

USER'S GUIDE

SLIMSCSI 1450 ADAPTER

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••••• SlimSCSI 1450 Adapter

User's Guide

 **adaptec**[®]

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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

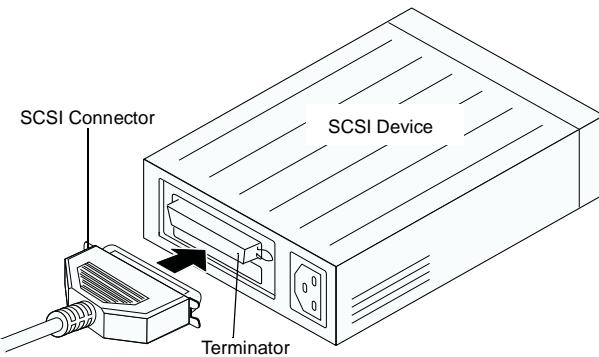
System Requirements

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

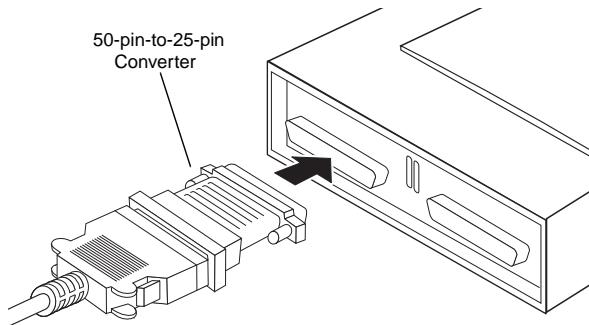
Installing the SlimSCSI 1450

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

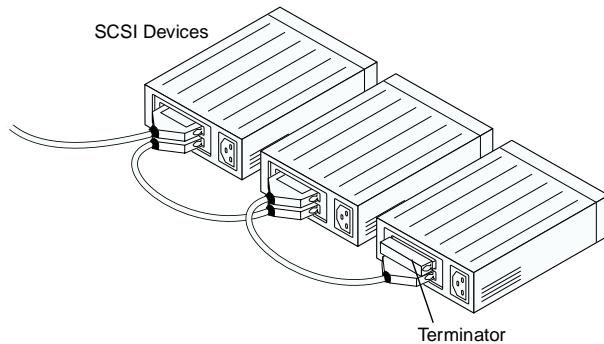
- 1 Remove the SlimSCSI 1450 from its packaging.
- 2 Plug the 50-pin connector into the first (or only) SCSI device, as shown below. Make sure the SCSI device is not powered.



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

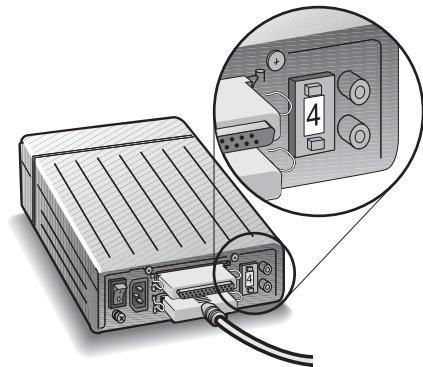


3 *(Optional)* Connect up to two additional SCSI devices by daisy-chaining them to the first device, as shown below:



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.)

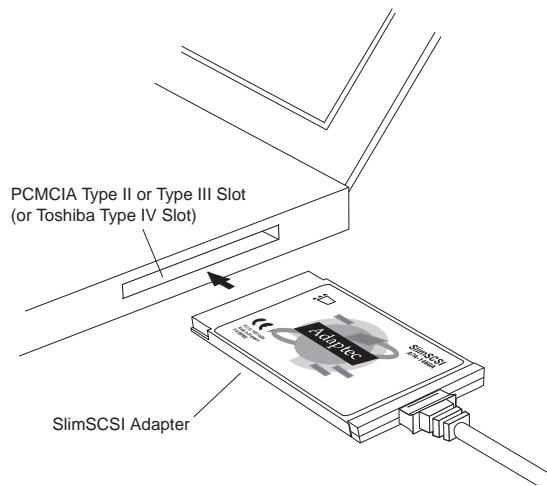
The diagram below shows a typical SCSI device with a selectable SCSI ID switch:



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.

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- 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:

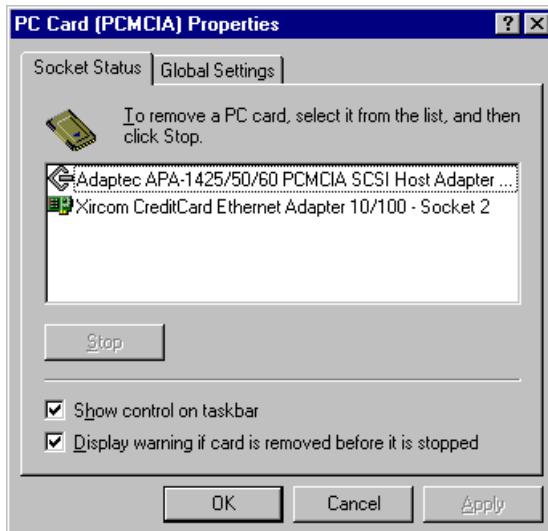
- 1 If Windows 95 is not already running, start it now.
- 2 Insert the Windows 95 drivers diskette in the portable PC's floppy disk drive.
- 3 Double-click the **My Computer** icon and Double-click the **Control Panel** icon.
- 4 Double-click the **Add New Hardware** icon. The Add New Hardware Wizard 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

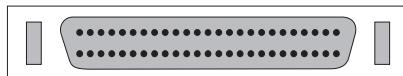
To ensure reliable communication on the SCSI bus, *terminators* must be installed (or enabled) on the devices at the physical ends of the SCSI bus. The terminators on all devices between the physical ends must be removed (or disabled). Termination on the SlimSCSI 1450 is permanently enabled, since it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

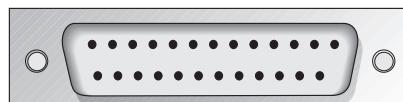
- Termination is usually controlled by installing or removing a SCSI terminator. On some SCSI devices, termination is controlled by setting a switch on the back of the device, as shown in the illustration on page 3.
- Most SCSI devices come from the factory with termination enabled.

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.

Troubleshooting

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](ftp://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.

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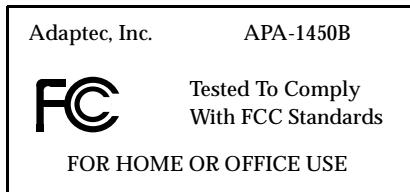
WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

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

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