User Guide

HP Modular Keyboard with Numeric Keypad and Accessories

Document Part Number: 365677-001

July 2004

This guide provides instructions on setting up and using the HP modular keyboard with numeric keypad, smart card adapter, Bluetooth keyboard adapter, and Bluetooth mouse.

WARNING: Text set off in this manner indicates that failure to
follow directions could result in bodily harm or loss of life.

CAUTION: Text set off in this manner indicates that failure to follow
directions could result in damage to equipment or loss of information.

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First Edition (July 2004)

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1
Choosing Configuration Options

Congratulations on purchasing an HP modular keyboard! The design of the modular keyboard creates a comfortable user experience and allows you to customize your workspace with accessories tailored to your particular needs.

The modular keyboard and its interwoven array of accessories provide:

■ Reprogrammable buttons for quick access to Web pages, applications, or data files.

■ A detachable numeric keypad that can be placed in a more optimal position on the desktop or removed completely to gain valuable desktop real estate.

■ An adjustable slope of 0°, 6°, or 12°.

■ Improved security with a smart card adapter. The smart card adapter reads all ISO 7816-3 compatible smart cards and is qualified with HP ProtectTools Security Manager software, which utilizes the HP ProtectTools Smart Card.

■ A Bluetooth wireless solution that converts the modular keyboard to a wireless Bluetooth desktop solution by adding a Bluetooth keyboard adapter, a Bluetooth mouse, and a USB Bluetooth transceiver. You can add other Bluetooth devices, such as printers, and synchronize Bluetooth notebooks and PDAs to the desktop computer.

The following sections in this chapter describe some of the typical HP modular keyboard configurations.

Standard Configuration

The HP modular keyboard standard configuration includes:

■ Modular keyboard

■ Detachable numeric keypad

HP Modular Keyboard Standard Configuration with Numeric Keypad

HP Modular Keyboard Standard Configuration without Numeric Keypad

See Chapter 2, "Identifying the Modular Keyboard and Numeric Keypad Features" for a description of the features of the modular keyboard and numeric keypad.

See Chapter 3, "Setting Up and Using the Modular Keyboard" for information on setting up and using the HP modular keyboard in the standard configuration.

✎ Refer to Appendix C, "Ordering Kits" for modular keyboard and accessory part numbers and ordering information.

Security Access Solution

The HP modular keyboard smart card configuration is a combination of the modular keyboard kit plus the optional smart card adapter kit. The smart card configuration includes:

■ Modular keyboard and detachable numeric keypad

■ Detachable smart card adapter

■ HP ProtectTools smart card

HP Modular Keyboard Smart Card Configuration

See Chapter 4, "Adding Smart Card Security" for information on setting up and using the HP modular keyboard in the smart card configuration.

✎ Refer to Appendix C, "Ordering Kits" for modular keyboard and accessory part numbers and ordering information.

Wireless Solution

The HP modular keyboard wireless configuration is a combination of the modular keyboard kit plus the optional Bluetooth adapter kit. The wireless configuration includes:

■ Modular keyboard and detachable numeric keypad

■ Bluetooth keyboard adapter

■ Bluetooth wireless optical mouse

■ Bluetooth USB transceiver

HP Modular Keyboard Wireless Configuration

See Chapter 5, "Converting the Modular Keyboard to a Wireless Solution" for information on setting up and using the HP modular keyboard in the wireless configuration.

✎ Refer to Appendix C, "Ordering Kits" for modular keyboard and accessory part numbers and ordering information.

Combined Wireless and Security Access Solution

The HP modular keyboard wireless plus smart card configuration is a combination of the modular keyboard kit plus the optional Bluetooth adapter kit and the optional smart card adapter kit. The wireless plus smart card configuration includes:

■ Modular keyboard and detachable numeric keypad

■ Bluetooth keyboard adapter

■ Bluetooth wireless optical mouse

■ Bluetooth USB transceiver

■ Smart card adapter

■ HP ProtectTools smart card

See Chapter 5, "Converting the Modular Keyboard to a Wireless Solution" and Chapter 4, "Adding Smart Card Security" for information on setting up and using the HP modular keyboard in the wireless plus smart card configurations.

✎ Refer to Appendix C, "Ordering Kits" for modular keyboard and accessory part numbers and ordering information.

2

Identifying the Modular Keyboard and Numeric Keypad Features

Standard Features

The HP Modular Keyboard includes the following standard features:

■ Modular keyboard ready for attachable accessories

■ Numeric keypad that can be removed or attached to either side of the modular keyboard

■ Adjustable slope for maximum comfort

■ Six programmable modular keyboard access buttons

■ Four programmable numeric keypad access buttons

■ Modular keyboard to computer USB connectivity

■ Numeric keypad to modular keyboard RJ-45 connectivity

Supported Operating Systems

The following are primary support operating systems for the HP modular keyboard and numeric keypad:

■ Microsoft Windows XP Professional

■ Microsoft Windows XP Home

■ Microsoft Windows 2000 Professional

✎ Other legacy operating systems may also have limited support through native USB drivers or the computer BIOS.

Modular Keyboard Kit Contents
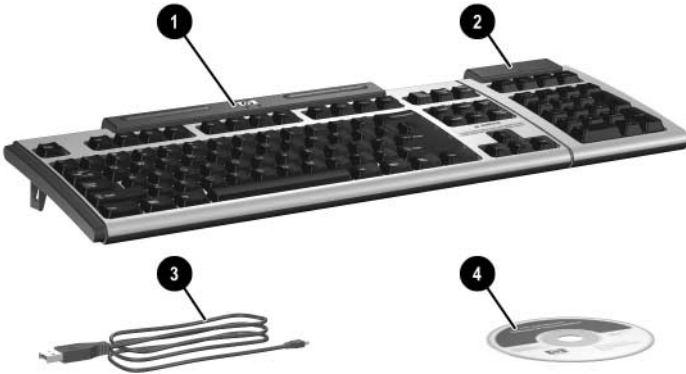
❶ Modular keyboard	❸ USB cable
❷ Numeric keypad	❹ *I/O and Security Software & Documentation* CD

Identifying the Modular Keyboard Components

Front Components
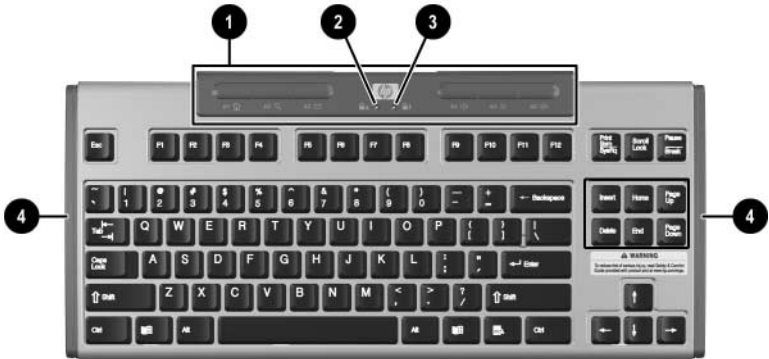
❶	Access buttons	Provide quick access to Web pages, applications, data files, and volume adjustment. See the "Modular Keyboard Access Buttons" section for more information.
❷	Caps Lock indicator light	Caps Lock is on when lit.
❸	Scroll Lock indicator light	Scroll Lock is on when lit.
❹	Accessory interlock	Physically connects optional adapters.

✎ The Scroll Lock and Caps Lock indicator lights do not function if the modular keyboard is converted to a wireless configuration.

Rear Components
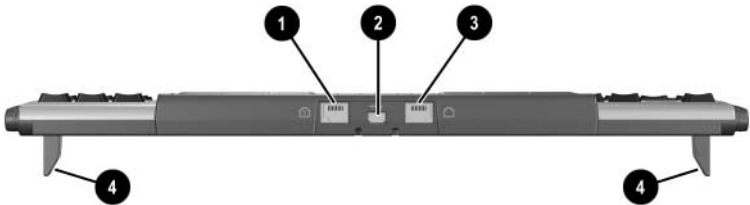
❶		RJ-45 connector	Dedicated for numeric keypad connection only.
❷		USB connector	Connects the modular keyboard to the computer.
❸		RJ-45 connector	Connects the Bluetooth keyboard adapter or smart card adapter.
❹		Expandable feet	Adjusts the slope of the modular keyboard.

Modular Keyboard Access Buttons

The access buttons on the modular keyboard are pre-programmed to provide the following functions:
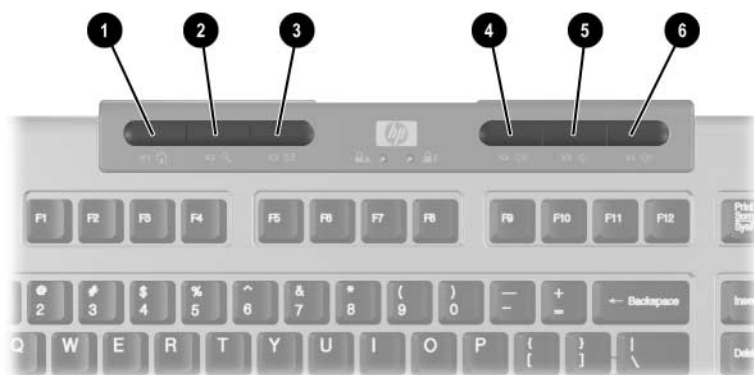
❶	K1 ⌂	Home	Opens the browser default home page.
❷	K2 🔍	Search	Opens the default search engine.
❸	K3 ✉	Email	Opens the default email application.
❹	K4 🔊	Volume up	Increases the volume.
❺	K5 🔉	Volume down	Decreases the volume.
❻	K6 🔇	Mute	Toggles sound on and off.

✎ You can re-program the access buttons to meet your particular needs. See "Programming the Access Buttons" for information.

Identifying the Numeric Keypad Components
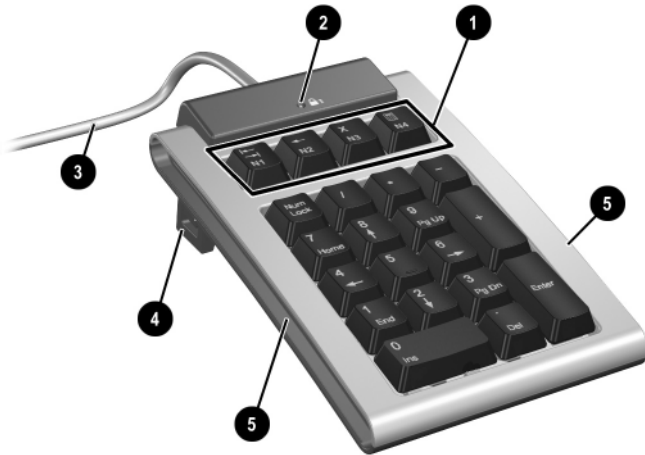
❶	Access buttons	Provide quick access to numeric keypad functions. See the "Numeric Keypad Access Buttons" section for more information.
❷	Num Lock indicator light 🔒₁	Num Lock is on when lit.
❸	RJ-45 cable	Connects the numeric keypad to the modular keyboard.
❹	Expandable feet	Adjusts the slope of the numeric keypad.
❺	Keyboard interlock	Physically connects the numeric keypad to the modular keyboard.

✎ The Num Lock indicator light does not function if the modular keyboard is converted to a wireless configuration.

Numeric Keypad Access Buttons

The access buttons on the numeric keypad are pre-programmed to provide the following functions:
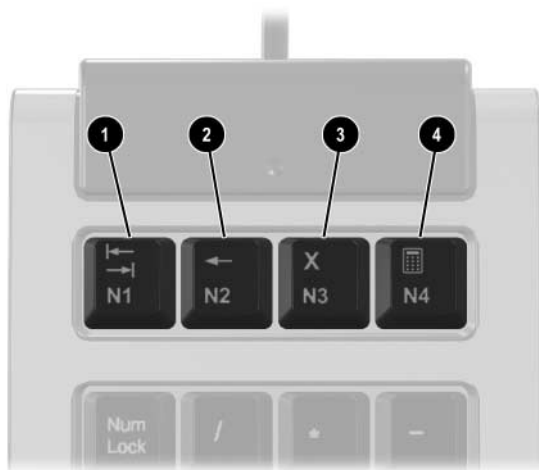
❶	⬚ N1	Tab	Functions the same as the Tab key on the modular keyboard. Press this key to tab right. Press this key plus the Shift key to tab left.
❷	⬚ N2	Backspace	Functions the same as the Backspace key on the modular keyboard.
❸	**X** N3	Delete	Functions the same as the Delete key on the modular keyboard.
❹	⬚ N4	Calculator	Launches the Microsoft Windows calculator applet.

✎ You can re-program the access buttons to meet your particular needs. See "Programming the Access Buttons" for information.

3

Setting Up and Using the Modular Keyboard

⚠ **WARNING:** To reduce the risk of serious injury, read the *Safety & Comfort Guide* included on the *I/O and Security Software & Documentation* CD or go to www.hp.com/ergo.

Connecting to the Computer

To begin using the modular keyboard and numeric keypad, connect the USB cable between the modular keyboard and the computer.

1. Using the USB cable provided with the modular keyboard, connect the Type Mini-B end of the USB cable to the USB connector on the modular keyboard.
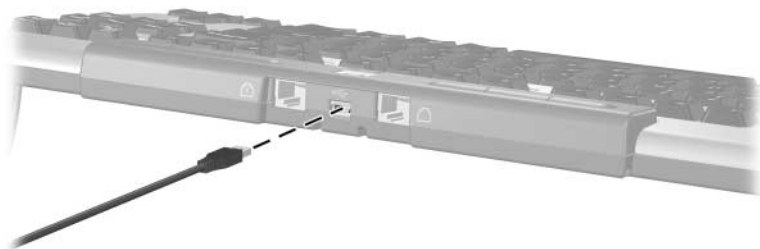
Connecting the USB Cable to the Modular Keyboard

2. Connect the Type A end of the USB cable to a USB connector on the computer.

✎ Depending on the computer model, the USB connector may be located on the front or rear of the computer. Connect the USB cable to the USB connector that is convenient for your setup.

Connecting the USB Cable to the Computer

3. You can now begin using the modular keyboard.

Repositioning the Numeric Keypad

You can attach the numeric keypad to the left or right side of the modular keyboard, or leave it unattached.

✎ Whether the numeric keypad is attached or unattached to the modular keyboard, the numeric keypad's RJ-45 cable must be connected to the modular keyboard's RJ-45 connector labeled ⌂ for the numeric keypad to function.

To move the numeric keypad from one side of the modular keyboard to the other side:

1. Remove the RJ-45 cable (that connects the numeric keyboard to the modular keyboard) from the cable routing channel on the bottom side of the modular keyboard.
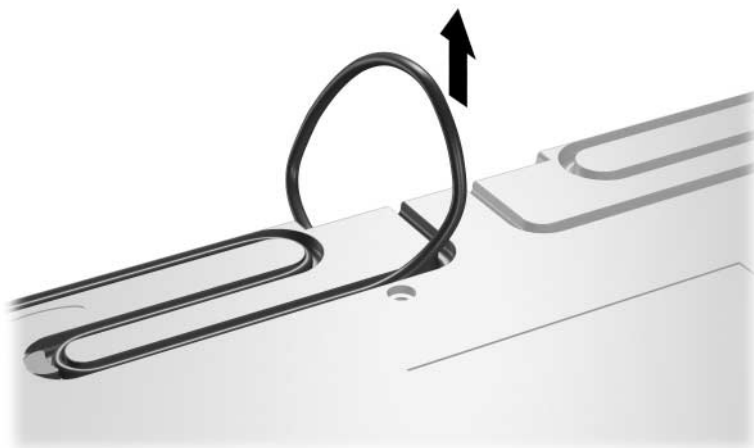
Removing the RJ-45 Cable from the Routing Channel

✎ You do not need to unplug the RJ-45 cable from the back of the modular keyboard.

2. Pull the numeric keypad free from the modular keyboard.
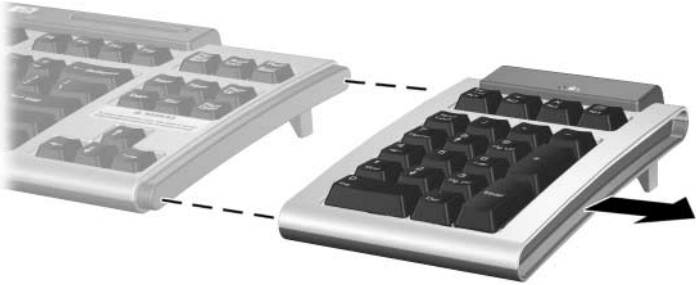
Removing the Numeric Keypad from the Modular Keyboard

3. Attach the numeric keypad to the other side of the modular keyboard.
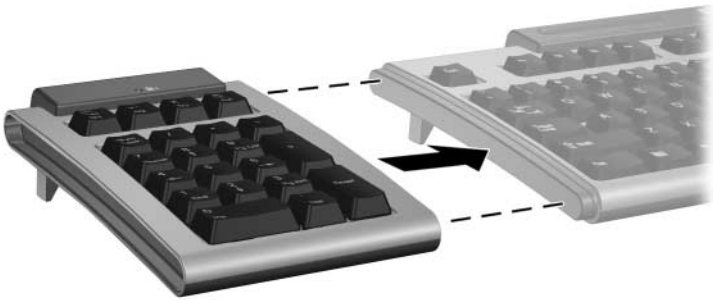
Attaching the Numeric Keypad to the Modular Keyboard

4. Press the RJ-45 cable into the other routing channel on the bottom side of the modular keyboard.
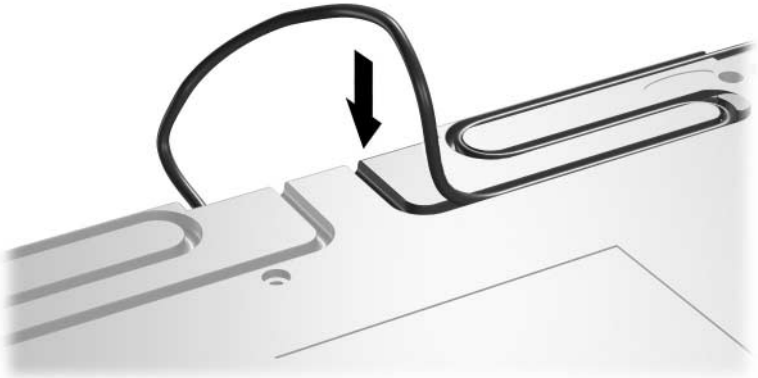
Placing the RJ-45 Cable in the Routing Channel

✎ Ensure that the RJ-45 cable is plugged into the RJ-45 connector on the back of the modular keyboard labeled 🖵.

Adjusting the Slope

The feet on the bottom side of the modular keyboard and numeric keypad can be adjusted so that the modular keyboard sits flat on the workspace surface (0° angle) ❶, sits at a 6° angle ❷, or sits at a 12° angle ❸.
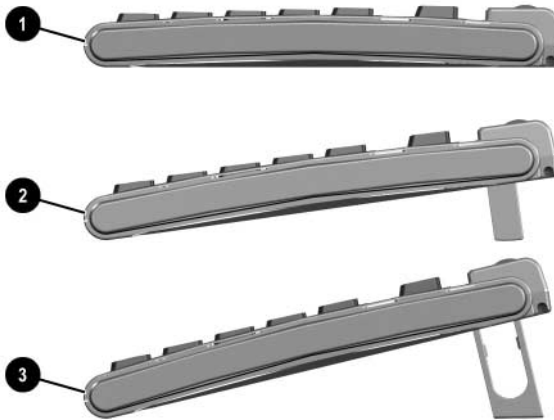
Adjusting the Slope of the Modular Keyboard

✎ When adjusting the slope of the modular keyboard and numeric keypad, be sure to extend all the feet on each device to the same position.

Installing the Modular Access Keyboard (MAK) Software

To reprogram the access buttons on the modular keyboard and numeric keypad, install the MAK software:

1. Insert the *I/O and Security Software & Documentation* CD in the computer's optical drive.

2. Go to **D:\Modular\MAK\setup.exe** (where D: is the drive letter of the computer's optical drive).

3. Double-click the **setup.exe** file.

4. Follow the on-screen instructions to install the software.

Programming the Access Buttons

The access buttons on the modular keyboard and numeric keypad are pre-programmed to specific destinations, but can be re-programmed to meet your particular needs.

Before you can program the access buttons, you must install the MAK software included on the *I/O and Security Software & Documentation* CD. See "Installing the Modular Access Keyboard (MAK) Software" for information.

To program the access buttons:

1. Double-click the **MAK** icon in the system tray (lower right corner of the display screen) to launch the MAK software application.

2. Click the **Help** button on the MAK software interface for instructions on programming the access buttons.

4

Adding Smart Card Security

Smart Card Features

The smart card accessory kit adds smart card functionality to the HP modular keyboard, providing improved security to the computer. Features of the smart card solution include:

- Smart card reader adapter that can be attached to the keyboard or configured as a stand-alone device

- HP ProtectTools Smart Card

- HP ProtectTools Smart Card Security Manager software, which is used to initialize, configure, and manage smart card security accounts

Supported Operating Systems

The smart card reader adapter requires one of the following operating systems:

- Microsoft Windows XP Professional

- Microsoft Windows XP Home

- Microsoft Windows 2000 Professional (this operating system must be fully installed before installing the HP ProtectTools software)

- Microsoft Windows CE .NET

- Microsoft Windows XPe

Smart Card Adapter Kit Contents
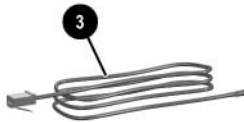
❶ Smart card adapter	❸ RJ-45 cable for connecting to the modular keyboard
❷ HP ProtectTools Smart Card	❹ *I/O and Security Software & Documentation* CD

✎ Refer to Appendix C, "Ordering Kits" for modular keyboard and accessory part numbers and ordering information.

Identifying the Smart Card Reader Adapter Components
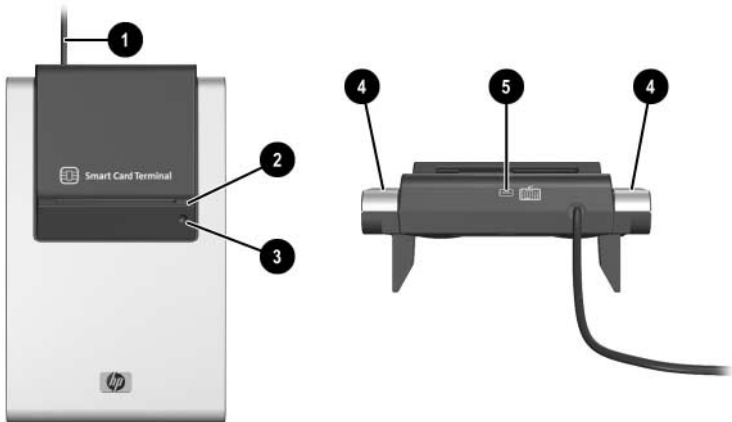
❶	USB cable	Connects the smart card adapter to the computer.
❷	Smart card slot	Insert the smart card into this slot for the system to read the card.
❸	Smart card indicator light	Lights when the smart card has been inserted and detected by the system.
❹	Keyboard interlock	Physically connects the smart card adapter to the modular keyboard.
❺	Ultra mini serial connector	Connects the RJ-45/ultra-mini serial cable between the smart card adapter and the modular keyboard (not required when using the smart card adapter as a stand-alone device).

Setting Up the Smart Card Solution

Set up the smart card adapter as either a:

■ Modular keyboard attachment

■ Stand-alone device

If you are attaching the smart card adapter to the modular keyboard, follow the directions in the "Connecting as an Attachment to the Modular Keyboard" section of this chapter.

If the modular keyboard has the Bluetooth keyboard adapter attached to it, or if you want to keep the smart card adapter separated from the modular keyboard, or if you purchased the smart card adapter kit but do not have a modular keyboard, set up the smart card adapter in the stand-alone configuration as described in the "Connecting as a Stand-Alone Device" section of this chapter.

Connecting as an Attachment to the Modular Keyboard

If the modular keyboard does not have a Bluetooth keyboard adapter attached to it, you can attach the smart card adapter to the modular keyboard.

1. Attach the smart card adapter to either side of the modular keyboard. (If the numeric keypad is attached to the right side, attach the smart card adapter to the left side.)

Attaching the Smart Card Adapter to the Modular Keyboard

2. Connect the large end of the supplied RJ-45 cable to the RJ-45 connector on the modular keyboard labeled ⌂ ❶. Connect the small end of the RJ-45 cable to the Ultra Mini Serial connector on the smart card adapter labeled ⌨ ❷.
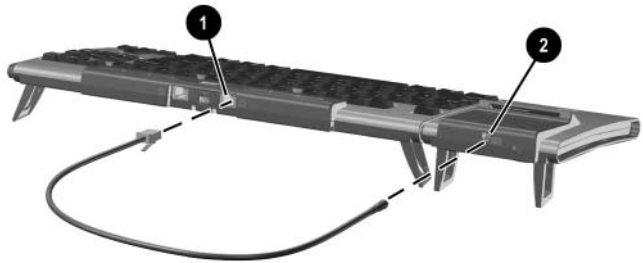
Connecting the Smart Card Adapter RJ-45 Cable

3. Route the RJ-45 cable in the channel on the bottom side of the modular keyboard.

Placing the RJ-45 Cable in the Routing Channel

4. Disconnect both ends of the USB cable that connects the Modular Keyboard to the computer (if connected).

5. Connect the Smart Card adapter's USB cable to a USB connector on the computer.
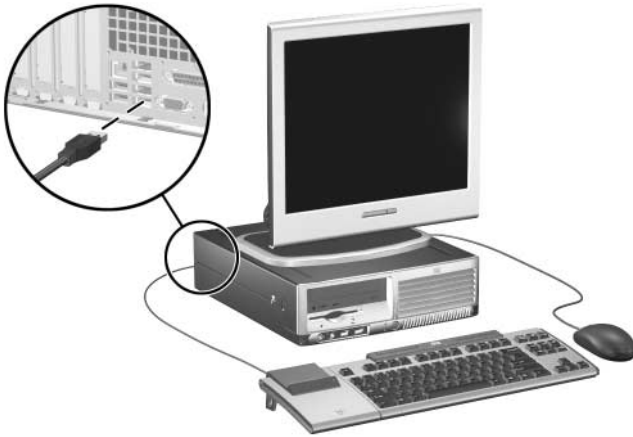
Connecting the Smart Card Adapter USB Cable

6. When prompted to install the drivers for the smart card adapter, click the **Cancel** button. Proceed to the "Installing the Smart Card Adapter Drivers" section.

Connecting as a Stand-Alone Device

To connect the smart card adapter as a stand-alone device:

1. Connect the Smart Card adapter's USB cable to the computer.
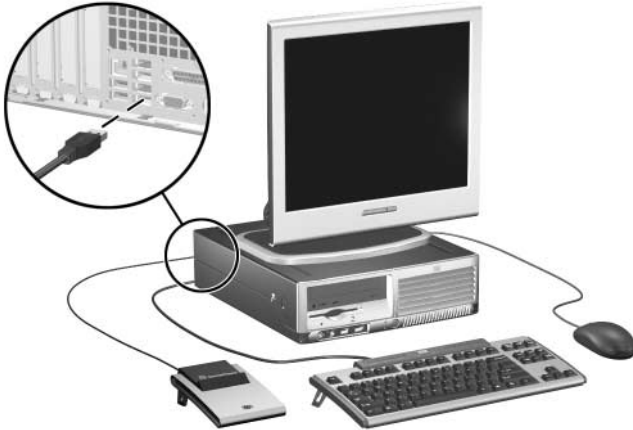
Connecting the Smart Card Adapter USB Cable

2. When prompted to install the drivers for the smart card adapter, click the **Cancel** button. Proceed to the "Installing the Smart Card Adapter Drivers" section.

Installing the Smart Card Adapter Drivers

1. Insert the *I/O and Security Software & Documentation* CD in the computer's optical drive.

2. Go to **D:\Modular\Smart_Card\SCM\setup.exe** (where D: is the drive letter of the computer's optical drive).

3. Double-click the **setup.exe** file.

4. Follow the on-screen instructions to install the software.

Installing the ProtectTools Software

✎ The HP ProtectTools software requires Microsoft Windows 2000 or Microsoft Windows XP operating systems. Microsoft Windows 2000 must be *completely* installed before installing the HP ProtectTools software.

1. Insert the *I/O and Security Software & Documentation* CD in the computer's optical drive.

2. Go to **D:\Modular\Smart_Card\ProtectTools\setup.exe** (where D: is the drive letter of the computer's optical drive).

3. Double-click the **setup.exe** file.

4. Follow the on-screen instructions to install the software.

Adjusting the Slope

The feet on the bottom side of the smart card adapter can be adjusted to match the slope of the modular keyboard. It can sit flat on the workspace surface (0° angle) ❶, sit at a 6° angle ❷, or sit at a 12° angle ❸.
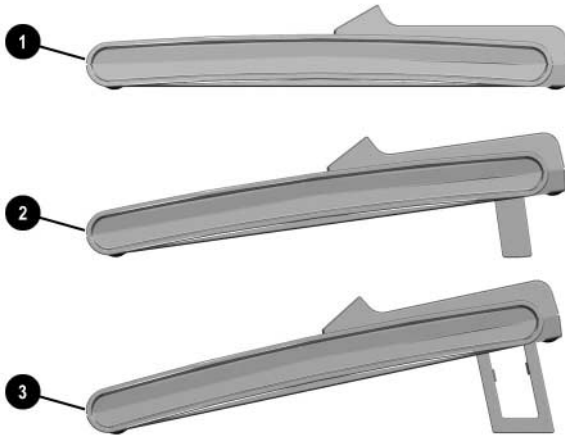
Adjusting the Slope of the Smart Card Adapter

✎ When adjusting the slope of the smart card adapter, be sure to extend all the feet on each connected device to the same position.

Using the ProtectTools Smart Card

Place the smart card in the slot face up with the gold contact pad at the bottom. The smart card indicator light on the smart card adapter is illuminated when the smart card is detected and/or read by the reader.
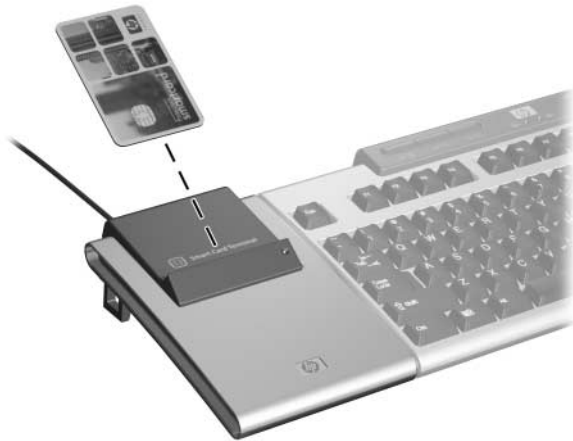
Inserting the Smart Card into the Smart Card Slot

Refer to the HP ProtectTools software Help files for instructions on using the smart card.

✎ Before you can enable the BIOS Security Mode in the HP ProtectTools software, you must enter Computer Setup (F10) and enable Smart Card BIOS Password support in the Smart Card Options menu. Smart Card BIOS Password support is only available with HP Business Desktop models dc7100, dx6100, and later.

Identifying Compatible Smart Cards

The following smart cards are vendor-tested as compatible with the HP smart card adapter. For an updated list of tested smart cards, check the Tested Products List (TPL) at www.hp.com

✎ The following smart cards are qualified and approved by SCM Microsystems, Inc. Contact SCM at www.scmmicro.com for technical support questions.

Schmlumberger:

CyberFlex Access 32k e-gate

CyberFlex Access 64k v1

CryptoFlex 32k

CryptoFlex 32k e-gate

PayFlex-S:

PayFlex 1K

PayFlex 2K

PayFlex 4K

PayFlex 8K

U.S. Government CAC:

AXALTO

Oberthur CAC:

Galactic 2.1

CosmopolIC V4

CosmopolIC v4.1

American Express:

Amex Blue

Java:

GemExpresso

CyberFlex Palmera

Data Cards: Generic

SLE4406

SLE4418

SLE4428

SLE4432

SLE4436

SLE4442

SLE5536

AT24C01ASC

AT24C02SC

AT24C04SC

AT24C08SC

AT24C16SC

AT24C32SC

AT24C64SC

AT24C128SC

AT24C256SC

AT24C512SC

AT88SC153

AT88SC1608

IS23SC4418

IS23SC4428

PrimeFlex Store 8K

PrimeFlex Store 2K

X24026

ST14C02

✎ The following smart cards are qualified and approved by Gemplus Corporation. Contact Gemplus at www.gemplus.com for technical support questions.

Gemplus:

GemExpresso

GPK32k

GemClub Memo

GemClub Micro

GemSafe

5

Converting the Modular Keyboard to a Wireless Solution

Wireless Solution Features

The Bluetooth wireless accessory kit converts the HP modular keyboard to a wireless solution. Features of the wireless solution include:

■ Bluetooth keyboard adapter that converts the modular keyboard to a rechargeable Bluetooth wireless keyboard

■ Rechargeable Bluetooth wireless optical mouse

■ Bluetooth USB transceiver that can connect up to seven wireless devices

■ Rechargeable batteries for the Bluetooth keyboard adapter and Bluetooth mouse

✎ Refer to Appendix C, "Ordering Kits" for modular keyboard and accessory part numbers and ordering information.

✎ For optimal performance, use the Bluetooth mouse with a mouse pad. Using the Bluetooth mouse on a transparent or reflective surface will inhibit the ability of the optical sensor to track the cursor.

Supported Operating Systems

The Bluetooth USB transceiver requires one of the following operating systems:

■ Microsoft Windows XP Professional

■ Microsoft Windows XP Home

■ Microsoft Windows 2000 Professional (must install WIDCOMM Bluetooth drivers, which are included with the kit)

Bluetooth Adapter Kit Contents

❶	Bluetooth keyboard adapter	❹	Bluetooth USB transceiver* (attaches to the computer and is required for operating the modular keyboard and mouse in wireless mode)
❷	USB cable (connects the mouse to the computer for recharging the mouse batteries)	❺	Four AA rechargeable batteries (two for the Bluetooth keyboard adapter and two for the Bluetooth wireless mouse)
❸	Bluetooth wireless optical mouse*	❻	*I/O and Security Software & Documentation* CD

* Available as a separate accessory kit

Identifying the Bluetooth Keyboard Adapter Components
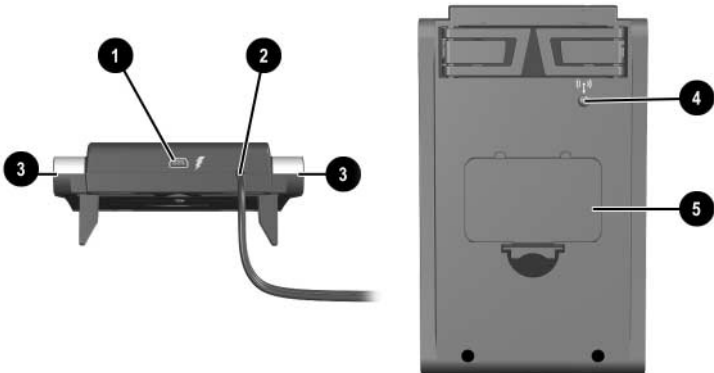
❶	USB connector ⚡ (Type Mini-B)	Connects the USB cable included in the modular keyboard kit to the computer when recharging the Bluetooth keyboard adapter batteries.
❷	RJ-45 cable	Connects the Bluetooth keyboard adapter to the modular keyboard.
❸	Keyboard interlock	Physically connects the Bluetooth keyboard adapter to the modular keyboard.
❹	Connect button ⁽¹⁾	Activates the modular keyboard in wireless mode.
❺	Battery compartment	Two rechargeable AA batteries must be properly inserted in this compartment for the modular keyboard to operate in wireless mode.

Identifying the Bluetooth Mouse Components

❶	Right-click button	Performs standard right-click functions.
❷	Scroll wheel	Scrolls through documents or Web pages (not supported by all software applications).
❸	Left-click button	Performs standard single-click and double-click functions.
❹	Battery compartment	Two rechargeable AA batteries must be properly inserted in this compartment for the Bluetooth mouse to operate in wireless mode.
❺	Connect button ⁽¹⁾	Activates the Bluetooth mouse in wireless mode.
❻	USB recharge receptacle ⚡	Connects the USB cable (included in the kit with the Bluetooth mouse) to the computer when recharging the Bluetooth mouse batteries.

Identifying the Bluetooth Transceiver Components
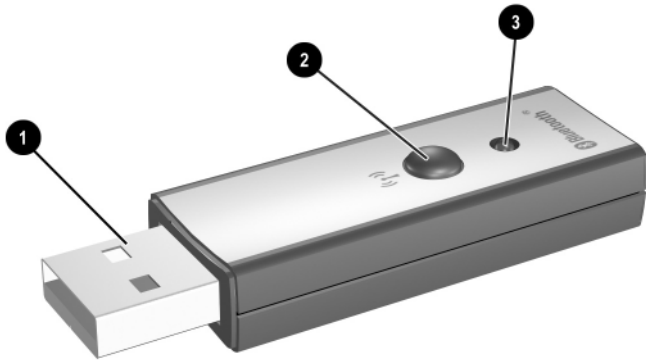
❶	USB plug	Plugs into a USB receptacle on the computer for the modular keyboard and Bluetooth mouse to operate in wireless mode.
❷	Connect button ⁽¹⁾	Activates the Bluetooth transceiver when pressed to set up the modular keyboard and/or Bluetooth mouse in wireless mode.
❸	Bluetooth indicator light	Indicates the Bluetooth transceiver is plugged in and recognized by the system, and the Bluetooth radio is on.

Setting Up the Wireless Solution

The wireless solution can function in either **USB wireless mode** or **Bluetooth wireless mode**.

■ USB wireless mode: Setting up the wireless solution before the Bluetooth drivers are installed.

■ Bluetooth wireless mode: Setting up the wireless solution after installing the Bluetooth drivers. In this mode, you can add other Bluetooth devices to the wireless solution.

When setting up the wireless solution you must:

■ Connect the Bluetooth components as described in the "Connecting Wireless Devices" section to function in either USB wireless mode or Bluetooth wireless mode.

■ Install the Bluetooth drivers as described in the "Installing the Bluetooth Software" section to function in Bluetooth wireless mode. The Bluetooth drivers are located on the *I/O and Security Software & Documentation* CD included with the Bluetooth adapter kit.

✎ To save battery power, the Scroll Lock, Caps Lock, and Num Lock indicator lights on the keyboard and numeric keypad do not operate in wireless mode. However, the supplied Broadcom Bluetooth Control Suite (BBCS) software displays whether these locks are on or off.

Connecting Wireless Devices

To connect the Bluetooth USB transceiver, Bluetooth keyboard adapter, and Bluetooth mouse:

1. Push in the release latch on the Bluetooth keyboard adapter battery compartment ❶, lift the battery compartment door ❷, and install two of the supplied rechargeable batteries ❸.
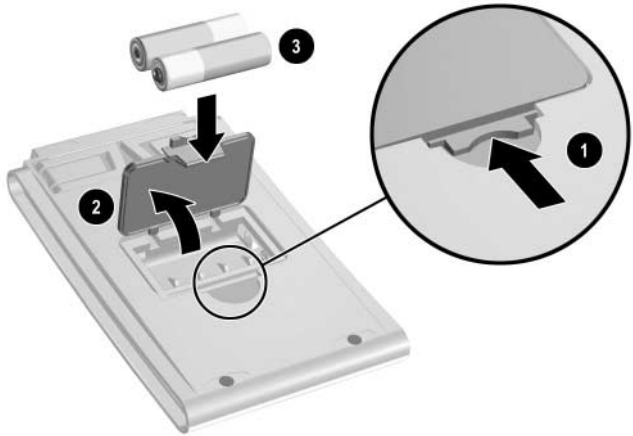
Installing the Bluetooth Keyboard Adapter Batteries

⚠ **CAUTION:** Risk of explosion if battery is replaced by an incorrect type. Only NiMH and NiCad batteries are supported in the Bluetooth keyboard adapter. Dispose of used batteries according to instructions. Refer to Appendix B, "Regulatory Compliance Notices" for disposal instructions.

2. Attach the Bluetooth keyboard adapter to either side of the keyboard. (If the numeric keypad is attached to the right side, attach the Bluetooth keyboard adapter to the left side.)
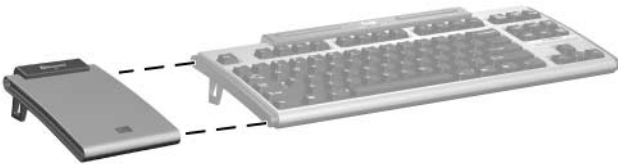
Attaching the Bluetooth Keyboard Adapter to the Modular Keyboard

3. Connect the Bluetooth keyboard adapter's RJ-45 cable to the RJ-45 connector on the modular keyboard labeled ⌨.

Connecting the Bluetooth Keyboard Adapter's RJ-45 Cable

4. Press the RJ-45 cable into the routing channel on the bottom side of the modular keyboard.

Placing the RJ-45 Cable in the Routing Channel

5. Push in the release latch on the Bluetooth mouse battery compartment ❶, lift the battery compartment door ❷, and install the other two supplied rechargeable batteries ❸.
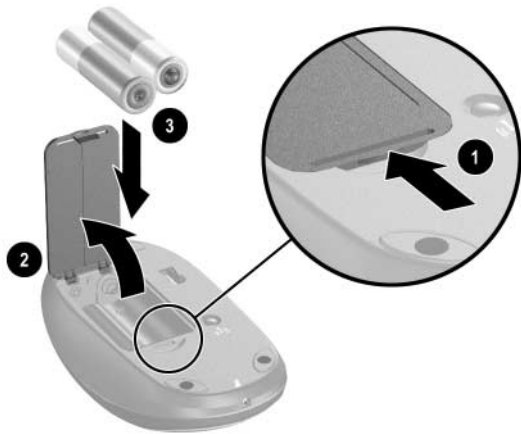
Installing the Bluetooth Mouse Batteries

⚠ **CAUTION:** Risk of explosion if battery is replaced by an incorrect type. Only NiMH and NiCad batteries are supported in the Bluetooth mouse. Dispose of used batteries according to instructions. Refer to Appendix B, "Regulatory Compliance Notices" for disposal instructions.

6. To continue with this procedure:

   ❏ If the computer is turned off, or if the pre-installed operating system has not been unbundled, proceed to step 7.

   ❏ If the computer is turned on and the Microsoft Windows operating system is completely installed and running, proceed to the "Installing the Bluetooth Software" section.

7. If the modular keyboard was previously used in a non-wireless mode, disconnect the USB cable from the modular keyboard and computer.

8. Insert the Bluetooth transceiver into a USB receptacle on the computer.

✎ Your computer may look different than the one shown in the illustration below.

Connecting the Bluetooth Transceiver

9. Turn on the computer if it is not already on.

10. Press the Connect button ⁽¹⁾ on the Bluetooth transceiver ❶ for two seconds. The blue indicator light on the transceiver begins flashing.

11. Press the Connect button ⁽¹⁾ on the Bluetooth keyboard adapter ❷ for two seconds.
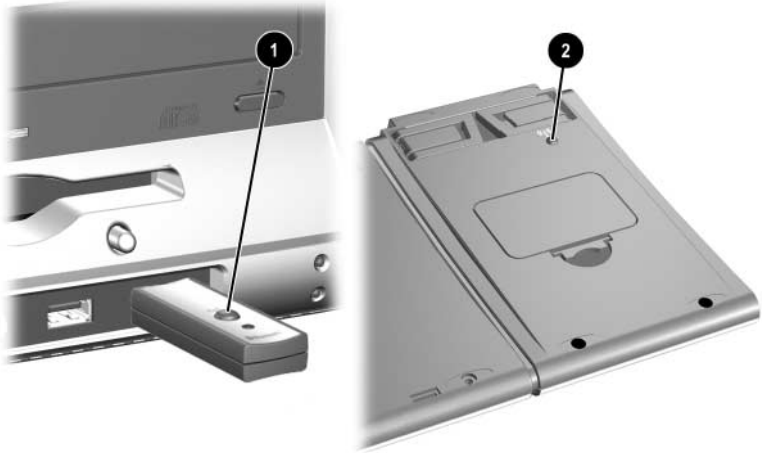
Pressing the Connect Button on the Bluetooth Transceiver and on the Bluetooth Keyboard Adapter

12. Press the Connect button ⁽¹⁾ on the Bluetooth mouse for two seconds. The indicator light on the transceiver flashes rapidly then becomes solid blue.

Pressing the Connect Button on the Bluetooth Mouse

✎ The modular keyboard and Bluetooth mouse are now functioning in the USB wireless mode. After installing the Bluetooth drivers, the modular keyboard and Bluetooth mouse will function in Bluetooth wireless mode.

Installing the Bluetooth Software

The Bluetooth software is available on the *I/O and Security Software & Documentation* CD included with the Bluetooth keyboard adapter kit.

For the modular keyboard and Bluetooth mouse to operate in Bluetooth wireless mode, you must install Bluetooth drivers. To obtain a user interface for viewing information about the Bluetooth devices, you must install the BBCS software.

To obtain the full benefits of Bluetooth wireless mode, install the following software packages:

■ WIDCOMM Bluetooth software (drivers)

■ Broadcom Bluetooth Control Suite (BBCS)

WIDCOMM Bluetooth Software

The WIDCOMM Bluetooth software package contains Bluetooth drivers required for operating the modular keyboard and Bluetooth mouse in Bluetooth wireless mode.

✎ It is recommended that you install the WIDCOMM software to get optimal Bluetooth functionality. However, if you do not want to install the WIDCOMM software, you can install the Microsoft Bluetooth drivers instead. Refer to the "Enabling Microsoft Bluetooth Drivers" section for instructions.

To install the WIDCOMM Bluetooth software:

1. Insert the *I/O and Security Software & Documentation* CD into the computer's optical drive.

2. Go to **D:\Modular\Bluetooth\WIDCOMM\setup.exe** (where D: is the drive letter of the computer's optical drive).

3. Double-click the **setup.exe** file.

4. Follow the on-screen instructions to install the software.

5. When prompted, insert the Bluetooth transceiver into a USB connector on the computer (if it is not already inserted) and click the **OK** button.

6. After the software installation is complete, a Bluetooth icon will appear on the desktop and in the system tray. Double-click either one of the icons to launch the Initial Bluetooth Configuration Wizard.

7. Follow the on-screen instructions in the Initial Bluetooth Configuration Wizard.

8. During the configuration process in the Initial Bluetooth Configuration Wizard, the system will search for Bluetooth devices. While the system is searching:

   a. Press the Connect button on the Bluetooth keyboard adapter for two seconds.

✎ You do not need to press the Connect button on the Bluetooth USB transceiver.

   b. Press the Connect button on the Bluetooth mouse for two seconds.

9. If the system does not locate the modular keyboard and/or Bluetooth mouse, click the **Search Again** button and repeat step 8 above.

10. Once the modular keyboard and Bluetooth mouse are displayed in the Bluetooth Device Selection window, select the modular keyboard from the list and click the **Next** button. Follow the on-screen instructions.

11. After the modular keyboard pairing has been established, you will return to the Bluetooth Device Selection window. Select the Bluetooth mouse, click the **Next** button, and follow the on-screen instructions.

✎ Refer to the Help in the WIDCOMM software for information on enhancing the wireless solution.

Broadcom Bluetooth Control Suite (BBCS)

The BBCS software provides a user interface for viewing information about Bluetooth devices. To install the BBCS software:

1. Insert the *I/O and Security Software & Documentation* CD into the computer's optical drive.

2. Go to **D:\Modular\Bluetooth\Broadcom\setup.exe** (where D: is the drive letter of the computer's optical drive).

3. Double-click the **setup.exe** file.

4. Follow the on-screen instructions to install the software.

✎ Refer to the Help in the Broadcom Bluetooth Control Suite (BBCS) software for information on enhancing the wireless solution.

✎ If the modular keyboard was previously used in a non-wireless mode, disconnect the USB cable from the modular keyboard and computer.

✎ The Broadcom Bluetooth Control Suite (BBCS) battery level indicator may be less accurate when using NiCad batteries. Recharging less frequently will extend the life of NiCad batteries.

Enabling Microsoft Bluetooth Drivers

If you chose not to install the WIDCOMM software, you can install the Microsoft Bluetooth drivers so that the Bluetooth components function in Bluetooth wireless mode.

✎ Limited Bluetooth profiles are supported by Microsoft Bluetooth drivers. Check the Microsoft web site www.microsoft.com for updated listings.

The Microsoft Bluetooth drivers found in Microsoft Windows XP Service Pack 2 do not provide first boot or recovery capabilities. For recovery and first boot requirements, a wired USB keyboard and/or mouse should be readily available.

■ "First boot" capability refers to using a Bluetooth wireless keyboard and Bluetooth mouse in USB wireless mode then switching to Bluetooth wireless mode (once the operating system has loaded) without connecting a wired keyboard for the system to recognize the keyboard.

■ "Recovery" capability refers to replacing a faulty Bluetooth wireless keyboard with a functioning Bluetooth wireless keyboard without connecting a wired keyboard for the system to recognize the keyboard.

To enable the Microsoft Bluetooth drivers, you must install the software packages as described in the "Preparing the Bluetooth Transceiver to Work with Microsoft Bluetooth Drivers" and "Installing the Microsoft Bluetooth Drivers" sections below.

✎ The Connect button on the Bluetooth USB transceiver does not function if the Microsoft Bluetooth drivers are used.

Preparing the Bluetooth Transceiver to Work with Microsoft Bluetooth Drivers

1. Insert the *I/O and Security Software & Documentation* CD into the computer's optical drive.

2. Go to **D:\Modular\Bluetooth\Microsoft\dfu\setup.exe** (where D: is the drive letter of the computer's optical drive).

3. Double-click the **setup.exe** file.

4. Follow the on-screen instructions to install the software.

Installing the Microsoft Bluetooth Drivers

The Microsoft Bluetooth drivers are included in Microsoft Windows XP Service Pack 2. Before installing the Microsoft Bluetooth Drivers, install the software as described in the previous section, "Preparing the Bluetooth Transceiver to Work with Microsoft Bluetooth Drivers."

1. Download the Microsoft Windows XP Service Pack 2 from www.microsoft.com (if the service pack has not already been installed).

2. Follow the on-screen instructions to install the software.

✎ Install the Broadcom Bluetooth Control Suite (BBCS) software to view information about the Bluetooth devices, such as battery charge status and keyboard LED status.

Adjusting the Slope

The feet on the bottom side of the Bluetooth keyboard adapter can be adjusted to match the slope of the modular keyboard. It can sit flat on the workspace surface (0° angle) ❶, sit at a 6° angle ❷, or sit at a 12° angle ❸.

Adjusting the Slope of the Bluetooth Keyboard Adapter

✎ When adjusting the slope of the Bluetooth keyboard adapter, be sure to extend all the feet on each connected device to the same position.

Recharging the Bluetooth Keyboard Adapter and Bluetooth Mouse Batteries

The AA NiMH batteries included with the Bluetooth wireless kit are rechargeable. You can continue to use the modular keyboard and Bluetooth mouse while the batteries are recharging.

✎ Only NiMH and NiCad rechargeable batteries are supported. Standard AA non-rechargeable batteries are not supported.

⚠ **CAUTION:** DO NOT attempt to recharge standard non-rechargeable AA batteries. Doing so can cause the batteries to explode.

When the battery charge becomes low for the Bluetooth keyboard adapter or Bluetooth mouse, the Broadcom Bluetooth Control Suite (BBCS) software displays a message to recharge the batteries. Another message is displayed when the batteries become fully charged.

✎ The Broadcom Bluetooth Control Suite (BBCS) battery level indicator may be less accurate when using NiCad batteries. Recharging less frequently will extend the life of NiCad batteries.

✎ The computer must be turned on and can not be in Hibernate mode for the batteries to recharge. If the Broadcom Bluetooth Control Suite (BBCS) software is installed, the computer will not enter Hibernate mode until recharging is complete. If the BBCS software is not installed, make sure the Control Panel's Power Options Properties has **System hibernates** set to **Never** while recharging.

To recharge the Bluetooth keyboard adapter rechargeable batteries:

1. Connect the Type Mini-B end of the USB cable included with the HP Modular Keyboard kit to the USB connector ⚡ on the Bluetooth keyboard adapter. Connect the Type A end of the USB cable to a USB connector on the computer.
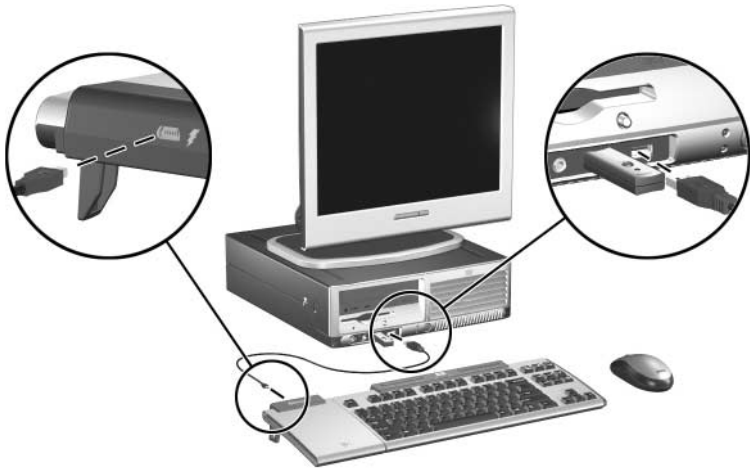
Recharging the Bluetooth Keyboard Adapter Batteries

2. Let the batteries recharge until the Broadcom Bluetooth Control Suite (BBCS) software displays a message that they are fully charged, then remove the USB cable from the Bluetooth keyboard adapter and computer.

✎ The Broadcom Bluetooth Control Suite (BBCS) battery level indicator may be less accurate when using NiCad batteries. Recharging less frequently will extend the life of NiCad batteries.

To recharge the mouse rechargeable batteries:

1. Plug the mouse recharge end of the USB cable included with the Bluetooth adapter kit into the recharge receptacle ⚡ on the mouse. Connect the Type A end of the USB cable to a USB connector on the computer.

Recharging the Bluetooth Mouse Batteries

2. Let the batteries recharge until the Broadcom Bluetooth Control Suite (BBCS) software displays a message that they are fully charged, then remove the USB cable from the Bluetooth mouse and computer.

✎ The Broadcom Bluetooth Control Suite (BBCS) battery level indicator may be less accurate when using NiCad batteries. Recharging less frequently will extend the life of NiCad batteries.

Identifying Compatible Bluetooth Devices

The Bluetooth USB transceiver can connect up to seven Bluetooth-compliant devices. The following Belkin Bluetooth devices are vendor-tested as compatible with the HP USB transceiver. For an updated list of tested Belkin Bluetooth devices, check the Tested Products List (TPL) at www.hp.com

✎ The following Bluetooth devices are Belkin qualified and approved. Contact Belkin Corporation at www.belkin.com for technical support questions.

Belkin Bluetooth Device	Belkin Part Number
Bluetooth PDA & PC Combo Card	F8T006-PC
Bluetooth GPS Navigation System	F8T051
Bluetooth Hands-Free Headset	F8T061
Bluetooth Acess Point with Printer Adapter	F8T030
Bluetooth USB Printer Adapter	F8T031

6

Installing the Bluetooth Mouse as a Stand-Alone Device

Bluetooth Mouse Features

Features of the Bluetooth mouse kit include:

■ Rechargeable Bluetooth wireless optical mouse

■ Rechargeable batteries for the Bluetooth mouse

✎ An HP USB transceiver is required for the Bluetooth mouse to function.

✎ For optimal performance, use the Bluetooth mouse with a mouse pad. Using the Bluetooth mouse on a transparent or reflective surface will inhibit the ability of the optical sensor to track the cursor.

✎ Refer to Appendix C, "Ordering Kits" for modular keyboard and accessory part numbers and ordering information.

Supported Operating Systems

The Bluetooth mouse requires one of the following operating systems:

■ Microsoft Windows XP Professional

■ Microsoft Windows XP Home

■ Microsoft Windows 2000 Professional (must install WIDCOMM Bluetooth drivers, which are included with the *HP USB Bluetooth Transceiver 1.2 Software & Documentation* CD that is shipped with the HP USB transceiver)

Bluetooth Mouse Kit Contents

❶	USB cable (connects the mouse to the computer for recharging the mouse batteries)	❸	Two AA rechargeable batteries for the Bluetooth mouse
❷	Bluetooth wireless optical mouse		

Identifying the Bluetooth Mouse Components

❶	Right-click button	Performs standard right-click functions.
❷	Scroll wheel	Scrolls through documents or Web pages (not supported by all software applications).
❸	Left-click button	Performs standard single-click and double-click functions.
❹	Battery compartment	Two rechargeable AA batteries must be properly inserted in this compartment for the Bluetooth mouse to operate in wireless mode.
❺	Connect button ⁽¹⁾	Activates the Bluetooth mouse in wireless mode.
❻	USB recharge receptacle ⚡	Connects the USB cable (included in the kit with the Bluetooth mouse) to the computer when recharging the Bluetooth mouse batteries.

Setting Up the Bluetooth Mouse

The Bluetooth mouse can function in either **USB wireless mode** or **Bluetooth wireless mode**.

■ USB wireless mode: Setting up the wireless solution before the Bluetooth drivers are installed.

■ Bluetooth wireless mode: Setting up the wireless solution after installing the Bluetooth drivers. In this mode, you can add other Bluetooth devices to the wireless solution.

When setting up the wireless solution you must:

■ Connect the Bluetooth components as described in the "Connecting the Bluetooth Mouse" section to function in either USB wireless mode or Bluetooth wireless mode.

■ Install the Bluetooth drivers as described in the "Installing the Bluetooth Software" section to function in Bluetooth wireless mode. The Bluetooth drivers are located on the *HP USB Bluetooth Transceiver 1.2 Software & Documentation* CD included with the Bluetooth USB transceiver kit.

Connecting the Bluetooth Mouse

To connect the Bluetooth USB transceiver and Bluetooth mouse:

1. Push in the release latch on the Bluetooth mouse battery compartment ❶, lift the battery compartment door ❷, and install the two supplied rechargeable batteries ❸.
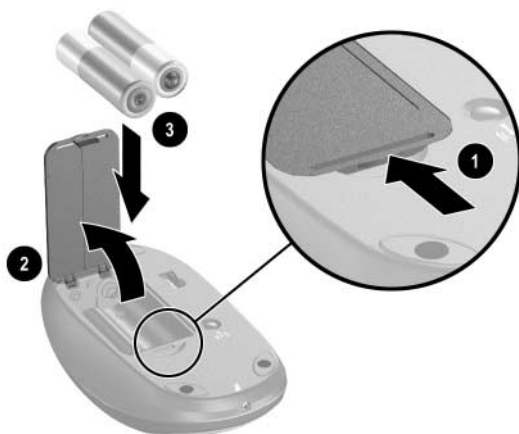
Installing the Bluetooth Mouse Batteries

⚠ **CAUTION:** Risk of explosion if battery is replaced by an incorrect type. Only NiMH and NiCad batteries are supported in the Bluetooth mouse. Dispose of used batteries according to instructions. Refer to Appendix B, "Regulatory Compliance Notices" for disposal instructions.

2. To continue with this procedure:

   ❏ If the computer is turned off, or if the pre-installed operating system has not been unbundled, proceed to step 3.

   ❏ If the computer is turned on and the Microsoft Windows operating system is completely installed and running, proceed to the "Installing the Bluetooth Software" section.

3. Insert the Bluetooth transceiver into a USB receptacle on the computer.

✎ Your computer may look different than the one shown in the illustration below.

Connecting the Bluetooth Transceiver

4. Turn on the computer if it is not already on.

5. Press the Connect button ⁽𝟏⁾ on the Bluetooth transceiver ❶ for two seconds. The blue indicator light on the transceiver begins flashing.

6. Press the Connect button ⁽𝟏⁾ on the Bluetooth mouse ❷ for two seconds. The indicator light on the transceiver flashes rapidly then becomes solid blue.

Pressing the Connect Button on the Bluetooth Transceiver and on the Bluetooth Mouse

✎ The Bluetooth mouse is now functioning in the USB wireless mode. After installing the Bluetooth drivers, the Bluetooth mouse will function in Bluetooth wireless mode.

Installing the Bluetooth Software

The Bluetooth software is available on the *HP USB Bluetooth Transceiver 1.2 Software & Documentation* CD included with the Bluetooth USB transceiver kit.

For the Bluetooth mouse to operate in Bluetooth wireless mode, you must install Bluetooth drivers. To obtain a user interface for viewing information about the Bluetooth devices, you must install the BBCS software.

To obtain the full benefits of Bluetooth wireless mode, install the following software packages:

■ WIDCOMM Bluetooth software (drivers)

■ Broadcom Bluetooth Control Suite (BBCS)

WIDCOMM Bluetooth Software

The WIDCOMM Bluetooth software package contains Bluetooth drivers required for operating the Bluetooth mouse in Bluetooth wireless mode.

✎ It is recommended that you install the WIDCOMM software to get optimal Bluetooth functionality. However, if you do not want to install the WIDCOMM software, you can install the Microsoft Bluetooth drivers instead. Refer to the "Enabling Microsoft Bluetooth Drivers" section for instructions.

To install the WIDCOMM Bluetooth software:

1. Insert the *HP USB Bluetooth Transceiver 1.2 Software & Documentation* CD into the computer's optical drive.

2. Go to **D:\Modular\Bluetooth\WIDCOMM\setup.exe** (where D: is the drive letter of the computer's optical drive) **Greg Young to verify path**.

3. Double-click the **setup.exe** file.

4. Follow the on-screen instructions to install the software.

5. When prompted, insert the Bluetooth transceiver into a USB connector on the computer (if it is not already inserted) and click the **OK** button.

6. After the software installation is complete, a Bluetooth icon will appear on the desktop and in the system tray. Double-click either one of the icons to launch the Initial Bluetooth Configuration Wizard.

7. Follow the on-screen instructions in the Initial Bluetooth Configuration Wizard.

8. During the configuration process in the Initial Bluetooth Configuration Wizard, the system will search for Bluetooth devices. While the system is searching, press the Connect button on the Bluetooth mouse for two seconds.

✎ You do not need to press the Connect button on the Bluetooth USB transceiver.

9. If the system does not locate the Bluetooth mouse, click the **Search Again** button and repeat step 8 above.

10. Once the Bluetooth mouse is displayed in the Bluetooth Device Selection window, select the Bluetooth mouse from the list and click the **Next** button. Follow the on-screen instructions.

✎ Refer to the Help in the WIDCOMM software for information on enhancing the wireless solution.

Broadcom Bluetooth Control Suite (BBCS)

The BBCS software provides a user interface for viewing information about Bluetooth devices. To install the BBCS software:

1. Insert the *HP USB Bluetooth Transceiver 1.2 Software & Documentation* CD into the computer's optical drive.

2. Go to **D:\Modular\Bluetooth\Broadcom\setup.exe** (where D: is the drive letter of the computer's optical drive). **<u>Greg Young to verify path</u>**

3. Double-click the **setup.exe** file.

4. Follow the on-screen instructions to install the software.

✎ Refer to the Help in the Broadcom Bluetooth Control Suite (BBCS) software for information on enhancing the wireless solution.

✎ The Broadcom Bluetooth Control Suite (BBCS) battery level indicator may be less accurate when using NiCad batteries. Recharging less frequently will extend the life of NiCad batteries.

Enabling Microsoft Bluetooth Drivers

If you chose not to install the WIDCOMM software, you can install the Microsoft Bluetooth drivers so that the Bluetooth components function in Bluetooth wireless mode.

✎ Limited Bluetooth profiles are supported by Microsoft Bluetooth drivers. Check the Microsoft web site www.microsoft.com for updated listings.

The Microsoft Bluetooth drivers found in Microsoft Windows XP Service Pack 2 do not provide first boot or recovery capabilities. For recovery and first boot requirements, a wired mouse should be readily available.

■ "First boot" capability refers to using a Bluetooth mouse in USB wireless mode then switching to Bluetooth wireless mode (once the operating system has loaded) without connecting a wired mouse for the system to recognize the mouse.

■ "Recovery" capability refers to replacing a faulty Bluetooth mouse with a functioning Bluetooth mouse without connecting a wired mouse for the system to recognize the mouse.

To enable the Microsoft Bluetooth drivers, you must install the software packages as described in the "Preparing the Bluetooth Transceiver to Work with Microsoft Bluetooth Drivers" and "Installing the Microsoft Bluetooth Drivers" sections below.

✎ The Connect button on the Bluetooth USB transceiver does not function if the Microsoft Bluetooth drivers are used.

Preparing the Bluetooth Transceiver to Work with Microsoft Bluetooth Drivers

1. Insert the *HP USB Bluetooth Transceiver 1.2 Software & Documentation* CD into the computer's optical drive.

2. Go to **D:\Modular\Bluetooth\Microsoft\dfu\setup.exe** (where D: is the drive letter of the computer's optical drive). **Greg Young to verify path**

3. Double-click the **setup.exe** file.

4. Follow the on-screen instructions to install the software.

Installing the Microsoft Bluetooth Drivers

The Microsoft Bluetooth drivers are included in Microsoft Windows XP Service Pack 2. Before installing the Microsoft Bluetooth Drivers, install the software as described in the previous section, "Preparing the Bluetooth Transceiver to Work with Microsoft Bluetooth Drivers."

1. Download the Microsoft Windows XP Service Pack 2 from www.microsoft.com (if the service pack has not already been installed).

2. Follow the on-screen instructions to install the software.

✎ Install the Broadcom Bluetooth Control Suite (BBCS) software to view information about the Bluetooth devices, such as battery charge status.

Recharging the Bluetooth Mouse Batteries

The AA NiMH batteries included with the Bluetooth mouse are rechargeable. You can continue to use the Bluetooth mouse while the batteries are recharging.

✎ Only NiMH and NiCad rechargeable batteries are supported. Standard AA non-rechargeable batteries are not supported.

⚠ **CAUTION:** DO NOT attempt to recharge standard non-rechargeable AA batteries. Doing so can cause the batteries to explode.

When the battery charge becomes low for the Bluetooth mouse, the Broadcom Bluetooth Control Suite (BBCS) software displays a message to recharge the batteries. Another message is displayed when the batteries become fully charged.

✎ The Broadcom Bluetooth Control Suite (BBCS) battery level indicator may be less accurate when using NiCad batteries. Recharging less frequently will extend the life of NiCad batteries.

✎ The computer must be turned on and can not be in Hibernate mode for the batteries to recharge. If the Broadcom Bluetooth Control Suite (BBCS) software is installed, the computer will not enter Hibernate mode until recharging is complete. If the BBCS software is not installed, make sure the Control Panel's Power Options Properties has **System hibernates** set to **Never** while recharging.

To recharge the Bluetooth mouse rechargeable batteries:

1. Plug the mouse recharge end of the USB cable included with the Bluetooth mouse into the recharge receptacle ⚡ on the mouse. Connect the Type A end of the USB cable to a USB connector on the computer.

Recharging the Bluetooth Mouse Batteries

2. Let the batteries recharge until the Broadcom Bluetooth Control Suite (BBCS) software displays a message that they are fully charged, then remove the USB cable from the Bluetooth mouse and computer.

✎ The Broadcom Bluetooth Control Suite (BBCS) battery level indicator may be less accurate when using NiCad batteries. Recharging less frequently will extend the life of NiCad batteries.

A

Troubleshooting

If you encounter problems with the HP modular keyboard, smart card adapter, or Bluetooth accessories, refer to the following tables for possible causes and solutions.

HP Modular Keyboard

Problem	Cause	Solution
The MAK software does not work on HP/Compaq Easy Access Keyboards.	MAK is not backwards compatible with HP/Compaq Easy Access Keyboards.	MAK only works on the HP Modular Keyboards and newer keyboards. EAK is used for HP/Compaq Easy Access Keyboards.
The numeric keypad does not work after connecting the RJ-45 cable to the keyboard.	The numeric keypad is not plugged into the correct RJ-45 connector on the modular keyboard.	Make sure the RJ-45 connector from the numeric keypad is connected to the RJ-45 connector on the modular keyboard labeled ⌗.
The smart card or Bluetooth adapter does not work after connecting the RJ-45 cable to the keyboard	The smart card or Bluetooth adapter is not plugged into the correct RJ-45 connector on the modular keyboard.	Make sure the RJ-45 connector from the smart card or Bluetooth adapter is connected to the RJ-45 connector on the keyboard labeled ⌂.

Smart Card

Problem	Cause	Solution
There are two entries in Device Manager	The RJ-45 cable is not connected from the smart card adapter to the modular keyboard.	• When using the smart card reader in a keyboard environment (attached to the modular keyboard), make sure the RJ-45 cable is connected from the smart card adapter to the modular keyboard connector labeled ⌂ and the removable USB cable from the modular keyboard is disconnected. • When using the smart card reader as a stand-alone device, connect the USB cable from the smart card reader to the computer and make sure the RJ-45 cable is not connected to the modular keyboard.

Smart Card *(Continued)*

Problem	Cause	Solution
F10 Setup shows a smart card when HP ProtectTools Smart Card Security Manager is not installed or has BIOS enabled.	Smart card BIOS support was previously enabled then removed.	• Enter F10 Setup and manually disable the smart card feature. • Or, re-enable BIOS support via HP ProtectTools Smart Card Security Manager. • Or, leave the F10 Setup option enabled for future BIOS enable via HP ProtectTools Smart Card Security Manager.
The smart card LED occasionally turns red.	A secure transaction is taking place.	The standard color for the smart card reader operation is amber when data is being read by the reader. However, whenever a secure transaction is enabled, the LED color becomes red.

Bluetooth

Problem	Cause	Solution
Unable to recharge standard Alkaline Duracell/Energizer AA batteries.	Alkaline batteries are not supported.	⚠ DO NOT attempt to recharge Alkaline batteries. Doing so can cause the batteries to explode.
Standard Alkaline Duracell/Energizer AA batteries work although the documentation says they are not supported.	Alkaline batteries are not supported for recharging.	All AA type batteries should work but only rechargeable batteries (NiMH and NiCad) are fully supported in the Bluetooth keyboard adapter and Bluetooth mouse while in wireless and recharging modes.
There is a Yellow Bang in Device Manager when the Bluetooth USB transceiver is attached but the Bluetooth keyboard and Bluetooth mouse work.	The current wireless operation is in USB wireless mode rather than Bluetooth mode.	Ensure the Bluetooth drivers are installed and functioning correctly (WIDCOMM or Microsoft). Otherwise, the Bluetooth keyboard and Bluetooth mouse function in USB wireless mode. They will not operate as Bluetooth devices but as USB devices.
The indicator light on the Bluetooth USB transceiver is not on.	The transceiver is not correctly seated, the radio is in the off state, or the transceiver is faulty.	• Reseat the transceiver in the USB port on the computer. • Or, turn on the transceiver radio. • Or, replace the faulty transceiver.

Bluetooth *(Continued)*

Problem	**Cause**	**Solution**
The transceiver does not find the Bluetooth keyboard and/or mouse when the connect button of the transceiver is pressed.	The connect button on the Bluetooth keyboard and mouse must be pressed within 1 minute.	After pressing the connect button on the transceiver, the LED will begin flashing. Within 1 minute, press the connect button on the Bluetooth keyboard and/or Bluetooth mouse. (You must press the connect buttons on the transceiver, mouse, and keyboard for at least 2 seconds.) After pairing is complete, the Bluetooth keyboard and/or mouse are operating in USB wireless mode.
The LED on the transceiver blinks faster when a Bluetooth keyboard or mouse is detected.	The transceiver has found and is pairing with a Bluetooth device and is waiting for another device before timing out.	Once the connect button has been pressed on the transceiver, it will wait 1 minute to attach to a Bluetooth keyboard and/or mouse. Once the connect button on the keyboard or mouse is pressed, the transceiver pairs with it and is waiting for the second device during the remainder of the 1 minute interval. If the 2nd device is found within the 1 minute interval, the blinking will stop and the LED will turn solid since both devices are discovered.
"Invalid DFU file" error message is displayed.	The firmware is corrupted.	Download a new firmware update file and use the new file to update the firmware.

Bluetooth *(Continued)*

Problem	Cause	Solution
"This firmware is not for this manufacturer's product" error message is displayed.	The firmware file you used is for another manufacturer's product.	Check the product brand name of the Bluetooth wireless device and go to that manufacturer's Web site to download the appropriate firmware update file.
"This firmware s not for this product" error message is displayed.	The firmware you used is for the manufacturer's other product.	Check the model number of the Bluetooth wireless controller and go to the manufacturer's Web site to download the appropriate firmware update file for that model.
"Device has newer firmware, the firmware does not need to be upgraded" error message is displayed.	The firmware that is installed on your Bluetooth wireless controller is the same version or a more recent version than the firmware update file you are using.	Download the latest version of the firmware update file and use it, unless you already have the latest firmware.
"Cannot find Widcomm Bttdfuapp.exe. Please install the Widcomm Bluetooth stack" error message is displayed.	No WIDCOMM Bluetooth software is detected.	Install the latest WIDCOMM Bluetooth software.
The connect button does not seem to work when using the Microsoft Bluetooth drivers.	The connect button does not work for Microsoft Bluetooth drivers.	The connect button only works with the WIDCOMM Bluetooth drivers since Microsoft Bluetooth drivers in the initial release of Windows XP Service Pack 2 does not support first boot or recovery modes.

Bluetooth *(Continued)*

Problem	Cause	Solution
In Windows, when the connect button is pressed on the transceiver, WIDCOMM drivers are enabled and can not use USB Wireless mode.	There is no USB wireless mode in Windows.	If the WIDCOMM software is installed, the connect button on the transceiver will initiate the pairing process through WIDCOMM Bluetooth drivers.
A PIN number is required when pairing the Bluetooth keyboard.	This is a security requirement.	Due to security reasons and to avoid conflicts with other Bluetooth devices (such as a keyboard), you must enter a randomly generated PIN from the keyboard that is intended to be connected to the transceiver.
The correct profiles may or may not be installed/enabled for the Bluetooth devices	Possible Bluetooth device is not able to pair/connect.	The profiles supported depend on the Bluetooth drivers being used. WIDCOMM has a wide range of profiles it supports and they are shown during installation, in the properties section of the GUI, or their documentation. Microsoft has a certain number of profiles it supports and they are shown in their properties and/or documentation.

Bluetooth *(Continued)*

Problem	Cause	Solution
Can I use my older HP Bluetooth transceiver or any other vendor's transceiver?	This depends on transceiver compatibility.	In Bluetooth mode (in Windows) with the Bluetooth drivers installed, almost any Bluetooth USB transceiver can be used. However, not all transceivers will work during reboot, first boot, recovery, and other critical modes. So for optimal performance, it is recommended that you use the HP transceiver supplied with this solution.
The Broadcom Bluetooth Control Suite (BBCS) does not report the NiCad rechargeable batteries charge level correctly.	There is a memory issue with NiCad batteries.	Due to the memory capabilities of the NiCad batteries, BBCS is not able to know what stage the NiCad battery is in. BBCS can correctly show battery levels for NiMH rechargeable batteries. It is recommended that you use NiMH rechargeable batteries but if NiCad batteries are used, it is recommended that you NOT recharge as often.

Bluetooth *(Continued)*

Problem	Cause	Solution
Does the computer need to be always on to recharge the batteries?	Yes, depending on computer condition during battery recharge mode.	The recharge mechanism provided with the BT keyboard and mouse is a trickle charge through the USB cable.
		The USB ports on the computer provide the required power during standby mode but not during hibernation mode or when computer is shut down.
		The computer can enter standby and still recharge but can not recharge during hibernation; If the BBSC application is enabled, the software will prevent the computer from entering hibernation during recharge mode. However, if the BBCS software is not enabled, you must disable hibernation during recharge mode. It takes about 6 hours to full charge a dead battery.

Bluetooth *(Continued)*

Problem	Cause	Solution
Does it harm the batteries if the recharge cable is left on after they are fully charged?	No, but it is not recommended.	If the BBCS is installed, you will get a message that says the battery is fully charged similar to the low battery indicator.
		It does not harm the battery if the USB recharge cable is still plugged in but to enhance the wireless experience, it is recommended that you remove the USB cable after the batteries are fully charged.
Can I interrupt the battery charge session before the end of the charge?	Yes, but it is not recommended.	For NiCad batteries it is recommended that you wait until the battery is fully charged because these batteries types hold memory.
		For NiMH batteries, you can interrupt the charge session but the usage time will be reduced since the battery is not fully charged.
		It is recommended that you let the charge continue until fully charged for all battery types; the Bluetooth keyboard and mouse will continue to function via the USB recharge cable.

Bluetooth *(Continued)*

Problem	Cause	Solution
Can I use any rechargeable batteries for my Bluetooth keyboard and mouse?	Some battery types are not supported.	Rechargeable NiMH and NiCad batteries with a rated capacity of 1200 mAh – 2100 mAh batteries are supported with your BT keyboard/mouse.
		NiMH rechargeable batteries are shipped and recommended for use with these products.
		NiCad rechargeable batteries will not report accurately in BBCS but will recharge and function as designed.
		Standard AA Alkaline batteries are NOT supported.

Bluetooth Mouse

Problem	Cause	Solution
The Bluetooth mouse is not tracking properly or is acting jumpy/jerky.	The surface under the mouse is not conducive to optimal performance.	When using the Bluetooth wireless optical mouse on transparent or translucent surfaces, use a mouse pad. Translucent surfaces will confuse the mouse's optical sensor as well as reduce the battery life. Avoid deep dark surfaces (such as a deep black mouse pad or deep blue mouse pad) and reflective surfaces (such as a mirror, or shiny metal plate).
How can I make sure the mouse pairing is secure?	This is a security concern.	Using WIDCOMM Bluetooth drivers, there is security and avoidance to conflict with other Bluetooth mice enabled. Since there is not a way to enter PIN numbers with the mouse, there will be a pop up window with a timer for you to click on with the found mouse to make sure the correct mouse is paired.

Technical Support

Using the Worldwide Web

Before contacting customer services, refer to the support Web site at http://www.hp.com/support for online access to technical support information and tools.

Preparing to Call Technical Support

If you cannot solve a problem using the troubleshooting tips in this appendix, you may need to call technical support. Refer to the *Worldwide Telephone Numbers* on the *I/O and Security Software & Documentation* CD for the telephone number of the technical telephone support center in your region.

Have the following information available when you call technical support:

■ Model number

■ Serial number

■ Purchase date on invoice

■ Conditions under which the problem occurred

■ Error messages received

■ Hardware configuration (found on Microsoft Windows Control Panel)

■ Hardware and software you are using

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Regulatory Compliance Notices

Wireless Notices

In some environments, the use of wireless devices may be restricted. Such restrictions may apply aboard airplanes, in hospitals, near explosives, in hazardous locations, etc. If you are uncertain of the policy that applies to the use of this device, please ask for authorization to use it prior to turning it on.

⚠ **WARNING: Exposure to Radio Frequency Radiation**
The radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, the device should be used in such a manner that the potential for human contact during normal operation is minimized.

Batteries, battery packs, and accumulators should not be disposed of together with the general household waste. In order to forward them to recycling or proper disposal, please use the public collection system or return them to HP, their authorized partners, or their agents.

The Taiwan EPA requires dry battery manufacturing or importing firms in accordance with Article 15 of the Waste Disposal Act are required to indicate the recovery marks on the batteries used in sales, giveaway or promotion. Contact a qualified Taiwanese recycler for proper battery disposal.

Canadian Regulatory Wireless Notice

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

European Union Notice

Radio product for indoor use in Home and Office environment operating in the 2.4 GHz band – Bluetooth.

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Declaration of Conformity

This product complies with the following EU Directives:

■ Low Voltage Directive 73/23/EEC

■ EMC Directive 89/336/EEC

■ R&TTE Directive 1999/5/EC

Compliance with these directives implies conformity to the following European Norms (in parentheses are the equivalent international standards and regulations):

■ EN 55022 (CISPR 22) – Electromagnetic Interference

■ EN 55024 (IEC 61000-4-2, 3, 4, 5, 6, 8, 11) – Electromagnetic Immunity

■ EN 61000-3-2 (IEC 61000-3-2) – Power line harmonics

■ EN 61000-3-3 (IEC 61000-3-3) – Power line flicker

■ EN 60950 (IEC 60950) – Product safety

■ EN 300 328-2 – Data transmission equipment operating in the 2.4 GHz ISM band and using 2.4 GHz radio equipment using spread spectrum techniques

■ EN 301 489-1, -17 – General EMC requirements for radio equipment

The radio functionality of this equipment may be used in the following EU and EFTA countries:

Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Notice for Use in France and Italy

Italy:

E'necessaria una concessione ministeriale anche per l'uso del prodotto. Verifici per favore con il proprio distributore o direttamente presso la Direzione Generale Pianificazione e Gestione Frequenze.

License required for use. Verify with your dealer or directly with General Direction for Frequency Planning and Management (Direzione Generale Pianificazione e Gestione Frequenze).

France:

L'utilisation de cet equipement (2.4GHz Wireless LAN) est soumise a certaines restrictions: Cet equipement peut etre utilise a l'interieur d'un batiment en utilisant toutes les frequences de 2400 a 2483.5MHz (Chaine 1-13). Pour une utilisation en environement exterieur, vous devez utiliser les frequences

comprises entre 2454-2483.5MHz (Chaine 10-13). Pour les dernieres restrictions, voir http://www.art-telecom.fr.

For 2.4 GHz Wireless LAN operation of this product certain restrictions apply: This equipment may be used indoor for the entire 2400-2483.5 MHz frequency band (channels 1-13). For outdoor use, only 2454-2483.5 MHz frequency band (channels 10-13) may be used. For the latest requirements, see http://www.art-telecom.fr.

Japanese Regulatory Wireless Notice

この機器の使用周波数帯では、電子レンジ等の産業・科学・医療用機器のほか工場の製造ライン等で使用されている移動体識別用の構内無線局（免許を要する無線局）及び特定小電力無線局（免許を要しない無線局）が運用されています。
1　この機器を使用する前に、近くで移動体識別用の構内無線局及び特定小電力無線局が運用されていないことを確認して下さい。
2　万一、この機器から移動体識別用の構内無線局に対して電波干渉の事例が発生した場合には、速やかに使用周波数を変更するか又は電波の発射を停止した上、下記連絡先にご連絡頂き、混信回避のための処置等（例えば、パーティションの設置など）についてご相談して下さい。
3　その他、この機器から移動体識別用の特定小電力無線局に対して電波干渉の事例が発生した場合など何かお困りのことが起きたときは、次の連絡先へお問い合わせ下さい。

連絡先：日本ヒューレット・パッカード株式会社　ＴＥＬ：０１２０－０１４１２１

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Brazilian Regulatory Wireless Notice

Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

Federal Communications Commission Notice

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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television 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 the equipment and the receiver.

■ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

■ Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hewlett-Packard Company may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Declaration of Conformity for Products Marked with the FCC Logo (United States Only)

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.

For questions regarding the product, contact:

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 530113
Houston, Texas 77269-2000

Or, call 1-800-652-6672

For questions regarding this FCC declaration, contact:

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 510101
Houston, Texas 77269-2000

Or, call 281-514-3333

To identify this product, refer to the Part, Series, or Model number found on the product.

Canadian Notice

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

Avis Canadien

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

Japanese Notice

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

Korean Notice

B급 기기 (가정용 정보통신기기)

이 기기는 가정용으로 전자파적합등록을 한 기기로서
주거지역에서는 물론 모든지역에서 사용할 수 있습니다.

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Ordering Kits

To order any of the adapter kits for the HP Modular Keyboard, go to http://www.hp.com.

Kit	Order Number	Contents
HP Modular Keyboard	DT530A	• Modular keyboard • Numeric keypad • USB cable • *I/O and Security Software & Documentation* CD
Smart Card Adapter	DT531A	• Smart Card Keyboard Adapter • HP ProtectTools Smart Card • RJ-45 cable • *I/O and Security Software & Documentation* CD
HP USB Bluetooth Transceiver	DN650B	• HP USB Bluetooth Transceiver • *HP USB Bluetooth Transceiver 1.2 Software & Documentation* CD

Kit	Order Number	Contents
HP Bluetooth wireless optical mouse ✎ The HP USB Bluetooth transceiver is required for the mouse to function.	PA720A	• Bluetooth wireless optical mouse • Two AA rechargeable batteries • USB mouse recharging cable
HP Bluetooth Keyboard Adapter	DT532A	• Bluetooth Keyboard Adapter • HP USB Bluetooth Transceiver • HP Bluetooth wireless optical mouse • USB mouse recharging cable • Four AA rechargeable batteries • *I/O and Security Software & Documentation* CD