

P-630-S Series

ADSL USB Modem

User's Guide

Version 1.0
7/2005

The logo for ZyXEL, featuring the word "ZyXEL" in a bold, blue, sans-serif font. The "Zy" is in a slightly larger font size than "XEL".

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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/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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/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.

Certifications

- 1 Go to www.zyxel.com.
- 2 Select your product from the drop-down list box on the ZyXEL home page to go to that product's page.
- 3 Select the certification you wish to view from this page.

Safety Warnings

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

- To reduce the risk of fire, use only No. 26 AWG (American Wire Gauge) or larger telecommunication line cord.
- 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.
- Do NOT use the device if the power supply is damaged as it might cause electrocution.
- If the power supply is damaged, remove it from the power outlet.
- Do NOT attempt to repair the power supply. Contact your local vendor to order a new power supply.
- Place connecting cables carefully so that no one will step on them or stumble over them. Do NOT allow anything to rest on the power cord and do NOT locate the product where anyone can walk on the power cord.
- 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.

ZyXEL Limited Warranty

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

Repair or replacement, as provided under this warranty, is the exclusive remedy of the purchaser. This warranty is in lieu of all other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular use or purpose. ZyXEL shall in no event be held liable for indirect or consequential damages of any kind of character to the purchaser.

To obtain the services of this warranty, contact ZyXEL's Service Center for your Return Material Authorization number (RMA). Products must be returned Postage Prepaid. It is recommended that the unit be insured when shipped. Any returned products without proof of purchase or those with an out-dated warranty will be repaired or replaced (at the discretion of ZyXEL) and the customer will be billed for parts and labor. All repaired or replaced products will be shipped by ZyXEL to the corresponding return address, Postage Paid. This warranty gives you specific legal rights, and you may also have other rights that vary from country to country.

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.

METHOD	SUPPORT E-MAIL	TELEPHONE ^A	WEB SITE	REGULAR MAIL
	SALES E-MAIL	FAX	FTP SITE	
CORPORATE HEADQUARTERS (WORLDWIDE)	support@zyxel.com.tw	+886-3-578-3942	www.zyxel.com www.europe.zyxel.com	ZyXEL Communications Corp. 6 Innovation Road II Science Park Hsinchu 300 Taiwan
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	sales@zyxel.se	+46 31 744 7701		

METHOD	SUPPORT E-MAIL	TELEPHONE^A	WEB SITE	REGULAR MAIL
LOCATION	SALES E-MAIL	FAX	FTP SITE	
UNITED KINGDOM	support@zyxel.co.uk	+44 (0) 1344 303044 08707 555779 (UK only)	www.zyxel.co.uk	ZyXEL Communications UK Ltd., 11, The Courtyard, Eastern Road, Bracknell, Berkshire, RG12 2XB, United Kingdom (UK)
	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 a Prestige 630-S (P-630-S) Series ADSL USB Modem.

Your USB-powered Prestige supports an upstream data rate of up to 1Mbps and is compatible with all G.DMT compliant Central Office (CO) Digital Subscriber Line Access Multiplexer (DSLAM) equipment.

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 Prestige is easy to install and configure. All functions are configurable via the ZyXEL configuration wizard and web configurator.

About This User's Guide

A practical and comprehensive tool, this guide provides information about modem installation and operation for computers running Windows 98/2000/Me/XP.

Note: Screens for Windows XP are shown in this guide unless otherwise specified. They illustrate the setup procedure for the Prestige 630-S ADSL USB modem.

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 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 **Start**, 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”.
- The "ZyXEL Prestige 630-S (P-630-S) Series ADSL USB Modem" is also referred to as the "modem" and the "Prestige" in this manual.

CHAPTER 1

Getting to Know Your Prestige

This chapter covers the key features and main applications of your modem.

1.1 Introducing the Prestige

The Prestige 630-S (P-630-S) Series ADSL USB Modem combines high speed ADSL (Asynchronous Digital Subscriber Line) technology with the ease of setup and operation facilitated by a USB (Universal Serial Bus) interface.

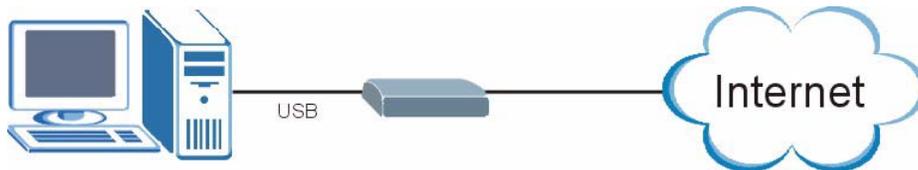
The ZyXEL configuration wizard provides an easy-to-use interface to configure your Prestige.

1.2 Application for the Prestige

Here is an example of what you can do with your Prestige.

The Prestige allows you to have high-speed ADSL Internet access from a computer via a USB connection.

Figure 1 Prestige Internet Access Application



CHAPTER 2

Hardware Overview

This chapter introduces the port and LED indicators.

2.1 Side Panel Connector

The Prestige has an integrated USB cable. A DSL port is on the side panel.

Figure 2 Front Panel

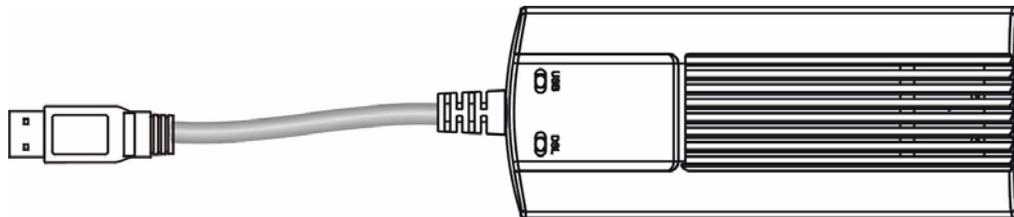
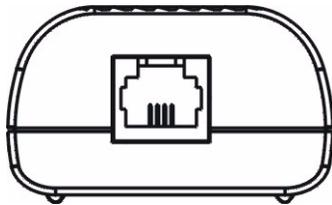


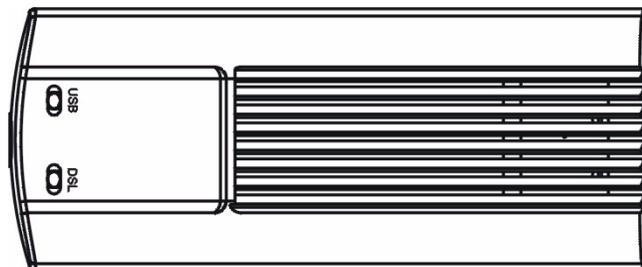
Figure 3 Side Panel Connector



2.2 Front Panel LEDs

The LEDs on the front panel of your modem indicate operational status. The table under the following figure describes the LED functions.

Figure 4 Front Panel LEDs



The following table describes the functions of the LEDs.

Table 1 LED Descriptions

LED	COLOR	STATUS	DESCRIPTION
USB	Green	Off	The Prestige's USB port is not connected or not receiving power.
		On	The Prestige's USB port is connected and receiving power.
		Blinking	The Prestige is sending or receiving data.
DSL	Green	On	The DSL link is up.
		Blinking	The Prestige is initializing the DSL line.

2.3 Splitter and Microfilter

This section tells you how to install a POTS splitter or a telephone microfilter

2.3.1 Connecting a POTS Splitter

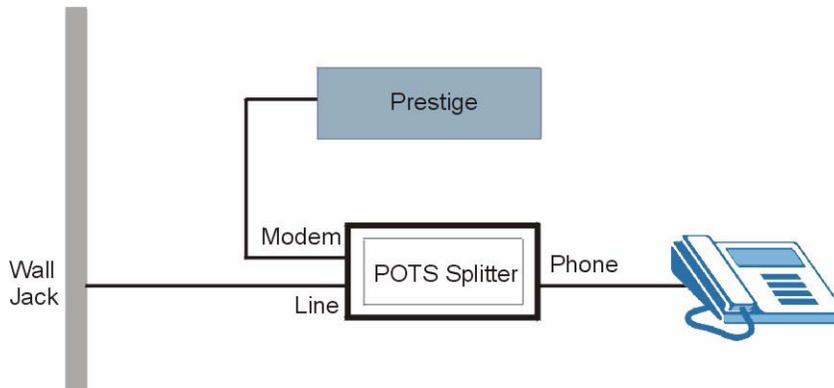
Use a splitter (optional) in order to plug a phone into the same ISDN or telephone line.

When you use the Full Rate (G.dmt) ADSL standard, you can use a POTS (Plain Old Telephone Service) splitter to separate the telephone and ADSL signals. This allows simultaneous Internet access and telephone service on the same line. A splitter also eliminates the destructive interference conditions caused by telephone sets.

Install the POTS splitter at the point where the telephone line enters your residence, as shown in the following figure.

- 1** Connect the side labeled “Phone” to your telephone.
- 2** Connect the side labeled “Modem” to your Prestige.
- 3** Connect the side labeled “Line” to the telephone wall jack.

Figure 5 Splitter

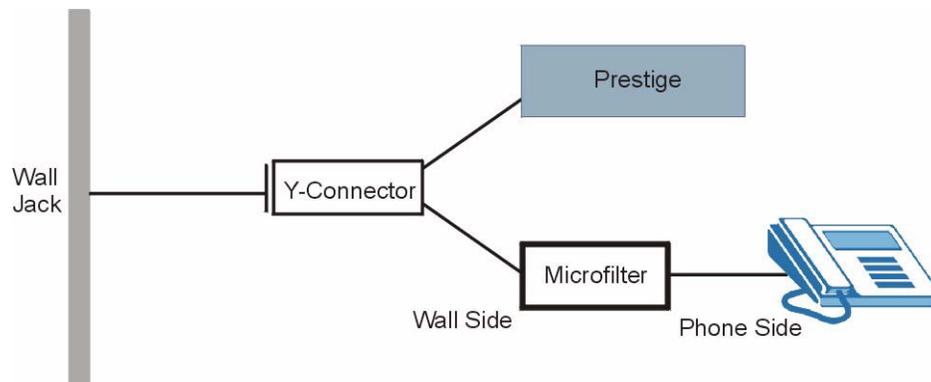


2.3.2 Telephone Microfilters

You may opt to buy a telephone microfilter to install between the wall jack and your telephone(s). A microfilter acts as a low-pass filter, for your telephone, to ensure that ADSL transmissions do not interfere with your telephone voice transmissions.

- 1 Connect a phone cable from the wall jack to the single jack end of the Y- Connector.
- 2 Connect a cable from the double jack end of the Y-Connector to the “wall side” of the microfilter.
- 3 Connect another cable from the double jack end of the Y-Connector to the Prestige.
- 4 Connect the “phone side” of the microfilter to your telephone as shown in the following figure.

Figure 6 Microfilter



CHAPTER 3

Modem Setup

This chapter shows you how to set up your modem for ADSL Internet access.

3.1 Needed Information

Fill in the table below with information from your Internet Service Provider (ISP) and telephone company before installation. You may not need to fill in every blank.

Table 2 Needed Information

REQUIRED INFORMATION	FILL IN THE BLANKS
Protocol: Bridge, PPPoA or PPPoE.	
VPI: The Virtual Path Identifier number identifies a bundle of virtual channels.	
VCI: The Virtual Channel Identifier number identifies a logical connection between end stations.	
Framing Type: LLC or VCMUX.	
Modulation: Your ISP will tell you which type of ADSL modulation it uses. <ul style="list-style-type: none"> • ANSI T1.413 Issue 2 • ITU G.992.1 (G.dmt) • ITU G.992.2 (G.lite) 	
User Name / Password: Lets your ISP know which account you are logging into and protects your account from unauthorized users.	
IP Address (if given)	

Your modem supports Bridge, PPPoA (Point to Point Protocol over ATM) and PPPoE (Point to Point Protocol over Ethernet) encapsulation. These refer to the underlying data transport protocols. Use the encapsulation method specified by your ISP.

The framing type is also called encapsulation or multiplexing. Your modem supports both **LLC** and **VCMUX**.

3.2 PPP over Ethernet

PPPoE provides access control and billing functionality in a manner similar to dial-up services using PPP. The Prestige bridges a PPP session over Ethernet (PPP over Ethernet, RFC 2516) from your computer to an ATM PVC (Permanent Virtual Circuit) which connects to ADSL Access Concentrator where the PPP session terminates. One PVC can support any number of PPP sessions from your LAN. For more information on PPPoE, see the appendices.

3.3 PPPoA

PPPoA stands for Point to Point Protocol over ATM Adaptation Layer 5 (AAL5). A PPPoA connection functions like a dial-up Internet connection. The Prestige encapsulates the PPP session based on RFC1483 and sends it through an ATM PVC (Permanent Virtual Circuit) to the Internet Service Provider's (ISP) DSLAM (digital access multiplexer). Please refer to RFC 2364 for more information on PPPoA. Refer to RFC 1661 for more information on PPP.

3.4 Multiplexing

There are two conventions to identify what protocols the virtual circuit (VC) is carrying. Be sure to use the multiplexing method required by your ISP.

3.4.1 VC-based Multiplexing

In this case, by prior mutual agreement, each protocol is assigned to a specific virtual circuit; for example, VC1 carries IP, etc. VC-based multiplexing may be dominant in environments where dynamic creation of large numbers of ATM VCs is fast and economical.

3.4.2 LLC-based Multiplexing

In this case one VC carries multiple protocols with protocol identifying information being contained in each packet header. Despite the extra bandwidth and processing overhead, this method may be advantageous if it is not practical to have a separate VC for each carried protocol, for example, if charging heavily depends on the number of simultaneous VCs.

3.5 VPI and VCI

Be sure to use the correct Virtual Path Identifier (VPI) and Virtual Channel Identifier (VCI) numbers assigned to you. The valid range for the VPI is 0 to 255 and for the VCI is 32 to 65535 (0 to 31 is reserved for local management of ATM traffic). Please see the appendix for more information.

3.6 Configuration Wizard

The following sections show you how to configure your Prestige in Windows and Mac.

3.6.1 Windows

Screens for Windows XP are shown in this section unless otherwise specified.

- 1 After you install the driver and connect the Prestige, the ADSL status icon will appear in the system tray.

Figure 7 ADSL Status Icon



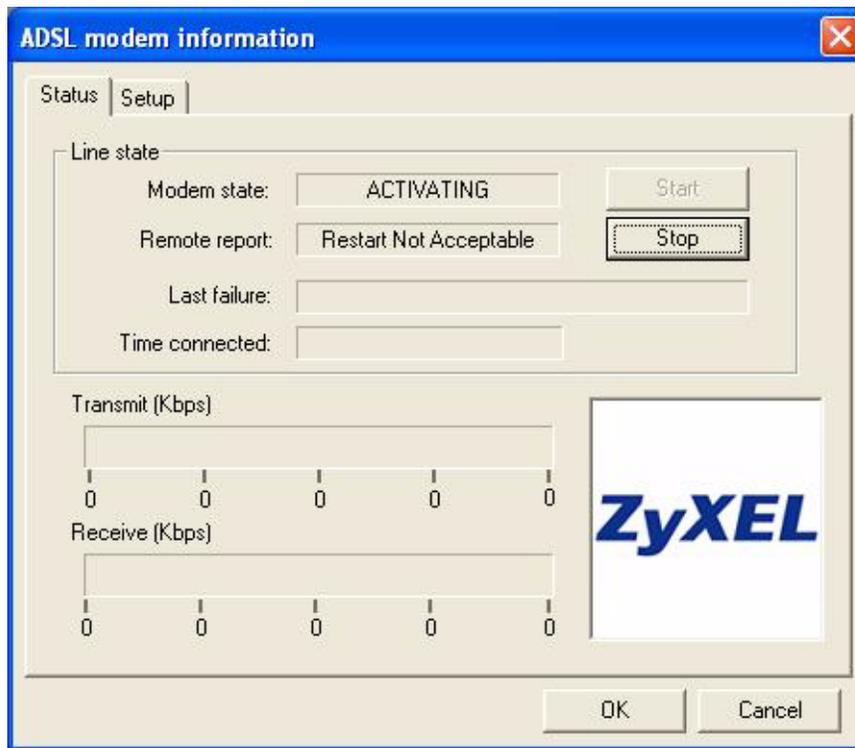
The color of the ADSL status icon indicates the status of the ADSL connection. Refer to the following table for details.

Table 3 ADSL Status Icon

COLOR	DESCRIPTION
Yellow	The Prestige is initializing the DSL line.
Red	The Prestige is idle.
Black	The DSL link is up.
Blue	The Prestige is sending or receiving data.

- 2 Double click the icon to start the configuration wizard.

Note: If you right-click the ADSL status icon and select **Exit**, the ADSL status icon will disappear. To display it again, double-click the **ADSL** icon () in Windows **Control Panel**.

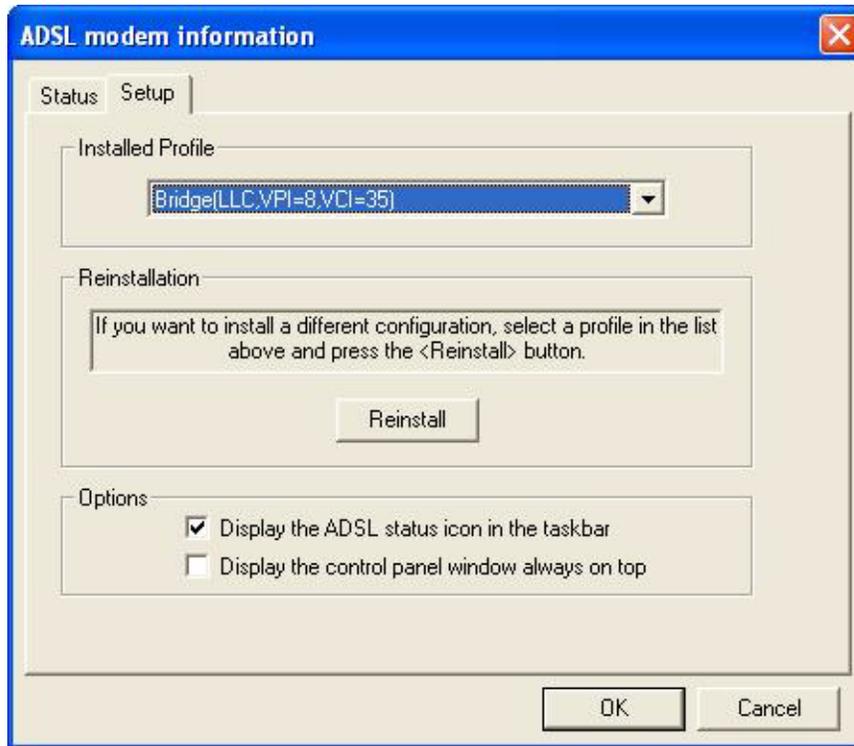
Figure 8 Windows: ADSL modem information: Status

The following table describes the labels in this screen.

Table 4 Windows: ADSL modem information: Status

	DESCRIPTION
Line state	This shows the current status of the ADSL connection.
Modem state	This shows the the status of the Prestige.
Start	Click this button to initialize the ADSL connection.
Remote report	This shows the feedack from the remote ADSL device.
Stop	Click this button to stop initializing the ADSL connection.
Last failure	This is the last problem with the ADSL line.
Time connected	This shows the total time the ADSL connection has been up.
Transmit (Kbps)	This shows the total number of bytes sent by the modem.
Receive (Kbps)	This shows the total number of bytes received by the modem.
OK	Click this button to apply changes and close the configuration wizard.
Cancel	Click this button to exit the control panel without saving changes.

3 Click the **Setup** tab to configure the ADSL line information.

Figure 9 Windows: ADSL modem information: Setup

The following table describes the labels in this screen.

Table 5 Windows: ADSL modem information: Setup

	DESCRIPTION
Installed Profile	Select the DSL connection settings (Bridge(LLC,VPI=8,VCI=35) , Bridge(VCMUX,VPI=8,VCI=35) , PPPoA(LLC,VPI=8,VCI=35) , PPPoA(VCMUX,VPI=8,VCI=35) , PPPoE(LLC,VPI=8,VCI=35) or PPPoE(VCMUX,VPI=8,VCI=35)) used by your ISP from the drop-down list box. Select Unknown if you don't want to use a pre-defined profile. This is for test purposes only.
Reinstallation	
Reinstall	If you want to reconfigure or update the DSL connection settings, select a profile in the field above and click Reinstall .
Options	
Display the ADSL status icon in the taskbar.	Select this check box to show the ADSL status icon in the system tray. Clear this check box to hide the ADSL status icon. To display it again, double-click the ADSL icon () in Windows Control Panel to start the configuration wizard and select the check box again.
Display the control panel window always on top.	Select this check box to have the control panel always appear on top of other screens.
OK	Click this button to apply changes and close the screen.
Cancel	Click this button to exit the screen without saving changes.

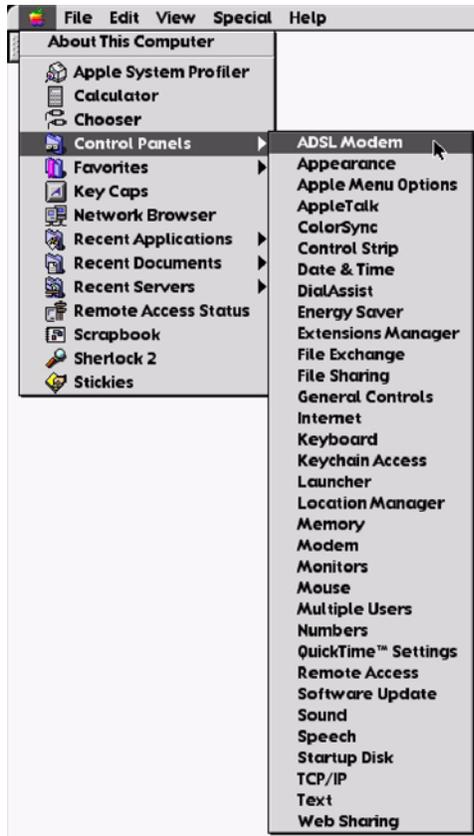
3.6.2 Mac

The following two sections describe how to configure the Prestige for both Mac OS 9 and X.

3.6.2.1 Mac OS 9

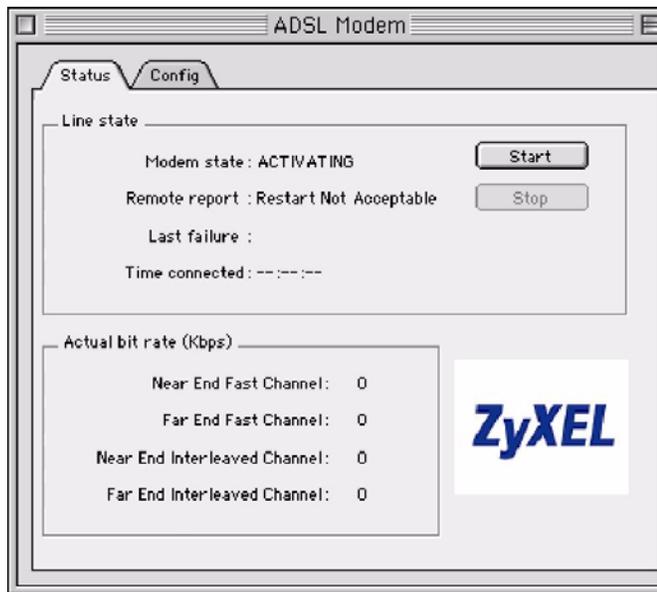
Screens for Mac OS 9.2 are shown in this section.

- 1 Click the Apple icon, **Control Panels** and **ADSL Modem** to start the configuration wizard.



Alternatively, click the ADSL icon in the menu bar and select **Open ADSL Modem**.



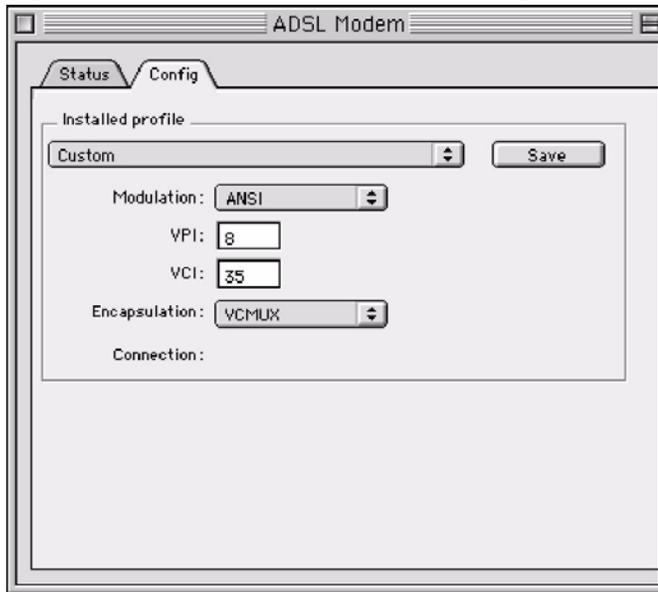
Figure 10 Mac 9: ADSL Modem: Status

The following table describes the labels in this screen.

Table 6 Mac 9: ADSL Modem: Status

	DESCRIPTION
Line state	This shows the current status of the ADSL connection.
Modem state	This shows the the status of the Prestige.
Start	Click this button to initialize the ADSL connection.
Remote report	This shows the feedback from the remote ADSL device.
Stop	Click this button to stop initializing the ADSL connection.
Last failure	This is the last problem with the ADSL line.
Time connected	This shows the total time the ADSL connection has been up.
Actual bit rate (kbps)	These are the rates in kbps for data being received and transmitted.
Near End Fast Channel	This is the downstream data rate when the Prestige uses fast mode.
Far End Fast Channel	This is the upstream data rate when the Prestige uses fast mode.
Near End Interleaved Channel	This is the downstream data rate when the Prestige uses interleave delay.
Far End Interleaved Channel	This is the upstream data rate when the Prestige uses interleave delay.

2 Click the **Config** tab to set up the ADSL line information.

Figure 11 Mac OS 9: ADSL Modem: Config

The following table describes the labels in this screen.

Table 7 Mac OS 9: ADSL Modem: Config

LABEL	DESCRIPTION
Installed Profile	Select a pre-defined profile (LLC (VPI=8, VCI=35) or VC (VPI=8, VCI=35)) with the DSL connection settings used by your ISP from the drop-down list box. Otherwise, select Custom and configure the following fields. The following fields are read-only when you select a pre-defined profile.
Modulation	Select the ADSL modulation type used to establish physical communications with the DSL provider. Options are ANSI , G.lite , Multimode Annex A , Multimode Annex B , G.dmt Annex A , G.dmt Annex B , G.dmt Annex B DT and ETSI Annex B .
VPI	Enter the Virtual Path Identifier. The valid range for the VPI is 0 to 255.
VCI	Enter the Virtual Channel Identifier. The valid range for the VCI is 32 to 65535 (0 to 31 is reserved for local management of ATM traffic).
Encapsulation	Select the encapsulation type. Options are VCMUX and LLC .
Connetion	This field displays the connetion status.

3.6.2.2 Mac OS X

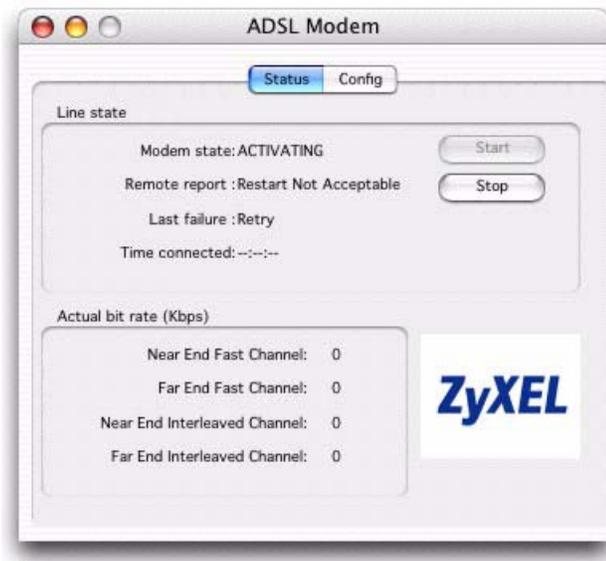
Screens for Mac OS 10.3 are shown in this section.

1 Click ADSL Modem under Applications.



2 Double-click the ADSL Modem icon to start the configuration wizard.



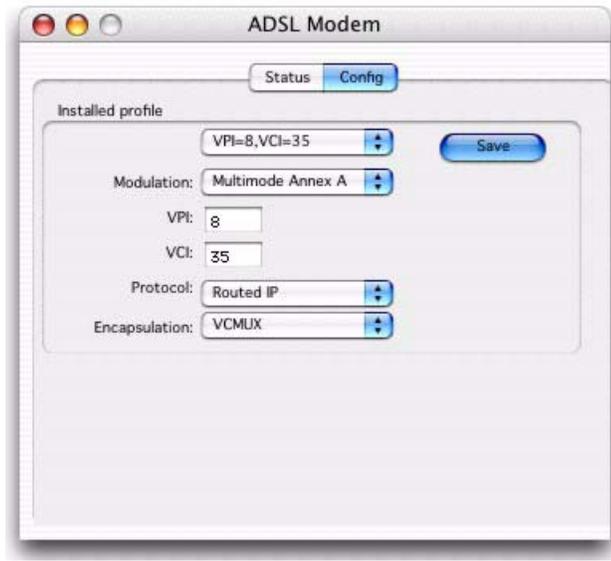
Figure 12 Mac: ADSL Modem: Status

The following table describes the labels in this screen.

Table 8 Mac: ADSL Modem: Status

	DESCRIPTION
Line state	This shows the current status of the ADSL connection.
Modem state	This shows the the status of the Prestige.
Start	Click this button to initialize the ADSL connection.
Remote report	This shows the feedack from the remote ADSL device.
Stop	Click this button to stop initializing the ADSL connection.
Last failure	This is the last problem with the ADSL line.
Time connected	This shows the total time the ADSL connection has been up.
Actual bit rate (kbps)	These are the rates in kbps for data being received and transmitted.
Near End Fast Channel	This is the downstream data rate when the Prestige uses fast mode.
Far End Fast Channel	This is the upstream data rate when the Prestige uses fast mode.
Near End Interleaved Channel	This is the downstream data rate when the Prestige uses interleave delay.
Far End Interleaved Channel	This is the upstream data rate when the Prestige uses interleave delay.

3 Click the **Config** tab to set up the ADSL line information.

Figure 13 Mac: ADSL Modem: Config

The following table describes the labels in this screen.

Table 9 Mac: ADSL Modem: Config

LABEL	DESCRIPTION
Installed Profile	Select a pre-defined profile (VPI=8,VCI=35-PPPoE-(VPI=8,VCI=35) , VPI=8,VCI=35-PPPoA-(VPI=8,VCI=35) , VPI=8,VCI=35-Routed IP-(VPI=8,VCI=35) or VPI=8,VCI=35-Bridged Ethernet-(VPI=8,VCI=35)) with the DSL connection settings used by your ISP from the drop-down list box. Otherwise, select VPI=8,VCI=35 and configure the following fields. The following fields are read-only when you select a pre-defined profile.
Modulation	Select the ADSL modulation type used to establish physical communications with the DSL provider. Options are ANSI , G.lite , Multimode Annex A , Multimode Annex B , G.dmt Annex A , G.dmt Annex B , G.dmt Annex B DT and ETSI Annex B .
VPI	Enter the Virtual Path Identifier. The valid range for the VPI is 0 to 255.
VCI	Enter the Virtual Channel Identifier. The valid range for the VCI is 32 to 65535 (0 to 31 is reserved for local management of ATM traffic).
Protocol	Select the data transport protocol. Options are PPPoE , PPPoA , Bridged and Routed IP .
Encapsulation	Select the encapsulation type. Options are VCMUX and LLC .

3.7 Changing the VPI and VCI in Windows

After you select a profile, you can follow the steps below to change the VPI and/or VCI.

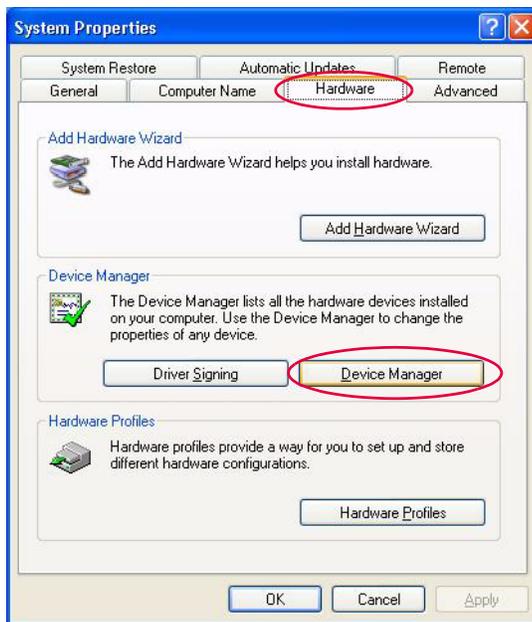
Note: You can edit and save new profile configurations (for example the VPI and VCI), but you cannot change the profile name.

If you reinstall a profile, the VPI and VCI will be reset to the default.

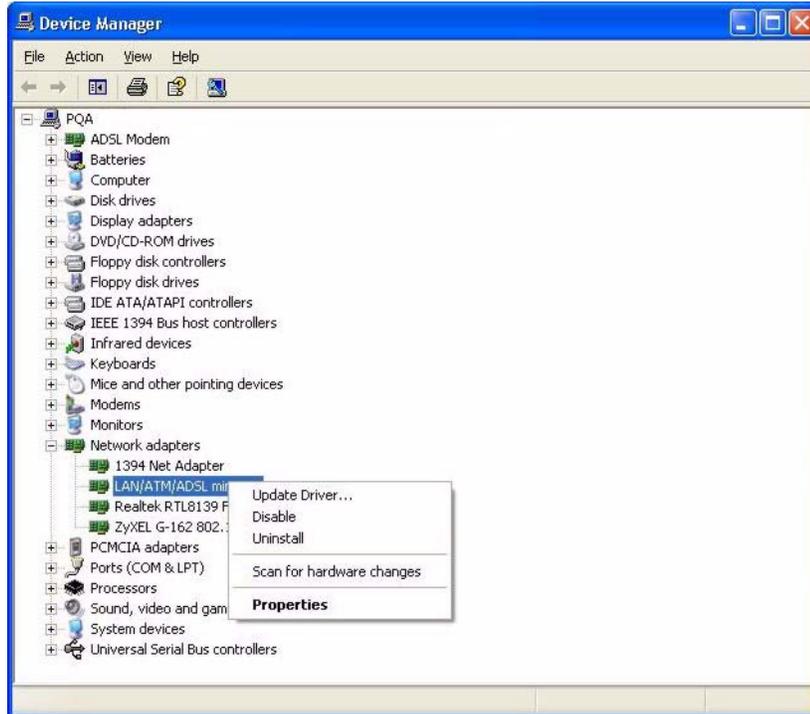
1 Right-click **My Computer** on your desktop and select **Properties**.



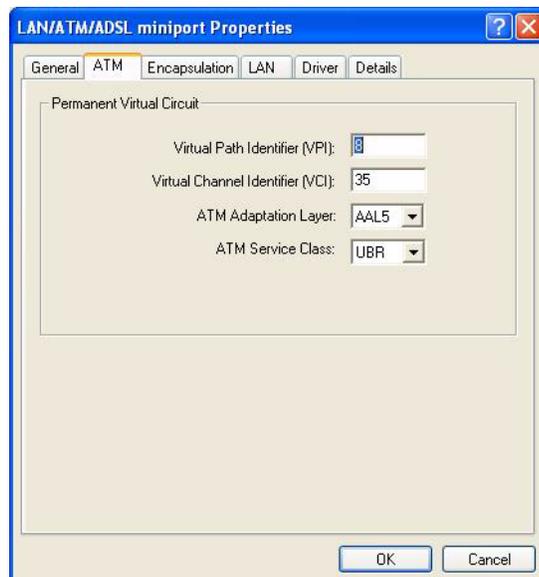
2 The **System Properties** screen displays. Click the **Hardware** tab and then **Device Manager**.



- 3 Double-click **LAN/ATM/ADSL miniport** or right-click **LAN/ATM/ADSL miniport** and select **Properties**.



- 4 In the **LAN/ATM/ADSL miniport Properties** screen, click the **ATM** tab. Enter a VPI and VCI, then click **OK**.



CHAPTER 4

Uninstalling the USB Driver

Follow the steps below to remove (or uninstall) the USB driver from your computer.

Note: It is recommended that you save and close all other running programs before uninstalling the driver.

4.1 Windows

1 Click **Start, Programs, ZyXEL ADSL Modem, Uninstall Drivers**.

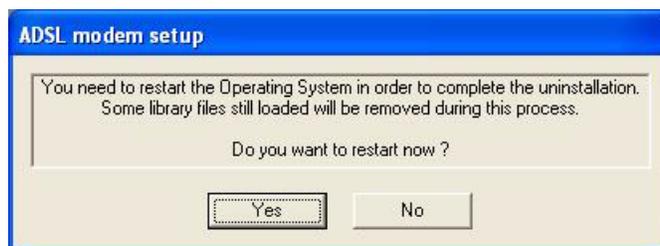
2 Click **Yes** to remove the driver.



3 Make sure your Prestige is disconnected and click **OK**.



4 You need to restart your computer to complete uninstalling the driver. Click **Yes** to restart your computer now or click **No** to restart your computer later.

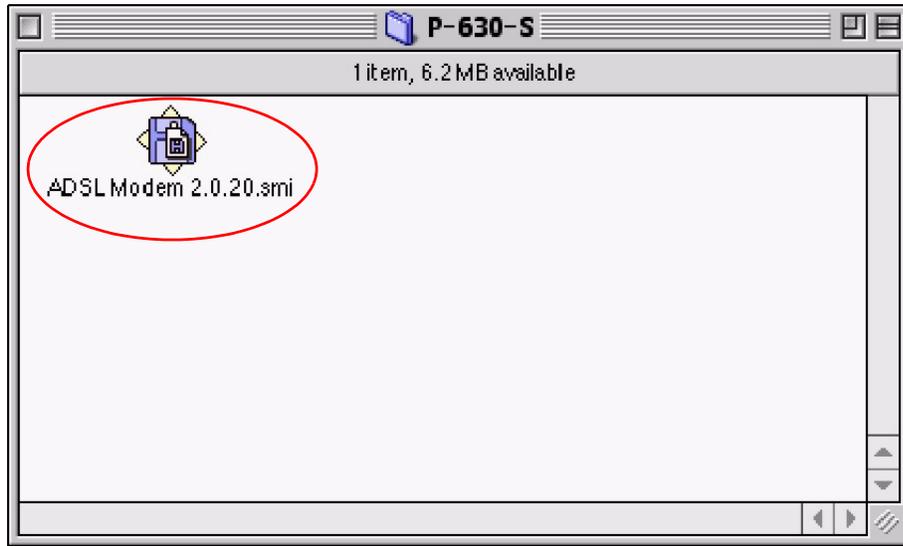


4.2 Mac

The following two sections describe how to uninstall your driver for both Mac OS 9 and X.

4.2.1 Mac OS 9

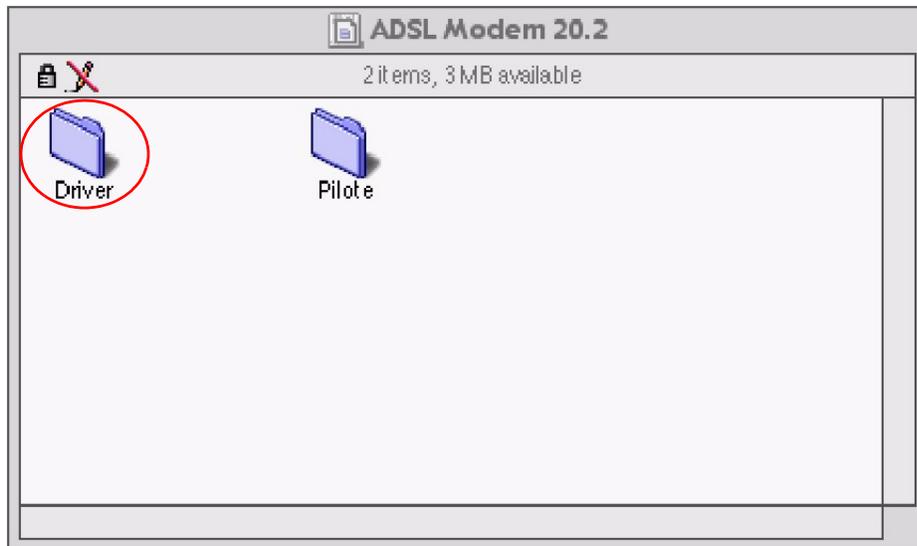
- 1 Open the folder you selected or created during installation (see the Quick Start Guide) and double-click **ADSLModem 2.0.20.smi**.



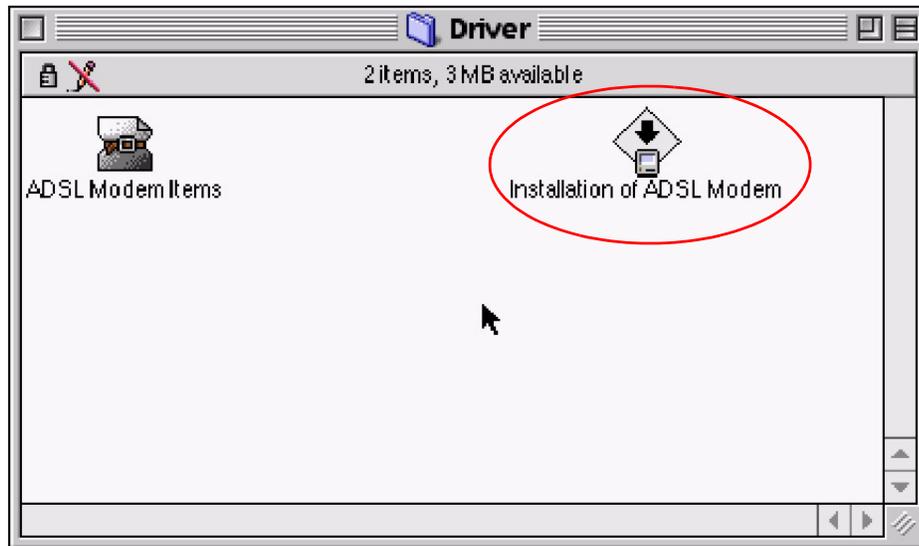
- 2 The **ADSLModem 20.2** icon will display on the desktop. Double-click **ADSLModem 20.2**.



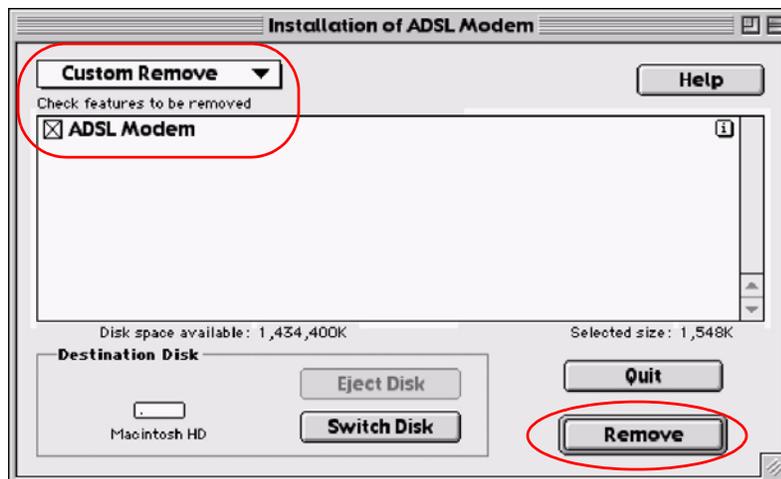
- 3 Double-click **Driver**.



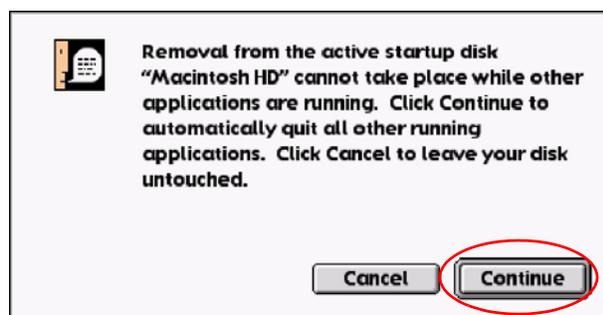
4 Double-click **Installation of ADSL Modem**.



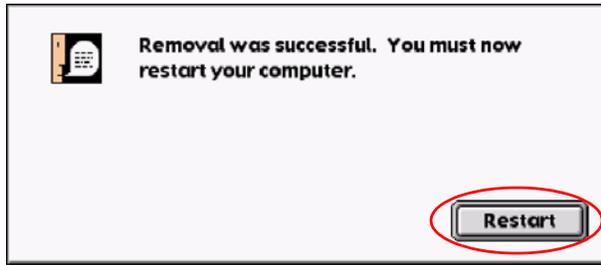
5 Select **Custom Remove** from the drop-down list box and the **ADSL Modem** check box, then click **Remove** to uninstall the driver.



6 Click **Continue**.



7 Click **Restart** to restart your computer to complete uninstalling the driver.



4.2.2 Mac OS X

1 Click **Finder, Applications** and **ADSL Modem**.



- 2 Double-click the **ADSL Modem Uninstall** icon to remove the driver.



- 3 You need to restart your computer to complete uninstalling the driver. Click **Restart** to restart your computer now or click **Cancel** to restart your computer later.



CHAPTER 5

Product Specifications

These are the Prestige product specifications.

Table 10 Device Specifications

Dimensions	110 mm (W) x 45 mm (D) x 26 mm (H)
Weight	75 g
Interface	<ul style="list-style-type: none"> • An RJ-11 or RJ45 port for ADSL connection • An integrated USB cable
Operation Temperature	0° C ~ 50° C
Storage Temperature	-30° C ~ 60° C
Operation Humidity	20% ~ 85% RH (non-condensing)
Storage Humidity	20% ~ 90% RH (non-condensing)
Certifications	<p>Safety</p> <ul style="list-style-type: none"> CAN/CSA-C22.2 No 60950-1-03 ANSI/UL Std No 60950-1, 1st Ed IEC 60950-1, 1st Ed EN 60950-1, 1st Ed <p>EMC</p> <ul style="list-style-type: none"> FCC Part 15 Class B FCC Part 68 EN55022 Class B EN61000-3-2 EN61000-3-3 EN55024
Multi-Mode ADSL standard	<ul style="list-style-type: none"> • ANSI T1.413 • Issue 2 • G.dmt (G.992.1) • G.lite (G992.2)
Default VPI and VCI	8 and 35

Table 10 Device Specifications

Driver support	<ul style="list-style-type: none">• Windows 98 Second Edition• Windows Me• Windows 2000• Windows XP• Mac 9• Mac 10
Other Features	<ul style="list-style-type: none">• Compliant with Universal Serial Bus (USB) Specification Revision 1.1• USB bus-powered; an external power supply is not required• VC-based and LLC-based multiplexing• Software upgradeable• Includes a user interface screen for checking the status of the connection• DSL downstream data rates of up to 8 Mbps• DSL upstream data rates of up to 800 Kbps• One PVC

CHAPTER 6

Troubleshooting

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

6.1 Problems Starting Up the Prestige

Table 11 Troubleshooting Starting Up Your Prestige

PROBLEM	CORRECTIVE ACTION
None of the LEDs turn on.	<p>Make sure your computer is turned on.</p> <p>Check the USB cable connections between the modem and your computer.</p> <p>Check the USB cable (see if the USB cable works with a different USB device or try using a different USB cable).</p> <p>Carefully follow the instructions to uninstall and reinstall the software driver. See your Quick Start Guide on how to install the driver.</p> <p>If the error persists, you may have a hardware problem. In this case, you should contact your local vendor.</p>

6.2 Problems Accessing the Internet

Table 12 Troubleshooting Accessing the Internet

PROBLEM	CORRECTIVE ACTION
Cannot access the Internet.	<p>Verify the Internet connection settings.</p> <p>Make sure you entered the correct user name and password if you are using PPPoE or PPPoA.</p> <p>Make sure the DSL port is properly connected to the phone jack with a telephone wire. Check the telephone wire (use it to plug the phone directly into the wall jack for a dial tone or try using a different one).</p> <p>Carefully follow the instructions to uninstall and reinstall the software driver. See your Quick Start Guide on how to install the driver.</p> <p>Restart your computer.</p>

6.3 Problems Installing the Driver

Table 13 Troubleshooting Installing the Driver

PROBLEM	CORRECTIVE ACTION
Windows does not auto-detect the USB connection to the modem.	<p>Make sure the modem is connected to the USB port on the computer.</p> <p>Perform a hardware scan by clicking Start, Settings, Control Panel and double-clicking Add/Remove Hardware. (Steps may vary depending on the version of Windows).</p> <p>Follow the on-screen instructions to search for the modem and install the driver.</p> <p>Check for possible hardware conflicts. In Windows, click Start, Settings, Control Panel, System, Hardware and then click Device Manager. Verify the status of the modem under Network Adapters. (Steps may vary depending on the version of Windows).</p> <p>Connect the modem to another computer. If the error persists, you may have a hardware problem. In this case, you should contact your local vendor.</p>

Appendix A

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 9 and later operating systems include the software components you need to install and use TCP/IP on your computer.

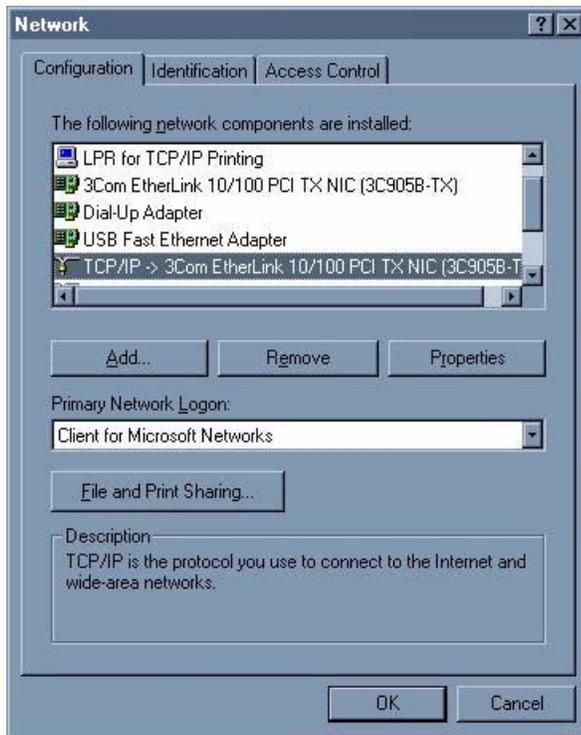
TCP/IP should already be installed on computers using Windows NT/2000/XP, Macintosh OS 9 and later operating systems.

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 98/Me

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

Figure 14 WIndows 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:

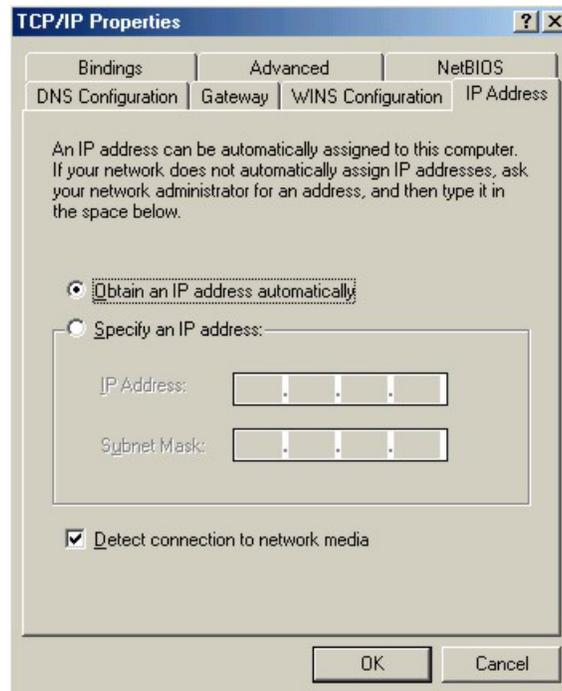
- 1 Click **Add**.
- 2 Select **Client** and then click **Add**.

- 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.

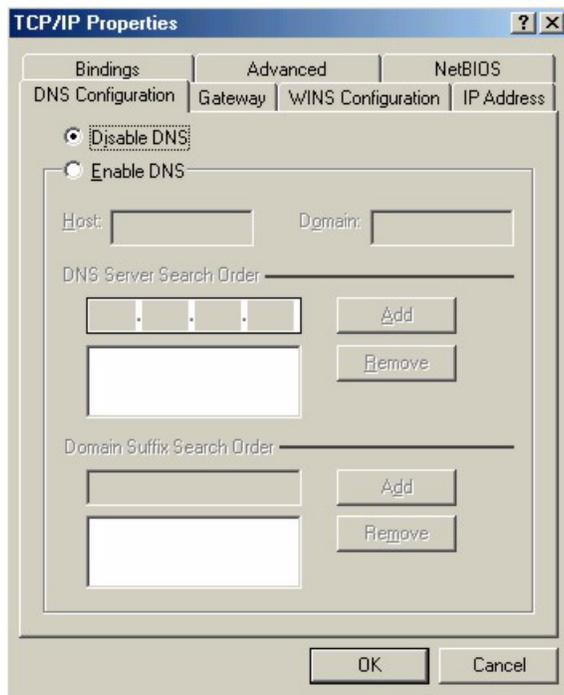
Configuring

- 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 15 Windows 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 16 Windows 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

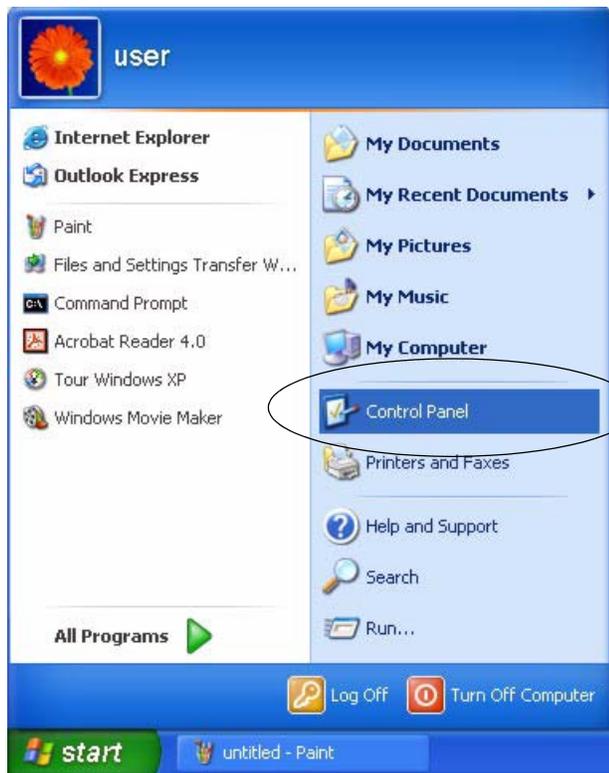
1 Click **Start** and then **Run**.**2** In the **Run** window, type "winipcfg" and then click **OK** to open the **IP Configuration** window.**3** Select your network adapter. You should see your computer's IP address, subnet mask and default gateway.

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 17 Windows XP: Start Menu

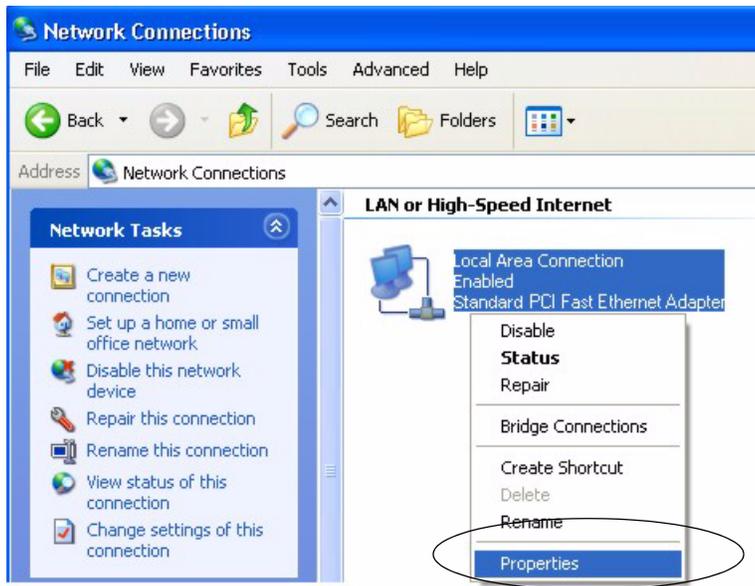


2 In the **Control Panel**, double-click **Network Connections (Network and Dial-up Connections)** in Windows 2000/NT).

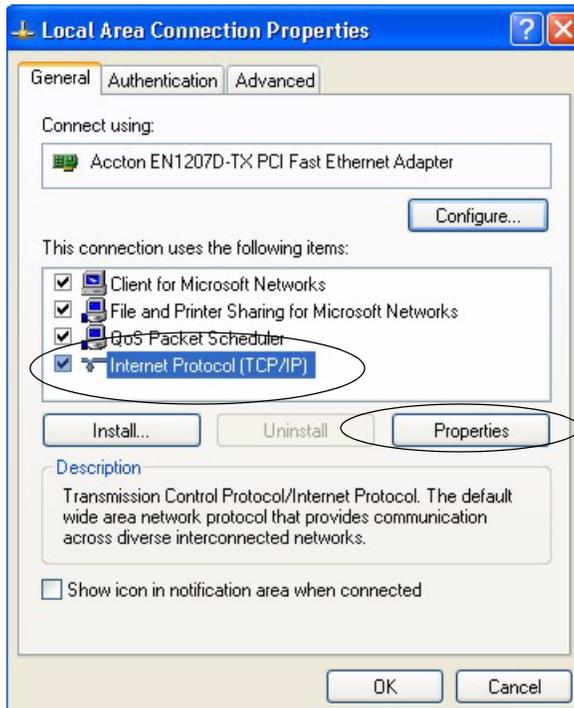
Figure 18 Windows XP: Control Panel



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

Figure 19 Windows XP: Control Panel: Network Connections: Properties

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

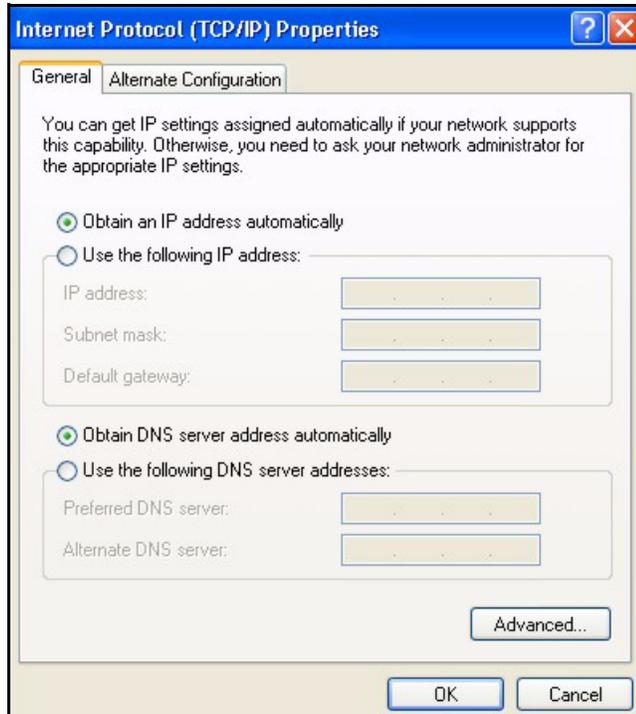
Figure 20 Windows XP: Local Area Connection Properties

- 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**.

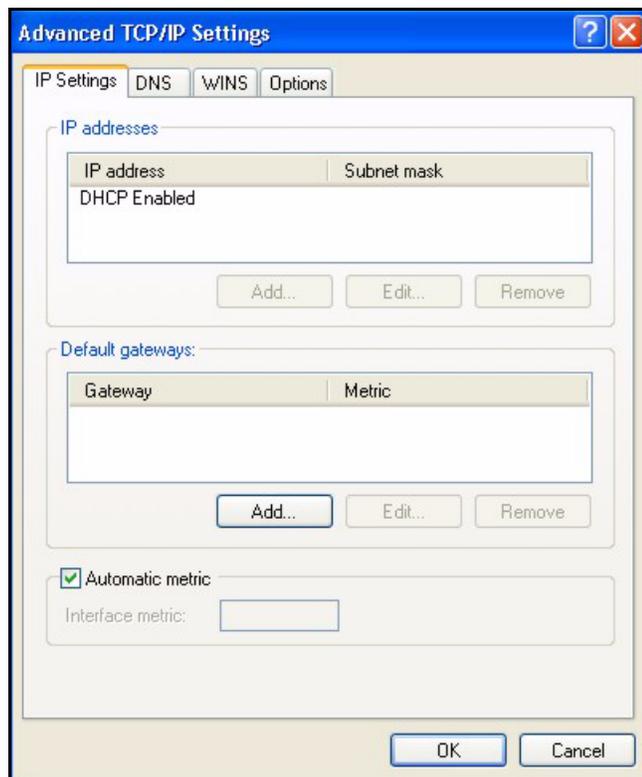
Figure 21 Windows XP: Internet Protocol (TCP/IP) Properties



- 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:

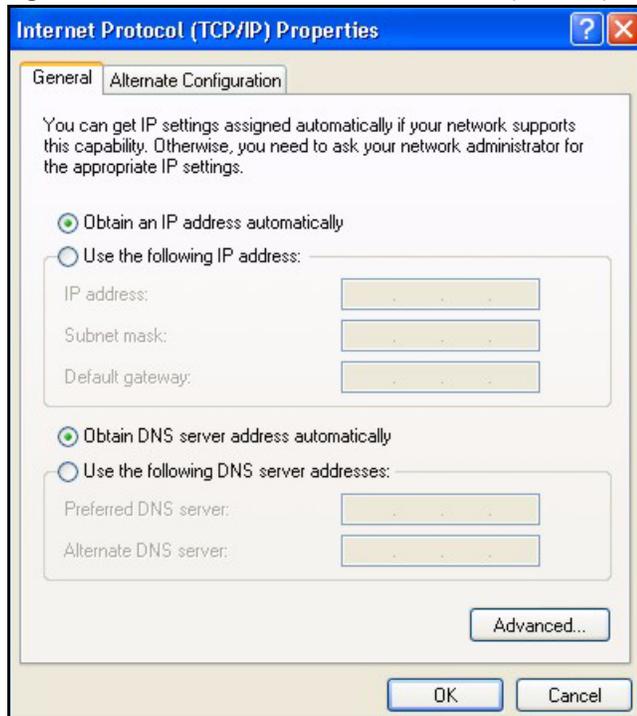
- In the **IP Settings** tab, in IP addresses, click **Add**.
- In **TCP/IP Address**, type an IP address in **IP address** and a subnet mask in **Subnet mask**, and then click **Add**.
- Repeat the above two steps for each IP address you want to add.
- Configure additional default gateways in the **IP 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 22 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 23 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).

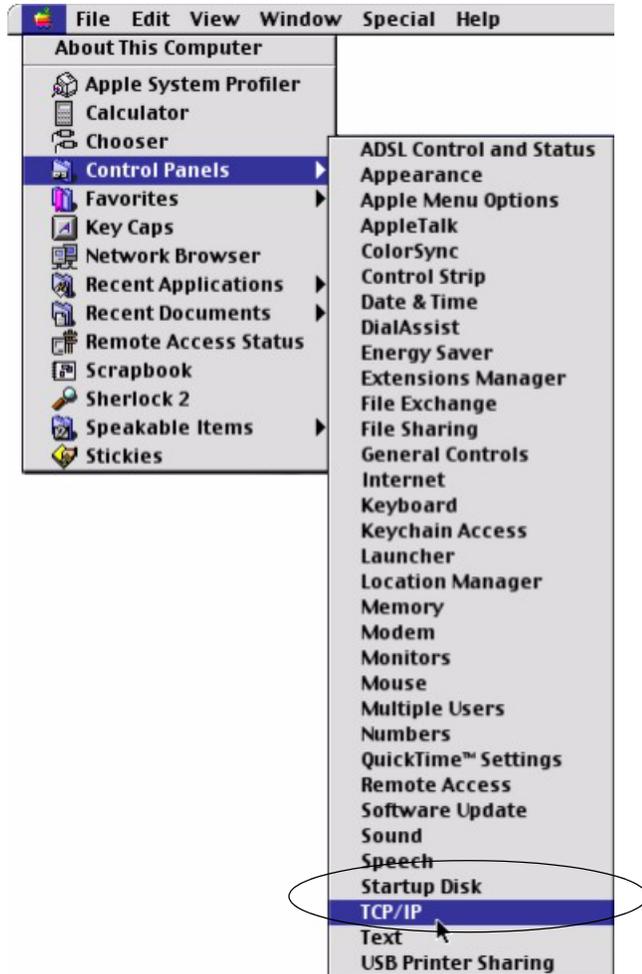
Verifying Settings

- 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

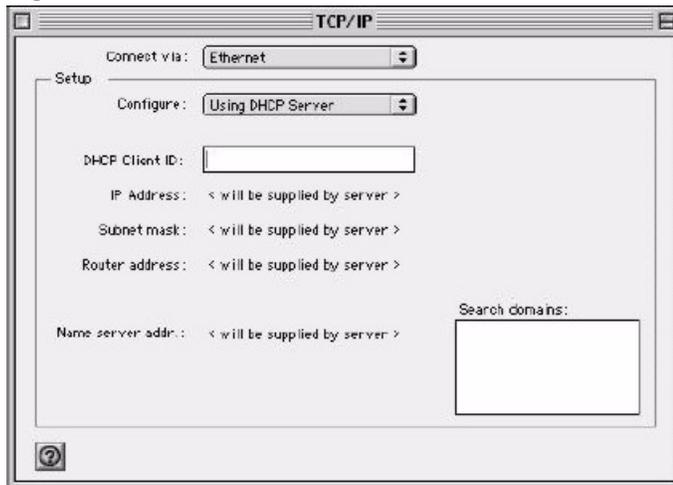
- 1** Click the **Apple** menu, **Control Panel** and double-click **TCP/IP** to open the **TCP/IP Control Panel**.

Figure 24 Macintosh OS 8/9: Apple Menu



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

Figure 25 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).

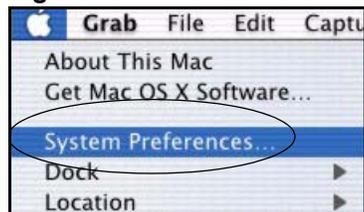
Verifying Settings

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

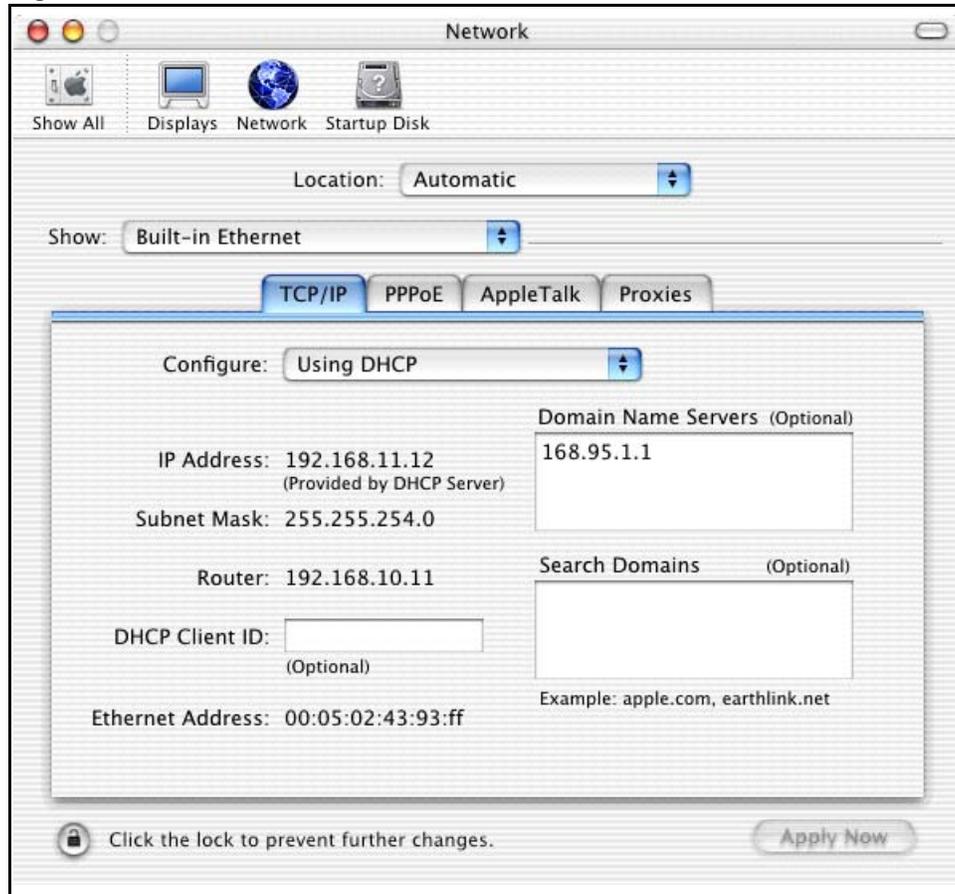
Macintosh OS X

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

Figure 26 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 27 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.

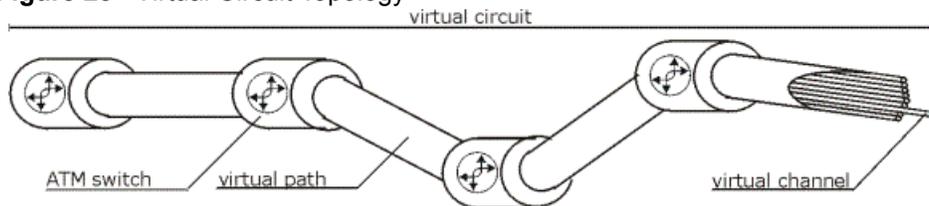
Appendix B

Virtual Circuit Topology

ATM is a connection-oriented technology, meaning that it sets up virtual circuits over which end systems communicate. The terminology for virtual circuits is as follows:

- Virtual Channel Logical connections between ATM switches
- Virtual Path A bundle of virtual channels
- Virtual Circuit A series of virtual paths between circuit end points

Figure 28 Virtual Circuit Topology



Think of a virtual path as a cable that contains a bundle of wires. The cable connects two points and wires within the cable provide individual circuits between the two points. In an ATM cell header, a VPI (Virtual Path Identifier) identifies a link formed by a virtual path; a VCI (Virtual Channel Identifier) identifies a channel within a virtual path.

The VPI and VCI identify a virtual path, that is, termination points between ATM switches. A series of virtual paths make up a virtual circuit.

Your ISP (Internet Service Provider) should supply you with VPI/VCI numbers.

Appendix C

About ADSL

ADSL Overview

Asynchronous Digital Subscriber Line (ADSL) technology provides high-speed data access across regular telephone or ISDN lines by making use of previously unused high-frequency bandwidth. ADSL is asymmetric in the sense that it provides a higher downstream data rate transfer (up to 8Mbps), than in the upstream transfer (up to 832 Kbps). Asymmetric operation is ideal for typical home and small office use where files and information are downloaded more frequently than uploaded.

Advantages of ADSL

- 1** ADSL provides a private (unlike cable telephone and modem services where the line is shared), dedicated and secure channel of communications between you and your service provider.
- 2** Because your line is dedicated (not shared), transmission speeds are not affected by other users. With cable modems, transmission speeds drop significantly as more users go on-line because the line is shared.
- 3** ADSL is "always on" (connected). This means that there is no time wasted dialing up the service several times a day and waiting to be connected; ADSL is on standby, ready for use whenever you need it.

Appendix D

About USB

USB

USB (Universal Serial Bus) is a data communications standard that allows your computer to recognize (auto-detect) new devices. No technical expertise is required to install your device. You simply plug your USB cable in and follow a limited set of easy-to-understand, automatically generated instructions. Set-up and operation has never been easier.

Advantages of USB

- 1** There is no need for numerous different types of ports and connectors on your computer. Modems, printers, joysticks, keyboards, mice, audio devices, CD-ROMs, digital cameras and other devices can all be connected through USB.
- 2** With USB, installing adapter cards, changing dip switches and configuring IRQs (Interrupt Requests) does not require opening your computer.
- 3** Full-speed USB 1.1 or USB 2.0 supports data transfer rates of up to 12 Mbps. High-speed USB 2.0 supports data transfer rates of up to 480 Mbps.
- 4** Multiple devices can be daisy-chained to a single port without restarting your computer.
- 5** USB can power some devices - eliminating the need for batteries or power adaptors

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