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PowerBook G4 Aluminum 17" 1.67 GHz (High-Res) Logic Board Replacement

Written By: Walter Galan

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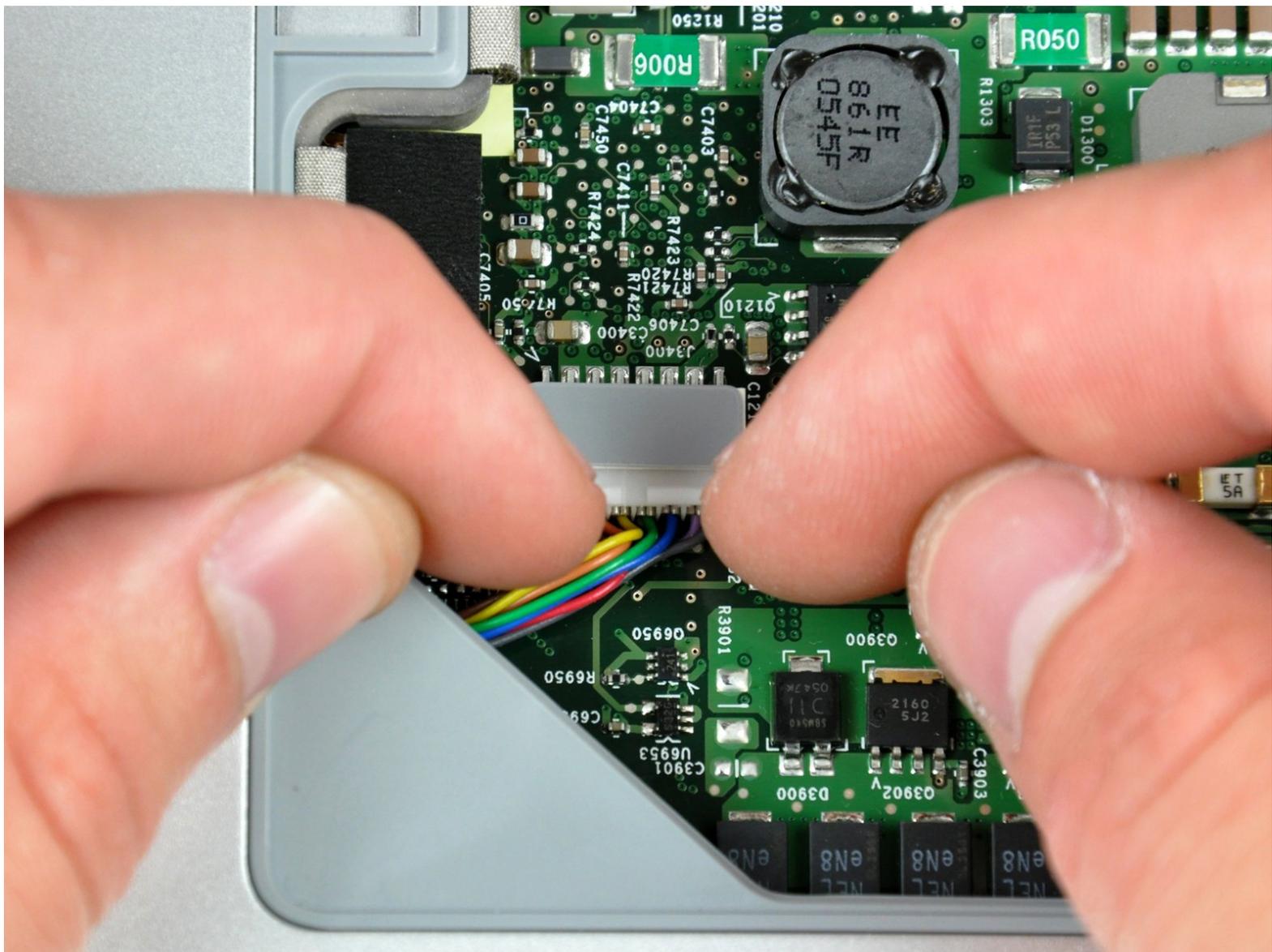
INTRODUCTION

Like brain surgery? Use this guide to replace your logic board.

TOOLS:

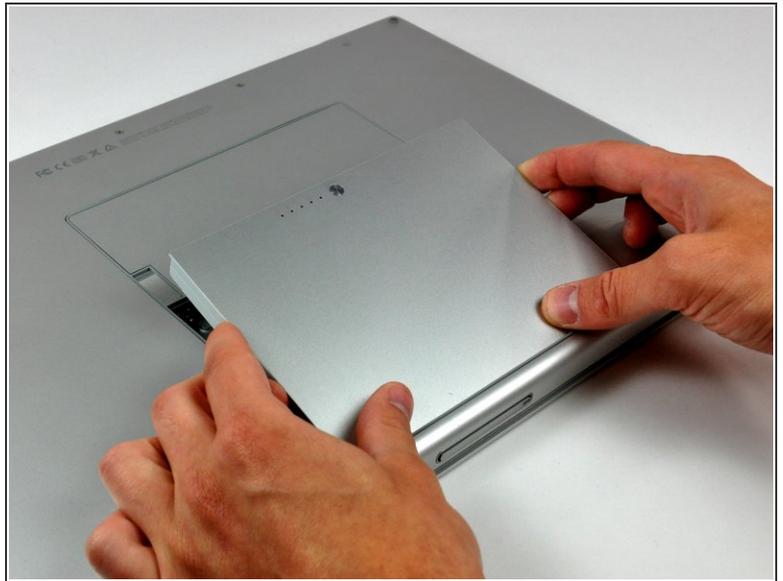- Arctic Silver ArctiClean (1)
- Arctic Silver Thermal Paste (1)
- Phillips #00 Screwdriver (1)
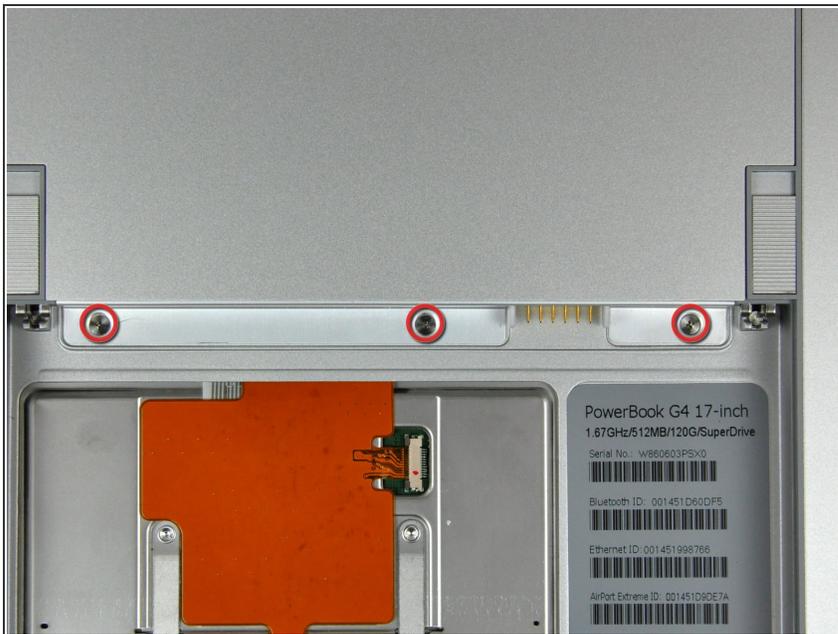- Spudger (1)
- T8 Torx Screwdriver (1)

PARTS:

- G4 Aluminum 17" 1.67 GHz (HR) Logic Board (1)

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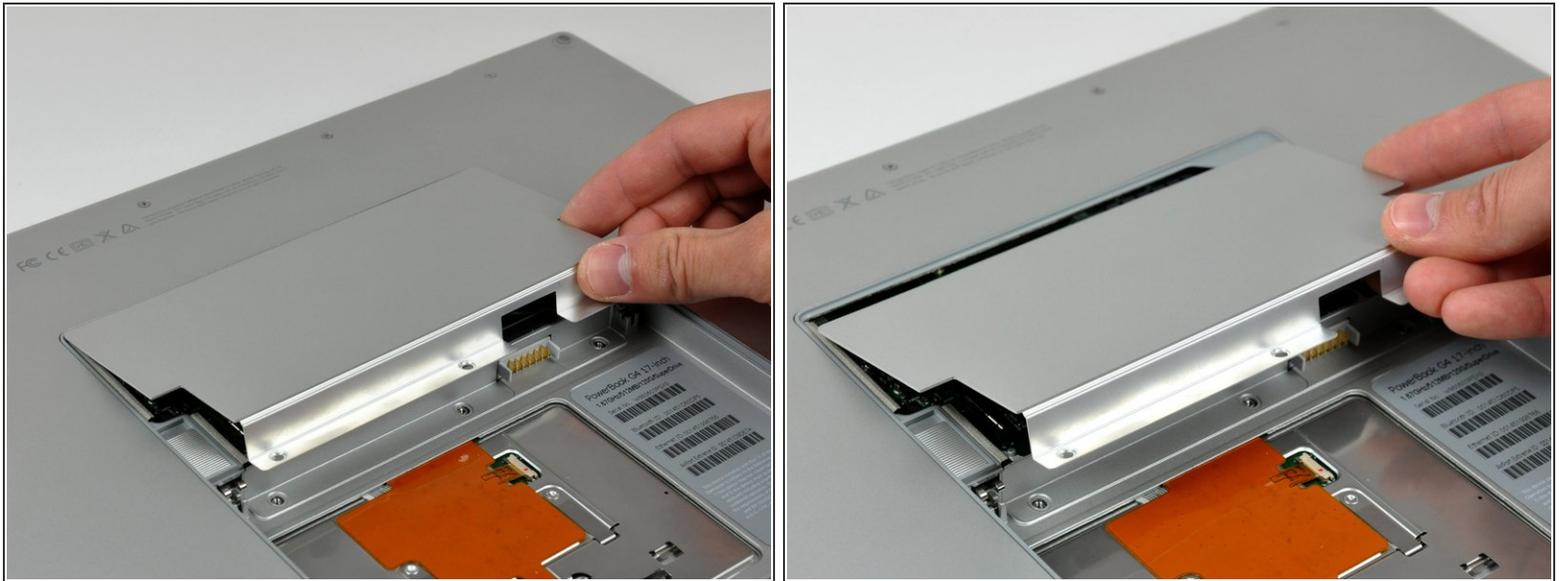www.iFixit.com

Step 1 — Battery

- Use your thumbs to push the two battery retaining tabs away from the battery.

- The battery should pop up enough to rotate it toward yourself and lift it out of the lower case.

Step 2 — Memory Door

- Remove the three 2.3 mm Phillips screws securing the memory cover to the lower case.

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Step 3

- Lift the memory cover slightly and pull it toward yourself to remove it from the lower case.

Step 4 — Upper Case

- Remove the following ten screws:
  - Two 14.7 mm shouldered Phillips.
  - Three 12.3 mm Phillips.
  - One 3.8 mm T8 Torx.
  - One 6.8 mm T8 Torx.
  - Three 1.3 mm Phillips.

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Step 5
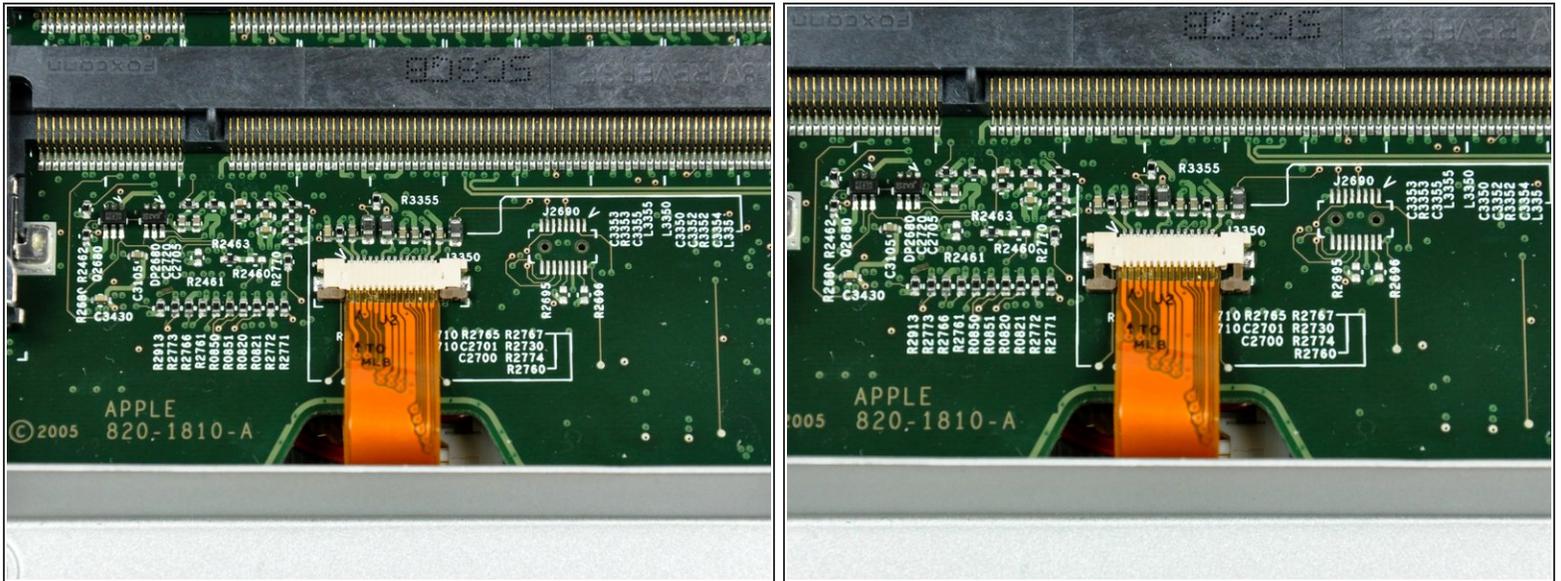
- ⓘ The ZIF cable is located underneath the bottom RAM slot. If your PowerBook has both RAM slots occupied, make sure to remove the RAM chip.

- ● Use your fingernails to separate the ZIF cable lock away from its socket. (Move the two brown bits down 1mm)

- ⚠ The ZIF cable lock will move about a millimeter away from the socket before it stops (see picture 2). **Do not** try to remove the ZIF cable lock.

Step 6

- Use the tip of a spudger to slide the trackpad ribbon cable out of its socket.

Step 7

- Remove the four 3.4 mm Phillips screws from the PC card side of the PowerBook.

- ⊠ When replacing these screws, you must reinstall each screw in the correct order. Begin by installing the screw closest to the display hinge, and go out from there.

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Step 8

- Remove the four 3.4 mm Phillips screws from the DVI connector side of the PowerBook.

- When replacing these screws, you must reinstall each screw in the correct order. Begin by installing the screw closest to the display hinge, and go out from there.

- During reassembly, make sure to reinstall the two screws on the right into their appropriate locations, and not the DVI port anchor holes.
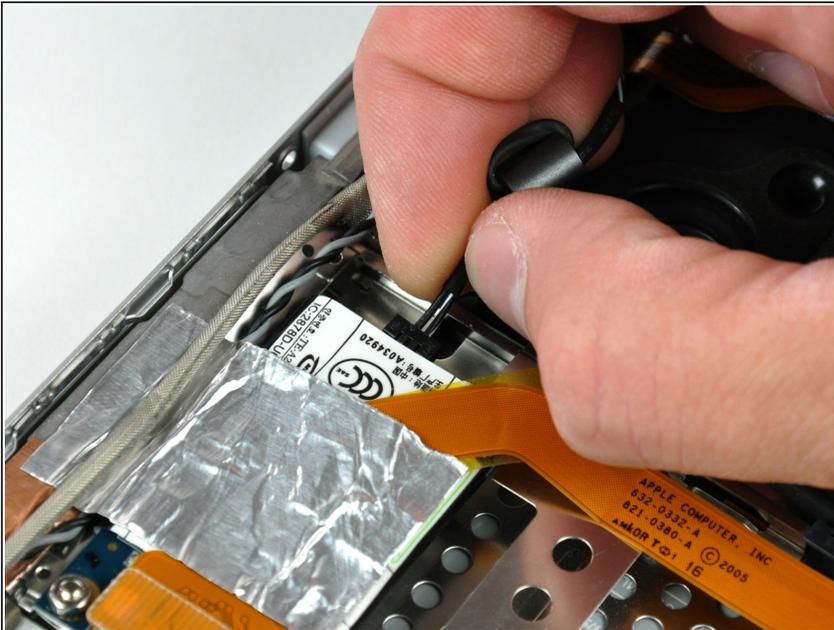
Step 9

- Depress the display latch release button and open your display.

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Step 10

- Starting near the display, lift the upper case straight up off the lower case, minding any cables that may get caught.
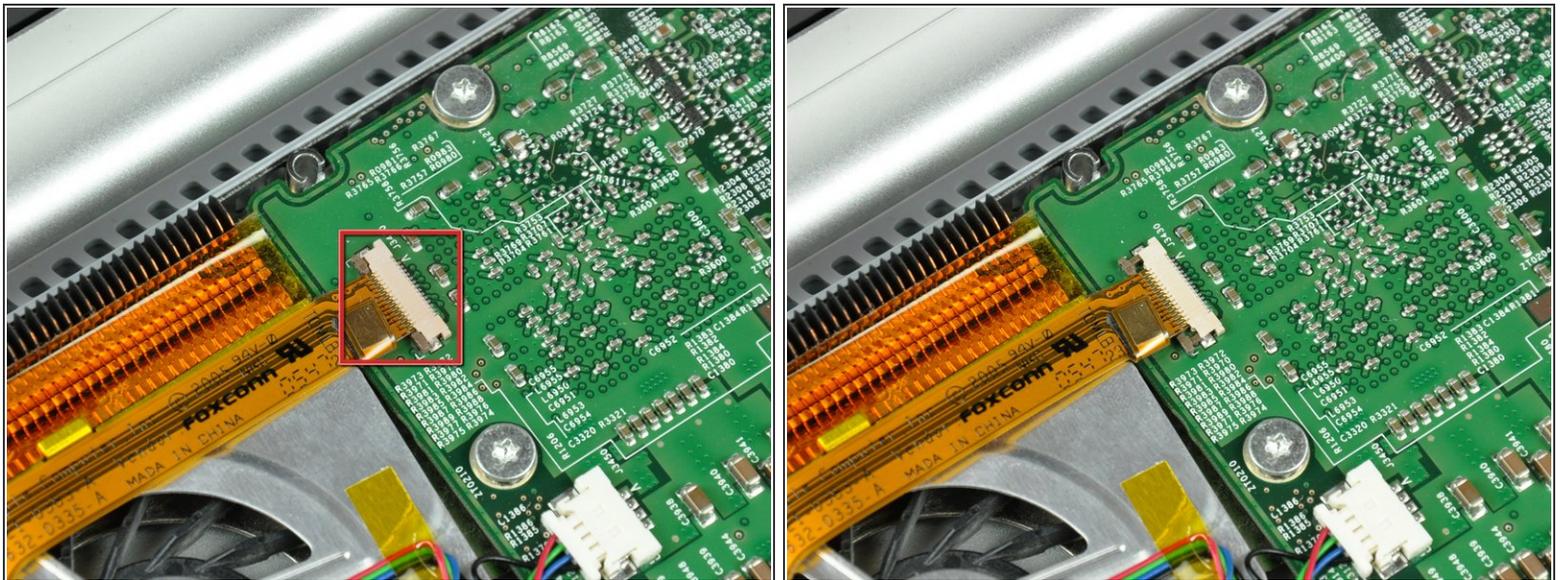
Step 11 — Speakers

- Disconnect the RJ-11 cable from the modem.

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Step 12

- If necessary, remove the strip of tape covering the speaker cables.

Step 13

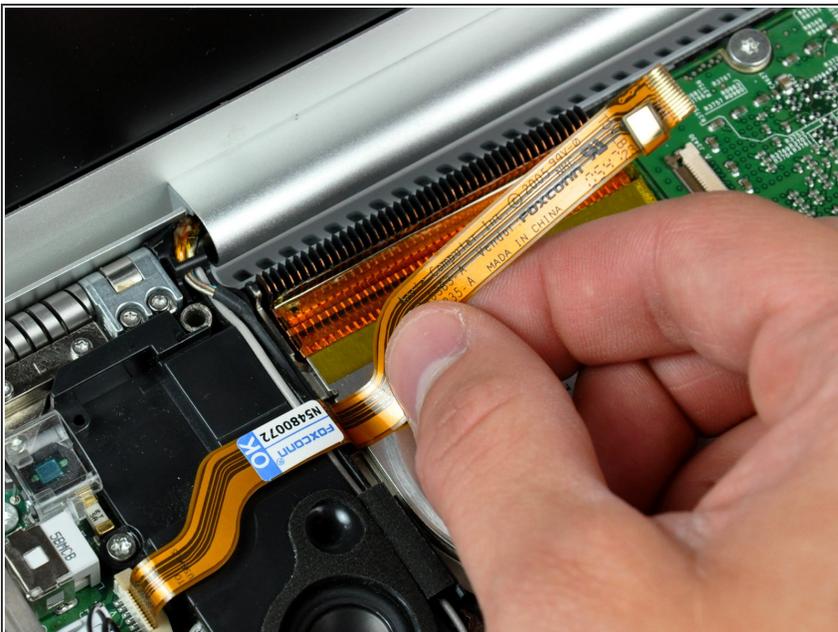- Use your fingernails or the tip of a spudger to separate the ZIF cable lock from its socket.

- ⚠️ The ZIF cable lock will move about 1 mm and stop. **Do not** attempt to completely remove the ZIF cable lock.
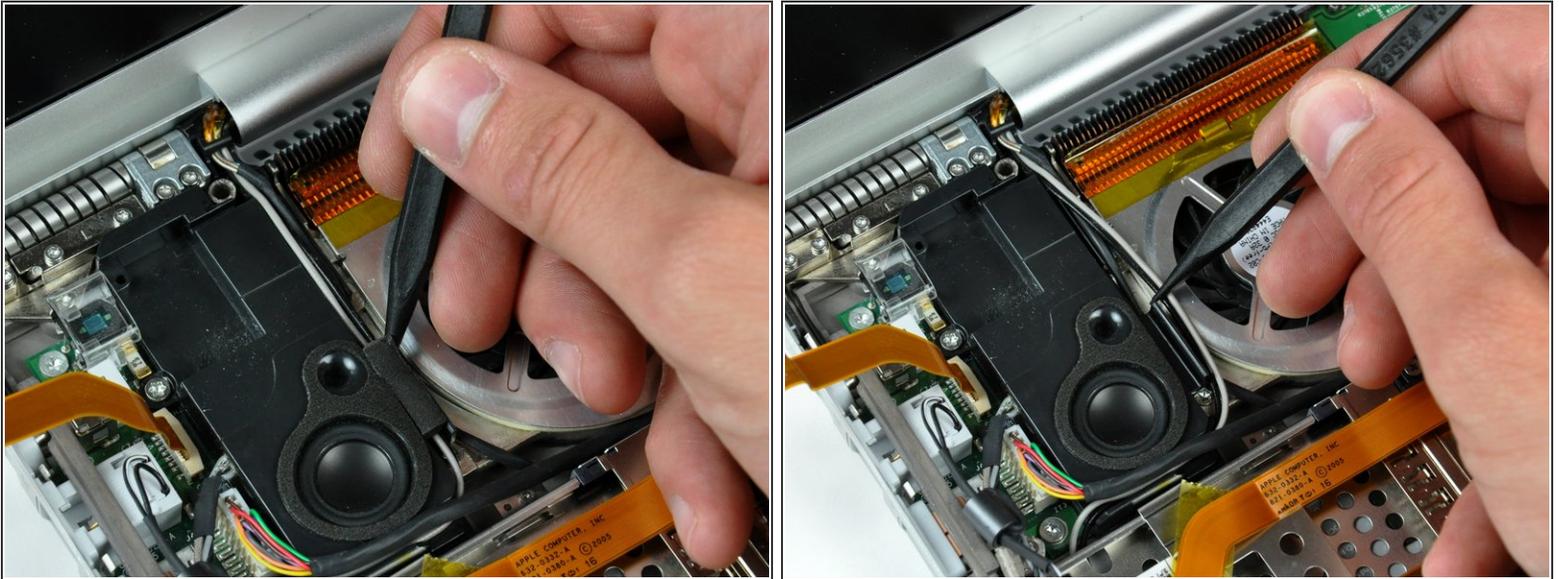
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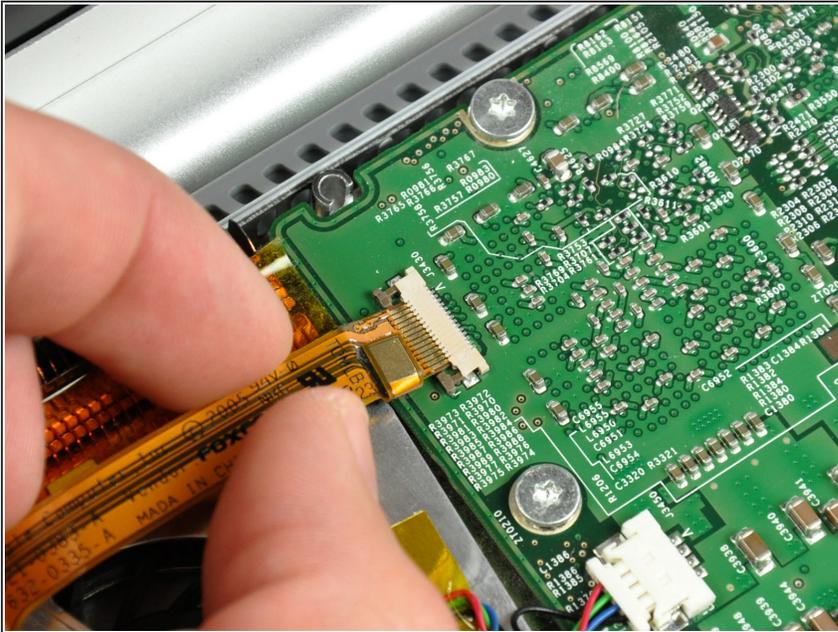
Step 14

- Pull the DC-in ribbon cable straight away from its socket.

Step 15

- Peel the DC-in cable off the adhesive securing it to the lower case.

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Step 16

- If necessary, use the tip of a spudger to remove the small piece of foam tape from the side of the left speaker.

- De-route the AirPort antenna cables from the channel in the left speaker.

Step 17
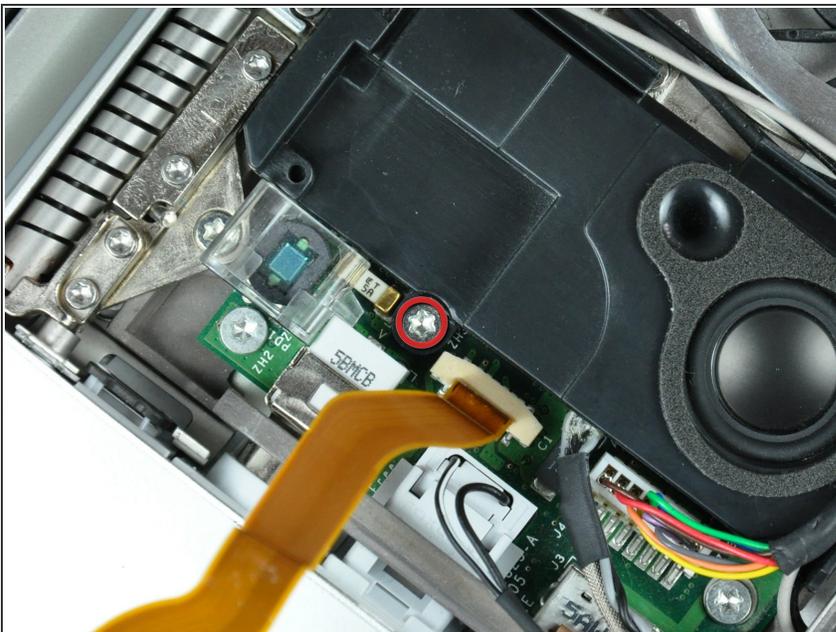
- Remove the single 6.9 mm T8 Torx screw securing the left speaker to the lower case.

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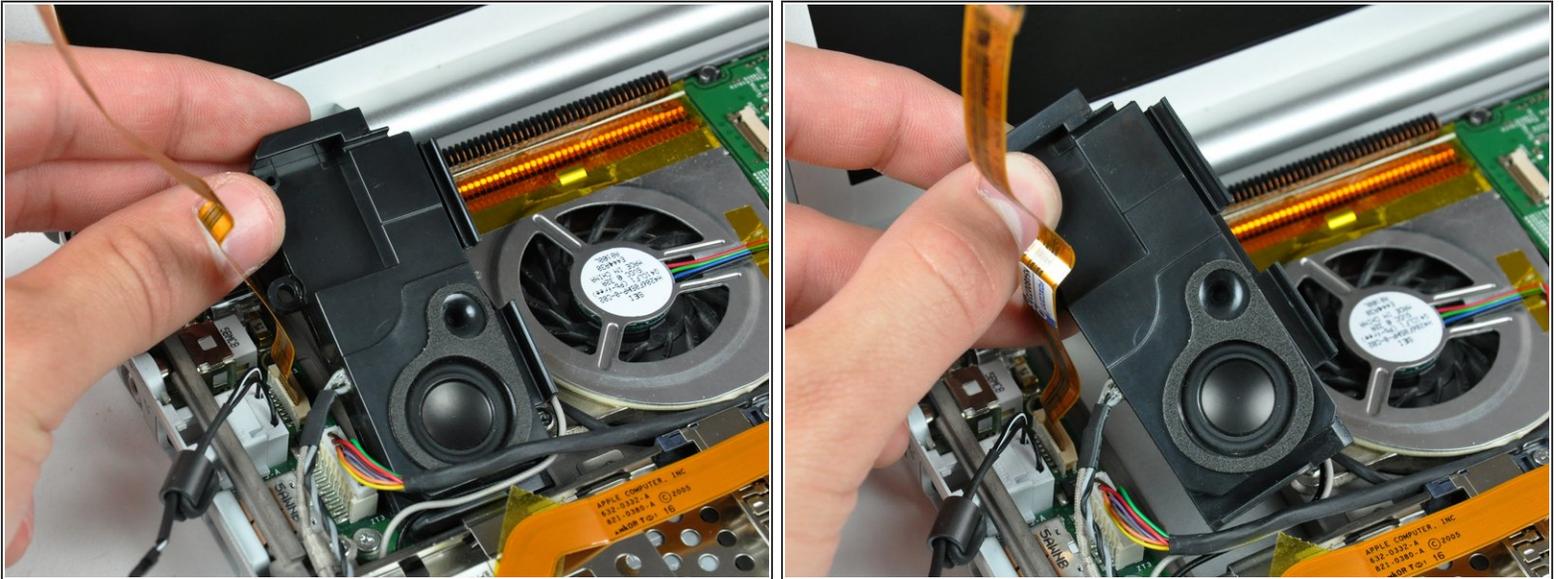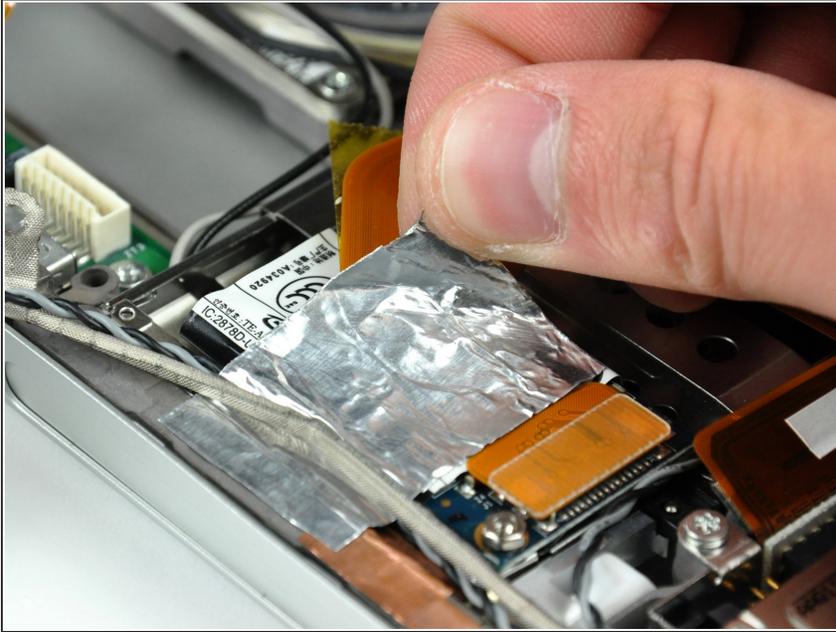
Step 18

- Lift the left speaker from its rear edge and maneuver it out of the lower case, minding the cables sitting in the channel near the front edge of the left speaker.
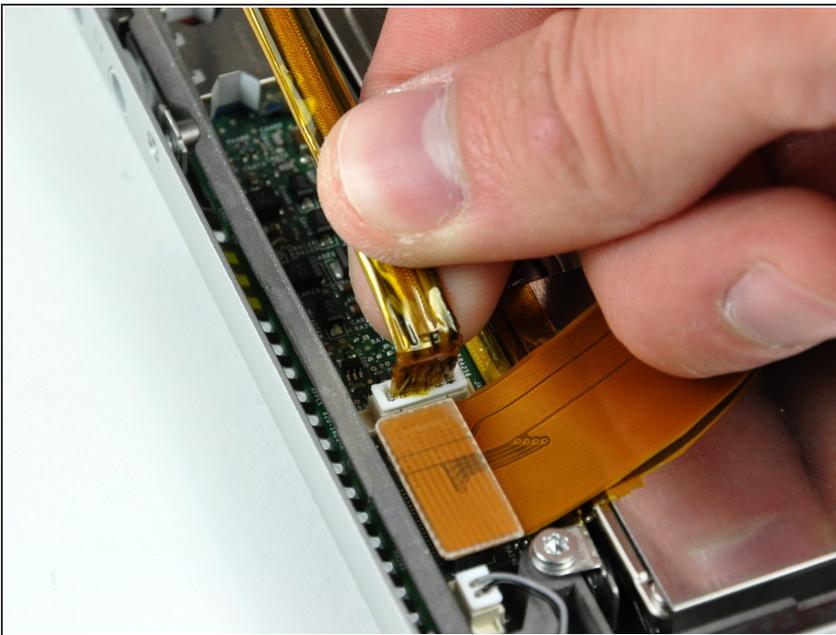
Step 19

- Remove the single 6.9 mm T8 Torx screw securing the speaker cable ground loop to the lower case.

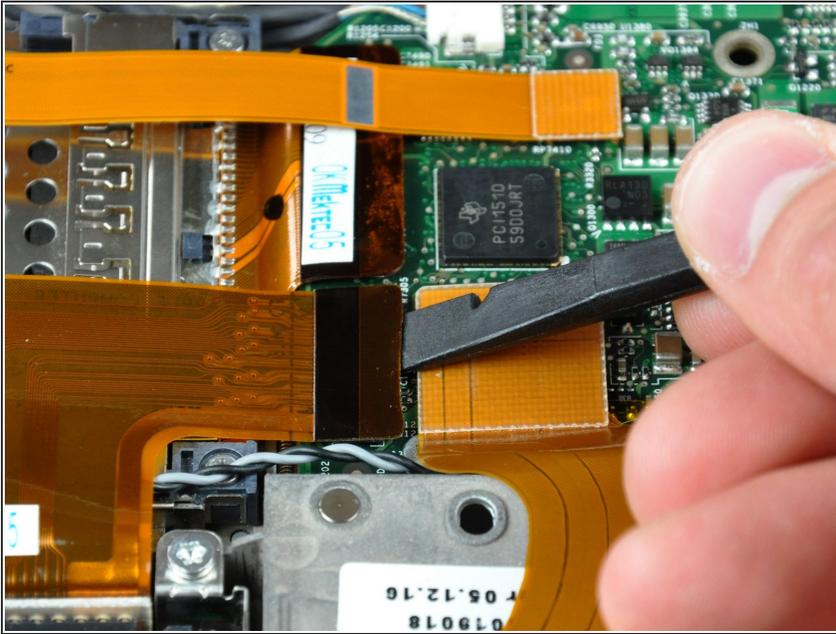This document was generated on 2019-10-29 07:03:07 PM (MST).

Step 20

- Peel back the piece of foil tape covering the modem cable to free the speaker cable held underneath.

Step 21

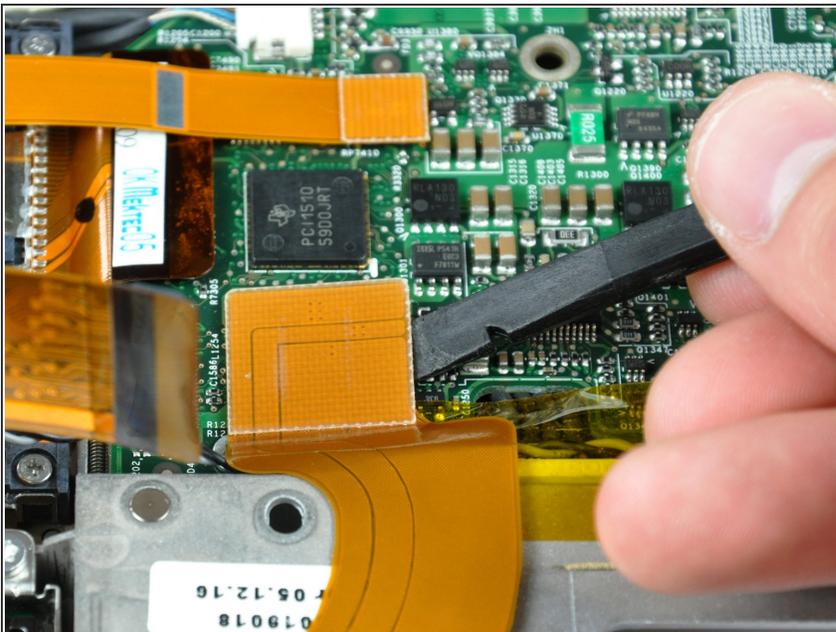- Pull the speaker cable straight up to disconnect it from the sound card.

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Step 22

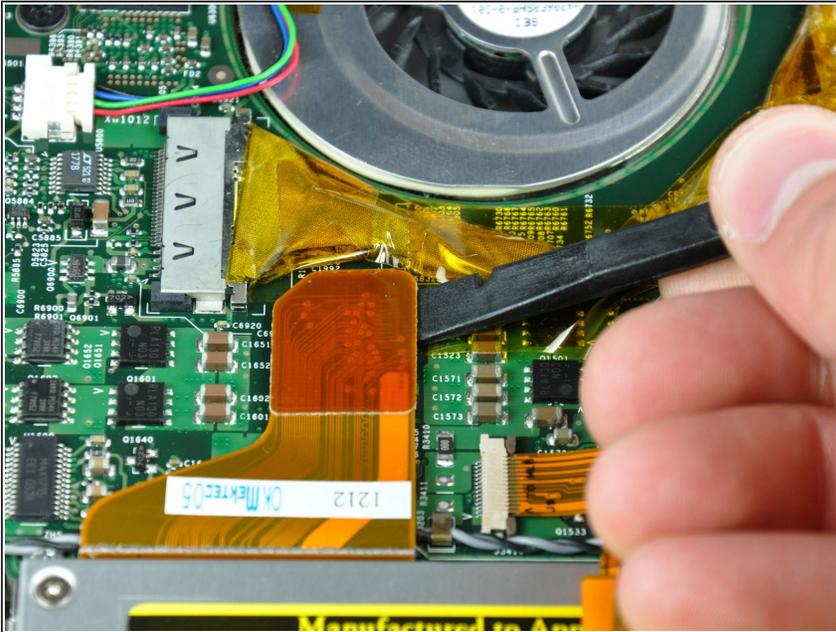- (i) In the next few steps, you will disconnect several ribbon cables that cover the right speaker cable.

- Use the flat end of a spudger to pry the hard drive ribbon cable connector up off the logic board.
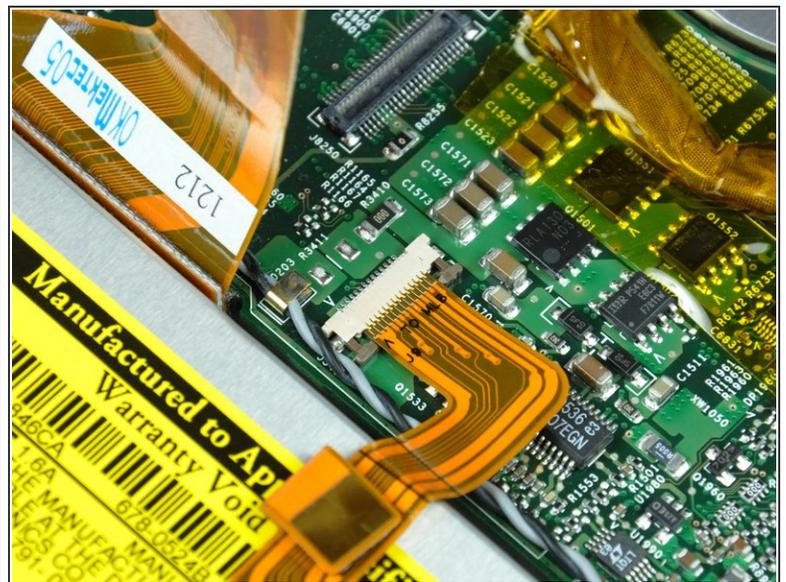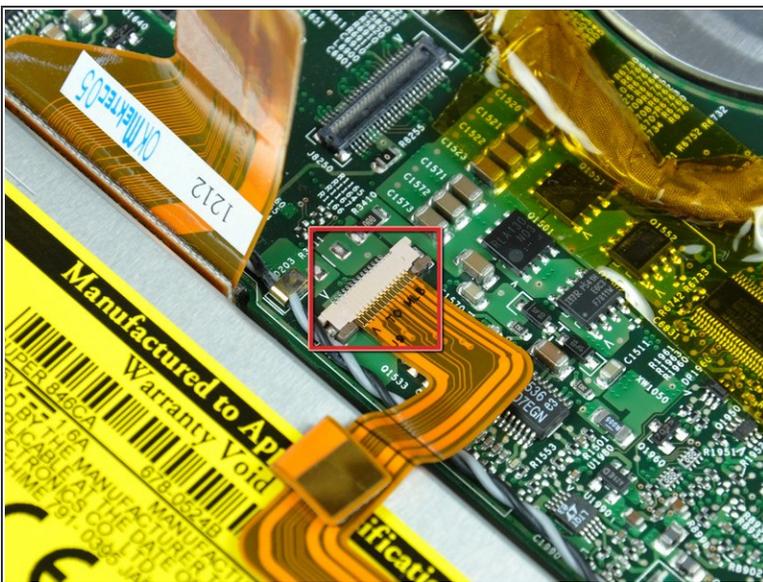
Step 23

- Use the flat end of a spudger to pry the sound card cable connector up off the logic board.

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Step 24

- Use the flat end of a spudger to pry the optical drive cable connector up off the logic board.
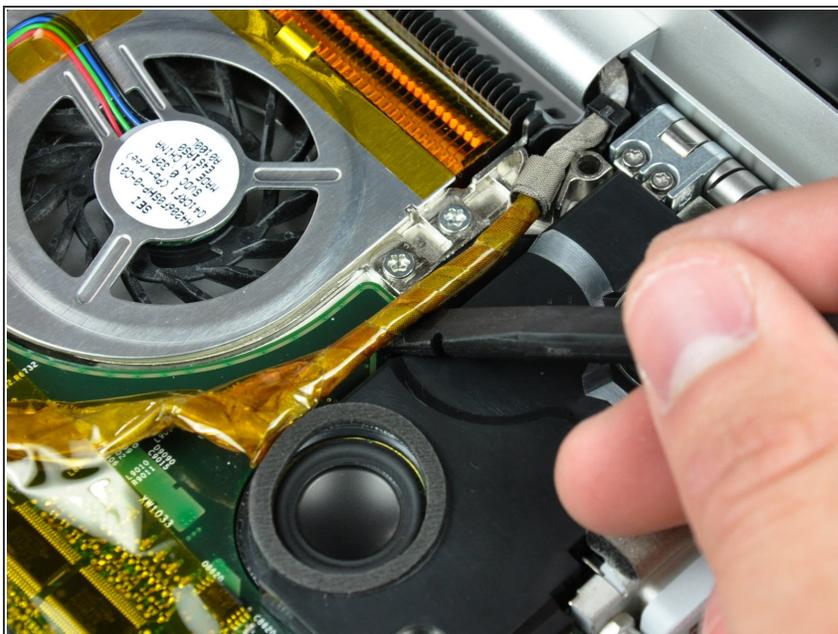
Step 25

- Use your fingernails or the tip of a spudger to separate the ZIF cable lock from its socket.

⚠️ The ZIF cable lock will move about 1 mm and stop. **Do not** attempt to completely remove the ZIF cable lock.

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Step 26

- Pull the PRAM battery & USB board cable out of its socket.

Step 27

- Use a spudger to de-route the display data cable from the channel in the right speaker.

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Step 28

- Use the tip of a spudger to pry the power button LED window off the right speaker.

- (i) Try to place the window curved-side down on your work surface to keep the adhesive around its perimeter clean.

Step 29
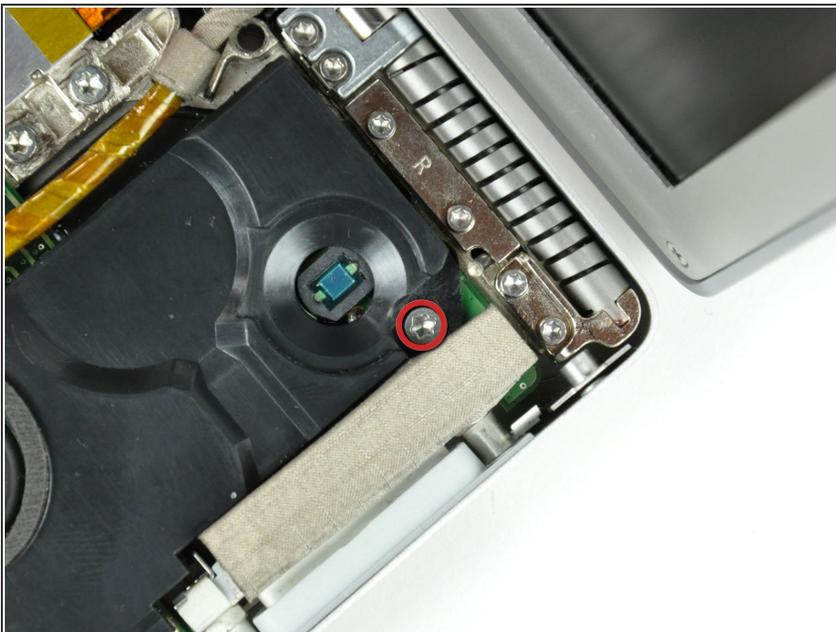
- Remove the single T8 6.9 mm Torx screw securing the right speaker to the lower case.

Step 30

- Lift the right speaker out of the lower case.

Step 31

- De-route the speaker cable from the clips along the front edge of the logic board.

- (i) The clips open in different directions, so be careful to not break any off during removal.

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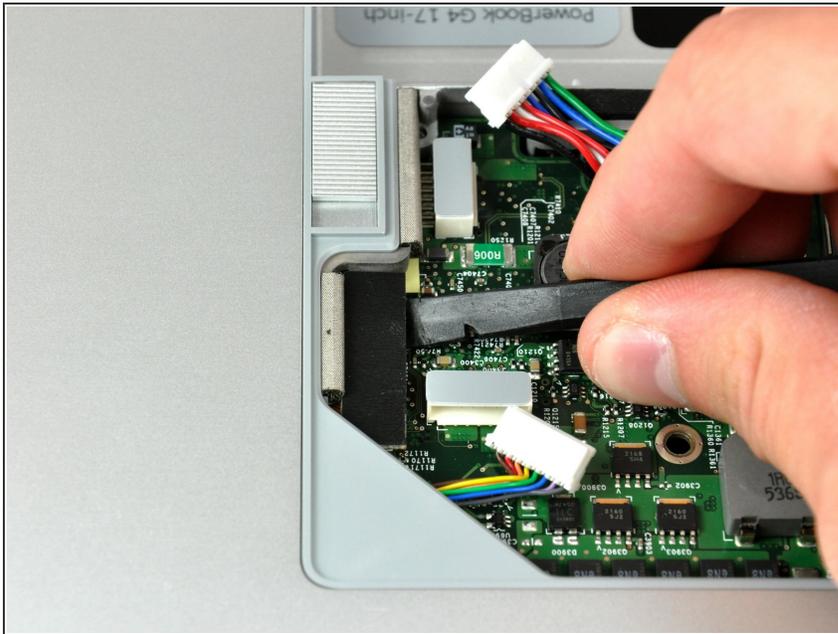Page 18 of 26

Step 32 — Logic Board

- Close your PowerBook, minding any cables that may interfere, and flip it over.

- Disconnect the power cable connector by pulling it straight away from its socket on the logic board.
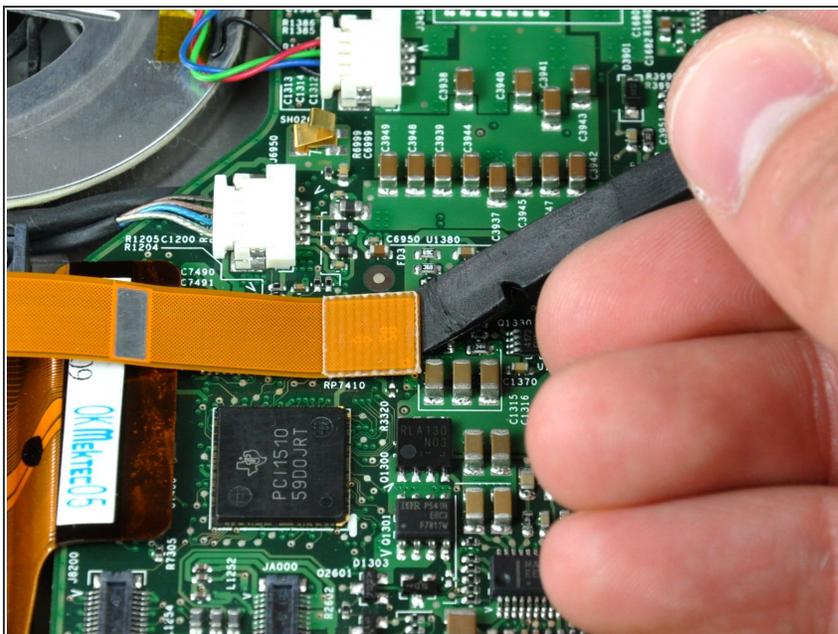
Step 33
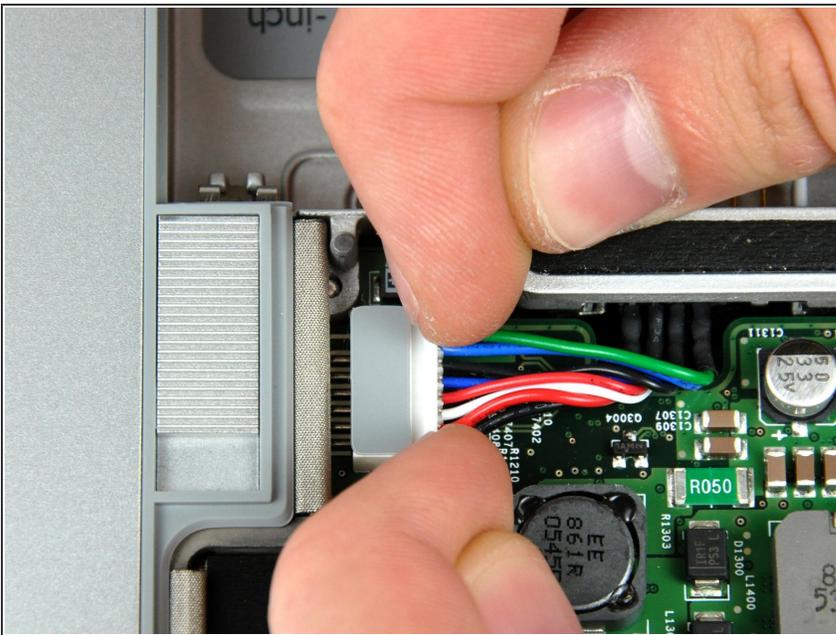
- Disconnect the battery cable connector straight away from its socket on the logic board.

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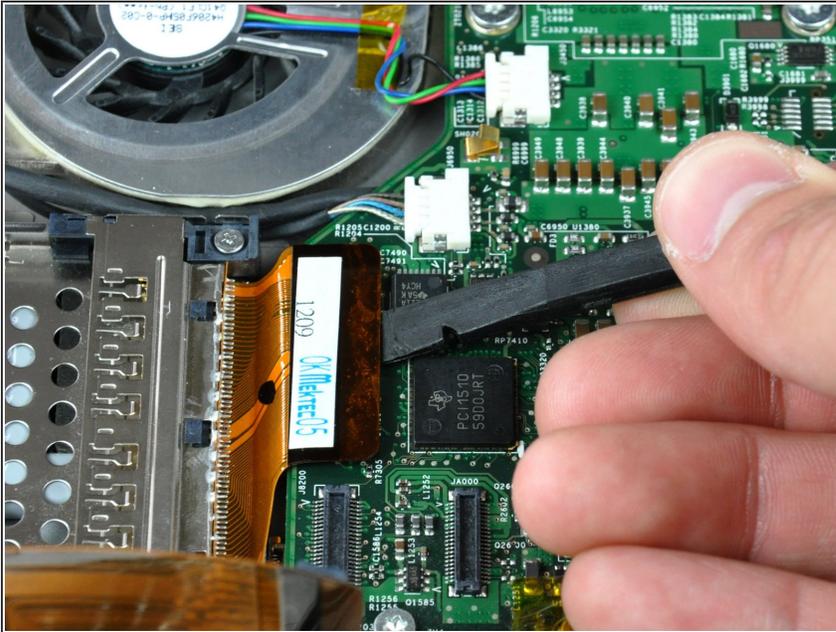
Step 34

- Use the flat end of a spudger to pry the AirPort/Bluetooth cable connector up off the logic board.
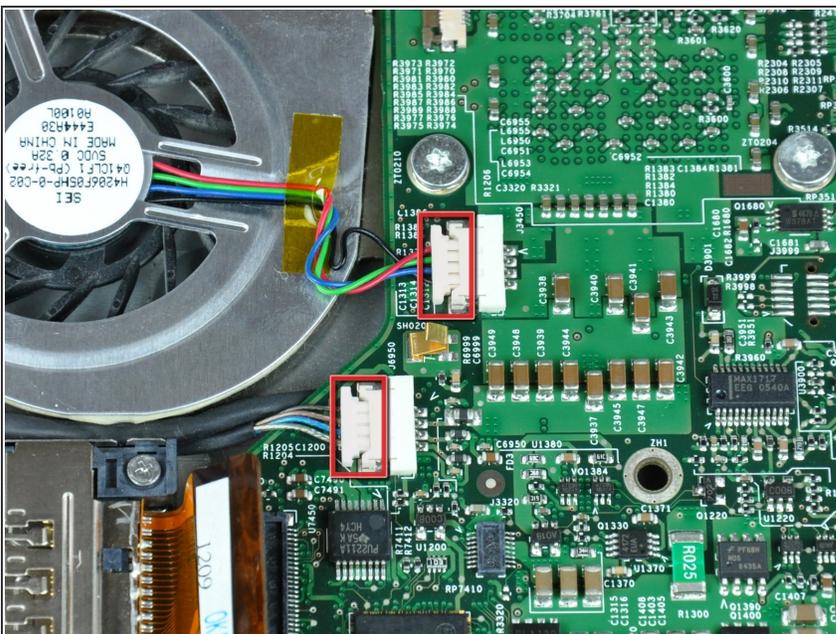
Step 35

- (i) Turn the PowerBook back over.

- Use the flat end of a spudger to pry the modem cable connector up off the logic board.

Step 36

- Use the flat end of a spudger to pry the PC card cage cable connector up off the logic board.

Step 37

- Disconnect both of the following connectors from the logic board:
  - Left fan cable.
  - Inverter cable.

⚠️ Be sure to pull only parallel to the face of the logic board, as pulling up on the socket will break it off the logic board.

ⓘ When pulling these connectors away from their sockets, it is helpful to use your fingernails to pull on the ears at each side of the connector.

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Step 38

- Remove the following four screws securing the optical drive to the lower case:
  - Three 6.8 mm T8 Torx.
  - One 3.8 mm T8 Torx.
- Lift the optical drive out of the lower case, minding any cables that may get caught.

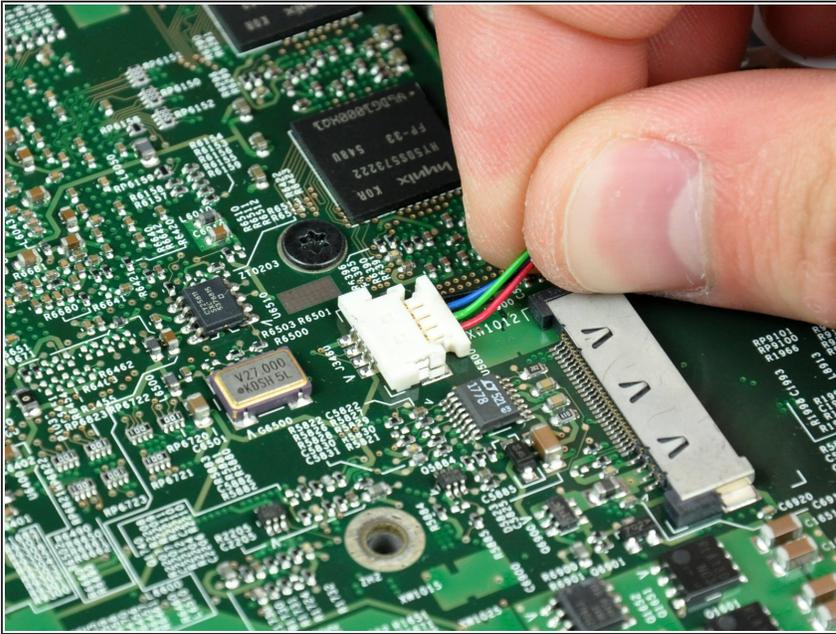This document was generated on 2019-10-29 07:03:07 PM (MST).

Step 39

- If necessary, remove the piece of tape securing the display data cable to the logic board.
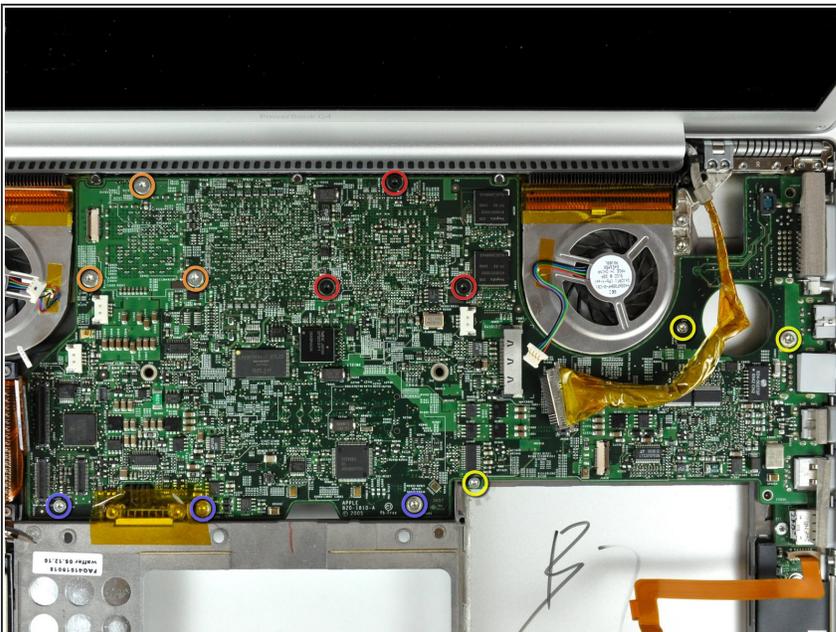
Step 40
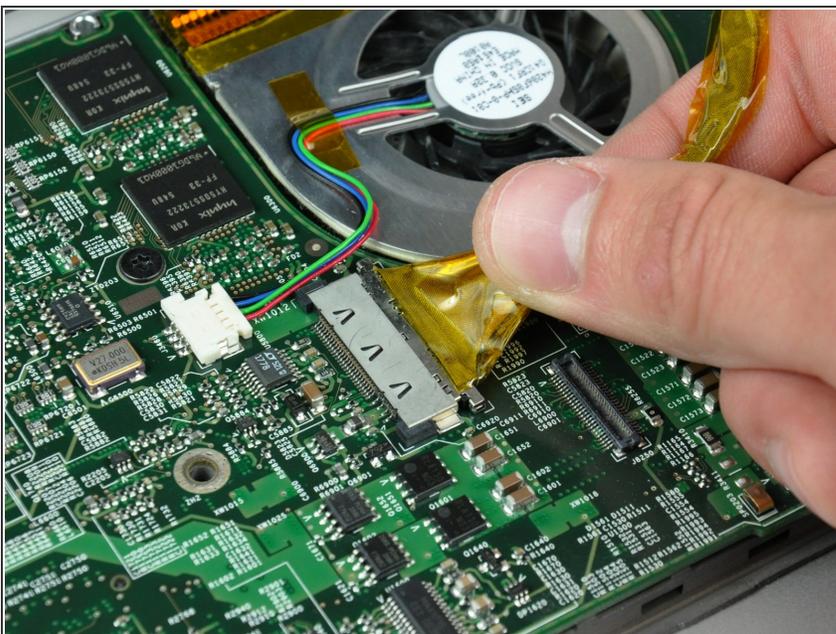
- Pull the display data cable away from its socket to disconnect it from the logic board.

⚠ Be sure to pull only parallel to the face of the logic board, as pulling up on the socket will break it off the logic board.

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Step 41

- Disconnect the right fan by pulling its connector away from the socket on the logic board.

- (i) When pulling this connector away from its socket, it is helpful to use your fingernails to pull on the ears at each side of the connector.

- ⚠ Be sure to pull only parallel to the face of the logic board, as pulling up on the socket will break it off the logic board.

Step 42

- Remove the following 12 screws:
  - Three black 5.7 mm T8 Torx.
  - Three 7 mm T8 Torx with spring washers.
  - Three 6.8 mm T8 Torx.
  - Three 3.8 mm T8 Torx.

Step 43
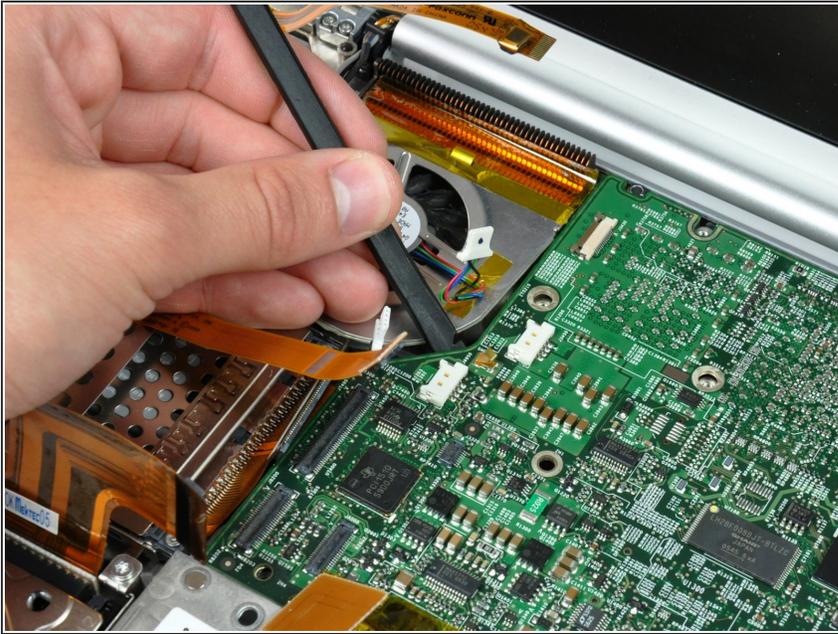
- If necessary, use a spudger to pry up the left edge of the logic board to separate the solidified thermal paste from the heat sink.

- ⓘ If any resistance is felt when prying up on the logic board, we recommend softening the thermal paste by heating the board with a hair dryer before prying further.

Step 44

- Lift the logic board from its left edge and rotate it toward the right side of the lower case.

- ⚠ The logic board on this model has a tendency to get caught on the lower case near the DVI port at the upper right corner. If it catches as you are rotating it, stop to avoid bending and breaking the logic board.

- Rotate the logic board until it is nearly vertical, and wiggle it around until it releases from the lower case.

- 📌 When reinstalling your logic board, be sure to apply thermal paste to the CPU. Our thermal paste guide makes it easy.

- ⚠ Only replace the gray thermal paste on the CPU. The white thermal material on the GPU chips can be reused.

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