adaptec®

USER'S GUIDE

AUA-1420
USB2CONNECT FOR NOTEBOOKS ADAPTER

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Changes

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Adaptec, Inc.
Legal Department
691 South Milpitas Boulevard
Milpitas, California 95035

Regulatory Compliance Statements

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.

```
Adaptec, Inc.                          AUA-1420

            FC    Tested to Comply
                  With FCC Standards


       FOR HOME OR OFFICE USE
```

European Union Compliance Statement

This Information Technology Equipment has been tested and found to comply with the following European directives:
EMC Directive 89/336/EEC, as amended by 92/31/EEC and 93/68/EEC
EN50081-1 (1992)
EN55022 (1994) Class B
EN50082-1 (1992)
EN61000-4-2 (1998)
EN61000-4-3 (1998)
EN61000-4-4 (1995)
EN61000-4-5 (1995) Surges
EN61000-4-6 (1996) Conducted immunity
EN61000-4-11 (1994) Supply dips of variation

Australian/New Zealand Compliance Statement

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to the Australian/New Zealand standard AS/NZS 3548 set out by the Spectrum Management Agency.

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.

Japanese Compliance (Voluntary Control Council Initiative)

This equipment complies to class B Information Technology equipment based on VCCI (Voluntary Control Council for Interface). This equipment is designed for home use but it may causes radio frequency interference problem if used too near to a television or radio. Please handle it correctly per this documentation.

This *User's Guide* describes how to install the Adaptec AUA-1420 USB2connect for Notebooks adapter and its associated drivers in a notebook computer. This *Guide* also describes how to connect various devices.

Overview

The USB2connect for Notebooks adapter lets you to connect Universal Serial Bus (USB) devices to Windows® and Macintosh® notebook computers.

The USB2connect for Notebooks adapter is compatible with USB 1.1 Open Host Controller Interface (OHCI) and USB 2.0 Enhance Host Controller Interface (EHCI) devices and works in any CardBus slot.

USB 2.0 is the fastest USB standard, capable of transferring data at up to 480 Megabits per second while maintaining backward compatibility with USB 1.1 devices.

The USB2connect for Notebooks adapter provides two USB ports and the option of an external power supply to support devices that do not have their own power supplies.

Taking Inventory

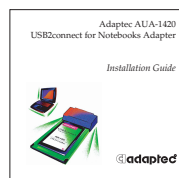Your USB2connect for Notebooks adapter kit includes the items shown below.

USB2connect for
Notebooks adapter

USB2connect for
Notebooks CD

Installation guide,
and other literature

What's on the CD

■ Readme file

■ This *User's Guide*

■ Adobe Acrobat software

■ Windows drivers

■ Product registration information

System Requirements

Your notebook computer must meet the requirements outlined below for use with the USB2connect for Notebooks adapter.

Windows Notebook

■ 266-MHz (or faster) processor

■ Available CardBus (PCMCIA Type II) slot

■ Windows XP, Windows 2000, Windows Me, or Windows 98 SE

■ CD-ROM drive

Macintosh Notebooks

■ PowerBook G3 Series or later

■ Available CardBus (PCMCIA Type II) slot

■ Mac OS 9.2.1 or later and Mac OS X 10.1 or later

■ CD-ROM drive

Installing the Windows Drivers

The USB2connect for Notebooks adapter contains the following controllers:

Controller	Description
USB 1.1	NEC PCI to USB Open Host Controller
USB 2.0	Adaptec AUA-1420 CardBus to USB Enhanced Host Controller

When successfully installed, these controllers are displayed separately in the Windows Device Manager.

1 Turn on the computer and insert the USB2connect for Notebooks adapter in the CardBus slot.

CardBus slot

USB2connect for Notebooks adapter
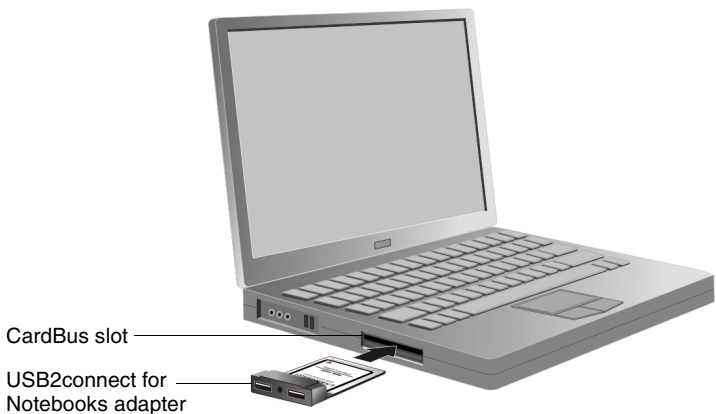
2 Insert the USB2connect for Notebooks CD.

Proceed with instructions appropriate to your operating system:

- *Windows XP* on page 4.

- *Windows 2000* on page 8.
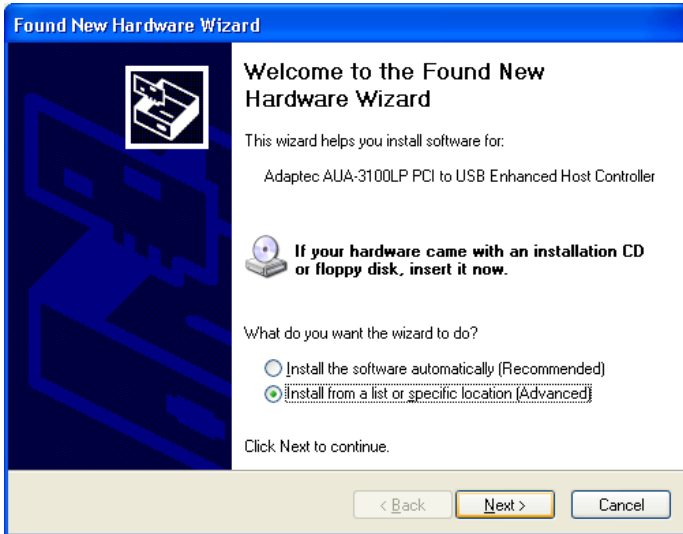
- *Windows Me* on page 11.

- *Windows 98 SE* on page 13.

# Windows XP

Continue here after performing steps on .

1 Start Windows XP.

Windows XP will automatically discover the new hardware and start the Found New Hardware Wizard to walk you through the device driver installation.
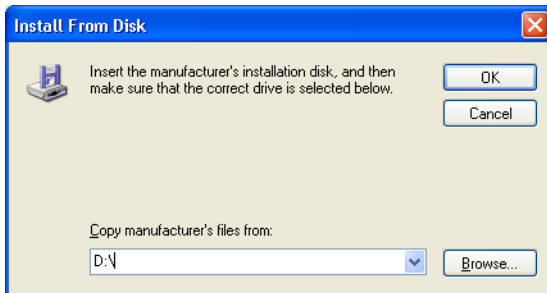
2 Select **Install from a list or specific location (Advanced),** then select **Next**.

3 Select **Don't search, I will choose the driver to install**, then click **Next**.
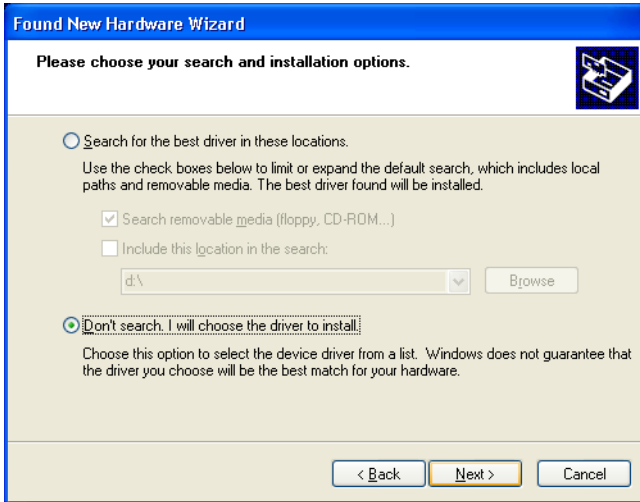
4 Click **Next** again.

5 Click **Have Disk**.

6 Insert the Adaptec USB2connect CD into the CD-ROM drive. Type the drive letter for your CD-ROM drive in the Copy manufacturer's files from box, as shown below, and click **OK**.
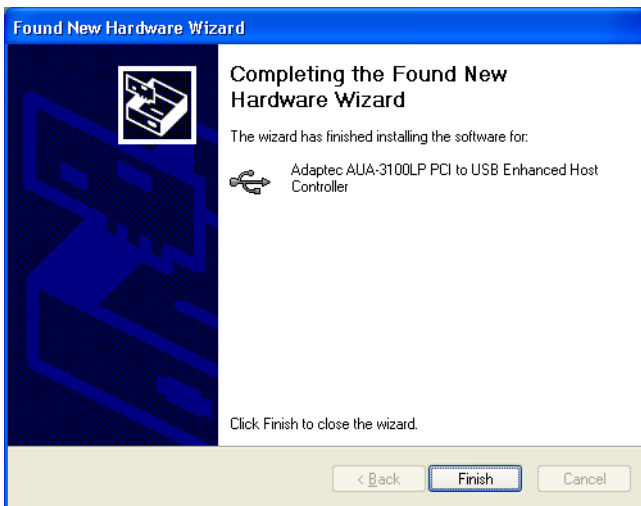

Note: Your CD-ROM drive may have a different drive letter than the one shown in the example above.

7 On the next screen, click **Continue Anyway**.

8 When the installation is complete, click **Finish**.

9 If you are prompted to restart the computer, click **Yes**.

10 To verify that the driver is installed, right-click the **My Computer** desktop icon, select **Properties**, click the **Hardware** tab, then click the **Device Manager** button. Expand **Universal Serial Bus controllers** and verify that the information shown below appears.

USB 2.0 controller (see note)

USB 1.1 controllers
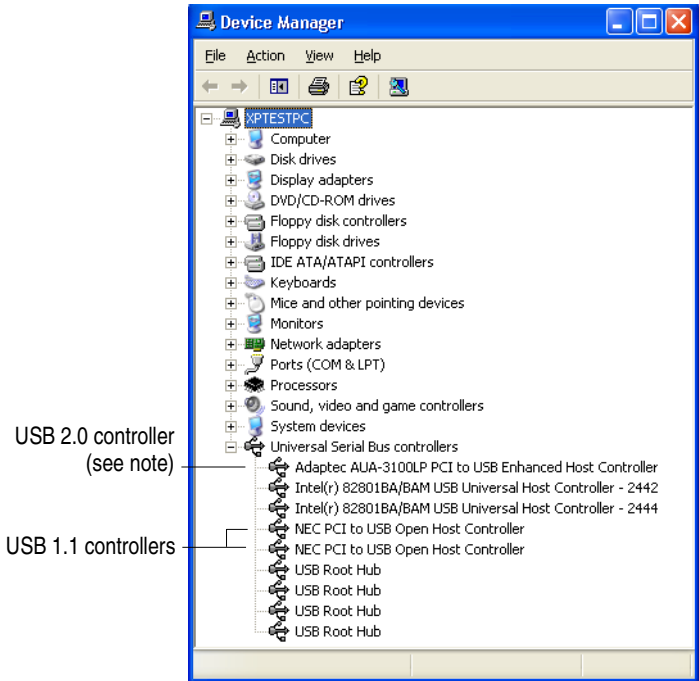
Note: *USB 2.0 controller* – Your controller is identified by its model number, which may differ from the model number shown in this *User's Guide*.

Windows 2000

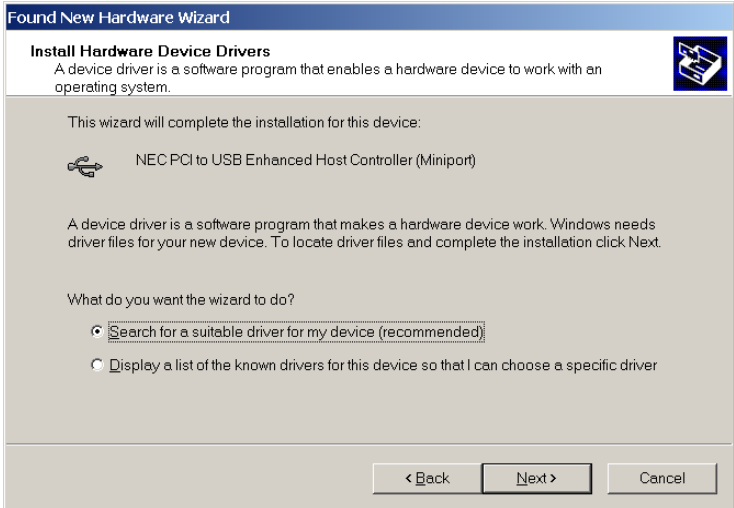Continue here after performing steps on .

1 When the Found New Hardware Wizard opens, click **Next**.

2 In the Install Hardware Device Drivers window, select **Search for a suitable driver for my device (recommended)** and click **Next**.

3 In the Locate Driver Files window, uncheck all options *except* **CD-ROM drives**, and click **Next**.
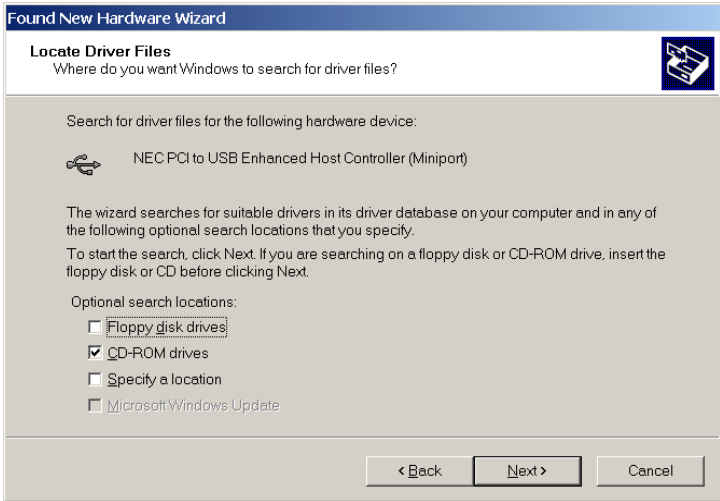
4 In the Driver Files Search Results window, ensure that **Install one of the other drivers** is *not* checked and click **Next**.
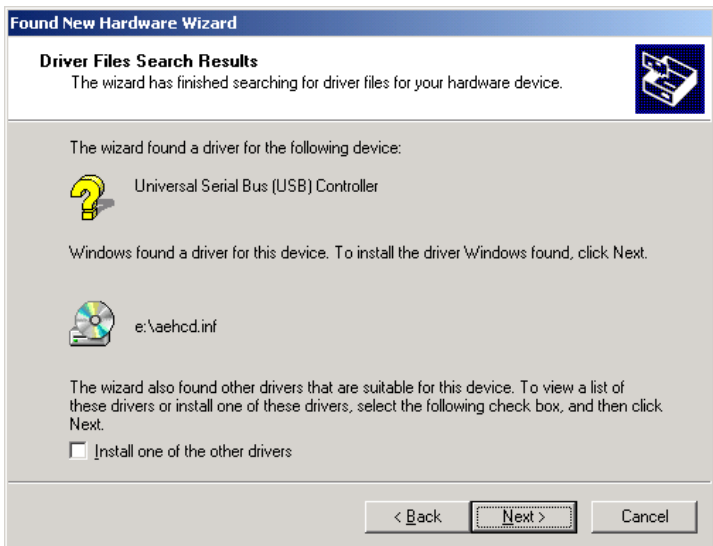
5 When Windows is finished copying drivers, click **Finish**.

6 Restart your computer if prompted to do so.

7 To verify that the driver is installed, right-click the **My Computer** desktop icon, select **Properties**, click the **Hardware** tab, click the **Device Manager** button, and then, expand **Universal Serial Bus controllers** and verify that the information shown below appears.
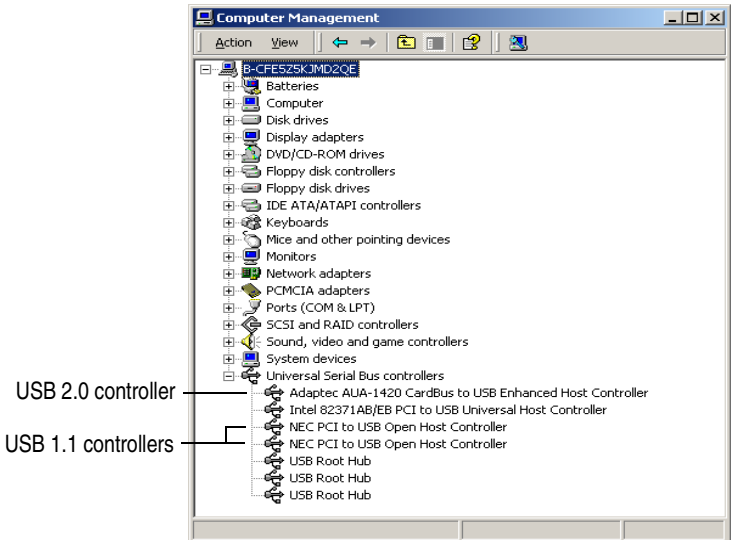
Notes:

1 The Windows 2000 Device Manager may show a green question mark next to the Adaptec USB controller. This is normal and does not affect the operation of the USB2connect for Notebooks adapter.

2 For instructions on removing the USB2connect for Notebooks adapter from a Windows 2000 notebook, see page 19.

Windows Me

Continue here after performing steps outlined on .

1   When the Add New Hardware Wizard opens, click **Next**.

2   Select **Automatic search for a better driver (Recommended)**.
Then, insert the USB2connect for Notebooks CD and click **Next**.

3   When Windows has finished copying the USB 2.0 drivers from
the USB2connect for Notebooks CD, click **Finish**.

4   Restart your computer if prompted to do so.

5 To verify that the driver is installed, right-click the **My Computer** desktop icon, select **Properties**, click the **Device Manager** tab, and then expand **Universal Serial Bus controllers** and verify that the information shown below appears.

USB 2.0 controller ———

USB 1.1 controllers ———
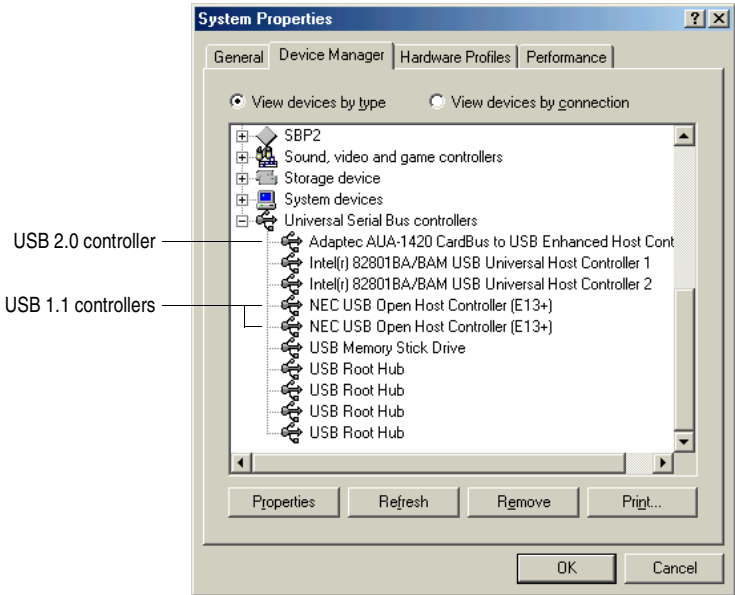
Note: The Windows Me Device Manager may show a green question mark next to the Adaptec USB controller. This is normal and does not affect the operation of the USB2connect for Notebooks adapter.

Windows 98 SE

Windows 98 SE requires two device driver installations using the Add New Hardware Wizard because the operating system has no embedded USB drivers. During driver installation, you may need to use the Windows 98 SE CD.

Continue here after performing steps on .

1 When the Found New Hardware Wizard opens, click **Next**. The Add New Hardware Wizard opens.

2 Click **Next**.

3 Select **Search for the best driver for your device (Recommended)** and click **Next.**
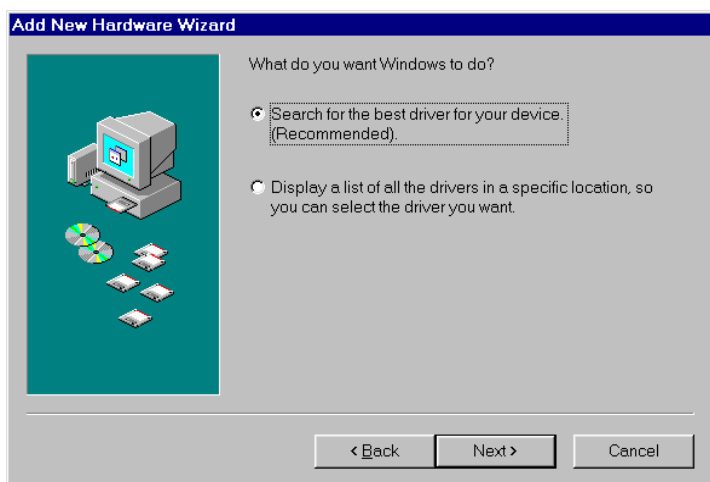
4 In the following window, uncheck all options and click **Next**.

5 Select **The updated driver (Recommended)** and click **Next**.
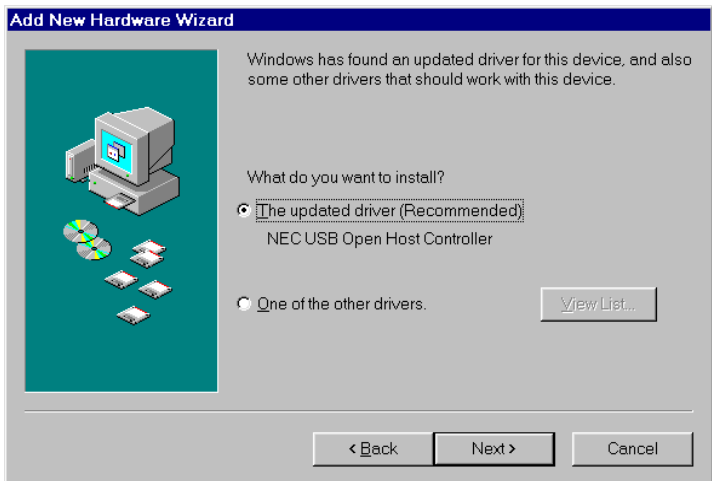
6 You may see a message that Windows is searching for the driver. Click **Next.**

7 You may see the following screen prompting you to insert your Windows 98 CD in the CD-ROM drive. If so, follow the instructions and click **OK**.

Insert Disk

❌ Please insert the disk labeled 'Windows 98 Second Edition CD-ROM', and then click OK.

OK
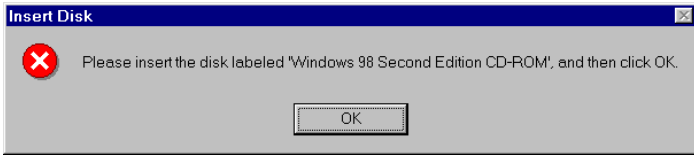
8 If prompted to do so, type the drive letter for your CD-ROM drive in the Copy files from box, as shown below, and click **OK**.

Copying Files...

The file 'openhci.sys' on Windows 98 Second Edition CD-ROM cannot be found.

Insert Windows 98 Second Edition CD-ROM in the selected drive, and click OK.

OK

Cancel

Skip File

Details...

Copy files from:

d:\win98
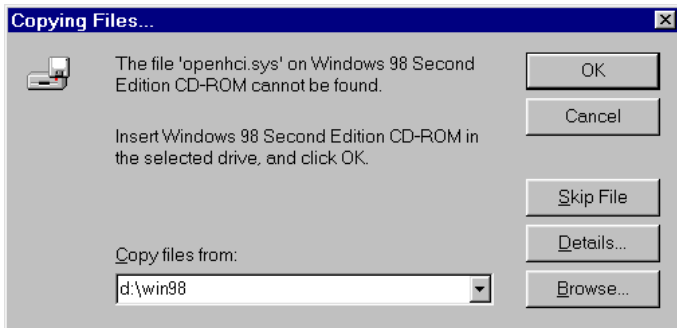
Browse...

✒ **Note:** If you have copied your driver files onto your hard drive and know where they are located, you can browse to that folder instead of inserting the Windows 98 SE CD. Also, your CD-ROM drive letter may be different from the one shown in the above example.

9 When the USB 1.1 driver has been copied onto your system, the following window appears. Click **Finish**.

10 The Hardware Wizard restarts and attempts to install the USB 2.0 driver. Click **Next**.

11 Select **Search for the best driver for your device (Recommended)**, and click **Next.**
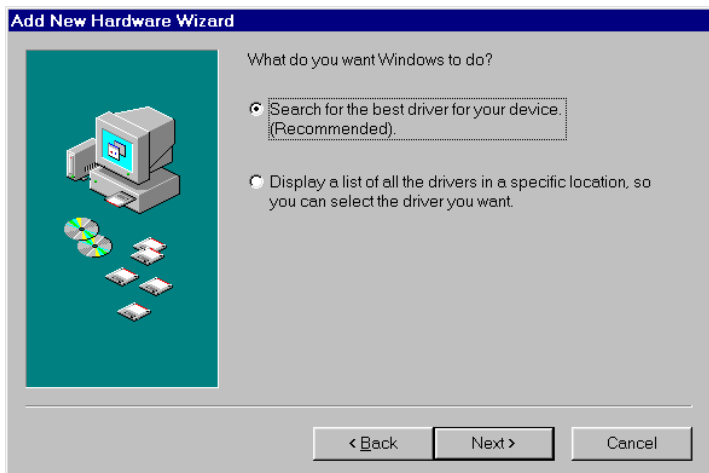
12 Check the **CD-ROM drive** option, insert the USB2connect for Notebooks CD, and click **Next**.

```
┌─────────────────────────────────────────────────────────┐
│ Add New Hardware Wizard                                  │
│                                                          │
│              Windows will search for new drivers in its  │
│              driver database on your hard drive, and in  │
│              any of the following selected locations.    │
│              Click Next to start the search.             │
│                                                          │
│              ☐ Floppy disk drives                        │
│                                                          │
│              ☑ CD-ROM drive                              │
│                                                          │
│              ☐ Microsoft Windows Update                  │
│                                                          │
│              ☐ Specify a location:                       │
│                 E:\win98                                 │
│                                        Browse...         │
│                                                          │
│                  < Back      Next >      Cancel          │
└─────────────────────────────────────────────────────────┘
```

13 You may see a screen recommending to you the option of selecting an updated driver. If you see this option, click **Next**.

14 If Windows shows you the location of the driver, click **Next**.

15 Windows might display an Unknown Device error message if there is no USB 2.0 driver on your system. When you see the screen below, click **Finish**.

```
┌─────────────────────────────────────────────────────────┐
│ Add New Hardware Wizard                                  │
│                                                          │
│            ⟨⇆  Adaptec AUA-1420 CardBus to USB Enhanced  │
│                Host Controller                           │
│                                                          │
│                Windows has finished installing the       │
│                software that your new hardware device    │
│                requires.                                 │
│                                                          │
│                                                          │
│                  < Back     Finish      Cancel           │
└─────────────────────────────────────────────────────────┘
```

16 To verify that the drivers are installed, right-click on the **My Computer** desktop icon, select **Properties**, click the **Device Manager** tab, and then expand **Universal Serial Bus controllers**. Verify that the information shown below appears.

USB 2.0 controller

USB 1.1 controllers
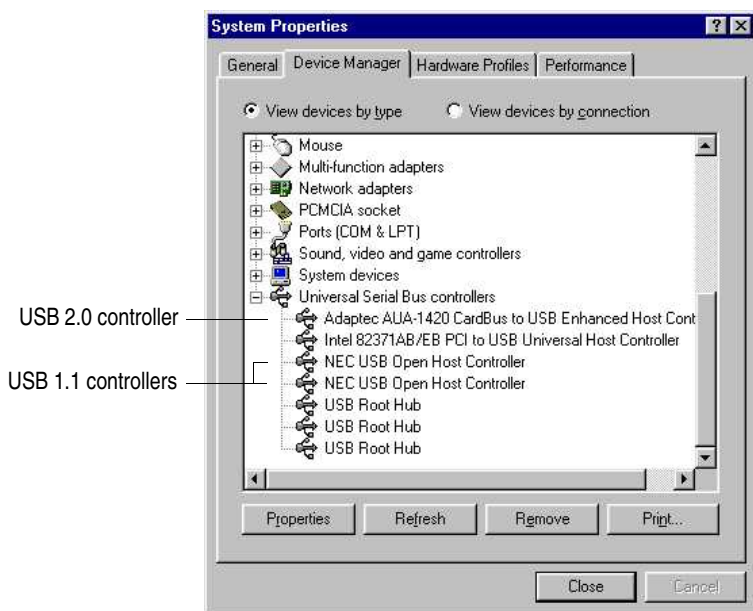
Removing the USB2connect for Notebooks Adapter – *Windows 2000 only*

Windows 2000 requires a special operation to properly remove hardware such as the USB2connect for Notebooks adapter.

1 Open the Unplug or Eject Hardware wizard by clicking the icon shown at right, which is at the bottom right corner of your desktop.

2 The unplug or Eject Hardware wizard is displayed. Click **NEC PCI to USB Open Host Controller** and then click **Stop.**
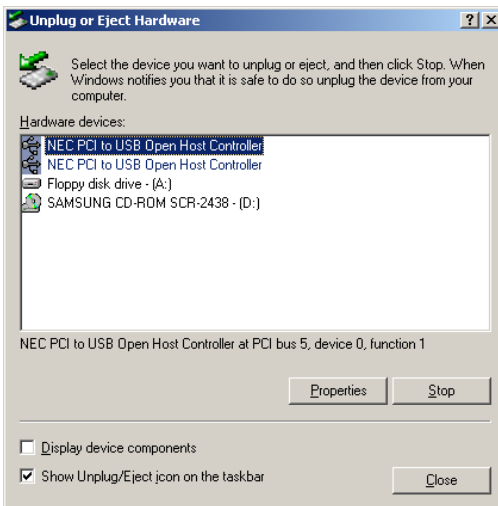
3 Then, click **OK** in the window below.
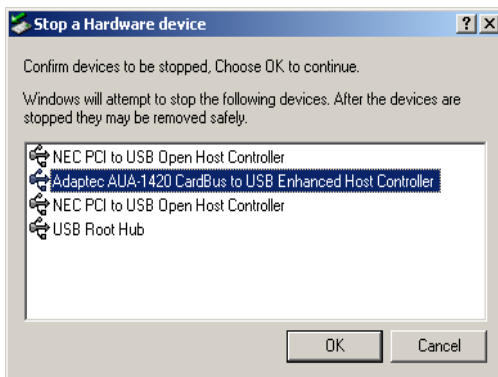
Installing the Macintosh Driver

1 Turn on the computer and insert the USB2connect for Notebooks CD.

2 Double-click the **Start Installation Here** installer file on the CD.

3 Read the directions carefully and follow all installation instructions.

4 After the installation is complete, restart the PowerBook.

5 Once the system has restarted, insert the USB2connect for Notebooks adapter in the CardBus slot of your PowerBook.


CardBus slot

USB2connect for Notebooks adapter

6 If the driver installation was successful and the USB2connect for Notebooks is fully inserted, you will see one of the USB2connect for Notebooks adapter icons shown at right on your desktop. If not, see *Troubleshooting on page 23*.

Connecting USB Devices

You can connect standard USB 1.1 or high-speed USB 2.0 devices to the connectors of the USB2connect adapter, as shown below.
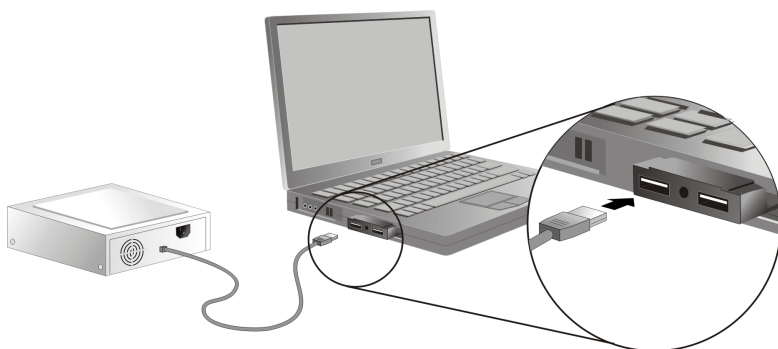
> ✔ **Note:** To ensure proper functioning, use a standard USB cable with a maximum length of 6 feet (2 meters).

External Power Source

In most cases, you can attach USB devices without using an external power adapter. However, when attaching multiple devices with varying power requirements, an external power source may be needed to ensure proper functioning.

If necessary, use a UL-approved power supply with a polarity configuration as shown at right, a P-7 power connector (3.5-mm outside and 1.3-mm inside diameter), and a 5-V, 1.5-A DC output. Refer to your device documentation for the device power requirements.

Hotplugging USB Devices

The USB2connect for Notebooks adapter supports hotplugging, allowing USB devices to be attached and recognized while the computer is on. Device manufacturers support hotplugging in different ways. Refer to the instructions for each device for attaching and mounting recommendations.

> **Note:** Moving a device from one adapter connector to another can cause the operating system to initiate a new hardware installation process. Refer to the Readme file for details.

Hubs

The following figure shows the recommended configuration for connecting USB 1.1 and USB 2.0 devices. Note that you *could* connect USB 2.0 devices to a USB 1.1 hub, but the USB 2.0 devices would run at USB 1.1 speeds.
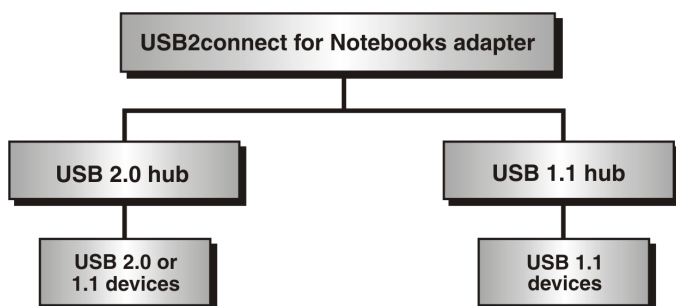
Troubleshooting

If you encounter difficulties installing or using your USB2connect for Notebooks adapter, check the following:

■ Is the adapter inserted completely in the CardBus slot?

■ Is the cable properly connected to the USB2connect for Notebooks adapter and the device?

■ Is your device powered on?

■ Does the device require an external power source? See *External Power Source* on page 21 for details.

■ Are you encountering problems hotplugging the USB2connect adapter? If so, an external power source may be required to run your USB devices. See *External Power Source* on page 21 and the Readme file on the USB2connect for Notebooks CD.

■ Did you encounter problems with a USB device when it is connected to a hub? If so, connect the affected device directly to the USB2connect for Notebooks adapter.

■ Did you encounter problems loading the drivers on your Windows 2000 operating system? If so, refer to the Readme file on the USB2connect for Notebooks CD. Also, check the Windows 2000 event log and the troubleshooting section of your operating system user's guide.

■ Are you having problems using your notebook computer after you disconnect a device? If so, restart the computer, and see if the problem recurs.

■ *Macintosh only* – Do you see either of the USB2connect for Notebooks adapter icons shown at right on your desktop? If not, this means the driver is disabled or not installed. See *Installing the Macintosh Driver* on page 20. If you have further difficulties, check the Readme file on the USB2connect for Notebooks CD and http://www.adaptec.com.

For more troubleshooting information, visit http://www.adaptec.com and http://ask.adaptec.com.

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