iBook (14.1 LCD) - 600 MHz

AppleCare

Updated : 04-06-2002

Take Apart

Troubleshooting

iBook (14.1 LCD)

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Symptom Charts

How to Use the Symptom Charts

The Symptom Charts included in this chapter will help you diagnose specific symptoms related to the product.

The steps to solve a symptom are listed sequentially. You might not need to perform every step before the symptom is solved. Start with the first step, and then test for the symptom. If the symptom persists, replace any modules you removed, go to the next step, and test again. Continue down the list until the symptom is solved.

AirPort Card

AirPort Card not recognized

1. Use Software Update in Mac OS X system preferences (or the Software Update control panel in Mac OS 9) or see the Apple Software Updates web page to make sure the latest version of AirPort software is installed.
2. Boot using Mac OS All extensions setting.
3. Reseat AirPort Card and make sure AirPort antenna cable is fully connected.
4. Remove and reinstall the AirPort software.
5. Replace with known-good AirPort Card.
6. Replace logic board.

Battery

The battery won't charge

1. Remove any connected peripherals.
2. Try known-good power outlet.
3. Try known-good power adapter and power cord.

   Note: Verify that power adapter connector glows amber or green. If the power adapter light is green, turn over the computer and press the battery button. The battery lights should glow green and stay on if the power adapter is operating correctly.
4. Try known-good battery.
5. Turn off the computer. Reset the power manager by pressing the reset button (located above and right of the Audio/Video port). Wait five seconds before continuing. Press the power button to start the computer.

   Note: Make sure the reset button is not caught under the button opening.

Warning: Resetting the power manager will permanently remove a RAM disk, if present, and all of its contents. You will also need to reset the date and time (using the Date & Time control panel).

6 Replace battery transfer board.
7 Replace logic board.

Error Beeps

The computer automatically performs a power-on self test when it is turned on after being fully shut down (not a restart). This section describes what to do if beeps are heard during the startup.

Note: The iBook (14.1 LCD) has one memory expansion slot that accepts a 1.25-inch (or shorter) PC-100 compliant, SO-DIMM memory card. Refer to the Memory Replacement instructions for removal and installation.

Computer beeps once at startup

1 One beep means that no RAM is detected.
2 If a RAM card is installed in the expansion slot, remove it and put in known-good and compatible RAM and restart.
- If symptom does NOT repeat, replace RAM card.
- If symptom repeats, replace logic board.

3 If no RAM card is installed, replace logic board.

Computer beeps twice at startup

1 Two beeps means that EDO memory is installed in the expansion slot. The iBook does not accept EDO memory.
2 Replace RAM card with known-good and compatible RAM and restart.
- If symptom repeats, replace logic board.

Computer beeps three times at startup

1 Three beeps means that no RAM banks passed memory testing.
2 If a RAM card is installed in the expansion slot, remove it and put in known-good and compatible RAM and restart.
- If symptom does NOT repeat, replace RAM card.
- If symptom repeats, replace logic board.

3 If no RAM card is installed, replace logic board.

Computer beeps four times at startup

1 Four beeps indicates a bad checksum for the remainder of the boot ROM. The ROM (which is located on the logic board) is bad.
2 If a RAM card is installed in the expansion slot, remove it and put in known-good and compatible RAM and restart.
- If symptom does NOT repeat, replace RAM card.
- If symptom repeats, replace logic board.

3 If no RAM card is installed, replace logic board.

Related articles:
58442: Power On Self-Test Beep Definition - Part 2
95136: iBook (Dual USB): Installing or Replacing Memory

Hard Drive

Hard drive will not initialize	1 Boot from iBook Software Install CD and see if the hard drive mounts on the desktop. 2 If in Mac OS X, boot from the Mac OS X software install CD. Under the File menu, select Disk Utilities and initialize the disk or run Disk First Aid. 3 If in Mac OS 9, launch Drive Setup and update hard drive driver. 4 If no hard drive is found in Drive Setup, verify the hard drive cable connections. 5 Replace hard drive cable.(This is the same cable that attaches to the optical drive.) 6 Replace hard drive. **Important:** If the computer is under warranty and data recovery is required, refer to Article 31077: Hard Drive Data Recovery & Warranty Implications, for important information.
The internal hard drive does not spin	1 Disconnect any connected peripherals. 2 Try known-good power outlet. 3 Try known-good power adapter and power cord. 4 Boot from a Mac OS system CD. 5 Verify Drive Setup does not recognize the hard drive. 6 Verify cable connections.

Keyboard

No response from any key on keyboard	1 Remove any connected peripherals. 2 Boot from a Mac OS system CD to verify that it is not a software problem. 3 Turn off the computer. Disconnect the keyboard connector and inspect connectors. 4 Replace keyboard. 5 Replace logic board.
The keyboard lock is damaged or won't lock	1 Verify that keyboard is installed properly so the lock lines up with the notch in the top case. 2 Replace keyboard.

Modem

No modem dial tone	1 Check that the correct modem is selected. In Mac OS X, check Network Setup. In Mac OS 9, check the Modem control panel. 2 Verify known-good analog (not digital) telephone line. 3 Verify known-good RJ11 telephone cable. 4 Verify RJ11 cable is not plugged into Ethernet port. 5 Inspect RJ11 connector and modem port for pin damage. 6 Verify RJ11 telephone cable is firmly installed in the modem port. 7 If using Apple Remote Access, select Ignore Dial Tone in the Modem control panel. If the modem connects with this settings selected, try another phone line. If using a terminal or communications program, enter atx1 to disable tone detection. To reset the modem back to the factory settings, enter atz. 8 Verify modem 2-pin connector is plugged into modem correctly. 9 Replace the modem 2-pin connector cable. 10 Replace modem.

Optical Drive

The optical drive does not accept CD or DVD disc (mechanical failure)	1 Verify disc is not warped. 2 Verify disc is properly seated in the carrier. 3 Replace optical drive.
The disc icon does not show up on the desktop, or a dialog box appears to initialize disc	1 Verify the correct type of disc is being used. 2 Try cleaning the disc. It may not mount if dirty or scratched. 3 Try a different disc. 4 Select “Mac OS All” in the Extensions Manager control panel and restart. 5 Replace optical drive cable. (This is the same cable that attaches to the hard drive.) 6 Replace optical drive.

Ports

The FireWire or USB port is not recognizing devices	1 Completely shut down, then press the power button to start the computer. 2 Use Software Update in Mac OS X system preferences (or the Software Update control panel in Mac OS 9) to verify that the latest software is installed.

3 Use Apple System Profiler to verify that the computer is recognizing the bus.
4 For USB, test ports with an Apple keyboard or mouse.
5 For FireWire, test by connecting another computer in FireWire Target Disk Mode. Refer to article 58583: How to Use FireWire Target Disk Mode.
6 Verify that drivers are installed properly for third party, if needed.
7 If in Mac OS 9, boot with Mac OS All extension set.
8 Try other port if available.
9 Try a different cable.
10 If self powered make sure that the power supply is connected and device's LED indicates that it is getting power.
11 Replace logic board.

A USB device not recognized by computer

Note: If you are trying to use a serial device with a USB/Serial adapter, check with the manufacturer of the adapter for compatibility.

1 Completely shut down, then press the power button to start the computer.
2 Try known-good Apple USB keyboard or mouse to verify the port is working properly.
3 Verify current driver for the device is installed.
4 If a camera, turn on camera after initiating download with camera application.
5 Try the other USB port.
6 Try different USB device on same port.
7 Eliminate chain by plugging in only one peripheral.
8 If in Mac OS 9, select “Mac OS All” in the Extensions Manager control panel and restart.
9 If in Mac OS 9, troubleshoot extensions and perform a clean installation of system software.
10 Replace logic board.

Sound

Distorted sound from speakers

1 Verify sound is correct with external speakers/headphones. If sound is correct, replace top case.
2 In Mac OS X check balance.
3 Compare same sound with two different units to make sure that sound is actually distorted.
4 Replace logic board.

No sound from speaker(s)

1 Use the Software Update control panel to verify that the latest audio update has been installed.

2 Press the F3 key (with the fn key pressed and not pressed) to verify that mute mode is not enabled.
3 Press the F4 or F5 key (with the fn key pressed and not pressed) to check the volume setting.
4 Verify no external speakers or headphones are plugged in.
5 Check the speakers tab on the Sound control panel to confirm that the software is correctly seeing that there are no external speakers or headphones connected.
6 Shutdown computer and restart.
7 Reset PRAM (Press the power button, then hold down the Option-Command-P-R keys until you hear the startup chime at least one additional time after the initial startup chime).
8 Verify that the speaker cable is connected properly to logic board.
9 Replace top case.
10 Replace logic board

Related article:
58463: iBook: Sound Capabilities

Startup

The computer will not power on

1 Remove any connected peripherals.
2 Try known-good power outlet.
3 Try known-good power adapter and power cord.
4 Remove battery.
5 Press Caps Lock key to see if light on key comes on. If it does, hold power button down for six seconds to shut down the computer and restart.
6 Reset the power manager by pressing the reset button (located above and right of the Audio/Video port). Wait five seconds before continuing. Press the power button to start the computer.

Note: Make sure the reset button is not caught under the button opening.

Warning: Resetting the power manager will permanently remove a RAM disk, if present, and all of its contents. You will also need to reset the date and time (using the Date & Time control panel).

7 Disconnect keyboard completely. Inspect connectors. Restart with keyboard disconnected.
8 Remove any additional RAM
9 Remove AirPort Card.
10 Try known-good DC board.
11 Verify power button is connected properly to logic board, if

power button is not functioning correctly or damaged, replace the top case.

12 Replace logic board.

At startup, a dialog box comes up stating: "kernel panic" in Mac OS X or "Built-in memory test has detected an error" in Mac OS 9

1 If a RAM card is installed in the expansion slot, remove it and restart.
   - If symptom repeats, replace logic board.
   - If symptom does not repeat, replace RAM card with known-good RAM card and restart.
2 If no RAM card is installed, replace logic board.

Related article 95136: iBook (Dual USB): Installing or Replacing Memory

Video

No video on an external device with RGB cable adapter

1 If in Mac OS 9, in Resolution Control Strip, verify that monitor is being recognized. If so, select resolution.
2 If running Mac OS X, verify that this issue is also in Mac OS 9.
3 Verify monitor that is used in testing is known-good and is supported by this computer.
4 Try known-good RGB adapter.
5 Replace logic board.

No video on an external device with Apple A/V cable

1 Make sure you are using an Apple A/V cable.
2 If viewing a DVD, make sure to connect directly to the TV and not through a VCR.
3 Verify TV is setup properly with correct source.
4 Try different TV.
5 Make sure to connect directly to the TV and not through a VCR.
6 Replace Apple A/V cable.
7 Replace logic board.

The display is rolling (PAL instead of NTSC)

1 Verify that you are using Apple's A/V Video Cable (the pin out is different than off-the-shelf cables that look similar). Refer to Article 88040: Composite Video Cable Not Interchangeable With Similar Cables, for important information.
2 If in Mac OS 9, go to Monitors control panel and change the resolution from a PAL setting to an NTSC setting.
3 Try a different TV.
4 Try a different A/V Cable.
5 Replace logic board.

No display, or dim display, but computer appears to operate correctly	1 Remove any connected peripherals. 2 Try known-good power outlet, power adapter and power cord. 3 Press the F2 (with the fn key pressed and not pressed) to increase the screen brightness setting. 4 Reboot the computer—hold down the Control and Command keys and press the Power button, or press and hold the Power button for 5 to 10 seconds to shut down the computer, then press the Power button to restart. 5 Verify backlight cable and LVDS cable connections are seated properly and that the cables are not damaged (refer to display assembly replacement instructions). 6 Replace display assembly. 7 Replace logic board.

Misc. Symptoms

The computer runs with battery, but not with the power adapter plugged into wall outlet	1 Try known-good power outlet. 2 Try known-good power adapter and power cord. **Note:** Verify that power adapter connector glows amber or green. If the power adapter light is green, turn over the computer and press the battery button. The battery lights should glow green and stay on if the power adapter is operating correctly. 3 Reset the power manager by pressing the reset button (located above and right of the Audio/Video port). Wait five seconds before continuing. Press the power button to start the computer. **Note:** Make sure the reset button is not caught under the button opening. **Warning: Resetting the power manager will permanently remove a RAM disk, if present, and all of its contents. You will also need to reset the date and time (using the Date & Time control panel).** 4 Replace DC board. 5 Replace logic board. Related article 88133: iBook (Dual USB): Using PowerBook G4 Adapter
The computer runs when plugged into a wall outlet but not on battery power	1 Reseat battery to verify battery is seated correctly with battery lock engaged. 2 Try known-good charged battery. 3 Reset the power manager by pressing the reset button (located above and right of the Audio/Video port). Wait five seconds before continuing. Press the power button to start the

computer.

Note: Make sure the reset button is not caught under the button opening.

Warning: Resetting the power manager will permanently remove a RAM disk, if present, and all of its contents. You will also need to reset the date and time (using the Date & Time control panel).

4 Replace battery transfer board.
5 Replace logic board.

The cursor does not move when you are using trackpad

1 Verify that no USB device is connected.
2 Boot from a Mac OS system CD to verify that it is not a software problem.
3 Reset the power manager by pressing the reset button (located above and right of the Audio/Video port). Wait five seconds before continuing. Press the power button to start the computer.

Note: Make sure the reset button is not caught under the button opening.

Warning: Resetting the power manager will permanently remove a RAM disk, if present, and all of its contents. You will also need to reset the date and time (using the Date & Time control panel).

4 Check trackpad cable and connection to the logic board (see separate Top Case replacement instructions for location under RAM shield).
5 Replace top case.
6 Replace logic board.

The cursor intermittently does not move or moves erratically

Note: User must touch with the surface of only one finger at a time and point directly down on the trackpad surface.

1 Clean trackpad surface (with computer off, using a non-static-inducing material).
2 Completely shut down, then press the power button to start the computer.
3 Reset the power manager by pressing the reset button (located above and right of the Audio/Video port). Wait five seconds before continuing. Press the power button to start the computer.

Note: Make sure the reset button is not caught under the button opening.

Warning: Resetting the power manager will permanently remove a RAM disk, if present, and all of its contents. You will

	also need to reset the date and time (using the Date & Time control panel). 4 Try unit on battery power. If problem goes away, replace power adapter. 5 Place a Mac OS system CD in the optical disc drive, press the start button and hold down the “C” key. Check the cursor movement, to see if the problem is software. 6 Check trackpad cable and connection to the logic board (see separate Top Case replacement instructions for location under RAM shield). 7 Replace top case. 8 Replace logic board.
The microphone is not working	1 If in Mac OS 9, check the Sound control panel and verify that the selection for input is the built-in microphone. 2 Check the signal level and level meter and adjust the gain. 3 If in Mac OS 9, remove Sound Preferences from the Preferences folder and restart. 4 Reset PRAM (Press the power button, then hold down the Option-Command-P-R keys until you hear the startup chime at least one additional time after the initial startup chime). 5 Verify microphone cable connection to logic board. 6 Replace display assembly (which includes the microphone). 7 Replace logic board.
The latching mechanism that holds the display closed is not working	**Note:** As the display closes against the top case, a hook in the top of the display housing should be magnetically pulled down into a slot in the top case, and secured. When the latch button is pushed, the hook should release and retract into the display housing, allowing the display to open. 1 Verify hook operation by exercising the latch mechanism. 2 If the hook does not operate properly, replace the display assembly. 3 If the latch or latch button does not operate properly, replace the top case assembly.
AirPort Card installed and received a -3278 error	1 Check to make sure using the latest version of AirPort software. 2 Completely shut down, then press the power button to start the computer. 3 Reseat AirPort Card and make sure AirPort antenna cable is fully connected. 4 Remove and reinstall the AirPort software. 5 Replace with known-good AirPort Card. 6 Replace logic board.

LCD anomalies → **Go to : Pixel anomalies**

A certain number of pixel anomalies are inherent in liquid crystal display technology and vary by many factors, including type of technology.

Many anomalies observed by customers are considered normal or are the result of lint or dust particles resting on the front of the display. It is important to understand what type of anomaly a customer sees in order to determine whether further analysis is necessary. In many cases all that may be necessary is a gentle cleaning of the display face using the provided cleaning cloth.

IMPORTANT : **Providing a replacement display to satisfy a customer may not be effective because the replacement display may have more or different types of visible anomalies than the original display, and still be within specifications**.

Knowledge Base Article 22194 can be indicated to customers as public explanation from Apple side.

Industry standards used by all manufacturers are specifying a certain number of minor defects, as generally accepted or creating an acceptable situation. This means that the level of quality in the industry includes some level of pixel-defect.

The following sentences can be used with customers' complains

Copied from SONY documentation (Sony VAIO web Support)

- High precision technology is used to manufacture these LCDs to maintain a high standard of operation. However in all LCD panels there may be a small number of pixels that do not change color. This is a normal occurrence for all LCD displays from all manufacturers and should not be noticeable or objectionable under normal operation.
- Sometimes the pixels are noticeable only during booting or on an all white or all black screen.
- The LCD screen is manufactured using high precision technology. However, there may be some tiny black spots and/or bright spots (red, blue or green in colour) that constantly appear on the LCD screen. These spots occur normally in the manufacturing process and do not effect the recorded picture in any way. Effective number of pixels is 99.99% or more.

Copied from COMPAQ documentation (Compaq FAQ on Compaq's web Support)

- Note that if you have the smallest number of dead pixels, your replacement display panel may have more, use your judgement before deciding that you have a defective panel.

Copied from DELL documentation (Dell web : http://support.euro.dell.com/fr/fr/kb/document.asp?DN=FA1018431)

- The liquid crystal display (LCD) screens built into portable computers and flat-panel monitors are manufactured using rigid quality control standards. These manufacturing standards ensure that the LCD screen is clear and viewable.
- During the manufacturing process, it is not uncommon for one or more pixels to be fixed in an unchanging state. The visible result is a fixed pixel that appears as an extremely tiny discolored spot, either a dark spot or a bright spot.

Copied from TOSHIBA documentation (Toshiba web Support)

- Due to current manufacturing methods and the high number of transistors in the TFT Color LCD, a few nonconforming pixels may be visible. There are over a million transistors in a typical TFT screen. When any one of those transistors is not lighting as designed, the pixel is called nonconforming. Nonconforming pixels typically appear as tiny colored dots (red, blue, green, etc.) or as black dots in contrast to the projected background color of the LCD module.
- Quality inspections, performed by the LCD module manufacturers, include limits for nonconforming pixels. Nonconforming pixel limits (10 to 18 pixels) are set solely by the LCD module manufacturers and not by specific computer manufacturers. These limits are defined by the manufacturing processes and are specific to screen characteristics which include :
  - * physical size of module.
  - * display type (SVGA, XGA, VGA).
  - * screen resolutions available.
- LCD Module manufacturers continually strive to upgrade processes used in manufacturing as well as the Quality Specifications which include the limits on nonconforming pixels allowed for LCD modules for use in portable computer displays.

(**End**

Pixel anomalies → **Go to : LCD anomalies**

When speaking with Apple Technical Support, it may be necessary to use a pocket microscope, jeweler's loupe, or other magnifying device to properly identify and count each subpixel anomaly.

Displaying all white, red, green, and blue screens makes locating and viewing pixel anomalies easier.

A subpixel that is always on should be referred to as a bright subpixel anomaly. A subpixel that is always off should be referred to as a dark subpixel anomaly.

When necessary, portable and display products may be dispatched for evaluation by the Apple Repair Center.

(**End**

English

Keyboard

AppleCare

Replacement Instructions
Follow the instructions in this sheet carefully. Failure to follow these instructions could damage your equipment and void its warranty.

Note : Written and video instructions covering customer-installable parts are available at http://www.info.apple.com/install-parts/.

Warning : During this procedure, keep small parts away from children.

Tools Required
- Coin
- #0 Phillips screwdriver
- Jeweler's flat-blade screwdriver (if keyboard is locked)
- Small soft cloth (if an optional AirPort Card is installed)

Opening the Computer

Warning : Always shut down your computer before opening it to avoid damaging its internal components or causing injury. After you shut down the computer, the internal components can be very hot. Let the computer cool down before continuing.

1. Place your computer on a clean, flat surface.

2. Shut down your computer and wait thirty minutes before continuing.

3. Disconnect the power cord and any other cables connected to the computer.

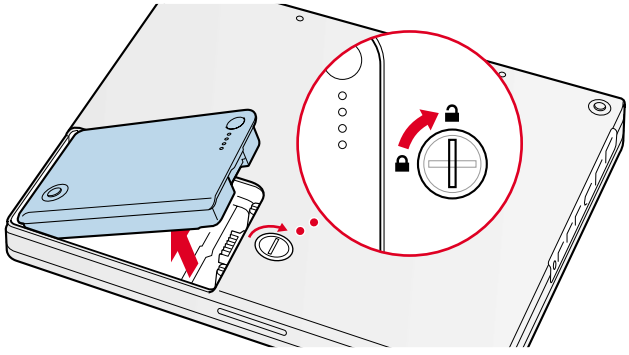
4. Close the computer, turn it over, and locate the battery latch (**Figure 1**).

   Use a coin to turn the battery latch 1/4 turn clockwise to unlock the battery. Gently remove the battery.

   Removing the battery will prevent you from accidentally turning on the computer.

   Warning : Removing the battery before shutting down your computer may result in data loss.

Figure 1



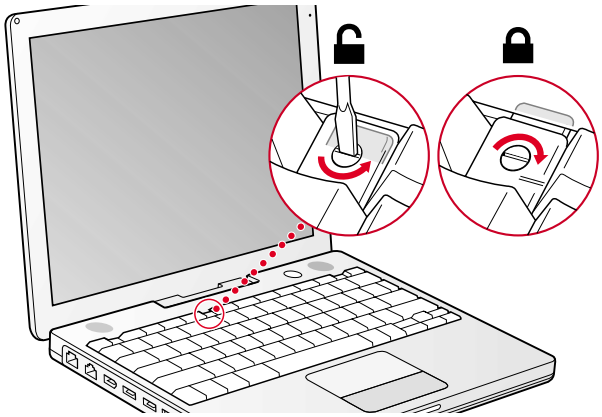
5. Turn over the computer.

6. Raise the display so you can access the keyboard.

7. Make sure the keyboard locking screw, located in the small plastic tab to the left of the Num Lock key (**Figure 2**), is not in the locked position. Your iBook comes with the keyboard unlocked, so unless you or someone else locked the keyboard, you can skip this step.

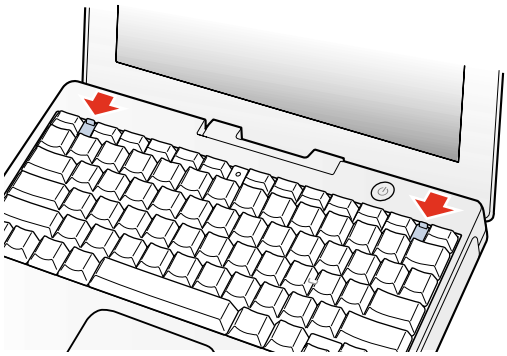
   To unlock the keyboard, turn the screw 1/2 turn.

Figure 2



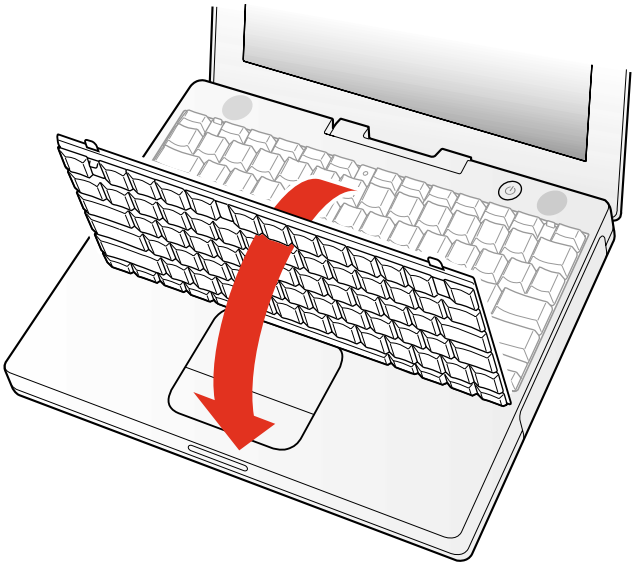
8. Release the keyboard by pulling down on the keyboard release tabs (located to the left of the F1 and F12 keys) (**Figure 3**), then lift the top portion of the keyboard up slightly, and toward the display.

Figure 3



9. Flip the keyboard over and lay it on the palm rests and trackpad (**Figure 4**).

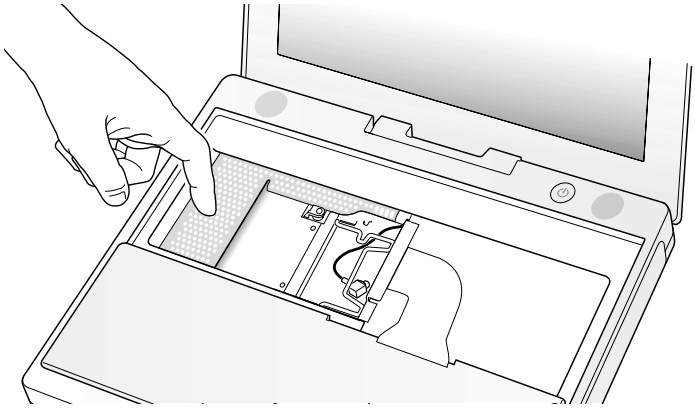
Figure 4



10. Touch a metal surface on the inside of the computer to discharge any static electricity, as shown (**Figure 5**).

Important : To avoid electrostatic discharge damage, always ground yourself by touching the computer's framework before you touch any parts or install any components inside the computer. To avoid static electricity building back up in your body, do not walk around the room until you have completed the installation and closed the computer.

Figure 5



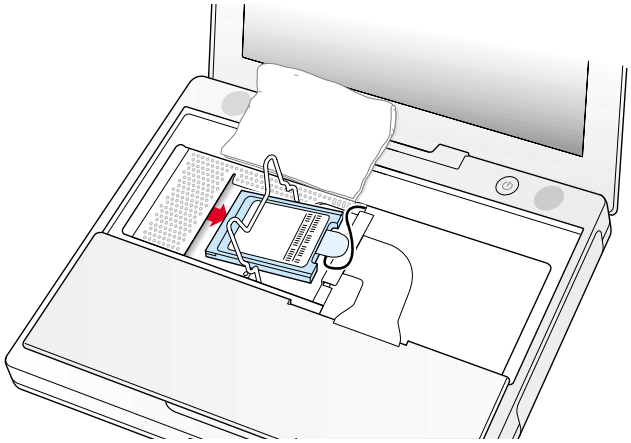
Removing the Installed Keyboard

1. If your computer has the optional AirPort Card installed, unlatch the flexible wire holder that secures the card (**Figure 6**).

2. Use the pull-tab on the card to remove it from the slot. (You do not need to disconnect the antenna.)

Note : To avoid scratching the computer's case, place a soft cloth between the AirPort Card and the surface of your iBook.

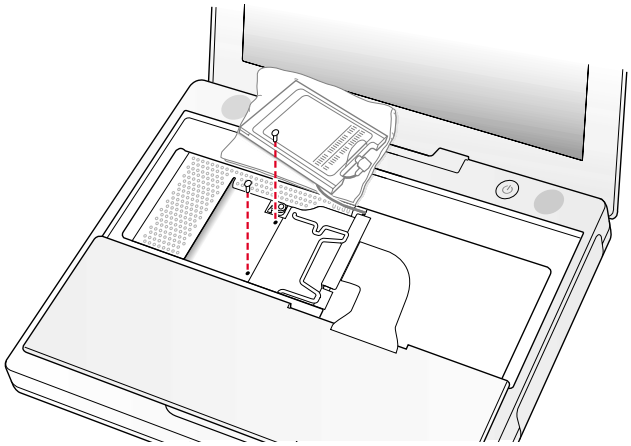
Figure 6



3. If an AirPort Card is not installed, unlatch the flexible wire holder to release the AirPort Card antenna cable.

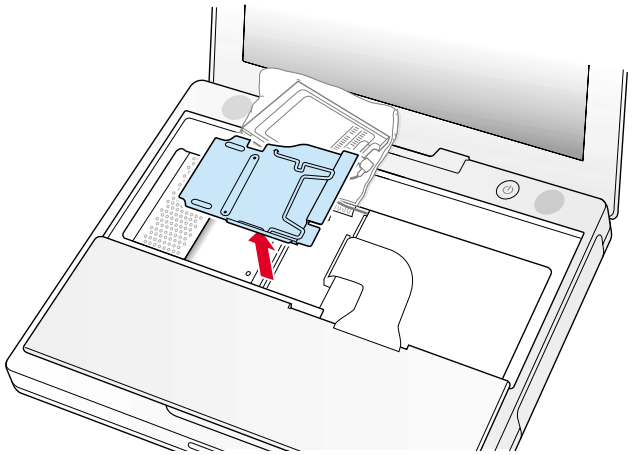
4. Remove the screws that secure the RAM shield (**Figure 7**).

Figure 7



5. Lift the RAM shield out of the computer. Carefully pulling up on the wire holder may help to remove the shield (**Figure 8**).

Figure 8



6. Locate the keyboard cable connector (**Figure 9**).

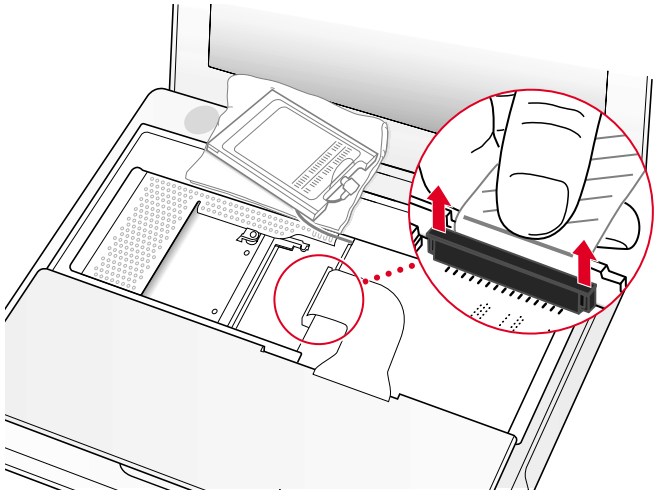
7. Firmly grasp the cable as shown in the illustration.

8. Carefully pull straight up on the cable until the connector releases.

   Important : Pull straight up, do not twist or pull the cable sideways.

   Note : If needed, use your fingers to pry up the connector from side to side.

Figure 9



9. Set the keyboard aside.

Installing the Replacement Keyboard

1. Lay the replacement keyboard in the correct orientation over the keyboard opening, then flip it toward you and lay it face down on the palm rests and trackpad to expose its connector cable.

2. Firmly insert the keyboard cable connector into its connector on the computer.

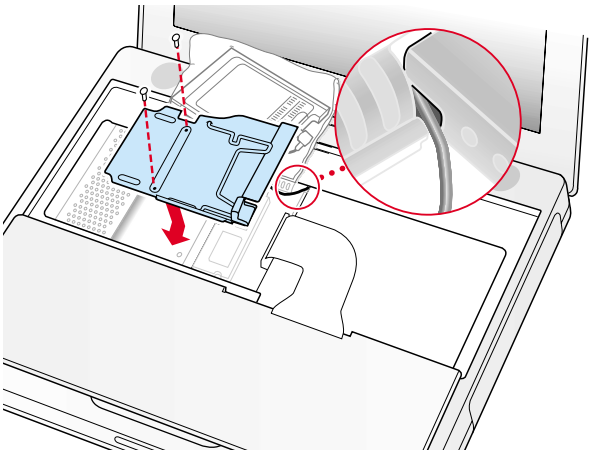
3. Insert the RAM shield (**Figure 10**).

4. Verify that the end of the wire of the wire holder (where it is attached to the RAM shield, on the keyboard side) does not catch on the side of the compartment. The screw holes on the shield and computer should align and the shield should lay uniformly flat.

5. Verify that the AirPort antenna cable routes through the notch in the RAM shield without pinching.

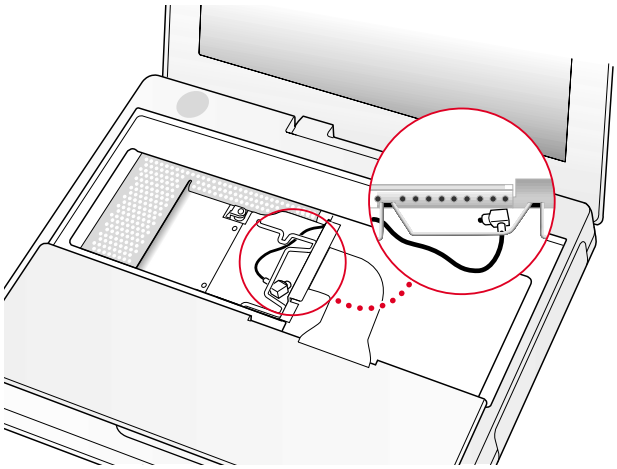
6. Replace the RAM shield screws.

Figure 10



7. If you do not have an AirPort Card, flip down the wire holder over the AirPort Card antenna cable and secure it by inserting the prongs of the holder into the slots in the RAM shield (**Figure 11**).

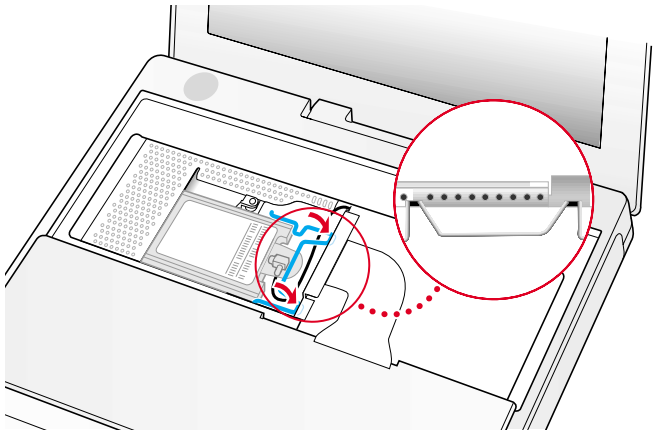
Figure 11



8. If you have an AirPort Card, gently slide it (with the AirPort ID number and bar code facing up) under the wire bracket and securely into the AirPort Card slot.

9. Use the wire holder to secure the AirPort Card in place by inserting its prongs into the slots in the RAM shield (**Figure 12**).

Figure 12

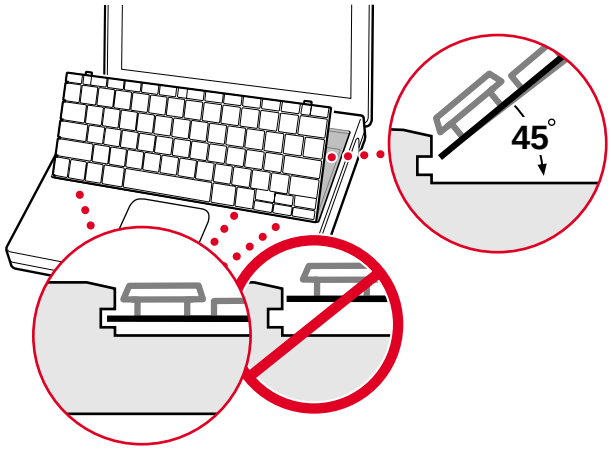


Closing the Computer

1. Flip the keyboard back toward the keyboard opening in the case.
2. Hold the keyboard at a 45-degree angle above the keyboard opening, and insert the tabs on the bottom edge of the keyboard into the slot under the edge of the opening (**Figure 13**).

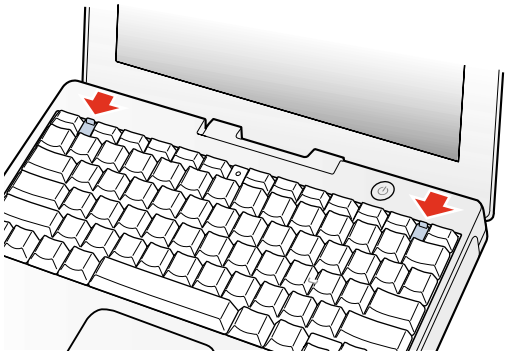
   Important : Make sure that all the tabs are seated and that the keyboard rests flush against the edge of the opening.
3. Lay the keyboard flat into the keyboard opening.

Figure 13



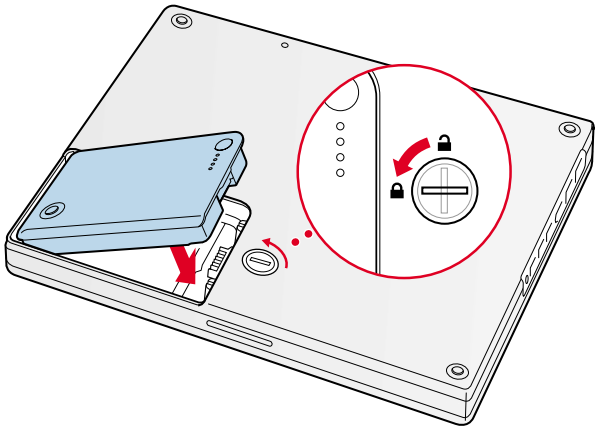
4. Pull down on the keyboard release tabs and then press down on the top portion of the keyboard (**Figure 14**).

Figure 14



5. Let go of the keyboard release tabs to secure the keyboard in place.
6. Close the display and turn the iBook over.
7. Replace the battery into the battery compartment. Hold the battery flush and use a coin to turn the latch counterclockwise 1/4 turn to lock the battery into place (**Figure 15**).

Figure 15



8. Turn your iBook over and open the display.

9. Reconnect the power cord and any other cables that were connected and restart your computer.

Note : You may need to reset the date and time (using the Date & Time control panel).

Warning : Never turn on your computer unless all of its internal and external parts are in place and it is fully reassembled. Operating the computer when it is missing parts can damage your computer or cause injury.

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English

Memory

AppleCare

Replacement Instructions

Follow the instructions in this sheet carefully. Failure to follow these instructions could damage your equipment and void its warranty.

Note : Written and video instructions covering customer-installable parts are available at http://www.info.apple.com/install-parts/.

Warning : During this procedure, keep small parts away from children.

Warning : Memory cards come in various specifications. Only install memory cards that are approved for your iBook.

Tools Required

- Coin
- #0 Phillips screwdriver
- Jeweler's flat-blade screwdriver (if keyboard is locked)
- Small soft cloth (if an optional AirPort Card is installed)

Opening the Computer

Warning : Always shut down your computer before opening it to avoid damaging its internal components or causing injury. After you shut down the computer, the internal components can be very hot. Let the computer cool down before continuing.

1. Place your computer on a clean, flat surface.

2. Shut down your computer and wait thirty minutes before continuing.

3. Disconnect the power cord and any other cables connected to the computer.

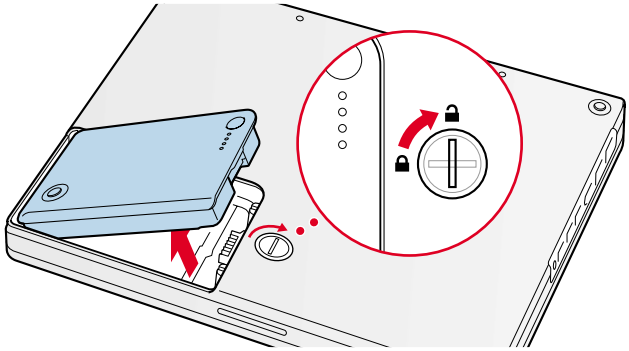
4. Close the computer, turn it over, and locate the battery latch (**Figure 1**).

   Use a coin to turn the battery latch 1/4 turn clockwise to unlock the battery. Gently remove the battery.

   Removing the battery will prevent you from accidentally turning on the computer.

   Warning : Removing the battery before shutting down your computer may result in data loss.

Figure 1



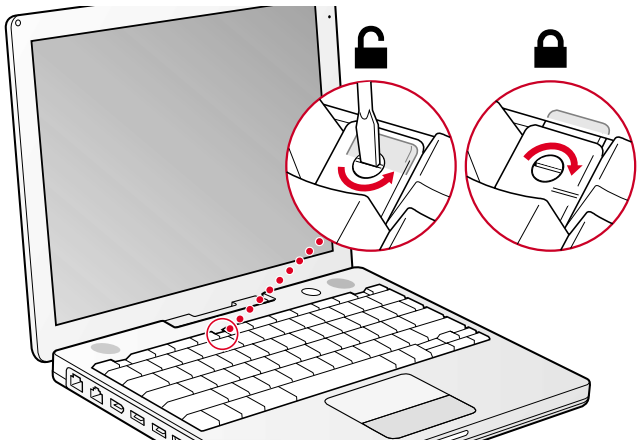
5. Turn over the computer.

6. Raise the display so you can access the keyboard.

7. Make sure the keyboard locking screw, located in the small plastic tab to the left of the Num Lock key (**Figure 2**), is not in the locked position. Your iBook comes with the keyboard unlocked, so unless you or someone else locked the keyboard, you can skip this step.

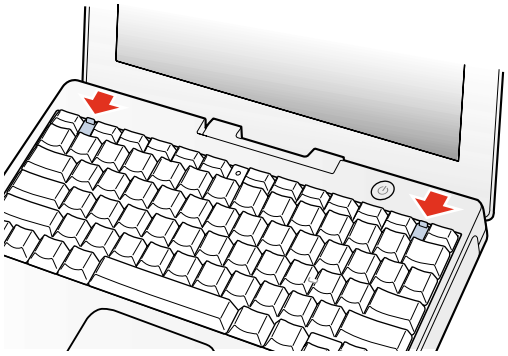
   To unlock the keyboard, turn the screw 1/2 turn.

Figure 2



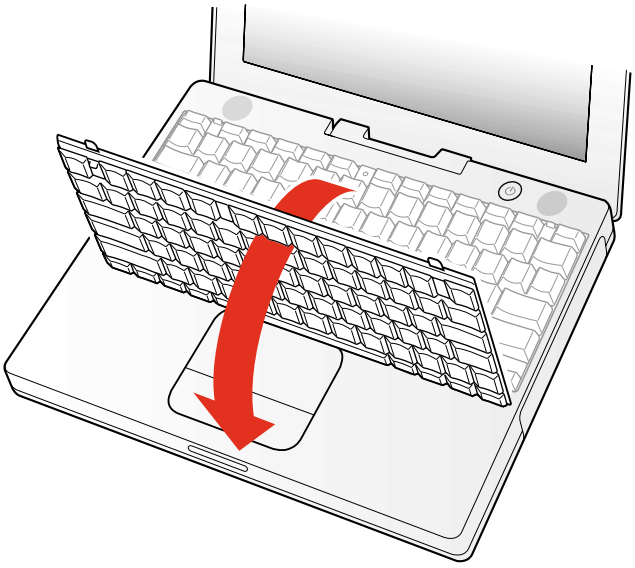
8. Release the keyboard by pulling down on the keyboard release tabs (located to the left of the F1 and F12 keys) (**Figure 3**), then lift the top portion of the keyboard up slightly, and toward the display.

Figure 3



9. Flip the keyboard over and lay it on the palm rests and trackpad (**Figure 4**).

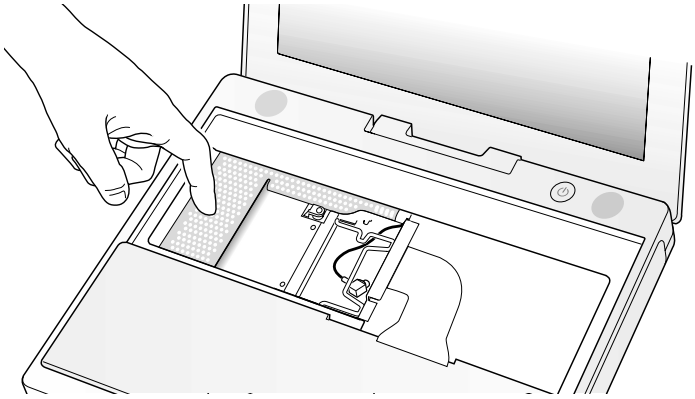
Figure 4



10. Touch a metal surface on the inside of the computer to discharge any static electricity, as shown (**Figure 5**).

Important : To avoid electrostatic discharge damage, always ground yourself by touching the computer's framework before you touch any parts or install any components inside the computer. To avoid static electricity building back up in your body, do not walk around the room until you have completed the installation and closed the computer.

Figure 5



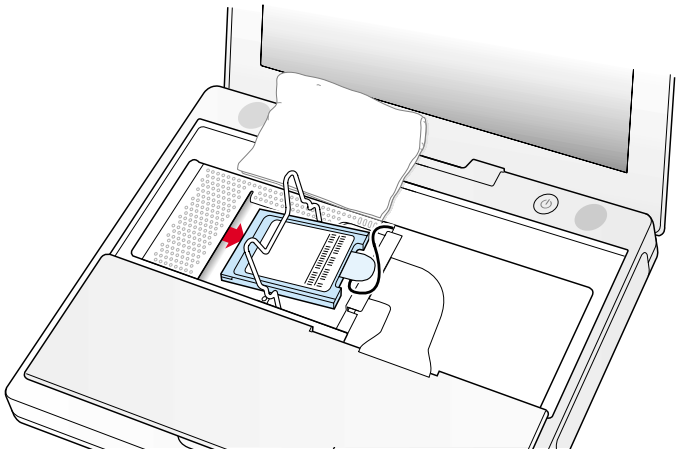
Removing the Installed Memory Card

1. If your computer has the optional AirPort Card installed, unlatch the flexible wire holder that secures the card (**Figure 6**).

2. Use the pull-tab on the card to remove it from the slot. (You do not need to disconnect the antenna.)

Note : To avoid scratching the computer's case, place a soft cloth between the AirPort Card and the surface of your iBook.

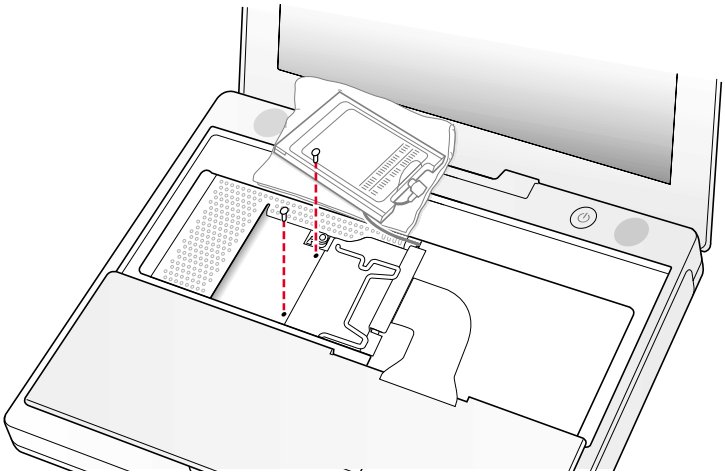
Figure 6



3. If an AirPort Card is not installed, unlatch the flexible wire holder to release the AirPort Card antenna cable.

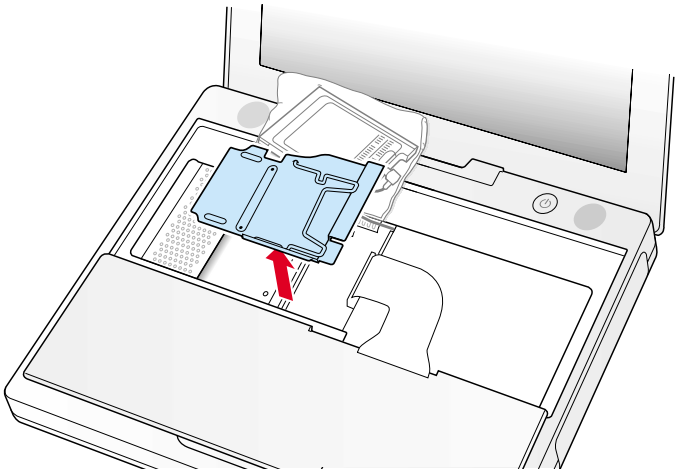
4. Remove the screws that secure the RAM shield (**Figure 7**).

Figure 7



5. Lift the RAM shield out of the computer. Carefully pulling up on the wire holder may help to remove the shield (**Figure 8**).

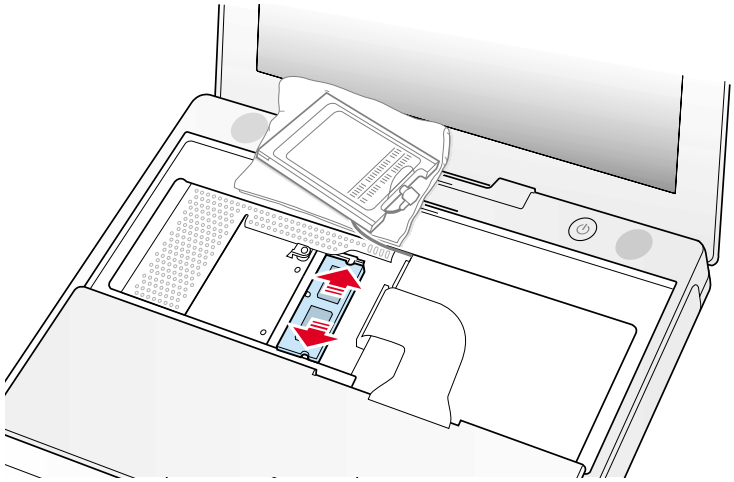
Figure 8



6. Locate the installed memory card and brackets that secure the card on both sides (**Figure 9**).

7. Carefully spread the brackets apart until the card releases on each side. Pull the card up and out of the memory slot.

Figure 9

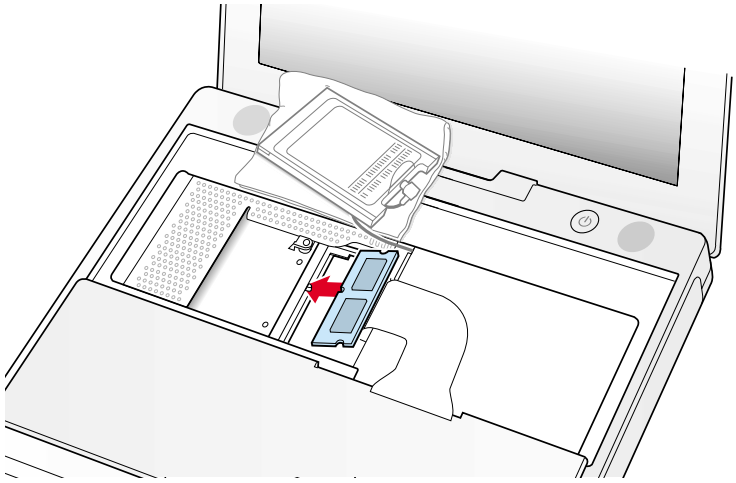


Installing the Replacement Memory Card

1. Line up the notch in the replacement memory card with the small tab in the memory slot. Hold the card at a 30-degree angle, then push the card into the slot until it is firmly seated (**Figure 10**).

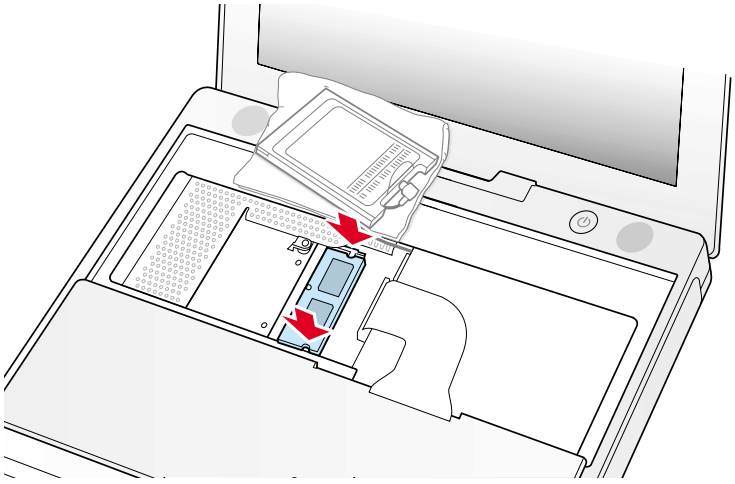
   Note : If you feel resistance when inserting the card, try pushing one side at a time.

Figure 10



2. Gently push the top of the card down until the brackets snap onto both sides of the memory card to lock it into place (**Figure 11**).

Figure 11



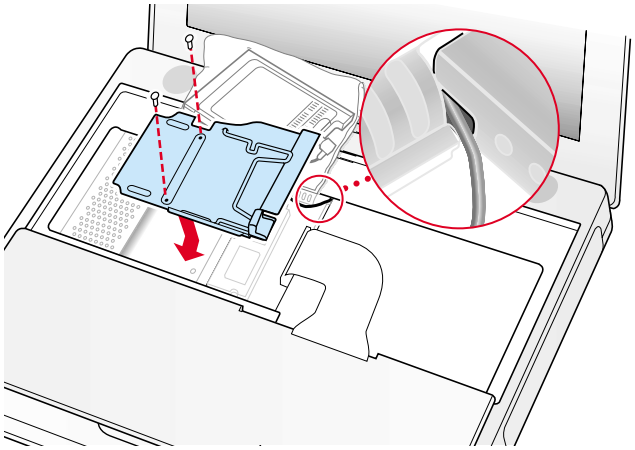
3. Insert the RAM shield (**Figure 12**).

4. Verify that the end of the wire of the wire holder (where it is attached to the RAM shield, on the keyboard side) does not catch on the side of the compartment. The screw holes on the shield and computer should align and the shield should lay uniformly flat.

5. Verify that the AirPort antenna cable routes through the notch in the RAM shield without pinching.

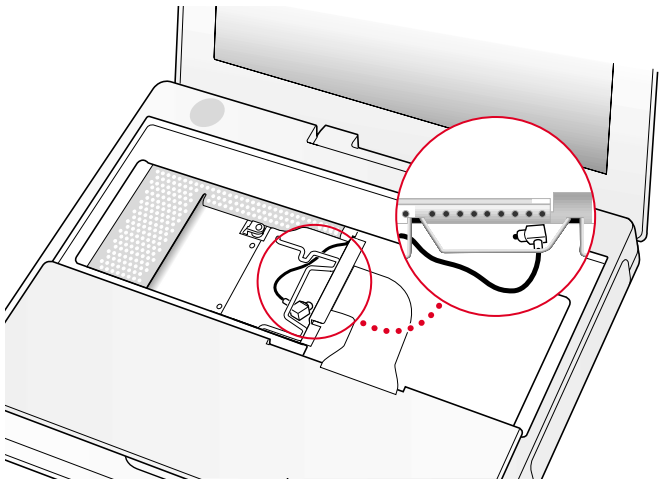
6. Replace the RAM shield screws.

Figure 12



7. If you do not have an AirPort Card, flip down the wire holder over the AirPort Card antenna cable and secure it by inserting the prongs of the holder into the slots in the RAM shield (**Figure 13**).

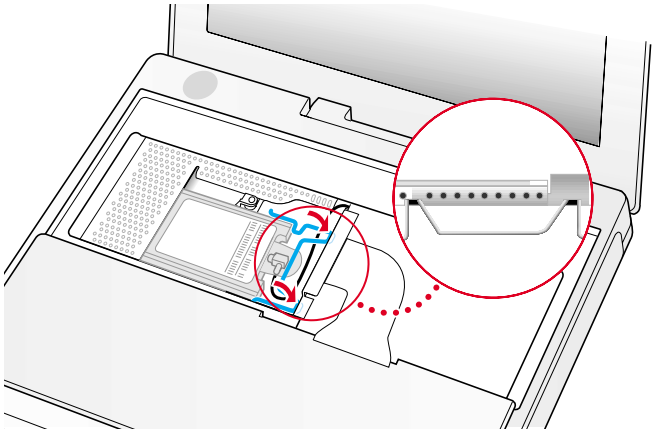
Figure 13



8. If you have an AirPort Card, gently slide it (with the AirPort ID number and bar code facing up) under the wire bracket and securely into the AirPort Card slot.

9. Use the wire holder to secure the AirPort Card in place by inserting its prongs into the slots in the RAM shield (**Figure 14**).

Figure 14



Closing the Computer

1. Flip the keyboard back toward the keyboard opening in the case.

2. Hold the keyboard at a 45-degree angle above the keyboard opening, and insert the tabs on the bottom edge of the keyboard into the slot under the edge of the opening.

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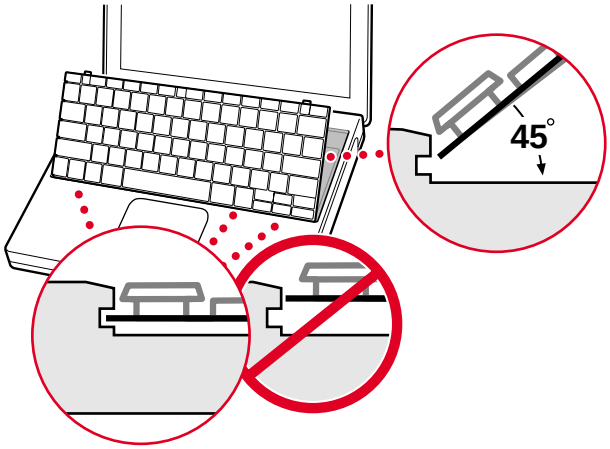
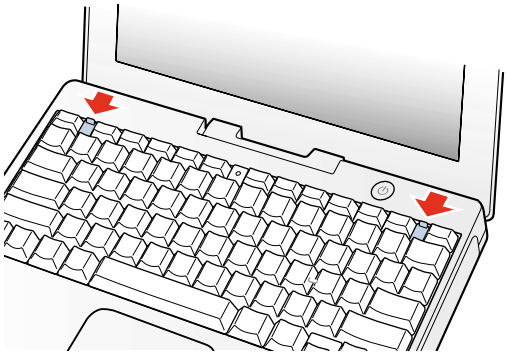
3. Lay the keyboard flat into the keyboard opening.

Figure 15



4. Pull down on the keyboard release tabs and then press down on the top portion of the keyboard (**Figure 16**).

Figure 16

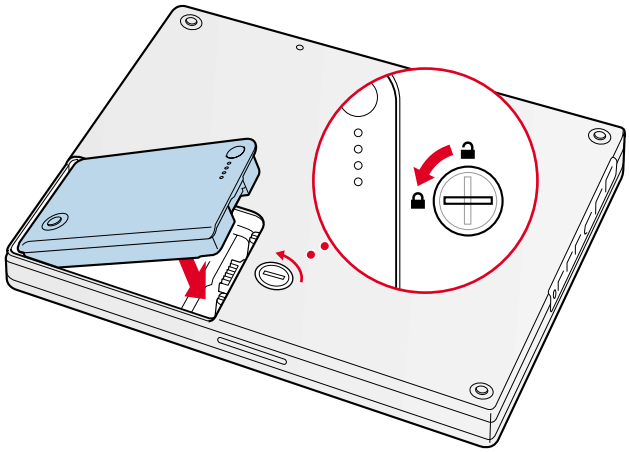


5. Let go of the keyboard release tabs to secure the keyboard in place.

6. Close the display and turn the iBook over.

7. Replace the battery into the battery compartment. Hold the battery flush and use a coin to turn the latch counterclockwise 1/4 turn to lock the battery into place (**Figure 17**).

Figure 17



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English

AirPort Card

AppleCare

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   Use a coin to turn the battery latch 1/4 turn clockwise to unlock the battery. Gently remove the battery.

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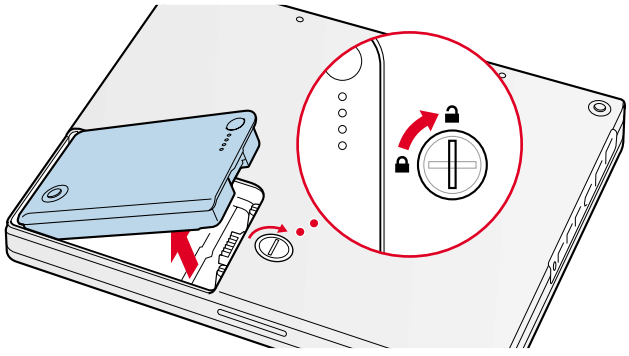
Figure 1



5. Turn over the computer.

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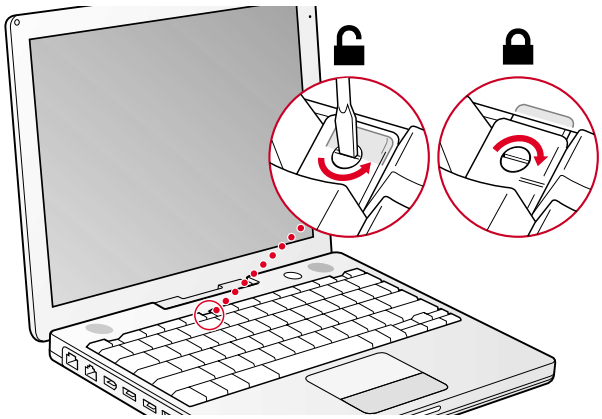
7. Make sure the keyboard locking screw, located in the small plastic tab to the left of the Num Lock key (**Figure 2**), is not in the locked position. Your iBook comes with the keyboard unlocked, so unless you or someone else locked the keyboard, you can skip this step.

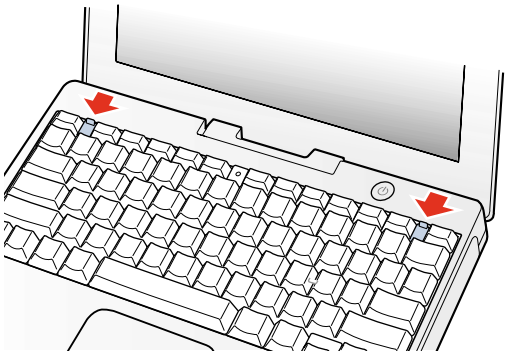
   To unlock the keyboard, turn the screw 1/2 turn.

Figure 2



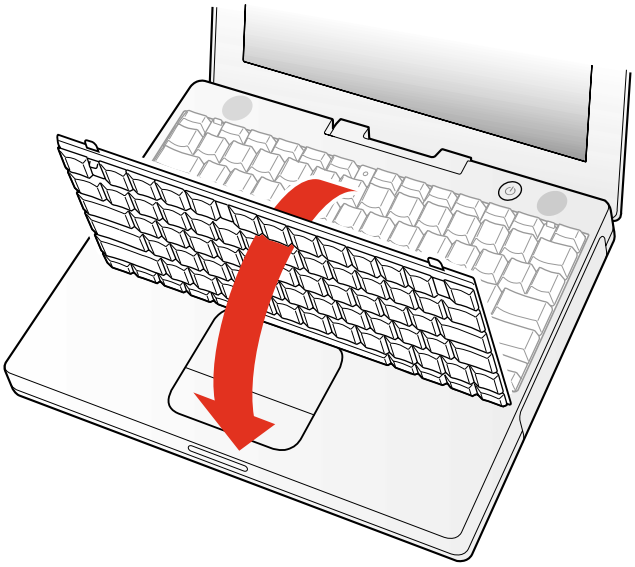
8. Release the keyboard by pulling down on the keyboard release tabs (located to the left of the F1 and F12 keys) (**Figure 3**), then lift the top portion of the keyboard up slightly, and toward the display.

Figure 3



9. Flip the keyboard over and lay it on the palm rests and trackpad (**Figure 4**).

Figure 4



10. Touch a metal surface on the inside of the computer to discharge any static electricity, as shown (**Figure 5**).

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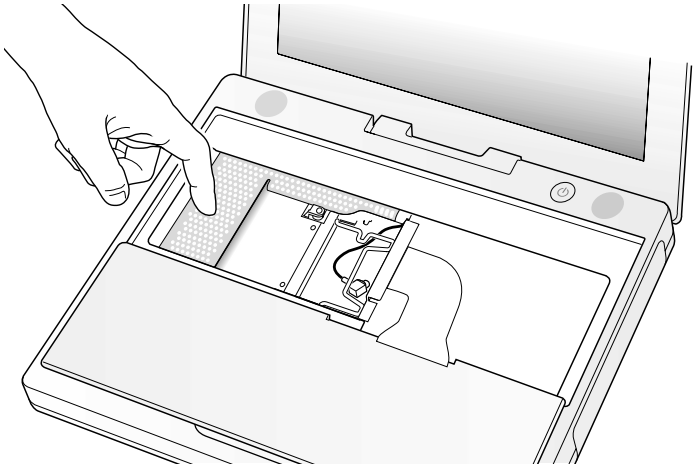
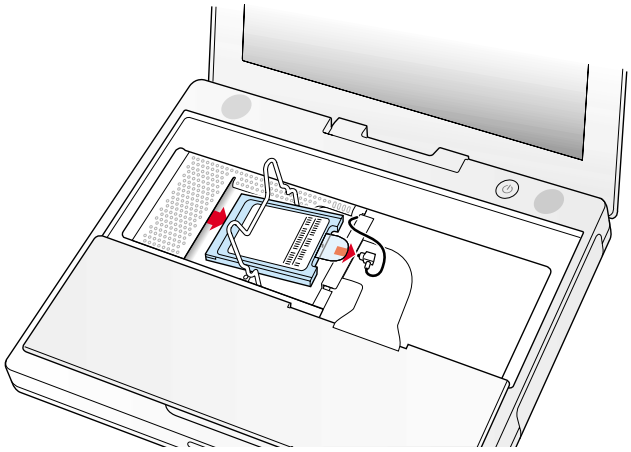
Figure 5



Removing the Installed AirPort Card

1. Unlatch the flexible wire holder that secures the card (**Figure 6**).

Figure 6



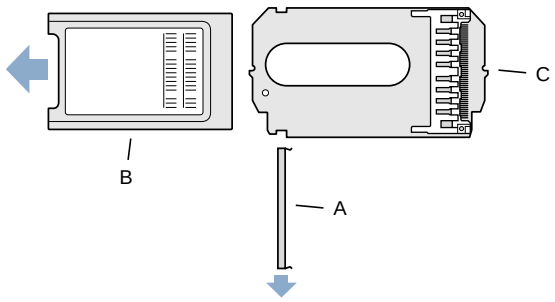
2. Use the pull-tab on the card to remove it from the slot.

3. Disconnect the antenna cable from the AirPort Card by pulling straight back on its connector.

Installing the Replacement AirPort Card

1. If the AirPort Card came with the AirPort adapter (**Figure 7**), remove the metal clip (A) and pull the AirPort Card (B) from the adapter (C). The adapter and metal clip are not used with your iBook.

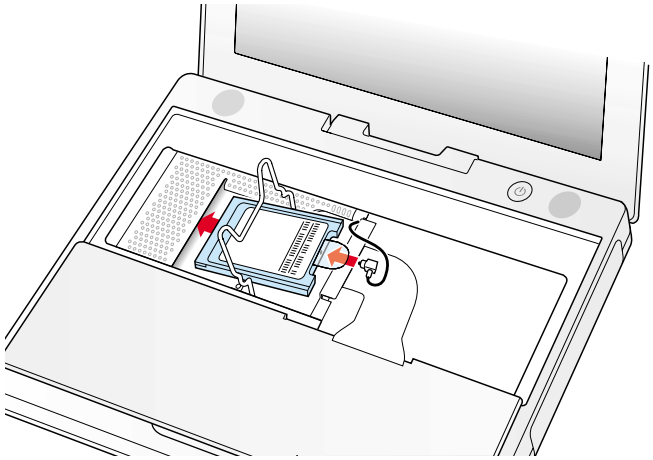
Figure 7



2. Locate the AirPort antenna cable connector and plug it into the port (located just below the pull-tab) on the end of the AirPort Card. Make sure the connector is straight before inserting it into the card (**Figure 8**).

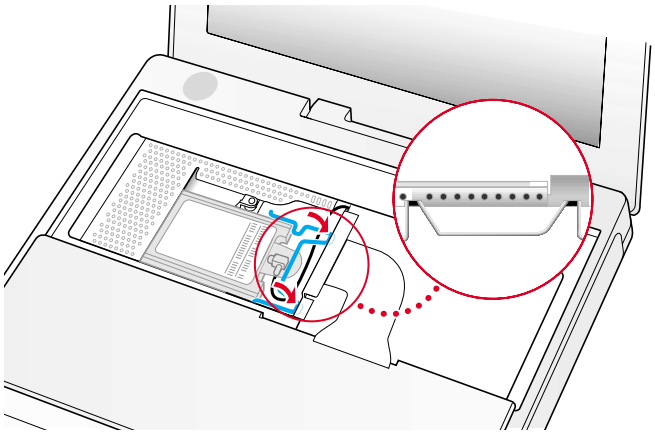
3. To install the AirPort Card, gently slide it (with the AirPort ID number and bar code facing up) under the wire bracket and securely into the AirPort Card slot.

Figure 8



4. Use the wire holder to secure the AirPort Card in place by inserting its prongs into the slots in the RAM shield (**Figure 9**).

Figure 9



Closing the Computer

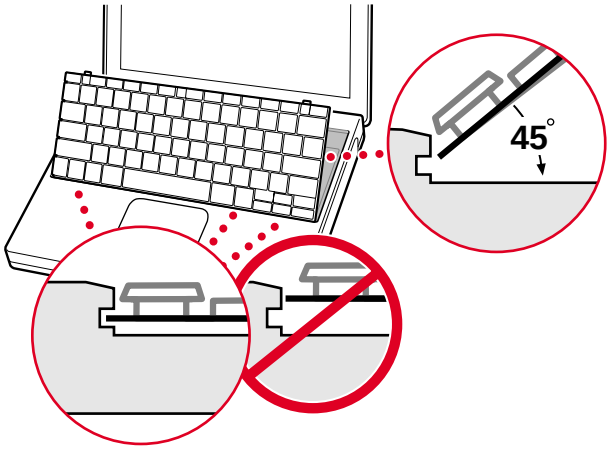
1. Flip the keyboard back toward the keyboard opening in the case.

2. Hold the keyboard at a 45-degree angle above the keyboard opening, and insert the tabs on the bottom edge of the keyboard into the slot under the edge of the opening (**Figure 10**).

   Important : Make sure that all the tabs are seated and that the keyboard rests flush against the edge of the opening.

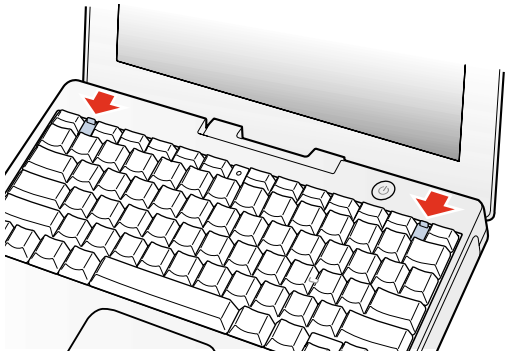
3. Lay the keyboard flat into the keyboard opening.

Figure 10



4. Pull down on the keyboard release tabs and then press down on the top portion of the keyboard (**Figure 11**).

Figure 11

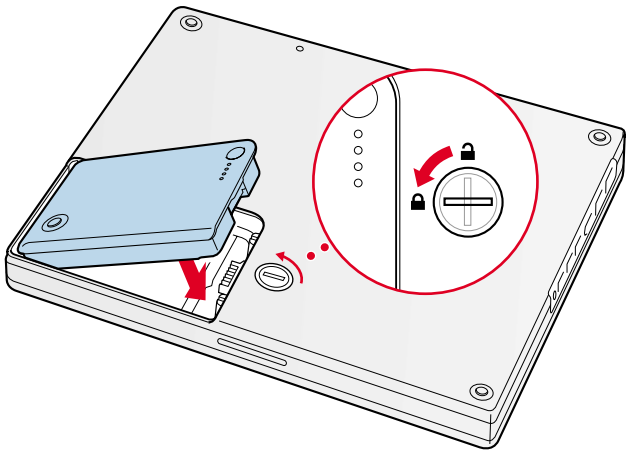


5. Let go of the keyboard release tabs to secure the keyboard in place.

6. Close the display and turn the iBook over.

7. Replace the battery into the battery compartment. Hold the battery flush and use a coin to turn the latch counterclockwise 1/4 turn to lock the battery into place (**Figure 12**).

Figure 12



8. Turn your iBook over and open the display.

9. Reconnect the power cord and any other cables that were connected and restart your computer.

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Bottom Case
Replacement Instructions

The following instructions explain how to replace the bottom case on the iBook (14.1 LCD) computer.

Tools

This procedure requires the following tools:
- Soft cloth
- Torx T8 screwdriver
- Black stick (or other nonconductive nylon or plastic tool)
- #0 Phillips screwdriver

Preliminary Steps

Before you begin, remove the battery.

Procedure

1. Place the computer upside down on a soft cloth.

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2. **Important:** To avoid damaging the case, be careful that the screwdriver tip does not slip out of the screw head during removal.

   Remove the three screws (two identical screws in the back, one shorter screw in the center of the bottom case).

3. Using a black stick, peel up the three rubber feet from the metal sockets.

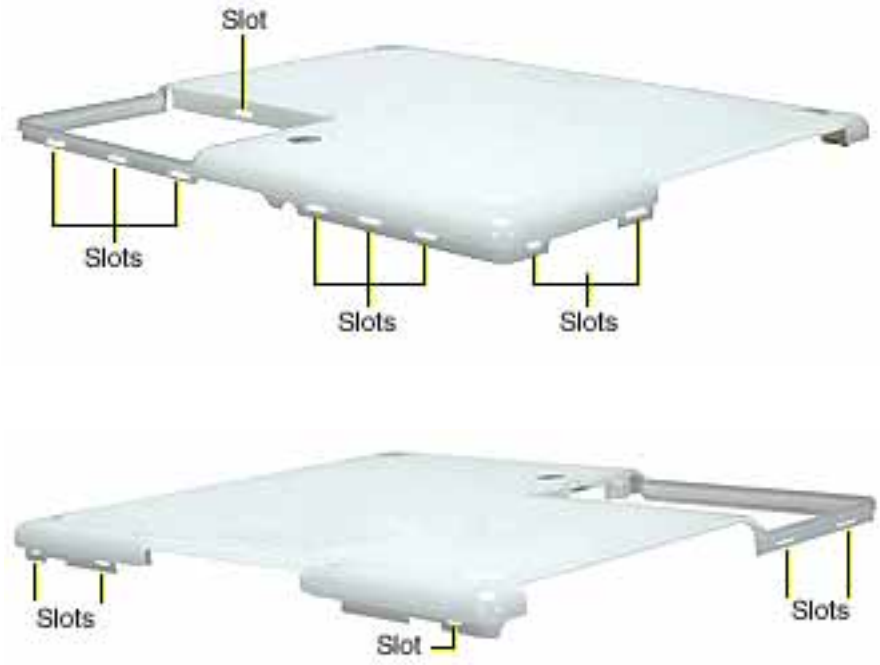
   Note: When reassembling the computer, do not reuse the feet. Install three new rubber feet.

4. Remove the three identical Phillips screws from the metal sockets.
5. Use a black stick to lift out the metal sockets.

   Note: When reassembling the computer, note that the metal sockets are keyed. Rotate them until they sit flat against the bottom case.

6. Remove the two identical Phillips screws next to the battery connector.

7. Note the locations of the slots on the bottom case. The computer frame has tabs that fit into slots within the bottom case (six tabs in front; two on each side; three in back). When using a black stick to pry off the bottom case, it helps to know where the slots are as you free the tabs from the slots.



8. In the battery compartment, lift up the corner of the bottom case, and use a black stick or jeweler's flat-blade screwdriver to gently pry up the slot from the inner tabs on the frame.

9. Starting at the battery compartment, use a black stick to carefully pry up the bottom case from the computer.

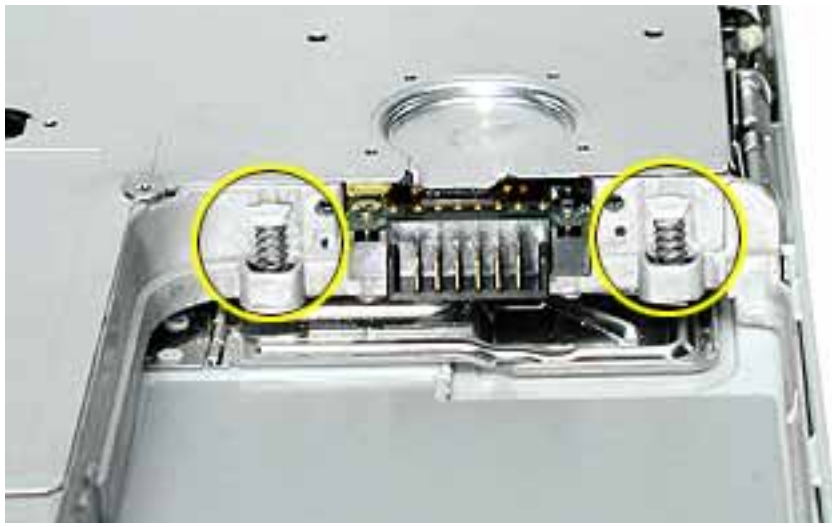
10. **Warning: To avoid damaging the sleep light and other delicate components, do not insert the black stick too far into the computer as you free the bottom case from the computer. Use just the tip of the black stick to pry up the bottom case.**

11. Carefully work the black stick around the corners of the bottom case.

12. The bottom case fits snugly. Use moderate force to remove the remaining tabs from the slots.
13. When all tabs have been freed from the slots, lift up the bottom case.

Note: When reassembling the computer, be careful not to pinch any cables as you press the bottom case back onto the computer. Check that the bottom case shows no raised surfaces and is fully snapped into place before installing the remaining screws, sockets, and feet.

14. If you are replacing any additional parts at this time, remove the two springs from the battery compartment so they do not fall out and get lost.



Note: When reassembling the computer, make sure that the two springs in the battery connector are in place before installing the bottom case. Each spring has a plastic cap on one end. The cap should fit securely on the spring, and the curved side of the cap should be positioned against the inner frame.

15. Install the replacement bottom case, and reassemble and test the computer.

Bottom Shield
Replacement Instructions

The following instructions explain how to replace the bottom shield in the iBook (14.1 LCD) computer.

Tools

- Soft cloth
- #0 Phillips screwdriver
- Black stick (or other nonconductive nylon or plastic tool)

Note: To organize the screws you remove from the computer, use a tray with divided compartments (such as a plastic ice cube tray).

Preliminary Steps

Before you begin, remove the following:
- Battery
- Bottom case

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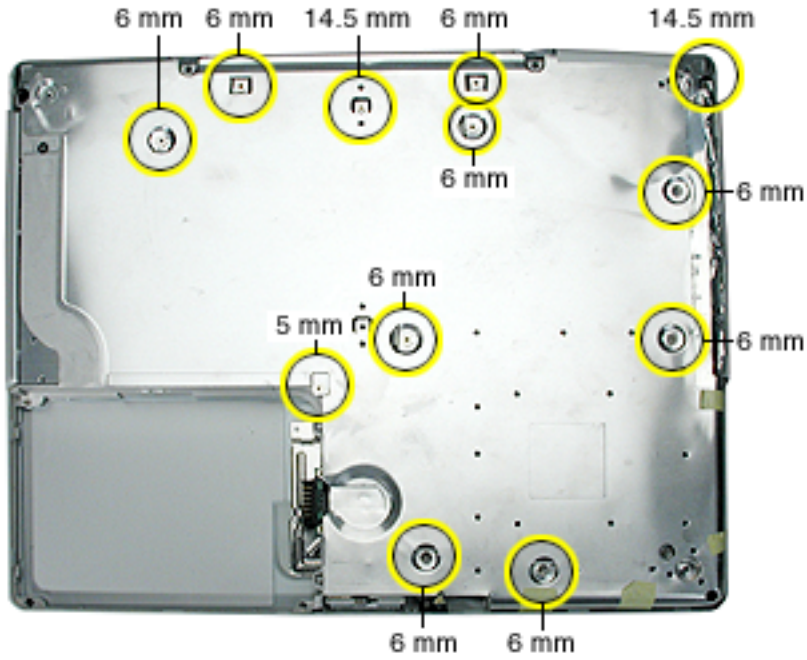
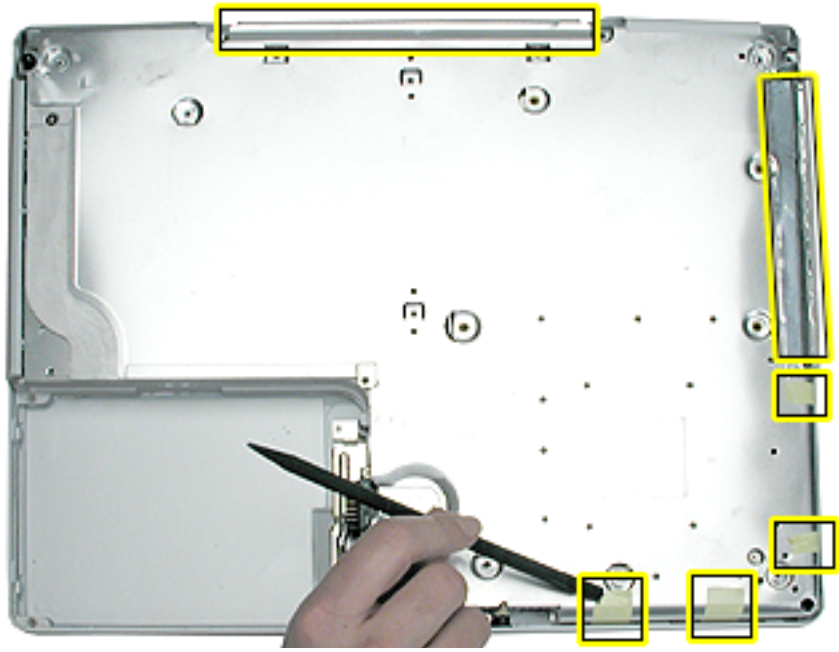
Procedure

1. With the computer on a soft cloth, remove the following screws from the bottom shield:
   - nine identical 6-mm long Phillips screws (two of the screws may be concealed under foil tape at the display hinge)
   - two identical 14.5-mm long Phillips screws
   - one 5-mm long Phillips screw



2. Using a black stick, peel up—but do not remove— the strips of tape.

   Note: Check for foil tape by the computer latch as well as the areas shown below.

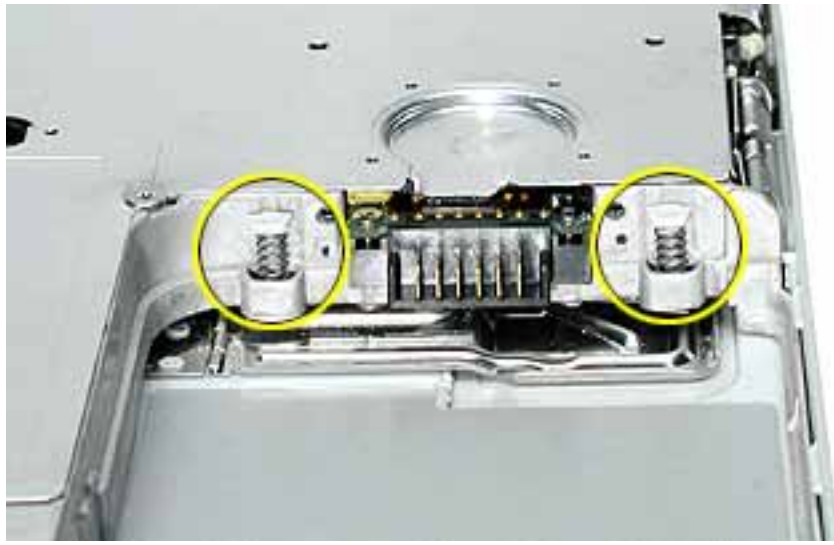


3. **Warning: Do not bend the bottom shield.**

   Lift the bottom shield off the computer, being careful where it might catch on the tape.

4. If necessary, use a black stick to separate the foil tape on the bottom shield from the I/O bezel shield.

5. **Note:** The two springs in the battery connector can become loose. When reassembling the computer, make sure that the two springs in the battery connector are in place before installing the bottom case. Each spring might have grease on the coils, and each has a plastic cap on one end. Make sure the cap fits securely on the spring, and the curved side of the cap is positioned against the inner frame.



6. Install the replacement bottom shield, and reassemble and test the computer.

Fan
Replacement Instructions

The following instructions explain how to replace the fan in the iBook (14.1 LCD) computer.

Tools

- Soft cloth
- #0 Phillips screwdriver
- Black stick (or other nonconductive nylon or plastic tool)

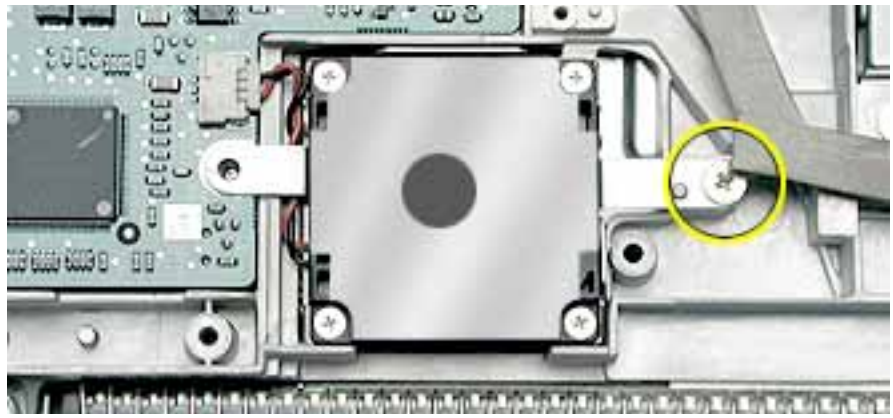
Preliminary Steps

Before you begin, remove the following:

- Battery
- Bottom case
- Bottom shield

Procedure

1. With the computer on a soft cloth, remove the single screw from the fan bracket.



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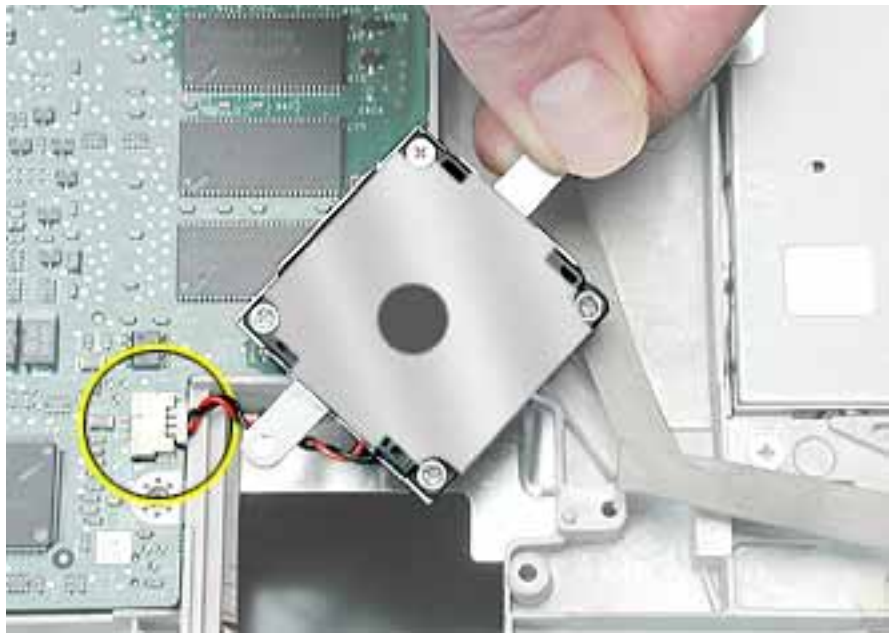
2. Lift the fan and bracket from the computer, and disconnect the connector from the logic board. (Use a black stick, if necessary.)

   Note: When installing the replacement fan, make sure that the fan cable routes underneath the fan bracket.



3. Install the replacement fan, and reassemble and test the computer.

Top Case
Replacement Instructions

The following instructions explain how to replace the top case on the iBook (14.1 LCD) computer.

Tools

This procedure requires the following tools:
- Soft cloth
- Black stick (or other nonconductive nylon or plastic tool)
- Magnetized #0 Phillips screwdriver
- Metal paper clip

Note: To organize the screws you remove from the computer, use a tray with divided compartments (such as a plastic ice cube tray).

Preliminary Steps

Before you begin, remove the following:
- Battery
- Keyboard
- AirPort Card
- Bottom case

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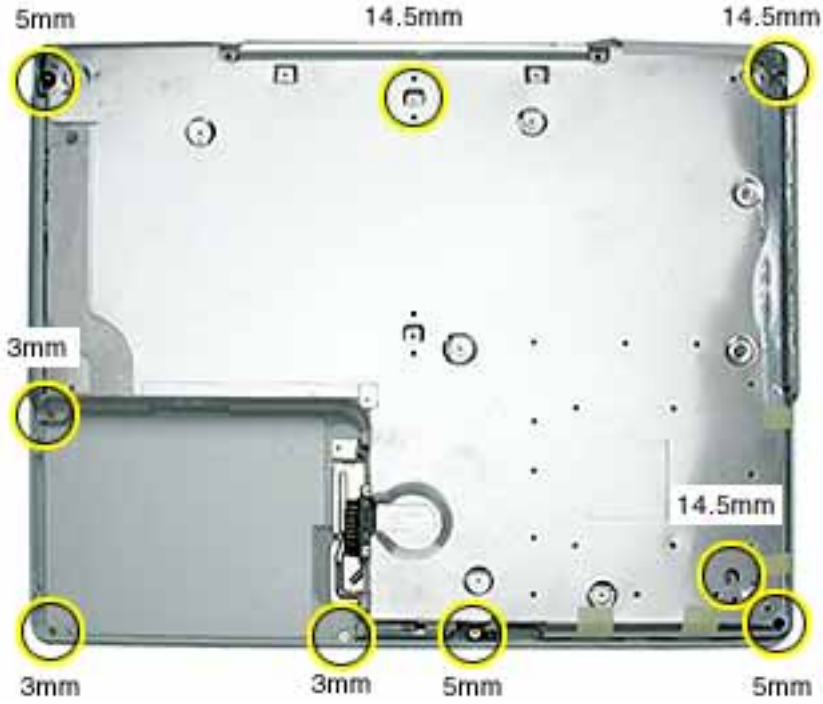
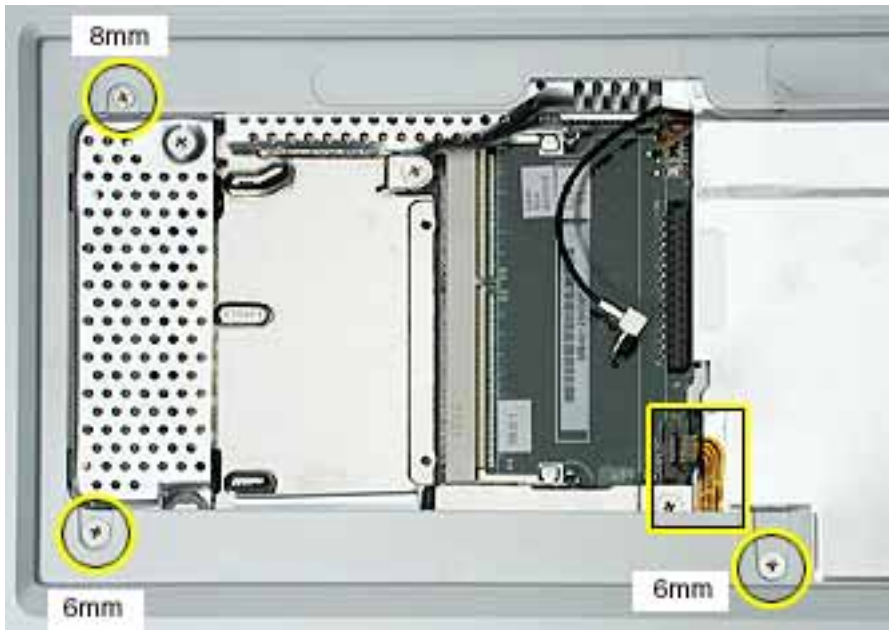
Procedure

1. With the computer on a soft cloth and the bottom shield facing up, remove the nine screws shown:
   - three 14.5-mm long screws
   - three 5-mm long screws
   - three 3-mm long screw



2. Turn over the computer. Using a black stick, pry up the sides of the trackpad cable connector to release the trackpad cable.
3. Remove the three screws from the keyboard well:
   - two 6-mm long Phillips screws
   - one 8-mm long Phillips screw



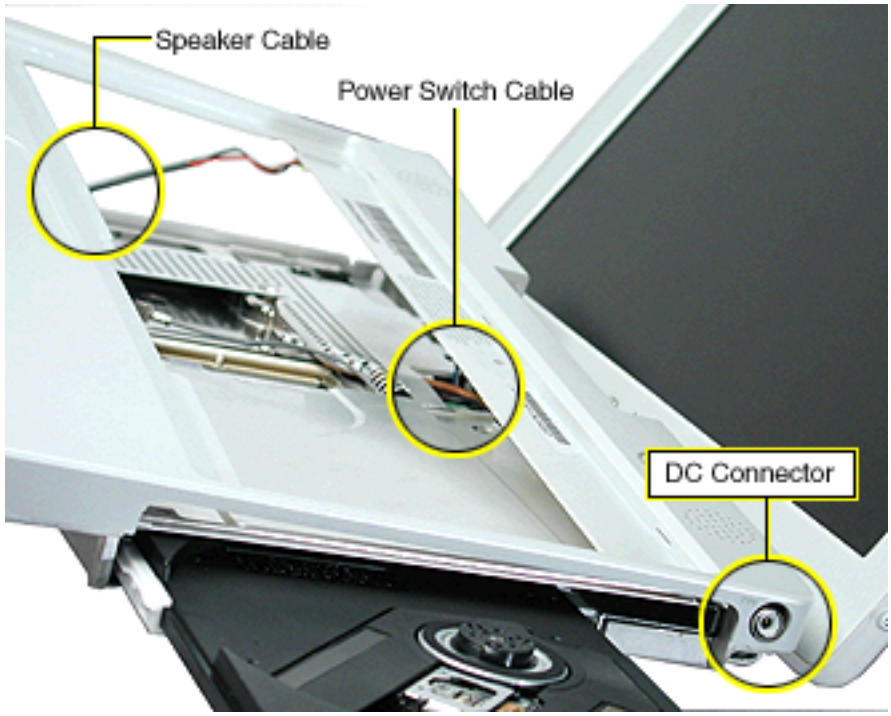
4. Using a straightened paper clip, open the optical drive.

5. **Warning: When performing this step, make sure the speaker cable and power switch cable are not strained.**

   Starting near the left speaker end of the top case, lift up the top case near the front. Tilt the top case so that it clears the DC connector.

   Tilt the top case up away from the computer latch.

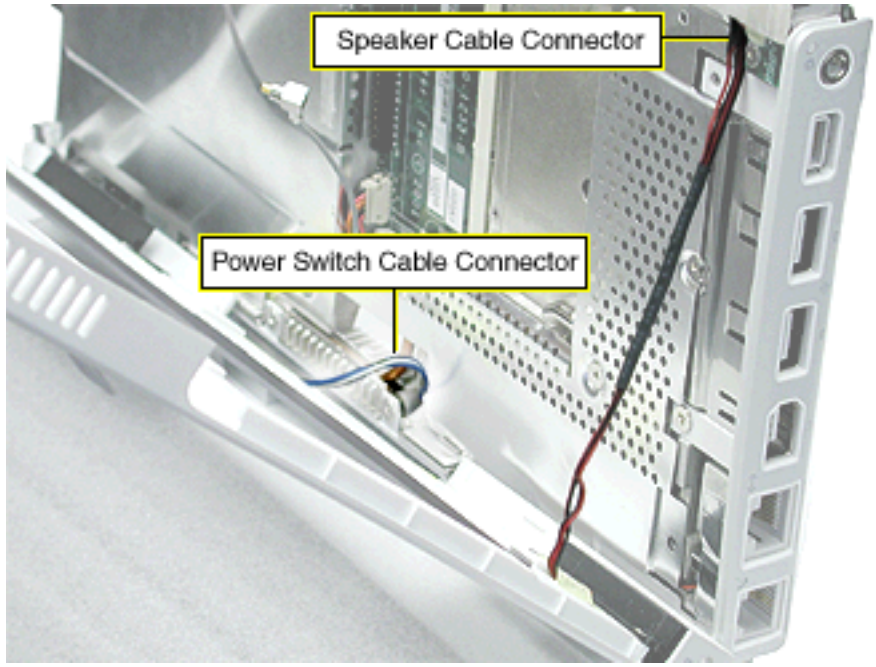
   Use a black stick to loosen the top case from the optical drive.



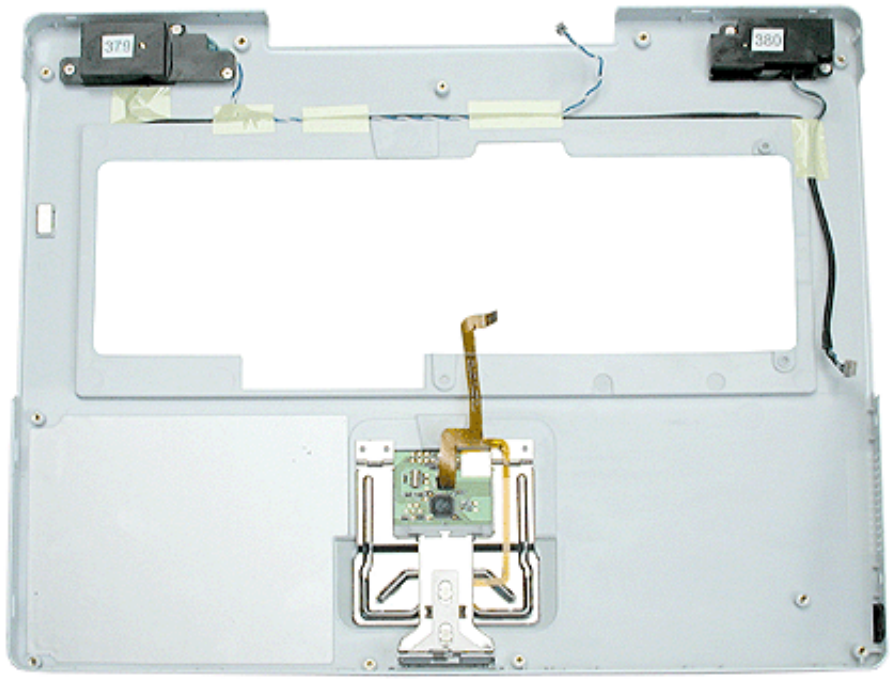
6. With the top case loosened, disconnect the speaker cable from the logic board.
7. Disconnect the power switch cable from the logic board.

8. Remove the top case from the computer.

Note: When installing the replacement top case, first connect the power switch cable connector followed by the speaker cable connector. Do not strain the cables. Then make sure you attach the case over the DC connector.



9. Before installing the replacement top case, make sure it includes the following:
   - Speaker set
   - Power button and board (under left speaker)
   - Speaker cable and power switch cable
   - Trackpad assembly with board and cable
   - Display latch
   - Battery magnet
10. **Important:** Make sure you transfer the original serial number label and Ethernet label from the old top case to the replacement top case. You can use a black stick to carefully peel up a corner of the label. Then peel off the label completely and apply it to the replacement top case. Make sure that the labels lie completely flat so they do not interfere with the battery compartment.

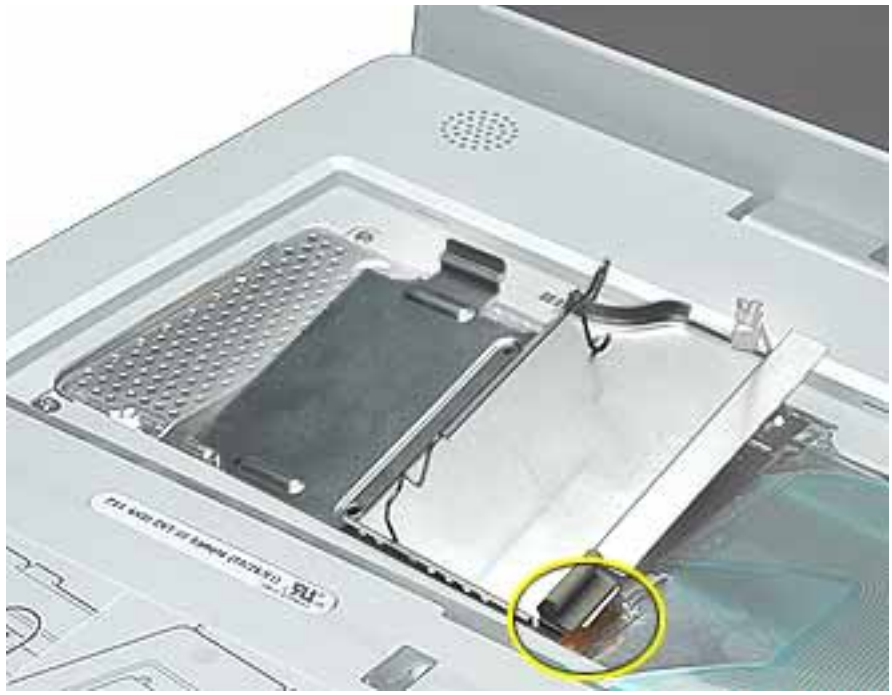


11. Install the replacement top case.

    Warning: When reassembling the computer, be careful not to pinch any cables as you press the top case back onto the computer. Check that the top case shows no raised surfaces and is fully snapped into place before installing the remaining screws.

12. Reassemble and test the computer.

Note: When reinstalling the RAM shield, insert the edge next to the trackpad cable first. Then make sure the RAM shield lays flat and the two screw holes align with the two holes in the heat spreader before installing the screws.



Top Shield
Replacement Instructions

The following instructions explain how to replace the top shield in the iBook (14.1 LCD) computer.

Tools

- Soft cloth
- #0 Phillips screwdriver
- Black stick (or other nonconductive nylon or plastic tool)

Note: To organize the screws you remove from the computer, use a tray with divided compartments (such as a plastic ice cube tray).

Preliminary Steps

Before you begin, remove the following:

- Battery
- Bottom case
- Keyboard
- Airport Card
- Top case

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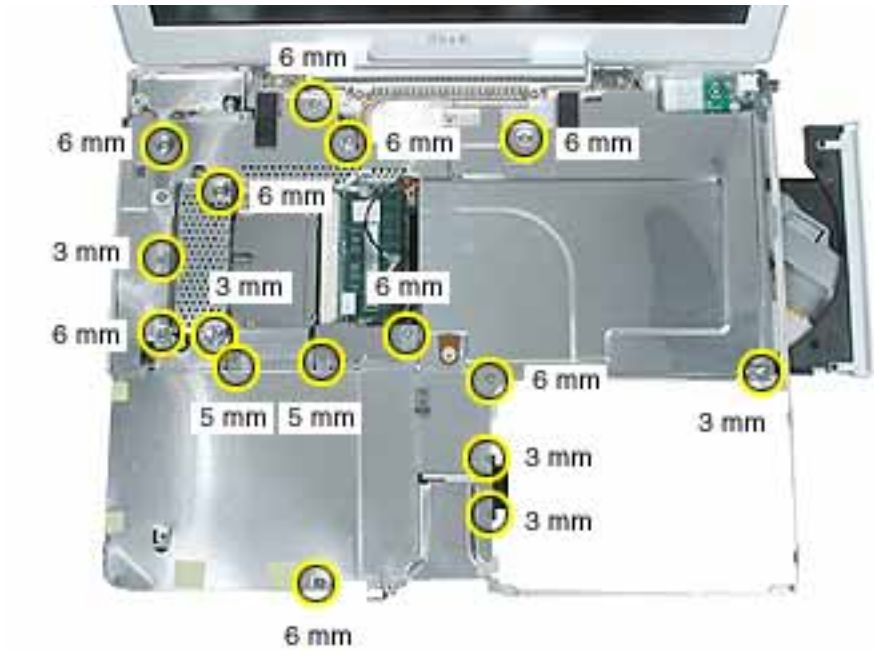
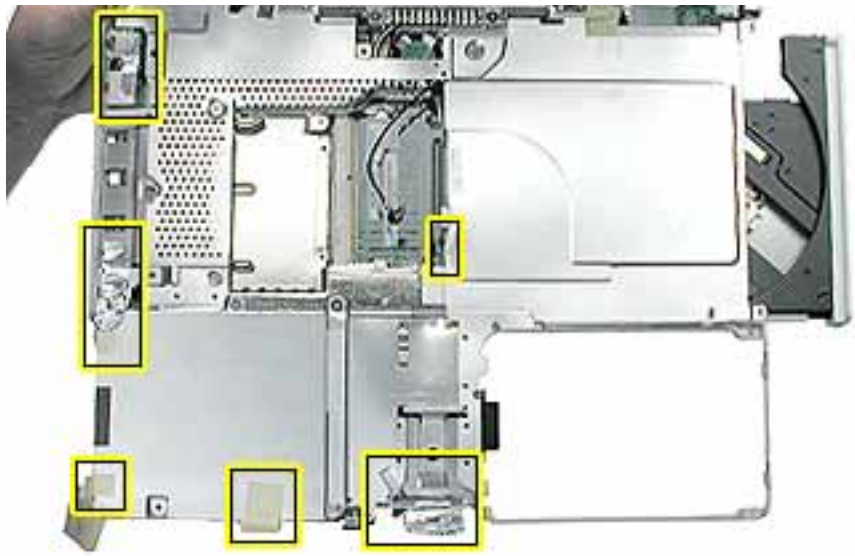
Procedure

1. With the computer on a soft cloth, remove the 16 Phillips screws:
   - nine 6-mm long screws
   - two 5-mm long screws
   - five 3-mm long screws

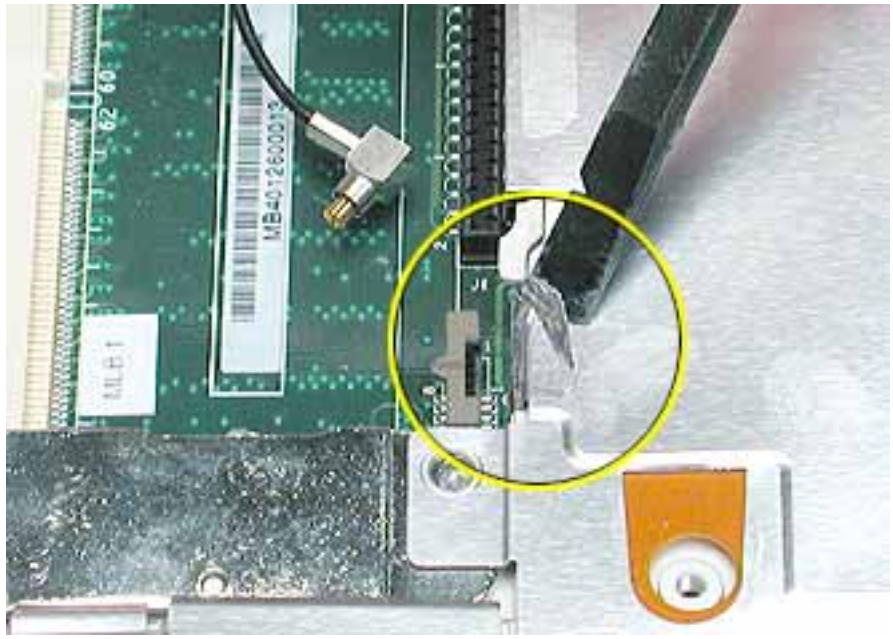


2. Using a black stick, carefully peel up, but do not remove, the foil strips and pieces of tape.

   Note: When reassembling the computer, reuse the foil and tape to secure the replacement top shield.

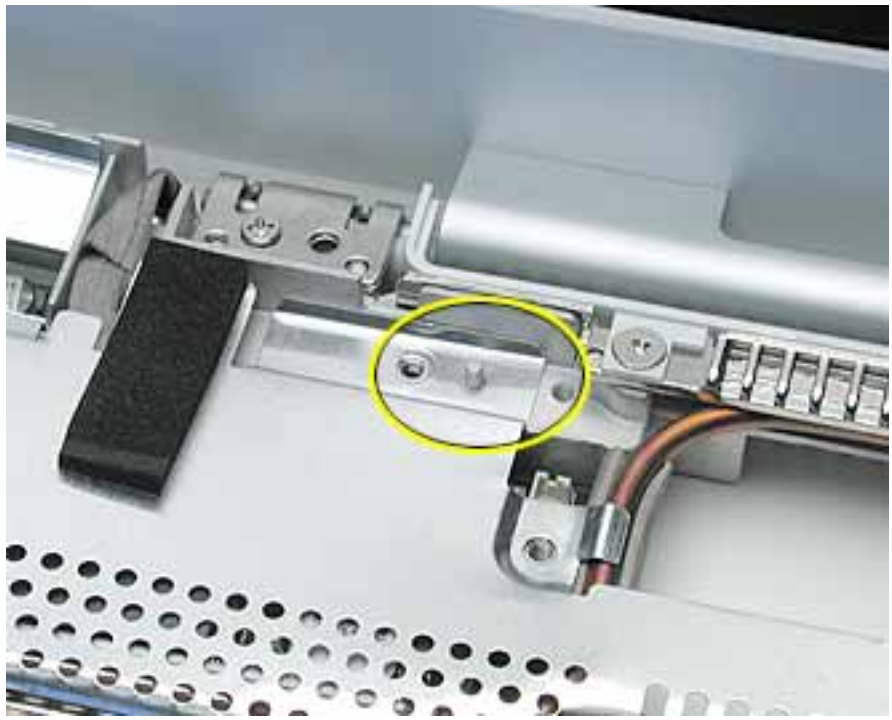


3. Lift up the foil tape near the trackpad cable.



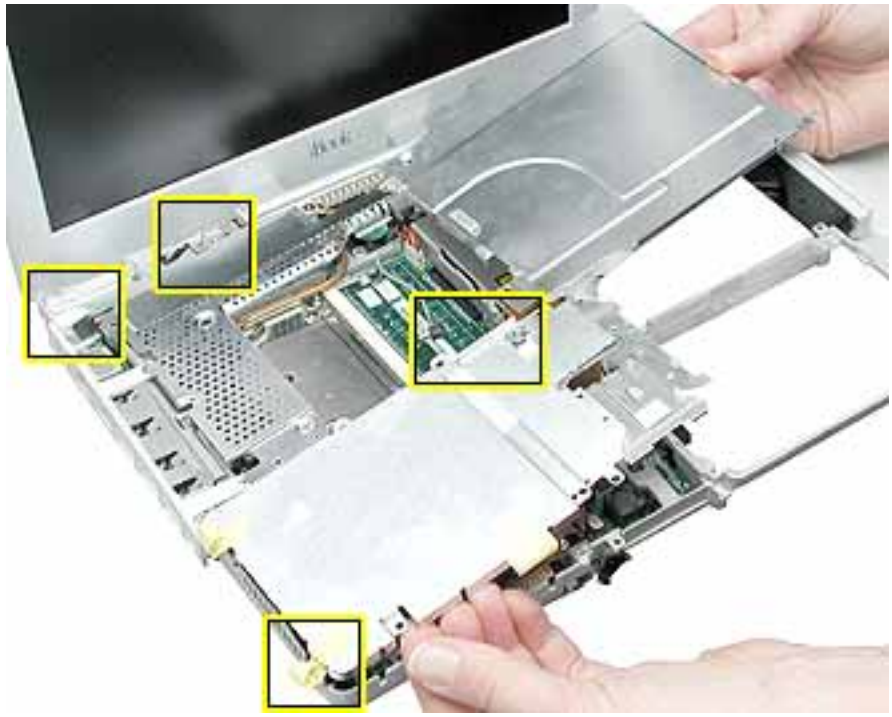
4. Before lifting up the top shield, note that the shield fits over posts on the computer frame.

   Note: When reinstalling the top shield, make sure the holes in the shield align with the screw holes and posts.



5. **Warning: Do not bend the top shield.**

   Lift the top shield off the computer, being careful where it might catch on the highlighted areas shown.



6. Install the replacement top shield, and reassemble and test the computer.

I/O Bezel
Replacement Instructions

The following instructions explain how to replace the I/O bezel in the iBook (14.1 LCD) computer.

Tools

- Soft cloth
- #0 Phillips screwdriver
- Black stick (or other nonconductive nylon or plastic tool)

Preliminary Steps

Before you begin, remove the following:

- Battery
- Bottom case
- Bottom shield
- Keyboard
- Airport Card
- Top case
- Top shield

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Procedure

1. With the computer on a soft cloth, remove the screw from the I/O bezel.

2. Tilt down the I/O bezel and remove it from the computer frame.

   Note: When reassembling the computer, make sure that the I/O bezel is level and fits over all ports.

3. Install the replacement I/O bezel, and reassemble and test the computer.

   Note: When installing the replacement I/O bezel, make sure the bezel shield and the mylar panel fits over the underside of the logic board, as shown below.

Hard Drive
Replacement Instructions

The following instructions explain how to replace the hard drive in the iBook (14.1 LCD) computer.

Tools

- Soft cloth
- Black stick (or other nonconductive nylon or plastic tool)
- Torx T8 screwdriver

Note: To organize the screws you remove from the computer, use a tray with divided compartments (such as a plastic ice cube tray).

Preliminary Steps

Before you begin, remove the following:

- Battery
- Bottom case
- Keyboard
- Airport Card
- Top case
- Top shield

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Procedure

1. With the computer on a soft cloth, note the location of the hard drive and how the flex cable is routed.
2. Remove the 5-mm long Phillips screw at the corner of the hard drive.

3. **Warning: If the flex cable connector is pulled up unevenly, some connector pins could become bent and damaged.**

   Using even force, pull the looped handle straight up to disconnect the flex cable from the connector at the side of the hard drive.

   Note: When installing the flex cable at the side of the replacement drive, this connector is labeled "TO MAIN BOARD" on the flex cable.

4. Lift up the fabric tape to release the microphone cable.

   Note: When reassembling the computer, reuse the tape to secure the microphone cable to the replacement drive.

5. From the corner bracket, tilt up the hard drive, and slide it out from under the microphone cable.

6. **Warning: Handle the hard drive at the sides only. Do not touch or press anywhere else on the drive.**

   Warning: If the flex cable connector is pulled out unevenly, some connector pins could become bent and damaged.

   Using even force, pull the looped handle to disconnect the flex cable from the connector on the end of the hard drive.

   Note: When installing the flex cable to the end of the replacement drive, this connector is labeled "TO HDD" on the flex cable.

7. Holding the drive by the corners as shown, pull off the side rails (with grommets attached).

   Note: When reassembling the computer, transfer the side brackets (including the grommets) to the replacement hard drive so the grommets fit over the screw heads.

8. Install the replacement hard drive, and reassemble and test the computer.

   Note: Each connector on the flex cable is labeled for reinstallation.

Modem
Replacement Instructions

The following instructions explain how to replace the modem in the iBook (14.1 LCD) computer.

Tools

- Soft cloth
- #0 Phillips screwdriver
- Black stick (or other nonconductive nylon or plastic tool)

Preliminary Steps

Before you begin, remove the following:

- Battery
- Bottom case
- Keyboard
- Airport Card
- Top case
- Top shield

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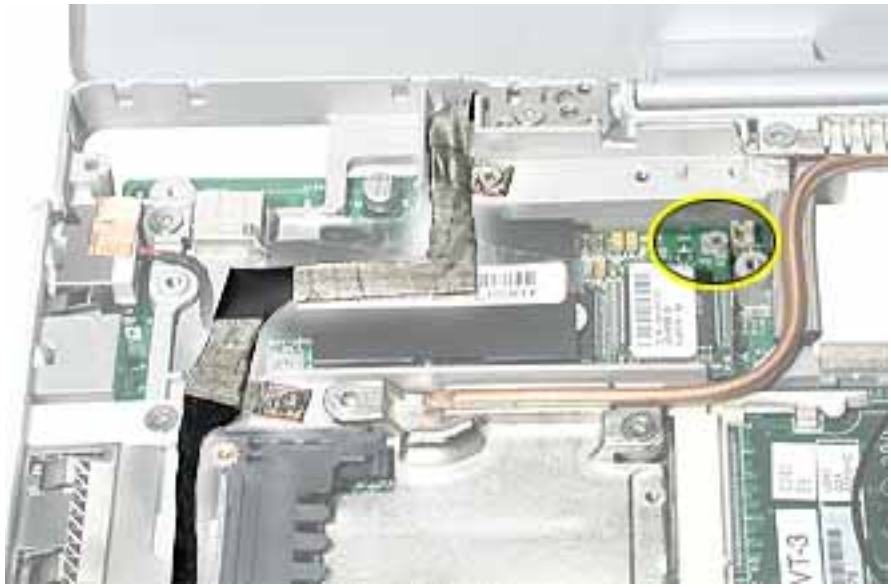
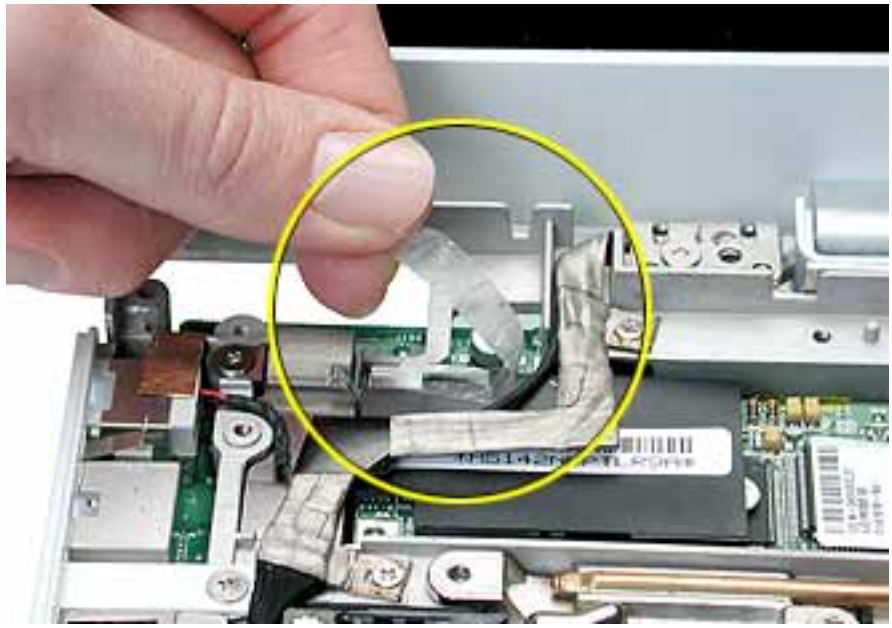
Procedure

1. With the computer on a soft cloth, remove the Phillips screw from the corner of the modem board.
2. **Warning: When removing the modem, be careful not to strain the LVDS (low voltage data signal) cable.**

   Note the routing of the LVDS cable that is taped to the plastic modem sleeve.



3. Without straining the LVDS cable, peel off the clear tape.



4. Tilt up the end of the modem board to disconnect it from the logic board.

5. **Important:** Do not strain or remove the LVDS cable.

   Gently move the LVDS cable aside, and pivot the modem board to reach the 2-pin cable connector located under the plastic sleeve.

6. Disconnect the connector from the modem. Slide the modem board out from under the LVDS cable.

   Note: When reassembling the computer, reuse the tape that secures the flat LVDS cable to the modem sleeve.

7. Install the replacement modem, and reassemble and test the computer.

Display Module
Replacement Instructions

The following instructions explain how to replace the display module in the iBook (14.1 LCD) computer.

Tools

- Soft cloth
- #0 Phillips screwdriver
- Black stick (or other nonconductive nylon or plastic tool)

Note: To organize the screws you remove from the computer, use a tray with divided compartments (such as a plastic ice cube tray).

Preliminary Steps

Before you begin, remove the following:

- Battery
- Bottom case
- Keyboard
- Airport Card
- Top case
- Top shield

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Procedure

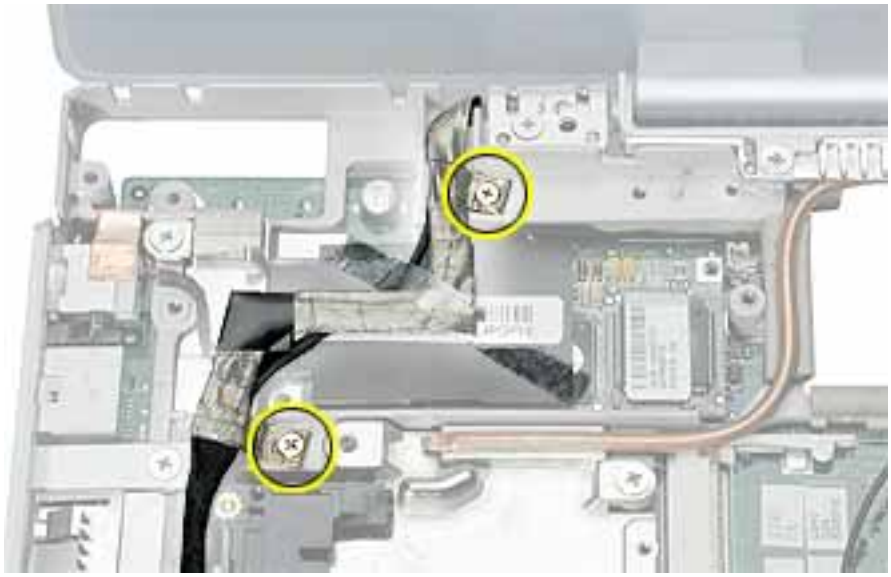
1. With the computer on a soft cloth, note the routing of the black microphone cable. Disconnect the microphone cable from the logic board and release the cable from the black fabric tape on the hard drive.

2. Pull up the flexible tab to disconnect the LVDS (low voltage data signal) cable from the logic board.

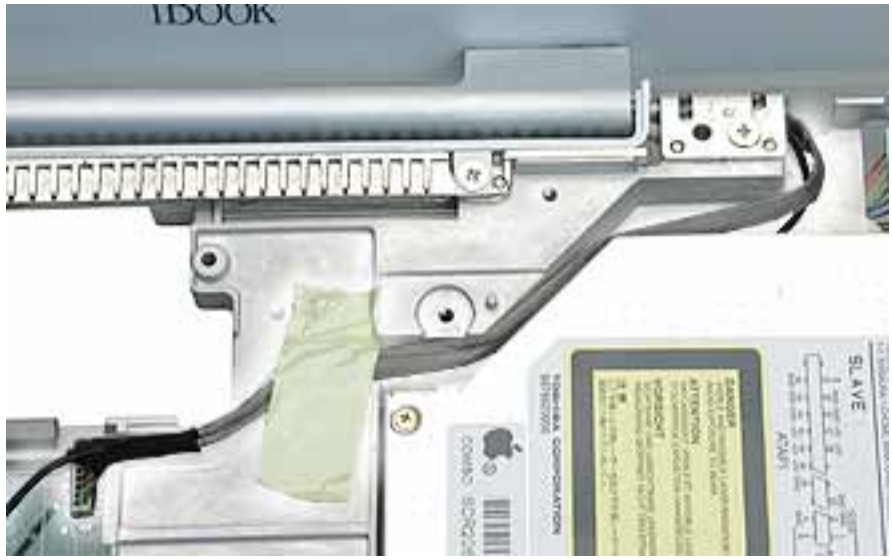
3. Remove the two screws securing the flat section of the LVDS cable.

   Warning: Be careful not to strain the LVDS cable.

4. Peel up the clear tape that attaches the LVDS cable to the modem sleeve.
5. Gently guide the LVDS cable and the microphone cable up from the computer chassis.



6. Peel the tape off of the computer frame, and disconnect the flat backlight cable from the logic board.



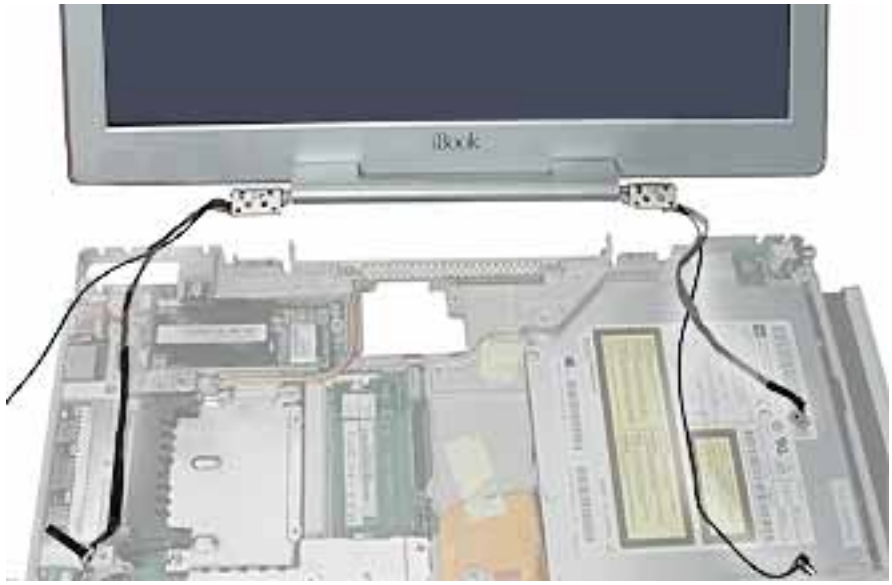
7. Route the cables up through the channel past the optical drive.

8. **Warning: To prevent damage, support the back of the display while performing this step.**

   Remove the screw at each display hinge.

9. **Warning: When lifting the display, be careful not to strain the cables.**

   Tilt the display up slightly from the computer.



10. Install the replacement display, and reassemble and test the computer.

Optical Drive
Replacement Instructions

The following instructions explain how to replace the optical drive in the iBook (14.1 LCD) computer.

Note: The optical drive in this computer is a combination CD-RW/DVD-ROM drive.

Tools

- Soft cloth
- #0 Phillips screwdriver
- Black stick (or other nonconductive nylon or plastic tool)

Note: To organize the screws you remove from the computer, use a tray with divided compartments (such as a plastic ice cube tray).

Preliminary Steps

Before you begin, remove the following:

- Battery
- Bottom case
- Bottom shield
- Keyboard
- Airport Card
- Top case
- Top shield

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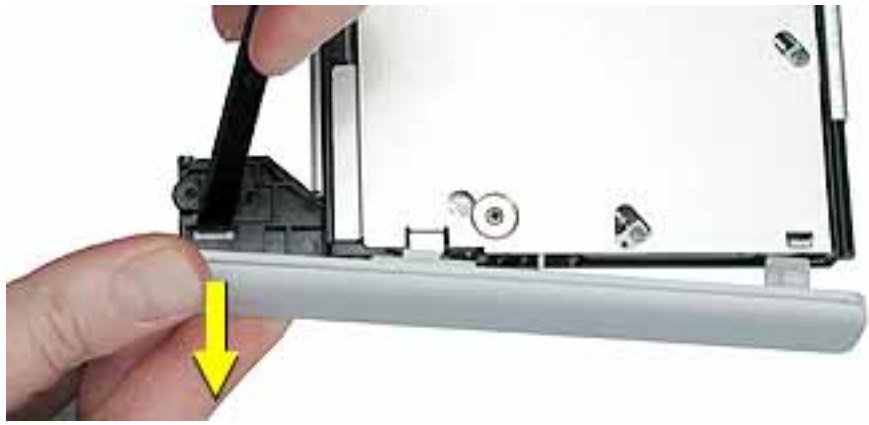
Procedure

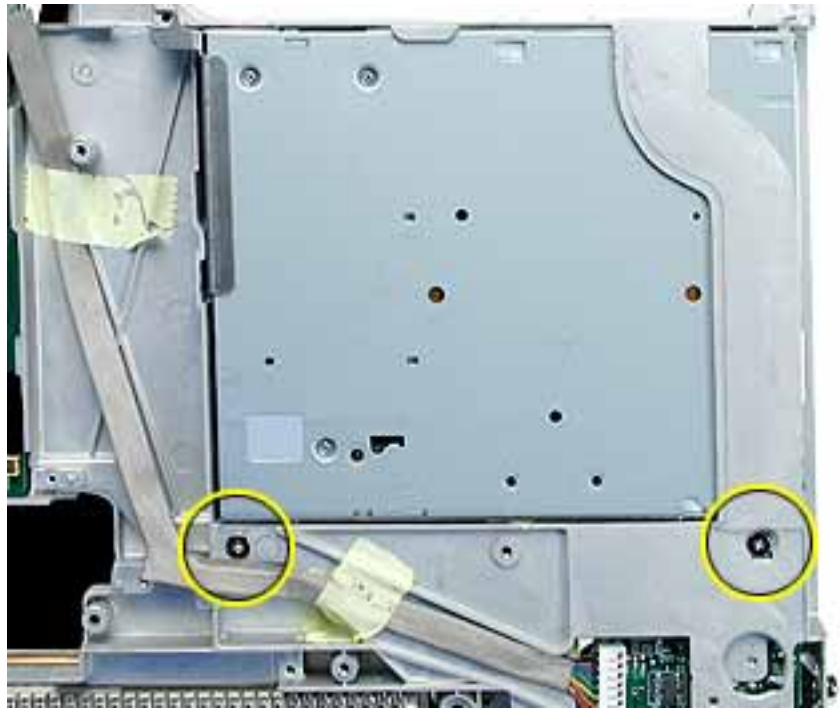
1. Use a straightened paper clip to release the drive tray.

2. With the drive tray open, carefully turn over the computer.
3. On the underside of the drive, notice the tabs near each end of the drive bezel.
4. Using the pointed end of a black stick, press the recessed middle of the smaller tab, and loosen that end of the bezel.

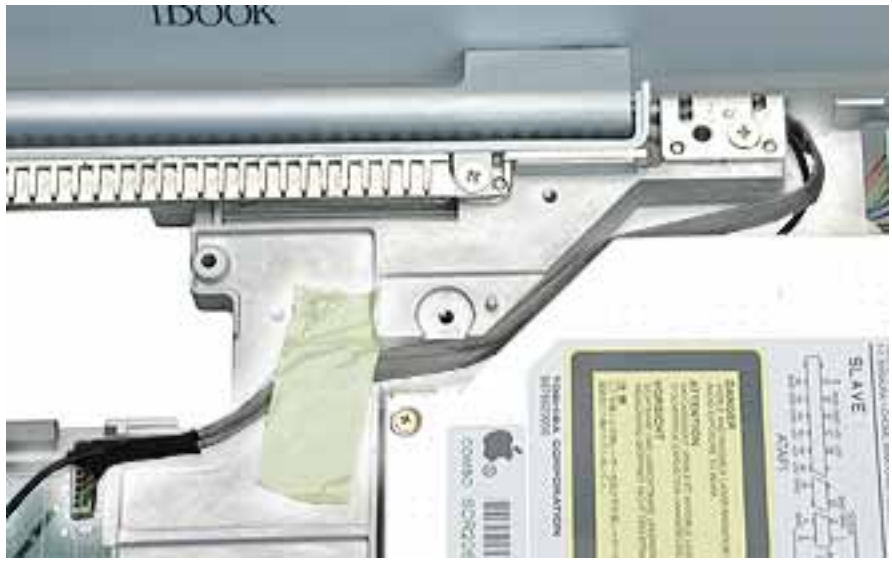
5. Press the wider tab, and pull the bezel off of the drive.



6. With the bezel removed, press the drive tray in until it is completely closed.
7. Tilt up the computer, and support the optical drive as you remove the two screws beneath the optical drive.



8. Turn the computer upright, and without straining the backlight cable, loosen the tape that secures the cable to the computer frame.



9. **Warning: Handle the optical drive at the sides only. Do not touch or press anywhere else on the drive.**

   Tilt up the optical drive so the corner tab clears the backlight cable.

   Without straining the optical drive flex cable, remove the tape and tilt the drive up from the computer frame.

10. Remove the two screws holding the cable bracket to the optical drive.
11. Remove the cable bracket.

    Note: When reassembling the computer, transfer the cable bracket to the replacement drive.

12. Disconnect the flex cable.

    Note: When reassembling the computer, transfer the flex cable to the replacement drive. The connector is labeled "TO CD-ROM" on the flex cable.

13. Install the replacement optical drive, and reassemble and test the computer.

    Note: When installing the replacement optical drive, press the bezel onto the drive after the optical drive is installed in the computer.

DC Board
Replacement Instructions

The following instructions explain how to replace the DC board in the iBook (14.1 LCD) computer.

Tools

- Soft cloth
- #0 Phillips screwdriver

Preliminary Steps

Before you begin, remove the following:

- Battery
- Bottom case
- Bottom shield
- Keyboard
- Airport Card
- Top case
- Top shield

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Procedure

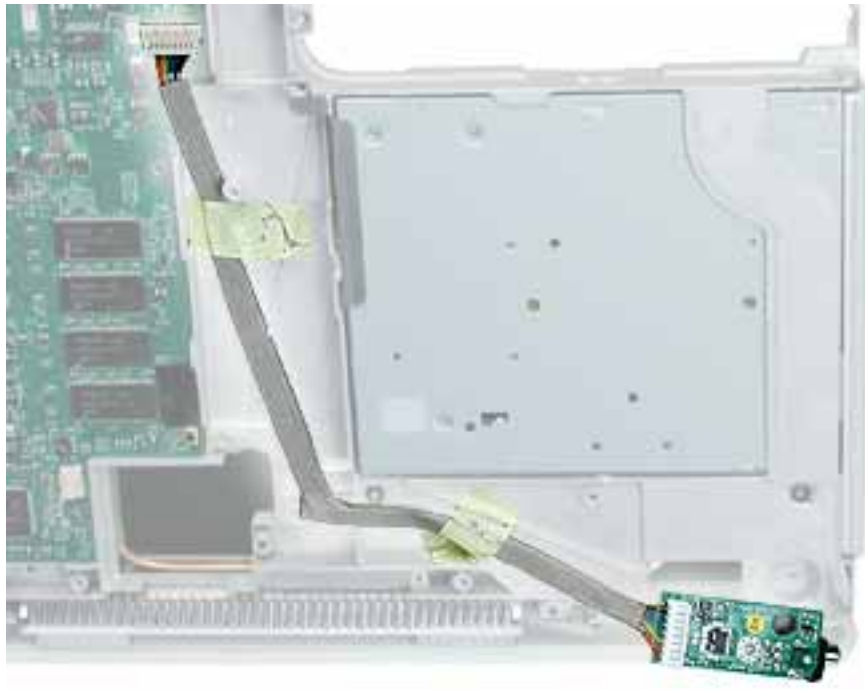
1. With the computer on a soft cloth, remove the 6-mm long screw that secures the DC board to the computer frame.

2. Tilt up the DC board and route it through the opening in the computer frame.

3. Disconnect the flat power cable from the connector on the logic board.

   Note: When reassembling the computer, make sure the flat power cable is taped to the underside of the computer frame.

4. Peel up the tape holding the flat cable to the computer frame.



5. Install the replacement DC board, and reassemble and test the computer.

Logic Board
Replacement Instructions

The following instructions explain how to replace the logic board in the iBook (14.1 LCD) computer.

Tools

- Soft cloth
- #0 Phillips screwdriver
- Black stick (or other nonconductive nylon or plastic tool)

Note: To organize the screws you remove from the computer, use a tray with divided compartments (such as a plastic ice cube tray).

Preliminary Steps

Before you begin, remove the following:

- Battery
- Bottom case
- Bottom shield
- Keyboard
- Airport Card
- Fan
- Top case
- Top shield
- I/O bezel
- Display module
- Modem
- Hard drive
- Optical drive

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Procedure

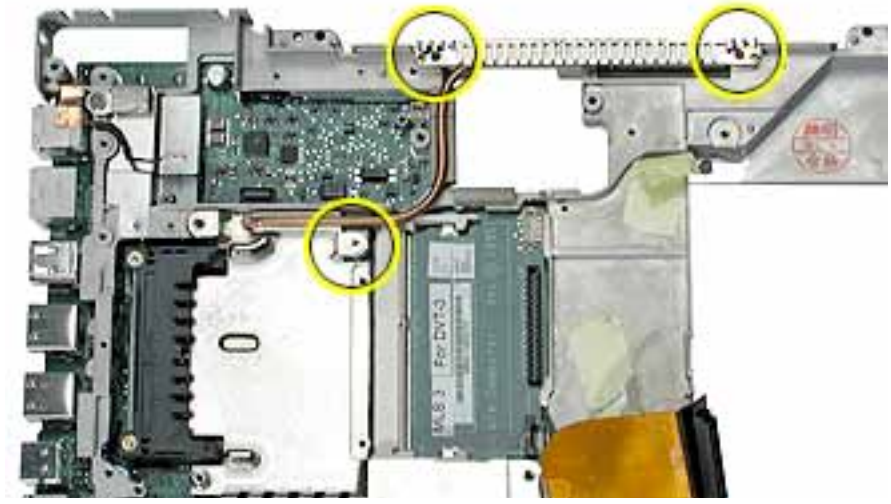
1. With the computer on a soft cloth, note the location of the sleep light board connected to the logic board and outer frame.

   Note: When reassembling the computer, make sure the sleep light board is positioned as shown and does not get caught between the top and bottom case.

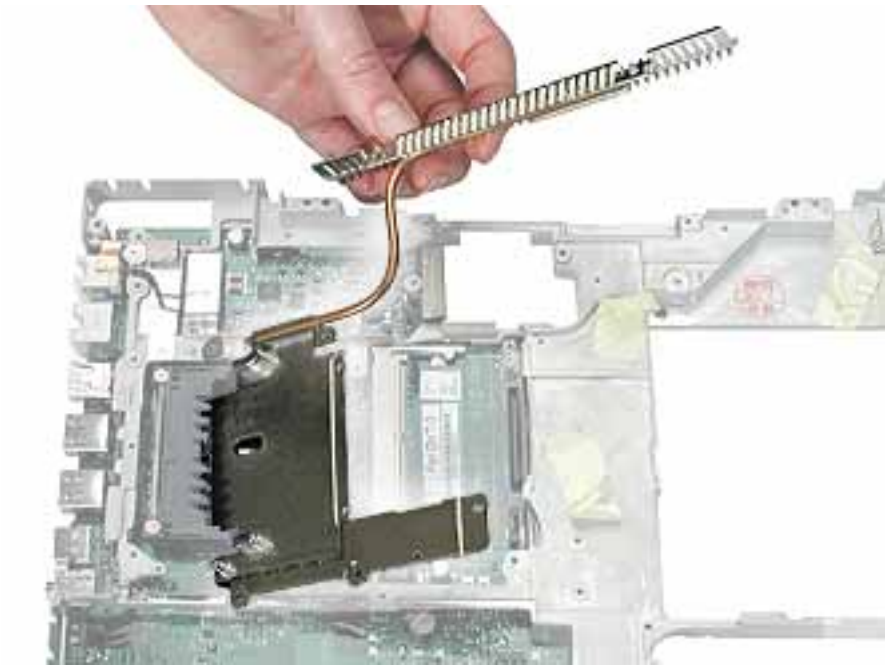
2. Using a black stick, disconnect the sleep light board connector from the logic board.

3. Remove the screw from the reset button board, and disconnect the connector from the logic board.

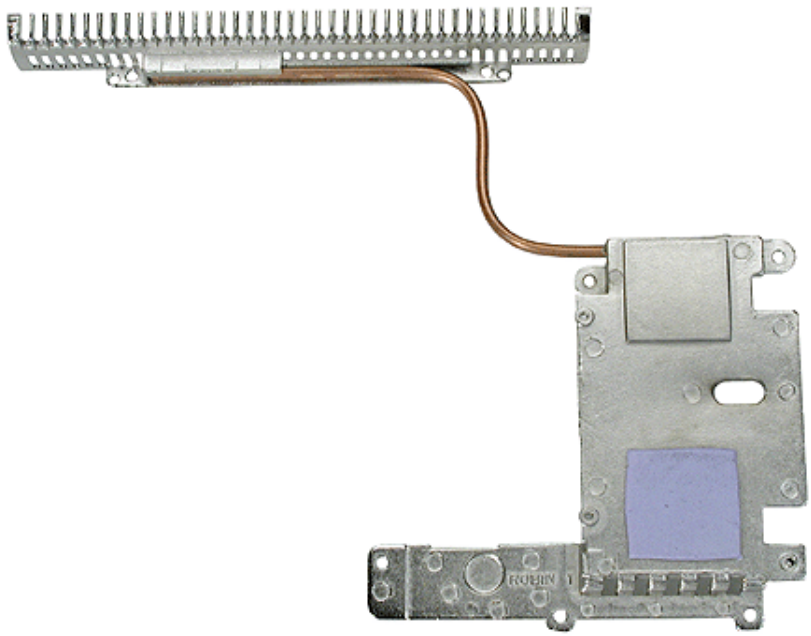
4. Remove the two screws holding the vent cover to the heat spreader.
5. Remove the remaining screw at the heat spreader plate.



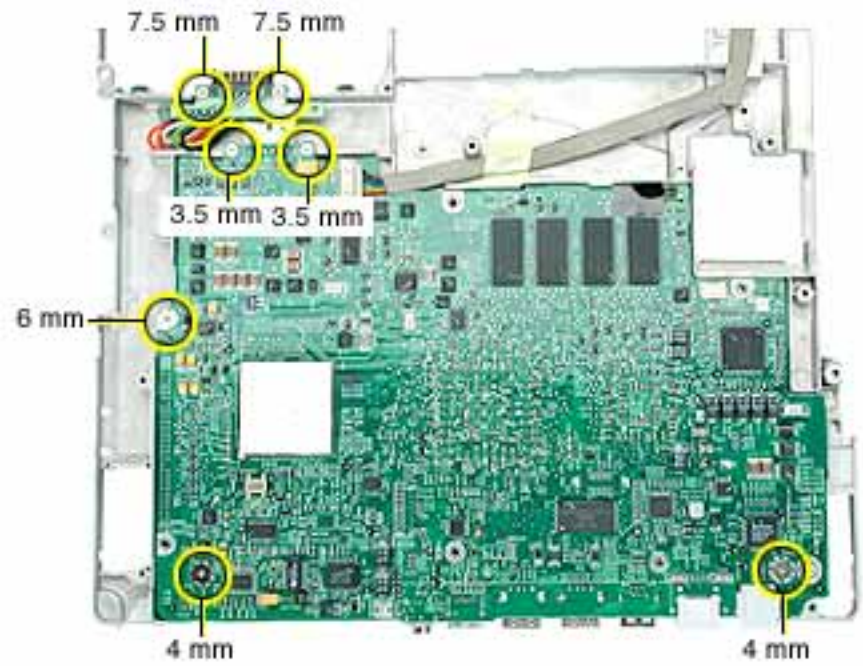
6. Tilt up the heat spreader and lift it off the logic board and out of the frame.



7. Turn over the heat spreader and notice the placement of the thermal pad on the other side. If replacing the heat spreader, make sure it has the thermal pad.



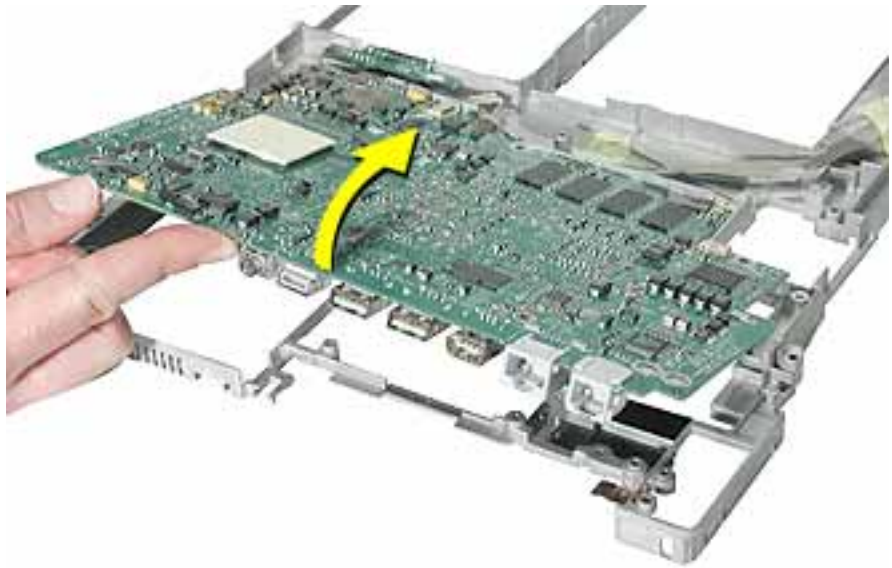
8. Turn over the frame, and remove the following:
   - Two7.5 mm long screws at battery transfer board
   - Two 3.5 mm long logic board screws
   - One 6 mm long logic board screw
   - Two 4 mm long logic board screws
9. Disconnect the DC board connector.



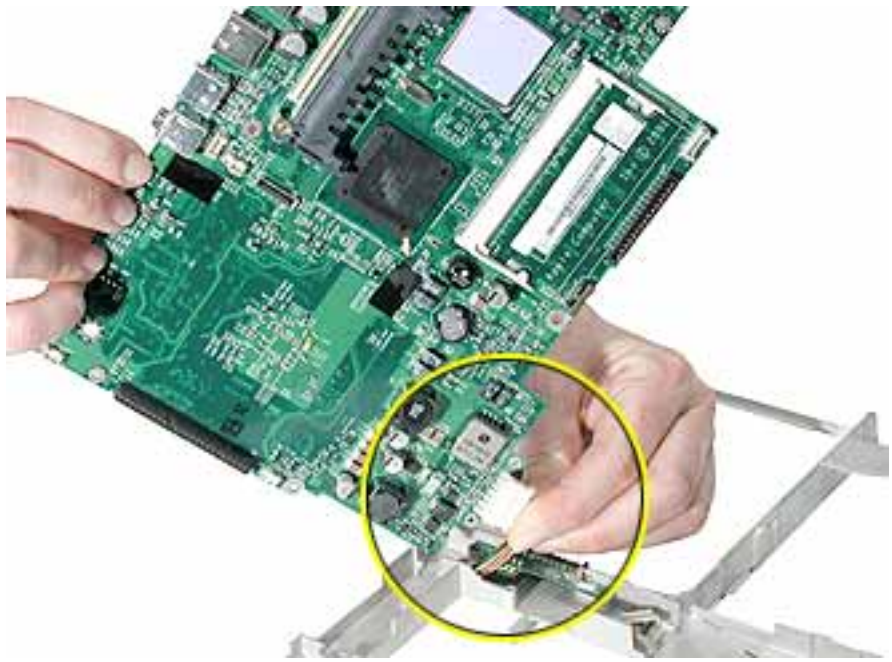
Note: When reassembling the computer, make sure that the underside of the replacement logic board includes the thermal transfer pad covering the large chip.

Note: When reassembling the computer, make sure that you transfer the following items from the original logic board to the top of the replacement logic board:
- Memory card(s)
- Strip of foil tape extending from the top of the Ethernet port, over the top of the modem port, and folding down the side of the modem port

10. Lifting the logic board at the back ports, tilt up the logic board to remove it from the frame.

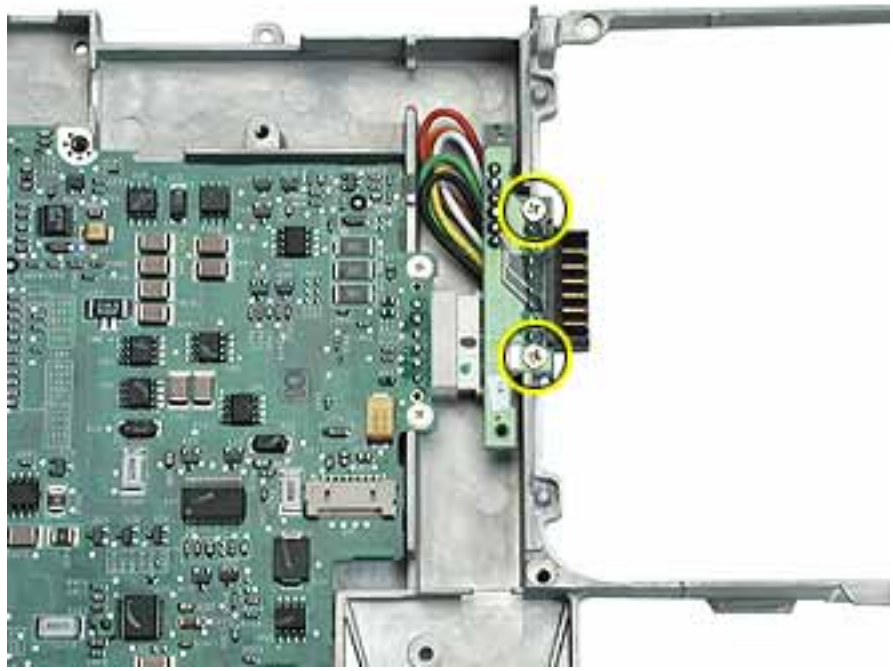


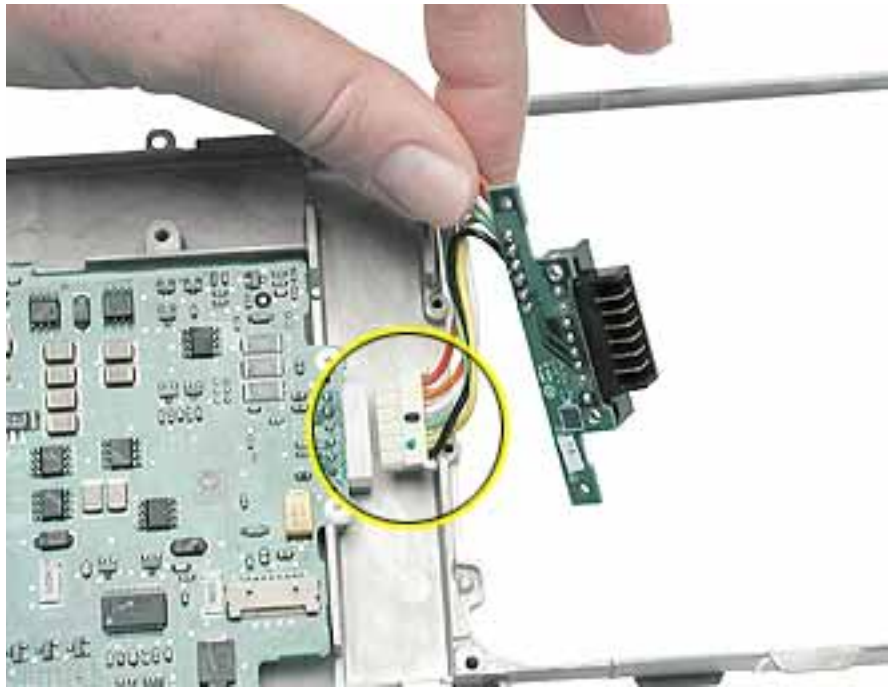
11. Disconnect the logic board from the battery transfer board connector.



12. Install the replacement logic board, and reassemble and test the computer.

13. If replacing the battery transfer board, remove the two screws that connect the battery transfer board to the rib frame. Then disconnect the battery transfer board from the logic board.





iBook (14.1LCD) Screw Locator - 1 of 5

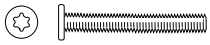
Keyboard and Memory Replacement

Two identical #0 Phillips
3 mm

Bottom Case Replacement

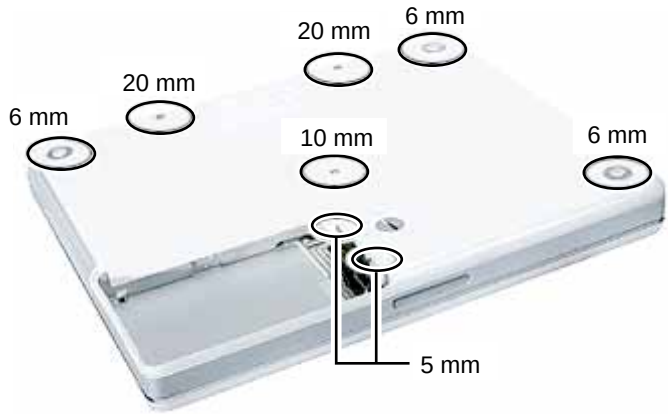
Three identical #0 Phillips,
6 mm long

One Torx T8,
10 mm long

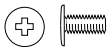


Two identical Torx T8,
20 mm long

Two identical #0 Phillips
5 mm long



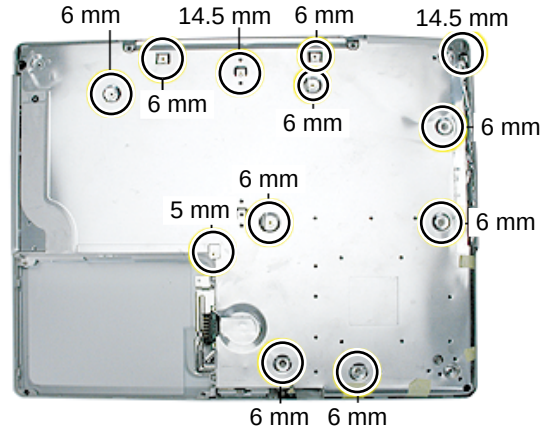
Bottom Shield Replacement



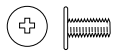
Nine identical #0 Phillips
6 mm long

One #0 Phillips
5 mm long

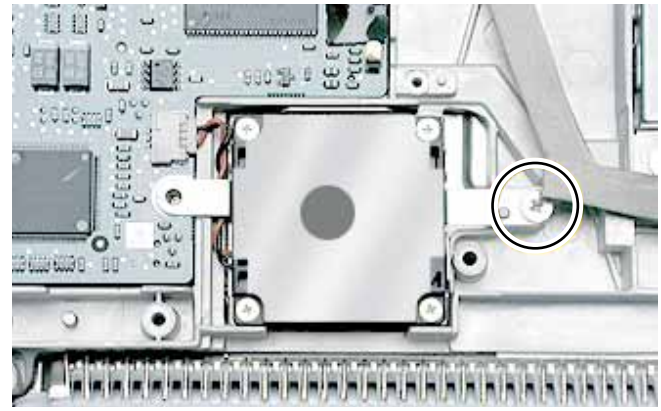
Two identical #0 Phillips
14.5 mm long



Fan Replacement



One #0 Phillips
6 mm long



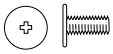
iBook (14.1 LCD) Screw Locator - 2 of 5

Top Case Replacement

Three identical #0 Phillips,
3 mm long

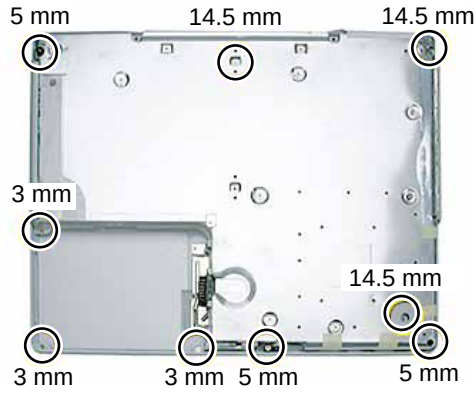
Three identical #0 Phillips,
14.5 mm long

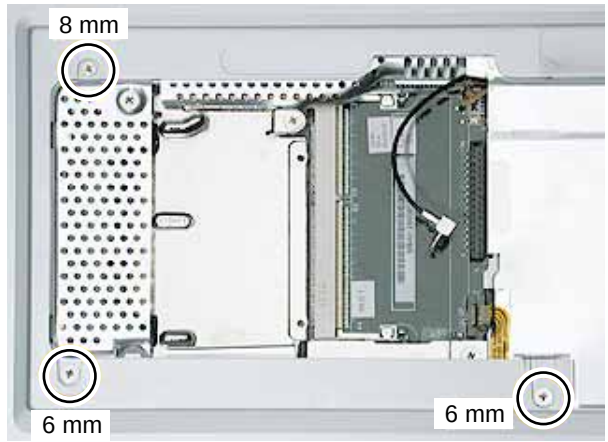
Three identical #0 Phillips,
5 mm long



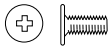
Two identical #0 Phillips,
6 mm long

One #0 Phillips,
8 mm long





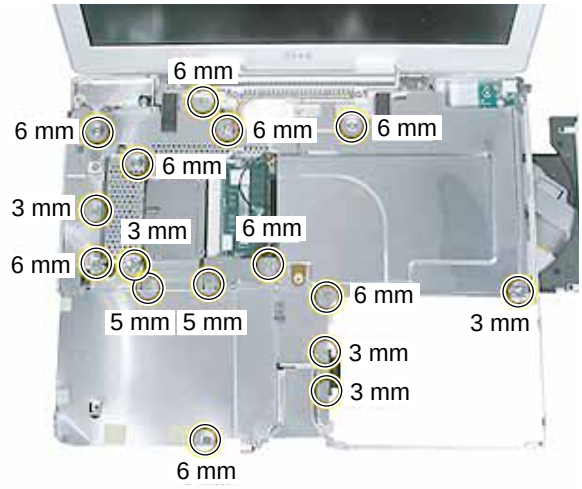
Top Shield Replacement



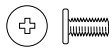
Nine identical #0 Phillips,
6 mm long

Two identical #0 Phillips,
5 mm long

Five identical #0 Phillips,
3 mm long



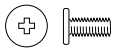
I/O Bezel Replacement



One #0 Phillips,
6 mm long

iBook (14.1 LCD) Screw Locator - 3 of 5

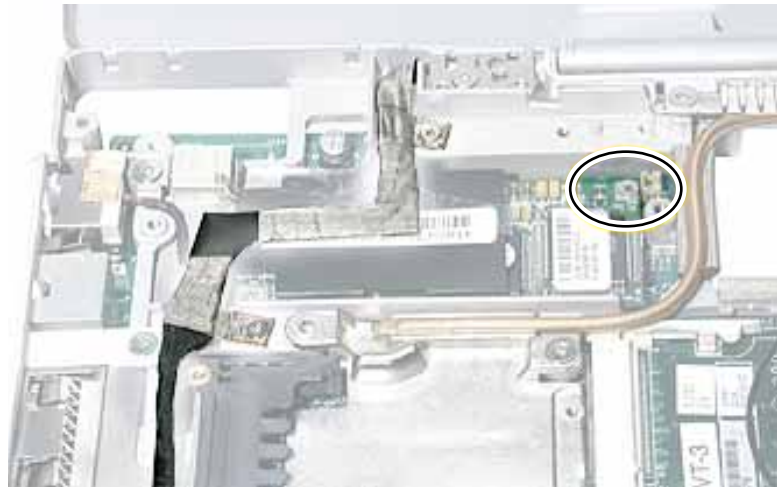
Hard Drive Replacement



One #0 Phillips,
5 mm long

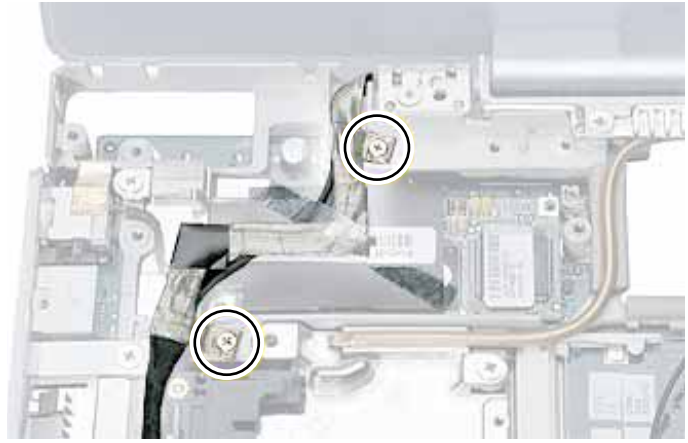
Modem Replacement

One #0 Phillips,
3.5 mm long



Display Module Replacement

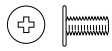
Two identical #0 Phillips,
3.5 mm long



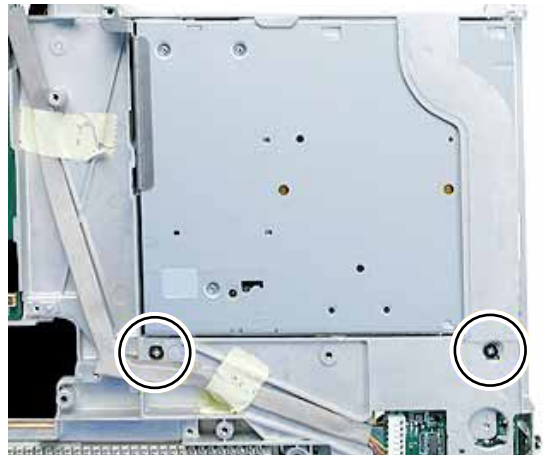
Two identical #0 Phillips,
5 mm long

iBook (14.1 LCD) Screw Locator - 4 of 5

Optical Drive Replacement

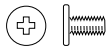


Two identical #0 Phillips,
6 mm long



Two identical #0 Phillips,
3 mm long

DC Board Replacement

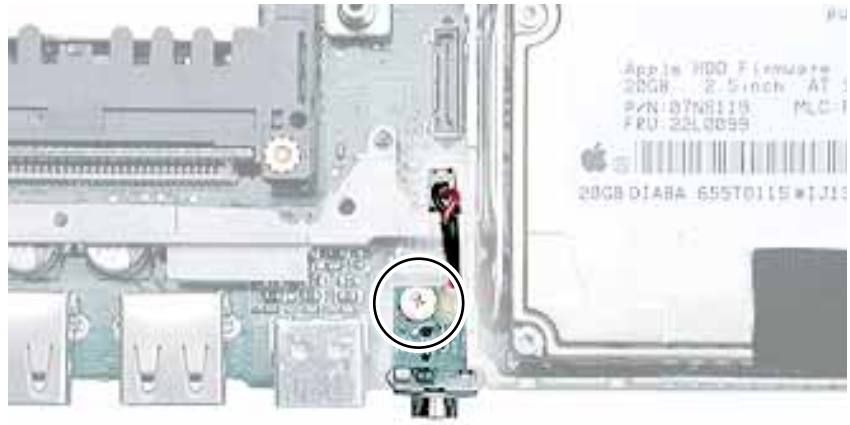


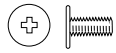
One #0 Phillips,
6 mm long

iBook (14.1 LCD) Screw Locator - 5 of 5

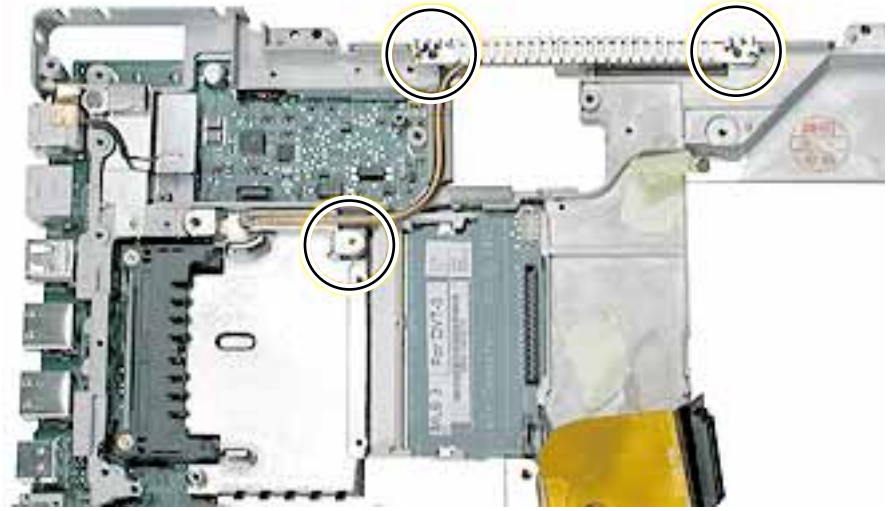
Logic Board Replacement

One #0 Phillips,
3.5 mm long

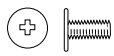




Three identical #0 Phillips,
6 mm long



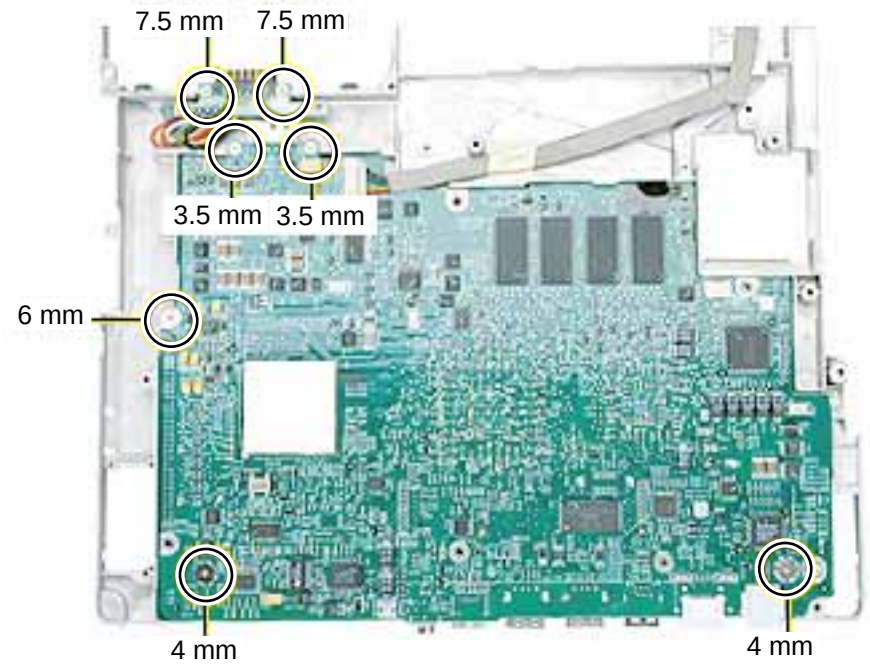
Two identical #0 Phillips,
4 mm long



One #0 Phillips,
6 mm long

Two identical#0 Phillips,
7.5 mm long

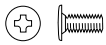
One #0 Phillips,
3.5 mm long



iBook (14.1 LCD) Screw Reference Sheet

This sheet shows the types of screws used in the iBook (14.1 LCD) computer. To see where the screws are located in the computer, refer to "iBook (14.1 LCD) Screw Locator."

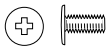
RAM Shield 2 @ 3 mm


Bottom Case 3 @ 6 mm

Bottom Case 2@ 20 mm

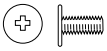
Bottom Case 1 @ 10 mm

Bottom Case: Battery 2 @ 5 mm


Bottom Shield 9 @ 6 mm

Bottom Shield 2 @ 14.5 mm

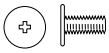
Bottom Shield 1 @ 5 mm


Fan 1@ 6 mm

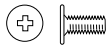
Top Case: Battery 3 @ 3 mm

Top Case 3 @ 5 mm

Top Case 3 @ 14.5 mm

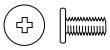

Top Case: Keyboard 2 @ 6 mm

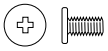
Top Case: Keyboard 1 @ 8 mm


Top Shield 9 @ 6 mm

Top Shield 5 @ 3 mm

Top Shield 2@ 5 mm

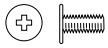

I/O Bezel 1 @ 6 mm


Hard Drive 1 @ 5 mm

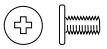
Modem 1 @ 3.5 mm

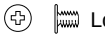
Display 2 @ 3.5 mm

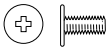
Display: Hinge 2 @ 5 mm

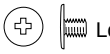

Optical Drive 2 @ 6 mm

Optical Drive: Cable 2 @ 3 mm

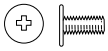

DC Board 1 @ 6 mm

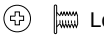

Logic Board: Reset Board 1 @ 3.5 mm


Logic Board: Heat Spreader 3 @ 6 mm


Logic Board 2 @ 4 mm

Logic Board 2 @ 7.5 mm


Logic Board 1@ 6 mm


Logic Board 1 @ 3.5 mm

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