

# CRESCENDO™/PB G3

## Processor Upgrade Card for Macintosh® PowerBook® 1400 Series Computers

### Quick Start Guide for Crescendo/PB G3

#### Macintosh PowerBook and Operating System Compatibility

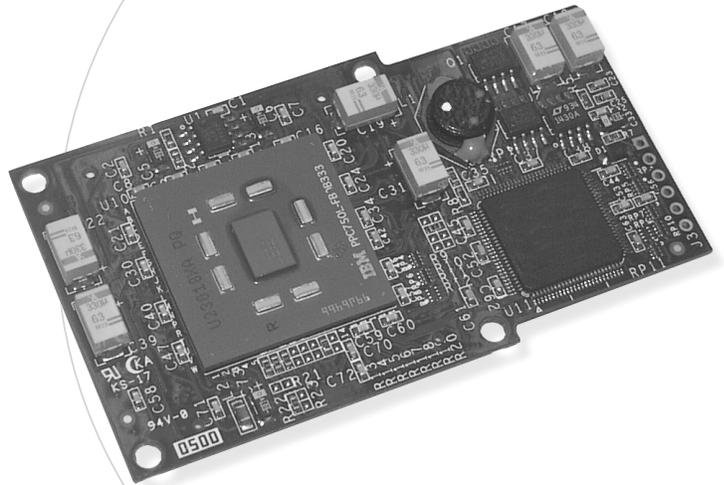
The Crescendo/PB G3 processor upgrade card is compatible with any Macintosh PowerBook 1400 series model.

At this printing, the Crescendo/PB G3 processor upgrade is compatible with System 7.5.3 through Mac® OS 9.1. For up-to-date Mac OS compatibility information, check our web site.

#### You Should Have

The following items should be included in your product package:

- Crescendo/PB G3 processor upgrade card
- Crescendo/Encore Install Diskette
- Sonnet Installer CD
- *Powered by Sonnet* label
- Small Phillips screwdriver/hex head driver tool



**Support Note:** Please familiarize yourself with the following instructions before beginning the installation. If you feel you are unable to install the computer hardware, please contact a qualified computer technician.

Before proceeding with the installation, we recommend that you make a backup of important information on your hard drive prior to installing new hardware or software.



Software updates and links are available from the Sonnet web site at [www.sonnettech.com](http://www.sonnettech.com).

Remember to register your product online at <http://registration.sonnettech.com> to be informed of future upgrades and product releases.

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Sonnet Technologies, Inc., 15 Whatney, Irvine, California 92618-2808 USA • Tel: 1-949-587-3500 Fax: 1-949-457-6350

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**WARNING:** To avoid damaging your PowerBook, you should not install any type of expansion card while a power source is connected. Follow the instructions below for details on when to disconnect the power adapter and remove the battery.

### Install Software

Before proceeding with the hardware installation, you *must* run the Crescendo/PB Installer.

1. Insert the Crescendo diskette into the floppy disk drive or the Sonnet Installer CD into the CD-ROM drive. Double click the Crescendo/Encore Install icon.
2. By default, with “Easy Install” selected from the pop-up menu, the required software will be installed into the active System Folder on the boot drive. If this is ok, click the Install button; otherwise, select “Custom Install” from the pop-up menu for more options or select another drive to install the software. The installer will install the appropriate software into the System Folder of your computer. If the installation was successful, a dialog box will appear.
3. Click Quit to leave the installer and shut down your computer.



**Support Note:** When handling computer products, take care to prevent components from being damaged by static electricity; avoid working in carpeted areas. Handle electronic components only by their edges and avoid touching connector traces and component pins.

### Shut Down and Open Computer

1. If you have not already done so, shut down your PowerBook. If it has been on for any length of time, wait a few minutes for it to cool before beginning the installation.
2. Disconnect the power adapter and any peripheral cables from the back of the PowerBook and move it to an area where you can freely work.
3. If installed, remove the battery from the computer.
4. With the front of the PowerBook facing you, find the speaker grill located above the keyboard. Remove the speaker grill by sliding it to the left and away from the computer (Figure 1). You may need to use some gentle pressure to move it sideways if it has never been removed before. Set the speaker grill aside.
5. Place your finger (or carefully slide the end of the Phillips screwdriver) under the top edge of the keyboard and lift it up. Rotate the keyboard forward (Figure 2) so that it rests upside down on the lower part of the computer's case. Take care not to disconnect the keyboard cable from the logic board.

### Remove Metal Heat Shield

1. Locate the metal heat shield (Figure 3) and touch it to discharge any potential damaging static electricity.



**Support Note:** To avoid regenerating a static charge in your body, do not walk around the room until after you finish the installation, reassemble and close the computer.

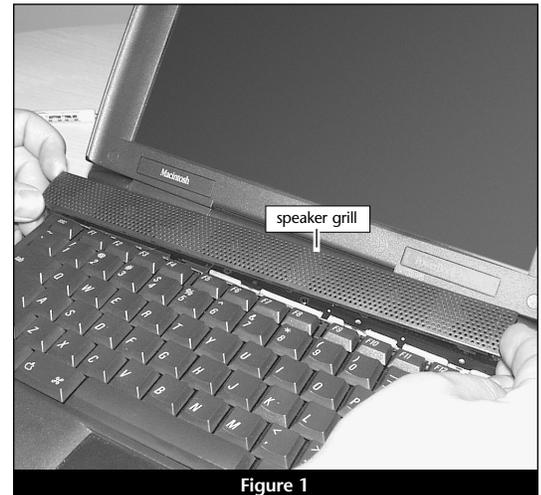


Figure 1

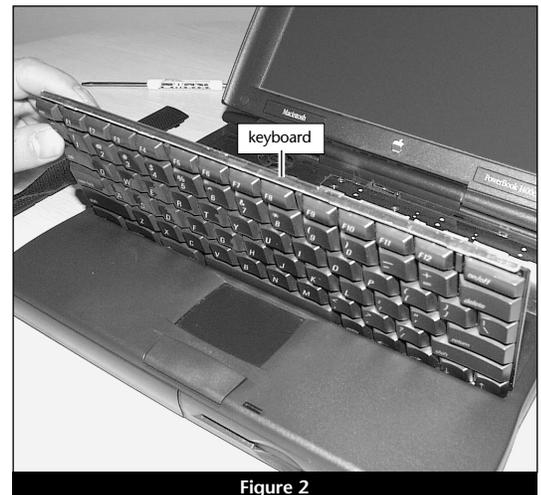


Figure 2

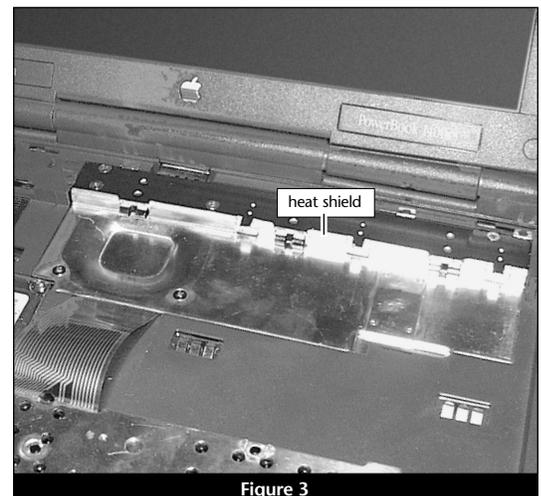


Figure 3

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2. Use the Phillips screwdriver to loosen the six screws that hold the heat shield in place (**Figure 4**). Remove the screws, noting the two screws that secure the rear of the heat shield are longer than the other four screws. Set the screws aside.
3. Lift the heat shield up and away from the computer (**Figure 5**) and set it aside near the screws you just removed.

### Remove Processor Card

1. Locate the processor card (**Figure 6**). It is in front of the keyboard cable connected to the logic board. The processor card should also have four stand-offs that secure it in place.
2. If present, remove the screen cable shield. Use the hex head driver tool to loosen the stand-offs (**Figure 6**). Remove the stand-offs and set them aside, noting the two rear stand-offs that run horizontal to the screen are longer than the two stand-offs in front of the keyboard cable.

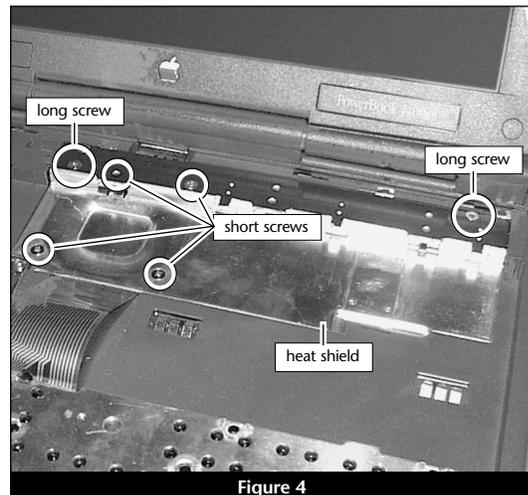


Figure 4

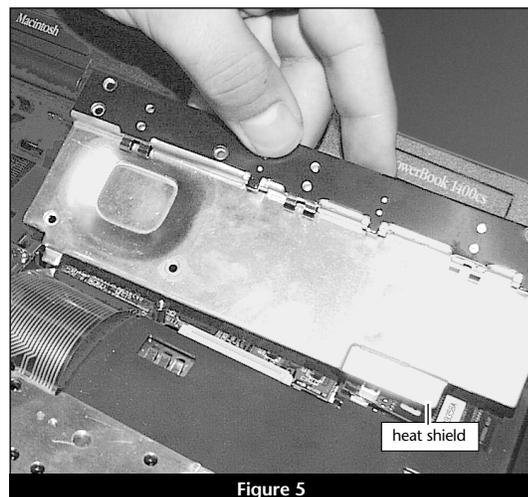


Figure 5

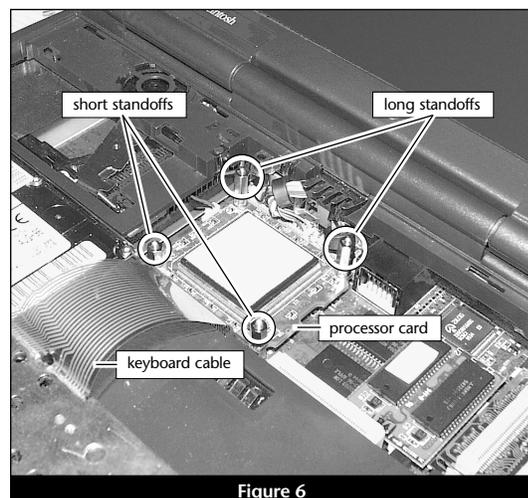


Figure 6

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3. Carefully unseat the processor upgrade card by first lifting up the edge nearest the keyboard, then lift up the edge nearest the screen. Once un-mated from the logic board connectors, lift the processor card out toward the keyboard while holding the front edge higher than the screen edge (Figure 7). Set the card aside near the stand-offs you just removed.

### Install the Crescendo/PB

1. Remove the Crescendo card from the anti-static package, making sure to handle the card by the edges.
2. Lower the card into the unit while holding it with the screen edge lower than the keyboard edge. Align the screen end of the card connectors with the logic board connectors. Once aligned, gently press on the outer edges of the board (as indicated in Figure 8) until the card's connectors begin to engage the main logic board connectors. Take care not to press on the board component shown in Figure 8. Then in one motion, lower the front edge of the card and firmly press down until the card is seated. **DO NOT FORCE IT!** The connection may be tight, but should not require excessive force during insertion. If the card does not join properly with the logic board connectors, carefully remove the card using the procedure above, check for bent pins, and reinstall it using the procedure outlined above.
3. Package the old processor card into the Crescendo's anti-static package and store it in a safe place.
4. Reinstall the four stand-offs into their respective holes in the four corners of the Crescendo card. The two long stand-offs run horizontal to the screen; the two short stand-offs run horizontal to the keyboard. Reinstall the screen cable shield if present.

### Reinstall Metal Heat Shield

Reinstall the heat shield. Slide the front edge of the heat shield under the case, then lower the back of the shield until it is flush with the logic board (Figure 9). Reinstall the six screws. Make sure to put the two long screws at the rear corners of the shield.

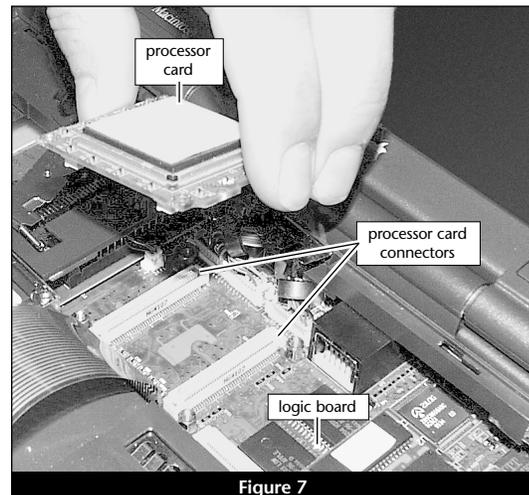


Figure 7

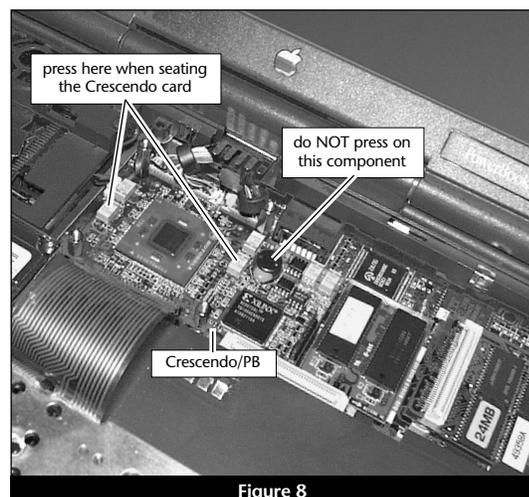


Figure 8

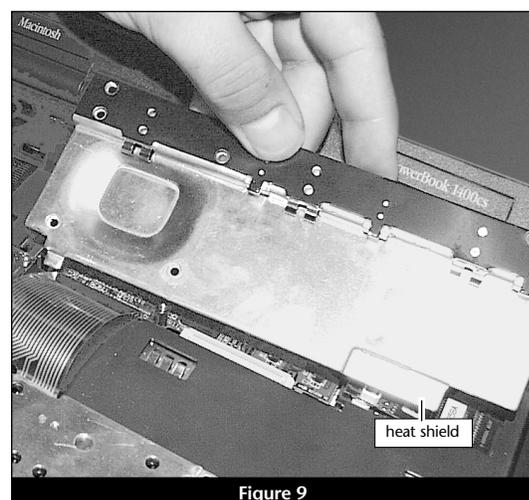


Figure 9

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### Reassemble Computer

1. Reinstall the keyboard (**Figure 10**). Gently lift it up and rotate it back into place, lowering the top edge of the keyboard into the upper part of the case.
2. Reinstall the speaker grill (**Figure 11**). Lower the grill into the opening above the top row of keys. Slide the grill to the right to lock it in place.
3. Affix the *Powered by Sonnet* label to the front of your computer.

### Reset Power Management

1. Hold down the On/Off key for 30 seconds. This procedure acts as a reset for the PowerBook's power management chip and ensures that a new processor upgrade card is recognized at the next startup. Clicking sounds from the speaker may be audible during this procedure. This is normal and does not indicate a problem with the installation.

### Turn On Computer

1. Before reinstalling the battery or any peripheral cables, reconnect the A/C power adapter and turn on your upgraded G3 PowerBook. You should hear the startup tone and see the Crescendo extension load during startup. The Crescendo extension will rebuild your desktop the first time you restart the computer. If the PowerBook fails to boot, refer to the troubleshooting section of these installation instructions.
2. Once the PowerBook has booted, shut down the unit and reinstall the battery and any peripheral cables.

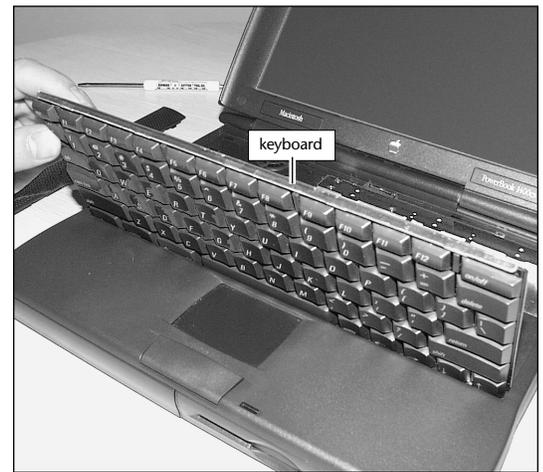


Figure 10

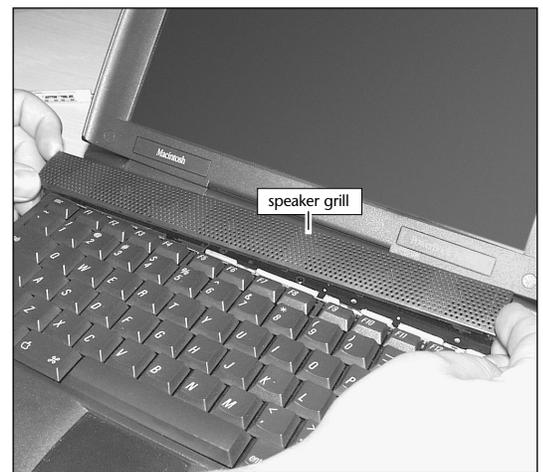


Figure 11

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### Troubleshooting

This section addresses issues encountered by some Crescendo/PB users.

#### **Problem:**

Although the A/C power adapter has been reconnected, there is no startup tone when the PowerBook is turned on.

#### **Solution:**

Does the sleep light on the upper right corner of the screen stay on (green)?

**Yes:** The PowerBook power management circuit needs to be completely reset. To do this, disconnect all peripherals and power sources (battery and A/C power adapter) from the PowerBook. Use a small piece of tape to hold the On/Off key down and leave the PowerBook in this configuration overnight (8-10 hours). It is normal if clicking sounds from the speaker are audible during this procedure. Repeat step 22 of the installation procedure.

**No:** The PowerBook power management circuit may need to be reset longer than the 30 seconds in step 21 of the installation instructions. Disconnect all peripherals and power sources (battery and A/C power adapter). Hold the On/Off key down for several minutes. It is normal if clicking sounds from the speaker are audible during this procedure. Repeat step 22 of the installation procedure.

The Crescendo card may not be installed properly. After attempting the above extended reset procedure, verify the Crescendo card is installed properly.