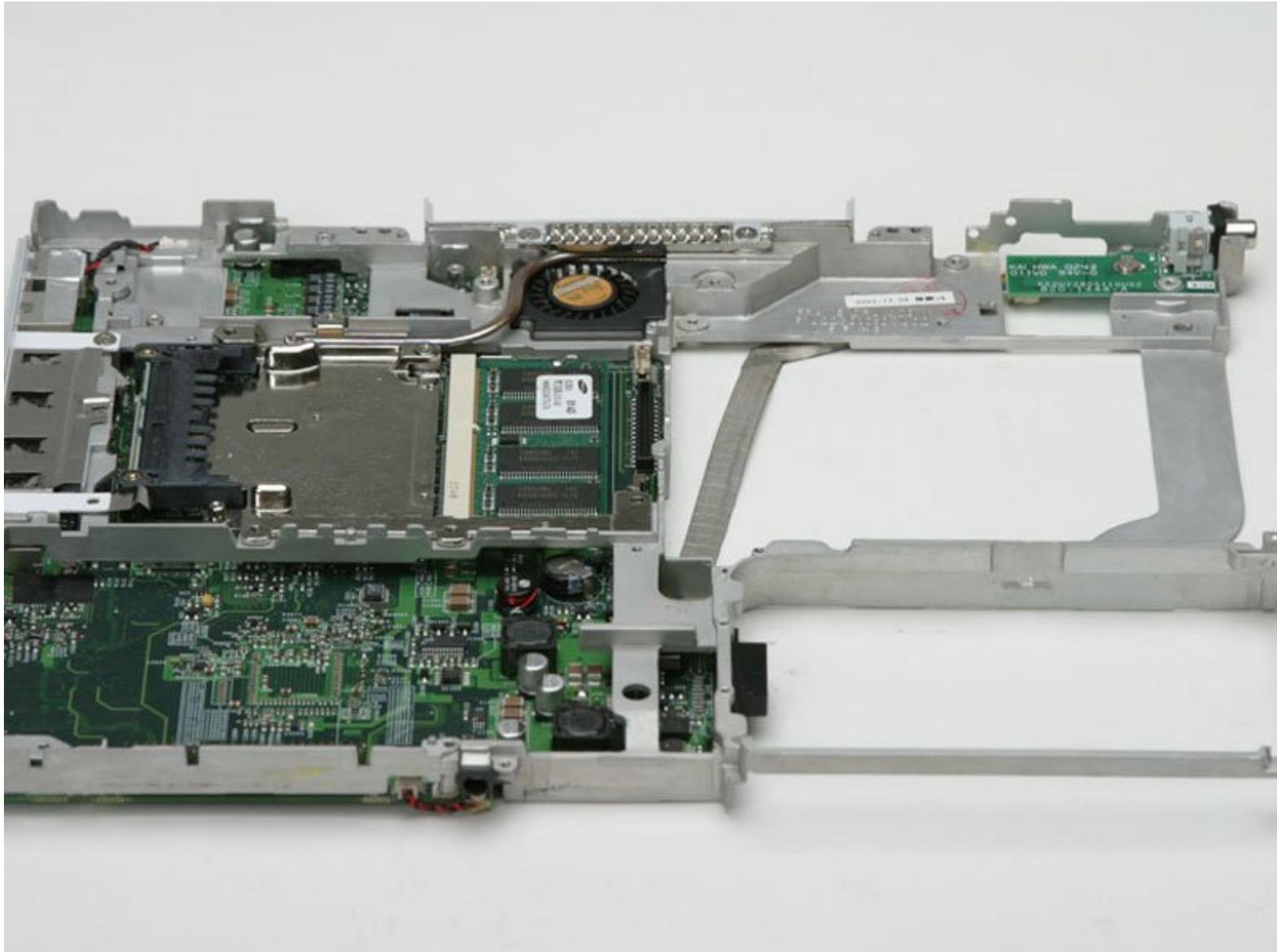




iBook G3 12" Logic Board Replacement

Written By: iRobot



INTRODUCTION

This motherboard includes all ports except the DC-In board.

TOOLS:

- Coin (1)
- Paper Clip (1)
- Phillips #00 Screwdriver (1)
- Flathead 3/32" or 2.5 mm Screwdriver (1)
- Spudger (1)
- TR8 Torx Security Screwdriver (1)

PARTS:

- iBook G3 12" 500 MHz Logic Board (128 RAM) (1)
- iBook G3 12" 800 MHz Logic Board (1)
- iBook G3 12" 700 MHz Logic Board (1)
- iBook G3 12" 500 MHz Logic Board (64 RAM) (1)
- iBook G3 12" 600 MHz Logic Board (16 VRAM) (1)
- iBook G3 12" 900 MHz Logic Board (1)
- iBook G3 12" Heat Sink (500 600) (1)
- iBook G3 12" Heat Sink (600) (1)
- iBook G3 12" Reset Button (1)
- iBook G3 12" Sleep Light (1)
- iBook G3 or G4 Battery Springs (1)
- iBook G3 12" Hinge Grill (1)
- iBook G3 12" 700 (Opaque) 800 900 MHz Metal Framework (1)
- iBook G3 12" 600 (16 VRAM) 700 (Transparent) Metal Framework (1)

Step 1 — Battery



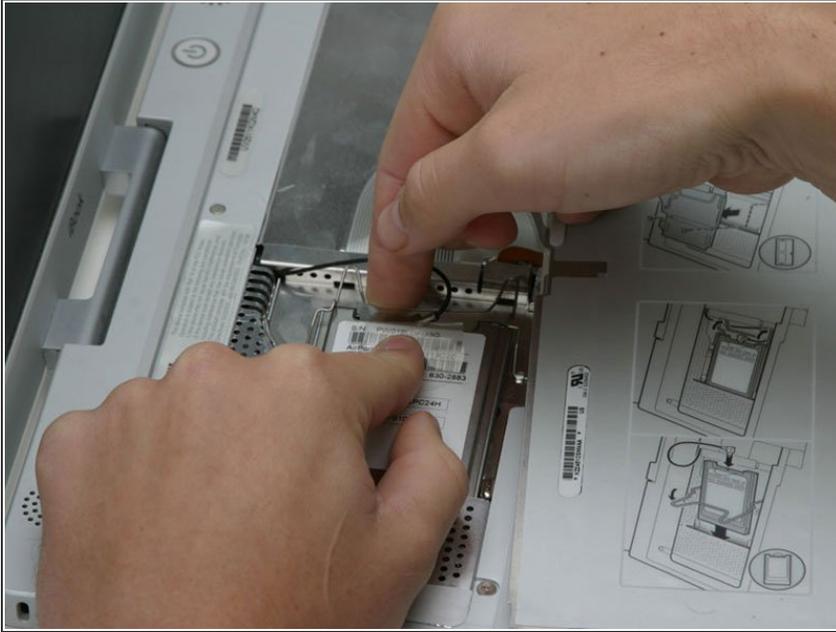
- Use a coin to rotate the battery locking screw 90 degrees clockwise.
- Lift the battery out of the computer.

Step 2 — Keyboard



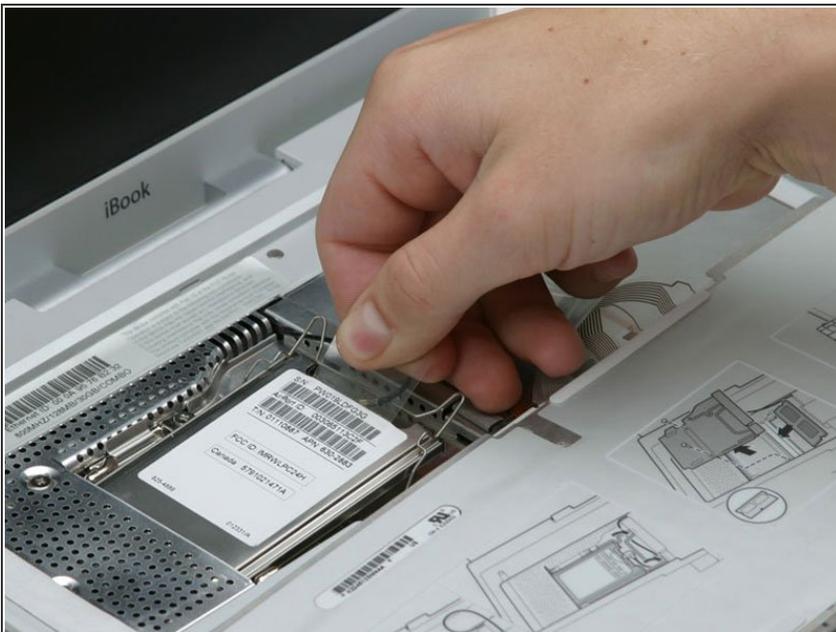
- Pull the keyboard release tabs toward you and lift up on the keyboard until it pops free.
- If the keyboard does not come free, use a small flathead screwdriver to turn the keyboard locking screw 180 degrees in either direction and try again.
- Flip the keyboard over, away from the screen, and rest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

Step 3



- **i** If the computer does not have an Airport card installed, skip the next two steps.
- Push the wire clasp toward the Airport card and pull it up to free it from the RAM shield.

Step 4



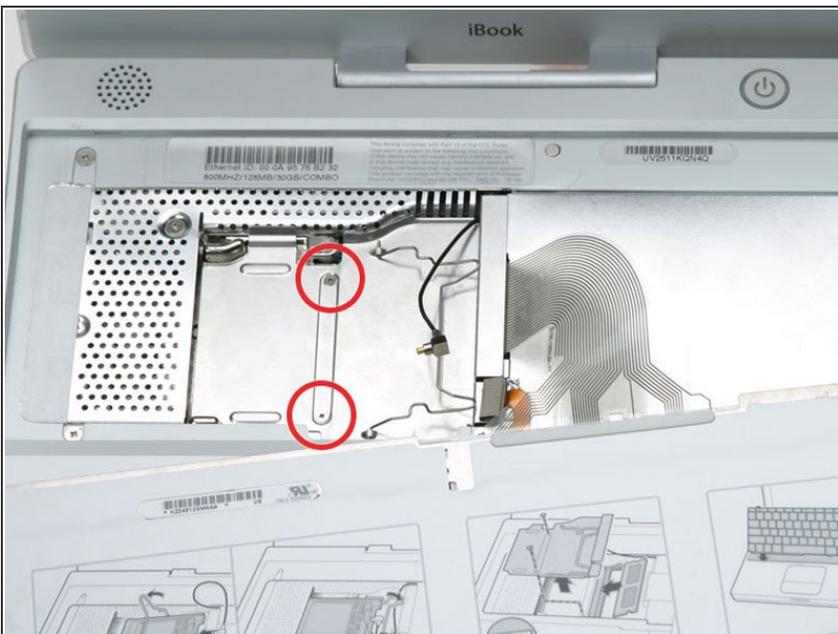
- Grasp the clear plastic tab on the Airport card and pull toward the right.

Step 5



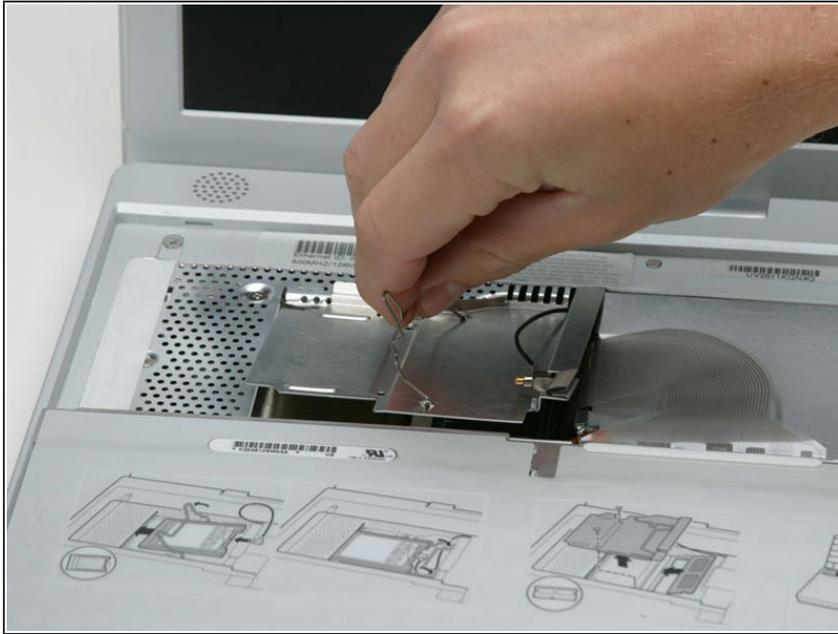
- Hold the Airport card in one hand and use your other hand to remove the antenna cable.

Step 6



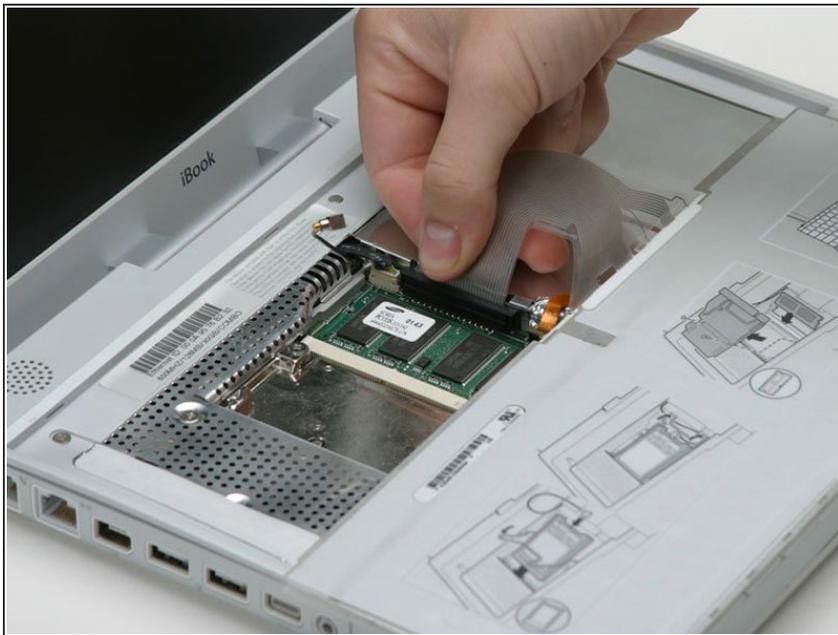
- Remove the two 2.5 mm Phillips screws that secure the RAM shield.

Step 7



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

Step 8



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

Step 9 — Lower Case



- Your laptop should look approximately like this.

Step 10



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

Step 11



- Remove the three 5.2 mm 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 one 10 mm and two 20 mm hex screws using a 2mm hex. Alternatively, a T8 Torx screwdriver key will do.

Step 14



- Remove the two 4.2 mm Phillips screws on either side of the battery contacts.

Step 15



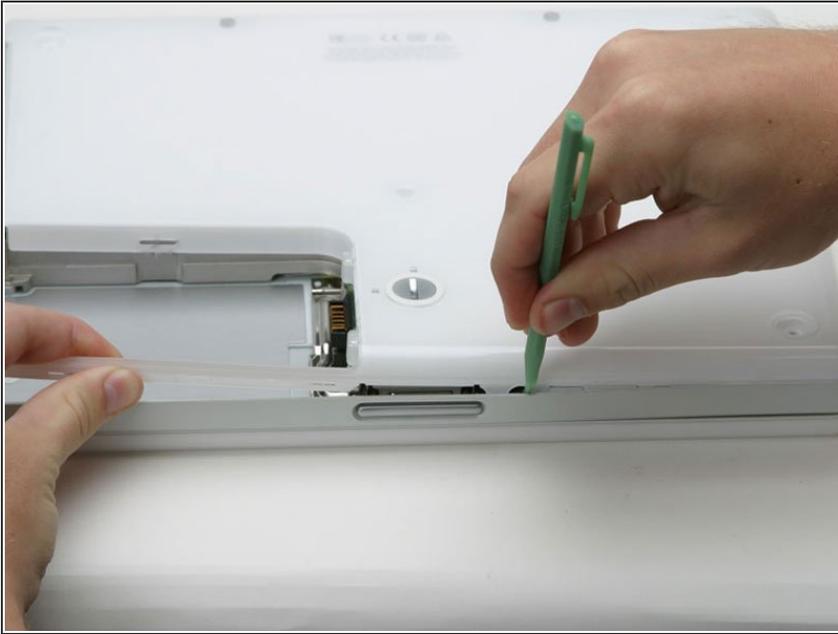
- Breathe deeply. Trying times are ahead, but we promise the lower case does come off.
- Push the thin rims of the lower case surrounding the battery compartment in, bending them past the tabs, and then lift up to free that corner of the lower case.

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



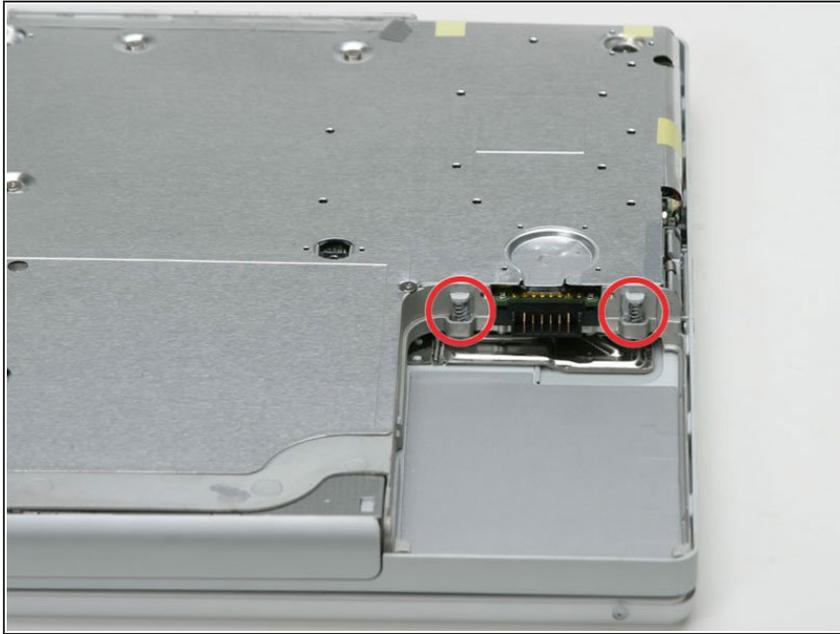
- Continue to run the spudger around the front, right corner. There are two tabs on the port side of the computer, one near the front corner and one near the sound out port.

Step 19



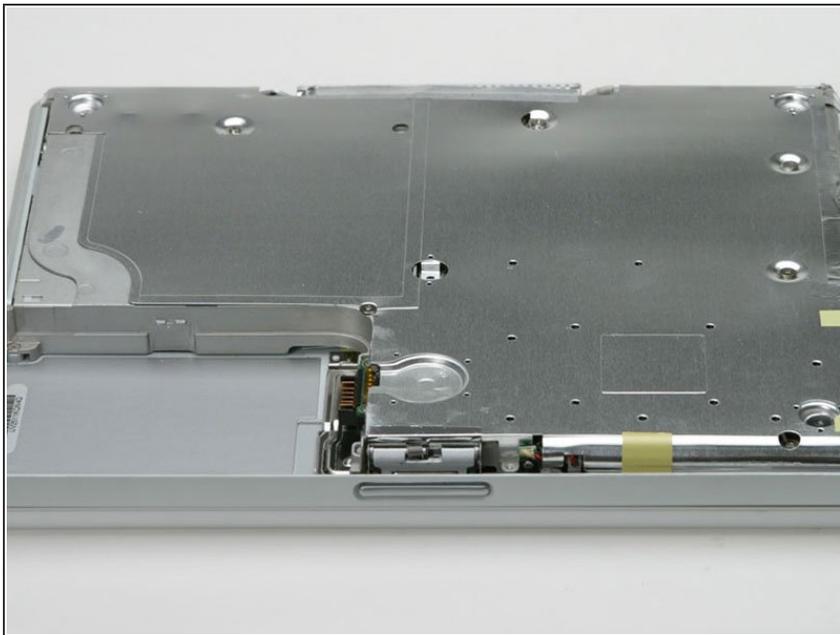
- Once the front and sides of the lower case are free, turn the computer so that the back is facing you and pull the lower case up and toward you until the back tabs pop free (it may be helpful to jiggle the case up and down).

Step 20



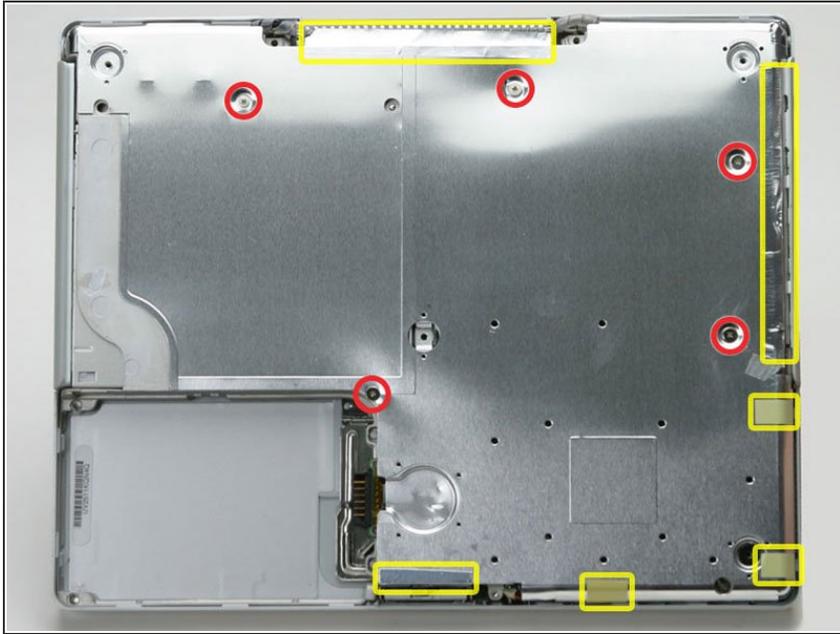
- Remove the small greasy springs with white plastic caps from either side of the battery contacts.

Step 21 — Bottom Shield



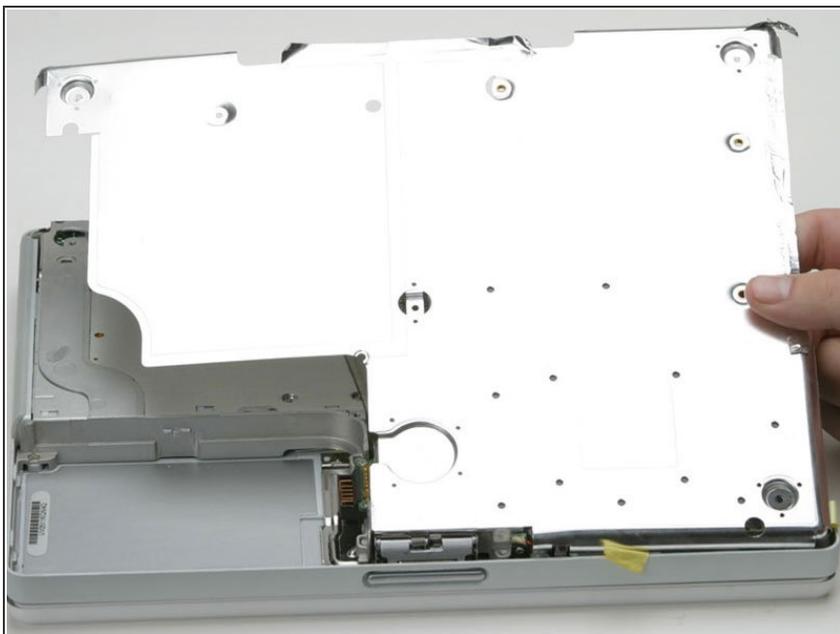
- Your laptop should look approximately like this.

Step 22



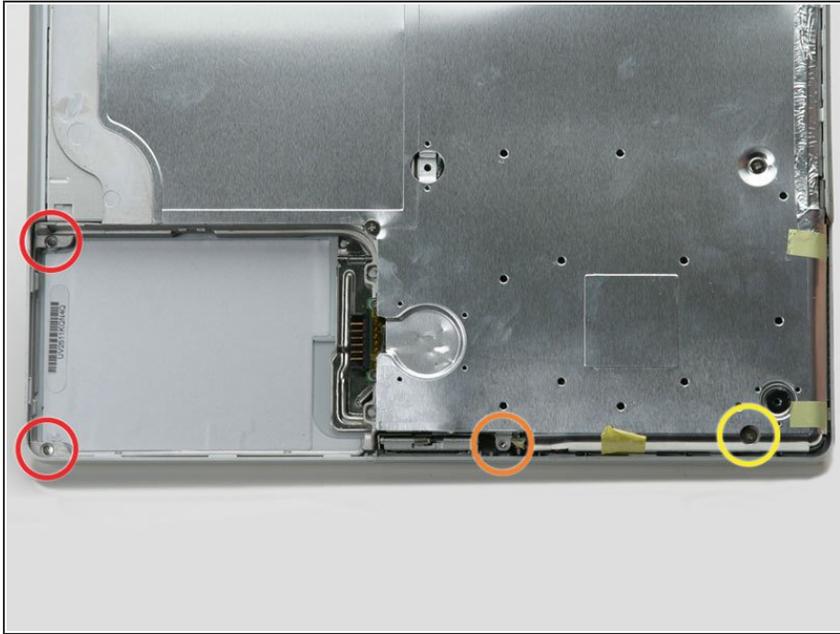
- Remove the five 5.8 mm Phillips screws from the bottom shield.
- Peel back the yellow tape and foil shielding outlined in the image.

Step 23



- Lift the bottom shield off.

Step 24 — Upper Case



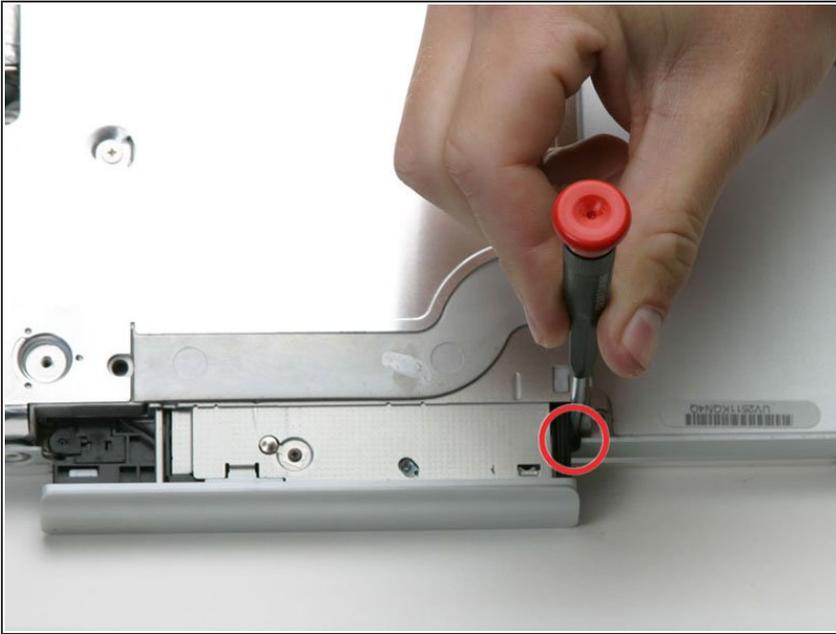
- Remove the following 4 screws on the bottom of the computer:
 - Two 3 mm Phillips from the left side of the computer.
 - One 4.5 mm Phillips near the latch mechanism (this screw may be missing in 800 MHz iBooks)
 - One 14.2 mm Phillips near the front, right corner.

Step 25



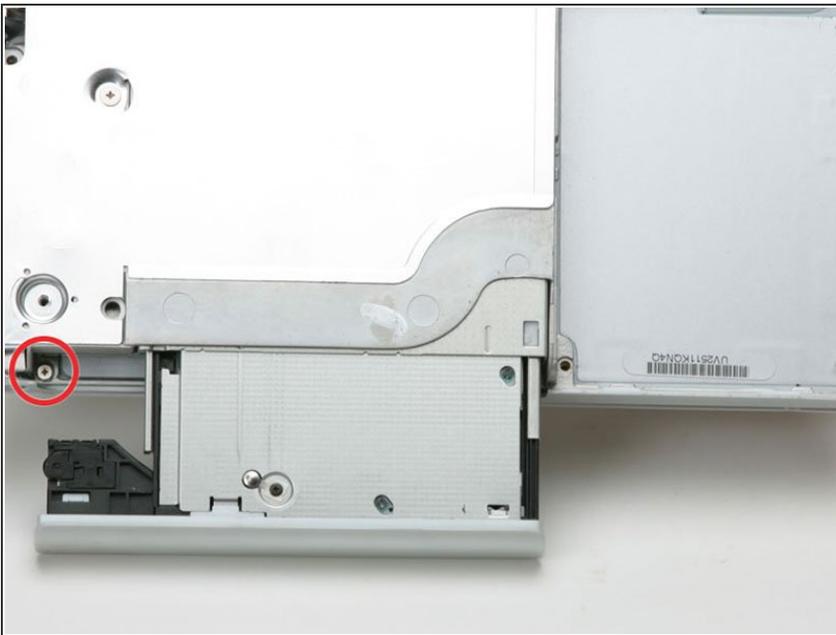
- Use a straightened paperclip to open the optical drive tray.

Step 26



- Pull the optical drive out just enough so that you can access and remove a Phillips screw near the battery compartment.

Step 27



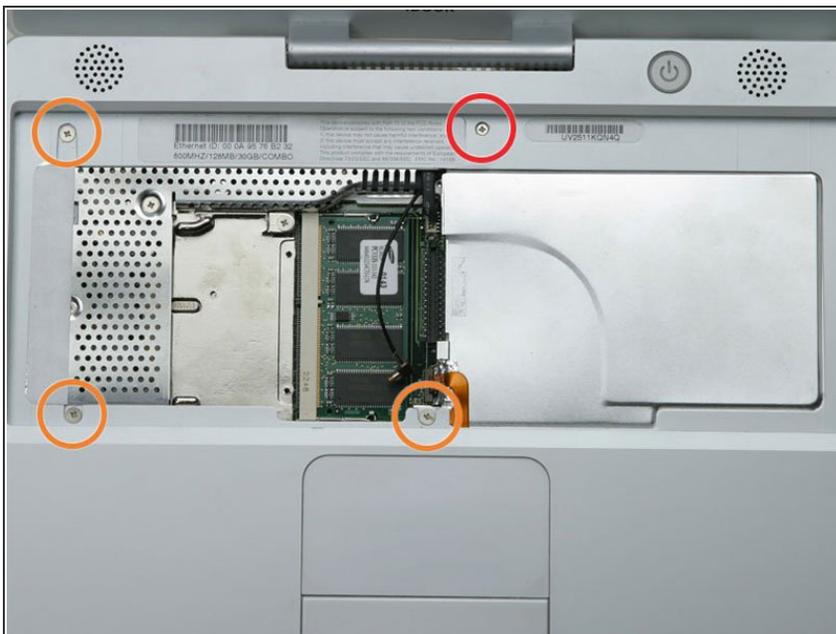
- Pull the optical drive a bit more so that you can access and remove a second Phillips screw near the power receptacle.

Step 28



- Turn over the computer and open it.
- Use tweezers (or a refrigerator magnet) to remove the magnet covering a Phillips screw near the middle of the computer.

Step 29



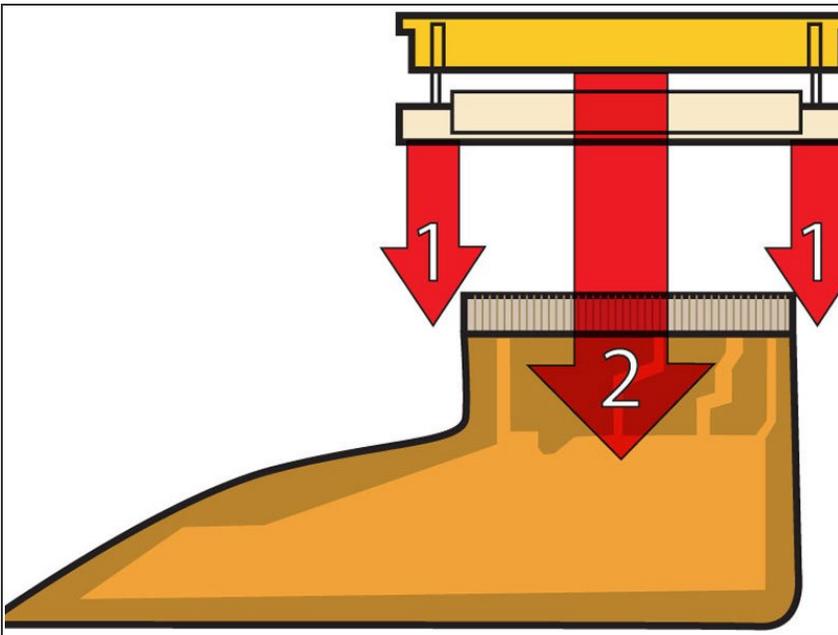
- Remove the following 4 screws on the edges of the keyboard area.
 - One 4.5 mm Phillips underneath where the magnet was.
 - Three 6 mm Phillips in plastic depressions.

Step 30



- Peel up the foil tape covering the speaker cable near the ports.

Step 31



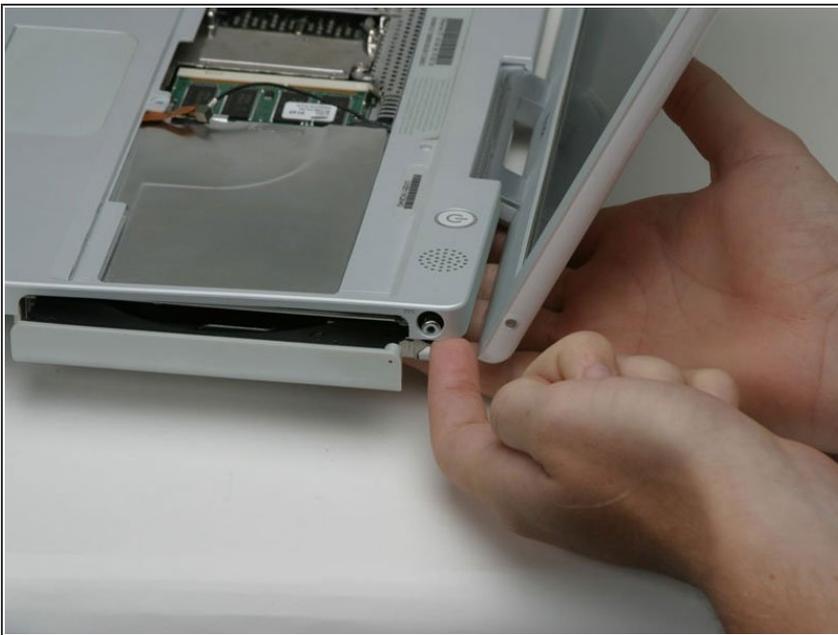
- ⓘ This is a diagram of the trackpad ribbon clamp connector you will disconnect in the next step.
- 1) With your fingernails, grasp the locking bar on either side and pull up a small amount (about 1/16" or 2 mm).
- 2) After disengaging the locking bar, slide the cable out of the connector.

Step 32



- Loosen the trackpad connector by pulling the top piece up slightly, freeing the trackpad ribbon.
- Slide the orange trackpad ribbon out of the connector.

Step 33

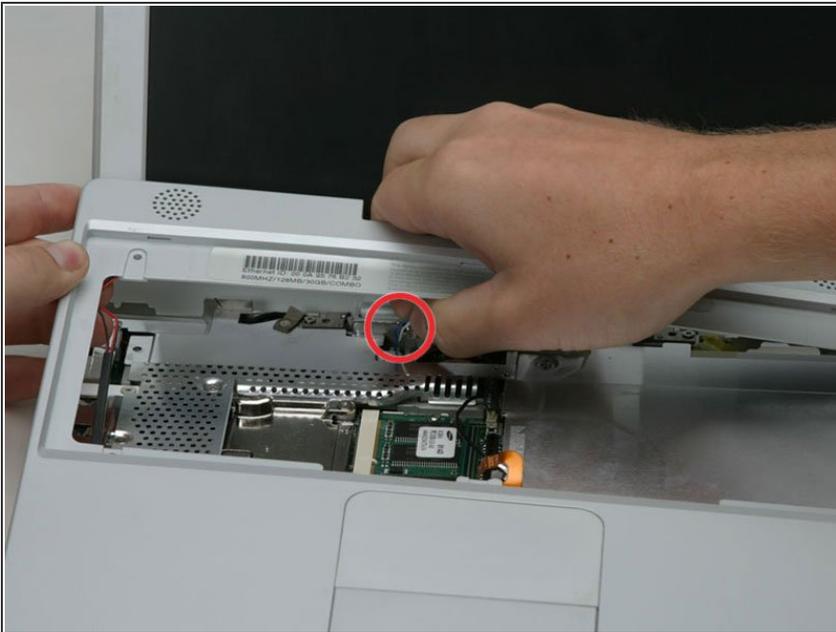


- ⓘ Before you can jerk the upper case off with joy, you must disconnect both the blue and white power cable

and red and black speaker cable as described in the next steps.

- Lift the upper case from the left side and use your other hand to pull out the right side in order to clear the power receptacle.
- ☒ There may be a thin metal bar fastened to the upper case by the two screws on either side of the optical drive. This bar provides rigidity around the optical drive; don't forget it when reassembling.

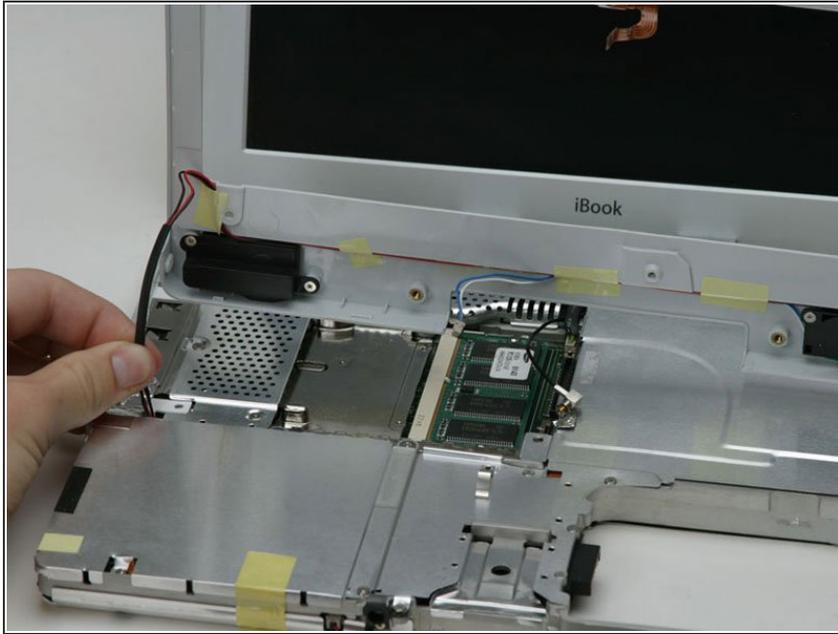
Step 34



⚠ 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.

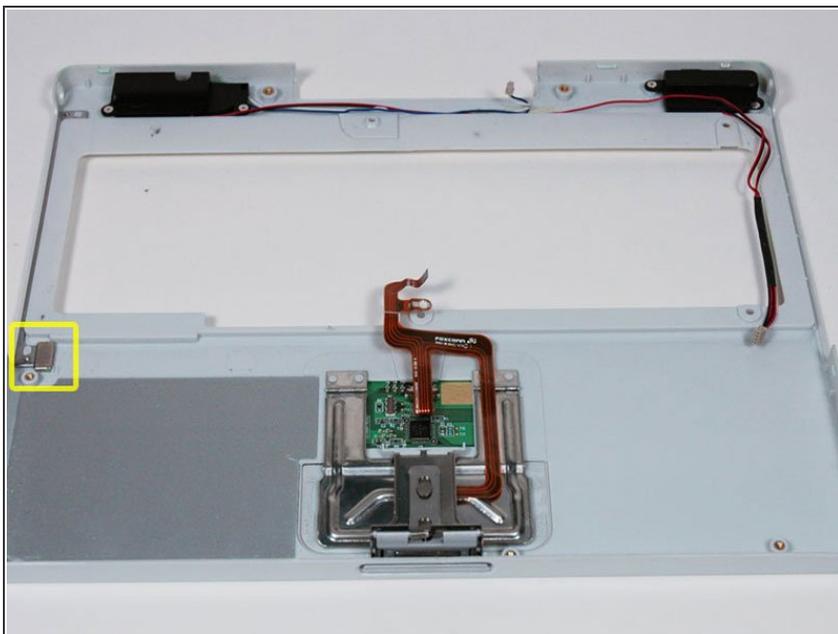
- Lift the upper case enough to disconnect the blue and white power cable from the logic board. Using your fingernails or a dental pick, carefully pry the connector from its socket. Make sure you're pulling only on the connector and not on the socket.

Step 35



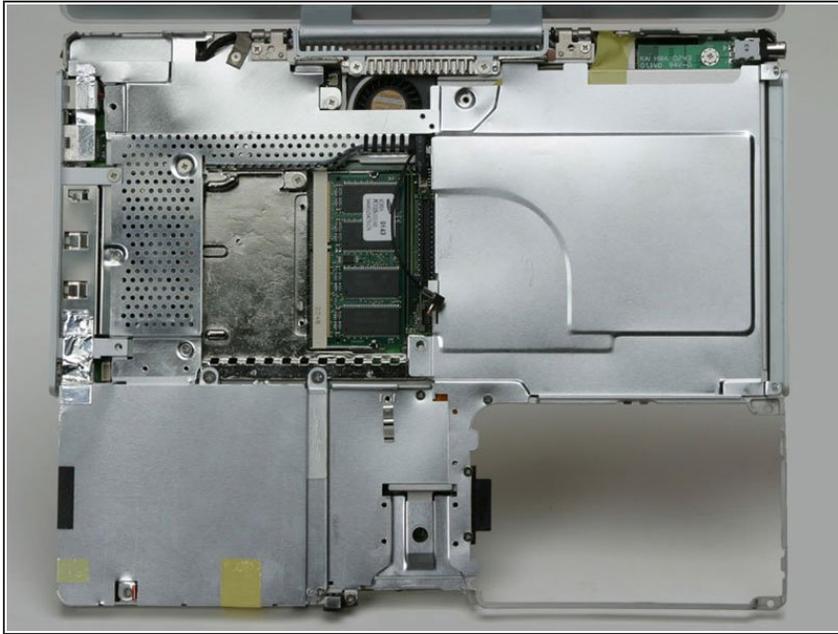
- Lift the upper case off completely and disconnect the red and black speaker cable from the logic board. As before, make sure you're pulling only on the connector and not on the socket.

Step 36



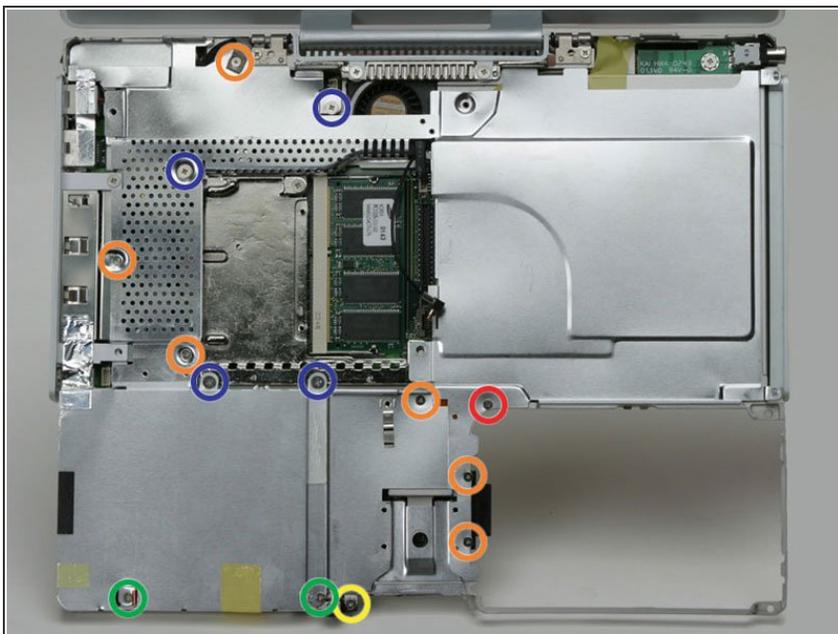
- ☑ There is a magnet that allows the computer to detect when the laptop is closed. If this magnet is not present your computer will not automatically go to sleep. Be sure the magnet is in the position indicated.

Step 37 — Top Shield



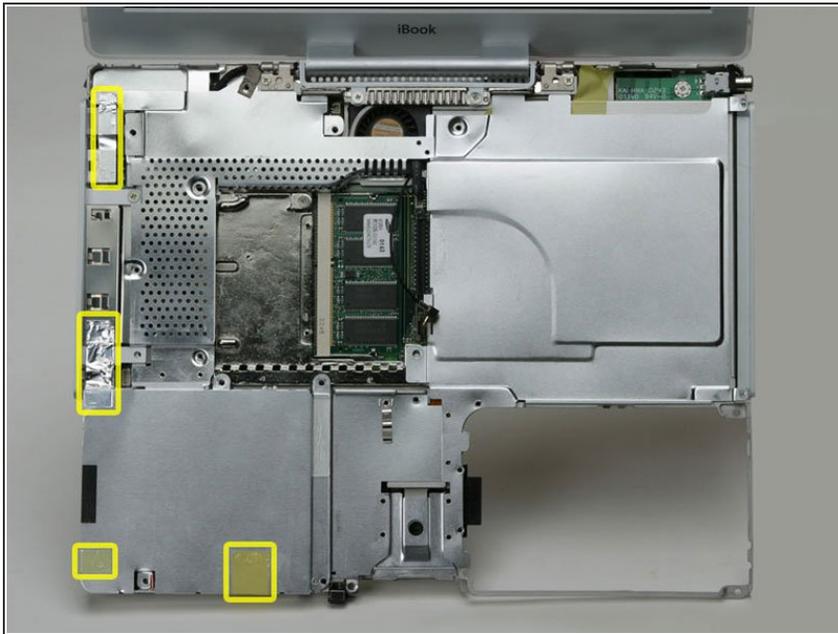
- Your laptop should look approximately like this.

Step 38



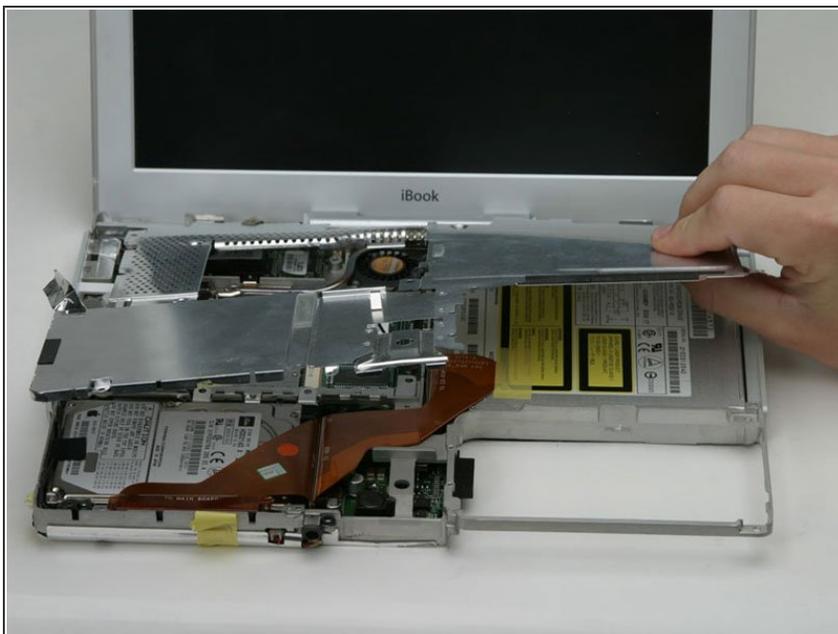
- Remove the following 14 screws (some models may be missing a couple of screws):
 - One 2.5 mm Phillips.
 - Six 3.5 mm Phillips.
 - One 4.5 mm Phillips near the sleep light with a small shaft.
 - Two 4.5 mm Phillips with larger shafts.
 - Four 5 mm Phillips
- If a screw is inserted in the left hole, the 14.2 mm screw in step 24 can not be inserted to hold the top case down.

Step 39



- Peel back three strips of yellow tape in the bottom left corner.
- Peel back one strip of foil tape in the upper left corner and another near where the trackpad connects to the logic board.

Step 40



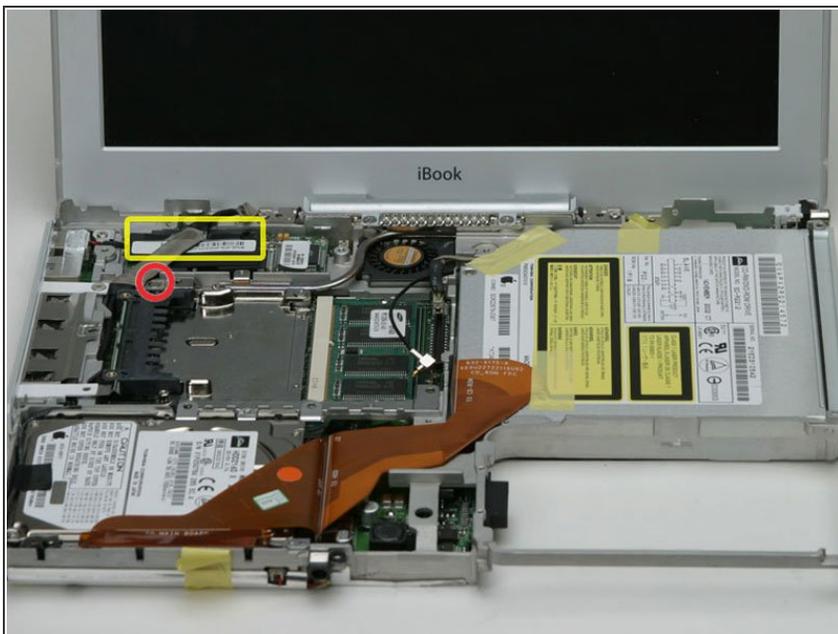
- Lift the top shield up from the right side, minding the upper left corner, which may catch on the metal framework.

Step 41 — Modem



- Your laptop should look approximately like this.

Step 42



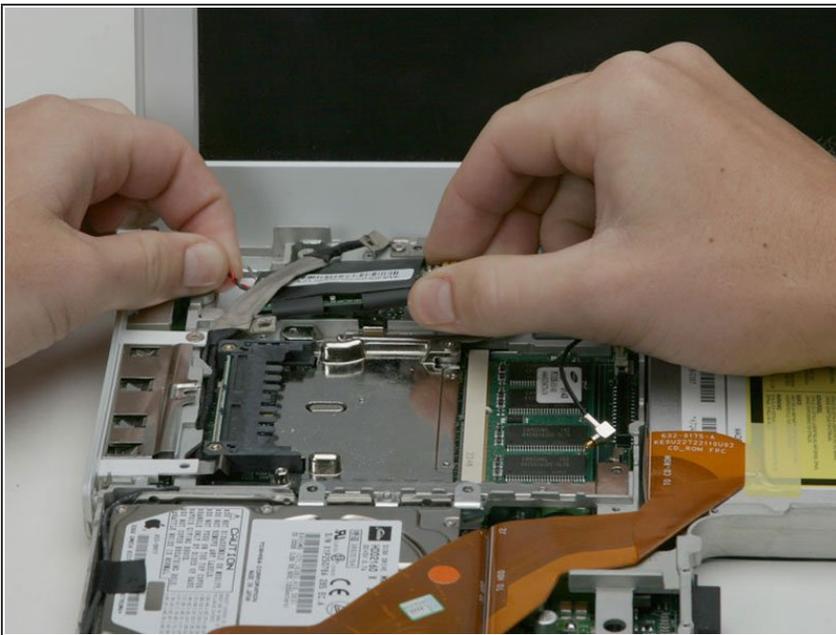
- Remove the single strip of tape running across the modem.
- Remove the single Phillips securing the display data cable to the metal framework.

Step 43



- Move the display data cable to the right in order to access and remove a single Phillips screw.
- Remove the single Phillips screw remaining at the upper, right corner of the modem.

Step 44



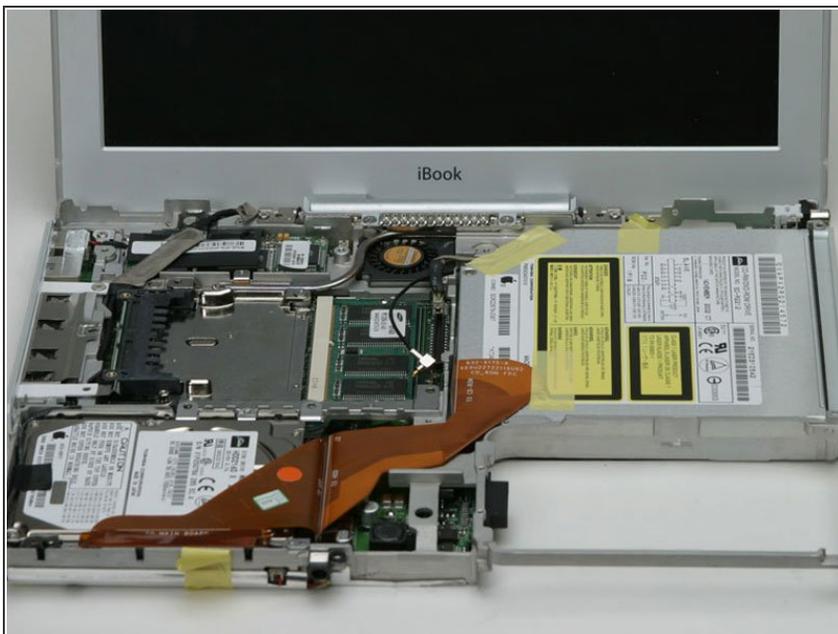
- Lift the modem from the logic board on the right side, being careful not to strain the display data cable.
- Disconnect the modem cable from the left side of the modem.
- Slide the modem out of the computer, being careful to avoid catching the black plastic shielding on the surrounding cables.

Step 45



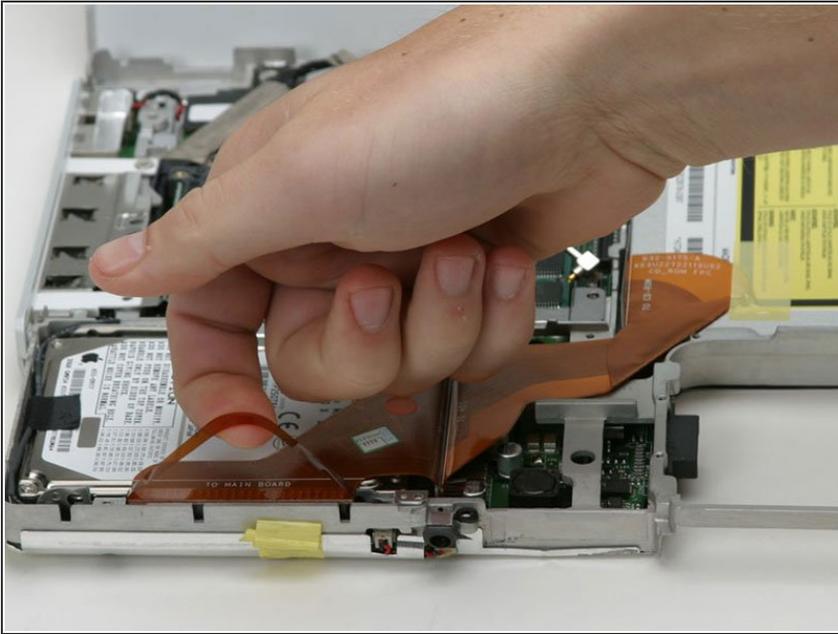
- Your laptop should look approximately like this.

Step 46 — Hard Drive



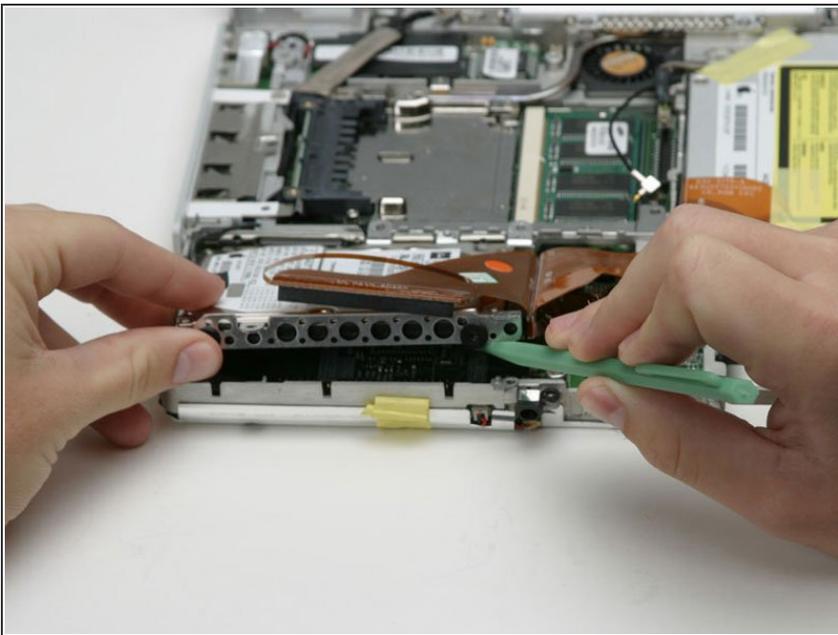
- Your laptop should look approximately like this.

Step 47



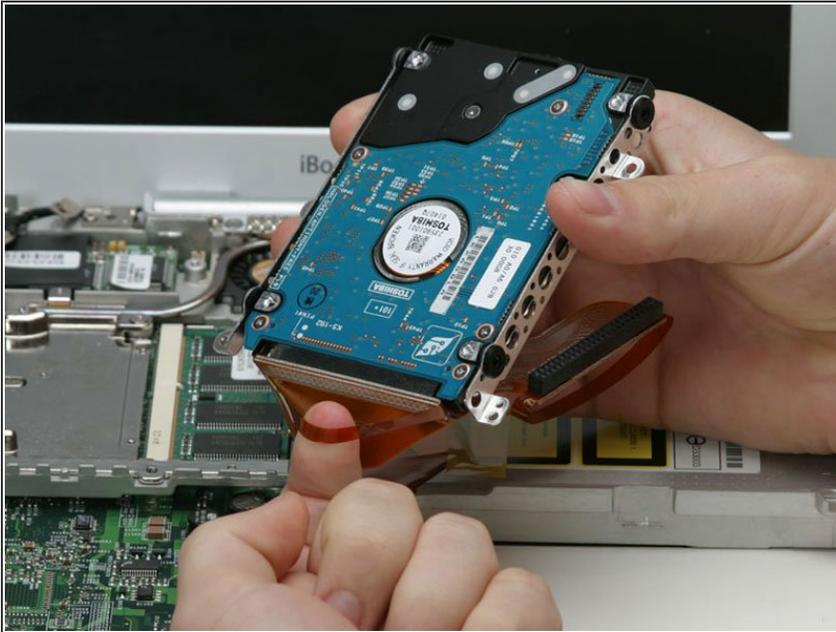
- Use the transparent orange loop to disconnect the large orange ribbon cable from the logic board.

Step 48



- Lift up the front edge of the hard drive.
- Peel back the black tape to free the microphone cable from the hard drive.

Step 49



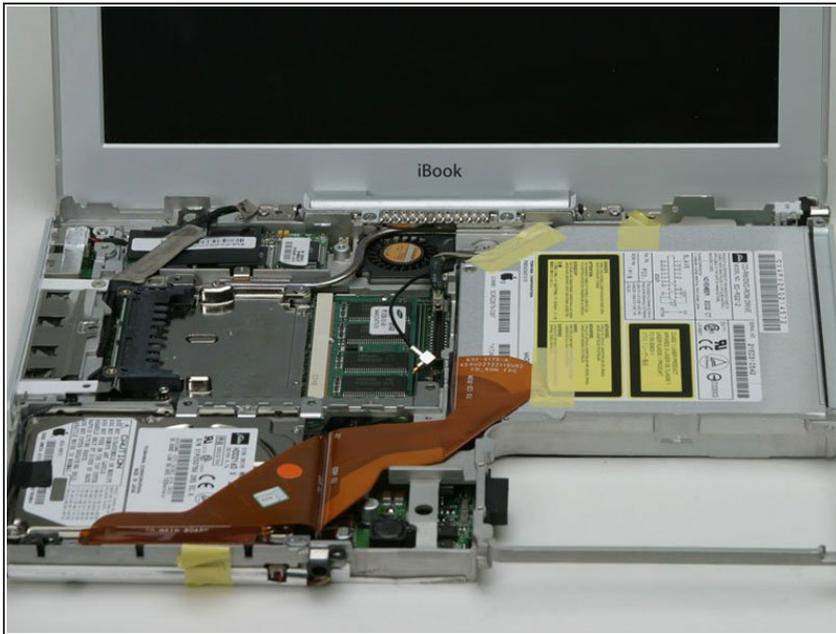
- Use the transparent orange loop to disconnect the hard drive ribbon cable from the hard drive.
- ⓘ This is a bit tricky. Try rocking the cable gently from side to side while applying even pressure. If you bend the pins, do your best to straighten them, using the hard drive cable as a guide.

Step 50



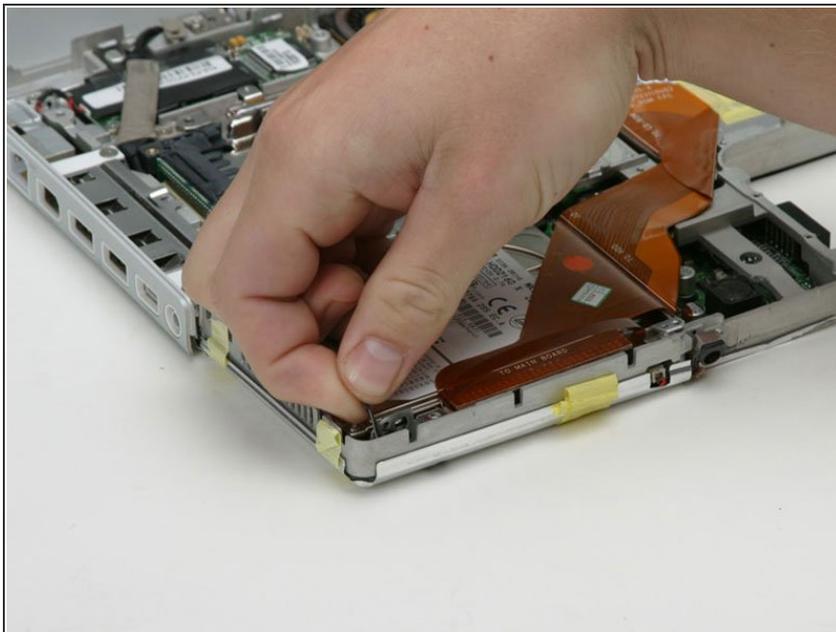
- Your laptop should look approximately like this.

Step 51 — Display



- Your laptop should look approximately like this.

Step 52



- ⓘ If you have already removed the hard drive in a previous step, your iBook may differ slightly from the picture.
- Disconnect the microphone cable from the front, left corner of the logic board.
- Peel back the black tape and free the microphone cable from the hard drive.

Step 53



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

Step 54



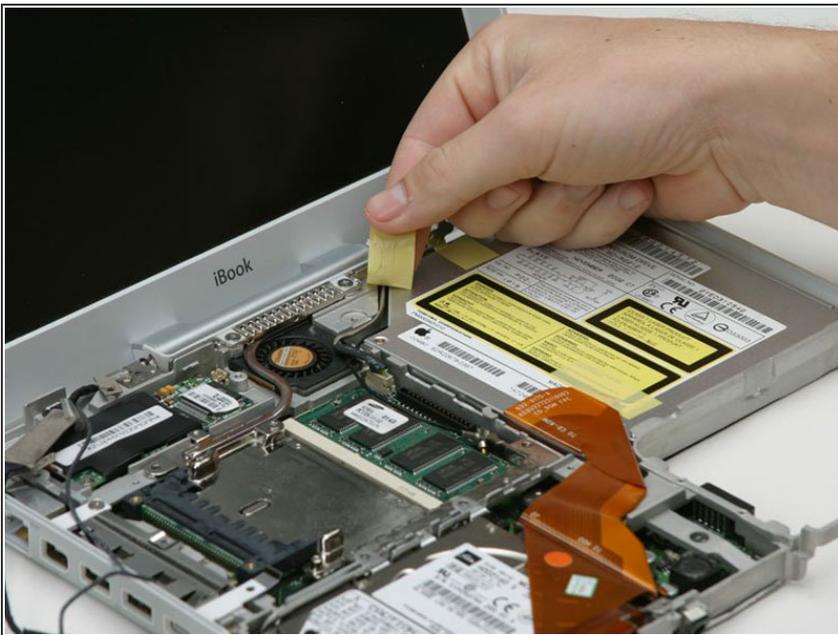
- ⓘ If you have already removed the modem in a previous step, you can skip this step.
- Remove the single Phillips securing the display data cable to the metal framework.

Step 55



- Deroute the display data and microphone cables.

Step 56



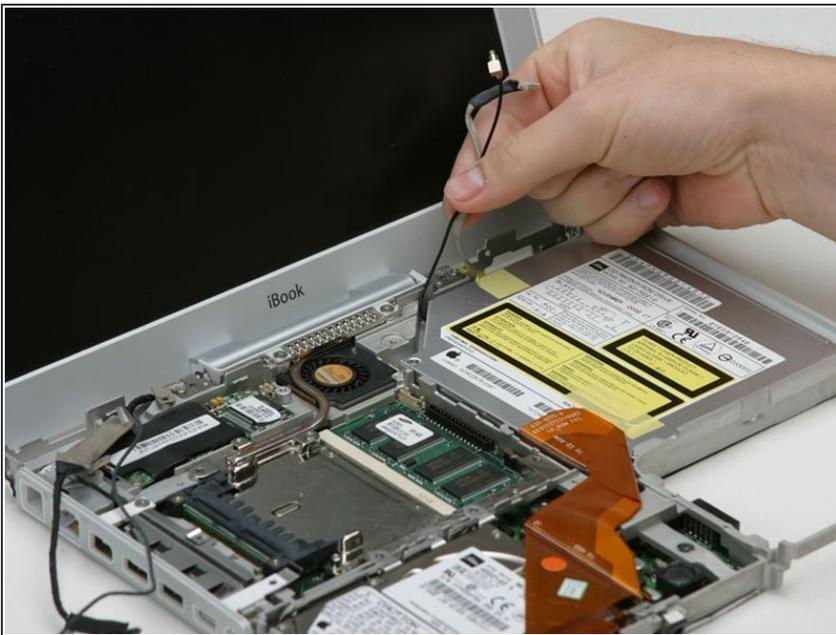
- Peel back the yellow tape securing the inverter cable to the optical drive.

Step 57



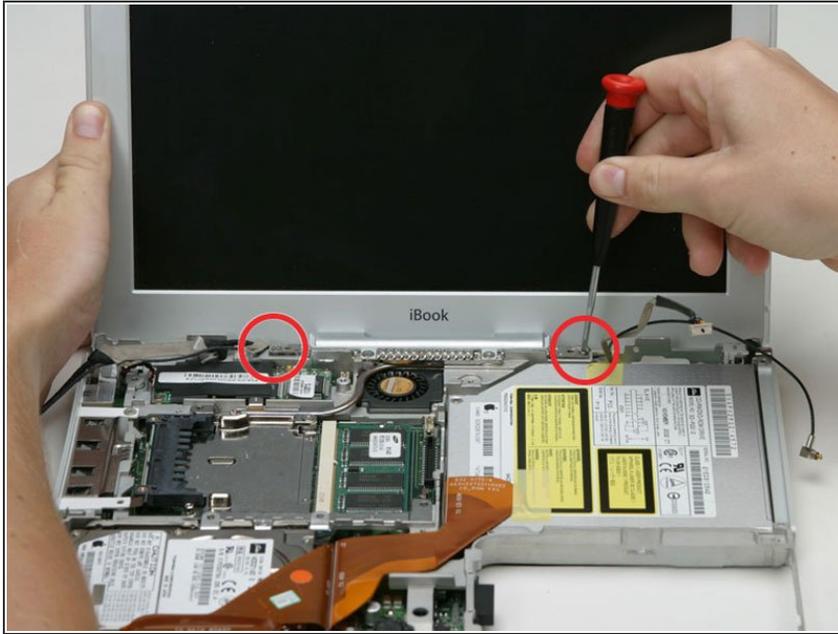
- Disconnect the inverter cable from the logic board.

Step 58



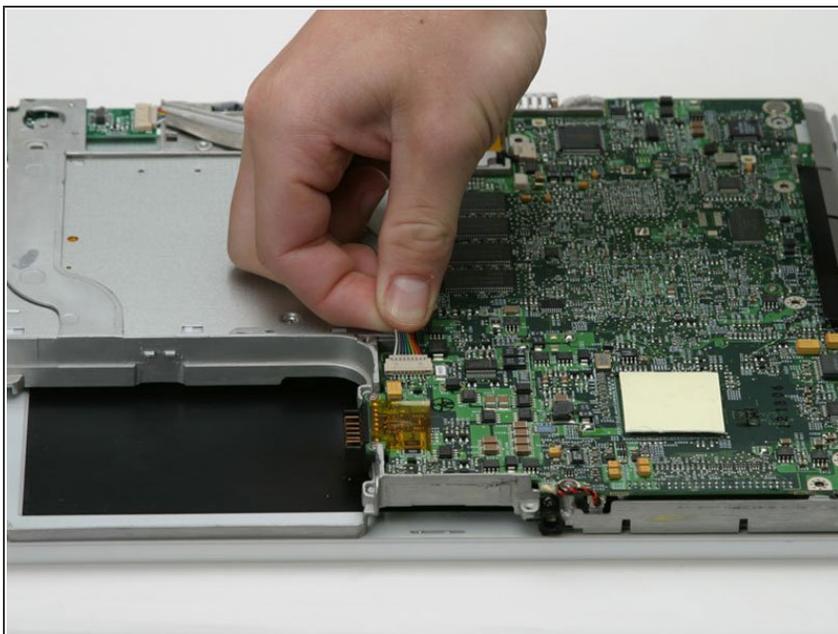
- Carefully deroute the inverter cable from beneath the optical drive.
- Deroute the Airport antenna cable from beneath the optical drive.

Step 59



- i Support the display with your free hand while removing the following screws.
 - Remove the single Phillips screw on the outer edge of either hinge (two screws total).
 - Tilt the display back to get over two small nubbins, and then slide it directly from the case and away.

Step 60 — Optical Drive



- i If you have already removed the hard drive or display in a previous step, your iBook may differ slightly from the picture.
 - On the bottom of the computer, disconnect the DC-In cable from the logic board.

Step 61



- Flip the computer over and open the display.
- Open the optical drive using a straightened paperclip (if it's not already opened).
- Peel up the yellow tape from the optical drive.

Step 62



- i** This step may vary on some iBook models. If the screws shown are not on your iBook, you may need to flip the computer over and remove two screws attaching the bottom of the optical drive to the metal framework.
- Remove the two Phillips screws securing the optical drive to the metal framework.

Step 63



- Peel back the orange ribbon cable to reveal a single Phillips screw. Remove this screw to free the optical drive from the metal framework.

Step 64



- Lift the optical drive by the edge closest to the screen, minding that the metal bracket at the top left corner doesn't catch on the Airport or inverter cables.

Step 65



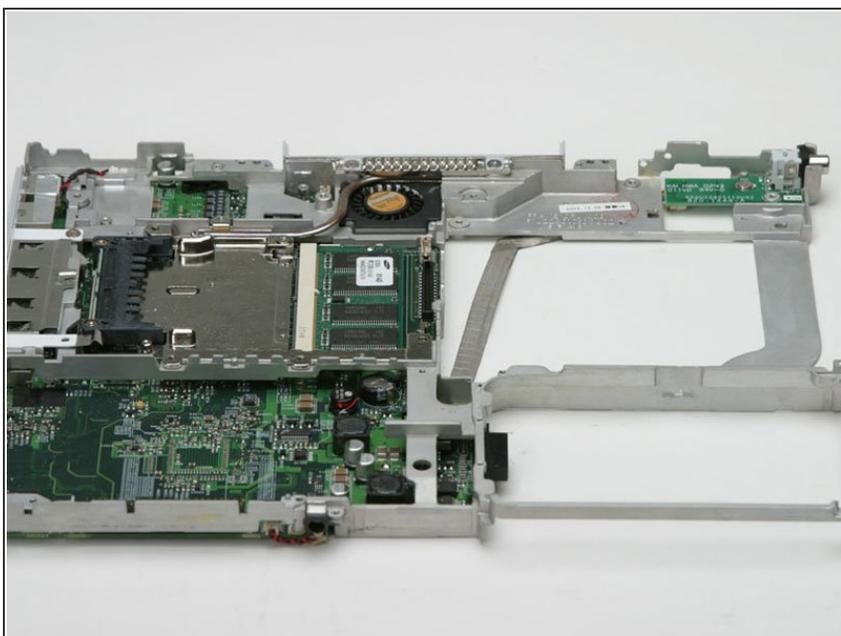
- Remove the two 2.5 mm Phillips screws securing the large orange ribbon cable and thin metal bracket to the drive.

Step 66



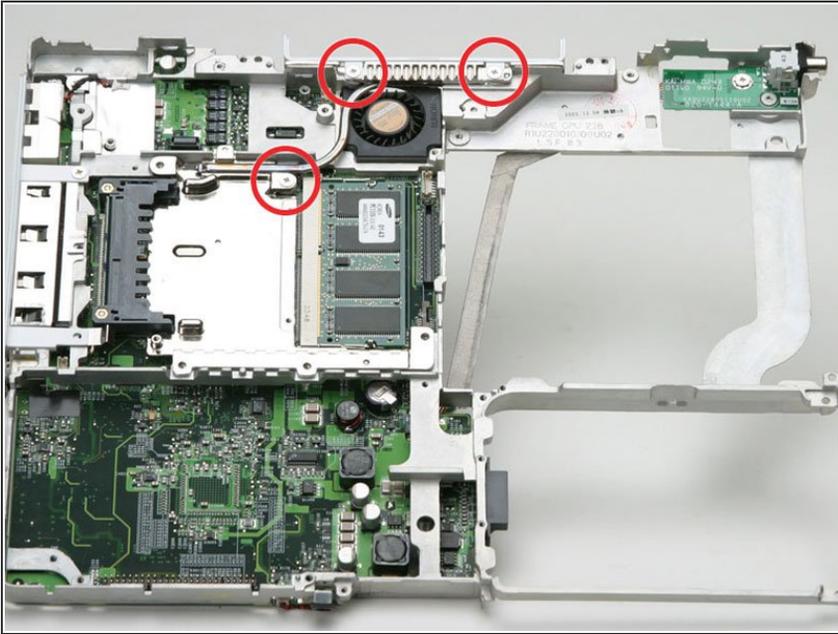
- Disconnect the ribbon cable from the optical drive.
- ⓘ If you have a CD or any other object jammed in your optical drive, we have an [optical drive repair guide](#).

Step 67 — Logic Board



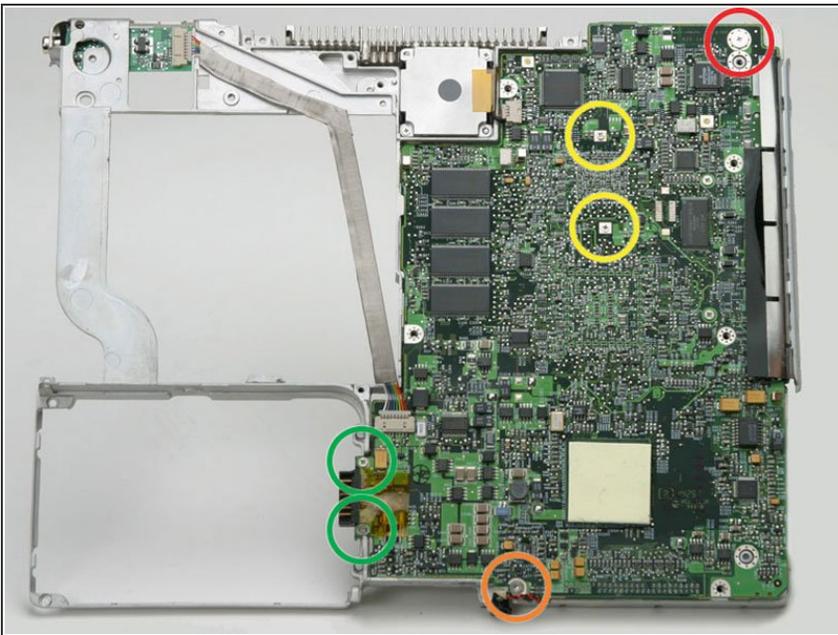
- Your laptop should look approximately like this.

Step 68



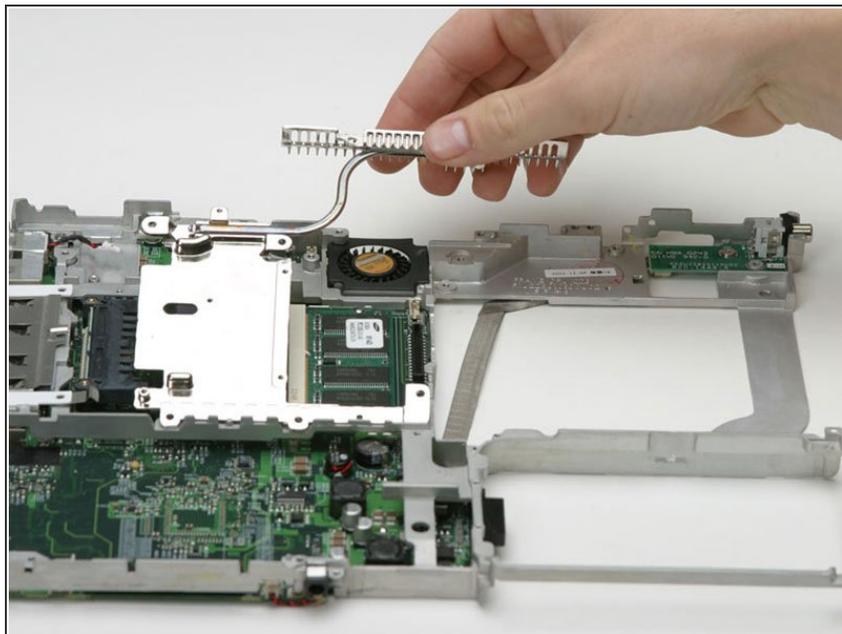
- Remove the three Phillips securing the heat sink to the metal framework.
- Remove the rear plastic grill and IO Bezel.

Step 69



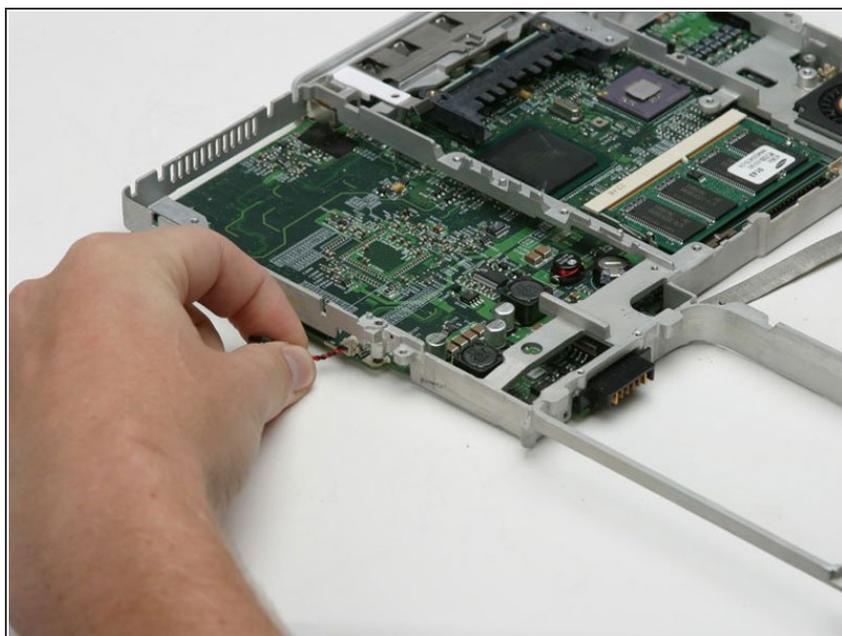
- Turn the remains of the computer over.
- Remove the following 6 screws:
 - One 4 mm Phillips at the upper right corner of the logic board.
 - One 6 mm Phillips at the front of the computer, near the sleep light.
 - Two 6 mm small-head Philips from the middle of the logic board
 - Two 7.5 mm small-head Phillips, one on either side of the battery contacts.

Step 70



- Turn the remains of the computer over again.
- Lift the heat sink out of the computer.
- ⓘ If you need to mount the heat sink back into the laptop, we have a [thermal paste guide](#) that makes replacing the thermal compound easy.

Step 71



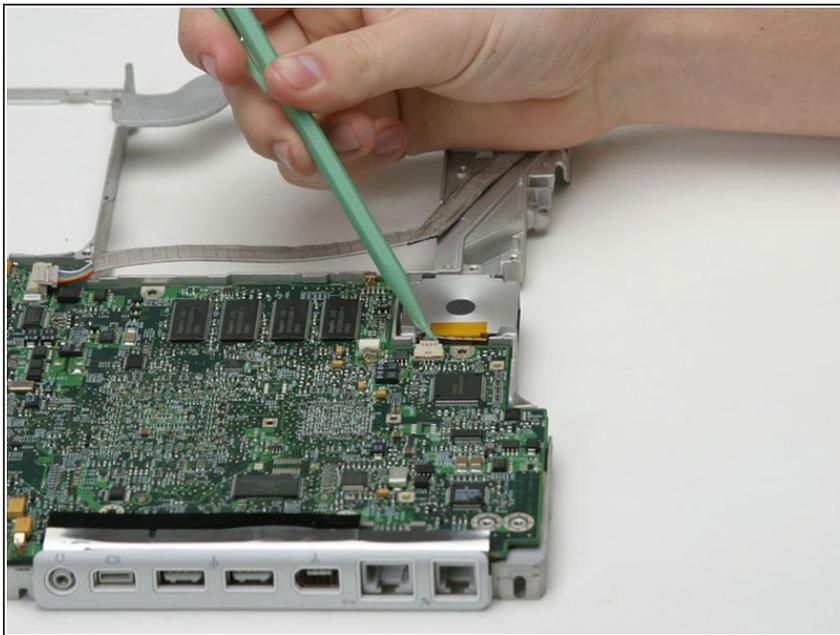
- Disconnect the sleep light from the logic board.

Step 72



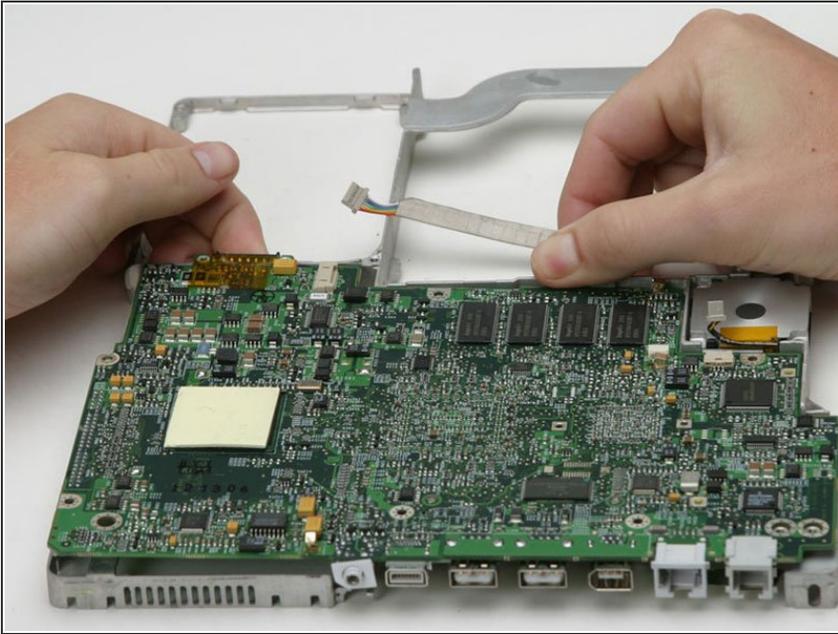
- Turn the remains of the computer over (for the last time).

Step 73



- Disconnect the fan cable from the logic board.

Step 74



- Press the metal framework out as shown and lift the logic board out of the computer, holding it near the battery contacts.

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