Hardware and Software Guide

HP Tablet PC Series

Document Part Number: 367426-001

March 2005

This guide explains how to identify and use tablet PC hardware features, including connectors for external devices, and provides settings and procedures for managing tablet PC power and security. It also includes power and environmental specifications, which may be helpful when traveling with the tablet PC, as well as instructions for obtaining system information and using setup utilities to help detect, solve, and prevent problems.

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Hardware and Software Guide
HP Tablet PC Series
First Edition March 2005
Reference Number: tc4200
Document Part Number: 367426-001

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1

Component ID

Top Components

Lights
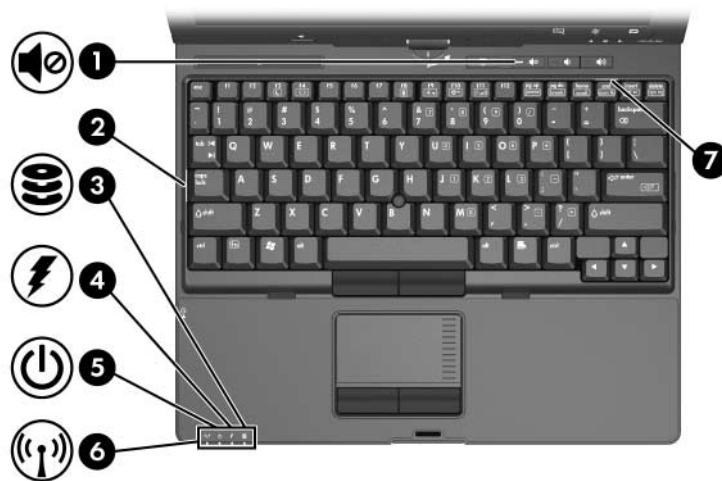
Component	Description
❶ Volume mute light	On: System sound is turned off.
❷ Caps lock light	On: Caps lock is on.
❸ IDE (Integrated Drive Electronics) drive light	On: A drive in the hard drive bay is being accessed.

Component ID

Component		Description
❹	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, when the light begins blinking amber.
❺	Power/standby light	Green: The tablet PC is on.
		Blinking green: The tablet PC is in standby mode.
❻	Wireless light*	On: One or more optional internal wireless devices, such as a WLAN device and/or Bluetooth® device, are turned on.
❼	Num lock light	On: Num lock is on or the embedded numeric keypad is enabled.

*For information about establishing a wireless link, visit http://www.hp.com/go/wireless.

Pointing Devices

Component		Description
❶	Pointing stick	Moves the pointer.
❷	Left pointing stick button	Functions like the left button on an external mouse.
❸	TouchPad*	Moves the pointer. Can be set to perform other mouse functions, such as scrolling, selecting, and double-clicking.
❹	Left TouchPad button*	Functions like the left button on an external mouse.
❺	Right TouchPad button*	Functions like the right button on an external mouse.
❻	Touchpad scroll zone*	Scrolls upward or downward.
❼	Right pointing stick button	Functions like the right button on an external mouse.

*This table describes default settings. For information about changing the functions of TouchPad features, refer to the "Setting Mouse Properties" section in Chapter 3, "Pointing Devices and Keyboard."

Component ID
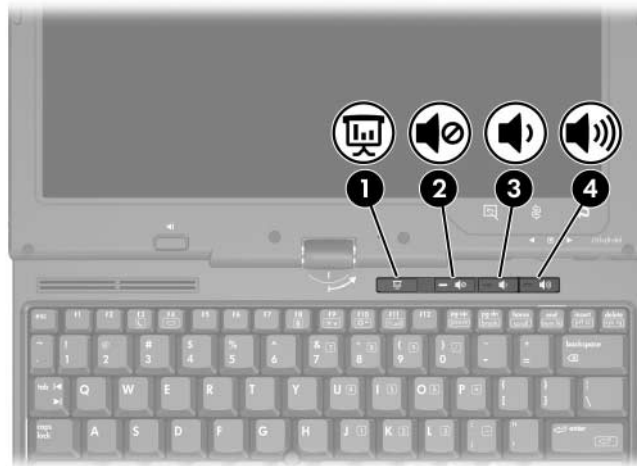
Buttons

	Component	Description
❶	Presentation mode button	Turns on Presentation mode.
❷	Volume mute button	Mutes or restores volume.
❸	Volume down button	Decreases tablet PC sound.
❹	Volume up button	Increases tablet PC sound.
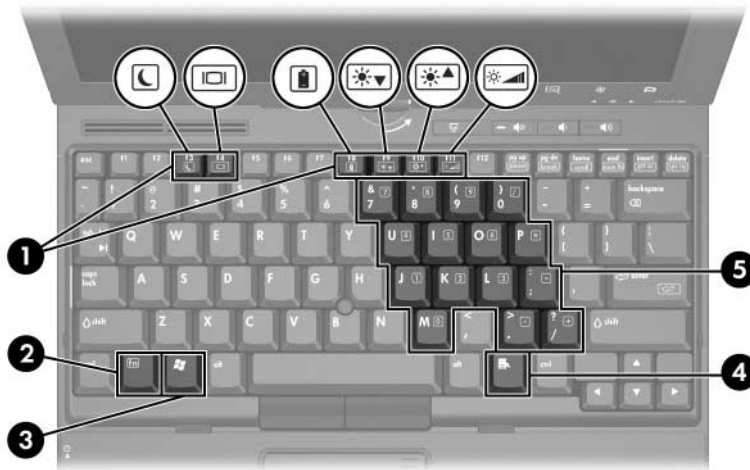
Component ID

Keys

	Component	Description
❶	Function keys (12)	Perform system and application tasks. When combined with the **fn** key, the function keys **f3, f4,** and **f8** through **f11** perform additional tasks as hotkeys.
❷	**fn** key	Executes frequently used system functions when pressed in combination with a function key or the **esc** key.
❸	WIndows logo key	Displays the Microsoft Windows Start menu.
❹	Windows applications key	Displays a shortcut menu for items beneath the pointer.
❺	Keypad keys (15)	Can be used like the keys on an external numeric keypad.

Component ID

Pen-Activated Buttons
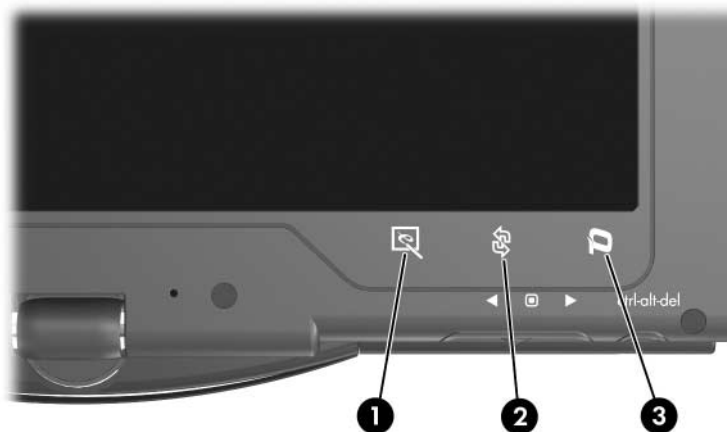
Component		Description
❶	Tablet PC Input Launch button*	When Windows is running, opens the Microsoft Tablet PC Input Panel application, which includes a handwriting pad and an on-screen keyboard.
❷	Rotate button*	Switches the image between landscape and portrait orientation.
❸	**Q** button*	When Windows 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 button, refer to Chapter 4, "Pen and Command Controls."

Component ID

Display Components
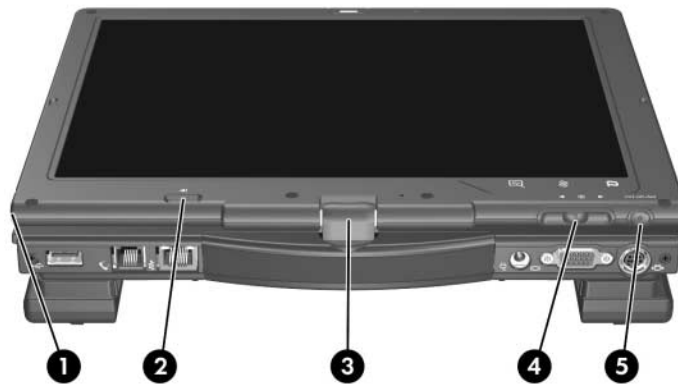
	Component	Description
	Pen tether eyelet	Enables you to tether the pen to the tablet PC.
❶	Pen holder	Secures the pen to the tablet PC.
❷	Pen eject button	Ejects the pen from the pen holder.
❸	Rotating hinge	Swivels the display and converts the tablet PC from notebook mode into a tablet PC mode.

Component ID

Component		Description
❹	Jog dial*	Functions like **enter** and the up and down arrow keys on a standard keyboard.
		■ Press inward to enter a command.
		■ Rotate upward to scroll upward.
		■ Rotate downward to scroll downward.
❺	Windows Security button*	When pressed while:
		■ 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.

Front Components

	Component	Description
❶	Infrared port	Provides wireless communication between the tablet PC and an optional IrDA-compliant device.
❷	Bluetooth module (select models only)	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.

Component ID

Rear Components

Component		Description
❶	USB port	Connects USB 1.1- and 2.0-compliant devices to the tablet PC using a standard USB cable.
❷	RJ-11 (modem) jack	Connects a modem cable.
❸	RJ-45 (network) jack	Connects a network cable.
❹	Power connector	Connects an AC adapter, an optional HP 90W Auto Adapter, or an HP 90W DC Aircraft Power Cable.
❺	External monitor port	Connects an optional VGA external monitor or overhead projector.
❻	S-Video-out jack	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. The extra 3 pins also enable an optional S-Video-to-composite adapter to be used with the tablet PC.

Component ID

Right-Side Components
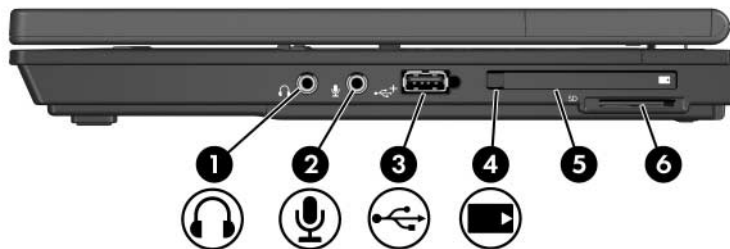
Component	Description
❶ Audio-out (headphone) jack	Connects optional headphones or powered stereo speakers. Also connects the audio function of an audio/video device, such as a television or VCR.
❷ Audio-in (microphone) jack	Connects an optional monaural (single sound channel) or stereo (dual sound channel) 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 external MultiBay II to the tablet PC. This USB port is a powered port that can be used without external power.
❹ PC Card eject button	Ejects PC Cards from the PC Card slot.
❺ PC Card slot	Supports optional Type I, Type II, 32-bit (CardBus), or 16-bit PC Cards.
❻ Digital memory card slot	Accepts SD (Secure Digital) Memory Cards or MultiMediaCards.

Component ID

Left-Side Components

Component		Description
❶	Security cable slot	Attaches an optional security cable to the tablet PC.
		⚠ Security solutions are designed to act as deterrents. These deterrants may not prevent a product from being mishandled or stolen.
❷	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.
❸	Wireless button (select models only)*	Turns the wireless functionality of the WLAN or Bluetooth device on or off, but does not establish a connection.
		✎ To establish a wireless connection, a wireless network must already be set up. For information about establishing a wireless connection, visit http:www.hp.com/go/wireless.

Component	Description
❹ USB port	Connects a USB 1.1- and 2.0-compliant device to the tablet PC using a standard USB cable.
❺ Info Center button	Enables you to view a list of commonly used software solutions.
❻ Power switch*	When the tablet PC is ■ Off, slide toward the rear of the tablet PC and release to turn on the tablet PC. ■ In standby, slide toward the rear of the tablet PC and release to exit standby. ■ In hibernation, slide toward the rear of the tablet PC and release to exit hibernation. If the tablet PC has stopped responding and Microsoft® Windows® shutdown procedures cannot be used, slide toward the rear of the tablet PC and hold for 5 seconds to turn off the tablet PC.
❼ Speaker	Produces tablet PC sound.

*This table describes default settings. For information about changing the functions of the power features, refer to the "Power Options" section in Chapter 2, "Power." For information about changing the functions of the wireless features, refer to Chapter 13, "Wireless."

Bottom Components
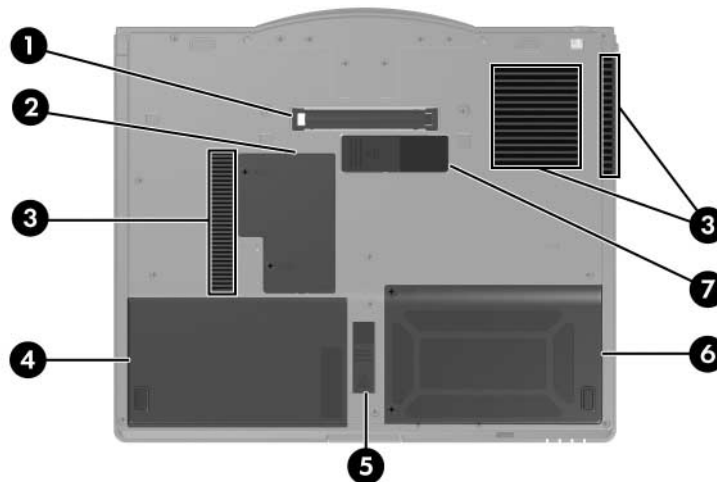
	Component	Description
❶	Docking connector	Connects the tablet PC to an optional docking device.
❷	Expansion memory module compartment	Contains one expansion memory slot.
❸	Vents (3)	Enable airflow to cool internal components. ⚠ To prevent overheating, do not obstruct vents. Using the tablet PC on a soft surface, such as a pillow, blanket, rug, or thick clothing, may block airflow.
❹	Primary battery bay	Holds the primary battery pack.
❺	Primary battery release latch	Releases the primary battery pack from the battery bay.
❻	Hard drive bay	Holds the primary hard drive.
❼	Travel battery connector	Connects an optional travel battery.

Component ID

Wireless Antennae

Component	Description
Antennae (2) (select models only)*	Send and receive wireless 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.

*The antennae are not visible from the outside of the tablet PC. For optimal transmission, keep the areas immediately around the antennae free from obstructions.

Component ID

Magnets

Component	Description
Magnets (3)	Top left: Releases the display latch.
	Top right: Switches the panel orientation from landscape to portrait mode.
	Bottom: Initiates standby if the display is closed while the tablet PC is turned on.
	$\triangle$ Keep diskettes and other magnetic media away from magnetic fields, which can erase your data.

Component ID
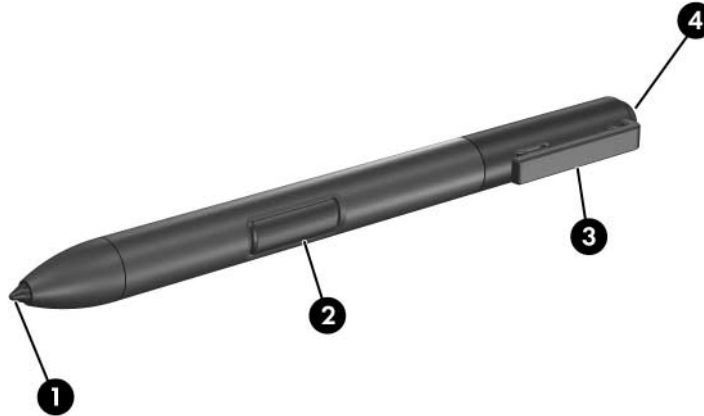
Pen Components

Component		Description
❶	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.
❷	Pen button	Functions like the right button on an external mouse.
❸	Pen tether eyelet	Used with the tether eyelet on the tablet PC, enables you to tether the pen to the tablet PC.
❹	Pen eraser	Enables you to erase handwriting on the tablet PC.

Component ID

Additional Hardware Components
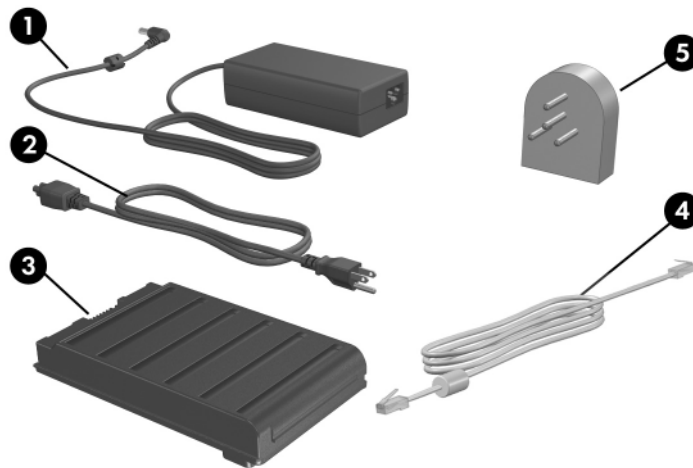
Component	Description
❶ AC adapter	Converts AC power to DC power.
❷ Power cord*	Connects an AC adapter to an AC outlet.
❸ Battery pack*	Powers the tablet PC when the tablet PC is not connected to external power.
❹ Modem cable*	Connects the RJ-11 (modem) jack to an RJ-11 telephone jack or to a country-specific modem adapter.
❺ Country-specific modem adapter (included by region as required)*	Adapts the modem cable to a non-RJ-11 telephone jack.

*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
❶ **fn+f3**	Initiates standby.
❷ Power switch	When the tablet PC is ■ Off, slide toward the rear of the tablet PC and release to turn on the tablet PC. ■ In standby, slide toward the rear of the tablet PC and release to exit standby. ■ In hibernation, slide toward the rear of the tablet PC and release to exit hibernation. If the tablet PC has stopped responding and Microsoft® Windows® shutdown procedures cannot be used, slide toward the rear of the tablet PC and hold for 4 seconds to turn off the tablet PC.

Power

Component	Description
❸ Power/standby light	Green: The tablet PC is on.
	Blinking green: The tablet PC is in standby mode.
❹ Power/standby light	Green: The tablet PC is on.
	Blinking green: The tablet PC is in standby mode.
❺ 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 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, when the light begins blinking amber.

Power

Power Sources

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	■ Charged battery pack in the tablet PC ■ External power supplied through one of the following devices: ❒ AC adapter ❒ Optional docking device ❒ Optional HP 90W DC Aircraft Power Cable ❒ Optional HP 90W Auto Adapter ❒ Optional HP 90W Air/Auto/AC Combo Adapter
Charge or calibrate a battery pack in the tablet PC	External power supplied through ■ AC adapter ■ Optional docking device ■ Optional HP 90W Auto Adapter ■ Optional HP 90W Air/Auto/AC Combo Adapter ⚠ To prevent damage to the tablet PC and aircraft systems, do *not* charge the battery pack while you are using a Combo Adapter on an aircraft.
Install or modify system software or write to a CD	External power supplied through ■ AC adapter ■ Optional docking device

Power

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 power/standby lights 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.

Power

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 > Performance and Maintenance > Power Options > Hibernate** tab. Make sure that the **Enable hibernation** check box is selected.

$\triangle$ **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.

Power

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 gets extremely low, 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

<table>
<tr><td>

△</td><td>**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.</td></tr>
</table>

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.

Power

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 "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 switch toward the font of the tablet PC.	■ The power/standby lights are turned on. ■ The operating system loads.
Turn off the tablet PC.*	Save your work and close all open applications. Then ■ Slide the power switch toward the rear of the tablet PC 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 > Turn Off Computer > Turn Off.**	■ The power/standby lights 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.

Power

Initiating or Restoring from Hibernation

Task	Procedure	Result
Initiate hibernation.	■ Select **Start > Turn Off Computer > Hibernate > OK.** (If the Hibernate option is not displayed, press and hold the **shift** key.) ■ If hibernation has been configured, slide the power switch toward the rear of the tablet PC.	■ The power/standby lights are turned off. ■ The screen clears.
Allow the system to initiate hibernation (with hibernation enabled).	No action required. ■ 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.	■ The power/standby lights are turned off. ■ The screen clears.
Restoring from user-initiated or system-initiated hibernation.	Slide the power switch toward the rear of the tablet PC. ✎ 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 switch.	■ The power/standby lights are turned on. ■ Your work returns to the screen.

Power

Initiating or Resuming from Standby

Task	Procedure	Result
Initiate standby.	■ Slide the power switch toward the rear of the tablet PC. ■ With the tablet PC on, press **fn+f3.** ■ Select **Start > Turn Off Computer > Standby > OK.** (If the standby option is not displayed, press the **shift** key.)	■ The power/standby lights blink. ■ The screen clears.
Allow the system to initiate standby.	No action required. ■ 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.	■ The power/standby lights blink. ■ The screen clears.
Resume from user-initiated or system-initiated standby.	Slide the power switch toward the rear of the tablet PC.	■ The power/standby lights are turned off. ■ Your work returns to the screen.

Power

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 switch toward the rear of the tablet PC for at least 4 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.

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 switch.

By default, when the tablet PC is on:

■ 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.

Power

Accessing the Power Options Window

To access the Power Options window:

» Right-click the **Power Meter** icon on the notification area (at the far right of the taskbar) and select **Adjust Power Properties.**

– or –

» Select **Start > Control Panel > Performance and Maintenance > Power Options**

Displaying the Power Meter Icon

The Power Meter icon is on your notification area by default. The icon changes shape to indicate whether the tablet PC is running on a battery pack or external power. Right-click the icon and select **Adjust Power Properties** to display the **Power Options** window.

To hide or show the Power Meter icon on the notification area:

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.

Power

Setting or Changing a Power Scheme

The Power Schemes tab in the **Power Options** window allows you to set the amount of time that the tablet PC will allow to pass before entering standby or hibernation. 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 want to modify, and accept or adjust the default 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, resumes from standby, or restores from 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 14, "Security."

Power

Processor Performance Controls (Select Models Only)

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 > Performance and Maintenance > 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

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.
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.

Power

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 only be attached to the bottom of the tablet PC.

If the tablet PC will be idle 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.

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✎ 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 contact an authorized service partner.

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 ❶ into the battery bay until it is seated.

3. Press the battery pack ❷ into the battery bay until the battery pack clicks into place.

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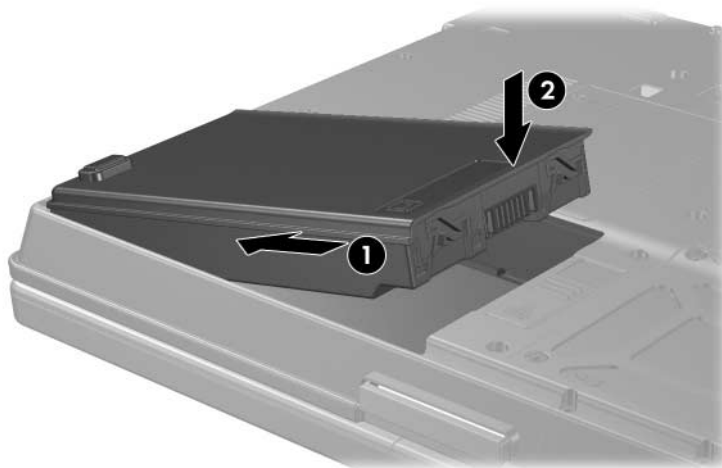
To remove a primary battery pack:

1. Turn the tablet PC upside down with the front of the tablet PC towards you.

2. Press the battery release latch ❶ toward the rear of the tablet PC.

3. Lift and slide the battery pack ❷ out of the tablet PC.
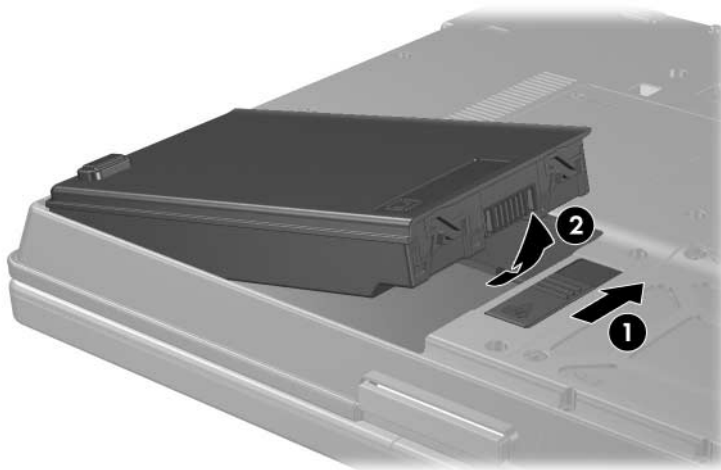
Charging Battery Packs

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 (optional battery pack)

■ Discharge sequence:

   1. Travel battery (optional battery pack)

   2. Primary battery in the tablet PC battery bay

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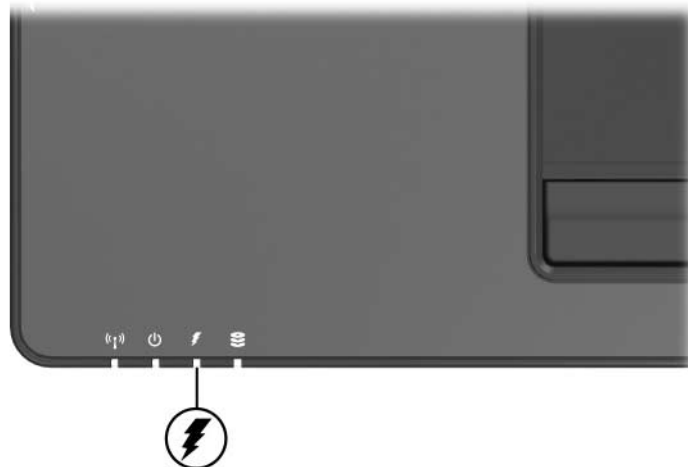While a battery pack is charging, the battery light on the tablet PC is on. The light is turned off when all battery packs are fully charged.

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

Charging 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 lights may be inaccurate.

⚠ **CAUTION:** To prevent damage to the tablet PC and aircraft systems, do *not* charge the battery pack while you are using an HP 90W Air/Auto/AC Combo 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 HP 90W Air/Auto/AC Combo Adapter

✎ An optional HP 90W DC Aircraft Power Cable or HP 90W Auto Adapter can run the tablet PC, but they cannot charge a battery pack.

Charging an In-Use Battery Pack

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

■ 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:

■ Double-click the **Power Meter** icon on the notification area.

– or –

■ Select **Start > Control Panel > Performance and Maintenance > 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.

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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 > Performance and Maintenance > Power Options > Hibernate** tab. Make sure that the **Enable hibernation** check box is selected.

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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 lights are 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 HP 90W Auto Adapter into the tablet PC and into a vehicle cigarette lighter receptacle. (An optional HP 90W Auto Adapter can run the tablet PC but cannot charge a battery pack.)

■ 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 Combo Adapter on an aircraft.

■ Plug an optional HP 90W DC Aircraft Power Cable into the tablet PC and into the in-seat power supply available on some commercial aircraft. (An optional HP 90W DC Aircraft Power Cable 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.