

USER'S GUIDE

SLIMSCSI 1450 ADAPTER

© 1997 Adaptec, Inc.
All rights reserved. Adaptec, and the
Adaptec logo are trademarks of Adaptec,
Inc. which may be registered in some
jurisdictions.

Printed in Singapore
STOCK NO.: 511607-00, Rev. A KL 9/97

▼▼▼▼ SlimSCSI 1450 Adapter

User's Guide



▼▼▼▼ Contents

Introduction 1

Contents of Kit 1

System Requirements 1

Installing the SlimSCSI 1450 2

Updating the Windows 95 Miniport Driver 5

Using the SlimSCSI 1450 6

Hot Plugging 6

Formatting Removable Media 7

Understanding SCSI 8

SCSI IDs 8

Terminating the SCSI Bus 9

SCSI Connector Types 9

Troubleshooting 10

General Hardware Troubleshooting 10

Windows 95 Troubleshooting 11

Contacting Adaptec 15

Electronic Support 15

Technical and Product Support 15

Sales and Ordering Information 16



Introduction

Congratulations on your purchase of Adaptec's SlimSCSI[®] 1450, which is designed specifically for use with Microsoft Windows[®] 95. The SlimSCSI 1450 allows you to connect up to three SCSI devices to your portable PC, including Zip drives and other kinds of removable media drives.

Contents of Kit

- SlimSCSI 1450 PC Card-to-SCSI Adapter, with permanently attached 50-pin high-density cable
- Windows 95 driver diskette
- *SlimSCSI 1450 User's Guide*
- 50-pin-to-DB25 converter
- Registration card

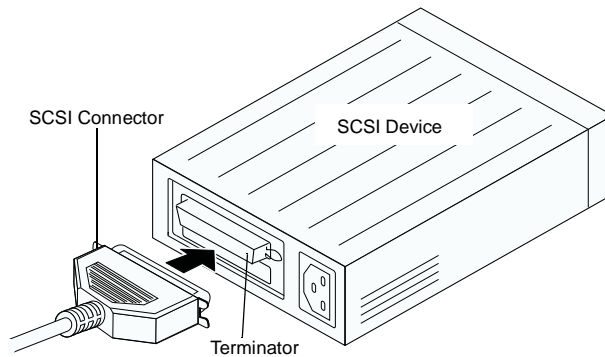
System Requirements

- Portable PC with a PC Card Type II, Type III, or Toshiba Type IV slot
- Microsoft Windows 95

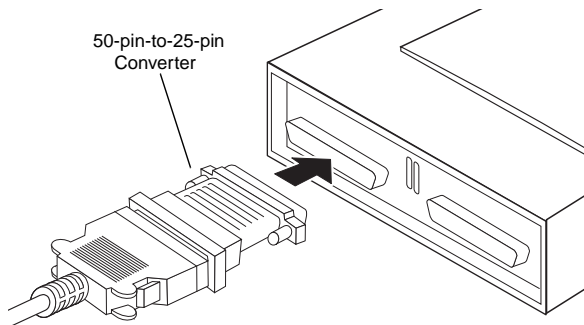
Installing the SlimSCSI 1450

Follow these steps to install the SlimSCSI 1450 and connect your SCSI devices to it:

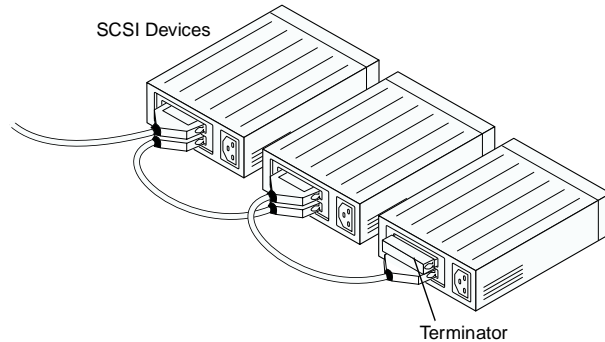
- 1 Remove the SlimSCSI 1450 from its packaging.
- 2 Plug the 50-pin connector into the first (or only) SCSI device, as shown below. Make sure the SCSI device is not powered.



If the SCSI device has a DB25 (25-pin) connector, attach the 50-pin-to-25-pin converter, as shown below, and plug it into the connector on the device.

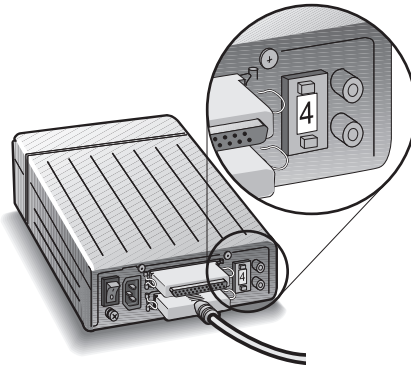


- 3 (Optional) Connect up to two additional SCSI devices by daisy-chaining them to the first device, as shown below:



- 4 Be sure that each SCSI device has a unique SCSI ID ranging from 0 to 6. If any two devices have the same ID, change the SCSI ID of one device. This is usually done by changing a switch on the back of the device. (For more information, see *SCSI IDs* on page 8.)

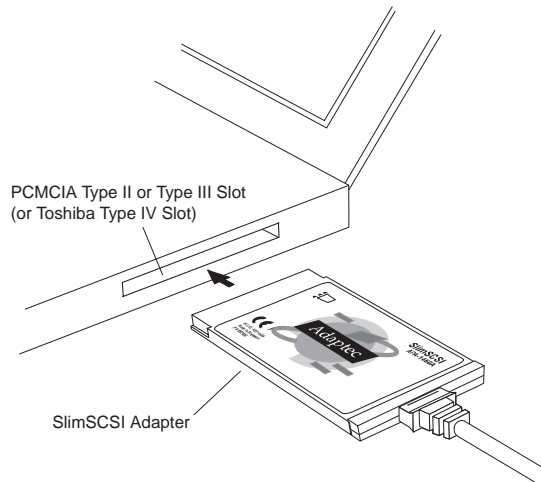
The diagram below shows a typical SCSI device with a selectable SCSI ID switch:



- 5 Terminate the *last* (or *only*) SCSI device connected to the SlimSCSI 1450. Read the device documentation if you are not sure how to terminate the device, or refer to *Terminating the SCSI Bus* on page 9.

SlimSCSI 1450 Adapter User's Guide

- 6** Be sure that at least one external SCSI device provides SCSI bus termination power or that the last device on the bus supplies termination power to itself. Read the device documentation if you are not sure whether the SCSI device provides termination power.
- 7** Connect all power cables to the SCSI device(s). Then power up the device(s).
- 8** Insert the SlimSCSI 1450 into one of your portable PC's PC Card slots, as shown below:



- 9** Power up your portable PC.

This completes the physical installation of your SlimSCSI 1450 and SCSI devices. Next, you need to update the SlimSCSI Windows 95 miniport driver.

Updating the Windows 95 Miniport Driver



Windows 95 has built-in software support for the SlimSCSI 1450. This means that when you install the SlimSCSI 1450, Windows automatically finds and installs the driver for it. However, you may be able to achieve better data I/O performance by installing the updated driver from the diskette included with the SlimSCSI 1450. Follow these steps if you wish to do this:

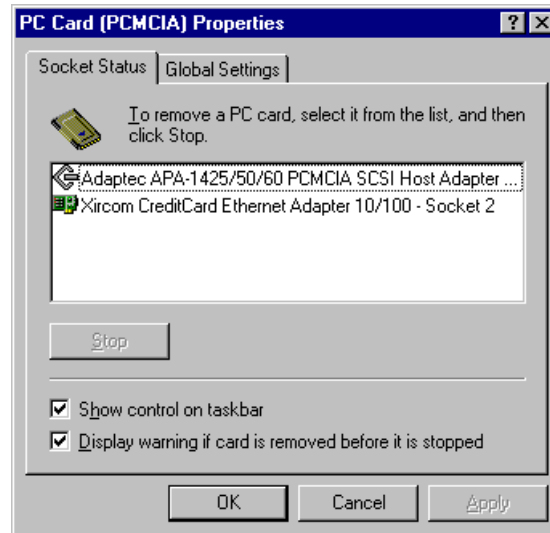
- 1 If Windows 95 is not already running, start it now.
- 2 Insert the Windows 95 drivers diskette in the portable PC's floppy disk drive.
- 3 Double-click the **My Computer** icon and Double-click the **Control Panel** icon.
- 4 Double-click the **Add New Hardware** icon. The Add New Hardware Wizard screen appears.
- 5 Click **Next**. When the next screen appears, select **No** and click **Next**.
- 6 When the next screen appears, select the **SCSI controllers** icon and click **Next**. (You may need to scroll down before you can see the icon.)
- 7 When the next screen appears, click **Have Disk**. Type a: if it does not already appear on the screen, and click **OK**.
- 8 When the next screen appears, select **APA-1450B PCMCIA SCSI Host Adapter**, if it is not already highlighted, and click **Next**.
- 9 When the next screen appears, click **Finish**.
- 10 Reboot your PC if Windows 95 prompts you to do so; if there is no prompt, you do not need to reboot in order to start using the new driver.

Using the SlimSCSI 1450

Hot Plugging

After you install the SlimSCSI 1450 driver in your Windows 95 PC, you can insert or remove the SlimSCSI 1450 at any time except when data is being transferred on the SCSI bus. This is called *hot plugging*. (You can tell that data is being transferred if the SCSI device activity light is on.) Follow these steps to remove the SlimSCSI 1450 while Windows 95 is running

- 1 Click on the small **PC Card (PCMCIA)** icon in the lower right corner of the screen. You will see a dialog box similar to the following:



- 2 Select **Adaptec APA-1425/50/60 PCMCIA SCSI Host Adapter**.
- 3 Click the **Stop** button.
- 4 When you see the message You may safely remove this device, remove the SlimSCSI 1450 from the slot.



Caution: Your PC may hang if you remove the adapter before the message appears.

When you insert the SlimSCSI 1450 adapter while Windows 95 is running, Windows 95 detects the adapter and the device(s) connected to it. (Be sure the devices are powered before you insert the adapter!)

Formatting Removable Media

Many removable media drives include a formatting utility that you can use to format removable media. If no utility program was included with your drive, you can format removable media with the *afdisk* program included on the Win 95 Drivers Diskette.



Caution: All files on the removable media are erased when you format it. *Do not* use the Windows 95 Format command to format removable media.

Copy the *afdisk.exe* file from the Win 95 Drivers Diskette to the Command folder in the Windows directory on your hard disk drive. Then follow these steps to run the *afdisk* program:

- 1 Insert the media in the drive. (Be sure the drive is connected to the SlimSCSI adapter and is turned ON.)
- 2 Click the **Start** button, select **Programs**, and select **MS-DOS Prompt**.
- 3 In the MS-DOS Prompt window, type *afdisk* and press **Enter**.
- 4 Use the arrow keys to move the highlight to the name of the removable drive in the Select SCSI Device window, and press **Enter**.
- 5 Press **Ins**. A small Create a DOS Partition window appears at the bottom right of the screen.
- 6 Press **Esc**. When the confirmation prompt appears, select **Yes** and press **Enter** to create the partition.
- 7 Press **Esc** to return to the Select SCSI Device to Partition window.
- 8 To quit *afdisk*, press **Esc** and select **Yes**.

Understanding SCSI

SCSI (pronounced “scuzzy”) stands for **Small Computer Systems Interface**. SCSI is an industry standard computer interface for connecting SCSI devices (such as hard disk drives, CD-ROM drives, and scanners) to a common SCSI bus.

A *SCSI bus* is an electrical pathway consisting of a SCSI adapter (such as the SlimSCSI adapter) installed in a computer and one or more SCSI devices. SCSI cables are used to connect the devices to the SCSI card.

For the SCSI bus to function properly, SCSI IDs must be assigned to the SCSI devices and the SCSI adapter, and the SCSI bus must be properly terminated.

SCSI IDs

Each device attached to the SlimSCSI 1450 adapter, as well as the adapter itself, must be assigned a unique SCSI ID number from 0 to 6. A SCSI ID uniquely identifies each SCSI device on the SCSI bus and determines priority when two or more devices are trying to use the SCSI bus at the same time.

- The SlimSCSI 1450 adapter is preset to SCSI ID 7, which gives it the highest priority on the SCSI bus.
- In Windows 95, you can use the Device Manager to view the SCSI ID and other information about each installed SCSI device.
- If you installed Adaptec® EZ-SCSI® software, you can use the SCSI Explorer utility to view the SCSI ID and other information about each installed SCSI device.

Terminating the SCSI Bus

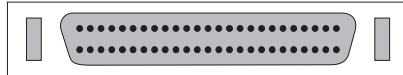
To ensure reliable communication on the SCSI bus, *terminators* must be installed (or enabled) on the devices at the physical ends of the SCSI bus. The terminators on all devices between the physical ends must be removed (or disabled). Termination on the SlimSCSI 1450 is permanently enabled, since it is always at one end of the SCSI bus.

There are various methods for terminating disk drives and other SCSI devices. Read the device documentation if you are not sure how to do this. Here are some general guidelines for termination:

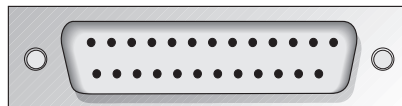
- Termination is usually controlled by installing or removing a SCSI terminator. On some SCSI devices, termination is controlled by setting a switch on the back of the device, as shown in the illustration on page 3.
- Most SCSI devices come from the factory with termination enabled.

SCSI Connector Types

Several different types of SCSI connectors are used on SCSI devices, and each type requires a different kind of cable. The SCSI-2 high-density 50-pin connector shown here is typically used with high-performance CD-ROM drives, hard disk drives, Jaz drives, and Plug and Play devices:



The DB25 connector shown here is typically used with Iomega ZIP drives, Syquest EZFlyer, etc.:



If one of your SCSI devices has a DB25 connector, you will need to use the 50-pin-to-DB25 converter included in the SlimSCSI 1450 kit.

Troubleshooting

Most problems with the SlimSCSI 1450 result from errors in preparing and connecting the SCSI devices to it. If you have problems, check the items below.



Note: If you have problems with a specific SCSI device when other SCSI devices are working correctly, contact the manufacturer of the problem device for troubleshooting information.

General Hardware Troubleshooting

- Be sure all SCSI cables and power cables are properly connected and all SCSI devices are powered.
- Be sure the SlimSCSI 1450 is firmly seated in the PC Card slot.
- Be sure each SCSI device has a different SCSI ID.
- Be sure the last (or only) SCSI device on the SCSI bus is terminated.
- Be sure at least one SCSI device connected to the SlimSCSI 1450 supplies termination power to the SCSI bus. Otherwise, the SCSI devices will not work correctly. (Some devices have a switch to enable or disable termination power. See the device documentation for more information.)

The SlimSCSI 1450 terminates itself but does not provide termination power to other devices on the SCSI bus (the adapter would need to draw this power from the portable PC's battery, which would not be desirable).

Windows 95 Troubleshooting

How do I determine if the Windows 95 socket is enabled and is running correctly?

- 1 Insert the SlimSCSI 1450 in the PC Card slot.
- 2 Click the **Start** button and click **Settings**.
- 3 Click **Control Panel**.
- 4 Double click the **System** icon, and then select the **Device Manager** tab.
- 5 Double-click **SCSI controllers**. If APA-1450/60 PCMCIA is not listed, double click **Other Devices**.
- 6 If PCMCIA Socket is not listed, or if it is listed but has a yellow exclamation mark or a red "X" next to it, PCMCIA Socket has not been loaded properly or is not configured properly. See your Windows 95 documentation for more information.

When I start Windows 95, the system locks up when the Windows logo is displayed. How can I get the system to start so I can verify that the SlimSCSI 1450 is functioning normally?

- 1 Start or restart your PC, and view the onscreen messages.
- 2 When Starting Windows 95 appears, press and release **F8** while the text is on the screen.
- 3 From the menu that is displayed, select **Safe Mode**. (It may take several minutes for Windows 95 to load.)
- 4 Verify that the SlimSCSI 1450 software driver is loading properly (see below).

How do I determine if the SlimSCSI Windows 95 miniport driver is working correctly?

- 1** Insert the SlimSCSI 1450 into the PC Card slot, if it is not already inserted.
- 2** Click the **Start** button and click **Settings**.
- 3** Click **Control Panel**.
- 4** Double-click the **System** icon, then select the **Device Manager** tab.
- 5** Double-click **SCSI controllers**. The driver for the SlimSCSI adapter is listed as Adaptec APA-1450/60 PCMCIA SCSI Adapter.
 - If the driver is listed, this means it is loaded properly.
 - If the driver is listed but has an exclamation mark inside a yellow circle, it is in a problem state (usually indicating a conflict with other hardware using the same resources.)
 - If the driver is listed but has an "X" inside a red circle, this indicates that it is disabled and is not loading.
 - If the SCSI controllers icon or the APATM-1450 driver is not listed, reinstall the driver (see directions on page 5).



Note: Software upgrades (including downloadable drivers) for Adaptec products are available on the Adaptec Web site at <http://www.adaptec.com>

An "X" inside a red circle appears with the SlimSCSI 1450 software driver in Device Manager. What does this mean?

It means that the software driver is disabled and is not loading. Follow these steps to enable the driver:

- 1** Double-click the SlimSCSI 1450 software driver in Device Manager.
- 2** Under the **General** tab, check the **Original Configuration** (current) box.

What if there is no SCSI controllers icon under Device Manager, or the SlimSCSI 1450 software driver does not appear under Device Manager?

If the SCSI controllers icon or the software driver does not appear:

- 1 Double-click the **Add New Hardware** icon in the Control Panel.
- 2 Select **Yes** on the second screen of the Add New Hardware Wizard to have Windows search for the SlimSCSI 1450.
- 3 Follow the onscreen instructions.

If Windows 95 does not detect the SlimSCSI 1450, run the Add New Hardware Wizard again:

- 1 Double-click **Add New Hardware** in the Control Panel.
- 2 Select **No** on the second screen of the wizard.
- 3 Select **SCSI controllers** on the next screen.
- 4 Select the model of your Adaptec SCSI adapter.

If the SlimSCSI 1450 is not listed, you may be able to install the driver from the Windows 95 CD-ROM. To do this, follow these steps:

- 1 Place the Windows 95 CD-ROM in your CD-ROM drive and run the Add New Hardware wizard.
- 2 Select **No** on the second screen of the wizard.
- 3 Select **SCSI controllers** on the next screen.
- 4 Click the **Have Disk** button, then click the **Browse** button.
- 5 Look in the `\drivers\storage` directory of the CD-ROM and select the model of your SCSI adapter.

How can I check the status of a resource (for example, IRQ, Memory, I/O)?

- 1 Click the **Start** button, point to **Settings**, then click **Control Panel**.
- 2 Double-click the **System** icon, then click the **Device Manager** tab.
- 3 Click **Computer**, then click **Properties**.

- 4 On the View Resources tab, click the option button for the type of resource you want to check. Read the information.
 - If a specific resource is not listed, the resource is not used by a device.
 - If a resource is listed more than once, the resource is used by more than one device.
 - If a resource is used by an unknown device, the resource is used but the device using the resource cannot be detected.

How do I use the Hardware Conflict Troubleshooter in Windows 95?

- 1 Click the **Start** button, then click **Help**.
- 2 From the Contents tab, double-click **Troubleshooting**.
- 3 Double-click **If you have a hardware conflict**.
- 4 Follow the step-by-step instructions in the Help topic.



Contacting Adaptec

If you have questions about installing or using your Adaptec product, check this *User's Guide* first—you will find answers to most of your questions here. If you need further assistance, please contact us. We offer the following support and information services:

Electronic Support

Technical information, including product literature, answers to commonly asked questions, information on software upgrades and other topics is available electronically through the following:

- Adaptec World Wide Web (WWW) site at <http://www.adaptec.com>
- File Transfer Protocol (FTP) server at <ftp.adaptec.com>
- Adaptec USA Bulletin Board Service (BBS) at 408-945-7727; supports up to 28,800 bps (bits per second), 8 data bits, 1 stop bit, no parity. No product literature is available on the Adaptec BBS.
- Interactive Fax System at 408-957-7150; available 24 hours a day, 7 days a week.

Technical and Product Support

- For technical support and 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 use the Adaptec Interactive Support System, call 800-959-7274 or 408-945-2550, 24 hours a day, 7 days a week. The system prompts you with questions regarding your problem and then provides step-by-step troubleshooting instructions.
- To speak with a product support representative, call 408-934-7274, M–F, 6:00 A.M. to 5:00 P.M., Pacific Time. After hours, on weekends, and on holidays, product support is also available for a fee at 800-416-8066.

Sales and Ordering Information

- For sales information, call 800-959-7274 or 408-945-2550, M–F, 6:00 A.M. to 5:00 P.M., Pacific Time.
- To order Adaptec software and SCSI cables, call 800-442-7274 or 408-957-7274, M–F, 6:00 A.M. to 5:00 P.M., Pacific Time.
- To request additional documentation for Adaptec products, call 800-934-2766 or 510-732-3829, M–F, 6:00 A.M. to 5:00 P.M., Pacific Time.

Copyright

© 1997 Adaptec, Inc. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written consent of Adaptec, Inc., 691 South Milpitas Blvd., Milpitas, CA 95035.

Trademarks

Adaptec, the Adaptec logo, APA, EZ-SCSI, and SlimSCSI are trademarks of Adaptec, Inc. which may be registered in some jurisdictions. Windows and Windows 95 are registered trademarks of Microsoft Corporation in the U.S. and other countries used under license. All other trademarks are owned by their respective owners.

Changes

The material in this document is for information only and is subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, Adaptec, Inc. assumes no liability resulting from errors or omissions in this document, or from the use of the information contained herein.

Adaptec reserves the right to make changes in the product design without reservation and without notification to its users.

Disclaimer

IF THIS PRODUCT DIRECTS YOU TO COPY MATERIALS, YOU MUST HAVE PERMISSION FROM THE COPYRIGHT OWNER OF THE MATERIALS TO AVOID VIOLATING THE LAW WHICH COULD RESULT IN DAMAGES OR OTHER REMEDIES.

Federal Communications Commission Radio Frequency Interference Statement

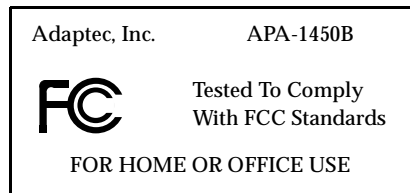
WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. However, if this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Use a shielded and properly grounded I/O cable and power cable to ensure compliance of this unit to the specified limits of the rules.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.



Canadian Compliance Statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Adaptec Software License Agreement

In return for acquiring a license to use the software ("Software") and related documentation, you agree to the following terms and conditions:

- 1 License: This Agreement grants you, the Licensee, a license to:
 - a use the Software on a single computer system which incorporates an Adaptec SCSI Card, or in the case of a multi-user or networked system which permits access to the Software by more than one user at the same time, at a single working location.
 - b make one copy of the Software in machine readable form solely for back-up purposes provided you reproduce Adaptec's copyright notice and any proprietary legends.
- 2 Restrictions: You may not distribute copies of the Software to others or electronically transfer the Software from one computer to another over a network. You may not use the Software from multiple locations of a multi-user or networked system at any one time. The Software contains trade secrets and in order to protect them you may not decompile, reverse engineer, disassemble, or otherwise reduce the Software to a human-perceivable form. YOU MAY NOT MODIFY, ADAPT, TRANSLATE, RENT, LEASE, LOAN, RESELL FOR PROFIT, DISTRIBUTE, NETWORK OR CREATE DERIVATIVE WORKS BASED UPON THE SOFTWARE OR ANY PART THEREOF.
- 3 Ownership of Software: As Licensee, you own the media upon which the software is fixed, but Adaptec retains title and ownership of the Software recorded on the original media and all subsequent copies of the Software regardless of the form or media in which or on which the original and other copies may exist. This license is not a sale of the Software or any copy.
- 4 Confidentiality: You agree to maintain the Software in confidence and to not disclose the Software to any third party without the express written consent of Adaptec. You further agree to take all reasonable precautions to preclude access of unauthorized persons to the Software.
- 5 Term: This license is effective until January 1, 2042, unless terminated earlier. You may terminate the license at any time by destroying the Software (including the related documentation) together with all copies or modifications in any form. Adaptec will have the right to terminate your license immediately if you fail to comply with any term or condition of this Agreement. Upon any termination, including termination by you, you must destroy the Software (including the related documentation) together with all copies or modifications in any form.
- 6 Limited Warranty: Adaptec warrants only that the media upon which the Software is furnished will be free from defects in material or workmanship under normal use and service for a period of thirty (30) days from the date of delivery to you. ADAPTEC DOES NOT AND CANNOT WARRANT THE PERFORMANCE OR RESULTS YOU MAY OBTAIN BY USING THE SOFTWARE OR DOCUMENTATION. THE FOREGOING STATES THE SOLE AND EXCLUSIVE REMEDIES ADAPTEC WILL PROVIDE FOR BREACH OF WARRANTY. EXCEPT FOR THE FOREGOING LIMITED WARRANTY, ADAPTEC MAKES NO WARRANTIES, EXPRESS OR IMPLIED, AS TO NONINFRINGEMENT OF THIRD PARTY RIGHTS, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow the exclusion of implied warranties or limitations on how long an implied warranty may last, so the above limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.
- 7 Limitation of Liability: IN NO EVENT WILL ADAPTEC BE LIABLE TO YOU FOR ANY SPECIAL DAMAGES, INCLUDING ANY LOST PROFITS, LOST SAVINGS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES, EVEN IF ADAPTEC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, OR FOR ANY CLAIM BY ANY OTHER PARTY. Some states do not allow the exclusion or limitation of special, incidental, or consequential damages, so the above limitation or exclusion may not apply to you.
- 8 Limitation of Remedies: Adaptec's entire liability and your exclusive remedy shall be:
 - a the replacement of any media not meeting Adaptec's limited warranty which is returned to Adaptec; or
 - b if Adaptec or its distributor is unable to deliver replacement media which is free of defects in materials or workmanship, you may terminate this Agreement by returning the Software and your money will be refunded.

- 9 Export: You acknowledge that the laws and regulations of the United States restrict the export and re-export of the Software. You agree that you will not export or re-export the Software or media in any form without the appropriate United States and foreign government approval.
- 10 U.S. Government Restricted Rights Legend for Units of the DoD: Use, duplication or disclosure by the Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at 252.227-7013. Adaptec, Inc., 691 South Milpitas Boulevard, Milpitas, California 95035.
- 11 U.S. Government Restricted Rights Legend for Civilian Agencies: Use, reproduction or disclosure is subject to restrictions as set forth in subparagraphs (a) through (d) of the Commercial Computer Software - Restricted Rights clause at 52.227-19 and the limitations set forth in Adaptec, Inc.'s standard commercial agreement for this software. Unpublished - rights reserved under the copyright laws of the United States.
- 12 General: You acknowledge that you have read this Agreement, understand it, and that by opening the package you agree to be bound by its terms and conditions. You further agree that it is the complete and exclusive statement of the agreement between Adaptec and you which supersedes any proposal or prior agreement, oral or written, and any terms of this Agreement or any different terms will be enforceable against Adaptec unless Adaptec gives its express consent, including an express waiver of the terms of this Agreement, in a writing signed by an officer of Adaptec. You assume full responsibility for the use of the Software and agree to use the Software legally and responsibly. This Agreement shall be governed by California law except as to copyright matters which are covered by Federal law. This Agreement is deemed entered into at Milpitas, California by both parties. Should any provision of this Agreement be declared unenforceable in any jurisdiction, then such provision shall be deemed to be severable from this Agreement and shall not affect the remainder hereof. All rights in the Software not specifically granted in this Agreement are reserved by Adaptec.

Should you have any questions concerning this Agreement, you may contact Adaptec by writing to: Adaptec, Inc., Legal Department, 691 South Milpitas Boulevard, Milpitas, California 95035.

Limited 5-Year Warranty

Adaptec, Inc. ("Adaptec") warrants to the purchaser of this product that it will be free from defects in material and workmanship for a period of five (5) years from the date of purchase. If the product should become defective within the warranty period, Adaptec, at its option, will repair or replace the product, or refund the purchaser's purchase price for the product, provided it is delivered at the purchaser's expense to an authorized Adaptec service facility or to Adaptec.

Repair or replacement parts or products will be furnished on an exchange basis and will either be new or reconditioned. All replaced parts or products shall become the property of Adaptec. This warranty shall not apply if the product has been damaged by accident, misuse, abuse or as a result of unauthorized service or parts.

Warranty service is available to the purchaser by delivering the product during the warranty period to an authorized Adaptec service facility or to Adaptec and providing proof of purchase price and date. The purchaser shall bear all shipping, packing and insurance costs and all other costs, excluding labor and parts, necessary to effectuate repair, replacement or refund under this warranty.

For more information on how to obtain warranty service, write or telephone Adaptec at 691 South Milpitas Boulevard, Milpitas, CA 95035, (800) 959-7274.

THIS LIMITED WARRANTY DOES NOT EXTEND TO ANY PRODUCT WHICH HAS BEEN DAMAGED AS A RESULT OF ACCIDENT, MISUSE, ABUSE, OR AS A RESULT OF UNAUTHORIZED SERVICE OR PARTS.

THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES WHICH NOW OR HEREFTER MIGHT OTHERWISE ARISE RESPECT TO THIS PRODUCT. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT SHALL (A) HAVE NO GREATER DURATION THAN 5 YEARS FROM THE DATE OF PURCHASE, (B) TERMINATE AUTOMATICALLY AT THE EXPIRATION OF SUCH PERIOD AND (C) TO THE EXTENT PERMITTED BY LAW BE EXCLUDED. IN THE EVENT THIS PRODUCT BECOMES DEFECTIVE DURING THE WARRANTY PERIOD, THE PURCHASER'S EXCLUSIVE REMEDY SHALL BE REPAIR, REPLACEMENT OR REFUND AS PROVIDED ABOVE. INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOSS OF DATA, ARISING FROM BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ARE NOT THE RESPONSIBILITY OF ADAPTEC AND, TO THE EXTENT PERMITTED BY LAW, ARE HEREBY EXCLUDED BOTH FOR PROPERTY DAMAGE, AND TO THE EXTENT NOT UNCONSCIONABLE, FOR PERSONAL INJURY DAMAGE.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR CONSUMER PRODUCTS, AND SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION OR EXCLUSIONS MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.