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Powerbook G3 Wallstreet (1998) 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

Identifying the Wallstreet Powerbook

If the writing under your display only has the words “Macintosh Powerbook G3” and the multicolored Apple logo as shown, then you have a Wallstreet.



The design of the rear ports is as in the picture below. Note there are no USB or Firewire ports. The Wallstreet has to add these ports via PCMCIA cards.



Identification of Parts

Before we begin with the actual take apart, we will label the parts discussed in the manual. If you need to order any of these parts, they are available from
www.powerbookmedic.com



Processor



Display



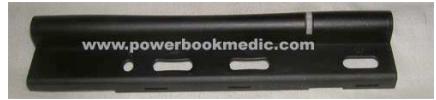
Logic Board



Heat Sync



Modem



Clutch Cover



Sound / AC Board



PRAM Battery



Charger Board

Required Tools

Torx T8 Screwdriver – available from www.powerbookmedic.com



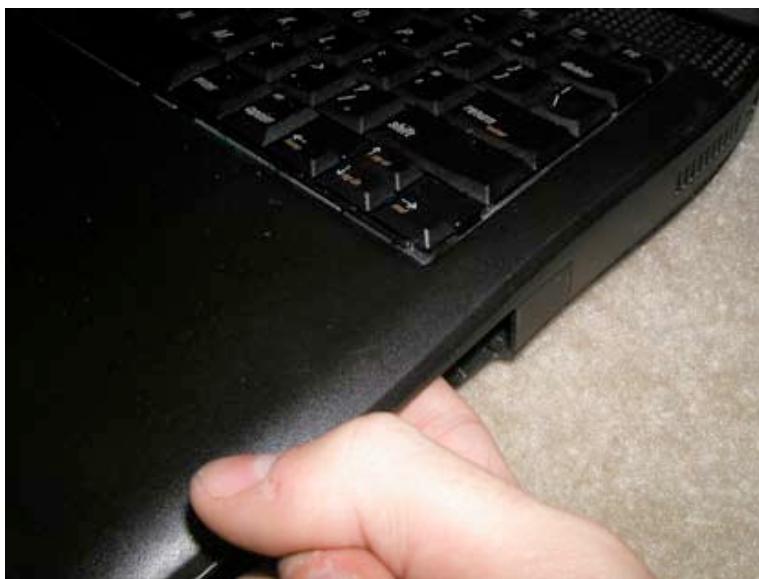
Flathead Screwdriver & or Philips Head Screwdriver



Keyboard & Modem Replacement



Begin by removing any expansion bays you have installed. Simply pull the expansion bay lever towards you to eject the device. Then pull the device out so the bays are completely empty.



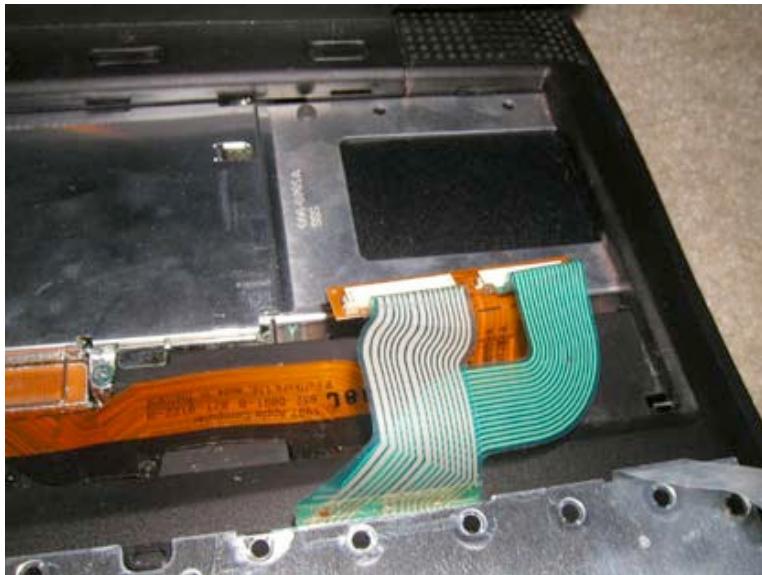
Put your index finger inside the expansion bay, and on the top of the side of the case close to the keyboard, search for a latch. Push with your finger, and move the latch towards you to unlock the keyboard. (You must do this to both sides. The keyboard latch will move easily, don't use excessive force.) (Replacement note: hold down the bottom corner of the keyboard before locking the latch back in order to make sure the keyboard locks.)



Lift the keyboard up and pull towards you to free the metal locks on the top of the keyboard. Then flip the keyboard out towards you.



Undo the clear plastic tabs on the left and right side of the keyboard by sticking a flat head screwdriver behind the plastic while pulling up on the plastic. They should come out easily. (Replacement note – The clear tabs simply slide back into the groove. After you slide them in, they should “lock” in place.)



Undo the two keyboard ribbon cables by gently pulling the cables while holding on to the connector end. The cables should come out with ease.

The keyboard can now be removed.

Modem / Heat Sync Removal & Replacement

(Remove Keyboard first)

Heat Sync / Shield Removal

Remove the two philips head screws as shown. Be careful not to strip the screw! Make sure to apply force down while turning to ensure that you do not strip the screw. If you do strip the screw then you will need to find a way to undo the screw, and it isn't easy. Needle nose pliers do the trick most of the item.

Now, pull up on the heat sync handle to lift the heat sync up and away from the laptop.



Remove the one Philips head screw as shown. Being careful again not to strip the screw.



Lift the modem up and out as shown.

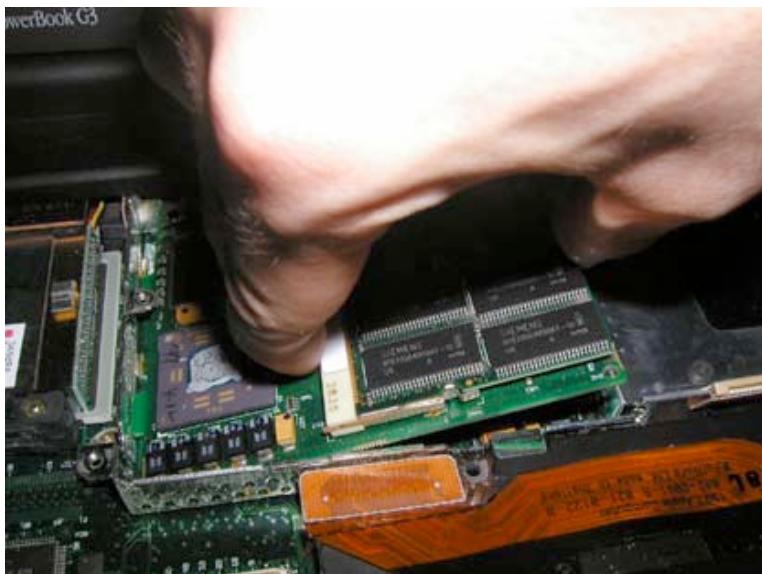


Processor Replacement

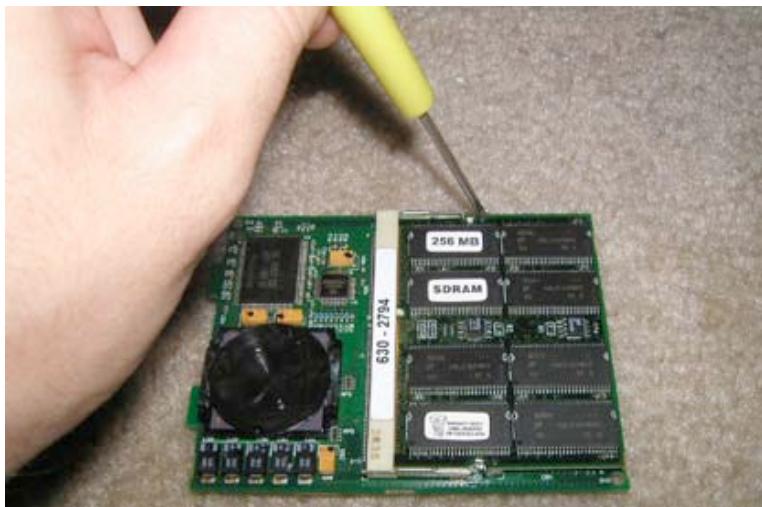


(Remove keyboard and heat sync first)
Note – The heat sync must be removed as shown above before proceeding. The modem does not have to be removed to remove the processor.

To remove the processor, put the flathead screwdriver on the right hand side of the processor as shown. Then gently pry up until the processor pops out. *Do not use too much pressure. If the processor does not easily come out, simply try another location in the bottom right hand corner. It should be relatively easy to pop out.



Remove the processor as shown, and place on a static free surface.



Ram Replacement

(Remove keyboard, heat sync, & processor first)

Note – To change the ram in the upper slot you do not need to remove the processor. You only need to for the bottom slot.

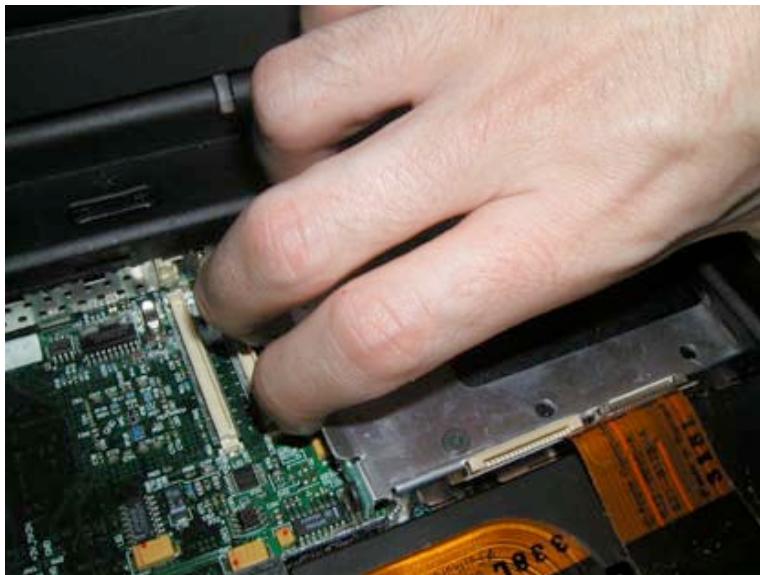
Using either a flat head screwdriver or your fingernail, pry back the metal fasteners holding in the ram as shown. Do this on each side. It's easier if you do them at the same time. To install new ram, align the grooves, slide in,

Hard Drive Replacement



(Remove keyboard, heat sync, and processor first)

Loosen the Philips head screw as shown (In some machines this is a torx screw.) The screw will not come out. It will only loosen. Loosen as much as you can.



Pull the hard drive up and out as shown.



Remove the 6 Torx Screws as shown. Then, grasp the green motherboard connector by the sides and pull it towards you. It should come off easily. The hard drive will now easily come out of its mounting bracket.

Display Replacement



(Remove keyboard, heat sync, processor, and hard drive (optional) first)

Tilt the display back, and pull the power button clutch cover upwards. (This can sometimes take a lot of force. The more tilted the display, the easier it is to take off.)



Using a Torx T8 screwdriver (available from www.powerbookmedic.com) , remove the four flathead torx screws on the back of the unit as shown. (Replacement Note: These four screws have flat heads, not the rounded heads like the other torx screws, do not get them confused.)



Grasp the orange display cable on the left of the laptop as shown. Gently pull up to undo it from the motherboard.



Grasp the orange display cable on the right of the laptop as shown. Gently pull up to undo it from the motherboard.



Now, pull the display back up so it is perfectly vertical. Place your hands on the right hand and left hand side of the monitor, and lift the display out of the casing.

Hinges / Display & Inverter Cable / LCD Replacement



(Remove display first by following the instructions above)

There are 6 points on the display with coverings or rubber stoppers that cover torx screws. Notice their position in the picture.



Using a flat head tool, pry up the flat plastic covering on the bottom of the display on either side of the cables. The left side is shown in the picture.



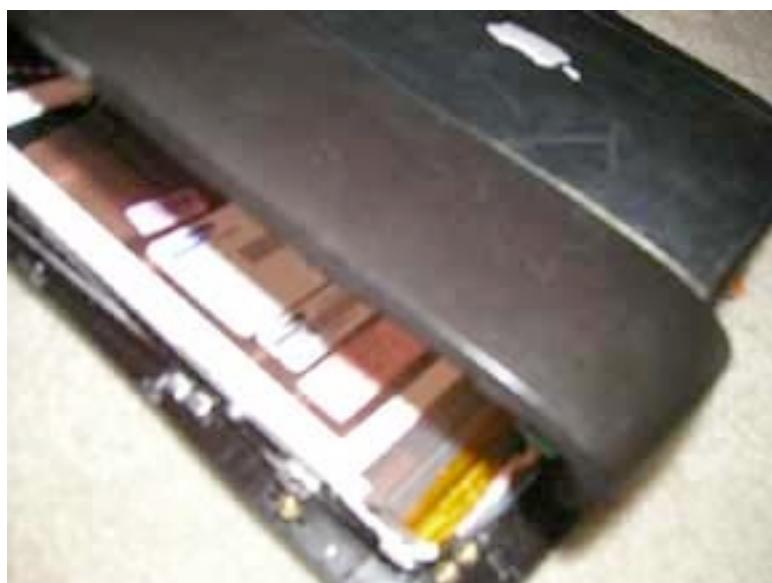
After removing the coverings on the bottom, remove the 4 rubber inserts simply inserting a flat head tool and prying up. The inserts should come out easily. Remove all 4 and then continue.



Remove the 6 torx screws at each of the 6 locations you have removed the cover from using your Torx T8 scredriver. (Available from Powerbookmedic.com)



You now have to separate the back casing from the display. You will have to pry the casing free. It is easiest if you start from the spot right under the apple logo.



You will have to use a little force to pry the casing off. Then lift the back casing up and away from the LCD.



This is what you should be looking at after removing the back case.



Right Hinge & Display Cable Replacement

If you are repairing the left hinge or inverter cable, you do not need to follow this step. If you are replacing the display cable, right hinge, or LCD, follow this step.

Remove the 4 Torx T8 screws from the positions shown in red.



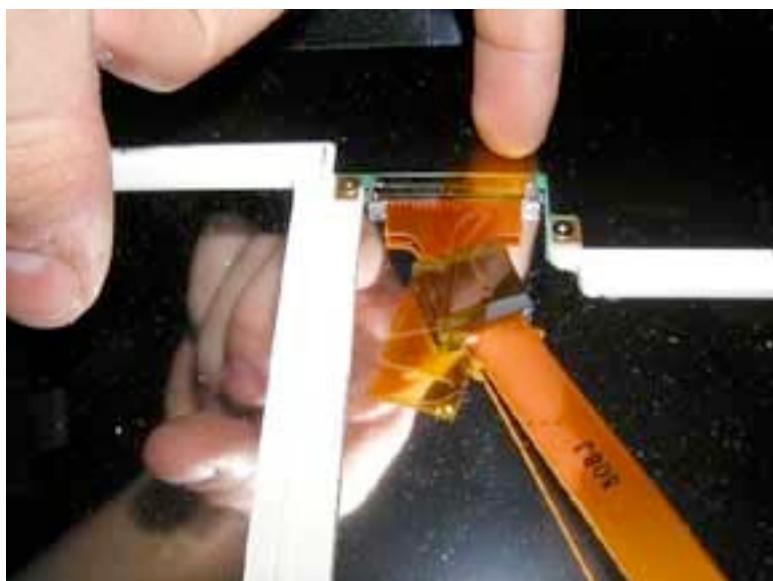
Guide the hinge to the right from under the display, then lift it up and free from the casing as shown.



The display cable is held onto the hinge by two little holes with a small metal rod. Simply pull this part of the cable off of the hinge as shown in the picture.



The display cable is wound around the hinge. You will need to unwind it from the hinge to remove it. When you replace the hinge or display cable, make sure to wind it back around the hinge.



To remove the display cable, locate where the cable attaches to the display, and remove the piece of orange tape as shown. Then pull the display out of the connector. It should come out easily.



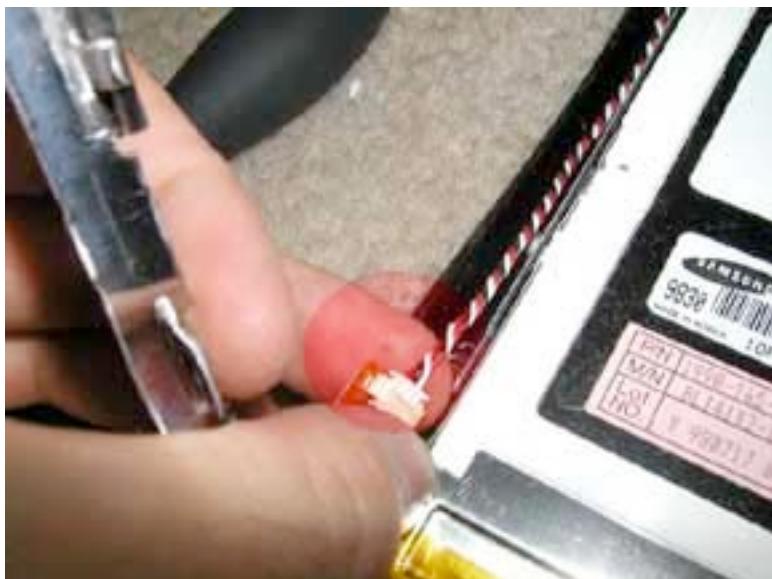
Left Hinge / Inverter Cable Replacement

If you are repairing the right hinge or display cable, you do not need to follow this step. If you are replacing the display cable, right hinge, or LCD, follow this step.

Remove the 4 Torx T8 screws from the positions shown in red.



Guide the hinge to the left from under the display, then lift it up and free from the casing as shown.



Remove the orange and white mic cable from the inverter cable as shown.



The inverter cable is held onto the hinge by two little holes with a small metal rod. Simply pull this part of the cable off of the hinge as shown in the picture.



The inverter cable is wound around the hinge. You will need to unwind it from the hinge to remove it. When you replace the hinge or display cable, make sure to wind it back around the hinge.

The hinge can now be replaced.



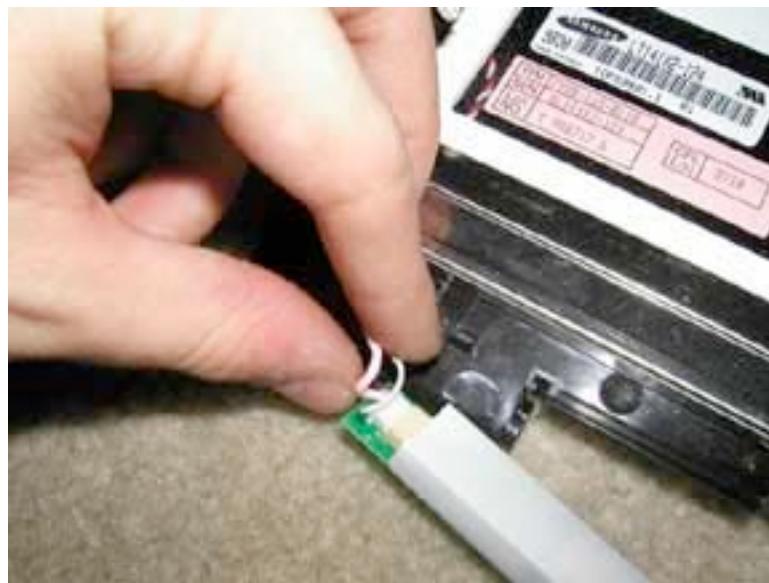
To remove the inverter cable, you will first need to remove the inverter board. Undo the two pieces of orange tape holding the inverter board to the LCD as shown.



Now lift the inverter board up and out.
(Fold it towards you.)



Undo the inverter cable from the inverter board as shown.
You can now replace the inverter cable.



To remove the inverter board, locate the inverter cable as shown. Pull the inverter cable from the inverter board. The cable should come out easily. The inverter board will now be free.



The LCD will now lift up and out of the front display bezel. To replace, simply place the new LCD with backlight into the display bezel, and follow the directions in reverse.

Trackpad Removal



(Remove keyboard, heat sync, modem, processor, hard drive, and display first)

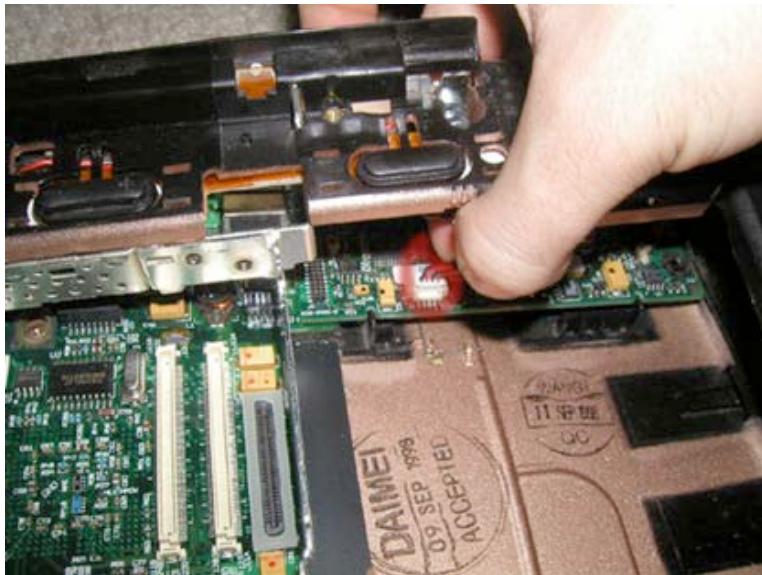
Remove the four torx screws as shown. Also, pull up on the orange PMU cable as shown so it is not connected to the motherboard.



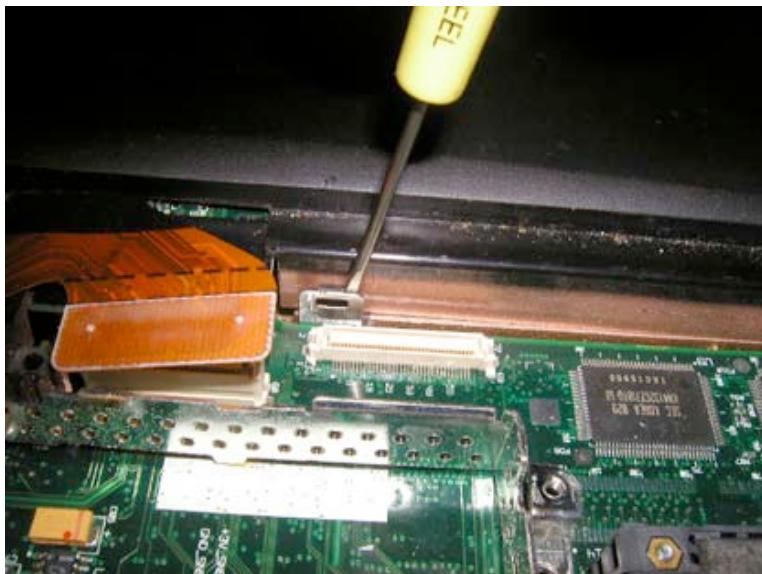
Turn the unit over, and remove the 8 torx screws as shown from the bottom casing.



Starting at the top right hand corner, lift up to begin separating the trackpad.



Undo the cable connecting the sound board and the trackpad as shown. Hold down the sound board and gently pull up on the cable. It will come out easily. Do not use excessive force.



If the trackpad is having problems coming off, make sure it is not caught on the latch next to the PMU cable as shown. (It is in front of the processor near the trackpad. If it is caught, use a flat head screw driver to undo the latch, and pull up on the trackpad.



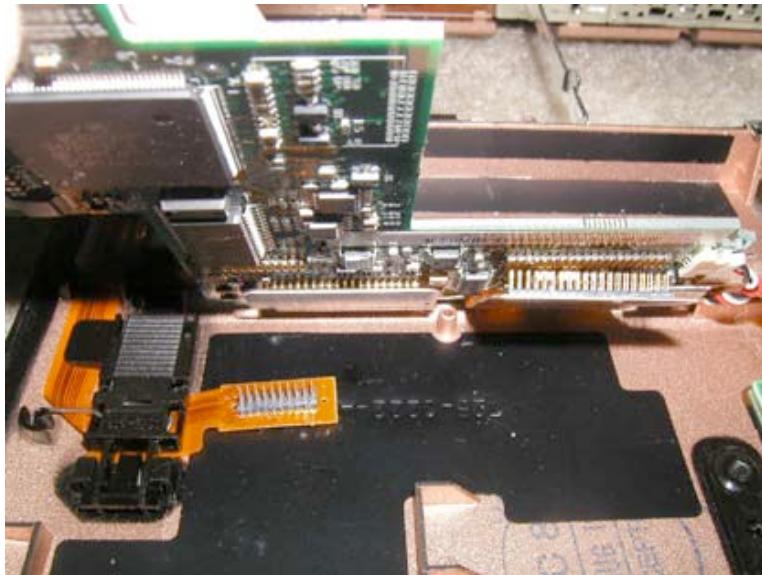
The trackpad should now come off with ease.

PMU Board / PRAM Battery Replacement

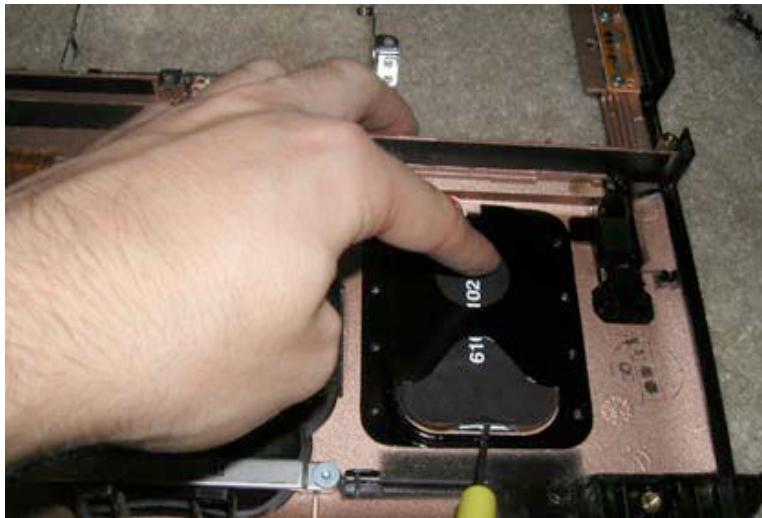


(Remove keyboard, heat sync, modem, processor, hard drive, display, and trackpad first)

Turn the trackpad over, remove the one torx screw as shown.



There are five different orange ribbon connections that must be undone. Lift the board up as shown, and then using either your flathead screwdriver or a fingernail, undo all of the connections. Then undo the black and white cable (PRAM battery cable.)



PRAM Battery Replacement

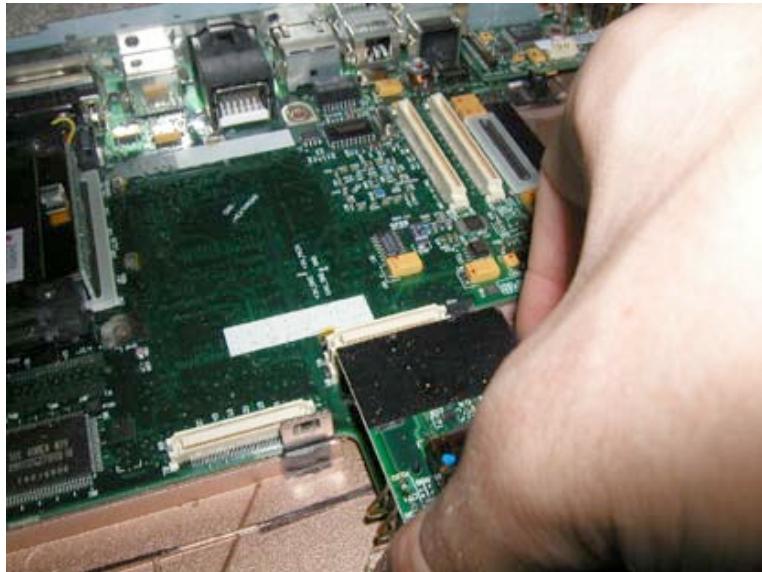
To remove the PRAM battery, push down as shown while using a flathead screwdriver to lift as shown. Slide the battery towards you while you are pushing down. The battery will slide out towards you.

Charger Board Replacement



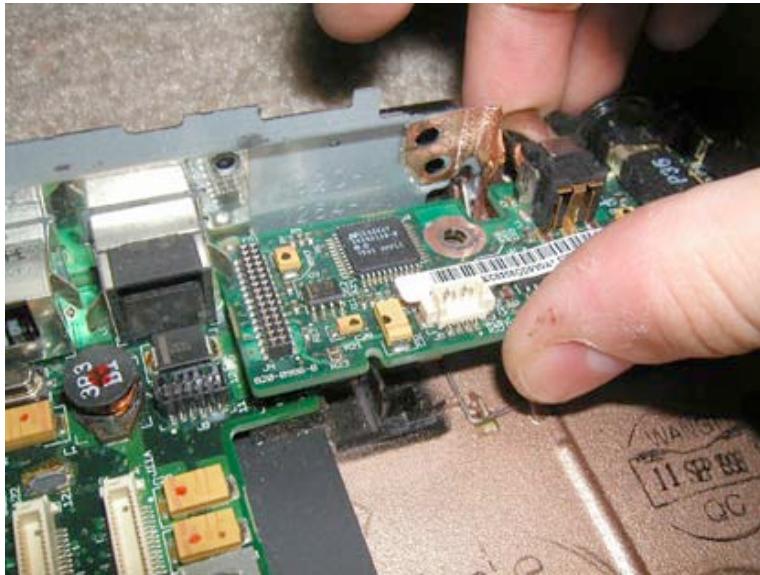
(Remove keyboard, heat sync, modem, processor, hard drive, display, and trackpad first)

Remove the one torx screw as shown.



Then, grab the charger board as shown, and gently wiggle it out of its connector. The board should come out with ease. Place the board on a static free surface.

Sound /AC Board Replacement



(Remove keyboard, heat sync, modem, processor, hard drive, display, and trackpad first)

Gently pull the sound board up and out as shown.

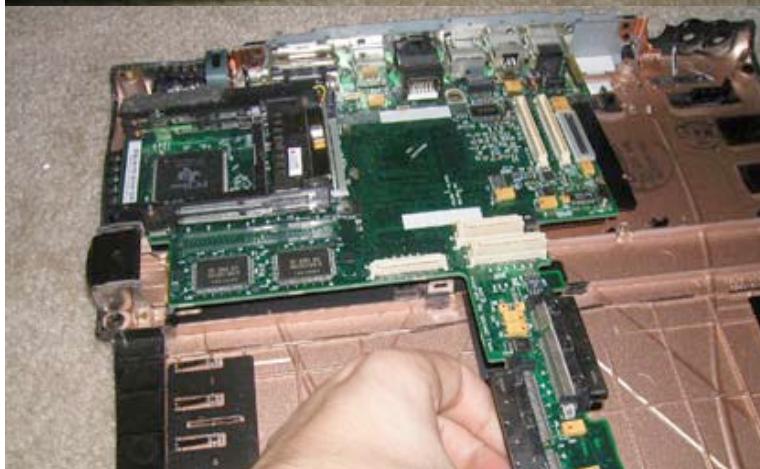
Logic Board Replacement



(Remove keyboard, heat sync, modem, processor, hard drive, display, trackpad, power board, and sound /AC board first.)

Using a Torx T8 screwdriver, insert the end into the “open screw” as shown. Push down and turn to undo the screw.

This screw can sometimes come off when you remove the charger board, so if it isn't there then it is on your charger board.



Pull the logic board up and out as shown. It should be relatively easy to remove.

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