User's Guide

PowerDomain™ Control Utility

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This user's guide explains how to use the PowerDomain Control utility to configure most installed Adaptec SCSI accelerators—directly from your computer's desktop.

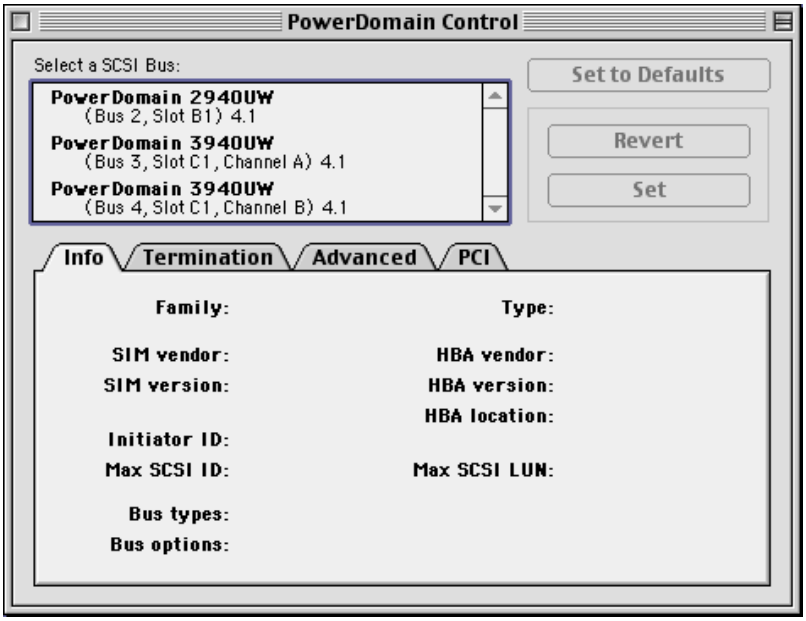
To locate specific information covered in this user's guide, refer to the following table:

Opening the PowerDomain Control Utility

To open the PowerDomain Control utility

➤ Double-click the PowerDomain Control icon.

The PowerDomain Control window appears.



Using the PowerDomain Control Utility

For most Adaptec SCSI accelerators installed in your computer, use the PowerDomain Control utility to do the following:

- Set SCSI termination
- Select an initiator ID
- Set the SCSI mode
- Set the PCI bus mode
- Reset SCSI default values

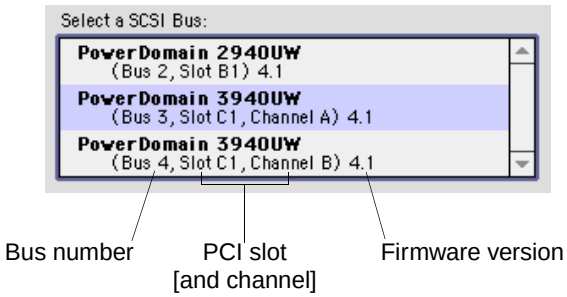
Obtaining SCSI Accelerator Information

To obtain information about a SCSI bus provided by an Adaptec accelerator

1. From the Select a SCSI Bus list, select the SCSI bus for which you want information.

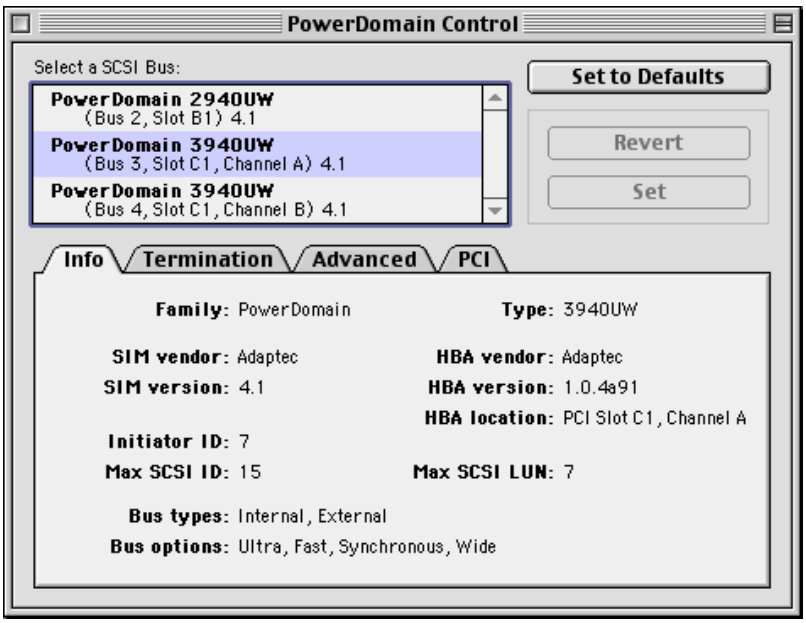
   The information below the accelerator name, as shown in the next illustration, identifies the following:

   - (In parentheses) The system-assigned bus number and the PCI slot (for single-channel accelerators) or the PCI slot and channel (for dual-channel accelerators)
   - Firmware version



2. Click the Info tab.

   The Information pane appears.



The following table defines each item in the Info pane:

Information Item	Definition
Family	The family to which the accelerator providing the selected SCSI bus belongs
SIM vendor	The name of the vendor of the driver for the selected SCSI bus
SIM version	The version number of the driver for the selected SCSI bus
Initiator ID	The initiator ID of the selected SCSI bus
Max SCSI ID	The maximum SCSI ID number supported by the selected SCSI bus (for example, a SCSI bus with a maximum SCSI ID of 7 supports 8 SCSI IDs, numbered 0–7)
Bus types	Describes the characteristics of the selected SCSI bus
Bus options	The options supported by the selected SCSI bus
Type	The model of the accelerator providing the selected SCSI bus
HBA vendor	The name of the vendor of the selected SCSI bus
HBA version	The version number of the selected SCSI bus
HBA location	The location (slot, or slot and channel) of the selected SCSI bus
Max SCSI LUN	The maximum LUN number supported by the selected SCSI bus (for example, a SCSI bus with a maximum LUN of 7 supports 8 LUNs, numbered 0–7)

3 To obtain information on another bus installed in your computer, select the bus from the Select a SCSI Bus list.

Setting Termination

The PowerDomain Control utility provides the following SCSI Bus Termination options:

- **Automatic (recommended)**

  When you select this option, the PowerDomain Control utility examines the connectors on the SCSI accelerator and automatically sets termination for the SCSI bus you selected from the Select a SCSI Bus list. This setting should work for most SCSI device configurations.

  In case your particular SCSI device does not respond appropriately with the Automatic setting, refer to the following table to determine which termination option you should select. (Enable, Disable, and Wide-to-Narrow are explained in the following paragraphs.)

For devices connected to the…	Select the following termination option…
Internal port only	Enable
External port only	Enable
Internal and external ports, only if both ports are the same width	Disable
Wide and narrow ports	Wide-to-Narrow

Note: Some 68-to-50-pin adapters terminate the high lines correctly. When using these adapters, a Wide-to-Narrow termination setting is not necessary.

- **Enable**

  Select this option when no cables or one cable are attached to the connectors for the bus on the SCSI accelerator.

- **Disable**

  Select this option when cables are attached to two or more connectors for the bus on the SCSI accelerator.

- **Wide-to-Narrow**

  Select this option ***only*** under the following conditions:

  1. When you use two or more connectors on the accelerator for the selected SCSI bus

     and

  2. when one of the connectors is wide*, and the other connector is narrow

     or

     when the cable attached to a wide connector uses a 68-to-50-pin adapter that is ***not*** terminating the wide lines (high byte)

  For example, when two connectors are used for the same SCSI bus, a wide cable is directly attached to one connector and a narrow cable is directly attached (that is, the cable is not attached via a 68-to-50-pin adapter) to another connector on the accelerator.

  When you select Wide-to-Narrow, only the Wide SCSI lines (18) of the selected bus are terminated at the SCSI accelerator.

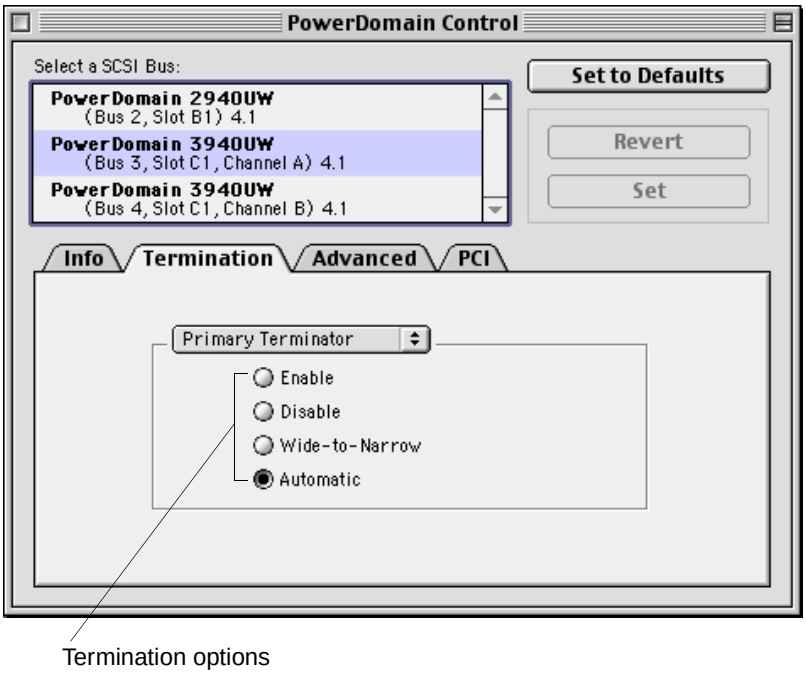
  If a 68-to-50-pin adapter is used to attach a narrow cable to a wide connector and the adapter is terminating the wide lines (high byte), you ***should not*** select the Wide-to-Narrow option. Use the Wide-to-Narrow option ***only*** if the wide lines (high byte) are not terminated by the adapter or cable.

To set termination for a SCSI bus on an Adaptec accelerator

1. From the Select a SCSI Bus list, select the SCSI bus for which you want to set termination.
2. Click the Termination tab.

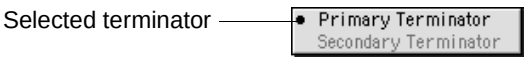
   The Termination pane appears.

*A wide port supports up to 15 devices, while a narrow port supports only 7 devices. Generally a wide port has a 68-pin connector, and a narrow port has either a 25- or 50-pin connector.



3 Choose the terminator for which you want to set termination from the Terminator menu. (Because some accelerators, such as the PowerDomain 2940U2W, provide more than one pair of connectors for a single bus, you must specify the appropriate terminator.)

The selected terminator is indicated by a black dot on its left.



4 Select the Termination option by clicking the appropriate button.

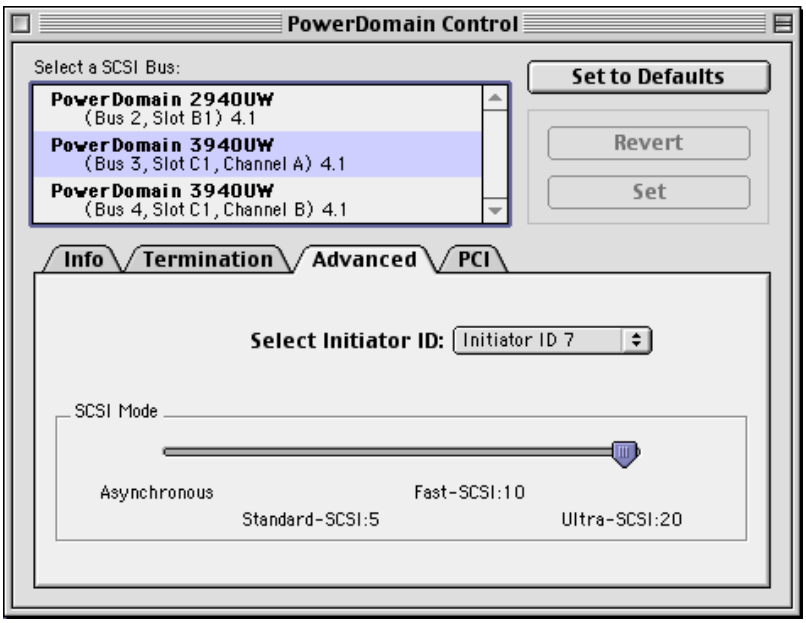
Selecting the Initiator ID

The initiator ID is the SCSI ID of the SCSI accelerator on a particular SCSI bus. This setting is usually 7. However, if another device is set to 7 and its setting cannot be changed, the Initiator ID option enables you to change the accelerator's ID. (Some software might not work correctly when this ID is not set to 7.)

To change the Initiator ID

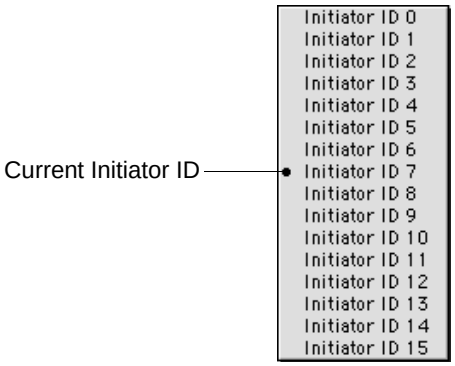
1. From the Select a SCSI Bus list, select the SCSI bus for which you want to select an Initiator ID.
2. Click the Advanced tab.

   The Advanced pane appears.



3 Choose an Initiator ID from the Select Initiator ID menu.

The current Initiator ID is indicated by a black dot on its left.



Setting the SCSI Mode

SCSI Mode options represent the maximum synchronous transfer rate at which data is moved across the selected SCSI bus as follows:

- **Asynchronous**

  Normally, the transfer rate is negotiated between the SCSI accelerator and the device connected to it. However, some older devices might not work correctly unless you select the Asynchronous option, which will prevent synchronous transfers from occurring.

- **Standard-SCSI:5**

  Select this option for standard SCSI devices.

- **Fast-SCSI:10**

  Select this option for Fast SCSI devices.

- **Ultra-SCSI:20**

  Select this option for UltraSCSI devices.

- **Ultra2-SCSI:40** (This option is only available for Ultra2SCSI and Ultra3SCSI devices.)

  Select this option for Ultra2SCSI devices.

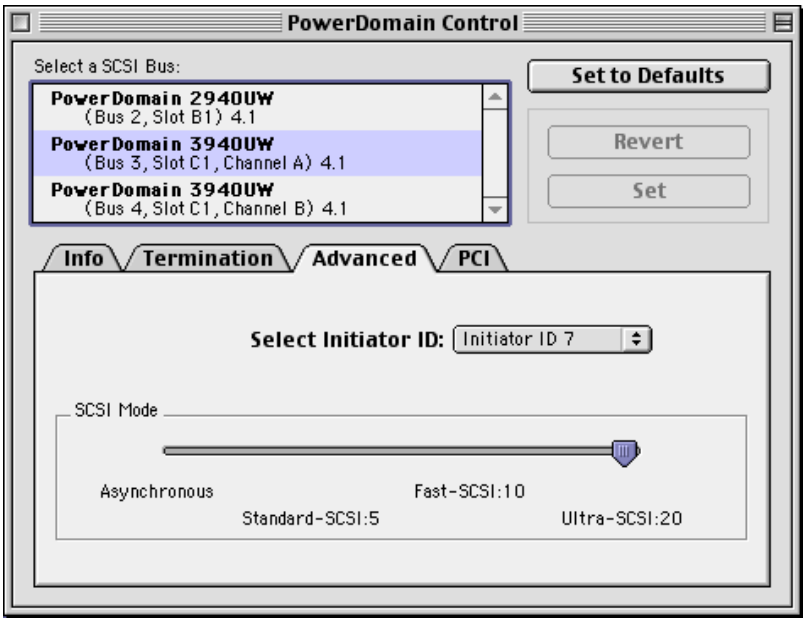
- **Ultra3-SCSI:80** (This option is only available for Ultra3SCSI devices.)

  Select this option for Ultra3SCSI devices, including Ultra160/m devices.

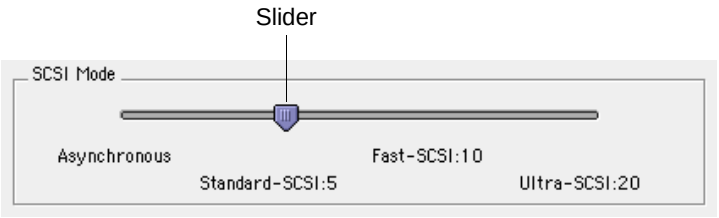
To set the SCSI Mode

1. From the Select a SCSI Bus list, select the SCSI bus for which you want to set the SCSI Mode.
2. Click the Advanced tab.

   The Advanced pane appears.



3. Move the slider until it snaps into place above the SCSI Mode setting you want.



Setting the PCI Bus Mode

Note: Changes to these settings are discouraged.

Changing the PCI Bus Mode enables you to optimize the performance of the accelerator for the selected SCSI bus with other devices on the PCI bus, particularly video capture/playback boards and other devices that require quick access to the PCI bus.

PCI Bus Mode options represent the rate at which data is moved to or from the data transfer buffer on Adaptec accelerators as follows:

- **Immediate**

  This setting tells the accelerator to move data across the PCI bus as soon as it is available. When the PCI Bus Mode is set to Immediate, the PCI bus is least available to other devices.

- **Cache Line**

  This setting tells the accelerator to move data across the PCI bus as soon as a cache line* of data is available and to access the bus using PCI cache commands whenever possible. The Cache Line setting works well for applications that tend to align their data along cache line boundaries.

- **Percent of data transfer buffer**

  This setting tells the accelerator to wait until the amount of data is approximately ***nn***% of the data transfer buffer size before accessing the PCI bus. The higher the percent, the more data is transferred, but the less often the PCI bus is accessed.

- **Delayed**

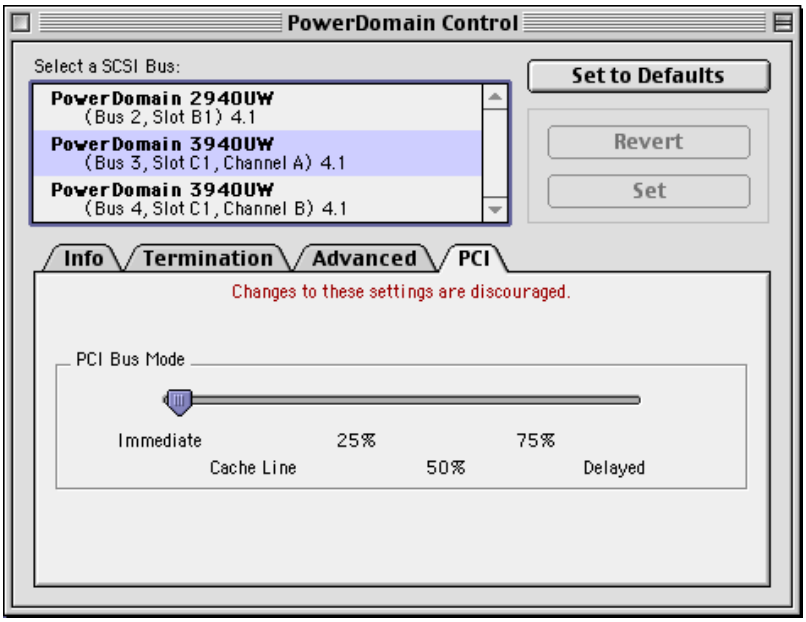
  This setting tells the accelerator to wait until the amount of data is approximately the size of the transfer buffer (that is, to wait as long as possible) before accessing the PCI bus to move the data. When the PCI Bus Mode is set to Delayed, the PCI bus is most available to other devices.

To set the PCI Bus Mode

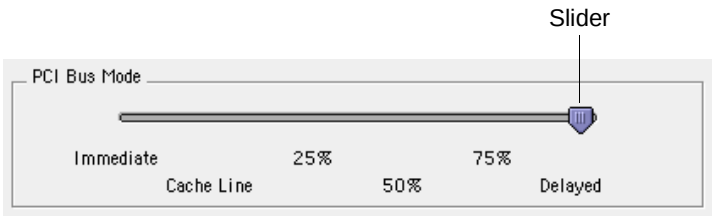
1. From the Select a SCSI Bus list, select the SCSI bus for which you want to set the PCI Bus Mode.
2. Click the PCI tab.

   The PCI pane appears.

*A cache line is a multiple of 4 bytes, usually 32 bytes.



3 Move the slider until it snaps into place above the PCI Bus Mode setting you want.



Setting Defaults

To reset all settings for the selected SCSI accelerator to their default values

➤ Click Set to Defaults.

The settings are immediately saved to the accelerator.

Saving Changes

When you have made all your changes in the PowerDomain Control window, you can do one of the following:

Click Revert to restore all PowerDomain Control window settings as they were when you last opened the PowerDomain Control window or when you last clicked Set. If, however, you last clicked Set to Defaults, Revert leaves all settings at their defaults.

Click Set to save all settings in the PowerDomain Control window to the memory on the accelerator.

Using Balloon Help

The PowerDomain Control utility fully supports Balloon Help. Refer to your computer user documentation for instructions on using Balloon Help.

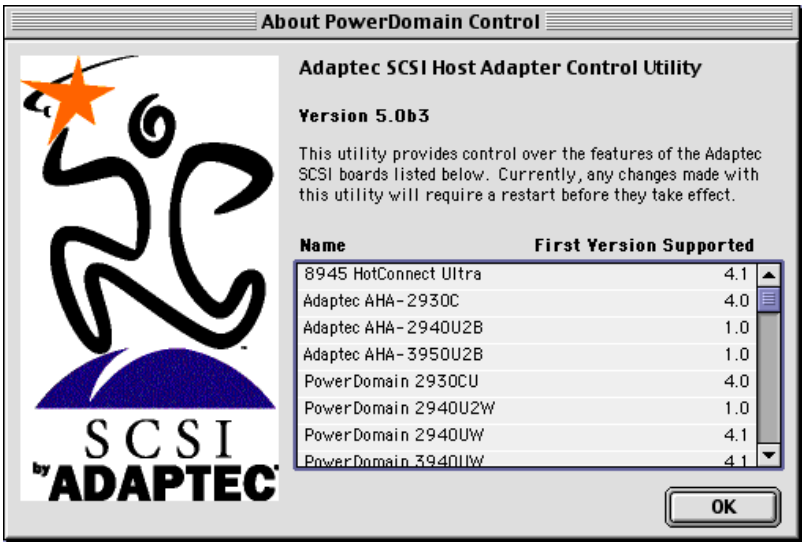
Getting Information about the PowerDomain Control Utility

The About PowerDomain Control dialog box displays the version number of the PowerDomain Control utility and a list of Adaptec accelerators that can be accessed through this version of the utility.

To access the About PowerDomain Control dialog box

➤ Choose About this utility from the Apple menu.

The About PowerDomain Control dialog box appears.



To close the About PowerDomain Control dialog box

- Click OK.

or

- Choose Close from the File menu.

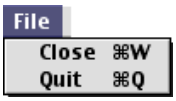
Quitting the PowerDomain Control Utility

To quit the PowerDomain Control utility

- Choose Close from the File menu.

or

- Choose Quit from the File menu.



or

- Click the close box.

Troubleshooting

This section explains how to do the following:

- Diagnose and fix problems that might occur when you install an Adaptec accelerator in your computer
- Recognize error messages

SCSI Troubleshooting Checklist

Adaptec accelerators have been tested for compatibility with a wide range of SCSI devices. Most problems that occur during installation result from errors in preparing and connecting devices on the SCSI bus.

If your computer hangs or the accelerator cannot always find the SCSI devices connected to it, do the following:

- Be sure that SCSI termination is set correctly.
- Check cable length and integrity.
- Reset the SCSI bus as follows:

  1. Turn OFF your computer.
  2. Turn OFF any devices connected to your computer.
  3. Turn ON the connected devices.
  4. Turn ON your computer.
  5. Run Disk First Aid or some other disk drive repair application before you use your computer again.

If you continue to have problems after trying the steps listed in this section, go to Adaptec's World Wide Web site at http://www.adaptec.com/support/webmail.html. If you still cannot find answers to your questions, call the number for Adaptec Technical Support listed on page 17.

Error Messages

If you continue to have problems after following the step(s) listed in the error message, go to Adaptec's World Wide Web site at http://www.adaptec.com/support/webmail.html, or search the Adaptec Support Knowledgebase at http://ask.adaptec.com. If you still do not find the answers to your questions, call the number for Adaptec Technical Support listed on page 17.

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- Internet support. Send technical questions to Adaptec's technical support specialists via WebMail at http://www.adaptec.com/support/webmail.html.
- A.S.K. Search the Adaptec Support Knowledgebase at http://ask.adaptec.com for articles, troubleshooting tips, and frequently asked questions for your product.
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Technical and Product Support

- For information about many of Adaptec's electronic support services, call 800-959-7274 or 408-945-2550, 24 hours a day, 7 days a week.
- To speak with a product/technical support representative, call 408-934-7274, Monday–Friday, 6:00 A.M. to 5:00 P.M., Pacific Time. After hours, on weekends, and on holidays, product support is available for a fee at 800-416-8066. Please have your Technical Support Identification Number (TSID) available.

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