ADSL Bridge Modem

zoom

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Installation Instructions

The ADSL Bridge modem is an easy-to-install unit that gives you a connection to the Internet through your ADSL Internet service provider.
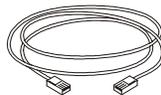
Package Contents

Your package contains the items shown below:

ADSL Bridge Modem   **Power Cube**
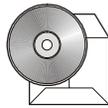
Ethernet Cable   **Software CD-ROM**   **Phone Cord**
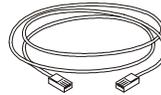
The CD contains the installation software, documentation, advanced features information, a glossary of technical terms, the warranty, and detailed Customer Support information.

If anything is missing or damaged, please contact Zoom Customer Support or whoever sold you the modem.

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)

Before You Begin

Before you begin installing the ADSL Bridge modem using this guide, you must have the following available to you:

- **ADSL service enabled on your telephone line.** To do this, you need to sign up with an ADSL service provider. Once this service is enabled, you should have an ADSL-enabled telephone wall jack to plug the modem into. (Your service provider may refer to "ADSL service" as "DSL service.")

- One of the following to connect to the modem:

    - ➢ **A Macintosh, Linux, or Windows 98/Me/2000/XP computer.** The computer must have an Ethernet port.

        > **Tip!**
        > If you are using a Windows computer and it does not have an Ethernet port, you can purchase a Network Interface Card (NIC) to add one.

    - ➢ **A router.** You can connect a router to the ADSL Bridge modem. To do this, you must first connect a computer to the modem using the Installation Instructions starting on the next page.

- **In the unlikely event that you plan to use a static IP address with the modem, you must have the IP Address, Subnet Mask, Gateway, and DNS values provided by your Internet service provider.** Only those who have made arrangements with their Internet service provider for a static IP address need this information.

Installation Instructions

Installing the ADSL Bridge modem involves three steps: **Installing the Software**, **Installing the Hardware**, and **Testing Your Internet Connection**.

Step 1: Installing the Software

<u>**You MUST install the software BEFORE installing the hardware.**</u>

Important Macintosh and Linux Information:
If you are using a Macintosh or Linux computer with your ADSL Bridge modem, you do not have to install the software. Continue with the next section, **Installing the Hardware**, on page 7. Only those using a Windows computer should continue below.

---

1 Turn on your Windows computer.

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** to start the software installation, then click **Next** when prompted.

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

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

7 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 Plug one end of the supplied phone cord into the modem's **ADSL** port and the other into the ADSL wall jack.

3 Connect the modem to the computer's Ethernet port. Plug one end of the Ethernet cable into the modem's **ETHERNET** port and plug the other end into your computer's Ethernet port.

The connection is made to the back panel of the modem.
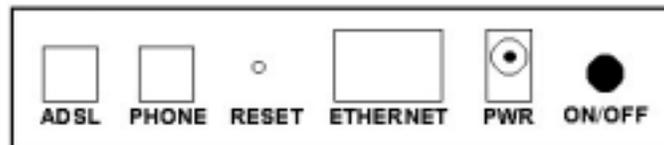
4 Plug the included power cube into a power strip or wall outlet and then into the modem's power (**PWR**) jack.

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

5 Turn the modem on by pushing the **ON/OFF** button.

The **PWR** light on the front panel of the modem should become steady on, and the **LINK** light should blink and then become steady on. 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 modem's **ON/OFF** button to turn it on.

6 Turn the computer on.

7 [Optional] If you want to plug in a phone through the modem, you can do so by plugging it into the **PHONE** port. (A filter is not required.)

8 **We HIGHLY RECOMMEND that you install a filter on EVERY phone and fax that is sharing the ADSL phone line.** 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.

The **PHONE** port of the modem has a built-in filter, so there is no need for a filter if you plug a phone into the **PHONE** port.

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

Plug each phone or fax 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, **Testing Your Internet Connection**.

Step 4: Testing Your Internet Connection

Once the software is installed and the hardware is connected, you are ready to browse the Web!

However, if any of the following situations applies to you, there is an additional task you must complete before your ADSL Bridge modem can access the Internet.

- **You have a static IP address:** In the unlikely event that you are using a static IP address, you must specify that IP address in your computer's TCP/IP settings and configure the modem to match your provider's **VPI** and **VCI** settings. You will not be able to access the Internet until you do so. See **Chapter 2: Using Static IP Addressing** on page 12.

- **You have PPPoE client software:** If your Internet service provider gave you setup software, install it now. Your service provider should have provided the necessary instructions to do this.

- **You are using a Macintosh or a Linux computer <u>and</u> you are using dynamic IP addressing (DHCP):** You must verify your computer's TCP/IP settings. See **Macintosh TCP/IP Settings** on page 16 or **Linux TCP/IP Settings** on page 18, as appropriate. (This is not required for those using a Windows computer and DHCP because the default TCP/IP settings for Windows are sufficient.)

Once the software is installed, the hardware is connected, and any required TCP/IP settings are configured, you are ready to test your Internet connection as summarized below.

To test your Internet connection for the first time

1 Turn on your computer (if it is not on already).

2 Open your Web browser (for example, 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 use the modem with your computer. You are done with this user's guide, unless you want to use the modem with a router. To do that, please continue below with **Using a Router with Your ADSL Bridge Modem**.

> ➢ If you are unable to access the Web, wait a few minutes and try again. Your modem may need more time to establish a connection with your Internet service provider. If you are still unable to connect after a few minutes, refer to **Appendix A: Troubleshooting Tips** on page 37.

Using a Router with Your ADSL Bridge Modem

Disconnect the ADSL Bridge modem from your computer, and then connect the ADSL Bridge modem to your router's WAN Ethernet port. In setting up your router according to its instructions, please note the following:

- If you are using DHCP, the WAN port of the router must be set up to use DHCP.

- If you are using a static IP address, you must specify that address for the WAN port of the router. The computers connected to the LAN ports of the router should have their TCP/IP settings set for DHCP.

- If your Internet service provider gave you PPPoE client software, you must set up your router to terminate a PPPoE connection.

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.

- If you have ADSL service problems, contact your ADSL service provider.

2

Using Static IP Addressing

This chapter is only for those who have a static IP address they plan to use with their ADSL Bridge modem.

Your ADSL Bridge modem works with Dynamic Host Configuration Protocol (DHCP), which is also known as "dynamic IP addressing." This is because most Internet service providers use DHCP.

However, in the unlikely event that you plan to use a static IP address with your modem, you must specify that IP address in your computer's TCP/IP settings and configure the modem to match your provider's **VPI** and **VCI** settings.

There is typically an extra charge for a static IP address, and you usually have to make a special request of your Internet service provider 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 your computer's TCP/IP settings or configure the modem. 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 perform the steps below.

To configure your ADSL Bridge modem to use a static IP address

1 Before you can access the modem's interface, you must first change your computer's TCP/IP settings to match the values show in the table below.

For this value…	Enter…
IP address	Any value between **10.0.0.4** and **10.0.0.20**. For example, type **10.0.0.10**.
Subnet mask	**255.255.255.0**
Default gateway	**10.0.0.2**

Tip!
If do not know how to access your computer's TCP/IP settings, see **Chapter 3: Specifying TCP/IP Settings** on page 15.

2 Log into 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. (You do not need to have an Internet connection established to be able to view the interface.)

Tip!
If you are using a Windows computer, a **Zoom** icon should have been placed on your desktop when you installed the software provided with the modem. 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.

3 The **Zoom Configuration Manager** opens and begins to automatically configure itself. This is evident because the **Basic Setup** page will open and quickly change to the **Autodetect** page. To specify your Internet service provider's **VPI** and **VCI** settings, you must set the modem for manual configuration. Do the following:

a Click the **Stop** button to stop the modem from trying to automatically configure itself.

b Select the **Disable** option button, then click **Save Changes**. The page changes, and the **MANUALLY** option button is selected.

c Enter the **VPI** and **VCI** settings into the appropriate boxes. These values should have been given to you by your Internet service provider.

d Click the **Save Changes** button, then click the **Write Settings to Flash** button.

4 Close **Zoom Configuration Manager** by closing your Web browser.

5 Change your computer's TCP/IP settings from the values you specified in step 1 to those given to you by your Internet service provider. Besides changing the **IP address**, **Subnet mask**, and **Default gateway** values, you must enter an additional value: **DNS**. This, too, should have been provided by your Internet service provider. For more information about specifying these settings, see **Chapter 3: Specifying TCP/IP Settings** on page 15.

Continue with **Testing Your Internet Connection** on page 9.

3

Specifying TCP/IP Settings

This Appendix explains how to specify TCP/IP settings for Macintosh, Linux, and Windows computers.

There are several situations in which you must change your computer's TCP/IP settings:

- **ALL USERS:** If you want to log into the **Zoom Configuration Manager**, you must first change your computer's TCP/IP settings to work with the modem's internal IP address. This is required because your ADSL Bridge modem uses 1483 Bridged encapsulation as its protocol. See the table in step 1 of **To access the Web interface of your ADSL Bridge modem** on page 27 for the values you need to specify.

- **WINDOWS USERS:** If you are using a Windows computer, you only have to specify TCP/IP settings if you have a static IP address (or when logging into the **Zoom Configuration Manager**, as explained above.) If you are using dynamic IP addressing, the default TCP/IP settings on your Windows computer are sufficient. However, if you are troubleshooting your modem connection, you may want to verify these settings. The appropriate settings are described in **Windows TCP/IP Settings** on page 22.

- **MACINTOSH AND LINUX USERS:** If you are using a Macintosh or Linux computer, you <u>must</u> specify TCP/IP settings regardless of whether your Internet service provider is using dynamic or static IP addressing. (You must also specify them if you are logging into the **Zoom Configuration Manager**, as explained above.) The appropriate settings are described in **Macintosh TCP/IP Settings** on page 16 and **Linux TCP/IP Settings** on page 18.

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 17.

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, do the following, depending on your situation:

> **If you are logging into the Zoom Configuration Manager:** Ensure that **Static** is highlighted in the **Configure:** list box, then select **Manually**. Enter the values provided in the table below appears in the appropriate fields.

For this value…	Enter…
IP Address	Any value between **10.0.0.4** and **10.0.0.20**. For example, type **10.0.0.10**.
Subnet Mask	**255.255.255.0**
Router	**10.0.0.2**

> **If you are using dynamic IP addressing:** Make sure that **Using DHCP** is highlighted in the **Configure:** list box. Do not enter anything into the **DHCP Client ID** field.

> **If you are using a static IP address:** Make sure that **Static** is highlighted in the **Configure:** list box, then select **Manually**. Enter the values provided to you by your Internet service provider for **IP Address:**, **Subnet Mask:**, **Router:**, and **Domain Name Server:**. (The last value may be called **DNS Servers:**.)

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

Once you have specified the settings, you are ready to surf the Web. Continue with **Testing Your Internet Connection** on page 9.

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:**, do the following, depending on your situation:

➢ **If you are logging into the Zoom Configuration Manager:** Ensure that **Static** is highlighted in the **Configure:** list box, then select **Manually**. Enter the values provided in the table below appears in the appropriate fields.

For this value…	Enter…
IP Address	Any value between **10.0.0.4** and **10.0.0.20**. For example, type **10.0.0.10**.
Subnet Mask	**255.255.255.0**
Router Address	**10.0.0.2**

➢ **If you are using dynamic IP addressing:** Select **Using DHCP Server**. Do not enter anything in the **DHCP Client ID** field.

➢ **If you are using a static IP address:** Select **Static** and then enter the values provided to you by your Internet service provider for **IP Address:**, **Subnet Mask:**, **Router Address**, and **Name Server Addr:**.

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

Once you have specified the settings, you are ready to surf the Web. Continue with **Testing Your Internet Connection** on page 9.

Linux TCP/IP Settings

The instructions for specifying TCP/IP settings vary dramatically by distribution, so you may want to refer to your particular version's documentation. The instructions below are a general guide and may not exactly match the instructions for your particular Linux system.

Once you have verified the settings, you are ready to surf the Web. Continue with **Testing Your Internet Connection** on page 9

> **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 Bridge modem, use that identifier throughout.

RedHat

Depending on what you want to do, specify the appropriate TCP/IP settings as shown in the tables below.

Dynamic IP Addressing
Edit or create the file **/etc/sysconfig/network-scripts/ifcfg-eth0** so that it contains the following three lines: ``` DEVICE=eth0 ONBOOT=yes BOOTPROTO=dhcp ```

Static IP Addressing

Edit or create the file **/etc/sysconfig/network-scripts/ifcfg-eth0** so that it contains the following lines. You must enter the static IP address, subnet mask, and gateway values given to you by your service provider after the appropriate equal sign.

```
DEVICE=eth0
BOOTPROTO=static
ONBOOT=yes
IPADDR=
NETMASK=
GATEWAY=
```

Logging into the Zoom Configuration Manager

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

```
DEVICE=eth0
BOOTPROTO=static
ONBOOT=yes
IPADDR=10.0.0.10
NETMASK=255.255.255.0
GATEWAY=10.0.0.2
```

*(Note that for **IPADDR**, you can enter any value between 10.0.0.4 and 10.0.0.20.)*

SuSE

Depending on what you want to do, specify the appropriate TCP/IP settings as shown in the tables below.

Dynamic IP Addressing

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**

Static IP Addressing

Add these lines to the file **/etc/sysconfig/network/ifcfg-eth0**, setting them equal to the values provided to you by your Internet service provider. Be sure each value—after the equal sign—is enclosed in quotes.

```
BOOTPROTO="static"
BROADCAST=
IPADDR=
NETMASK=
NETWORK=
```

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

Logging into the Zoom Configuration Manager

Add these lines to the file /etc/sysconfig/network/ifcfg-eth0:

```
BOOTPROTO="static"
BROADCAST="10.0.0.255"
IPADDR="10.0.0.10"
NETMASK="255.255.255.0"
NETWORK="10.0.0.2"
```

*(Note that for **IPADDR**, you can enter any value between 10.0.0.4 and 10.0.0.20.)*

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

Debian

Depending on what you want to do, specify the appropriate TCP/IP settings as shown in the tables below.

Dynamic IP Addressing

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

```
iface eth0 inet dhcp
```

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

Static IP Addressing

Add the following lines to the file **/etc/network/interfaces**, but include the values for **address**, **netmask**, and **gateway** provided by your Internet service provider next to the appropriate label:

```
iface eth0 inet static
      address
      netmask
      gateway
```

Add the following lines to the file **/etc/resolv.config**, but include the values for **address**, **netmask**, **gateway**, and **dnc-nameservers** provided by your Internet service provider next to the appropriate label:

```
iface eth0 inet static
      address
      netmask
      gateway
      dns-nameservers
```

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

Logging into the Zoom Configuration Manager

Add these lines to the file /etc/sysconfig/network/ifcfg-eth0:

```
BOOTPROTO="static"
BROADCAST="10.0.0.255"
IPADDR="10.0.0.10"
NETMASK="255.255.255.0"
NETWORK="10.0.0.2"
```

*(Note that for **IPADDR**, you can enter any value between 10.0.0.4 and 10.0.0.20.)*

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 your situation:

➢ **If you are logging into the Zoom Configuration Manager:** Ensure that **Use the following IP address** and **Use the following DNS server addresses** are selected and that the information in the table below appears in the appropriate fields.

For this value…	Enter…
IP Address	Any value between **10.0.0.4** and **10.0.0.20**. For example, type **10.0.0.10**.
Subnet mask	**255.255.255.0**
Default gateway	**10.0.0.2**

➢ **If you are using dynamic IP addressing (DHCP):** 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. Enter the **IP address**, **Subnet mask**, **Default gateway**, and **Preferred DNS server** values given to you by your service provider.

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 your situation:

   ➢ **If you are logging into the Zoom Configuration Manager:** Ensure that **Use the following IP address** and **Use the following DNS server addresses** are selected and that the information in the table below appears in the appropriate fields.

For this value…	Enter…
IP Address	Any value between **10.0.0.4** and **10.0.0.20**. For example, type **10.0.0.10**.
Subnet mask	**255.255.255.0**
Default gateway	**10.0.0.2**

   ➢ **If you are using dynamic IP addressing (DHCP):** 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. Enter the **IP address**, **Subnet mask**, **Default gateway**, and **Preferred DNS server** values given to you by your service provider.

Windows Me/98

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 your situation:

   ➢ **If you are logging into the Zoom Configuration Manager:** Ensure that **Use the following IP address** and **Use the following DNS server addresses** are selected and that the information in the table below appears in the appropriate fields.

For this value…	Enter…
IP Address	Any value between **10.0.0.4** and **10.0.0.20**. For example, type **10.0.0.10**.
Subnet mask	**255.255.255.0**
New gateway	**10.0.0.2**

   ➢ **If you are using dynamic IP addressing (DHCP):** 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, then enter the **IP address** and **Subnet mask** values given to you by your service provider. On the **Gateway** tab, enter the **New gateway** value given to you by your provider. 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.) In the **DNS Server Search Order** box, enter the **DNS** value provided by your service provider.

4

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.

Monitoring System and ADSL Status

The ADSL Bridge modem 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.

Viewing the modem and/or ADSL connection status requires the use of the modem's Web interface.

To access the Web interface of your ADSL Bridge modem

1 Before you can access the modem's interface, you must first change your computer's TCP/IP settings to match the values show in the table below. Be sure to make note of your computer's current TCP/IP settings before changing them. How you access these settings and their names may vary depending on whether you are using a Windows, Macintosh, or Linux computer (for example, **Gateway** is called **Router** or **Router Address** on Macintosh computers).

For this value…	Enter…
IP address	Any value between **10.0.0.4** and **10.0.0.20**. For example, type **10.0.0.10**.
Subnet mask	**255.255.255.0**
Default gateway	**10.0.0.2**

> **Tip!**
> If do not know how to access your computer's TCP/IP settings, see **Chapter 3: Setting TCP/IP Settings** on page 15.

2 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. (You do not need to have an Internet connection established to be able to view the interface.)

> **Tip!**
> If you are using a Windows computer, a **Zoom** icon should have been placed on your desktop when you installed the software provided with the modem. 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.

3 The **Zoom Configuration Manager** opens and displays its **Basic Setup** page. Depending on the type of information you want to monitor, click one of the following icons at the top of the **Basic Setup** page:

➢ Click the **System Status** icon to open the **System Status** page. This page provides information about many aspects of your modem, including how long it has been since you last rebooted it, your WAN settings, your LAN settings, and so forth.

➢ Click the **ADSL Status** icon to open the ADSL Status page. This 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 modem 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 5: Advanced Setup Options**, on page 30 if you need to make changes to these settings.

4 When you are done using the modem's Web interface, close your browser and then restore your computer's TCP/IP settings to what they were before you changed them in step 1.

For more detailed information about the **System Status** or **ADSL Status** information provided, click the **Help** icon at the top of the applicable page to open the online help.
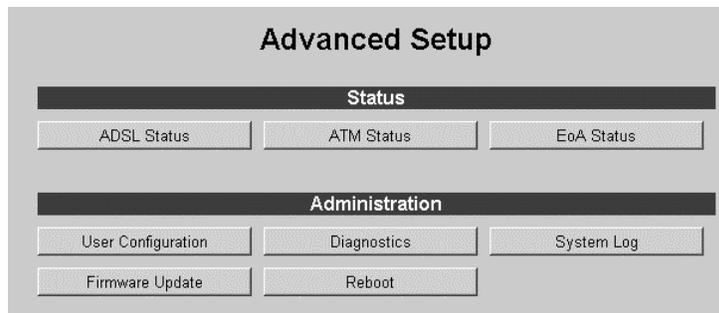
5

Advanced Setup Options

*The options that are set by default when the ADSL Bridge modem is installed are sufficient for most users. However, those that want or need to change their modem settings can do so using the **Advanced Setup** page. This chapter explains how to specify advanced options.*

Specifying advanced options for your modem (such as configuring an Asynchronous Transfer Mode [ATM] Virtual Circuit [VC] interface to enable the modem to communicate using the ATM protocol) require 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 27.)

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

Most users will not need to use any of the buttons on the **Advanced Setup** page.

Advanced Setup

Status

| ADSL Status | ATM Status | EoA Status |

Administration

| User Configuration | Diagnostics | System Log |
| Firmware Update | Reboot | |

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.
TCP/IP Status	View information about the IP packets handled by your modem.
EoA Status	Configure an Ethernet-over-ATM (EoA) interface on the modem, if one is needed to communicate with your ISP.
ATM Status	Configure an Asynchronous Transfer Mode (ATM) Virtual Circuit (VC) interface to enable the modem to communicate using the ATM protocol.

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 modem.
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.
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.
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 modem and reset its configuration to the factory defaults.

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 ADSL Bridge modem 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 28.)

If you want, you can change the default password. **Changing the password is not required.**

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 28 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.

Resetting Default Settings

If you have changed the system settings on your modem 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 modem's Web interface

If you can open your Web browser and access your modem's Web 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 27 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 modem's factory defaults.

6

Removing the Modem Software

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

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

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

Appendix A
Troubleshooting Tips

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

Problem

My ADSL Bridge modem'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:

- You modem may not have connected to your Internet service provider. Turn off the modem and then turn it back on and wait a few minutes. If this does not work, try the following, depending on your situation:

  - ➢ If you are using dynamic IP addressing (DHCP), the modem may not have detected your Internet service provider when it automatically configured itself. Try entering your Internet service provider's **VPI** and **VCI** settings on the **Basic Setup** page of the **Zoom Configuration Manager**. If you do not have these values, contact your Internet service provider. For instructions on how to enter these values, perform steps 1–4 of **To configure your ADSL Bridge modem to use a static IP address** on page 13. However, because you are using DHCP, you should not perform step 5. Instead, specify the following TCP/IP settings: Select **Obtain an IP address automatically** and **Obtain a DNS server address automatically** (the latter may be called **Enable DNS**).

> ➤ If you are using a static IP address, ensure that you entered the correct **VPI** and **VCI** settings on the **Basic Setup** page of the **Zoom Configuration Manager**. Your Internet service provider should have given you these values. See **To configure your ADSL Bridge modem to use a static IP address** on page 13 for more information about entering these values.

- Verify that you have specified the correct TCP/IP settings. See **Chapter 3: Specifying TCP/IP Settings** on page 15 for information about these settings.

- If you are using PPPoE client software, ensure that you have typed your ADSL Username and Password correctly. (Note that this is <u>NOT</u> the username and password you used to log into the **Zoom Configuration Manager** on page 13.)

- 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.)

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:

- Ensure that you changed your TCP/IP settings to use the internal IP address of the modem. This must be done to access the modem's Web interface. Once you are done using the modem's Web interface, return the setting to what they were before you logged in to the **Zoom Configuration Manager**. See **To access the Web interface of your ADSL Bridge modem** on page 27.

Problem

My ADSL Bridge modem'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** port on the back of the modem (not the **PHONE** port 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 modem. These devices can produce noise and interfere with your ADSL connection.

Appendix B
Front and Back Panels

The front panel of the ADSL Bridge modem looks like this:

The following table describes each light on the front panel.

Light	Description
LAN	Lights when the **ETHERNET** jack of the modem is plugged into the Ethernet port of a powered-up device. Blinks when data is sent.
LINK	Blinks when the modem 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 A: Troubleshooting Tips** on page 37.
PWR	Lights when the modem is plugged into a power source.

The back panel of the ADSL Bridge modem 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
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.