

# Apple iBook G4 12" Repair Manual

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This manual is presented as a guide in order to help you repair problems on your powerbook. Working on a powerbook can be dangerous if not done properly. We at Powerbookmedic.com take no responsibility for any damage or harm done to yourself or your powerbook as a result of reading this guide.

Suggestions for making this manual better? Email: [sales@powerbookmedic.com](mailto:sales@powerbookmedic.com)

## **Tools Needed for Take Apart:**

Torx T8 Screwdriver – Available from our online store

Torx T6 Screwdriver – Available from our online store

Philips head screwdriver ( small and medium size screwdrivers)

Hex Wrench or pliers to remove hex nut (only for logic board disassembly)

**Always remove the battery and power supply from the computer before beginning any take apart or repair!**

# Table of Contents

Battery Removal.....	pg. 4
Keyboard /Airport Extreme Card.....	pg. 6
Ram / Memory.....	pg.10
Bottom Case.....	pg. 12
Bottom Shield.....	pg 16
Dc-In Board.....	pg. 17
Fan Assembly.....	pg. 19
Top Case.....	pg. 21
Sleep Light Assembly.....	pg. 24
Top Shield.....	pg. 26
I/O Bezel.....	pg. 28
Modem Port.....	pg. 29
Hard Drive.....	pg. 31
Bluetooth Assembly.....	pg. 35
Optical Drive.....	pg. 39
Display Module.....	pg 45
Back Casing.....	pg. 49
Clutch Cover.....	pg.51
LCD.....	pg. 53
Inverter Board.....	pg. 57

Airport Antenna.....pg 60  
Reed Switch / Inverter Cable.....pg. 65  
Microphone Assembly.....pg.67  
Hinge / Clutch Assembly.....pg. 68  
Inverter Board.....pg. 69  
Logic Board.....pg. 71

## Battery Removal

Before beginning any repair, remove the battery first!

Locate the battery lock as shown in red in the picture.



Using either a flat head screwdriver or a coin (anything with a flat surface) turn the security latch to the left as shown. Turn it until the notch is facing the “unlock graphic.”



The battery will then pop up slightly. Grasp the battery as shown, and pull it up and out of the computer.



# Keyboard / Airport Extreme Card

Before proceeding, you must first remove:

## Battery

Located at the top of the keyboard are two tabs that need to be pulled towards you. These tabs are located between the ESC and F1 keys and between the F11 and F12 keys. The location of these tabs is also shown in the picture below.



While depressing the tabs, pull the keyboard up, out, and flip it towards you as shown.



Before proceeding with any repair, touch a metal surface such as on the computer as shown to discharge any static buildup.



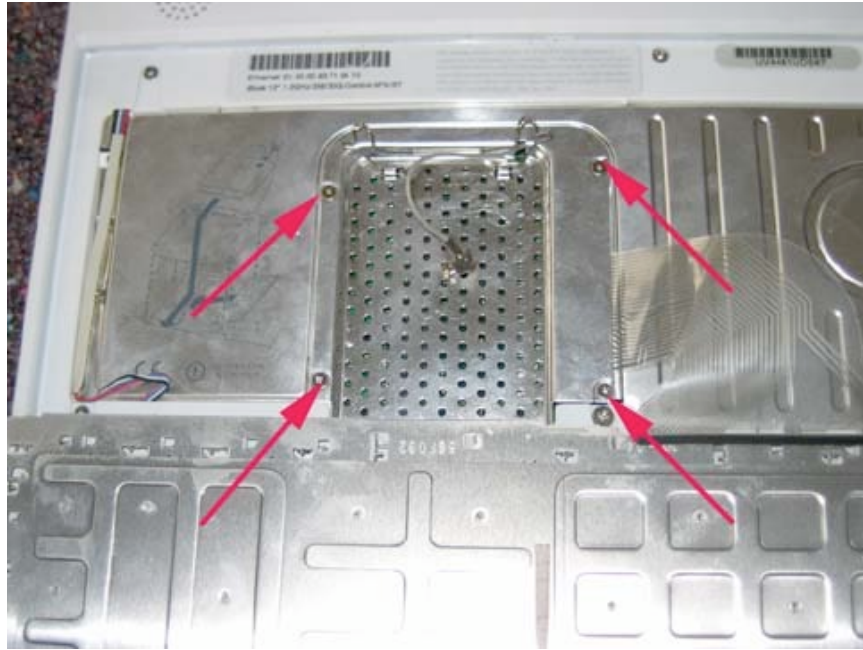
Behind the airport extreme card is a retainer clip. Push this clip out and up as shown.



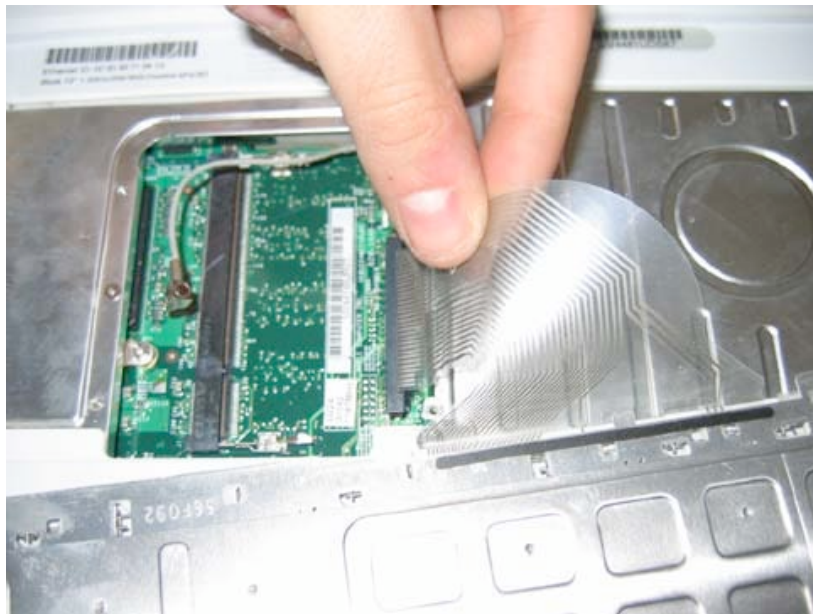
Locate the plastic tab on the airport card, and gently pull away from you to disengage it from its connector. Undo the airport connector from the card, and set the card aside on a static free surface. Note – To remove the airport connector from the Airport extreme card, use your fingers to pull it out. If it does not come out easily, use a pair of needle nose pliers to gently pull it out. Do not use too much force or you may damage the connector.



Remove the four screws from the airport retainer in the locations shown, and lift the airport retainer up and out of the unit.



To remove the keyboard, gently lift up on the cable as shown. The connector should easily come free. Set the keyboard aside.



# Ram / Memory

Before proceeding, you must first remove:

**Battery**  
**\* Keyboard \***

- Note that you do not have to undo the keyboard from the logic board if all you are doing is replacing ram.

To replace or install ram, push the metal brackets on either side of the ram chip away from the chip. The card should pop up when free. Then just gently pull the card free.



To install, simply line up the chip with the ram slot and push the chip down so it engages the ram clips



## Bottom Case

Before proceeding, you must first remove:

### **Battery**

Remove the three Torx T8 screws at the locations shown.



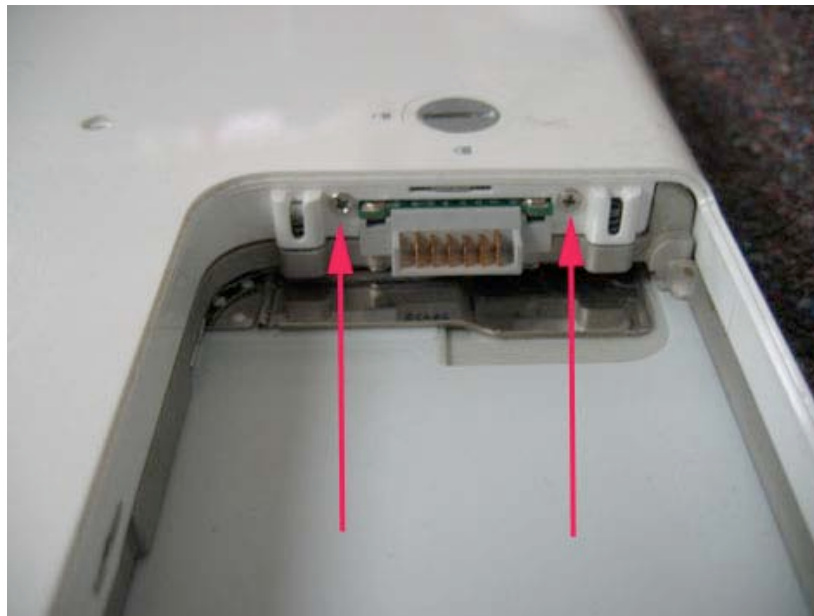
Pry up the 3 feet on the edges of your computer as shown.



Unscrew the Philips head screw underneath the three feet, and lift out the metal foot socket as shown.



Inside the battery bay are two more Philips head screws in the locations shown. Remove these two screws.



Beginning in the battery bay corner, Use your fingers to separate the corner plastics, and then undo the latch in the battery bay by using your flat tool to pry the latch out while lifting up.



Work your way around the front edge of the casing with a flat head screwdriver or pry tool while pulling up on the case to disengage the latches around the unit.



Disengage all of the latches all the way to the optical drive. The right hand casing should be free to lift up and to the left. Lift the bottom case up as shown to disengage the latches on the optical drive. The bottom case should come off easily.



Notice that in the battery bay there are two springs with white rubber stoppers. You should remove these by simply lifting them up. Make sure to reinstall them during reassembly.

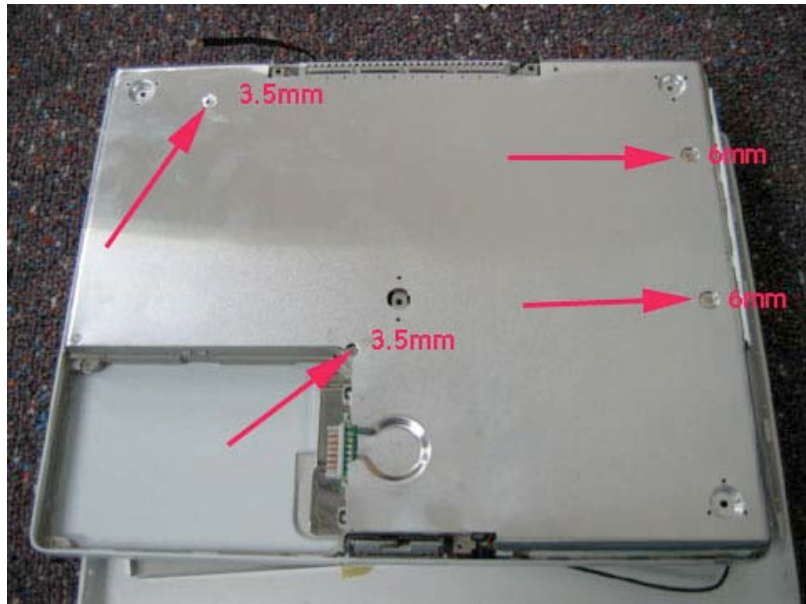


## Bottom Shield

Before proceeding, you must first remove:

**Battery**  
**Bottom Case**

First, remove the four Philips head screws as shown in the locations below.



Next, simply lift the bottom shield up and away from the unit. It should come free easily.

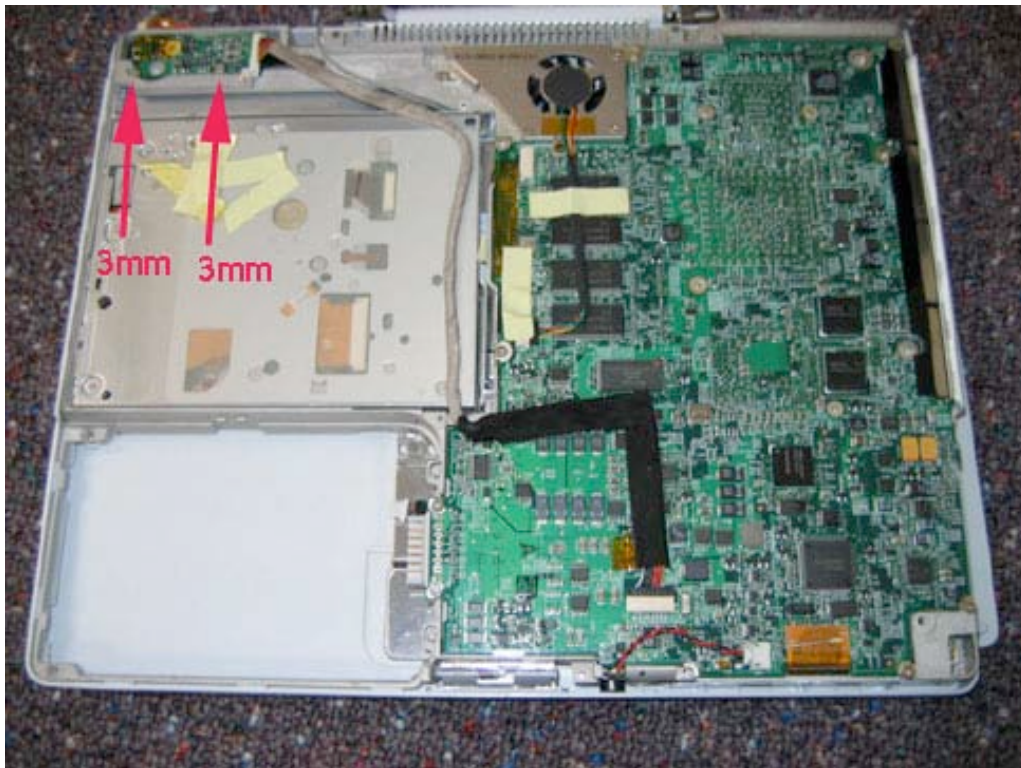


## DC-In Board

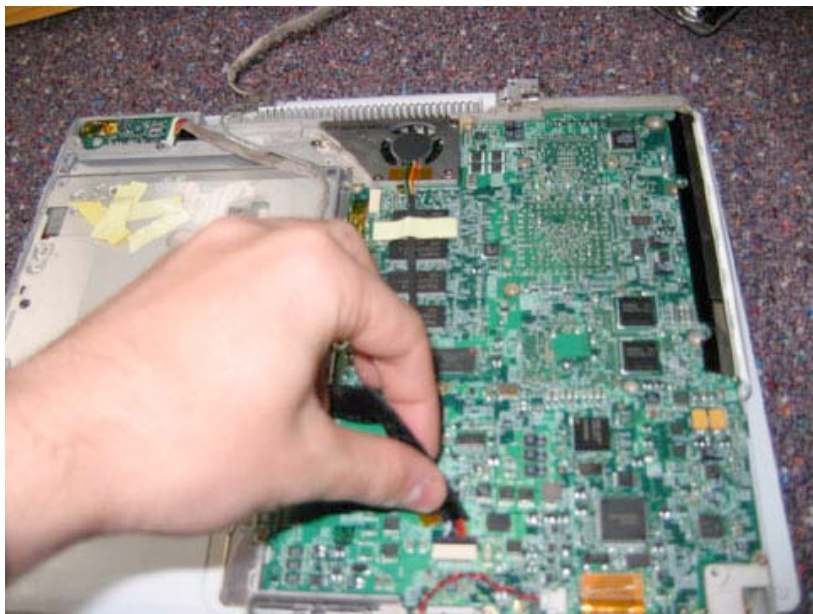
Before proceeding, you must first remove:

**Battery**  
**Bottom Case**  
**Bottom Shield**

Begin by removing any yellow tape from the DC-In board. Next, remove the two Philips head screws at the locations shown in the picture below.



Disconnect the DC-In board connector from the logic board by gently grasping the cable and pulling away from logic board connector,



Grasp the Dc-in board as shown, and lift it up and out of the unit. It should come free easily.

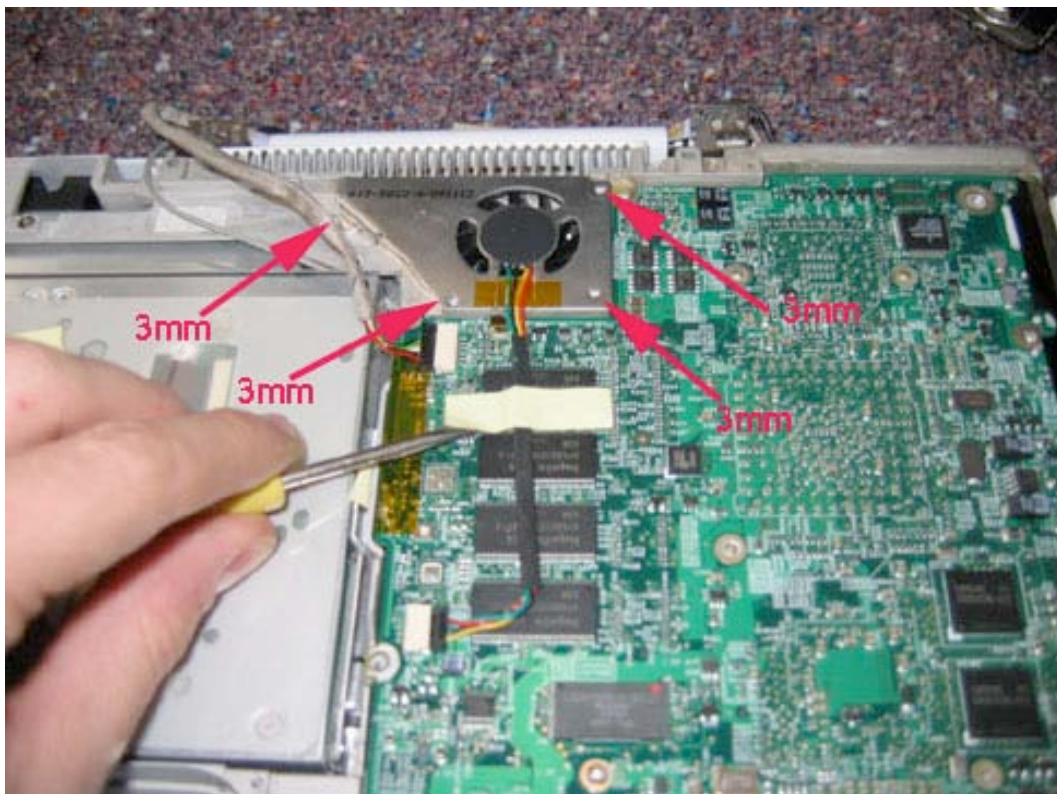


# Fan Assembly

Before proceeding, you must first remove:

**Battery**  
**Bottom Case**  
**Bottom Shield**

Begin by removing any yellow tape holding the fan cable. Next remove the four Philips head screws in the locations shown. The one on the top left hand side may be slightly hidden under the inverter cable.



Disconnect the fan cable from the logic board, and lift the fan up and out as shown.

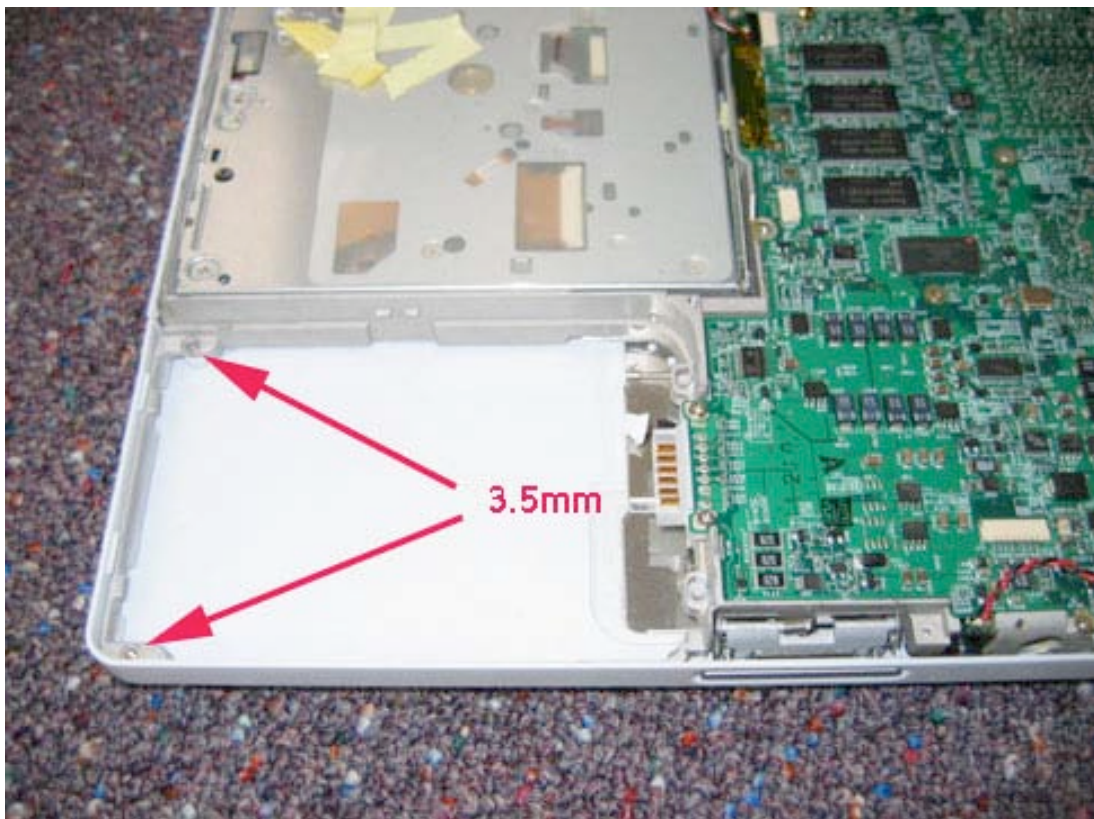


# Top Case

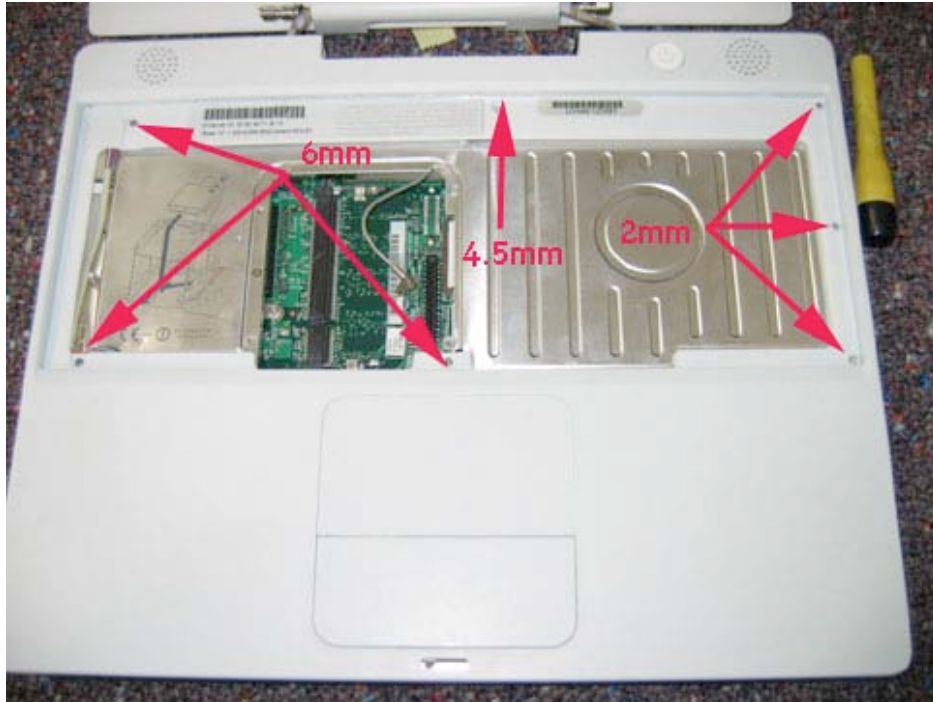
Before proceeding, you must first remove:

**Battery**  
**Keyboard / Airport Extreme Card**  
**Bottom Case**  
**Bottom Shield**  
**DC-In Board**

Remove the two Philips head screws from inside the battery bay at the location shown.



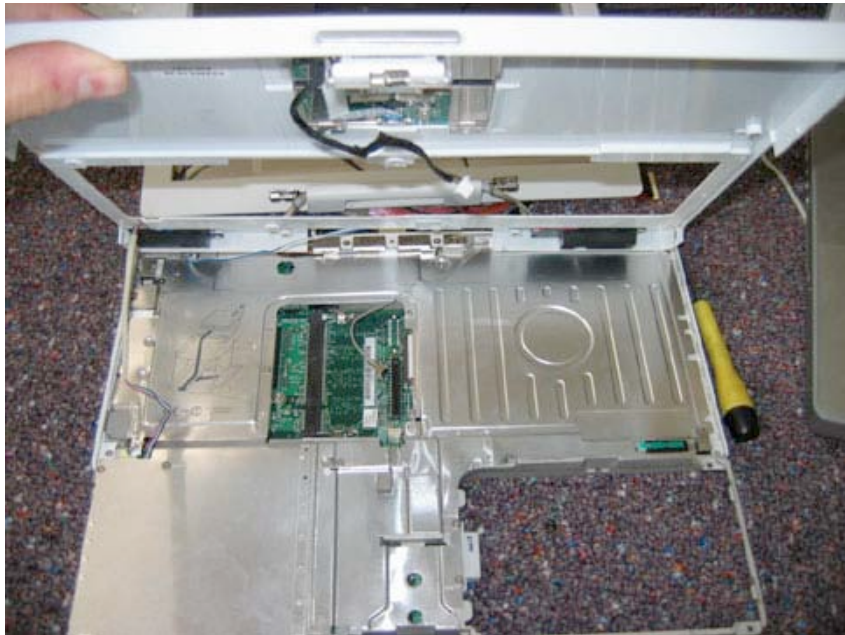
Remove the seven Philips head screws from the locations shown. Note that the 4.5mm screw is located under a magnet. Use your flat tool to pry the magnet up to reveal this screw. Do not forget to install this magnet during reassembly.



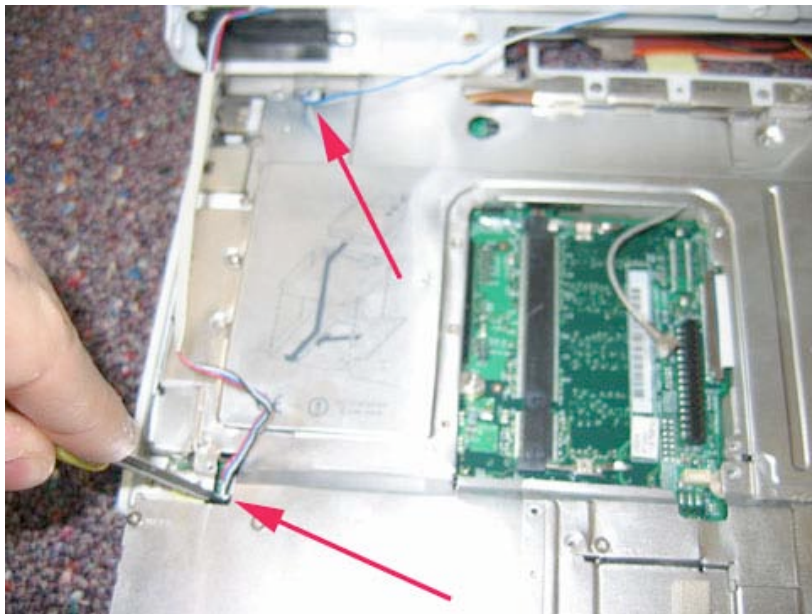
Starting at the battery bay gently pry the top case away from the frame of the computer.



Make your way around the top case until you can easily flip it up as shown (with cables still attached!)



There are two cables attached from the top case to the logic board. You should be able to gently wiggle these free from their logic board connections. If they do not come out easily, then use a flat tool to gently pry up while pulling. \*Be careful! If you use too much force and the cable does not come easily, you could damage the connector to the logic board! Once the connections are undone, the top case will be free to be removed.

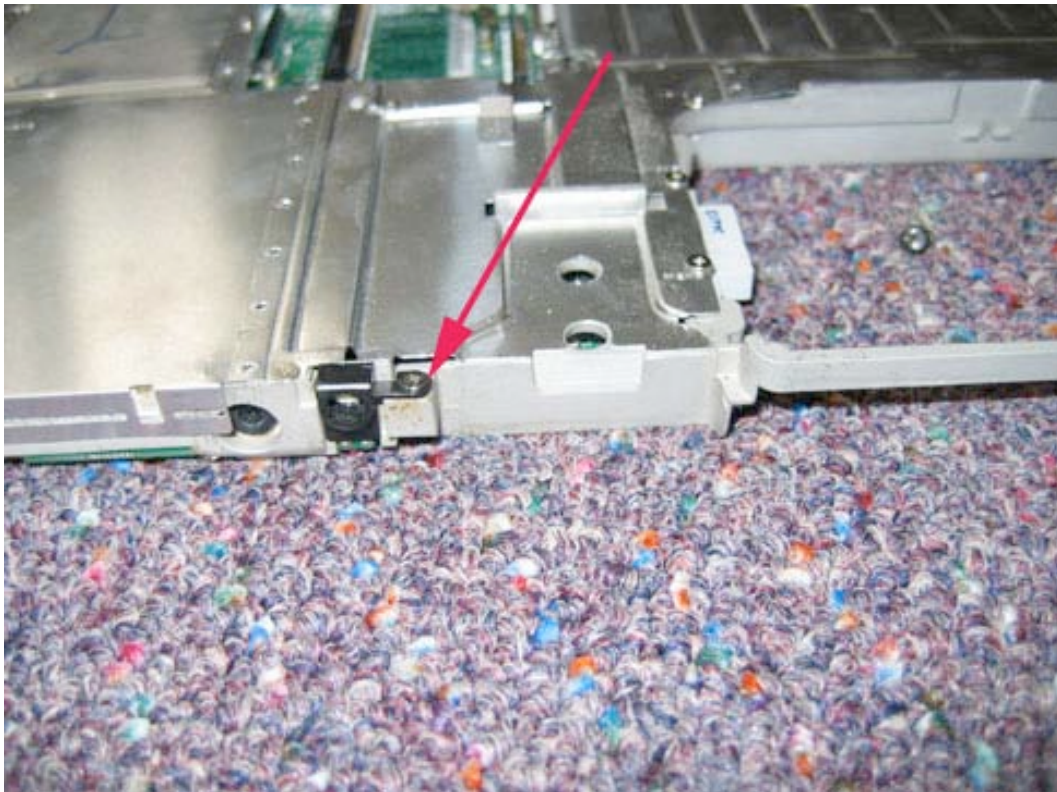


## Sleep Light Assembly

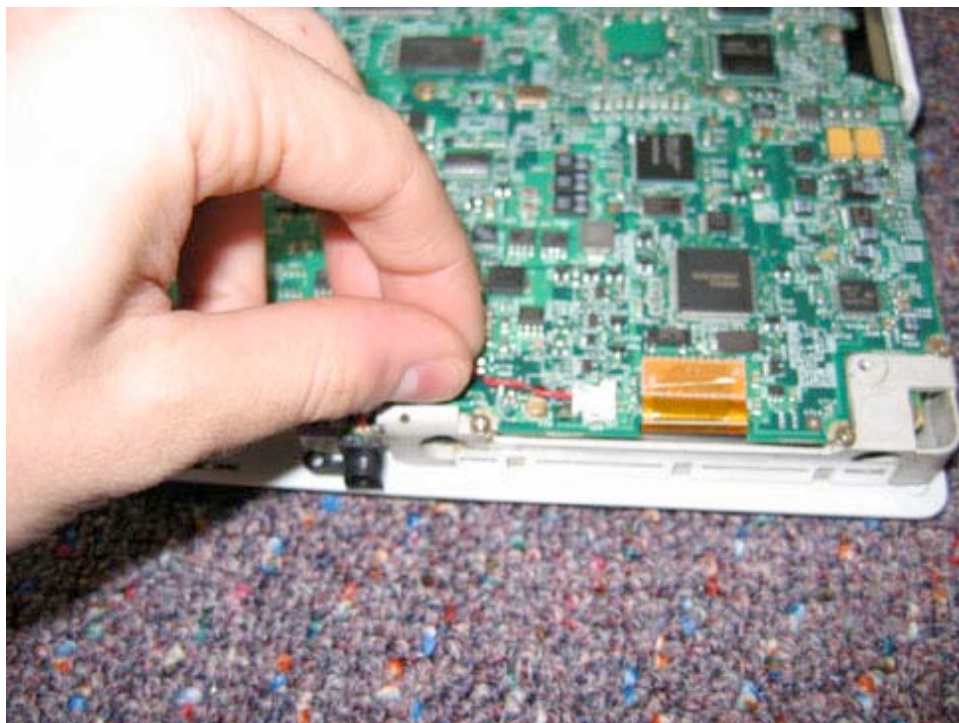
Before proceeding, you must first remove:

**Battery**  
**Keyboard / Airport Extreme Card**  
**Bottom Case**  
**Bottom Shield**  
**DC-In Board**  
**Top Case**

Begin by removing the single Philips head screw from the sleep light in the location shown.



Flip the unit over and locate the cable going from the sleep light to the logic board. Gently pull this cable to free it from the logic board, and set the sleep light should come free easily.

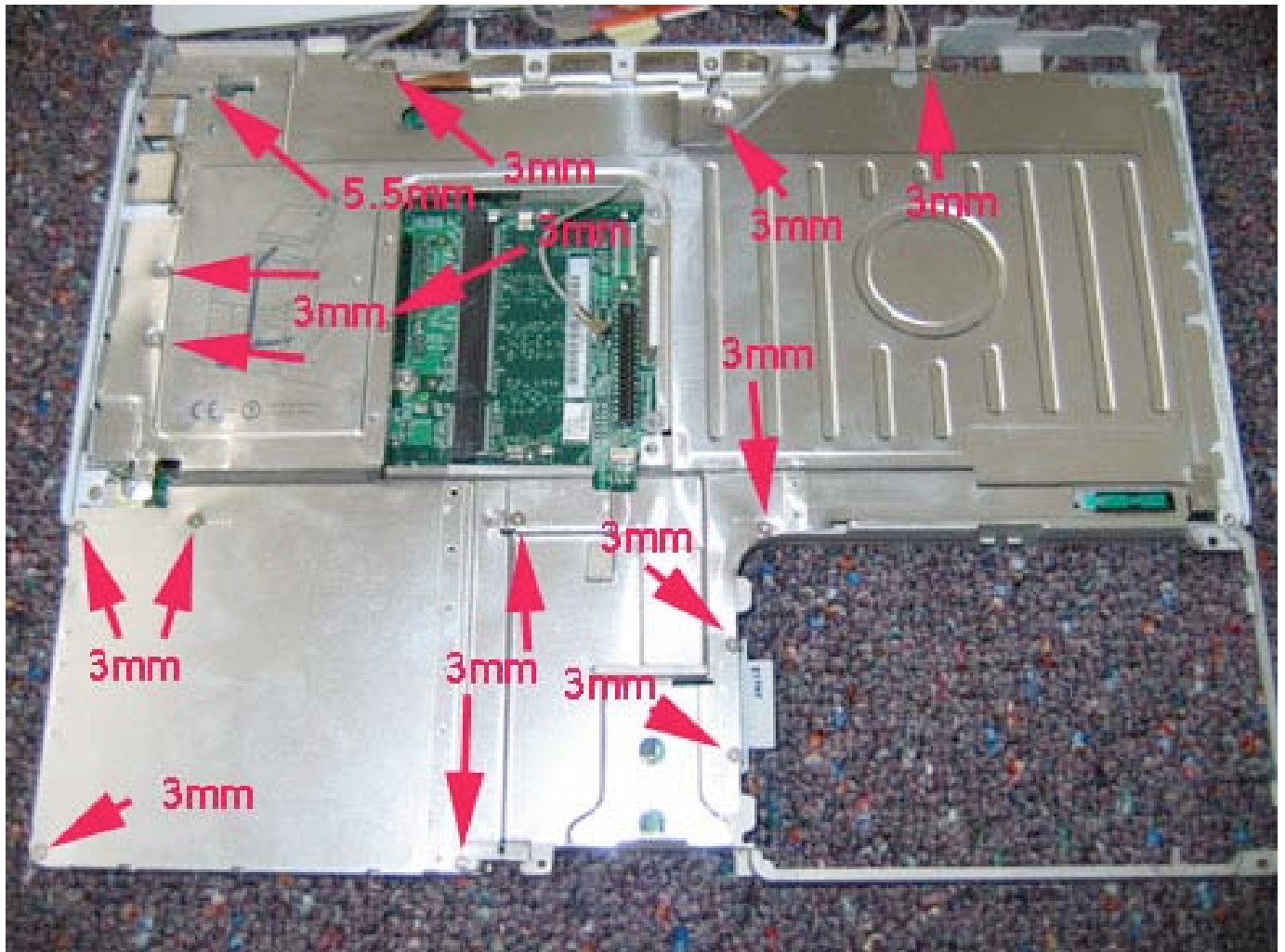


# Top Shield

Before proceeding, you must first remove:

- Battery**
- Keyboard / Airport Extreme Card**
- Bottom Case**
- Bottom Shield**
- DC-In Board**
- Top Case**

Remove the 15 Philips head screws from the locations shown.



The top shield can now easily be lifted up and out of the unit as shown.

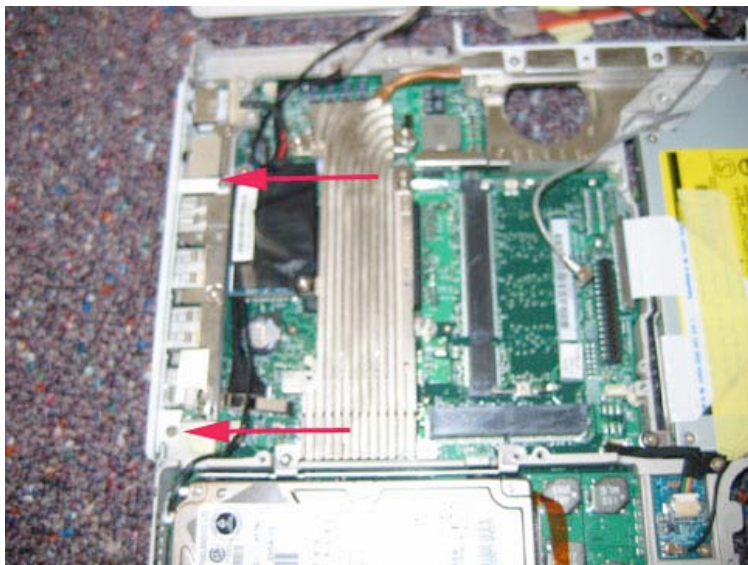


## I/O Bezel

Before proceeding, you must first remove:

**Battery**  
**Keyboard / Airport Extreme Card**  
**Bottom Case**  
**Bottom Shield**  
**DC-In Board**  
**Top Case**  
**Top Shield**

Remove the 2 Philips head screws from the locations shown and pull the bezel off of the unit as shown in the second picture.

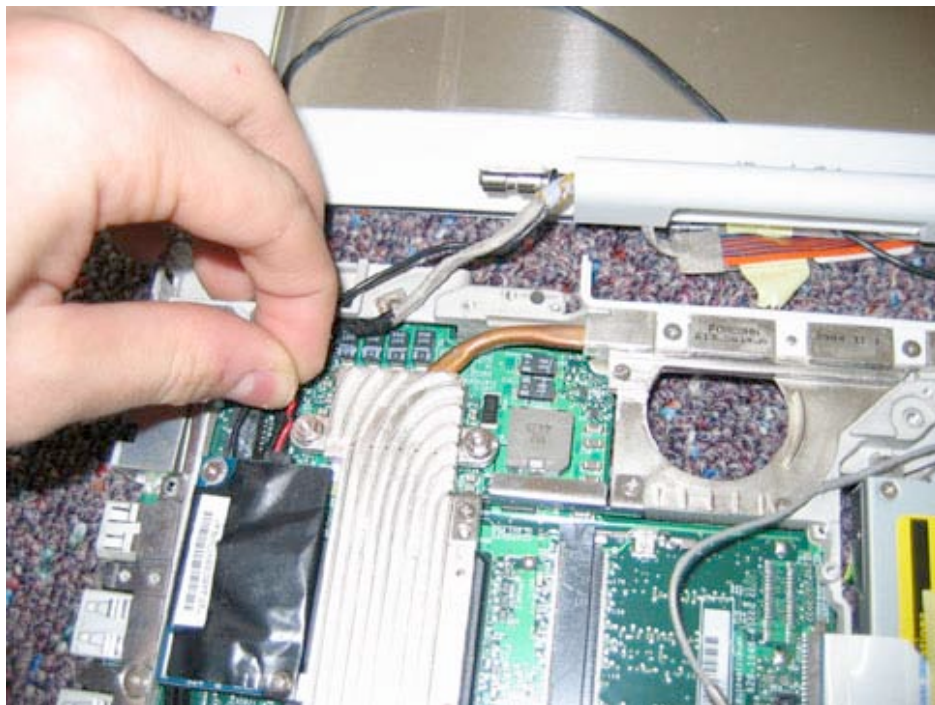


# Modem Port

Before proceeding, you must first remove:

**Battery**  
**Keyboard / Airport Extreme Card**  
**Bottom Case**  
**Bottom Shield**  
**DC-In Board**  
**Top Case**  
**Top Shield**  
**I/O Bezel**

Disconnect the modem port cable from the modem by gently grasping the cable and pulling it away from the modem. It should come out easily.



Using your finger, push the modem port away from the unit. You may have to use a minimum amount of force to guide it off the logic board. The port will now be free.



# Hard Drive

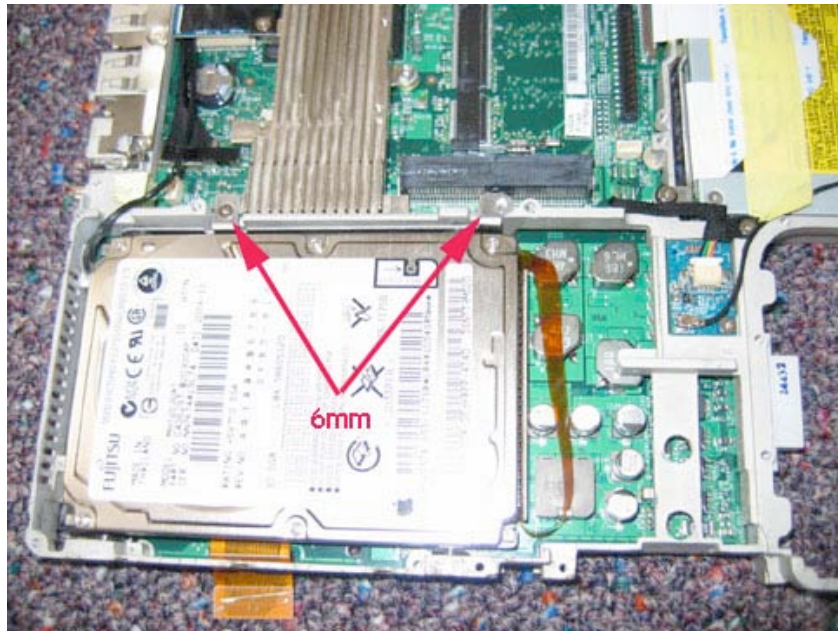
Before proceeding, you must first remove:

**Battery**  
**Keyboard / Airport Extreme Card**  
**Bottom Case**  
**Bottom Shield**  
**DC-In Board**  
**Top Case**  
**Top Shield**

Flip the unit over and disconnect the hard drive ribbon cable to the logic board. You can either use your finger or your flat tool to disconnect the cable from the logic board.



Flip the unit back over and remove the two 6mm Philips head screws from the locations shown in the picture below.



Lift the hard drive up and out of the unit as shown.



Pull the bracket off of the side of the drive as shown. It should come off easily.



Disconnect the hard drive cable by gently pulling the cable away from the hard drive using the orange pulling cable as shown in the picture below. The cable should come free easily.

\*Note for replacement – If you are replacing the hard drive, you will need to transfer the 4 black T8 screws (2 on either side of the hard drive) to your new drive.



# Modem

Before proceeding, you must first remove:

**Battery**  
**Keyboard / Airport Extreme Card**  
**Bottom Case**  
**Bottom Shield**  
**DC-In Board**  
**Top Case**  
**Top Shield**

If you have not already done so, disconnect the modem cable from the modem. Remove the two screws from the locations shown. To remove simply pull the modem up to free it from its logic board connector, and place the modem on a static free surface. You can use either your fingers or your flat tool to pry the modem up to free it.

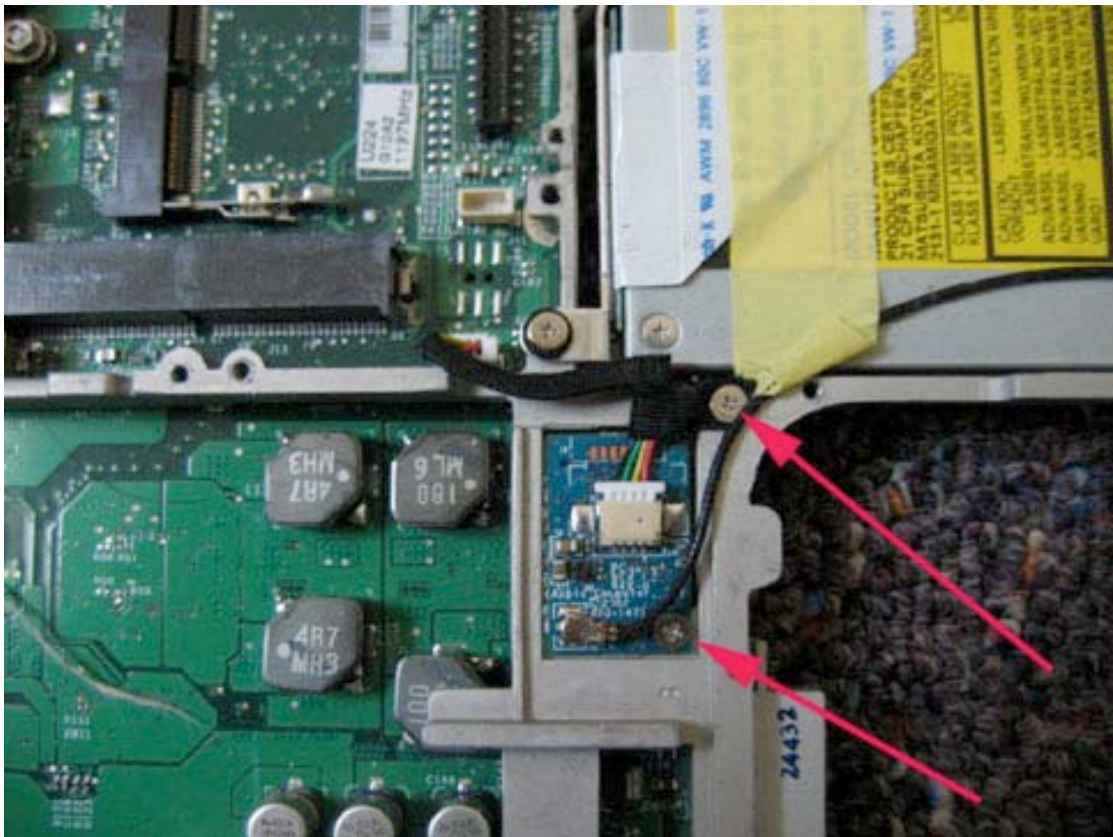


# Bluetooth Assembly

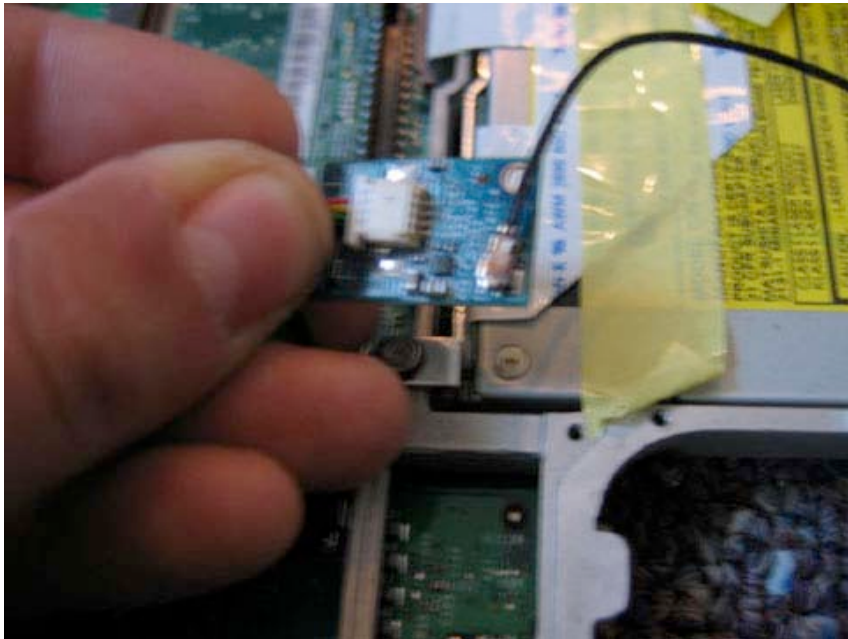
Before proceeding, you must first remove:

- Battery**
- Keyboard / Airport Extreme Card**
- Bottom Case**
- Bottom Shield**
- DC-In Board**
- Top Case**
- Top Shield**

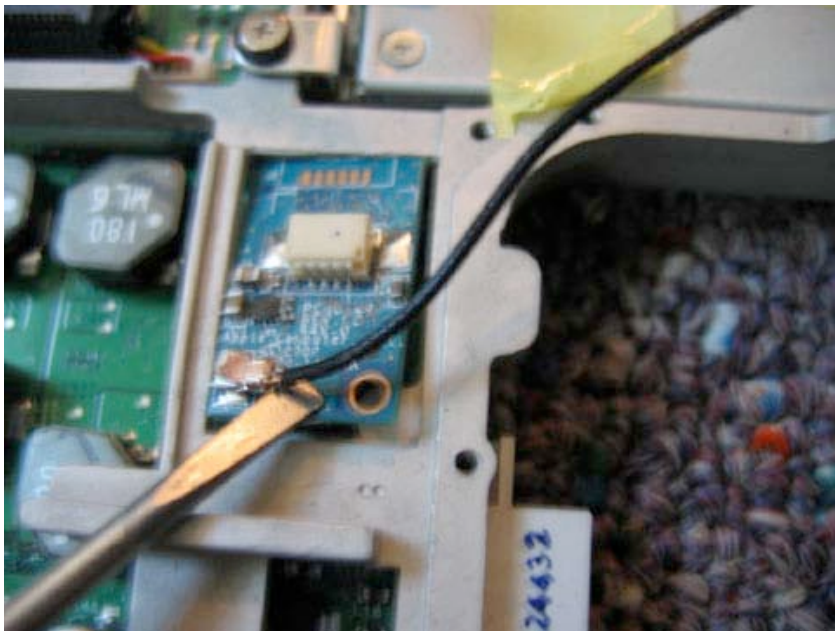
Remove the two Philips head screws from the locations shown.



Grasp the Bluetooth cable as shown and gently pull it free from its Bluetooth board connector. It should come out easily. If it does not, Use your flat tool to aid.



Use your flat tool to gently pry the Bluetooth antenna connector from the Bluetooth board. It should come off easily. If it does not, try it from a different angle. The Bluetooth board will now be free.



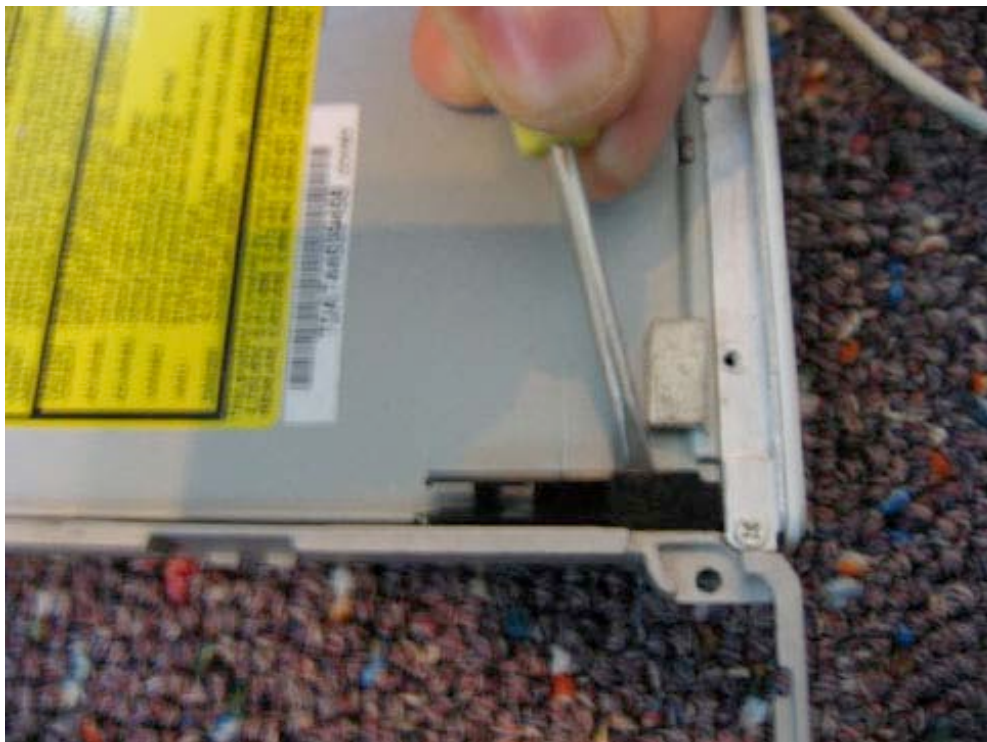
Grasp the Bluetooth cable, and gently pull it free from its logic board connector. The cable will now be free.



To remove the antenna, grasp the cable as shown, and pull to the left. It should easily slide out of the antenna holder.



The antenna holder is held in place by a very light adhesive. Use your flat tool to pry the holder off of the optical drive. It should come off easily.



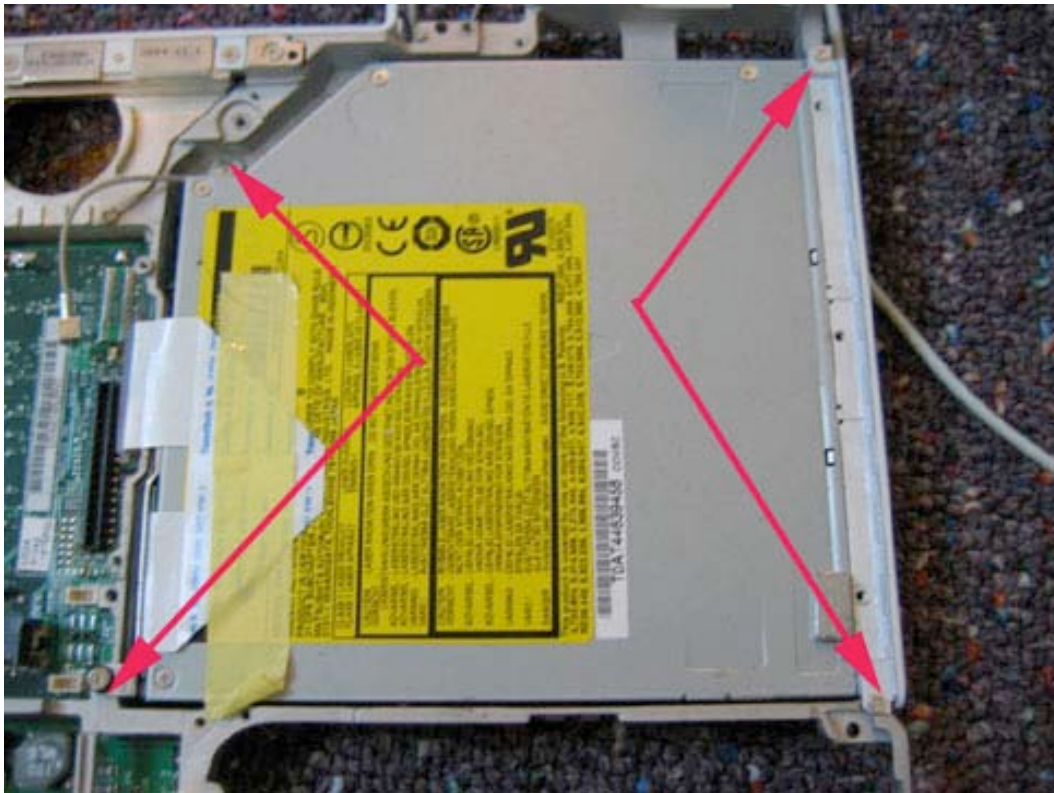
# Optical Drive

Before proceeding, you must first remove:

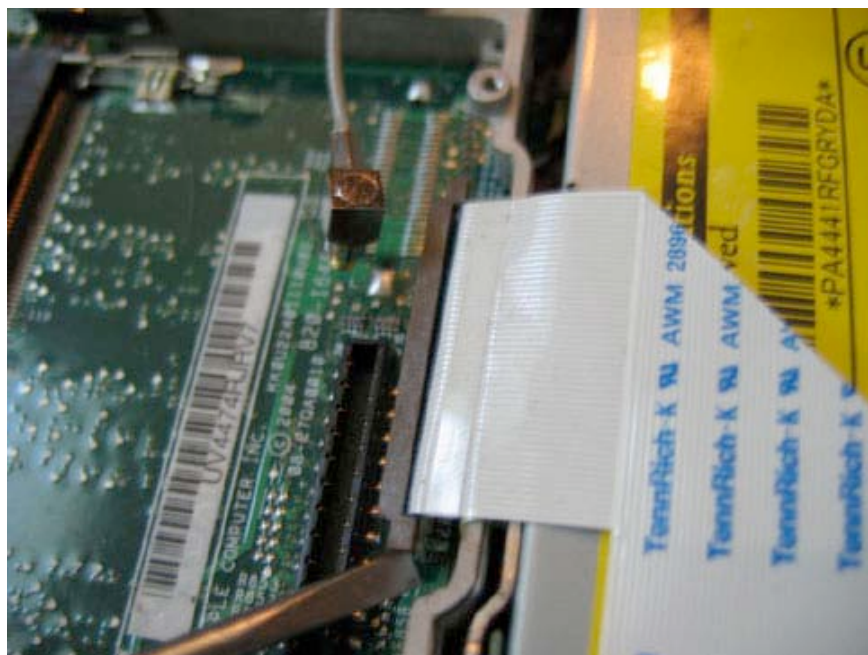
**Battery**  
**Keyboard / Airport Extreme Card**  
**Bottom Case**  
**Bottom Shield**  
**DC-In Board**  
**Top Case**  
**Top Shield**  
**Bluetooth Antenna and Bluetooth Holder**

Remove the four screws from the locations shown and remove tape (if any) holding the optical drive cable in place.

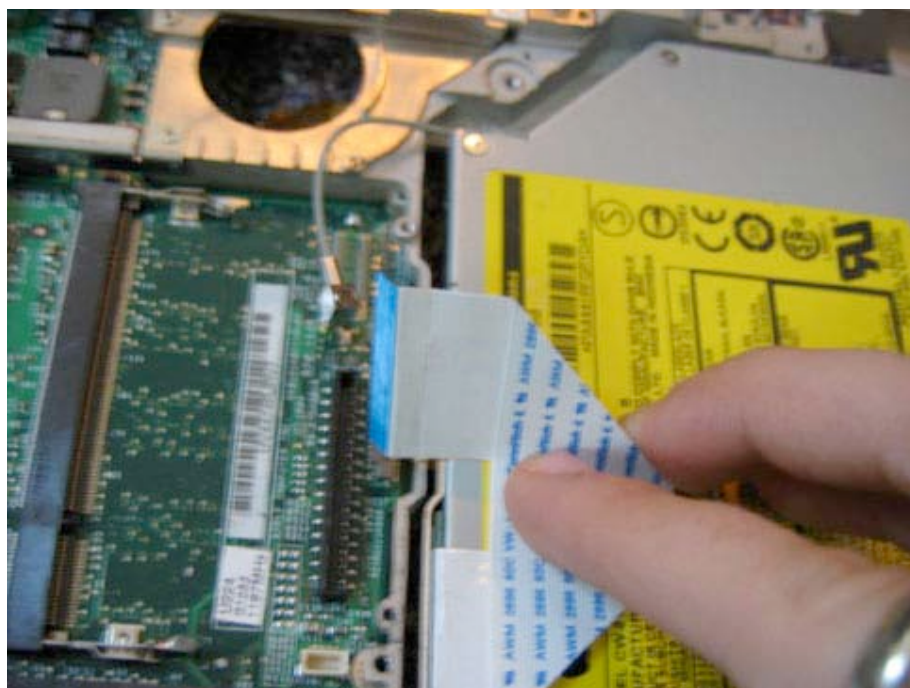
\*Note that some earlier iBook G4s have an orange logic board connector that will be different than the cable pictured below. If you have this version, simply remove the screws, gently pry up the orange logic board connector, and remove the drive.



There is a brown clip that holds the optical drive cable to the logic board connector. Using your flat tool or your finger and using barely any force, lift up this clip on each side (\*Note – Do not remove the clip! Leave it in place. Only lift is up slightly on either side.)



This will free the optical drive cable.

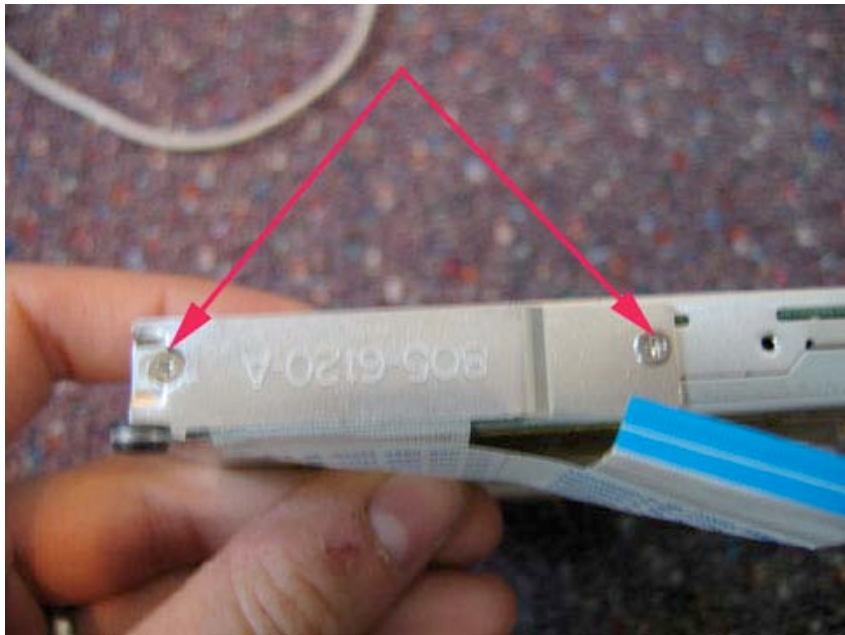


You can now lift the drive up and out of the unit as shown.



### Optical Drive Cable

Remove the two Philips head screws from the locations shown.



This will release the back bracket. Remove it as shown.

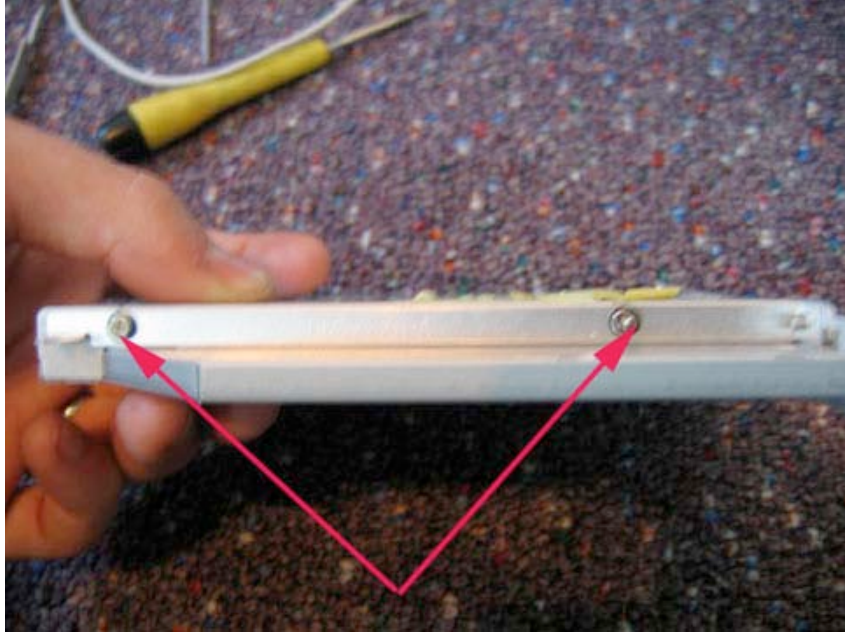


Use your flat tool to gently pry up on the optical drive cable connector as shown. It should come free with little force

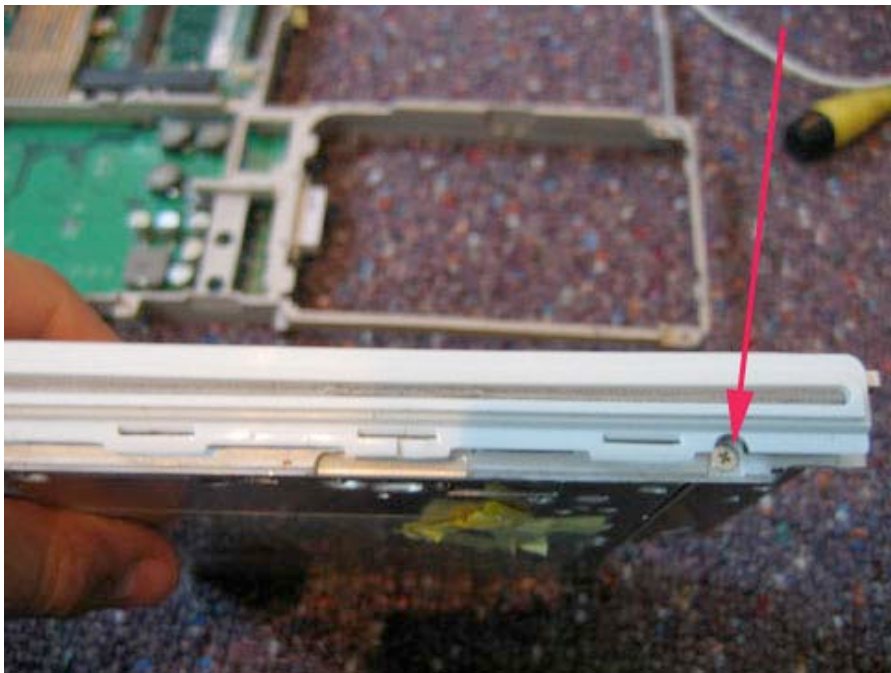


## Right bracket

Remove the two Philips head screws from the locations shown.



Remove the one Philips head screw on the front of the drive. The bracket should fall off.



## Bezel

You can now pull the bezel off the drive. You may have to use a little force to pull the bezel off.

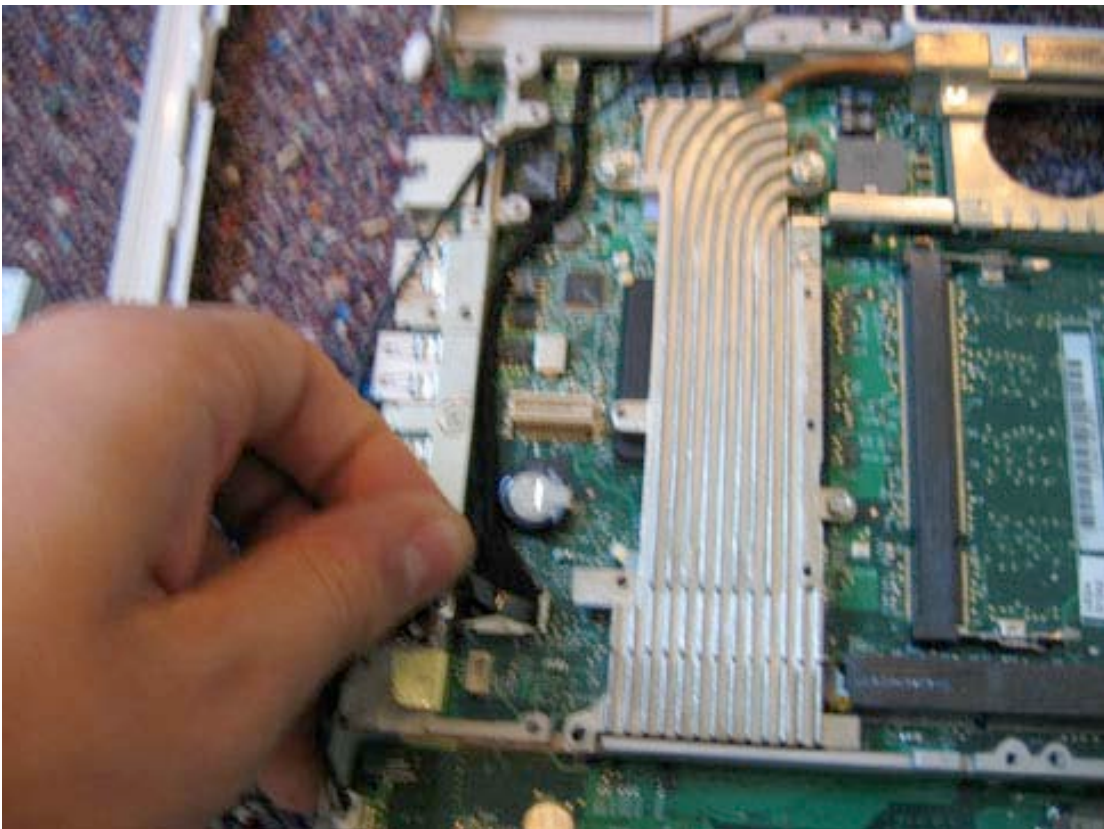


# Display Module

Before proceeding, you must first remove:

**Battery**  
**Keyboard / Airport Extreme Card**  
**Bottom Case**  
**Bottom Shield**  
**DC-In Board**  
**Top Case**  
**Top Shield**  
**Modem**

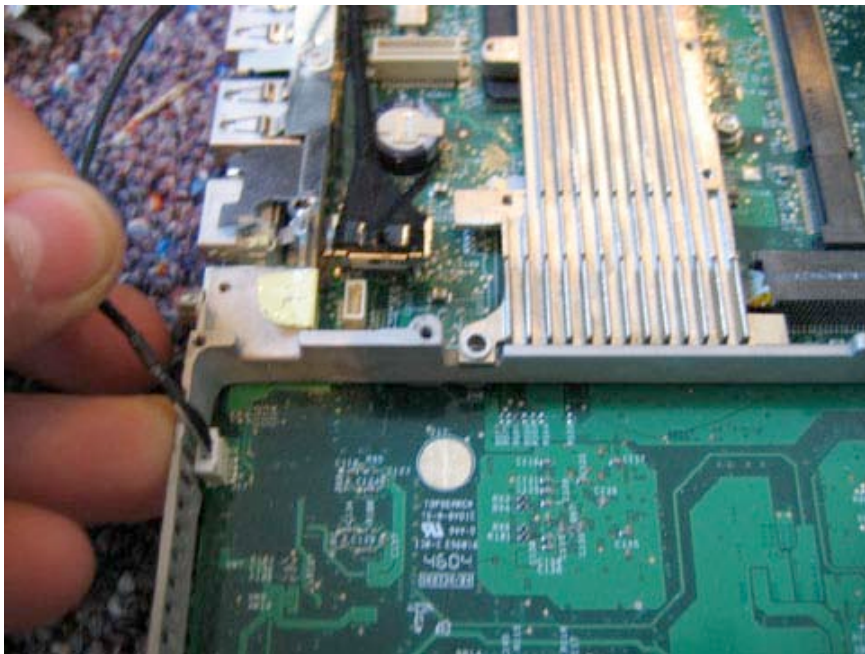
Begin by disconnecting the LVDS cable by grasping the black pull strap and gently pull up. Remove any tape that may be holding the cable in place.



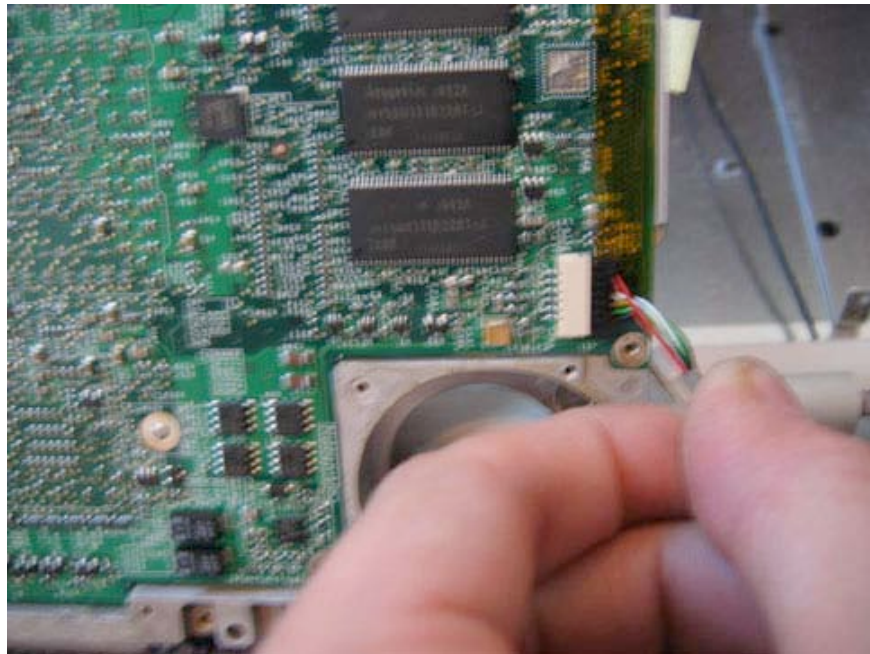
Remove the screw holding down the LVDS cable in the location shown.



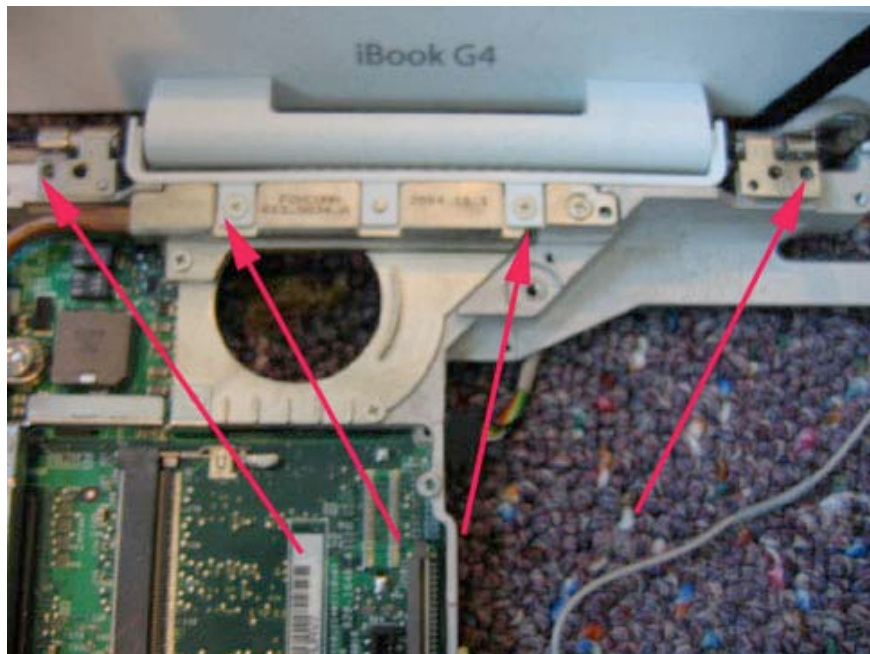
Next, disconnect the microphone cable by gently pulling up as shown. Remove any tape that may be holding the cable in place.



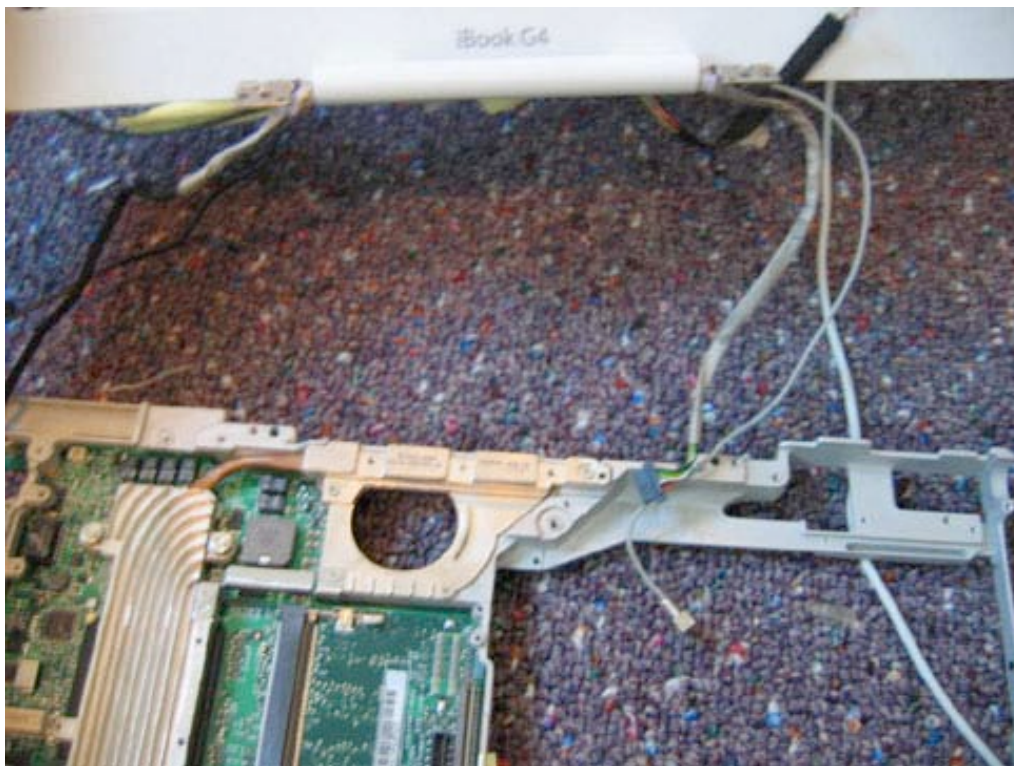
From the bottom of the unit, disconnect the inverter cable from the logic board, by gently grasping the cable as shown and pulling away from the connector.



Remove the four Philips head screws from the locations shown. Note that the middle two screws hold on the vent cover that can be lifted out once the display module is removed.



Lift the display module up and out as shown. Make sure all cables are routed properly and come out easily.



## Back Casing Removal

Before proceeding, you must first remove:

### Display Module

With the display removed, begin by removing the two Torx T6 screws from both sides of the display. (You should remove a total of 4 screws, two from each side)



Next, you will need to pry the back panel (case with Apple logo ) off. It is best to start at a corner as shown, and pull the casing in the opposite direction as the LCD. You may need to use a flat too to help you at first. After you get started, the casing will come off easily.



Lift the back casing off and away from the rest of the display module, and place it on a clean surface.

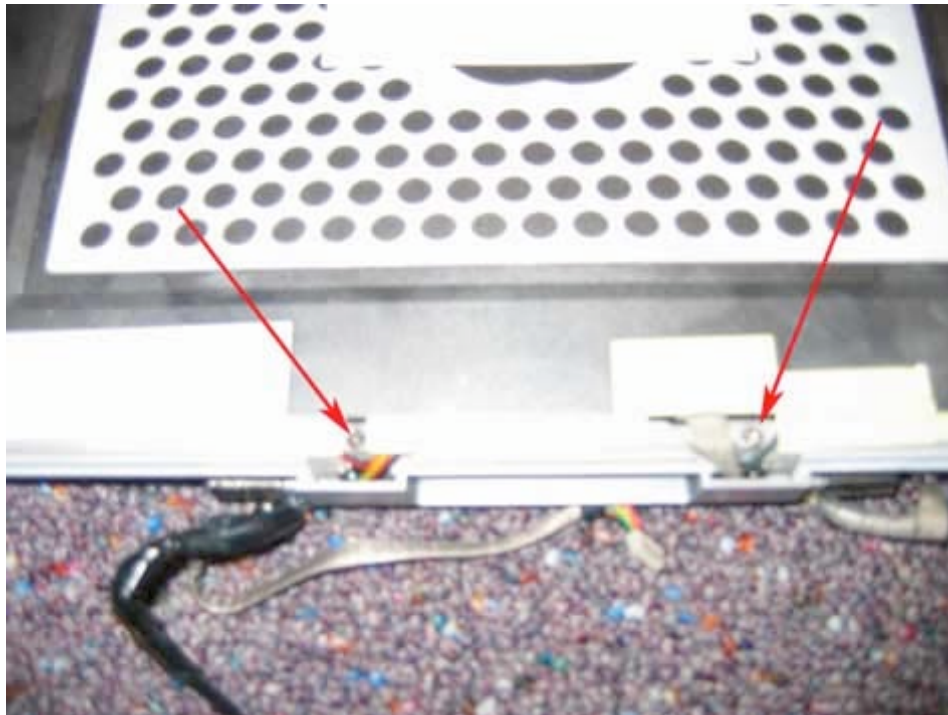


# Clutch Cover Removal

Before proceeding, you must first remove:

**Display Module**  
**Display Back Casing**

Begin by removing the two Philips head screws in the location shown (near where the cables enter the display)



This will allow the clutch cover to simply be pulled off as shown. \*Note that there are two small white plastic ends on either side of the clutch cover. If these fall off you will need to place them back on and hold them in place while placing the clutch cover back on. The grooves on these pieces line up with the clutch cover. \*\*Also, when replacing the clutch cover, note the location of the screw holes in the cover. It is possible to put this piece on backwards.



## LCD Removal

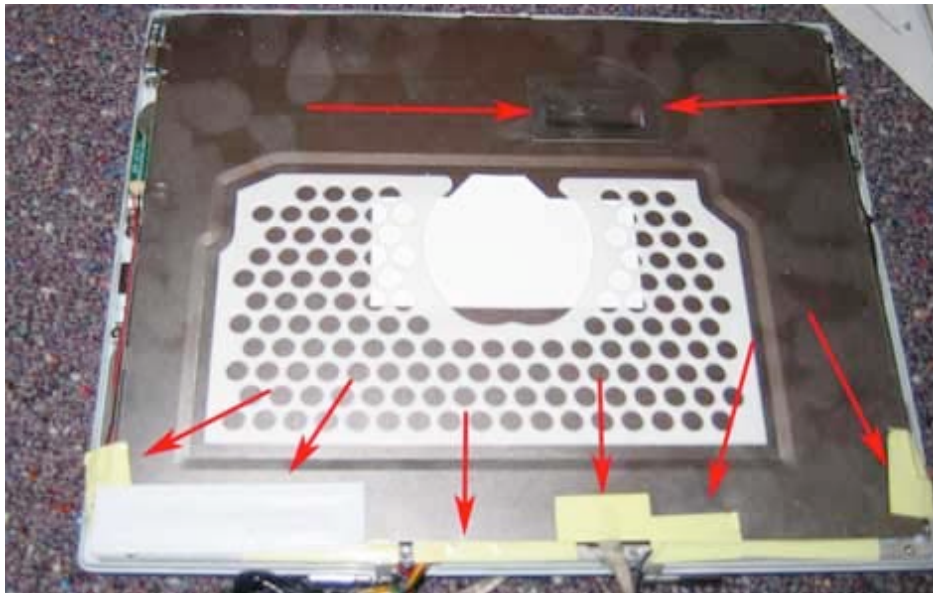
Before proceeding, you must first remove:

### **Display Module Display Back Casing**

On the side of the display casing you will notice two U shaped notches. In these notches there are Philips head screws, two on each side of the display. Remove all four screws.



Remove all the pieces of tape holding the thin metal sheet in place. The location of the tape can vary from model to model, so use the picture below as a guide. Make sure to remove the Aluminum tape in the middle of the cover as well.



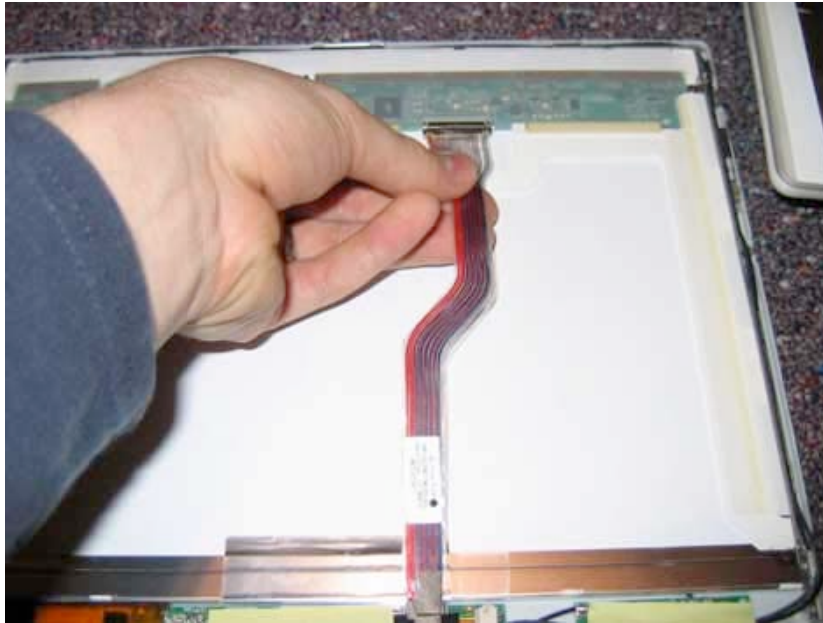
You can now lift up the back shield. Lift it completely off and place on a clean surface.



Remove the piece of tape holding down the display cable in the location shown.



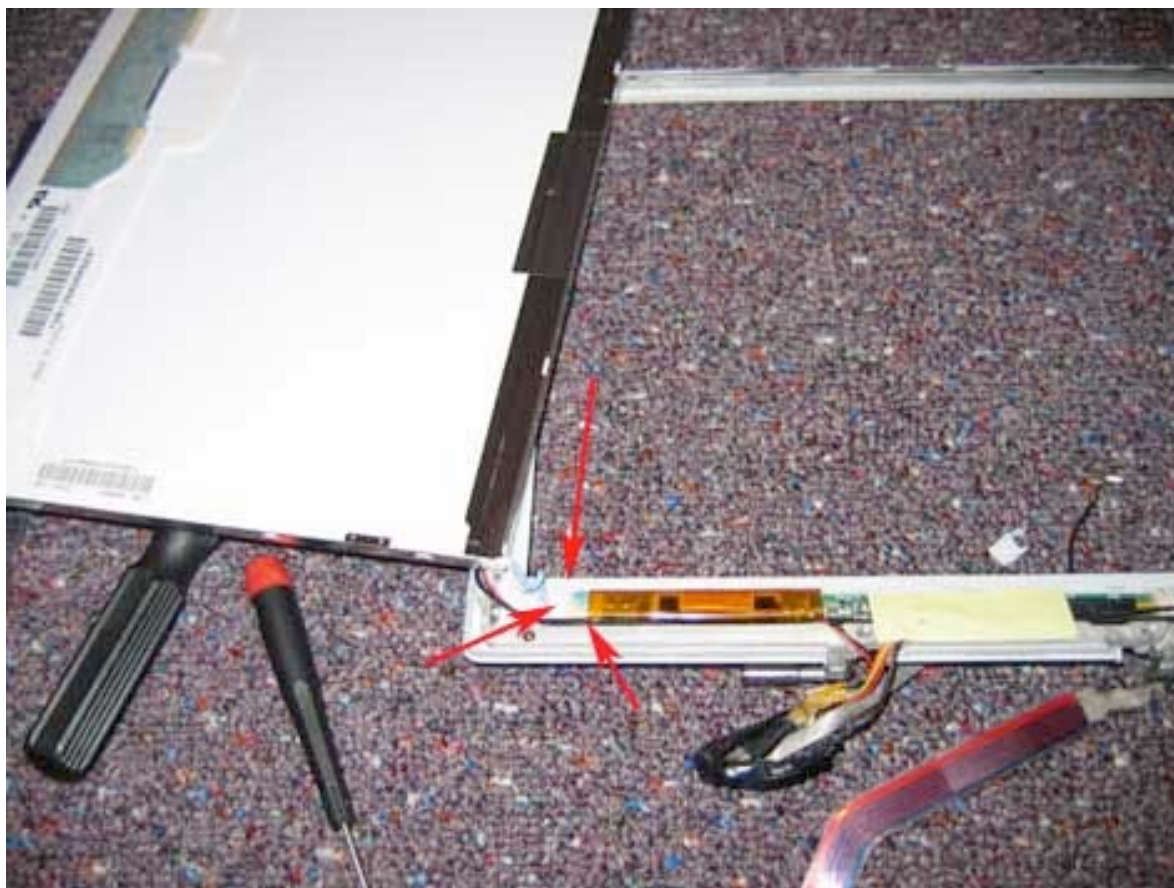
Disconnect the display cable from the LCD by gently grabbing it as shown and then pulling it towards you. It should come out very easily.



The LCD panel will not be free to be moved. Lift up the display, and pivot it towards the left hand side where the inverter cable enters the LCD.



Pivot the LCD all the way to the left as shown, and disconnect the inverter cable connector from the Inverter board at the location shown.

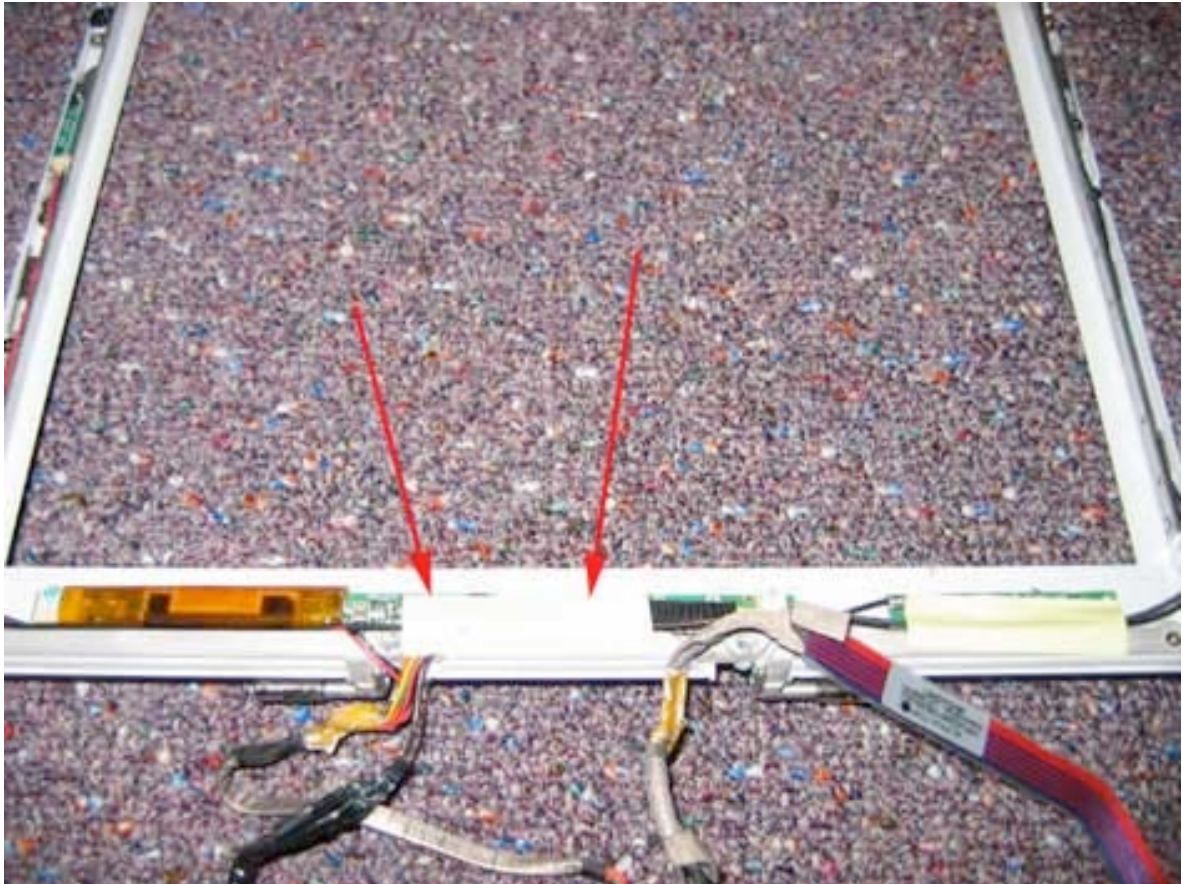


# Inverter Board

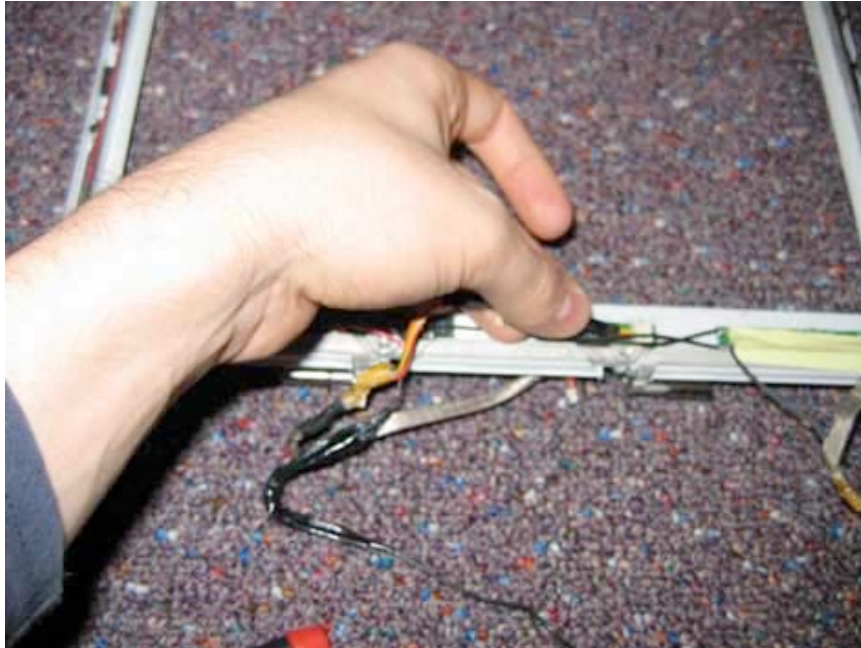
Before proceeding, you must first remove:

**Display Module**  
**Display Back Casing**  
**LCD Module**

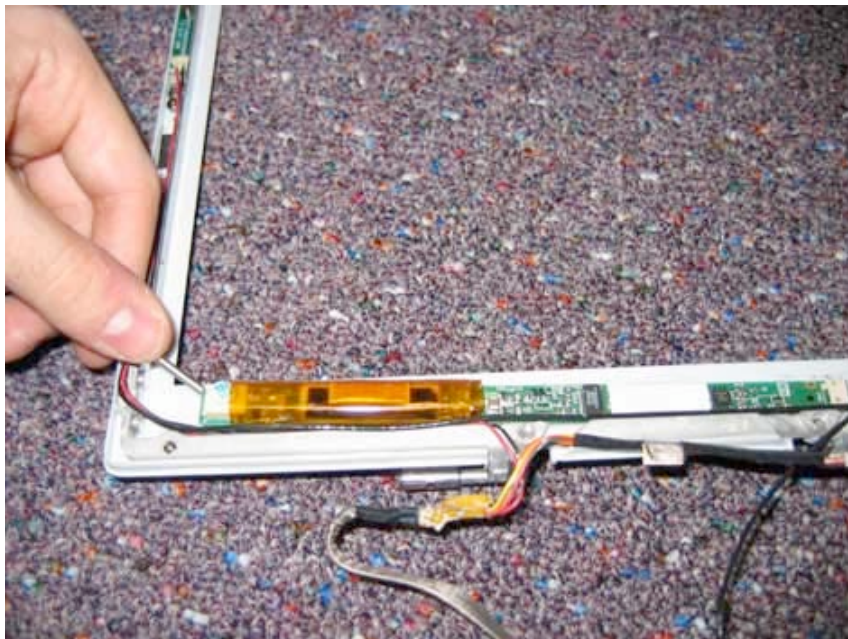
Begin by removing the yellow strip of tape in the location shown.



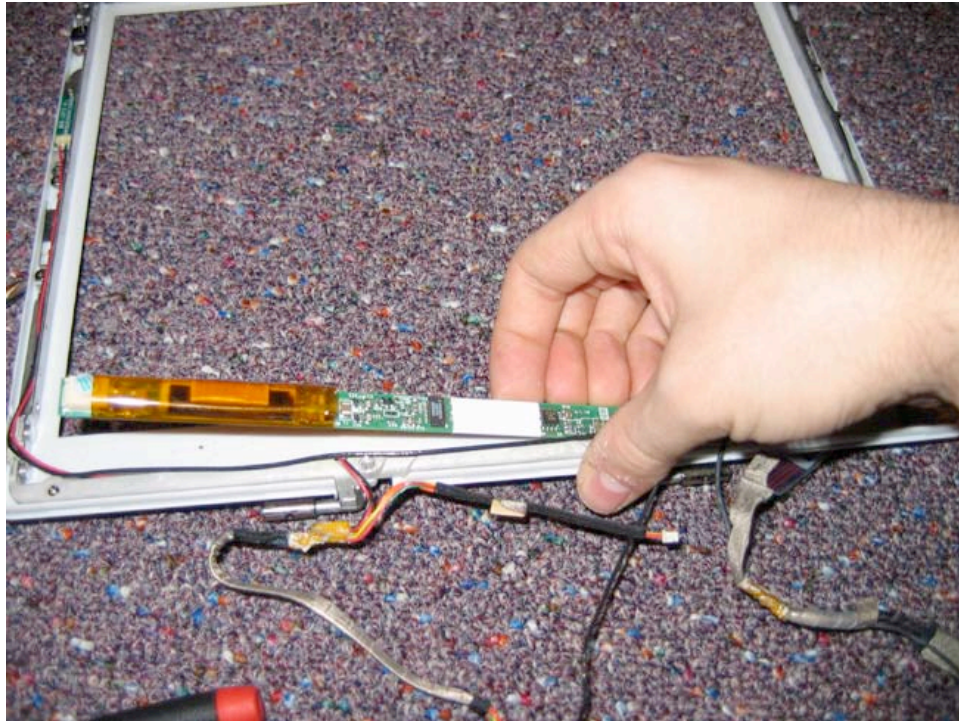
Undo the inverter cable connector from the inverter board by gently pulling the cable out.  
You may need a flat tool to help aid in the task.



The inverter board is held in place by adhesive tape. You will need to use a flat tool to pry up the board. It is best to do this from the left hand side of the board. Put a flat tool under the board, and gently pry up.



Lift the inverter board up and out.

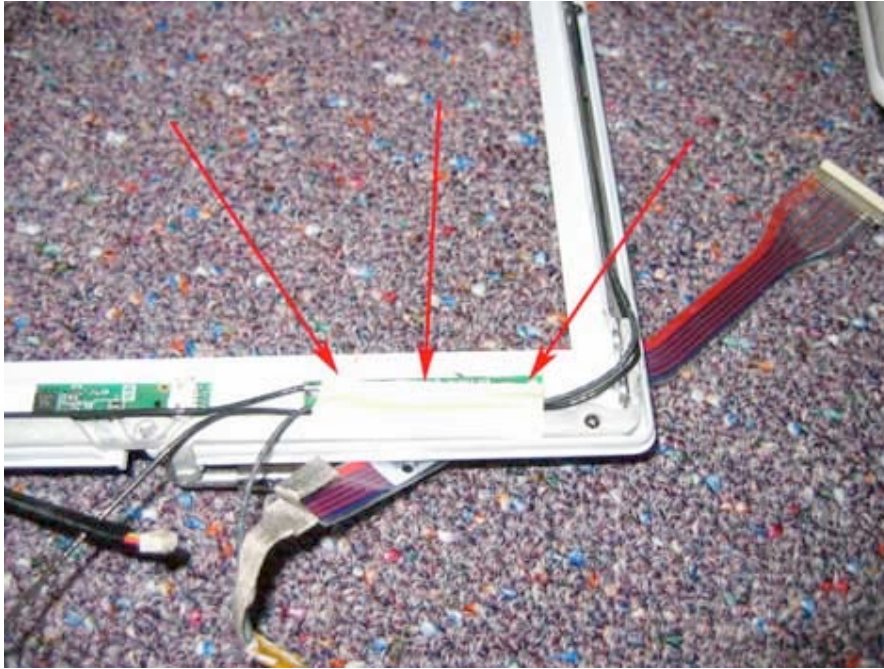


# Airport Antenna Cable

Before proceeding, you must first remove:

**Display Module**  
**Display Back Casing**  
**LCD Module**

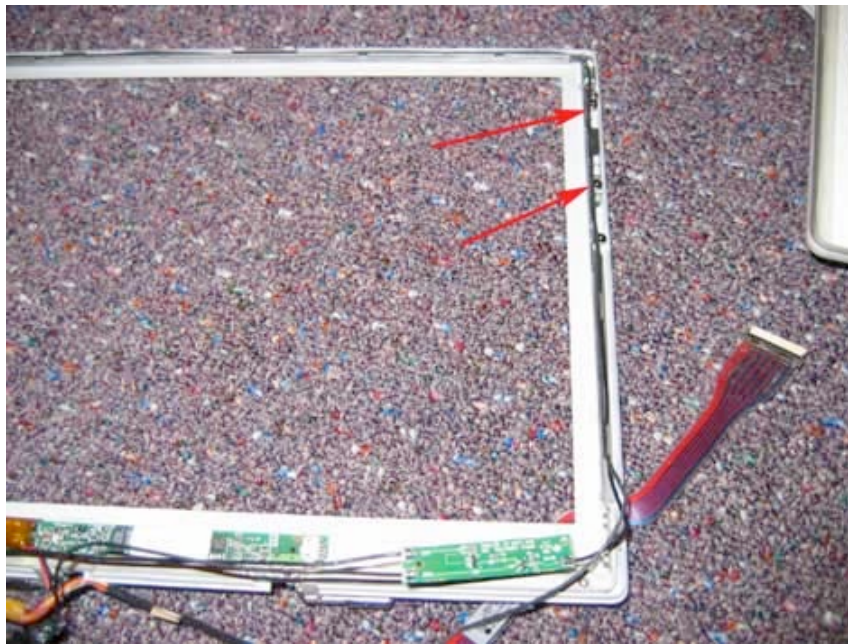
Begin by removing the piece of yellow tape in the location shown (bottom right hand corner)



Next, you need to pry up the green airport board as shown below. It is held on by a light adhesive.



Remove the two Philips head screws in the locations shown below.



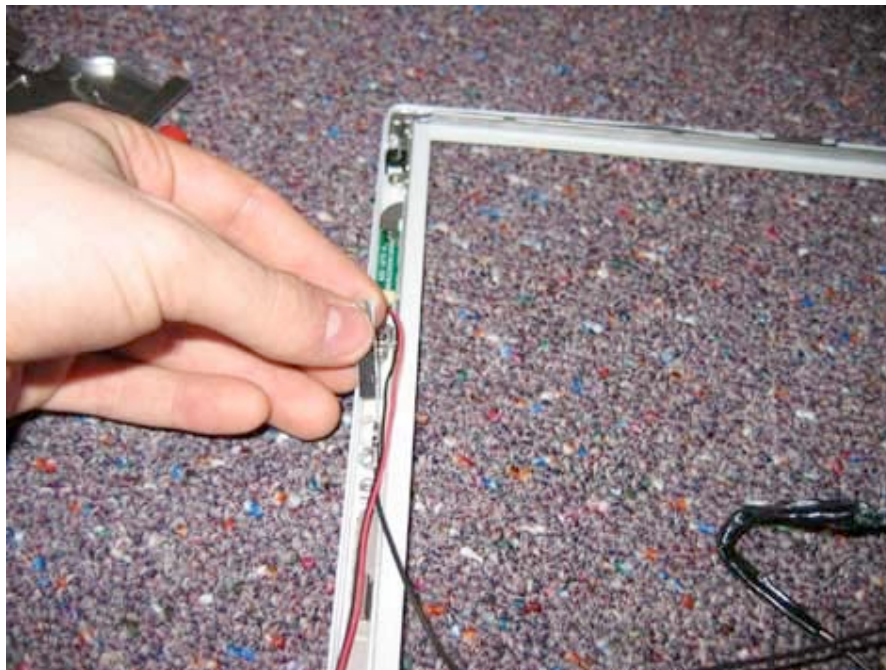
With the screws removed, tilt the metal piece with cable attached up and out towards you. Note that there is a cable that keeps going past this piece. That is the microphone cable and is not a part of the airport cable assembly.



Now, on the left hand side, repeat the procedure. Remove the two Philips head screws from the locations shown below.

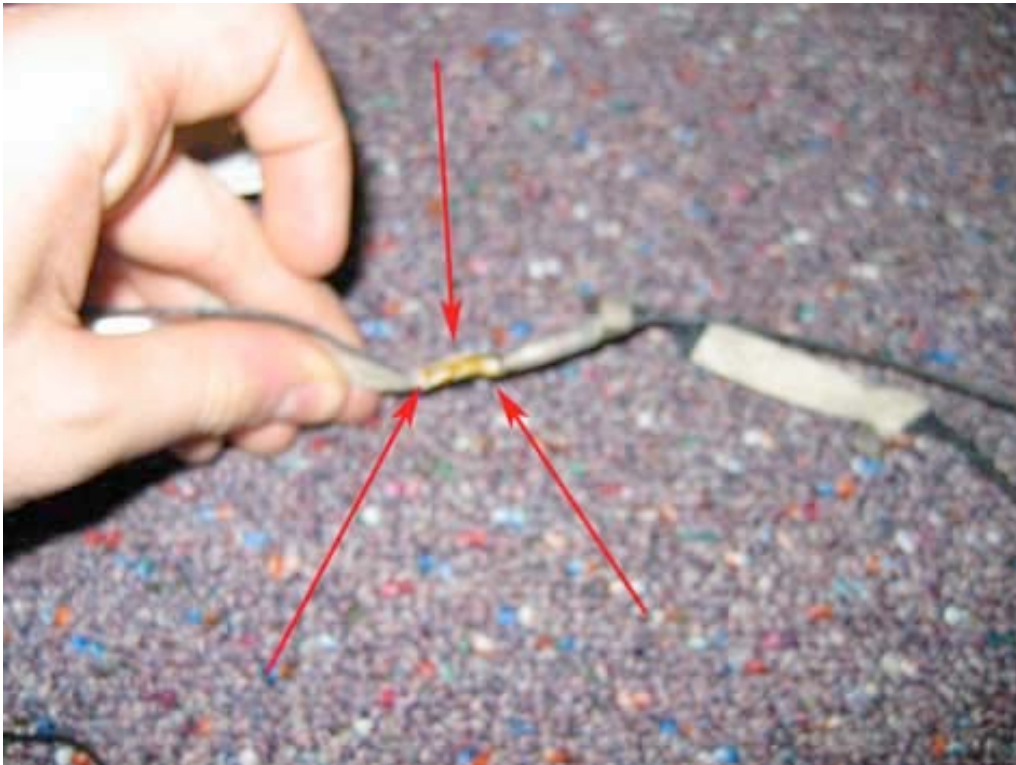


With the screws removed, tilt the metal piece with cable attached up and out towards you.



The cable assembly should now be loose. If it is not, make sure you have removed any tape that may be holding the cable in, and make sure the cable has been guided out of all of the metal clips that hold the cable in along the side of the display. (Just pull up on the cable to release it from the clips)

Next, remove the tape holding the display cable and airport assembly together. It may take several attempts to get the tape off. Separate the cables. When replacing, it is not necessary to tape the cables back together, but you can do so if you have some yellow tape.



## Reed Switch / Inverter Cable

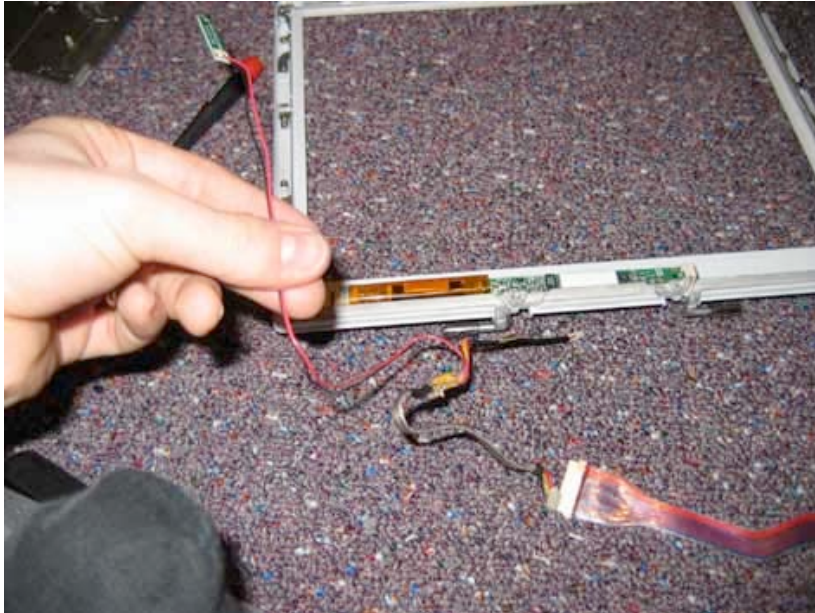
Before proceeding, you must first remove:

**Display Module**  
**Display Back Casing**  
**LCD Module**

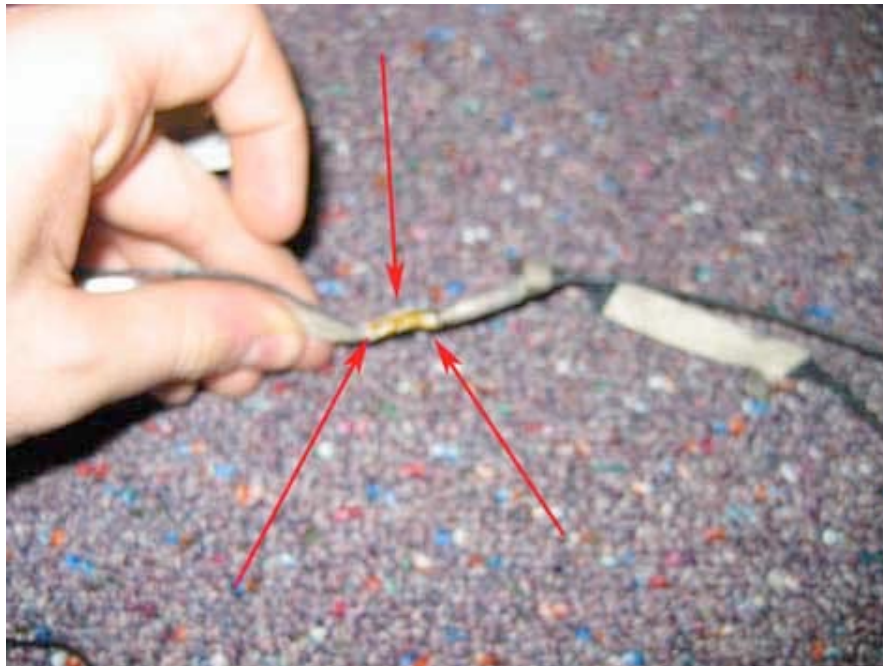
Begin by removing the Philips head screw in the location shown.



Guide the reed switch cables out, and if held in place by any tape, remove the tape.



Next, remove the tape holding the inverter cable microphone cable together. It may take several attempts to get the tape off. Separate the cables. When replacing, it is not necessary to tape the cables back together, but you can do so if you have some yellow tape.

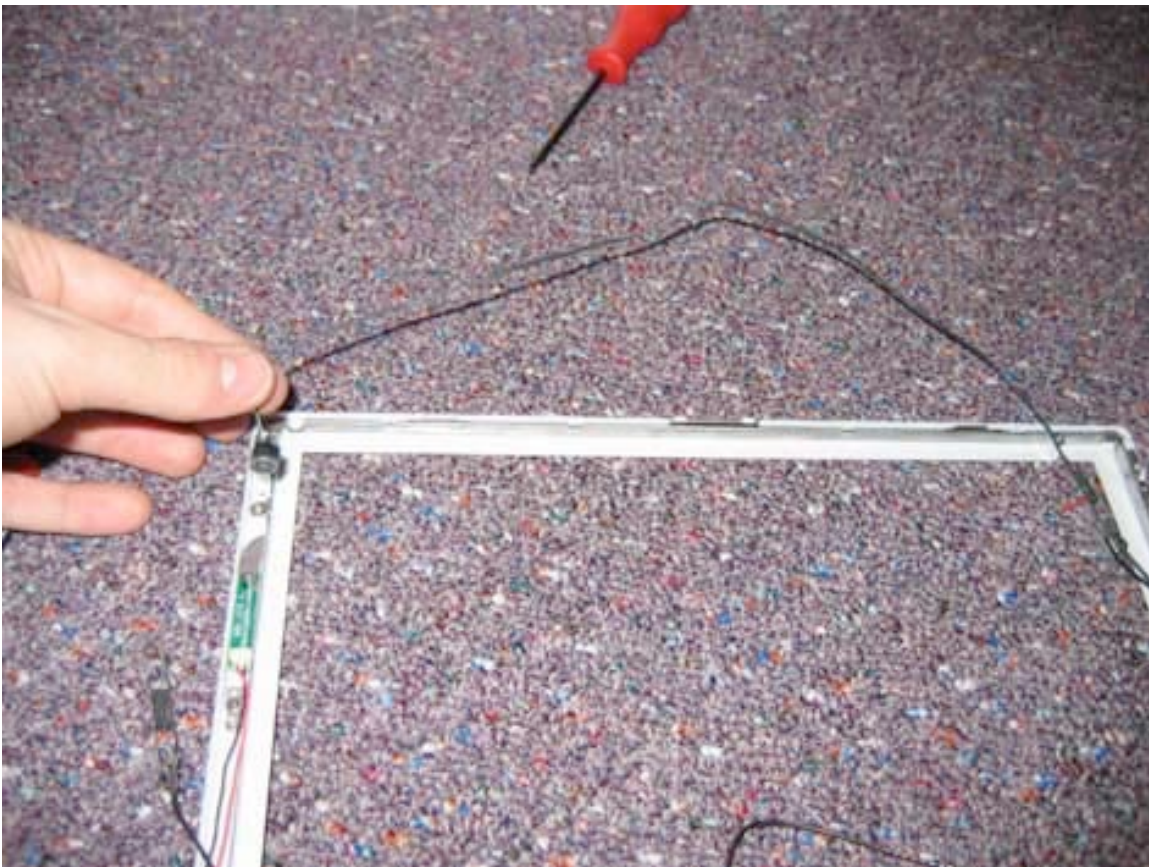


# Microphone Assembly

Before proceeding, you must first remove:

**Display Module**  
**Display Back Casing**  
**LCD Module**

The microphone is located in the top left of the display. Then guide the cable all the way around the bezel and remove it from the inverter cable by undoing the tape holding the cables together.

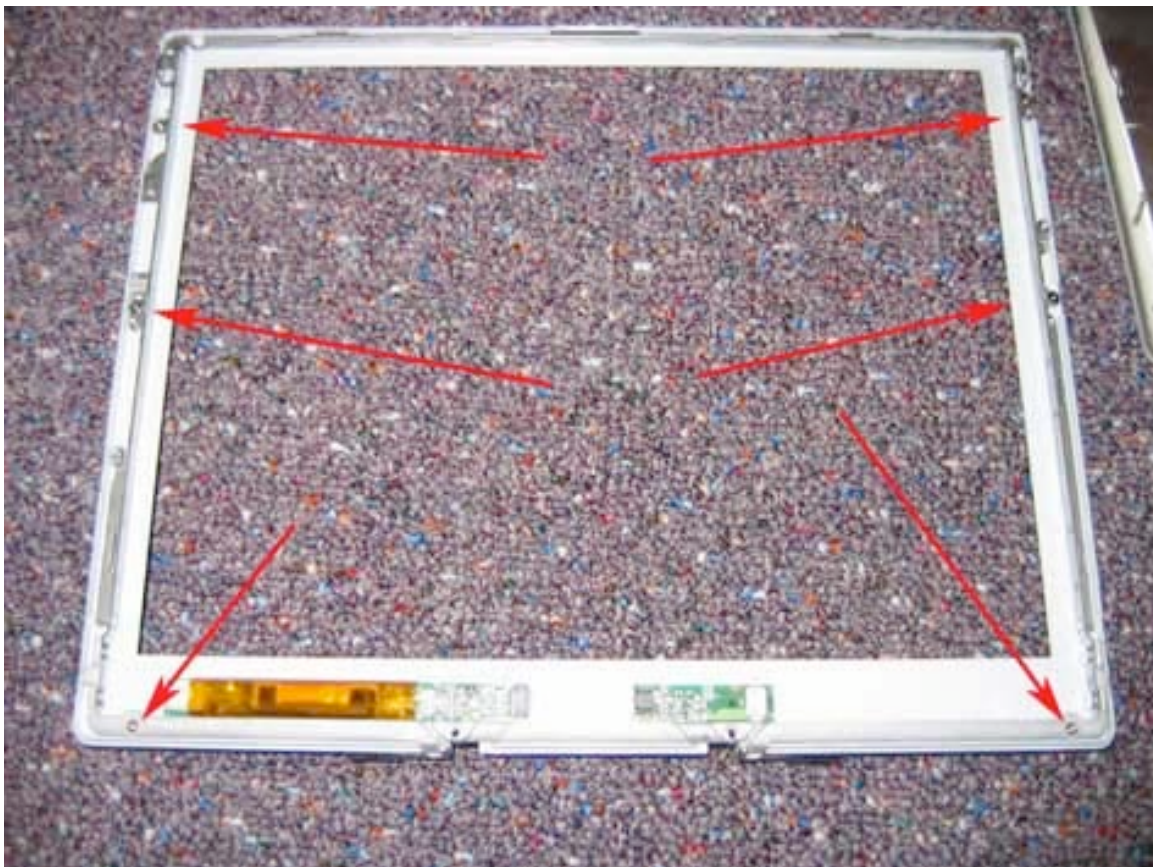


## Hinge / Clutch Assembly

Before proceeding, you must first remove:

**Display Module**  
**Display Back Casing**  
**LCD Module**  
**Clutch Cover**  
**Inverter Board**  
**Antenna Cable**  
**Reed Switch / Inverter Cable**  
**Microphone Cable**

Remove the six Philips head screws from the locations shown in the picture, and then just lift the clutch assembly out of the unit.

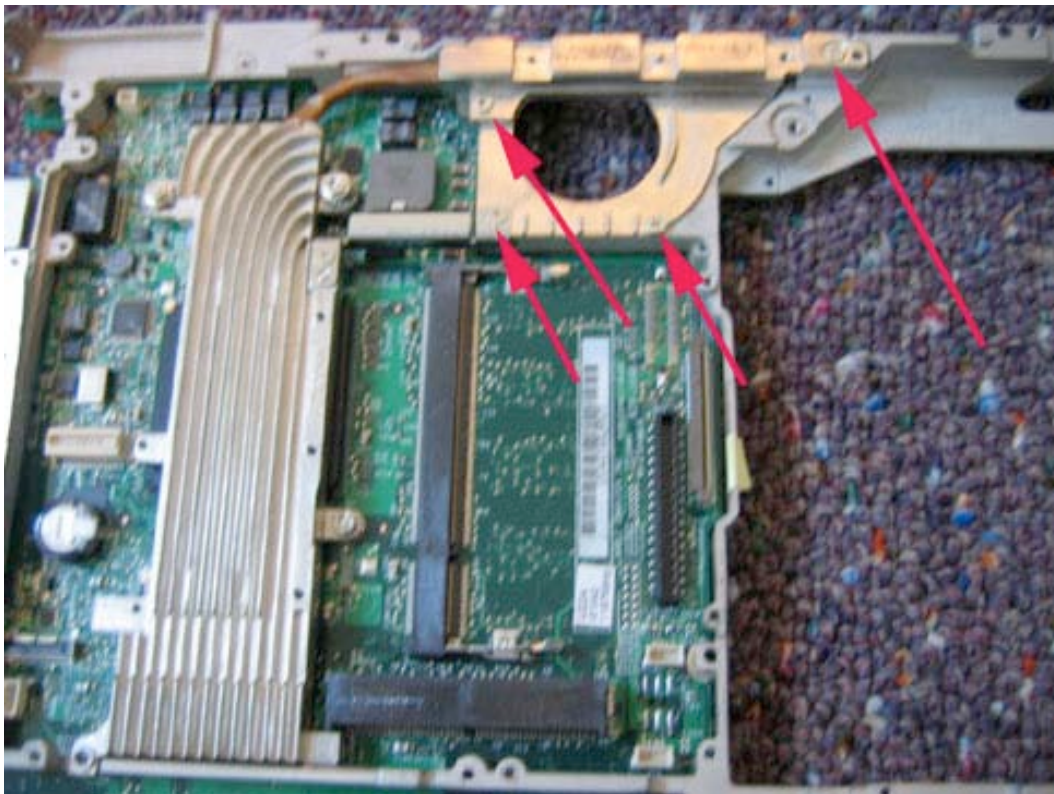


# Heatsink

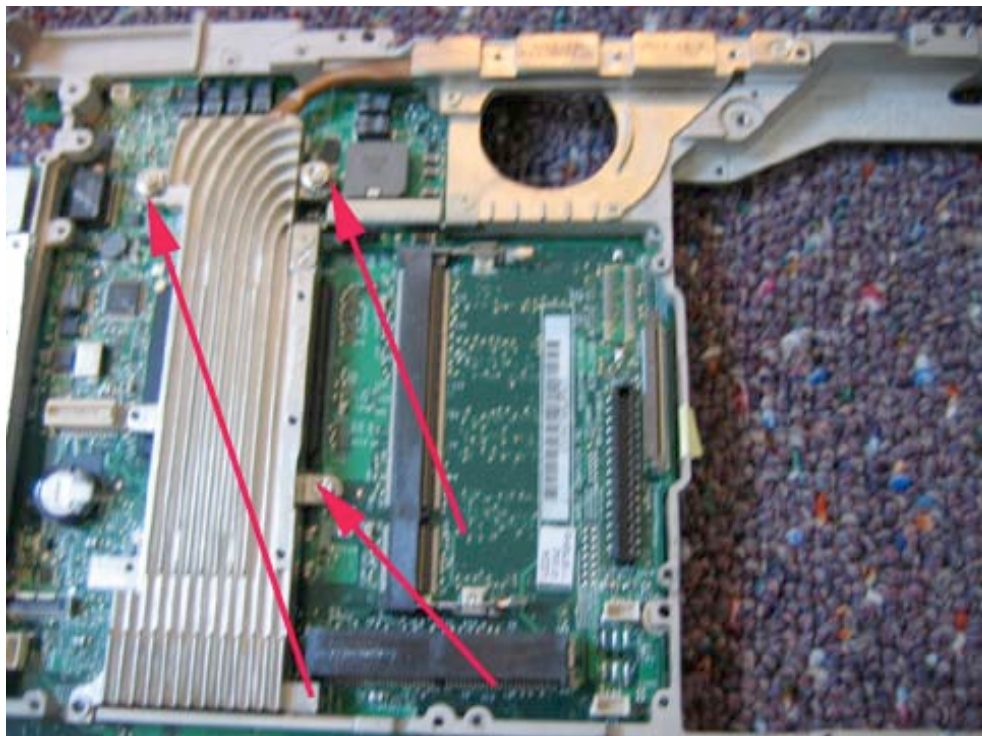
Before proceeding, you must first remove:

- Battery**
- Keyboard / Airport Extreme Card**
- Bottom Case**
- Bottom Shield**
- DC-In Board**
- Top Case**
- Top Shield**
- Hard Drive**
- Modem**

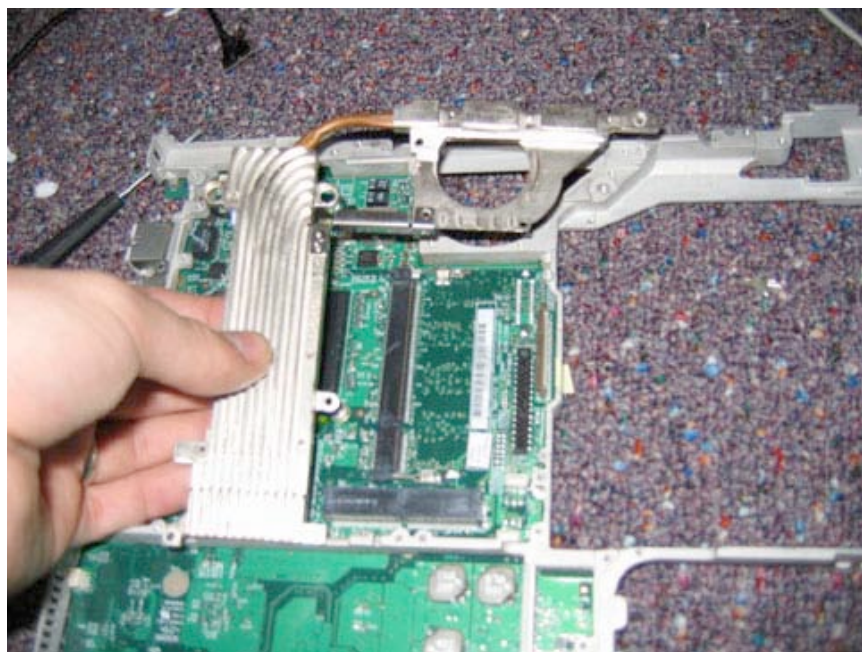
Remove the 4 Philips head screws from the locations shown.



Remove the 3 hex nut screws from the locations shown. Use either pliers or a hex nut screwdriver to remove the screws.



Lift the heatsink up and out of the unit as shown.



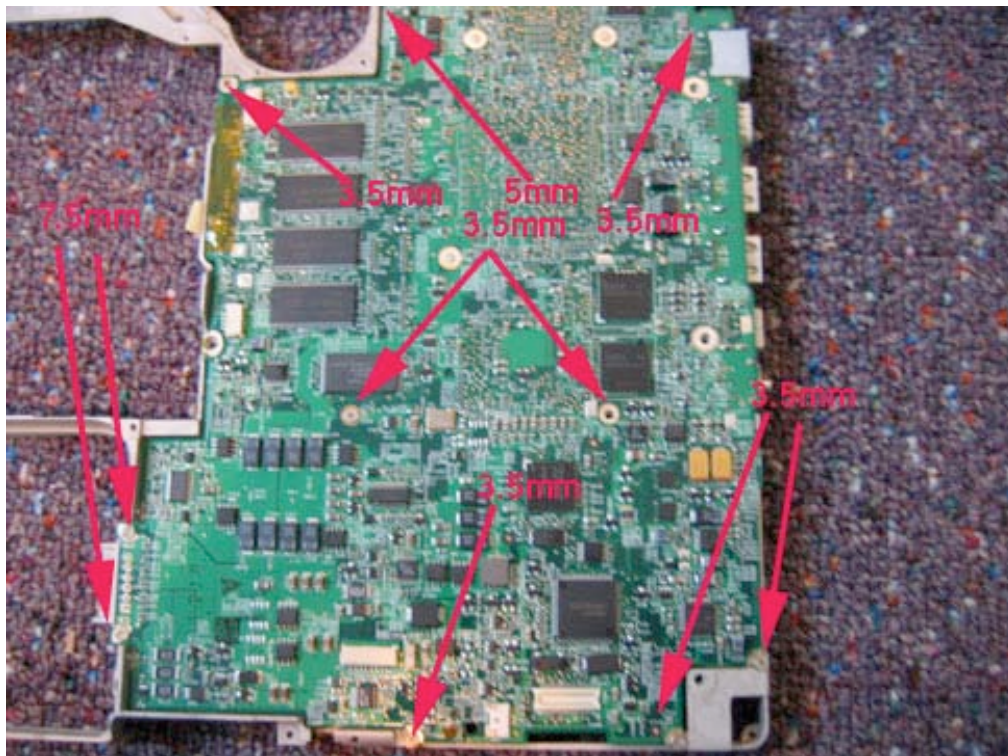
# Logic Board

Before proceeding, you must first remove:

**Battery**  
**Keyboard / Airport Extreme Card**  
**Bottom Case**  
**Bottom Shield**  
**DC-In Board**  
**Fan**  
**Top Case**  
**Top Shield**  
**I/O Bezel**  
**Sleep Light**  
**Hard Drive**  
**Modem**  
**Heatsink**

If you have not removed the display module, refer to the display module disassembly to disconnect the LVDS, microphone cable, and inverter cable from the logic board. Also, disconnect the optical drive cable.

Remove the 10 screws from the locations shown.



Lift the board up and out as shown.



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