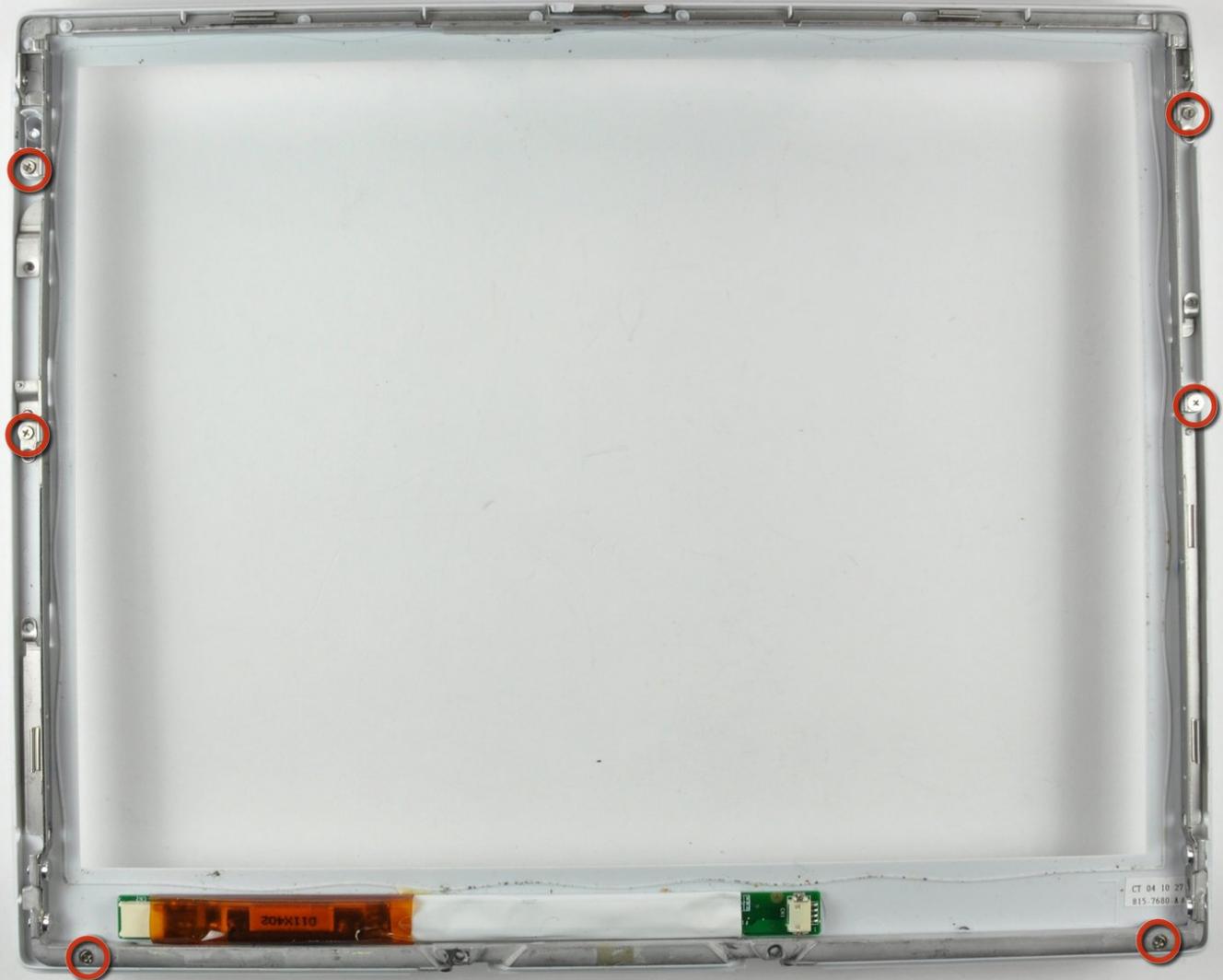




iBook G4 12" 800 MHz-1.2 GHz Clutch Hinges Replacement

Written By: Walter Galan



INTRODUCTION

Replace your broken display hinges to make your display open silky-smooth.



TOOLS:

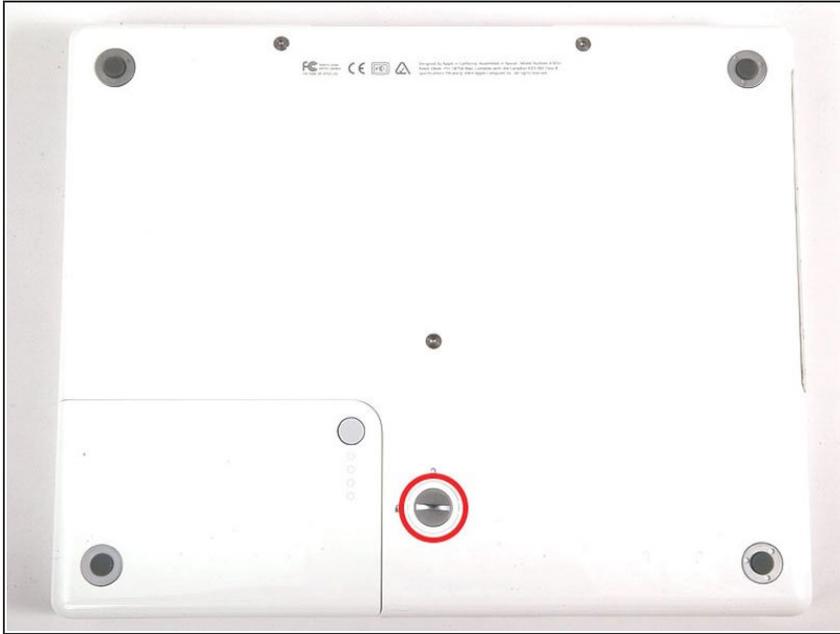
- [1.5mm Hex Screwdriver](#) (1)
- [Coin](#) (1)
- [Phillips #00 Screwdriver](#) (1)
- [Flathead 3/32" or 2.5 mm Screwdriver](#) (1)
- [Spudger](#) (1)
- [T8 Torx Screwdriver](#) (1)



PARTS:

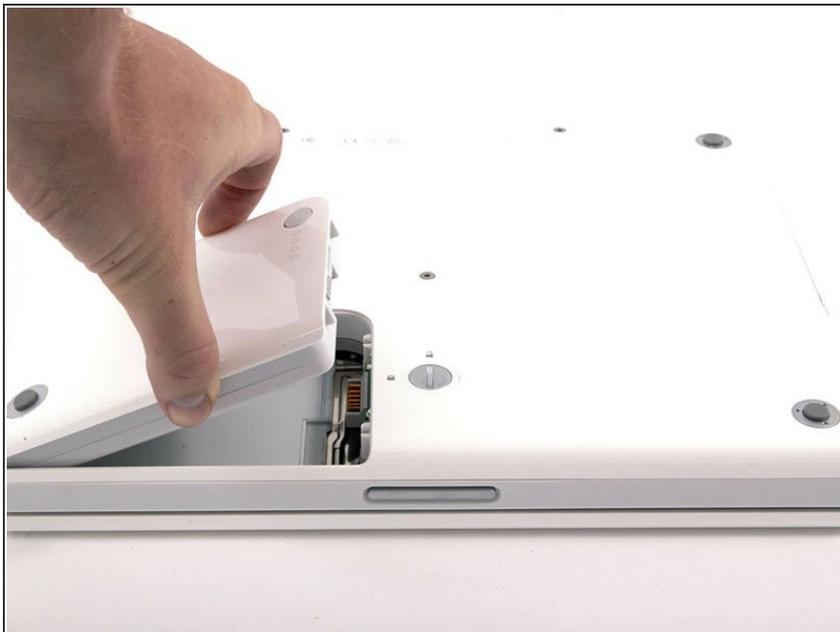
- [iBook G3 or G4 12" Clutch Hinges](#) (1)

Step 1 — Battery



- Use a coin to rotate the battery locking screw 90 degrees clockwise.

Step 2



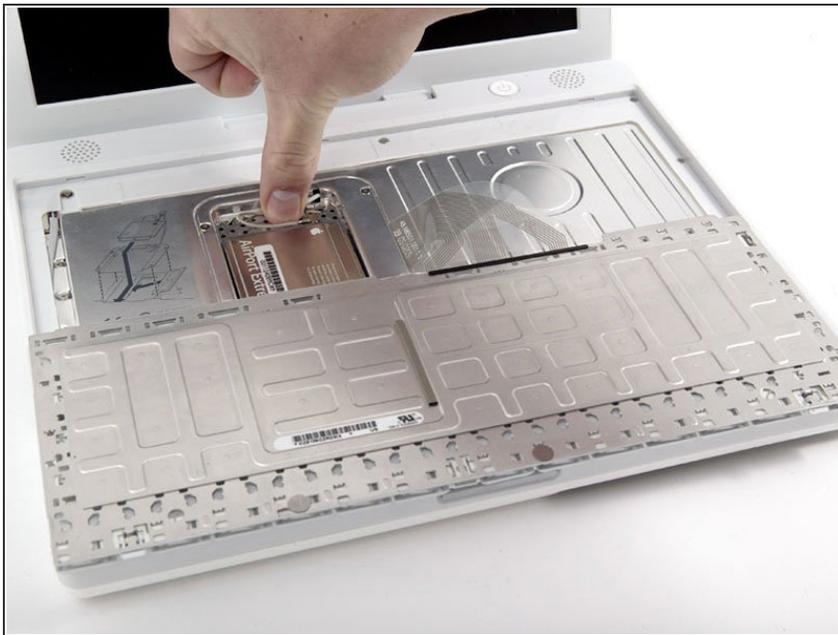
- Lift the battery out of the computer.

Step 3 — Keyboard



- Pull the keyboard release tabs toward you and lift up on the keyboard until it pops free.
- ⓘ If the keyboard does not come free, use a small flathead screwdriver to turn the keyboard locking screw 180 degrees in either direction and try again.
- Flip the keyboard over, away from the screen, and rest it face-down on the trackpad area.

Step 4



- ⓘ If the computer has an AirPort card installed, follow the next three steps to remove it.
- Push the wire clasp away from the AirPort card and toward the display, then rotate up to free it from the RAM shield.

Step 5



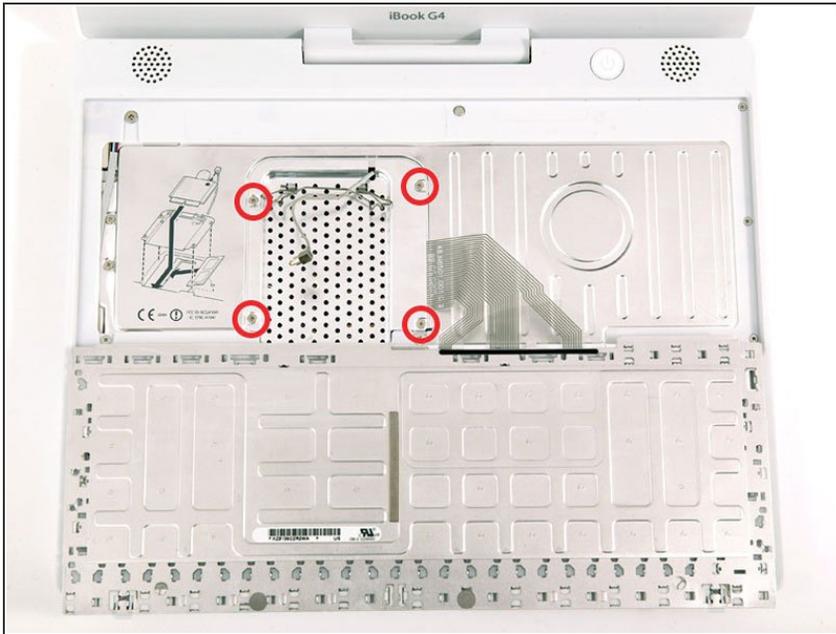
- Grasp the clear plastic tab on the AirPort card and pull toward the display.

Step 6



- Hold the AirPort card in one hand and use your other hand to remove the antenna cable.

Step 7



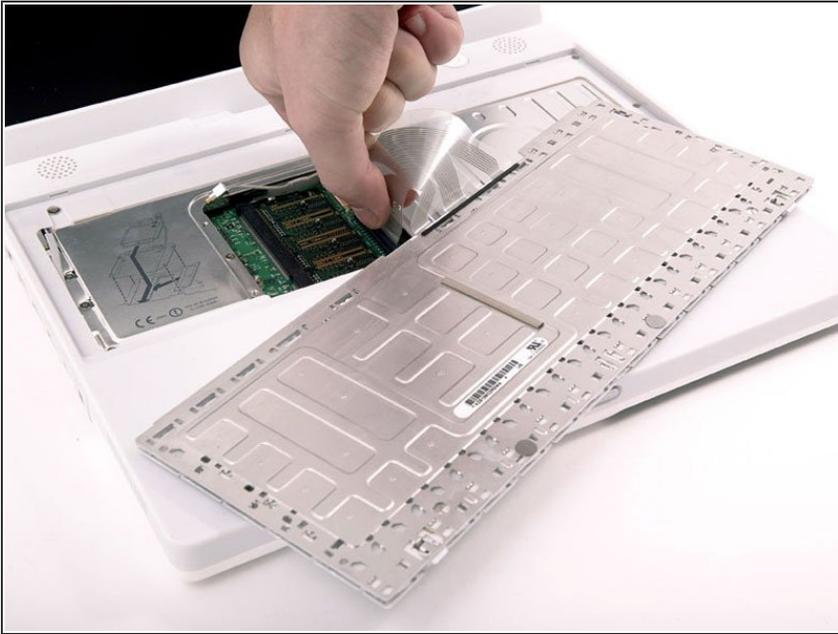
- Remove the four silver Phillips screws that secure the RAM shield.

Step 8



- Grasp the metal bracket on top of the RAM shield and pull upward to remove the shield.

Step 9



- Pull the keyboard cable up from the logic board, holding the cable as close to the connector as possible.
- ★ Make sure that you reconnect the keyboard cable before replacing the RAM shield.

Step 10 — Lower Case



- Use a pin (or anything you like) to remove the three rubber feet from the lower case.

Step 11



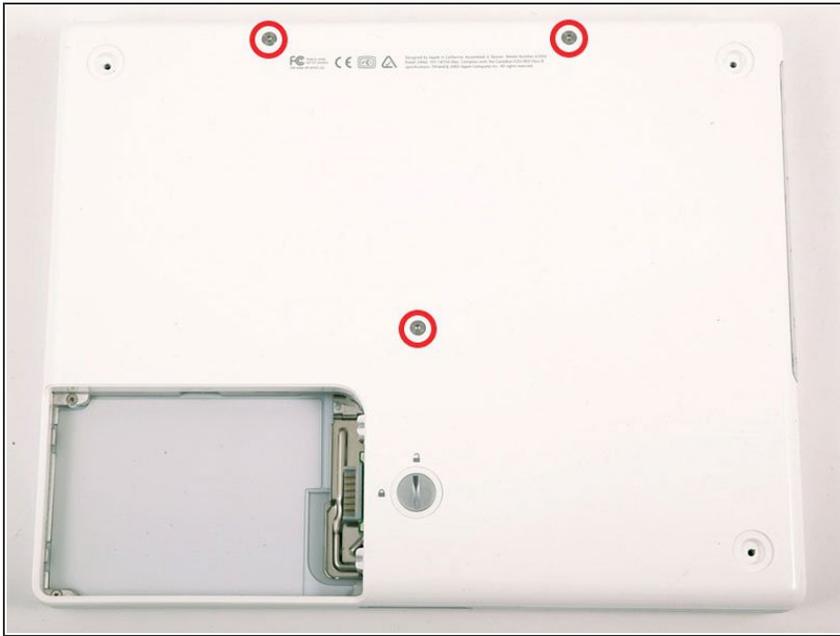
- Remove the three newly-revealed Phillips screws.

Step 12



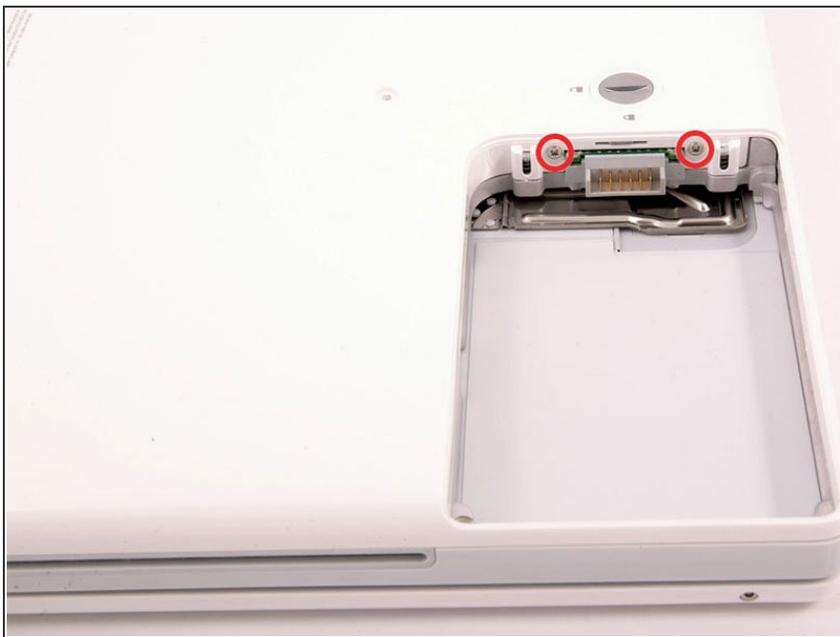
- Use a spudger or small flathead screwdriver to pry up the three metal rings that housed the rubber bumpers.

Step 13



- Remove the three Torx screws using a T8 Torx screwdriver.
- ☑ The shorter screw is in the center of the computer.

Step 14



- Remove the two Phillips screws on either side of the battery contacts.

Step 15



- ⓘ Breathe deeply. Trying times are ahead, but we promise the lower case does come off.
- Push the thin rims of the lower case surrounding the battery compartment in, bending them past the tabs, and then lift up to free that corner of the lower case.

Step 16



- There is a slot on the wall of the battery compartment that locks the lower case in place. Use a small flathead screwdriver to pry out the slot's lower rim and pull up on the lower case to free the slot from the tabs holding it.

Step 17



- Run a spudger along the seam between the lower case and upper case on the front of the computer to free the tabs locking the lower case. Pull up on the lower case and continue to use the spudger as necessary until you hear three distinct clicks.

Step 18



- Continue to run the spudger around the front, right corner. There are two tabs on the port side of the computer, one near the front corner and one near the sound-out port.

Step 19



- There are three tabs over the optical drive that must be released before the lower case can come off. Slide the spudger into the lower case above the optical drive and run it toward the back of the computer until you hear three distinct clicks.

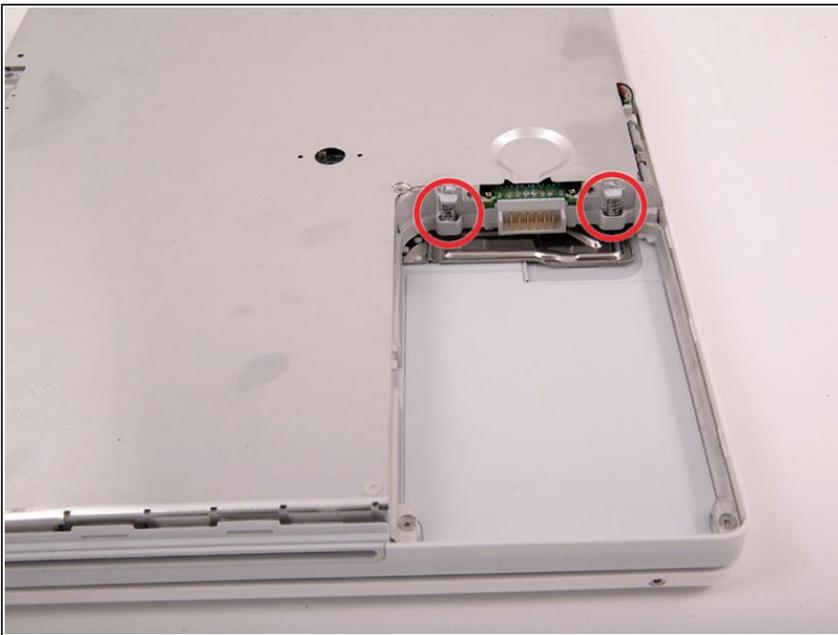
Step 20



- Once the front and sides of the lower case are free, turn the computer so that the back is facing you and pull the lower case up and away from you until the back tabs pop free.

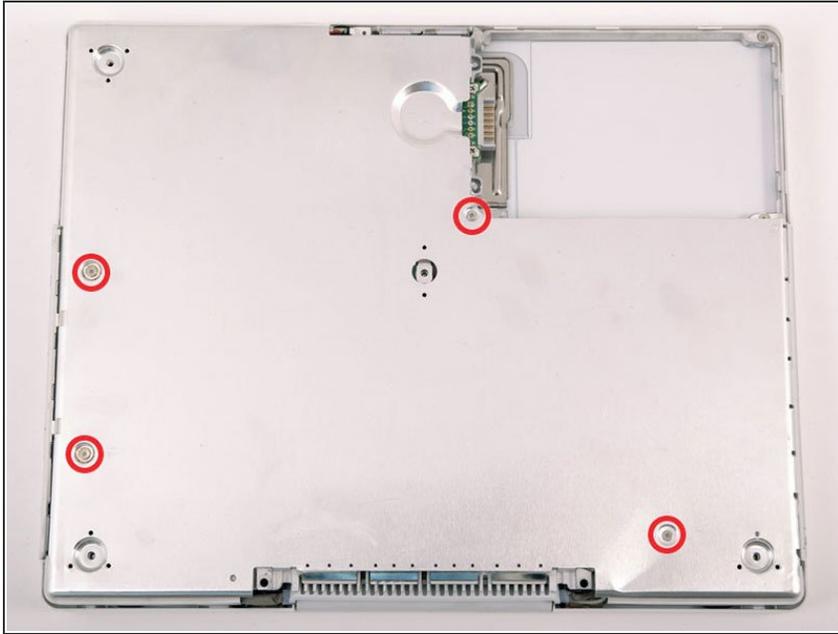
i it may be helpful to jiggle the case up and down.

Step 21



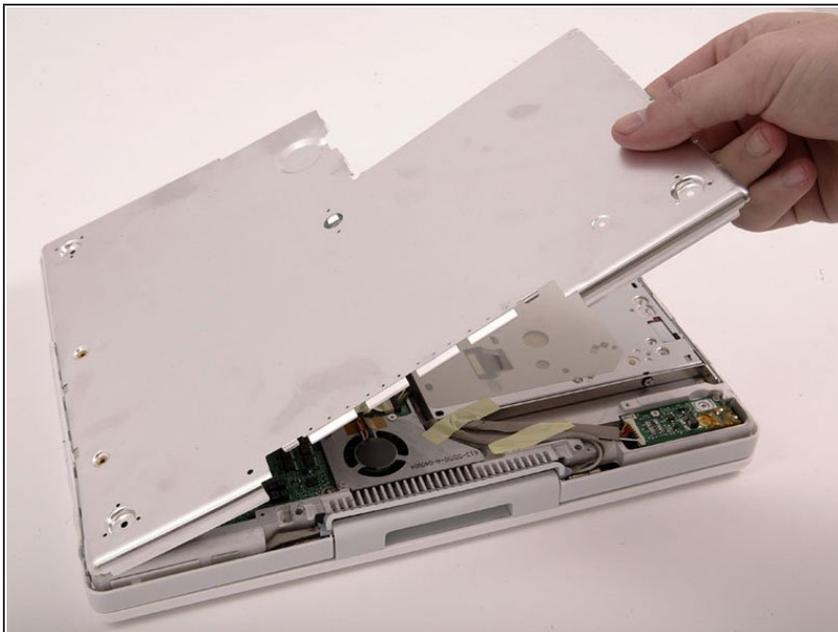
- Remove the small greasy springs with white plastic caps from either side of the battery contacts.

Step 22 — Bottom Shield



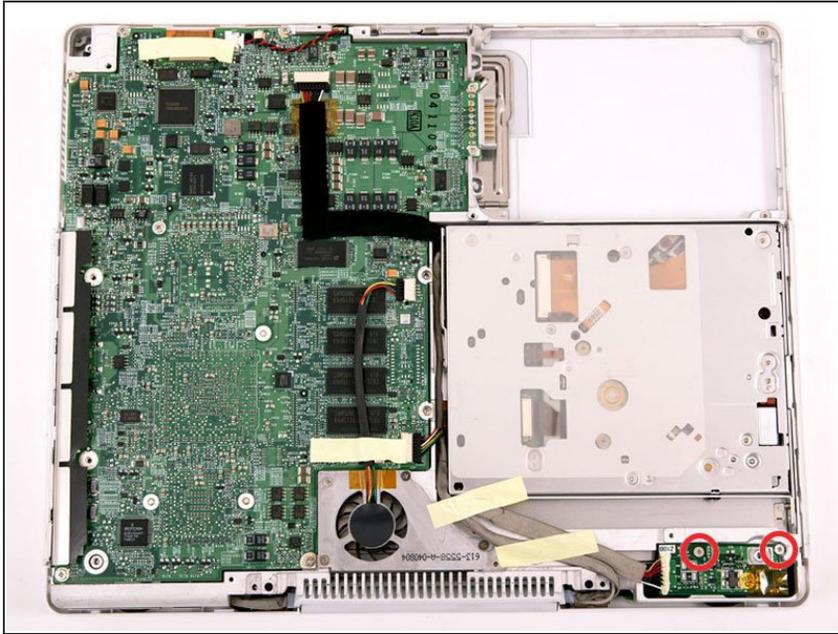
- Remove the 4 Phillips screws from the bottom shield.
- ⓘ The two longer screws are along the computer's edge, near the ports.

Step 23



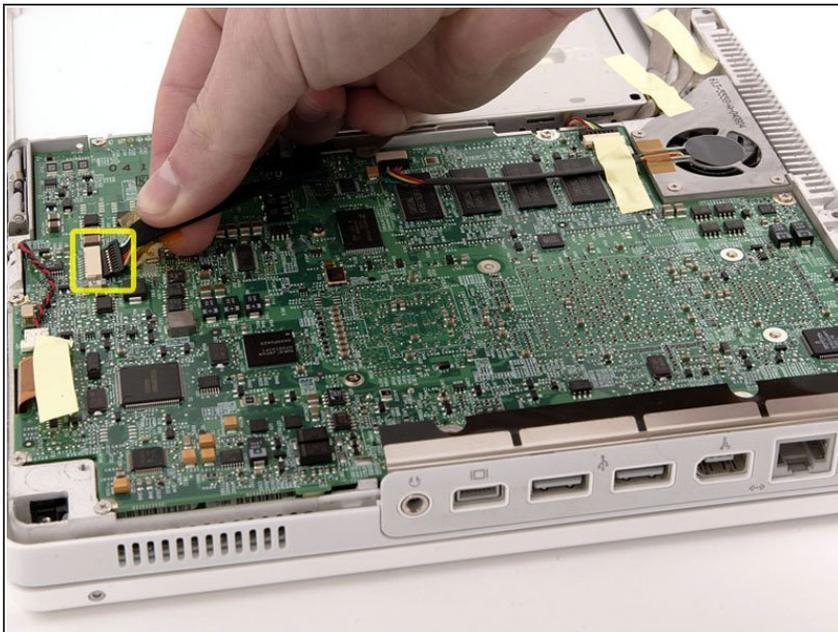
- Lift the bottom shield off.

Step 24 — DC-In Board



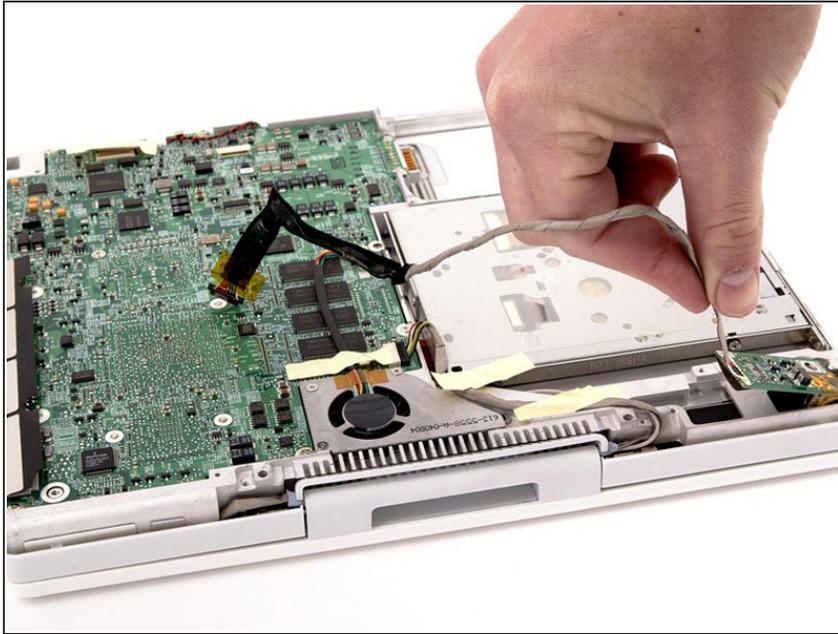
- Remove the two Phillips screws securing the DC-In board.

Step 25



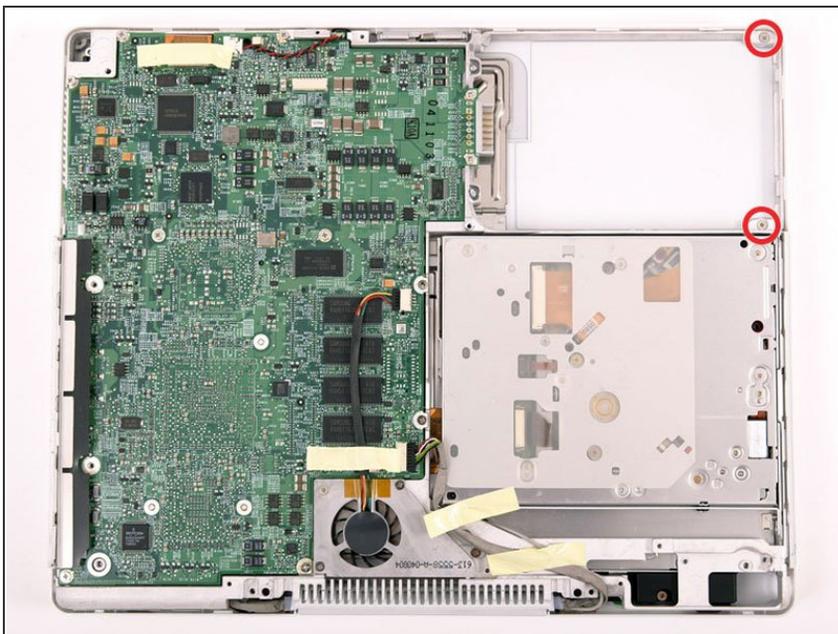
- Disconnect the DC-In cable from the logic board.

Step 26



- Deroute the cable from around the optical drive, removing tape as necessary, and angle the DC-In board out of its compartment.

Step 27 — Upper Case



- Remove the two Phillips screws from the battery compartment.

Step 28



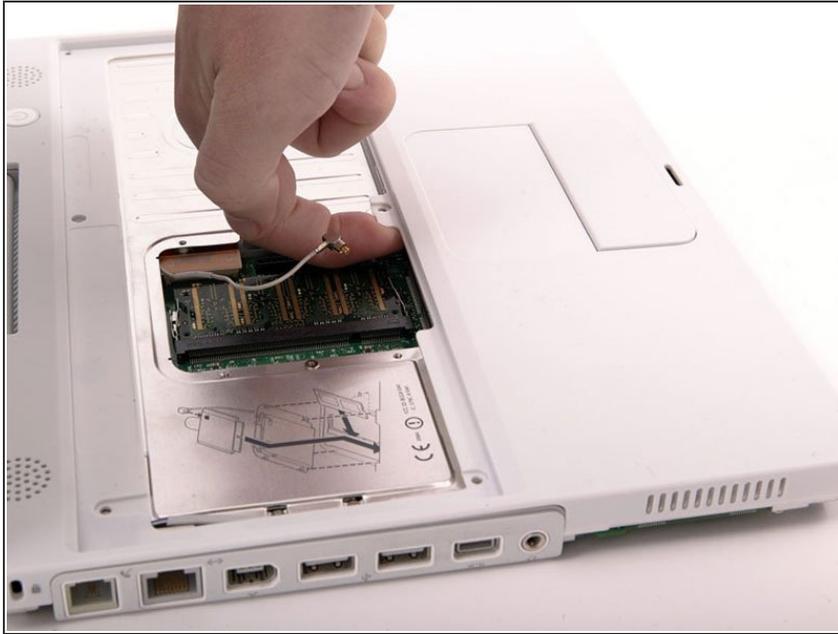
- i We recommend placing the computer on a slab of grey anti-static packing foam from this point on to prevent damaging the logic board.
- Turn over the computer and open it.
- Pry up the magnet covering a Phillips screw near the middle of the computer.

Step 29



- Remove the following 7 screws from the edges of the keyboard area.
 - Three 2 mm Phillips along the right edge.
 - One 4.5 mm Phillips underneath where the magnet was.
 - One 6 mm Phillips with a small head in the lower left corner.
 - Two 6 mm Phillips with large heads, one in the upper left corner and one in the middle

Step 30



- i Before you can yank the upper case off, you must disconnect the trackpad connector, the blue and white power cable, and speaker cable as described in the next steps.
- Lift the upper case from the right side and use a spudger or your finger to disconnect the trackpad connector hidden beneath the white plastic tab. Due to model variations your trackpad connector may be different from the one pictured.

Step 31



- Carefully lift the upper case about half of an inch and move it so that you can access the power and speaker cables.
- i If the upper case is sticking, it may be necessary to free the tabs holding the upper case to the metal framework along the outer edge of the battery compartment.

Step 32



⚠ The connectors at the ends of the cables are attached very firmly to the sockets on the logic board. Pulling directly on the cable will either separate the cable from its connector or the socket from the logic board.

- Lift the upper case enough to disconnect the blue and white power cable from the logic board. Using your fingernails or a dental pick, carefully pry the connector from its socket. Make sure you're pulling only on the connector and not on the socket.

Step 33

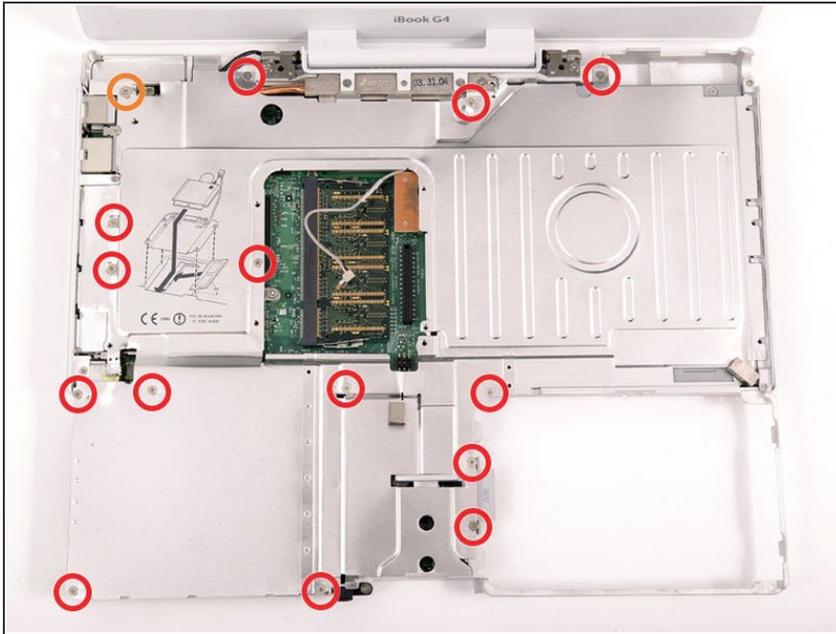


- Lift the upper case off completely and disconnect the multicolored speaker cable from the logic board. As before, make sure you're pulling only on the connector and not on the socket.

- ⓘ Tip: the multi-coloured cable may be easier and less daunting to disconnect after removing the top heat shield. Prop the top case

upright while removing the shield - the connector is then much more accessible.

Step 34 — Top Shield



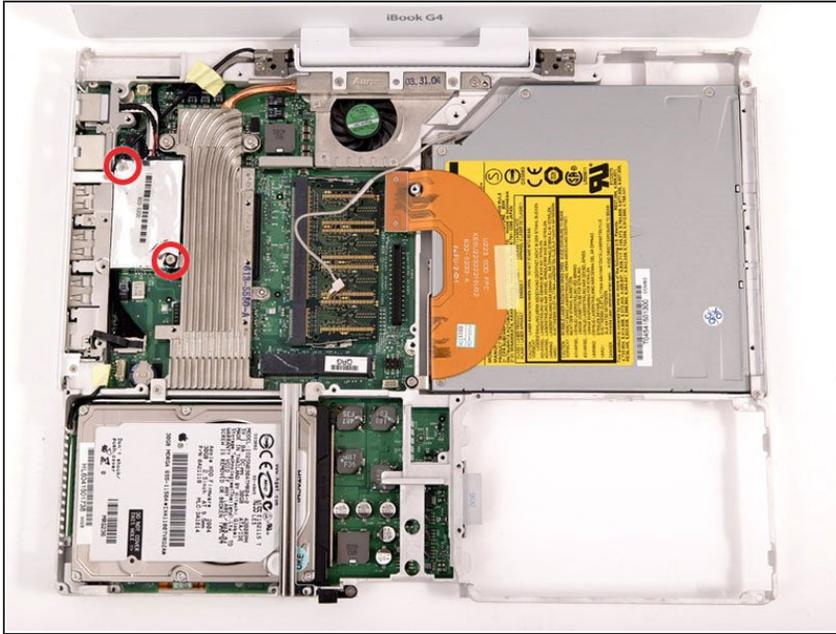
- Remove the following 15 screws:
 - Fourteen 3 mm Phillips.
 - One 5.5 mm Phillips in the upper left corner.
- ⓘ Mind the magnet position in the lower right corner

Step 35



- Lift the top shield up from the right side, minding the upper left corner, which may catch on the metal framework.

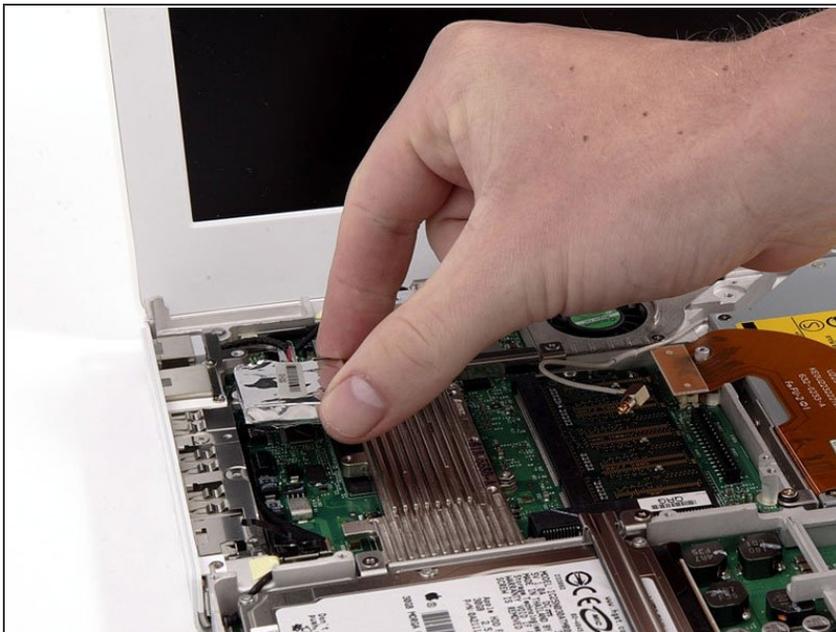
Step 36 — Modem



i Due to variations between iBook G4 models, your modem may look slightly different from the picture. All of the following steps apply to either model.

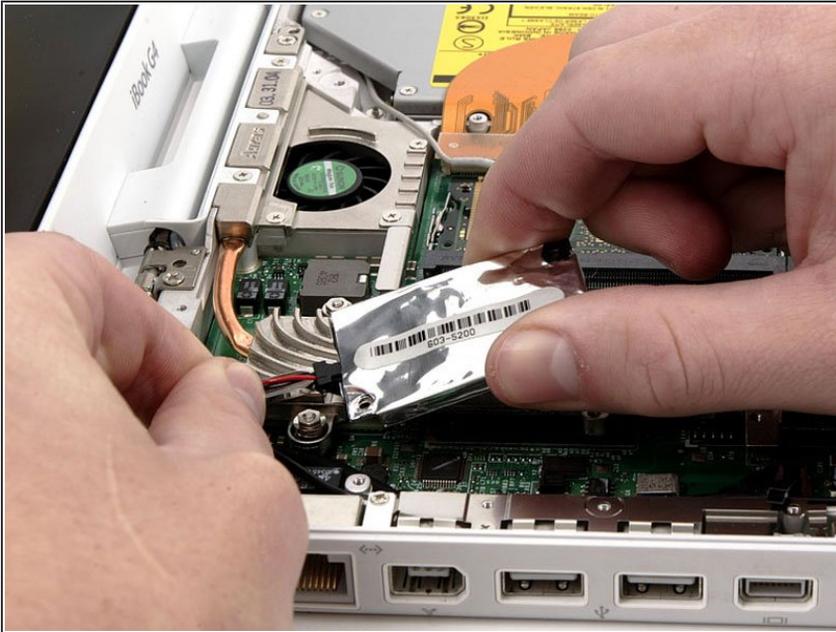
- Remove the two Phillips screws at the corners of the modem.

Step 37



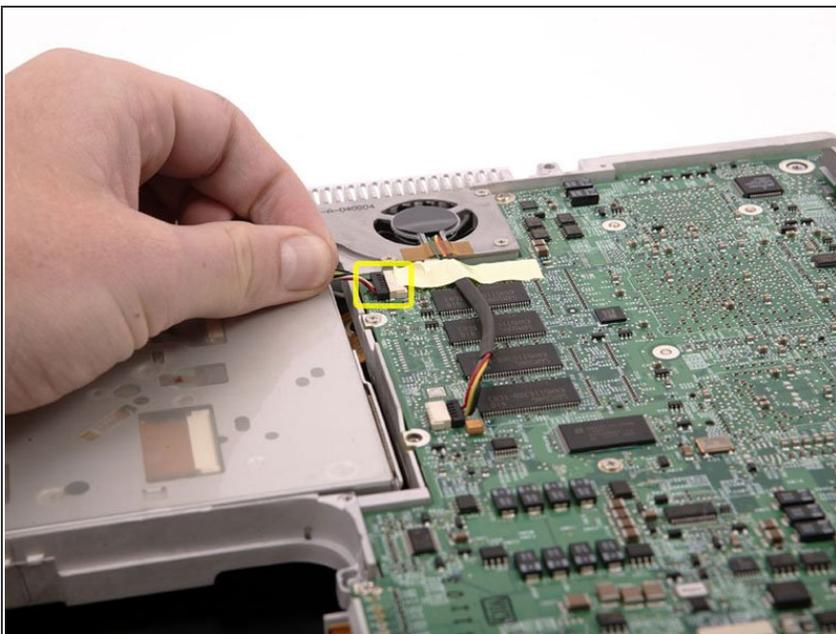
- Lift the modem and modem shield from the bottom.

Step 38



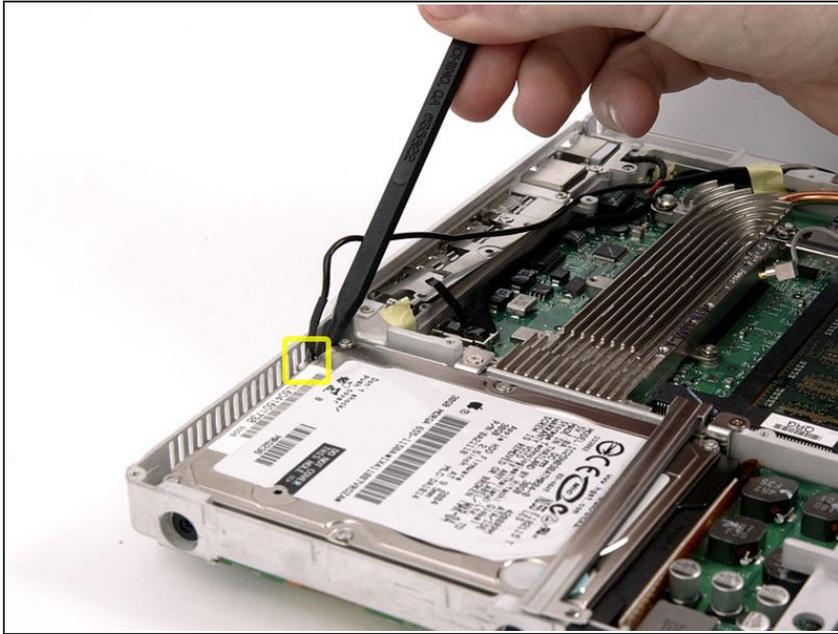
- Disconnect the RJ-11 cable from the top of the modem.
- ☑ When replacing the modem, seat the shield first, and then connect the modem and press it firmly into the shield, making sure that it is connected to the logic board.

Step 39 — Display Assembly



- Turn the computer over.
- Disconnect the inverter cable from the logic board and deroute it from the metal framework, removing tape as necessary.

Step 40



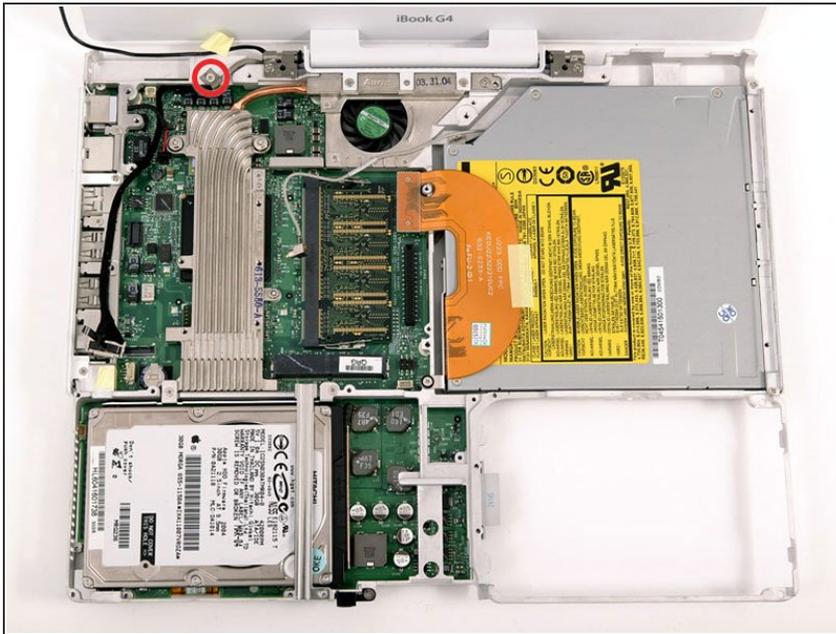
- Turn the computer back over.
- ⚠ The cable you're about to remove is very fragile - do not pull directly on the wires. Instead, try to pry up the connector directly, using a spudger or a small flathead screwdriver if necessary.
- Disconnect the microphone cable at the front of the computer, between the left side of the hard drive and the metal framework, removing tape as necessary.

Step 41



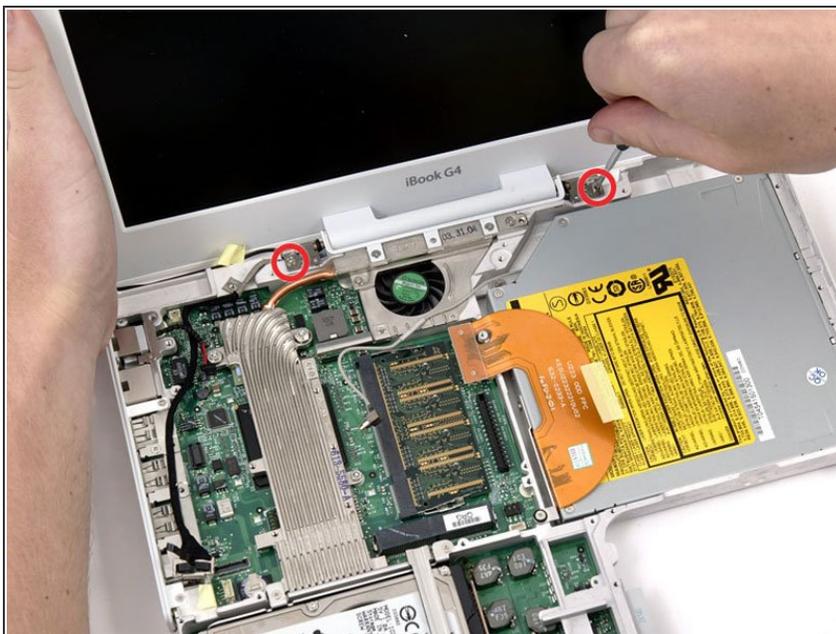
- Use the black plastic handle to disconnect the display data cable from the logic board.

Step 42



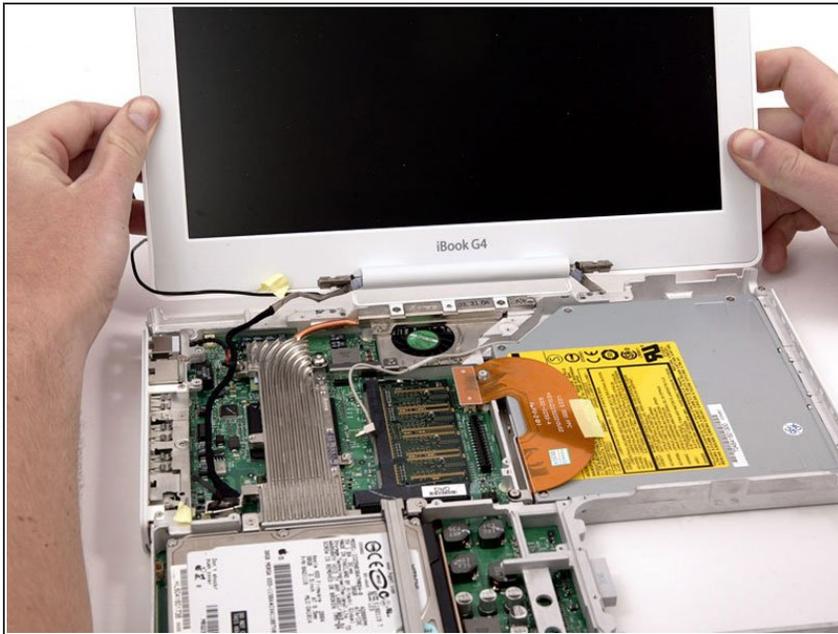
- Peel up the yellow tape holding the display data cable to the metal framework and remove the single Phillips screw beneath it.

Step 43



- Support the display with one hand and remove the single Phillips screw on either side of the hinge (two screws total).
- ☑ The screws go in the outer holes on each side (you can see the threads in the correct hole).
- ⓘ It may be necessary to unscrew one side of the optical drive for enough clearance to thread the AirPort antenna through the gap between the body of the optical drive and the iBook's internal frame.
- When remounting, mind that cables pass under the hinge, not over

Step 44



- Tilt the display back, freeing it from the two metal alignment posts holding the hinges in place, and slide it away from you.

Step 45 — Rear Display Bezel



- Use a 1.5mm hex screwdriver to remove the two hex screws on either side of the display (four screws total).
- ⓘ If you don't have a 1.5mm hex driver, you can probably get these screws out with a T6 Torx screwdriver. However, if you use a T6 Torx driver you'll be more likely to strip the screws.

Step 46



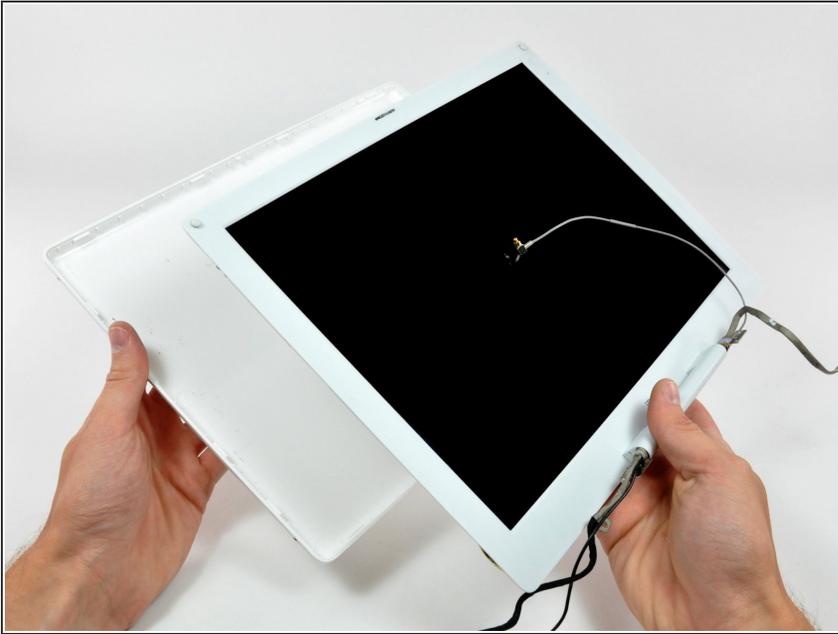
- Use your thumbs to slightly separate the rear bezel from the front bezel.
- ⓘ It is helpful to hold the opposing corner of the display stationary to aid in flexing the rear bezel away from the display.

Step 47



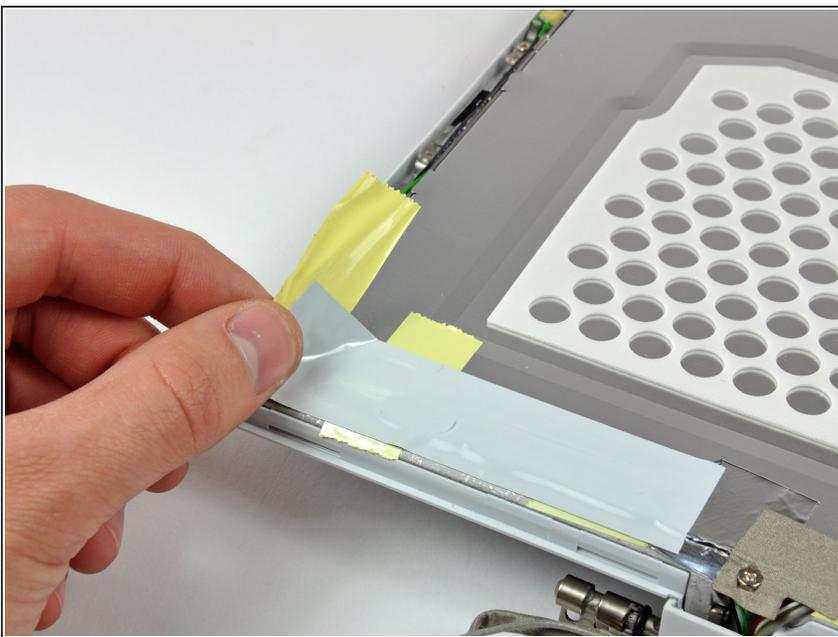
- Insert the flat end of a spudger into the gap between the front and rear bezels.
- Rotate your spudger until it is parallel to the front face of the display.
- Run the spudger around the perimeter of the display to separate the rear bezel from its retaining clips.

Step 48



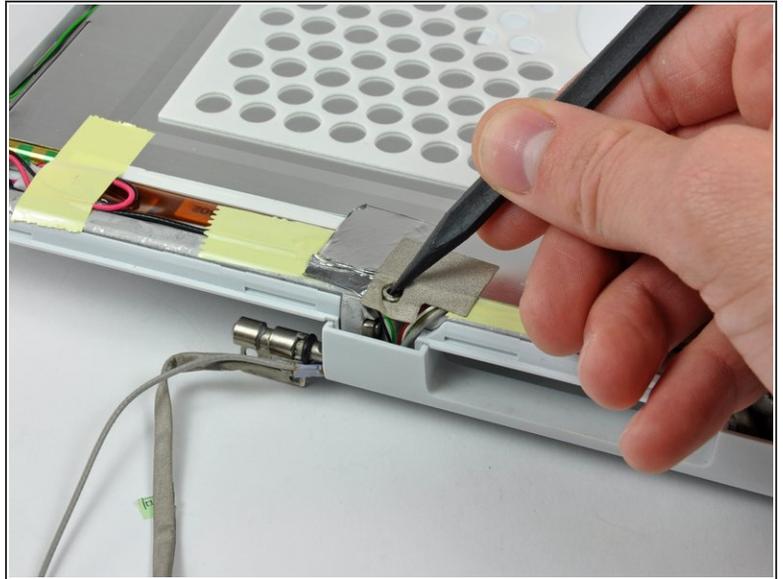
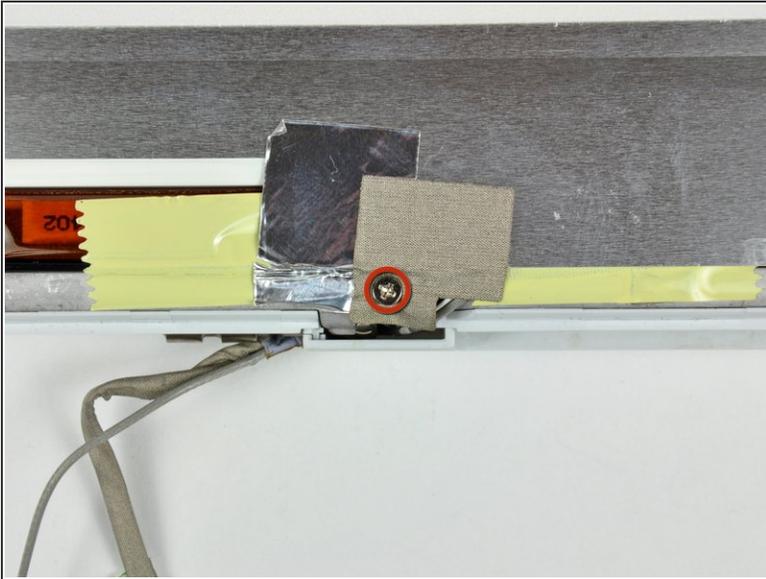
- Lift the rear bezel off the display.

Step 49 — LCD Cover



- Remove the large piece of tape near the lower right corner of the display.

Step 50



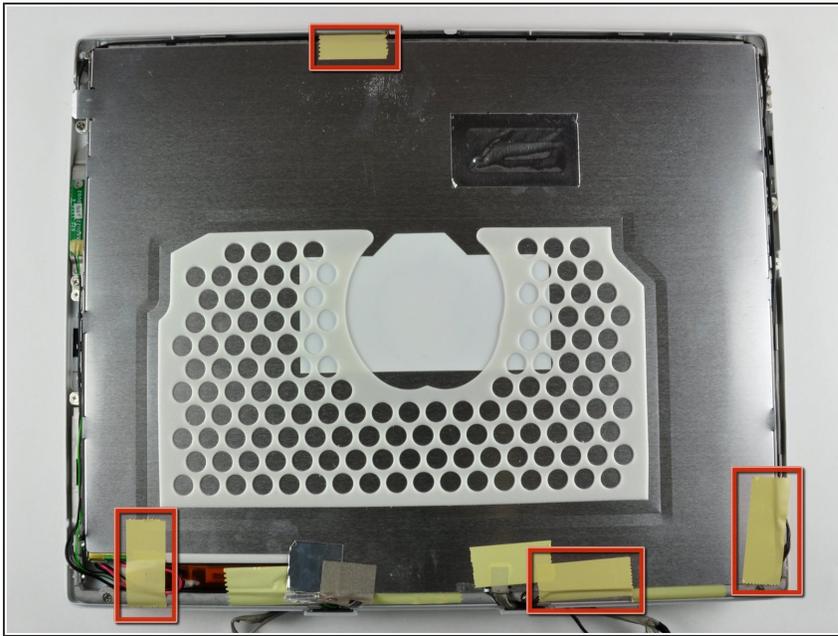
- Remove the single screw inserted through the piece of EMI tape near the bottom edge of the display (it's the first of the two clutch cover screws).
- Use the tip of a spudger to remove the small washer under the screw you just removed.

Step 51



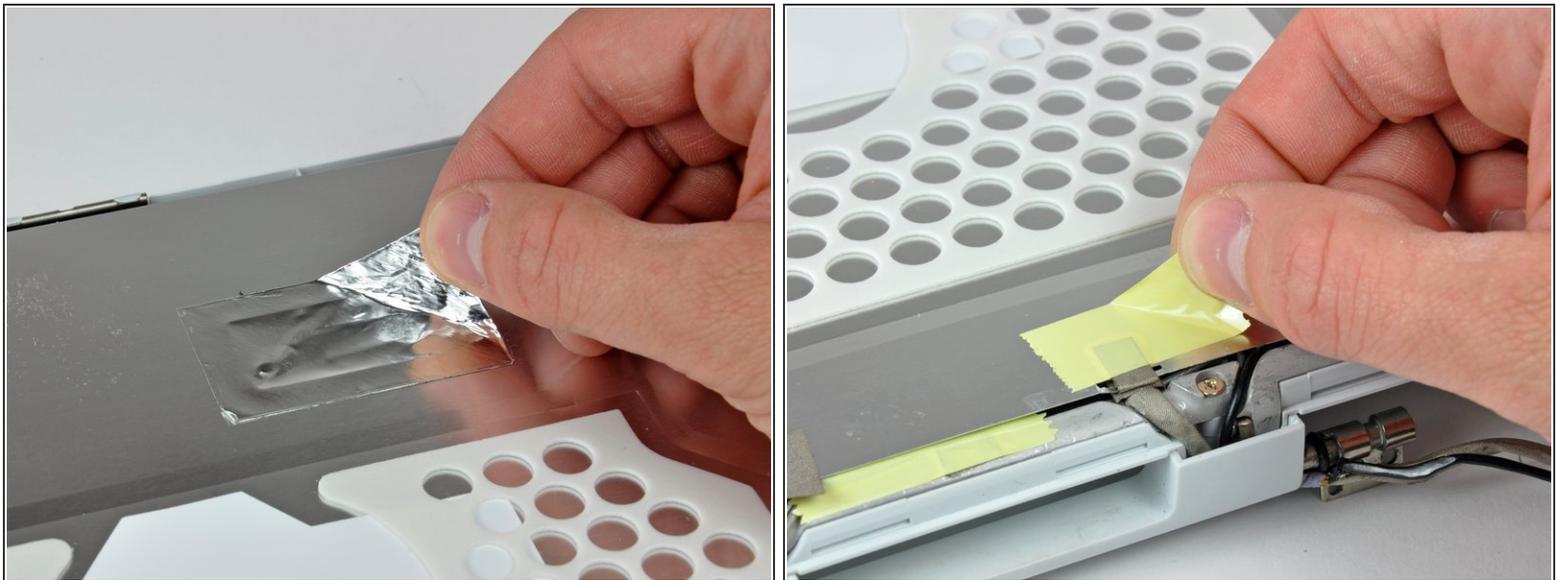
- Peel the aluminum/EMI tape as one piece off the cast aluminum frame of the clutch hinges.
- ⓘ It is not necessary to peel the tape off the thin steel LCD cover.

Step 52



- Remove the pieces of readily removable tape from around the perimeter of the display.

Step 53



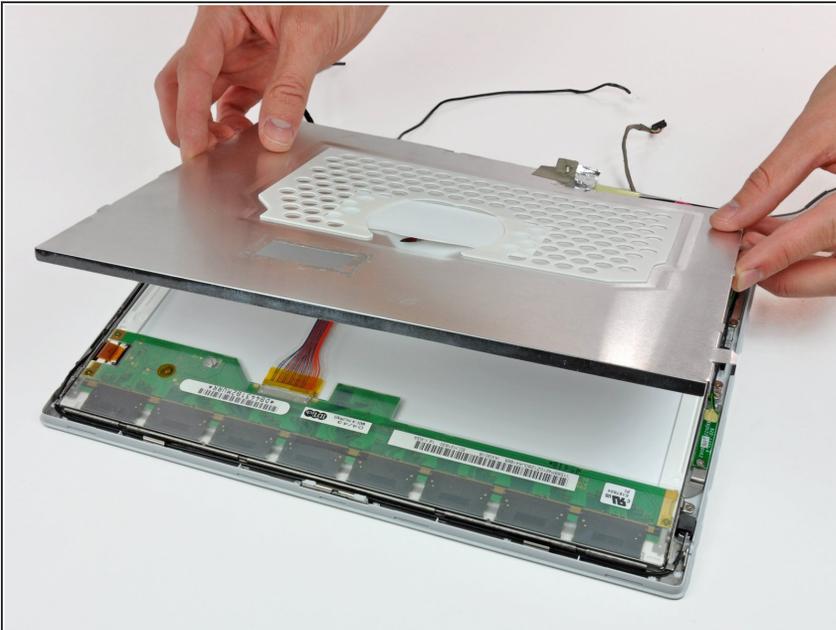
- Remove the piece of aluminum tape near the center of the LCD cover.
- Peel back the piece of tape securing the display data cable ground loop to the thin steel LCD cover.

Step 54



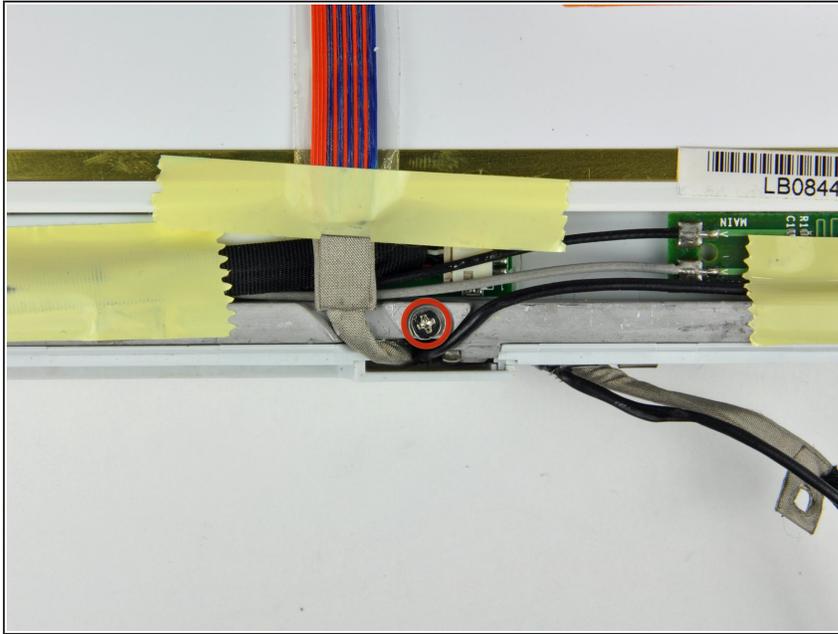
- Remove the two Phillips screws securing each side of the LCD to the clutch hinge frame (four screws total).

Step 55



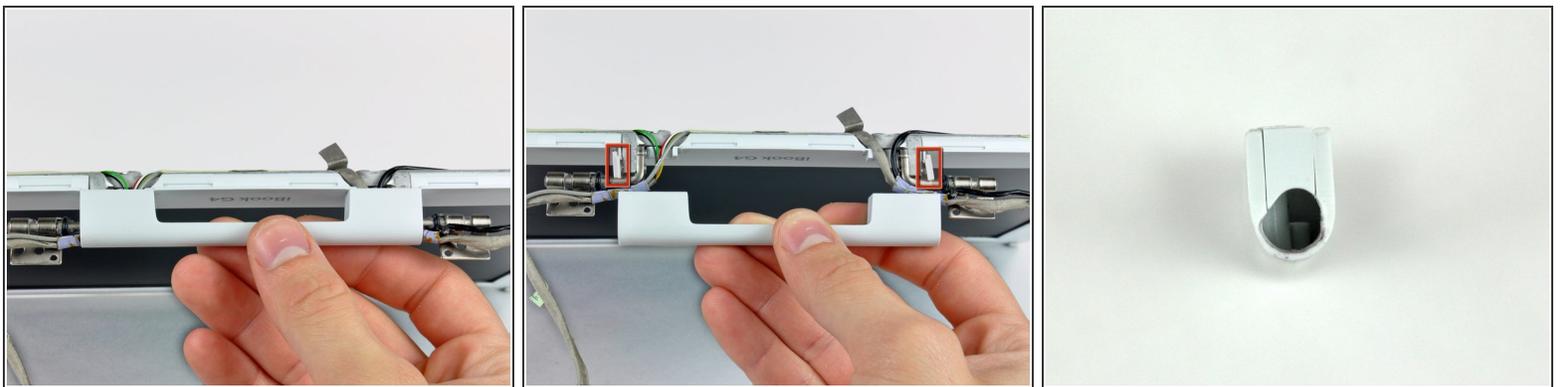
- Lift the thin steel LCD cover off the LCD.

Step 56 — Clutch Cover



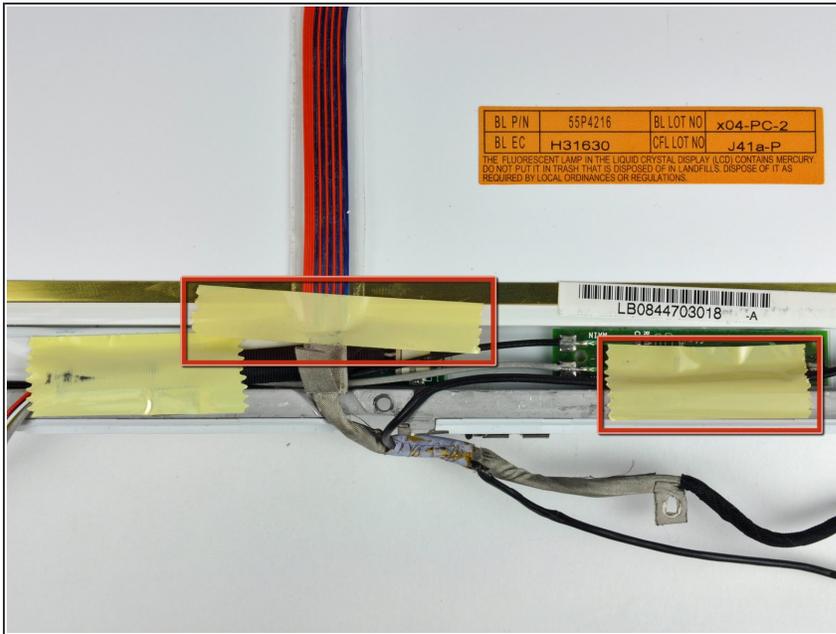
- Remove the second of the two Phillips screws securing the clutch cover to the cast aluminum frame of the clutch hinges.

Step 57



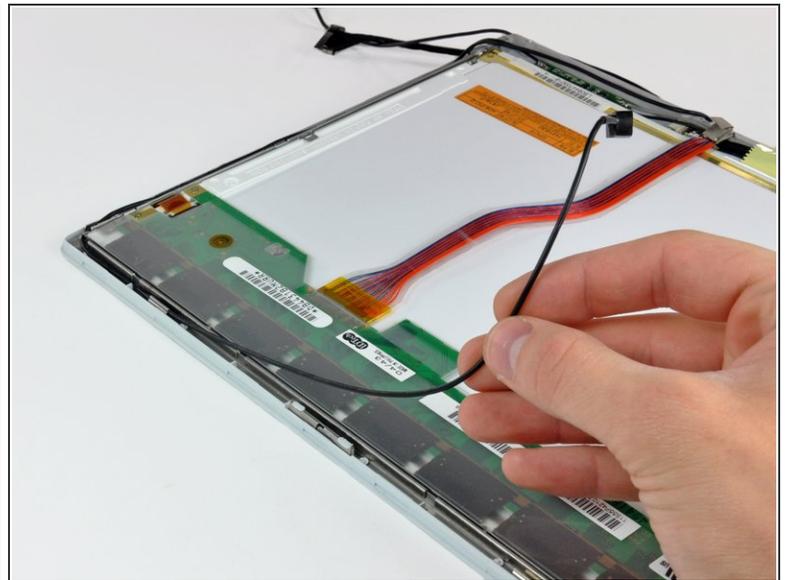
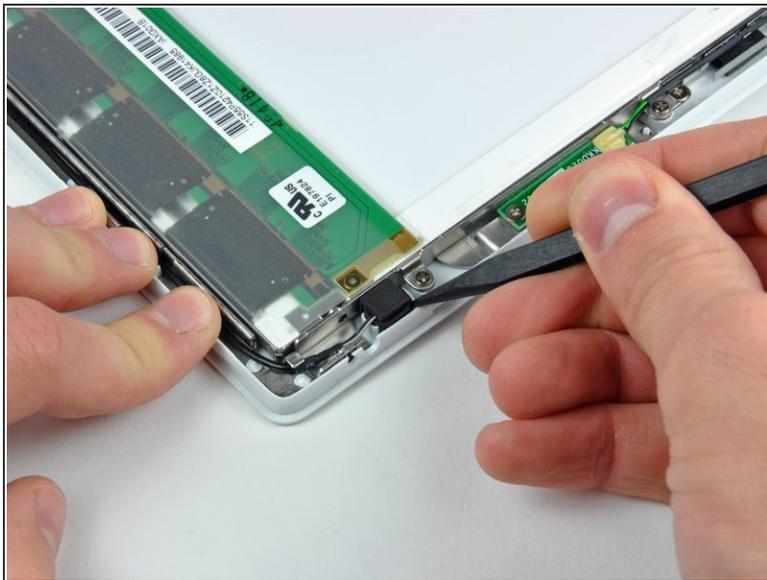
- Pull the clutch cover away from the front of the display.
- ⓘ Keep track of the two covers that close the ends of the clutch cover. The third picture shows their correct orientation on the clutch cover.

Step 58 — Display Data Cable



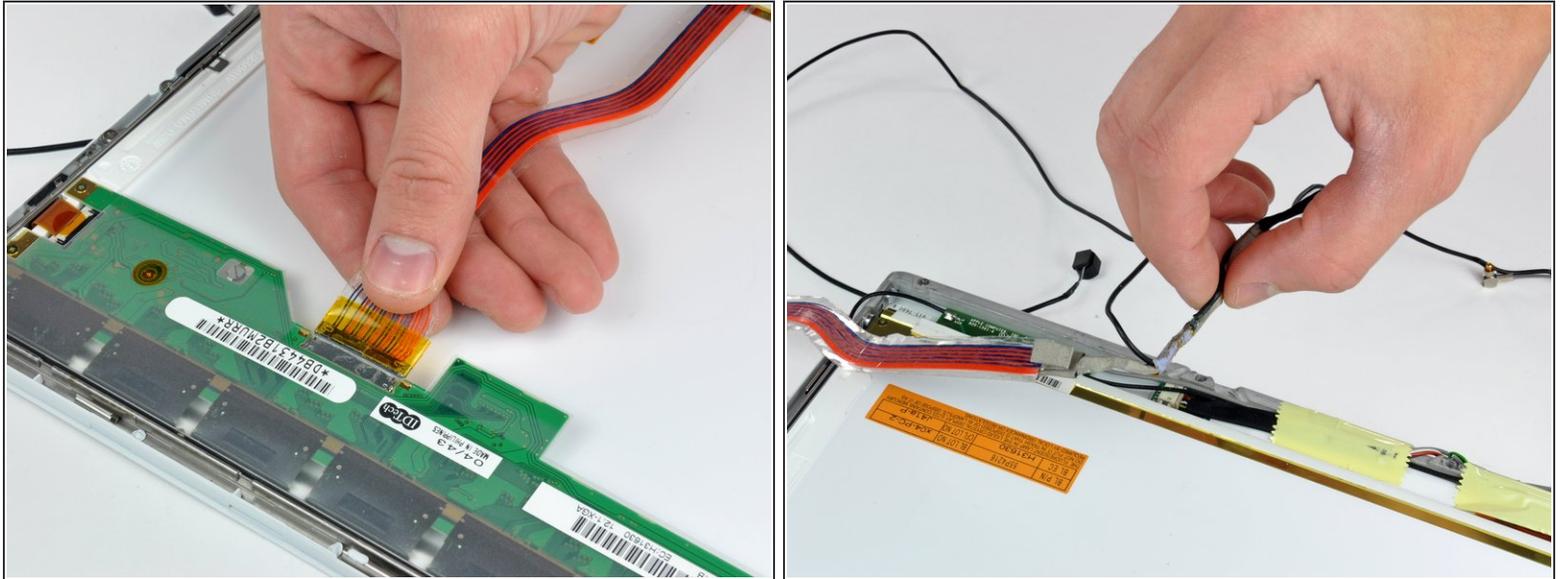
- Remove the two pieces of tape over the display data/microphone cables near the lower edge of the display.

Step 59



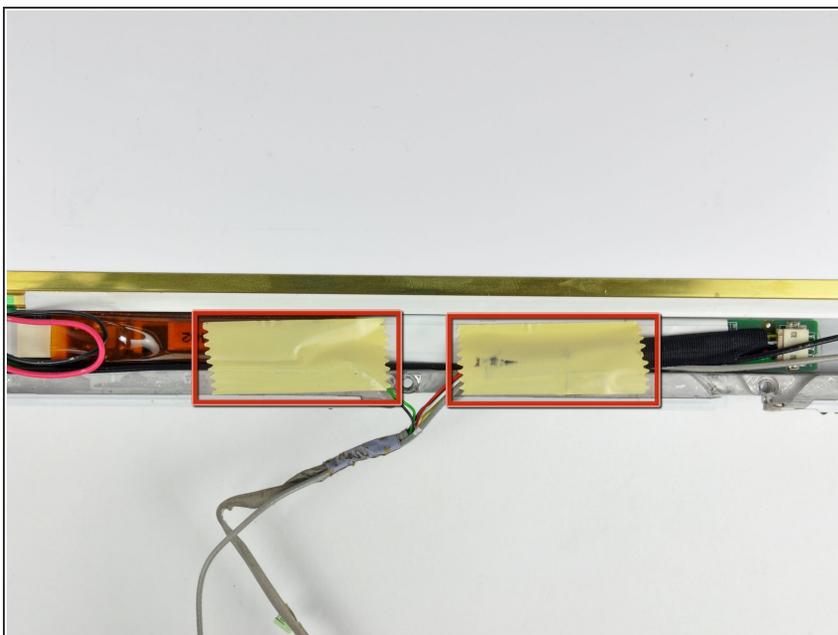
- Use the tip of a spudger to lift the microphone out of the front bezel.
- De-route the microphone cable from around the top and side of the display.

Step 60



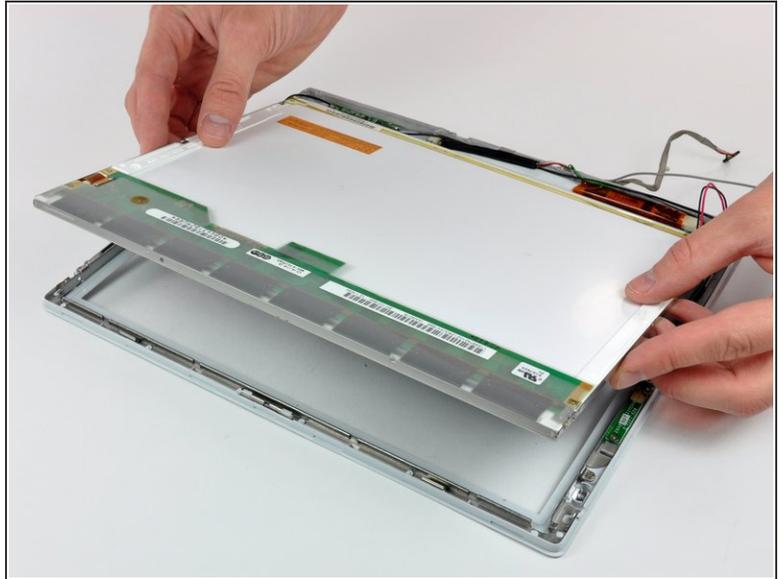
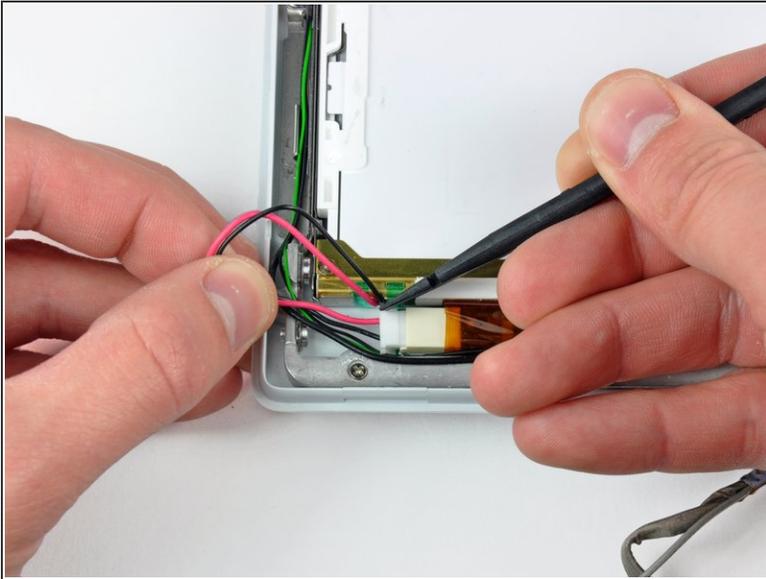
- Disconnect the display data cable by pulling its connector away from the socket on the LCD.
- ⓘ Pull the connector parallel to the face of the LCD.
- Remove the display data cable from the display.

Step 61 — Inverter/AirPort Cables



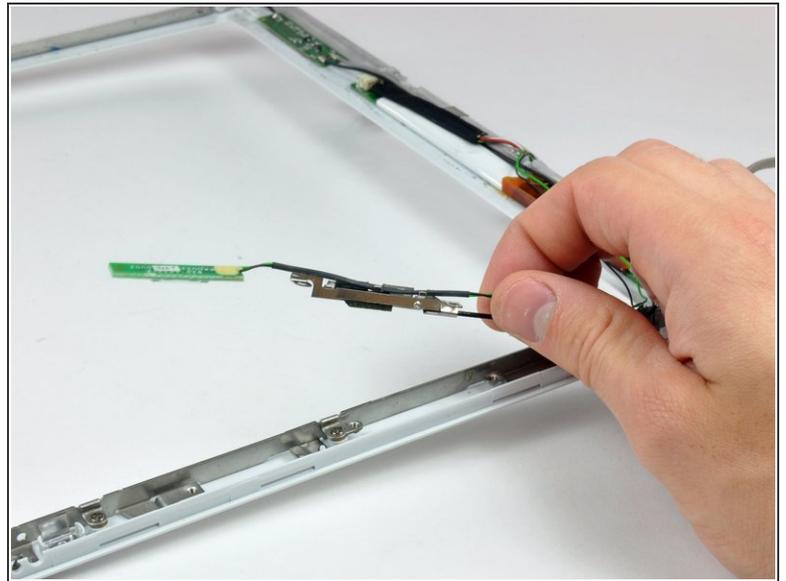
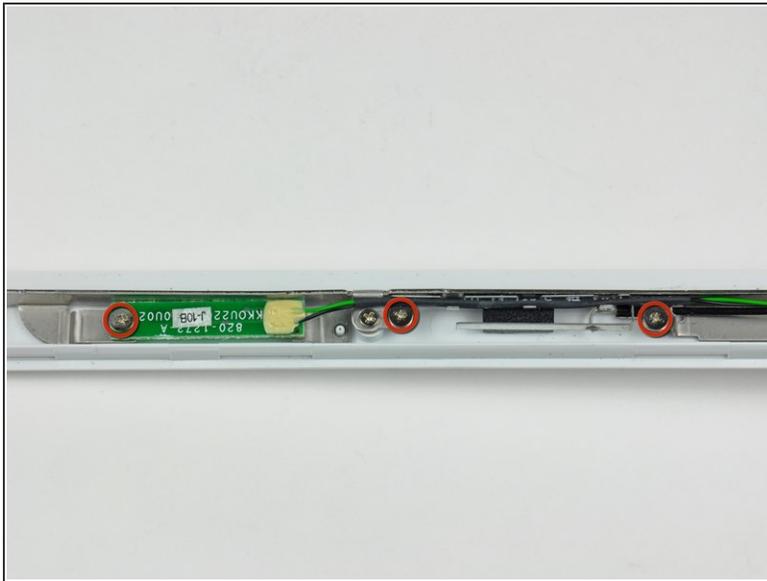
- Remove the two pieces of tape covering the inverter/AirPort cables along the lower edge of the display.

Step 62



- Use the flat end of a spudger to push the backlight connector while gently pulling its cables away from the socket on the inverter.
- Lift the LCD out of the front bezel and set it aside.

Step 63



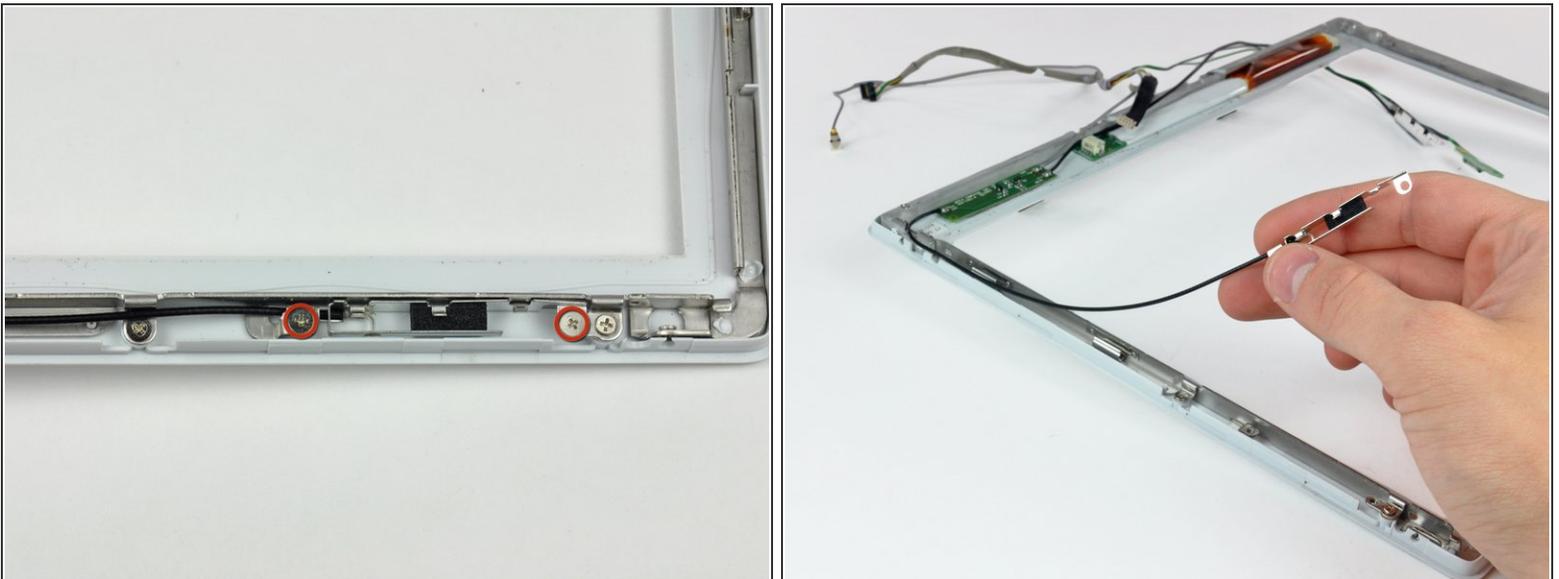
- Remove the three Phillips screws securing the reed switch board and the AirPort antenna to the front bezel.
 - ⓘ If you have a 1.33 GHz 12" G4 iBook, the reed switch board is located near the optical drive. Please skip to the next step.
- De-route the reed switch/AirPort antenna cables around the side of the display.

Step 64



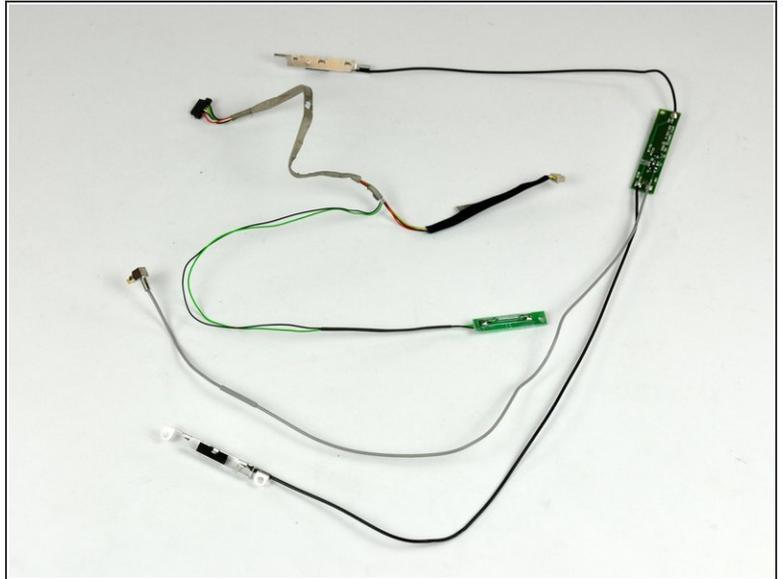
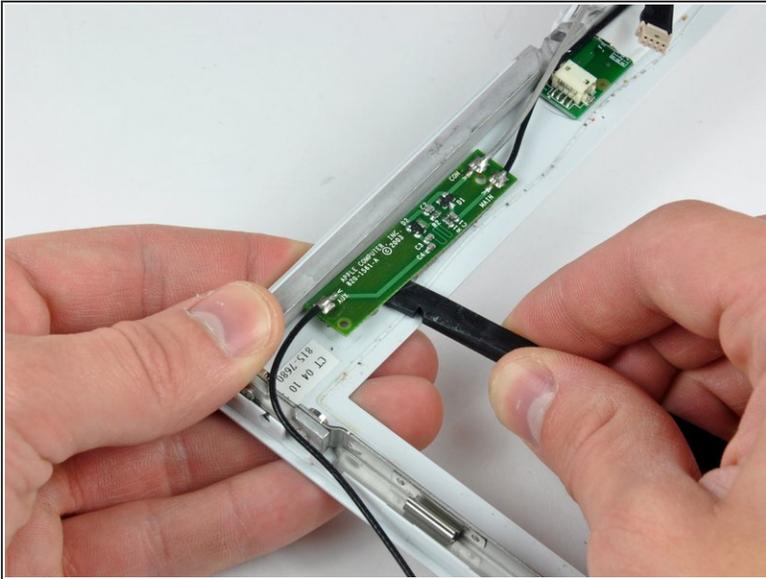
- Gently peel the inverter cable ground strap off the cast aluminum frame of the clutch hinges.
- While pulling the inverter cable away from its socket on the inverter board, use the tip of a spudger to push the connector out of its socket.
- ⓘ If the connector won't budge from its socket, insert a metal spudger or similar tool into the gap between the connector and its socket and twist to separate the two pieces.

Step 65



- Remove the two Phillips screws securing the AirPort antenna to the front bezel.
- De-route the AirPort antenna cable along the edge of the display.

Step 66



- If you have a 1.33 GHz 12" G4 iBook, simply remove the Inverter/AirPort cables.
 - For all other models, use the flat end of a spudger to remove the antenna board from the front bezel.
- ⚠ The antenna board is very thin and delicate.
- Remove the inverter/AirPort cables.

Step 67 — Clutch Hinges



- Remove the six Phillips screws securing the clutch hinges to the front display bezel.
- Lift the clutch hinges off the front display bezel.

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