Prestige 630

ADSL USB Modem

User's Guide

Version 1.0.0.1 for Macintosh X
October 2002

ZyXEL

TOTAL INTERNET ACCESS SOLUTION

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Information for Canadian Users

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective operation and safety requirements. The Industry Canada does not guarantee that the equipment will operate to a user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

For their own protection, users should ensure that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

Caution

Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority, or electrician, as appropriate.

Note

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the radio interference regulations of Industry.

Federal Communications Commission (FCC) Interference Statement

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

Refer to the product page at www.zyxel.com.

Customer Support

When contacting your Customer Support Representative, please have the following information ready:

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

METHOD LOCATION	E-MAIL SUPPORT/SALES	TELEPHONE/FAX	WEB SITE/ FTP SITE	REGULAR MAIL
WORLDWIDE	Support@zyxel.com.tw Support@europe.zyxel.com Sales@zyxel.com.tw	+886-3-578-3942 +886-3-578-2439	www.zyxel.com www.europe.zyxel.com ftp.europe.zyxel.com	ZyXEL Communications Corp., 6 Innovation Road II, Science-Based Industrial Park, Hsinchu, 300, Taiwan
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SCANDINAVIA	Support@zyxel.dk Sales@zyxel.dk	+45-3955-0700 +45-3955-0707	www.zyxel.dk ftp.zyxel.dk	ZyXEL Communications A/S, Columbusvej 5, 2860 Soeborg, Denmark
GERMANY	Support@zyxel.de Sales@zyxel.de	+49-2405-6909-0 +49-2405-6909-99	www.zyxel.de	ZyXEL Deutschland GmbH. Adenauerstr. 20/A4 D-52146 Wuerselen, Germany

Table of Contents

Copyright ..... *ii*
ZyXEL Limited Warranty ..... *iii*
Information for Canadian Users ..... *iv*
Federal Communications Commission (FCC) Interference Statement ..... *v*
Customer Support ..... *vi*
List of Figures ..... *ix*
List of Diagrams ..... *x*
List of Tables ..... *x*
Preface ..... *xi*

Chapter 1 Installing Your Modem **1-1**

1.1 Operating Systems *1-1*
1.2 Needed Information *1-1*
1.3 Installation *1-2*
1.4 Front Panel LEDs *1-9*
1.5 Front Panel LED Descriptions *1-10*

Chapter 2 Configuring Your Macintosh for Internet Access **2-1**

2.1 Configuring Your Mac for RFC1483 and Making a DSL Connection *2-1*
2.2 Configuring Your Mac for PPPoE and Making a DSL Connection *2-4*
2.3 Configuring Your Mac for PPPoA and Making a DSL Connection *2-6*

Chapter 3 Control And Status **3-1**

3.1 CSA *3-1*
3.2 CSA Icon *3-1*
3.3 ADSL Control and Status Interface Screen *3-3*

Chapter 4 Uninstalling Your Modem **4-1**

4.1 Uninstalling the Hardware 4-1

4.2 Uninstalling the Driver 4-1

Chapter 5 Troubleshooting 5-1

Appendix A VPI and VCI ..... A

Index C

List of Figures

Figure 1-1 About This Mac 1-1
Figure 1-2 DMG File 1-3
Figure 1-3 Virtual Disk 1-3
Figure 1-4 Start Installation 1-3
Figure 1-5 Authorization Screen 1-4
Figure 1-6 Administration Name and Password 1-4
Figure 1-7 Select Destination 1-5
Figure 1-8 Select Driver Type 1-6
Figure 1-9 Set VPI and VCI 1-6
Figure 1-10 Select Mode and Encapsulation 1-7
Figure 1-11 Back Panel Connections 1-8
Figure 1-12 USB Cable Connectors 1-8
Figure 1-13 Splitter 1-9
Figure 1-14 Front Panel LEDs 1-9
Figure 2-1 Open System Preferences 2-1
Figure 2-2 System Preferences 2-1
Figure 2-3 New Port Detected 2-2
Figure 2-4 Network: TCP/IP Tab 2-3
Figure 2-5 Network: PPPoE Tab 2-5
Figure 2-6 PPPoE Icon Connect 2-6
Figure 2-7 New Port Detected 2-6
Figure 2-8 Network 2-7
Figure 2-9 Network: Modem Tab 2-8
Figure 2-10 Network: PPP Tab 2-9
Figure 2-11 PPPoA Connect Icon 2-10

Figure 2-12 Internet Connect Icon 2-10
Figure 2-13 PPPoA Connect Screen 2-11
Figure 3-1 Macintosh HD Icon 3-1
Figure 3-2 Macintosh HD Applications 3-2
Figure 3-3 Control and Status Icon 3-2
Figure 3-4 CSA Icon 3-2
Figure 3-5 Launch CSA 3-3
Figure 3-6 Control and Status Application 3-4
Figure 4-2 DMG File 4-1
Figure 4-3 Virtual Disk 4-2
Figure 4-4 Start Uninstallation 4-2
Figure 4-5 Uninstall Authorization 4-3
Figure 4-6 Administration Name and Password 4-3
Figure 4-7 Select Destination 4-4

List of Diagrams

Diagram 1 Virtual Circuit Topology ..... A

List of Tables

Table 1-1 Needed Information 1-1
Table 1-2 LED Descriptions 1-10
Table 5-1 Troubleshooting 5-1

Preface

This User's Guide provides instructions for using the Prestige 630 ADSL USB modem with Macintosh computers using Mac OS 10.1.3 and later.

Features

The ZyXEL Prestige 630 ADSL USB Modem provides the following features:

- Compliant with Universal Serial Bus Specification Revision 1.1
- USB bus-powered; an external power supply is not required
- Compatible with all G.DMT compliant Central Office (CO) Digital Subscriber Line Access Multiplexer (DSLAM) equipment
- Software upgradable
- Includes a user interface screen for checking the status of the connection
- An RJ-11 port for ADSL connection
- Support for DSL downstream data rates of up to 8 Mbps
- Support for DSL upstream data rates of up to 800 Kbps.

Related Documentation

- Included CD

  This disk contains the installation driver, release note, support note, supporting software and information on product registration.

- Glossary and ZyXEL Web Site

  Please refer to www.zyxel.com for an online glossary of networking terms or the ZyXEL download library for additional support documentation.

About This Manual

This manual provides information about modem installation and operation.

Syntax Conventions

- Mouse action sequences are denoted using a comma. For example, "click the Apple icon, **Control Panels** and then **Modem**" means first click the Apple icon, then click or move your mouse pointer over **Control Panels** and then click or (double-click) **Modem**.
- "Select" or "Choose" means for you to use one of the predefined choices.

- Button and field labels, links and screen names are in **Bold Times New Roman** font.
- Predefined choices are in **Bold Arial** font.

The “ZyXEL Prestige 630 ADSL USB Modem” is also referred to as the “modem” in this manual.

Chapter 1
Installing Your Modem

This chapter shows you how to install your modem and USB driver and introduces the ports and LED indicators.

1.1 Operating Systems

The modem drivers are compatible with the Macintosh operating system versions 10.1.3 and later.

Click the Apple icon and then **About This Mac** in order to see which OS version is on your Macintosh.

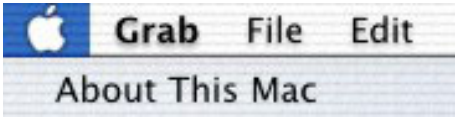


Figure 1-1 About This Mac

The screens on your computer may differ slightly from the screens shown here depending on the version of your operating system.

1.2 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 1-1 Needed Information

REQUIRED INFORMATION	FILL IN THE BLANKS
Driver Type: **RFC 1483**, **PPPoE** or **PPPoA**.	
RFC Mode (with RFC 1483 only) **Bridged IP** or **Routed IP**.	
VPI: The Virtual Path Identifier number identifies a bundle of virtual channels.	

Table 1-1 Needed Information

REQUIRED INFORMATION	FILL IN THE BLANKS
VCI: The Virtual Channel Identifier number identifies a logical connection between end stations.	
Framing Type: **LLC** or **VCMUX**.	
User Name: For PPPoA, this lets your ISP know which account you are logging into.	
Password: For PPPoA, this protects your account from unauthorized use.	

Your modem supports **RFC 1483**, **PPPoA** (Point to Point Protocol over ATM) and **PPPoE** (Point to Point Protocol over Ethernet) drivers. These refer to the underlying data transport protocols. Use the RFC 1483 driver with always-on accounts and the PPPoA and PPPoE drivers with dial-up PPPoA accounts.

When using the RFC 1483 driver, select the mode that your ISP uses, either **Bridged IP** or **Routed IP**.

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

See the appendix for more information about VPI and VCI.

1.3 Installation

The following sections describe how to install your modem driver and modem. Install the modem driver first and then the modem hardware.

Save and close all other running programs before installing the modem driver.

1.3.1 Modem Driver Installation

Step 1. Insert the included CD into the CD-ROM drive. An icon for the CD appears.

Step 2. Double-click the CD's icon.

Step 3. Double-click the Mac X folder.

Step 4. Double-click the driver folder that appears.

Step 5. In the resulting folder, double-click the .dmg file. This creates a virtual installer disc.

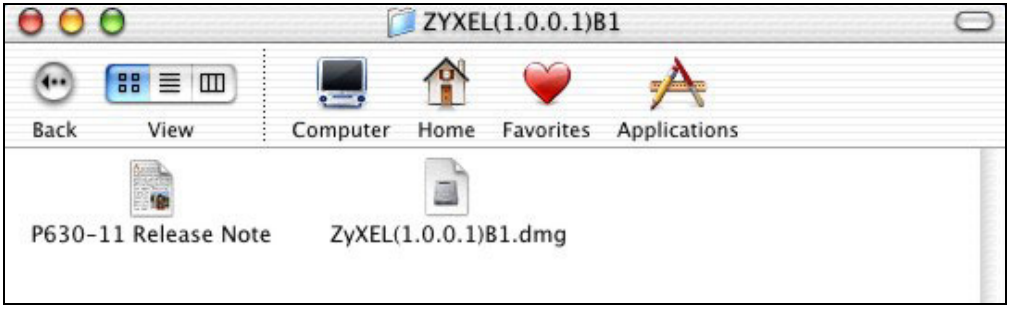


Figure 1-2 DMG File

Step 6. Double-click the virtual disc.

Figure 1-3 Virtual Disk

Step 7. Double-click the AME Modem.mpkg file.

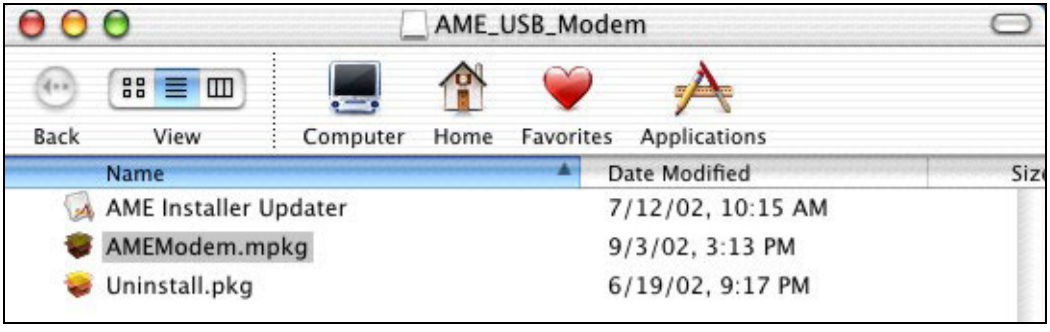


Figure 1-4 Start Installation

Step 8. In the **Authorization** screen, click the lock icon.

Figure 1-5 Authorization Screen

Step 9. Enter the administrator username and password for your Macintosh. Click **OK**.

Figure 1-6 Administration Name and Password

Step 10. In the **Welcome** sceen, click **Continue**.

Step 11. Read the text in the **Read Me** screen and click **Continue**.

Step 12. Read the license agreement and click **Continue**.

Step 13. Click **Agree**.

Step 14. In the **Select a Destination** screen, select a destination (this must be on an actual physical hard drive on the Macintosh, not a virtual drive) and click **Continue**.

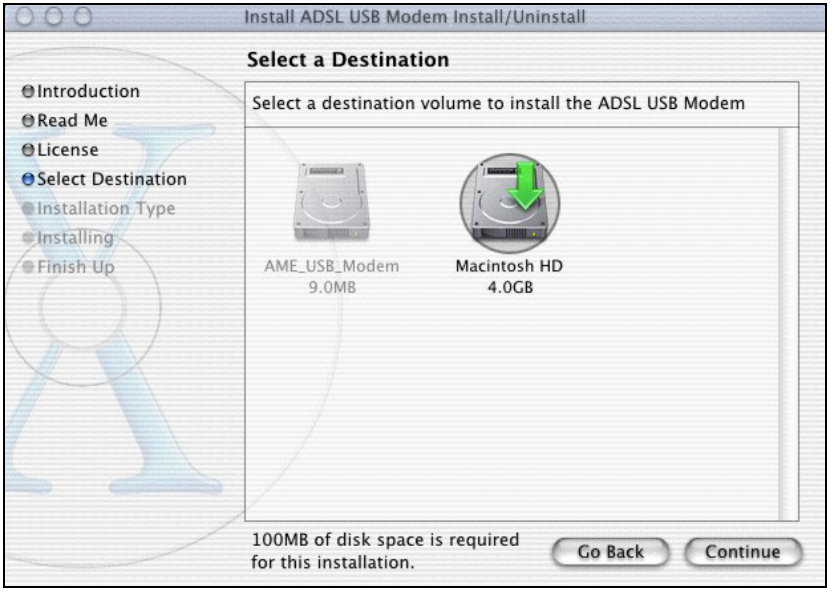


Figure 1-7 Select Destination

Step 15. In the **Easy Install** screen, click **Upgrade**; do not modify any settings.

Step 16. Click **Continue Installation** in the drop-down screen to proceed.

Step 17. Click **OK** in the screen about system version 10.1.3.

Step 18. Select your driver type; use **PPP** for PPPoA or **RFC 1483** for RFC 1483 or PPPoE.

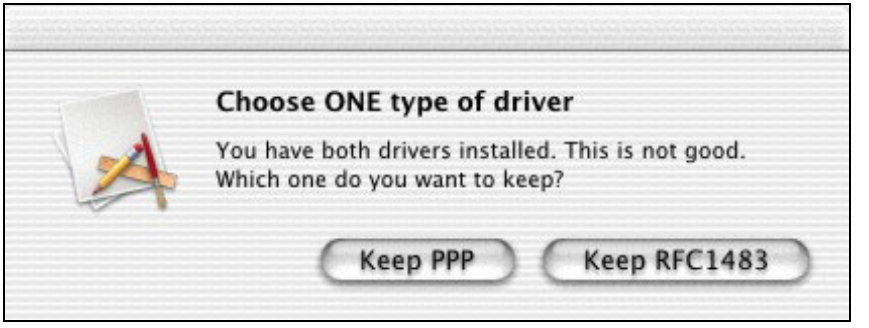


Figure 1-8 Select Driver Type

Step 19. Type the VPI and VCI that your ISP or telephone company gave you and click **OK**.

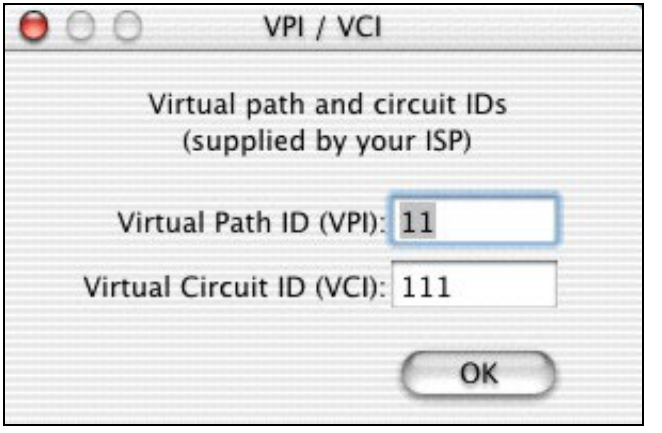


Figure 1-9 Set VPI and VCI

Step 20. Configure this screen with the information from your ISP. Select **LLC Encapsulation** or **VC/MUX Encapsulation**. Select **Routed IP**or **Bridged IP** mode when set up for RFC 1483 or PPPoE, you do not select either with PPPoA. Click **OK**.

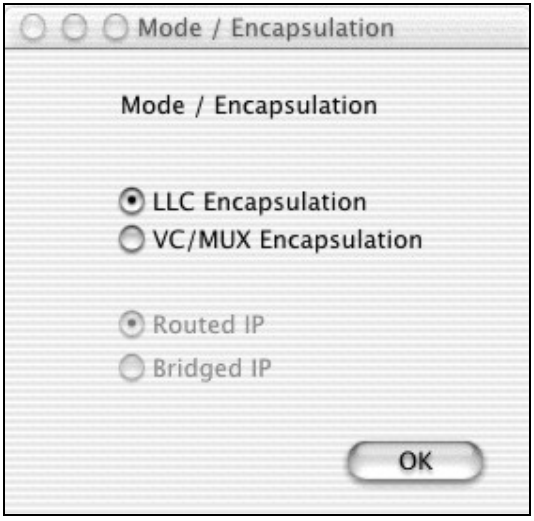


Figure 1-10 Select Mode and Encapsulation

Step 21. Make sure you have saved and closed all other running applications and click **Restart** to restart your computer and complete the modem driver installation.

1.3.2 Modem Hardware Installation

Step 1. Connect the square end of the USB cable to the back of your modem and then connect the rectangular end of the USB cable to your computer's USB port.

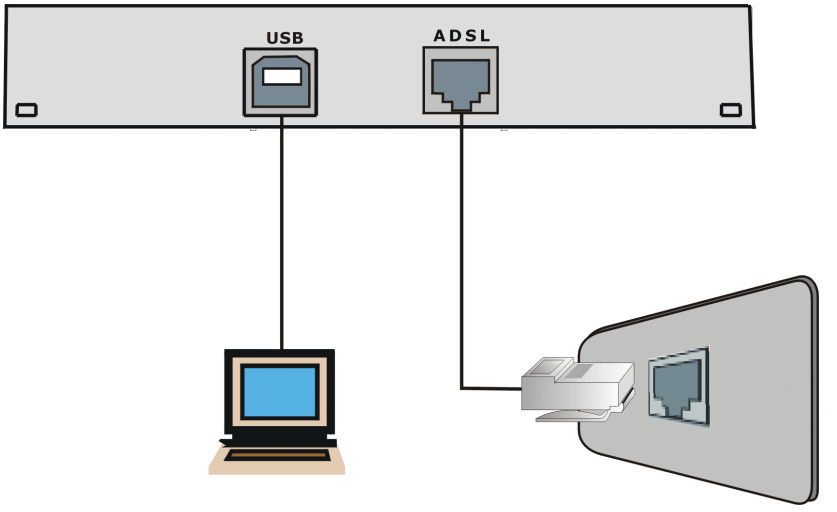
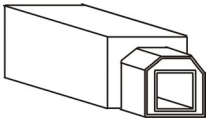
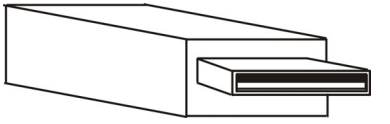


Figure 1-11 Back Panel Connections



Connect this cable end to your modem.



Connect this cable end to your computer.

Figure 1-12 USB Cable Connectors

Step 2. Use a telephone wire to connect the ADSL port to a telephone wall jack.

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 that screens out possible interference.

Use a splitter (optional) in order to plug a phone into the same telephone line. See the following figure.

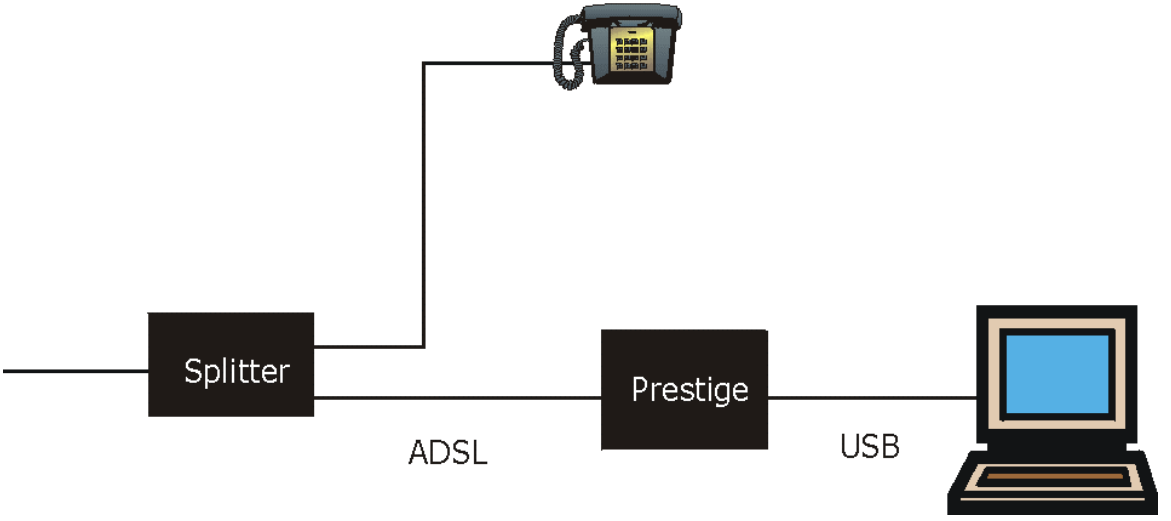


Figure 1-13 Splitter

1.4 Front Panel LEDs

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

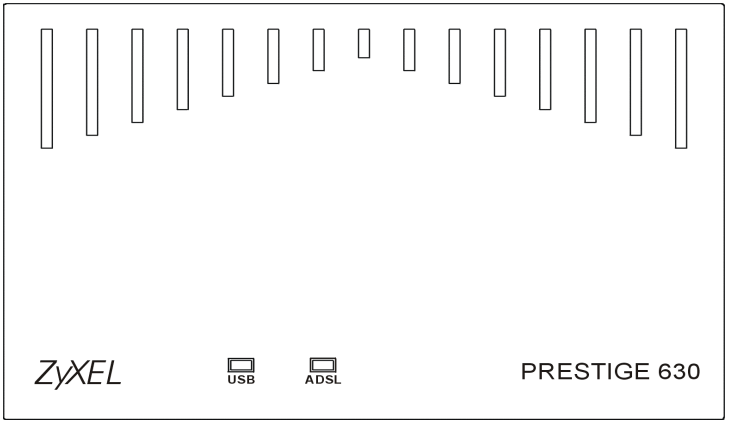


Figure 1-14 Front Panel LEDs

1.5 Front Panel LED Descriptions

Table 1-2 LED Descriptions

LED	FUNCTION	DESCRIPTION
USB	USB Interface and Modem Power Connection	This LED is off when the modem's USB port is not connected or not receiving power. The LED is on when the USB is connected, receiving power, and the driver software is installed. This LED blinks during data transfer or whenever the ADSL link is up.
ADSL	ADSL Interface	This LED is off when the software driver has not been installed or after you click the **Disconnect** button in the CSA interface. This LED is on when the ADSL link is up. This LED blinks when the ADSL link is connecting or waiting to connect.

See *Chapter 2* for instructions on how to configure your Macintosh and connect to the Internet.

Chapter 2
Configuring Your Macintosh for Internet Access

This chapter describes how to configure your Macintosh computer for DSL Internet access using the RFC1483, PPPoE or PPPoA driver you installed in 1.3.1.

2.1 Configuring Your Mac for RFC1483 and Making a DSL Connection

Use the following steps to configure your Macintosh when using a RFC1483 driver.

Step 1. Click the Apple icon and **System Preferences**.

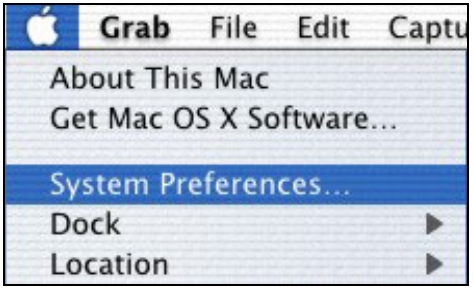


Figure 2-1 Open System Preferences

Step 2. Click **Network**.

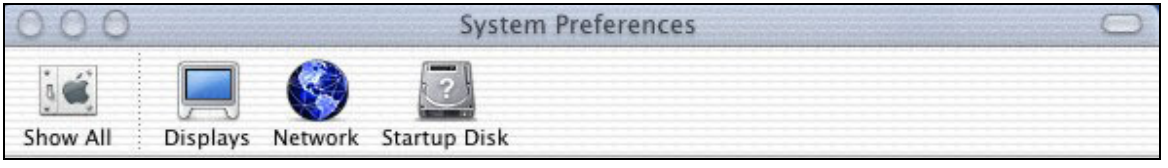


Figure 2-2 System Preferences

Step 3. A **New Port Detected** screen opens when the computer detects that the ADSL link is up. Click **OK**.

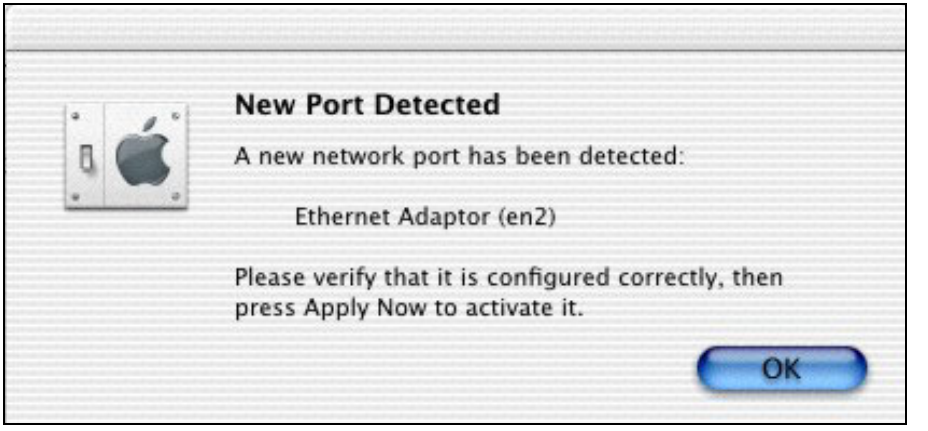


Figure 2-3 New Port Detected

Step 4. In the **Network** screen, select **Ethernet Adaptor (en x)** in the **Show** field. In the **TCP/IP** tab, select **Using DHCP** in the **Configure** field if you are using the bridged IP mode or **Manually** if you are using the routed IP mode. Click **Apply Now**.

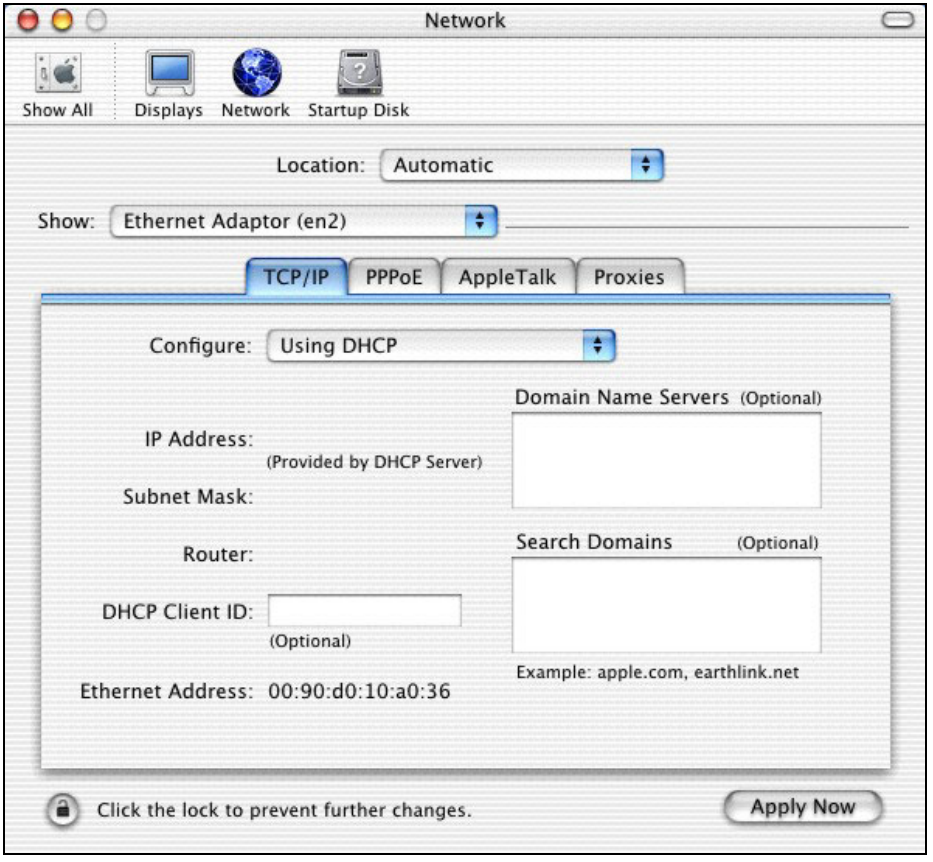


Figure 2-4 Network: TCP/IP Tab

Step 5. Open your web browser.

2.2 Configuring Your Mac for PPPoE and Making a DSL Connection

Use the following steps to configure your Macintosh when using a PPPoE driver. PPPoE is a dial-up connection, so you configure the driver and create a dial-up connection to use. The dial-up connection is not necessary with RFC 1483.

Step 1. Click the Apple icon and **System Preferences** and then **Networking** (see *Figure 2-1* and *Figure 2-2*).

Step 2. A **New Port Detected** screen opens when the computer detects that the ADSL link is up. Click **OK** (see Figure 2-3).

Step 3. In the **Network** screen, select **Ethernet Adaptor (en x)** in the **Show** field. Click the **PPPoE** tab and select the **Connect using PPPoE** check box. Type the information from your ISP in the **PPPoE Service Name**, **Account Name** and **Password** fields. Select the **Show PPPoE status in menu bar** check box. Click **Apply Now**.

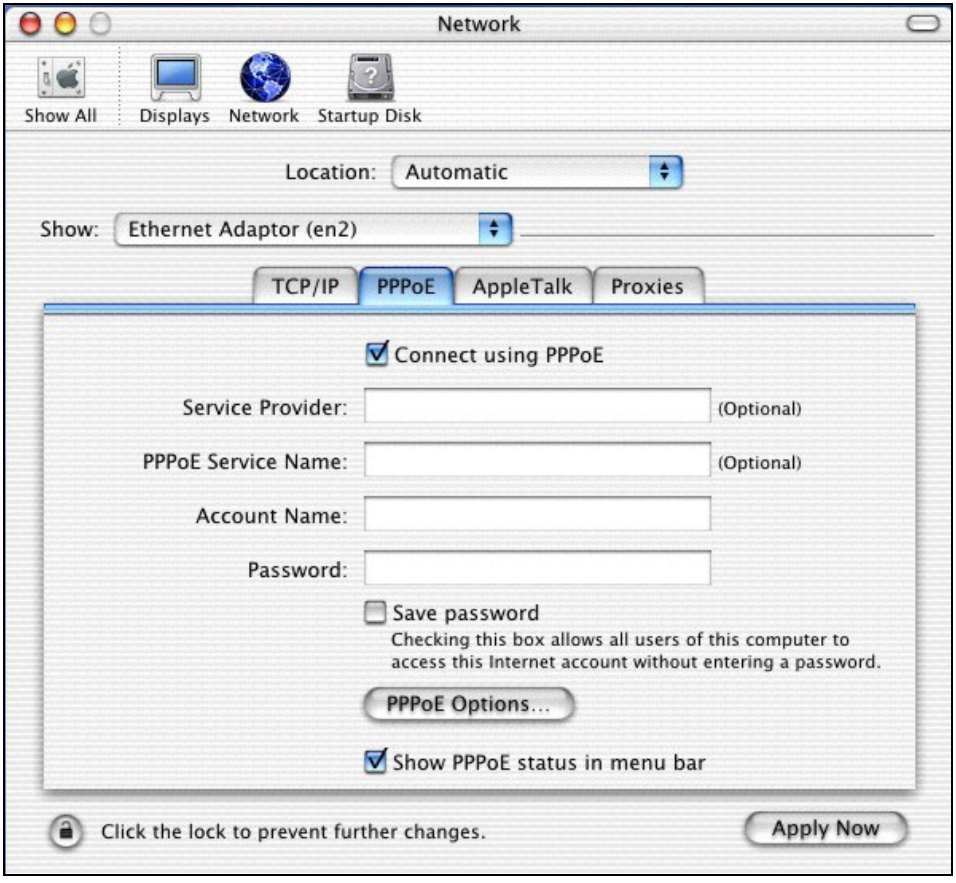


Figure 2-5 Network: PPPoE Tab

Step 4. Click the menu bar icon and select **Connect**.

Figure 2-6 PPPoE Icon Connect

2.3 Configuring Your Mac for PPPoA and Making a DSL Connection

Use the following steps to configure your Macintosh when using a PPPoA driver. PPPoA is a dial-up connection, so you configure the driver and create a dial-up connection to use. The dial-up connection is not necessary with RFC 1483.

Step 1. Click the Apple icon and **System Preferences** and then **Networking** (see *Figure 2-1* and *Figure 2-2*).

Step 2. A **New Port Detected** screen opens when the computer detects that the ADSL link is up. Click **OK**.

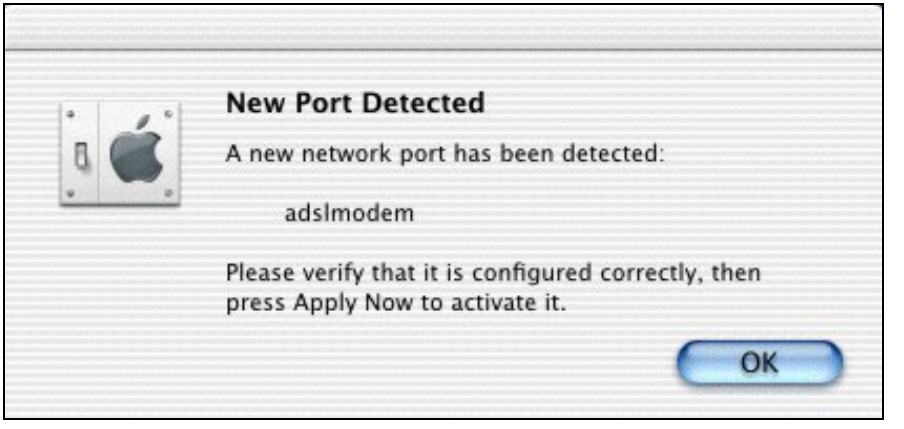


Figure 2-7 New Port Detected

Step 3. In the **Network** screen, select **adslmodem**.

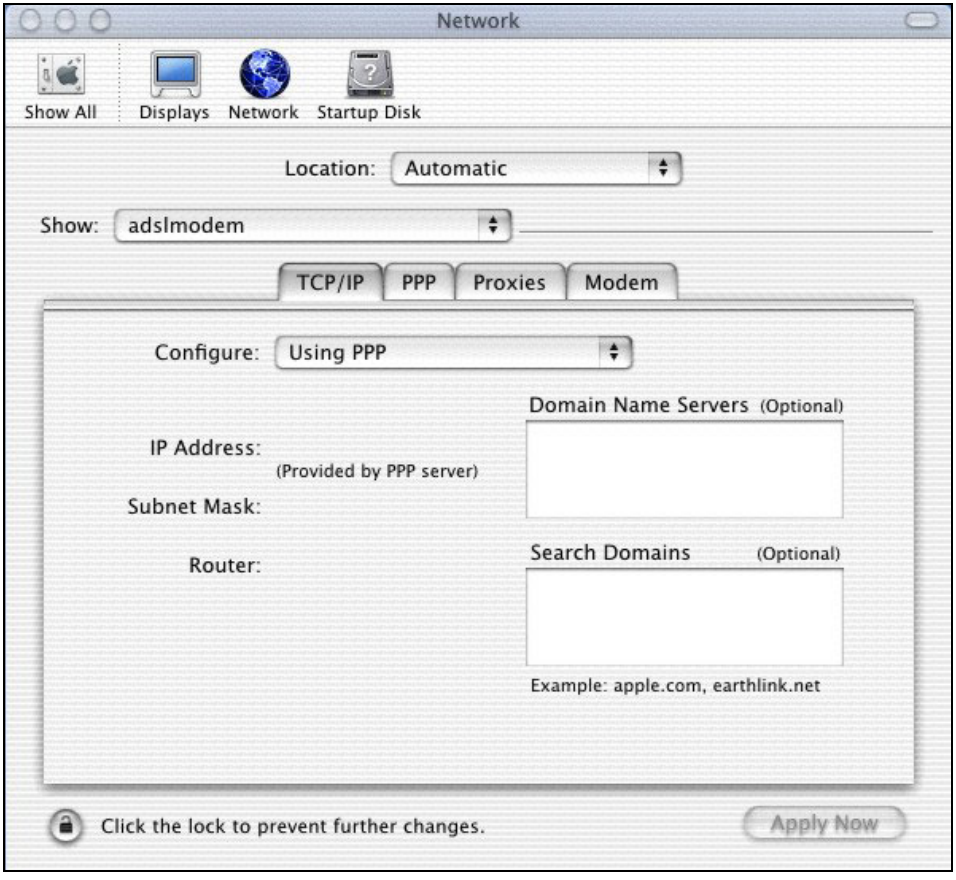


Figure 2-8 Network

Step 4. Click the **Modem** tab. Select **Null Modem 115200** in the **Modem** field. Select the **Show modem status in menu bar** check box.

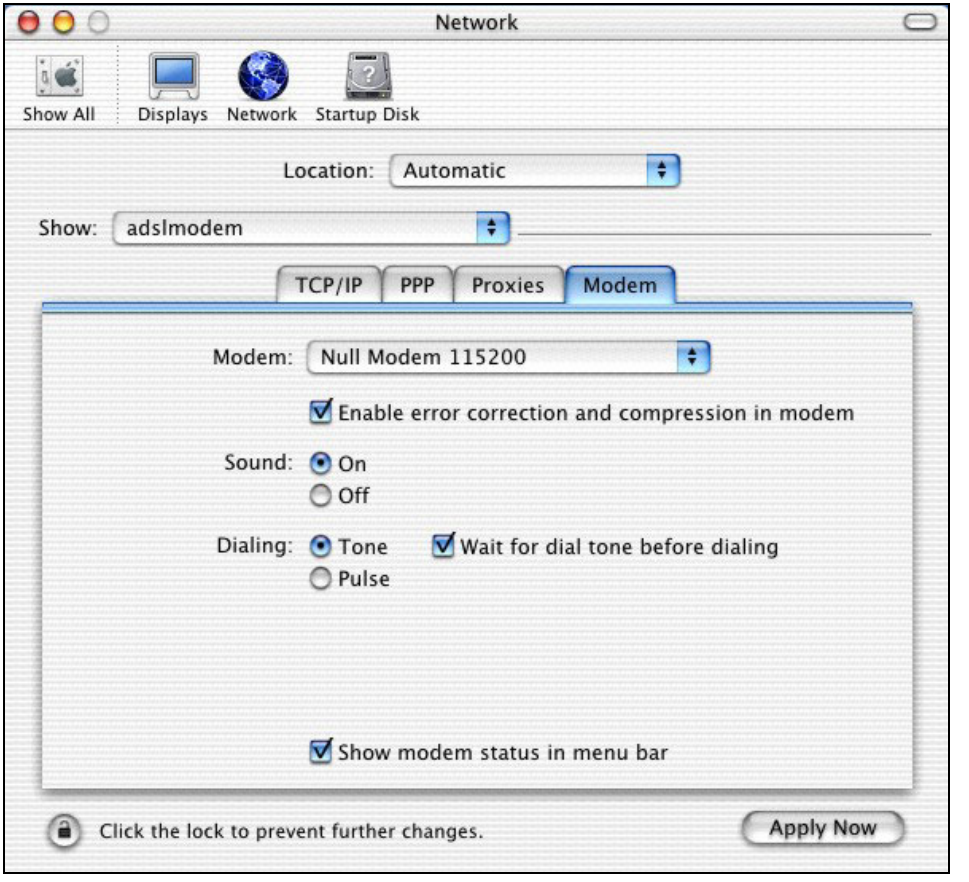


Figure 2-9 Network: Modem Tab

Step 5. Click the **PPP** tab. Type your PPPoA account information from your ISP in the **Account Name** and **Password** fields. This creates your PPPoA dial-up account.

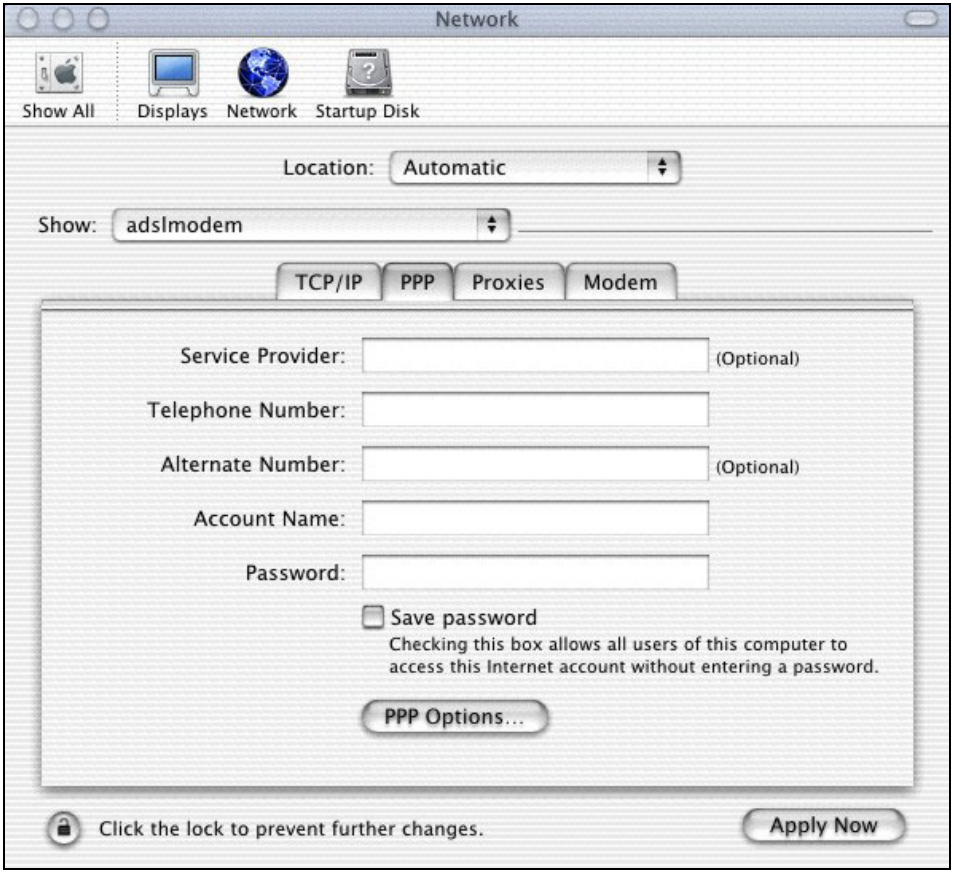


Figure 2-10 Network: PPP Tab

Step 6. Click the **TCP/IP** tab (see *Figure 2-8*). Make sure that the **Configure** field is set to **Using PPP** and click **Apply Now**.

Step 7. Click the menu bar icon and select **Connect**.

Figure 2-11 PPPoA Connect Icon

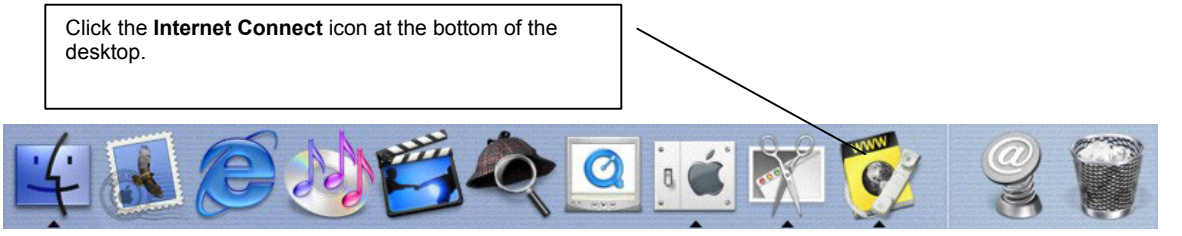


Figure 2-12 Internet Connect Icon

Step 8. Enter your password and click **Connect**.

Figure 2-13 PPPoA Connect Screen

Chapter 3
Control And Status

This chapter introduces the Control and Status Application GUI.

3.1 CSA

The CSA (Control and Status Application) displays information about your modem's status and performance, and also allows you to connect or disconnect an ADSL connection.

3.2 CSA Icon

The CSA icon displays information about your modem's connection status and allows you to open the CSA interface. Do the following to display the CSA icon in the menu bar at the top of the screen.

3.2.1 Procedure to Display the CSA icon.

Step 1. Click the **Macintosh HD** icon.

Figure 3-1 Macintosh HD Icon

Step 2. Double-click **Applications**.

Figure 3-2 Macintosh HD Applications

Step 3. Double-click **AME Control and Status**.

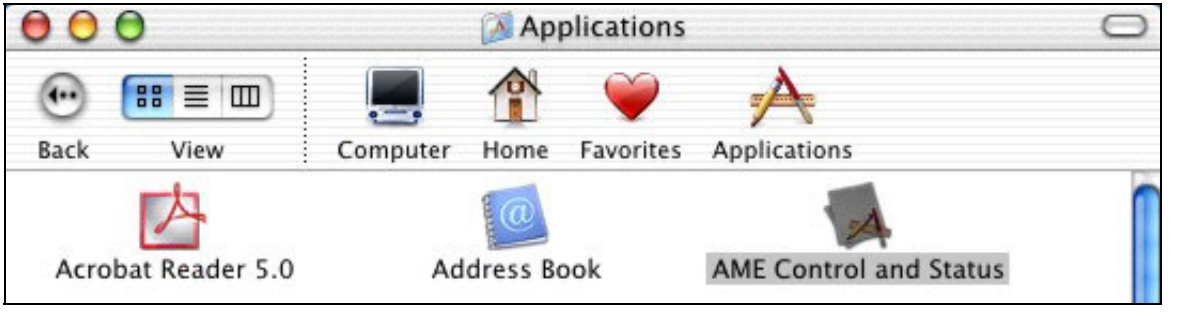


Figure 3-3 Control and Status Icon

Step 4. The CSA icon displays in the menu bar at the top of the screen.

Figure 3-4 CSA Icon

3.2.2 Icon Colors

The color of the icon indicates the connection state of the modem as follows:

- Black indicates that the modem is unavailable.
- Red indicates that the modem is not connected.

- Blue indicates that the modem is waiting to initialize a connection.
- Yellow indicates that the modem is initializing a connection.
- Green indicates that the connection is up and the modem is functioning.

3.3 ADSL Control and Status Interface Screen

Click the CSA icon on the menu bar at the top of the screen and then **Launch CSA**.

Figure 3-5 Launch CSA

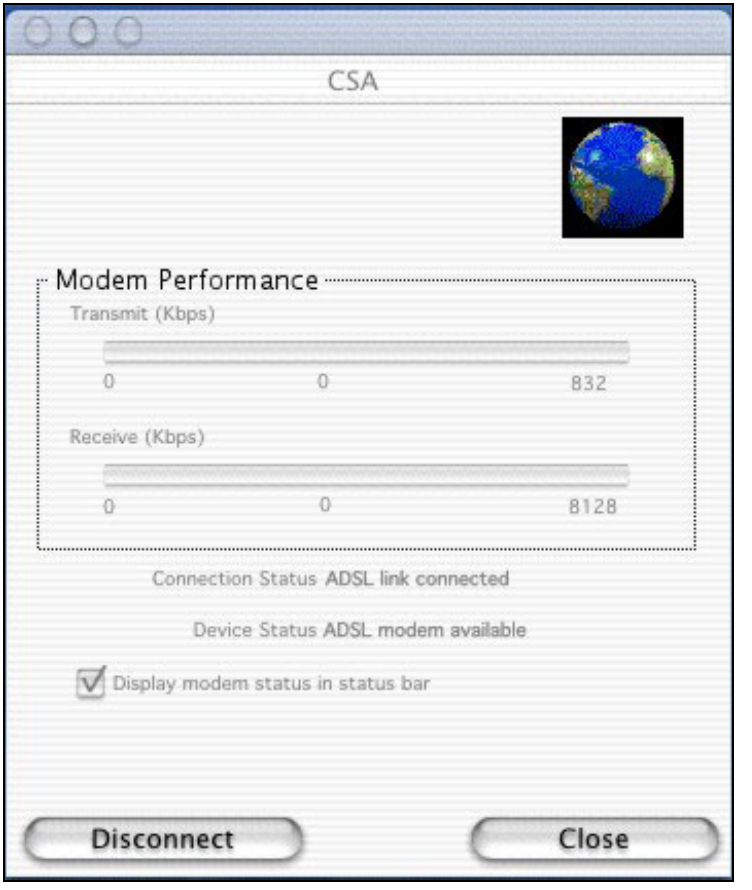


Figure 3-6 Control and Status Application

3.3.1 Modem Performance

Two bar graphs indicate the throughput rates. One indicates the transmit rate (upstream) of data being sent out from the modem and the second indicates the receive rate (downstream).

3.3.2 Connection Status

This field displays **ADSL link connected** when there is an ADSL connection. It displays **ADSL link disconnected** when there is not an ADSL connection.

3.3.3 Device Status

This field displays **ADSL modem available** when the modem is properly connected to the computer and the modem driver is installed. The field displays **ADSL modem not available** when the modem is not connected to the computer or the modem driver is not properly installed.

3.3.4 Display Modem Status in Status Bar

Select this check box to have the CSA icon display in the menu bar at the top of the screen.

3.3.5 Connect

The connect/disconnect functions are controlled by the **Connect/Disconnect** button. The button is disabled when the modem is unavailable. This happens when the modem driver fails to communicate properly or is disabled.

The status of the modem determines the button text. **Connect** is displayed when the modem is not connected and not cycling in order to connect. **Disconnect** is displayed when the modem is connected.

3.3.6 Close

The **Close** button closes only the CSA interface screen and does not have any affect on the ADSL connection.

Chapter 4
Uninstalling Your Modem

This chapter tells how to uninstall your modem hardware and software.

4.1 Uninstalling the Hardware

Disconnect the USB cable from your Macintosh's USB port.

4.2 Uninstalling the Driver

Use the following steps to remove your modem's software driver.

Save and close all other running programs before installing the modem driver.

Step 1. Insert the included CD into the CD-ROM drive. An icon for the CD appears.

Step 2. Double-click the CD's icon.

Step 3. Double-click the Mac X folder.

Step 4. Double-click the driver folder that appears.

Step 5. In the resulting folder, double-click the .dmg file. This creates a virtual installer disc.

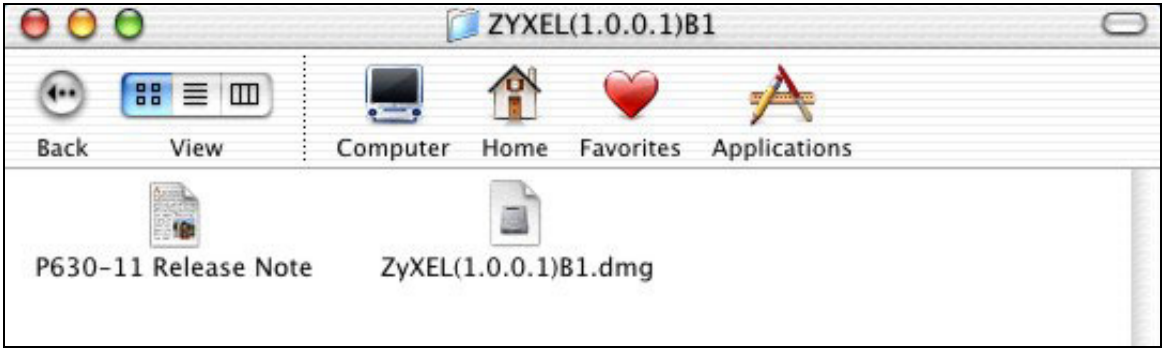


Figure 4-1 DMG File

Step 6. Double-click the virtual disc.

Figure 4-2 Virtual Disk

Step 7. Double-click the uninstall file.

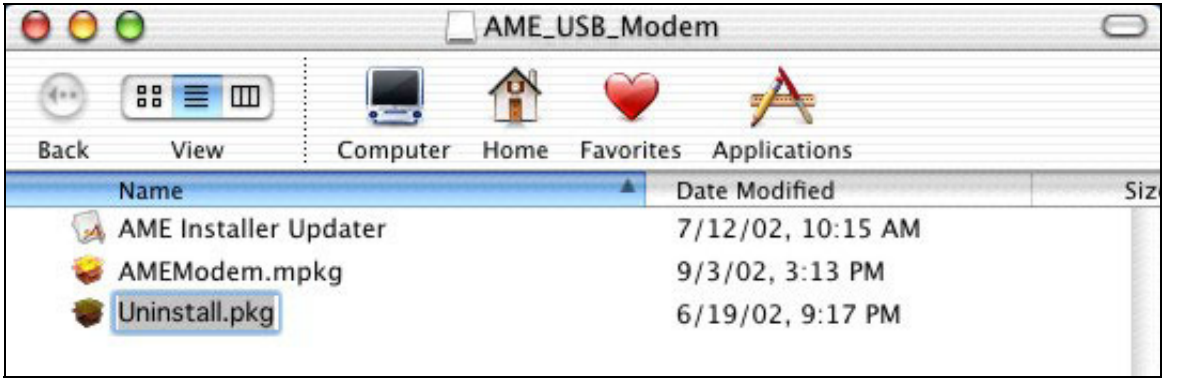


Figure 4-3 Start Uninstallation

Step 8. In the **Authorization** screen, click the lock icon.

Figure 4-4 Uninstall Authorization

Step 9. Enter the administrator username and password for your Macintosh. Click **OK**.

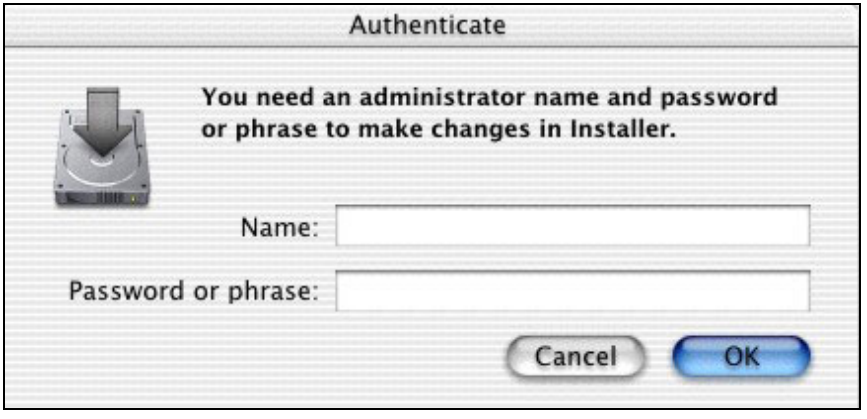


Figure 4-5 Administration Name and Password

Step 10. In the **Welcome** sceen, click **Continue**.

Step 11. In the **Select a Destination** screen, select a destination (this must be on an actual physical hard drive on the Macintosh, not a virtual drive) and click **Continue**.

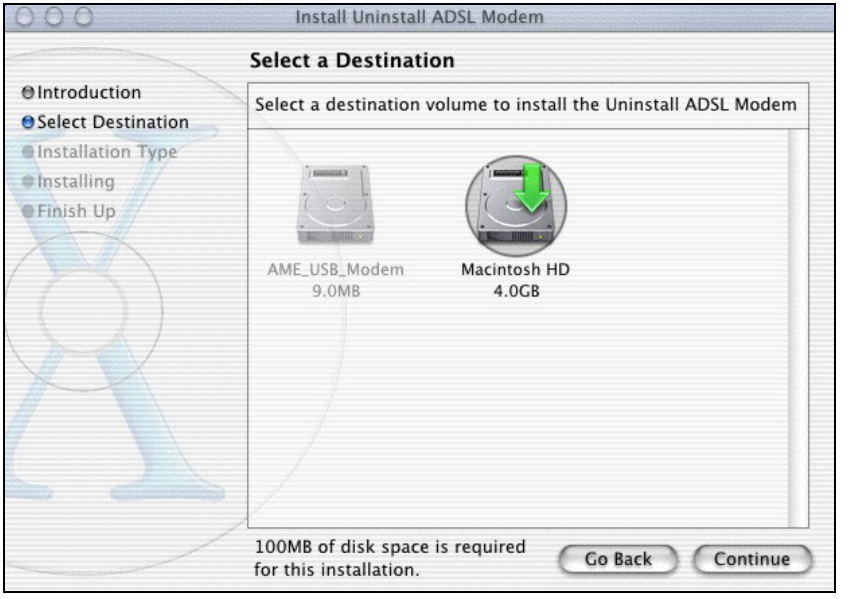


Figure 4-6 Select Destination

Step 12. In the **Easy Install** screen, click **Upgrade**.

Step 13. Make sure you have saved and closed all other running applications and click **Continue Installation** in the drop-down screen to proceed with the uninstall.

Step 14. Click **Restart** to restart your computer and complete the uninstallation.

Chapter 5
Troubleshooting

This chapter covers potential problems and the possible solutions.

Table 5-1 Troubleshooting

PROBLEM	CORRECTIVE ACTION
None of the LEDs turn on when I start the modem.	Make sure your computer is turned on. Check the USB cable connections between the modem and your computer. Make sure you can open the CSA interface (refer to *Chapter 3* for details. Install the software driver if the CSA is not present. Carefully follow the instructions in this User's Guide to uninstall and reinstall the software driver.
I cannot access the modem via my computer.	Make sure the modem's USB port is connected to your computer's USB port. Restart your computer.
I cannot connect to the Internet.	Make sure the ADSL port is properly connected to the telephone wall jack. Use the **Connect/Disconnect** button in the **ADSL Control and Status** screen to reinitiate the ADSL connection. With PPPoE, see *2.2* and make sure that you have configured the correct user name and password. With PPPoA, see *2.3* and make sure that you have configured the correct user name and password. Restart your computer.

Appendix A
VPI and VCI

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 end points in a network

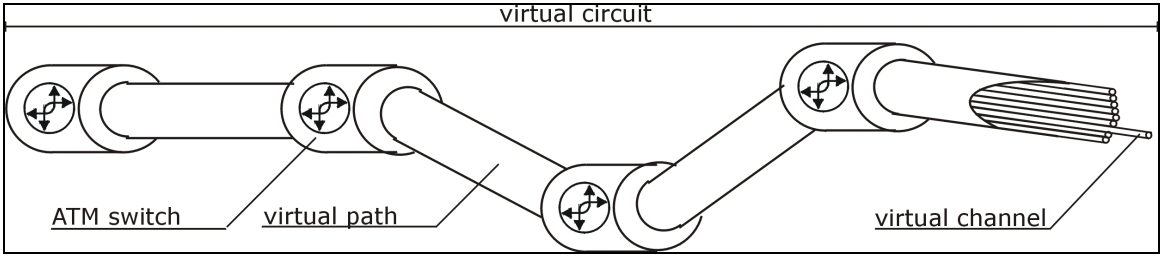


Diagram 1 Virtual Circuit Topology

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.

Index

C

Close Button 3-5

Compatibility and Compliance xi

Configuration 2-1

Connect Button 3-5

Connection Status 3-5

Connections 1-8

Contacting Customer Support vi

Control and Status Application 3-1

Copyright ii

Disclaimer ii

Trademarks ii

CSA 3-1

Customer Support vi

D

Device Status 3-5

Downstream Data Rates xi

Driver Installation 1-2

F

FCC v

FCC Rules v

Features xi

Federal Communications Commission (FCC) Interference Statement v

G

Glossary xi

H

Hardware Installation 1-7

I

Included CD xi

Information for Canadian Users iv

Caution iv

Note iv

ISP Information 1-1

L

LEDs 1-9

Limited Warranty iii

M

Macintosh Configuration 2-1

Microfilter 1-8

Modem Performance 3-4

N

Needed Information 1-1

O

Online Registration iii

Operating Systems 1-1

P

Power Supply xi

PPPoA 2-6

R

Related Documentation xi

Removing 4-1
Repair iii
RFC 1483 1-2
RFC1483 2-1
RJ-11 xi
S
Service iii
Support Disk xi
Syntax Conventions xi
T
Table of Contents vii
Telephone Company Information 1-1
Troubleshooting 5-1
U
Uninstalling 4-1
Upstream Data Rates xi
USB as Power Source xi
USB Compliance xi
User Interface Screens 3-1
V
Virtual Channel ..... A
Virtual Circuit ..... A
Virtual Path ..... A
W
Warranty iii
Z
ZyXEL Contact Information vi
ZyXEL Limited Warranty
Note iii
ZyXEL Web Site xi