

DRAFT Revised: 8/24/04
File: Title.fm
PN: HP-367426-001



Hardware and Software Guide

HP Tablet PC Series

Document Part Number: [367426-001](#)

December 2004

DRAFT Revised: 8/24/04
File: Notice-Front.fm
PN: HP-367186-001

© 2004 Hewlett-Packard Development Company, L.P.

Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation. SD Logo is a trademark of its proprietor. Bluetooth is a trademark owned by its proprietor and used by Hewlett-Packard Company under license.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

[Hardware and Software Guide](#)

[HP Tablet PC Series](#)

First Edition December 2004

Reference Number: tc4200

Document Part Number: [367186-001](#)

Contents

1 Tablet PC Features

Pen Components	1-1
Top Components	1-2
Lights	1-2
Pointing Devices	1-4
Buttons	1-5
Pen-Activated Buttons	1-6
Keys	1-7
Front Components	1-9
Rear Components	1-11
Right-Side Components	1-13
Left-Side Components	1-15
Bottom Components	1-17
Additional Hardware Components	1-18

2 Power

Power Control and Light Locations	2-1
Selecting a Power Source	2-4
Standby and Hibernation	2-5
Standby	2-5
Hibernation	2-5
Initiating Standby, Hibernation or Shutdown	2-6
When You Leave Your Work	2-6
When the Power Supply Is Uncertain	2-7
When Using Infrared Communication or Drive Media	2-7

Using the Default Power Settings	2-8
Turning the Tablet PC or Display On or Off	2-8
Initiating or Restoring from Hibernation	2-9
Initiating or Resuming from Standby	2-10
Using Emergency Shutdown Procedures	2-11
Managing Power Options	2-11
Accessing the Power Options Window	2-12
Displaying the Power Meter Icon	2-12
Setting or Changing a Power Scheme	2-12
Using a Security Password	2-13
Processor Performance Controls	2-13
Using Battery Packs	2-15
Identifying Battery Packs	2-16
Inserting or Removing a Primary Battery Pack	2-16
Attaching or Detaching an Optional Travel Battery	2-18
Charging Battery Packs	2-21
Charging the Primary Battery	2-22
Charging an Optional Travel Battery	2-23
Charging a New Battery Pack	2-23
Charging an In-Use Battery Pack	2-23
Monitoring the Charge of a Battery Pack	2-24
Obtaining Accurate Charge Information	2-24
Displaying Charge Information on the Screen	2-24
Managing Low-Battery Conditions	2-25
Identifying Low-Battery Conditions	2-26
Resolving Low-Battery Conditions	2-26
Calibrating a Battery Pack	2-28
When to Calibrate	2-28
How to Calibrate	2-28
Conserving Battery Power	2-31
Conserving Power As You Work	2-31
Selecting Power Conservation Settings	2-32
Storing a Battery Pack	2-32
Disposing of a Used Battery Pack	2-33

3 Pointing Devices and Keyboard

Using a Pointing Device.	3-1
Using the Pointing Stick	3-2
Using the TouchPad.	3-3
Using an External Mouse	3-4
Setting Pointing Device Preferences	3-4
Using Hotkeys	3-5
Hotkey and Shortcut Key Quick Reference	3-6
Initiating Standby (fn+f3)	3-6
Switching Displays (fn+f4)	3-7
Viewing Battery Charge Information (fn+f8)	3-7
Decreasing Screen Brightness (fn+f9)	3-8
Increasing Screen Brightness (fn+f10)	3-8
Ambient Light Sensor (fn+f11)	3-8
Displaying System Information (fn+esc)	3-8
Using Hotkeys with External Keyboards	3-8
Keypads	3-9
Using the Internal Keypad.	3-9
Using an External Keypad.	3-11
Using Presentation Mode	3-12
Using Quick Launch Buttons	3-13
Quick Launch Buttons Control Panel	3-14
Accessing the Quick Launch Buttons Control Panel	3-14
Setting Presentation Mode Preferences	3-15
Setting Advanced Preferences	3-17

4 Pen and Command Controls

Pen	4-1
Entering Information with the Pen	4-2
Calibrating the Pen	4-4
Setting Pen Preferences	4-5

Command Controls	4-6
Identifying Command Controls	4-6
Command Controls Quick Reference	4-7
Using Command Controls	4-8
Setting Command Control Preferences	4-11
On-Screen Keyboard	4-14

5 Multimedia

Using Audio Features.	5-1
Using the Audio-In (Microphone) Jack	5-2
Using the Audio-Out (Headphone) Jack	5-2
Adjusting the Volume	5-3
Using Video Features.	5-4
Using the S-Video Out Jack	5-5
Connecting a Monitor or Projector	5-6
Using CD and DVD Software	5-7
Observing the Copyright Warning	5-7
Installing Software.	5-8
Enabling AutoPlay.	5-9
Installing the Universal Disc Format Reader	5-9
Using Windows Media Player.	5-10
Using WinDVD Player	5-10
Using WinDVD Creator Plus (Select Models Only)	5-10
Using Sonic RecordNow!	5-11
Changing DVD Region Settings	5-11

6 Hardware Components

Using Drives.	6-1
Caring for Drives.	6-1
Adding a Drive to the System	6-3
Identifying the Hard Drive Light.	6-4
Replacing the Primary Hard Drive	6-4

Using PC Cards	6-9
Inserting a PC Card	6-10
Removing a PC Card	6-11
Using SD Cards	6-12
Inserting an SD Card	6-12
Removing an SD Card	6-13
Adding and Upgrading Memory Modules	6-14
Adding or Upgrading a Memory Module in the Expansion Memory Slot	6-14
Upgrading the Memory Module in the Primary Memory Module Slot	6-19
Effects of Increasing Memory	6-24
Connecting a Modem Cable	6-25
Using the Modem Cable	6-26
Using a Country-Specific Adapter	6-26
Connecting a Network Cable	6-28
Linking to An Infrared Device	6-29
Setting Up an Infrared Transmission	6-30
Using Standby with Infrared	6-31
Connecting a USB Device	6-32
Using a USB Device	6-32
Enabling USB Legacy Support	6-33
Connecting Optional External Devices	6-33
Connecting an Optional External MultiBay and External MultiBay II	6-34

7 Q Menu and Desktop Video Profiles

Q Menu	7-1
Identifying Q Menu Controls	7-2
Displaying and Closing the Q Menu	7-2
Selecting an Item from the Q Menu	7-3
Obtaining Information About System-Defined Items	7-3
Setting Q Menu Preferences	7-4
Using a System-Defined Item	7-9

Desktop Video Profiles	7-16
Identifying Profiles and Modes	7-16
Using the Default Profiles	7-21
Enabling the Default Profiles	7-23
Customizing the Profiles (Optional)	7-24
Change Mode Service	7-26
Tablet PC Button Driver	7-27

8 Wireless

Wireless Local Area Network (Select Models Only) . . .	8-3
Connecting Your Wireless Tablet PC to a Corporate WLAN	8-4
Connecting Your Wireless Tablet PC to a Public WLAN	8-4
Setting Up a WLAN in Your Home	8-5
Using a WLAN Connection	8-6
Using Wireless Security Features	8-7
Installing Wireless Software (Optional)	8-7
Troubleshooting 802.11 Wireless Devices	8-9
Bluetooth (Select Models Only).	8-10
Turning On, Turning Off, Enabling and Disabling the 802.11 Wireless and Bluetooth Devices	8-12
Turning On the 802.11 Wireless and Bluetooth Devices	8-14
Turning Off and Disabling the 802.11 Wireless and Bluetooth Devices	8-15

9 Security

Security Features Quick Reference	9-1
Setting Security Preferences in Computer Setup	9-2
Using Passwords	9-3
HP and Windows Passwords	9-4
HP and Windows Password Guidelines	9-5

Using Power-On Passwords	9-6
Setting Power-On Passwords	9-6
Entering Power-On Passwords	9-7
Requiring a Power-On Password at Restart	9-7
Using HP Administrator Passwords	9-8
Setting HP Administrator Passwords	9-8
Entering HP Administrator Passwords	9-9
Using DriveLock	9-9
Setting DriveLock Passwords	9-10
Entering DriveLock Passwords	9-12
Requiring a Drivelock Password at Restart	9-12
Changing DriveLock Passwords	9-13
Removing DriveLock Protection	9-14
Disabling a Device	9-15
Using System Information	9-15
Setting System Information Options	9-16
Firewall Software	9-16
Connecting an Optional Security Cable	9-19
HP ProtectTools Security Manager (Select Models Only)	9-20
Embedded Security for ProtectTools	9-20
Credential Manager for ProtectTools	9-21
BIOS Configuration for ProtectTools	9-21
Smart Card Security for ProtectTools	9-22

10 MultiBoot

Understanding the Default Boot Sequence	10-1
Enabling Bootable Devices in Computer Setup	10-3
Understanding MultiBoot Results	10-4
Setting MultiBoot Preferences	10-5
Setting a New Default Boot Sequence	10-5
Setting a MultiBoot Express Prompt	10-6
Entering MultiBoot Express Preferences	10-7

11 Computer Setup

Using Computer Setup	11-1
Accessing Computer Setup	11-2
Restoring Computer Setup Defaults	11-2
Selecting from the File Menu	11-3
Selecting from the Security Menu	11-4
Selecting from the Tools Menu	11-6
Selecting from the Advanced Menu	11-6

12 HP Client Management Solutions

Configuration and Deployment	11-2
HP Client Manager Software	11-2

13 Software Update and Recoveries

Preparing to Update Software	11-1
Obtaining the Support Software CD	11-2
Accessing Tablet PC Information	11-2
Downloading Software from the Internet	11-3
Downloading System ROM	11-4
Downloading Other Software	11-5
System Recovery	11-5
Safeguarding Your Data	11-6
Setting System Restore Points	11-6
Repairing the Operating System	11-7
Reinstalling the Operating System	11-7
Reinstalling Device Drivers and Other Software	11-9

14 Specifications

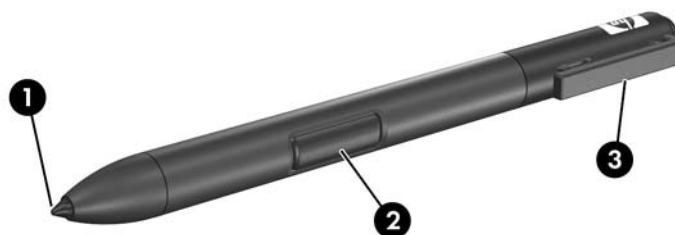
Operating Environment	11-1
Rated Input Power	11-2

Index

1

Tablet PC Features

Pen Components

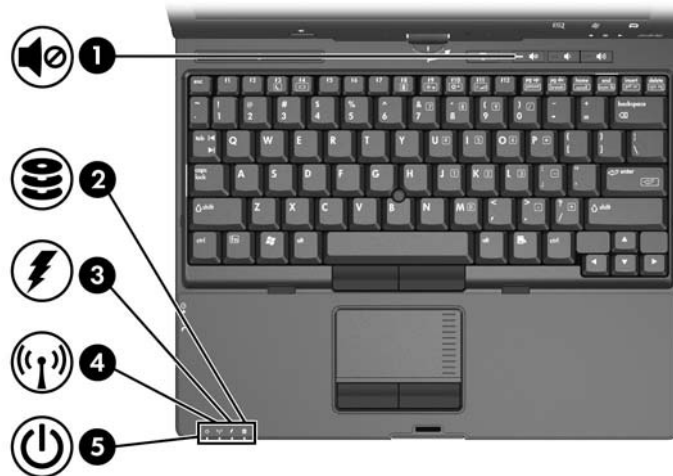


Component	Description
1 Pen tip	Interacts with the tablet PC whenever the tip is touching the screen or within 1.27 cm (0.5 inch) of the screen. When tapped on or held over a pen-activated button, activates the button.

Component	Description
② Pen button	Functions like the right button on an external mouse.
③ Pen tether eyelet	Used with the tether eyelet on the tablet PC, enables you to tether the pen to the tablet PC.

Top Components

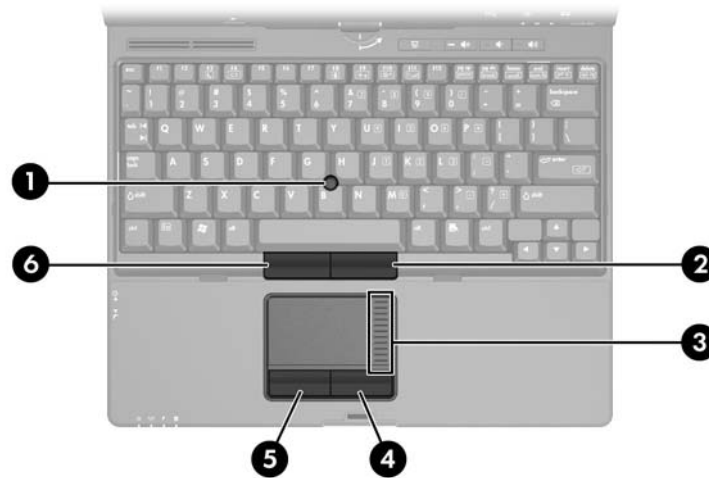
Lights



Component	Description
① Volume mute light	On: System sound is turned off.
② caps lock light	On: Caps lock is on.
③ IDE drive light	On: A drive in the hard drive bay is being accessed.

Component	Description
④ Battery charge light	Amber: A battery pack is charging. Green: A battery pack is close to full charge capacity. Blinking amber: A battery pack that is the only available power source has reached a low-battery condition. When the battery reaches a critical low-battery condition, the battery light begins blinking more quickly. Off: If the tablet PC is connected to an external power source, the light is turned off when all batteries in the tablet PC are fully charged. If the tablet PC is not connected to an external power source, the light is turned off until the battery reaches a low-battery condition.
⑤ Power/standby light	Green: The tablet PC is on. Blinking green: The tablet PC is in Standby mode.
⑥ Wireless light	On: An integrated wireless device has been enabled.
⑦ num lock light	On: Num lock is on or the embedded numeric keypad is enabled.

Pointing Devices

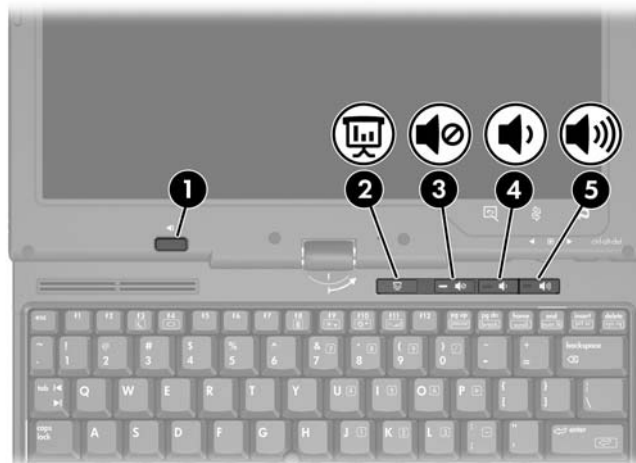


Component	Description
① Pointing stick	Moves the pointer and selects or activates items on the screen.
② Right pointing stick button	Functions like the right button on an external mouse.
③ Touchpad scroll zone*	Scrolls upward or downward.
④ Right TouchPad button*	Functions like the right button on an external mouse.
⑤ Left TouchPad button*	Functions like the left button on an external mouse.

Component	Description
⑥ TouchPad*	Moves the pointer and selects or activates items on the screen. Can be set to perform other mouse functions, such as scrolling, selecting, and double-clicking.
⑦ Left pointing stick button	Functions like the left button on an external mouse.

*This table describes default settings. For information about changing the functions of TouchPad features, refer to the [“Setting Pointing Device Preferences”](#) section in [Chapter 3, “Pointing Devices and Keyboard.”](#)

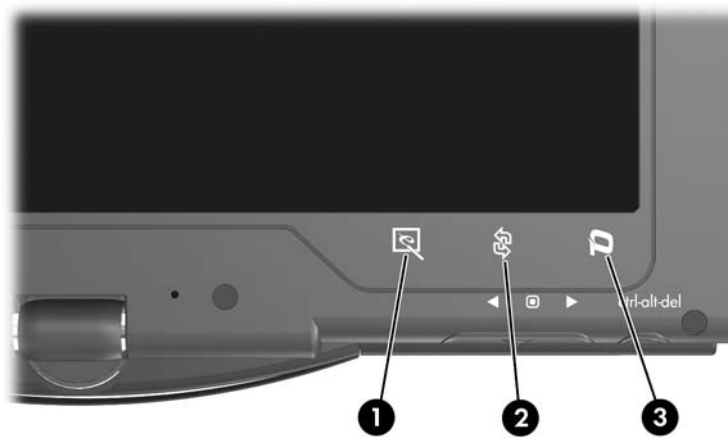
Buttons



Component	Description
① Presentation mode button	Turns on Presentation mode.
② Volume mute button	Turns off tablet PC sound.

Component	Description
③ Volume down button	Decreases tablet PC sound.
④ Volume up button	Increases tablet PC sound.
⑤ Pen eject button	Ejects the pen from the pen holder.

Pen-Activated Buttons

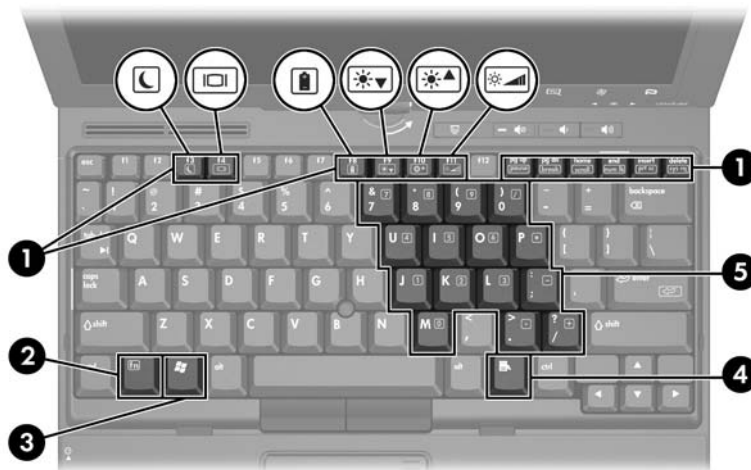


Component	Description
① Tablet PC Input launch button*	When Windows is running, opens the Microsoft Tablet PC Input Panel application, which includes a handwriting pad and an on-screen keyboard.

Component	Description
② Rotate button*	Switches the image between landscape and portrait orientation.
③ Q Menu button*	When Windows is running, opens or closes the Q Menu.

*This table describes default settings. For information about changing the functions of the Tablet PC Input launch button, rotate button, and Q Menu button, refer to [Chapter 4, "Pen and Command Controls."](#)

Keys

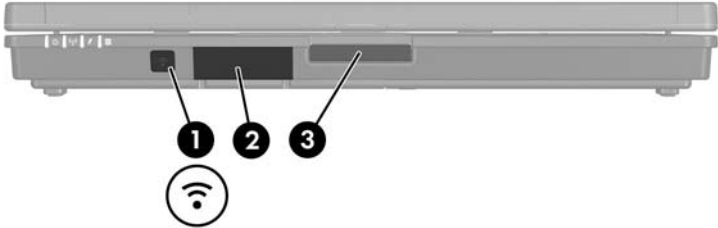



Component	Description
① Function keys	Executes frequently used system functions when pressed in combination with the fn key.
② Keypad keys	Can be used like the keys on an external numeric keypad.

Tablet PC Features

Component	Description
③ Windows applications key	Displays a shortcut menu for items beneath the pointer.
④ Windows logo key	Displays the Microsoft Windows Start menu.
⑤ fn key	Executes frequently used system functions when pressed in combination with a function key or the ESC key.

Front Components



Component	Description
❶ Infrared port	Provides wireless communication between the tablet PC and an optional IrDA-compliant device.
❷ Bluetooth® antenna*	Sends and receives Bluetooth device signals.  Exposure to Radio Frequency Radiation. The radiated output power of this device is 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. To avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antennae should be not less than 20 cm (8 inches) during normal operation, including when the tablet PC display is closed.
❸ Display release latch	Opens the tablet PC.

*The antennae is available on only select models. The antennae is not visible from the outside of the tablet PC. For optimal transmission, keep the areas immediately around the antennae free from obstructions.

Rear Components



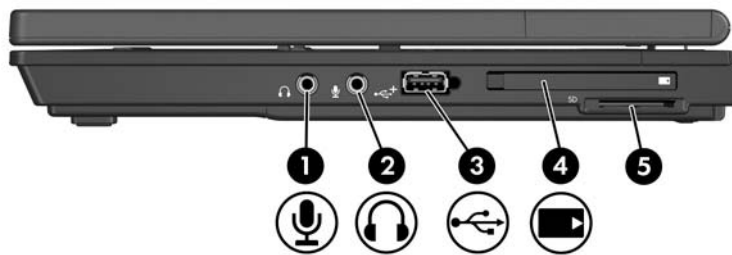
Component	Description
① USB port	Connects USB 1.1- and 2.0-compliant devices to the tablet PC using a standard USB cable, or connects an optional external MultiBay or MultiBay II to the tablet PC. The external MultiBay must also be connected to an external power source.
② RJ-11 (modem) jack	Connects a modem cable.
③ RJ-45 (network) jack	Connects a network cable.
④ Power connector	Connects an AC adapter or an optional Automobile Power Adapter/Charger, or Aircraft Power Adapter.
⑤ External monitor port	Connects an optional external monitor or overhead projector.

Component	Description
⑥ S-Video out jack	<p>Is a 7-pin, dual-purpose jack. It connects an optional S-Video device, such as a television, VCR, camcorder, overhead projector, or video capture card, with an optional, standard (4-pin) S-Video cable.</p> <p>The extra 3 pins also enable an optional S-Video-to-composite adapter to be used with the tablet PC.</p>
④ Jog dial*	<p>Functions like enter and the up and down arrow keys on a standard keyboard.</p> <ul style="list-style-type: none">■ Press inward to enter a command.■ Rotate upward to scroll upward.■ Rotate downward to scroll downward.
⑤ Windows Security button*	<p>When pressed with the pen tip or a small object like the end of a paper clip while:</p> <ul style="list-style-type: none">■ Windows is open, enters the ctrl+alt+delete command.[†]■ The Setup utility is open, enters the reset command.

*This table describes default settings. For information about changing the functions of the Windows security button and jog dial, refer to [Chapter 4, "Pen and Command Controls."](#)

†To protect your work and the system, the ctrl+alt+delete command cannot be entered using the **Ctrl**, **Alt**, and **Del** keys on the on-screen keyboard.

Right-Side Components

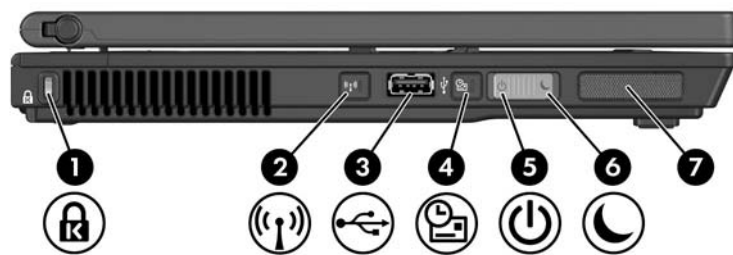


Component	Description
❶ Audio-out (headphone) jack	Produces system sound when connected to optional powered stereo speakers, headphones, headset, or television audio.
❷ Audio-in (microphone) jack	Connects an optional monaural or stereo microphone.
❸ USB port	Connects USB 1.1- and 2.0-compliant devices to the tablet PC using a standard USB cable, or connects an optional external MultiBay or MultiBay II to the tablet PC. The external MultiBay must also be connected to an external power source.

Tablet PC Features

Component	Description
④ PC Card eject button	Ejects PC Cards from the PC Card slot.
⑤ PC Card slot	Supports optional Type I, Type II, or Type III 32-bit (CardBus) or 16-bit PC Cards.
⑥ SD Card slot	Accepts SD (Secure Digital) Memory Cards.

Left-Side Components



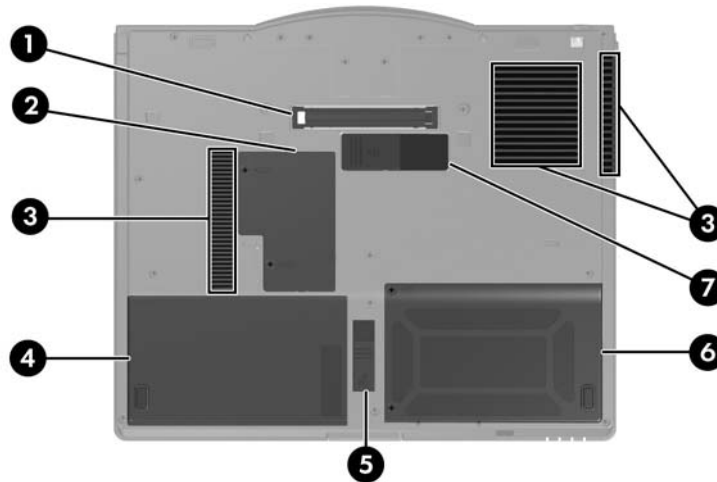
Component	Description
① Security cable slot	Attaches an optional security cable to the tablet PC. △ Security solutions are designed to act as deterrents. These deterrents may not prevent a product from being mishandled or stolen.
② Vent	Enables airflow to cool internal components. △ To prevent overheating, do not obstruct vents. Using the tablet PC on a soft surface, such as a pillow, blanket, rug, or thick clothing, may block airflow.
③ Wireless button*	Turns on wireless LAN or Bluetooth.

Tablet PC Features

Component	Description
④ USB port	Connects USB 1.1- and 2.0-compliant devices to the tablet PC using a standard USB cable, or connects an optional external MultiBay or external MultiBay II to the tablet PC. The external MultiBay must be connected to an external power source.
⑤ HP Information Center button	content to come
⑥ Power/standby switch*	When the tablet PC is <ul style="list-style-type: none">■ Off, slide to the left and release to turn on the tablet PC.■ In Standby, slide to the right or left and release to exit Standby.■ In Hibernation, slide to the right or left and release to exit Hibernation.■ On, slide to the right and release to enter Standby. If the tablet PC has stopped responding and Microsoft® Windows® shutdown procedures cannot be used, slide to the left and hold for 5 seconds to turn off the tablet PC.
⑦ Speaker	Produces tablet PC sound.
⑧ Pen holder	Secures the pen to the tablet PC.

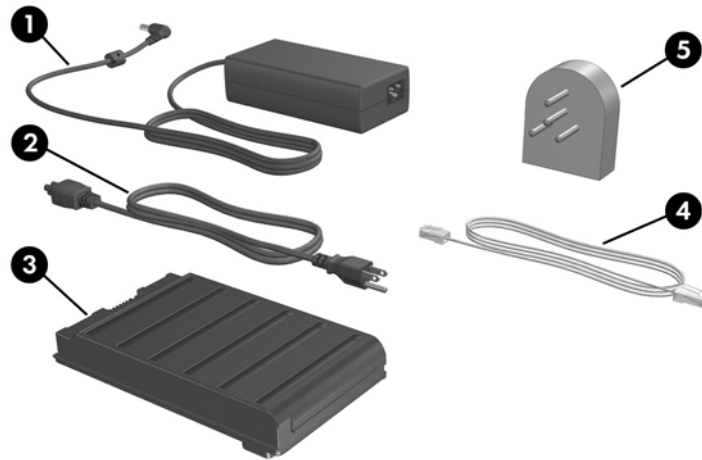
*This table describes default settings. For information about changing the functions of the power features, refer to the [“Managing Power Options”](#) section in [Chapter 2, “Power.”](#) For information about changing the functions of the wireless features, refer to [Chapter 8, “Wireless.”](#)

Bottom Components



Component	Description
① Docking connector	Connects the tablet PC to an optional docking device.
② Vents (3)	Enable airflow to cool internal components. △ To prevent overheating, do not obstruct vents. Using the tablet PC on a soft surface, such as a pillow, blanket, rug, or thick clothing, may block airflow.
③ Travel battery connector	Connects an optional travel battery.
④ Hard drive bay	Holds the primary hard drive.
⑤ Primary battery release latch	Releases the primary battery pack from the battery bay.
⑥ Primary battery bay	Holds the primary battery pack.
⑦ Memory module compartment	Contains one primary memory slot (populated).

Additional Hardware Components



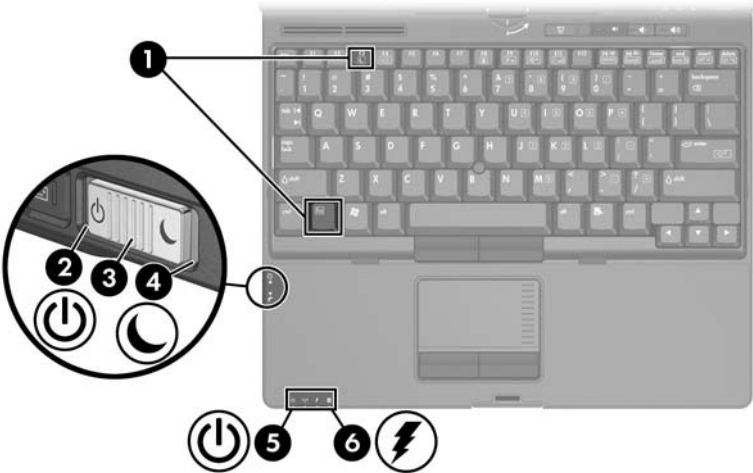
Component	Description
① AC adapter	Converts AC power to DC power.
② Power cord*	Connects an AC adapter to an AC wall outlet.
③ Primary battery pack*	Runs the tablet PC when the tablet PC is not connected to external power.
④ Modem adapter*	Adapts the modem cable for a non-RJ-11 telephone jack.
⑤ Modem cable*	Connects a modem to a telephone jack or a country-specific modem adapter.

*Power cords, modem cables, and modem adapters vary in appearance by region and country. Battery packs vary by model.

2

Power

Power Control and Light Locations



Power

Component	Description
① fn+f3	Initiates Standby.
② Power/standby switch	<p>When the tablet PC is</p> <ul style="list-style-type: none">■ Off, slide to the left and release to turn on the tablet PC.■ In Standby, slide to the right or left and release to exit Standby.■ In Hibernation, slide to the right or left and release to exit Hibernation.■ On, slide to the right and release to enter Standby. <p>If the tablet PC has stopped responding and Microsoft® Windows® shutdown procedures cannot be used, slide to the left and hold for 5 seconds to turn off the tablet PC.</p>
③ Power light	Green: The tablet PC is on.

Component	Description
④ Standby light	Blinking green: The tablet PC is in Standby mode.
⑤ Power/standby light	Green: The tablet PC is on. Blinking green: The tablet PC is in Standby mode.
⑥ Battery light	Amber: A battery pack is charging. Green: A battery pack is close to full charge capacity. Blinking amber: A battery pack that is the only available power source has reached a low-battery condition. When the battery reaches a critical low-battery condition, the battery light begins blinking more quickly. Off: If the notebook is connected to an external power source, the light is turned off when all batteries in the notebook are fully charged. If the notebook is not connected to an external power source, the light is turned off until the battery reaches a low-battery condition.

Selecting a Power Source

The tablet PC can run on internal or external AC power. The following table indicates the best power sources for common tasks.

Task	Recommended Power Source
Work in most software applications	<ul style="list-style-type: none">■ Charged battery pack in the tablet PC■ External power supplied through one of the following devices:<ul style="list-style-type: none"><input type="checkbox"/> AC adapter<input type="checkbox"/> Optional docking device<input type="checkbox"/> Optional Aircraft Adapter<input type="checkbox"/> Optional Automobile Power Adapter/Charger<input type="checkbox"/> Optional 90W Air/Auto/AC Combo Adapter
Charge or calibrate a battery pack in the tablet PC	<p>External power supplied through</p> <ul style="list-style-type: none">■ AC adapter■ Optional docking device■ Optional Automobile Power Adapter/Charger■ Optional 90W Air/Auto/AC Combo Adapter <p>△ To prevent damage to the tablet PC and aircraft systems, do <i>not</i> charge the battery pack while you are using an Auto/Air/AC Adapter on an aircraft.</p>
Install or modify system software or write to a CD	<p>External power supplied through</p> <ul style="list-style-type: none">■ AC adapter■ Optional docking device

Standby and Hibernation

Standby and Hibernation are energy-saving features that conserve power and reduce startup time. They can be initiated by you or by the system. Refer to the [“Initiating Standby, Hibernation or Shutdown”](#) section in this chapter for details about when to use each setting.

Standby



CAUTION: To avoid a complete battery discharge, do not leave your tablet PC in Standby for extended periods. Connect the tablet PC to an external power source.

Standby reduces power to system components that are not in use. When Standby is initiated, your work is saved in random access memory (RAM) and the screen is cleared. When you resume from Standby, your work returns to the screen where you left off.

- Saving your work before initiating Standby is not usually necessary but is a recommended precaution.
- When the tablet PC is in Standby, the standby light and the power/standby light flash.

Hibernation

Hibernation saves your work to a hibernation file on the hard drive, and then shuts down the tablet PC. When you restore from Hibernation, your work returns to the screen where you left off. If a power-on password has been set, the password must be entered to restore from Hibernation.

You can disable Hibernation. However, if Hibernation is disabled, and the system reaches a low-battery condition, the system will not automatically save your work while power is on or when Standby has been initiated.

In the Power Options window, Hibernation is not displayed as an option if it has been disabled. You must enable Hibernation in order to select it in the Power Options window. To verify that

Hibernation is enabled, select **Start > Control Panel > Power Options > Hibernate** tab. Make sure that the **Enable hibernate support** check box is selected.



CAUTION: If the configuration of the tablet PC is changed during Hibernation, resuming from Hibernation may not be possible. When the tablet PC is in Hibernation:

- Do not dock or undock the tablet PC in a docking device.
 - Do not add or remove memory modules.
 - Do not insert or remove any hard drives.
 - Do not connect or disconnect external devices.
 - Do not insert or remove a PC Card or a Secure Digital (SD) Memory Card.
-

Initiating Standby, Hibernation or Shutdown

The following sections explain when to initiate Standby or Hibernation and when to shut down your tablet PC.

When You Leave Your Work

Initiating Standby clears the screen and uses less power than leaving the tablet PC on. Your work returns instantly to the screen when you resume from Standby.

Initiating Hibernation clears the screen, saves your work to the hard drive, and uses much less power than Standby.

Shutting down the tablet PC and removing the battery pack is recommended to extend the life of the battery pack when the tablet PC will be disconnected from external power for an extended period. For details on battery pack storage, refer to the [“Storing a Battery Pack”](#) section in this chapter.

When the Power Supply Is Uncertain

Make sure that Hibernation remains enabled, especially if you are operating the tablet PC on battery power and do not have access to an external power supply. If the battery pack fails, Hibernation saves your work to a hibernation file and shuts down the tablet PC.

HP recommends that if you pause your work when the power supply is uncertain, you do one of the following:

- Initiate Hibernation.
- Shut down the tablet PC.
- Save your work, and then initiate Standby.

When Using Infrared Communication or Drive Media



CAUTION: Do not initiate Standby or Hibernation while using drive media. Doing so may result in possible video and audio degradation and loss of audio or video playback functionality.

Standby and Hibernation interfere with the use of infrared and Bluetooth communication, and drive media. Note the following guidelines:

- If the tablet PC is in Standby or Hibernation, you cannot initiate an infrared or Bluetooth transmission.
- If Standby or Hibernation is accidentally initiated while a drive medium (such as a diskette, CD, or DVD) is in use:
 - Your playback may be interrupted.
 - You may see a warning message: “Putting the computer into Hibernation or Standby may stop the playback. Do you want to continue?” Select **No**.
 - You may need to restart the playback to resume audio and video.

Using the Default Power Settings


The following tables describe the factory power settings on the tablet PC. You can change many of these settings according to your preference. For more information on changing power settings, refer to the [“Managing Power Options”](#) section in this chapter.

Turning the Tablet PC or Display On or Off

Task	Procedure	Result
Turn on the tablet PC.	Slide the power/standby switch to the left.	<ul style="list-style-type: none">■ The power light and the power/standby light are turned on.■ The operating system loads.
Shut down the tablet PC.*	<p>Save your work and close all open applications. Then</p> <ul style="list-style-type: none">■ Slide the power/standby switch to the left and follow the on-screen directions (if displayed) for shutting down the tablet PC.■ Shut down the tablet PC through the operating system. Select Start > Shut Down > Shut Down > OK.	<ul style="list-style-type: none">■ The power light and power/standby light are turned off.■ The operating system shuts down.■ The tablet PC is turned off.
Turn off the display while the power is on.	Close the tablet PC.	Closing the tablet PC activates the display switch, which turns off the display. This conserves battery power.

* If the system is unresponsive and you are unable to shut down the tablet PC with these procedures, refer to the [“Using Emergency Shutdown Procedures”](#) section in this chapter.

Initiating or Restoring from Hibernation

Task	Procedure	Result
Initiate Hibernation.	<ul style="list-style-type: none">■ Select Start > Shut Down> Hibernate > OK. (If the Hibernation option is not displayed, press and hold the shift key.)■ If Hibernation has been configured, slide the power/standby switch to the right or left.	<ul style="list-style-type: none">■ The power light and power/standby light are turned off.■ The screen clears.
Allow the system to initiate Hibernation (with Hibernation enabled).	<p>No action required.</p> <ul style="list-style-type: none">■ If the tablet PC is running on battery power, the system initiates Hibernation after 30 minutes of tablet PC inactivity or when the battery pack(s) reach a critical low-battery condition.■ If the tablet PC is connected to external power, the system does not initiate Hibernation.■ Power settings and timeouts can be changed in the Power Options window.	<ul style="list-style-type: none">■ The power light and power/standby light are turned off.■ The screen clears.
Restoring from user-initiated or system-initiated Hibernation.	<p>Slide the power/standby switch to the right or left.</p> <p> If the system initiated Hibernation because of a critical low-battery condition, connect external power or insert a charged battery pack before you slide the power/standby switch.</p>	<ul style="list-style-type: none">■ The power light and power/standby light are turned on.■ Your work returns to the screen.

Initiating or Resuming from Standby

Task	Procedure	Result
Initiate Standby.	<ul style="list-style-type: none">■ Slide the power/standby switch to the right.■ With the tablet PC on, press fn+f3.■ Select Start > Shut Down > Standby > OK. (If the Standby option is not displayed, press the shift key.)	<ul style="list-style-type: none">■ The power light and power/standby light blink.■ The screen clears.
Allow the system to initiate Standby.	<p>No action required.</p> <ul style="list-style-type: none">■ If the tablet PC is running on battery power, the system initiates Standby after 10 minutes of tablet PC inactivity. (Default setting)■ If the tablet PC is attached to external power, the system does not initiate Standby.■ Power settings and timeouts can be changed in the Power Options window.	<ul style="list-style-type: none">■ The standby light and power/standby light blink.■ The screen clears.
Resume from user-initiated or system-initiated Standby.	<ul style="list-style-type: none">■ Slide the power/standby switch to the right or left.■ If the display was closed while the tablet PC was in Standby, open the display.	<ul style="list-style-type: none">■ The standby light and power/standby light are turned off.■ Your work returns to the screen.

Using Emergency Shutdown Procedures



CAUTION: Emergency shutdown procedures result in the loss of unsaved data.

If the tablet PC is unresponsive and you are unable to use normal Windows shutdown procedures, try the following emergency procedures, in the sequence provided:

- Press **ctrl+alt+delete**. Select **Shut Down**.
- Slide and hold the power/standby switch to the left for at least 5 seconds.
- Disconnect the tablet PC from external power and remove the battery pack. For more information about removing and storing the battery pack, refer to the [“Storing a Battery Pack”](#) section in this chapter.

Managing Power Options

Many default power settings can be changed in the Power Options window. For example, you can set an audio alert to warn you when the battery pack reaches a low-power condition, or you can change the default settings for the power/standby switch.

By default, when the tablet PC is on:

- Pressing the power/standby switch to the right initiates Standby.
- Pressing the **fn+f3** hotkey, called the “sleep button” in the operating system, initiates Standby.
- The display switch turns off the display. The display switch is activated by closing the display. (By default and when using custom settings, the display switch also turns on the tablet PC if the display is opened while the tablet PC is in Standby.)

Accessing the Power Options Window

To access the Power Options window, double-click the Power Meter icon on the taskbar, or select **Start > Control Panel > Power Options**.

Displaying the Power Meter Icon

The Power Meter icon is on your taskbar by default. The icon changes shape to indicate whether the tablet PC is running on a battery pack or external power. Double-click the icon to display the Power Options window.

To hide or show the Power Meter icon on the taskbar:

1. Access the Power Options window.
2. Select the **Advanced** tab.
3. Select or clear the **Always show icon** on the taskbar check box.
4. Select **Apply**.
5. Select **OK**.



If you cannot see an icon you have placed on the taskbar, the icon may be hidden. Select the arrow or vertical bar on the taskbar and expand it to view hidden icons.

Setting or Changing a Power Scheme

The Power Schemes tab in the Power Options window assigns power levels to system components. You can assign different schemes depending on whether the tablet PC is running on a battery pack or external power.

You can also set a power scheme that initiates Standby or turns off the display or hard drive after a time interval that you specify.

To set a power scheme:

1. Access the **Power Options** window, and then select the **Power Schemes** tab.
2. Select the power scheme you wish to modify, and adjust options in the lists on the screen.
3. Select **Apply**.

Using a Security Password

You can add a security feature that prompts you for a password when the tablet PC is turned on or restores from Standby or Hibernation.

To set a password prompt, access the **Power Options** window, and then select the **Advanced** tab. Select the check box for **Prompt for password when the computer resumes from Standby**, and select **Apply**.

For more information about using security passwords, refer to [Chapter 9, "Security."](#)

Processor Performance Controls

On select tablet PC models, Windows XP supports software that enables you to control processor performance. The central processing unit (CPU) speed can be set for optimal performance or for optimal power conservation.

For example, the software can be set to trigger an automatic change in processor speed when the power source changes from external power to battery pack power, or when the tablet PC use changes between active and idle.

Processor performance controls are managed in the Power Options window.

To access Windows XP processor performance controls, select **Start > Control Panel > Power Options > Power Schemes** tab.

The power scheme you select determines how the processor performs when the tablet PC is connected to external power or is running on battery power. Each power scheme for external power or battery power sets a specific processor state.

Different states may be used, depending on whether the tablet PC is running on external or battery power. After a power scheme has been set, no other intervention is required to control the performance of your tablet PC processor. The following table describes the processor performance on external and battery power for the available power schemes.

Power Scheme	Processor Performance While on External Power	Processor Performance While on Battery Power
Home/Office Desk	Always runs at the highest performance state.	Performance state is determined based on CPU demand.
Portable/Laptop	Performance state is determined based on CPU demand.	Performance state is determined based on CPU demand.
Presentation	Performance state is determined based on CPU demand.	Starts at lowest performance state, then uses linear performance reduction (stop-clock throttling) as the battery discharges.

Power Scheme	Processor Performance While on External Power	Processor Performance While on Battery Power
Always On	Always runs at the highest performance state.	Always runs at the highest performance state.
Minimal Power Management	Performance state is determined based on CPU demand.	Performance state is determined based on CPU demand.
Max Battery	Performance state is determined based on CPU demand.	Starts at lowest performance state, then uses linear performance reduction (stop-clock throttling) as the battery discharges.

Using Battery Packs

When the tablet PC is connected to external AC power, the tablet PC runs on AC power. When a charged battery pack is in the tablet PC and the tablet PC is not connected to external power, the tablet PC runs on battery power.

The tablet PC switches between AC power and battery power according to the availability of an external AC power source. For example, if the tablet PC contains a charged battery pack and is running on external AC power supplied through the AC adapter, the tablet PC switches to battery power if the AC adapter is disconnected from the tablet PC.

You can leave a battery pack in the tablet PC or in storage, depending on how you work. Keeping a battery pack in the tablet PC enables the battery pack to charge whenever the tablet PC is connected to external AC power and also protects your work in case of a power outage.

However, battery packs in the tablet PC slowly discharge when the tablet PC is turned off. For this reason, the primary battery pack is not shipped inside the tablet PC and must be inserted before the tablet PC can run on battery power.

Identifying Battery Packs

This tablet PC supports up to 2 battery packs:

- The primary battery pack is a 6-cell lithium-ion battery pack that can be used only in the battery bay. One primary battery pack is included with the tablet PC.
- The travel battery pack is an optional 8-cell lithium-ion battery pack that can be used only in the travel battery case.

If you will not be using the tablet PC for 2 weeks or more, remove the battery pack and store it as described in the “[Storing a Battery Pack](#)” section in this chapter to prolong battery pack life. For more information about leaving your work, refer to the “[Initiating Standby, Hibernation or Shutdown](#)” section in this chapter.




Only compatible AC adapters and battery packs should be used with the tablet PC. For additional information, visit the HP Web site at <http://www.hp.com> or use the *Worldwide Telephone Numbers* booklet, included with your tablet PC, to contact Customer Care.

Inserting or Removing a Primary Battery Pack

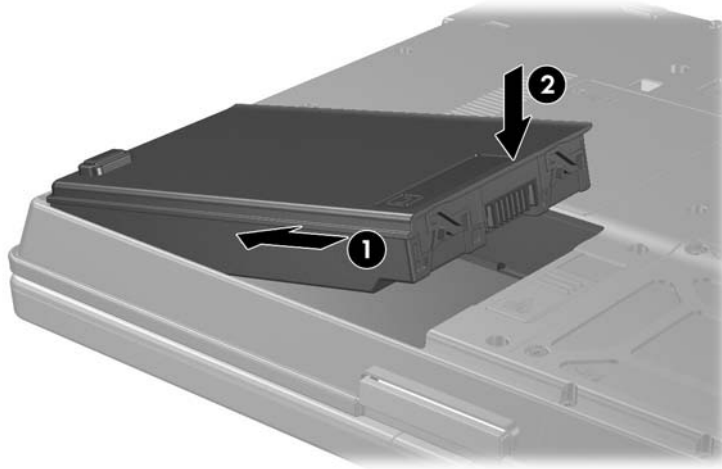


CAUTION: To prevent loss of work when removing a battery pack that is the sole power source, initiate Hibernation or turn off the tablet PC before removing the battery pack.

To insert a primary battery pack:

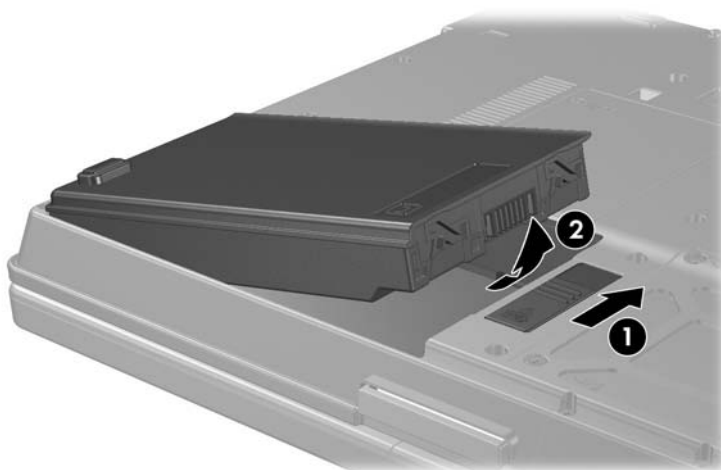
1. Turn the tablet PC upside down.
2. Slide the battery pack  into the battery bay until it is seated.

3. Press the battery pack ② into the tablet PC.



To remove a primary battery pack:

1. Turn the tablet PC upside down with the battery bay toward you.
2. Press the battery release latch **1** to the right.
3. Slide the battery pack **2** out of the tablet PC.

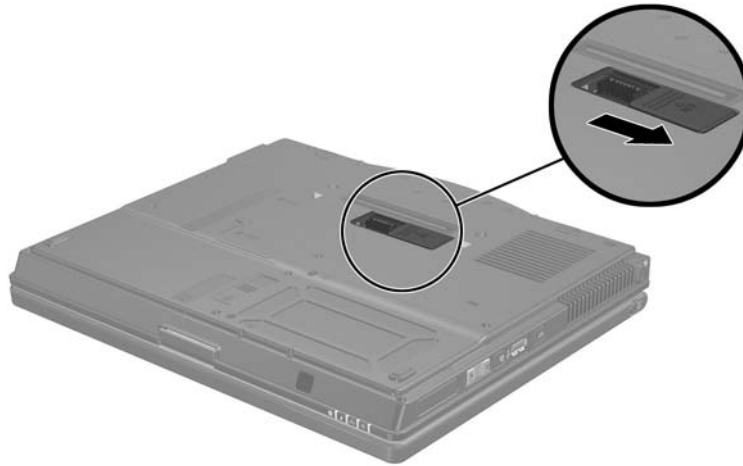


Attaching or Detaching an Optional Travel Battery

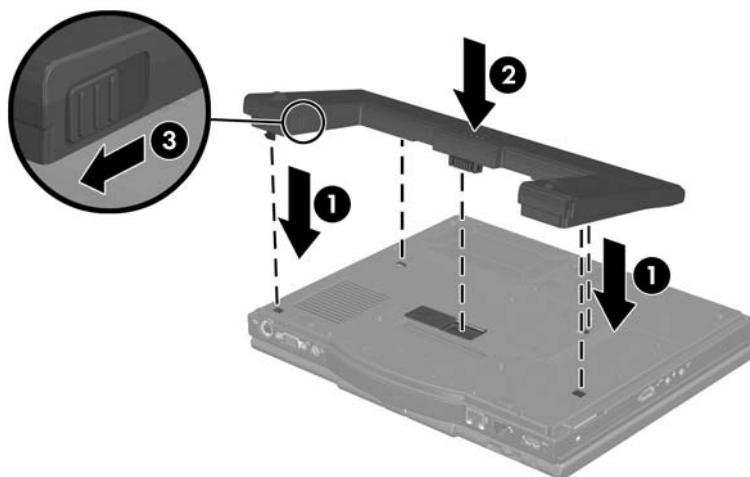
To attach an optional travel battery:

1. Turn the tablet PC upside down with the primary battery bay toward you.

2. Open the travel battery connector on the bottom of the tablet PC by sliding the cover to the right.

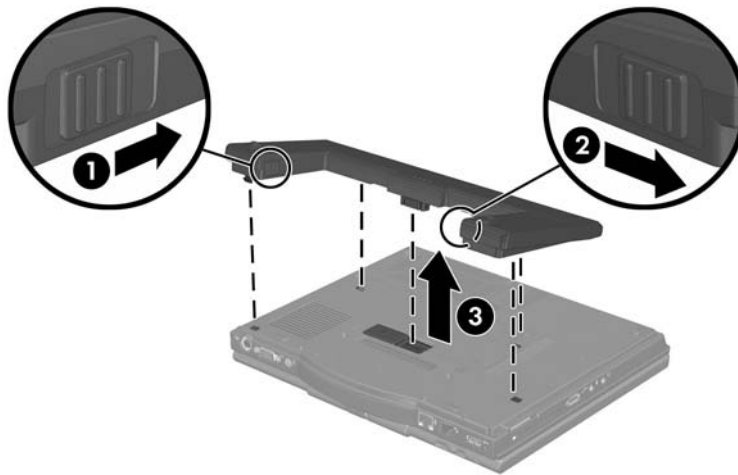


3. Insert the tabs on the travel battery caddy into the recesses on the bottom of the tablet PC ❶.
4. Press the travel battery caddy onto the tablet PC until it snaps into place ❷.
5. Slide the locking latch ❸.



To detach an optional travel battery:

1. Unlock the travel battery from the tablet PC by sliding the locking switch ❶.
2. Press the release latch ❷.
3. Lift the travel battery ❸ up and away from the tablet PC.

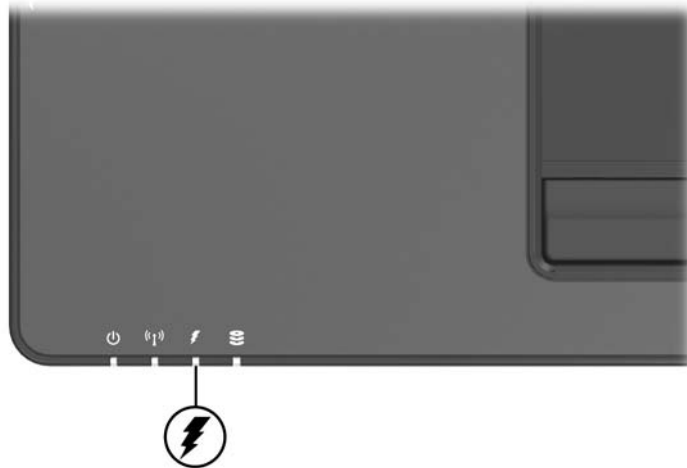


Charging Battery Packs

Multiple battery packs in the system charge and discharge in a preset sequence:

- Charge sequence:
 1. Primary battery in the tablet PC battery bay
 2. Travel battery
- Discharge sequence:
 1. Travel battery
 2. Primary battery in the tablet PC battery bay

While a battery pack is charging, the battery light on the tablet PC is on. The light is turned off when all battery packs are fully charged.



Battery packs can also be charged in the optional HP Universal Charger.

Charging the Primary Battery



CAUTION: To prevent damage to the tablet PC and aircraft systems, do not charge the battery pack while you are using an Auto/Air/AC Adapter on an aircraft.

The primary battery pack charges when it is inserted into the tablet PC and the tablet PC is connected to external power. External power can be supplied through the following:

- AC adapter
- Optional docking device
- Optional Automobile Power Adapter/Charger

- Optional 90W Air/Auto/AC Combo Adapter



An optional Aircraft Power Adapter can run the tablet PC, but it cannot charge a battery pack.

Charging an Optional Travel Battery

The battery pack in the travel battery charges when it is attached to the tablet PC and the tablet PC is connected to external power. External power can be supplied through the following:

- AC Adapter
- Optional docking device
- Optional Automobile Power Adapter/Charger
- Optional 90W Air/Auto/AC Combo Adapter



Because the travel battery covers the docking connector, the travel battery cannot be used or charged with a docking device.



An optional Aircraft Power Adapter can run the tablet PC, but it cannot charge a battery pack.

Charging a New Battery Pack

Fully charge the battery pack while the tablet PC is connected to external power through the AC adapter.

A new battery pack that has been partially but not fully charged can run the tablet PC, but the battery charge indicators may be inaccurate.

Charging an In-Use Battery Pack

To prolong battery life and increase the accuracy of battery charge indicators:

- Allow a battery pack to discharge to 10 percent of a full charge through normal use before charging it.
- When you charge a battery pack, charge it fully.

Monitoring the Charge of a Battery Pack

This section explains several ways you can determine the amount of charge in your battery pack.

Obtaining Accurate Charge Information

To increase the accuracy of all battery charge displays:

- Allow a battery pack to discharge to about 10 percent of a full charge through normal use before charging it.
- When you charge a battery pack, charge it fully.
- If a battery pack has not been used for one month or more, calibrate the battery pack instead of simply charging it. For calibration instructions, refer to the [“Calibrating a Battery Pack”](#) section in this chapter.

Displaying Charge Information on the Screen

This section explains how to access and interpret battery charge displays.

Viewing Charge Displays

To view information about the status of any battery pack in the tablet PC:

- Select the **Power Meter** icon on the taskbar.
- or-
- Select **Start > Control Panel > Power Options > Power Meter** tab.

Interpreting Charge Displays

Most charge displays report battery status as both a percentage and as the number of minutes of charge remaining.

- The percentage indicates the amount of charge remaining in the battery pack.
- The time indicates the approximate running time remaining on the battery pack *if the battery pack continues to provide power at the current level*. For example, the time remaining will decrease when you start playing a DVD and will increase when you stop playing a DVD.

Most charge displays identify battery packs by location:

- Location 1 is the battery pack in the primary battery bay.
- Location 2 is the optional travel battery pack.

On some displays, a lightning bolt icon may be displayed on the charge display beside a battery pack location. The icon indicates that the battery pack in that location is charging.

Managing Low-Battery Conditions

Some low-battery condition alerts and system responses can be changed in the Power Options window of the operating system. The information in this section describes the alerts and system responses set at the factory. Preferences set in the Power Options window do not affect lights.

Identifying Low-Battery Conditions

This section explains how to identify low and critical low-battery conditions.

Low-Battery Condition

When a battery pack that is the only power source for the tablet PC reaches a low-battery condition, the battery light blinks.

Critical Low-Battery Condition

If a low-battery condition is not resolved, the tablet PC enters a critical low-battery condition.

In a critical low-battery condition:

- If Hibernation is enabled and the tablet PC is on or in Standby, the tablet PC initiates Hibernation.
- If Hibernation is disabled and the tablet PC is on or in Standby, the tablet PC remains briefly in Standby, then shuts down and loses your unsaved work.

To verify that Hibernation is enabled, select **Start > Control Panel > Power Options > Hibernate** tab. Make sure that the **Enable hibernate support** check box is selected.

Resolving Low-Battery Conditions



CAUTION: If the tablet PC has reached a critical low-battery condition and has initiated Hibernation, do not restore power until the power/standby light is turned off.

When External Power Is Available

To resolve a low-battery condition when external power is available, do one of the following:

- Connect the AC adapter.
- Plug an optional Automobile Power Adapter/Charger into the tablet PC and into a vehicle cigarette lighter receptacle.
- Plug an optional 90W Air/Auto/AC Combo Adapter into the tablet PC and into a vehicle cigarette lighter receptacle or into the in-seat power supply available on some commercial aircraft.

△ To prevent damage to the tablet PC and aircraft systems, do *not* charge the battery pack while you are using an Auto/Air/AC Adapter on an aircraft.

- Plug an optional Aircraft Power Adapter into the tablet PC and into the in-seat power supply available on some commercial aircraft. (An optional Aircraft Power Adapter can run the tablet PC but cannot charge a battery pack.)

When a Charged Battery Pack Is Available

To resolve a low-battery condition when a charged battery pack is available, turn off the tablet PC or initiate Hibernation, insert a charged battery pack, and then turn on the tablet PC.

When No Power Source Is Available

To resolve a low-battery condition when no power source is available, initiate Hibernation, or save your work and shut down the tablet PC.

When the Tablet PC Cannot Exit Hibernation

To resolve a low-battery condition when the tablet PC lacks the power to exit Hibernation:

1. Insert a charged battery pack or connect external power.

2. Exit Hibernation by pressing the power/standby switch to the right or left.

Calibrating a Battery Pack

This section describes when and how to calibrate a battery pack.

When to Calibrate

Even if a battery pack is heavily used, it should not be necessary to calibrate it more than once a month. It is not necessary to calibrate a new battery pack before first use. Calibrate the battery pack under the following conditions:

- When battery charge displays seem inaccurate.
- When you observe a significant decrease in battery run time.
- When the battery pack has been unused for one month or more.

How to Calibrate

To calibrate a battery pack, you must fully charge, fully discharge, then fully recharge the battery pack.

Charging the Battery Pack

A battery pack can charge whether the tablet PC is off or in use, but it will charge faster when the tablet PC is off.

To charge the battery pack:

1. Insert the battery pack into the tablet PC.
2. Connect the tablet PC to an AC outlet or an optional Automobile Power Adapter/Charger. The battery light on the tablet PC is turned on.
3. Leave the tablet PC connected to external power until the battery pack is fully charged. The battery light on the tablet PC is turned off.

Discharging the Battery Pack

Before you begin a full discharge, disable Hibernation.

To disable Hibernation:

1. Select **Start > Control Panel > Power Options > Hibernate** tab.
2. Clear the **Enable Hibernation** check box.
3. Select **Apply**.

The tablet PC must remain on while the battery pack is being discharged. The battery pack can discharge whether or not you are using the tablet PC, but will discharge faster while the tablet PC is in use.

- If you plan to leave the tablet PC unattended during the discharge, save your work before beginning the discharge procedure.
- If you use the tablet PC occasionally during the discharge procedure and have set energy-saving timeouts, expect the following performance from your system during the discharge process:
 - The monitor will not turn off automatically.
 - Hard drive speed will not decrease automatically while the tablet PC is idle.
 - System-initiated Standby will not occur.

To fully discharge a battery pack:

1. Select the **Power Meter** icon on the taskbar, or access the Power Schemes tab by selecting **Start > Control Panel > Power Options > Power Schemes** tab.
2. Make a note of the 2 settings in the Plugged In column and the 2 settings in the Running on Batteries column so that you can reset them after the calibration.
3. Use the drop-down lists to set the 4 options (2 in each column) to **Never**.

4. Select **OK**.
5. Disconnect the tablet PC from the external power source, but do *not* turn off the tablet PC.
6. Run the tablet PC on battery power until the battery pack is fully discharged. The battery light begins to blink when the battery pack has discharged to a low-battery condition. When the battery pack is fully discharged, the battery light is turned off and the tablet PC shuts down.

Recharging the Battery Pack

To recharge the battery pack:

1. Connect the tablet PC to external power and maintain the connection until the battery pack is fully recharged. The battery light on the tablet PC is turned off.
You can use the tablet PC while the battery pack is recharging but the battery pack will charge faster if the tablet PC is off.
2. If the tablet PC is off, turn it on when the battery pack is fully charged and the battery light is turned off.
3. Access the Power Schemes tab by selecting **Start > Control Panel > Power Options > Power Schemes** tab.
4. Refer to the settings you recorded earlier. Reenter the settings that you recorded for the items in the Plugged In column and the Running on Batteries column.
5. Select **OK**.



CAUTION: After calibrating the battery pack, reenable Hibernation. Failure to reenable Hibernation may result in a complete battery drain and potential data loss.
To reenable Hibernation, select **Start > Settings > Control Panel > Power Options > Hibernate** tab. Select the **Enable Hibernation** check box, and then select **Apply**.

Conserving Battery Power

Using the battery conservation procedures and settings described in this section extends the time that a battery pack can run the tablet PC from a single charge.

Conserving Power As You Work

To conserve power as you use the tablet PC:

- Turn off wireless and local area network (LAN) connections and exit modem applications when you are not using them.
- Disconnect external devices you are not using that are not connected to an external power source.
- Stop or remove a PC Card you are not using. For more information, refer to [Chapter 6, “Hardware Components.”](#)
- Use the **fn+f9** and **fn+f10** hotkeys to adjust screen brightness as you need it.
- Use optional powered speakers instead of the internal speakers, or use the volume buttons to adjust system volume as you need it.
- Turn off a device connected to the S-Video out jack by using the **fn+f4** hotkey or by turning off support for the device in Windows.
- Run the tablet PC on external power while formatting a diskette.
- If you leave your work, initiate Standby or Hibernation or shut down the tablet PC.

Selecting Power Conservation Settings

To set the tablet PC to conserve power:

- Select a short wait for the screen saver and select a screen saver with minimal graphics and motion. To access screen saver settings, select **Start > Control Panel > Display > Screen Saver** tab.
- Select a Power Scheme with low-power-use settings through the operating system. Refer to the [“Setting or Changing a Power Scheme”](#) section in this chapter.

Storing a Battery Pack

If a tablet PC will be unused and unplugged for more than 2 weeks, remove any battery packs and store them separately.



CAUTION: To prevent damage to a battery pack, do not expose it to high temperatures for extended periods of time.

High temperatures accelerate the self-discharge rate of a stored battery pack. To prolong the charge of a stored battery pack, place it in a cool, dry place.

Use the following table to estimate how long you can safely store a battery pack. The storage times provided are based on a battery pack that contains 50 percent of a full charge. A fully charged battery pack can be safely stored for longer times; a battery pack containing a lower charge can be safely stored for less time.

Calibrate a battery pack that has been stored for one month or more before using it.

Temperature Range °F	Temperature Range °C	Safe Storage Time
115° to 140°	46° to 60°	Less than 1 month
79° to 113°	26° to 45°	No more than 3 months
32° to 77°	0° to 25°	1 year

Disposing of a Used Battery Pack



WARNING: There is a risk of fire and chemical burn if a battery pack is handled improperly. Do not disassemble, crush, or puncture a battery pack or short the contacts on a battery pack. Do not expose a battery pack to temperatures higher than 60°C (140°F), or dispose of a battery pack in water or fire.

When a battery pack has reached the end of its useful life, do not dispose of it in general household waste.

- In Europe, dispose of or recycle battery packs by using the public collection system or by returning them to HP, your authorized HP service partners, or their agents.
- In other regions, refer to the *Worldwide Telephone Numbers* booklet, included with the tablet PC, to contact Customer Care and request information about battery pack disposal.

For more information about battery pack precautions and disposal and the complete text of governmental agency notices, refer to the *Regulatory and Safety Notices* guide on the *Tablet PC Documentation CD*.

DRAFT Revised: 8/24/04
File: Chap2.fm
PN: HP-367186-001

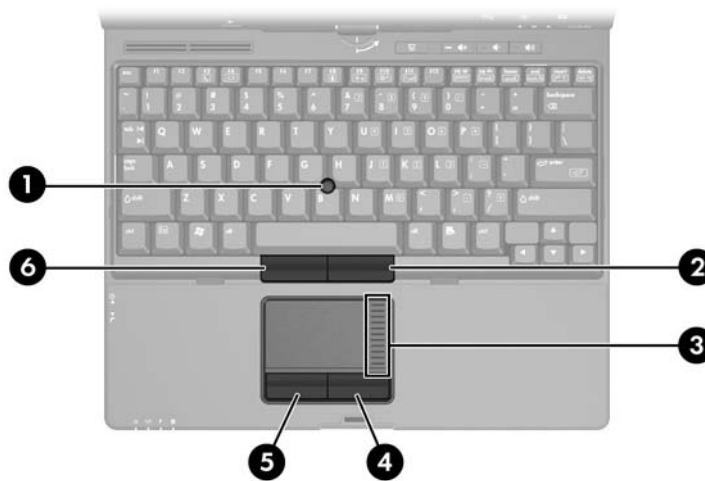
Power

3

Pointing Devices and Keyboard

Using a Pointing Device

The pointing stick and TouchPad controls can be used interchangeably.



Component	Description
❶ Pointing stick	Moves the pointer and selects or activates items on the screen.
❷ Right pointing stick button	Functions like the right button on an external mouse.
❸ Touchpad scroll zone*	Scrolls upward or downward.

Component	Description
④ Right TouchPad button*	Functions like the right button on an external mouse.
⑤ Left TouchPad button*	Functions like the left button on an external mouse.
⑥ TouchPad*	Moves the pointer and selects or activates items on the screen. Can be set to perform other mouse functions, such as scrolling, selecting, and double-clicking.
⑦ Left pointing stick button	Functions like the left button on an external mouse.

*This table describes default settings. For information about changing the functions of TouchPad features, refer to the [“Setting Pointing Device Preferences”](#) section in this chapter.

Using the Pointing Stick

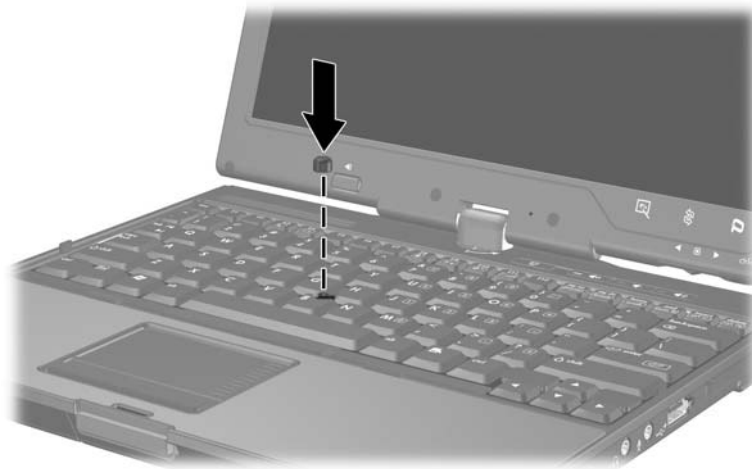
To move the pointer, press the pointing stick in the direction you want to move the pointer. Use the left and right pointing stick buttons as you would the left and right buttons on an external mouse.

To change the pointing stick cap:

1. Turn off the tablet PC.
2. Gently pull off the used pointing stick cap.
3. Press a replacement cap into place.



Replacement caps are not included with the tablet PC.



Using the TouchPad

To move the pointer, slide your finger across the TouchPad surface in the direction you want the pointer to go. Use the left and right TouchPad buttons as you would the left and right buttons on an external mouse. To scroll up and down using the TouchPad vertical scroll zone, slide your finger up or down over the raised area.

Using an External Mouse

An external USB mouse can be connected to the tablet PC using one of the ports on the right or left side of the tablet PC. An external serial mouse can be connected to the serial port on the right side of the tablet PC. An external PS/2 or USB mouse can be connected to the system using the connectors on an optional docking device.

Setting Pointing Device Preferences

Mouse Properties in Windows enables you to customize settings for pointing devices, including

- Enabling or disabling a pointing device (enabled by default).
- TouchPad tapping, which enables you to tap the TouchPad once to select an object or twice to double-click an object (disabled by default).
- Edge motion, which enables you to continue to scroll even though your finger has reached the edge of the TouchPad (disabled by default).
- Palm Check, which helps prevent moving the pointer unintentionally if your palms contact the TouchPad as you type (disabled by default).

Other features, such as mouse speed preferences and mouse trails, are also found in the Mouse Properties window.

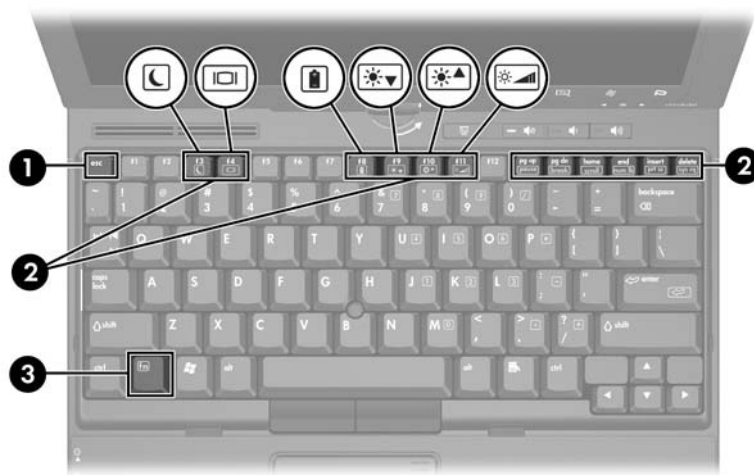
To access Mouse Properties:

- » Select **Start > Control Panel > Mouse** icon.

Using Hotkeys

Hotkeys are preset combinations of the **fn** key ❶, one of the function keys ❷, or the **esc** key ❸,

The icons on the **f3**, **f4**, and **f8** through **f10** keys represent the hotkey functions. Hotkey functions and procedures are discussed in the following sections.



Hotkey and Shortcut Key Quick Reference

Function	Key combination to activate function	Key combination to deactivate function
Initiate Standby	fn+f3	Power/standby switch
Switch between tablet PC display and external display	fn+f4	fn+f4
View battery information	fn+f8	fn+f8
Decrease screen brightness	fn+f9	N/A
Increase screen brightness	fn+f10	N/A
Display system information	fn+esc	fn+esc

Initiating Standby (fn+f3)

When the tablet PC is on, press the **fn+f3** hotkey to initiate Standby. When Standby is initiated, your work is saved in random access memory (RAM), the screen is cleared, and power is conserved. While the tablet PC is in Standby, the standby light and the power/standby light blink.

To exit Standby, press the power/standby switch to the right or left.

The **fn+f3** hotkey is set at the factory to initiate Standby. The function of the **fn+f3** hotkey, called the “sleep button” in Windows, can be changed. For example, the **fn+f3** hotkey can be set to initiate Hibernation instead of Standby. For more information about Standby, Hibernation, and changing the function of the **fn+f3** hotkey, refer to [Chapter 2, “Power.”](#)

Switching Displays (fn+f4)

The **fn+f4** hotkey switches the image among display devices connected to the external monitor connector or the S-Video jack on the tablet PC. For example, if an external monitor is connected to the tablet PC, pressing the **fn+f4** hotkey multiple times toggles the image between the tablet PC display, the external monitor display, and a simultaneous display on both the tablet PC and the monitor.

Most external monitors receive video information from the tablet PC using the external VGA video standard. The **fn+f4** hotkey can also toggle images among other devices receiving video information from the tablet PC.

The following five video transmission types, with examples of devices that use them, are supported by the **fn+f4** hotkey:

- LCD (tablet PC display)
- External VGA (most external monitors)
- S-Video (televisions, camcorders, VCRs, and video capture boards with S-Video in jacks)
- Composite video (televisions, camcorders, VCRs, and video capture boards with composite-video in jacks)
- DVI-D (external monitors that support the DVI-D interface)



DVI-D can be connected to the tablet PC only when the notebook is docked in an optional docking device.

Viewing Battery Charge Information (fn+f8)

Press **fn+f8** to display charge information for all installed battery packs. The display indicates which battery packs are charging and reports the amount of charge remaining in each battery pack.

Battery pack locations are indicated by number:

- Location 1 is the primary battery pack.
- Location 2 is the travel battery pack.

Decreasing Screen Brightness (fn+f9)

Press **fn+f9** to decrease screen brightness. Hold down the hotkey to decrease the brightness level incrementally.

Increasing Screen Brightness (fn+f10)

Press **fn+f10** to increase screen brightness. Hold down the hotkey to increase the brightness level incrementally.

Ambient Light Sensor (fn+f11)

Press **fn+f11** to turn on and off the ambient light sensor. For more information about the ambient light sensor, refer to the [“Setting the Ambient Light Sensor”](#) section in this chapter.

Displaying System Information (fn+esc)

Press **fn+esc** to display information about system hardware components and software version numbers. Press **fn+esc** a second time to remove the system information from the screen.



The system BIOS date is the version number of the system ROM. The BIOS date may display in a decimal format, such as 10/19/2002 F.07.

Using Hotkeys with External Keyboards

The hotkeys available for use with optional external keyboards differ depending on the type of external keyboard you use. USB keyboards support only the Hotkey functions controlled by the Quick Launch Buttons control panel. For more information about the Quick Launch Buttons control panel, refer to the [“Quick Launch Buttons Control Panel”](#) section later in this chapter.

The following table describes how certain hotkeys and shortcut keys are used on external keyboards:

Tablet PC Keys	External Keyboard Keys
fn+f3	scroll lock+scroll lock+f3 (PS/2 keyboards only)
fn+f4	scroll lock+scroll lock+f4 (PS/2 keyboards only)
fn+f8	scroll lock+scroll lock+f8
fn+f9	scroll lock+scroll lock+f9 (PS/2 keyboards only)
fn+f10	scroll lock+scroll lock+f10 (PS/2 keyboards only)
fn+f11	scroll lock+scroll lock+f11
fn+esc	scroll lock+scroll lock+esc

Keypads

The tablet PC has an embedded numeric keypad and also supports an optional external keypad or an optional external keyboard that includes a numeric keypad.

Using the Internal Keypad

The 15 keys of the embedded numeric keypad can be used like the keys on an external numeric keypad. When the embedded numeric keypad is turned on, each key on the keypad performs the function indicated by the icon in the upper right corner of the key.



Item	Component
❶	fn key
❷	num lock light
❸	num lk key
❹	Embedded numeric keypad

Enabling and Disabling the Embedded Numeric Keypad

Press **fn+num lk** to enable the embedded numeric keypad. The num lock light is turned on. Press **fn+num lk** again to return the keys to their standard keyboard functions.



The embedded numeric keypad does not work while an external keyboard or numeric keypad is connected to the tablet PC or to an optional docking device.

Switching Key Functions on the Embedded Numeric Keypad

You can temporarily switch the functions of keys on the embedded numeric keypad between their standard keyboard functions and their keypad functions by using the **fn** key or the **fn+shift** key combination.

- To change the function of a keypad key to keypad functions while the keypad is off, press and hold the **fn** key while pressing the keypad key.
- To use the keypad keys temporarily as standard keys while the keypad is on:
 - Press and hold the **fn** key to type in lowercase.
 - Press and hold **fn+shift** to type in uppercase.

Using an External Keypad

Most keys on most external keypads function differently according to whether num lock mode is on or off. For example:

- When num lock is on, most keypad keys type numbers.
- When num lock is off, most keypad keys function like the arrow, page up, or page down keys.

When num lock on an external keypad is turned on, the num lock light on the tablet PC is turned on. When num lock on an external keypad is turned off, the num lock light on the tablet PC is turned off.

If an external numeric keypad is connected, the embedded numeric keypad cannot be turned on.

Enabling or Disabling Num Lock Mode As You Work

To turn num lock on or off on an external numeric keypad as you work, press the **num lk** key on the external numeric keypad, not on the tablet PC.

Enabling or Disabling Num Lock Mode As You Work

To turn num lock on or off on an external keypad as you work, press the **num lk** key on the external keypad, not on the tablet PC.


Using Presentation Mode

The Presentation mode button toggles Presentation mode on and off. Turning Presentation mode on opens an application, folder, file, or Web site that you specify. The image simultaneously displays on the tablet PC screen and on an external device connected to the external monitor port or S-Video out jack on the rear panel, or to ports and jacks on an optional docking device.



When you first select the Presentation mode button, the Presentation Settings dialog box displays. In this dialog box, you can

- Set the program to start when the button is pressed.
- Choose a power scheme.
- Choose whether you want to show the Presentation Settings dialog box each time you press Presentation mode button.

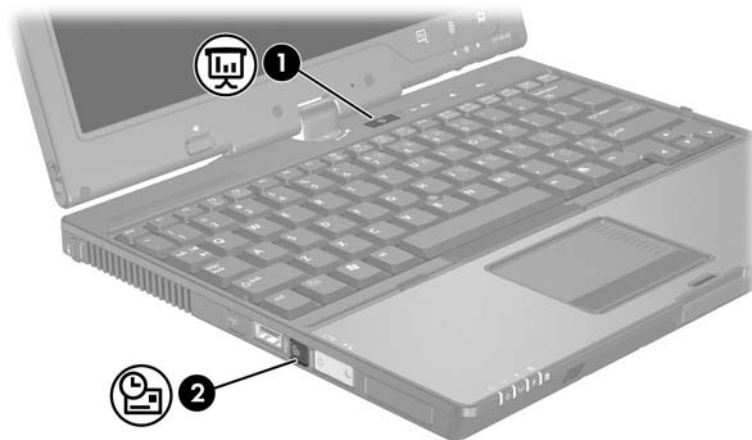
 If you do not select this option, each time you press the Presentation mode button, the Presentation Settings dialog box displays and you have to select **Continue** to open the program, application, folder, file, or Web site you have selected to start when the button is pressed.

- Automatically switch to an external display.

You can modify the Presentation mode settings using the Quick Launch Button control panel. Refer to “[Setting Presentation Mode Preferences](#)” in this chapter for information on setting Presentation mode settings.

Using Quick Launch Buttons

The tablet PC has two Quick Launch buttons that open frequently used applications when you press them.



Item	Component	Description
❶	Presentation mode button	Starts Presentation mode, which optimizes for an external monitor or projects and opens a user-defined program such as Microsoft PowerPoint.
❷	HP Information Center button	content to come.

Quick Launch Buttons Control Panel

You can use the Quick Launch Buttons control panel to

- Change Presentation mode settings.
- Set advanced preferences, including
 - Setting preferences for the display of the Quick Launch Buttons icon.
 - Setting preferences for the ambient light sensor.

The following sections provide instructions for setting preferences within the control panel. For additional on-screen information about any item on the control panel, select the help button in the upper-right corner of the window. The help button is identified by a question mark icon.

Accessing the Quick Launch Buttons Control Panel

You can access the Quick Launch Buttons control panel from the Start button or from an icon that you can display in the notification area (at the far right of the taskbar) or Windows desktop. To access the Quick Launch Buttons control panel from the Start button:

- » Select **Start > Control Panel > Printers and Other Hardware > Quick Launch Buttons**.

Setting Presentation Mode Preferences

Setting the Presentation Mode Button

To set an application, folder, file, or Web site to start when the Presentation mode button is pressed:

1. Open the Quick Launch Buttons control panel:
 - Select **Start > Control Panel > Printers and Other Hardware > Quick Launch Buttons**.
 - or -
 - Select the Quick Launch Buttons icon in the notification area (at the far right of the taskbar) or Windows desktop.
2. Select the **Presentation** tab.
3. In the box under Program to Start, add the application, folder, file, or Web site you want to start when the Presentation mode button is pressed, or select **Browse** to view available applications, folders, files, or Web sites.
4. To save your preferences and close the display, select **OK**.

Changing the Power Scheme

By default the Presentation power scheme is selected when the Presentation mode button is pressed. To change the power scheme:

1. Open the Quick Launch Buttons control panel:
 - Select **Start > Control Panel > Printers and Other Hardware > Quick Launch Buttons**.
 - or -
 - Select the Quick Launch Buttons icon in the notification area (at the far right of the taskbar) or Windows desktop.
2. Select the **Presentation** tab.

3. Select an option from the drop-down list box, or select **Power Options** to open the Microsoft Power Options control panel to view or change the current power scheme.
4. To save your preferences and close the display, select **OK**.

Showing the Welcome Screen

You can choose to show the Quick Launch Buttons Properties dialog box each time you press the Presentation mode button. By default, this option is turned off.

To turn it on select the check box next to **Show Welcome Screen when Presentation mode button is pressed**.

Switching to an External Display

By default, the Automatically switch to external display setting in the Presentation tab is not selected. When you press the Presentation mode button, the application, folder, file, or Web site you selected in the Program to Start setting opens.

If you select the **Automatically switch to external display setting** and press the Presentation mode button, the display is switched to the external display connected to your tablet PC and the application, folder, file, or Web site you selected in the Program to Start setting opens.



You can toggle between displays by pressing the Presentation mode button.

Setting Advanced Preferences

You can set the icon and ambient light sensor in the Quick Launch Button control panel.

Displaying the Quick Launch Buttons Icon

To show or hide the Quick Launch Buttons Properties icon in the notification area (at the far right of the taskbar) or your Windows desktop:

1. Open the Quick Launch Buttons control panel:
 - Select **Start > Control Panel > Printers and Other Hardware > Quick Launch Buttons**.
 - or -
 - Select the **Quick Launch Buttons** icon in the notification area (at the far right of the taskbar) or Windows desktop.
2. Select the **Advanced** tab. On the Advanced tab you can
 - Display or hide the Quick Launch Buttons icon in the notification area (at the far right of the taskbar), or on the desktop.
 - ◆ To display the icon, select the **Show icon on the taskbar** or **Show icon on the desktop** check box.
 - ◆ To hide the icon, clear the **Show icon on the taskbar** or **Show icon on the desktop** check box.
3. To save your preferences and close the display, select **OK**.

Setting the Ambient Light Sensor

The tablet PC features a built-in light sensor that enables the tablet PC to automatically adjust the screen brightness according to the ambient lighting level. When the lighting of your environment changes, the ambient light sensor detects the change and automatically adjusts the screen brightness.

You can turn the ambient light sensor on and off in 3 ways:

- By pressing **fn+f11**
- Through the Quick Launch Buttons control panel
- By the Quick Launch Buttons control panel icon in the notification area (at the far right of the taskbar) or Windows desktop.



To turn on and off the ambient light sensor using the Quick Launch Buttons control panel or the Quick Launch icon, the Quick Launch Buttons software must be installed.

To turn the ambient light sensor on and off using the ambient light sensor hotkeys, press **fn+f11**.

*Illustration
in
Progress*

You can turn on and off the ambient light sensor using the Quick Launch Buttons software:

1. Open the Quick Launch Buttons software:
 - Select **Start > Control Panel > Quick Launch Buttons**.
 - or-
 - Select the **Quick Launch Buttons** icon in the notification area (at the far right of the taskbar) or Windows desktop.
2. Select the **Advanced** tab.
3. Select or clear the **Enable Ambient Light Sensor** check box.
4. Select **Apply**, and then select **OK**.

You can turn on and off the ambient light sensor using the **Quick Launch Buttons** icon:

1. Right-click the **Quick Launch Buttons** icon in the notification area (at the far right of the taskbar) or Windows desktop.
2. Select **Turn Ambient Light Sensor On** or **Turn Ambient Light Sensor Off**.

DRAFT Revised: 8/24/04
File: Chap3.fm
PN: HP-367186-001

Pointing Devices and Keyboard

4

Pen and Command Controls

You can enter and access information on the tablet PC by voice (supported in English only), pen, and command controls. This chapter provides information about using the pen and command controls.

Pen

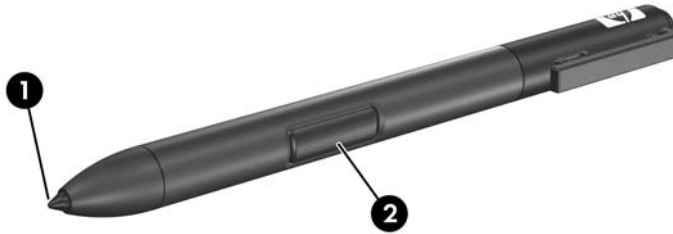
You can write with the pen in pen-specific applications such as the Tablet PC Input Panel, in all Microsoft Office applications, and in most other Windows applications and utilities. The information you write on the screen with the pen can be filed, searched, and shared among most Windows applications.

- To access basic information about using the pen within the operating system, refer to the printed *Windows XP Tablet PC Edition Start Here* guide included with the tablet PC.
- To access on-screen tutorials which include more detailed information about using the pen in the tablet PC system:
 1. Open Windows Explorer. To open Windows Explorer from the Start button, select **Start > All Programs > Accessories > Windows Explorer**.
 2. In Windows Explorer, select **My Computer > Local Disk (C:) > WINDOWS > Help > latute.hta**.

Entering Information with the Pen

Identifying the Pen Tip and Pen Button

The pen interacts with the tablet PC whenever the tip of the pen ❶ is within 1.27 cm (0.5 inch) from the screen. The pen button ❷ emulates the functions of the right-click button on an external mouse.



Holding the Pen

Hold the pen as if you were writing with a standard pen or pencil. Position your hand on the pen so that you will not accidentally press the pen button.

As you monitor the movements of the pen, focus on the pointer, not on the tip of the pen.

Performing Mouse Clicks with the Pen

To select an item on the screen as you would with the left button of an external mouse:

- » Tap the item with the tip of the pen.

To double-click an item on the screen as you would with the left button of an external mouse:

- » Tap the item twice with the tip of the pen.

To select an item as you would with the right button of an external mouse:

- » Press and hold down the pen button, then tap the item with the tip of the pen.

Performing Other Procedures with the Pen

In addition to emulating mouse clicks, the pen can be used for the following tasks:

- To display the pointer location, hold the pen tip immediately over any location on the tablet PC screen without touching the screen with the pen tip.
- To display the menu options related to an item on the screen, tap the screen with the pen tip.
- To write with the pen, write on the screen with the tip of the pen.
- To press a pen-activated button, tap the button with the tip of the pen.

Pressure-Sensitivity

The tablet PC pen is equipped with a pressure-sensitive feature. This means that you can manipulate the pen to create lines of various thickness, depending upon the amount of pressure you use to write.

Calibrating the Pen

The pen can function at the default calibration or at a calibration set by another user. However, HP highly recommends that you use the pen only while it is calibrated to your personal handwriting and mouse action motions. Calibration optimizes pen performance for all users and particularly for left-handed users.

To calibrate the pen:

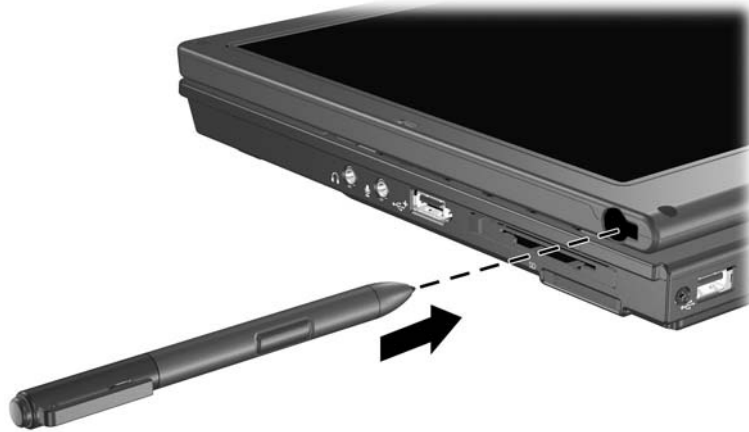
1. Select **Start > Control Panel > Printers and Other Hardware > Tablet and Pen Settings > Settings** tab.
2. Select **Calibrate**.
3. Follow the instructions on the screen.
 - Tap the pen in the exact center of each of the calibration markers. The calibration markers are displayed on the screen as plus signs (+).
 - Be sure to calibrate the pen for use in both portrait and landscape orientations.



You can display information about any setting in the Tablet and Pen Settings window by selecting the question mark button in the upper right corner of the window, then selecting a setting. A definition, explanation, or procedure is displayed.

Using the Pen Holder

To protect the pen when you are not using it, insert the pen, tip first, into the pen holder on the tablet PC.



Setting Pen Preferences

Pen preferences are set in the Tablet and Pen Settings window of the operating system. The preferences include settings that optimize handwriting recognition and the location of on-screen menus for either right-handed or left-handed users. To access the pen settings:

- » Select Start > Control Panel > Printers and Other Hardware icon > Tablet and Pen Settings window > Pen Options tab.

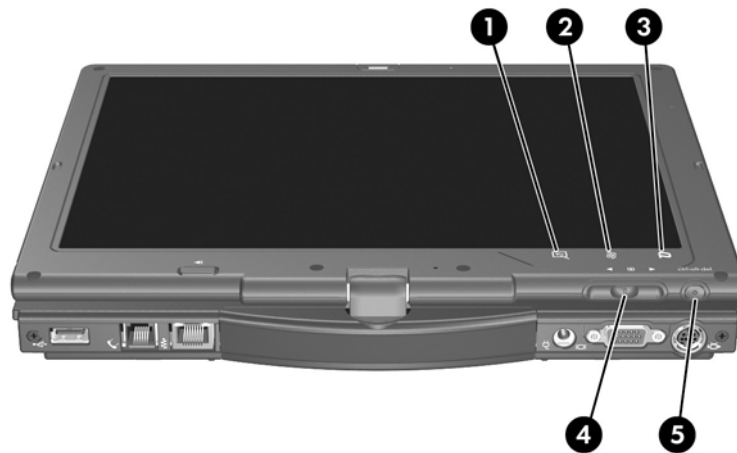
The preferences you set in the Tablet and Pen Settings window are specific to the pen and the tablet PC.

Pointing device preferences, such as pointer speed, click speed, and mouse trails, that apply to any pointing device in the system, are set in the Mouse Properties window. For instructions, refer to [Chapter 3, "Pointing Devices and Keyboard."](#)

Command Controls

The 5 command controls enable you to enter commands usually entered with keyboard keys while you are using the tablet PC without an external keyboard. The command controls can also be used while you are using the on-screen keyboard or an optional keyboard.

Identifying Command Controls



Component	Description
①	Tablet PC Input Panel launch button
②	Q Menu button
③	Rotate button
④	Windows Security button
⑤	Jog dial

Command Controls Quick Reference

The following table identifies the default setting and activation procedure for each command control.

- To activate a pen-activated button, tap the button with the tip of the pen.
- To activate a manually activated button, press and release the button.

Button	Default Function	Activation
Tablet PC Input Panel launch button*	Opens and closes the Tablet PC Input Panel application, which includes a writing pad and the on-screen keyboard.	Pen
Rotate button*	Switches the image between landscape and portrait orientation.	Pen
Q menu button*	Opens and closes the Q Menu.	Pen
Windows Security button*	In Windows, functions like the ctrl+alt+delete command on a standard keyboard. In the Setup utility, functions like the reset button on some computers.	Manual
Jog dial*	Enters commands or scrolls the image upward or downward.	Manual

*These controls are programmable. For instructions, refer to [“Setting Command Control Preferences,”](#) later in this chapter.

Using Command Controls

Tablet PC Input Panel Launch Button

Tap the Tablet PC Input Panel launch button with the pen tip when the tablet PC is in Windows to open the Tablet PC Input Panel application. The Tablet PC Input Panel application displays a keyboard on the screen and can also display a writing pad, which supports handwriting.

To enter the ctrl+alt+delete command, press the Windows Security button on the tablet PC with the pen tip or a small object like the end of a paper clip.

Rotate Button

Tap the rotate button with the pen tip when the tablet PC is in Windows to rotate the image on the screen 90 degrees. For example, if the image is in landscape orientation, tap the rotate button to rotate the image to portrait orientation.

Q Menu Button

Press the Q menu button manually when Windows is running to open or close the Q Menu. The Q Menu provides quick access to programmable tasks and destinations including:

- System controls, such as volume and screen brightness.
- Key simulations such as Capture Screen, which functions like the **print screen** key on a standard keyboard.
- Applications, files, or folders on a drive, a network, or the Internet.

To select an item from the Q Menu without using the pen or a keyboard, press the Q menu button to display the Q Menu, rotate the jog dial upward or downward until your selection is highlighted, then press the jog dial inward.

For more information about using the Q Menu, refer to [Chapter 7, "Q Menu Software."](#)

Windows Security Button

Press the Windows Security button with the pen tip or a small object like the end of a paper clip to enter the ctrl+alt+delete command while you are in Windows or the reset command while you are in the Setup utility.

Ctrl+Alt+Delete Command

When the tablet PC is in Windows, the Windows Security button clears your work from the screen and displays the Windows Security window in which you can lock, log off, or shut down the tablet PC, initiate Standby or Hibernation, or open Task Manager.

- The Shut Down option in the ctrl+alt+delete window enables you to safely shut down the tablet PC if the system has become unresponsive.
- Task Manager displays the status of all open applications and enables you to close an application that has become unresponsive.

If the system remains unresponsive after selecting Shut Down in the Windows Security window, slide and hold the power switch for 4 seconds. For additional shut down procedures, refer to [Chapter 2, “Power.”](#) For information about using the ctrl+alt+delete command in non-Windows applications, refer to the application documentation.

Reset Command

When the Setup utility is open, the Windows Security button simulates the reset button found on some computers. When the tablet PC is reset, the tablet PC restarts and all unsaved information is lost.

The reset function can be used to restore functionality when the system has become unresponsive. For information about the Setup utility, which is a non-Windows utility, refer to [Chapter 11, “Computer Setup.”](#)

Jog Dial

Press or rotate the jog dial manually to enter commands or scroll vertically:

- Press inward to simulate the function of the **enter** key on a standard keyboard.
- Rotate upward or downward to scroll toward the top or bottom of an image.

At the default setting, the jog dial scrolls line by line like the up and down arrow keys on a standard keyboard. The jog dial can be set to scroll page by page like the page up and page down keys on a standard keyboard or three lines at a time like a mouse wheel. Other settings, in addition to scroll functions, are also available. For instructions, refer to [“Setting Command Control Preferences,”](#) next in this chapter.

Setting Command Control Preferences

All command controls except the Display Toggle button and the enter function of the jog dial can be customized to launch applications, simulate key combinations, or perform preset system functions.

Each programmable command control can be assigned to 4 settings. Each setting applies only to 1 of 4 views:

- Portrait-Primary
- Portrait-Secondary
- Landscape-Primary
- Landscape-Secondary

Command control preferences are set in the Tablet and Pen Settings window. You must select a view before setting a preference. Each view is illustrated in the Button Location pane of the Tablet and Pen Settings window as you select it.

If you are unfamiliar with the four views, you may want to read [“Selecting a View”](#) next in this section, before setting a command control preference.

Selecting a View

In the Portrait-Primary and Portrait-Secondary views, the image is displayed vertically, in portrait orientation. In the Landscape-Primary and Landscape-Secondary views, the image is displayed horizontally, in landscape orientation.

- A portrait view is often optimal when you are using the tablet PC as a handheld.
- A landscape view is often optimal when you are displaying the image on an optional external monitor or projector.

In the primary views (Portrait-Primary and Landscape-Primary), the image switches clockwise between vertical and horizontal. In the secondary views (Portrait-Secondary and Landscape-Secondary), the image switches counterclockwise between vertical and horizontal.

- Left-handed users may find the secondary views more convenient.
- HP recommends that you not use a secondary view while using the internal wireless. The positions commonly occupied by the tablet PC, external devices, and users while the tablet PC is in a secondary view may obstruct the antennas.

When you are facing the tablet PC screen with the tablet PC in portrait orientation, the antennas, not visible from the outside of the tablet PC, are on the right and left sides of the tablet PC, near the upper corners.

To switch the system among the Portrait-Primary, Landscape-Primary, Portrait-Secondary, and Landscape-Secondary views:

1. Press the **Q menu** button.
2. Select a view from the Q Menu. (The system switches to the view you select.)

For more information about using the Q Menu, including instructions for adding or removing items from the Q Menu, refer to [Chapter 7, “Q Menu Software.”](#)

Assigning or Changing a Preference

To assign or change the function of a programmable command control:

1. Select **Start > Control Panel > Printers and Other Hardware > Tablet and Pen Settings > Tablet Buttons** tab.
2. In the Button Settings For field, select the view in which you want to use your preference. (The view is illustrated in the Button Location panel.)
3. In the Tablet Button drop-down list, select the button you plan to assign.
 - To assign or change the function of rotating the jog dial upward, select **Up**.
 - To assign or change the function of rotating the jog dial downward, select **Down**.
4. Select **Change**. (The Button Action dialog box opens.)
5. Select your preference in the Button Action dialog box. To save your preference, select **OK** or **Apply**.

Returning All Command Controls to Default Settings

To return the settings on *all* command controls to their default settings:

1. Select **Start > Control Panel > Printers and Other Hardware > Tablet and Pen Settings > Tablet Buttons** tab.
2. In the Button Settings For field, select the view in which you want to change all command controls to their default settings.
3. Select **Reset**. (All command controls are returned to their default settings only in the orientation currently selected.)
4. Select **Apply**, and then select **OK**.

On-Screen Keyboard

The Tablet PC Input Panel application displays a keyboard on the screen. This on-screen keyboard simulates the functions of an optional keyboard.

To open the Tablet PC Input Panel application, tap the Tablet PC Input Panel launch button ❶ with the pen.

- To type, tap a key.
- To switch the keys displayed in the top row between number keys and function keys, tap **Func**.
- To enter the ctrl+alt+delete command, press the Windows Security button ❷ on the tablet PC with the pen tip or a small object like the end of a paper clip. To protect your work and the system, the ctrl+alt+delete command cannot be entered using the **Ctrl**, **Alt**, and **Del** keys on the on-screen keyboard.

For more information about using the Tablet PC Input Panel application, refer to the [“Tablet PC Input Panel Launch Button”](#) section earlier in this chapter.



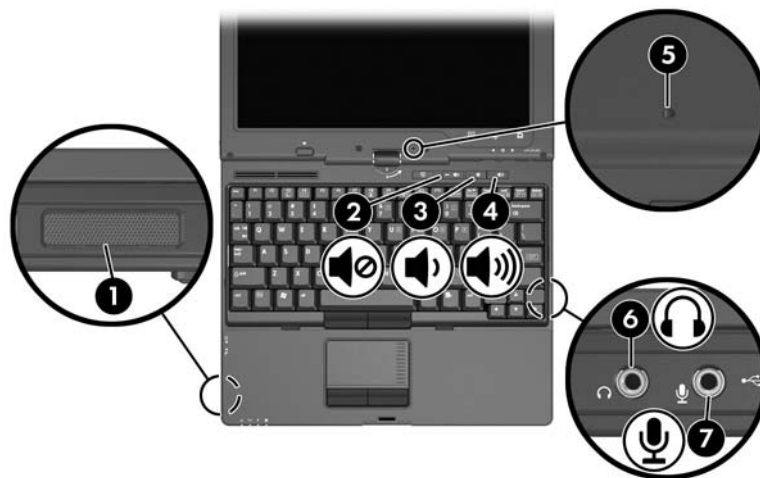
*Illustration
in
Progress*

5

Multimedia

Using Audio Features

The following figure and table describe the audio features of the tablet PC.



Component	Description
❶ Volume mute button	Turns off tablet PC sound.
❷ Volume down button	Decreases tablet PC sound.
❸ Volume up button	Increases tablet PC sound.
❹ Internal microphone	Records sound.

Component	Description
⑤ Audio-out (headphone) jack	Produces system sound when connected to optional powered stereo speakers, headphones, headset, or television audio.
⑥ Audio-in (microphone) jack	Connects an optional monaural or stereo microphone.
⑦ Speaker	Produces tablet PC sound.

Using the Audio-In (Microphone) Jack

The tablet PC is equipped with a stereo microphone jack. When connecting a microphone to the microphone jack, use a microphone with a 3.5-mm plug.

- If you connect a stereo (dual-channel) microphone, stereo sound will be recorded.
- If you connect a monaural (single-channel) microphone, left-channel sound will record on both channels.
- If you connect a dynamic microphone, the recommended sensitivity may not be achieved.



When an external microphone is connected to the tablet PC, the tablet PC internal microphone is disabled.

Using the Audio-Out (Headphone) Jack



WARNING: To reduce the risk of personal injury, adjust the volume before putting on headphones or a headset.



CAUTION: To prevent possible damage to an external device, do not plug a single sound channel (monaural) connector into the headphone jack.

The stereo (dual-channel) headphone jack is used to connect headphones, and also to connect the audio function of an audio/video device such as a television or VCR.

When connecting a device to the headphone jack:

- Use only a 3.5-mm stereo plug.
- For best sound quality, use 24-ohm to 32-ohm headphones.
- The internal speaker is disabled.

Adjusting the Volume

To adjust the volume, use any of the following controls:

- Tablet PC volume buttons
 - To mute or restore volume, press the volume mute button. You can also mute or restore volume by pressing the volume down and volume up buttons simultaneously.
 - To decrease the volume, press the volume down button.
 - To increase the volume, press the volume up button.

- Windows volume control:
 1. Click the **Volume** icon in the notification area (at the far right of the taskbar).
 2. Increase or decrease the volume by moving the slider up or down. (You can also select the check box next to Mute to mute the volume.)

- or -

 1. Double-click the **Volume** icon.
 2. In the Volume Control column, increase or decrease the volume by moving the Volume slider up or down. You can also adjust the balance or mute the volume.



Volume can also be adjusted within some applications.

If the Volume icon is not in the notification area, follow the steps below to place it in the notification area.

1. Select **Start > Control Panel > Sounds, Speech, and Audio Devices > Sounds and Audio Devices**.
2. Select the **Volume** tab.
3. Select the check box for **Place volume icon in the taskbar**.
4. Select **Apply**.

Using Video Features

The tablet PC features a 7-pin, dual-purpose S-Video out jack that connects the tablet PC to an optional S-Video device, such as a television, VCR, camcorder, overhead projector, or video capture card, using an optional, standard (4-pin) S-Video cable. The S-Video out jack features 3 extra pins that enable an optional S-Video-to-composite adapter to be used with the tablet PC.

The tablet PC can support one S-Video device connected to the S-Video out jack while simultaneously supporting an image on the tablet PC display and on any other supported external display. The S-Video connection usually provides an image of higher quality than a composite-video connection provides.

To transmit video signals through the S-Video out jack, you need an S-Video cable, available from most electronics retailers. If you are combining audio and video functions, such as playing a movie from a DVD in an optional MultiBay drive to a television, you also need a standard audio cable, available from most electronics retailers.


Using the S-Video Out Jack

To connect a video device to the S-Video out jack:

1. Plug either end of the S-Video cable into the S-Video out jack on the tablet PC.




2. Connect the other end of the cable to the video device, as instructed in the documentation included with the device.

 If the S-Video out jack on the tablet PC is not accessible because the tablet PC is docked into an optional docking device, you can connect the device to the S-Video out jack on the docking device.

Connecting a Monitor or Projector

To connect an external monitor or projector to the tablet PC, insert the monitor cable into the external monitor port on the back of the tablet PC.



 If a properly connected external monitor or projector does not display an image, try pressing the **fn+f4** hotkey to switch the image to the monitor. You can toggle between displays by pressing the Presentation mode button.

Using CD and DVD Software

The following software is supported for use with the tablet PC:

- Windows Media Player—Plays audio CDs and video DVDs and copies audio and data CDs. This software is included with the Windows operating system.
- InterVideo WinDVD—Plays video CDs and DVD movies. This software is preinstalled on select tablet PCs. You can also obtain this software by any of the following methods:
 - Install WinDVD from the *Driver Recovery* disk provided with most HP tablet PCs.
 - If you do not have the *Driver Recovery* disk, refer to the *Worldwide Telephone Numbers* booklet included with your tablet PC to contact Customer Care for a copy of the Restore solution for you tablet PC.
 - Download the software from the HP Web site:
<http://www.hp.com>
- InterVideo WinDVD Creator Plus—Provides the ability to create, edit and burn movies to a DVD or video CD. This software is located on the InterVideo WinDVD Creator CD, included with select tablet PCs.
- Sonic RecordNow!—Enables you to create copies of data and audio CDs and DVDs and create personalized audio CDs and DVDs. RecordNow! is preinstalled on select tablet PCs.


Observing the Copyright Warning


It is a criminal offense, under applicable copyright laws, to make unauthorized copies of copyright-protected material, including computer programs, films, broadcasts, and sound recordings. This tablet PC should not be used for such purposes.

Installing Software

To install software from a CD that is included with the tablet PC:

1. Insert an appropriate optical drive into an external MultiBay or MultiBay II.
2. Connect the tablet PC to a reliable AC outlet.
3. Close any open applications.
4. Insert a software CD into the optical drive.
 - If Autorun is enabled, an installation wizard is displayed.
 - If Autorun is disabled, select **Start > Run**. Enter:
x:\setup.exe
(where *x* is your CD drive designation), and then select **OK**.
5. When the installation wizard is displayed, follow the installation instructions on the screen.
6. Restart the tablet PC if prompted.

 Repeat the installation procedure for all software you want to install.

 WinDVD Creator has special drive requirements for proper installation. To install WinDVD Creator, refer to the instructions provided with the *InterVideo WinDVD Creator* CD.

Enabling AutoPlay

AutoPlay is an option in Windows that turns the Autorun feature on or off. Autorun starts a program or plays a title on a disc as soon as the disc is inserted into the drive and the drive door is closed. By default, AutoPlay is enabled on the tablet PC.

To disable AutoPlay or to enable AutoPlay if the feature has been turned off, refer to your operating system documentation or visit the Microsoft Web site at: <http://www.microsoft.com>.

Installing the Universal Disc Format Reader

Some CDs or DVDs created with “drag-and-drop” software might not initially run in the tablet PC you are using. The first time you insert a CD or DVD formatted for drag-and-drop software into the optical drive, you might be prompted to install the Universal Disk Format (UDF) Reader. Discs formatted for drag-and-drop software or created using drag-and-drop software contain a copy of the UDF Reader.

To install the UDF Reader:

1. Insert the CD or DVD created with the drag-and-drop software into the optical drive of the tablet PC.
2. Select **Start > Run**. Enter:
x:\udfinst.exe
(where *x* is the CD or DVD drive designation).
3. Select **OK**.
4. Follow the installation instructions on the screen.

Using Windows Media Player

Windows Media Player is included with the Windows operating system. It can be used to play CDs and DVDs and create audio and data CDs. To play a CD or DVD:

1. Insert the CD or DVD into the optical drive, and then close the tray.
2. Wait several seconds, and then:
 - If AutoPlay is enabled, Windows Media Player is opened.
 - If Windows Media Player is not opened, select **Start > (All) Programs > Accessories > Entertainment > Windows Media Player**, and then select the **Play** button to play the disc.

For additional instructions on using this application, select **Help** on the Windows Media Player menu bar.

Using WinDVD Player

InterVideo WinDVD can be used to play video CDs and DVD movies. To locate and install InterVideo WinDVD, refer to the “Installing Software” section in this chapter.

To open WinDVD when AutoPlay has been disabled, select **Start > (All) Programs > InterVideo WinDVD > InterVideo WinDVD**.

For more information about using WinDVD, select **Help** on the WinDVD menu bar.

Using WinDVD Creator Plus (Select Models Only)

WinDVD Creator Plus can be used to create, edit, and burn movies to a DVD or video CD. This software must be installed from the *InterVideo WinDVD Creator* CD provided with select tablet PCs.

WinDVD Creator Plus must be installed using a DVD/CD-RW or DVD+RW/R and CD-RW Combo Drive only. If you do not use one of the these drives, WinDVD Creator Plus will not be installed.

For more information about WinDVD Creator Plus capabilities and instructions on creating DVDs and Video CDs, refer to the WinDVD Creator Plus online help after installing the software.

Using Sonic RecordNow!

Sonic RecordNow! can be used to create backups of data or audio CDs or DVDs, transfer audio files from CDs to a hard drive, and create personalized audio CDs. RecordNow! is preinstalled on your tablet PC. For more information about RecordNow! capabilities and for instructions on creating data and audio CDs and DVDs, refer to the Sonic RecordNow! Tutorial and online help.

Changing DVD Region Settings



CAUTION: The region settings on your DVD drive can only be changed 5 times.

- The region setting you select the fifth time becomes the permanent region setting on the DVD drive.
- The number of allowable region changes remaining on the drive is displayed in the Remaining Times Until Permanent field in the WinDVD window. The number in the field includes the fifth and permanent change.

Most DVDs that contain copyrighted files also contain region codes. The region codes help protect copyrights internationally.

You can play a DVD containing a region code only if the region code on the DVD matches the region setting on your DVD drive.

If the region code on a DVD does not match the region setting on your drive, a Playback Of Content From This Region Is Not Permitted message is displayed when you insert the DVD. To

play the DVD, you must change the region setting on your DVD drive. DVD region settings can be changed through the operating system or through some DVD players.

Changing Settings Using the Operating System

To change settings through the operating system:

1. Open Device Manager by selecting **Start > My Computer**. Right-click in the window and select **Properties > Hardware** tab > **Device Manager**.
2. Select **DVD/CD-ROM drives**, right-click the DVD drive for which you want to change region settings, and then select **Properties**.
3. Make the desired changes on the **DVD Region** tab.
4. Select **OK**.
5. For additional information, refer to the Windows operating system Help and Support.

Changing Settings Using WinDVD

To change the region settings on a drive using WinDVD:

1. Open WinDVD through one of the following methods:
 - Select the WinDVD Player icon on the taskbar.
 - Select **Start > (All) Programs > InterVideo WinDVD > InterVideo WinDVD**.
2. Right-click the WinDVD player window.
3. Select **Setup**.
4. Select the button for the region, and then select your region.
5. Select **OK**.

Changing Settings Using Other DVD Software

To change region settings on a drive using a DVD player other than WinDVD, refer to the documentation provided with the player.

6

Wireless

If your notebook is equipped with an integrated wireless device such as 802.11 or Bluetooth wireless devices, you have a wireless notebook.

- An 802.11 wireless notebook can connect to wireless networks in corporate offices, your home, and public places. Wireless networks include wireless local area networks (WLANs) or “hotspots.” Hotspots are wireless access points available in public places, such as airports, restaurants, coffee shops, hotels, and universities.
- A Bluetooth wireless notebook can connect to other Bluetooth wireless-enabled devices using a wireless personal area network (PAN).

Your notebook has a button that may be used to enable and disable the 802.11 and Bluetooth wireless devices and an associated light to indicate the state of the wireless devices. The following illustration shows the wireless button ❶ and light ❷.



In addition to the wireless button and light, your notebook has software controls that enable you to turn on, turn off, enable, and disable your wireless devices. The following table explains the software controls.

Wireless Control	Description
Wireless Assistant	Is a software utility that enables you to turn on and off the 802.11 and Bluetooth wireless devices individually. For more information on using Wireless Assistant, refer to the “Turning On, Turning Off, Enabling and Disabling the 802.11 Wireless and Bluetooth Devices” section in this chapter.
Computer Setup controls	Enable and disable the 802.11 and Bluetooth wireless devices in Computer Setup. For more information about using Computer Setup to control the 802.11 and Bluetooth wireless devices, refer to Chapter 9, “Computer Setup.”

Wireless Local Area Network (Select Models Only)

With the 802.11 wireless device, you can access a wireless local area network (WLAN), which is composed of other computers and accessories linked by a wireless router or a wireless access point.

- A large scale WLAN, such as a corporate WLAN or public WLAN hotspot, typically use wireless access points, that can handle a large number of computers and accessories and can separate critical network functions.
- A home or small office WLAN typically uses a wireless router, which enables several wireless and wired computers to share an Internet connection, a printer, and files without additional pieces of hardware or software. *Wireless access point* and *wireless router* are often used interchangeably.

Notebooks with 802.11 WLAN devices may support one or more of three IEEE physical layer standards:

- 802.11a
- 802.11b
- 802.11g

There are three popular implementations of WLAN adapters:

- 802.11b only
- 802.11b/g
- 802.11a/b/g

802.11b, the first popular WLAN standard, supports data rates of up to 11 Mbps and operates at a frequency of 2.4 GHz. 802.11g, which came later, also operates at 2.4 GHz but supports data rates of up to 54 Mbps. An 802.11g WLAN device is backward compatible with 802.11b devices, so they can operate on the same network. 802.11a supports data rates of up to 54 Mbps but operates at a frequency of 5 GHz. 802.11a is not compatible with

802.11b and 802.11g. For information on identifying the type of device in your notebook, refer to the “[Identifying a WLAN Device](#)” section in this chapter.

Connecting Your Wireless Notebook to a Corporate WLAN

Contact your network administrator or IT department for information on connecting your notebook to your corporate WLAN.

Connecting Your Wireless Notebook to a Public WLAN

Contact your ISP or search the Web for a list of public WLANs near you. Web sites that list public WLANs include Cisco Hotspot Locator, Hotspotlist, and Geekttools.

When you are within range of a public WLAN, a Wireless Network Connection interactive message is displayed at the bottom of the screen. Check with each public WLAN location for cost and connection requirements.

Setting Up a WLAN in Your Home

To set up a WLAN and connect to the Internet in your home, you need the following equipment. The illustration below shows an example of a completed wireless network installation that is connected to the Internet. This wireless network includes

- An optional broadband modem (either DSL or cable) and high-speed Internet service purchased from an Internet service provider (ISP) ❶.
- An optional wireless router (purchased separately) ❷.
- Your wireless notebook ❸.




As this network grows, additional wireless and wired computers can be connected to the network to access the Internet.




If you need technical assistance to install your WLAN, contact the router manufacturer or your ISP.

Using a WLAN Connection

To use a WLAN connection:

- Verify that all drivers required by the 802.11 wireless device are installed and that the 802.11 wireless device is correctly configured.
 -  If you are using an integrated 802.11 wireless device, all required drivers are installed and the adapter is preconfigured and ready for use.
- If you are using an integrated 802.11 wireless device, verify that the 802.11 wireless device is turned on. When the 802.11 wireless device is turned on, the wireless light is turned on. If the wireless light is off, turn on the 802.11 wireless device. Refer to the [“Turning On, Turning Off, Enabling and Disabling the 802.11 Wireless and Bluetooth Devices”](#) section.
- For your home WLAN, verify that your router is correctly configured. For instructions, refer to your router documentation.

 Functional range for subsequent WLAN connections vary, depending on your notebook WLAN implementation, router manufacturer, and interference from varying types of walls and other electronic devices.

For more information about using a WLAN connection:

- Refer to information from your ISP and the documentation included with your wireless router and other WLAN equipment.
- Access the information and Web site links provided at **Start > Help and Support**.
- Refer to the documentation included with your notebook. The *Troubleshooting* guide on the *Notebook Documentation* CD contains a section about wireless LAN device problems and resolutions.

Using Wireless Security Features

When you set up your own WLAN or access an existing WLAN, always ensure that security features are protecting the WLAN. If you do not enable security on your WLAN, an unauthorized wireless user can access your notebook data and use your Internet connection without your knowledge.

The most common security levels are Wi-Fi Protected Access (WPA)-Personal and Wired Equivalent Privacy (WEP). In addition to enabling WPA-Personal or WEP security encryption on the router, you may want to use one or more of the following security measures:

- Change the default network name (SSID) and password.
- Use a firewall.
- Set security on your Web browser.
- Enable MAC address filtering on the router.

For more information about WLAN security, refer to the HP Web site at <http://www.hp.com/go/wireless> for details.

Installing Wireless Software (Optional)

Microsoft Windows XP supports WLAN configuration with the Zero Client Configuration feature. HP provides a separate WLAN configuration utility that must be installed if you plan to use Cisco Compatible Extensions. Cisco Compatible Extensions enable wireless devices to use Cisco-based WLANs.

Identifying a WLAN Device

To install HP WLAN software for an integrated 802.11 wireless device, you need to know the name of the integrated 802.11 wireless device on your notebook. To identify an integrated 802.11 wireless device:

1. Display the names of all the 802.11 wireless devices on your notebook:
 - a. Select **Start > My Computer**.
 - b. Right-click in the My Computer window.
 - c. Select **Properties > Hardware tab > Device Manager > Network Adapters**.
2. Identify the 802.11 wireless device from the list that is displayed:
 - The listing for an 802.11 wireless device includes the term *wireless LAN, WLAN, or 802.11*.
 - If no 802.11 wireless device is listed, either your notebook does not have an integrated 802.11 wireless device, or the driver for the 802.11 wireless device is not properly installed.

Accessing WLAN Software and Documentation

Your WLAN software is preloaded on your notebook and is available in the Software Setup utility.

To install the WLAN software:

- » Select **Start > All Programs > Software Setup**, and then follow the instructions on the screen. (When you are prompted to select the software you want to install, select or clear the corresponding check boxes.)

The WLAN software is also available as a SoftPaq at the HP Web site. To access, download, and install the SoftPaq, use either of the following procedures:

■ Select **Start > Help and Support**.

-or-

■ Visit the HP Web site at <http://www.hp.com/support>:

- a. Choose your language and region.
- b. Select the **Download Drivers and Software** radio button
- c. Enter your computer model information, and then follow the instructions provided at the Web site.



WLAN software is provided in the Network category. To access model information about your computer, refer to the serial number label. The serial number label is on the bottom of the notebook.

To access documentation for your WLAN software:

1. Install the WLAN software as instructed earlier in this chapter.
2. Open the utility.
3. Select **Help** on the menu bar.

Troubleshooting 802.11 Wireless Devices

For more troubleshooting information, visit the HP Web site (<http://www.hp.com/go/wireless>) or refer to the documentation included with your notebook. The *Troubleshooting* guide on the *Notebook Documentation* CD contains a section about wireless LAN device problems and resolutions.

Bluetooth (Select Models Only)

The Bluetooth device provides short-range wireless communications that replace the physical cable connections that traditionally link electronic devices such as

- Network access points.
- Computers (desktop, notebook, PDA).
- Phones (cellular, cordless, smart phone).
- Imaging devices (printer, camera).
- Audio devices (headset, speakers).

The devices are represented in the Bluetooth for Windows software by graphical icons that resemble their physical features, which makes them easily recognizable and distinguishes them from other classes of devices.

The Bluetooth for Windows software provides the following functions:

- Personal Information Management (PIM) item transfer—Sends and receives information files such as business cards, calendar items, notes, and message items to and from another Bluetooth computer or device.
- PIM synchronization—Synchronizes PIM data between a computer, PDA, or cell phone using Bluetooth.
- File Transfer—Sends and receives files to and from another Bluetooth computer.
- Network access (Personal Area Networking Profile)—Enables two or more Bluetooth devices to form an ad-hoc (peer-to-peer) network. Provides a mechanism that enables a Bluetooth device to access a remote network through a network access point. The network access points can be traditional LAN data access points or group ad-hoc networks that represent a set of devices that are attached only to one another.
- Dial-up networking—Connects Bluetooth devices to the Internet.

- Bluetooth serial port—Transfers data over the Bluetooth link using a virtual COM port.
- Hands-Free—Enables a vehicle-embedded, hands-free unit or a notebook serving as a hands-free unit to establish a wireless connection to a cellular phone and to act as the Bluetooth cellular phone audio input and output mechanism.
- Basic imaging—Provides a wireless connection between a Bluetooth-enabled camera and other Bluetooth devices. The camera can be controlled remotely by a notebook, and images can be transferred from a camera to be stored on a computer or to be printed.
- Human interface device—Provides a wireless connection to other Bluetooth devices, such as keyboards, pointing devices, gaming devices, and remote monitoring devices.
- Fax—Provides a Bluetooth connection that enables a notebook to send or receive a fax message using a Bluetooth cellular phone or modem.
- Headset—Provides a wireless connection between a headset and a notebook or cellular phone. The headset acts as the device's audio input and output mechanism and increases mobility.

For more information about using Bluetooth with your notebook, refer to the *Wireless Documentation* CD included with your notebook.

Turning On, Turning Off, Enabling and Disabling the 802.11 Wireless and Bluetooth Devices

The wireless button ❶ enables and disables 802.11 wireless and Bluetooth devices in conjunction with Wireless Assistant. By default, the 802.11 wireless and Bluetooth devices and wireless light ❷ are turned on when you turn on the notebook.



Turning on a wireless device does not automatically create a WLAN or connect you to a WLAN. For information on setting up a WLAN refer to the “[Wireless Local Area Network \(Select Models Only\)](#)” section in this chapter.



The 802.11 wireless and Bluetooth devices have two power states:

- Enabled
- Disabled

You can enable and disable the wireless devices in Computer Setup. For more information about using Computer Setup to control the 802.11 and Bluetooth wireless devices, refer to [Chapter 9, “Computer Setup.”](#) You can also enable and disable the wireless devices with the wireless button.

When the wireless devices are enabled in Computer Setup and with the wireless button, you can use Wireless Assistant to turn on and off the devices individually.

To view the state of your wireless devices, place the cursor over the Wireless Assistant icon in the notification area, or open Wireless Assistant by double-clicking the icon in the notification area. Wireless Assistant displays the status of the devices as on, off, or disabled. Wireless Assistant also displays the status of the devices in Computer Setup as enabled or disabled.


For more information about Wireless Assistant:

1. Open Wireless Assistant by double-clicking the icon in the notification area.
2. Select the **Help** button.



You cannot use the wireless button or Wireless Assistant to control the wireless devices if they are disabled in Computer Setup.

Turning On the 802.11 Wireless and Bluetooth Devices

If	And	Then
<ul style="list-style-type: none">■ Wireless Assistant shows that both WLAN and Bluetooth are off■ Wireless light is off	You want to turn on either or both devices	<ol style="list-style-type: none">1. Right-click the Wireless Assistant icon in the notification area.2. Select the device or devices you want to turn on. <p> If the wireless devices are turned off, pressing the wireless button disables both devices. The button does not turn on the devices.</p>
<ul style="list-style-type: none">■ Wireless Assistant shows that both WLAN and Bluetooth are disabled*■ Wireless light is off	You want to turn on either or both devices	<ol style="list-style-type: none">1. Press the wireless button. (The devices return to their previous on or off state.)2. If the wireless devices are turned off, right-click the Wireless Assistant icon in the notification area.3. Select the device or devices you want to turn on.
<ul style="list-style-type: none">■ Wireless Assistant shows that one device is on and the other device is off■ Wireless light is on	You want to turn on either or both devices	<ol style="list-style-type: none">1. Right-click the Wireless Assistant icon in the notification area.2. Select the device or devices you want to turn on.

*If the wireless devices are not both on when you disable the devices, pressing the wireless button again returns the devices to their previous on or off state. Pressing the button does not turn on both devices.



If you want your wireless devices to be turned on when you turn on your notebook, you must turn them on before you shut down or restart.

Turning Off and Disabling the 802.11 Wireless and Bluetooth Devices

If	And	Then
■ Wireless Assistant shows that both WLAN and Bluetooth are on	You want to disable both devices	Press the wireless button.
■ Wireless light is on	You want to turn off either or both devices	1. Right-click the Wireless Assistant icon in the notification area. 2. Select the device or devices you want to turn off.
■ Wireless Assistant shows that both WLAN and Bluetooth are off	You want to disable both devices	Press the wireless button.
■ Wireless light is off		
■ Wireless Assistant shows that one device is on and the other device is off*	You want to disable both devices	Press the wireless button.
■ Wireless light is on	You want to turn off both devices.	1. Right-click the Wireless Assistant icon in the notification area. 2. Select the device or devices you want to turn off.

*If the wireless devices are not both on when you disable the devices, pressing the wireless button again returns the devices to their previous on or off state. Pressing the button does not turn on both devices.

DRAFT Revised: 8/24/04
File: Chap6.fm
PN: HP-376186-001

Wireless

7

Q Menu Software

Q Menu

The Q Menu provides quick access to many of the system tasks accessed with the buttons, keys, or hot keys found on most tablet PCs.

You can program the Q Menu to access alternative system tasks or to any item on a drive, a network, or the Internet.

Identifying Q Menu Controls

The jog dial ❶ and the Q Menu button ❷ are used in Q Menu procedures.



Displaying and Closing the Q Menu

The Q Menu can be displayed or closed at any time by using any of the following procedures:

- To display the Q Menu, press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).

If the Q icon is not displayed in the notification area (at the far right of the taskbar):

1. Press the **Q Menu** button.
2. Select **Q Menu Settings**.
3. Select the **Display Q Menu Icon On System Tray** check box.

4. Select **OK**.

If the icon is not displayed, select **Show Hidden Icons** in the notification area (at the far right of the taskbar).

- To close the Q Menu, press the **Q Menu** button or select anywhere outside of the Q Menu.

For information about setting a pen-activated button to open and close the Q Menu, refer to [Chapter 4, “Pen and Command Controls.”](#)

Selecting an Item from the Q Menu

The items on the Q Menu can be selected with the jog dial, the pen, an external mouse, or the pointing devices.

To select an item with the jog dial, rotate the jog dial upward or downward to scroll vertically through the items, then press the jog dial inward to select an item.

Obtaining Information About System-Defined Items

To display a description of a system-defined Q Menu item or to test any Q Menu item by executing the item command:

1. Press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).
2. Select **Q Menu Settings**.
3. On the Items to Display On Q Menu list:
 - ❑ To display a description of a system-defined item, select the item. (A description is displayed in a panel beneath the list.) User-defined items are not described.
 - ❑ To test any item by executing the item command, select the item, and then select **Execute**.

Procedures for using all system-defined items are provided in the [“Using a System-Defined Item”](#) section, later in this chapter.

Setting Q Menu Preferences

The Q Menu can display up to 40 items. Several system-defined items are displayed by default. Additional system-defined and user-defined items can be added. All items, including the default items, can be removed.

The items on the Q Menu are managed from the Items to Display On Q Menu list.

Accessing the Items to Display on Q Menu List

The Items to Display on Q Menu list can be accessed at any time by using either of the following procedures:

- Press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar), and then select **Q Menu Settings**.
- Select **Start > Control Panel > Other Control Panel Options > Q Menu Settings**.

Removing a Q Menu Item

To remove an item from the Q Menu:

1. Press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).
2. Select **Q Menu Settings**.
3. On the Items to Display On Q Menu list, clear the check box for the item you want to remove.
4. Select **Apply > OK**.

Adding a Q Menu Item

An item must be displayed on the Items to Display On Q Menu list before it can be added to the Q Menu.

The Q Menu and the Items to Display on Q Menu list can include no more than 40 items. If the list currently contains 40 items, the Add button is dimmed and unavailable. If the Add button is unavailable, you must remove a listed item before you can add the new item.

Adding a Listed Item to the Q Menu

To add an item from the Items to Display On Q Menu list to the Q Menu:

1. Press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).
2. Select **Q Menu Settings**.
3. Select the check box for the item you want to add.
4. Select **OK**.

To display the Q Menu after adding the item, press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).

Adding an Unlisted Item to the Q Menu

To add an item that is not on the Items to Display on Q Menu list—for example, an item on a drive, network, or the Internet—to both the Items to Display on Q Menu list and to the Q Menu:

1. Press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).
2. Select **Q Menu Settings**.
3. Select **Add**.

4. In the Add New Menu Entry window, you can add the item by typing or by browsing:
 - To add the item using the keyboard, type a name for the item in the Display Name field and type the path to the item in the File Name field. If you prefer to type the Display Name, but browse for the File Name, leave the File Name field blank.
 - To add an item by browsing, select the **Browse** button next to the File Name field.
 - In the window, select the item. (The full name of the item is displayed in the File Name field and, if you did not type a name earlier in the Display Name field, a Display Name is generated from the item name and displayed in the Display Name field.)
5. To confirm your preference(s), select **Apply > OK**.
6. To close the Q Menu window, select **OK**.

To display the Q Menu after adding the item, press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).

Changing a User-Defined Item

User-defined items can be changed, but system-defined items cannot be changed. If you select a system-defined item on the Items To Display on Q Menu list, the Modify button is unavailable.

To change the Display Name and/or File Name of a user-defined item:

1. Press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).
2. Select **Q Menu Settings**.
3. Select the item on the Items To Display On Q Menu list.

4. Select **Modify**.

- To change the Display Name or File Name of the item using the keyboard, type the new name for the item in the Display Name field or type the new path to the item in the File Name field. If you prefer to type the Display Name, but browse for the File Name, leave the File Name field blank.
- To change the Display Name or File Name by browsing, select the **Browse** button beside the File Name field.
- In the window, select the item. (The full name of the item is displayed in the File Name field and, if you did not type a name earlier in the Display Name field, a Display Name is generated from the item name and displayed in the Display Name field.)

5. To confirm your preference(s), select **Apply > OK**.

6. To close the Q Menu window, select **OK**.

To display the Q Menu after changing a Display and/or File Name, press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).

Repositioning a Q Menu Item

To change the location of an item on the Q Menu:

1. Press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).
2. Select **Q Menu Settings**.
3. Select the item on the Items to Display On Q Menu list, then:
 - To move the item upward, select the **Move Up** button.
 - To move the item downward, select the **Move Down** button.
4. To confirm your preference(s) and close the Q Menu window, select **Apply > OK**.

Removing an Item from the Items to Display on Q Menu List

System-defined items cannot be removed from the Items to Display on Q Menu List. To remove a user-defined item:

1. Press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).
2. Select **Q Menu Settings**.
3. Select the item you want to remove.
4. Select **Remove**.
5. To confirm your preference(s) and close the Q Menu window, select **Apply > OK**.

Enabling Automatic Mode Change

Enabling automatic mode change allows the Q Menu software to adjust the display orientation automatically. If you disable this option, the orientation of the display will need to be manually changed.

To enable automatic mode change:

1. Press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).
2. Select **Q Menu Settings**.
3. Select the **Enable Automatic Mode Change** check box.

Allowing All Users to Configure Q Menu

This option allows all user accounts to reconfigure Q Menu. When selected, this change is only applied to that user.

To enable automatic mode change:

1. Press the **Q Menu** button or select the **Q** icon in the notification area (at the far right of the taskbar).
2. Select **Q Menu Settings**.
3. Select the **Allow All Users to Configure Q Menu** check box.

Using a System-Defined Item

As shipped, the Q Menu displays only the items identified below as *default*. All the items described below can be added or removed from the Q Menu. For instructions, refer to “[Setting Q Menu Preferences](#),” earlier in this chapter.

Brightness (Default)

Select **Brightness** to display a pop-up window that enables you to adjust screen brightness with the jog dial. After selecting your preferences, select **OK** in the pop-up window.

Volume (Default)

Select **Volume** to display the operating system volume control window.

Mute On/Off (Default)

If system volume is on, select **Mute On/Off** to mute system volume. If system volume is muted, select **Mute On/Off** to restore system volume.

Capture Screen

Select **Capture Screen** to copy the image currently displayed on the tablet PC screen to the Windows clipboard.

To save or print the image, open an application which supports a screen image, such as Microsoft Word or Microsoft Paint, then paste the image.

For example, to copy the screen image into a Word document:

1. Select **Capture Screen**.
2. Open Word.
3. Place the pointer in the document where you want to paste the image.
4. On the Word menu bar, select **Edit > Paste**.

Capture Window

Select **Capture Window** to copy the image of the currently active window on the tablet PC screen to the Windows clipboard.

To save or print the image, open an application which supports a screen image, such as Microsoft Word or Microsoft Paint, then paste the image.

For example, to copy the an image of the currently active window into a Word document:

1. Select **Capture Window**.
2. Open Word.
3. Place the pointer in the document where you want to paste the image.
4. On the Word menu bar, select **Edit > Paste**.

Tablet Display (Default)

When an optional display device, such as an external monitor or projector, is connected to the external monitor connector on the tablet PC:

To display the image only on the tablet PC:

- » Select **Tablet Display**.



Selecting **Tablet Display** turns off the Extended Desktop option.

External Display

When an optional display device, such as an external monitor or projector, is connected to the external monitor connector on the tablet PC:

To display the image only on the display device:

- » Select **External Display**.



Selecting **External Display** turns off the Extended Desktop option.

Dual Display (Default)

When an optional display device, such as an external monitor or projector, is connected to the external monitor connector on the tablet PC:

To display the image on the tablet PC and the display device:

- » Select **Dual Display**.



Selecting **Dual Display** turns off the Extended Desktop option.

Extended Desktop

The Extended Desktop option extends the display from the tablet PC screen onto the external monitor screen. For example, you could use the Extended Desktop item to display an entire spreadsheet. The left side columns could be displayed on the tablet PC screen and the right side columns could be displayed on the external monitor.

When an optional external monitor is connected to the external monitor connector on the tablet PC:

To turn on the Extended Desktop option:

- » Select **Extended Desktop**.

To turn off the Extended Desktop option:

1. Press the **Q Menu** button.
2. Select **Tablet Display**, **External Display**, or **Dual Display**.

Presentation Mode On/Off (Default)



CAUTION: Presentation mode is integrated with the Q Menu software. If the Q Menu software is uninstalled or disabled, presentation mode will not function.

Presentation mode is a desktop profile that provides the optimal configuration for displaying a presentation, such as a Microsoft PowerPoint presentation, on a projector or external monitor while displaying speaker's notes on the tablet PC.

If you cause the system to initiate a desktop video profile while presentation mode is applied—for example, by docking or undocking—you must reapply presentation mode.

To apply or reapply presentation mode:

- » Select **Presentation Mode On.**

To close presentation mode and return the system to the previous desktop video profile:

- » Select **Presentation Mode Off.**

Portrait-Primary (Default)

To switch the image clockwise to portrait view from landscape view:

- » Select **Portrait-Primary.**

Landscape-Primary (Default)

To switch the image clockwise to landscape view from portrait view:

- » Select **Landscape-Primary.**

Portrait-Secondary

To switch the image counterclockwise to portrait view from landscape view:

- » Select **Portrait-Secondary**.

The default Portrait-Primary item switches the image clockwise to portrait view. Left-handed users may find the Portrait-Secondary item, which switches the image counterclockwise to portrait view, more convenient.



HP recommends that you not use the Portrait-Secondary view while using the internal wireless. The positions commonly occupied by the tablet PC, external devices, and the user while the tablet PC is in the Portrait-Secondary view may obstruct the antennas.

For exact antenna locations, refer to [Chapter 1, “Tablet PC Features.”](#)

Landscape-Secondary

To switch the image counterclockwise to landscape view from portrait view:

- » Select **Landscape-Secondary**.

The default Landscape-Primary item switches the image clockwise to landscape view. Left-handed users may prefer to use the Landscape-Secondary item, which switches the image counterclockwise to landscape view.



HP recommends that you not use the Landscape-Secondary view while using the internal wireless. The positions commonly occupied by the tablet PC, external devices, and the user while the tablet PC is in the Landscape-Secondary view may obstruct the antennas.

For exact antenna locations, refer to [Chapter 1, “Tablet PC Features.”](#)

Standby

To initiate Standby:

- » Select **Standby**.

Hibernate

To initiate Hibernation if Hibernation is enabled:

- » Select **Hibernate**.



Hibernation is enabled by default. If Hibernation is not enabled, selecting **Hibernate** initiates Standby.

To verify that Hibernation is enabled:

- » Select **Start > Control Panel > Performance and Maintenance > Power Options > Hibernate** tab.

If Hibernation is enabled, the **Enable Hibernation** check box is selected.

Shut Down

To immediately close the operating system and shut down the system:

- » Select **Shut Down**. You are not prompted to confirm this action.

Power Controls

To open the operating system Power Options Properties window:

- » Select **Power Controls**.

Tablet PC Settings (Default)

To open the operating system Tablet and Pen Settings window:

- » Select **Tablet PC Settings**.

Q Menu Settings (Default)

To open the Q Menu Settings window:

- » Select **Q Menu Settings**.

Tablet PC Button Driver

The tablet PC button driver allows you to customize the pen-activated buttons and jog dial. You can program the buttons to perform various functions or open specific programs. Each button can be programmed to perform a different function for each orientation, or to perform the same function for all orientations.

To customize a tablet PC button:

1. Select **Start > Control Panel > Printers and other Hardware > Tablet and Pen Settings**.
2. Select the **Tablet Buttons** tab.
3. Select the orientation for which you want to program the button.
4. Select the button you want to program in the Tablet Button column. The button is displayed in the Button location and Detailed view areas of the Tablet Buttons tab.
5. To change the action associated with the button, select **Change**. The Change Tablet Button Actions dialog box is displayed.
6. In the Action drop-down box, select the action that you want the button to perform.
7. Select **OK**.
8. Select **Apply > OK** on the Tablet and Pen settings dialog box.



CAUTION: The tablet PC button driver is integrated with the Q Menu software. If the Q Menu software is uninstalled or disabled, the button driver will not function.

DRAFT Revised: 8/24/04
File: Chap7.fm
PN: HP-367186-001

Q Menu Software

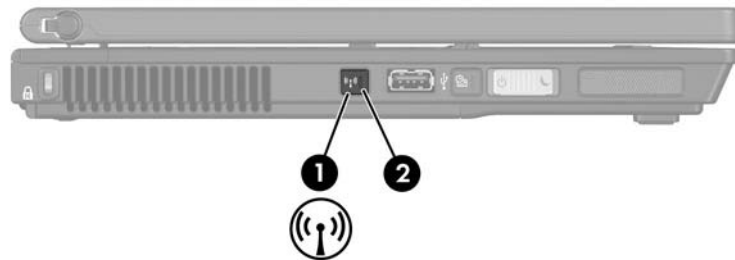
8

Wireless

If your tablet PC is equipped with an integrated wireless device such as 802.11 or Bluetooth wireless devices, you have a wireless tablet PC.

- An 802.11 wireless tablet PC can connect to wireless networks in corporate offices, your home, and public places. Wireless networks include wireless local area networks (WLANs) or “hotspots.” Hotspots are wireless access points available in public places, such as airports, restaurants, coffee shops, hotels, and universities.
- A Bluetooth wireless tablet PC can connect to other Bluetooth wireless-enabled devices using a wireless personal area network (PAN).

Your tablet PC has a button that may be used to enable and disable the 802.11 and Bluetooth wireless devices and an associated light to indicate the state of the wireless devices. The following illustration shows the wireless button ❶ and light ❷.



In addition to the wireless button and light, your tablet PC has software controls that enable you to turn on, turn off, enable, and disable your wireless devices. The following table explains the software controls.

Wireless Control	Description
Wireless Assistant	Is a software utility that enables you to turn on and off the 802.11 and Bluetooth wireless devices individually. For more information on using Wireless Assistant, refer to the “Turning On, Turning Off, Enabling and Disabling the 802.11 Wireless and Bluetooth Devices” section in this chapter.
Computer Setup controls	Enable and disable the 802.11 and Bluetooth wireless devices in Computer Setup. For more information about using Computer Setup to control the 802.11 and Bluetooth wireless devices, refer to Chapter 11, “Computer Setup.”

Wireless Local Area Network (Select Models Only)

With the 802.11 wireless device, you can access a wireless local area network (WLAN), which is composed of other computers and accessories linked by a wireless router or a wireless access point.

- A large scale WLAN, such as a corporate WLAN or public WLAN hotspot, typically use wireless access points, that can handle a large number of computers and accessories and can separate critical network functions.
- A home or small office WLAN typically uses a wireless router, which enables several wireless and wired computers to share an Internet connection, a printer, and files without additional pieces of hardware or software. Wireless access point and wireless router are often used interchangeably.

Tablet PCs with 802.11 WLAN devices may support one or more of three IEEE physical layer standards:

- 802.11a
- 802.11b
- 802.11g

There are three popular implementations of WLAN adapters:

- 802.11b only
- 802.11b/g
- 802.11a/b/g

802.11b, the first popular WLAN standard, supports data rates of up to 11 Mbps and operates at a frequency of 2.4 GHz. 802.11g, which came later, also operates at 2.4 GHz but supports data rates of up to 54 Mbps. An 802.11g WLAN device is backward compatible with 802.11b devices, so they can operate on the same network. 802.11a supports data rates of up to 54 Mbps but operates at a frequency of 5 GHz. 802.11a is not compatible with

802.11b and 802.11g. For information on identifying the type of device in your tablet PC, refer to the [“Identifying a WLAN Device”](#) section in this chapter.

Connecting Your Wireless Tablet PC to a Corporate WLAN

Contact your network administrator or IT department for information on connecting your tablet PC to your corporate WLAN.

Connecting Your Wireless Tablet PC to a Public WLAN

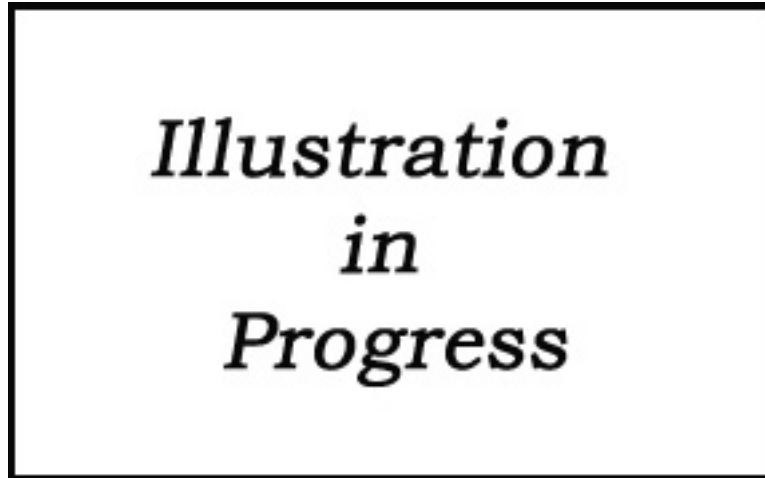
Contact your ISP or search the Web for a list of public WLANs near you. Web sites that list public WLANs include Cisco Hotspot Locator, Hotspotlist, and Geekttools.

When you are within range of a public WLAN, a Wireless Network Connection interactive message is displayed at the bottom of the screen. Check with each public WLAN location for cost and connection requirements.

Setting Up a WLAN in Your Home

To set up a WLAN and connect to the Internet in your home, you need the following equipment. The illustration below shows an example of a completed wireless network installation that is connected to the Internet. This wireless network includes

- An optional broadband modem (either DSL or cable) and high-speed Internet service purchased from an Internet service provider (ISP) ❶.
- An optional wireless router (purchased separately) ❷.
- Your wireless tablet PC ❸.




As this network grows, additional wireless and wired computers can be connected to the network to access the Internet.




If you need technical assistance to install your WLAN, contact the router manufacturer or your ISP.

Using a WLAN Connection

To use a WLAN connection:

- Verify that all drivers required by the 802.11 wireless device are installed and that the 802.11 wireless device is correctly configured.
 -  If you are using an integrated 802.11 wireless device, all required drivers are installed and the adapter is preconfigured and ready for use.
- If you are using an integrated 802.11 wireless device, verify that the 802.11 wireless device is turned on. When the 802.11 wireless device is turned on, the wireless light is turned on. If the wireless light is off, turn on the 802.11 wireless device. Refer to the [“Turning On, Turning Off, Enabling and Disabling the 802.11 Wireless and Bluetooth Devices”](#) section.
- For your home WLAN, verify that your router is correctly configured. For instructions, refer to your router documentation.

 Functional range for subsequent WLAN connections vary, depending on your tablet PC WLAN implementation, router manufacturer, and interference from varying types of walls and other electronic devices.

For more information about using a WLAN connection:

- Refer to information from your ISP and the documentation included with your wireless router and other WLAN equipment.
- Access the information and Web site links provided at **Start > Help and Support**.
- Refer to the documentation included with your tablet PC. The *Troubleshooting* guide on the *Tablet PC Documentation* CD contains a section about wireless LAN device problems and resolutions.

Using Wireless Security Features

When you set up your own WLAN or access an existing WLAN, always ensure that security features are protecting the WLAN. If you do not enable security on your WLAN, an unauthorized wireless user can access your tablet PC data and use your Internet connection without your knowledge.

The most common security levels are Wi-Fi Protected Access (WPA)-Personal and Wired Equivalent Privacy (WEP). In addition to enabling WPA-Personal or WEP security encryption on the router, you may want to use one or more of the following security measures:

- Change the default network name (SSID) and password.
- Use a firewall.
- Set security on your Web browser.
- Enable MAC address filtering on the router.

For more information about WLAN security, refer to the HP Web site at <http://www.hp.com/go/wireless> for details.

Installing Wireless Software (Optional)

Microsoft Windows XP supports WLAN configuration with the Zero Client Configuration feature. HP provides a separate WLAN configuration utility that must be installed if you plan to use Cisco Compatible Extensions. Cisco Compatible Extensions enable wireless devices to use Cisco-based WLANs.

Identifying a WLAN Device

To install HP WLAN software for an integrated 802.11 wireless device, you need to know the name of the integrated 802.11 wireless device on your tablet PC. To identify an integrated 802.11 wireless device:

1. Display the names of all the 802.11 wireless devices on your tablet PC:
 - a. Select **Start > My Computer**.
 - b. Right-click in the My Computer window.
 - c. Select **Properties > Hardware tab > Device Manager > Network Adapters**.
2. Identify the 802.11 wireless device from the list that is displayed:
 - The listing for an 802.11 wireless device includes the term *wireless LAN*, *WLAN*, or *802.11*.
 - If no 802.11 wireless device is listed, either your tablet PC does not have an integrated 802.11 wireless device, or the driver for the 802.11 wireless device is not properly installed.

Accessing WLAN Software and Documentation

Your WLAN software is preloaded on your tablet PC and is available in the Software Setup utility.

To install the WLAN software:

- » Select **Start > All Programs > Software Setup**, and then follow the instructions on the screen. (When you are prompted to select the software you want to install, select or clear the corresponding check boxes.)


The WLAN software is also available as a SoftPaq at the HP Web site. To access, download, and install the SoftPaq, use either of the following procedures:

■ Select **Start > Help and Support**.

-or-

■ Visit the HP Web site at <http://www.hp.com/support>:

- a. Choose your language and region.
- b. Select the **Download Drivers and Software** radio button
- c. Enter your computer model information, and then follow the instructions provided at the Web site.

 WLAN software is provided in the Network category. To access model information about your computer, refer to the serial number label. The serial number label is on the bottom of the tablet PC.

To access documentation for your WLAN software:

1. Install the WLAN software as instructed earlier in this chapter.
2. Open the utility.
3. Select **Help** on the menu bar.

Troubleshooting 802.11 Wireless Devices

For more troubleshooting information, visit the HP Web site (<http://www.hp.com/go/wireless>) or refer to the documentation included with your tablet PC. The *Troubleshooting* guide on the *Tablet PC Documentation* CD contains a section about wireless LAN device problems and resolutions.

Bluetooth (Select Models Only)

The Bluetooth device provides short-range wireless communications that replace the physical cable connections that traditionally link electronic devices such as

- Network access points.
- Computers (desktop, tablet PC, PDA).
- Phones (cellular, cordless, smart phone).
- Imaging devices (printer, camera).
- Audio devices (headset, speakers).

The devices are represented in the Bluetooth for Windows software by graphical icons that resemble their physical features, which makes them easily recognizable and distinguishes them from other classes of devices.

The Bluetooth for Windows software provides the following functions:

- Personal Information Management (PIM) item transfer—Sends and receives information files such as business cards, calendar items, notes, and message items to and from another Bluetooth computer or device.
- PIM synchronization—Synchronizes PIM data between a computer, PDA, or cell phone using Bluetooth.
- File Transfer—Sends and receives files to and from another Bluetooth computer.
- Network access (Personal Area Networking Profile)—Enables two or more Bluetooth devices to form an ad-hoc (peer-to-peer) network. Provides a mechanism that enables a Bluetooth device to access a remote network through a network access point. The network access points can be traditional LAN data access points or group ad-hoc networks that represent a set of devices that are attached only to one another.
- Dial-up networking—Connects Bluetooth devices to the Internet.

- Bluetooth serial port—Transfers data over the Bluetooth link using a virtual COM port.
- Hands-Free—Enables a vehicle-embedded, hands-free unit or a tablet PC serving as a hands-free unit to establish a wireless connection to a cellular phone and to act as the Bluetooth cellular phone audio input and output mechanism.
- Basic imaging—Provides a wireless connection between a Bluetooth-enabled camera and other Bluetooth devices. The camera can be controlled remotely by a tablet PC, and images can be transferred from a camera to be stored on a computer or to be printed.
- Human interface device—Provides a wireless connection to other Bluetooth devices, such as keyboards, pointing devices, gaming devices, and remote monitoring devices.
- Fax—Provides a Bluetooth connection that enables a tablet PC to send or receive a fax message using a Bluetooth cellular phone or modem.
- Headset—Provides a wireless connection between a headset and a tablet PC or cellular phone. The headset acts as the device's audio input and output mechanism and increases mobility.

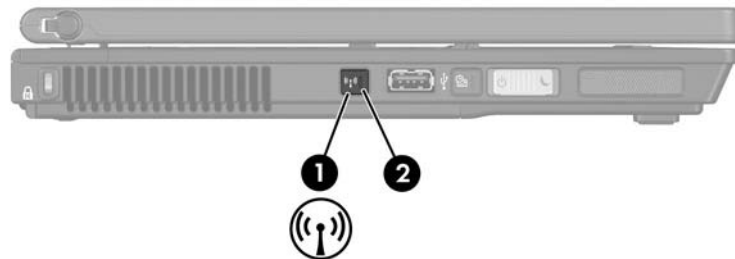
For more information about using Bluetooth with your tablet PC, refer to the *Wireless Documentation* CD included with your tablet PC.

Turning On, Turning Off, Enabling and Disabling the 802.11 Wireless and Bluetooth Devices

The wireless button ❶ enables and disables 802.11 wireless and Bluetooth devices in conjunction with Wireless Assistant. By default, the 802.11 wireless and Bluetooth devices and wireless light ❷ are turned on when you turn on the tablet PC.



Turning on a wireless device does not automatically create a WLAN or connect you to a WLAN. For information on setting up a WLAN refer to the “[Wireless Local Area Network \(Select Models Only\)](#)” section in this chapter.



The 802.11 wireless and Bluetooth devices have two power states:

- Enabled
- Disabled

You can enable and disable the wireless devices in Computer Setup. For more information about using Computer Setup to control the 802.11 and Bluetooth wireless devices, refer to [Chapter 11, “Computer Setup.”](#) You can also enable and disable the wireless devices with the wireless button.

When the wireless devices are enabled in Computer Setup and with the wireless button, you can use Wireless Assistant to turn on and off the devices individually.

To view the state of your wireless devices, place the cursor over the Wireless Assistant icon in the notification area, or open Wireless Assistant by double-clicking the icon in the notification area. Wireless Assistant displays the status of the devices as on, off, or disabled. Wireless Assistant also displays the status of the devices in Computer Setup as enabled or disabled.


For more information about Wireless Assistant:

1. Open Wireless Assistant by double-clicking the icon in the notification area.
2. Select the **Help** button.



You cannot use the wireless button or Wireless Assistant to control the wireless devices if they are disabled in Computer Setup.

Turning On the 802.11 Wireless and Bluetooth Devices

If	And	Then
<ul style="list-style-type: none">■ Wireless Assistant shows that both WLAN and Bluetooth are off■ Wireless light is off	You want to turn on either or both devices	<ol style="list-style-type: none">1. Right-click the Wireless Assistant icon in the notification area.2. Select the device or devices you want to turn on. <p> If the wireless devices are turned off, pressing the wireless button disables both devices. The button does not turn on the devices.</p>
<ul style="list-style-type: none">■ Wireless Assistant shows that both WLAN and Bluetooth are disabled*■ Wireless light is off	You want to turn on either or both devices	<ol style="list-style-type: none">1. Press the wireless button. (The devices return to their previous on or off state.)2. If the wireless devices are turned off, right-click the Wireless Assistant icon in the notification area.3. Select the device or devices you want to turn on.
<ul style="list-style-type: none">■ Wireless Assistant shows that one device is on and the other device is off■ Wireless light is on	You want to turn on either or both devices	<ol style="list-style-type: none">1. Right-click the Wireless Assistant icon in the notification area.2. Select the device or devices you want to turn on.

*If the wireless devices are not both on when you disable the devices, pressing the wireless button again returns the devices to their previous on or off state. Pressing the button does not turn on both devices.



If you want your wireless devices to be turned on when you turn on your tablet PC, you must turn them on before you shut down or restart.

Turning Off and Disabling the 802.11 Wireless and Bluetooth Devices

If	And	Then
■ Wireless Assistant shows that both WLAN and Bluetooth are on	You want to disable both devices	Press the wireless button.
■ Wireless light is on	You want to turn off either or both devices	<ol style="list-style-type: none">1. Right-click the Wireless Assistant icon in the notification area.2. Select the device or devices you want to turn off.
■ Wireless Assistant shows that both WLAN and Bluetooth are off	You want to disable both devices	Press the wireless button.
■ Wireless light is off		
■ Wireless Assistant shows that one device is on and the other device is off*	You want to disable both devices	Press the wireless button.
■ Wireless light is on	You want to turn off both devices.	<ol style="list-style-type: none">1. Right-click the Wireless Assistant icon in the notification area.2. Select the device or devices you want to turn off.

*If the wireless devices are not both on when you disable the devices, pressing the wireless button again returns the devices to their previous on or off state. Pressing the button does not turn on both devices.

DRAFT Revised: 8/24/04
File: Chap8.fm
PN: HP-376186-001

Wireless

9

Security


Security Features Quick Reference



Security solutions are designed to act as deterrents. These deterrents may not prevent a product from being mishandled or stolen.

In addition to the Windows operating system security measures, the tablet PC provides the following security features, most of which can be configured in Computer Setup. For more information, refer to [Chapter 11, “Computer Setup”](#) in this guide.

To Protect Against	Use This Security Feature
Unauthorized use of the tablet PC	Power-on password
Unauthorized access to the Computer Setup utility (f10)	HP administrator password
Unauthorized access to the contents of a hard drive	DriveLock
Unauthorized access to a Windows user account	Optional smart cards An enabled smart card can store the Windows user and Windows administrator passwords; therefore, both the smart card and the smart card PIN are required to access the account.

 This security feature is supported by only certain smart card readers.

To Protect Against	Use This Security Feature
Unauthorized access of data	Windows Firewall software
Unauthorized access to the BIOS settings and other system identification information	HP administrator password, which protects the system information in Computer Setup.
Unauthorized removal of the tablet PC	Security cable slot (used with an optional security cable) For more information on the security cable slot, refer to the “Connecting an Optional Security Cable” section in this chapter.

Setting Security Preferences in Computer Setup

Most security preferences are set in Computer Setup. Because Computer Setup is a non-Windows utility, it does not support the pointing devices on your tablet PC. When using Computer Setup, you must use the keys on your tablet PC to navigate and make selections.

For more details, refer to [Chapter 11, “Computer Setup.”](#)

Using Passwords



CAUTION: If you forget both your DriveLock user and DriveLock master passwords, the hard drive is permanently locked and can no longer be used.

Most security features use passwords. Whenever you set a password, write down the password and store it in a secure location away from the tablet PC.

- If you forget your power-on password, you cannot start up the tablet PC or restore from Hibernation until a service partner resets the tablet PC. To contact a service partner, refer to the *Worldwide Telephone Numbers* booklet included with the tablet PC.
- If you forget your HP administrator password, you will not be able to access Computer Setup.
- If you forget the DriveLock user password but know your DriveLock master password, you can remove DriveLock protection from the drive. For instructions, refer to the “[Using DriveLock](#)” section in this chapter.

HP and Windows Passwords

HP security features and Windows operating system security features work independently from one another. For example, a device disabled in Computer Setup cannot be enabled in Windows.

HP passwords and Windows passwords are also independent of one another. The following table lists the different passwords used by HP and Windows and describes their functions.

HP Passwords*	Function
HP administrator password	Used to access Computer Setup.
Power-on password	Used to access the tablet PC during Startup and when you restart the tablet PC.
DriveLock user password	Used by the day-to-day user to access drives protected by DriveLock at startup.
DriveLock master password	Used by the HP administrator to access drives protected by DriveLock and to remove DriveLock protection from the drive.
Smart card PIN	Stores the Windows administrator and user passwords and is used to access Windows during startup on tablet PCs. Power-on and HP administrator passwords can be stored on smart cards if an optional smart card reader supports this functionality.

*HP passwords must be enabled in Computer Setup. For more information, refer to [Chapter 11, "Computer Setup."](#)

Windows Passwords	
Administrator password	Used to log on to the tablet as the Windows administrator after Windows has been configured to prompt for a password at startup.
User password	Used to log on to the tablet PC as a user after Windows has been configured to prompt for a password at startup.

HP and Windows Password Guidelines

HP and Windows passwords are not interchangeable. You must use an HP password at an HP password prompt and a Windows password at a Windows password prompt. For example:

- If a power-on password is set, the power-on password (not a Windows password) must be entered when the tablet PC starts up or restores from Hibernation.
- If you set Windows to prompt for a password before resuming from Standby, a Windows password (not a power-on password) must be entered to resume from Standby.

The same word or series of letters or numbers used for an HP password can be used for another HP password or for a Windows password, with these considerations:

- HP passwords can be any combination of up to 32 letters and numbers and are not case sensitive.
- An HP password must be set and entered with the same type of keys. For example, an HP password set with keyboard number keys will not be recognized if it is entered with embedded numeric keypad number keys. For information about the embedded numeric keypad, refer to the “[Keypads](#)” section in [Chapter 3, “Pointing Devices and Keyboard.”](#)

Using Power-On Passwords

A power-on password prevents unauthorized use of the tablet PC. After it is set, a power-on password must be entered each time the tablet PC is turned on or restarted. A power-on password:

- Does not display as it is set, entered, changed, or deleted.
- Must be set and entered with the same keys. For example, a power-on password set with keyboard number keys will not be recognized if you enter it with keypad number keys.
- Can include any combination of up to 32 letters and numbers and is not case sensitive.

Setting Power-On Passwords

A power-on password is set, changed, or deleted in Computer Setup. To manage the password:

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower-left corner of the screen.
 - ❑ To change the language, press **f2**.
 - ❑ For navigation instructions, press **f1**.
2. Use the arrow keys to select **Security > Power-On password**, and then press **enter**.
 - ❑ To set a power-on password, type the password in the New Password and Verify New Password fields, and then press **f10**.
 - ❑ To change a power-on password, type the current password in the Old Password field, type the new password in the New Password and Verify New Password fields, and then press **f10**.
 - ❑ To delete a power-on password, type the current password in the Old Password field, and then press **f10**.

3. To save your preferences, use the arrow keys to select **File > Save Changes and Exit**. Then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and take effect when the tablet PC restarts.

Entering Power-On Passwords

At the power-on password prompt, type your password, and then press **enter**. After 3 unsuccessful attempts to enter the password, you must restart the tablet PC and try again.

Requiring a Power-On Password at Restart

You can require that a power-on password be entered each time the tablet PC is restarted. Enable and disable this feature in Computer Setup.

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower-left corner of the screen.
 - To change the language, press **f2**.
 - For navigation instructions, press **f1**.
2. Use the arrow keys to select **Security > Password options > Require password on restart**.
3. Toggle the field to enable or disable, and then press **enter**.
4. Save your preferences by using the arrow keys to select **File > Save Changes and Exit**. Then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and take effect when the tablet PC restarts.

Using HP Administrator Passwords

The HP administrator password protects the configuration settings and system identification information in Computer Setup. After it is set, this password must be entered to access Computer Setup. The HP administrator password

- Is not interchangeable with a Windows administrator password, although both can use the same word or series of letters, or numbers.
- Does not display as it is set, entered, changed, or deleted.
- Must be set and entered with the same keys. For example, an HP administrator password set with keyboard number keys will not be recognized if you enter it with embedded numeric keypad number keys.
- Can include any combination of up to 32 letters and numbers and is not case sensitive.

Setting HP Administrator Passwords

An HP administrator password is set, changed, or deleted in Computer Setup. To manage the password:

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower-left corner of the screen.
 - ❑ To change the language, press **f2**.
 - ❑ For navigation instructions, press **f1**.
2. Use the arrow keys to select the **Security** menu > **Administrator Password**, and then press **enter**.
 - ❑ To set an HP administrator password, type your password in the New Password and Verify New Password fields, and then press **f10**.

- ❑ To change an HP administrator password, type your current password in the Old Password field, type the new password in the New Password and Verify New Password fields, and then press **F10**.
 - ❑ To delete an HP administrator password, type your current password in the Old Password field, and then press **F10**.
3. To save your preferences and exit Computer Setup, use the arrow keys to select **File > Save Changes and Exit**. Then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and take effect when the tablet PC restarts.

Entering HP Administrator Passwords

At the Computer Setup prompt, type your Administrator Password (using the same type of keys you used to set the password), and then press **enter**. After 3 unsuccessful attempts to enter the HP administrator password, you must restart the tablet PC and try again.

Using DriveLock



CAUTION: If you forget the DriveLock user and DriveLock master passwords, the hard drive is permanently unusable.

DriveLock prevents unauthorized access to the contents of a hard drive. After DriveLock protection is applied to a drive, a password must be entered to access the drive. The drive must be inserted into the tablet PC, not an optional docking device (select models only) or external MultiBay, in order for it to be accessed by the DriveLock passwords.

DriveLock involves a user password and a master password:

- A hard drive protected by DriveLock can be accessed with either the user password or the master password.
- You can delete a user password or master password only by removing DriveLock protection from the drive. DriveLock protection can be removed from the drive only with the master password.
- The owner of the user password should be the day-to-day user of the protected hard drive. The owner of the master password may be a system administrator or the day-to-day user.
- A user password and a master password can be the same word.



When you start the tablet PC from a hard drive protected with DriveLock, and your power-on and DriveLock passwords are identical, you will be prompted to enter only a power-on password instead of both a power-on and a DriveLock password.

Setting DriveLock Passwords



CAUTION: If you forget the DriveLock user and the DriveLock master passwords, the hard drive is permanently unusable.



CAUTION: To prevent system lockup and loss of information:

- Shut down the tablet PC before removing the hard drive from the hard drive bay. Do not remove the hard drive while the tablet PC is on, in Standby, or in Hibernation.
 - If you are not sure whether the tablet PC is off or in Hibernation, turn the tablet PC on by pressing the power/standby switch to the left or right. Then shut down the tablet PC through the operating system.
-

To access the DriveLock settings in Computer Setup:

1. Shut down the tablet PC. If you are not sure whether the tablet PC is off or in Hibernation, turn the tablet PC on by pressing the power/standby switch to the left or right, and then shut down the tablet PC through the operating system.
2. Insert the hard drive into the tablet PC (not into an optional docking device or external MultiBay).
3. Open Computer Setup by turning on (not restarting) the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower-left corner of the screen.
 - To change the language, press **f2**.
 - For navigation instructions, press **f1**.
4. Use the arrow keys to select the **Security** menu > **DriveLock passwords**. Then press **enter**.
5. Select the location of the hard drive, and then press **f10**.
6. Toggle the Protection field to **Enable**.
7. Read the warning. To continue, press **f10**.
8. Type your user password in the New Password and Verify New Password fields, and then press **f10**.
9. Type your master password in the New Password and Verify New Password fields, and then press **f10**.
10. To confirm DriveLock protection on the drive you have selected, type DriveLock in the confirmation field, and then press **f10**.
11. To save your DriveLock settings, select **File > Save Changes and Exit**. Then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and take effect when the tablet PC restarts.

Entering DriveLock Passwords

1. Be sure that the drive is inserted into the tablet PC (not an optional docking device or external MultiBay).
2. When prompted for a DriveLock password, type your user or master password (using the same type of keys you used to set the password), and then press **enter**.
3. After 2 incorrect attempts to enter the password, you must restart the tablet PC and try again.

Requiring a Drivelock Password at Restart

You can require that a DriveLock password be entered each time the tablet PC is restarted. Enable and disable this feature in Computer Setup.

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower-left corner of the screen.
 - To change the language, press **f2**.
 - For navigation instructions, press **f1**.
2. Use the arrow keys to select **Security > Password options > Require password on restart**.
3. Toggle the field to enable or disable, and then press **enter**.
4. Save your preferences by using the arrow keys to select **File > Save Changes and Exit**. Then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and take effect when the tablet PC restarts.

Changing DriveLock Passwords



CAUTION: To prevent loss of work and damage to the tablet PC and the hard drive, shut down the tablet PC before inserting or removing a hard drive. (The hard drive is any hard drive used in the hard drive bay.)

To access the DriveLock settings in Computer Setup:

1. Shut down the tablet PC. If you are not sure whether the tablet PC is off or in Hibernation, turn the tablet PC on by pressing the power/standby switch to the left or right, and then shut down the tablet PC through the operating system.
2. Be sure that the hard drive is inserted into the tablet PC (not into an optional docking device or external MultiBay).
3. Open Computer Setup by turning on (not restarting) the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower left of the screen.
 - ❑ To change the language, press **f2**.
 - ❑ For navigation instructions, press **f1**.
4. Use the arrow keys to select the **Security** menu > **DriveLock passwords**, and then press **enter**.
5. Use the arrow keys to select the location of the hard drive, and then press **f10**.
6. Use the arrow keys to select the field for the password you want to change, type your current password in the Old Password field, type the new password in the New Password and in the Verify New Password fields. Then press **f10**.
7. To save your preferences, use arrow keys to select **File > Save Changes and Exit**, and then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and take effect when the tablet PC restarts.

Removing DriveLock Protection

To access the DriveLock settings in Computer Setup:

1. Shut down the tablet PC. If you are not sure whether the tablet PC is off or in Hibernation, turn the tablet PC on by pressing the power/standby switch to the left or right, and then shut down the tablet PC through the operating system.
2. Be sure that the hard drive is inserted into the tablet PC (not into an optional docking device or external MultiBay).
3. Open Computer Setup by turning on (not restarting) the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower-left corner of the screen.
 - ❑ To change the language, press **f2**.
 - ❑ For navigation instructions, press **f1**.
4. Use the arrow keys to select the **Security** menu > **DriveLock passwords**, and then press **enter**.
5. Use the arrow keys to select the location of the hard drive, and then press **f10**.
6. Toggle the Protection field to Disable, and then press **f10**.
7. Type your master password in the Old Password field. Then press **f10**.
8. To save your preferences, use arrow keys to select **File** > **Save Changes and Exit**. Then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and take effect when the tablet PC restarts.

Disabling a Device

From the **Computer Setup Device Security** menu, you can disable or partially disable most ports and drives.

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower-left corner of the screen.
 - To change the language, press **f2**.
 - For navigation instructions, press **f1**.
2. Select the **Security** menu > **Device Security**, and then enter your preferences.
3. To confirm your preferences, press **f10**.
4. To save your preferences, select **File > Save Changes and Exit**. Then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and take effect when the tablet PC restarts.

Using System Information

System information provides details about your tablet PC and battery pack. The following sections explain how to prevent other users from viewing system information and how to configure system information options in Computer Setup.

System Information options allow you to

- Display or enter the tablet PC serial number, asset tag, and ownership tag.
- Display a battery pack serial number.



To prevent unauthorized access to this information, you must create an HP administrator password. For instructions, refer to the [“Setting HP Administrator Passwords,”](#) section earlier in this chapter.

Setting System Information Options

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower left of the screen.
 - To change the language, press **f2**.
 - For navigation instructions, press **f1**.
2. Access or set your preferences by following these directions:
 - To view general system information, select the **File** menu > **System Information**.
 - To view or enter identification values for system components, select the **Security** menu > **System IDs**.
3. To confirm the information or your preferences, press **f10**.
4. To save your information or preferences, use the arrow keys to select **File > Save Changes and Exit**, and then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and take effect when the tablet PC restarts.

Firewall Software

When you use the tablet PC for e-mail, network, or Internet access, it is possible for unauthorized persons to obtain information about you, your tablet PC, and your data. To protect your privacy, it is recommended that you use firewall software.

The Windows operating system firewall is available on your tablet PC and is enabled by default. To learn more about this firewall or to disable or reenable this firewall:

1. Select **Start > Control Panel > Network and Internet Connections > Windows Firewall**.

2. Select the **General** tab.

- To learn more about Windows Firewall, select the **Learn more about Windows Firewall** link.
- To disable Windows Firewall, select **Off (not recommended)**.
- To reenable Windows Firewall, select **On (recommended)**.

3. Select **OK**.

Under some circumstances a firewall can block access to Internet games, interfere with printer or file sharing on a network, or block authorized email attachments. If you are using Windows Firewall and an application attempts an inbound connection to your tablet PC for the first time, a security alert will be displayed. The security alert allows you to configure the firewall permission for the application.

- To allow the application to connect to your tablet PC, select **Unblock this program**. The application is added to the Exceptions list and will not be blocked by Windows Firewall.
- To permanently block the application, select **Keep blocking this program**. Windows Firewall will block the application anytime the application tries to connect.
- To temporarily block the application, select **Keep blocking this program, but ask me again later**. The next time the application attempts to connect to your tablet PC, you will receive the security alert.

To manually add an application to the Windows Firewall Exceptions list so that it will not be blocked by the firewall:

1. Select **Start > Control Panel > Network and Internet Connections > Windows Firewall**.
2. Select the **Exceptions** tab.
3. Select **Add Program** and enter the required information about the application.
4. Select **OK**. The application is added to the Exceptions list and will not be blocked by Windows Firewall.

If you are using an optional firewall and you want to allow a blocked application to connect:

- Temporarily solve the problem by disabling the firewall, performing the task, and then reenabling the firewall.
- Permanently resolve the problem by reconfiguring the firewall. Refer to the firewall documentation or contact the firewall manufacturer.

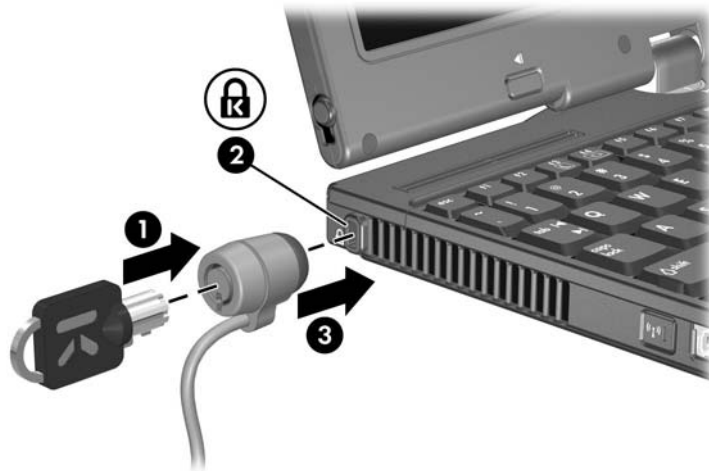
Connecting an Optional Security Cable



Security solutions are designed to act as deterrents. These deterrents may not prevent a product from being mishandled or stolen.

To install a security cable:

1. Loop the security cable around a secured object.
2. Insert the key ❶ into the cable lock ❷.
3. Insert the cable lock into the security cable slot ❸, and lock the cable lock with the key.



HP ProtectTools Security Manager (Select Models Only)

Your tablet PC comes with HP ProtectTools Security Manager preinstalled. This software is accessed through Microsoft® Windows® Control Panel. It provides security features that are designed to help protect against unauthorized access to the tablet PC, networks, and critical data. Add-on modules for HP ProtectTools Security Manager include the following:

- Embedded Security for ProtectTools
- Credential Manager for ProtectTools
- BIOS Configuration for ProtectTools
- Smart Card Security for ProtectTools

Depending on your tablet PC model, add-on modules may be preinstalled, preloaded, or downloaded from the HP Web site. Visit <http://www.hp.com> for more information.

Embedded Security for ProtectTools



You must have the embedded security chip in your tablet PC in order to use Embedded Security for ProtectTools.

Embedded Security for ProtectTools has security features that protect against unauthorized access to user data or credentials, which include:

- Administrative functions, such as ownership and management of the owner pass phrase.
- User functions, such as user enrollment and management of user pass phrases.

- Settings configuration, including setting up enhanced Microsoft EFS and Personal Secure Drive for protecting user data.
- Management functions, such as backing up and restoring the key hierarchy.

Credential Manager for ProtectTools

Credential Manager for ProtectTools has security features that provide protection against unauthorized access to your tablet PC, including the following:

- Alternatives to passwords when logging on to Microsoft Windows.
- Single sign-on capability that automatically remembers credentials for Web sites, applications, and protected network resources.
- Support for optional security devices, such as Smart Cards and biometric fingerprint readers.

For more information, refer to the Credential Manager for ProtectTools online documentation.

BIOS Configuration for ProtectTools

BIOS Configuration for ProtectTools provides access to BIOS security and configuration settings within the HP ProtectTools Security Manager application, which gives users better access to system security features that are managed by the system BIOS.

With BIOS Configuration for ProtectTools, you can:

- Access to power-on user and administrator password management.
- Configure preboot authentication features, such as smart card and power-on password.
- Enable and disable hardware features (such as the enable CD-ROM boot).

- Configure boot options, which includes disabling the ability to boot to drives other than the primary hard drive.



Many of the features in BIOS Configuration for ProtectTools are also available in Computer Setup. Refer to [Chapter 11, “Computer Setup”](#) for additional information.

For more information, refer to the BIOS Configuration for ProtectTools online documentation.

Smart Card Security for ProtectTools

With Smart Card Security for ProtectTools, you can:

- Access optional smart card security features. Security enhancements are supported by the optional HP ProtectTools Smart Card and an optional supported reader, such as the HP PC Card Smart Card Reader.
- Initialize an HP ProtectTools Smart Card so that it can be used with Credential Manager for ProtectTools.
- Work with the BIOS to enable optional smart card authentication in a preboot environment, and to configure separate smart cards for an administrator and a user.
- Set and change the password used to authenticate users to the smart card.
- Backup and restore credentials stored on the smart card.

For more information, refer to the Smart Card Security for ProtectTools online documentation.

10

MultiBoot

A bootable medium or network interface card (NIC) contains files that the tablet PC needs to start and operate properly. The MultiBoot utility, disabled by default, enables you to identify the devices and control the sequence in which the system attempts to boot from those devices as it starts up your tablet PC.

Bootable devices include optical drive discs, such as CDs or DVDs, bootable diskettes, or NICs.



Some devices, including USB devices and NICs, must be enabled in Computer Setup before they can be included in the boot sequence. For more information, refer to [“Enabling Bootable Devices in Computer Setup”](#) in this chapter.

Understanding the Default Boot Sequence

By default, when more than one bootable device is in the system, the tablet PC chooses the startup device by searching enabled devices and locations in a predetermined sequence.

On every boot, the system looks for bootable drive A devices first. If it fails to find a bootable drive A device, it searches for bootable drive C devices. Drive A devices include optical drives and diskette drives. Drive C devices include optical drives and primary hard drives.

The primary hard drive can only boot as drive C. The NIC does not have a drive letter assigned to it.



An optical drive device (such as a CD-ROM drive) can boot either as drive A or drive C, depending on the format of the CD. Most bootable CDs boot as drive A. If you have a CD that boots as the C drive, the system will boot the diskette drive before it boots the CD.

By default, the tablet PC selects the startup device by searching enabled devices and locations in a predetermined sequence.

You can change the sequence in which the tablet PC searches for a startup device by enabling MultiBoot and entering a new startup sequence, also called a *boot order*. Or, you can use MultiBoot Express to set the tablet PC to prompt you for a startup location each time the tablet PC is started or restarted.

The list below describes the default sequence in which drive numbers are assigned. (The actual startup sequence varies by configuration.)

- Default sequence for devices that boot as drive A:
 - a. Optical drive in an optional docking device MultiBay or in an external MultiBay that contains a disc that boots as drive A.
 - b. Diskette drive in an optional docking device or in an external MultiBay.
- Default sequence for devices that boot as drive C:
 - a. An optical drive in an optional docking device MultiBay or in an external MultiBay that contains a disc that boots as drive C.
 - b. Hard drive in the tablet PC primary hard drive bay.
 - c. Hard drive in an optional docking device MultiBay or in an external MultiBay.



Since no drive letter is associated with the NIC, changing the boot order of a NIC does not affect drive letters of the other devices.

Enabling Bootable Devices in Computer Setup

The tablet PC can start up from a USB device or the NIC only if that device has been enabled for inclusion in MultiBoot.

To enable a device or location for inclusion in MultiBoot:

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower-left corner of the screen.
 - ❑ To change the language, press **f2**.
 - ❑ For navigation instructions, press **f1**.
2. To enable bootable media in USB drives or in drives inserted into an optional docking device, use the arrow keys to select **Advanced > Device options**. Then select **Enable USB legacy support**.

-or-

To enable a NIC, select **Security > Device security**.

3. Save your preferences and exit Computer Setup, by using the arrow keys to select **File > Save changes and exit**, and then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and they take effect when the tablet PC restarts.



To connect a NIC to a Preboot eXecution Environment (PXE) or Remote Program Load (RPL) server during startup without using MultiBoot, quickly press **f12** when the Network Service Boot message appears in the lower-right corner of the screen.

Understanding MultiBoot Results

Before changing the startup sequence, consider the following:

- When the tablet PC restarts after the boot order has been changed, it considers only the first device of each drive type when searching for a startup device (except for optical devices).
For example, the tablet PC is connected to an optional docking device containing an optical drive and a diskette drive. In the default boot sequence, the optical drive comes before the diskette drive. If the system fails to boot to the optical drive (either because it does not contain a disc or because the disc is not bootable) it does not try to boot to the diskette drive. Instead, it tries to boot to the first hard drive device present in the system. However, if there are two optical devices, and the first optical device does not boot, the system tries to boot to other optical devices in the system.
- Changing the boot sequence also changes the logical drive designations. For example, if you start up from a CD-ROM drive with a disc that boots as drive C, that CD-ROM drive becomes drive C and the hard drive in the hard drive bay becomes drive D.
- Starting up from a NIC does not affect logical drive designations because no drive letter is associated with the NIC.
- Drives in an optional docking device are treated like external USB devices in the boot sequence and must be enabled in Computer Setup.

Setting MultiBoot Preferences

There are two ways to set MultiBoot sequences:

- Set a new default boot sequence that the tablet PC uses each time it starts up.
- Use variable boot sequences using MultiBoot Express. This feature prompts you for a startup device each time the tablet PC is started or restarted.

Setting a New Default Boot Sequence

To set a startup sequence that the tablet PC uses each time it is started or restarted with Computer Setup:

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower-left corner of the screen.
 - To change the language, press **f2**.
 - For navigation instructions, press **f1**.
2. Use the arrow keys to select **Advanced > Boot options**, and then press **enter**.
3. Toggle the MultiBoot field to **Enable**.
4. Toggle the Boot Order fields to the boot sequence that you prefer.
5. Save your preferences and exit Computer Setup by using the arrow keys to select **File > Save changes and exit**, and then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup, and they take effect when the tablet PC restarts.

Setting a MultiBoot Express Prompt

To set the tablet PC to display the MultiBoot startup location menu each time the tablet PC is started or restarted with Computer Setup:

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower-left corner of the screen.
 - To change the language, press **f2**.
 - For navigation instructions, press **f1**.
2. Use the arrow keys to select **Advanced > Boot options**, and then press **enter**.
3. In the Express Boot Popup Delay (Sec) field, select the length of time in seconds that you want the tablet PC to display the startup location menu before it defaults to the current MultiBoot setting (when 0 is selected, the Express Boot startup location menu is not displayed.)
4. Save your preferences and exit Computer Setup by using the arrow keys to select **File > Save changes and exit**, and then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup, and they take effect when the tablet PC restarts.

Entering MultiBoot Express Preferences

When the **Express Boot** menu is displayed during startup:

- To specify a startup location from the **Express Boot** menu, select your preference within the allotted time, and then press **enter**.
- To prevent the tablet PC from defaulting to the current MultiBoot setting, press any key before the allotted time expires. The tablet PC will not start up until you select a startup location and press **enter**.
- To allow the tablet PC to start up according to the current MultiBoot settings, wait for the allotted time to expire.

DRAFT Revised: 8/24/04
File: Chap10.fm
PN: HP-367186-001


MultiBoot


11

Computer Setup

Using Computer Setup

Computer Setup is a preinstalled, ROM-based utility that can be used even when the operating system is not working or will not load. If the operating system is working, the tablet PC restarts the operating system after you exit Computer Setup.

 Pointing devices are not supported in Computer Setup; you must use the keyboard to navigate and make selections.

 An external keyboard connected by USB can be used with Computer Setup only if USB legacy support is enabled. For more information about USB, refer to the [“Connecting a USB Device”](#) section in the [“Hardware Components”](#) chapter in this guide.

The menu tables later in this chapter provide an overview of Computer Setup options.

Accessing Computer Setup

The information and settings in Computer Setup are accessed from the **File**, **Security**, **Tools**, and **Advanced** menus.

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower-left of the screen.
 - To change the language, press **f2**.
 - To view navigation information, press **f1**.
 - To return to the **Computer Setup** menu, press **esc**.
2. Select the **File**, **Security**, **Tools**, or **Advanced** menu.
3. To exit Computer Setup, choose one of the following:
 - To exit without saving any changes, use the arrow keys to select **File > Ignore changes and exit**, and then follow the instructions on the screen.
 - To exit and save all the settings you have entered, use the arrow keys to select **File > Save changes and exit**, and then follow the instructions on the screen.

Your preferences are set when you exit Computer Setup and take effect when the tablet PC restarts.

Restoring Computer Setup Defaults

To return all settings in Computer Setup to the values that were set at the factory:

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower left of the screen.
 - To change the language, press **f2**.
 - To view navigation information, press **f1**.
2. Use the arrow keys to select **File > Restore defaults**.
3. Select the **Restore Defaults** check box.



4. To confirm the restoration, press **F10**.
5. Select **File > Save changes and exit**, and then follow the instructions on the screen.


When the computer restarts, the factory settings are restored, and any identification information you may have entered is saved.

Selecting from the File Menu

Select	To Do This
System Information	<ul style="list-style-type: none">■ View identification information about the tablet PC and any battery packs in the system.■ View specification information about the processor, memory and cache size, video revision, keyboard controller version, and system ROM.
Save to floppy	Save system configuration settings to a diskette.
Restore from floppy	Restore system configuration settings from a diskette.
Restore defaults	Replace configuration settings in Computer Setup with factory default settings. (Identification information is retained.)
Ignore changes and exit	Cancel changes entered during the current session. Then exit and restart the tablet PC.
Save changes and exit	Save changes entered during the current session. Then exit and restart the tablet PC. The changes you save are in effect when the tablet PC restarts.

Selecting from the Security Menu

Select This Option	To Do This
Administrator password	Enter, change, or delete an HP Administrator password.
Power-On password	Enter, change, or delete a power-on password.
Password options	<ul style="list-style-type: none">■ Enable/disable stringent security■ Enable/disable required password on restart
DriveLock passwords	Enable/disable DriveLock; change a DriveLock user or master password.  DriveLock settings are accessible only when you enter Computer Setup by turning on (not restarting) the tablet PC.
Smart Card Security	Enable/disable power-on support for smart cards.  This feature is supported by select smart card readers only.

Select This Option	To Do This
Embedded Security	<ul style="list-style-type: none">■ Enable/Disable the embedded security chip.■ Restore embedded security chip to factory settings.■ Enable/disable power-on authentication support.■ Enable/disable automatic DriveLock.■ Reset power-on authentication credential. <p> Embedded Security settings are accessible only if the tablet PC is equipped with an embedded security chip.</p>
Device security	<ul style="list-style-type: none">■ Enable/disable devices in the system.■ Enable NIC for inclusion in MultiBoot.
System IDs	Enter user-defined identification values.

Selecting from the Tools Menu

Select	To Do This
HDD Self Test options	Run a quick or comprehensive self-test on any hard drive in the system.
Battery Information	View information about any battery packs in the tablet PC.
Memory Check	<ul style="list-style-type: none">■ Run a self-test on memory modules in the tablet PC.■ View information about memory modules installed in the tablet PC.

Selecting from the Advanced Menu

Select	To Do This
Language (or press f2)	Change the Computer Setup language.
Boot options	<ul style="list-style-type: none">■ Enable/disable QuickBoot, which starts the tablet PC more quickly by eliminating some startup tests. (If you suspect a memory failure and want to test memory automatically during startup, disable QuickBoot.)■ Enable/disable MultiBoot, which sets a startup sequence that can include most bootable devices and media in the system. For details, refer to the "MultiBoot" chapter.■ Set the boot order.

Select	To Do This
Device options	<ul style="list-style-type: none">■ Enable/disable num lock mode at startup.■ Enable/disable multiple standard pointing devices at startup. (To set the tablet PC to support only a single, usually nonstandard, pointing device at startup, select Disable.)■ Select a parallel port mode: EPP (Enhanced Parallel Port), standard, bidirectional, or ECP (Enhanced Capabilities Port).■ Enable/disable USB legacy support for a USB keyboard, mouse, and hub. When USB legacy support is enabled:<ul style="list-style-type: none"><input type="checkbox"/> A USB keyboard, mouse, and hub work even when a Windows operating system is not loaded.<input type="checkbox"/> The tablet PC starts from a bootable hard drive, diskette drive diskette, or CD, CD-RW, or DVD inserted into a drive connected by a USB connector to the tablet PC or to an optional docking device.■ Enable/disable all settings in the SpeedStep window. (When Disable is selected, the tablet PC runs in Battery Optimized mode.)■ Swap the functions of the fn key and left ctrl key.

DRAFT Revised: 8/24/04
File: Chap11.fm
PN: HP-367186-001

Computer Setup

12

HP Client Management Solutions

HP Client Management Solutions provides standards-based solutions for managing client (user) desktop, workstation, and tablet PCs in a networked environment.

The key capabilities and features of client management are

- Initial software image deployment.
- Remote system software installation.
- Software management and updates.
- ROM updates.
- Tracking and security of computer assets (the hardware and software installed on the computer).
- Fault notification and recovery of certain system software and hardware components.



Support for specific features described in this chapter may vary, depending on the computer model and/or version of management software installed on your computer.

Configuration and Deployment

HP computers come with a preinstalled system software image. The initial software image is configured during the first-time setup of the computer. After a brief software “unbundling” occurs, the computer is ready to be used.

A customized software image can be deployed (distributed) by

- Installing additional software applications after unbundling the preinstalled software image.
- Using software deployment tools, such as Altiris Deployment Solutions, to replace the preinstalled software with a customized software image.
- Using a disk cloning process to copy the contents from one hard drive to another.

The deployment method you should use depends on your organization’s technology environment and processes. Visit the HP Web site at <http://www.hp.com/go/pcsolutions> for more information on selecting the best deployment method for your organization.



The system recovery discs, Computer Setup utility, and other system features provide further assistance with recovery of system software, configuration management and troubleshooting, and power management.

HP Client Manager Software

HP Client Manager Software (HP CMS) integrates HP Intelligent Manageability technology within Altiris software. HP CMS provides superior hardware management capabilities for HP devices. It provides

- Detailed views of hardware inventory for asset management.
- *PC health check* monitoring and diagnostics.

- Web-accessible reporting of business-critical details, such as machines with thermal warnings and memory alerts.
- Remote updating of system software such as device drivers and ROM BIOS.



Additional functionality can be added when HP CMS is used with optional Altiris Solutions software (purchased separately).

For more information on HP Client Manager, visit the HP Web site at <http://www.hp.com/go/easydeploy>.

DRAFT Revised: 8/24/04
File: Chap12.fm
PN: HP-367186-001

HP Client Management Solutions

13

Software Update and Recoveries

Preparing to Update Software

For optimal tablet PC performance and to make sure your tablet PC remains compatible with changing technologies, HP recommends that you install the latest versions of HP software as they become available.

To update HP software:

1. Prepare for any update by identifying your tablet PC type, series or family, and model; refer to [“Accessing Tablet PC Information”](#) later in this chapter. Prepare for a system ROM update by identifying (through the Computer Setup utility) the ROM versions currently installed on the tablet PC.
2. Access the updates through your local HP Web site or the *Support Software* CD (purchased separately).
3. Download and install the updates.



The tablet PC system ROM stores the BIOS. The BIOS determines how the tablet PC hardware interacts with the operating system and external devices and also supports such tablet PC services as time and date.



If your tablet PC connects to a network, HP recommends that you consult with your network administrator before installing any software updates, especially system ROM updates.

Obtaining the Support Software CD

The *Support Software* CD provides HP software updates and installation instructions. The CD includes device drivers, ROM updates, and utilities.

To purchase the current *Support Software* CD or a subscription that provides both the current version and future versions of the CD, visit the HP Web site at <http://www.hp.com>.

Accessing Tablet PC Information

To access the updates for your tablet PC, the following information will be needed:

- The product *category* is Tablet PC.
- The product *family* name and *series* number are printed in the lower-right corner of the display bezel.
- *Model* information is provided on the serial number label on the bottom of the tablet PC.

To determine whether available ROM updates contain later ROM versions than those currently installed on the tablet PC, you need to know the version of the system ROM currently installed.

To display ROM information in Computer Setup:

1. Open Computer Setup by turning on or restarting the tablet PC. Press **f10** while the F10 = ROM Based Setup message is displayed in the lower left of the screen.
 - ❑ To change the language, press **f2**.
 - ❑ For navigation instructions, press **f1**.
2. Select **File > System Information**. The system ROM information is displayed.
3. To exit Computer Setup without changing any settings, use the arrow keys to select **File > Ignore changes and exit**, and then follow the instructions on the screen. After Computer Setup closes, the tablet PC restarts in Windows.

For information about using Computer Setup, refer to the [“Computer Setup”](#) chapter.

Downloading Software from the Internet

Most software on the HP Web site is packaged in compressed files called a SoftPaqs. Some ROM updates may be packaged in compressed files called RomPaqs. Other ROM updates may be provided as CPQFlash SoftPaqs.

Most download packages contain a file named Readme.txt. A Readme.txt file contains information regarding installing and troubleshooting the file. The Readme.txt files included with RomPaqs are in English.

Downloading System ROM



CAUTION: To prevent an unsuccessful installation, download and install the system ROM only while the tablet PC is connected to reliable external power using the AC adapter. Do not download or install the system ROM while the tablet PC is running on battery power, docked in an optional port replicator, or connected to an optional power source. During the download and installation:

- Do not unplug the tablet PC from the electrical outlet.
 - Do not shut down the tablet PC.
 - Do not remove or insert a drive.
-

To download and install a system ROM:

1. Access the page on the HP Web site that provides software for your tablet PC.
 2. Follow the instructions on the screen to locate the system ROM you want to download.
 3. At the download area:
 - a. Write down the information (date and name) of any update that is later than the system ROM currently installed on your tablet PC.
 - b. Select the software you want and follow the download instructions on the screen.
 4. When the download is complete, open Windows Explorer.
 5. In Windows Explorer, select My Computer, then the hard drive designation (usually drive C), and then the folder to which you saved the downloaded item.
 6. In the folder, select the name or number of the software package containing the system ROM update. The system ROM installation begins.
 7. To complete the installation, follow the instructions on the screen.
-



After a message on the screen reports a successful installation, you can delete the download package from the folder.

Downloading Other Software

To download and install other software:

1. Access the page at the HP Web site that provides software for your tablet PC.
2. Follow the instructions on the screen to find the software you want to update.
3. At the download area, select the software you want and follow the downloading instructions on the Web page.
4. When the download is complete, open Windows Explorer.
5. In Windows Explorer, select My Computer, then the hard drive designation (usually drive C), and then the folder to which you saved the downloaded item.
6. In the folder, select the name or number of the software package containing the update.
7. Select the file that includes an .EXE extension—for example, FILENAME.EXE. The installation begins.
8. To complete the installation, follow the instructions on the screen.



After a message on the screen reports a successful installation, you can delete the download package from the folder.

System Recovery

The tablet PC system recovery process provides several ways to recover system functionality. The *Driver Recovery* and *Operating System* discs enable you to recover or repair your tablet PC without losing personal data. The *Operating System* disc also allows you to reinstall the operating system software provided with the tablet PC.



For best results, attempt to recover optimal tablet PC functionality by using the following procedures *in the order described here*.

Safeguarding Your Data

Software or devices added to the tablet PC can cause your system to become unstable. To safeguard your documents, store personal files in the My Documents folder and periodically create a backup copy of My Documents.

Setting System Restore Points

Tablet PCs with Windows XP operating systems provide the option of setting system restore points (benchmarks) daily as you change your personal settings. The tablet PC may also set restore points when you add new software or devices. You should periodically set system restore points when the tablet PC is functioning at optimal performance and before installing new software or devices. This enables you to return to a previous configuration restore point if you encounter problems.

To set a system restore point:

1. Select **Start > Help and Support**. Select the task “Use Tools to view your computer information and diagnose problems.” Select **System Restore**. A System Restore window opens.
2. Follow the on-screen directions for setting a restore point.

To restore the tablet PC to a previous date and time when it was functioning optimally:

1. Select **Start > Help and Support > Tools > System Restore**.
2. Follow the on-screen directions for restoring the tablet PC.

Repairing the Operating System

To attempt an operating system repair without deleting your personal data, use the *Operating System* disc that was shipped with the tablet PC:

1. Connect the tablet PC to external power and turn on the tablet PC.
2. Immediately insert the *Operating System* disc into the tablet PC.
3. Press and hold the power button for 5 seconds to turn off the tablet PC.
4. Press the power button again to start the tablet PC.
5. When prompted, press any key to boot from the disc. After a few minutes, the Welcome to Setup screen is displayed.
6. Press **enter** to continue. A Licensing Agreement screen is displayed.
7. Press **f8** to accept the agreement and continue. The Setup window is displayed.
8. Press **R** to repair the selected Windows installation. The repair process begins. This process may take up to 2 hours to complete. The tablet PC restarts in Windows after the process is complete.

Reinstalling the Operating System



CAUTION: Personal data and software you have installed on the tablet PC will be lost during the operating system reinstall. To protect your data, back up your data before reinstalling your operating system. Refer to the Windows online help utility to learn more about backing up your files.

If other recovery efforts do not successfully repair the tablet PC, you can reinstall the operating system.

To reinstall the operating system:

1. Connect the tablet PC to external power and turn on the tablet PC.
2. Immediately insert the *Operating System* disc into the tablet PC.
3. Press and hold the power button for 5 seconds to turn off the tablet PC.
4. Press the power button again to start the tablet PC.
5. When prompted, press any key to boot from the disc. After a few minutes, the Welcome to Setup screen is displayed.
6. Press **enter** to continue. A Licensing Agreement screen is displayed.
7. Press **f8** to accept the agreement and continue. The Setup window is displayed.
8. Press **esc** to continue installing a new copy of the operating system instead of repairing it.
9. Press **enter** to set up the operating system.
10. Press **C** to continue setup using this partition.
11. Select Format the partition using the NTFS file system (Quick) and press **enter**.



CAUTION: Formatting this drive will delete all current files.

12. Press **F** to format the drive. The reinstallation process begins. This process may take up to 2 hours to complete. The tablet PC restarts in Windows when the process is complete.
-



When prompted for the product key, refer to the Microsoft Certificate of Authenticity label located on the bottom of the tablet PC.

Reinstalling Device Drivers and Other Software

After the operating system installation process is complete, you must reinstall drivers.

To reinstall drivers, use the *Driver Recovery* disc included with the tablet PC:

1. While running Windows, insert the *Driver Recovery* disc into the optical drive.

If you do not have Autorun enabled, select **Start > Run**. Then type D:\SWSETUP\APPINSTL\SETUP.EXE (where D indicates the optical drive).

2. Follow the on-screen instructions for installing the drivers.

After the drivers are reinstalled, you must reinstall any software you added to the tablet PC. Follow the installation instructions provided with the software.

DRAFT Revised: 8/24/04
File: Chap13.fm
PN: HP-367186-001

Software Update and Recoveries

14

Specifications

Operating Environment

The operating environment information in the following table might be helpful if you plan to use or transport the tablet in extreme environments.

Factor	Metric	U.S.
Temperature		
Operating (not writing to optical disc)	0°C to 35°C	32°F to 95°F
Operating (writing to optical disc)	5°C to 35°C	41°F to 95°F
Nonoperating	-20°C to 60°C	-4°F to 140°F
Relative humidity (noncondensing)		
Operating	10% to 90%	10% to 90%
Nonoperating	5% to 95%	5% to 95%
Maximum altitude (unpressurized)		
Operating (14.7 to 10.1 psia)	-15 m to 3,048 m	-50 ft to 10,000 ft
Nonoperating (14.7 to 4.4 psia)	-15 m to 12,192 m	-50 ft to 40,000 ft

Rated Input Power

The power information in this section might be helpful if you plan to travel internationally with the tablet PC.

The tablet PC operates on DC power, which can be supplied by an AC or a DC power source. Although the tablet PC can be powered from a stand-alone DC power source, it is strongly recommended that the tablet PC be powered only with an AC adapter or DC power cord supplied or approved by HP.

The tablet PC is capable of accepting DC power within the following specifications:

Input Power	Rating
Operating voltage	18.5 V dc @ 3.5 A - 65 W
Operating current	3.5 A

This product is designed for IT power systems in Norway with phase-to-phase voltage not exceeding 240 Vrms.

Index

A

- AC adapter
 - connecting 2-27
 - disconnecting 2-15
 - AC power 2-15
 - accessing notebook information 11-2
 - adapter, modem 6-27
 - adjusting the volume 5-3
 - Aircraft Power Adapter
 - connecting 2-27
 - airport security devices 6-2
 - altitude specifications 11-1
 - ambient light sensor 3-18
 - analog vs. digital line 6-25
 - applications. *See* software
 - audio-in (microphone) jack 5-2
 - audio-out (headphone) jack 5-2
 - Automobile Power Adapter/Charger
 - connecting 2-27
 - AutoPlay 5-9
 - Autorun 5-9
- ## B
- battery bay
 - inserting battery pack 2-16
 - removing battery pack 2-16
 - battery charge information displays
 - hotkey 3-6
 - increasing accuracy 2-24
 - interpreting 2-25
 - battery packs
 - calibrating 2-28
 - disposing of 2-33
 - monitoring charge 2-24
 - primary 2-16
 - recycling 2-33
 - storing 2-15, 2-32
 - See also* battery power
 - battery power
 - conserving 2-31
 - low-battery conditions 2-26
 - running notebook on 2-15
 - See also* battery packs
 - bays
 - See also* compartments
 - BIOS information, displaying 9-2
 - bluetooth 8-10

- Brightness item on Q Menu
7-9
- button(s)
 - esc 4-10
 - pen 4-2
 - Q menu 4-8
 - reset 4-9
 - rotate 4-8
 - Tablet PC Input Panel
 - launch 4-8
 - Windows Security 1-12,
4-9
 - See also* jog dial; latch;
switch
- buttons
 - PC Card 6-11
 - Presentation mode 3-12
 - See also* battery pack
release latch; display
switch; keys
- C**
- cable lock, security 9-19
- cables
 - modem 6-25
- calibration
 - pen 4-4
- calibration, battery 2-28
- cap, replacing pointing stick
3-2
- Capture Screen item on Q
Menu 7-9
- Capture Window item on Q
Menu 7-10
- card and socket services, PC
Card 6-9
- card. *See* digital media
- CD(s)
 - Support Software* CD 11-1
- CDs
 - See also* recovery discs
- Change Mode Service 7-26
- command controls
 - identified 4-6
 - procedures 4-8
 - Quick Reference 4-7
- compartments
 - See also* bays
- Computer Setup
 - accessing 11-1
 - Advanced menu 11-6
 - changing language in 11-2
 - displaying ROM
 - information with 11-3
 - File menu 11-3
 - navigating 6-33
 - notebook information 11-2
 - procedures 11-1
 - restoring defaults 11-2
 - Security menu 11-4
 - setting security preferences
9-2
 - Tools menu 11-6
 - USB legacy support 6-33,
11-1
- connector(s)
 - drive 6-2
- connectors
 - See also* jacks; ports
- controls, command 4-6
- copyright warning 5-7
- cord

- See also* cables
 - country-specific modem cable adapter 6-27
 - CPQFlash file 11-3
 - critical low-battery condition
 - identifying 2-26
 - restoring from 2-27
 - ctrl+alt+delete command 4-9
- D**
- Desktop Video Profiles 7-16
- device disabling 9-15
- device drivers
 - external devices 6-33
 - PC Card 6-9
- dial, jog
 - described 4-10
 - identified 4-6
- digital vs. analog line 6-25
- disc, optical. *See* CDs; DVDs
- display
 - switching image to or from 3-6, 3-7
- display switch
 - setting preferences 3-16
- docking station
 - affecting presentation mode 7-12
- downloading
 - software 11-5
 - system ROM 11-4
- drive media affected by airport security 6-2
- DriveLock 9-9
- drives
 - affected by airport security 6-2
 - caring for 6-1
 - See also* CDs; DVDs: hard drive
 - shipping 6-2
 - DVD region settings 5-11
 - DVDs
 - See also* recovery discs
- E**
- electrostatic discharge (ESD) 6-2, 6-14
- embedded numeric keypad 3-10
- enablers, PC Card 6-9
- enabling
 - internal keypad 3-10
- enter command 4-10
- environmental specifications 11-1
- esc button
 - procedures 4-10
- ESD (electrostatic discharge) 6-2
- Extended Desktop item on Q Menu 7-11
- external keypad 3-11
- external monitor 5-6
 - switching image 3-7
- External Only item on Q Menu 7-10
- external video 5-4
- F**
- firewall software 9-16
- fn key 3-9, 3-10

- Fn, specific functions of
 - on on-screen keyboard 4–14
- freeze, system 4–9
- function keys (F1, F2, etc.)
 - accessing, on on-screen keyboard 4–14
- H**
- hard drive
 - activity light 6–4
 - caring for 6–1
 - DriveLock 9–9
 - installing, primary 6–7
 - removing, primary 6–5
 - replacing, primary 6–4
- headphone jack 5–2
- headphones 5–3
- Hibernation
 - exiting 1–16, 2–2, 2–26
 - file space requirements for 6–24
 - initiated during critical low-battery condition 2–26
 - initiating 2–9, 7–14
 - resuming from 2–9
- hibernation file 6–24
- holder, pen 4–5
- hotkeys
 - shortcut reference to commands 3–6
 - switch image 3–7
 - with external keyboards 3–9
- HP administrator password 9–8
- HP password 9–4
- HP password guidelines 9–5
- hub, USB 6–32
- humidity specifications 11–1
- I**
- increasing memory 6–24
- infrared 6–29, 6–30
- initiating Hibernation 2–9
- initiating Standby 2–10
- installing CD and DVD software 5–8
- installing the primary hard drive 6–7
- Internal and External item on Q Menu 7–11
- Internal Only item on Q Menu 7–10
- Internet Connection Firewall 9–16
- J**
- jack(s)
 - audio line-out 5–3
 - microphone input 5–3
 - RJ-11 6–25
 - S-Video out 5–5
- jacks
 - See also* connectors: ports
- jog dial
 - procedures 4–10
- K**
- key(s)
 - Fn 3–9, 3–10

- function 3–9
- hotkeys 3–9
- internal keyboard 3–10
- num lk 3–10
- shortcut 3–9
- keyboard
 - external 3–9
 - USB 6–32
- keyboard, external 3–8
- keyboard, external USB
 - supported 4–1
- keyboard, on-screen 4–14
- keypads
 - enabling/disabling 3–10
 - external 3–11
 - internal 3–9
- keys
 - See also* buttons; display switch
- L**
- landscape orientation
 - defined 4–11
- Landscape View, Primary and Secondary 4–11
- Landscape-Primary item on Q Menu 7–12
- Landscape-Secondary item on Q Menu 7–13
- latch
 - See also* buttons: display switch
- light
 - num lock 3–10
- lights
 - IDE drive activity 6–4
- lock, security cable 9–19
- low-battery conditions
 - identifying 2–26
 - resolving 2–27
- M**
- media, drive
 - affected by airport security 6–2
- memory
 - adding expansion memory module 6–14
 - increasing RAM 6–24
 - primary memory module, replacing 6–19
 - upgrading primary board 6–14
- microphone 5–2
 - internal 5–2
 - jack 5–2
- microphone jack 5–2
- modem
 - cable 6–25
 - connecting 6–26
 - country-specific adapter 6–26, 6–27
 - jack 6–25
- modes
 - presentation 7–12, 7–20
 - undocked 7–17
 - viewing 7–17
 - writing 7–19
- monitor
 - switching image 3–16
- monitor, external 5–6
 - switching display 3–7

mouse, external
 setting preferences for 4-1
 supported 4-1

MultiBay II
 external 6-34

Mute On/Off item on Q Menu
 7-9

N

network
 connecting 6-29
 noise suppression circuitry
 6-28

num lock
 key 3-10
 light 3-10

number
 keys, on on-screen
 keyboard 4-14

numeric keypad 3-10
 numeric keypad. *See* keypad,
 external; keypad, internal

NVIDIA nView Desktop
 Manager Utility 7-16

O

operating environment
 specifications 11-1

operating system 9-16
 passwords 9-4
 security 9-1

optical disc. *See* CDs; DVDs

optical drive
 activity light 6-4
See also CDs; drives;
 DVDs

overhead projector

switching display to or
 from 3-6

P

passwords

DriveLock 9-10

forgetting 9-3

HP 9-4

HP administrator 9-8

HP guidelines 9-5

power-on 9-6

using 9-3

Windows 9-4

Windows guidelines 9-5

passwords, coordinating 9-5

PC Card

buttons 6-11

enablers and card and
 socket services 6-9

inserting 6-9, 6-10

removing 6-11

stopping 6-11

types 6-9

PCMCIA cards 6-9

pen

attaching 4-5

button 4-2

calibration 4-4

components 1-1

entering information with
 4-2

Help and tutorials 4-1

Journal application 4-1

pen-activated buttons 4-6

setting preferences for 4-5

- pointing device preferences
3-4
 - pointing device(s)
 - command controls 4-6
 - pen 4-1
 - setting preferences for 4-5
 - pointing stick
 - cap, replacing 3-2
 - using 3-2
 - Port Replicator (optional)
 - enabling USB legacy support 11-7
 - identification information 11-3
 - port, infrared 6-29
 - portrait orientation
 - defined 4-11
 - Portrait View, Primary and Secondary 4-11
 - Portrait-Primary item on Q Menu 7-12
 - Portrait-Secondary item on Q Menu 7-12
 - ports
 - See also* connectors; jacks
 - power
 - schemes 3-15
 - See also* battery pack; Hibernation; shutdown procedures; Standby switching between AC and battery 2-15
 - See also* battery power
 - Power Controls item on Q Menu 7-14
 - power cord
 - See also* cables
 - power-on password. *See* passwords
 - presentation mode
 - described 7-20
 - Presentation Mode On/Off item on Q Menu 7-12
 - profile for 7-22
 - Presentation mode button 3-12
 - Presentation mode preferences, setting 3-15
 - profiles, Desktop Manager Utility 7-16
 - projector 5-6
 - switching display 3-7
- Q**
- Q Menu
 - button 7-2
 - closing 7-2
 - controls 7-2
 - described 4-8
 - displaying 7-2
 - icon 7-2
 - items, number supported 7-4
 - items, obtaining
 - information about 7-3
 - selecting item from 7-3
 - setting preferences for 7-4
 - testing items on 7-3
 - Q menu button
 - procedures 4-8
 - Q Menu system-defined items
 - Brightness 7-9

- Capture Screen 7–9
 - Capture Window 7–10
 - Extended Desktop 7–11
 - External Only 7–10
 - Hibernate 7–14
 - Internal and External 7–11
 - Internal Only 7–10
 - Landscape-Primary 7–12
 - Landscape-Secondary 7–13
 - Mute On/Off 7–9
 - Portrait-Primary 7–12
 - Portrait-Secondary 7–12
 - Power Controls 7–14
 - Presentation Mode On/Off 7–12
 - Q Menu Settings 7–15
 - Shut Down 7–14
 - Standby 7–14
 - Tablet PC Settings 7–15
 - Volume 7–9
 - Wireless On/Off 7–9
- R**
- RAM (random access memory) 6–24
 - rated input power specifications 11–2
 - region settings, DVD 5–11
 - replacing
 - primary hard drive 6–4
 - replacing the primary memory module 6–19
 - reset (emergency shut down) 4–9
 - resuming from Hibernation 2–9
 - resuming from Standby 2–10
 - ROMPaq 11–3
 - rotate button
 - procedures 4–8
 - setting preferences for 4–11
- S**
- Safeguarding Data 11–6
 - SD (Secure Digital) Card 6–12, 6–13
 - security cable lock, connecting 9–19
 - security features on notebook
 - Computer Setup 9–2
 - Quick Reference 9–1
 - Setup utility
 - resetting the tablet PC 4–9
 - setting security preferences 9–2
 - shortcut keys
 - with external keyboards 3–9
 - shutting down the notebook 2–8
 - shutting down the tablet PC 4–9
 - slots
 - memory 6–22
 - SD Card 6–12
 - socket services, PC Card 6–9
 - SoftPaq 11–3
 - software
 - firewall 9–2, 9–16

- Q Menu 7-1
 - setting up 4-2
 - Setup utility 4-9
 - Tablet PC Input Panel 4-14
 - Task Manager 4-9
 - Windows Security window 4-9
 - software updates 11-1
 - CPQFlash file 11-3
 - determining current version of system ROM 11-2
 - identifying software packages 11-3
 - ROMPaq 11-3
 - SoftPaq 11-3
 - updating system ROM from Internet 11-3
 - Sonic RecordNow! 5-11
 - speakers 5-2
 - speakers, external
 - connecting 5-3
 - specifications
 - operating environment 11-1
 - rated input power 11-2
 - Standby
 - avoiding with infrared 6-31
 - exiting 1-16, 2-2
 - initiated during critical low-battery condition 2-26
 - initiating 2-10, 7-14
 - initiating with hotkey 3-6
 - resuming from 2-10
 - Standby item on Q Menu 7-14
 - Support Software CD 11-1
 - S-Video 5-4
 - connecting cable 5-5
 - jack 5-5
 - switch, display
 - setting preferences 3-16
 - switching display and image 3-6
 - system information 3-6
 - system information, displaying 9-16
 - system lockup 4-9
 - System Restore Points 11-6
 - system ROM (Read Only Memory)
 - defined 11-1
 - determining current version of 11-2
- T**
- tab button
 - procedures 4-9
 - Tablet PC Button Driver 7-27
 - Tablet PC Input Panel
 - application 4-14
 - Tablet PC Input Panel launch button
 - procedures 4-8
 - Tablet PC Settings item on Q Menu 7-15
 - telephone (RJ-11) jack
 - modem cable 6-25
 - television
 - connecting audio 5-5
 - connecting video 5-5

- S-Video jack 5-5
- switching image to or from 3-6
- temperature
 - specifications 11-1
 - storage, for battery packs 2-32
- traveling with notebook
 - environmental
 - specifications 11-2
 - traveling with the notebook
 - Aircraft Power Adapter 1-11, 2-27
 - Automobile Power Adapter/Charger 2-27
 - battery pack temperature considerations 2-32
 - protecting hardware connectors 6-12
- turning off the tablet PC 4-9
- turning the notebook on or off 2-8
- U**
 - UDF (Universal Disc Format) Reader 5-9
 - undocked mode
 - described 7-17
 - profile for 7-21
 - Universal Disc Format (UDF) Reader 5-9
 - updating software 11-1
- USB
 - connectors 6-32
 - devices 6-32, 6-33
 - hubs 6-32
 - legacy support 6-33
- USB legacy support 11-1
- user passwords. *See* passwords
- V**
 - VCR
 - connecting audio 5-5
 - connecting video 5-5
 - switching image to or from 3-6
 - video devices
 - S-Video jack 5-5
 - switching image to or from 3-6
 - viewing mode
 - described 7-17
 - profile for 7-21
 - volume
 - down button 5-1
 - mute 5-1
 - mute light 5-1
 - up button 5-1
 - volume controls 5-3
 - Volume item on Q Menu 7-9
- W**
 - Windows administrator
 - password. *See* passwords
 - Windows firewall 9-2, 9-16
 - Windows Media Player 5-10
 - Windows password guidelines 9-5
 - Windows Security button
 - identified 1-12
 - procedures 4-9
 - Windows user password. *See* passwords

- WinDVD Creator Plus 5–10
- WinDVD Player 5–10
- wireless
 - button 8–12
 - types of WLAN adapters 8–8
 - wireless local area network (WLAN) 8–7
 - WLAN software 8–9
- Wireless On/Off item on Q Menu 7–9
- WLAN
 - identifying devices 8–7
 - software 8–9
 - troubleshooting 8–9
 - types 8–8
- writing mode
 - described 7–19
 - profile for 7–21

DRAFT Revised: 8/24/04
File: 367426-001IX.fm

PN: CPQ-CPQ Part Number HP-367186-001 U-Unbranded Part Number

Index
