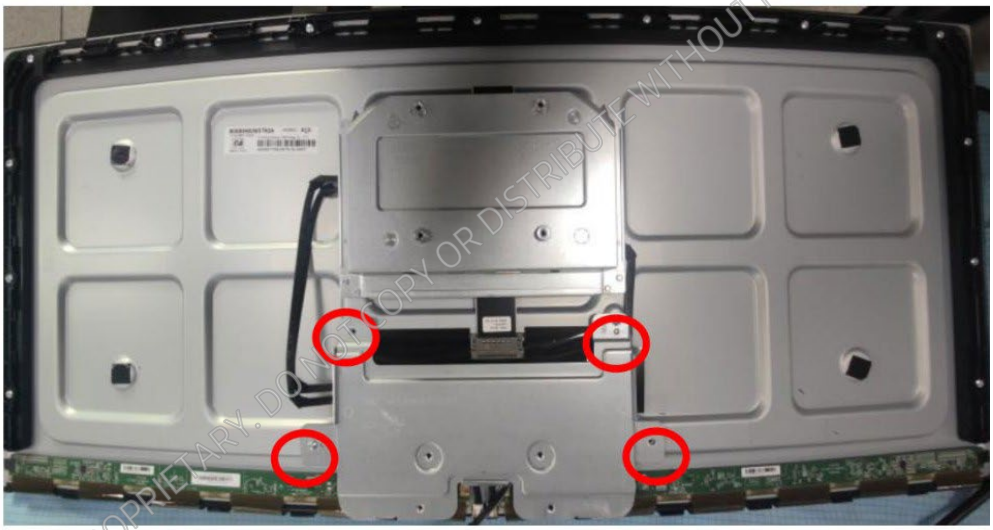


* Caution: If you lift the rear cover all at once, internal components of the unit may be damaged. Please be careful.

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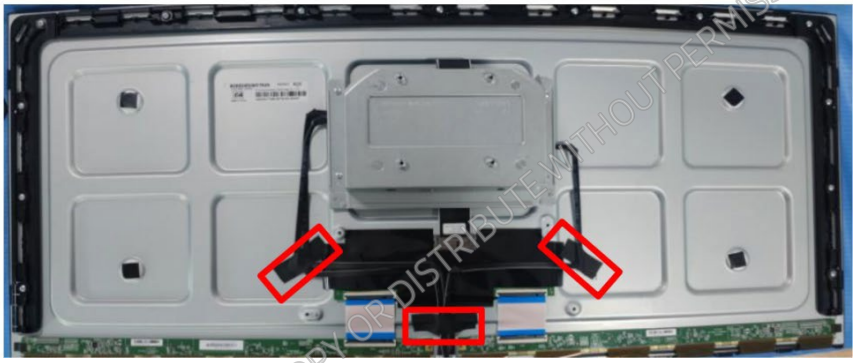
6

- Loosen the screws as indicated and remove the parts.

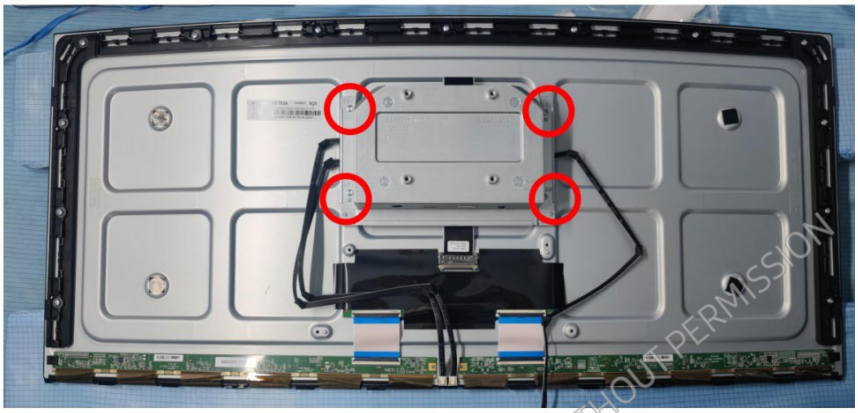


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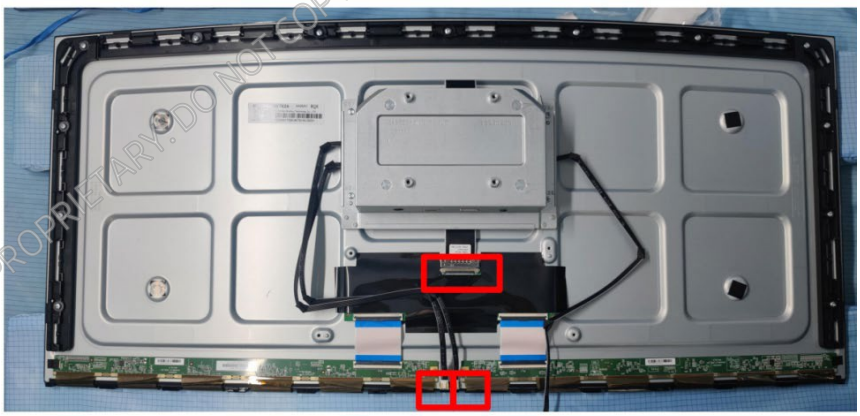
7	• Remove the tape secured to the top of the cable.



8	• Loosen the screws as indicated and remove the parts.



9	• Disconnect the wiring harness and remove the main assembly.

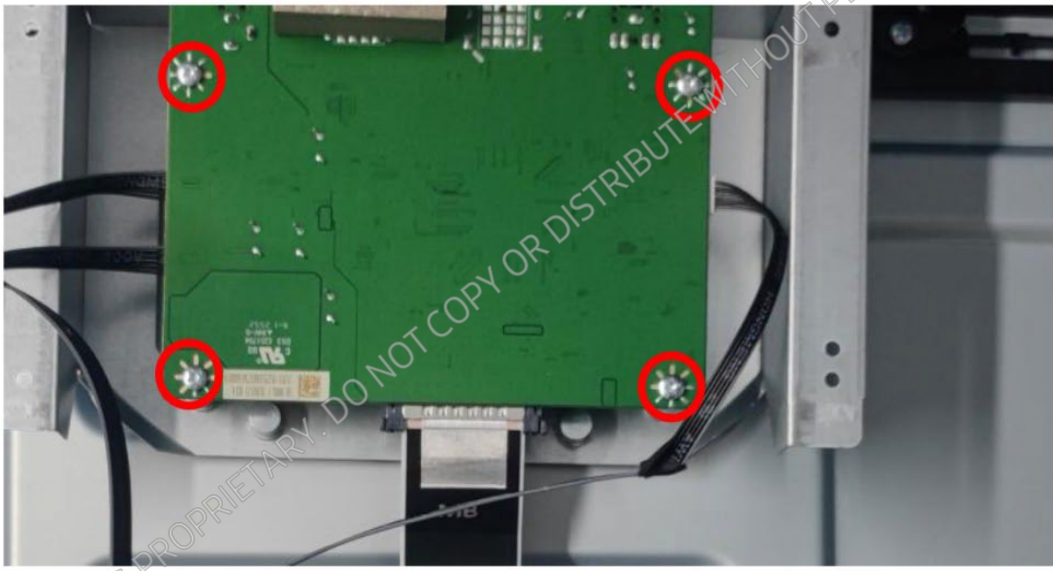


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2-3. Main PCB Disassembly

1

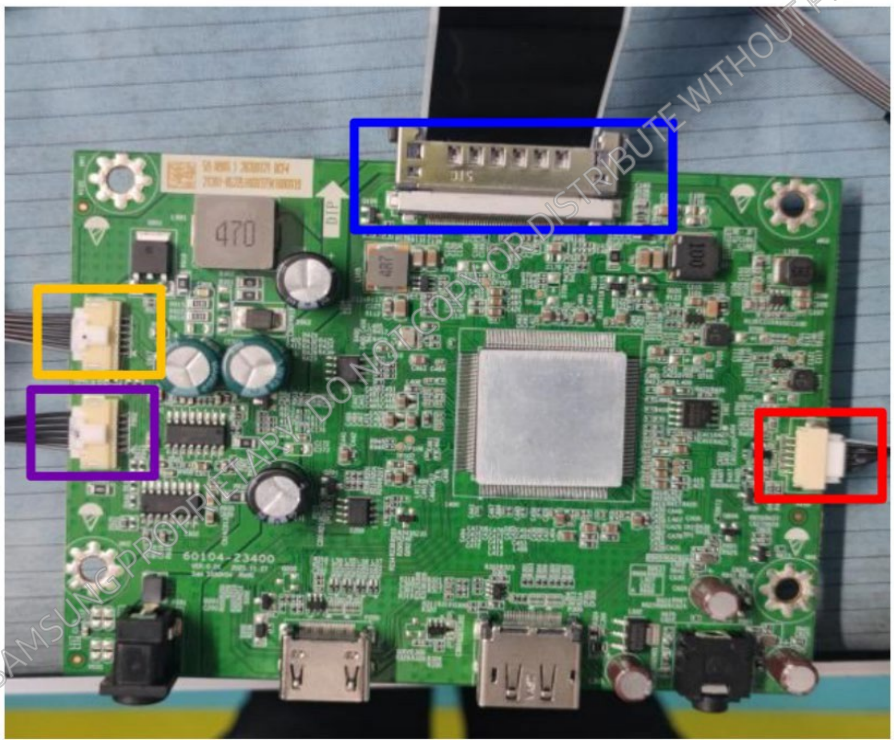
- To remove the main board, remove the cables from the connectors at the points in the picture.



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2

- Unplug all cables and remove the main board.



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3

- To remove the key panel, disconnect the wiring harness connection.





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4

- The main board has been successfully removed.



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2-4. Bracket Disassembly

1	• Unscrew the screws as indicated and remove the main assembly.



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2-5. LED Indicator Disassembly

1	• To remove the front frame, release the latches on both sides. 
2	• Disassembly complete. 

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NOTE

- Reassembly procedures are in the reverse order of disassembly procedures.
- The exterior may differ depending on the product.

3. Basic Troubleshooting

3-1. Basic Troubleshooting

Issues	Solution
The power LED is off. The screen will not turn on.	Check that the power cord is connected properly.
There is no image on the screen and the power LED blinks every 0.5 to 1 second.	Check the cable connection between the product and PC, and ensure the connectors are locked
	Press any key on the keyboard or move the mouse to return to normal operating mode.
	The product is operating in power-saving mode.
The product is making a popping noise.	The expansion and contraction of the product's outer casing may cause a popping noise. This does not indicate a product malfunction. The product is safe to use.

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