Go Wireless

Open up new possibilities for work and play

Start with 3 pieces

A typical home or small-office wireless LAN requires only 3 pieces of hardware. With these 3 pieces, you're ready to get started!

The instructions in this booklet are for wireless computers using Microsoft® Windows® XP Professional.

Your computer(s) with integrated 802.11 WLAN (wireless local area network) capability.

ISP cable, DSL modem, or other broadband technology (purchased separately). Your Internet connection should be operational before you begin the procedures in this booklet. Your Internet service provider (ISP) will provide you with the modem, Internet service, and the broadband Internet configuration settings needed to set up your wireless router. Use the table below to record this information.

My Network Settings
Point-to-Point over Ethernet
User Name (ID)
Host Name
Password
Service Name

Compatible wireless router (purchased separately). See the "Comparison of Wireless LAN (WLAN) Technology Standards" table on page 7. During router configuration, use the table below to record router security level.

| My Router Security Level		
Wireless Router Security Level	**Result**	**Action**
Disable	No security enabled.	No action required.
WEP (Wired Equivalent Privacy)	Encryption key provided.	Record encryption key.
WPA-PSK (Wi-Fi Protected Access–Preshared Key)	Pass phrase required.	1 Create pass phrase. 2 Record pass phrase 3 Download the latest WPA update for Microsoft Windows XP by visiting Microsoft Windows Update at http://windowsupdate.microsoft.com. Search for "WPA."

Set up the hardware and software

Now that you have the necessary components to get started, you're ready to connect the pieces of the network and to configure the wireless router.

1 Set up and turn on the computer according to the instructions included with the computer. Ensure that the computer is connected to AC power during this setup. Turn on the modem, the wireless router, and then the computer.

2 Make sure that the blue wireless light next to the wireless icon ((⬤)) is off. If the light is on, turn it off by pressing the wireless on/off button.

> **Important:** If you encounter problems at any time during the router setup, contact your router manufacturer for technical assistance.

Location of the wireless button and light varies by model.
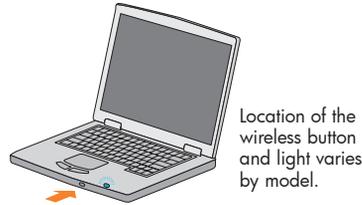
3 Connect the wireless router according to the manufacturer's instructions. (During this process your computer is temporarily connected to the router using the Ethernet cable included with the router. The router instructions will tell you when to connect and disconnect the cable.)

Router Ethernet Cable (shown in green)   Wireless Router   DSL Modem   Cable Modem   Internet
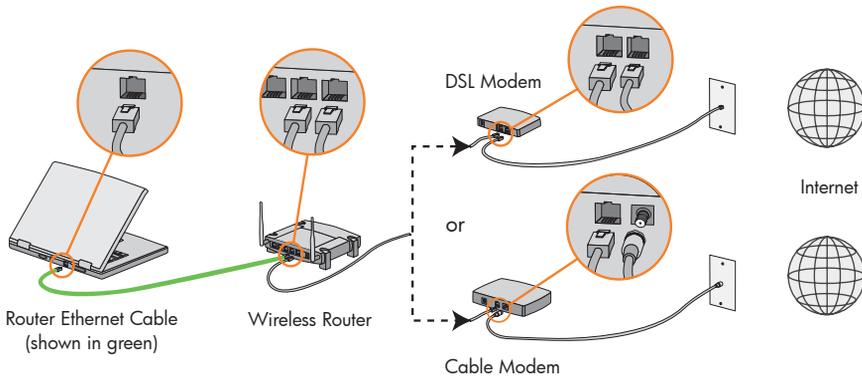
Network connections with router Ethernet cable temporarily connected (jack locations vary)

4 Configure the wireless router according to the manufacturer's instructions. Refer to the information you recorded in the "My Network Settings" table on page 2.

5 During router configuration, check whether the wireless router security level is set to Disable, WEP, or WPA-PSK. Record this information in the "My Router Security Level" table on page 2.

6 Test the Internet connection by opening your Web browser and accessing a Web site. After you have tested your setup with the wireless router Ethernet cable connected, remove the cable from the computer and the wireless router.

PROGRESS CHECK
If you successfully complete step 6, your router is set up correctly. If you cannot access a Web site, repeat steps 1 through 5, or contact your router manufacturer or your ISP for technical assistance. Do not continue with these instructions until you can successfully access a Web site.

Complete the wireless network

Now that you've set up the router hardware and software, you're ready to add devices to your network.

1. Press the wireless on/off button ((ᵖ)) on the computer to enable the wireless function.

2. Connect to the wireless network by selecting Start > Connect To > Wireless Network Connection. Highlight your network name in the Available wireless networks list.

3. Complete the following steps that correspond with your wireless router security level (encryption):

Wireless Router Security Level	On the Wireless Network Connection screen:
Disable (no security)	1 Select the check box for Allow me to connect to the selected wireless network, even though it is not secure. 2 Select Connect.
WEP	1 Clear the check box for Enable IEEE 802.11x authentication for this network. 2 Type the WEP encryption key in the Network key field. (You recorded this key in the "My Router Security Level" table on page 2.) 3 Retype the encryption key in the Confirm network key field. 4 Select Connect.
WPA-PSK	1 Type the WPA-PSK pass phrase in the Network key field. (You recorded this key in the "My Router Security Level" table on page 2.) 2 Retype the pass phrase in the Confirm network key field. 3 Select Connect.

4. Test the Internet connection by opening your Web browser and accessing a Web site.

5. Connect and configure any additional wireless-enabled computers or other devices, including wired devices, that you want to add to your network.
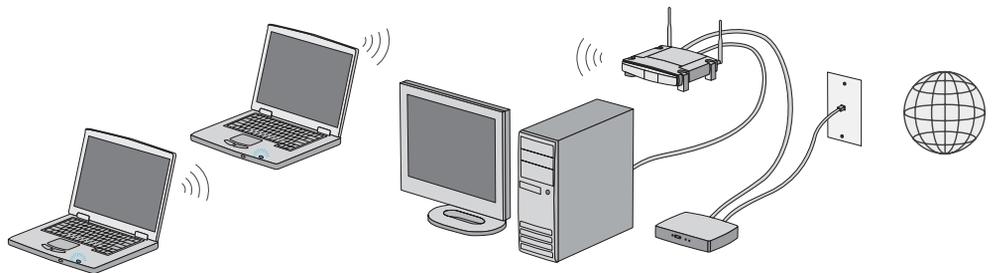
Example of network with wireless notebooks and wired desktop

6. Run the Network Setup Wizard on each computer in the network:
   a Select Start > Control Panel > Network and Internet Connections > Set up or change your home or small-office network.
   b Follow the instructions on the screen.

> **Important:** If you lose your wireless connection while you're working, select Start > Connect To > Wireless Network Connection. (The Wireless Network Connection status icon and message are displayed on the taskbar when the reconnection is successful.)

Secure your network

You don't go to sleep at night with your doors unlocked, so don't venture into cyberspace without security.

Depending on your wireless router security level, consider using one or more of the following security measures:

- **Enable encryption on your router**. If you have not already enabled security encryption, follow the router manufacturer's instructions to set the highest level of security provided by the router. WEP and WPA are security encryption protocols.

- **Change the default SSID (your network name) on the wireless router and on all computers in the network**. The SSID should be a unique name that will not be easily associated with you.

  Important: The same SSID must be specified on the router and on the computer(s), or the devices cannot communicate.

  1 To change the SSID on your router, refer to the router instructions.
  2 To change the SSID on each computer in your network:
     a Select Start > Control Panel > Network and Internet Connection > Network Connections.
     b Right-click Wireless Network Connection and select Properties. (The Properties window is displayed.)
     c Select the Wireless Networks tab.
     d Change the SSID.

- **Enable MAC address filtering on the router**. Refer to the router instructions.

- **Use a firewall**. A firewall is an essential security solution that shields your data and computer from destructive hackers, data thieves, malicious email attachments, and other emerging Internet threats.

- **Set security on your Web browser**. Setting the highest level of security on your browser is the safest way to browse, but it will limit your ability to access and receive some types of information.

Note: There are additional means of securing your wireless network. Refer to your router instructions for more information.

DID YOU KNOW...
Chance of someone piggybacking on your wireless account: 1 in 10,000

DID YOU KNOW...
Chance of being hacked through the Internet: 1 in 10,000

DID YOU KNOW...
Chance of getting a virus, a Trojan horse, or spam over the Web or through email: 1 in 20

DID YOU KNOW...
- Windows XP and some router manufacturers offer a built-in firewall.
- Firewall software also can be purchased separately from a local retailer.

What Is?

access point (AP)—A single-purpose wireless communication device that provides a wireless link between a wireless-enabled device and a wired network.

broadband—An always-on, fast Internet connection. Services such as ISDN, cable modem, DSL, and satellite are considered broadband, as compared to dial-up Internet access.

cable modem—A device that connects a computer to the cable television network, which in turn connects to the Internet.

DHCP (Dynamic Host Configuration Protocol)—A specification for service provided by a wireless router, gateway, or other network device that automatically assigns TCP/IP network settings (IP address, DNS, default wireless gateway) to any device that requests one.

DNS (Domain Name Server)—The IP address of your ISP's server, which translates the names of Web sites into IP addresses.

DSL (Digital Subscriber Line) modem—A device that connects a computer to a phone line, which in turn connects to the Internet.

encryption—The process of scrambling data so unauthorized recipients cannot read it. A unique key is usually required to decrypt the data. WEP and WPA are security encryption protocols.

Ethernet—The most common LAN technology (using coaxial or twisted-pair cabling) for home and business networks, which is capable of handling large amounts of data at speeds up to 1000 Mbps.

Go wireless in public

Now you're ready to go outside and experience the freedom and flexibility of your new wireless world.

Airports

Restaurants

Libraries

Hotels

Coffee Shops

Universities

Away from your home or office, you can access wireless services from public places known as hotspots or coolspots (depending on locale). Hotspots include airports, restaurants, coffee shops, hotels, and universities, with new locations being added daily. Check with each location for cost and connection requirements.

Looking for hotspots? Contact your ISP or search the Web for a list of hotspots near you. Web sites that list hotspots include Cisco Hotspot Locator, Hotspotlist, Geektools, and Global Access Wireless Database.

What Is?

firewall—Security measures that protect the resources of a local network from intruders.

home or small-office network—Two or more devices (wired and wireless) connected to share files, programs, printers, and so on.

hotspot—A commercial or public area that offers wireless Internet access for free or at an hourly or daily rate. A traveler with a wireless-enabled computer can connect to the Internet at these locations. In some locales, hotspots are known as *coolspots*.

ISP (Internet Service Provider)—A company that provides access to the Internet.

IP (Internet Protocol) address—The address used to identify a computer or device on a network.

MAC (Media Access Control) address—A unique, 12-digit identifier assigned by the manufacturer to a network device.

PPPoE (Point-to-Point Protocol over Ethernet)—A type of broadband connection that provides authentication in addition to data transport.

SSID (Services Set Identifier)—The name you give your network. A unique network identifier used by the wireless devices in the WLAN. This name shows up when your computer displays available networks. Some manufacturers use the term ESSID (Extended Services Set Identifier).

Learn more

As millions of users purchase wireless computers, PDAs, and printers for home and small-office networks, wireless resources are expanding worldwide.

Resources to enhance your wireless user experience are located on the HP Web site at http://www.hp.com/go/wireless, on the *Documentation* CD included with the computer, and at a variety of other Internet Web sites, including:

- wireless.com
- wireless.pcmag.com
- pcworld.com
- wi-fi.org
- searchnetworking.com
- cooltown.com

Comparison of Wireless LAN (WLAN) Technology Standards			
WLAN Technology Standard	802.11a	802.11b (largest user base)	802.11g
Maximum Data Speed	54 Mbps	11 Mbps	54 Mbps
Radio Frequency	5 GHz	2.4 GHz	2.4 GHz
Range	25 to 75 feet	Over 150 feet	100 to 150 feet
Compatibility with Other WLAN Standards	Not compatible with 802.11b or 802.11g	802.11g	802.11b
Public Access	Compatible with 802.11a hotspots Limited availability	Compatible with 802.11b hotspots Broadest availability	Compatible with 802.11b and 802.11g hotspots Common availability
Interference Issues	5-GHz cordless phones	Microwave ovens, 2.4-GHz cordless phones, Bluetooth®	Microwave ovens, 2.4-GHz cordless phones

What Is?

static IP address—A fixed address assigned to a computer or device that is connected to a network.

TCP/IP (Transmission Control Protocol/Internet Protocol)—A network protocol for transmitting data packets within a network.

WEP (Wired Equivalent Privacy)—A type of wireless security provided by Wi-Fi, based on number-sequence encryption.

Wi-Fi (wireless fidelity)—The name for 802.11 wireless network technology that indicates interoperability among 802.11 products.

wireless LAN (WLAN)—A system of connecting computers and other devices within the same physical proximity for sharing resources such as an Internet connection, printers, files, and drives. The network uses high-frequency radio waves rather than wires to communicate among wireless devices.

wireless router—An all-in-one wireless communication device that includes a wireless access point and may include an Ethernet hub and other features.

WPA (Wi-Fi Protected Access)—A specification-based, interoperable wireless security feature for which a pass phrase (password) is required.

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