



PowerBook G4 Aluminum 15" 1.5-1.67 GHz Logic Board Replacement

Written By: iRobot



INTRODUCTION

This motherboard includes all ports on the right side except USB.



TOOLS:

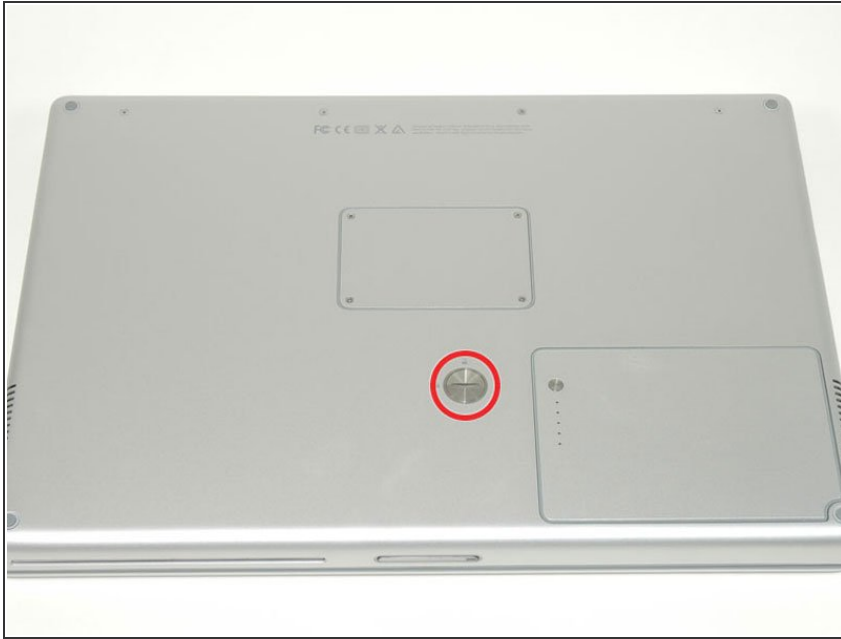
- [Anti-Static Wrist Strap](#) (1)
- [Arctic Silver ArctiClean](#) (1)
- [Arctic Silver Thermal Paste](#) (1)
- [Coin](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Spudger](#) (1)
- [T6 Torx Screwdriver](#) (1)



PARTS:

- [G4 Aluminum 15" 1.5 GHz \(BT 2.0\) Logic Board](#) (1)
- [G4 Aluminum 15" 1.67 GHz Logic Board \(64 VRAM, LR\)](#) (1)
- [G4 Aluminum 15" 1.67 GHz \(128 VRAM, LR\) Logic Board](#) (1)

Step 1 — Battery



- Use a coin or a spudger to turn the battery locking screw 90 degrees clockwise.
- Lift the battery out of the computer.

Step 2 — Upper Case



- Remove the four Phillips screws from the memory door.
- Slide the memory door away from the memory compartment.

Step 3



- Remove the following 8 screws:
 - Two 3 mm Phillips in the battery compartment, on either side of the battery contacts.
 - Two 12 mm Phillips on either side of the memory compartment.
 - Four 16 mm Phillips along the hinge.

Step 4



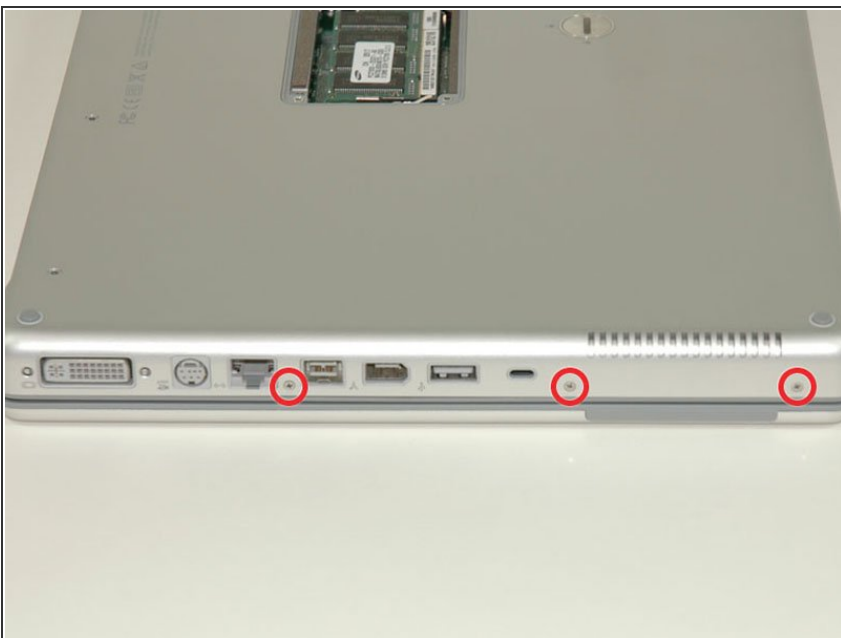
- Rotate the computer 90 degrees clockwise, so that the power receptacle faces you.
- Remove the three 3 mm Phillips screws.
- ★ When replacing these screws, you must place each screw in the correct order. Begin by installing the screw closest to the display hinge, and go out from there.

Step 5



- Turn the computer 90 degrees clockwise so that the hinge faces you.
- Remove the bottom 5 mm Phillips screw on either side of the hinge (two total).

Step 6



- Rotate the computer 90 degrees clockwise, so that the ports face you.
 - Remove the three 3 mm Phillips screws.
- ★ When replacing these screws, you must place each screw in the correct order. Begin by installing the screw closest to the display hinge, and go out from there.

Step 7



- Turn the computer over and open the display.
- Remove the two 1.5 mm hex screws in either corner, next to the display (a T6 Torx driver will work, but repeated use will strip the screws).

Step 8



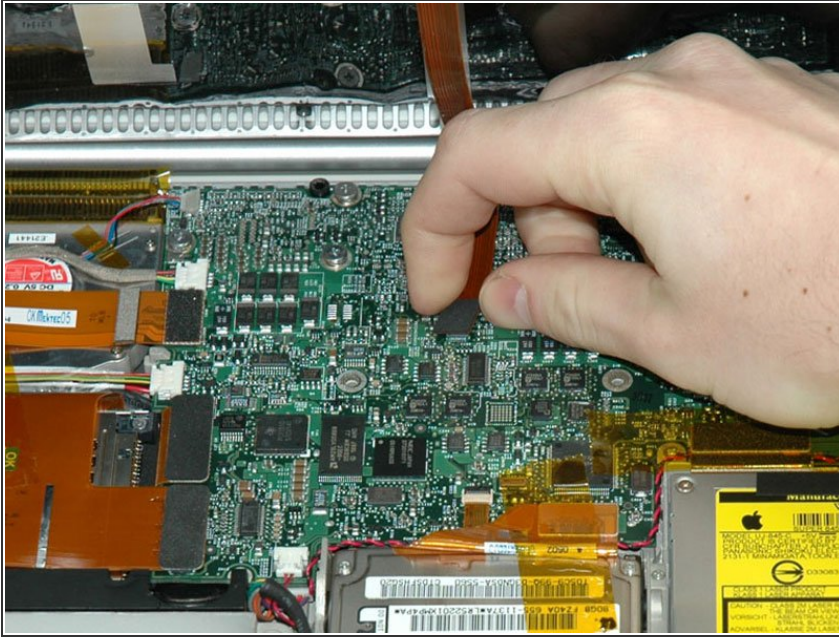
- Grasp the back corners of the upper case and pull up. Do not pull the upper case off yet; you still need to disconnect the keyboard and trackpad cable.
- Lift the back of the case up and work your fingers along the sides, freeing the case as you go. Once you have freed the sides, you may need to rock the case up and down to free the front of the upper case.

Step 9



- Rotate the upper case up and toward the screen, so that the upper case rests against it.

Step 10



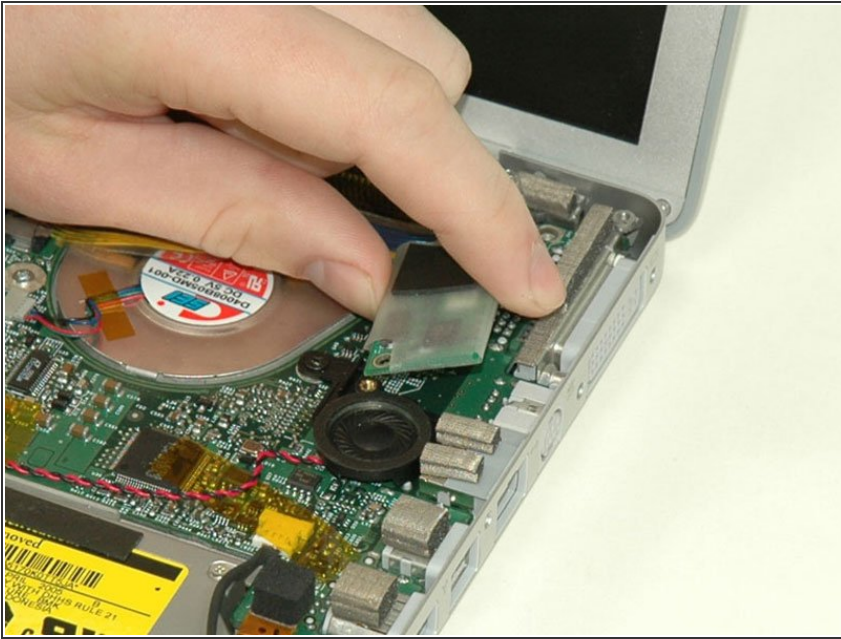
- Remove the orange tape securing the trackpad ribbon to the logic board.
- Disconnect the trackpad ribbon from the logic board.
- Remove the upper case from the computer.

Step 11 — Right Ambient Light Sensor



- Remove the 9.5 mm silver Phillips screw from the top of the right ambient light sensor board.
- Remove the small 3 mm black Phillips screw from the bottom of the board.

Step 12



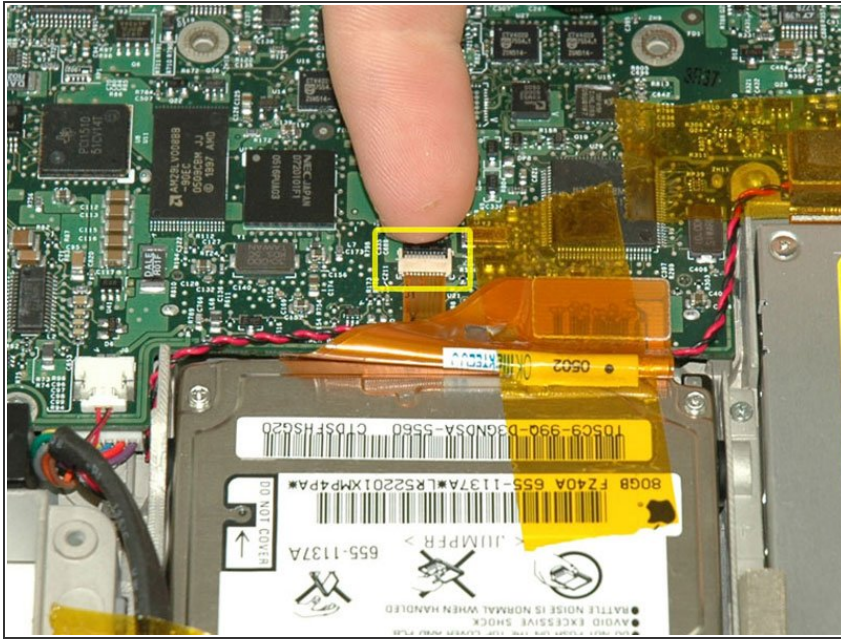
- Lift the right ambient light sensor board straight up from the Logic Board.

Step 13 — Logic Board



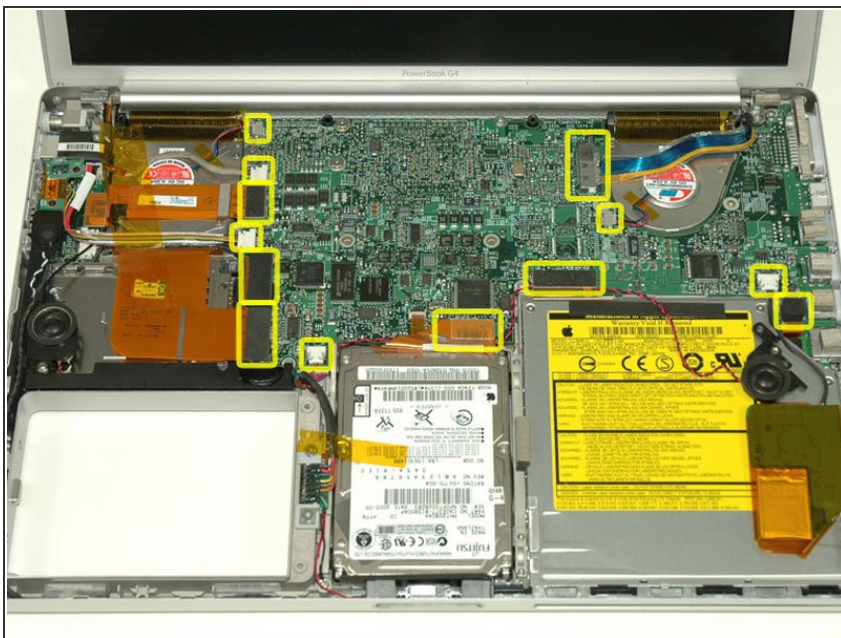
- Remove the two black Phillips screws from the right speaker.
- Lift the speaker away from the logic board and place it aside

Step 14



- Use your fingernail to flip up the black plastic flap locking the modem cable in place.
- Slide the modem cable from its connector.

Step 15



- Disconnect the 13 indicated cables, removing tape as necessary.
- ⓘ When re-installing the board, make sure the two small connectors at the right hand side are above the board before inserting the screws.

Step 16



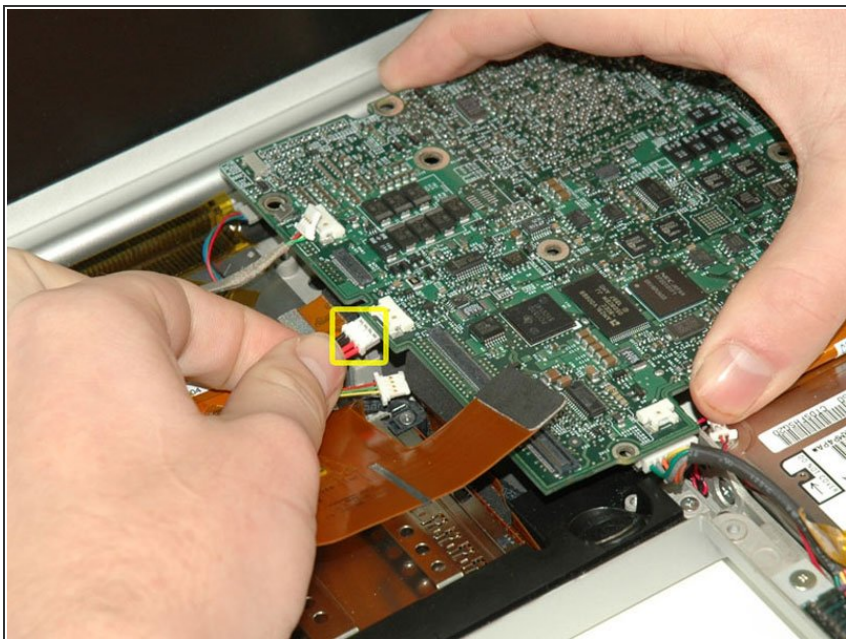
- Remove the following 8 Phillips screws from the logic board:
 - Three 6.5 mm in the upper left corner.
 - Five 4.5 mm around the edges.

Step 17



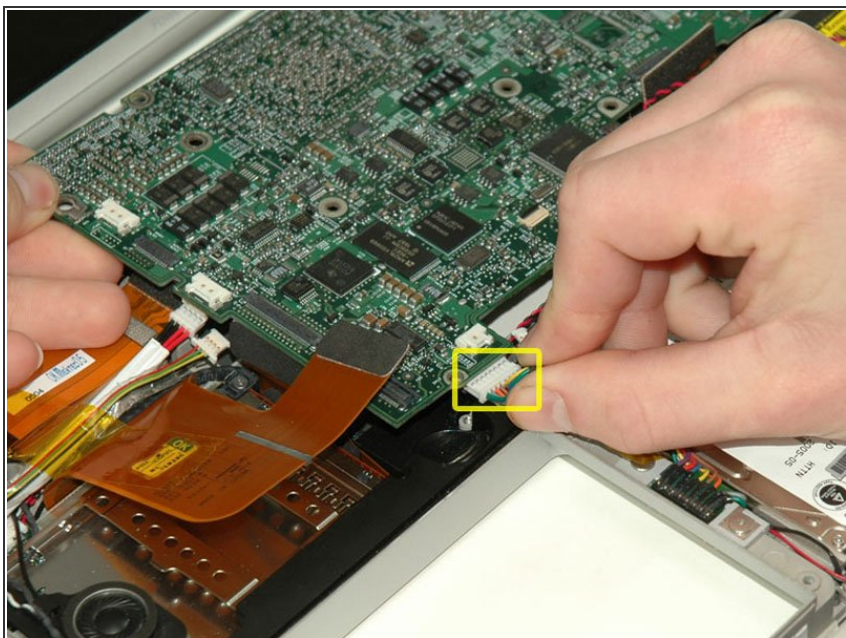
- ⓘ Two cables still connect to the logic board and must be removed before pulling the board entirely out of the computer.
- Use a spudger to gently (very gently) pry up the left side of the logic board.
- ⓘ If the logic board does not immediately come free, it may be necessary to soften the thermal paste between the logic board and heat sink. You can soften the thermal compound using a hairdryer. Move the hairdryer back and forth between the two fans about one inch above the logic board for one minute. At this point, the logic board should now come free easily.

Step 18



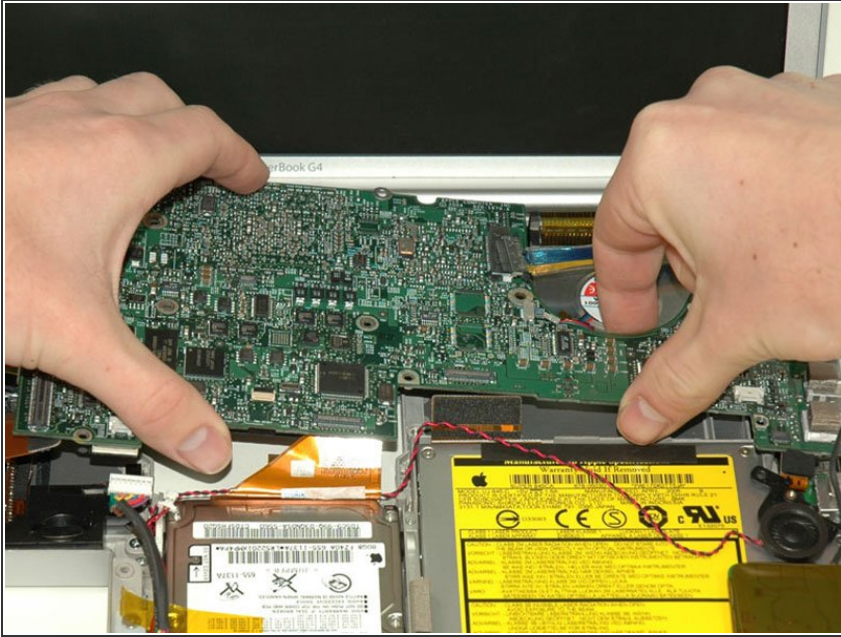
- Disconnect the DC-In connector from the left side of the logic board.

Step 19



- Disconnect the battery cable from the front, left corner of the logic board.

Step 20



- Grasp the logic board at the left edge with one hand and at the thinnest section with the other hand. Lift the left edge of the board up to approximately a 30 degree angle (if you don't have your protractor handy, just lift until the DVI port clears the right hinge).
- Once the logic board clears the ports, slide it out to the left.

Step 21

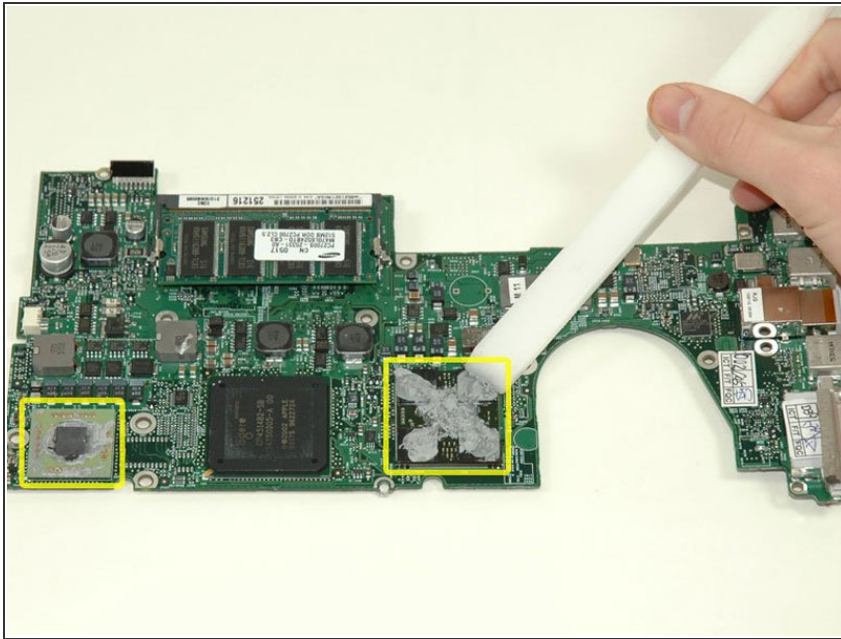


- ☑ Important: when you reinstall a logic board, you'll need to replace the thermal paste that goes between the processor on the logic board and the heat sink. Failure to remove the old paste and apply a new layer can cause the computer to overheat and sustain damage.

- To properly reassemble your PowerBook, you'll have to clean off and replace the old thermal

compound. Use our [Applying Thermal Paste Guide](#) to prepare the processor and heat sink surfaces.

Step 22



- Use a firm plastic edge to scrape the thermal material off the processor.
- ☑ When replacing the logic board, make sure all cables are routed around and above - not under - it, and to connect the two cables that do go beneath before pushing the board into place.
- ☑ Place the logic board back in the computer, trying not to move it around once the processor has come into contact with the newly-applied thermal paste.

To reassemble your device, follow these instructions in reverse order.