

PL-100

PowerLine 85 Mbps Ethernet Adapter

User's Guide

Version 1.00
9/2005

The logo for ZyXEL, featuring the word "ZyXEL" in a bold, blue, sans-serif font. The "Zy" is lowercase and the "XEL" is uppercase.

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This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operations.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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- Consult the dealer or an experienced radio or TV technician for help.

Notice 1

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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For your safety, be sure to read and follow all warning notices and instructions.

- Do NOT open the device or unit. Opening or removing covers can expose you to dangerous high voltage points or other risks. ONLY qualified service personnel can service the device. Please contact your vendor for further information.
- Connect the power cord to the right supply voltage (110V AC in North America or 230V AC in Europe).
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- If you wall mount your device, make sure that no electrical, gas or water pipes will be damaged.
- Do NOT install nor use your device during a thunderstorm. There may be a remote risk of electric shock from lightning.
- Do NOT expose your device to dampness, dust or corrosive liquids.
- Do NOT use this product near water, for example, in a wet basement or near a swimming pool.
- Make sure to connect the cables to the correct ports.
- Do NOT obstruct the device ventilation slots, as insufficient airflow may harm your device.
- Do NOT store things on the device.
- Connect ONLY suitable accessories to the device.

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ZyXEL warrants to the original end user (purchaser) that this product is free from any defects in materials or workmanship for a period of up to two years from the date of purchase. During the warranty period, and upon proof of purchase, should the product have indications of failure due to faulty workmanship and/or materials, ZyXEL will, at its discretion, repair or replace the defective products or components without charge for either parts or labor, and to whatever extent it shall deem necessary to restore the product or components to proper operating condition. Any replacement will consist of a new or re-manufactured functionally equivalent product of equal value, and will be solely at the discretion of ZyXEL. This warranty shall not apply if the product is modified, misused, tampered with, damaged by an act of God, or subjected to abnormal working conditions.

Note

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Customer Support

Please have the following information ready when you contact customer support.

- Product model and serial number.
- Warranty Information.
- Date that you received your device.
- Brief description of the problem and the steps you took to solve it.

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	sales@zyxel.co.uk	+44 (0) 1344 303034	ftp.zyxel.co.uk	

a. "+" is the (prefix) number you enter to make an international telephone call.

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Preface

Congratulations on your purchase of the PL-100 PowerLine 85 Mbps Ethernet Adapter.

Note: Register your product online to receive e-mail notices of firmware upgrades and information at www.zyxel.com for global products, or at www.us.zyxel.com for North American products.

Your PL-100 Ethernet Adapter is easy to install and configure.

About This User's Guide

This manual is designed to guide you through the configuration of your PL-100 for its various applications.

Related Documentation

- Supporting Disk

Refer to the included CD for support documents.

- Quick Start Guide

The Quick Start Guide is designed to help you get up and running right away. It contains a detailed easy-to-follow connection diagram, default settings, handy checklists and information on setting up your network and configuring for Internet access.

- ZyXEL Glossary and Web Site

Please refer to www.zyxel.com for an online glossary of networking terms and additional support documentation.

User Guide Feedback

Help us help you. E-mail all User Guide-related comments, questions or suggestions for improvement to techwriters@zyxel.com.tw or send regular mail to The Technical Writing Team, ZyXEL Communications Corp., 6 Innovation Road II, Science-Based Industrial Park, Hsinchu, 300, Taiwan. Thank you!

Syntax Conventions

- “Enter” means for you to type one or more characters. “Select” or “Choose” means for you to use one predefined choices.
- Mouse action sequences are denoted using a comma. For example, “In Windows, click **Start**, **Settings** and then **Control Panel**” means first click the **Start** button, then point your mouse pointer to **Settings** and then click **Control Panel**.
- “e.g.,” is a shorthand for “for instance”, and “i.e.,” means “that is” or “in other words”.

CHAPTER 1

Getting to Know Your PL-100

This chapter introduces the main features and applications of the PL-100.

1.1 PL-100 PowerLine 85 Mbps Ethernet Adapter Overview

Thank you for purchasing the The PL-100 PowerLine 85 Mbps Ethernet Adapter transforms a house's existing electrical wiring into a powerful networking infrastructure. The PL-100 plugs into an ordinary outlet to easily extend a cable or DSL broadband connection or existing Ethernet (LAN) network to any other electrical outlet in any room of a house, all without the need for any new cabling.

The PL-100 supports up to an 85 Mbps data rate over common power lines while providing 56-bit DES Link Encryption for a safe and secure network. Easy to install, simply plug the PL-100 into an outlet and connect it to any broadband modem or router, and then plug each PC, home entertainment device, gaming console or network-ready printer into a power socket with another PL-100.

1.2 Key Features

Up to an 85 Mbps Data Rate Over Power Lines

Power line communication (PLC), also called Broadband over Power Lines (BPL) or Power Line Telecoms (PLT), is a wireline technology that is able to use the current electricity networks for data and voice transmission. The technology allows the transfer of voice and data by superimposing an analog signal over the standard 50 or 60 Hz alternating current (AC).

56-bit DES Link Encryption

Data Encryption Standard (DES) is a widely used method of data encryption using a secret key. DES applies a 56-bit key to each 64-bit block of data.

No New Wiring to Install

The PL-100 works in any home with copper wiring used as for electrical lines. Since some older houses built before 1950 might have older wiring, then it may not work in these cases. The PL-100 signal has no problem passing through circuit breakers, but can't pass through power transformers (which usually feed power to a house or groups of houses). The PL-100 works with AC input of 100 ~ 240 V.

LAN Port

The 10/100 Mbps auto-negotiating Ethernet LAN port allows the PL-100 to detect the speed of incoming transmissions and adjust appropriately without manual intervention. It allows data transfer of either 10 Mbps or 100 Mbps in either half-duplex or full-duplex mode depending on your Ethernet network. The port is also auto-crossover (MDI/MDI-X) meaning it automatically adjusts to either a crossover or straight-through Ethernet cable.

HomePlug V1.01 Compatible

A coalition of manufacturers, the HomePlug Powerline Alliance, established the HomePlug 1.0 Standard, which enables the establishment of an Ethernet-class network over powerline channel.

1.3 System Requirements

- At least two available power outlets
- Standard home power wiring
- A computer with the following:
 - CD-ROM drive
 - IBM compatible running at 200 MHz or better
 - 64 MB of RAM
 - Ethernet network adapter
 - TCP/IP installed

1.4 Applications for the PL-100

Here are some examples of what you can do with your PL-100.

1.4.1 Broadband Internet Access via Cable or DSL Modem

You can connect the PL-100 to cable modem, DSL or wireless modem via an Ethernet switch or wireless port on the modem, and extend this high speed connection to all other PL-100 devices in the house.

1.4.2 Connect a Computer, Printer or Game Device to a Network

Besides a computer, you can connect other devices to your PL-100 enabled home LAN network. A printer, game device or a home entertainment system can be easily added to the system by connecting each to a PL-100. Each device only needs a standard ethernet connector.

1.4.3 Share Files, Printers and Other Devices

The benefit of any home network is of course to easily connect to high speed Internet, but also to share and exchange content. Easily share one printer with everyone in the house. Send or receive videos or music anywhere in the house. It is a great way to connect and is safer than a wireless connection.

CHAPTER 2

Connecting the PL-100

This chapter describes how to connect the PL-100 to your broadband connection and computers.

2.1 Preparing to Install the PL-100

The PL-100 PowerLine 85 Mbps Ethernet Adapter allows you to set up a high speed home network using your house's existing electrical wiring. The PL-100 plugs into an ordinary outlet to easily extend a cable or DSL broadband connection or existing Ethernet (LAN) network to any other electrical outlet in any room of a house.

Basically, you need to plug one PL-100 Ethernet adapter into a wall outlet for each computer (or other Ethernet device like printer or game console) you want to connect to your network. You will also need one PL-100 to extend your cable or DSL modem connection, the PL-100 connects to your modem or router to extend your broadband connection to the other PL-100 units in your house.

The steps below will show how to setup the hardware, install the required software and then use the PL-100 home networking functions.

If needed, there is a **Troubleshooting** section included that will hopefully help you work through any issues you might encounter. [Section Chapter 5 on page 37](#) for help.

To summarize what you need to install the system, let's do a quick summary.

- One PL-100 Ethernet adapter connected to each computer.
- A standard broadband modem.
- A standard router connected to broadband modem (some units might have a combined Cable or DSL modem or router).

2.2 Connecting the PL-100

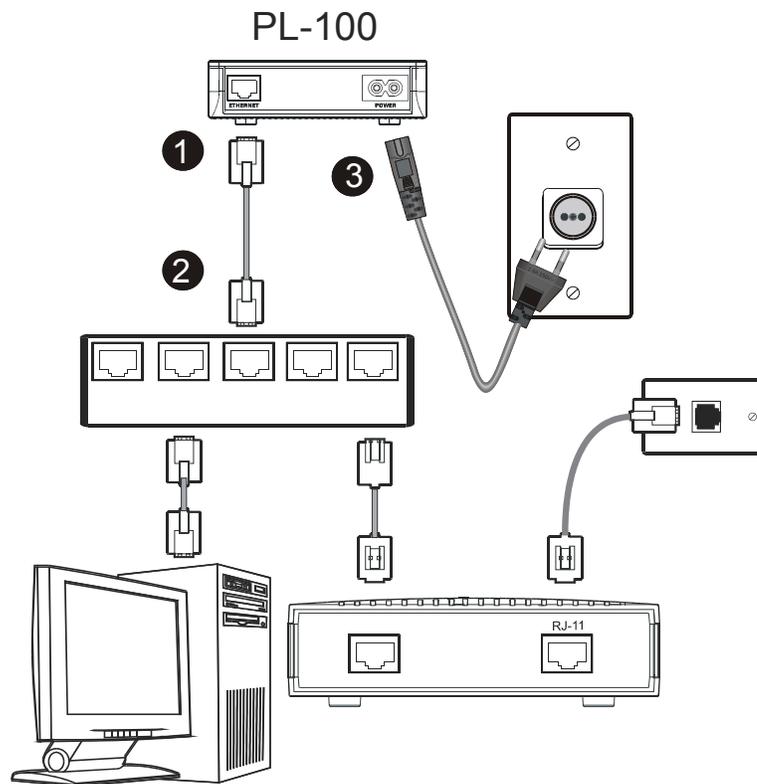
2.2.1 Connecting the PL-100 to Your Main Cable or DSL Modem

In order to get the whole house networked, you want to first make sure all the computers you wish to be networked are connected properly to a PL-100 adapter. The figure below shows how to connect the PL-100 into your existing broadband connection via Ethernet switch.

Follow the steps below to connect the PL-100 to your broadband modem.

- 1 Connect an Ethernet cable to the port on the PL-100.
- 2 Connect the other end of this Ethernet cable to an available Ethernet LAN port of your router (broadband modem or router device).
- 3 Plug the PL-100 into a wall socket that is near your computer.
- 4 Confirm that the **PWR**, **LINK** and **ETHN** LEDs on the PL-100 are on.

Figure 1 Connecting the PL-100 to a Broadband Modem



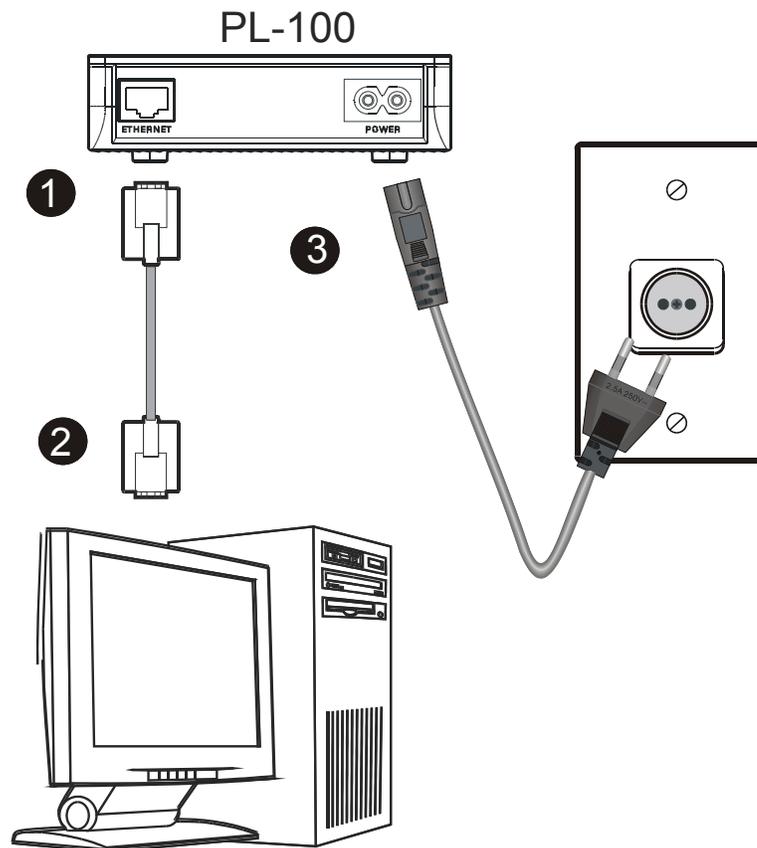
2.2.2 Connecting the PL-100 to a Computer

For all the computers you wish to be networked, they must each be connected properly to a PL-100 Ethernet adapter. The figure below shows how to connect the PL-100 to each computer.

Follow the steps below to connect the PL-100 to your computer.

- 1 Connect an Ethernet cable to the port on the PL-100.
- 2 Connect the other end of this Ethernet cable to the Ethernet port of your computer.
- 3 Plug the PL-100 into a wall socket that is near your computer.
- 4 Confirm that the **PWR**, **LINK** and **ETHN** LEDs on the PL-100 are on.

Figure 2 Connecting the PL-100 to a Computer



2.2.3 LED Status

The LEDs of the PL-100 show the current connection status.

Figure 3 PL-100 Top View With LED Lights



Table 1 LED Status of the PL-100 After Connection

LABEL	STATUS	DESCRIPTION
PWR	ON	The PL-100 is on and receiving power.
	OFF	The PL-100 is not receiving power.
LINK	ON	The Powerline port detects another powerline device.
	Flashing	The Powerline port is transmitting.
	OFF	The Powerline port is not detecting another powerline device.
ETHN	ON	The Ethernet port is on and ready.
	Flashing	The Ethernet port is transmitting.
	OFF	Devices on the Ethernet port are not connected or not on.

Please refer to the troubleshooting guide for additional help if needed. [Section Chapter 5 on page 37](#) for help.

CHAPTER 3

Installing the PL-100 Software

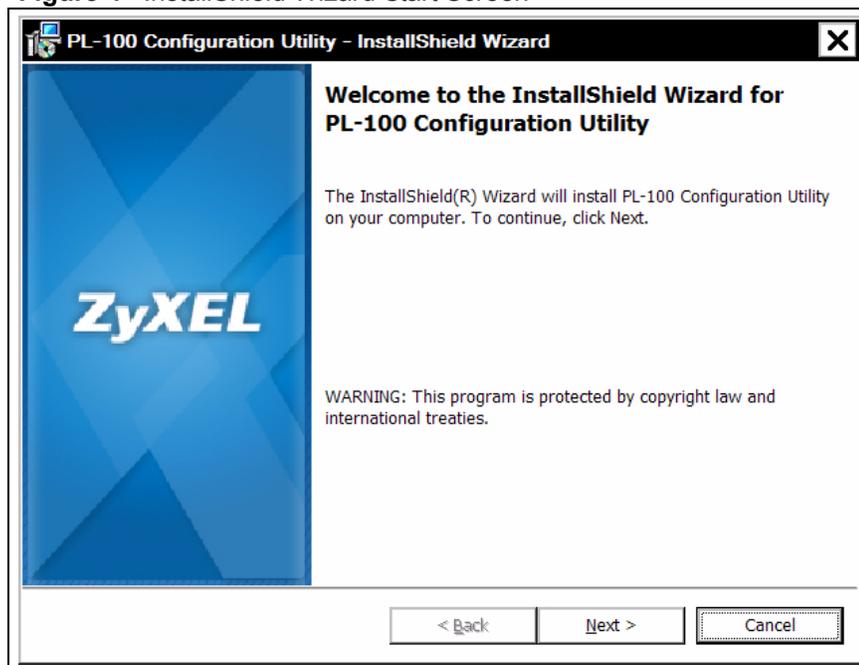
3.1 Installation of the Utility

Please verify that no other HomePlug or Encryption Management Utilities are installed before installing this product. If other utilities are installed, uninstall them and restart before installing this software.

To install the PL-100 Configuration Utility, please follow the steps below.

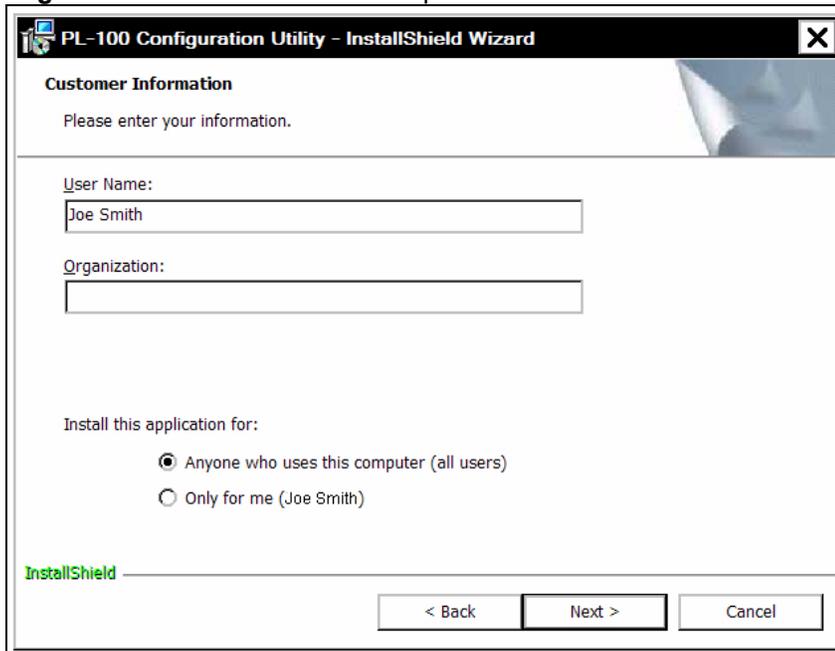
- 1 Insert the ZyXEL Windows OS Configuration Utility Setup utility CD-ROM into the computer's CD-ROM drive. The Setup utility runs automatically. Alternatively this can also be done manually by double clicking the setup.exe file on the CD. The CD will launch an installation utility similar to the one shown in Figure 4. Click **Next** to continue.

Figure 4 InstallShield Wizard Start Screen



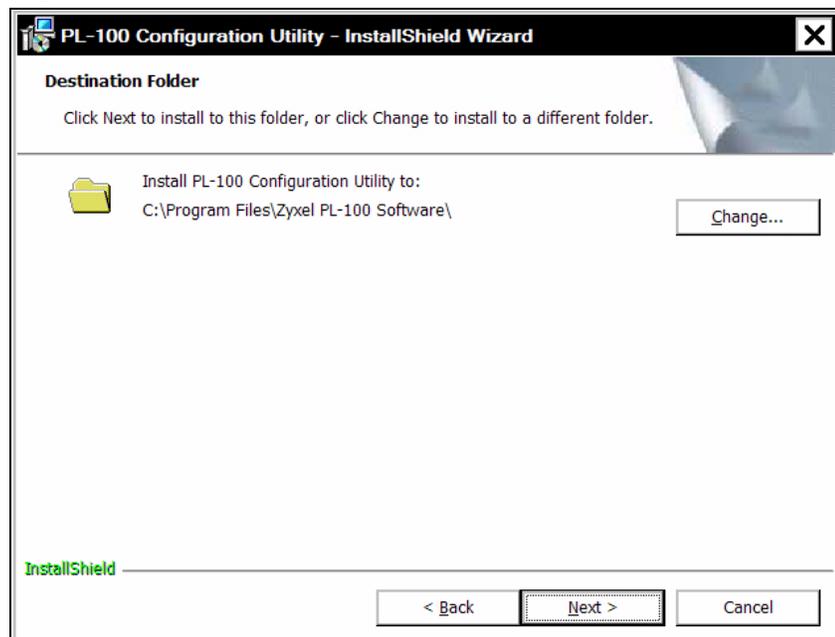
- 2 Enter your **User Name** and **Organization** (optional). For exclusive control by an individual, click the “**Only for me**” radio button. Click **Next** to continue.

Figure 5 Customer Information Input



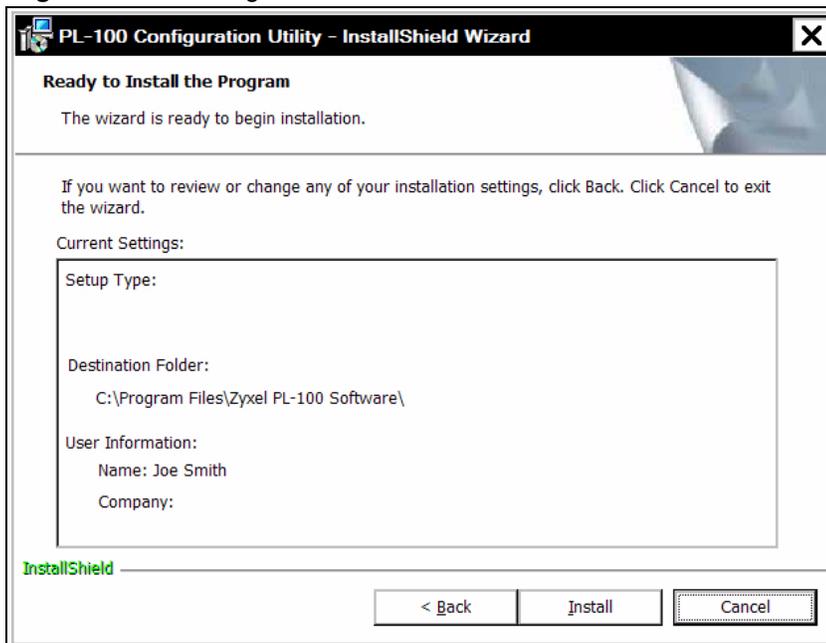
- 3 Click **Next** to install to the default folder, or click **Change** to install to a different folder.

Figure 6 Install Destination Folder



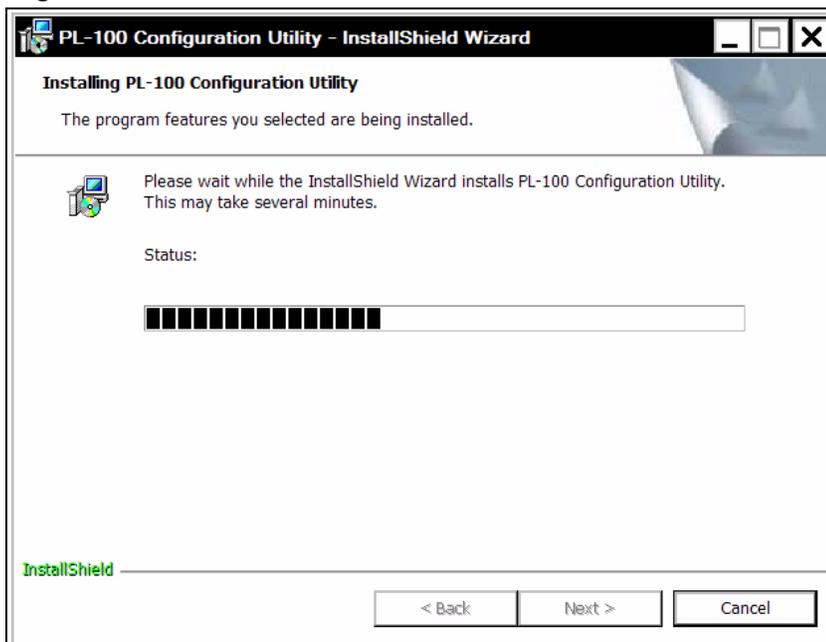
- 4 The installation wizard is ready to begin the installation. Click **Next** to proceed or **Cancel** to exit the wizard.

Figure 7 Install Begin Screen



- 5 The PL-100 Configuration Utility is being installed. Please wait for installation to complete.

Figure 8 Install Process Screen



- This is the screen to confirm the InstallShield Wizard has successfully installed the PL-100 Configuration Utility to your computer. Click **Finish** to exit the wizard.

Figure 9 Installation Confirmation Screen

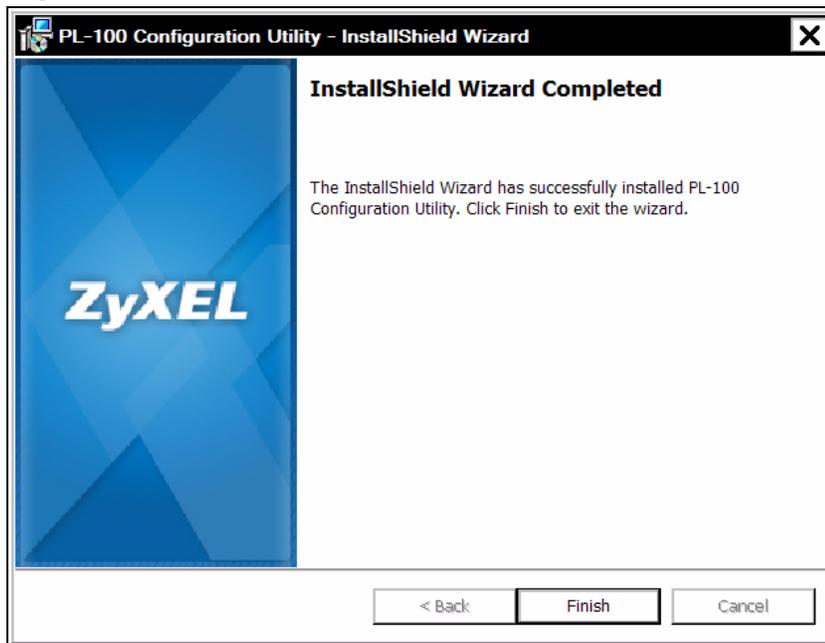
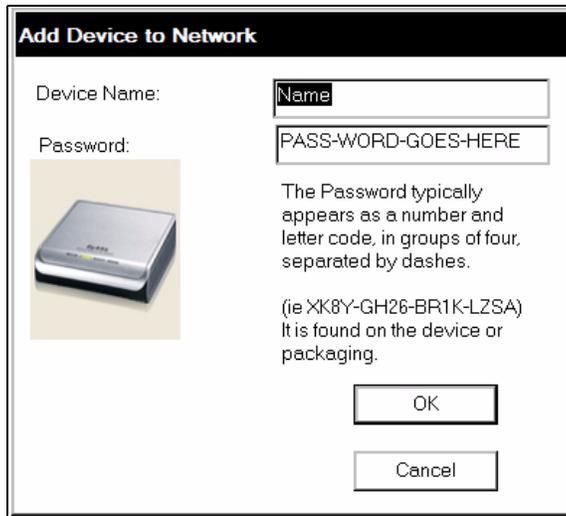


Table 2 Utility Main Window Descriptions

LABEL	DESCRIPTION
Top Panel	This shows all local HomePlug devices found connected to the computer's NIC (Network Interface Card). In most cases, only one device will be seen. In situations where there are more than one device connected, such as a USB and also an Ethernet device, you may click to select the one to manage through and then click the Connect button to its right. The status area above the button indicates that your PC is connected to that same device. Once connected to the chosen local device, the utility will automatically scan the power line periodically for any other HomePlug devices. If no local HomePlug devices are discovered, the status area above the connect button will indicate that accordingly.
Lower Panel	This displays all the HomePlug devices discovered on the current logical network (remote devices). Displayed immediately above this panel is the number of remote devices found, the type of logical network (Public or Private), and a message area that reports connectivity and scan status. The following information is displayed for each of the devices discovered that appear in the lower panel.
Device Name	This shows the default device name, which may be re-defined. You may change the name by clicking on the name and editing in-place, or by using the rename button. An icon is optionally shown with the name. A distinction in icons is made between low-speed and high-speed devices (HomePlug 1.0 and Turbo). By default, the icon is displayed with the name.
Rename	This allows you to rename a device.
Password	This shows current password for device.
Quality	This shows the quality of the High speed or Low speed device connection.
Rate	This shows the current transmission rate of selected device.
MAC Address	This shows the device's MAC address.
Enter Password	<p>This column shows the supplied device password (initially left blank). You may enter the password by using the Set Password button (explained below). To set the Password of the device (required when creating a private network), first select the device by clicking on its name in the lower panel and then click on the Enter Password button. A dialog box will appear as shown below to type the password. The selected device name is shown above the field for entering the password. Click OK after entering the new password.</p> <p>A confirmation box will appear if the password was entered correctly. If a device is not found, you will be notified and suggestions to resolve common problems will be presented.</p>
Add Button	This is used to add a remote device to your network that is not on the displayed list in the lower panel. For example, a device currently on another logical network See Figure 11 on page 31 , can be added this way. You are advised to locate the passwords for all devices you wish to manage and add them to the local logical network by clicking on the Add button. A dialog box will appear as seen below. The dialog box allows you to enter both a device name and the password.
Scan Button	This is used to perform an immediate search of the HomePlug devices connected to the computer. By default the utility automatically scans every few seconds and updates the display.

Figure 11 Add Device

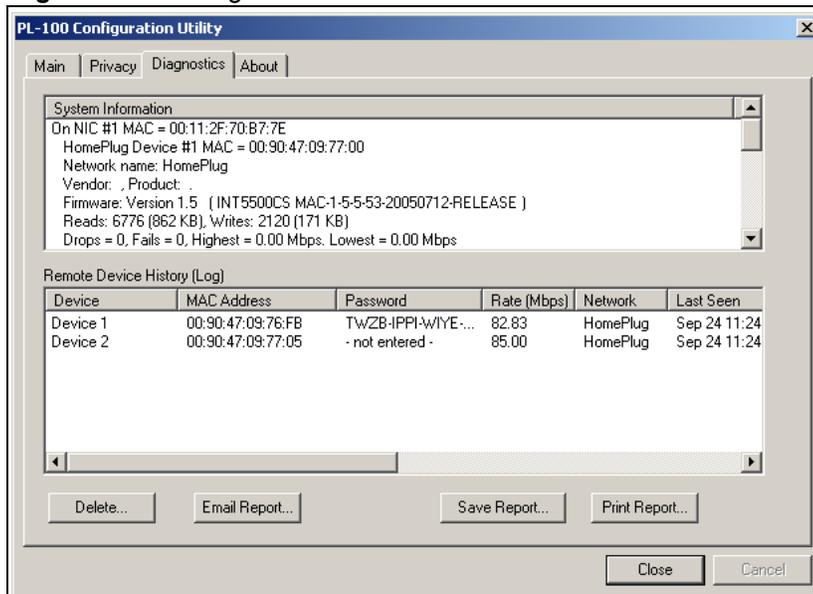


A confirmation box will appear if the password was entered correctly and if the device was found. If a device is not found, you will be notified and suggestions to resolve common problems will be presented.

Note: The device must be present on the power line (plugged in) in order for the password to be confirmed and added to the network. If the device could not be located, a warning message will be shown.

A typical screen after naming and supplying passwords might appear as below, which is also the diagnostics screen.

Figure 12 Naming and Passwords



4.2 Privacy Screen

The **Privacy** dialog screen provides a means for managing the local network and providing additional security. All HomePlug devices are shipped using a default logical network (network name), which is normally “HomePlug”. The Privacy dialog screen allows you to make the network private by changing the network name (network password) of devices.

You can always reset a HomePlug network to the universal one (public) by entering “HomePlug” as the network name or by clicking on the **Use Default** button.

Note: Changing the network name to any other name other than HomePlug will show the network type on the main screen as Private.

Figure 13 Privacy Screen

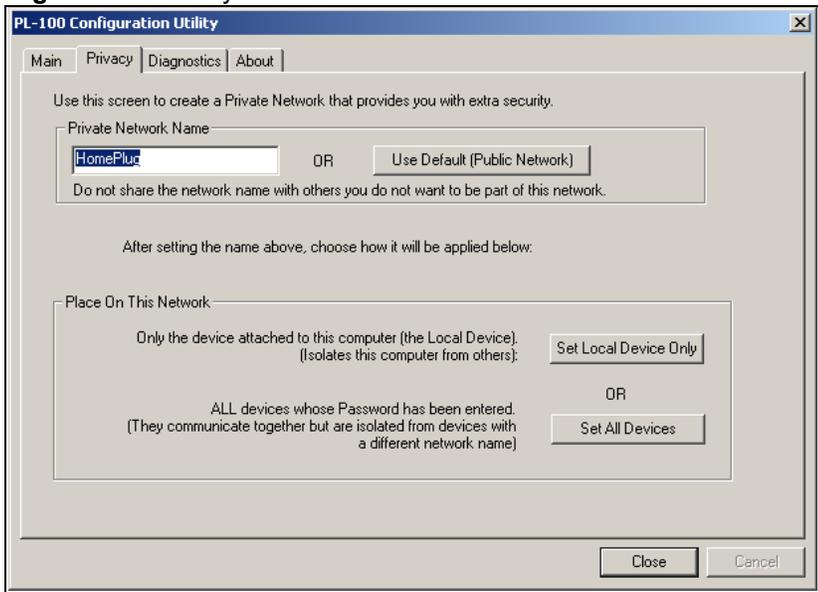


Table 3 Privacy Screen Choices

LABEL	DESCRIPTION
Set Local Device Only	This is used to change the network name (network password) for the local device only. After doing this, all the devices seen on the Main panel prior to this will no longer be able to communicate or respond to the computer, as they will be on a different logical network. Devices previously set up with the same logical network (same network name) will appear in the device list afterward selecting this option.
Set All Devices	This is used to change the logical network of all devices that appear on the Main panel. You must have entered the device's Password in order to set it to the new logical network. A notification message will appear to report the success of this operation.

4.3 Diagnostics Screen

The **Diagnostics** screen shows system information and a history of all devices seen. The appearance is shown in the figure below.

Figure 14 Diagnostics Screen

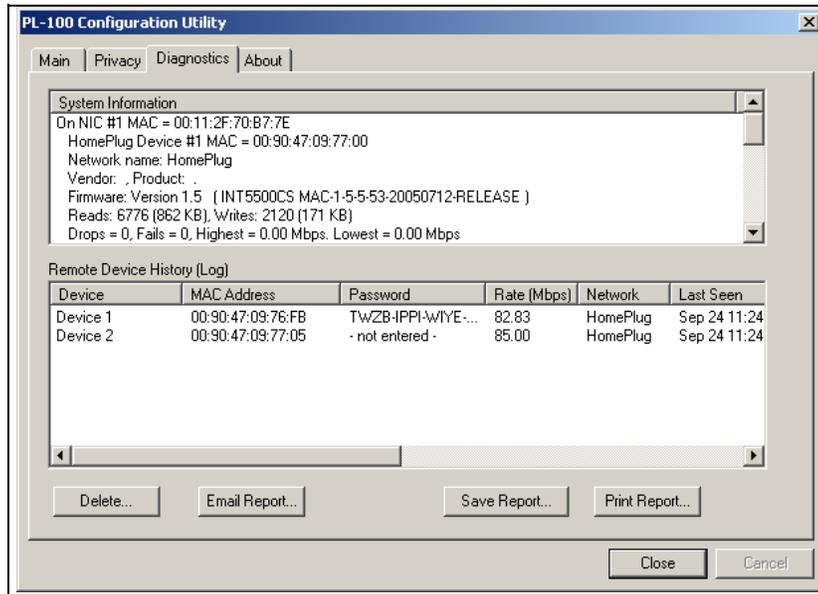


Table 4 Diagnostics Screen Items

LABEL	DESCRIPTION
Upper Panel	<p>This area shows technical data concerning software and hardware on the host computer used to communicate over HomePlug. It includes the following:</p> <ul style="list-style-type: none"> • Operating System Type or Version • Host Network Name • User Name • MAC Address of all NICs (network interface card) • Identify Versions of all Driver DLLs and Libraries used (NDIS) • HomePlug chipset manufacturer name (Turbo Only devices) • MAC Firmware Version (Turbo Only devices) • Vendor Name
Lower Panel	<p>This area contains a history of all remote devices seen on the computer over time. Devices are shown here regardless of whether or not they are on the same logical network. Devices that are active on the current logical network will show a transfer rate in the Rate column; devices on other networks, or devices that may no longer exist are shown with a "?" in the Rate column. The following remote device information is available from the diagnostics screen:</p> <ul style="list-style-type: none"> • Adapter Alias Name • Adapter MAC Address • Adapter Password • Adapter Last known rate • Adapter Last Known Network • HomePlug chipset manufacturer name • Date device last scanned. • MAC Firmware Version (Turbo Only).
Delete, Email Report, Save Report, Print Report	<p>The diagnostics information displayed may be saved to a text file for later emailing to technical support of a manufacturer, or printed for reference during a technical support call. Devices no longer part of the network can be deleted using the Delete button.</p>

4.4 About Screen

The **About** screen in the figure below shows the software version and provides access to the ZyXEL website.

Figure 15 About Screen

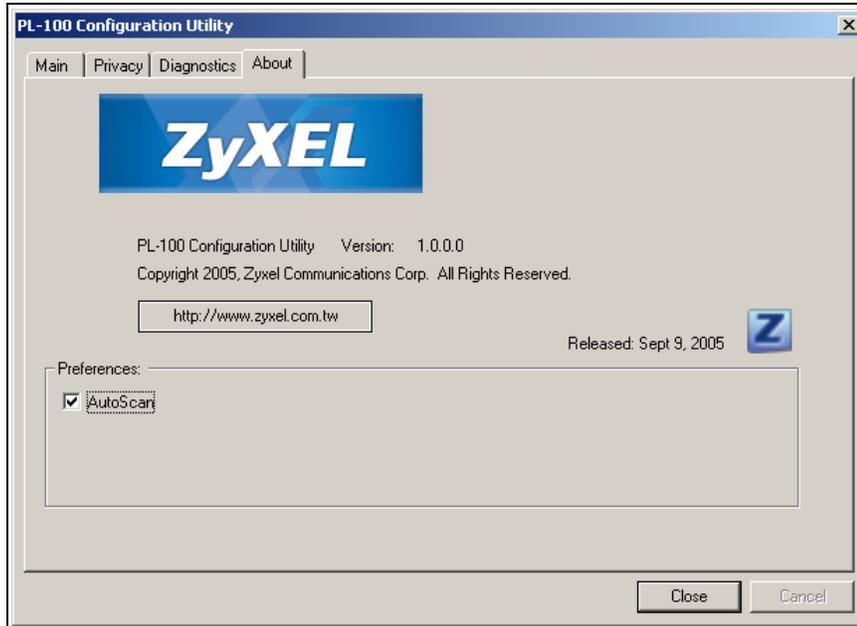


Table 5 About Screen Choices

LABEL	DESCRIPTION
http://www.zyxel.com.tw	Clicking on this web address field will open a web browser and take you directly to the ZyXEL web site.
AutoScan	This is used as the default Autoscan setting to find all HomePlug devices connected to the computer. When checked, the utility automatically scans every few seconds and updates the information to display. When left blank, the Configuration Utility only scans for devices when the Scan button on the Main utility screen is clicked.

CHAPTER 5

Troubleshooting

This chapter covers potential problems and possible remedies. After each problem description, instructions are provided to help you diagnose and fix the problem.

5.1 Using LEDs to Diagnose a Problem

5.1.1 PWR LED is Off

Table 6 Troubleshooting **PWR** LED

STEPS	CORRECTIVE ACTION
1	Make sure the PL-100 is properly connected to a power outlet. Make sure the outlet is working by plugging another electric device into it. If it is working, plug in the PL-100 again. If the PL-100 LED still does not light, contact our technical support.

5.1.2 LINK LED is Off

Table 7 Troubleshooting **LINK** LED

STEPS	CORRECTIVE ACTION
1	Use the PL-100 Configuration Utility to detect all other Homeplug devices on your power line network.
2	Try plugging a second Homeplug device into an adjacent socket (to your PL-100) and see if the lights light up. If you are still having a problem, please contact our technical support line.

5.1.3 ETHN LED is Off

Table 8 Troubleshooting **ETHN** LED

STEPS	CORRECTIVE ACTION
1	Check that all Ethernet cables are securely connected at all ports and are the correct type (Cat-5 or higher).
2	Check the Ethernet adapter on your computer and make sure it's enabled and working properly. If the PL-100 is connected to an Ethernet switch or router, make sure the device is working correctly, and that the LAN network is working and configured correctly as well.

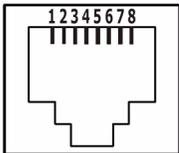
APPENDIX A

PL-100 Specifications

Table 9 Specifications

ITEM	DESCRIPTION
Product Name	PL-100 PowerLine 85 Mbps Ethernet Adapter
Power Input	100 - 240 VAC, 50 ~ 60 Hz, 0.05 A
Dimensions	112 (L) mm x 106 (D) mm x 28.5 mm (H)
Operating Temp	0°C ~ 45°C
Humidity	10% ~ 90% Noncondensing
Frequency Band	4.3 MHz, 20.9 MHz
Cabling Type	1 x Powerline Power Cord 1 x LAN UTP Category 5 or Better
Network Ports	1 x 10/100M BASE-T Ethernet port with Auto MDI/MDIX 1 x 85 Mbps PowerLine port compliant with 14M HomePlug V1.01
Power Line Network	Supports up to 16 (Tone Map) PL devices communicating on a single network. 1 PL device supports 16 remote Ethernet addresses, Total support 64.
Network Interface	1 x RJ-45 (10/100BASE-T Ethernet) 1 x 2 PIN AC-JACK + Power Cable
Encryption	56-bit DES Link Encryption with Key Management
Certifications	FCC, CE

Table 10 RJ-45 Connector Pin Assignments

RJ-45 CONNECTOR	PIN NO	RJ-45 SIGNAL ASSIGNMENT
	1	RxD +
	2	RxD -
	3	TxD +
	4	Not connected
	5	Not connected
	6	TxD -
	7	Not connected
	8	Not connected

APPENDIX B

Setting up Your Computer's IP Address

All computers must have a 10M or 100M Ethernet adapter card and TCP/IP installed.

Windows 95/98/Me/NT/2000/XP, Macintosh OS 7 and later operating systems and all versions of UNIX/LINUX include the software components you need to install and use TCP/IP on your computer. Windows 3.1 requires the purchase of a third-party TCP/IP application package.

TCP/IP should already be installed on computers using Windows NT/2000/XP, Macintosh OS 7 and later operating systems.

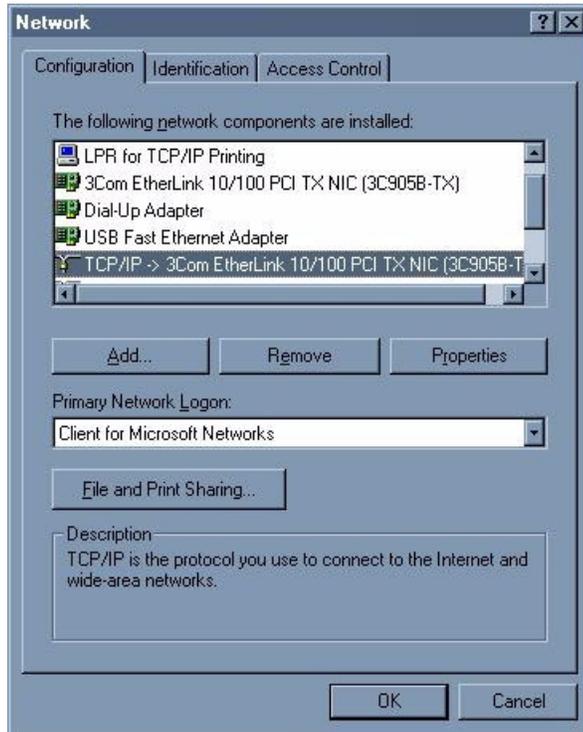
After the appropriate TCP/IP components are installed, configure the TCP/IP settings in order to "communicate" with your network.

If you manually assign IP information instead of using dynamic assignment, make sure that your computers have IP addresses that place them in the same subnet as the Prestige's LAN port.

Windows 95/98/Me

Click **Start**, **Settings**, **Control Panel** and double-click the **Network** icon to open the **Network** window.

Figure 16 WInows 95/98/Me: Network: Configuration



Installing Components

The **Network** window **Configuration** tab displays a list of installed components. You need a network adapter, the TCP/IP protocol and Client for Microsoft Networks.

If you need the adapter:

- 1 In the **Network** window, click **Add**.
- 2 Select **Adapter** and then click **Add**.
- 3 Select the manufacturer and model of your network adapter and then click **OK**.

If you need TCP/IP:

- 1 In the **Network** window, click **Add**.
- 2 Select **Protocol** and then click **Add**.
- 3 Select **Microsoft** from the list of **manufacturers**.
- 4 Select **TCP/IP** from the list of network protocols and then click **OK**.

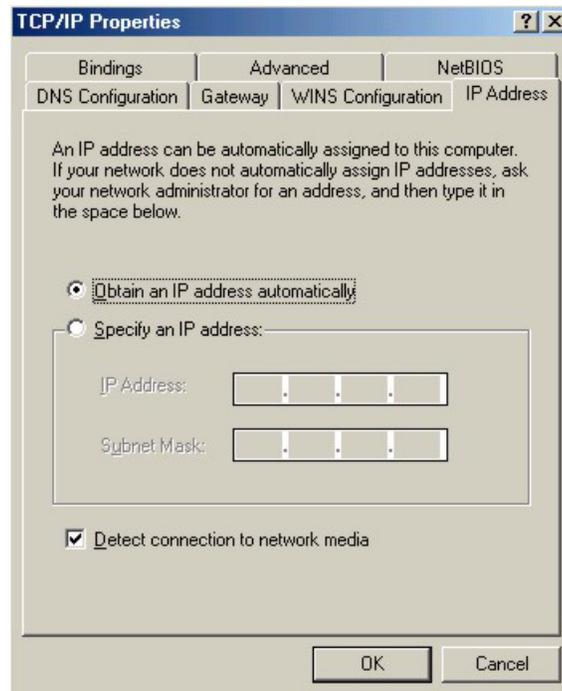
If you need Client for Microsoft Networks:

- 1 Click **Add**.
- 2 Select **Client** and then click **Add**.
- 3 Select **Microsoft** from the list of manufacturers.
- 4 Select **Client for Microsoft Networks** from the list of network clients and then click **OK**.
- 5 Restart your computer so the changes you made take effect.

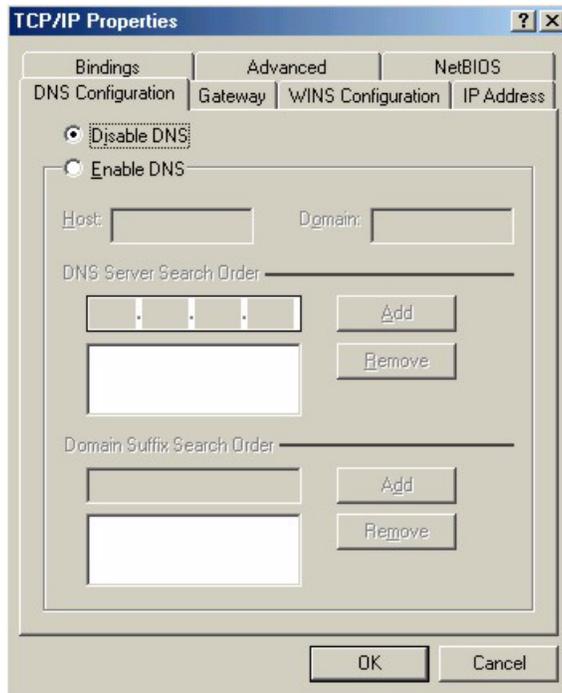
Configuring

- 1 In the **Network** window **Configuration** tab, select your network adapter's TCP/IP entry and click **Properties**
- 2 Click the **IP Address** tab.
 - If your IP address is dynamic, select **Obtain an IP address automatically**.
 - If you have a static IP address, select **Specify an IP address** and type your information into the **IP Address** and **Subnet Mask** fields.

Figure 17 Windows 95/98/Me: TCP/IP Properties: IP Address



- 3 Click the **DNS Configuration** tab.
 - If you do not know your DNS information, select **Disable DNS**.
 - If you know your DNS information, select **Enable DNS** and type the information in the fields below (you may not need to fill them all in).

Figure 18 Windows 95/98/Me: TCP/IP Properties: DNS Configuration**4** Click the **Gateway** tab.

- If you do not know your gateway's IP address, remove previously installed gateways.
- If you have a gateway IP address, type it in the **New gateway field** and click **Add**.

5 Click **OK** to save and close the **TCP/IP Properties** window.**6** Click **OK** to close the **Network** window. Insert the Windows CD if prompted.**7** Turn on your Prestige and restart your computer when prompted.

Verifying Settings

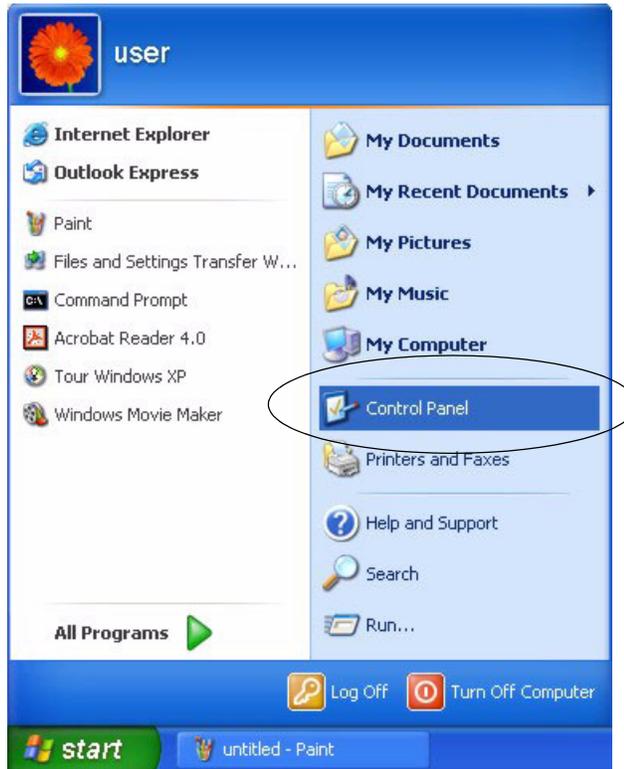
1 Click **Start** and then **Run**.**2** In the **Run** window, type "winipcfg" and then click **OK** to open the **IP Configuration** window.**3** Select your network adapter. You should see your computer's IP address, subnet mask and default gateway.

Windows 2000/NT/XP

The following example figures use the default Windows XP GUI theme.

- 1 Click **start** (**Start** in Windows 2000/NT), **Settings**, **Control Panel**.

Figure 19 Windows XP: Start Menu



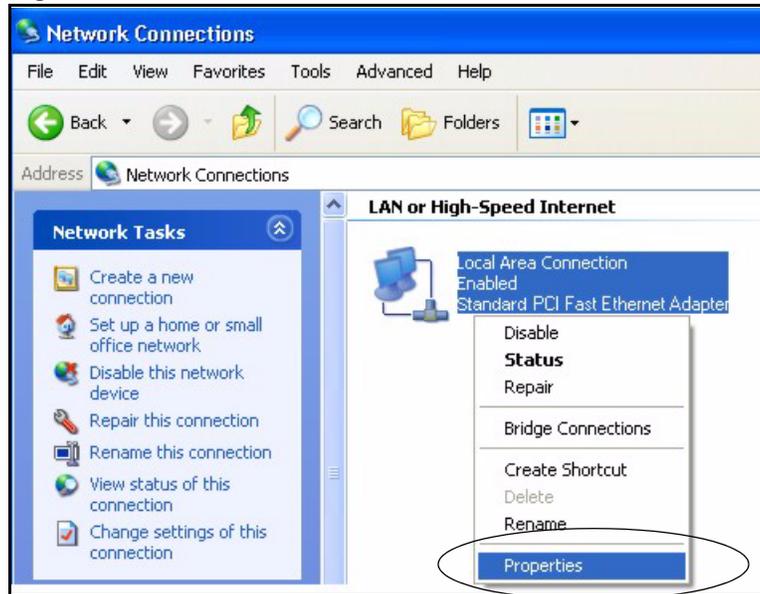
- 2 In the **Control Panel**, double-click **Network Connections** (**Network and Dial-up Connections** in Windows 2000/NT).

Figure 20 Windows XP: Control Panel



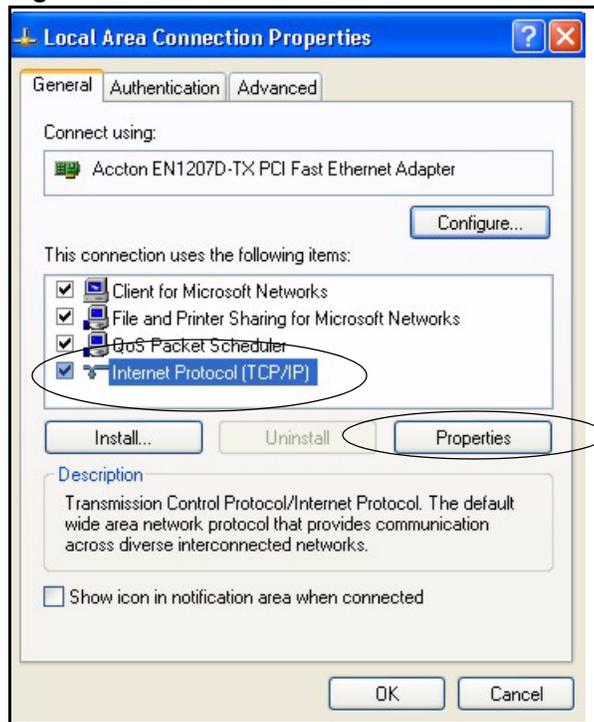
- 3 Right-click **Local Area Connection** and then click **Properties**.

Figure 21 Windows XP: Control Panel: Network Connections: Properties



4 Select **Internet Protocol (TCP/IP)** (under the **General** tab in Win XP) and then click **Properties**.

Figure 22 Windows XP: Local Area Connection Properties

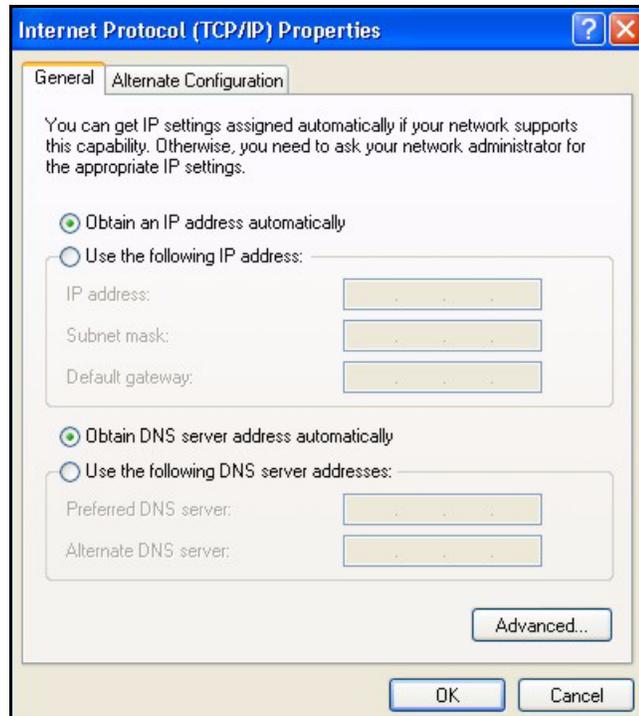


5 The **Internet Protocol TCP/IP Properties** window opens (the **General** tab in Windows XP).

- If you have a dynamic IP address click **Obtain an IP address automatically**.

- If you have a static IP address click **Use the following IP Address** and fill in the **IP address**, **Subnet mask**, and **Default gateway** fields.
- Click **Advanced**.

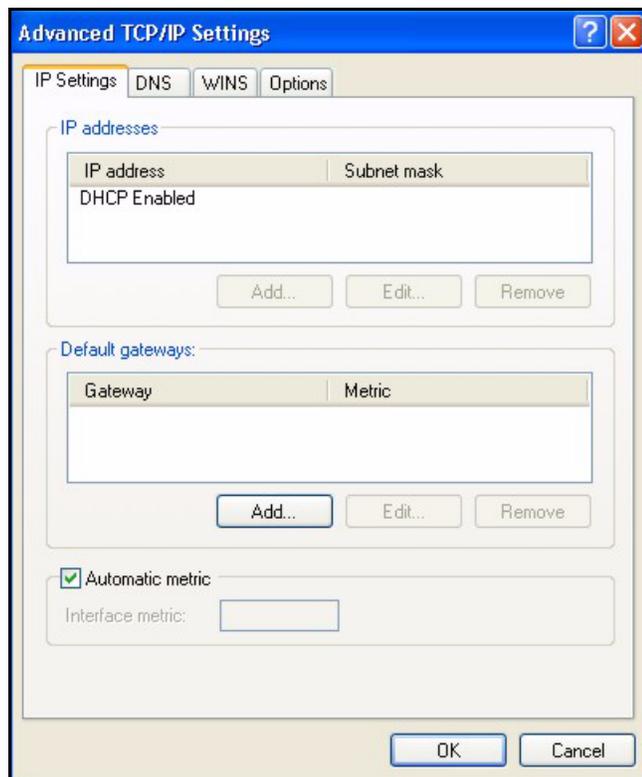
Figure 23 Windows XP: Internet Protocol (TCP/IP) Properties



- 6** If you do not know your gateway's IP address, remove any previously installed gateways in the **IP Settings** tab and click **OK**.

Do one or more of the following if you want to configure additional IP addresses:

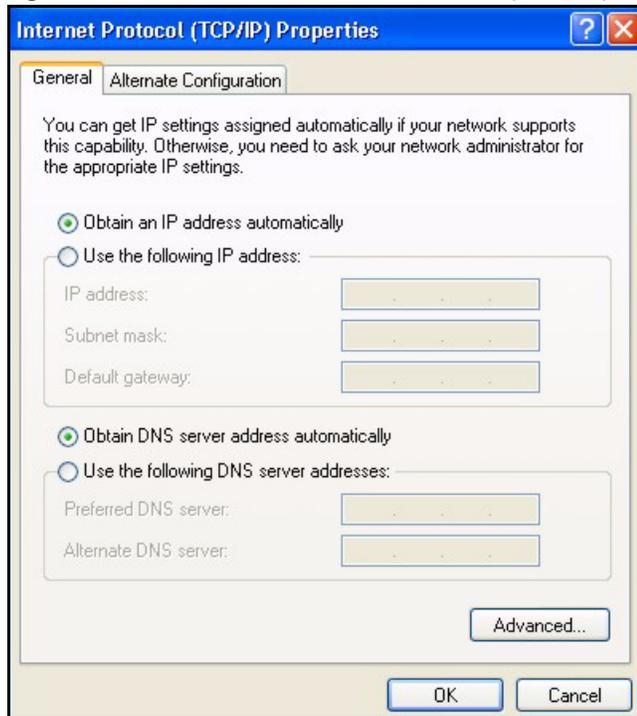
- In the **IP Settings** tab, in IP addresses, click **Add**.
- In **TCP/IP Address**, type an IP address in **IP address** and a subnet mask in **Subnet mask**, and then click **Add**.
- Repeat the above two steps for each IP address you want to add.
- Configure additional default gateways in the **IP Settings** tab by clicking **Add** in **Default gateways**.
- In **TCP/IP Gateway Address**, type the IP address of the default gateway in **Gateway**. To manually configure a default metric (the number of transmission hops), clear the **Automatic metric** check box and type a metric in **Metric**.
- Click **Add**.
- Repeat the previous three steps for each default gateway you want to add.
- Click **OK** when finished.

Figure 24 Windows XP: Advanced TCP/IP Properties

7 In the **Internet Protocol TCP/IP Properties** window (the **General** tab in Windows XP):

- Click **Obtain DNS server address automatically** if you do not know your DNS server IP address(es).
- If you know your DNS server IP address(es), click **Use the following DNS server addresses**, and type them in the **Preferred DNS server** and **Alternate DNS server** fields.

If you have previously configured DNS servers, click **Advanced** and then the **DNS** tab to order them.

Figure 25 Windows XP: Internet Protocol (TCP/IP) Properties

- 8** Click **OK** to close the **Internet Protocol (TCP/IP) Properties** window.
- 9** Click **Close (OK in Windows 2000/NT)** to close the **Local Area Connection Properties** window.
- 10** Close the **Network Connections** window (**Network and Dial-up Connections** in Windows 2000/NT).
- 11** Turn on your Prestige and restart your computer (if prompted).

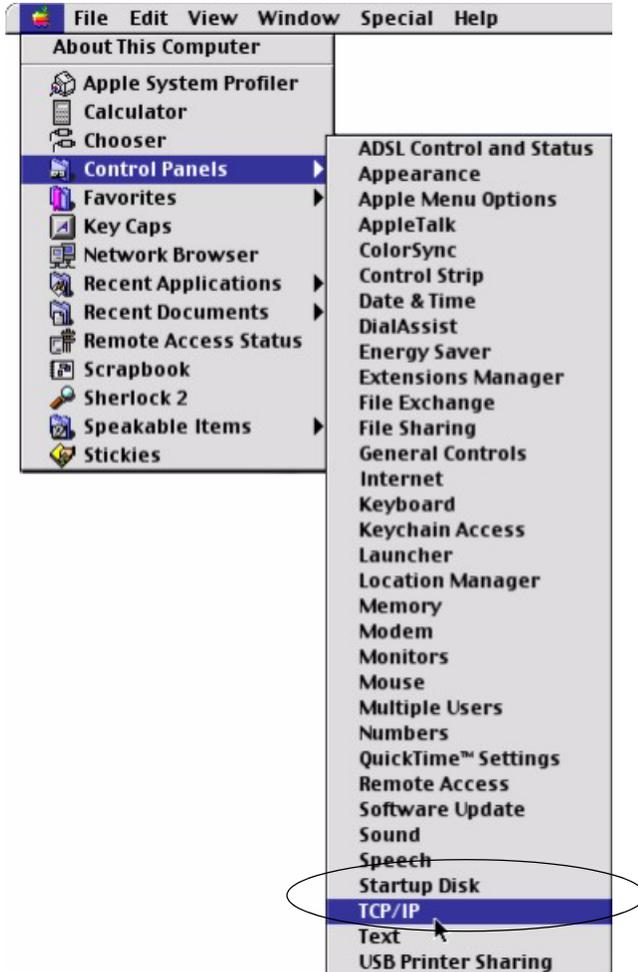
Verifying Settings

- 1** Click **Start, All Programs, Accessories** and then **Command Prompt**.
- 2** In the **Command Prompt** window, type "ipconfig" and then press [ENTER]. You can also open **Network Connections**, right-click a network connection, click **Status** and then click the **Support** tab.

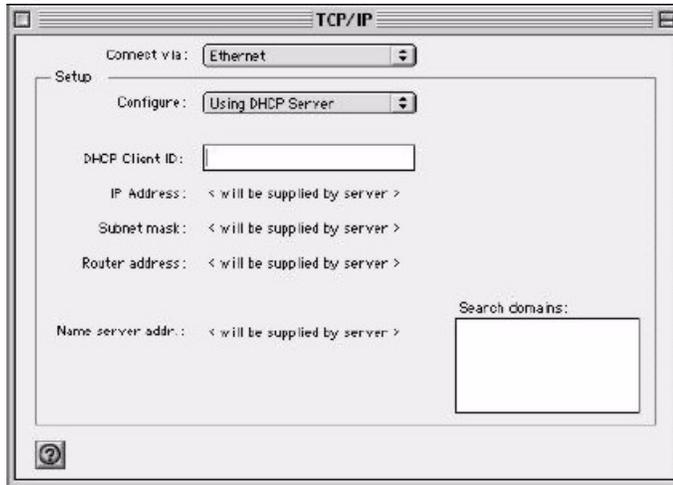
Macintosh OS 8/9

- 1 Click the **Apple** menu, **Control Panel** and double-click **TCP/IP** to open the **TCP/IP Control Panel**.

Figure 26 Macintosh OS 8/9: Apple Menu



- 2 Select **Ethernet built-in** from the **Connect via** list.

Figure 27 Macintosh OS 8/9: TCP/IP

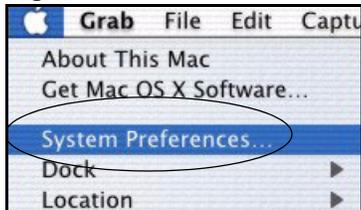
- 3 For dynamically assigned settings, select **Using DHCP Server** from the **Configure:** list.
- 4 For statically assigned settings, do the following:
 - From the **Configure** box, select **Manually**.
 - Type your IP address in the **IP Address** box.
 - Type your subnet mask in the **Subnet mask** box.
 - Type the IP address of your Prestige in the **Router address** box.
- 5 Close the **TCP/IP Control Panel**.
- 6 Click **Save** if prompted, to save changes to your configuration.
- 7 Turn on your Prestige and restart your computer (if prompted).

Verifying Settings

Check your TCP/IP properties in the **TCP/IP Control Panel** window.

Macintosh OS X

- 1 Click the **Apple** menu, and click **System Preferences** to open the **System Preferences** window.

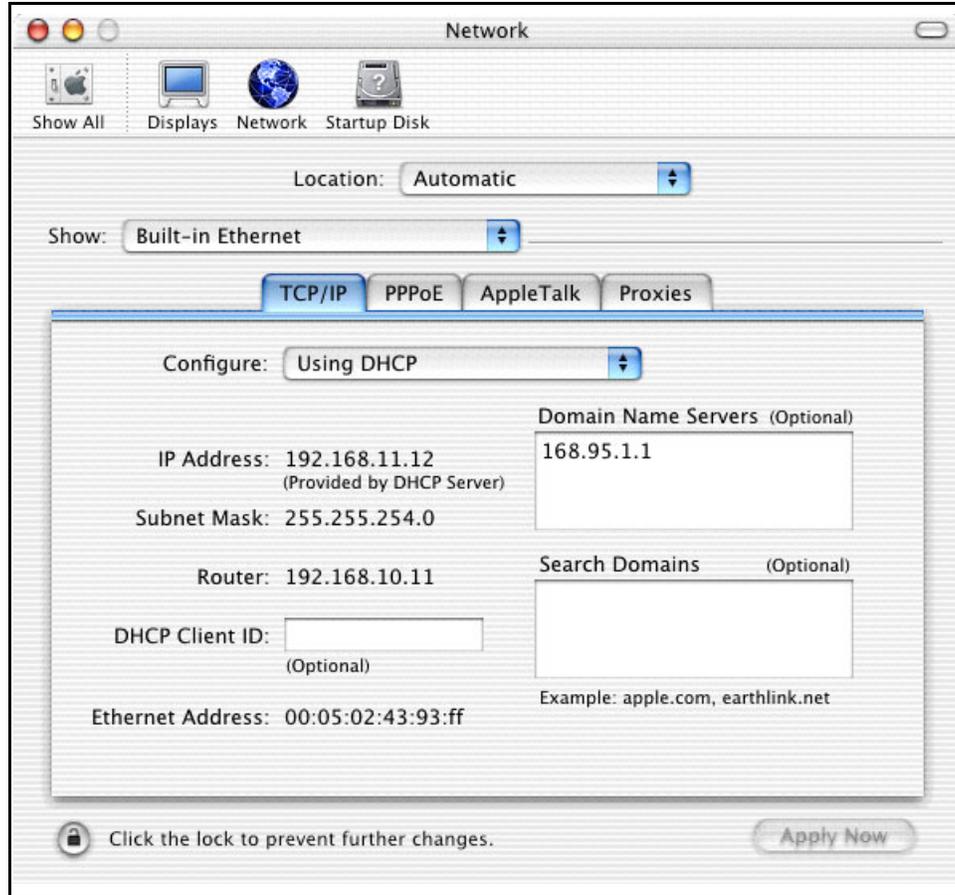
Figure 28 Macintosh OS X: Apple Menu

- 2 Click **Network** in the icon bar.
 - Select **Automatic** from the **Location** list.

- Select **Built-in Ethernet** from the **Show** list.
- Click the **TCP/IP** tab.

3 For dynamically assigned settings, select **Using DHCP** from the **Configure** list.

Figure 29 Macintosh OS X: Network



4 For statically assigned settings, do the following:

- From the **Configure** box, select **Manually**.
- Type your IP address in the **IP Address** box.
- Type your subnet mask in the **Subnet mask** box.
- Type the IP address of your Prestige in the **Router address** box.

5 Click **Apply Now** and close the window.

6 Turn on your Prestige and restart your computer (if prompted).

Verifying Settings

Check your TCP/IP properties in the **Network** window.

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