



## Apple Powerbook G4 Aluminum 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 speaker disassembly)

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

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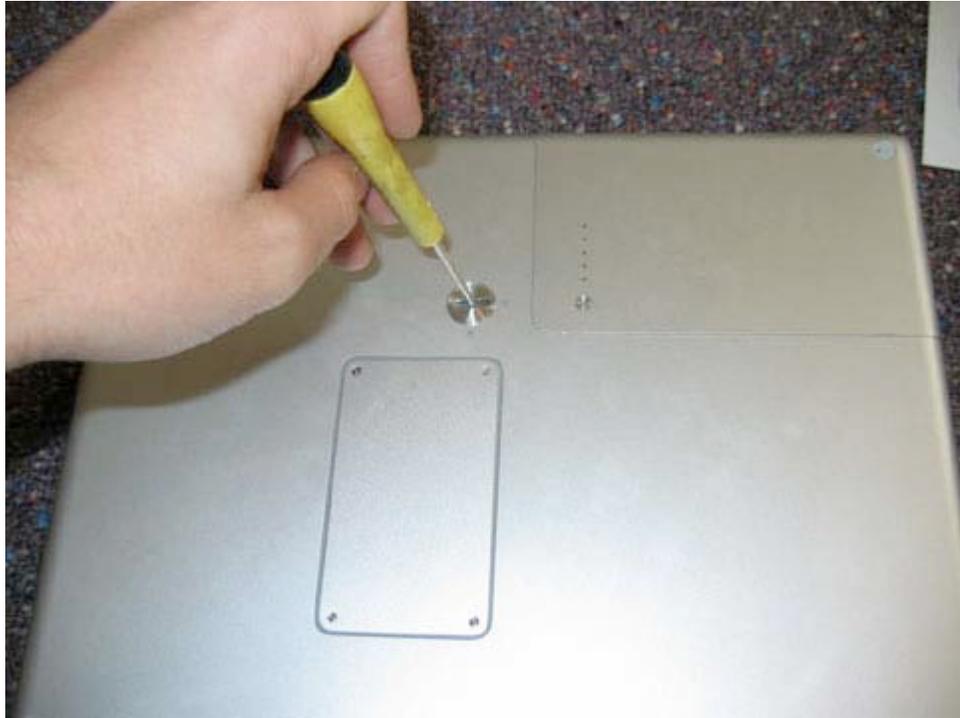
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**\*\* Note about using this manual.**

There are two versions of the 12” Aluminum powerbook. There is a VGA model that only came with a processor speed of 867mhz, and there is the DVI model which came in all other processor speeds. This manual was made using a DVI model, however the differences between the VGA model and DVI model are noted in the text.

## Battery Removal

Before beginning any repair, remove the battery first! Using a flat head screwdriver or a coin such as a nickel, turn the battery lock to the unlock position as shown. Keep the coin or screwdriver in this position, and simultaneously lift out the battery.



# Airport Extreme Card

Before proceeding, you must first remove:

## **Battery**

Begin by flipping back the airport door inside the battery bay. The door opens out towards the bay. You can open it by putting a small flathead screwdriver or your fingernail in the small slit in the top of the door and prying outwards toward the bay.



There is a plastic tab that is usually folded on the top of the card. You can use your flat tool to pull the flap towards you as shown in the picture below.



Now you need to undo the airport connector from the airport extreme card. This is most easily accomplished by grasping the connector with pliers and pulling out gently. Use only a little force, and be careful not to damage the connector or card.



Next, using the plastic tab, gently pull the card towards you until it is completely free of the unit.



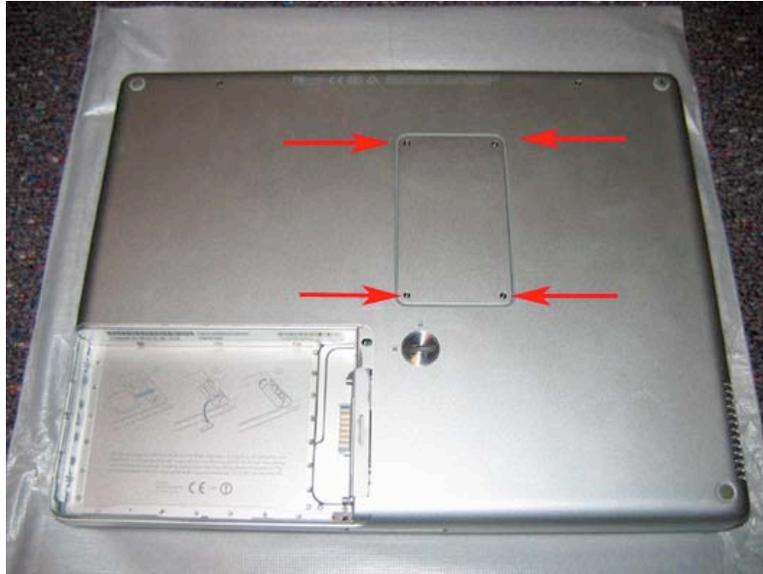
## Ram Access Door / Ram Removal

Before proceeding, you must first remove:

### **Battery**

Begin by turning your unit over (if you have not done so already) In the middle of the bottom pan casing you will notice a cover held in place by four Philips head screws.

Remove these four screws.



With the four screws removed, you can remove the access cover to the ram slot. To install ram, simply line up your ram chip with the ram slot, put the chip in and then down.



# Keyboard Removal

Before proceeding, you must first remove:

## **Battery Ram Access Door**

To begin, you need to remove the black Philips head screw in the ram area in the location shown below. \*Note that the screw holds down a small EMI shield (metal piece) Do not forget to install this during reassembly.



Next, you need to remove the F1, F2, F11, and F12 keys from the keyboard. You need to remove the keys by placing a flat tool under the key from the left hand side and then prying up. You want to try to remove only the keycap, and not the white scissor mechanism underneath the key. This will make reassembly much easier.



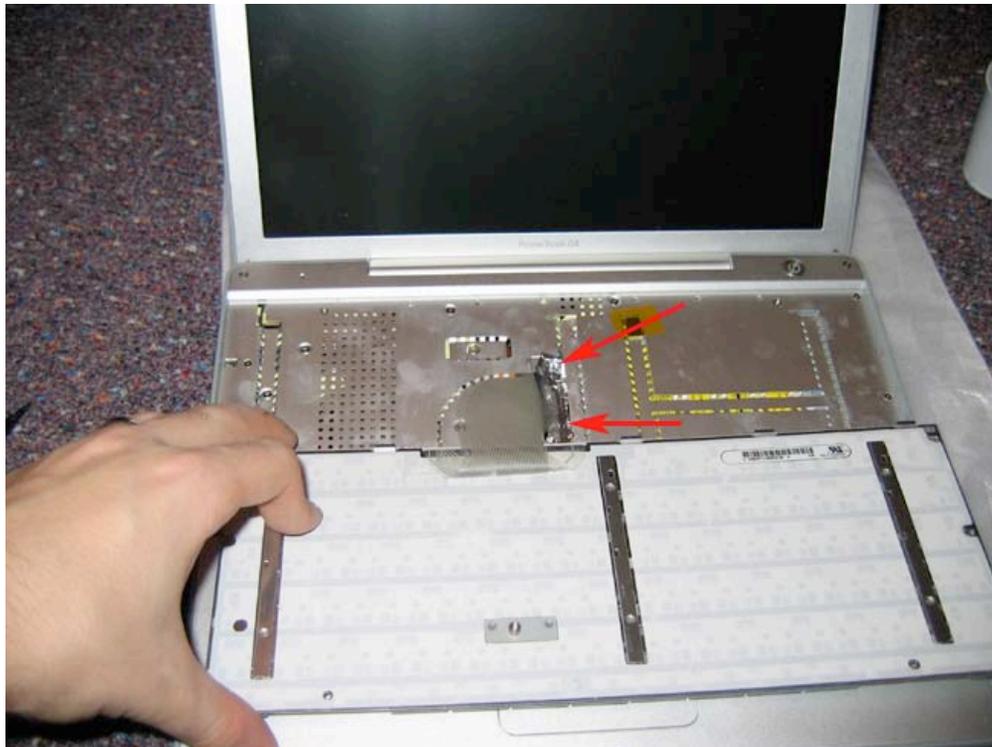
Next, remove the white round stickers located between the keys. These round stickers cover two screws that need to be removed. After the stickers are removed, remove the two Philips head screws.



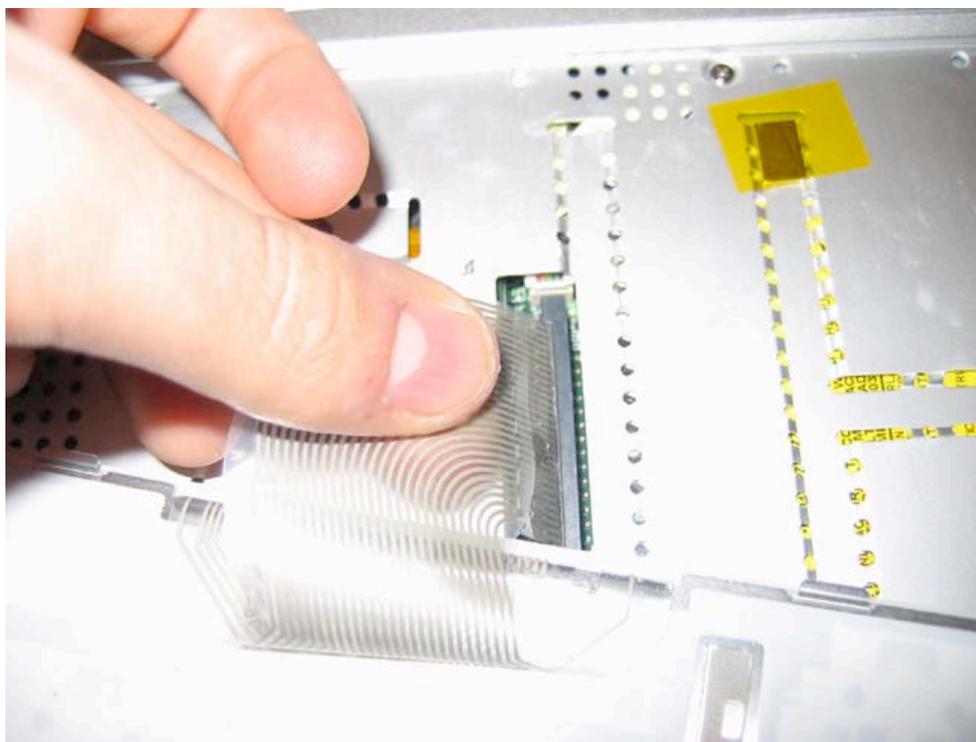
With the screws between the keys removed, Use a flat tool to pry up the keyboard (preferably from the back left or right hand corner as shown.)



Next, flip the keyboard back onto the trackpad as shown, and remove the aluminum strip of tape shown in red by the red arrows below.



Now you can undo the keyboard connector from the logic board by grasping the cable and pulling it up. You may need to slightly wiggle the cable from side to side while lifting up. The keyboard will now be free. Place the keyboard on a clean surface.



# Trackpad / Palmrest Removal

Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Keyboard**

Begin by opening up your unit and removing the two Torx T6 silver screws as shown in the locations marked in red. These are in the top left and right hand corners. Note that the screw on the right hand side is much longer than on the left hand side.



Next, shut the lid of the computer, and turn it around to the back. Remove the two Philips head 5.5mm silver screws as shown. (Note: If you only need to remove the trackpad, it is only necessary to remove the top screw on each side. The bottom screws anchor the display module.)



Now, go to the right hand side of the unit (with the optical drive slot) and remove the two 5.5mm silver screws in the location shown.



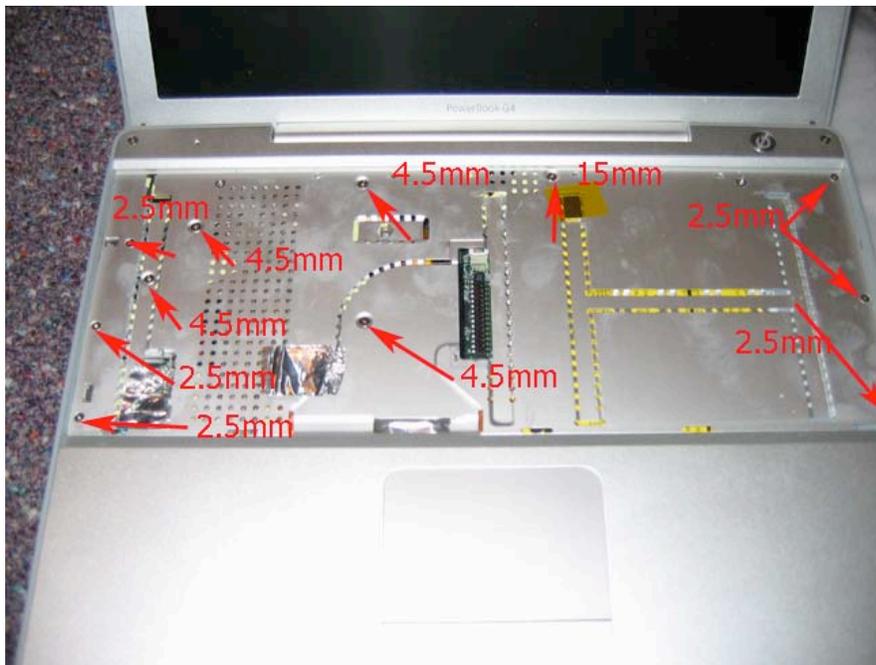
Now, go to the left hand side (with all the ports) and remove the two 3mm silver screws in the location shown.



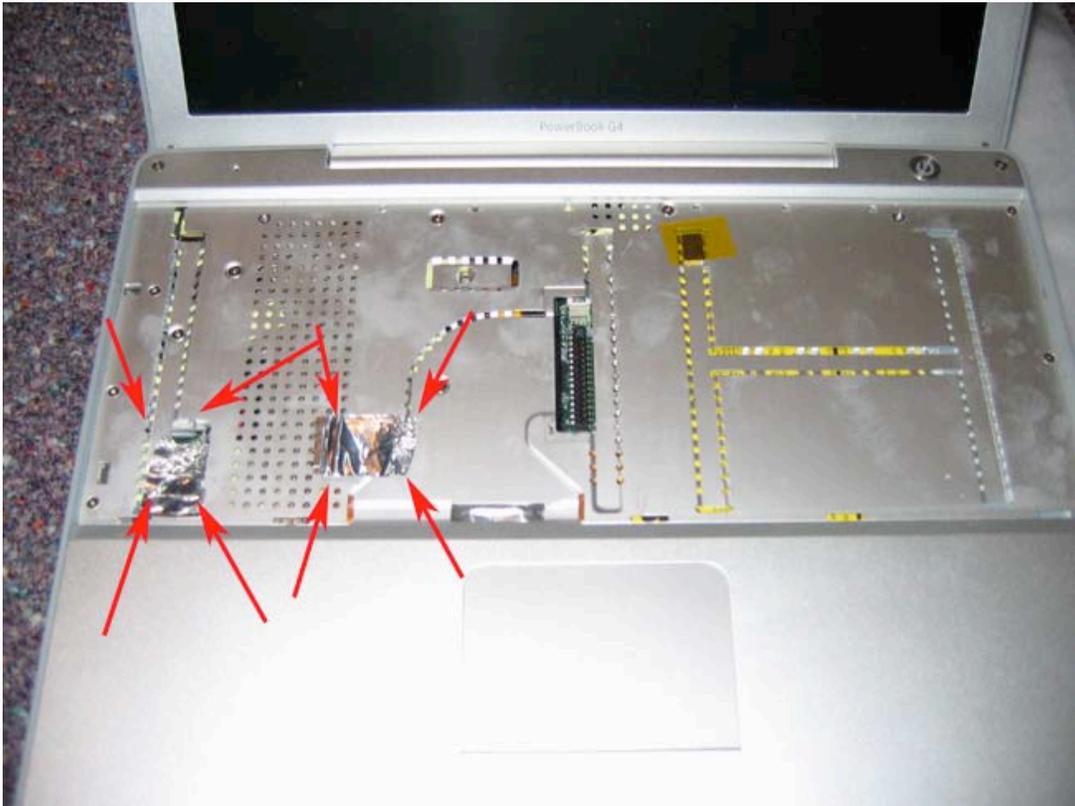
Now, flip the unit over. In the battery bay you will see 3 silver 2mm screws. Remove all three screws.



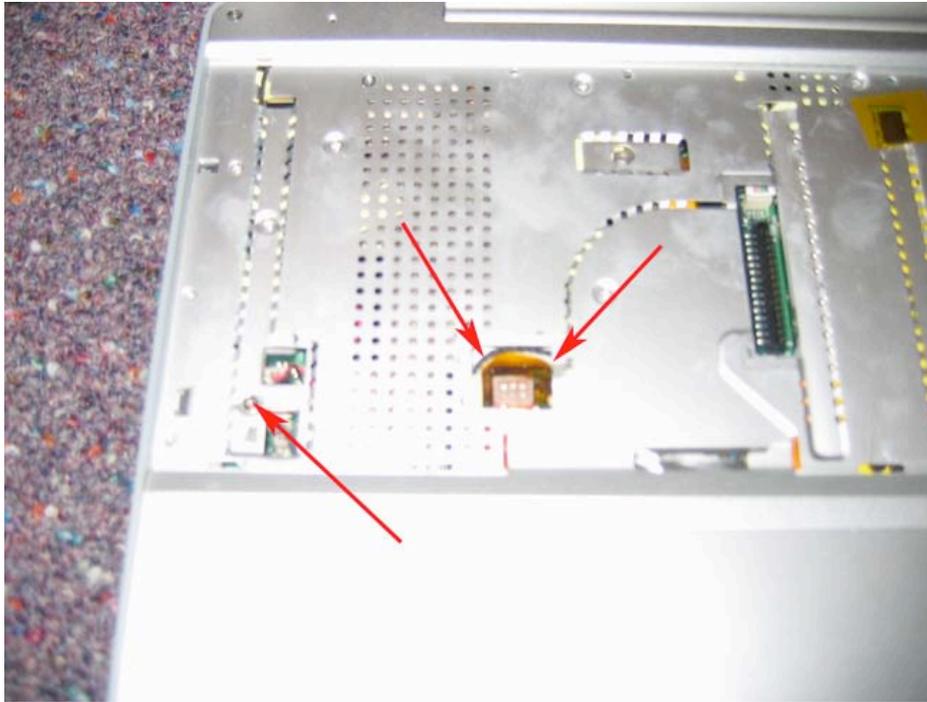
Flip the unit back over, and remove the 11 screws in the locations shown in the picture below. Also note the sizes of the screws for reassembly purposes.



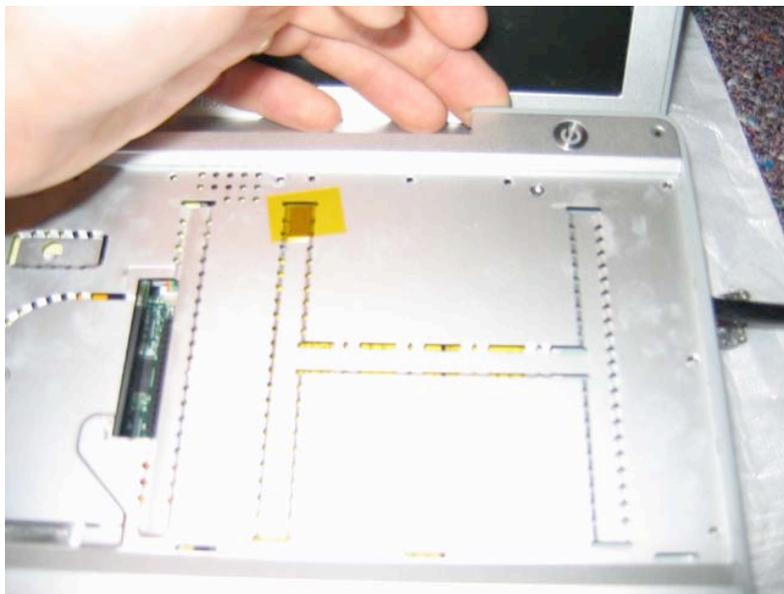
Next, remove the two remaining pieces of aluminum tape in the two locations shown in the picture below. (Each location is marked with 4 arrows.)



Removing the tape will reveal one more 4.5mm screw. Remove this screw. This will also reveal the trackpad cable. The trackpad cable has a light orange “handle” that you can pull up on to remove the connector from the logic board. Gently pull up on this cable to remove it from the logic board.



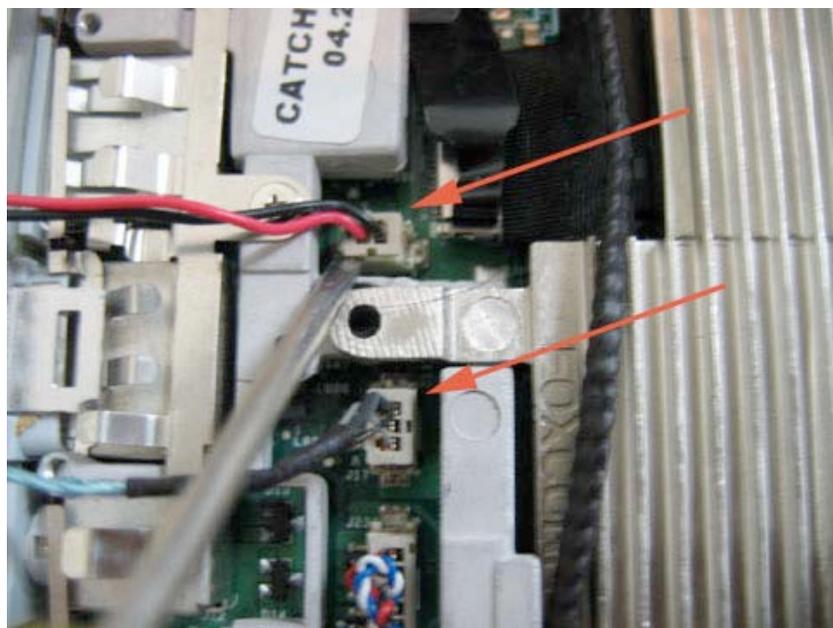
The trackpad will now be free to come up. Working your way around the edge of the trackpad, lift up, while using a flat head tool to gently pry up on the edge. Do this all the way around the unit working from the top left hand corner, to the top right, bottom right, and then bottom left.



Next, prop the casing up as shown so that you can more readily perform the next step paying special attention to the cable connecting the trackpad to the logic board (locations shown by red arrows.)



Disconnect the two cables running from the trackpad to the logic board. You need to **\*VERY CAREFULLY\*** pull up on these connectors to release them from their logic board connector. You may need to use a flat tool to help you if the cables do not come out easily. If the cables do not come out easily, gently work with them. **Do not pull up with a lot of force, or you will break the connector to the logic board, and then you will have to solder the connectors back on, so be EXTREMELY careful.**

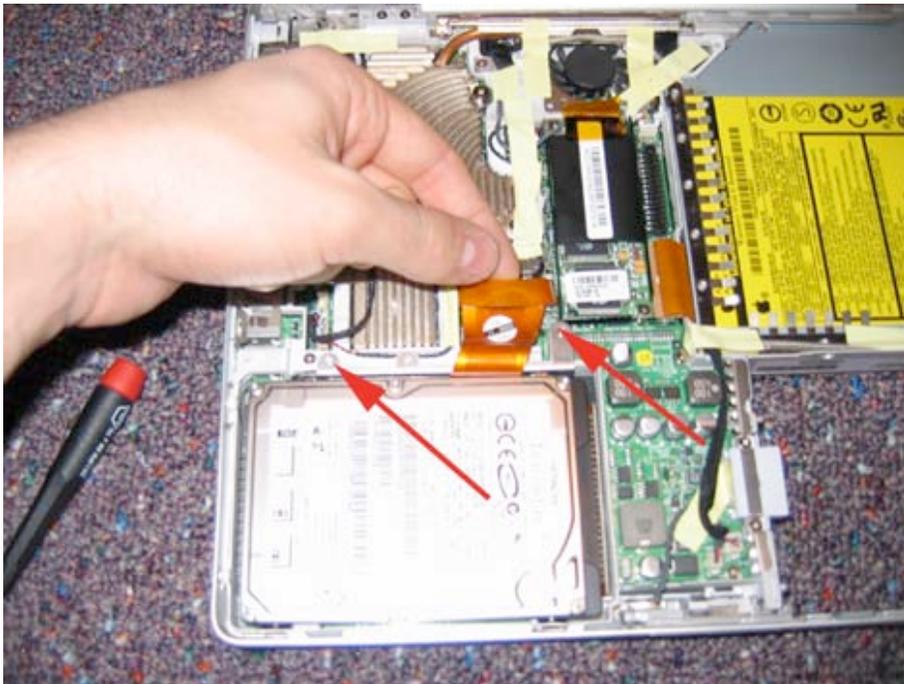


# Hard Drive Removal

Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Keyboard**  
**Trackpad / Palmrest Assembly**

Begin by locating the hard drive in the bottom left hand corner. Locate the two Philips head screws shown by the red arrow below. Next disconnect the hard drive cable by pulling up gently as shown.



Next, grasping by the by the flex cable, lift the hard drive up and out of the unit.



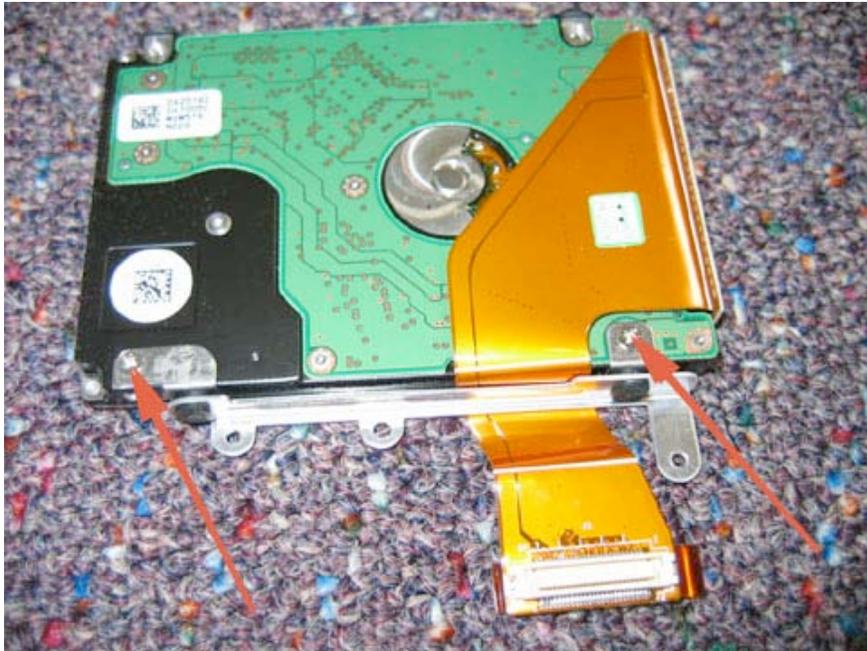
# Hard Drive Bracket /Cable Removal

Before proceeding, you must first remove:

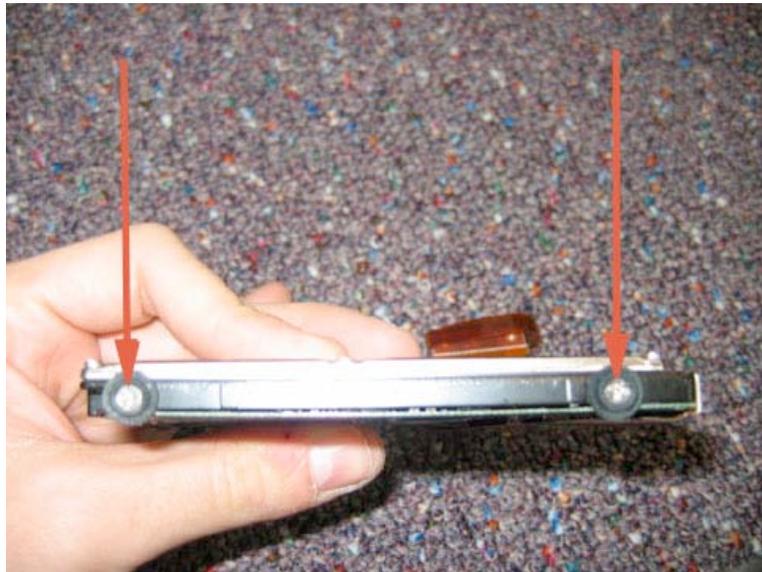
**Battery**  
**Ram Access Door**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**

Only follow this step if you are replacing the hard drive, hard drive cable, or bracket mounts.

Begin by flipping the hard drive over and locating and removing the two Philips head screws in the locations shown.



Next, remove the two Philips head screws with rubber holders from the other side of the drive.



To remove the hard drive cable, grasp the cable as shown in the picture below, and pull straight up. Do not pull at an angle or wiggle the cable as you may bend one of the hard drive pins.

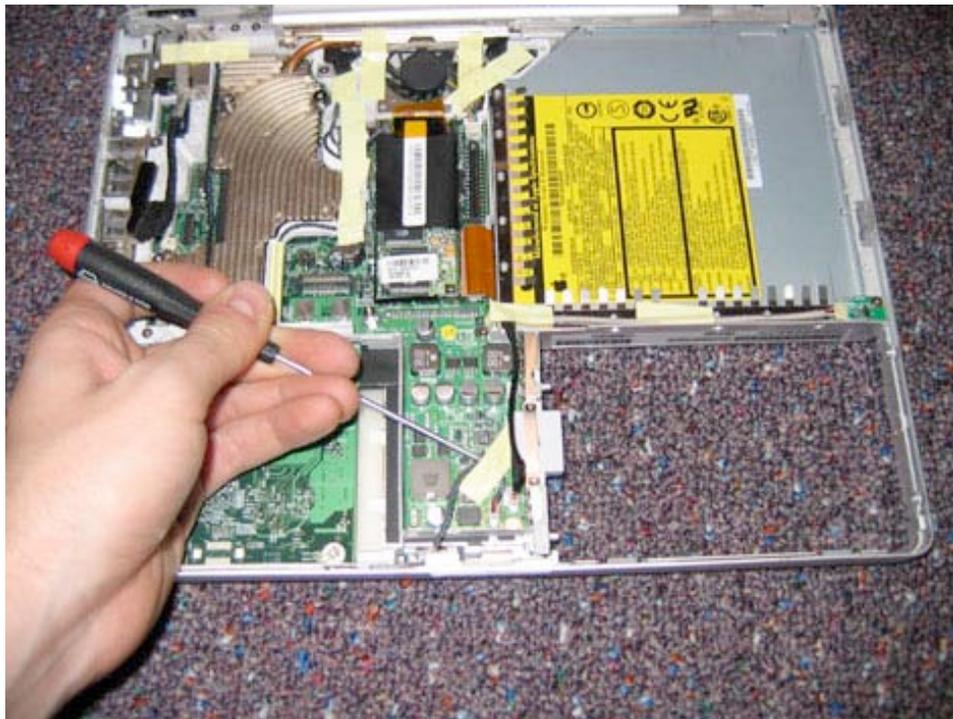


## DC-DC Board Removal

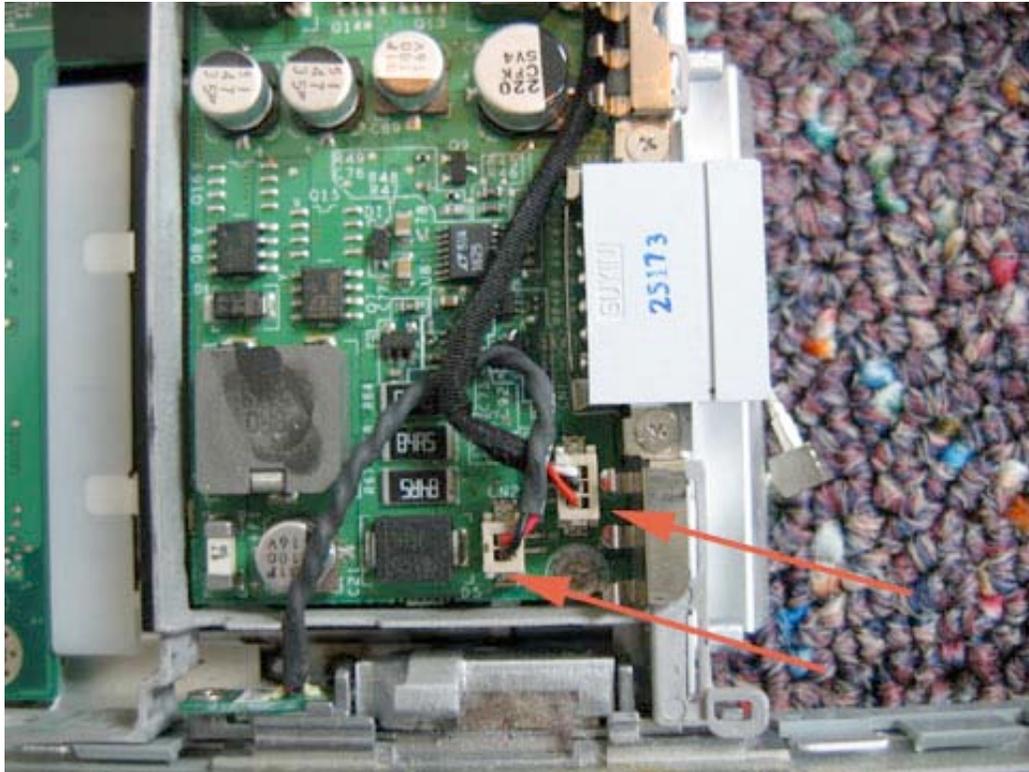
Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**

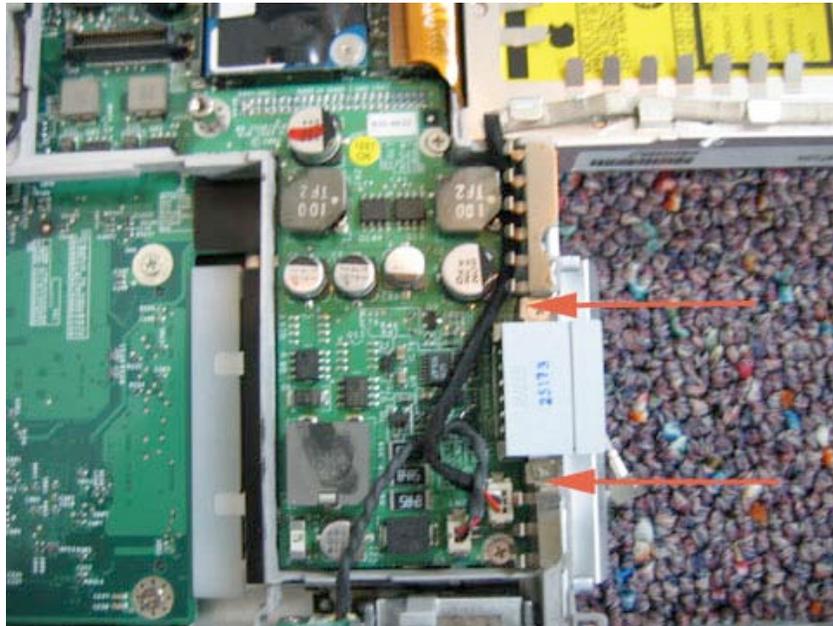
You must begin this step by first removing any tape located on the DC-DC board as shown in the picture below. (Some units may not have any tape.)



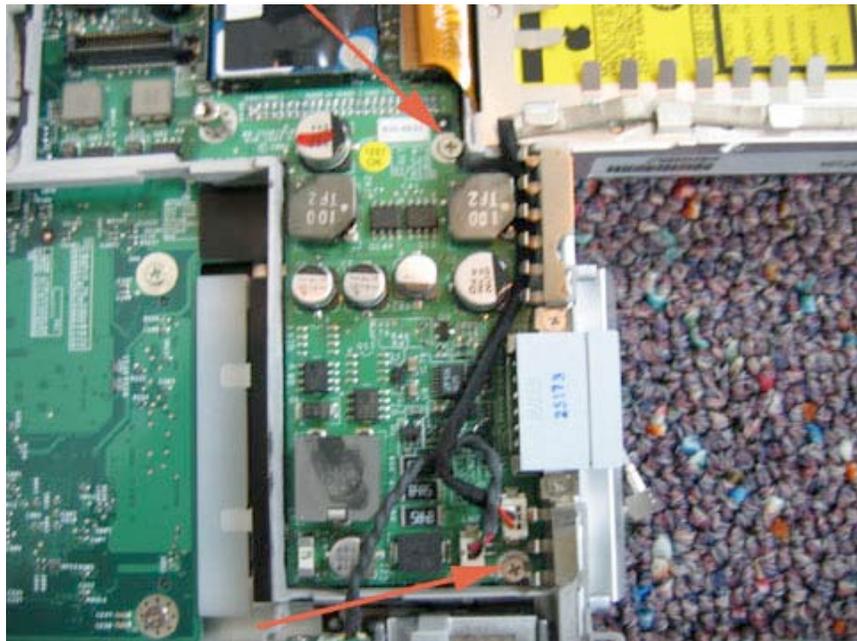
Disconnect the sleep light cable and reed switch cable from the DC board as shown. The locations of these cables are shown in the picture below. Use the same procedure you used with trackpad cables. Make sure you do not use excess force or you will damage the connectors.



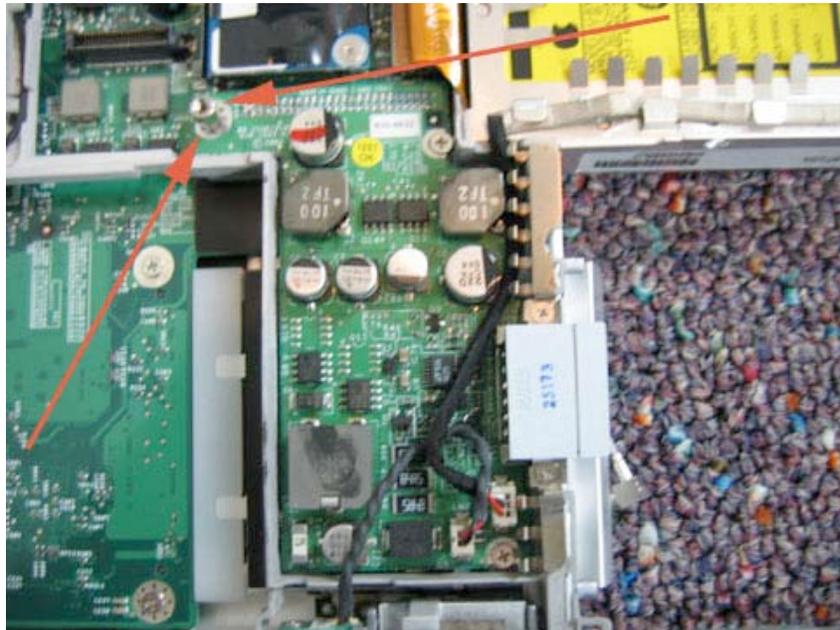
Begin by removing the two size #00 Philips head screws from the location shown. These two screws hold on an EMI strip. Once the screws are removed, lift the EMI strip up and away from the unit. **\*Reassembly note:** Make sure the EMI clip prongs are facing towards the DC-DC board.



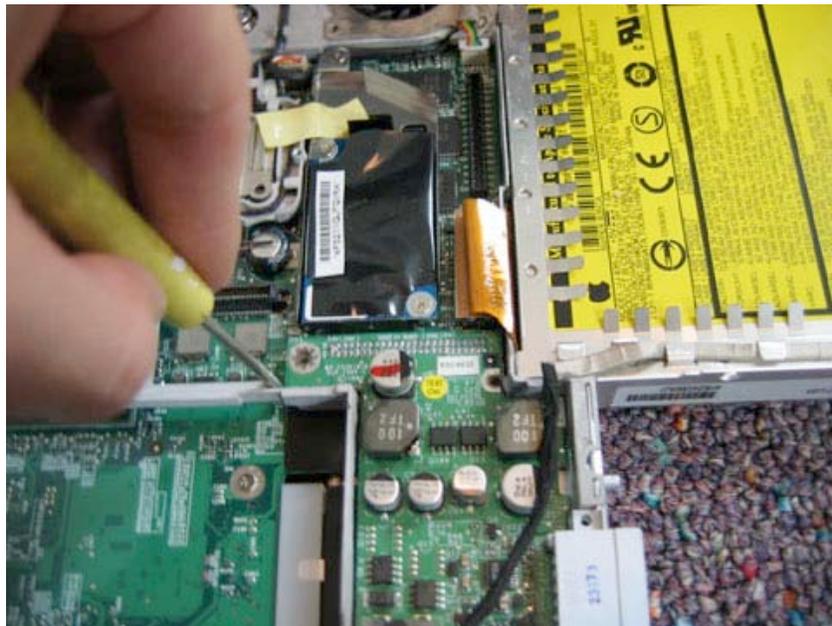
Remove the two additional Philips head screws in the locations shown below. Note the screw closest to the optical drive is 10mm, and the one furthest away is 3mm.



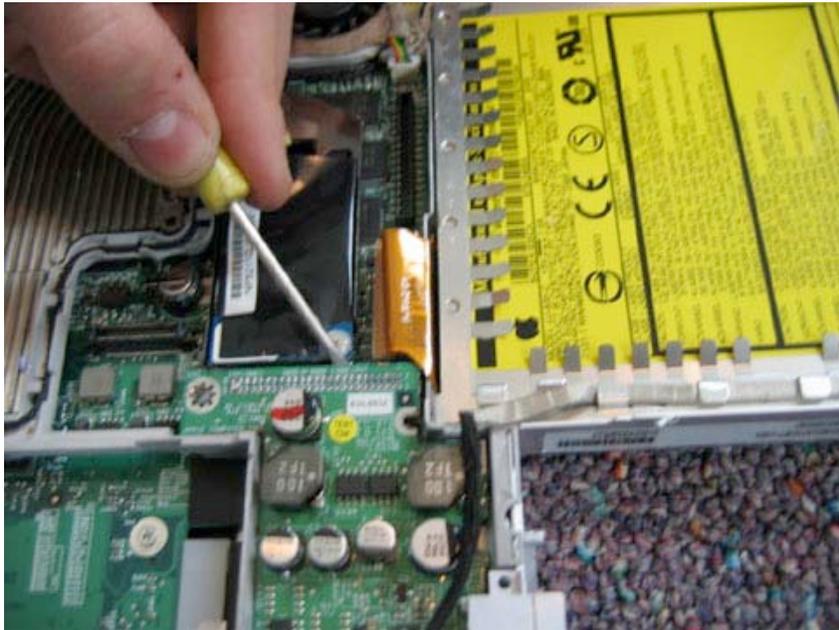
Next, you need to remove the hex head screw located in the top left corner of the DC-DC board. You can remove this by either placing your T6 screwdriver in the hole in the top of the screw and turning, or by using a pair of pliers.



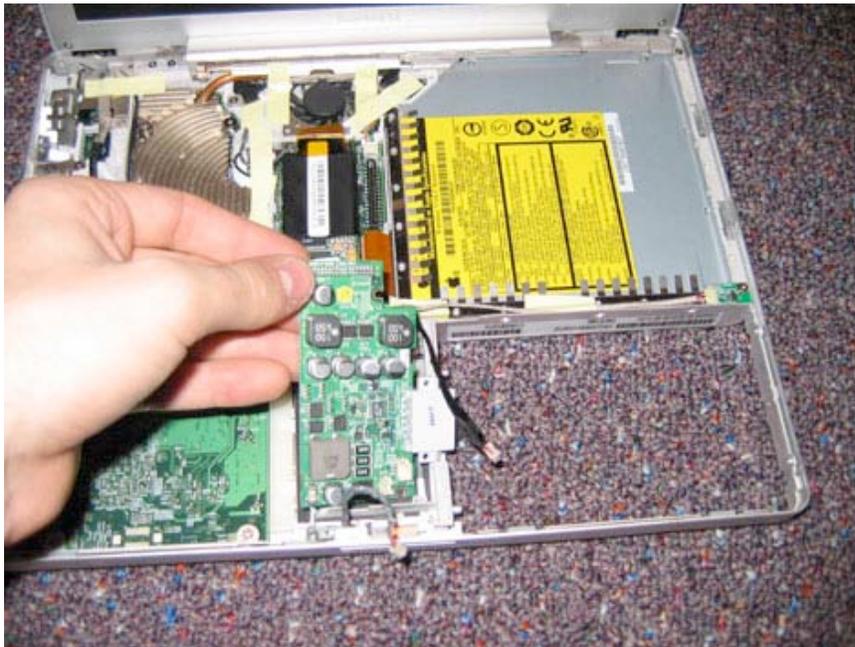
Now, using your flat tool, you will need to gently pry the DC-DC board up. The easiest way to do this is to start in the upper left and corner and pry up using your flat tool. Only pry at the extreme outermost edge of the board.



If the board is not loose, continue to gently pry around the top of the board as shown.



Lift the DC-DC board out as shown and place on a static free surface.



# Modem Removal

Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Keyboard**  
**Trackpad / Palmrest Assembly**

\*Note – The pictures below are for the DVI model. If you have a VGA model, follow the VGA notes provided.

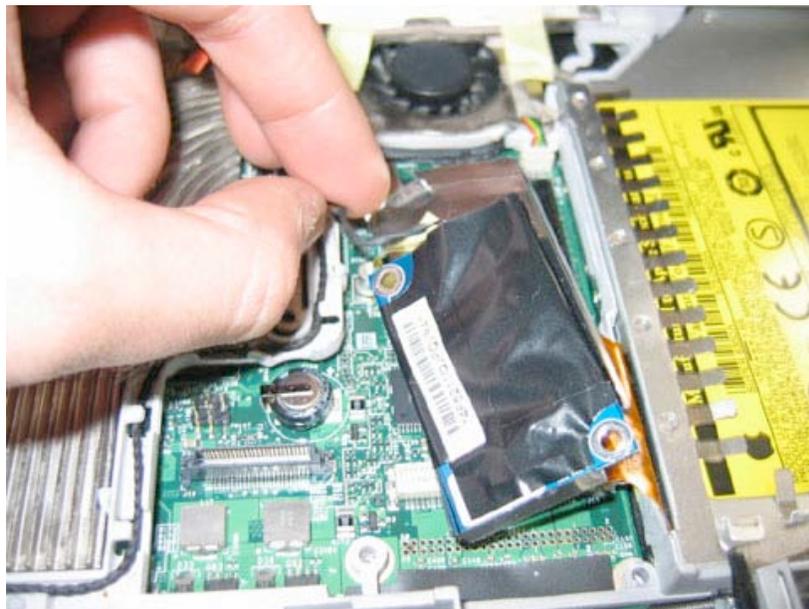
Begin by removing the 3 Philips size #00 screws from the locations shown. (The VGA model only has two screws, one at either corner of the modem.)



Next, lift the modem up from the front edge as shown. It should lift up easily. If it does not, use your flat tool to gently pry it up. The DVI model has a modem shield located under the modem (the silver tray) This piece should lift up with the modem. The VGA model does not have this tray. If there is any tape around the modem or cable coming out of the modem, remove it.



With the modem free, grasp the modem cable going into the modem and gently pull it out (away from the modem.) It should come out easily, and the modem will be free to set aside.



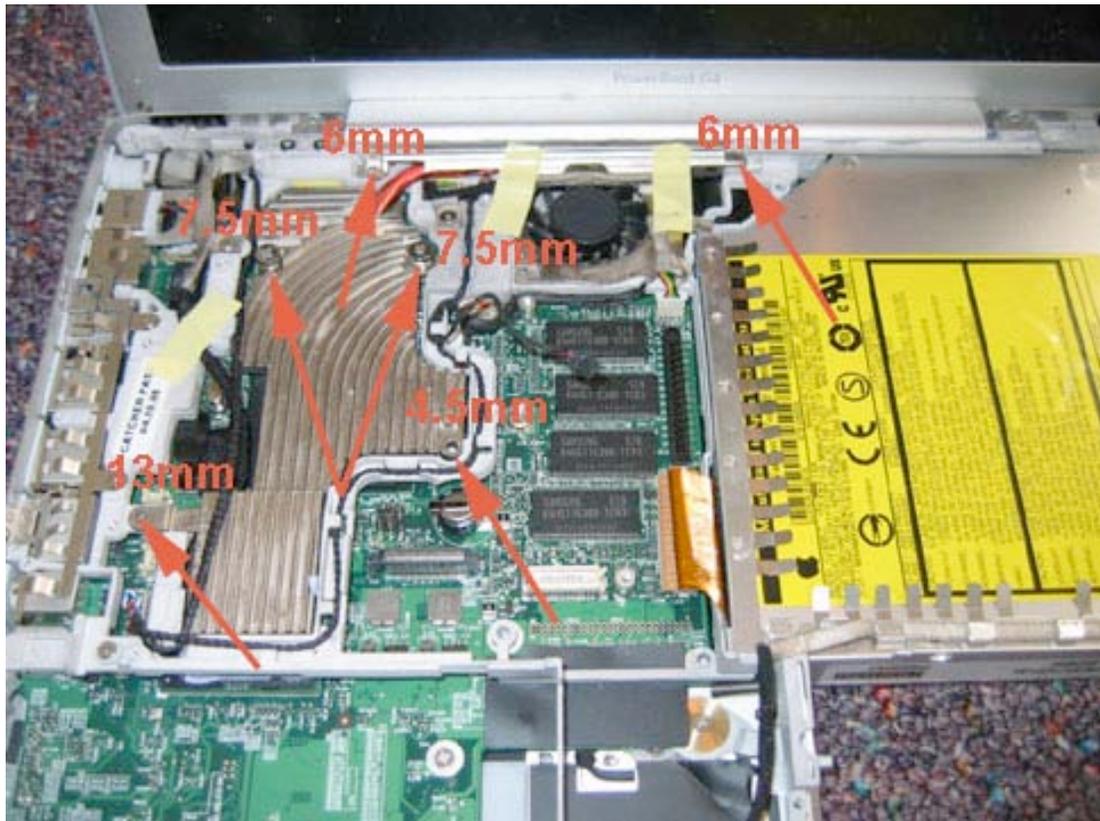
# Heatsink Removal

Before proceeding, you must first remove:

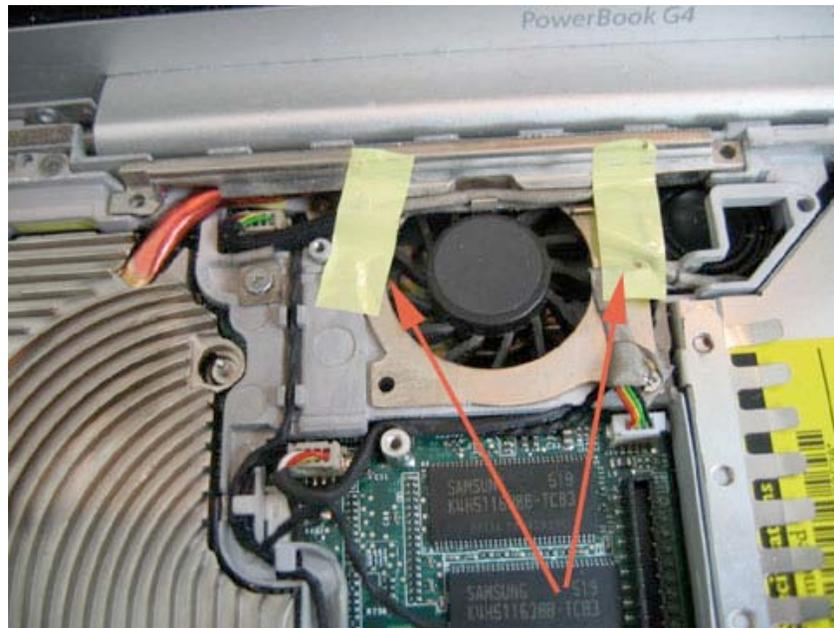
**Battery**  
**Ram Access Door**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Modem**

\*Note – The pictures below are for the DVI model. If you have a VGA model, follow the VGA notes provided.

Begin by removing the 6 philips head screws in the locations shown. For the two 7.5mm screws, you will likely need a larger screwdriver than the size #00 to provide enough torque to turn the screw (although the size #00 will usually work, a larger screwdriver will make these screws easier to remove. These two screws have a spring underneath them. When reassembling, make sure to put the spring and then the screw.



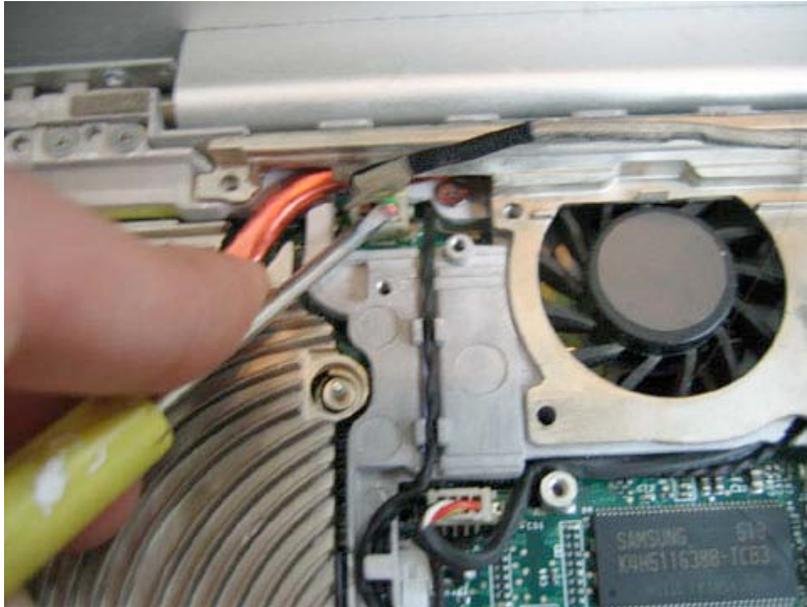
Remove any tape around the fan assembly. Usually there are two strips of tape in the locations shown below.



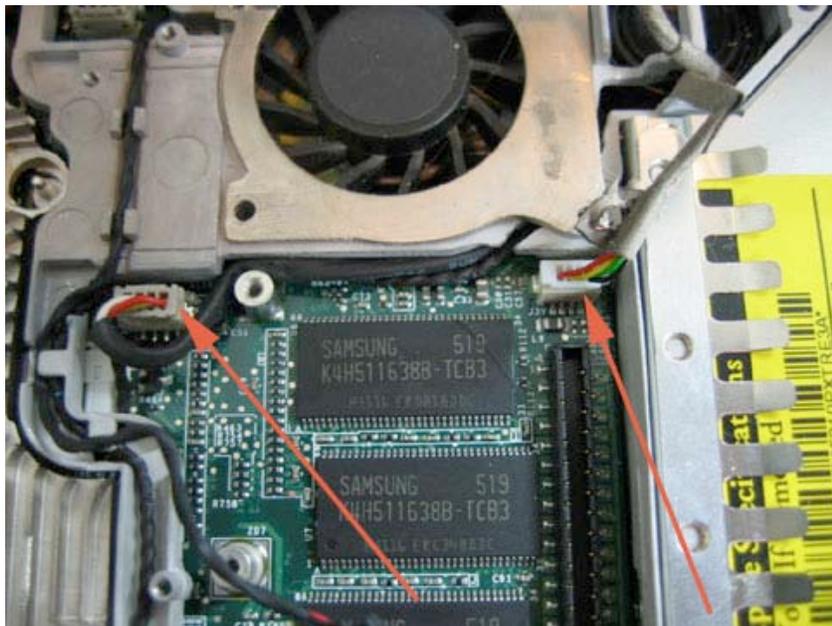
Next, remove the three Philips head screws in the locations shown. The 13mm screw is located under the Bluetooth cable, and you may need to slightly lift the cable to access it. You can remove the 3mm screw holding down to Bluetooth cable to access it. Note during reassembly that the 3mm screws go through hole in their respective cables.



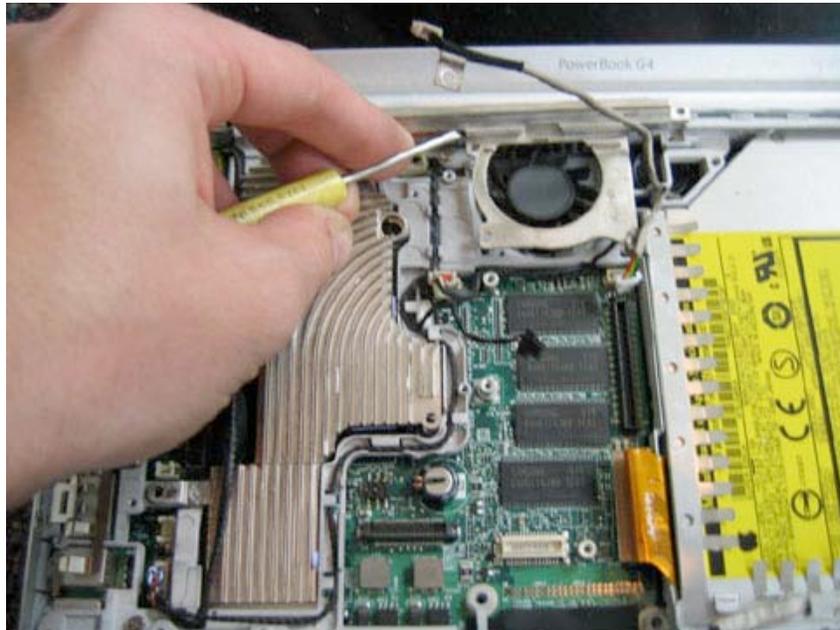
Next, following the same procedure as with every other logic board connector, disconnect the inverter cable from the logic board. Again, be very careful not to damage the connector.



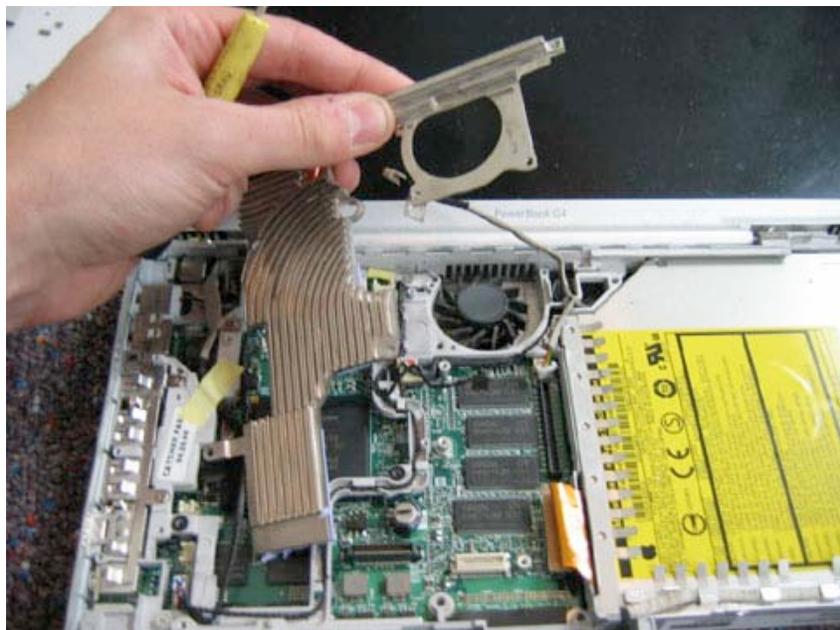
Following the same procedure, disconnect the speaker cable on the left and the Bluetooth cable on the right from the logic board. If you did not do so previously, remove the 3mm screw holding down the Bluetooth cable. (VGA model note – On the edge of the fan there will be a strip of orange tape. You will need to remove this strip as well.)



Now, use your pry tool to pry up the heatsink from the back near the fan assembly, Then, pull the assembly up and towards the display. (VGA Note – On the VGA model, the fan and heatsink are one assembly, so the fan will come out with the heatsink, unlike the pictures below.)



Lift the heatsink up as shown. Note during reassembly that you must first slide the heatsink into place at the side opposite the fan assembly (closest to where the hard drive was) and then it will fall properly into place.



## Rib Frame / Internal Frame Removal

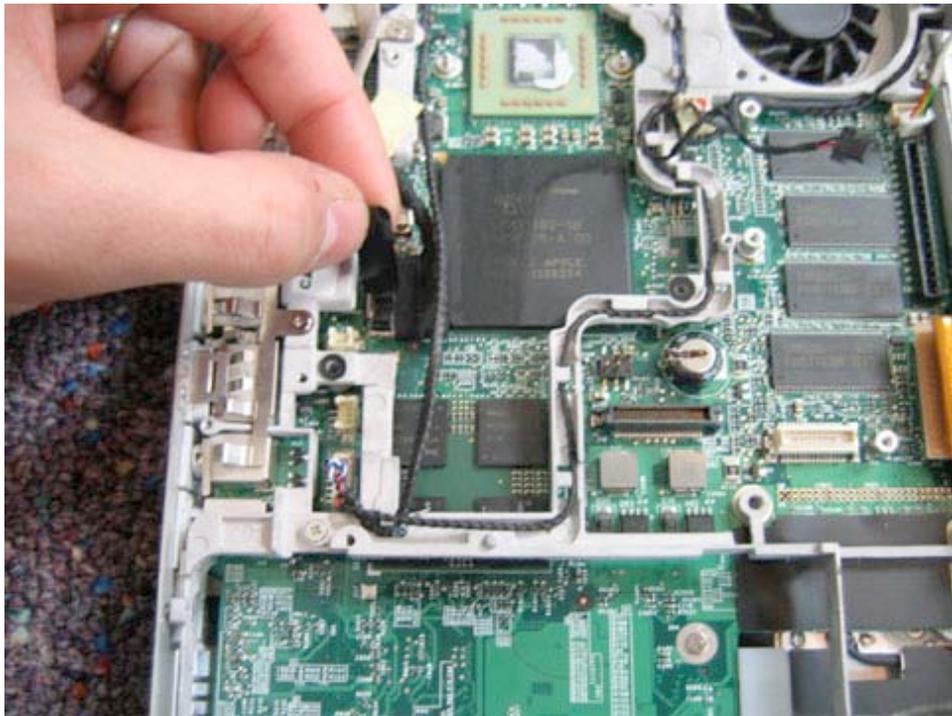
Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive / DC-DC Board**  
**Modem /Heatsink**

\*Note – The pictures below are for the DVI model. If you have a VGA model, follow the VGA notes provided.

Begin by locating the display cable. At the top of the cable is a black shiny tab. This may be tucked under the frame, if so, just lift it out with your finger as shown in the picture. Grasping this tab, pull up, and the cable should easily come free of the logic board. For reassembly, line the cable connector up with the logic board connector, and push down on the cable.

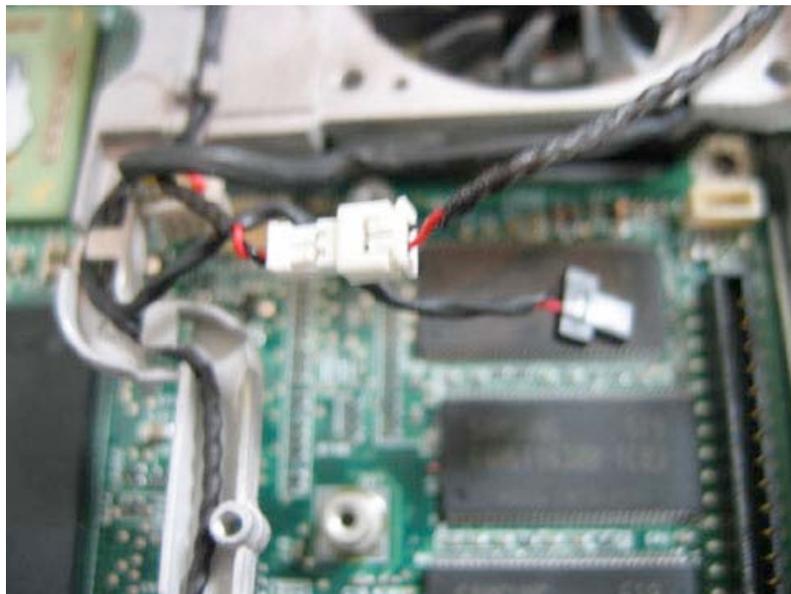
VGA Note – All of the pictures below show the fan still in the computer. On the VGA model, the fan should have been removed with you removed the heatsink.



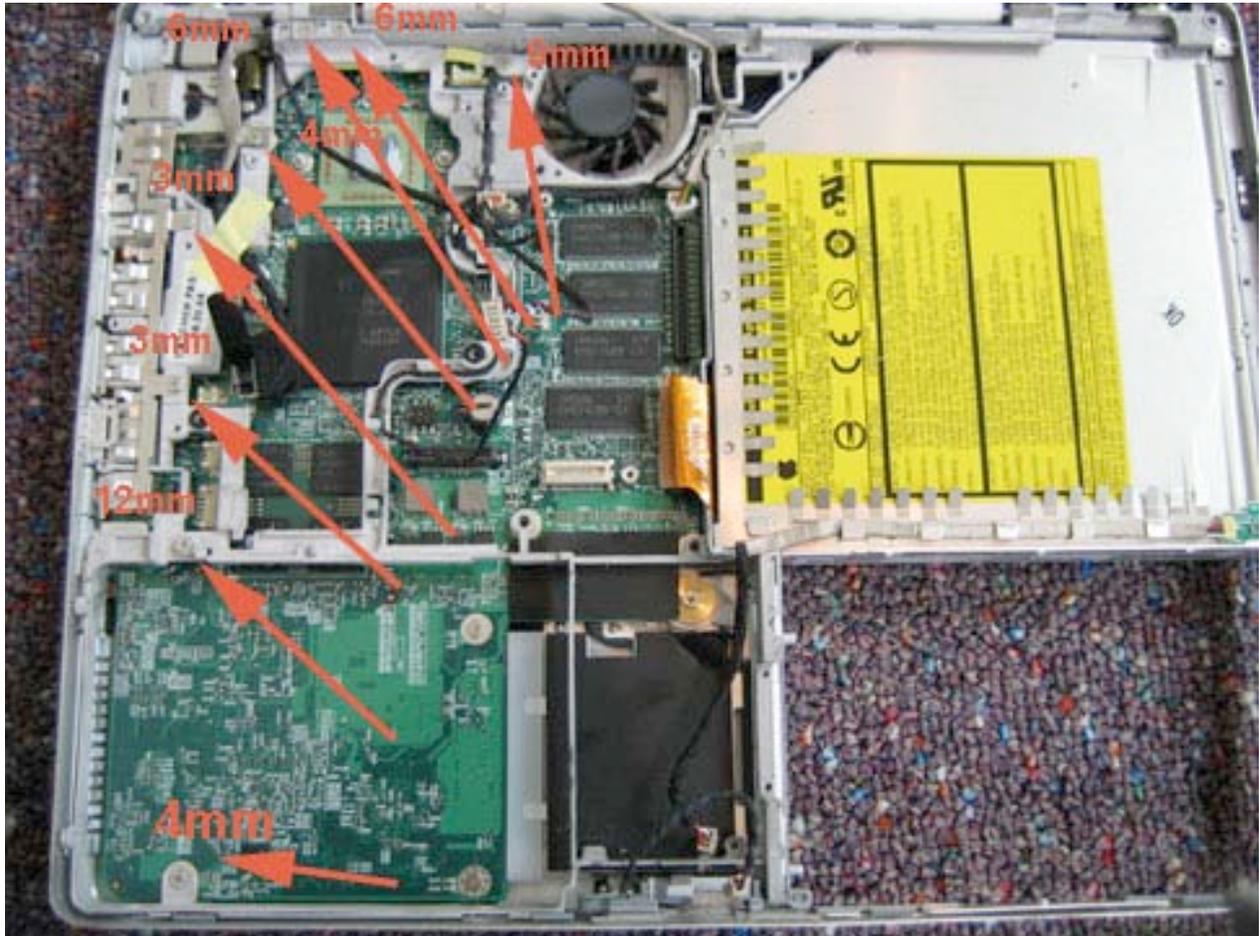
Next, using the same procedure as with the other logic board connectors, undo the speaker cable connection to the logic board. Note this cable has two cables that converge into one connector.



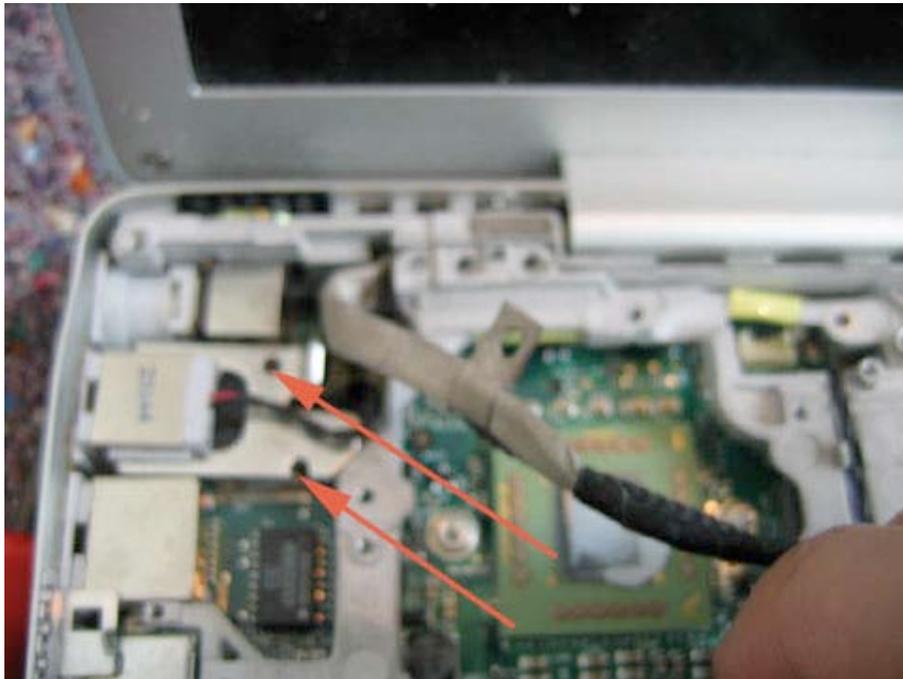
Near the fan (usually tucked away in the corner with the fan logic board connector) is the speaker wire connection joint as is shown in the picture below. Disconnect the two cables by pulling them in opposite directions.



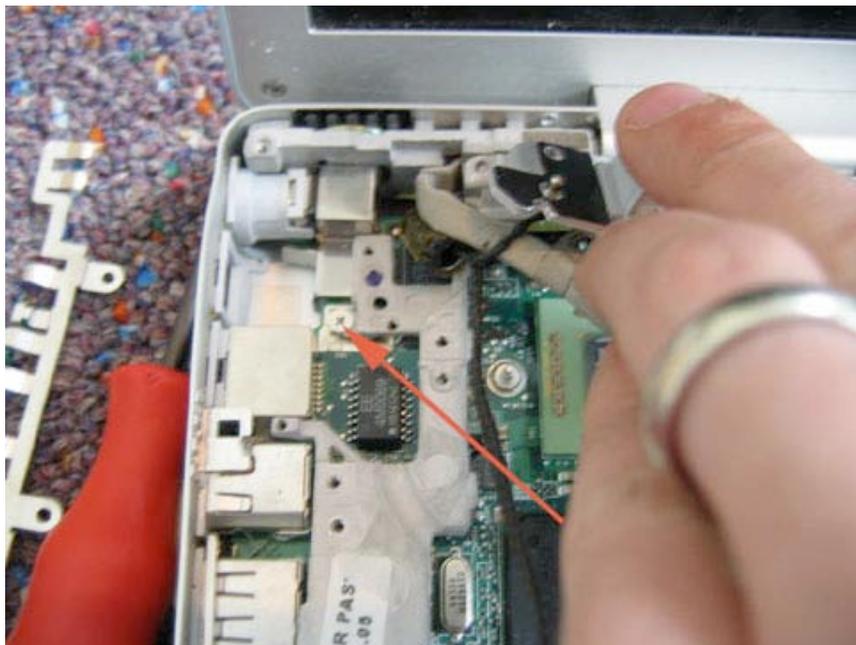
Remove the 8 Philips head screws from the locations shown in the picture below.



Next, lift back the display cable, and remove the two Philips head screws from the RJ-11 Modem jack. Note that on the VGA model, there is only one screw holding down the board.



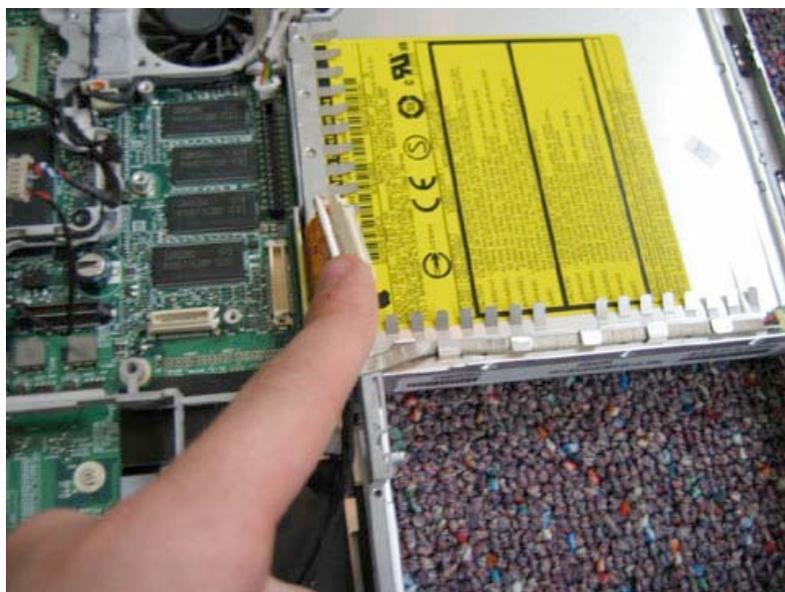
With the screws removed, lift back the board to reveal another Philips head screw. Remove this screw.



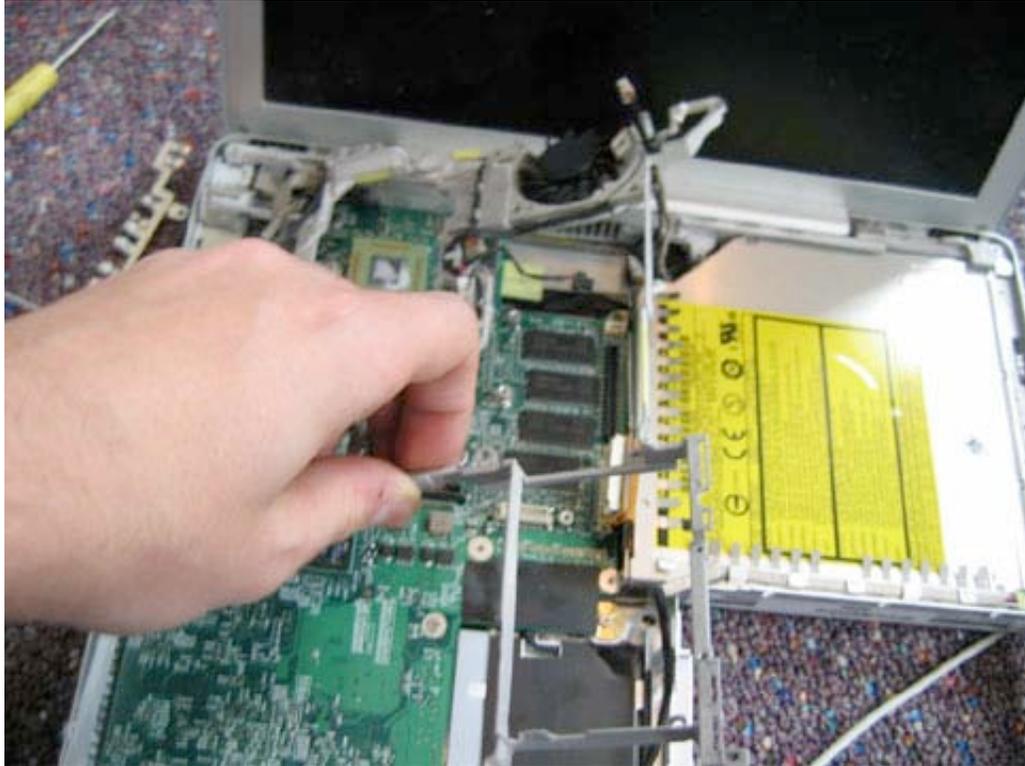
Next, you need to disconnect the optical drive cable from the logic board. First try to use your fingers to see if it will pull up easily. If it doesn't, use your flat tool to gently pry the cable up. Be careful with the cable as you do not want to tear it or stab it with your flat tool.



Use your finger to push the cable towards the optical drive (away from the rib frame) as shown in the picture below.



Lift the rib frame up and out as shown in the picture below. You may need to guide the cables through the opening next to the fan. Pay attention to the placement of these cables for reassembly.

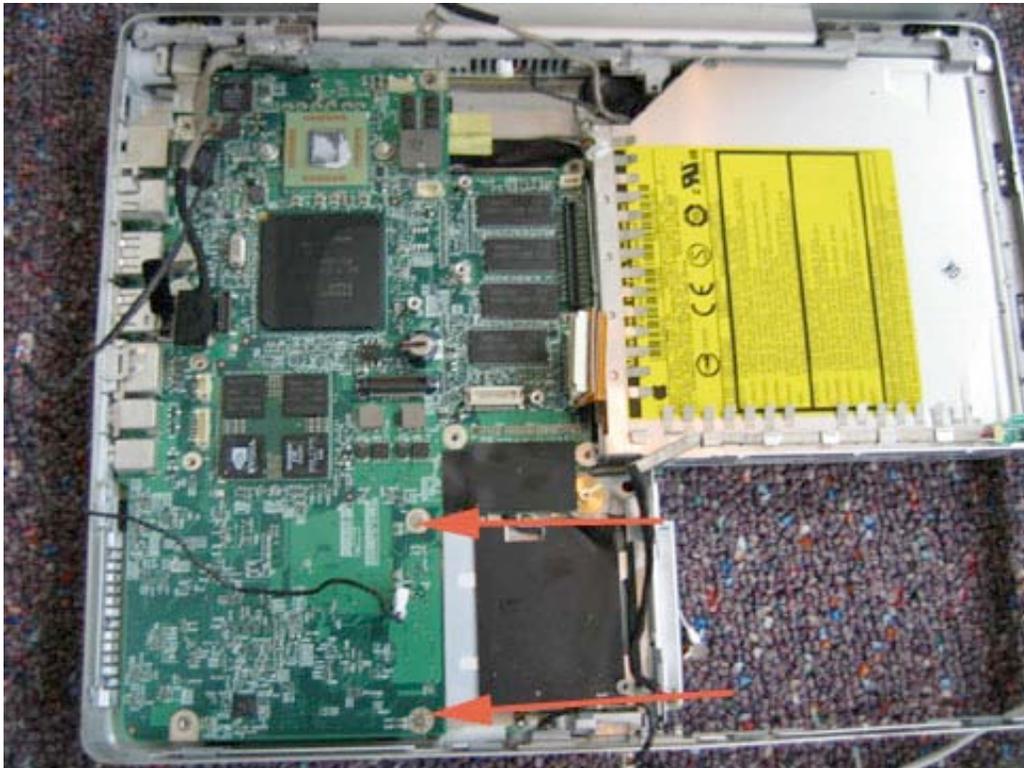


# Logic Board Removal

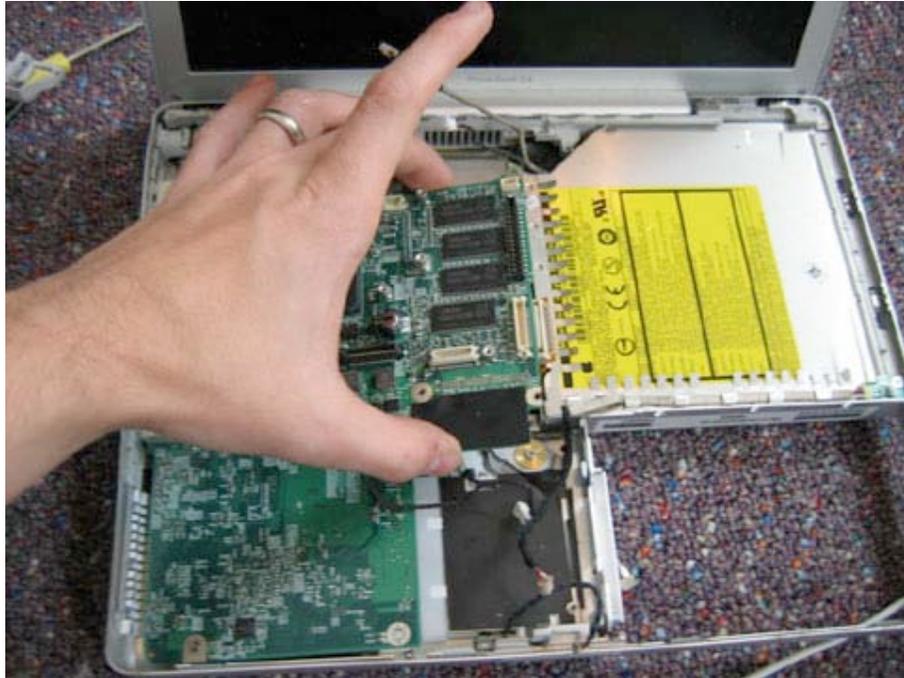
Before proceeding, you must first remove:

- Battery**
- Ram Access Door**
- Airport Extreme Card**
- Keyboard**
- Trackpad / Palmrest Assembly**
- Hard Drive**
- DC-DC Board**
- Modem**
- Heatsink**
- Rib Frame**

Begin by removing the two Philips head screws in the locations shown.



Grasping the logic board from the edge closest to the optical drive, lift the board up and flip to the left as shown in the picture below.



Holding the board as shown, you will note the DC-In connector to the logic board. Undo this connector by grasping the black cable and gently pulling it away from the board. It should come out easily.



## DC-IN Board

Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Airport Extreme Card**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**  
**DC-DC Board**  
**Modem**  
**Heatsink**  
**Rib Frame**  
**Logic Board**

Begin by using your flat tool to pry up the black strip of tape located on the top of the DC-IN board as shown in the picture below.



This will reveal a Philips head screw. Remove this screw.



Grasp the DC-In board as shown and pull towards the optical drive. You may have to move the display to a different angle to let the cable come out easily. Note that there is a light grey cylindrical piece on the end of the DC-In Board. This may or may not stay in place on the case. If it does not, to reassemble, place this piece on the end of the DC-In board with the long tab on that part facing you.



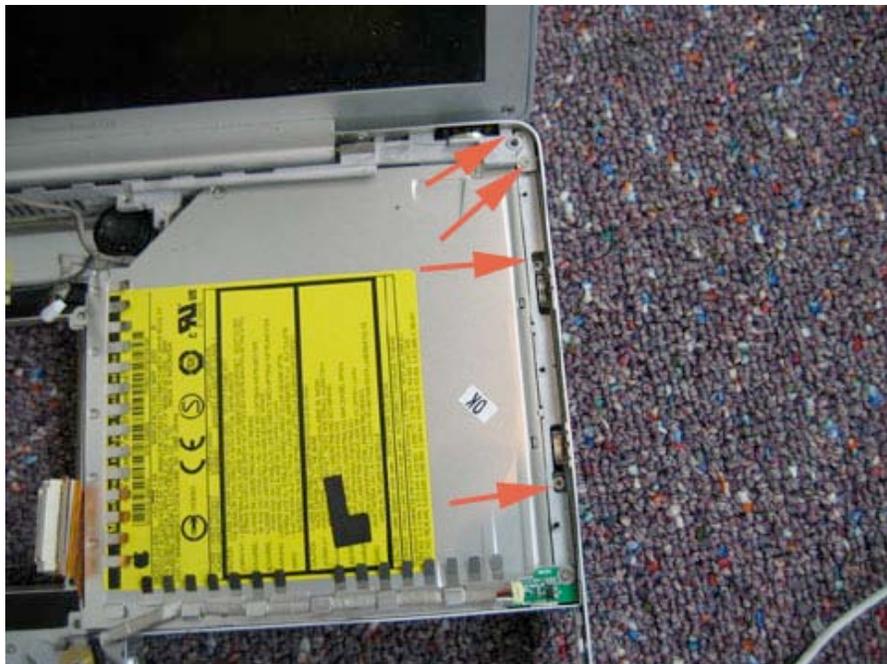
# Optical Drive Removal

Before proceeding, you must first remove:

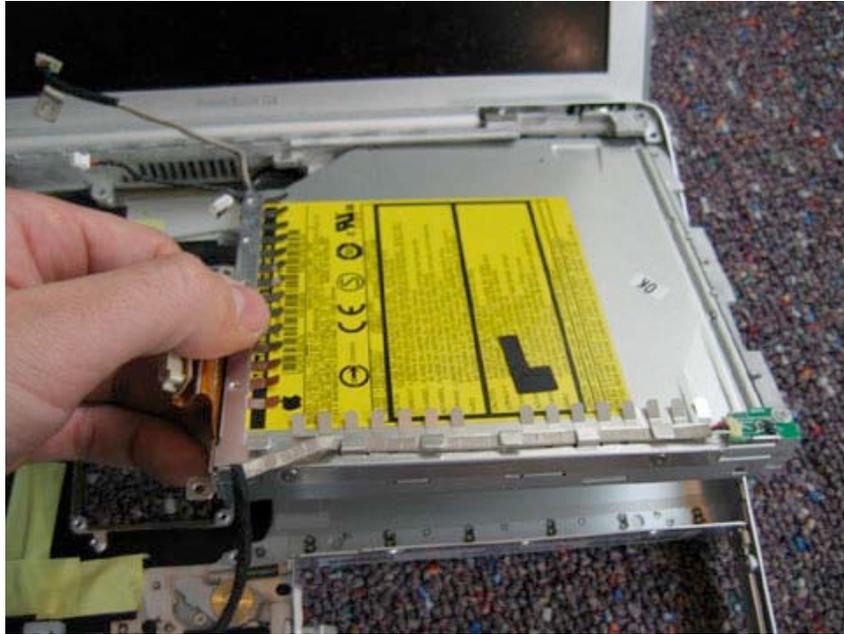
**Battery**  
**Ram Access Door**  
**Airport Extreme Card**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**  
**DC-DC Board**  
**Modem**  
**Heatsink**  
**Rib Frame**  
**Logic Board**

Remove the 4 Philips head screws from the locations shown. The two screws in the corner hold down a small curved bracket. Remove this after the screws are removed, and make sure to reinstall it during reassembly.

The two screws on the side are located inside the groove.



Close to the display, the optical drive is held in place by a “ledge” To remove the drive, lift the drive up as shown in the picture and pull towards you. The drive should come out easily. Note that during reassembly you need to place the edge of the drive first under the ledge, and then press down.



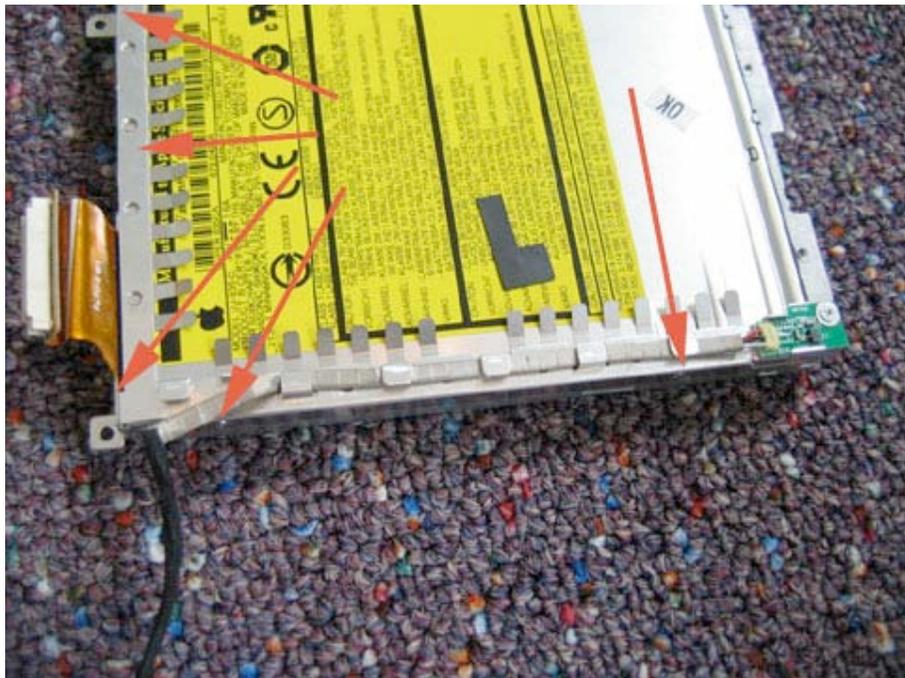
# Optical Drive Bracket / Cable Removal

Before proceeding, you must first remove:

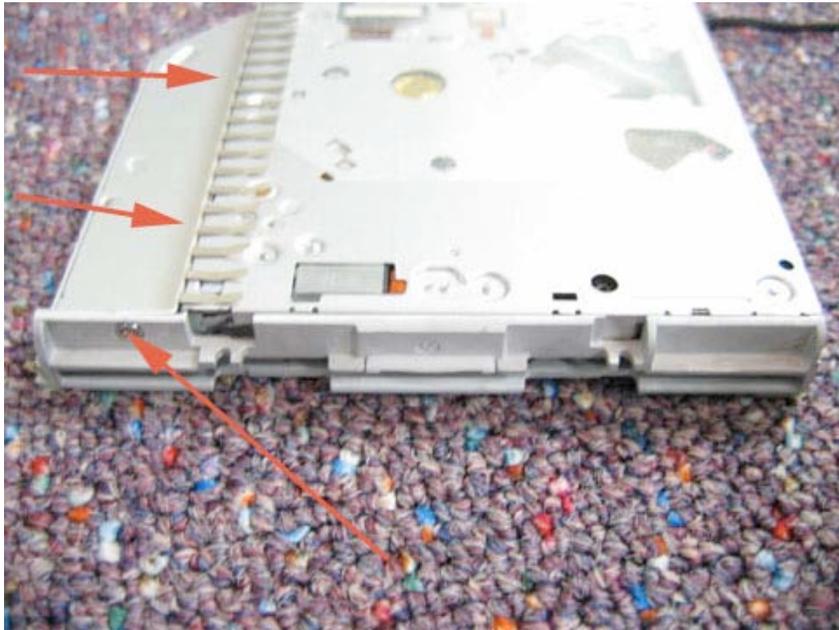
**Battery**  
**Ram Access Door**  
**Airport Extreme Card**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**  
**DC-DC Board**  
**Modem**  
**Heatsink**  
**Rib Frame**  
**Logic Board**  
**Optical Drive**

The optical drive bracket consists of 2 “L shaped” EMI shields. Begin by removing the first “L” shaped EMI shield by remove the 5 Philips head screws at the locations shown in the picture, noting that the screws are on the side of the drive, not on the top.

With these 5 screws removed, the first bracket should easily lift off of the optical drive.



To remove the second EMI shield, remove the 3 Philips head screws in the locations shown in the picture below.



### **Optical Drive Bezel**

To remove the front bezel from the drive, simply pull the bezel towards you. Note that the bezel has tabs that latch into place. To reinstall a bezel, simply line up the new bezel with the proper holes and push the bezel into place.

### **Optical Drive Cable**

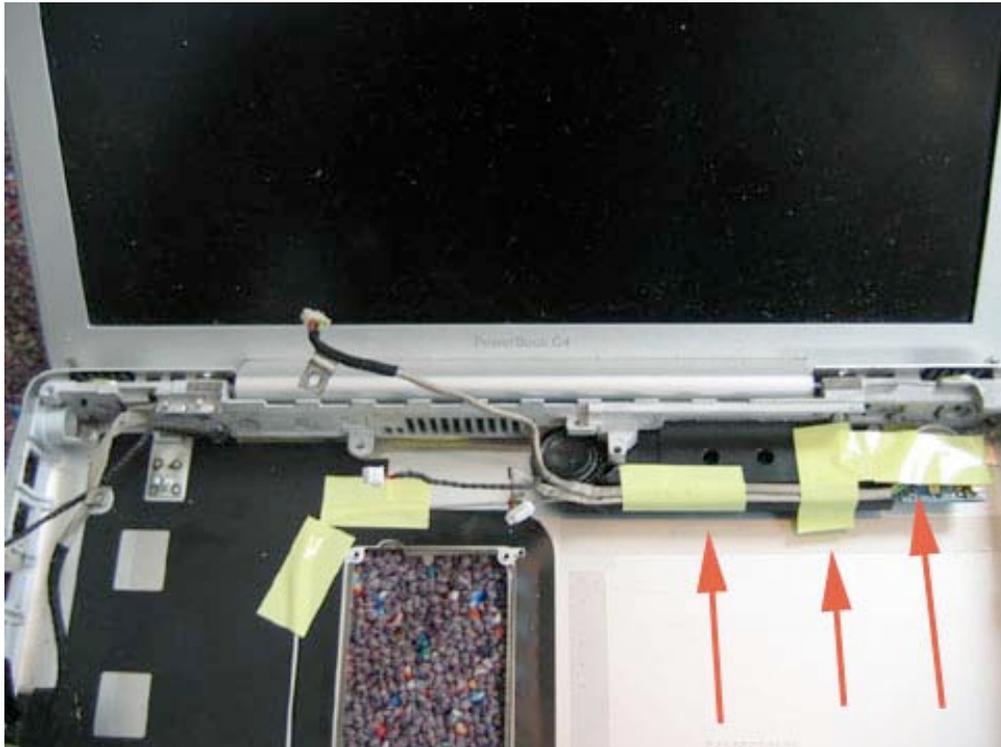
To remove the cable, first remove both EMI shields. Next gently pull the cable away from the optical drive. It should come out easily.

# Bluetooth Board Removal

Before proceeding, you must first remove:

- Battery**
- Ram Access Door**
- Airport Extreme Card**
- Keyboard**
- Trackpad / Palmrest Assembly**
- Hard Drive**
- DC-DC Board**
- Modem**
- Heatsink**
- Rib Frame**
- Logic Board**
- Optical Drive**

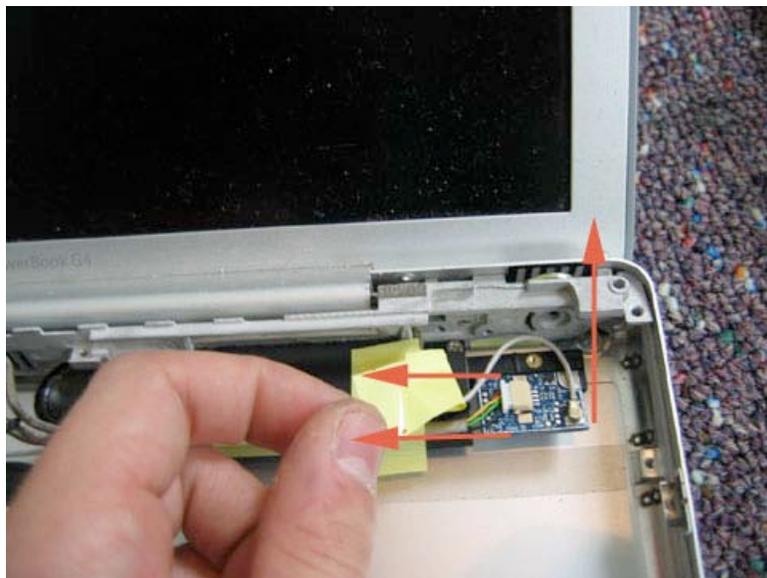
Begin by removing any strips of yellow tape that are covering the Bluetooth board and subwoofer assembly. The location of these parts is shown in the picture below.



Next, remove the single Philips head screw holding down the Bluetooth board in the location shown below.



The multi color cable going into the Bluetooth board is the Bluetooth cable. Undo this cable by grasping the cable and pulling it gently to the left. The grey cable with the gold end is the Bluetooth antenna. Disconnect this cable by grasping the gold receptor and gently pulling up. To reattach, align the connector and push down until it is “snaps” into place.

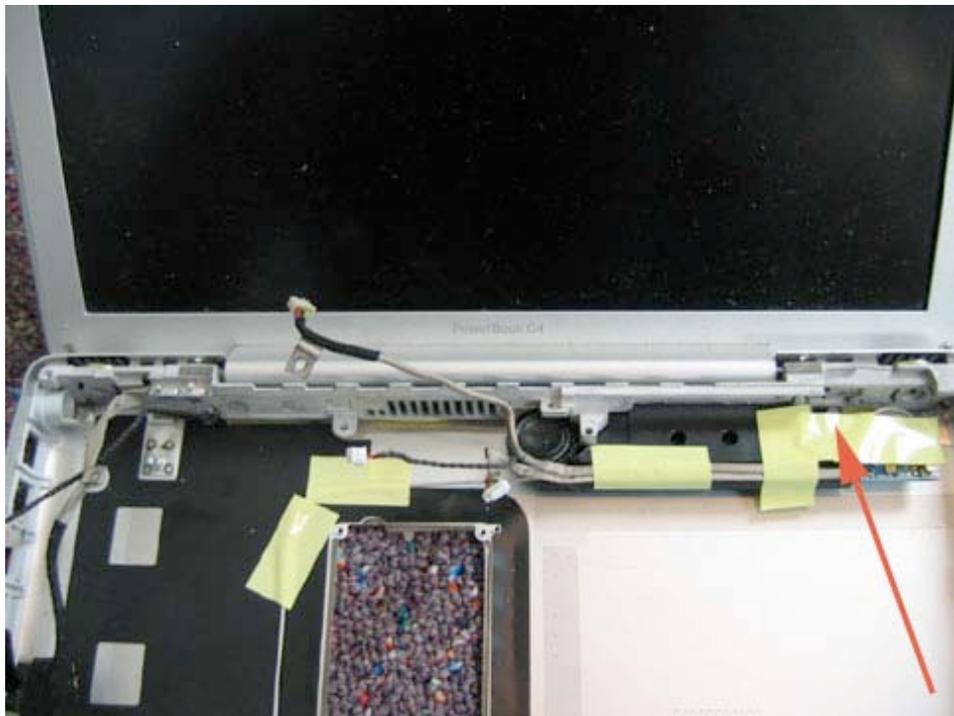


# Subwoofer Removal

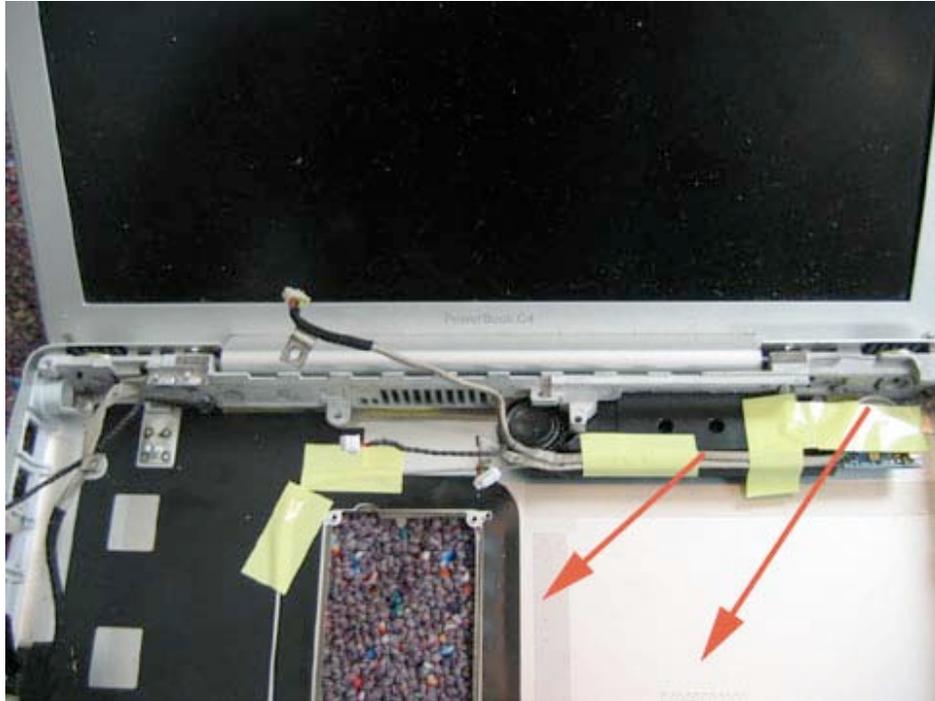
Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Airport Extreme Card**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**  
**DC-DC Board**  
**Modem**  
**Heatsink**  
**Rib Frame**  
**Logic Board**  
**Optical Drive**  
**Bluetooth Board**

Begin by removing any yellow tape remaining on the subwoofer if you have not removed it previously. Next, remove the single Philips head screw in the location shown.



With the tape and screw removed (not removed in picture below) pull the subwoofer towards you and to the left to remove it from the unit.

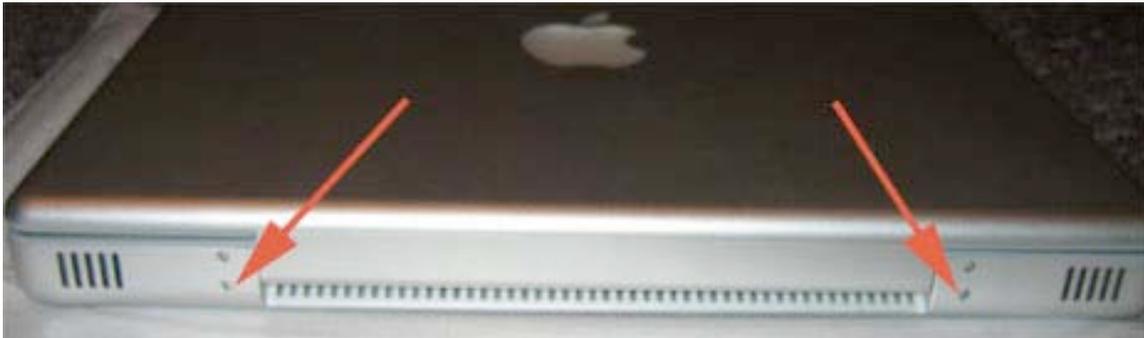


# Display Module

Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Airport Extreme Card**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**  
**DC-DC Board**  
**Modem**  
**Heatsink**  
**Rib Frame**  
**Logic Board**  
**DC-IN Board**  
**Optical Drive**  
**Bluetooth Board**  
**Subwoofer**

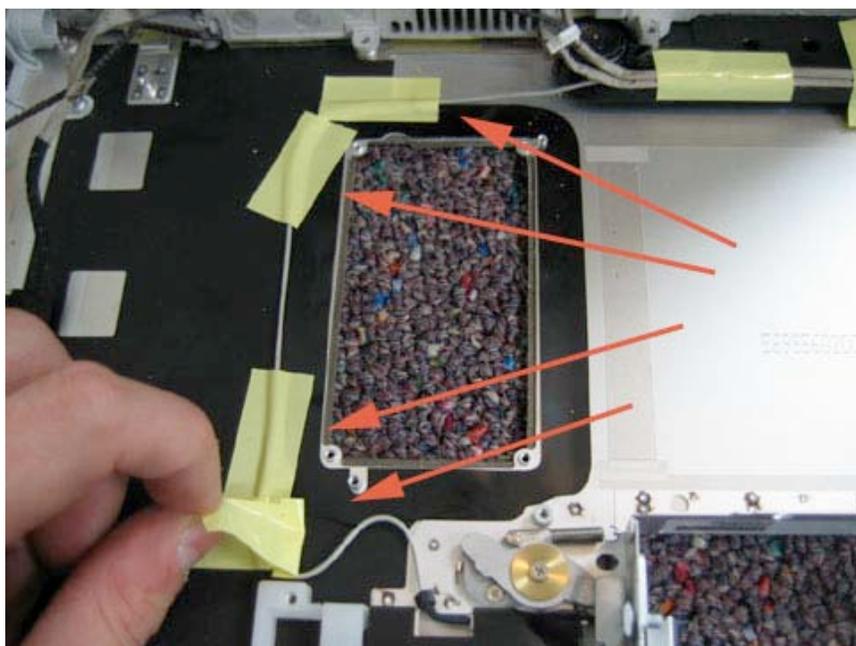
Begin by removing the two Philips head screws on the bottom row of the back of the unit as shown in the picture below.



Next, flip the unit over, and remove the two Philips head screws on the back edge of the bottom case at the locations shown in the picture below.



Next, remove any tape holding the grey airport cable in place.



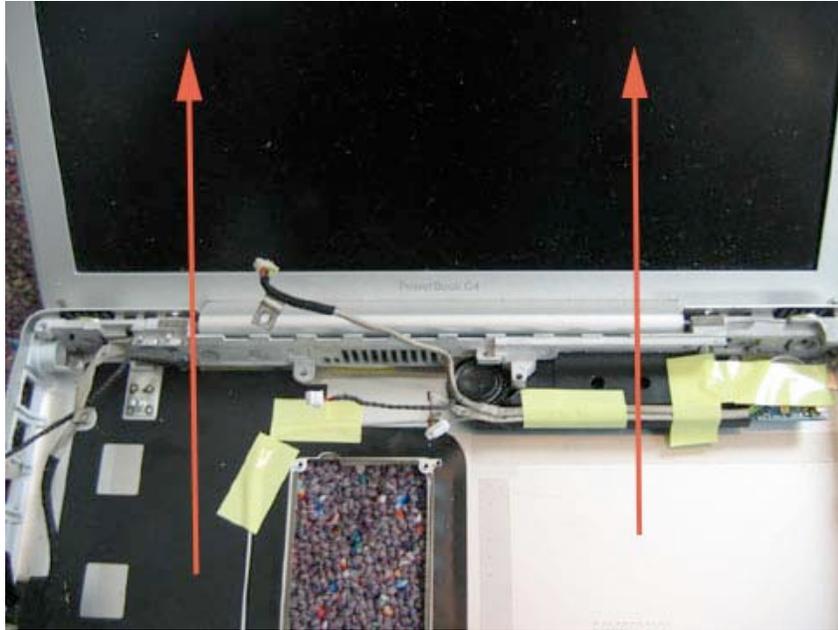
At the airport extreme slot, using your finger, hold back the top right corner of the black adhesive that runs on the top of the airport extreme slot as shown in the picture below.



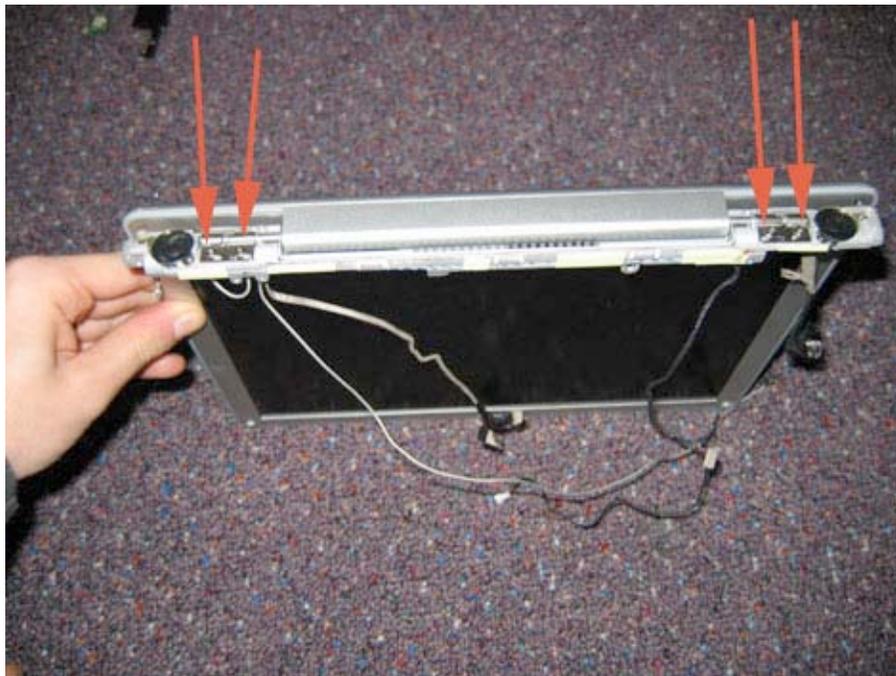
Next, use your flat tool to lift the cable up and over the metal divider, pulling towards you so that the cable ends up in the airport extreme slot. Next, pull the cable through the slot on the left hand side of the slot (not through the opening the card goes in.) This will free the airport cable.



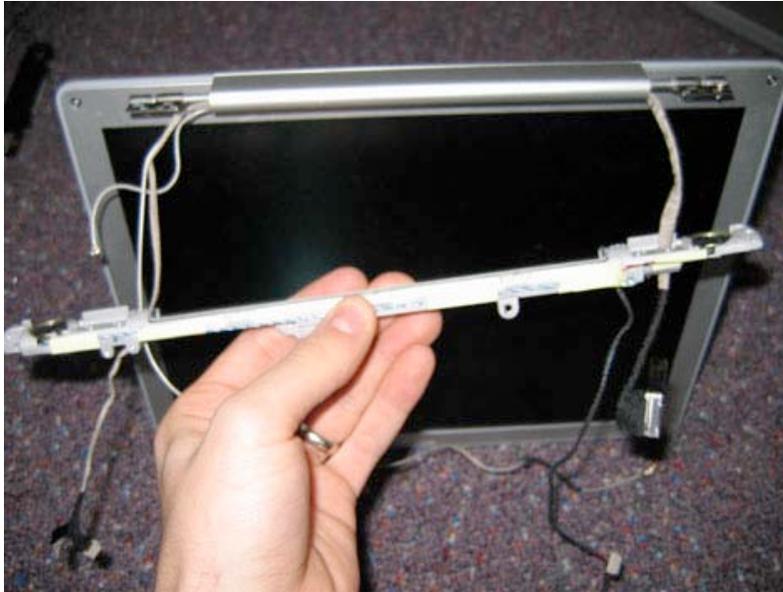
You will now be able to lift the display module up and out of the unit. If it does not come out easily, adjusting the angle of the display will help it to come free.



Hold the display module as shown, and remove the 4 Philips head screws in the locations shown.



Remove the speaker panel by pulling it towards you and routing the cables through the holes in the speaker panel.



# Bottom Case Removal

Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Airport Extreme Card**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**  
**DC-DC Board**  
**Modem**  
**Heatsink**  
**Rib Frame**  
**Logic Board**  
**DC-IN Board**  
**Optical Drive**  
**Bluetooth Board**  
**Subwoofer**  
**Display Module**

Once you have the display module removed, no further disassembly is required as the bottom pan will be free to be replaced.

# Display Back Casing

Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Airport Extreme Card**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**  
**DC-DC Board**  
**Modem**  
**Heatsink**  
**Rib Frame**  
**Logic Board**  
**Optical Drive**  
**Bluetooth Board**  
**Subwoofer**  
**Display Module**

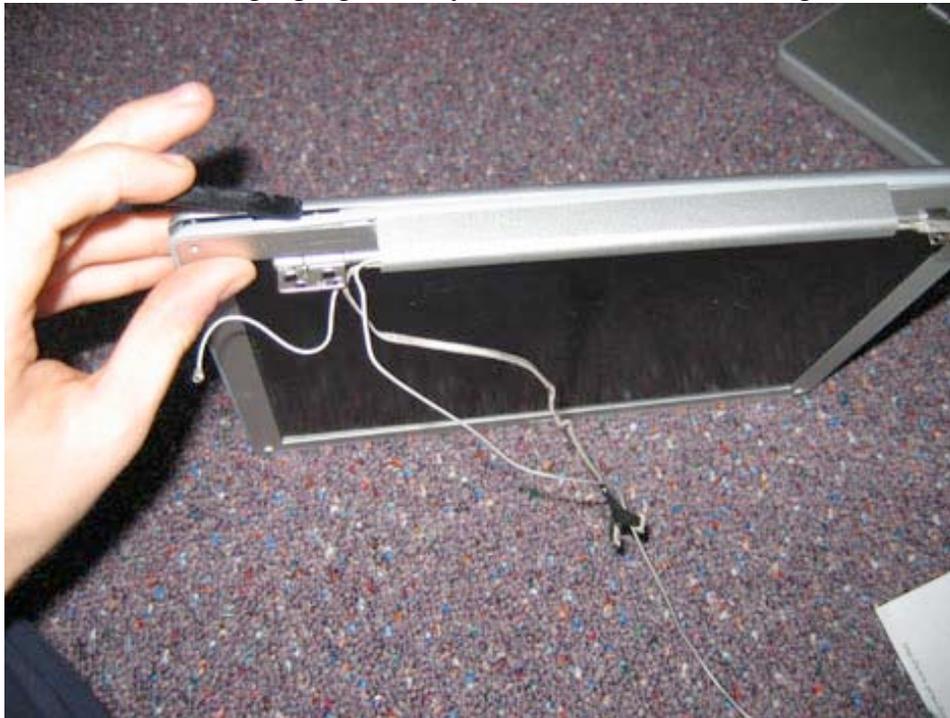
Begin by removing the two t6 screws from the front the display casing at the locations shown in the picture below:



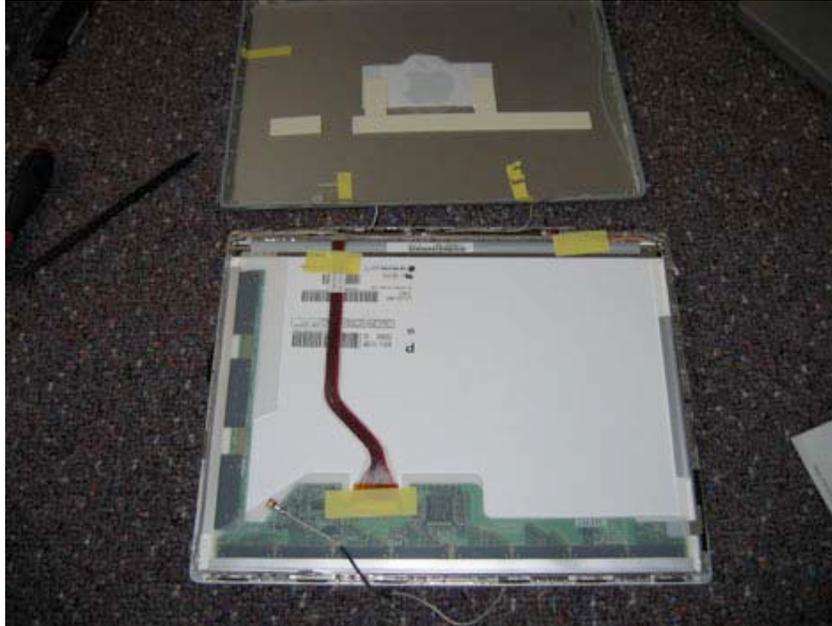
Use your flat tool to separate the front bezel from the back case. The back case includes the light grey plastic trim, so insert your tool on top of the trim between it and the front bezel as shown in the picture below. The hardest part will be separating the first corner.



With the first corner separated, work your way around the entire display casing. The case should get progressively looser and easier to manage.



The back case should now be completely free. Flip the case back as shown in the picture.  
\*Note the display case has airport cables running up either side of it. Be careful not to damage these cables or try to pull the display case completely off.



Next, you need to undo the two airport cables from either side of the display back case. First, remove all of the yellow tape holding down the cables. Next, use your flat tool to push the cable out from all of the plastic latches running up the side of bottom of the case.



The end of each cable has a metal portion that is held in place by two clips. Use your flat tool to gently pry the clip free of the two receptors.

Try not to break the receptors, but they are fragile, and do sometimes break. If this happens, during reassembly, line the metal end where it should be, and hold it in place with some anti-static tape.

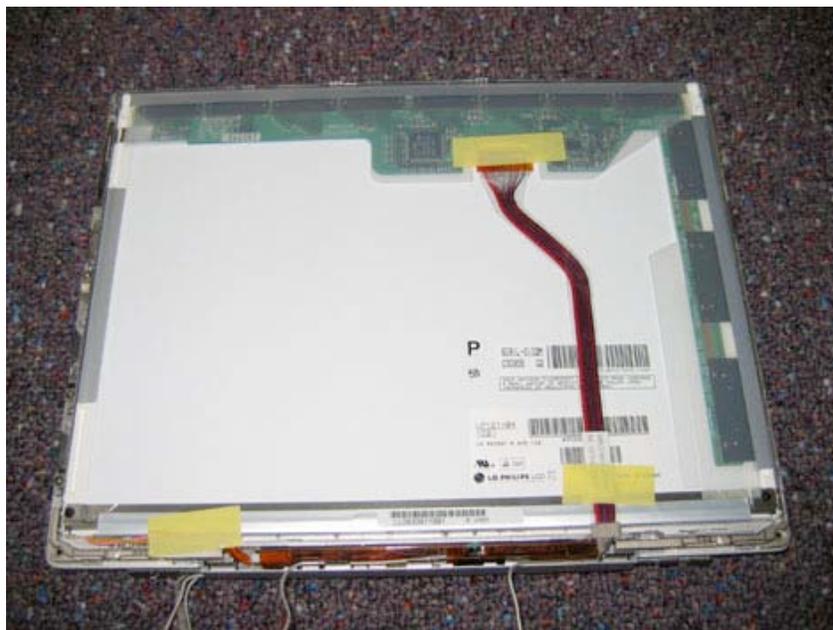


# Display LCD

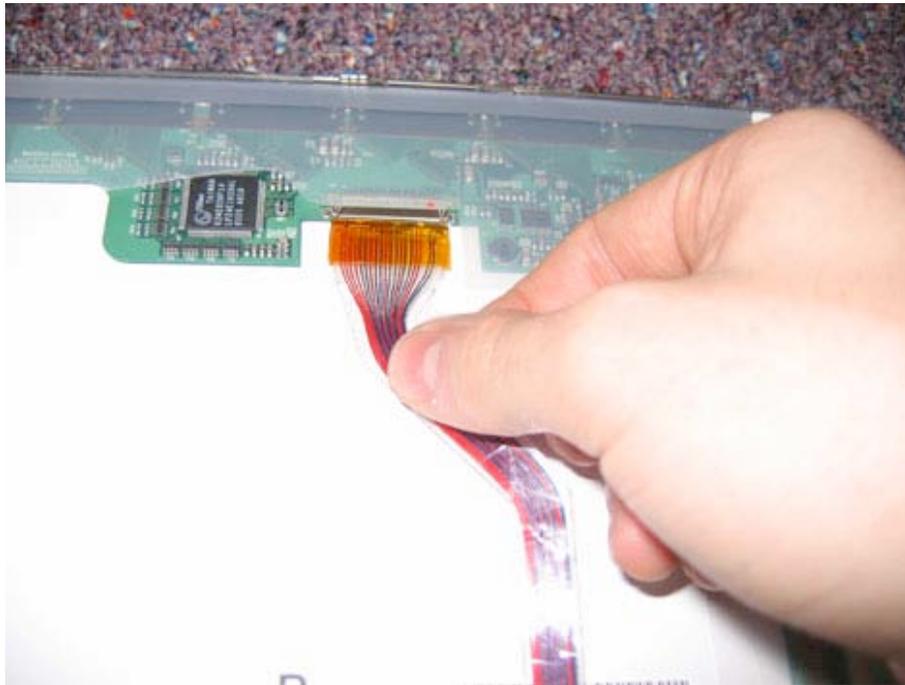
Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Airport Extreme Card**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**  
**DC-DC Board**  
**Modem**  
**Heatsink**  
**Rib Frame**  
**Logic Board**  
**Optical Drive**  
**Bluetooth Board**  
**Subwoofer**  
**Display Module**  
**Display Back Case**

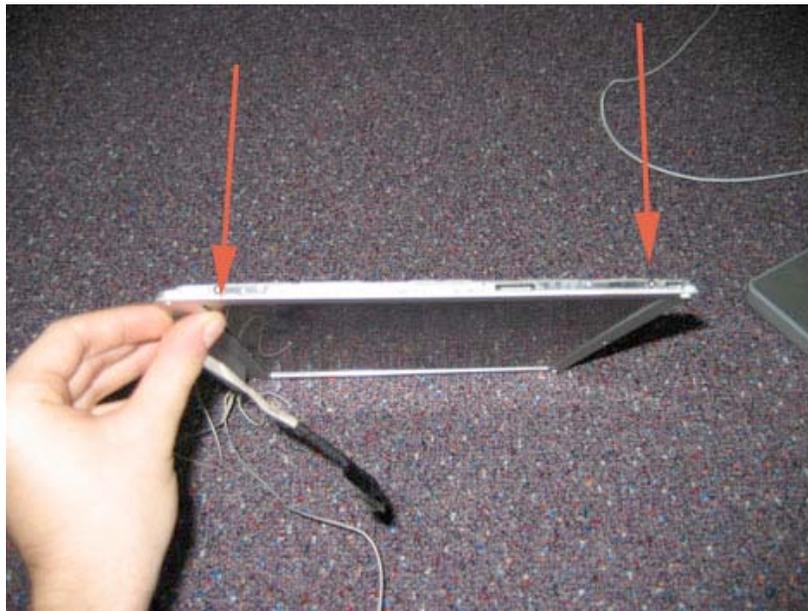
Begin by removing any tape located on the back of the LCD.



With the tape removed, disconnect the display cable from the LCD by gently grasping it and pulling towards you. It should come free easily.



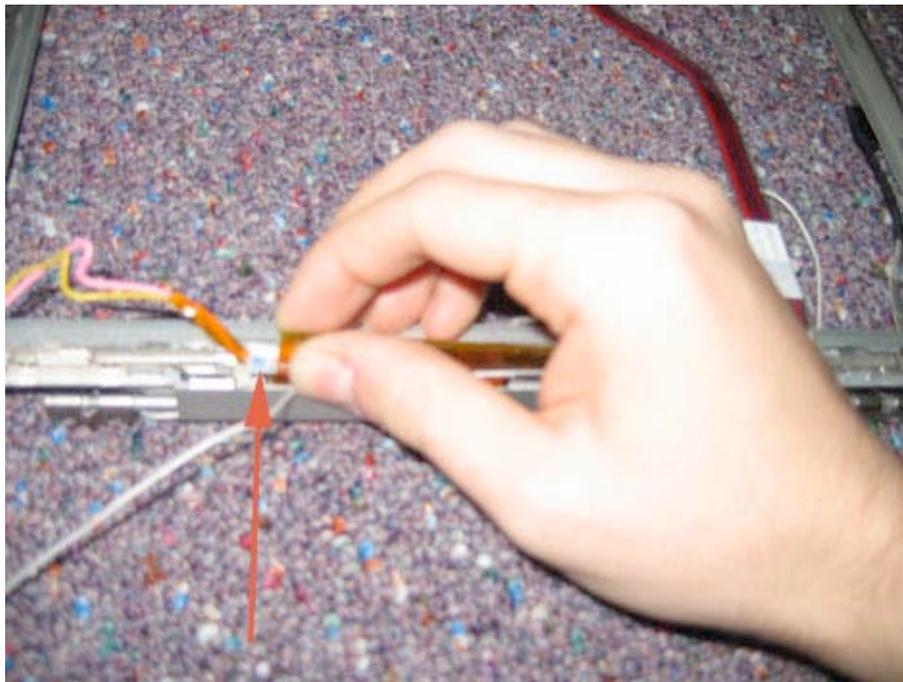
On either side of the LCD are two 3mm Philips head screws. Remove two from each side for a total of 4 screws.



The LCD panel will now be free except for the inverter cable that comes out of the bottom left of the LCD panel. Lift up the LCD and rotate it to the left as shown.



The inverter cable connects to the inverter board as shown. To disconnect the cable, grasp the board in one hand (you may have to slightly pry up the board using your pry tool) and the cable in the other, and pull the two apart. The cable may take a little force to come loose. The LCD will now be free to be removed.



## Inverter Board / Display Cable

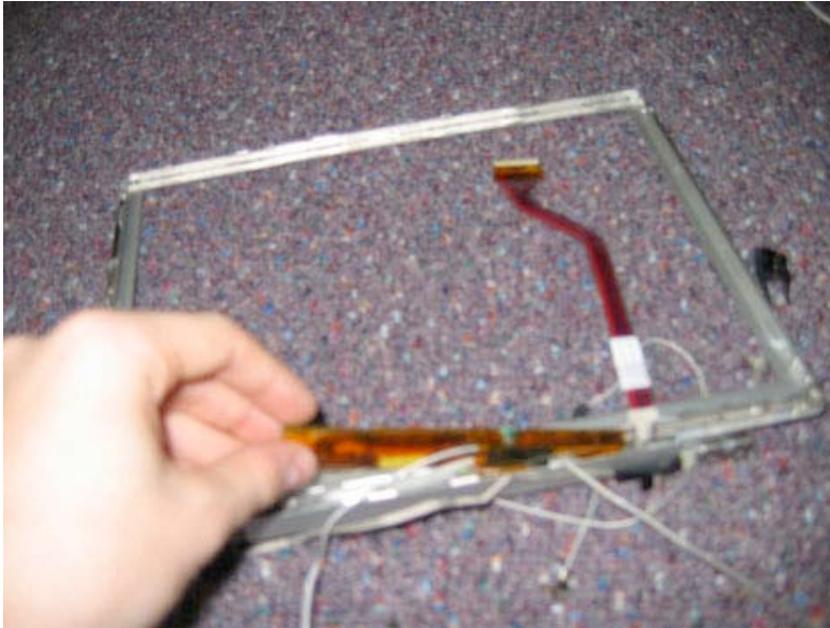
Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Airport Extreme Card**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**  
**DC-DC Board**  
**Modem**  
**Heatsink**  
**Rib Frame**  
**Logic Board**  
**Optical Drive**  
**Bluetooth Board**  
**Subwoofer**  
**Display Module**  
**Display Back Case**  
**LCD**

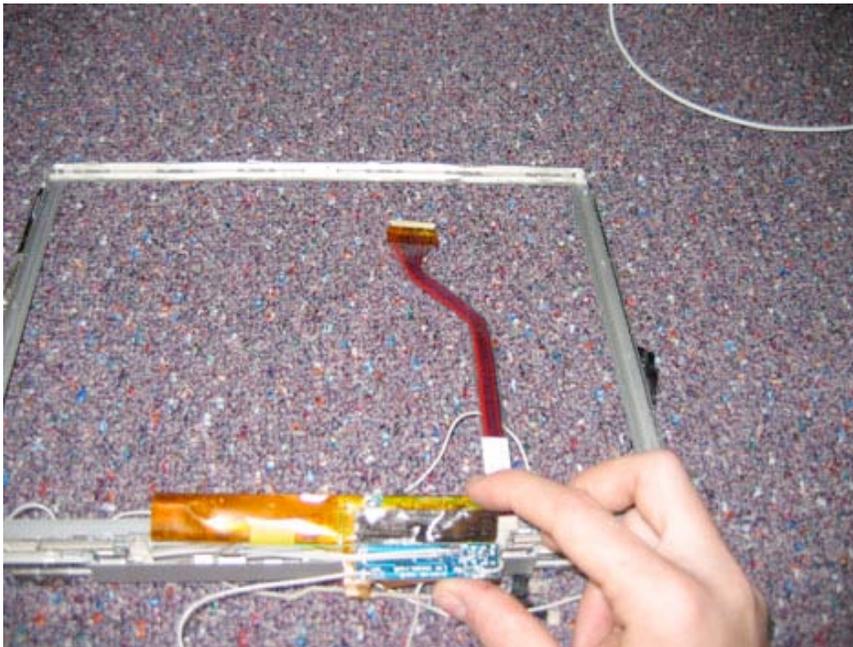
Begin by removing the single Philips head screw on the inverter board at the location shown.



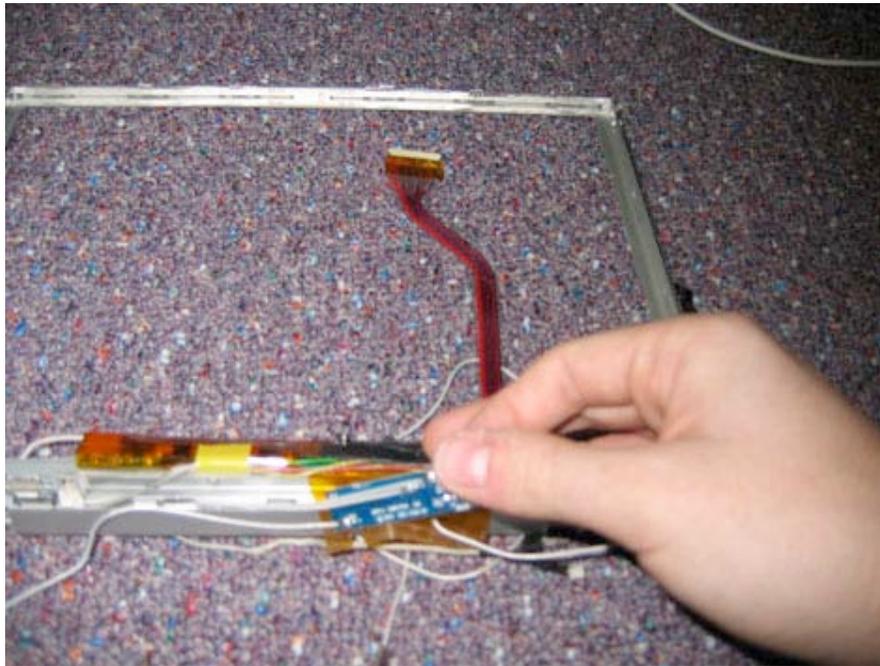
You can now lift the board up as shown.



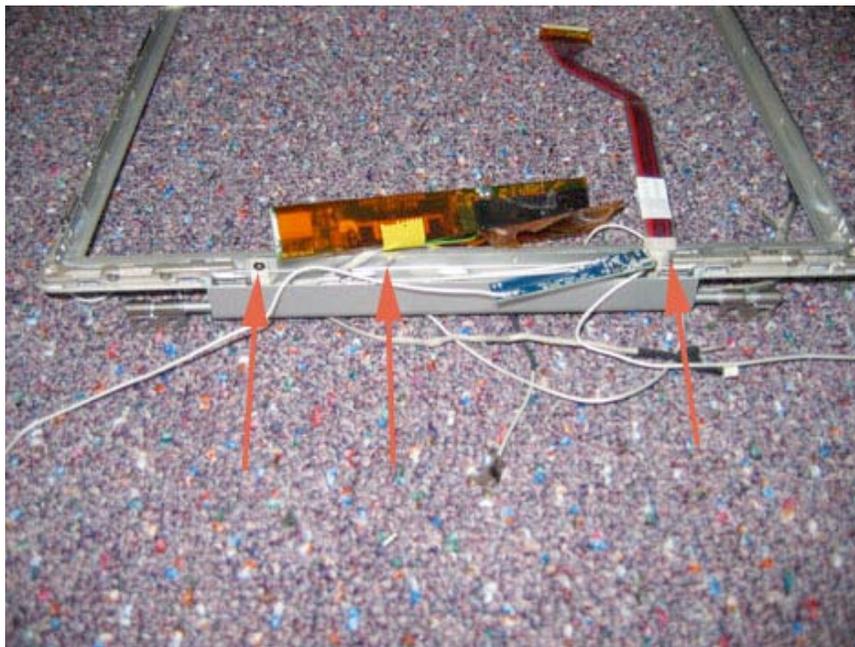
On the inverter board, on the right hand side is the airport cable bundle. Begin by removing any yellow tape on the inverter board and my folding back the orange tape covering the airport cable bundle as shown in the picture below.



Grasp the blue board holding the airport cable bundle, and pull it away from the inverter board and orange tape as shown.



Next, remove the 3 Philips head screws from the locations shown. The screw on the far right is located behind the display cable.



With the screws removed, you should be able to pull the clutch cover down and release the inverter cable and inverter board.



### **Display Cable**

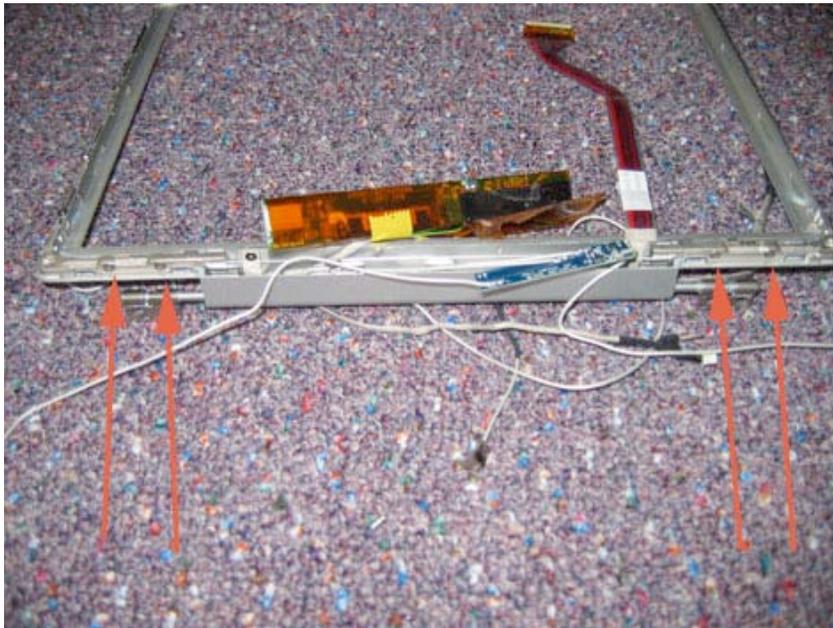
You should now be able to remove the display cable from the clutch cover by simply lifting it out.

## Clutches / Hinges / Display Bezel

Before proceeding, you must first remove:

**Battery**  
**Ram Access Door**  
**Airport Extreme Card**  
**Keyboard**  
**Trackpad / Palmrest Assembly**  
**Hard Drive**  
**DC-DC Board**  
**Modem**  
**Heatsink**  
**Rib Frame**  
**Logic Board**  
**Optical Drive**  
**Bluetooth Board**  
**Subwoofer**  
**Display Module**  
**Display Back Case**  
**LCD**  
**Inverter Board**

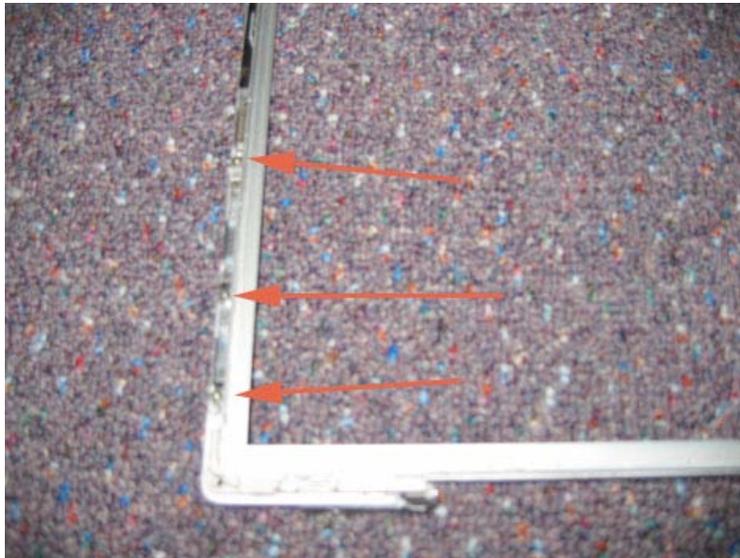
Begin by removing the four Philips head screws from the locations shown in the picture below.



The right hinge (left if the display was open and you were looking at it) will now be free to be lifted out of the unit as shown in the picture below.



On the left hinge, remove the three Philips head screws in the location shown below.



You can now lift the left hinge out of the bezel.



### **Display Bezel**

The display bezel will now be by itself and ready to be replaced.

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