ADSL X3

U S E R ' S G U I D E

zoom®

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Contents

Overview

The X3 is an ADSL modem and a gateway/router all contained in one device.

The ADSL modem gives you a connection to the Internet through your Internet service provider.

The gateway/router provides an interface between the Internet and your own local network. It also includes an advanced firewall, which allows you to control Internet access from your local network, and which protects your local network from unwanted Internet traffic.

The X3 modem is also enabled for Universal Plug and Play (UPnP™). This means that if you plug other devices with UPnP capabilities into your computer or network (for example, a gaming application, router, or stand-alone firewall) they will automatically detect the X3 and make the needed configurations for them to work together.

This User's Guide contains installation instructions for Windows, Macintosh, and Linux computers and information about the X3's advanced setup options. While most users will not need to use the advanced setup options, there are cases in which these advanced settings are necessary (for example, if you have a static IP address).

1

Installation Instructions

This chapter covers the basic instructions needed to install your X3 and connect to the Internet. These instructions can be used by those with a Macintosh, Linux, or Windows operating system. If you already installed and connnected your X3 (using the separate Quick Start booklet provided for Windows users), you can skip this chapter and begin with Chapter 2.

Important! Before You Begin

Before installing your X3, you must have ADSL service enabled on your telephone line. To do this, you need to sign up with an ADSL service provider. (Your service provider may refer to "ADSL service" as "DSL service.")

Package Contents

Your package contains the items shown below:

Zoom ADSL X3 Modem

Software CD-ROM

Ethernet Cable

Phone Cord

Power Cube
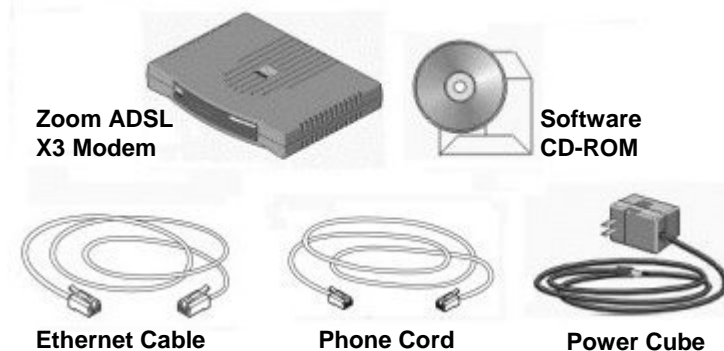
The CD contains the installation software, documentation, warranty, and Customer Support information.

If anything is missing or damaged, please contact Zoom Customer Support or your retailer or distributor.

In addition, the package may include:

- Phone-jack adapter to adapt the phone cord to a particular phone jack (certain countries only)

- ADSL line filter(s) (certain units only)

You Will Also Need

- One of the following:

  - ➢ A Windows 98/Me/2000/XP computer equipped with a Network Interface Card (NIC).

  - ➢ A Macintosh or Linux computer with an Ethernet port.

  - ➢ A network device, such as a wireless access point, hub, router, or switch.

- An ADSL-enabled telephone wall jack to plug the X3 modem into.

Installing the X3

Installing the X3 involves four steps: **Installing the Software**, **Installing the Hardware**, **Configuring Your Web Browser**, and **Establishing Communication**.

Step 1: Installing the Software

> **Important!**
> This section is for Windows computers only. If you are using a Macintosh or Linux computer, or your are connecting the X3 directly to a hub or network device, skip this section and begin with the next one, **Installing the Hardware** on page 8.

<u>Windows computer users <u>MUST</u> install the software BEFORE installing the hardware.</u>

1 Ensure that your computer is on.

2 Insert the supplied CD into the CD-ROM drive of your computer. The CD should start automatically and the **Language Selection** screen should appear. (If the CD does not start automatically, on the desktop, click the **Start** button, click **Run**, and then type **D:\setup.exe**, where **D** is the letter of your CD-ROM drive.)

**3** Select your language. The **Main Menu** screen opens.

4 Click **Installation Wizard**.

5 Click **ADSL X3 Modem** to start the software installation, then click **Next** when prompted.

6 When the installation is complete, click **Finish**, then click **Exit**.

7 Close any applications that may be open, then remove the CD from the CD-ROM drive.

8 Shut down the computer.

Congratulations! You have installed the software. Now, continue with the next section, **Installing the Hardware**.

Step 2: Installing the Hardware

1 Shut down your computer (if it is not shut down already).

2 Connect the modem to the computer's Ethernet jack or to a network device (such as, a hub).

> **If you are using a computer's Ethernet jack:** Plug one end of the Ethernet cable into the modem's **ETHERNET** jack and plug the other end into your computer's Ethernet jack.

> **If you are connecting the X3 directly to a hub, switch, wireless access point, or other network device:** Plug one end of the Ethernet cable into the modem's **ETHERNET** jack and the other end into the network device's Ethernet jack (which is typically called an Uplink or Expansion port).

The modem's **ETHERNET** connector is at the back of the modem.
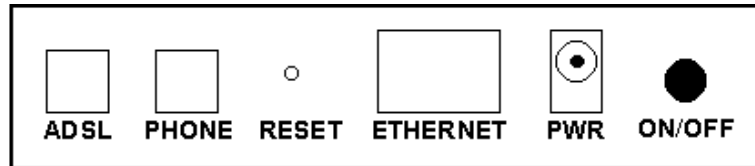
3 Plug the included X3 power cube into a power strip or wall outlet, and then into the modem's power (**PWR**) jack.

> **Important!**
> Only use the power cube shipped with the X3. Other power cubes may damage your hardware.

**4** Turn the modem on by using the **ON/OFF** button at the back of the modem.

The **PWR** light on the front panel of the modem should become steady on, and the **LINK** light should blink once. If the **PWR** light does not turn on, make sure there is power at the wall outlet or power strip where you plugged in the power cube and that you have pushed the X3's **ON/OFF** button to turn it on.

5 Turn the computer on.

6 Plug one end of the supplied phone cord into the modem's **ADSL** jack and the other into the ADSL wall jack. The **LINK** light should blink and then become steady on. If it does not, refer to **Appendix D: Troubleshooting** on page 55.

7 [Optional] If you want to plug in a phone through the modem, you can do so by plugging it into the **PHONE** port. (The PHONE port has a built-in phone filter.)

8 **We HIGHLY RECOMMEND that you install a filter on EVERY phone and fax machine that is sharing the ADSL phone line.** (Do not plug a filter between the wall jack and the X3.) Phone filters block the ADSL frequencies so that someone making a normal phone call will not hear modem noise on the line. They also keep phone conversations from interfering with ADSL performance.

You may have received ADSL phone filters with your X3. If you did not, or if you need more filters, they are available at most retail stores that carry consumer electronics.

For each filter, plug the phone or fax machine's cord into the filter's **PHONE** end and plug the filter's **LINE** end into the wall jack.
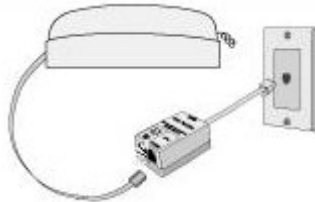
Congratulations! You have installed the hardware. Now, continue with the next section, **Configuring Your Web Browser**.

Step 3: Configuring Your Web Browser

> **Important!**
> This section is for Windows computers only. If you are using a Macintosh or Linux computer, your browser is already configured properly. However, you must ensure that your computer's TCP/IP settings are configured properly. See **Macintosh TCP/IP Settings** on page 49 or **Linux TCP/IP Settings** on page 51 for instructions on how to do this.

When using a Windows computer, the software that you use to make an Internet connection must be set for a **network connection**, <u>not</u> a **dial-up connection**.

This section includes instructions for recent versions of two popular Web browsers: Internet Explorer Version 5.0 (or later) and Netscape Navigator Version 7.2.

Depending on the browser you have on your Windows computer, follow the corresponding instructions in this section.

> **Tip:**
> If you are using an earlier version of one of these browsers, the configuration may be slightly different from below. In those cases—or if you are using another browser altogether—configure the browser to use a **network connection** (this might be called a "Local Area Network" or "broadband" connection).

Configuring Internet Explorer

The following instructions are for Internet Explorer Version 5.0 or later. (If you do not have this version, you can get a free upgrade from Microsoft Corp. If you are not sure what version you have, open Internet Explorer and from the **Help** menu, choose **About Internet Explorer**. The version number is directly below the Microsoft Internet Explorer logo. You can ignore all the numbers after the period following the first digit.)

1 On the desktop, right-click the **Internet Explorer** icon, and select **Properties**.

> **Tip:**
> If you cannot access Internet Explorer in this way, open your computer's **Control Panel** (click the **Start** button and then, depending on your computer, either click **Control Panel**, or click **Settings** and then **Control Panel**). In the **Control Panel**, double-click the **Internet Options** icon. If this icon does not appear, double-click the **Network and Internet Options** icon and then double-click the **Internet Options** icon.

2 On the **Internet Properties** dialog box, select the **Connections** tab, then click the **Setup** button.

3 The setup process will proceed differently, depending on your operating system. The following table details the process for your Windows computer.

Windows XP	Windows 98/Me/2000
a. On the **Welcome to the New Connection Wizard** dialog box, click **Next**. (If you see a **Location Information** dialog box, click **Cancel** and then when asked if you are sure you want to cancel, click **Yes** to return to the **Welcome** dialog box.)	a. On the **Internet Connection Wizard** dialog box, select **I want to set up my Internet connection manually, or I want to connect through a local area network (LAN)**, then click **Next**.
b. On the **Network Connection Type** dialog box, select **Connect to the Internet**, then click **Next**.	b. On the **Setting up your Internet connection** dialog box, **I connect through a local area network (LAN)**, then click **Next**.
c. On the **Getting Ready** dialog box, select **Set up my connection manually**, then click **Next**.	c. On the **Local area network Internet configuration** dialog box, uncheck the **Automatic discovery of proxy server** check box, then click **Next**.
d. On the **Internet Connection** dialog box, select **Connect using a broadband connection that is always on**, then click **Next**.	d. On the **Set Up Your Internet Mail Account** dialog box select **No**, then click **Next**.
e. On the **Completing the New Connection Wizard** dialog box, click **Finish**.	e. On the **Completing the New Connection Wizard** dialog box, uncheck the **To connect to the Internet immediately, select this box…** check box (if it appears) and click **Finish**.

4 If you accessed Internet Explorer's settings from the **Control Panel** (as explained in the "Tip" following step 1), the **Control Panel** window will still be open. Close it before continuing.
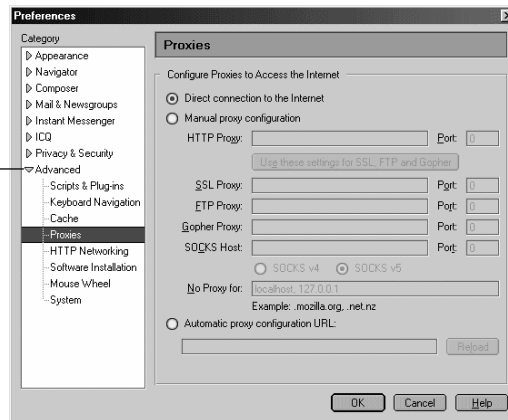
Congratulations! You have configured Internet Explorer. Now, continue with **Establishing Communication**, starting on page 15.

Configuring Netscape Navigator

The following instructions are for Netscape Navigator Version 7.2. (If you do not have Version 7.2, you can get a free upgrade from Netscape Communication Corp. If you are not sure what version you have, open Netscape Navigator and from the **Help** menu, choose **About Netscape**. The version number is at the top of the screen.)

1 Double-click the **Netscape Navigator** icon on your desktop to open the browser.

2 From the **Edit** menu, choose **Preferences** to open the **Preferences** dialog box.

3 In the **Category** list, click the triangle to the left of **Advanced** to display a list of choices below it, then select **Proxies**. The **Preferences** dialog box changes to show the Proxies you can specify.

When you click the triangle, more options appear below **Advanced**.

4 Select **Direct connection to the Internet**, then click **OK**.

Congratulations! You have configured Netscape Navigator. Now, continue with the next section, **Establishing Communication**.

Step 4: Establishing Communication

You must set up the X3 so that it can communicate with your Internet service provider. To do this, you must use the **Zoom Configuration Manager**.

1 Log in to the **Zoom Configuration Manager**:

a Open your Web browser and, in its address bar, type **http://10.0.0.2**, then press the **Enter** key on your keyboard.

> **Tip!**
> If you are using a Windows computer, a **Zoom** icon should have been placed on your desktop automatically. Instead of typing one of the addresses above in your Web browser, you can double-click the **Zoom** icon.

b When prompted, type the following user name and password in the appropriate boxes, then click **OK**. You must enter them using lowercase letters.

User Name: **admin**

Password: **zoomadsl**

If you are not prompted for a user name and password, do the following in this order: Recheck all connections; restart the modem and computer; and reset the modem by inserting a paper clip into the **Reset** pinhole in the center of the modem's back panel and holding it for five seconds.

The user name and password you enter here do not serve the same purpose as any name and password that your Internet service provider may have given you.

2 The **Zoom Configuration Manager** opens and displays its **Basic Setup** page.

Use this Web page to configure the modem so it can connect with your Internet service provider. You can configure the X3 manually or you can have the modem automatically configure itself. Depending on your situation, do the following:

➢ Select **MANUALLY** if one or both of the following are true:

- You already have the **VPI, VCI**, and **Encapsulation** settings from your Internet service provider.

- You have a static IP address that you plan use with the X3. (Only those whose Internet service provider instructs them to use a static IP address and advanced users with special configuration needs will require static IP addressing.)

To continue configuring the modem manually, skip the rest of the steps in this section and follow the instructions on page 20 (if you are NOT using a static IP address) or on page 23 (if you have a static IP address).

> Select **AUTOMATICALLY** if neither of the special circumstances mentioned above fits your situation. When this option is selected, the screen changes to show automatic configuration options. Do the following:

  a Select the **Enable** option button, then click **Save Changes**.

  b The page changes to the **Autodetect** page and a **Start** button appears. Click the **Start** button to begin the automatic configuration. A message appears to let you know that the current configuration, if any, will be lost when the X3 configures itself. Click **OK** to dismiss this message.

  c Wait while the X3 modem searches for the correct **VPI**, **VCI**, and **Encapsulation** settings and connects with your Internet service provider. This may take a few minutes because the modem must try various combinations until it finds the settings that match your service provider's.

3 Once the modem detects your settings, your **VPI**, **VCI**, and **Encapsulation** settings will appear in the table on the **Autodetect** page. Click the **Encapsulation** setting to continue with the process.

VPI	VCI	Encapsulation protocol Detected
8	35	PPPoE

When your **Encapsulation** setting appears, click it to continue with the process. (Note that yours may be something other than PPPoE.)

Note:
If your **Encapsulation** setting is not found (that is, if "**No Encapsulation Protocol Detected**" remains on the screen), select the **Disable** option button, click **Save Changes**, then click the **Basic Setup** icon at the top of the screen and try to manually configure the modem, as explained in **Configuring the X3 Manually** on page 20.

4 Depending on your **Encapsulation** setting, the following will happen when you click it:

- ➢ **If your Encapsulation setting begins with PPP:** You will be prompted for your **Login Name** and **Password**. Your Internet service provider should have given you a User ID or Username (usually your email address or the characters preceding the @ sign in your email address) and a Password. Enter this information in the applicable boxes, then click **Save Changes**. A screen appears to let you know that the process was a success. Click **Close** to return to the **Autodetect** page and notice that the **Encapsulation** setting has changed from bold to regular text. (These are NOT the same **User Name** and **Password** you that you used earlier to open the **Zoom Configuration Manager**.)

VPI	VCI	Encapsulation protocol Detected
8	35	PPPoE

When the configuration is complete, your **Encapsulation** setting will change from bold to regular text.

Tip:
If you do not know your **Login Name** and **Password**, contact your service provider and tell them that you misplaced the information.

- ➢ **If your Encapsulation setting begins with something other than PPP:** The **EOA Interface—Add** page will open. Click **Save Changes** on this page (without changing any settings on it). A screen appears to let you know that the process was a success. Click **Close** to return to the **Autodetect** page and notice that the **Encapsulation** setting has changed from bold to regular text.

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5 On the **Autodetect** page, click **Write Settings to Flash**.

6 Verify that your Internet connection is working. Open your Web browser (i.e., Internet Explorer or Netscape Navigator) and try to connect to a familiar Web address.

If you connect successfully, your installation is complete and you are ready to browse the Web!

Congratulations! You have completed all you need to do to get your computer on the Internet. The remainder of this user's guide is for troubleshooting and for advanced users who need information about status monitoring and advanced setup options.

> **Important!**
> If you did not connect, see **Appendix D: Troubleshooting** on page 55.

Configuring the X3 Manually

Some users may need to configure the X3's IP settings manually, instead of having the modem automatically configure itself.

Typically, you would manually configure your modem if:

- You already have the **VPI**, **VCI**, and **Encapsulation** settings from your Internet service provider.

- You have a static IP address that you plan to use with the X3. If this is the case, skip this section and continue with **Using Static IP Addressing** on page 23.

- The auto configuration process was unable to find your settings.

Manually configuring the modem requires that you log in to the **Zoom Configuration Manager** and enter information on its **Basic Setup** page. (If you need help logging in, see page 15.)

1 On the **Basic Setup** page, ensure that the **MANUAL** option button is selected.

2 Do the following, depending on whether you know your **VPI**, **VCI**, and **Encapsulation** settings:

 ➢ If your Internet service provider gave you the settings, continue with step 3 below.

 ➢ If you do not know the settings, refer to the **ADSL Internet Settings Tables** beginning on 43. Find your service provider on the list and make note of its settings. If there is more than one listing for your service provider, the most common one is labeled (1), the next (2), and so on.

 > **Tip:**
 > If you are in the United States and your service provider is not on the list, use the settings for **Service Provider Not Shown** at the bottom of the table.

3 Select **Enabled** from the **Current Connection** drop-down list. (That is, click the arrowhead ▾ at the far right of the box to view the items in the list, then select **Enabled**.)

4 Select your service provider's Encapsulation setting from the **Encapsulation** drop-down list. Depending on your selection, do the following:

➢ **If your Encapsulation setting begins with PPP:** Enter your **Username** and **Password** in the boxes provided. Your Internet service provider should have given you a User ID or User Name (usually your email address or the characters preceding the @ sign in your email address) and a Password. (These are NOT the same **User Name** and **Password** you that you used earlier to open **the Zoom Configuration Manager**.)

> **Tip:**
> If you do not know your **Username** and **Password**, contact your service provider and tell them that you misplaced the information.

➢ **If your Encapsulation setting begins with 1483 Bridged or 1483 Routed:** The **Username** and **Password** boxes will automatically disappear from the page because you do not need to enter this information. Continue with step 5.

> **Important!**
> If you plan to use a static IP address, you must manually configure the X3 from the **WAN Configuration** page and not the **Basic Setup** page. For more information, see **Using Static IP Addressing** on page 23. Typically, you must make arrangements with (and pay) your Internet service provider for a static IP address.

5 In the **VPI** and **VCI** boxes, enter the settings for your service provider.

6 Click **Save Changes** and then **Write Settings to Flash**. Once the process is complete, the X3's **LINK** light should remain on steady (this should take about 15 seconds).

7 Verify that your Internet connection is working. Open your Web browser (i.e., Internet Explorer or Netscape Navigator) and try to connect to a familiar Web address.

If you connect successfully, your installation is complete and you are ready to browse the Web!

Congratulations! You have completed all you need to do to get your computer on the Internet. The remainder of this user's guide is for troubleshooting and for advanced users who need information about status monitoring and advanced setup options.

If You Did Not Connect

If you did not connect and you are using settings provided by your service provider, repeat steps 3–7 above and ensure that you enter the information correctly (especially your **Username** and **Password**, if your **Encapsulation** begins with PPP). If you still cannot connect, look up your provider in the **ADSL Internet Settings Tables** on page 43 and try the setting(s) shown, if different.

If you did not connect and were using settings from the **ADSL Internet Settings Tables**, return to the tables and find the next most frequently used settings—those labeled (2) if you just entered (1), or (3) if you just entered (2), and repeat steps 3–7 above.

Using Static IP Addressing

If your Internet service provider's **Encapsulation** setting is either **1483 Bridged** or **1483 Routed**, the X3 can be set for either a Dynamic Host Configuration Protocol (DHCP) address (also known as a dynamic IP address) or for a static IP address.

Because most Internet service providers use DHCP, the X3 is set for dynamic IP addressing by default.

There is typically an extra charge for a static IP address, and you usually have to make a special request to get one.

Important!
If you do not know what static IP addressing is or why you would use it, you most likely do not need to change the default setting. Only advanced users who specifically want to use static IP addressing and/or those users whose IP provider specifically instructed them to use static IP addressing should change this setting.

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1 Click the **Advanced Setup** icon at the top of any page in the **Zoom Configuration Manager** to open the **Advanced Setup** page.

2 Click the **WAN Configuration** button, located in the **Configuration** group.

3 Enter the appropriate information on the **WAN Configuration** page. Use the table below as a guide.

For this setting…	Do this…
Current Connection	Select **Enabled** from the drop-down list. (That is, click the arrowhead ▼ at the far right of the box to view the items in the list, then select **Enabled**.)
Encapsulation	Select your service provider's Encapsulation setting from the drop-down list.
VPI and **VCI**	Enter the VPI and VCI settings for your service provider. (If you do not know these settings, refer to the **ADSL Internet Settings Tables** on page 43.)
Bridge and **IGMP**	Ensure that **Disabled** is selected from both drop-down lists.
IP Address and **Subnet Mask**	Enter the values assigned to you by your service provider for each.
Use DHCP	Ensure that the **Disabled** option button is selected.
Default Route	Ensure that **Enabled** is selected from the drop-down list.
Gateway IP Address	Enter the value assigned to you by your service provider.
Use DNS	Ensure that the **Disabled** option button is selected.
Primary DNS Server	Enter the value assigned to you by your service provider.
Secondary DNS Server	If your service provider gave you a second DNS server address, enter it.

4 Click **Save Changes** on the **WAN Configuration** page.

5 You are redirected automatically to the **Basic Setup** page. Click **Write Settings to Flash**.

6 Verify that your Internet connection is working. Open your Web browser (i.e., Internet Explorer or Netscape Navigator) and try to connect to a familiar Web address.

If you connect successfully, your installation is complete and you are ready to browse the Web!

Congratulations! You have completed all you need to do to get your computer on the Internet. The remainder of this user's guide is for troubleshooting and for advanced users who need information about status monitoring and advanced setup options.

Important!
If you did not connect, see **Appendix D: Troubleshooting** on page 55.

Removing the X3 Software

If you have a Windows computer and want to remove your X3—for instance, if you move your computer to a location without ADSL service—you should remove the software before disconnecting the hardware.

Note:
Because Macintosh and Linux computers do not require the X3 software be installed, users of those operating systems do not have to remove the software prior to removing the X3.

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1 From your Windows desktop, click the **Start** button, point to **Programs**, then point to **Zoom ADSL Modem**, then select **Uninstall X3 ADSL Modem**.

2 When prompted to confirm your choice, click **Yes**.

3 When the process is complete, you will be prompted to click **Finish**.

4 Unplug your X3 hardware.

Universal Plug and Play

The X3 is enabled for Universal Plug and Play (UPnP™). This means that other devices plugged into your computer or network (for example, a gaming application, router, or stand-alone firewall) that use UPnP will automatically detect the X3 and make the needed configurations for them to work together. There is no setup for you to do.

If You Need Help

Zoom has many Technical Support services available to its customers. You can access these services in a variety of ways:

- Windows users: Insert the CD, select your language, and then click the **Customer Support** link to view comprehensive support information.

- Macintosh and Linux users: Insert the CD and navigate to the **Mac_Linux** folder to view documentation and support information.

- Visit our Web site at **www.zoom.com** and select **Technical Support**. From here, you can send email to our technical support experts and/or do a smart search through our intelligent database by using **SmartFacts**™.

> **Tip:**
> From time to time, Zoom may release improved firmware. This is also available at **www.zoom.com** , along with upgrade instructions. We recommend that you check our Web site periodically for updates.

- Call our support office in the United States at **(561) 241-7170** or in the United Kingdom at **44 (0)1276 704440**.

- Some retailers of Zoom products provide support or can recommend a convenient support center.

2

Status Monitoring

This chapter discusses how to check the status of your modem and its ADSL connection.
Most users can skip this chapter, as it is primarily for advanced users and for those who are instructed by their Internet service provider or Zoom Technical Support to verify settings, usually for troubleshooting.
If you are using an access point or a network hub, you can monitor your X3 from any of the computers that are connected to the access point or hub.

Why Monitor Status?

The X3 provides two easy-to-read screens for you to review the status of the modem and its ADSL connection.

While most users will probably never need to check the status, there are some cases in which it would be helpful. For example, you may need to know the IP address assigned to you by your Internet service provider.

For advanced users with special configuration needs, the status information is useful for overall system maintenance.

Monitoring System Status

If you want to check the overall system status, click the **System Status** icon at the top of any page in the **Zoom Configuration Manager**. (If you forgot how to log in to the **Zoom Configuration Manager**, see page 15.)

The **System Status** page provides information about many aspects of your X3, including how long it has been since you last rebooted the modem, your WAN settings, your LAN settings, and so forth.

For more detailed information about the system status information provided, click the **Help** icon at the top of the **System Status** page to open the online help.

Monitoring ADSL Status

If you want to check the status of your ADSL connection, click the **ADSL Status** icon at the top of the **Zoom Configuration Manager**. (If you forgot how to log in to the **Zoom Configuration Manager**, see page 15.)

The **ADSL Status** page provides information about your ADSL connection. For example, you can verify whether your ADSL connection is active or not (the **ADSL Status** setting will display **Showtime** if connected). You can also monitor related ADSL parameters—for example, how fast the X3 is transferring data (**Downstream Speed** and **Upstream Speed**).

> **Note:**
> The **ADSL Status** page does not provide a way to change any of these settings—see Chapter 3, "Advanced Setup Options," on page 31 if you need to make changes to these settings.

For more detailed information about the ADSL status information provided, click the **Help** icon at the top of the **ADSL Status** page to open the online help.

3

Advanced Setup Options

*The options that are set by default when the X3 is installed are sufficient for most users. However, those that want or need to change the X3's settings can do so using the **Advanced Setup** page. This chapter explains how to specify advanced options. The information in this chapter applies to you if:*

- *Your Internet service provider instructs you to enable, disable, or change the default settings for your X3 in order for it to work properly with your ADSL service. See **How To Use the Advanced Options** on page 31 for a table listing the Advanced Setup areas that you can customize.*

- *You need to change your Wide Area Network settings (for example, if you have a static IP address). See **Changing Your WAN Settings** on page 36 for more information.*

- *You want to change the default firewall settings (for example, if you have multiple computers connected to the Web, you can specify that one or more users receive an email alert if the network is attacked). See **Changing Your Firewall Settings** on page 37 for more information.*

- *You want to change your ADSL password. See **Changing User Names and Passwords** on page 38 for more information.*

- *You have customized your configuration and want to back it up for future use. See **Backing Up Your Configuration** on page 39 for more information.*

- *You want to add, remove, or change the IP Filters. See **Using IP Filters** on page 42 for more information.*

How To Use the Advanced Options

Configuring the X3 for the situations described at the beginning of this chapter requires the use of the **Advanced Setup** page. To access this page, click the **Advanced Setup** icon at the top of any page in the **Zoom Configuration Manager**. (If you forgot how to log in to the **Zoom Configuration Manager**, see page 15.)

You will notice that there are numerous buttons on the page, broken into three groups: **Configuration**, **Status**, and **Administration**.

Most users will not need to use any of the buttons on the **Advanced Setup** page.
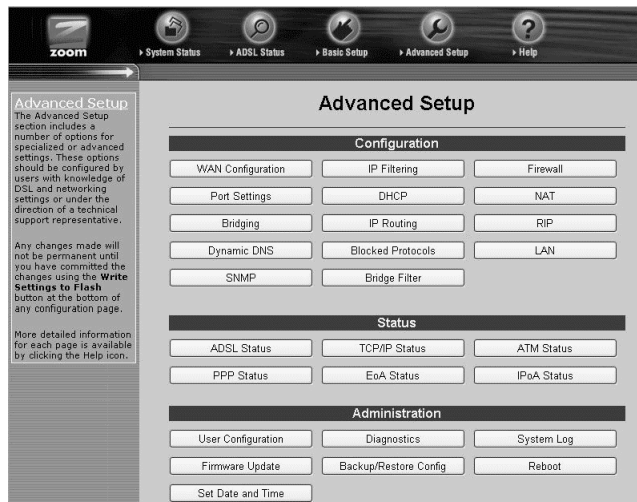
> **Tip:**
> If you plan to specify advanced options, you can view detailed information about each option in the online help. To open the help, click the button for the settings you want to specify (for example, the **Firewall** button to open the **Firewall Configuration** page), then click the **Help** icon at the top of the screen to open a help topic specifically about the page you are viewing.

Configuration Buttons

Use the buttons in the **Configuration** group to perform advanced configuration tasks.

The following table lists each button in the **Configuration** group and gives a brief description of the settings you can specify.

This button…	Opens a page that lets you…
WAN Configuration	Specify how your Wide Area Network ADSL setup is configured. This page is also where you would set up a static IP address (if you have arranged for one with your Internet service provider).
Port Settings	Set the ports used when you use FTP or Telnet with the device or if you are running a Web server behind it.
Bridging	Specify which device interfaces are capable of bridging data between your LAN/WAN and Internet service provider. Interfaces can be routable (for example, assigned an IP address), bridgeable, or both.
Dynamic DNS	Enter the Host name you registered with a Dynamic DNS service provider. This page is for those who are using dynamic IP addressing (the X3's default) and want to host a Web site. The Dynamic DNS service provider keeps track of your constantly changing IP address and routes those trying to access your Web site to the correct location.
SNMP	Set up Simple Network Management Protocol (SNMP). This enables a host computer to access configuration, performance, and other system data that resides in a database on the modem.
IP Filtering	Set up rules to control the forwarding of incoming and outgoing data between your LAN and the Internet and within your LAN. For example, you can create IP filter rules to block attempts by certain computers on your LAN to access certain types of data or Internet locations. You can also block or allow incoming access to computers on your LAN. This page displays the current filters and lets you edit and add filters.

Table continues on the next page…

This button…	Opens a page that lets you…
DHCP	Specify Dynamic Host Configuration Protocol (DHCP) settings to enable network administrators to centrally manage the assignment and distribution of IP information to computers on a network. When you enable DHCP on a network, you allow a device (such as your X3's router or a router located with your Internet service provider) to assign temporary IP addresses to your computers whenever they connect to your network.
IP Routing	Set up the routes on which you want the X3 to send data it receives on a particular interface (for example, LAN interface, Ethernet interface, etc.) Routes specify the IP address of the next device interface or Internet destination to forward data to, given the ultimate destination of the data.
Blocked Protocols	Select the protocols you want blocked from your computer (for example, IP Milticast, NetBEUI, IPX, APR, AppleTalk).
Bridge Filter	Filter packets at the Ethernet protocol level.
Firewall	Modify the default firewall settings. For example, use this page to specify the email address(es) to which you want an alert sent if your computer/network is attacked.
NAT	Specify Network Address Translation settings. The most common reason for changing the default settings is if you have a LAN and require each computer to have its own public IP address. Otherwise, the default NAT setting provides sufficient protection for most users.
RIP	Specify whether the X3 can communicate with other routing devices and, if so, on which interfaces. It also lets you specify how long routes remain in memory.
LAN	Specify the settings that control the connection between the X3 modem and your Ethernet jack.

Status Buttons

The buttons in the **Status** group are typically used for maintenance and troubleshooting.

The following table lists each button in the **Status** group and gives a brief description of the settings you can specify.

Click a button below, then click the **Help** icon at the top of the screen to open an online help topic about the page you are viewing.

This button…	Opens a page that lets you…
ADSL Status	View in-depth information about your ADSL connection.
PPP Status	Configure a Point-to-Point Protocol (PPP) to enable communication between the X3 modem and your Internet service provider.
TCP/IP Status	View information about the IP packets handled by your modem.
EoA Status	Configure an Ethernet-over-ATM (EoA) interface on the ADSL/Ethernet router, if one is needed to communicate with your ISP.
ATM Status	Configure an Asynchronous Transfer Mode (ATM) Virtual Circuit (VC) interface to enable the X3 to communicate using the ATM protocol.
IPoA Status	Configure an Internet Protocol over ATM (IPoA) interface on the ADSL/Ethernet router. An IPoA interface can be used to exchange IP packets over the ATM network, without using an underlying Ethernet over ATM (EOA) connection.

Administration Buttons

The buttons in the **Administration** group are typically used for administrative tasks, such as diagnostic testing, upgrading firmware, changing your **Zoom Configuration Manager** password, etc.

The following table lists each button in the **Administration** group and gives a brief description of the settings you can specify.

Click a button below, then click the **Help** icon at the top of the screen to open an online help topic about the page you are viewing.

This button…	Opens a page that lets you…
User Configuration	Manage the User IDs and passwords that can access the **Zoom Configuration Manager**. This is where you can change the default password supplied to you with the X3.
Firmware Update	Specify the path to the upgrade file you need to update your firmware. Use the **Browse** button on this page to navigate to the file, then click the **Upload** button to perform the firmware update.
Set Date and Time	Set the X3's internal date and time settings (including time zone and whether Daylight Savings Time is in effect).
Diagnostics	Run a series of diagnostic tests of your system software and hardware connections. You can also run the Ping and Traceroute utilities to troubleshoot connection problems.
Backup/Restore Config	Save your current configuration settings so that they may be restored at a later time.
System Log	View data generated or acquired by routine system communication with other devices. This information does not necessarily represent unexpected or improper functioning and is not captured by the system traps that create alarms. You can save the system log to a file.
Reboot	Reboot the X3 and reset its configuration to the factory defaults.

Changing Your WAN Settings

Use the **WAN Configuration** page to change your Wide Area Network (WAN) settings and to specify a static IP address (if you have arranged/paid for one). To open this page, click the **WAN Configuration** button on the **Advanced Setup** page.

Important!

If you want to use static IP addressing, see **Using Static IP Addressing** on page 23 for information on how to do this.

The settings you can change on this page include **Encapsulation**, **VPI**, **VCI**, **DHCP Client**, **IP Address**, **Subnet Mask**, and so forth.

Once you have made the changes you want on this page, click the **Save Changes** button, and then click the **Write Settings to Flash** button.

For more information about changing your **WAN Configuration** settings, click the **Help** icon at the top of the screen while you are on this page. This opens the online help and displays a topic containing detailed information about the **WAN Configuration** page.

Changing Your Firewall Settings

Use the **Firewall Configuration** page to change the X3's firewall settings. To open this page, click the **Firewall** button in the **Configuration** section of the **Advanced Setup** page.

When you install the X3, a firewall is automatically established to offer your computer protection as you use the Internet. (This built-in firewall is in addition to the NAT settings on your X3.)

By default, the firewall is set up to be relatively strict – that is, the only Internet traffic it allows to access your computer is that which you are likely to need (for example, a Web page you request in your browser's address bar).

For most users, this access is secure and sufficient. Most users will never need to change their firewall settings.

However, use the **Firewall Configuration** page if you want to:

- Blacklist computers that try to hack into your computer or network so that they are denied access. (By default, this feature is disabled.)

- Have email sent if your computer or network is attacked by an outside computer.

Once you have made the changes you want on this page, click the **Save Changes** button, and then click the **Write Settings to Flash** button.

For details about the individual firewall settings you can specify, click the **Help** icon at the top of the screen while you are on the **Firewall Configuration** page. This opens the online help and displays a topic containing detailed information about the X3's firewall settings.

Changing User Names and Passwords

Use the **User Configuration** page to manage the user names and passwords that can access the **Zoom Configuration Manager**. To open this page, click the **User Configuration** button, located in the **Administration** group on the **Advanced Setup** page.

When you installed the X3 and tried to open the **Zoom Configuration Manager**, you were prompted for a User Name and Password in order to gain access. (The default name and password were supplied to you on page 15.)

If you want, you can change the default password. <u>**Changing the password is not required.**</u>

To change the default password

1 On the **User Configuration** page, locate the row that contains the default **admin** user name. (Unless you have added additional users, it should be the only row shown.)

User ID	Privilege	Action(s)
admin	Root	✎

2 Click the pencil icon ✎ at the right end of the row to open the **User Config – Modify** screen.

3 In the **Old Password** box, enter **zoomadsl**. (This is the default password you used on page 15 during installation.) Note that it must be typed in lowercase letters.

4 In the **New Password** box, enter the new password you would like to use. The password is case sensitive and cannot exceed 128 characters.

5 In the **Confirm Password** box, enter the new password again to confirm it.

6 Click **Save Changes**. A message appears to let you know that the password has been changed. Click **Close** to return to the **User Configuration** page.

7 Click **Write Settings to Flash**.

In addition, you can also create additional logins (that is, user names and passwords) with varying degrees of access to the **Zoom Configuration Manager**.

For more information about managing logins, click the **Help** icon at the top of the screen while you are on the **User Configuration** page. This opens the online help and displays a topic containing detailed information about user names and passwords.

Backing Up Your Configuration

Use the **Backup/Restore Config** page to back up your current configuration or restore an old configuration to your X3. To open this page, click the **Backup/Restore Config** button, located in the **Administration** group on the **Advanced Setup** page.

Users who change the configuration settings for the X3 may want to back up their settings. This will enable them to restore those settings at a later time, if needed.

This feature may be especially useful when you receive firmware updates from Zoom. Installing the update may overwrite your customized settings with default values. Before you update the firmware, backup your configuration. Then, after the firmware has been updated, restore your configuration.

> **Note:**
> You do not need to back up the default settings. This is because you can easily restore the defaults by clicking the **Reboot** button on the **Advanced Setup** page. For more information, see **Resetting Default Settings** on page 41.

To back up your current configuration

1 On the **Backup/Restore Config** page, click **Save Config** to download a configuration file from the X3 to a folder on your computer.

2 Name the file and specify a location for it on your computer. Be sure to note the name and location. You will need this information if you ever want to restore the X3 to this backed-up configuration.

To restore a configuration

1 On the **Backup/Restore Config** page, click **Browse** and navigate to the file containing the configuration to which you want the X3 restored.

2 Click **Upload**.

For more information about backing up and restoring your customized settings, click the **Help** icon at the top of the screen while you are on the **Backup/Restore Config** page. This opens the online help and displays a topic containing detailed information about this process.

Resetting Default Settings

If you have changed the system settings on your X3 and for some reason want to restore them to the factory default settings, you can do so in one of two ways: You can perform a **software reset** or a **hard reset**.

To reset using the X3's Web interface

If you can open your Web browser and access your X3's user interface, do the following to perform a software reset:

1 Log into the **Zoom Configuration Manager** and click the **Advanced Setup** icon to open the **Advanced Setup** page. (See page 15 if you need help logging in.)

2 In the **Administration** section, click the **Reboot** button.

3 From the **Reboot Mode** drop-down list, select **Reboot From Default Configuration**.

4 Click the **Reboot** button. Once this process is complete, your unit is reset to its factory settings.

To perform a hard reset

If you lose your link to the unit and cannot communicate with it via the Web browser, do the following to perform a hard reset:

1 Insert a paper clip into the **RESET** pinhole in the center of the modem's back panel.

2 Hold it there for five seconds. The unit's **LINK** light will turn off and then it will blink slowly, about once per second.

You are now guaranteed that all system settings are restored to the X3's factory defaults.

Using IP Filters

Use the **IP Filter Configuration** page to set up IP filters to allow or block traffic coming into your computer from the Internet. To open this page, click the **IP Filtering** button in the **Configuration** section of the **Advanced Setup** page.

To filter Internet traffic, you must define one or more rules (that is, criteria you want the information to meet before it can proceed). As information comes in from the Internet, the X3 examines it and—if it meets the rule—moves forward to its destination on your computer or network. If it does not, it is discarded.

The rule can be based on many characteristics, including the network or Internet protocol it carries, IP address of the sending computer, the port that the traffic is coming in on, and so forth.

Once you have set up the IP filters you want, click the **Save Changes** button, and then click the **Write Settings to Flash** button.

For more information about setting up IP filters, click the **Help** icon at the top of the screen while you are on the **IP Filter Configuration** page. This opens the online help and displays a topic containing detailed information about this process.

Appendix A
ADSL Internet Settings Tables

These tables are for customers whose service providers do not supply them with the ADSL settings to connect to the Internet. Many ADSL providers use different settings depending on the region in which they are operating, which is why there may be more than one setting for your service provider. We post updated tables on our Web site. If your country is not listed in the tables below, please consult **www.zoom.com**

Note to USA customers

If your ADSL service provider is not shown below, first use the settings for **Service Provider Not Shown** at the bottom of the table. If those settings do not work, use the settings for the company that provides local telephone service in your area. (Refer to page 20 for more detailed installation instructions on entering the settings.)

Table A: USA

Service Provider	VPI	VCI	Encapsulation
AllTel (1)	0	35	PPPoE LLC
AllTel (2)	0	35	1483 Bridged IP LLC
August.net (1)	0	35	1483 Bridged IP LLC
August.net (2)	8	35	1483 Bridged IP LLC
BellSouth	8	35	PPPoE LLC
CenturyTel (1)	8	35	PPPoE LLC
CenturyTel (2)	8	35	1483 Bridged IP LLC
Covad	0	35	PPPoE LLC
Earthlink (1)	0	35	PPPoE LLC
Earthlink (2)	8	35	PPPoE LLC
GWI	0	35	1483 Bridged IP LLC
Qwest (1)	0	32	PPPoA LLC
Qwest (2)	0	32	PPPoA VC-MUX
SBC (1)	0	35	PPPoE LLC
SBC (2)	0	35	1483 Bridged IP LLC
SBC (3)	8	35	1483 Bridged IP LLC
Sprint (1)	0	35	PPPoA LLC
Sprint (2)	8	35	PPPoE LLC
Verizon (1)	0	35	PPPoE LLC
Verizon (2)	0	35	1483 Bridged IP LLC
Service Provider Not Shown	0	35	PPPoE LLC

Table B: Countries Other Than The USA

Service Provider	VPI	VCI	Encapsulation
Australia-Telstra	8	35	PPPoA LLC
Argentina	1	33	PPPoA VC-MUX
Belgium-ADSL Office	8	35	1483 Routed IP LLC
Belgium-Turboline	8	35	PPPoA LLC
Bolivia	0	34	1483 Routed IP LLC
Brazil-Brasil Telcom	0	35	PPPoE LLC
Brazil-Telefonica	8	35	PPPoE LLC
Brazil-Telmar	0	33	PPPoE LLC
Brazil-South Region	1	32	PPPoE LLC
Colombia-EMCALI	0	33	PPPoA VC-MUX
Denmark-Cybercity, Tiscali	0	35	PPPoA VC-MUX
France (1)	8	35	PPPoE LLC
France (2)	8	67	PPPoA LLC
France (3)	8	35	PPPoA VC-MUX
Germany	1	32	PPPoE LLC
Hungary-Sci-Network	0	35	PPPoE LLC
Iceland-Islandssimi	0	35	PPPoA VC-MUX
Iceland-Siminn	8	48	PPPoA VC-MUX
Israel	8	48	PPPoA VC-MUX
Italy	8	35	PPPoA VC-MUX
Jamaica (1)	8	35	PPPoA VC-MUX
Jamaica (2)	0	35	PPPoA VC-MUX
Jamaica (3)	8	35	1483 Bridged IP LLC SNAP
Jamaica (4)	0	35	1483 Bridged IP LLC SNAP
Kazakhstan	0	33	PPPoA VC-MUX
Mexico	8	35	PPPoE LLC
Netherlands-BBNED	0	35	PPPoA VC-MUX
Netherlands-MX Stream	8	48	PPPoA VC-MUX
Portugal	0	35	PPPoE LLC
Saudi Arabia (1)	0	33	PPPoE LLC
Saudi Arabia (2)	0	35	PPPoE LLC
Saudi Arabia (3)	0	33	1483 Bridged IP LLC
Saudi Arabia (4)	0	33	1483 Routed IP LLC
Saudi Arabia (5)	0	35	1483 Bridged IP LLC
Saudi Arabia (6)	0	35	1483 Routed IP LLC

Table B (Continued): Countries Other Than The USA

| Service Provider	VPI	VCI	Encapsulation
Spain-Albura, Tiscali	1	32	PPPoA VC-MUX
Spain-Colt Telecom, Ola Internet	0	35	PPPoA VC-MUX
Spain-EresMas, Retevision	8	35	PPPoA VC-MUX
Spain-Telefonica (1)	8	32	PPPoE LLC
Spain-Telefonica (2), Terra	8	32	1483 Routed IP LLC
Spain-Wanadoo (1)	8	35	PPPoA VC-MUX
Spain-Wanadoo (2)	8	32	PPPoE LLC
Spain-Wanadoo (3)	8	32	1483 Routed IP LLC
Sweden-Telenordia	8	35	PPPoE
Sweden-Telia	8	35	1483 Bridged IP LLC
Switzerland	8	35	PPPoE LLC
Turkey(1)	8	35	PPPoE LLC
Turkey(2)	8	35	PPPoA VC-MUX
UK (1)	0	38	PPPoA VC-MUX
UK (2)	0	38	PPPoE LLC
Venezuela-CANTV	0	33	1483 Routed IP LLC
Vietnam	0	35	PPPoE LLC

Appendix B
Front and Back Panels

The front panel of the X3 looks like this:
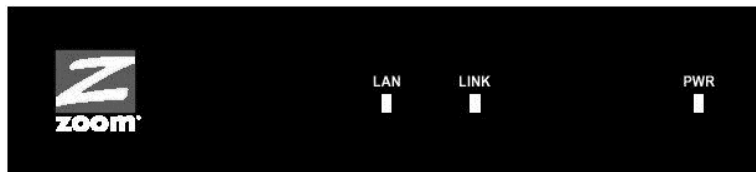
The following table describes each light on the front panel.

Light	Description
LAN	Lights when the **ETHERNET** jack of the X3 is plugged into the Ethernet port of a powered-up device. Blinks when data is sent.
LINK	Blinks when the X3 is performing its startup sequence. Stays on solid when the unit has synched up with its ADSL connection. **Note:** If the light fails to switch from blinking to steady after a minute or two, check with your ADSL provider that the ADSL connection is activated, or refer to **Appendix D: Troubleshooting** on page 55.
PWR	Lights when the X3 is plugged into a power source.

The back panel of the X3 looks like this:
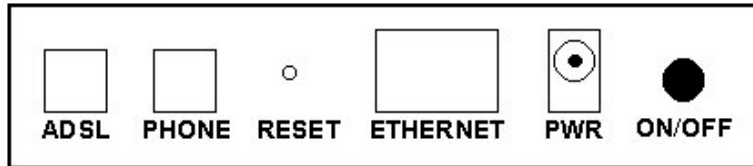
The following table describes each item on the panel.

Port	Description
ADSL	Jack to connect the modem to the ADSL telephone wall jack.
PHONE	Jack to connect a phone to the modem.
RESET	Button to reset the modem to its system default settings (necessary if communication link is lost).
ETHERNET	Jack that can connect the unit to an access point, a network hub, or the Ethernet jack of a computer.
PWR	Port to connect the unit to the power adapter.
ON/OFF	Button to turn the unit on or off.

Appendix C
TCP/IP Network Settings

If you are using a Macintosh or Linux computer, you **<u>must</u>** ensure that your computer's TCP/IP network settings are configured properly. Otherwise, you will not be able to connect to the Internet.

Note:
If you are using a Windows computer, you do not have to configure the TCP/IP settings. This is because your Windows computer will automatically configure them for you. Only Windows users who are troubleshooting the X3 will need to verify the TCP/IP settings.

Depending on your operating system, follow the steps in the appropriate section to ensure your TCP/IP settings are correct.

- If you are using Macintosh, see **Macintosh TCP/IP Settings** on page 49.

- If you are using Linux, see **Linux TCP/IP Settings** on page 51.

- If you are using Windows, see **Windows TCP/IP Settings** on page 52.

Macintosh TCP/IP Settings

How you configure your Macintosh computer's network settings differs, depending on your Mac OS. For OS X, follow the instructions below. Otherwise, go to page 50.

Mac OS X

1 From the **Dock**, choose **System Preferences** and then **Network** to display the **Network** pane. (For OS X 3, you also have to click the **Configure** button.)

2 Ensure that **Automatic** is selected from the **Location** list box.

3 Under the **Show** drop-down tab, choose **Built-in Ethernet**.

4 Under the **TCP/IP** tab, make sure that **Using DHCP** is highlighted in the **Configure:** list box. Do not enter anything into the **DHCP Client ID** field.

5 Click **Apply Now** (or **Save** if prompted) and close the **Network** pane.

Once you have verified the settings, return to **Configuring Your Web Browser** on page 11.

Mac OS 7.6.1 - 9.2.2

1 From the **Apple** menu, choose **Control Panels** and then
TCP/IP to display the **TCP/IP** Window.

2 Under Connect via:, select **Ethernet built-in**.

3 Under Configure:, select **Using DHCP Server**. Do not enter
anything in the **DHCP Client ID** field.

4 Close the **TCP/IP** Window. You will be asked if you want to
save the changes. Click **Save**.

Once you have verified the settings, return to **Configuring Your
Web Browser** on page 11.

Linux TCP/IP Settings

The instructions for setting up boot-time DHCP vary dramatically by distribution, so you may want to refer to your particular version's documentation.

Once you have followed the instructions for your Linux system, return to **Configuring Your Web Browser** on page 11.

> **Note:**
> If you have more than one network card installed, you will need to pick distinct Ethernet identifiers for each (eth0, eth1, eth2, and so forth). If you select an identifier other than eth0 for your ADSL modem, use that identifier throughout.

RedHat

Edit or create **/etc/sysconfig/network-scripts/ifcfg-eth0** so that it contains the following three lines:

```
DEVICE=eth0
ONBOOT=yes
BOOTPROTO=dhcp
```

SuSE

Edit the file **/etc/rc.config**; search for the variables **NETCONFIG**, **NETDEV_0**, and **IFCONFIG_0**.

Set them as follows (see the instructions in **rc.config**):

```
NETCONFIG="_0"
NETDEV_0="eth0"
IFCONFIG_0="dhcpclient"
```

Reboot with this command: **/sbin/shutdown -r now**.

Debian

Add this line to the **file /etc/network/interfaces**:

```
iface eth0 inet dhcp
```

Reboot with this command: **/sbin/shutdown -r now**.

Windows TCP/IP Settings

How you configure your Windows computer's network settings differs, depending on your operating system.

Windows XP

1 Open the **Internet Protocol (TCP/IP) Properties** dialog box.

   a From the desktop, click the **Start** button, point to **Control Panel**, and then click **Network and Internet Connections**.

   b Click **Network Connections**.

   c Right-click the **Local Area Connection** icon, and select **Properties**.

   d Select your NIC card's TCP/IP entry (it should include "TCP/IP" in it, but not "AOL," "Dial-up," or "Adapter") and click the **Properties** button.

2 Ensure the following is selected, depending on whether you are using dynamic (DHCP) or static IP addressing:

   ➢ **If you are using DHCP (most users):** Ensure that **Obtain an IP address automatically** is selected and that either **Obtain a DNS server address automatically** or **Enable DNS** is selected. All fields should be blank.

   ➢ **If you are using a static IP address:** Ensure that **Use the following IP address** and **Use the following DNS server addresses** are selected. The **IP address**, **Subnet mask**, **Default gateway**, and **Preferred DNS server** settings should match those given to you by your Internet provider when you arranged for a static IP address.

Windows 2000

1 Open the **Internet Protocol (TCP/IP) Properties** dialog box.

   a From the desktop, click the **Start** button, point to **Settings**, then **Network and Dial-up Connections**.

   b Right-click the **Local Area Connection** icon, and select **Properties**.

   c Select your NIC card's TCP/IP entry (it should include "TCP/IP" in it, but not "AOL," "Dial-up," or "Adapter") and click the **Properties** button.

2 Ensure the following is selected, depending on whether you are using dynamic (DHCP) or static IP addressing:

   ➢ **If you are using DHCP (most users):** Ensure that **Obtain an IP address automatically** is selected and that either **Obtain a DNS server address automatically** or **Enable DNS** is selected. All fields should be blank.

   ➢ **If you are using a static IP address:** Ensure **that Use the following IP address** and **Use the following DNS server addresses** are selected. The **IP address**, **Subnet mask**, **Default gateway**, and **Preferred DNS server** settings should match those given to you by your Internet provider when you arranged for a static IP address.

Windows 98/Me

1 Open the **Internet Protocol (TCP/IP) Properties** dialog box.

   a From the desktop, click the **Start** button, point to **Settings**, then **Control Panel**.

   b Double-click the **Network** icon to display the **Network** dialog box.

   c Select your NIC card's TCP/IP entry (it should include "TCP/IP" in it, but not "AOL," "Dial-up," or "Adapter") and click the **Properties** button and then click **OK**

2 Ensure the following is selected, depending on whether you are using dynamic (DHCP) or static IP addressing:

   ➢ **If you are using DHCP (most users):** Ensure that **Obtain an IP address automatically** is selected and that either **Obtain a DNS server address automatically** or **Enable DNS** is selected. All fields should be blank.

   ➢ **If you are using a static IP address:** Ensure **that Specify an IP address** is selected and that the **IP Address** and **Subnet Mask** settings match those given to you by your Internet service provider when you arranged for a static IP address. On the **DNS Configuration** tab, ensure that **Enable DNS** is selected and that something appears in the **Host** box. (If not, enter any name, word, or combination of letters and numbers.) Ensure that the **DNS Server Search Order** box contains **10.0.0.2**.

Appendix D
Troubleshooting

The following are some problems you may experience and some possible solutions to remedy the situation.

Problem

My X3's **LINK** light is solidly lit, but I cannot connect to the Internet.

Solution

There are several issues that could cause this problem. Check these items:

- Ensure that you are using the correct **VPI**, **VCI** and **Encapsulation** settings.

- If your **Encapsulation** begins with **PPP**, ensure that you have typed your ADSL Username and Password correctly. (Note that this is NOT the username and password you used to log into the **Zoom Configuration Manager** on page 15.)

  ➢ If you had the modem automatically configure its settings, open the **Basic Setup** page, ensure that **MANUAL** is selected, then select **7** from the **Virtual Circuit** drop-down list. When the screen changes to show the automatic configuration settings, select **MANUAL** again, then enter the correct **Username** and **Password** in the boxes provided. Click **Save Changes** and **Write Settings to Flash**.

  ➢ If you manually configured your modem, open **the Basic Setup** page, ensure that **MANUAL** is selected, then enter the correct **Username** and **Password** in the boxes provided. Click **Save Changes** and **Write Settings to Flash**.

- Verify that your service provider's ADSL connection is functioning properly. (Place a call to your service provider's customer support department to verify this.)

- Verify that your TCP/IP network settings are properly configured on your computer. To do this, refer to the appropriate section.

   ➢ If you are using Macintosh, see **Macintosh TCP/IP Settings** on page 49.

   ➢ If you are using Linux, see **Linux TCP/IP Settings** on page 51.

   ➢ If you are using Windows, see **Windows TCP/IP Settings** on page 52.

Problem

My X3's **LINK** light continually blinks and does not stay solidly lit.

Solution

There are several issues that could cause this problem. Check these items:

- Ensure that the phone cord is firmly plugged into the wall jack and the **ADSL** jack on the back of the X3 (not the **PHONE** jack on the back of the modem).

- Verify that the jack the phone cord is connected to is enabled for ADSL service. Unless your service provider has enabled it, you cannot use a standard telephone jack for ADSL service.

- Your phone cord may be defective. Replace the phone cord with a known good one.

- You have installed phone filters on all the phones and fax machines using the same ADSL line as the X3. These devices can produce noise and interfere with your ADSL connection.

Problem

I cannot log into the **Zoom Configuration Manager**. I have typed **http://10.0.0.2** in my Web browser (or I have double-clicked the **Zoom** icon on my desktop, if it appears), but I am not prompted for a User Name and Password.

Solution

There are several issues that could cause this problem. Check these items:

- If you are using a Macintosh or Linux computer, your TCP/IP settings may not be properly configured. See page 48 for more information.

- If you are using Mac OS X 10.3 and above, renew your IP address: Point to **System Preferences**, then choose **Network**. Click the **Configure** button and then the **Renew DHCP Lease** button.

- If you are using a Windows computer, perform a Release/Renew operation:

  ➢ **Windows 2000/XP:** From the desktop, click the **Start** button, then point to **Programs**, point to **Accessories**, and then select **Command Prompt**. Type **ipconfig /all** and press the **Enter** key on your keyboard. In the subsequent dialog box, make sure the NIC adapter is highlighted in the drop-down list, click **Renew** and then click **Release**. Type **10.0.0.2** in your browser's address bar and press **Enter**. The **Network Password** box should display.

  ➢ **For Windows 95/98/Me:** From the desktop, click the **Start** button and the point to **Run**. Type **winipcfg**, and click **OK**. In the subsequent dialog box, make sure the NIC adapter is highlighted in the drop-down list, click **Renew** and then click **Release**. Type **10.0.0.2** in your browser's address bar and press **Enter**. The **Network Password** box should display.

Appendix E
Regulatory Information

U.S. FCC Part 68 Statement

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. The unit bears a label on the back which contains among other information a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

This equipment uses the following standard jack types for network connection: RJ11C.

This equipment contains an FCC compliant modular jack. It is designed to be connected to the telephone network or premises wiring using compatible modular plugs and cabling which comply with the requirements of FCC Part 68 rules.

The Ringer Equivalence Number, or REN, is used to determine the number of devices which may be connected to the telephone line. An excessive REN may cause the equipment to not ring in response to an incoming call. In most areas, the sum of the RENs of all equipment on a line should not exceed five (5.0).

In the unlikely event that this equipment causes harm to the telephone network, the telephone company can temporarily disconnect your service. The telephone company will try to warn you in advance of any such disconnection, but if advance notice isn't practical, it may disconnect the service first and notify you as soon as possible afterwards. In the event such a disconnection is deemed necessary, you will be advised of your right to file a complaint with the FCC.

From time to time, the telephone company may make changes in its facilities, equipment, or operations which could affect the operation of this equipment. If this occurs, the telephone company is required to provide you with advance notice so you can make the modifications necessary to obtain uninterrupted service.

There are no user serviceable components within this equipment. See Warranty flyer for repair or warranty information.

It shall be unlawful for any person within the United States to use a computer or other electronic device to send any message via a telephone facsimile unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message and the telephone number of the sending machine or of such business, other entity, or individual. The telephone number provided may not be a 900 number or any other number for which charges exceed local or long distance transmission charges. Telephone facsimile machines manufactured on and after December 20, 1992, must clearly mark such identifying information on each transmitted message. Facsimile modem boards manufactured on and after December 13, 1995, must comply with the requirements of this section.

This equipment cannot be used on public coin phone service provided by the telephone company. Connection to Party Line Service is subject to state tariffs. Contact your state public utility commission, public service commission, or corporation commission for more information.

U.S. FCC Part 15 Emissions Statement

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 residential installation. This equipment generates, uses and can radiate radio frequency and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. 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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and 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.

Industry Canada Emissions Statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Industry Canada CS03 Statement

Notice: The Industry Canada label identifies certified equipment. This certification means that the equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing the 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 concern. 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 coordinated by a representative 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.

Users should ensure for their own protection 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 electric inspection authority, or electrician, as appropriate.

Notice: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

European Declaration of Conformity

The manufacturer declares under sole responsibility that this equipment is compliant to Directive 1999/5/EC (R&TTE Directive) via the following. This product is CE Marked.

Directive	Standard	Test Report
73/23/EEC-Low Voltage	EN 60950 : 2000 IEC 60950 : 3e éd. 1999	electrical safety
89/336/EEC-EMC	EN 55024 : 1998 EN 55022 : 1998	EMC-immunity EMC-emissions

Electrostatic Discharge Statement

The unit may require resetting after a severe electrostatic discharge event.

Note: If you do not use the supplied phone cord, use an equivalent of minimum AWG 26 line cord.

CAUTION: To reduce the risk of fire, use only No. 26 AWG or larger UL Listed or CSA Certified Telecommunication Line Cord.

Additional compliance information is located on the CD.