



iBook G4 14" 1.42 GHz Clutch Hinges Replacement

Replace the metal clutch hinge frame on your 1.42 GHz iBook G4 14".

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INTRODUCTION

Use this guide to replace the clutch hinges and their metal frame.

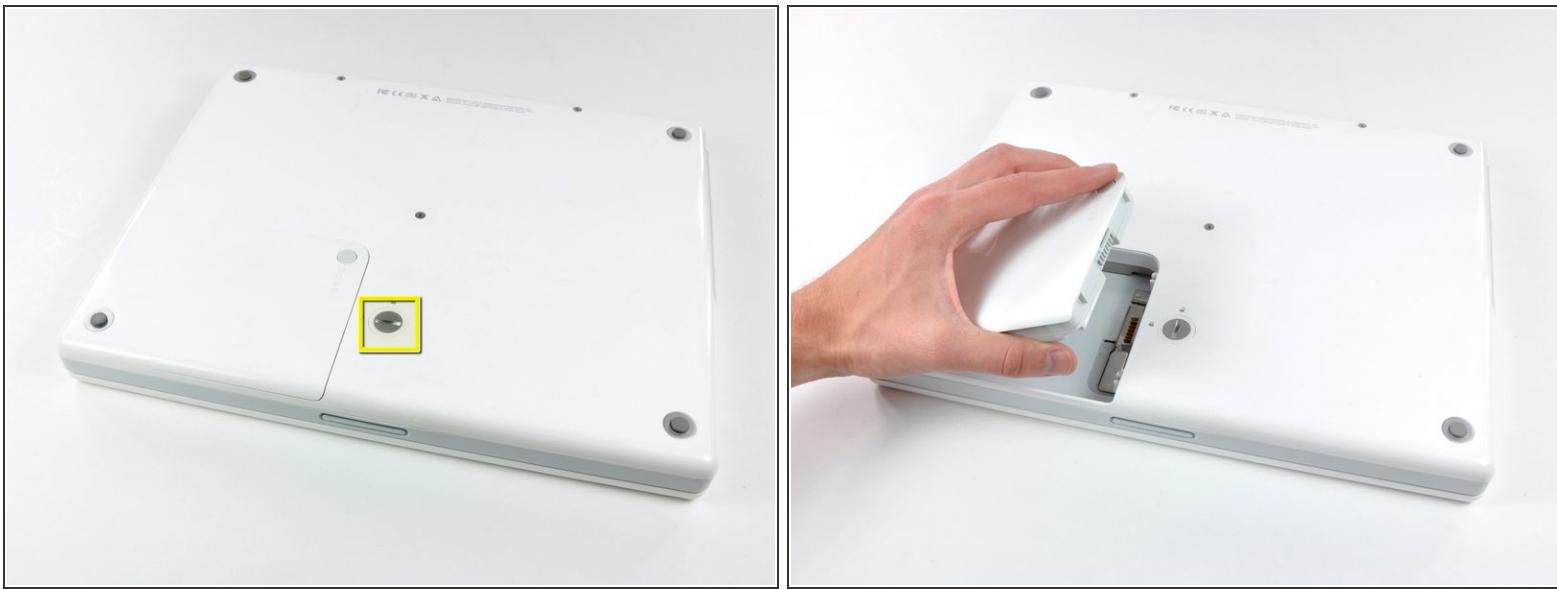
TOOLS:

- 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 14" Clutch Hinges (1)

Step 1 — Battery



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

Step 2 — Keyboard



- Pull the keyboard release tabs (shown in yellow) 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 (shown in orange) 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 3



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

These screws will not come out all the way. The screws are held captive to the RAM shield to prevent them from getting lost.

Step 4



- Remove the RAM shield from the computer.

The four captive screws will come out with the RAM shield.

Step 5



- Pull the keyboard cable up from the logic board, holding the cable as close to the connector as possible.

► When reassembling your iBook, make sure that you reconnect the keyboard cable before replacing the RAM shield.

Step 6 — Lower Case



- Close the display and flip the computer over.
- Remove the three hex screws using a T8 Torx screwdriver.

► The shorter screw is in the center.

Step 7



- Use a spudger or small flathead screwdriver to remove the three rubber feet from the lower case.

Step 8



- Remove the three newly-revealed Phillips screws.

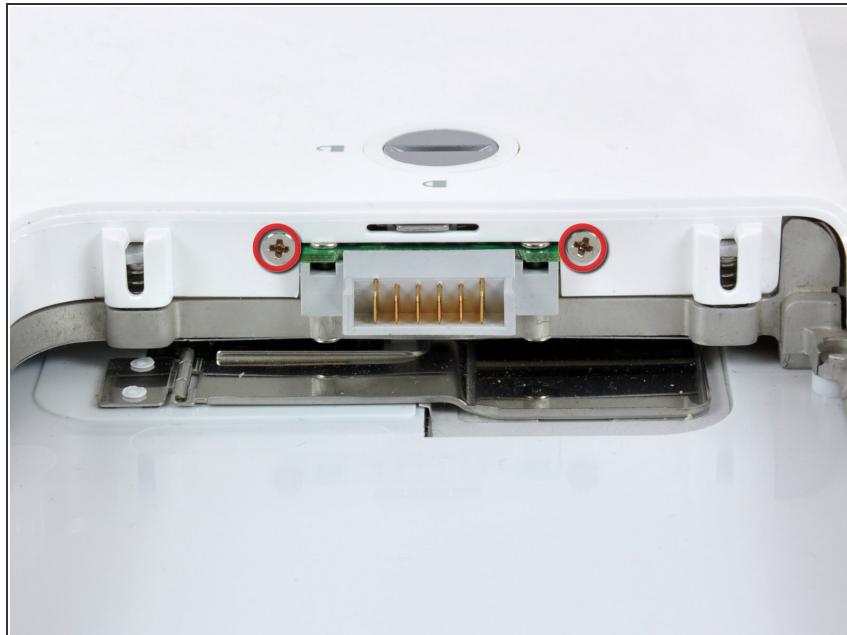
i One screw is underneath each bumper (three total).

Step 9



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

Step 10



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

Step 11



i Breathe deeply. Trying times are ahead, but we promise the lower case does come off.

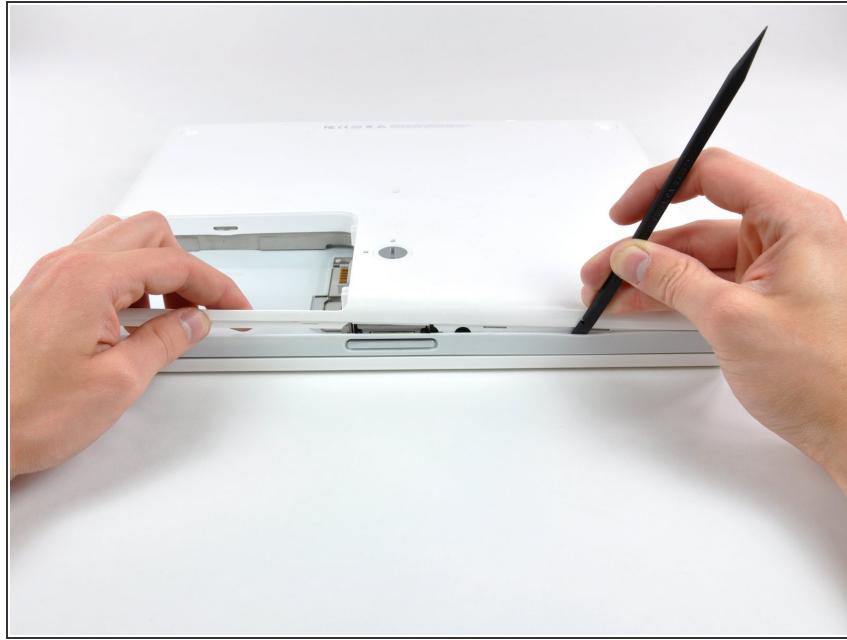
- Push in the thin rims of the lower case surrounding the battery compartment, bending them past the tabs, and then lift up to free that corner of the lower case.

Step 12



- 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 13



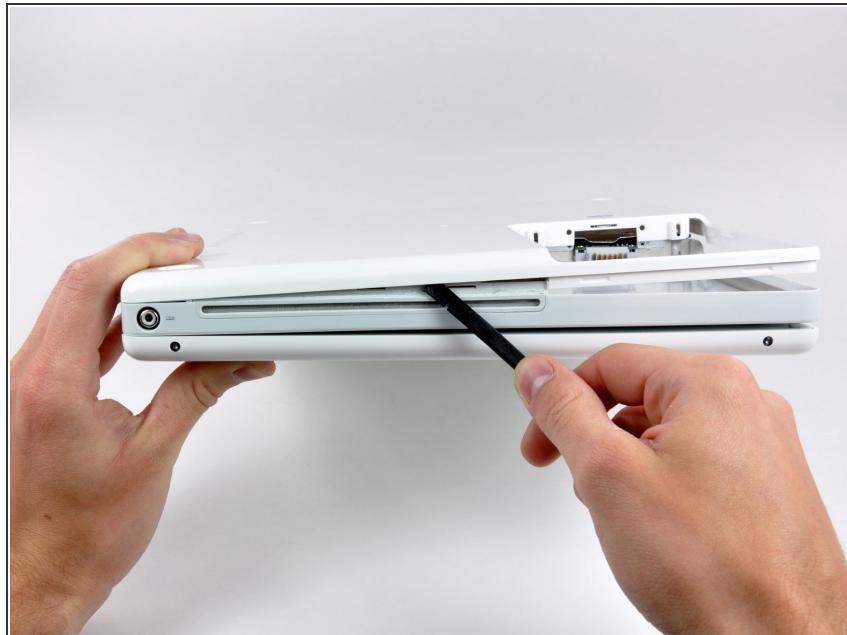
- Run a spudger along the seam between the lower case and upper case on the front of the computer to free the tabs locking the lower case. Pull up on the lower case and continue to use the spudger as necessary until you hear three distinct clicks.

Step 14



- 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 15



- 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.

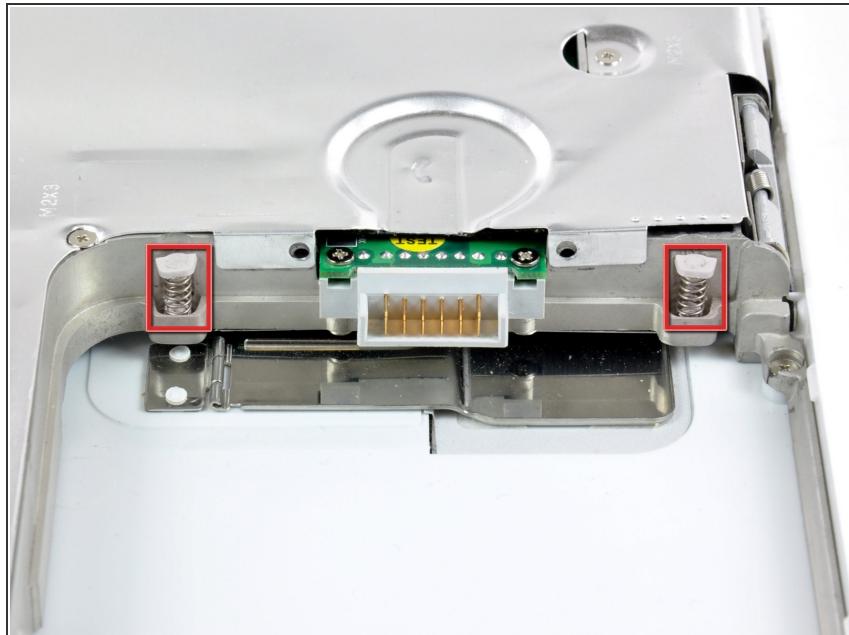
Step 16



i The front and sides of the lower case are now free.

- Turn the computer so that the back is facing you and pull the lower case up and toward you until the back tabs pop free.
- ☒ It may be helpful to jiggle the case up and down.

Step 17



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

Step 18 — Bottom Shield



- Remove the following 10 screws from the bottom shield:
 - Six 3 mm Phillips
 - Three 7.5 mm Phillips
 - One 14 mm Phillips

Step 19



- Lift the bottom shield off.

Step 20 — DC-In Board



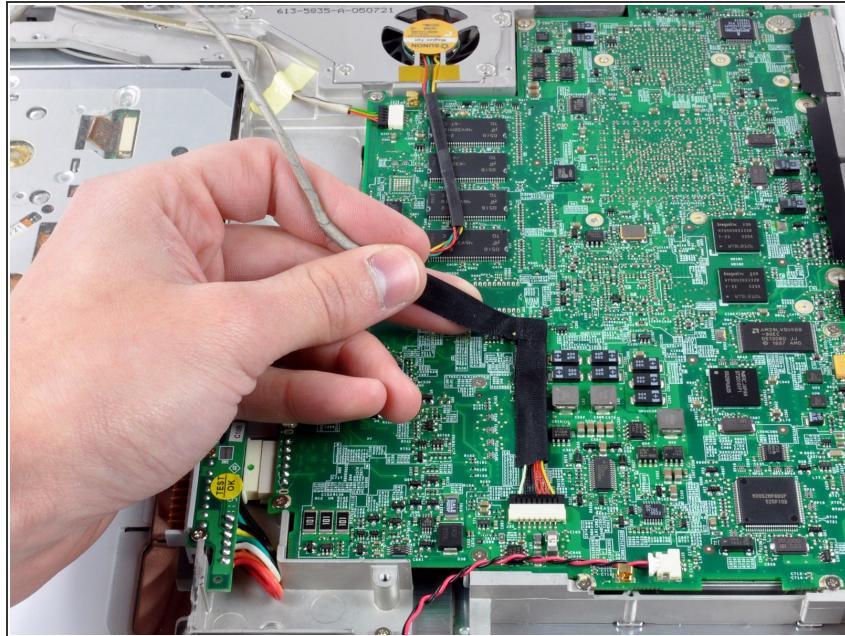
- Remove the single Phillips screw securing the DC-In board.

Step 21



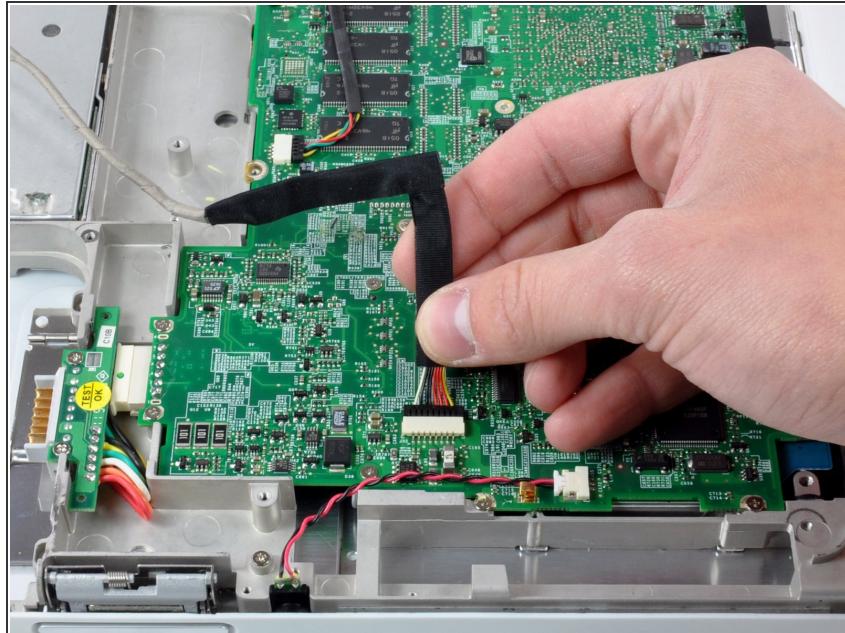
- Angle the DC-In board out of its compartment.
- You may need to remove tape that secures the DC-In board cable to the case.

Step 22



- Lift the DC-In cable from the adhesive attaching it to the logic board.

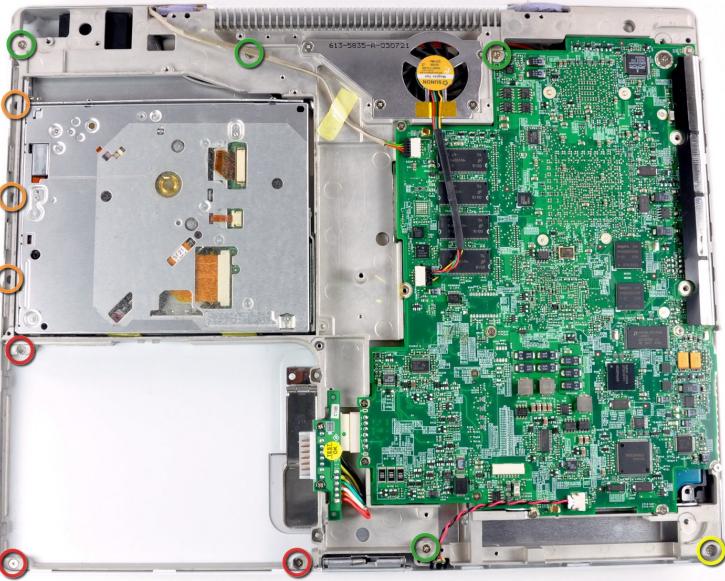
Step 23



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

i Wiggling the connector parallel to the surface of the logic board while applying slight tension may aid in removal.

Step 24 — Upper Case



- Remove the following 11 screws from the bottom of the computer:
 - Three 3 mm Phillips around the battery compartment.
 - Three 4.5 mm Phillips along the optical drive bezel. (a magnetic screwdriver may help to lift these screws out)
 - One 12 mm Phillips in the lower right corner.
 - Four 14.5 mm Phillips.

Step 25



- **i** We recommend placing the computer on a soft cloth from this point on to prevent damaging the logic board.
- Turn over the computer and open it.
- Remove the 3 Phillips screws from the edges of the keyboard area.
 - The shorter screw goes in the lower left corner. The left corner is indicated by a blue "L" in the photograph and is on the right side.

Step 26

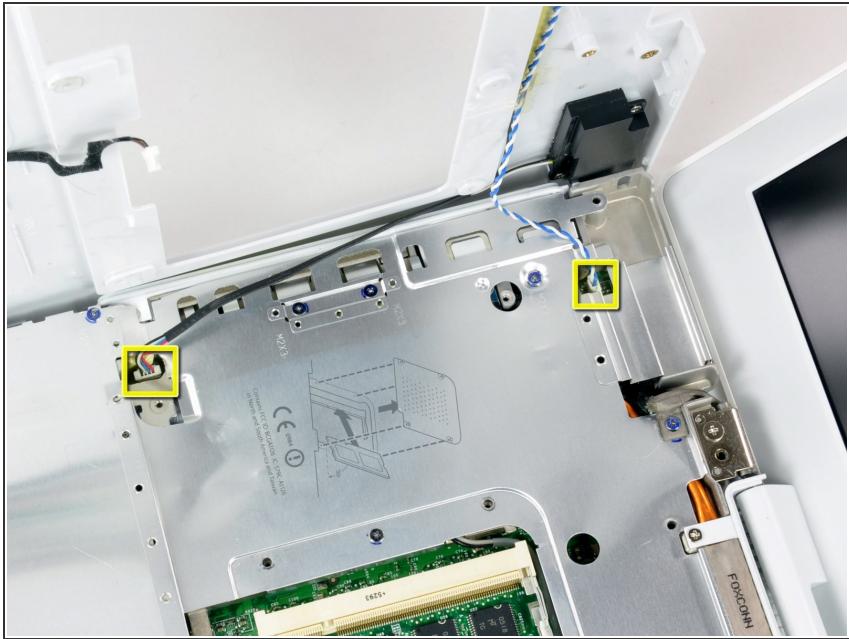


i Be especially careful while disconnecting the cables in the forthcoming steps. Never pull directly on the cables, but use a spudger to pry up the connector directly from its socket.

- Lift the upper case and use a spudger or your finger to disconnect the trackpad connector hidden beneath the white plastic tab.

i Be careful while lifting the upper case, as its tabs are still hanging on the metal frame.

Step 27

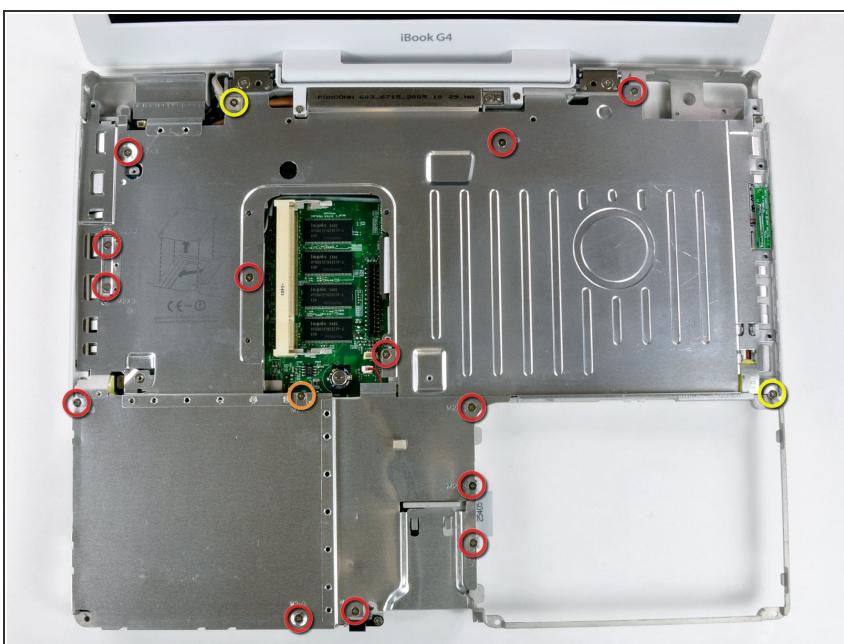


! The sockets attached to the motherboards of most iBooks are very weak and easily broken. Use extreme caution when pulling connectors out of their sockets.

- Lift the upper case enough to disconnect the blue and white power cable from the logic board. Using your fingernails, carefully pry the connector from its socket.

- Carefully disconnect the multicolored speaker cable from the logic board in the same fashion.

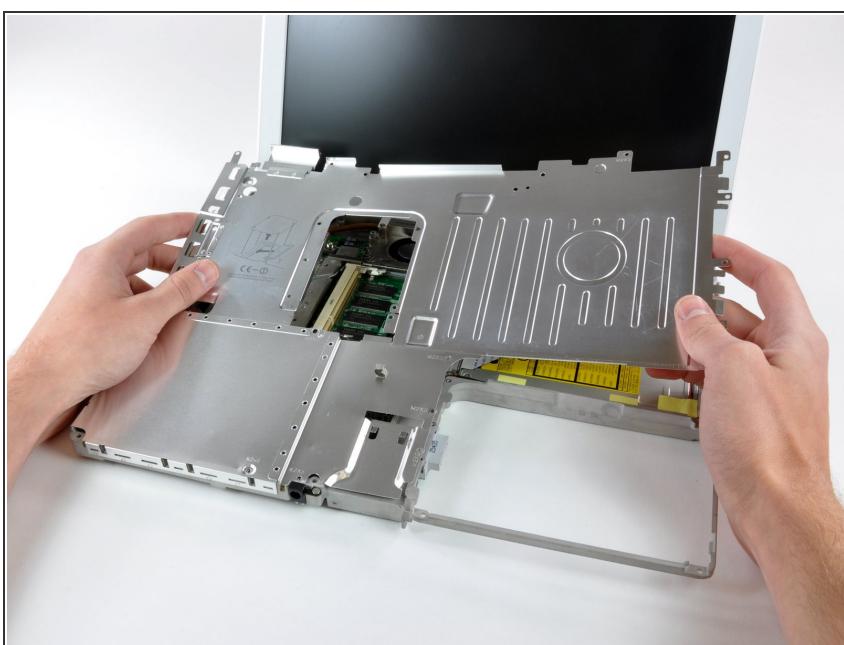
Step 28 — Top Shield



- Remove the following 16 screws:
 - Thirteen 3 mm Phillips.
 - One 3 mm Phillips.
 - Two 4 mm Phillips.

During reassembly, be sure to fit the screw near the left hinge through the loop in the display data cable, securing the cable to the upper case.

Step 29



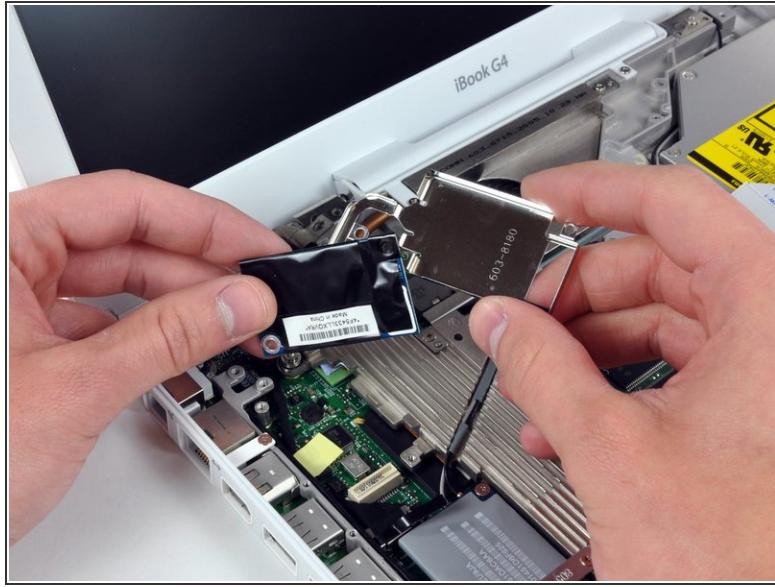
- Lift the top shield up from the right side, minding the upper left corner which may catch on the metal framework.

Step 30 — Modem



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

Step 31



- Use a spudger to pry the modem up from the end nearest the AirPort card to separate its connector from a socket on the logic board.
- Be sure to pry only against the heat sink or the metal framework.
- Use your hands to separate the modem from the modem shield.

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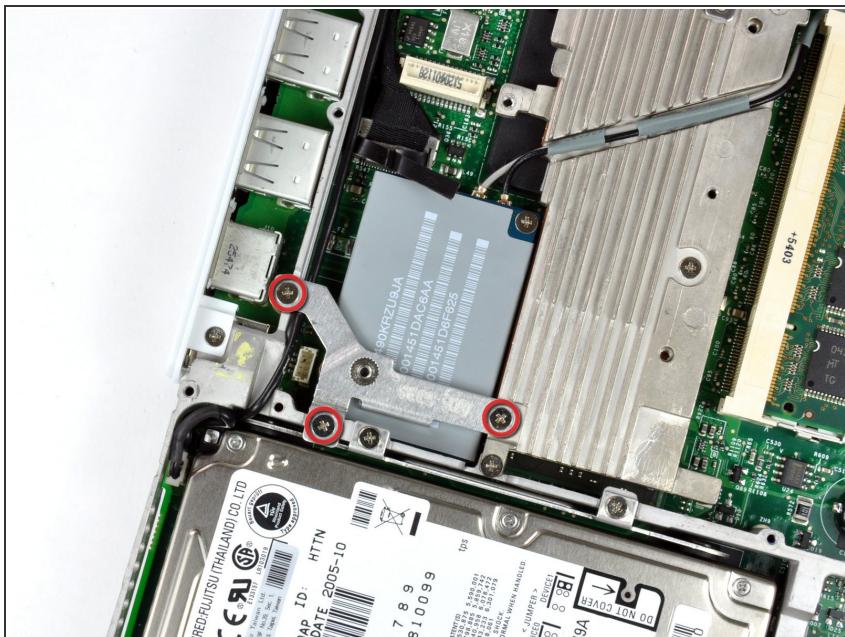
Step 32



- Disconnect the RJ-11 cable from the end of the modem.

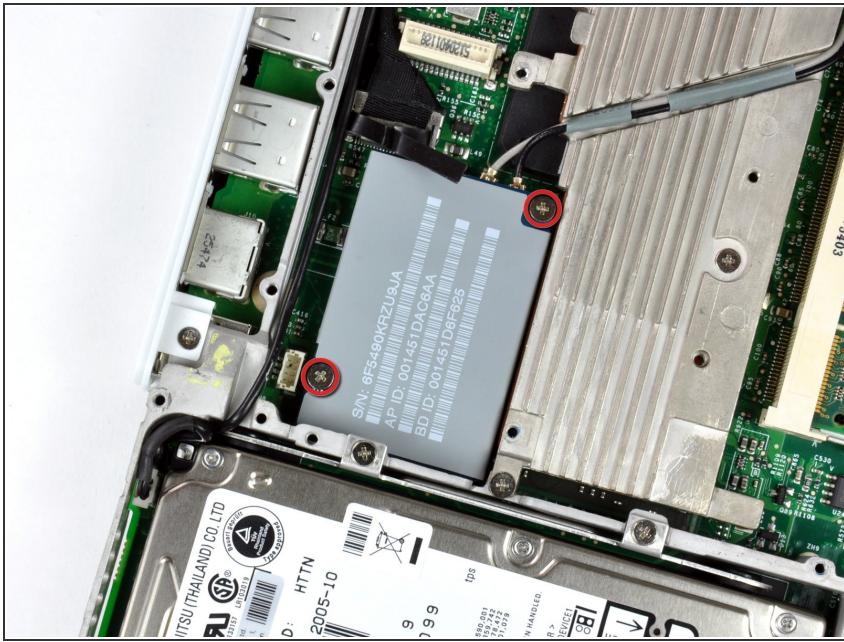
- ☒ When replacing the modem, first make sure that both the microphone and display data cables are routed beneath where the modem lies.

Step 33 — Display



- Remove the three 3 mm Phillips screws securing the AirPort card bracket to the framework.
- Lift the AirPort card bracket up and out of the computer.

Step 34



- Remove the two 3 mm Phillips screws securing the AirPort card to the logic board.

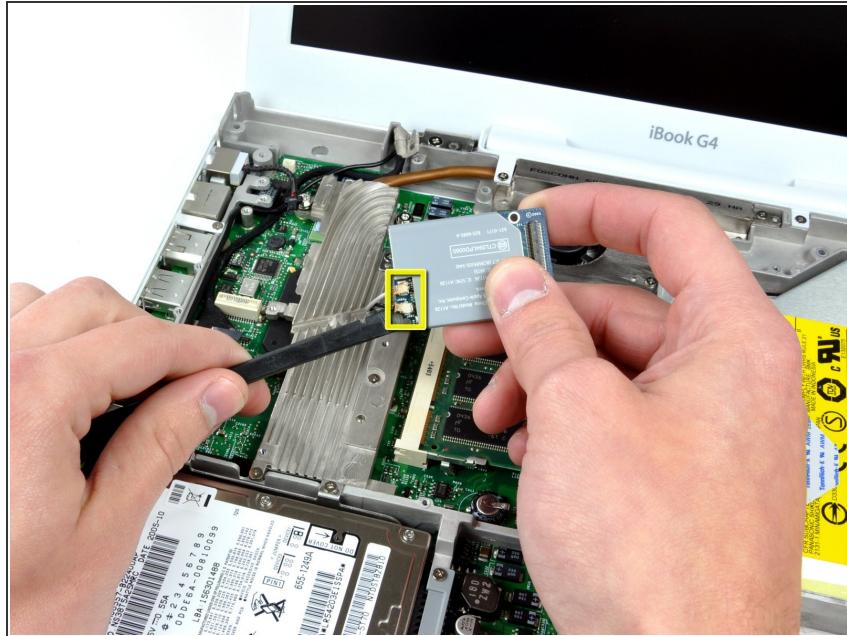
Step 35



- Using a spudger, pry up on the AirPort card from the end nearest the hard drive to separate the connector from the logic board.

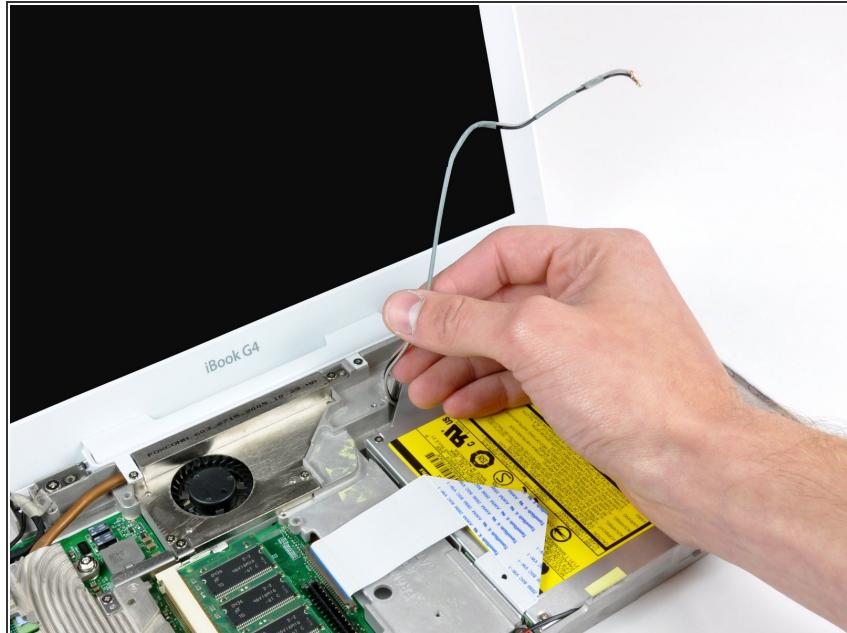
i Be sure to pry only between the metal frame and the AirPort card.

Step 36



- Use a spudger to disconnect the two antenna cables from the AirPort card.
- Remove the AirPort card from the computer and set it aside.

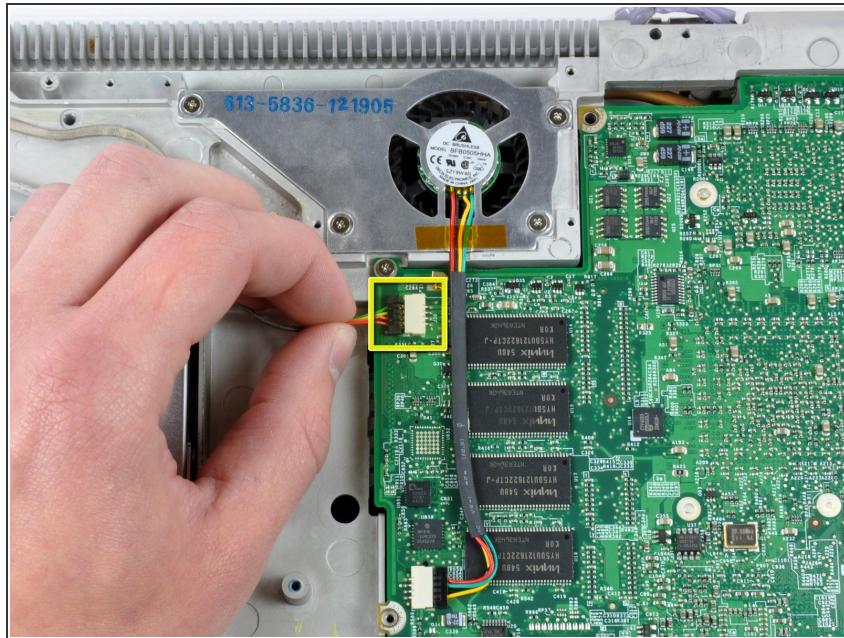
Step 37



- De-route the antenna wires from above the heat sink, around the RAM socket, and below the optical drive.

i Optical drive removal is not necessary for this step.

Step 38



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

Step 39



- Turn the computer back over.
- Use the black plastic loop to disconnect the display data cable from the logic board.
- Deroute the microphone and display data cables from the metal framework, removing tape as necessary.

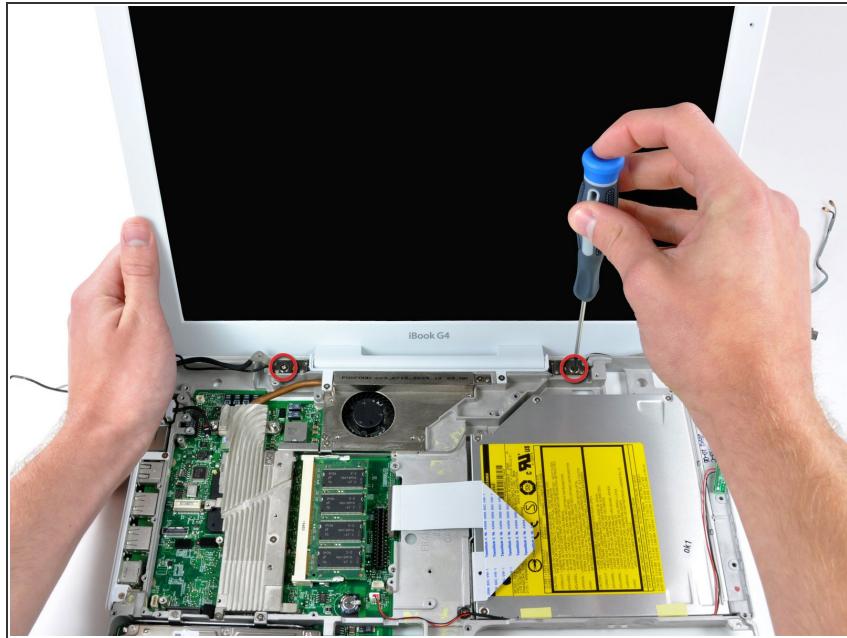
Step 40



i 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.
- Deroute the microphone and display data cables from the metal framework, removing tape as necessary.

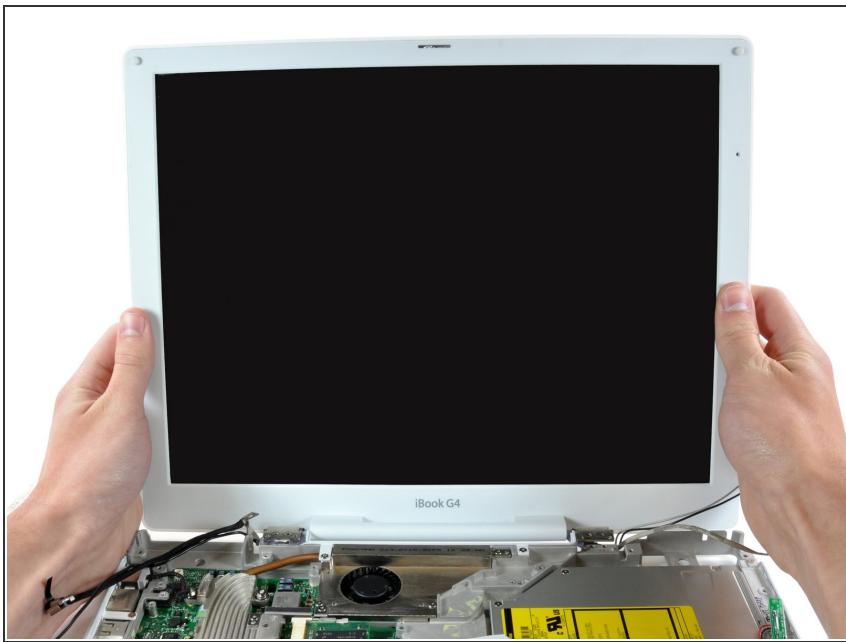
Step 41



- 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).

Step 42



- Lift the display up and tilt it backwards, freeing it from the two metal alignment posts holding the hinges in place, and slide it away from you.
- **i** Be sure all cables connecting the display to the computer are free before completely removing the display.

Step 43 — Rear Display Bezel



- Use a 1.5 mm hex screwdriver to remove the two hex screws on either side of the display (four screws total).
- **i** If you don't have a 1.5 mm 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.

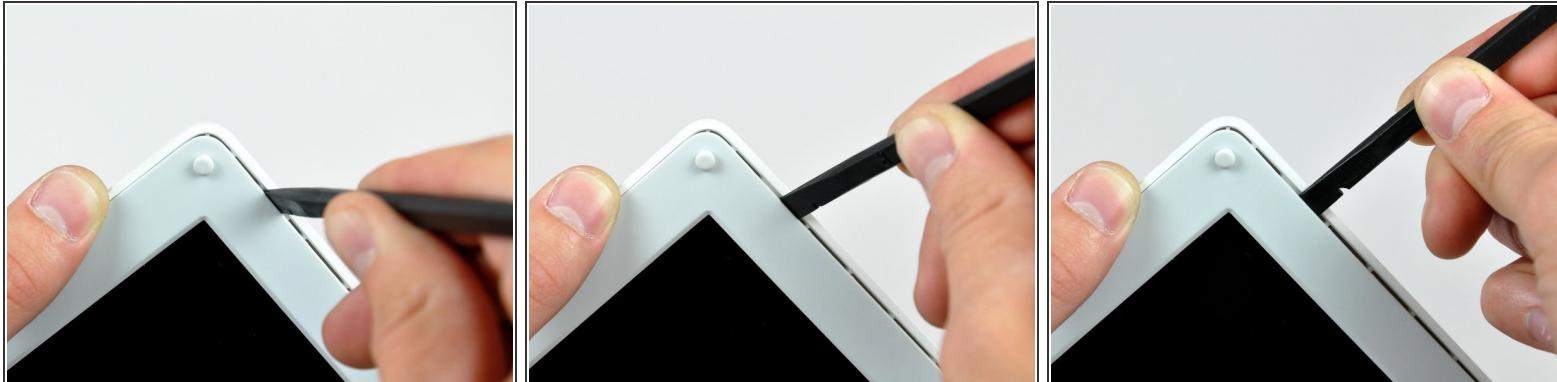
Step 44



- Use your thumbs to slightly separate the rear bezel from the front bezel.

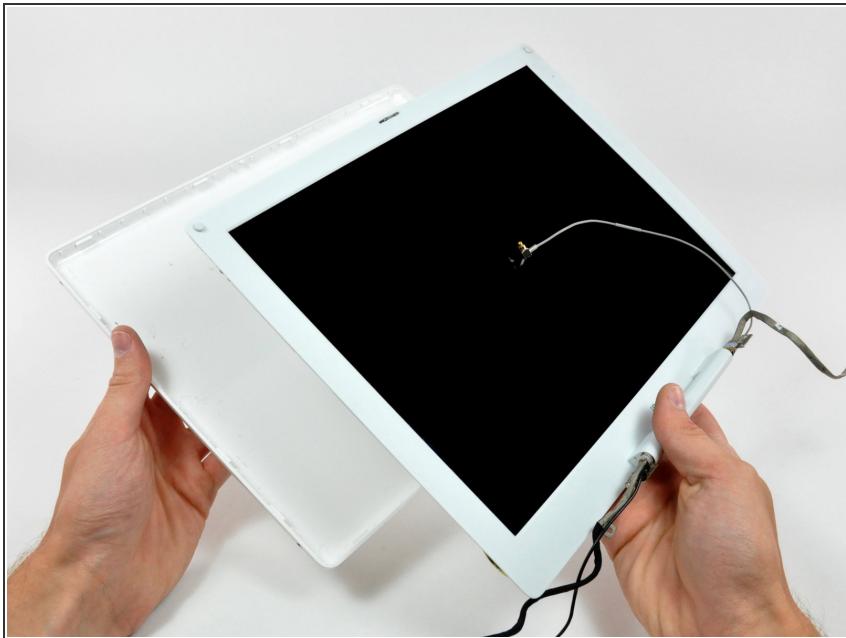
(i) It is helpful to hold the opposing corner of the display stationary to aid in flexing the rear bezel away from the display.

Step 45



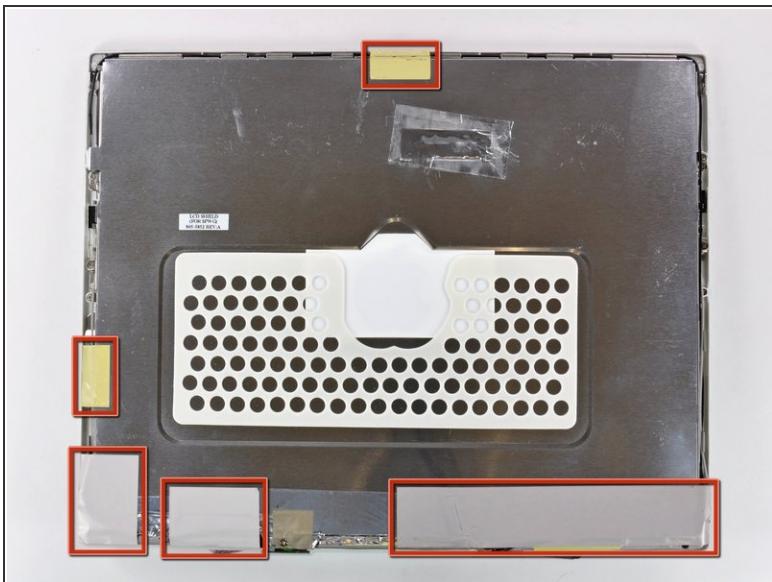
- Insert the flat end of a spudger into the gap between the front and rear bezels.
- Rotate your spudger until it is parallel to the front face of the display.
- Run the spudger around the perimeter of the display to separate the rear bezel from its retaining clips.

Step 46



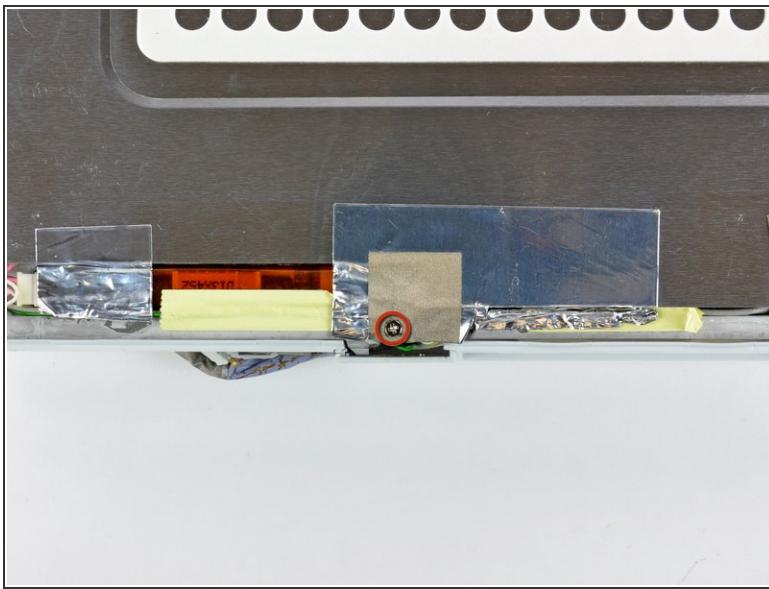
- Lift the rear bezel off the display.

Step 47 — LCD Cover



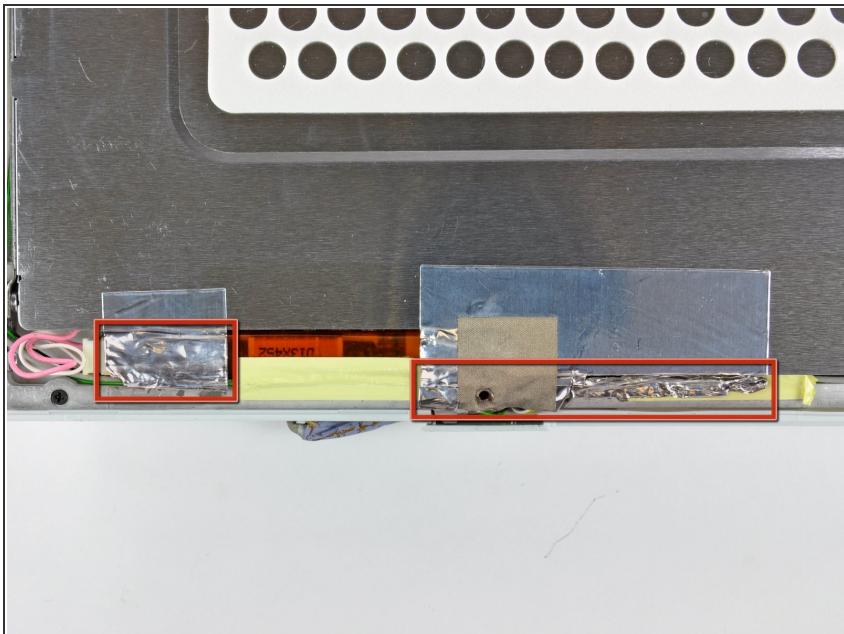
- Remove the pieces of readily removable tape from around the perimeter of the display.
- Carefully remove the aluminum tape covering the display data cable connection.

Step 48



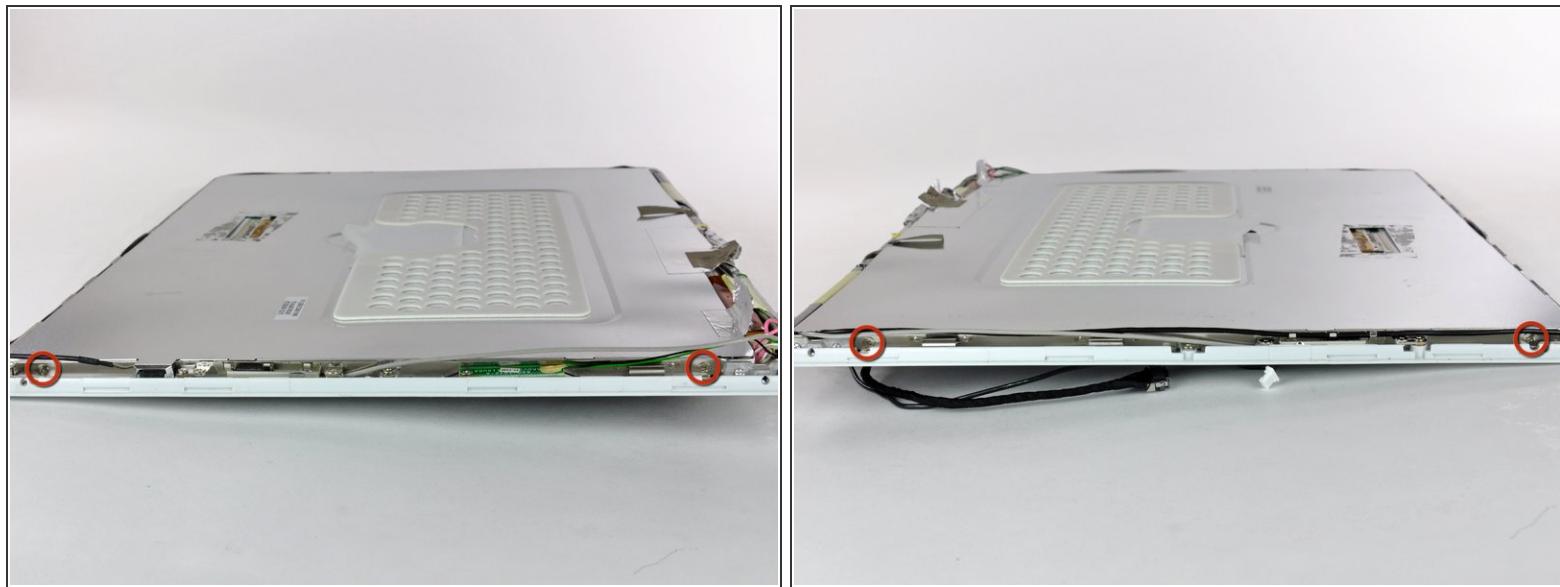
- Remove the single screw inserted through the piece of EMI tape near the bottom edge of the display.
- Use the tip of a spudger to remove the small washer under the screw you just removed.

Step 49



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

Step 50



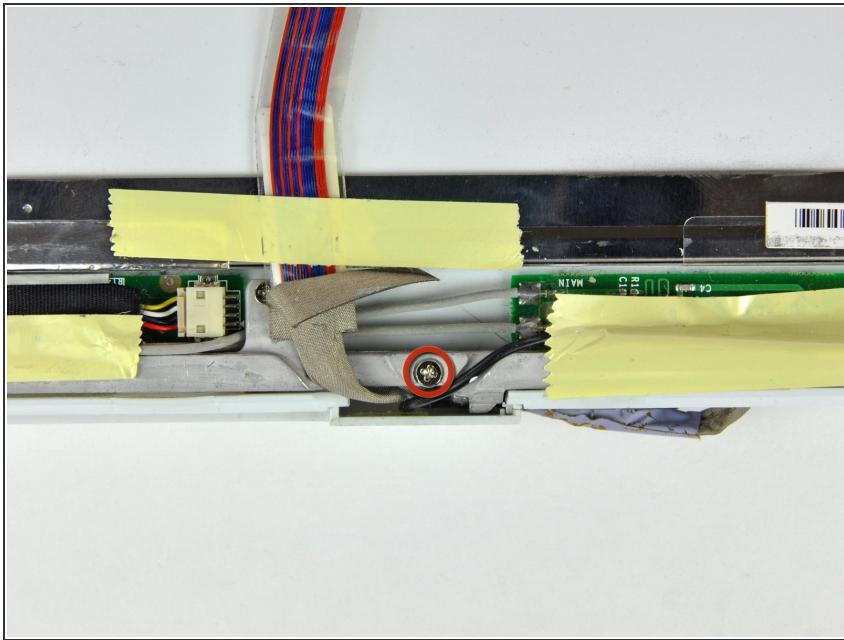
- Remove the two Phillips screws securing each side of the LCD to the clutch hinge frame (four screws total).

Step 51



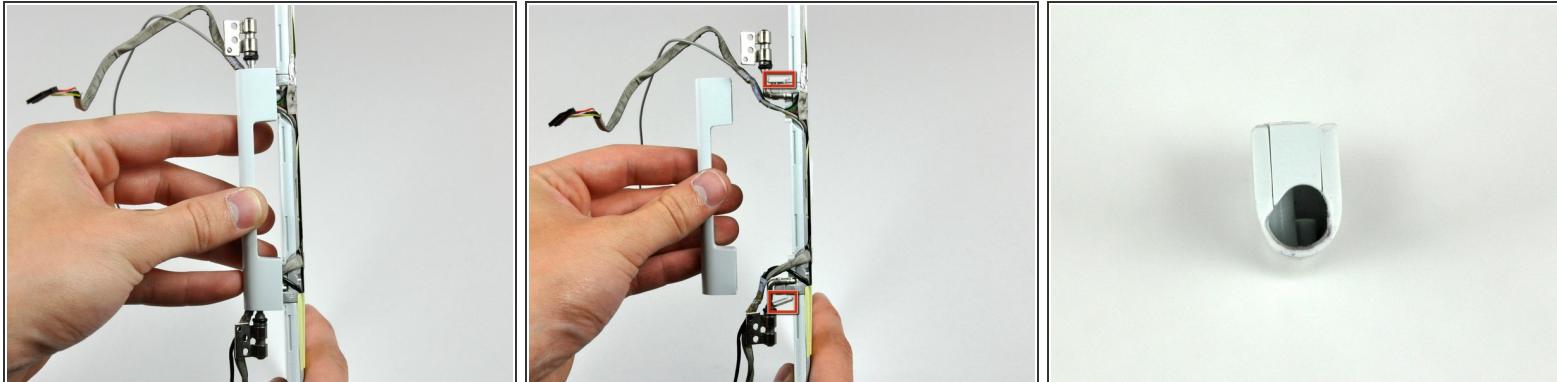
- Lift the thin steel LCD cover off the LCD.

Step 52 — Clutch Cover



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

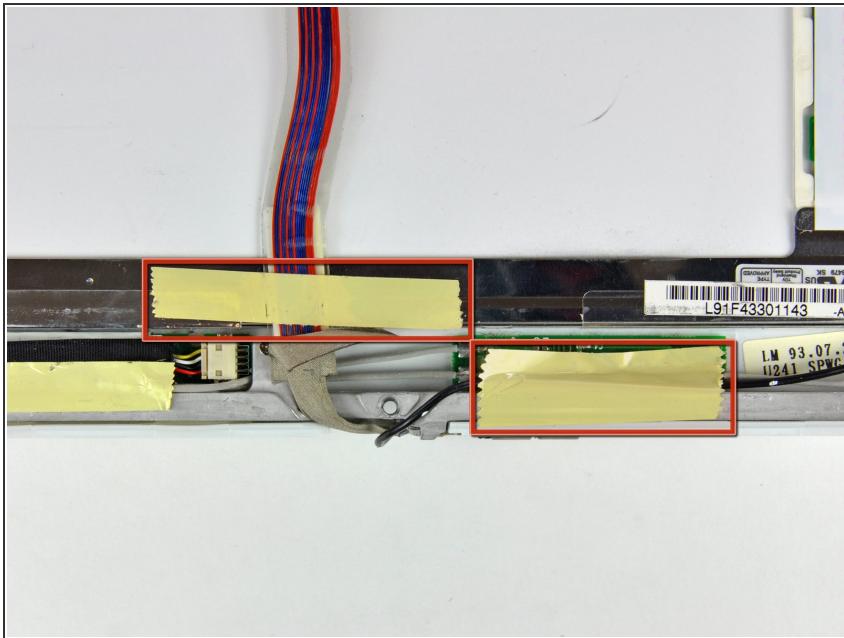
Step 53



- Pull the clutch cover away from the front of the display.

i 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 54 — Display Data Cable



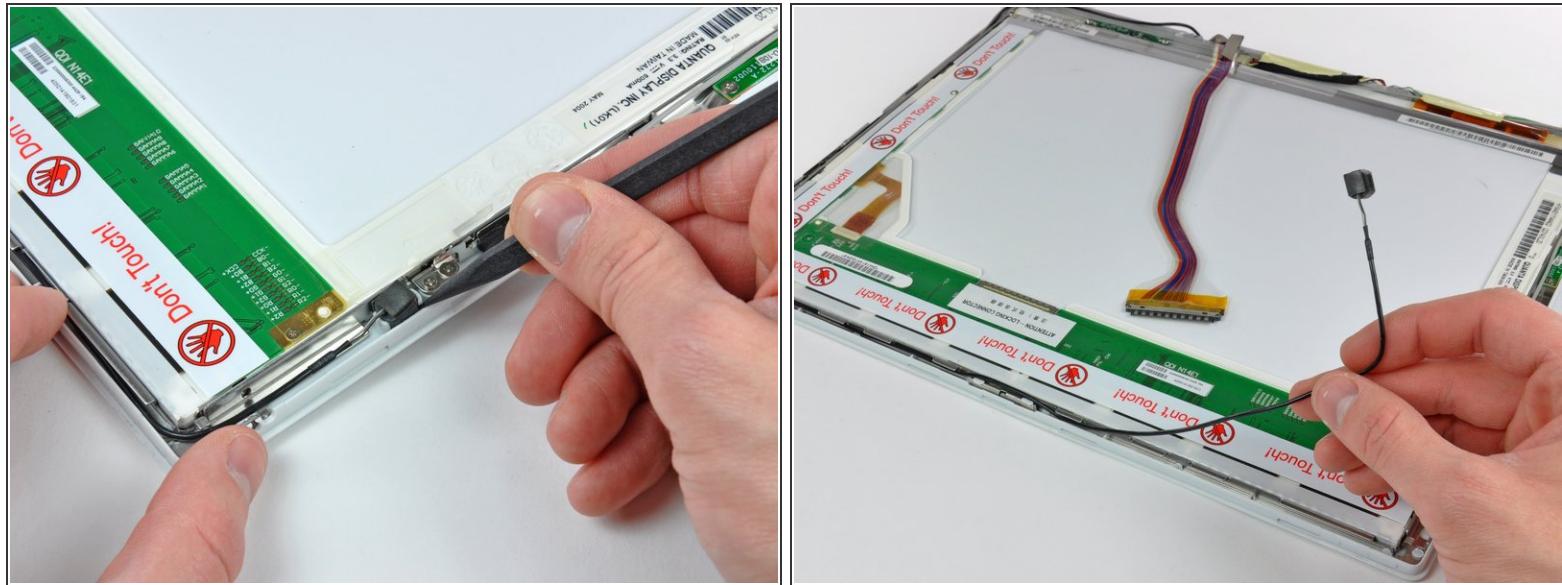
- Remove the pieces of tape covering the display data and microphone cables near the bottom edge of the display.

Step 55



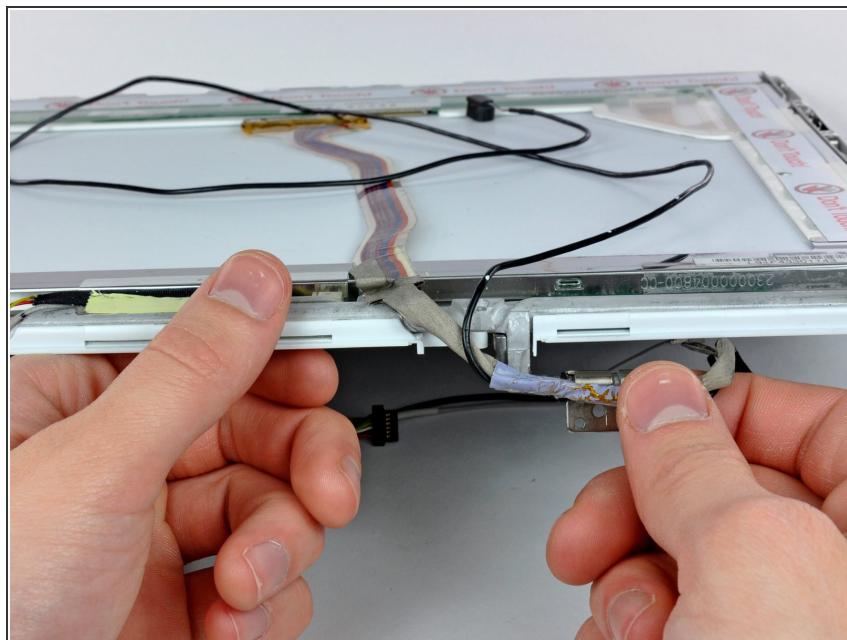
- Disconnect the display data cable by pulling its connector away from the socket on the LCD.
- *(i)* Pull the connector parallel to the face of the LCD.
- Remove the display data cable from the display.

Step 56



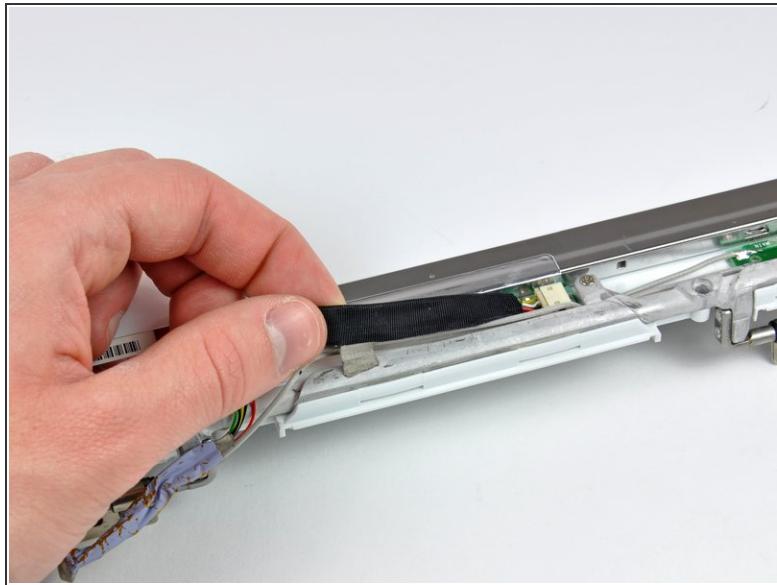
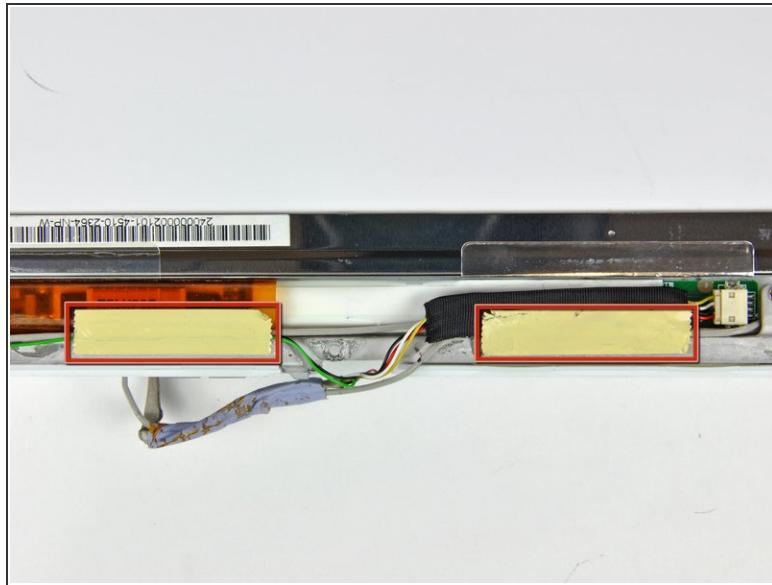
- Use the tip of a spudger to lift the microphone out of the front bezel.
- De-route the microphone cable from around the top and side of the display.

Step 57



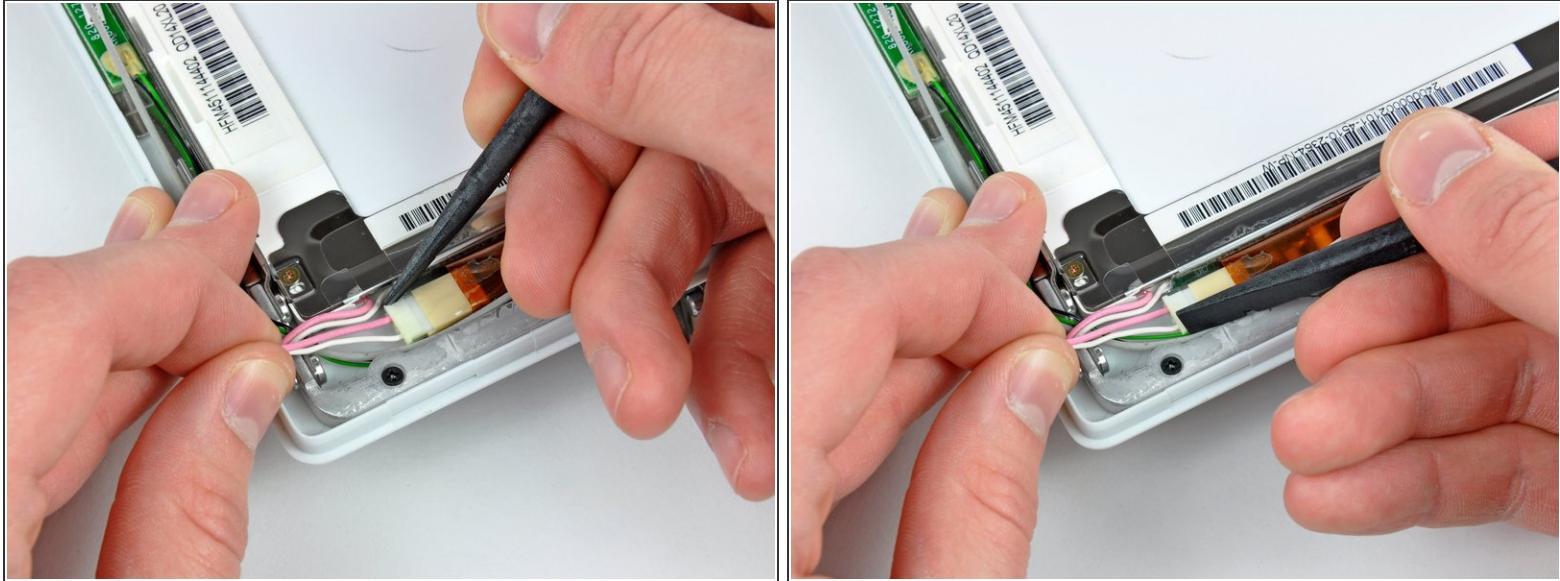
- Remove the display data cable from the display.

Step 58 — Inverter/AirPort Cables



- Remove the two pieces of tape covering the inverter/AirPort cables along the lower edge of the display.
- Carefully peel the inverter cable ground strap off the cast aluminum frame of the clutch hinges.

Step 59



- Disconnect the backlight cable from the inverter.

(i) It is helpful to use a spudger to push the backlight connector away from its socket while you lightly pull its cables away from the inverter.

Step 60



- Lift the LCD out of the display assembly.

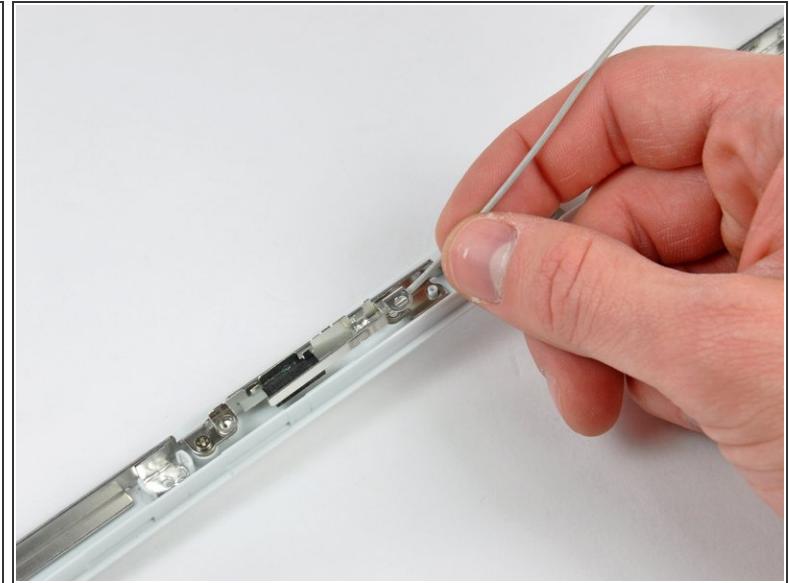
(i) It may be helpful to press the latch release button and open your display slightly to push the LCD out of the display assembly.

Step 61



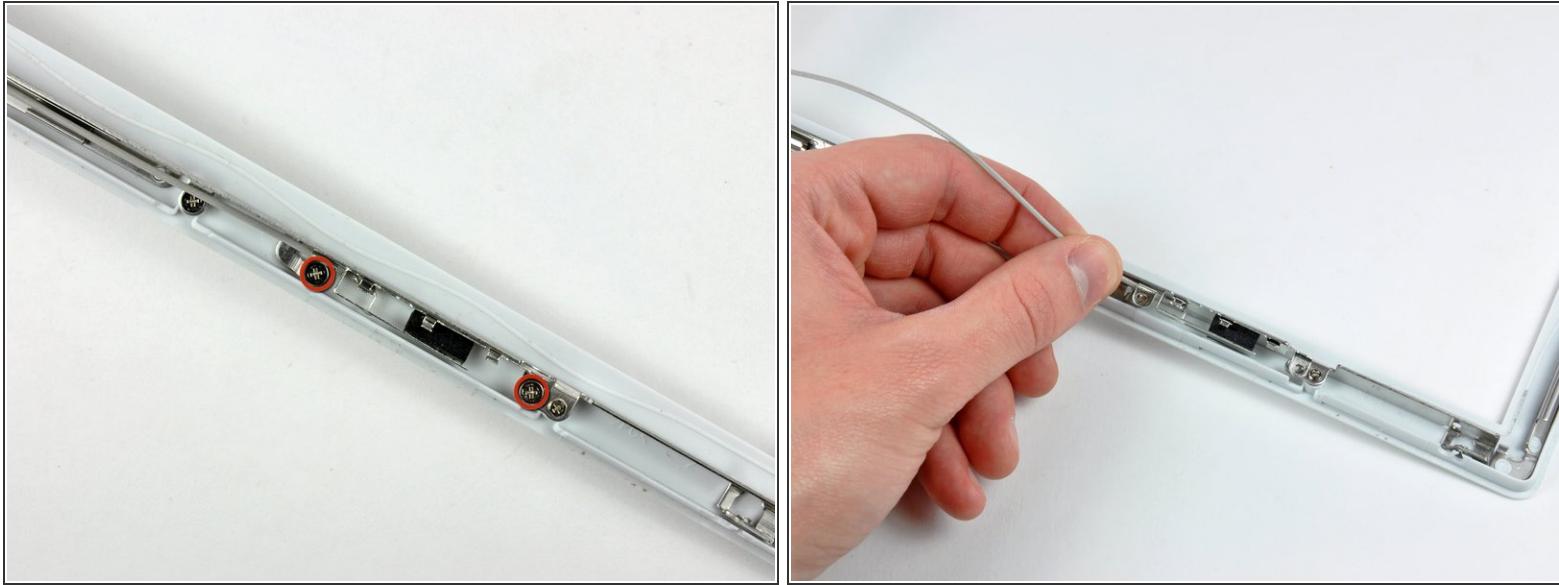
- Remove the single Phillips screw securing the reed switch board to the front bezel.
- Carefully lift the reed switch board off the metal frame of the clutch hinges.

Step 62



- Remove the two Phillips screws securing the right AirPort antenna to the clutch hinge frame.
- Carefully lift the right AirPort antenna off the clutch hinge frame.

Step 63



- Remove the two Phillips screws securing the left AirPort antenna to the clutch hinge frame.
- Carefully lift the left AirPort antenna off the clutch hinge frame.

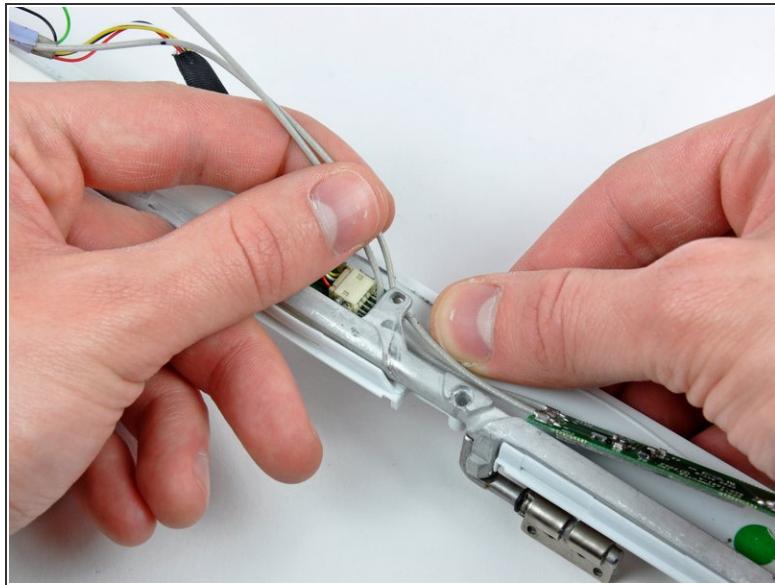
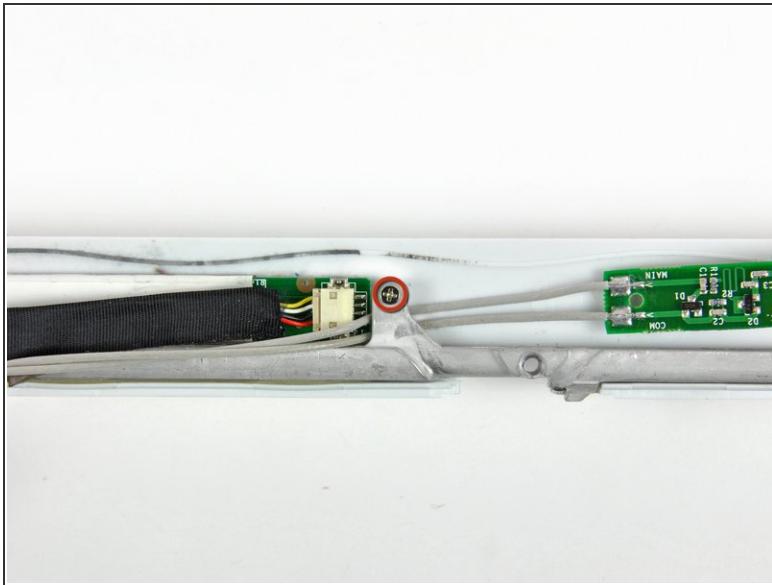
Step 64



- Use the flat end of a spudger to remove the antenna board from the front bezel.

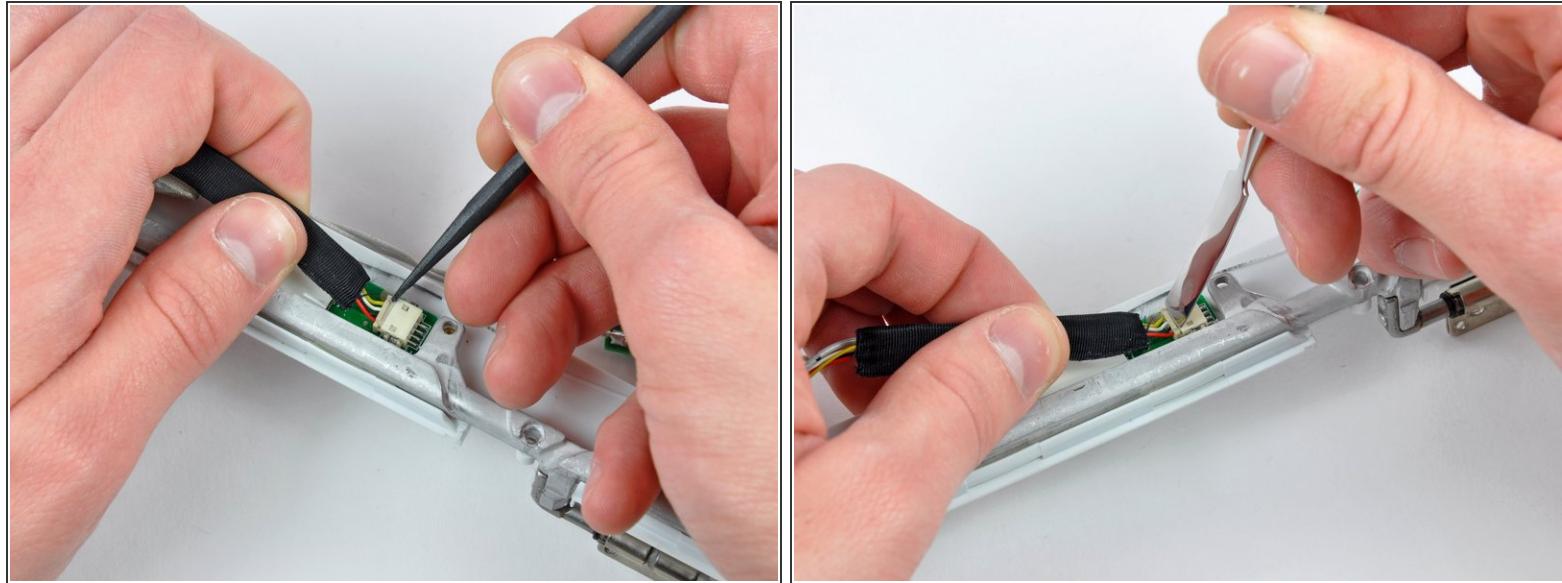
⚠ The antenna board is very thin and delicate.

Step 65



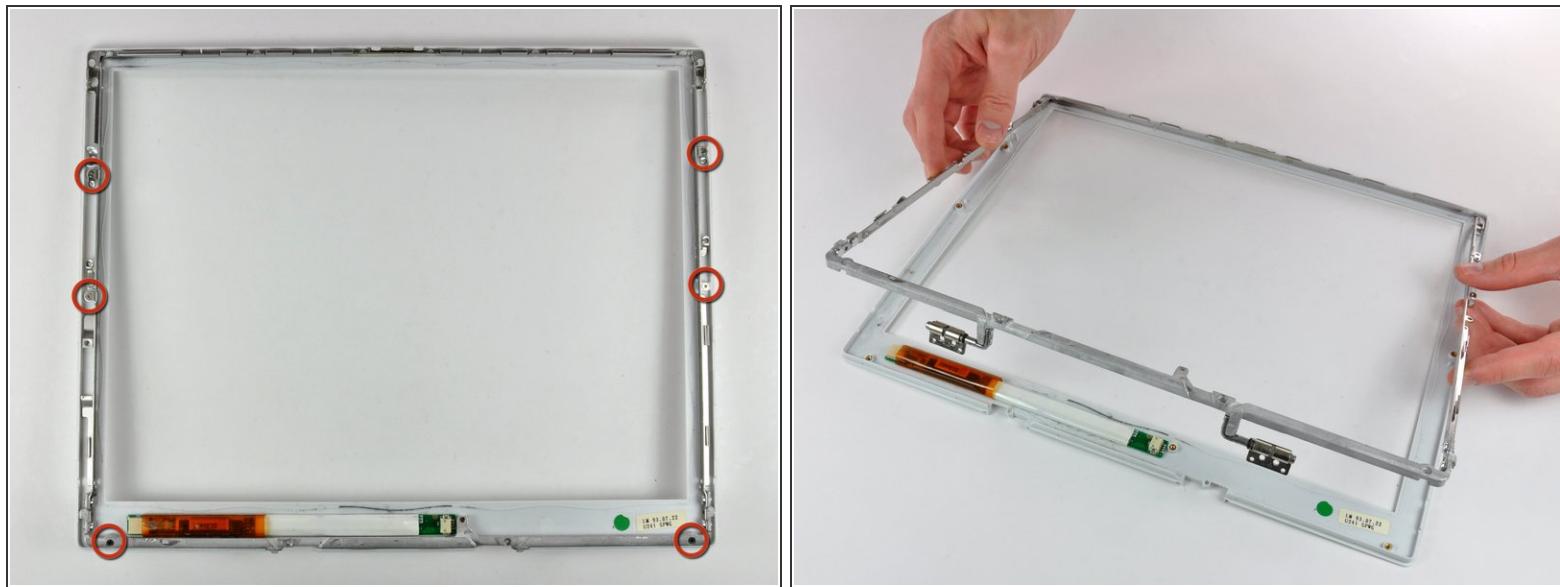
- Remove the single Phillips screw securing the front bezel to the middle of the cast aluminum clutch hinge frame.
- Carefully bend the front display bezel away from the clutch hinges as you slide the two Airport antennas out from under the clutch hinge frame.

Step 66



- 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.
- *i* 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 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.