

Notice

© 2000 Compaq Computer Corporation

COMPAQ and the Compaq logo Registered in U.S. Patent and Trademark Office. *iPAQ* is a trademark of Compaq Information Technologies Group, L.P.
Microsoft and Windows are trademarks of Microsoft Corporation.

All other product names mentioned herein may be trademarks or registered trademarks of their respective companies.

Compaq shall not be liable for technical or editorial errors or omissions contained herein. The information in this document is subject to change without notice.

The information in this publication is subject to change without notice and is provided "AS IS" WITHOUT WARRANTY OF ANY KIND. THE ENTIRE RISK ARISING OUT OF THE USE OF THIS INFORMATION REMAINS WITH RECIPIENT. IN NO EVENT SHALL COMPAQ BE LIABLE FOR ANY DIRECT, CONSEQUENTIAL, INCIDENTAL, SPECIAL, PUNITIVE, OR OTHER DAMAGES WHATSOEVER (INCLUDING WITHOUT LIMITATION DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, OR LOSS OF BUSINESS INFORMATION), EVEN IF COMPAQ HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE FOREGOING SHALL APPLY REGARDLESS OF THE NEGLIGENCE OR OTHER FAULT OF EITHER PARTY AND REGARDLESS OF WHETHER SUCH LIABILITY SOUNDS IN CONTRACT, NEGLIGENCE, TORT, OR ANY OTHER THEORY OF LEGAL LIABILITY, AND NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY.

The limited warranties for Compaq products are exclusively set forth in the documentation accompanying such products. Nothing herein should be construed as constituting a further or additional warranty.

Compaq iPAQ Connection Point
First Edition (August 2000)

Contents

Chapter 1 Introduction	1-1
About This Guide	1-2
What's in this Guide?	1-2
Who Should Read This Guide?	1-3
Using this iPAQ Connection Point User Guide	1-3
Text Conventions	1-4
Symbols and Graphics Used	1-4
Where Can I Find Information?	1-5
Enhancing Your iPAQ Connection Point	1-5
Safety	1-6
Safety Advice	1-6
Chapter 2 iPAQ Connection Point	2-1
What Do You Get?	2-2
iPAQ Connection Point Hardware	2-2
Indicator Lights	2-3
Ports on Your iPAQ Connection Point	2-4

iPAQ Connection Point Functionality	2-5
Basic Functionality	2-5
DHCP Client Server	2-5
WatchGuard® Firewall	2-6
Sharing a Single Internet Connection	2-7
Dial on Demand for V.90 Modem Users	2-8
Home Networking	2-8
Software License for Five Users	2-8
First 90 Days Free LiveSecurity™ Subscription	2-9
Add-On Features and Services	2-10
Optional Software Features	2-10
LiveSecurity™ Subscription	2-10
Additional User Licenses	2-10
Web Filtering (or Blocking)	2-11
Virtual Private Networking	2-12
Chapter 3 iPAQ Connection Point Installation	3-1
What Do You Need?	3-2
Installation Requirements	3-2
Location of the Unit	3-3
Where Should the iPAQ Connection Point Be Installed?	3-3
Setting Up	3-5
Setting Up the iPAQ Connection Point	3-5

Chapter 4 Need Some Help?	4-1
Chapter 5 Telecom Network Approvals	5-1
U.S. Regulations Governing the Use of Modems	5-2
Ringer Equivalence Number	5-2
Telephone Consumer Protection Act of 1991	5-3
Glossary	
Index	

Introduction

1

In This Chapter

About This Guide, 1-2

Who Should Read This Guide?, 1-3

Text Conventions, 1-4

Where Can I Find Information?, 1-5

Safety, 1-6

Congratulations! As the owner of a new Compaq *iPAQ* Connection Point, you are one of the progressive users who are taking advantage of the most advanced network technology available to manage their home or small office network. The *iPAQ* Connection Point will be the focal point of your network, providing broadband or V.90 Internet connectivity and acting as the link between all your networked devices. It also maintains a firewall between your network and the world of the Internet. The firewall provides a layer of security from hackers.



About This Guide



See also ...

For the latest information about your iPAQ Connection Point, visit our Web site:

**[www.compaq.com/
connectionpoint](http://www.compaq.com/connectionpoint)**

What's in this Guide?

This guide is designed to help you:

- Get acquainted with the iPAQ Connection Point features that can be implemented on your home or small business network
- Install the iPAQ Connection Point
- Solve problems if they occur

This guide explains how to use the iPAQ Connection Point. The topics include

- Installing the iPAQ Connection Point hardware
- Troubleshooting
- Glossary

Who Should Read This Guide?

This guide is designed for both the beginner and the experienced computer user. Read from cover to cover to learn basic information about the iPAQ Connection Point, or scan the guide for information on a specific topic.

The Glossary in the back of this guide has brief definitions of networking terms written in everyday language.

This chapter shows you how to use this guide and where to find other sources of information.

Using this iPAQ Connection Point User Guide

This easy-to-scan guide helps you find information quickly. You can see at a glance how the information is organized.

Installing Software

You may wish to purchase

What?

site.

The installation process automatically begins when you insert the CD in the disc drive. If it doesn't, refer to the documentation that came with the software. If no

Why?

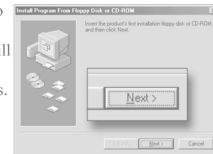
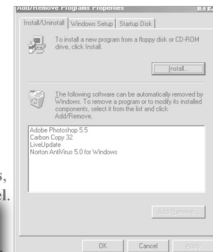
In the event of difficulties with the installation, contact the software manufacturer.

 Tip

Installing Software from a CD or Diskette

To install software from a diskette or CD that does not automatically install or come with installation instructions, complete the following steps:

1. Close all open programs.
2. From the Windows taskbar, click **Start**, point to **Settings**, and click **Control Panel**. The Properties window displays.
3. Double-click **AutoUpdate**. The Properties window displays.
4. Click **Install**.
5. Insert the CD or diskette into the proper drive and click **Next**. Microsoft Windows will find the CD or diskette and begin the installation process.



The left column lists major topics. It explains **what** the topic is and **why** it is important to you. This column also lists important warnings, useful tips, and directs you to additional reference materials.

The middle column explains **how** to perform a procedure. It contains step-by-step instructions.

The right column uses graphics to help you visualize the task and to validate what you are doing as you do it. Detailed graphics may span both columns.

Text Conventions

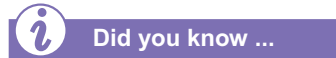
Warnings and cautions are displayed to protect you from injury, your equipment from damage, and your files from data loss.

Symbols and Graphics Used

The following words and symbols have special meaning in this guide:



Failure to follow directions may result in bodily harm or loss of life.



Understanding the background or concept may help you solve a problem



Helpful hints make using the iPAQ Connection Point easier and faster.



Another document or another page in this document has related information.

▲ Caution: Failure to follow directions may result in damage to equipment or loss of data.

Where Can I Find Information?

Information is available from the iPAQ Connection Point Web site. Use this guide as your first point of reference, then refer to the Web site for more information.



Did you know ...

The Compaq Web site is available around the clock, no matter where you are. As you explore the Internet, go to the following address for information about additional products and services:

www.compaq.com/athome

Enhancing Your iPAQ Connection Point

You can expand the iPAQ Connection Point functionality with upgrades such as additional user licenses, Web site filtering and blocking, and more.

See “Add-on Features and Services” in this guide for more information.

Safety



Did you know ...

Electrical storms can cause serious damage to your systems if they are not disconnected from all outside services.

Safety Advice

- The iPAQ Connection Point is an electrical device. Treat it with care to prevent damage to the device and to avoid personal injury.
 - Use a grounding plug to prevent electrical shorts, shocks, or fires.
 - Use a surge protector to regulate the flow of electricity to your network devices: the iPAQ Connection Point, computers, modems, printers, speakers, and monitors.
 - For more safety and comfort information, visit our Web site: **www.compaq.com/comfortguide**
- ▲ **Caution:** During an electrical storm, it is recommended that you disconnect all outside services from the computer and from the network. Such services include power, phone lines (voice, V.90, DSL, and HomePNA), and cable connections (cable modem and cable TV). All of these can carry damaging power surges into your network.

iPAQ Connection Point

2

In This Chapter

What Do You Get?, 2-2

iPAQ Connection Point
Functionality, 2-5

Add-On Features and
Services, 2-10

Your iPAQ Connection Point provides a maintenance-free, always-on link to the Internet and provides unmatched ease of installation and use in one simple device. The iPAQ Connection Point provides broadband or V.90 Internet connectivity to all computers on your network through a single compatible* Internet service provider (ISP) connection and also provides firewall protection for your network from the Internet.

* Some ISPs such as America Online and CompuServe may not be compatible. Please check

www.compaq.com/connectionpoint for more information.



What Do You Get?

The following sections provide a brief introduction to the basic hardware and pre-installed software that make up your iPAQ Connection Point.

When the iPAQ Connection Point is removed from the carton, it is ready for use. The device can be placed in any unobtrusive, out-of-the-way spot in your home or small office. It also comes with a wall-mount bracket, so you can even hang it on a wall.

Complete installation information is available at the following Web address:

[www.compaq.com/
connectionpoint/install](http://www.compaq.com/connectionpoint/install)



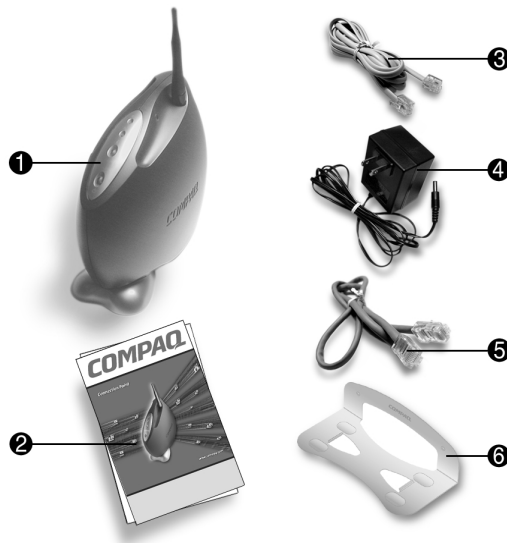
Tip

Save the packaging in which your iPAQ Connection Point arrived. It will be useful in case you move or need to ship the device.

iPAQ Connection Point Hardware

Your iPAQ Connection Point package contains the following items:

- ❶ iPAQ Connection Point device
- ❷ User Guide
- ❸ RJ11 (Phone cable)
- ❹ AC power adapter
- ❺ RJ45 (Ethernet) cable
- ❻ Wall-mount bracket



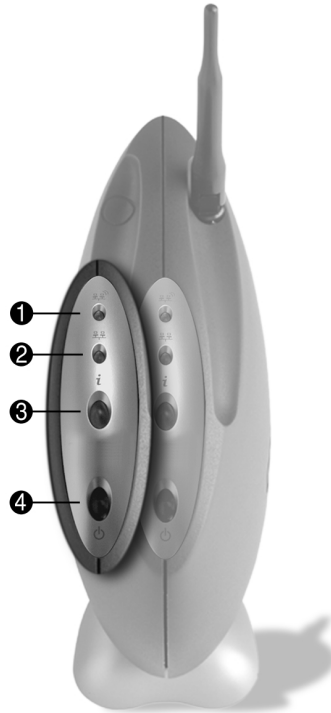
Note: Illustrations shown in this guide may vary slightly from your iPAQ Connection Point.





What Do You Get? (continued)

The bezel in the front of the iPAQ Connection Point contains indicator lights that show the status of the network at a glance.

Indicator Lights

The table below describes the indicator lights and explains the function of each.



No.	Description	Light Status
①	Wireless network 	<ul style="list-style-type: none">• Steady indicates HomeRF network is enabled.• Blinking indicates activity.
②	Wired network 	<ul style="list-style-type: none">• Steady indicates an Ethernet and/or HomePNA network connection.• Blinking indicates activity.
③	Internet connection 	<ul style="list-style-type: none">• Steady indicates an Internet connection.• Blinking indicates activity.
④	Power 	<ul style="list-style-type: none">• Steady indicates power on.• Blinking indicates power-on self-test.

What Do You Get? (continued)



Did you know ...

There are two different types of connectors used on your iPAQ Connection Point: RJ11, which is the type commonly used for telephone lines (including HomePNA networking), and RJ45, which is used for Ethernet connections and is larger.



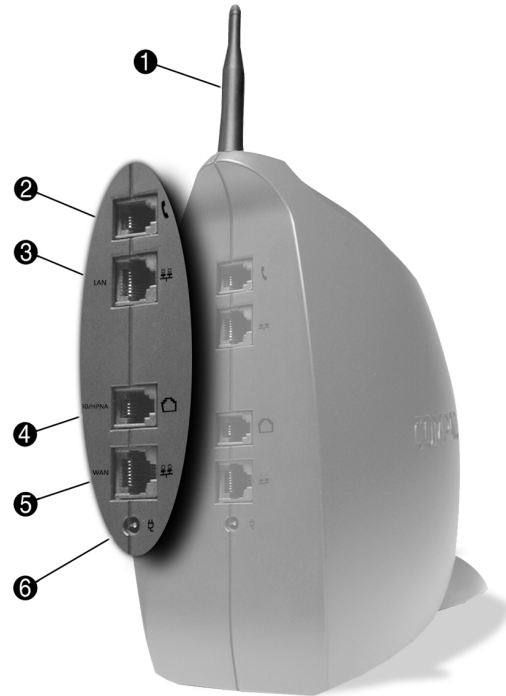
Did you know ...






Local Area Network (LAN) is a set of connected computers. The iPAQ Connection Point supports HomeRF, Ethernet, HomePNA, or any combination of these.

Wide Area Network (WAN) is a connection over a large area, including Internet connections.

Ports on Your iPAQ Connection Point

The table below describes the ports and explains the function of each.



No.	Port	Function
①	— —	Antenna, used for HomeRF network
②	RJ11 	Telephone connector
③	RJ45 	Ethernet-type connector, used for Ethernet home network
④	RJ11 	RJ11 connector used for V.90 Internet connection and Home PNA network
⑤	RJ45 	Ethernet-type connector used for broadband Internet connection
⑥	A/C input 	Power adapter connector

iPAQ Connection Point Functionality



Did you know ...

Several additional functions can be added to enhance the functionality of your iPAQ Connection Point.

- *LiveSecurity subscription*
- *Additional user licenses*
- *Web filtering*
- *Virtual Private Networking*



Did you know ...

If it is required by your ISP or if it is necessary for network administration reasons, the iPAQ Connection Point can accept a fixed IP address.

Basic Functionality

The iPAQ Connection Point is shipped with its basic functionality, which connects all your networked devices to each other and to the Internet. The basic iPAQ Connection Point functionality includes the following:

- DHCP client and server
- Security firewall
- Internet connection sharing
- Dial on Demand service
- Home networking using HomeRF, HomePNA, Ethernet, or any combination of these
- Five user licenses
- First 90 days free LiveSecurity subscription
- Internet connection monitoring (available for Windows operating systems only)

DHCP Client Server

Dynamic Host Configuration Protocol (DHCP) enables a DHCP server to assign unique Internet Protocol (IP) addresses to all the devices on your network. This feature enables the network to manage itself.

The Network Address Translation (NAT) functionality of the DHCP server also enables the devices on your network to communicate with the Internet through a single IP address.

iPAQ Connection Point Functionality (continued)



Did you know ...

The firewall security provided by the iPAQ Connection Point is referred to as stateful packet inspection.

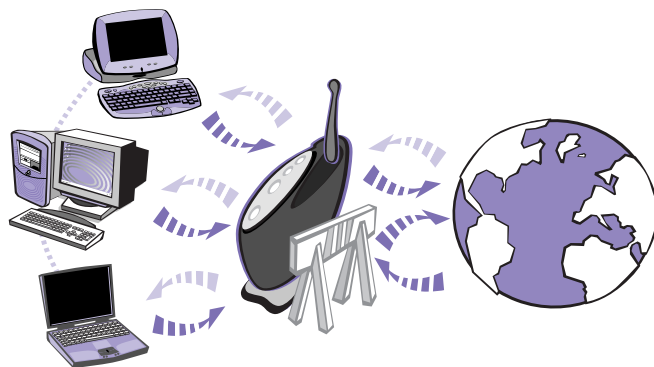
Incoming Internet traffic is allowed or denied access based on outgoing requests.

WatchGuard® Firewall

The iPAQ Connection Point provides the maximum amount of security because it can be set to refuse any data from the Internet that was not requested by a local network device.

When a networked device sends a request over the Internet, the Network Address Translation (NAT) functionality removes the unique local address of the device and replaces it with a single IP address that represents your entire local network to the Internet.

When a network request is received, the iPAQ Connection Point remembers which device made the request. The IP address for the incoming data is then replaced with the local IP address for the device that requested the data. If the incoming data was not requested by a network device, the data is blocked.



iPAQ Connection Point Functionality (continued)



Did you know ...

Using only one IP address to identify your local network to the Internet eliminates the need for additional IP addresses from your ISP.

Sharing a Single Internet Connection

The iPAQ Connection Point lets all of the supported devices on your local network share the same Internet connection at the same time.

You can share your existing broadband connection, or use the built-in V.90 modem.

Within your local network, each device is assigned a unique IP address by the iPAQ Connection Point DHCP server.

If you send a request over the Web, such as when your browser performs a search, the IP address of the local device making the request is replaced with the IP address that identifies your local network to the Internet.

When the requested data arrives, the iPAQ Connection Point sends the information to the network device that made the request.



iPAQ Connection Point Functionality (continued)

On Windows-based systems, the Internet connection monitoring feature of the iPAQ Connection Point lets you verify whether your modem is connected to the Internet.



Did you know ...

When any device on your network makes a request for Internet access, your iPAQ Connection Point detects whether its V.90 modem is connected to the Internet and auto-dials to your ISP if it is not.



Did you know ...

Registered users can upgrade their user licenses in blocks of five user accounts up to a maximum of 50 users.

Dial on Demand for V.90 Modem Users

If you are using the built-in V.90 modem to access the Internet, iPAQ Connection Point provides the convenience of Dial on Demand. The Dial on Demand function is initiated automatically when someone opens a Web browser from any device on the local network. If an Internet connection is not currently open, iPAQ Connection Point detects the request for an outside IP address, dials the telephone, and makes the connection.

Note: The first time you request Internet access after setting up your iPAQ Connection Point, or after a period of inactivity, you may have to wait while the iPAQ Connection Point re-establishes your Internet connection. You may have to click **Refresh** on your browser for the page to load.

If you have a broadband connection (DSL or cable), you are connected to the Internet whenever the system is powered on.

Home Networking

Your iPAQ Connection Point supports many popular home networking types, including HomeRF (wireless), home phonenumber, and Ethernet networking. You may mix all three network types seamlessly. Easily enjoy simultaneous Internet access, file and printer sharing, and head-to-head gaming from any computer in your home.

Software License for Five Users

The basic purchase agreement for the iPAQ Connection Point includes software license accounts for five users.

iPAQ Connection Point Functionality (continued)



Did you know ...

*The first 90 days of LiveSecurity are included in the purchase price, but you **must** register to receive the 90 days of LiveSecurity service.*

At the end of the 90-day free trial period, WatchGuard offers subscriptions for the full LiveSecurity service.

Additional information is available on the iPAQ Connection Point Web site:

**[www.compaq.com/
connectionpoint](http://www.compaq.com/connectionpoint)**

First 90 Days Free LiveSecurity™ Subscription

A free 90-day trial subscription to LiveSecurity is included in the basic iPAQ Connection Point package.



LiveSecurity consists of the following features:

- Access to the LiveSecurity Web site
- After logging in to the LiveSecurity site, customers have access to these resources:
 - **LiveSecurity portal**—one stop for anything you need to know about your firewall
 - **Software updates and firewall updates**
 - **WatchGuard's LiveSecurity Knowledge Base**—articles which can help you configure your network
 - **Web Activity Tracking**—monitors Web browsing activity
 - **Network event log archives**—for your firewall, stored at the LiveSecurity Web site
 - **Regularly scheduled e-mail with Tips-and-Tricks**—for registered users
 - **Virus warnings and security alerts**—e-mailed to you as they become necessary

Add-On Features and Services



Did you know ...

You can enhance the basic functionality that comes with your iPAQ Connection Point by ordering the add-ons described in this section.

Visit the iPAQ Connection Point Web site for more information:

**[www.compaq.com/
connectionpoint](http://www.compaq.com/connectionpoint)**

Optional Software Features

iPAQ Connection Point can be enhanced with several add-on software functions available from WatchGuard:

- LiveSecurity subscription
- Additional user licenses
- Web filtering
- Virtual Private Networking

LiveSecurity™ Subscription

At the end of the 90-day free trial period, WatchGuard offers subscriptions for the full LiveSecurity service.

Additional User Licenses

iPAQ Connection Point comes with five user licenses. Registered users can upgrade their user license accounts in blocks of five accounts to a maximum of 50 users.

Add-On Features and Services (continued)



Tip

Web filtering can be set to block any or all of your users from accessing unwanted material.

Web Filtering (or Blocking)

The WatchGuard WebBlocker can be programmed to permit or deny to specific users access to web servers that provide unwanted content.

The WatchGuard WebBlocker organizes Web servers into content categories including violence, profanity, nudity, and gambling.

The WatchGuard WebBlocker allows you to set specific access privileges for each local network user, giving you control over his or her Web access.

Add-On Features and Services (continued)

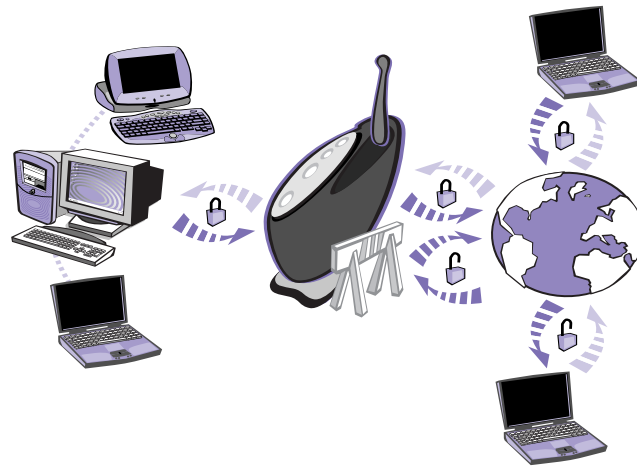


Did you know ...

iPAQ Connection Point uses the IPSec VPN standard to implement the Virtual Private Networking feature. The IPSec standard focuses on the security that can be provided at the IP layer of the network.

Virtual Private Networking

The Virtual Private Networking (VPN) feature allows your iPAQ Connection Point to participate as part of a secure network that can be accessed over the Internet. This enhancement allows you to download software that lets you access your network from an offsite device over the Internet. You have protected access to your network resources (application and data) on a secure, trusted network.



iPAQ Connection Point Installation



In This Chapter

What Do You Need?, 3-2

Location of the Unit, 3-3

Setting Up, 3-5

The iPAQ Connection Point is easy to set up and use. This chapter explains the steps necessary to get your device up and running, both internally and on the Internet.

Installing the iPAQ Connection Point includes considering your operating system and network type(s) and then tailoring the installation process to meet your needs. A detailed installation wizard is provided on the iPAQ Connection Point Web site. Preliminary steps for installing your new iPAQ Connection Point device are provided in this chapter.

This section explains how to obtain specific installation information for your computer and network setup, and how to set up your iPAQ Connection Point system. The installation information should be read and performed sequentially.



What Do You Need?



Tip

Before you begin the installation of any hardware or cabling, you must connect to the iPAQ Connection Point Web site for complete instructions.

Installation Requirements

Before you begin the Web-based installation, you need the following items:

- Existing Internet connection through an Internet Service Provider (ISP)
- Web browser—for example, Microsoft Internet Explorer 3.0 (or later), Netscape Navigator 2.0 (or later), Opera 3.0 (or later)
- Printer or formatted diskette (for printing or downloading the installation instructions)
- Cables and modem or network interface cards (NIC), according to the following table:

Internet Connection	Cable Needed	Modem Needed
V.90	Phone cable	None (built-in V.90 modem)
Broadband	Ethernet* cable	DSL or cable modem

Home Network Type	Cable Needed	NIC Needed
HomeRF	None	Wireless NIC
HomePNA	Phone cable for each device	HPNA NIC
Ethernet; one device	Crossover cable	Ethernet NIC
Ethernet; multiple devices using hub with uplink port	Ethernet* cable for each device and one crossover cable	Ethernet NIC
Ethernet; multiple devices using hub without uplink port	Ethernet* cable for each device	Ethernet NIC

* CAT5 recommended

- If your operating system is Microsoft Windows NT, Windows 2000, Linux, or another managed platform, you must be logged on with administrator rights (privileges) in order to make the necessary setting changes.

Location of the Unit

Depending on the type(s) of networking you have, your iPAQ Connection Point can be located in an out-of-the-way corner or even in a closet.



Tip

You can mount your iPAQ Connection Point unit on a wall using the supplied mounting bracket.

Where Should the iPAQ Connection Point Be Installed?

The iPAQ Connection Point device can be placed almost anywhere in your home or office. When deciding where to locate the unit, keep in mind the following points:

- The unit should be located where the ambient temperature does not exceed 40 degrees Celsius (104 degrees Fahrenheit). Therefore, you are advised not to place it in an attic.
- The unit should be near a power outlet and near your Internet connection.
- If your network includes Home Phoneline networking, place the unit near a telephone jack.
- If your network includes HomeRF networking, the unit should be located within the range of all wireless devices, typically 150 feet (46 meters), and the built-in antenna should be in the *up* position.

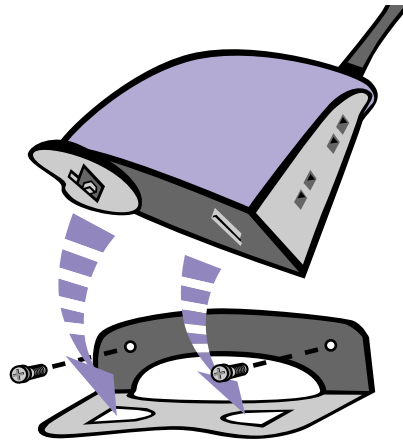
Location of the Unit (continued)

Your iPAQ Connection Point comes complete with a wall-mount bracket, so you can place the unit in any out-of-the-way location.

Using the Wall-Mount Bracket

To mount your iPAQ Connection Point on a wall, complete the following steps:

1. Choose the location for mounting your iPAQ Connection Point.
2. Attach the bracket to the wall using screws (not included) that are appropriate for the type of wall. You should secure at least one of the screws to a stud.
3. Snap the unit into the bracket, inserting the tab located near the back of the unit first.
4. To remove the unit from the bracket, press the tab on the underside of the bracket near the front of the unit, and lift the unit off the bracket.



Setting Up



Did you know ...

The entire setup process for your iPAQ Connection Point is contained in a simple-to-follow wizard on the iPAQ Connection Point Web site.

Setting Up the iPAQ Connection Point

Before installing any of your new hardware or cables, use your existing Internet connection and Web browser to access the iPAQ Connection Point Web site:

www.compaq.com/connectionpoint/install

From the iPAQ Connection Point Web site, retrieve the installation procedure for your network type. The Wizard will walk you through the entire installation process. When prompted, print or save a copy of the offline portion of this procedure.

After you complete the steps in the Wizard for each device on your network, your setup is complete!

4

Need Some Help?



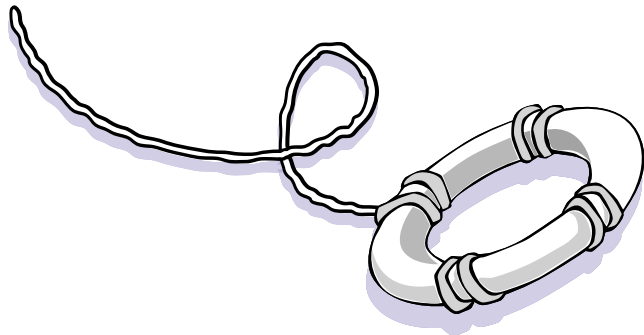
Did you know ...

The latest information about solving problems with your iPAQ Connection Point can be found on the iPAQ Connection Point Web site:

**[www.compaq.com/
connectionpoint](http://www.compaq.com/connectionpoint)**

This chapter provides possible solutions to problems you may encounter with the installation or operation of your iPAQ Connection Point. The left column presents some of the common problems. Possible causes and solutions appear in the middle and right columns. Read the following descriptions and solutions, and visit our Web site for more information:

www.compaq.com/connectionpoint



Symptom	Problem	Solution
I can't see the iPAQ Connection Point internal configuration pages.	PC is set for static IP address	Re-run the configuration wizard. If the problem persists, manually check that dynamic IP addressing is enabled.
	Cabling—HPNA and Ethernet	<ul style="list-style-type: none"> • If you are using phoneline networking, ensure that a phone cable is connected between the wall jack and the lower, narrow RJ11 port on the iPAQ Connection Point. • If you are using Ethernet networking, ensure that the correct cables are connected between the PC and the iPAQ Connection Point, or between the PC, the hub, and the iPAQ Connection Point.
	HomeRF security code	Ensure that the security code on the iPAQ Connection Point internal configuration page and the code on the HomeRF client match.
	Power to the iPAQ Connection Point	Make sure the power cable is fully plugged into the unit and the power outlet.
	Proxy is enabled	Make sure that the proxy feature on the computer is disabled. If you did not run the configuration wizard, do so now.

Symptom	Problem	Solution
I can see the configuration pages, but I can't get to the Internet.	<ul style="list-style-type: none"> • ISP is using static IP addressing and iPAQ Connection Point is using dynamic IP addressing • ISP is using dynamic IP addressing and iPAQ Connection Point is using static IP addressing 	Ensure that both your ISP and your iPAQ Connection Point are using the same type of IP addressing.
	V.90 dialing problems	<ul style="list-style-type: none"> • Ensure that a phone cable is connected between the wall jack and the lower RJ11 port on the iPAQ Connection Point. • Check your iPAQ Connection Point dial-up configuration page to verify the ISP access phone number, and user name and password are correct.
	Cabling	Ensure all WAN cables are properly connected.
	ISP is temporarily down No power to external DSL or cable modem	Try to connect at a later time. Make sure that the modem is powered on.
	Proxy is enabled	Disable proxy on your iPAQ Connection Point configuration page.

Telecom Network Approvals



In This Chapter

U.S. Regulations
Governing the Use of
Modems, 5-2

The telecommunications device in your computer is approved for connection to the telephone network in the countries whose approval markings are indicated on the product label located on the bottom of the unit. Additional country approvals may be found on the Compaq Web site. To view these approvals, visit **www.compaq.com** and perform a site search for the words “telecom network approvals.” If a selection is available for your product, you may view and print the approval marks or numbers.

Selecting a country other than the one in which you are currently located may cause your modem to be configured in a way that violates the telecommunication regulations/laws of that country. In addition, your modem may not function properly if the correct country selection is not made. If a message appears that states that the country is not supported, the modem has not been approved for use in this country and should not be used.

U.S. Regulations Governing the Use of Modems

This equipment complies with Part 68 of the FCC rules. Located on the bottom of the product is a label that contains, among other information, the FCC Registration Number and Ringer Equivalence Number (REN) for this equipment. Upon request, you must provide this information to your telephone company.

Ringer Equivalence Number

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most areas (but not all), the sum of the RENs of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your telephone line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

The REN for this device will not exceed 0.6.

An FCC-Compliant 6-position modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or to the premises wiring using a compatible 6-position modular jack which is FCC Part 68 Compliant.

If your telephone equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But, if advance notice is not practical, you will be notified as soon as possible. You will also be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, contact your local telephone company for information on obtaining service or repairs. The telephone company may ask that you disconnect this equipment from the network until the problem is corrected or until you are sure that the equipment is not malfunctioning.

This equipment may not be used on coin-service telephones provided by the telephone company. Connection to party lines is subject to state tariffs.

For the Compaq Customer Support Center and your nearest Compaq Authorized reseller in North America, call 1-800-345-1518 or write:

Compaq Customer Support Center
P.O. Box 692000
Houston, Texas 77269-2000

Telephone Consumer Protection Act of 1991

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone facsimile machine unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business or entity or individual sending the message and the telephone number of the sending machine or such business or entity or individual.

Glossary

This Glossary is provided to help new users understand computer networking concepts by defining the terms used in this guide and by defining other commonly used network terms. Refer to operator guides supplied with your computer for terms and information related to basic computer operations.

10BaseT; 10/100BaseT Network

A variant of Ethernet, which allows stations to be attached via twisted-pair cable. 10BaseT operates at 10Mbps, and 10/100BaseT operates at 10Mbps or 100Mbps. Twisted pair cables are terminated in RJ45 connectors.

A

ADSL (Asymmetric Digital Subscriber Line) See *DSL*.

alphanumeric A combination of letters, numerals, punctuation, and mathematical symbols.

asymmetric References data transmission where the upstream and downstream speeds are different. Typically, the downstream speeds are much greater than the upstream speeds. Contrast with *symmetric*.

B

bandwidth The speed at which data can travel. The higher the bandwidth, the faster the data can travel. Bandwidth may be physically limited by the medium used for transmission (wires or cables), or it may be artificially limited by communications standards.

baud The speed at which modems transfer data. One baud is roughly equal to one bit per second. It takes eight bits to make up one letter or character. Modems rarely transfer data at exactly the same speed as their listed baud rate because of static, telephone line conditions, and data transfer overhead.

bps (bits per second) The speed at which data bits are transmitted over a communications medium.

broadband Describes higher bandwidth networks, especially those that can transmit at 200 kbps and above. This includes Internet connections such as cable modems, DSL modems, and satellite downlinks.

browser A program that allows a person to read hypertext and view graphic images. The browser is what actually displays the Web pages on the Internet. Some browsers can be used to view files on other devices on a network as well.

byte A sequence of eight consecutive bits. Computer data is made up of bits and is most often grouped and counted in bytes. Typically, one byte is required to display a single alphanumeric character.

C

cable modem A device that allows your computer high-speed access to data (such as information on the Internet) through a cable television network.

Category 5 cable The suggested minimum standard UTP cable installed to create an Ethernet network. Also referred to as CAT5 cable.

client A computer or device that connects to servers or services available on a network and presents information to the user.

client/server interface A program that provides an interface between servers (computers that provide services) and clients (computers or devices that use those services). This is most commonly used across networks. These services can include access to databases, printers, files, and so on. See *peer-to-peer networking*.

crossover cable Special cables made to allow two devices to network together without requiring a hub. They can also be used to connect a hub (without an uplink or WAN port) to a DSL or cable modem.

D

DHCP (Dynamic Host Configuration Protocol) A network protocol that enables a DHCP server to automatically assign an IP address to individual computers or to devices on a network. The purpose of DHCP is to enable devices on an IP network to obtain their configuration from a server (the DHCP server) rather than use preset values determined and managed by the user.

DNS (Domain Name Server or Domain Name System) Primarily used to translate, or resolve, the IP number for a computer (for example 192.168.1.1) from its alphanumeric name (for example www.compaq.com). This feature is important because an IP number is required for initiating a connection to the remote system.

downstream The traffic on a network from the provider to the endpoint (your computer, for example). Downloading a Web page is downstream traffic. See *upstream*.

DSL (Digital Subscriber Line)

A type of broadband Internet connection that uses a digital modem connected to regular telephone wires (twisted-pair copper wiring), and that typically transfers up to 8 Mbps downstream and 128 kbps upstream, depending on the type of service purchased.

E

Ethernet A highly popular and internationally standardized networking technology (comprising both hardware and software) that enables computers to communicate with each other. Ethernet supports several ways of connecting devices together. Currently, the most popular is 10BaseT.

F

firewall A method to keep a network secure. It filters out unwanted or disallowed network traffic in order to stop unwarranted access from anyone outside the firewall to devices within the firewall protection.

FTP (File Transfer Protocol)

Used to transfer files over a TCP/IP network (Internet, UNIX, and so on). It includes functions to log onto the network, list directories, and copy files. It can also convert between character codes.

G

gateway Used to connect two or more networks together. A residential gateway connects the WAN (network outside the home) to the LAN (network inside the home).

G.Lite DSL Also referred to as Universal DSL, G.992.2, or G.Lite. A standard type of DSL which is being developed jointly by a group of telecommunications and computer companies (including Compaq) known as the Universal DSL Working Group, or UAWG. G.Lite DSL allows a DSL modem to operate concurrently with normal telephone service on a single phone line.

H

home network The network within your home that connects many different devices together in order to provide information, communication, and control. Often used to share files, music, peripherals (such as printers), and Internet connections among devices.

home page The default document or starting point at a Web site.

home phonline network

An Ethernet-compatible home network in which computers are connected using existing in-home phone wiring instead of UTP cable. This allows for the interconnection of computers, printers, scanners, and other devices (including telephone equipment) in the home or small office. Home phonline networking is based on the HPNA industry standard specification.

HPNA (Home Phonline Network Alliance) An association of companies (including Compaq) working together to develop a single, unified home phonline networking standard that is compatible with existing Ethernet technology.

HomeRF network A wireless network for the home or small office using RF (radio frequencies) to provide a connection medium between computers and other devices. HomeRF is based on the SWAP wireless networking specification, allowing data to travel at up to 1.6 Mbps through walls, floors, and ceilings, to a maximum distance of 150 feet (46 meters) between devices.

host Any computer that provides services to remote users.

HRFWG (Home Radio Frequency Working Group) An association of companies (including Compaq) working together to develop standard wireless networking technologies for homes and small businesses.

HTML (HyperText Markup Language)

The standard language for documents designed for viewing on the Web with a browser. They are easily identified by the file extension *.htm* or *.html*.

hub Generally, a term used to describe a device that serves as the center of a star-topology network. Ethernet 10BaseT is an example of a star-topology network. The cables from all devices on a network are connected to the hub, which connects them all together. Hubs are necessary in any 10BaseT network comprising more than two devices. For a network of only two devices, a special cable called a crossover cable can be used to connect the two devices. A hub is not required for a home phonline network.

hyperlink An embedded link in a Web page to another document or Web site. In many browsers, when you position the cursor over a hyperlink (colored text or image), a small hand is displayed. When you click the hyperlink, your browser displays the new document or Web site.

interface A means by which a user communicates with a computer.

Internet A worldwide collection of computer networks that are interconnected so that users can share electronic information.

Internet sharing PC A single computer that stores resources (files, data, and an Internet connection) and that can be accessed by other networked computers. Other computers on the network access the Internet through this PC.

Intranet A network inside a facility or home that connects servers, computers, and peripheral equipment and other devices together, allowing them to communicate with each other.

IP (Internet protocol) All data on the Internet flows in IP packets, following a universal addressing scheme called IP addresses.

IP address A computer's unique address on a network. This address is used to send and receive data between locations on the network. An IP address is a 32-bit number, and each standard address is unique on the Internet. IP addresses are usually written as four numbers, between 0 and 255, separated by periods (for example 192.168.1.1).

IPSec (IP Security) A methodology that allows for secure network access that can be provided at the IP layer of the network. This in turn allows for machines to have secure connections even though data travels across the Internet.

ISDN (Integrated Services Digital Network) Communications protocols permitting telephone networks to carry data, voice, and other source material. ISDN is a telephone network separate from that used in standard telephone service.

ISP (Internet service provider)

A company that provides access to the Internet. ISPs can potentially provide access through DSL, cable, satellite, and standard telephone service.

K

kbps Kilobits per second. Used to express speeds of data transfer through a network. One kilobit equals 1000 bits.

kHz Abbreviation for kilohertz, a unit of frequency equal to 1000 cycles per second.

L

LAN (local area network)

A set of connected or networked computers and/or other devices in a single location, such as a home or an office building. Computers and devices connected on a LAN have the ability to share data among themselves on the network. See *WAN*.

M

Mbps Megabits per second. Used to express speeds of data transfer through a network. One megabit equals 1000 kilobits, or 1,000,000 bits.

MHz Abbreviation for megahertz, a unit of frequency equal to 1,000,000 cycles per second.

modem (MOdulation/DEModulation)

A device that translates digital information into analog signals and back again. Modem technology bridges the gap between analog telephone technology and digital electronics. This makes possible the transfer of data along standard telephone lines.

N

NAT (Network Address Translation)

A technique developed to allow the use of a single IP address for a whole network of computers. This allows multiple computers to access the network without providing detailed identifying data. NAT enhances security as external sources are not able to obtain the identifying data that would allow them to access and potentially compromise the network.

navigate To move through a Web site or online document by clicking the hyperlinks embedded in the text or images.

network Two or more computers linked together to share resources such as programs, data, files, music, printers, and modems.

network adapter A piece of hardware that is used to connect a computer to a network. A network adapter may be a PCMCIA (PC Card) or a PCI card (see *network interface card*) or it may connect to a computer externally via a Universal Serial Bus (USB) or a parallel port.

NIC (network interface card) A piece of hardware that can be installed in your computer to enable it to connect to a network. The NIC provides the point of connection for a device on the network. Network cables are plugged in to the NIC.

O

OS (operating system) The interface that permits a person and a computer to “talk” to one another.

P

PAT (Port Address Translation)

A function provided by some routers that allows hosts on a LAN to communicate with the rest of the network (for example, the Internet) without revealing the private IP address.

peer-to-peer networking A network that allows clients to interface with each other as peers without a server. Each client/peer may provide services to other client/peers and use services provided by other client/peers.

POP (Point of Presence) A city or location where a network can be connected, often with dialup phone lines.

POTS (Plain Old Telephone Service)

Basic analog telephone service. POTS takes the lowest 4 kHz of bandwidth on twisted-pair copper wiring. Any service sharing a line with POTS must either use frequencies above POTS or convert POTS to digital and interleave with other data signals. Also known as PSTN (Public Switched Telephone Network).

powerline networking Technology that allows a home network to utilize already existing AC wiring as the cable connection between computers and other devices on a network. Powerline networking enables easy home automation, merging home security systems, lighting, and other environmental controls with the home network.

PPP protocol (Point-to-Point)

A protocol that provides a method for transmitting packets over serial point-to-point links such as router-to-router and host-to-network connections over both synchronous and asynchronous circuits.

PPTP (Point-to-Point Tunneling Protocol)

A protocol that allows Point-to-Point Protocol (PPP) connections to be tunneled through an IP network, creating a Virtual Private Network (VPN). It is used to secure Point-to-Point Protocol (PPP) connections over a TCP/IP link.

R

RJ11 connector The standard telephone line connector that plugs into a jack in the wall to receive phone service. Also used to connect computers in a home phonenumber network.

RJ45 connector The standard connector (plug) for Ethernet cables. Slightly wider than RJ11.

router A device that forwards traffic between networks according to network layer information and to tables constructed from routing protocols. It ensures that data arrives where it should, and attempts to do so in the most efficient manner.

S

search engine A program accessed on the Internet that allows you to search large databases for information by using keywords or phrases.

server A computer with a large hard disk that serves (provides information to) other computers connected to it by a network. The Internet is a network of servers. When you send or receive e-mail, it travels from the sender's computer to the receiver's computer through a number of servers.

SOHO (small office/home office)

Describes a level of features and capabilities in computers and peripherals.

SPI (Stateful Packet Inspection)

Refers to a firewall's ability to examine IP packet headers to determine origination/destination addresses by using predetermined rule sets to allow or deny access to the packets. This is a security feature commonly found in firewalls.

surf To jump from place to place within or between sites on the Internet, searching for topics of interest by clicking hyperlinks. See *hyperlink* and *navigate*.

symmetric Data transmission that is the same speed both downstream and upstream.

T

TCP/IP (transmission control protocol/Internet protocol) A set of networking protocols that allows two or more computers to communicate. TCP/IP was developed by the Department of Defense for the Defense Data Network and has since been widely adopted as a networking standard.

U

uplink port A port available on some hubs or routers that is set aside for connecting to other hubs, routers, or cable or DSL modems.

upstream The traffic on a network which goes from the endpoint (your computer) to the provider. Sending an e-mail message is upstream traffic. See *downstream*.

URL (Uniform Resource Locator)

The address your browser uses to locate a specific site on the World Wide Web, such as <http://www.compaq.com>

UTP (Unshielded Twisted Pair) cable

Used for creating Ethernet networks. See *Category 5 cable*.

V

V.90 modem The official ITU international standard for 56K analog modems. This is the standard most commonly used to connect through the telephone system. Although data can travel at speeds up to 56 kbps from the ISP to your home, the standard currently limits the speed that data can be sent from your home back to the ISP to 31.2 kbps.

VPN (Virtual Private Networking)

A system and method that enables remote users to access a private network through a public network. The remote user appears to be connected directly to the private network.

W

WAN (Wide Area Network)

A communications network that covers a wide geographic area, such as a community, city, state, or country. A WAN is a network spread over multiple locations. The Internet is a global WAN. See *LAN*.

wireless networking A network without physical cabling. Wireless networking encompasses different standards of which HomeRF is one. In a wireless network, data is passed between devices using radio frequencies.

WWW (World Wide Web) A system of servers that operate over the Internet. A browser is used to follow hyperlinks within and between Web sites. Documents formatted in HTML are supported. See *HTML*.

Index

C

- Caution notices
 - defined 1-4
 - Compaq
 - Web site 1-5, 2-2, 5-1
 - Customer Support Center 5-3
 - connection sharing 2-7
 - connector
 - Ethernet-type 2-4
 - Internet 2-4
 - power adapter 2-4
 - RJ11 2-4
 - RJ45 2-4
 - telephone-type 2-4
 - content blocking 2-11
 - CyberPatrol 2-11
- ## D
- DHCP 2-5
 - DHCP server 2-5
 - Dial on Demand 2-8
 - service 2-5
 - Did you know ... notices defined 1-4

E

- electronic documents defined 1-4

F

- FCC rules 5-2
- firewall 2-6
 - updates 2-9

H

- Home RF networking 3-3

I

- installation
 - requirements 3-2
 - procedure for accessing from Web site 3-5
- Internet connection 2-3
- Internet Service Provider *See also* ISP
- IP address 2-6, 2-7

iPAQ Connection Point 2-2
 add-on features 2-10
 connectors 2-4
 functions 2-5
 installation requirements 3-3
 Web site 3-5, 4-1
ISP 2-1, 2-7

L

LiveSecurity
 firewall 2-9
 license accounts 2-10
 subscription 2-9, 2-10
 tracking activity 2-9
 updates 2-9
 Web site 2-9

M

modem
 U.S. Regulations 5-2
 V.90 2-8

N

NAT/PAT IP sharing 2-5

O

operating system requirements 3-2

P

port
 A/C input 2-4
 LAN RJ11 2-4
 LAN RJ45 2-4
 WAN RJ11 2-4
 WAN RJ45 2-4
printer requirements 3-2
protected access 2-12
purchase agreement 2-8

R

Ringer Equivalence Number (REN) 5-2
RJ11 2-4
RJ45 2-4

S

safety tips 1-6
security firewall 2-5
See also ... notices defined 1-4
server
 DHCP 2-5
software
 optional features 2-10
software license account 2-8
surge protector 1-6

T

Telephone Consumer Protection Act of 1991
 5-3
Tip notices defined 1-4

U

user license 2-5

V

Virtual Private Networking (VPN) 2-5, 2-12

W

Warning notices defined 1-4
WatchGuard firewall 2-6
Web browser requirements 3-2
Web filtering 2-5