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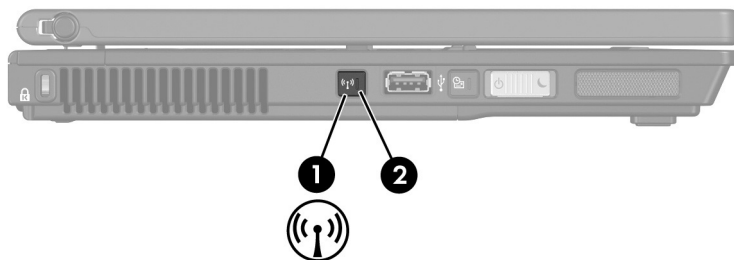
In addition to the wireless button and light, your tablet PC has software controls that enable you to turn on, turn off, enable, and disable your wireless devices. The following table explains the software controls.

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 Geektools.

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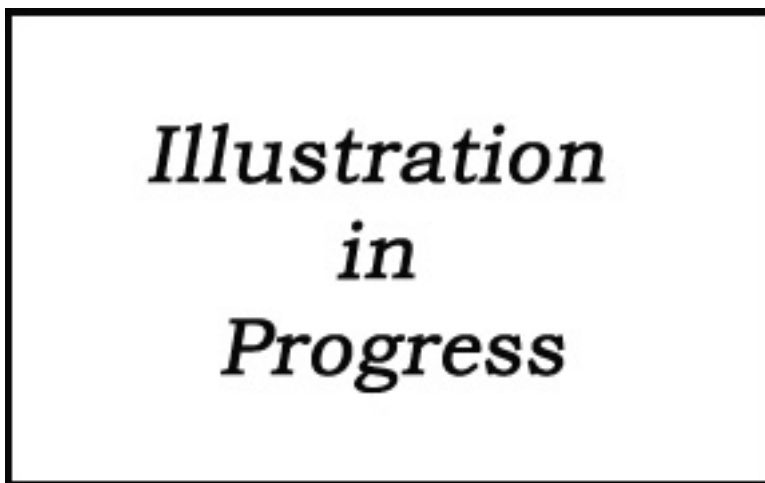
As this network grows, additional wireless and wired computers can be connected to the network to access the Internet.

✎ 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 Cicso-based WLANs.

Wireless

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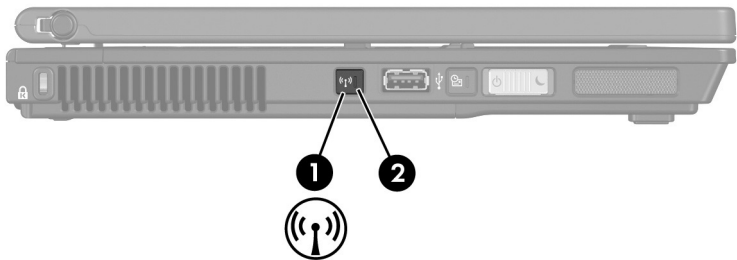
For more information about using Bluetooth with your tablet PC, refer to the *Wireless Documentation* CD included with your tablet PC.

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
■ Wireless Assistant shows that both WLAN and Bluetooth are off ■ Wireless light is off	You want to turn on 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 on. ✎ If the wireless devices are turned off, pressing the wireless button disables both devices. The button does not turn on the devices.
■ Wireless Assistant shows that both WLAN and Bluetooth are disabled* ■ Wireless light is off	You want to turn on either or both devices	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.
■ 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	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 ■ Wireless light is on	You want to disable both devices	Press the wireless button.
	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 ■ Wireless light is off	You want to disable both devices	Press the wireless button.
■ Wireless Assistant shows that one device is on and the other device is off* ■ Wireless light is on	You want to disable both devices	Press the wireless button.
	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.

Wireless

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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."

Security

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.

Security

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.
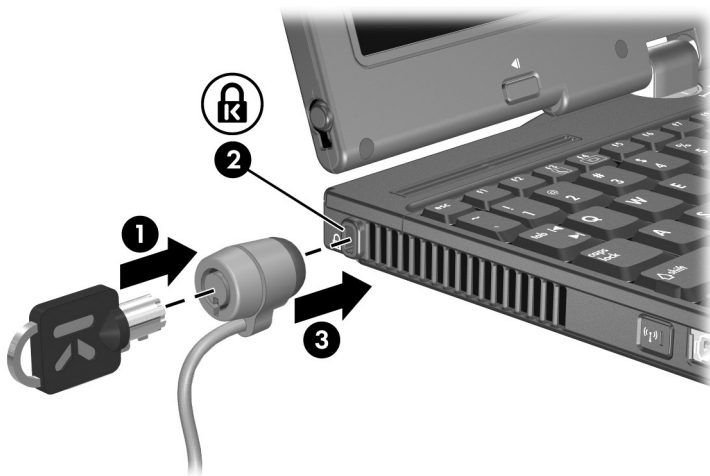
HP ProtectTools Security Manager (Select Models Only)

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 ProtectsTools

■ 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.

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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.

MultiBoot

✎ 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 he 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.

MultiBoot

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.

MultiBoot