WebRamp 200i Reference

For Windows and Macintosh

Where to Contact for Help

Technical support is available by mail, fax, e-mail, or phone, during the hours 6 AM to 5 PM, Pacific Standard Time (U.S.). Before you contact Customer Support, please check the *WebRamp 200i Reference* for more information.

Mail: Technical Support, Ramp Networks, 3100 De La Cruz Boulevard,
          Santa Clara, CA 95054, U.S.A.

Fax: 1(408)988-6363, attention Technical Support

E-mail: support@rampnet.com

Phone: 1(408)988-5353

When you request support, be sure to include your WebRamp serial number, your name, company name, street address, and phone number.

Ramp Networks, Inc.
3100 De La Cruz Boulevard
Santa Clara, CA 95054
U.S.A.

Safety Precautions

- Read and follow all warnings and instructions included with this product.

- Do not block the ventilation openings on the WebRamp. Do not expose the WebRamp (even if unplugged) to an environment that exceeds temperature and humidity specifications.

- Do not place cords or cables where they may be walked on or tripped over.

- Be sure to comply with any applicable local safety standards or regulations.

- General-purpose cables are provided with this product. Any cables or other requirements mandated by local authority are your responsibility.

- Never touch telephone wires or terminals unless the line has been disconnected.

- Avoid using telephone equipment or installing the product during an electrical storm.

- Never install telephone jacks, lines, network cables, this product, or power connections in wet locations.

FCC Notice

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 energy 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

ramp
NETWORKS

3100 De La Cruz Blvd.
Santa Clara, CA 95054
408•988•5353
Fax 988•6363

DECLARATION OF CONFORMITY WITH FCC RULES
FOR ELECTROMAGNETIC COMPATIBILITY

Ramp Networks, Inc.
3100 De La Cruz Boulevard
Santa Clara, CA 95054

Declare under our sole responsibility that the product:

WebRamp 200i

to which this declaration relates complies with Part 15 of the FCC Rules. Operation is subject to the following conditions: 1) this device may not cause harmful interference and 2) this device must accept any interference received, including interference that may cause undesired operation.

Sridhar Bathina
Vice President
Engineering Project Management
Ramp Networks, Inc.
November 6, 1998

Warranty and Software License

Your Ramp Networks product is covered by a Limited Warranty. Ramp Networks warrants that the product that you have purchased from Ramp Networks or from an authorized reseller is free from defects in materials or workmanship for one year from the date of purchase. Ramp Networks warrants its software for 90 days from the date of purchase and warrants that the software will execute its programming instructions when properly installed on the computer for which it is intended, and that the media upon which the software is recorded will be free from defects in materials and workmanship under normal use.

During the Limited Warranty period, Ramp Networks will repair or replace the product with the same or a similar model, which may be a remanufactured unit, at Ramp Networks' option, without charge for either parts or labor. Replacement parts assume the remaining warranty of the parts they replace. The sole remedy for software shall be to return the media to Ramp Networks for replacement. This Limited Warranty extends only to the original purchaser and is non-transferable.

What is NOT covered by this Limited Warranty:

- Unauthorized modification or misuse.

- Operation outside of the environmental specifications for the product.

- Damage due to lightning, "Acts of God," elements of nature, failure or fluctuation of electrical power, fire, theft, add-on items, or attachments.

- Damage from repair or replacement of warranteed parts by anyone other than Ramp Networks or a Ramp Networks authorized service provider.

- Third-party software applications shipped with the WebRamp.

In order to make a claim under this warranty, you must comply with the following procedure:

- Contact Ramp Networks Customer Support within the warranty period to obtain a Return Materials Authorization ("RMA") number.

- Return the defective product and proof of purchase, shipping prepaid, to Ramp Networks with the RMA number prominently displayed on the outside of the package.

If you are located outside of the United States or Canada, please contact your reseller in order to arrange for warranty service.

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WARRANTIES IS NOT PERMITTED BY SOME STATES OR JURISDICTIONS, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU. IN THAT CASE, ANY IMPLIED WARRANTIES ARE LIMITED IN DURATION TO NINETY (90) DAYS FROM THE DATE OF DELIVERY OF THE PRODUCT. THERE MAY BE OTHER RIGHTS THAT YOU MAY HAVE WHICH VARY FROM JURISDICTION TO JURISDICTION.

REGARDLESS OF WHETHER OR NOT ANY REMEDY SET FORTH HEREIN FAILS OF ITS ESSENTIAL PURPOSE, IN NO EVENT WILL RAMP NETWORKS, ITS LICENSOR(S) AND THE DIRECTORS, OFFICERS, EMPLOYEES, OR AGENTS OF ANY OF THEM BE LIABLE TO YOU FOR ANY CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGES (INCLUDING DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, AND THE LIKE) ARISING OUT THE USE OR INABILITY TO USE THE PRODUCT, EVEN IF RAMP NETWORKS OR ITS LICENSOR(S) HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. BECAUSE SOME STATES OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU. THE LIABILITY OF RAMP NETWORKS AND ITS LICENSOR(S) TO YOU FOR ACTUAL DAMAGES FROM ANY CAUSE WHATSOEVER, AND REGARDLESS OF THE FORM OF THE ACTION (WHETHER IN CONTRACT, TORT [INCLUDING NEGLIGENCE], PRODUCT LIABILITY, OR OTHERWISE), WILL BE LIMITED TO $50.

Contents

About This Reference

The *WebRamp 200i Reference* complements the WebRamp 200i Installation Card, providing detailed information about installation, features and capabilities, and troubleshooting and diagnostics.

The information in this book addresses both Windows and Macintosh users, and system differences are noted in text. Unless otherwise noted, Windows refers to Windows 95, Windows 98, and Windows NT 4.0.

What's in This Reference

This reference contains eight chapters, two appendixes, and a glossary.

Chapter 1, "Before You Begin," gives a brief overview of the WebRamp 200i, tells you what's included in the WebRamp box, and what you need to set up your WebRamp.

Chapter 2, "Setting Up a New Network," provides detailed information about setting up the WebRamp with your computer. This chapter tells you how to set up a new network using your WebRamp.

Chapter 3, "Adding the WebRamp to an Existing Network," tells you how to add the WebRamp to your existing network to give all your employees Internet access from their own computers.

Chapter 4, "Setting Up an Additional Modem for Internet Access," tells you how to add an external modem to the WebRamp to increase the speed of your Internet access.

Chapter 5, "WebRamp Security Features," gives an overview of the levels of security provided by the WebRamp.

Chapter 6, "WebRamp Access Controls," provides information about ways to manage access to your network.

Chapter 7, "Using the WebRamp's Advanced Options," gives information about using the advanced features of the WebRamp.

Chapter 8, "Troubleshooting," provides information you can use to diagnose and solve problems you are having connecting to the Internet. The information in this chapter can help you identify the problem, the cause of the problem, and how to fix the problem.

Appendix A contains a table that shows the default settings of the WebRamp.

Appendix B provides information on recovering the WebRamp's IP address.

The Glossary defines terms used in this reference.

Technical Support

You can reach the Technical Support group at Ramp Networks by phone, e-mail, fax, or mail. The hours are 6 AM to 5 PM, Pacific Standard Time (U.S.).

Here are the ways you can reach Technical Support.

- Web site: **www.rampnet.com/support**
- Mailing address: Technical Support, Ramp Networks, 3100 De La Cruz Blvd., Santa Clara, CA 95054, U.S.A.
- Fax: 1(408)988-6363, attention Technical Support
- E-mail: support@rampnet.com
- Phone: 1(408)988-5353

When you request support, please provide the serial number of your WebRamp 200i, your name, your company name, street address, and phone number.

Conventions

The following table explains the conventions used throughout this document.

Typeface	Description	Example
Italics	Manual titles or special emphasis.	*WebRamp 200i Reference*
bold italics	Placeholders where you provide the necessary information.	***myname***
Boldface	Buttons, checkboxes, or items that you can choose from screens, menus, or dialog boxes.	Click **OK** to restart

1

Before You Begin

This chapter provides a brief overview of the WebRamp 200i, and tells you what you need before you can set up the WebRamp and use it to connect to the Internet.

About the WebRamp 200i

The WebRamp 200i is an integrated analog router and four-port Ethernet hub, with one 56k V.90 internal modem. Simply put, the WebRamp is a device that lets you set up a network of computers that can access the Internet simultaneously using ordinary phone lines. With your WebRamp you can do the following:

- Set up a network of Windows, Macintosh, and other TCP/IP-based computers for your small business or home office. See Chapter 2, "Setting Up a New Network" for information about setting up a new network.

- Add the WebRamp to your existing network to give everyone in your office Internet Access. See Chapter 3, "Adding the WebRamp to an Existing Network" for information about setting up the WebRamp to work with your existing network.

- Add an additional modem to increase performance. As your business or demand for Internet access grows, you can increase your Internet access speed by adding an external modem. See Chapter 4, "Setting Up an Additional Modem for Internet Access" for information about adding an external modem.

- Manage access to your network and WebRamp. You can decide which Internet capabilities you provide to the people on your network and if your WebRamp can be configured remotely. See Chapter 6, "WebRamp Access Controls," for information on managing your network.

- Use the WebRamp's advanced features to set up local servers, security features, filtering options, and so on. See Chapter 7, "Using the WebRamp's Advanced Options," for more information about fine-tuning your WebRamp.

What the WebRamp Includes

The following items are included in the WebRamp box:

- WebRamp 200i
- Power supply
- Ethernet (10BaseT) cable
- WebRamp 200i Installation Card
- WebRamp CD

The WebRamp CD includes all of the documents and software you'll need to set up and use your WebRamp. You can run the CD on any Windows or Macintosh computer that has a CD drive. Here are the contents of the CD:

- EasyStart application. You use EasyStart to set up your Windows computer to work with the WebRamp. (See Chapter 2 for information about setting up your Macintosh.) After checking your computer for an Ethernet driver, EasyStart sets up all of the network protocols and network addresses so that your computer can connect to the WebRamp and the Internet.

- Netscape Communicator. This web browser is included in case you need one.

- TFTP server. A Windows version of this application is included for you to back up and restore configuration information to and from the WebRamp. You can also use this application to download the new software that runs on the WebRamp.

NOTE – If you are using a Macintosh computer, you can download a Macintosh version of TFTP server software from web sites such as www.shareware.com.

- WebRamp Finder (filename WRFinder) utility. You use this utility to change or set the IP address of the WebRamp. After setup, you can use WebRamp Finder if you need to set the WebRamp's default IP address or search for other WebRamps on your network.

What You Need

Before you set up your WebRamp to connect to the Internet, you need to get a single user account from your IPS. With a single user account, you receive one IP address from the ISP. When you use this kind of account, the Internet only knows this single address for your office—it doesn't recognize the difference between a single user using an IP address and an entire office using a single IP address. This means that your LAN (Local Area Network) is hidden from the view of your ISP and the Internet. You can use any IP address range you want, because it is only "known" by the WebRamp on the LAN side; on the WAN side, the ISP and the Internet don't see the LAN addresses.

In addition to having the WebRamp, the computer that you choose to configure the WebRamp must meet certain requirements. This section discusses what you need to set up the WebRamp using a Window and Macintosh computer.

NOTE – The installation process requires a web browser. If you do not have one, the WebRamp CD includes Netscape Communicator.

Windows Requirements

- a Windows 95, Windows 98, or Windows NT 4.0 computer that has an Ethernet (10BaseT) network card installed
- TCP/IP network protocol installed for each computer
- 16 MB of RAM (32 MB recommended)
- a standard phone line
- a dial-up Internet account (PPP)

Macintosh Requirements

- a 68030 Macintosh computer (PowerPC recommended) running system software version 7.5.3 or later that has an Ethernet (10BaseT) network card installed
- Open Transport 1.1.2 (or higher) or MacTCP 2.0.6 installed for each computer
- 16 MB of RAM (32 MB recommended)
- a standard phone line
- a dial-up Internet account (PPP)

Setting Up a New Network

This chapter describes all of the steps you need to set up your WebRamp in a new local area network and use it to connect to the Internet.

See "What You Need" in Chapter 1 to see what items you need to have before you can set up the WebRamp.

Setting Up the WebRamp in a New LAN

Imagine you work in a small business that has several computers, a modem, and a dial-up Internet (PPP) account with an Internet service provider (ISP). No local area network (LAN) exists: everyone works on individual computers that are not connected to a server. (A **local area network**, or **LAN**, is a network that connects computers and other devices, such as printers, under some common control.) Only one computer uses the modem and the Internet account, and everyone who needs to get on the Internet has to take turns to use that computer.

You want to install the WebRamp and create a LAN so that everyone can use their own computers to get to the Internet and share information. This section describes what you need to do to install the WebRamp in this situation.

The ISP Information You Need

When you first got your Internet account, your ISP should have given you the following information:

- a user name

- a password
- an access phone number
- Domain Name System (DNS) server addresses

You'll need these items during the installation process. If your ISP uses a log-in script when you use your Internet account, you'll need to provide the script as well. The setup program included with the WebRamp has online help for providing scripts.

Setting Up Your Hardware

To begin the installation process, you need to connect the WebRamp to one of your Windows 98, Windows 95, Windows NT, or Macintosh computers and the modem. Figure 2-1 shows how to connect the hardware together.

Figure 2-1   Connecting the WebRamp
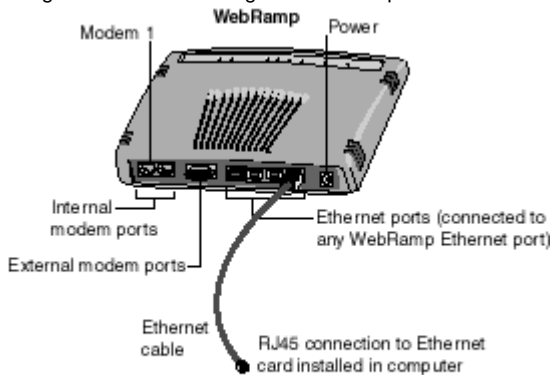
Note: each computer must have a 10BaseT Ethernet card and TCP/IP installed.

NOTE – You can use any Ethernet port on the WebRamp to connect the computer. However, Modem Port 1 is recommended for connecting the phone line.

After you've connected the WebRamp to the computer, turn on the power to each one in this order:

1. WebRamp

2. computer

The Ethernet port light on the WebRamp should turn on (green) after a few seconds.

Setting Up Your Computer

The EasyStart application, included on the WebRamp CD, checks for a network card driver, the presence of TCP/IP, and sets certain TCP/IP settings on computers running Windows 95, Windows 98, or Windows NT. If you are setting up your WebRamp with a Macintosh computer, you must perform these tasks manually, as described in "Setting Up a Macintosh Computer" later in this chapter.

NOTE – The EasyStart application checks whether TCP/IP is installed on your computer. If EasyStart tells you that TCP/IP is not present, you then need to use the Windows 95, Windows 98, or Windows NT CD to install TCP/IP on your computer. (You should have the Windows 95, Windows 98, or Windows NT CD available while you use EasyStart.)

Setting Up a Windows Computer With EasyStart

EasyStart sets up your Windows computer to work with the WebRamp, checking the Ethernet network card driver and making sure that TCP/IP is present. If you do not have a browser, you can use EasyStart to install Netscape Communicator on your computer.

NOTE – You must exit all browsers before running EasyStart.

Here are the steps to use EasyStart:

1. Insert the WebRamp CD into the CD drive of your computer.

2. From the **Start** menu on the Windows desktop, choose **Run**.

3. In the Run dialog box, type

    *CD-drive-letter***:\wrsetup.exe**

    For example, if the CD drive in your computer is drive D, then you type this:

    d:\wrsetup.exe

The CD opening screen appears. Click **EasyStart**, and then click **Next** in the Welcome screen for EasyStart.

Another screen (Figure 2-2) appears, showing the Express Setup option already selected. (For this process you want to use WebRamp's Express Setup, which uses the default settings. Custom Setup allows you to set a static IP address.)

Figure 2-2   EasyStart setup options

4. Click **Next**.

    EasyStart checks your computer for a network card driver and for the presence of TCP/IP. It also sets the TCP/IP information so that your computer is ready to use with the WebRamp.

    If TCP/IP is not present on your computer, EasyStart tells you what you need to do to install it from your Windows 95, Windows 98, or Windows NT CD.

5. Click **Next** when EasyStart offers to install Netscape Communicator if you do not want to install a browser. If you need to install a browser, click **Install Browser.**

    Figure 2-3 shows the browser installation screen of EasyStart.

NOTE – Your computer must have a browser installed in order for you to set up the WebRamp.

Figure 2-3   Browser installation screen
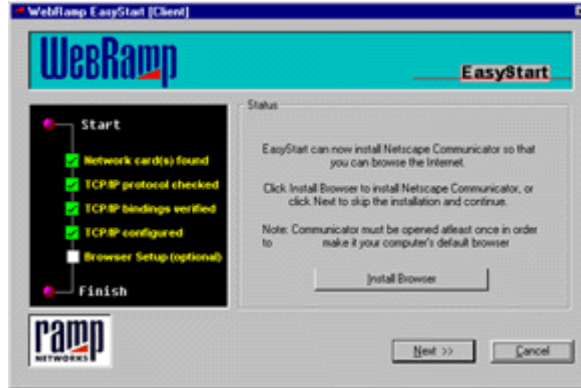
After clicking **Install Browser,** follow these steps:

• Follow the Communicator installation instructions.

  • Open Communicator at least once in order to use it as your default browser.

  • Close the browser.

• Click **Next** to continue using EasyStart.

• (Windows 95) If requested to by EasyStart, restart your computer.

The WebRamp DHCP Verifier screen, shown in Figure 2-4, now appears. The DHCP Verifier screen shows you a summary of your computer's TCP/IP settings.

Figure 2-4   WebRamp DHCP Verifier screen
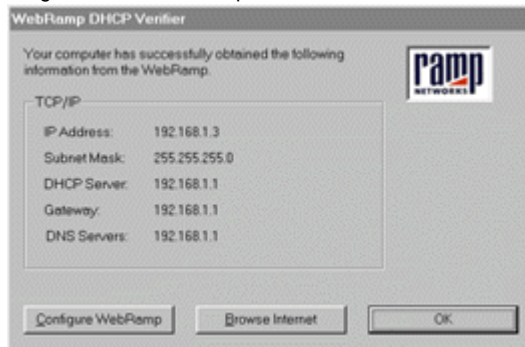
You're now ready to set up your WebRamp.

6. In the DHCP Verifier screen, click **Configure WebRamp.**

The browser opens and displays the WebRamp Setup page, which is shown in Figure 2-5 in "Setting Up the WebRamp," later in this chapter. This section provides details about adding information to the WebRamp Setup page.

Setting Up a Windows Computer Without EasyStart

Although Ramp Networks recommends that you use EasyStart, you can manually set the TCP/IP settings on your Windows computer so that it works with the WebRamp. You can do this if your WebRamp CD is unavailable or if EasyStart fails to detect your network driver. (If TCP/IP isn't present on your computer, you must install it from your Windows 95, Windows 98, or Windows NT CD.) Verify that the power to your WebRamp is on, and then follow these steps:

NOTE – Your computer must have a browser installed in order for you to set up the WebRamp. If you need a browser, Netscape Communicator is included on the WebRamp CD.

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1. From the Start menu, choose **Settings,** and then choose **Control Panel.**

2. In the Control Panel window, double-click **Network.**

3. In the Network window, click **TCP/IP,** and then click **Properties.**

4. In the TCP/IP Properties window, verify that the **Obtain an IP Address Automatically** radio button is selected. Click **OK.**

5. Open your browser and type **webramp.ramphome.com** or **192.168.1.1** in the URL line. The WebRamp Setup page, shown in Figure 2.5, appears.

Go to "Setting Up the WebRamp" later in this chapter for details about adding information to the WebRamp Setup page.

Setting Up a Macintosh Computer

You must manually configure the TCP/IP settings to use your Macintosh with the WebRamp. (If TCP/IP isn't present on your computer, you must install it from the Mac OS CD.) Verify that the power to your WebRamp is on, and then follow these steps:

NOTE – Your computer must have a browser installed in order for you set up the WebRamp. If you need a browser, Netscape Communicator is included on the WebRamp CD.

1. From the Apple menu, choose **Control Panel,** and then choose **TCP/IP** to open the TCP/IP control panel. (Depending on your version of system software, there may be some slight differences in the appearance of the TCP/IP control panel. The differences don't affect the setup process.)

2. From the Connect Via drop-down menu, choose **Ethernet.**

3. From the Configure drop-down menu, choose **Using DHCP Server.**

4. Click the Close box, and then click **Save.**

5. Restart the computer.

6. Open your browser and type **webramp.ramphome.com** or **192.168.1.1** in the URL line. The WebRamp Setup page, shown later in Figure 2.5, appears.

Go to "Setting Up the WebRamp" later in this chapter for details about adding information to the WebRamp Setup page.

Setting Up the WebRamp

Your computer is now set up and ready for use with the WebRamp. Follow these steps to set up your WebRamp to work with your computer.

1. In the WebRamp Setup page, shown in Figure 2-5, click **Express Internet.**

Figure 2-5   WebRamp Setup page

2. In the Express Internet page that appears, enter the following information in the fields provided:

    •   ISP Name. Entering the name of your ISP is for your reference only.

    •   ISP Phone Number. This is the access number for your ISP.

    •   User Name. This is the account name that your ISP provided for you.

    •   Password. This is the password you use when you connect to your ISP.

    •   Login script. Sometimes, an ISP requires the use of a login script in order to connect. If this is your situation, click **Yes.**

After you enter the information on this page, click **Next**.

The WebRamp attempts to connect to your ISP. (During this process, the WebRamp is negotiating the DNS address from your ISP. If your ISP doesn't provide the DNS address dynamically, you must obtain the address from the ISP

and then enter it in the DNS dialog box.) Upon connection, the WebRamp displays a message telling you it successfully connected. The WebRamp then takes you to the Registration Page.

NOTE – Be sure to register your WebRamp to get support from Ramp Networks. After you enter your registration information and click **Register** on this page, the WebRamp sends the information to Ramp Networks.

You are now finished setting up your WebRamp to work with your computer. Later, whenever you open the browser on this computer, the WebRamp automatically connects you to the Internet.

NOTE – If you need to get to the WebRamp Setup page at a later time, type **webramp.ramphome.com** or **192.168.1.1** in the URL line of your browser.

Adding Other Computers

With your WebRamp setup complete, you're ready to connect the rest of the computers in your office to use the WebRamp. Doing this allows all of the computers in your office to share the modem and the Internet account.

Just like the first computer, the rest of the computers need to have Ethernet network cards and TCP/IP installed. Here are the steps to set up each of the other computers:

1. With Figure 2-1 as your guide, connect each computer to the WebRamp using Ethernet cables.

2. Turn on the power to the computer.

3. (Windows) If you are adding a Windows computer to your network, follow the steps in "Setting Up a Windows Computer With EasyStart," given earlier in this chapter. When you complete the steps, restart the computer if requested by EasyStart, and then click **Browse Internet** in the DHCP Verifier screen that appears.

   (Macintosh) If you are adding a Macintosh computer to your network, follow steps 1-5 in "Setting Up a Macintosh Computer," given earlier in this chapter. When you complete the steps, open your browser.

The computer should connect to the Internet, through the WebRamp and the new network you just created.

NOTE – You don't need to do any additional configuration of the WebRamp when you add more computers.

Connecting Additional Hubs

Sometimes, the four Ethernet ports on your WebRamp are just not enough. If your office expands and you add more computers, you may need to add more ports to give those new computers Internet access.

To do this, you need to attach a standard 10BaseT Ethernet hub to the WebRamp. A *hub* is a device that provides additional Ethernet ports to your network. With these ports, you can attach even more computers to your network. Figure 2-6 shows how to connect the hub to one of the Ethernet ports on your WebRamp. Be sure to use port 1 of your hub for the connection.

Figure 2-6   Connecting a hub
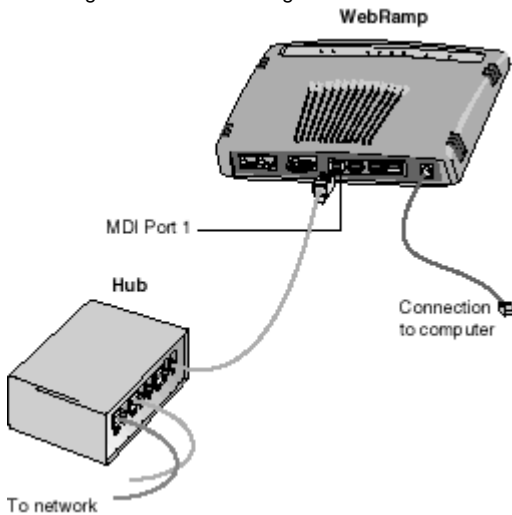
NOTE – If the connection is made correctly, the LED for Ethernet Port 1 on the WebRamp is lit.

Chapter

3

Adding the WebRamp to an Existing Network

This chapter describes how you can set up the WebRamp to work with your existing network for Internet access. If you are using the WebRamp to set up a new network, see Chapter 2, "Setting Up a New Network."

With this chapter you can provide all the computers on your network with Internet access using just one of the internal modems and one Internet account. For example, you may work in an office where all the computers are connected over the network to a server, but not everyone has Internet access. You can set up the WebRamp to work with your network, so that everyone can access the Internet from their own computer. (See "Chapter 1, Before You Begin," for a description of what you'll need before you can begin the installation.)

NOTE – To set up the WebRamp in an existing network, you should know how to obtain an unused IP address and your network's subnet mask values. If you don't, talk to a technical consultant before proceeding with the steps in this chapter.

This chapter tells you how to set up the WebRamp in the following types of networks:

• static IP address network

• dynamic IP address network

Basic Types of Networks

There are three basic types of networks:

- TCP/IP-based static IP address networks
- TCP/IP-based dynamic IP address networks
- non-TCP/IP networks, such as Novell-IPX networks

An **IP address** is a unique 32-bit number format for a specific TCP/IP computer on the Internet. A **static IP address** is one that has been permanently assigned for a specific computer on the network. A **dynamic IP address** is one that is assigned to the computer when it restarts: this means that a computer does not have a fixed address, but rather a server on the network assigns it an address when it requests one. The server uses the Dynamic Host Configuration Protocol (DHCP) to make the assignments, and is known as a **DHCP server**. A **non-TCP/IP network** is one in which the computers share file servers and printers using IPX or other protocols.

What does all this mean to you? To install the WebRamp, you need to know what kind of network you have. If you don't know, consult someone who can tell you what kind of network you have. On a non-TCP/IP network, your computers must have Ethernet network cards and TCP/IP installed. Then follow the installation instructions given either in Chapter 2 or on the Installation Card for setting up the WebRamp on a new network.

Setting Up the WebRamp in a Static IP Address Network

The process of setting up the WebRamp on a static network is easy, if you plan ahead. There are a few things to do before you start the setup:

- Obtain an unassigned IP address. (This address is for the WebRamp—because your computers were already part of your network, they have assigned static IP addresses.)

- Your static network uses a range of IP addresses, with each used address assigned to one of the computers or devices on the network. One easy way to find an unused address is to look at the address used by the last computer or device that was added to the network. The next address above that one is probably available for you to use.

- Obtain the values of your network's subnet mask.

- Disconnect one of the Windows or Macintosh computers already on the network.

Now, connect the computer to the Ethernet ports of your WebRamp, as shown in Figure 2-1. (See "Setting Up Your Hardware" in Chapter 2 for more information.)

Setting Up a Windows Computer in a Static IP Address Network Using EasyStart

You're ready to use the EasyStart application to set up your Windows computer in a static IP address network. EasyStart sets up your computer to work with the WebRamp, checking the network card driver and making sure that TCP/IP is present. If you do not have a browser, you can use EasyStart to install Netscape Communicator on your computer. (If the WebRamp CD is unavailable, see "Setting Up the WebRamp in a Static IP Address Network Without EasyStart," later in this chapter.

NOTE – You must exit all browsers before running EasyStart.

Here are the steps to use EasyStart:

1. Insert the WebRamp CD into the CD drive of your computer.

2. From the **Start** menu on the Windows desktop, choose **Run**.

3. In the Run dialog box, type

   *CD-drive-letter***:\wrsetup.exe**

   For example, if the CD drive in your computer is drive D, then you type this:

   d:\wrsetup.exe

   Click **EasyStart**. The Welcome screen for EasyStart appears, showing the Express Setup option already selected.

4. Choose the **Custom Setup** option and click **Next**.

   EasyStart checks your computer for a network card driver and for the presence of TCP/IP. It also sets the TCP/IP information, checking and verifying that your computer is ready to use with the WebRamp. If TCP/IP is not present on your computer, EasyStart tells you what you need to do to install it from your Windows 95, Windows 98, or Windows NT CD.

As shown in Figure 3-1, a screen appears, asking you to choose the IP Address assignment mode you want to use with your network.

Figure 3-1   Options for assigning IP addresses
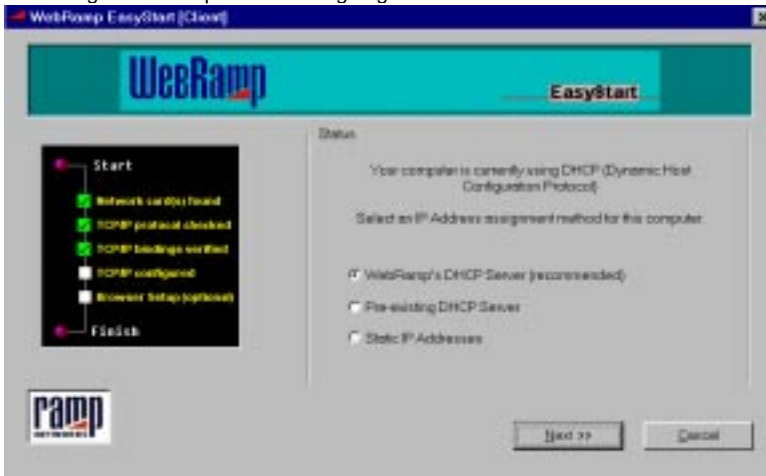
5. Choose **Static IP Addresses** and click **Next.**

    EasyStart now attempts to contact the WebRamp.

6. After ensuring that the computer is connected to the WebRamp and that the WebRamp is turned on, click **Set IP Address**.

    Now EasyStart asks you to set the IP address of the WebRamp, as shown in Figure 3-2.

Figure 3-2   Setting the IP address in EasyStart

7. Enter the unused IP address that you chose earlier (see "Setting Up the WebRamp in a Static IP Address Network" earlier in this chapter), as well as the values of your network's subnet mask.

    This address becomes the WebRamp's LAN IP address, and acts as your network's gateway address and Domain Name System (DNS) address. A screen appears, telling you that EasyStart has successfully set the IP address for your WebRamp.

8. Click **Next.**

9. If you do not want to install a browser, click **Next** when EasyStart offers to install Netscape Communicator. If you need to install a browser, click **Install Browser.**

Refer to Figure 2-3 in Chapter 2 to see the browser installation screen of EasyStart. Follow these steps if you need to install a browser:

- Follow the Communicator installation instructions.
- Open Communicator at least once in order to use it as your default browser.
- Close the browser.

EasyStart closes.

Setting the Gateway and DNS Addresses

The next step in the setup process is to set the gateway address and the Domain Name System (DNS) address of your computer. You use the WebRamp's IP address for both settings. Here are the steps to do this:

1. From the Start menu on the Windows 95, Windows 98, or Windows NT desktop, choose **Settings,** then **Control Panel,** and then double-click the **Network** icon.

2. In the Network window, click the **Configuration tab,** choose **TCP/IP,** and then click the **Properties** button. The TCP/IP Properties window appears.

NOTE – For Windows users, the next step may vary according to the Windows software and setup you are using.

---

3. Choose the following tabs and change these settings:

- **Gateway.** Enter the WebRamp's IP address as the gateway address. (Macintosh users enter this information in the Router Address field.)

- **DNS Configuration.** Choose **Enable DNS**, and enter the WebRamp's IP address as the DNS address. (Macintosh users enter this information in the Name Server Address field.)

4. Click **OK** in the TCP/IP Properties window, and click **OK** in the Network window.

   Click the **Close** box and then click **Save.**

5. Restart your computer.

Your computer is now set up and you are ready to set up the WebRamp.

Setting Up the WebRamp in a Static IP Address Network Without EasyStart

Ramp Networks recommends that you use EasyStart to set up your WebRamp and Windows computer in a static IP address network. However, you can complete the process manually by using the WebRamp Finder utility on the WebRamp CD. The WebRamp comes with a default IP address of 192.168.1.1. To change the IP address of the WebRamp, you can use any computer on the network. Follow these steps:

NOTE – Although the steps in this section tell how to set up the WebRamp in a static IP address network with a Windows computer, the process is similar for Macintosh computers.

---

1. Insert the WebRamp CD in the CD drive of one of the Windows computers on the network.

2. Open the WebRamp Finder utility.

   From the Start menu of the Windows desktop, choose **Run**. In the Run dialog box, type

   *CD-drive-letter***:\util\wrfinder.exe**

   For example, if the CD drive is drive D, you type

   d:\util\wrfinder.exe

The WebRamp Finder window opens.

3. From the Configure menu, choose **Set IP Address**.

Figure 3-3 shows the screen that appears.

Figure 3-3   Setting the IP address in WebRamp Finder

Set WebRamp IP Address

IP Address: `0` `0` `0` `0`

Subnet Mask: `255` `0` `0` `0`

If the WebRamp default Administrative password has been changed, please enter it below, otherwise leave it blank.

Password:

OK   **Cancel**
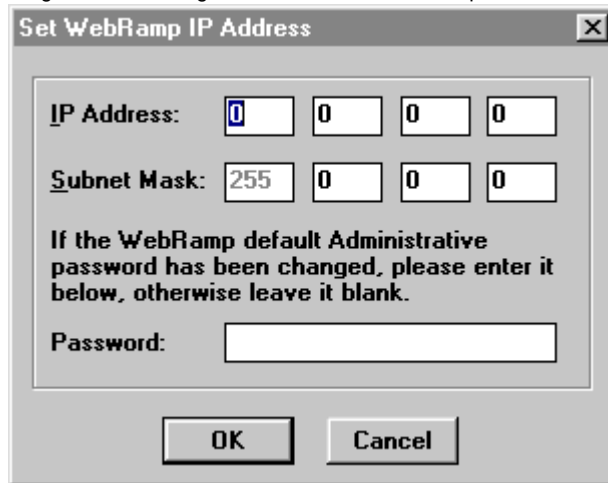
Enter the unused IP address you chose previously (see "Setting Up the WebRamp in a Static IP Address Network," earlier in this chapter), as well as the values of your network's subnet mask.

As shown in Figure 3-4, a message appears, telling you that WebRamp Finder has set the IP address of the WebRamp.

Figure 3-4   After WebRamp Finder sets the IP address

Set IP Address

IP Address successfully set.

OK

4. Click OK and then set the Gateway and DNS addresses. See "Setting the Gateway and DNS Addresses" earlier in this chapter.

Using the New IP Address to Set Up the WebRamp

With the new IP address, you can set up your WebRamp to work on your static network. Here are the steps:

1. Open the browser.

2. In the URL line, enter the WebRamp's IP address. For example, if you assigned the IP address of 204.25.1.2, enter that address in the Location line or URL line of your browser. The WebRamp Setup page appears.

3. Click **Express Internet.** The Express Internet page then appears.

4. In the fields provided on the Express Internet page, enter the following information:

   • ISP Name. Entering the name of your ISP is for your reference only.

   • ISP Phone Number. This is the access number for your ISP.

   • User Name. This is the account name that your ISP provided for you.

   • Password. This is the password you use when you connect to your ISP.

   • Login script. Sometimes, an ISP requires the use of a login script in order to connect. Click the radio button that applies to your situation.

   After you enter the information on this page, click **Next**.

The WebRamp attempts to contact your ISP. Upon connection, the WebRamp displays a message telling you it successfully connected. The WebRamp then takes you to the Registration Page.

NOTE – Be sure to register your WebRamp to get support from Ramp Networks. After you enter your registration information and click **Register** on this page, the WebRamp sends the information to Ramp Networks.

You are now finished with setting up your WebRamp to work with your computer. Later, whenever you open the browser on this computer, the WebRamp automatically connects you to the Internet. You're now ready to connect the WebRamp to your static network.

Completing the Static IP Address Network With Your WebRamp

Because you are using static IP addresses, you must also disable the DHCP Server. To disable the DHCP Server, follow these steps:

1. From the WebRamp Setup page, click **Advanced.**

2. From the Advanced Options page, click **Local Configuration.**

3. From the Local Configuration page, click **DHCP Server.**

4. Click the **Disable** button to disable the DHCP Server.

You can now add the WebRamp to the rest of the network by following these steps:

1. Connect Ethernet Port 1 on the WebRamp to a spare port on the hub of your network.

NOTE – If the connection is made correctly, the LED for Ethernet Port 1 on the WebRamp is lit.

---

2. For each of the additional computers in your network, follow the steps described in "Setting the Gateway and DNS Addresses" earlier in this chapter.

3. On each additional computer, open the browser to test the connection to the Internet.

    You can enter any URL (for example, **www.rampnet.com**) in the browser to verify you have access to the Internet. If you need to install a browser, the WebRamp CD provides Netscape Communicator for installation.

The WebRamp is now completely installed on your static IP address network.

Setting Up the WebRamp in a Dynamic IP Address Network

As described earlier, in a dynamic IP address network a server assigns addresses to devices on the network *as needed*. A server using the Dynamic Host Configuration Protocol (DHCP) makes the address assignments whenever the computer requests an address, usually at startup.

The WebRamp has a built-in DHCP server. Ramp Networks recommends using the DHCP server in the WebRamp because using it makes setup for Internet access fast and easy. To use the WebRamp's DHCP server instead of the one already on your network, disable the network's DHCP server and follow the instructions in "Setting Up the WebRamp in a New LAN," earlier in this chapter. (To disable your DHCP server, see the server's documentation for more information.) If you decide to use the existing DHCP server in your network, you may be concerned that introducing the WebRamp to your network might cause problems. To avoid problems, be sure to disable the WebRamp's DHCP server. See "DHCP Server Configuration" in Chapter 7 for information about disabling the WebRamp's DHCP server.

This section describes all of the steps to set up the WebRamp in a dynamic network, while continuing to use your existing DHCP server. The setup process essentially covers these simple tasks:

• assigning an IP address for the WebRamp

• telling the DHCP server to "protect" the address, so that the server doesn't reassign it to another device on the network later

• setting up the WebRamp to work on the network

After you finish the setup process, your network continues to use your existing DHCP server to assign addresses dynamically.

NOTE – To do the steps described in this section, you should have experience working with your DHCP server. If not, consult the documentation that came with your server.

Setting Up the Existing DHCP Server

To work with the WebRamp, the DHCP server needs to know what address to use for the WebRamp and that it should "protect" that address, making certain that the address is not available for reassigning later. On the DHCP server for your network, follow these steps:

1. Open the configuration area of your server.

2. Locate an unassigned address and exclude it from availability.

3. Use this address as the setting for the gateway and DNS (Domain Name Server). The WebRamp will be the gateway and DNS server.

4. Restart all of the computers connected to the network.

The DHCP server is now set up to work with your WebRamp.

Setting the WebRamp's IP Address Using WebRamp Finder

To change the IP address of the WebRamp, you can use any computer on the network. Follow these steps:

1. Insert the WebRamp CD in the CD drive of the computer.

2. Open the WebRamp Finder utility.

   From the Start menu of the Windows desktop, choose **Run**. In the Run dialog box, type

   CD-drive-letter:**\util\wrfinder.exe**

   For example, if the CD drive is drive D, you type

   d:\util\wrfinder.exe

   The WebRamp Finder window opens.

3. From the Configure menu, choose **Set IP Address**.

   Figure 3-5 shows the screen that appears.

Figure 3-5   Setting the IP address in WebRamp Finder

Enter the protected address you used for the gateway and DNS settings.

As shown in Figure 3-6, a message appears, telling you that WebRamp Finder has set the IP address of the WebRamp.

Figure 3-6   After WebRamp Finder sets the IP address

You are ready to set up the WebRamp to work with your dynamic network.

Connecting the WebRamp to the Rest of the Network

You are ready to connect the WebRamp to the network hub. Here are the steps:

1. Connect an Ethernet cable to an open port on the network hub.

2. Attach the other end of the cable to port 1 on the WebRamp.

NOTE – If the connection is made correctly, the LED for Ethernet Port 1 on the
WebRamp is lit.

Figure 2-6, shown in Chapter 2, shows how to connect the cables to the
WebRamp and the hub.

Setting Up the WebRamp for Internet Access

You can use the browser on the computer to set up the WebRamp to work on
your dynamic network.

NOTE – If there is no browser on the computer, you can install a copy of Netscape
Communicator from the WebRamp CD.

Here are the steps to connect the WebRamp to your ISP account:

1. Open the browser.

2. In the URL line, enter the IP address that you assigned to the WebRamp. For
   example, if you assigned the IP address of 204.25.1.2, enter that address in
   the Location line or URL line of your browser. The WebRamp Setup page
   appears.

3. Click **Express Internet.**

   The Express Internet page then appears.

4. In the fields provided on the Express Internet page, enter the following
   information:

   • ISP Name. Entering the name of your ISP is for your reference only.

   • ISP Phone Number. This is the access number for your ISP.

   • User Name. This is the account name that your ISP provided for you.

   • Password. This is the password you use when you connect to your ISP.

   • Login script. Sometimes, an ISP requires the use of a login script in order
     to connect. Click the radio button that applies to your situation.

   After you enter the information on this page, click **Next**.

The WebRamp attempts to contact your ISP. Upon connection, the WebRamp displays a message telling you it successfully connected. The WebRamp then takes you to the Registration Page.

NOTE – Be sure to register your WebRamp to get support from Ramp Networks. On the Registration page, you can enter registration information. After you click **Register** on this page, the WebRamp sends the information to Ramp Networks.

You have now completed the setup of your WebRamp on your dynamic network. Later if you open the browser on any computer on the network, the WebRamp automatically connects you to the Internet.

4

Setting Up an Additional Modem for Internet Access

This chapter shows you how to set up an additional modem to the WebRamp to increase the speed of your Internet access. The WebRamp 200i comes with one internal modem, and has a serial port so that you can add an external modem. When you follow the instructions for setting up another modem given in this chapter, you are building on the network setup you created earlier in Chapter 2 or Chapter 3. After providing an overview of how you can use another modem in your office, this chapter shows you how to add the modem, select the modem-bonding method, and then decide on how the WebRamp uses both modems.

The WebRamp provides the ability to "bond" the modems: **bonding** is the technique of combining the modem lines into a single, high-speed line. With another modem, you can browse on the Internet up to two times faster—which is important if you are viewing web pages with lots of graphics or if several users want to access the Internet.

NOTE – For simplicity, this reference and the user interface of the WebRamp use the term *bonding* to mean the process of "combining" the modems and the phone lines. Thus, "bonding" here applies to both Multilink PPP and COLT, two technologies that are defined later in this chapter.

Think of a highway and cars in traffic. Using one WebRamp and one modem is similar to a single-lane highway. As long as there isn't much traffic, the small size of the road is fine. However, as traffic increases, either the road has to be expanded to support the additional cars, or there needs to be alternate routes for the traffic go through. You can increase your Internet access capabilities in

similar ways. Like adding lanes to a road, you can add an external modem to your WebRamp and connect both modems to a single ISP account that bonds them together. Or, like establishing alternate routes to avoid traffic jams, you can add another modem, but use an additional ISP account.

You can use the additional modem either dynamically or simultaneously. Using the additional modem dynamically means that as the demand for Internet access increases, the WebRamp uses the additional modem as necessary. Using the modems simultaneously means that the WebRamp always uses both modems—regardless of demand—for Internet access.

Deciding to Add Another Modem

Imagine that almost everyone in your company is going to the Internet now through the WebRamp. When they're all on the Internet downloading files or viewing graphics-filled web sites, your access may be slow. What can you do to speed up your Internet access easily? Do you have to get an ISDN line or special equipment?

With the WebRamp, you can use up to two modems and use the analog phone technology you're already used to. The WebRamp 200i includes one internal modem, and you can add an external modem for even greater capacity. More modems mean more speed: each modem contributes its line to the overall Internet access capacity of the WebRamp. Figure 4-1 shows three examples of using the WebRamp for Internet access.

Figure 4-1   Three possible examples of Internet access
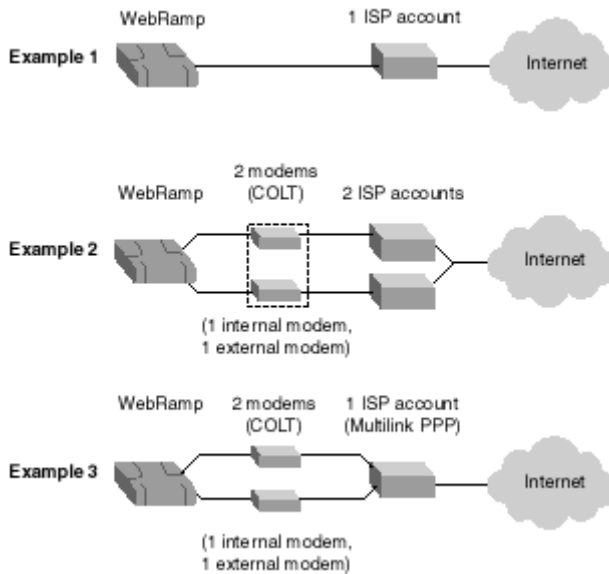
Figure 4-1 shows the following examples:

- The first example shows the WebRamp connected to the Internet using the internal modem and one Internet account. This is the setup you had when you first installed the WebRamp to your computer.

- The second example shows the WebRamp connected to the Internet using the internal modem, an external modem, and two ISP accounts. The modems in this scenario are combined using Connection Optimized Link Technology (COLT), a proprietary technology of Ramp Networks.

- The third example shows the WebRamp connected to the Internet using the internal modem, an external modem, and one special ISP account that supports Multilink PPP, a modem-bonding method. Contact your ISP to see if it supports Multilink PPP.

These are examples only. There are other variations on these examples, depending on how many modems and ISP accounts you have. The following section describes the two modem-bonding methods.

Modem Bonding

When you add another modem, you need to decide how the WebRamp will bond the modems together. Bonding combines the modem lines into a single, high-speed line. The WebRamp provides two methods of modem bonding:

• Using one Internet account for both modems, which is a method called Multilink Point-to-Point Protocol (also known as Multilink PPP)

• Using a separate Internet account for each modem, which is a method called Connection Optimized Link Technology (also known as COLT)

NOTE – For simplicity, this reference and the user interface of the WebRamp use the term *bonding* to mean the process of "combining" the modems and the phone lines. Thus, "bonding" here applies to both Multilink PPP and COLT, two technologies that are defined later in this chapter.

Simply put, both of these methods combine your modems and phone lines together, increasing the speed and capacity of your network's Internet access. You don't need to worry about the technical details of how each method works, but you do need to consider some factors as you decide which method to use.

Using Modems Bonded to One Internet Account

An industry standard, **Multilink PPP** is a modem-bonding technique that distributes a single Internet account across multiple modems. Both modem connections are associated to the same IP address. Because you use the same IP address, you only need one Internet account.

However, not all ISPs support this method on analog modems. So, before you can use Multilink PPP, you need to find out if your ISP supports it.

To use Multilink PPP, make certain you have the following items, and then follow the instructions provided in "Adding an External Modem" in this chapter:

• a phone line for each modem

• modem cables

• Multilink PPP account for analog modems from your ISP

• an external modem

If your ISP does not support Multilink PPP, you should use COLT. See "Using a Separate Account for Each Modem" in this chapter for more information on this method.

Using a Separate Account for Each Modem

Ramp Networks developed and patented a method called **COLT** that uses a separate Internet account for each modem. You can use this method with any ISP, as long as you have separate accounts. You can even use different ISPs or modems of different speeds and still use the modems together. To the users in your office, there will be no discernible difference.

This method provides a lot of flexibility: for example, if two of the computers in your office had Internet accounts, you can continue to use both of them. You only need to attach the modems to the WebRamp and make the appropriate setting choices to bond the modems and the Internet accounts.

To use separate accounts for each modem, make certain you have the following items and then follow the instructions provided in "Adding an External Modem" in this chapter:

- modem cables

- a separate Internet account for each modem

- an external modem

If you decide to use only one Internet account, see "Using Modems Bonded to One Internet Account" in this chapter for more information.

Deciding Between Simultaneous or Dynamic Modem Use

Before you add a modem and bond the modems, you need to decide how the WebRamp will use them. You have two options, which work with both bonding methods:

- simultaneous, where the WebRamp uses both modem lines, regardless of demand

- dynamic, where the WebRamp only engages the modem line it needs, and brings up or brings down the other line when Internet access demand increases or decreases

Think back to the highway example given in the beginning of this chapter. Simultaneous use of the modems is similar to having multiple lanes on the highway. You can use any of them, but all lanes are always available. Dynamic use of the modems means that the WebRamp is like a traffic officer, directing traffic to other routes when the main highway is congested.

Simultaneous use provides the fastest possible access to the Internet when there are few users. The modems are bonded together, so large files can speed through. Dynamic use means that the WebRamp only uses the modems and Internet accounts according to need. When there is little demand, the WebRamp may only use one modem and not use the other.

Why does the WebRamp give you a choice? You need to consider how the users in your office use the Internet and how much you spend on local phone calls. Are they accessing the Internet constantly, or do they use it occasionally? Constant use probably requires using the modems simultaneously. Occasional use, where users may go to graphics-intensive sites sometimes, probably means you should choose dynamic use of the modems.

Adding an External Modem

Here are the steps to an external modem to your WebRamp. You should have set up your WebRamp and your network as described in Chapter 2 or Chapter 3. See Chapter 2, "Setting Up a New Network**"** and Chapter 3, "Adding the WebRamp to an Existing Network" for more information.

NOTE – Some Macintosh modems require a cable adapter to connect to the WebRamp. If you need an adapter, contact the Technical Support group at Ramp Networks at (408)988-5353.

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1. Connect the modem to the Modem 2 port.

2. With your browser open to the WebRamp Setup Page, click **Add Modem**.

   The Add Modem page appears, presenting the current configuration. The current configured connections are shown in the pull-down menu.

3. From the menu, select the Internet connection and then click **Next**.

   The Modem Bonding Options page appears.

4. Select the type of modem bonding you want the WebRamp to use. (See "Modem Bonding" in this chapter for more information.)

   • **Use a Separate Internet Account for Each Modem**

     This option uses the COLT technology, which requires that each modem uses a separate Internet account.

   • **Use the Same Internet Account for All Modems**

This option uses the Multilink PPP technology. Remember that, to use the same Internet account for both modems, your ISP must support Multilink PPP.

5. Select the method to bring up a modem connection:

    •   **Dynamically.** This method causes the WebRamp to activate any additional modems as the demand for Internet access increases.

    •   **Simultaneously.** This method causes the WebRamp to always use both the modems at the same time, regardless of the number of users accessing the Internet.

    Click **Next**.

6. From the pull-down menu on the Modem Selection page, select the modem you want to add and click **Next**.

7. On the Modem Configuration page, provide the name of the modem manufacturer and the modem speed. Then click **Next**.

    If your modem is not listed in the menu, choose **Other** and, if necessary, enter the modem initialization string provided by your modem manufacturer.

8. Next, depending on the modem-bonding method you selected, do the following.

    •   If you selected Dynamically: In the Account Information page, provide the ISP account information.

    •   If you selected Simultaneously: In the Multilink Configuration page, confirm the phone number of the ISP account. Do not change this number unless your ISP has given you a different number for your second modem.

9. Click **Next**.

    After the WebRamp sets up the additional modem, you see a screen telling you that the modem was added successfully.

NOTE – Chapter 7, "Using the WebRamp's Advanced Options" provides additional information on the advanced options with your modem-bonding choice. For example, you can fine-tune the settings that the WebRamp uses to dynamically bring up the modems. Be aware, though, that the use of these advanced options depends greatly on your particular situation.

Chapter

5

WebRamp Security Features

This chapter provides an overview of the WebRamp's security features, and discusses how you can use those features to protect your network.

Protecting Your WebRamp

If you configured and are responsible for maintaining the integrity of your WebRamp's setup information, you should set up password protection. One of the security features that the WebRamp provides is the password feature. By using a password, you prevent unauthorized access to the WebRamp setup information, specifically the WebRamp's graphical user interface and the Command Line Interface.

In the Local Configuration page, click **Administrative Password** to get to the Password Configuration page. There, you can change the default password that comes with the WebRamp to one of your own. The WebRamp's default password is **trancell.** If you do change this password, store the new password in a safe place and then click **Apply.**

NOTE – A password must contain a minimum of 8 characters and a maximum of 15.

If you forget or lose your password, you can use the configuration Reset button located on the back of the WebRamp to reset the WebRamp to its default values.

WARNING – When you press the configuration Reset button, all the configuration parameters are reset to the original default values.

Once the password is changed, you must enter the new password to make any changes to the WebRamp's configuration.

NOTE – The default user name is **wradmin,** which you cannot change.

If you are connecting to the WebRamp using Telnet or from the Internet, the administrative user login name is **wradmin,** and the default password is **trancell.**

For added security, you can block all outside access to your WebRamp's configuration with WebRamp Access Controls. You can also block all incoming calls to prevent remote users from dialing in to the WebRamp. See "Access Controls" in Chapter 6 for more information restricting WAN access to your WebRamp.

Protecting Your LAN From WAN Computers

The WebRamp provides several ways for you to protect your network from unauthorized access from outside sources.

Built-In Security

When you use the Internet connection on the WebRamp, there is a built-in security feature that protects your computers on the local LAN. When the WebRamp is connected to the Internet, it drops, by default, all connection attempts from computers on the Internet to the WebRamp's LAN. The WebRamp only allows data associated with an existing connection through the WebRamp to pass from the Internet to the LAN. An example of data that the WebRamp would allow would be a reply to a Web page request from a computer on the WebRamp's LAN. So if you want to make a computer on the LAN accessible from the Internet, you must configure the Local Servers, Internet Applications, or Visible Computers features, but you should consider the security implications when doing so. Local servers allow access from the Internet to one computer for one service, for example, a Web server. A visible computer, which is less secure, allows access from the Internet to all services available on one computer. For more information, see "Local Servers," and "Internet Applications" in Chapter 7. Also see "Visible Computers and Local Servers" in this chapter and "Setting Up Visible Computers" in Chapter 7.

You can also limit all WAN activity by enabling or disabling a particular connection and using access controls.

Filters

The WebRamp provides a number of filters that you can use to determine what information can be sent or received on your network. Each filter selectively screens out information, protecting your LAN and preventing certain local information from entering and leaving your LAN through the WebRamp.

The WebRamp provides IP filters. See "Filters" in Chapter 7 for more information about setting filter parameters.

Restricting Access to the WAN

In addition to using filters, you can use the User Access Controls feature to limit Internet access for the users on your LAN. (See "Filters" in this chapter for more information.) For example, say your business requires a high level of confidentiality. You need Internet access to deal with customers, but most of your employees don't. With access controls, you can selectively choose which

employees have Internet access. While this is more a management than a security tool, it does help you set some controls for how information travels outside your LAN.

Additional Security Considerations

When you set up your WebRamp and network, there are a couple of other things to think about if you are concerned with security.

Visible Computers and Local Servers

A visible computer is a computer on your network that's visible to the Internet. When you set up a visible computer on your LAN, Internet traffic uses the WebRamp's local WAN IP address as its destination. Any new requests from the Internet are forwarded by the WebRamp to the visible computer, making it vulnerable to unauthorized access. However, the other computers on your LAN are not visible to the Internet and are protected by the WebRamp's built-in security. See "Built-In Security" for more information.

NOTE – Because of the potential security risk associated with visible computers, you should not keep confidential or company-sensitive data on a visible computer. Also avoid running a server, such as a Telnet server, that might compromise the LAN.

A local server is a computer on your network that you dedicate to manage certain tasks, for example, a mail server. A local server differs from a visible computer in that when you set up a local server on your LAN, you choose the type of incoming traffic that server will accept from the Internet. For example, if you set up a mail server, the WebRamp accepts and diverts all e-mail requests to that server. Other incoming Internet traffic is rejected. A local server is vulnerable to unauthorized access because it allows external Internet users to access a service running on the LAN.

Password Protection

As discussed in previous sections, the WebRamp's Administrative Password feature allows you to change the WebRamp's default password, and Ramp Networks strongly recommends that you do so.

When you change the password, you can access the WebRamp's setup information from any computer. However, the time-out interval for that IP address is five minutes. Your access, from that IP address, will expire after five minutes of inactivity.

Chapter

6

Access Controls

Access controls provide a way for you to limit and manage access to the Internet, to your LAN, and to your WebRamp. With the WebRamp's access controls, you can decide which Internet features the users on your LAN can access and whether to allow WAN access to the WebRamp.

This chapter provides overview information about how access controls are implemented with the WebRamp. This chapter also provides examples that show how to set both WebRamp and user access controls. Detailed information about the user interface is provided in the section "Access Controls" in Chapter 7.

Managing User Access to the Internet

When you first set up your network and Internet access with the WebRamp, everyone connected to the network received access to all the available Internet resources. With user access controls, you can decide which Internet resources the users on your LAN can access.

On the User Access Controls page, you can enable and disable user access controls, view the users connected to your network, and set and modify the Internet access permissions on an individual user basis.

Identifying Users on the LAN

The WebRamp has an internal table called the *User Access Controls* table. All users, up to 75, currently connected to the LAN are listed in this table, which provides the following information:

- index (a number identifying a user in the table)

- user name

- IP address

- MAC address

- allowed applications

The WebRamp searches for and identifies users on the LAN at the Ethernet level, by MAC address. Users currently connected to the LAN are listed in the table, which is sorted by IP address. You can modify an entry to give it a unique user name, or you can identify users by IP address.

Applying User Access Controls

When you first enable user access controls, all Internet access for all users is blocked. You must choose which resources to make accessible.

User access controls allow you to specify access for the following Internet resources:

- Web

- E-mail

- Telnet

- Other (includes real audio, chat, and so on)

See "Managing Access to the WebRamp" in this chapter for more information.

NOTE – You should allow access to all applications for visible computers and local servers.

Modifying User Access

You can make modifications to individuals or to a range of users. For example, perhaps you want to provide e-mail and Web access to the administrative staff in your office. You simply enter the index numbers for the range of IP addresses for those users and choose the applications allowed.

NOTE – When you modify a user's Internet access, you identify that user by IP address. However, all changes are bound to the user by the MAC address, so even if the IP address changes, the access controls you applied remain with that user.

Setting Default User Access

You can use access controls to set default settings for unlisted users, that is, users not currently connected to your LAN that don't appear in the User Access Controls table. For example, you might use temporary help who need to connect to your network periodically only to check e-mail. You can set your default access controls so that all unlisted users have access to e-mail only.

Adding and Deleting Users

The information in the User Access Controls table is updated automatically each time you click Refresh on the User Access Controls page. However, if you have hosts behind other LAN routers, that information won't appear in the table because the refresh doesn't cross routers. You must add those users to the table manually if you want to apply access controls. To add users to the table manually, you enter the MAC address of the router and then the IP address of the computer.

You must also manually delete information about hosts behind other LAN routers, because that information remains in the table even when users are no longer connected to the network.

You can also delete users if you exceed the limit of 75 that can be listed in the table. That user then becomes unlisted and has the same access controls as other unlisted users.

Managing Access to the WebRamp

The WebRamp Access Controls feature allows you to manage calls to and from your network and restrict access to the WebRamp's configuration information from outside your LAN.

Incoming and Outgoing Calls

By default, the WebRamp accepts incoming and allows outgoing calls. If you want to change these settings, you can do so by deselecting the appropriate checkbox or checkboxes on the WebRamp Access Controls page. Blocking incoming calls prevents a remote user or remote router from dialing in to the WebRamp. When you block outgoing calls, the WebRamp cannot dial out to the Internet or a remote location.

Remote Configuration

By default, the WebRamp allows you to access the configuration information remotely through Telnet or a Web browser. If you want to block remote access to the WebRamp's configuration information, you can do so by deselecting the appropriate checkbox or checkboxes on the WebRamp Access Controls page.

Monitoring Access to the WebRamp

The WebRamp keeps track of access violation information with the Log Messages feature. If users try to access an application for which they don't have permissions, access is denied and a message appears in the Event Log on the Diagnostics page. You must enable the Log Messages feature to begin tracking access violations.

Setting User Access Controls

This section provides a sample that shows you the steps for setting user access controls.

Follow these steps:

1. From any page, click **Advanced** to reach the Advanced Options page.

2. On the Advanced Options page, click **Local Configuration.**

3. On the Local Configuration page, click **Access Controls.**

4. On the Access Controls page click **User Access Controls.**

5. On the User Access Controls page, click **Enable.**

6. Click **Refresh** to view the users currently connected to your LAN.

NOTE – If there are a lot of users connected to your LAN, it may take a few seconds for the WebRamp to update the information in the table. This happens because the WebRamp checks the entire IP address range for new computers on the LAN.

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7. Click **Modify Range** to modify Internet access for a range of users.

8. Enter the starting and ending indexes for the range of users.

9. Click **All Applications** to allow access to all Internet resources for each user in that range, and then click **Apply.**

10. Click **Modify User** to modify the Internet access for an existing user.

11. On the Modify a User Entry page, choose the user to modify and then click **Apply.**

12. Enter the information you wish to change about the user and then click **Apply.**

The information in the table is updated automatically.

Setting WebRamp Access Controls

This section provides a sample that shows you the steps for setting WebRamp access controls.

Follow these steps to change the default WebRamp access control settings:

1. From any page, click **Advanced** to reach the Advanced Options page.

2. On the Advanced Options page, click **Local Configuration.**

3. On the Local Configuration page, click **Access Controls.**

4. On the Access Controls page, click **WebRamp Access Controls.**

On the WebRamp Access Controls page, there are four checkboxes already selected by default.

- Allow Incoming Calls
- Allow Outgoing Calls
- Allow Telnet Access to the WebRamp Configuration From the WAN
- Allow Web Access to the WebRamp Configuration From the WAN

Click a checkbox to deselect any of the default settings.

5. Deselect **Allow Incoming Calls** to prevent incoming calls to the WebRamp.

6. Deselect **Allow Telnet Access to the WebRamp Configuration From the WAN** to prevent remote Telnet access to the WebRamp's configuration information.

7. Click **Apply.**

Chapter

7

Using the WebRamp's Advanced Options

This chapter describes the WebRamp's advanced features, which are available when you click the Advanced button on the WebRamp Setup Page. If you are unfamiliar with the advanced concepts presented in this chapter, work with a technical consultant who can help you decide which features and settings you should use.

Figure 7-1 shows the Advanced Options page. This page provides an overview of your connections, showing which modems you are using and which connections are enabled. Each of the items on the page is described in more detail later in this chapter.

Figure 7-1 Advanced Options
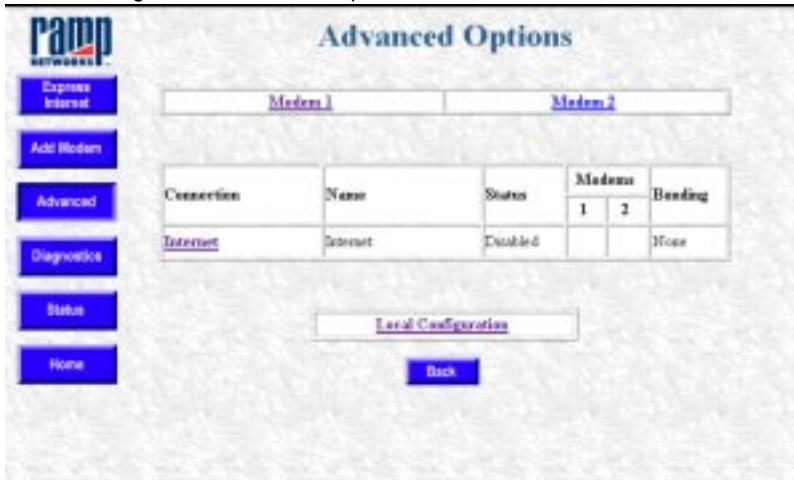
Fine-Tuning Your WebRamp With Advanced Options

Through the WebRamp's advanced options, you can fine-tune its setup and connections. For example, all of the following advanced features allow you or a technical consultant to modify your WebRamp and its setup:

• Modem Configuration

• Internet Connection

• Local Configuration

Each of these pages is available from the Advanced Options page and are described completely later in this chapter. Local Configuration, in particular, provides other controls for making local servers or computers accessible to outside users, assigning addresses to computers on your LAN, and using domain names instead of IP addresses. This section briefly describes where these controls are; see "Modem Configuration," "Internet Connection," and "Local Configuration," in this chapter for more information about all of the advanced options.

Making Parts of Your LAN Available to Outside Users

The WebRamp allows you to provide outside users limited access to your LAN. For example, you may want to set up a web server or mail server that users or customers can access, or use a client application such as a game that requires special control connections and data connections, or create "visible" computers that use interactive applications that are completely accessible from the Internet. Before you can provide access, you need to set up a single static IP address, a process that is described next.

Setting Up a Single Static IP Address

There are two parts to providing access to parts of your LAN, such as to a specific server. First, you set up a static IP address for the WebRamp's WAN address. Then you configure the IP address of the WebRamp's server. See "Local Servers" later in this chapter for more information. The WebRamp, in turn, transparently associates this static IP address to the server's IP address. Check to see if your ISP can provide a single static IP address. You can use the WebRamp's advanced options to set the IP address.

See "Setting Up the WebRamp in a Static IP Address Network Without EasyStart" in Chapter 3 for the steps to set up the static IP address using WebRamp Finder.

Here are the steps to set up the static IP address through the Advanced Options:

1. In the WebRamp Setup Page, click **Advanced**.

2. In the Advanced Options page, click **Internet**.

3. In the Internet Connection page, click **ISP Options**.

4. In the ISP Options page, click **IP Configuration**.

5. In the ISP IP Configuration page, click **Static** and enter the IP address that your ISP provided.

    This IP address becomes the static IP address.

NOTE – If you have more than one Internet account and used COLT to bond the connections, then you need to enter a static IP address for each connection. To check the WebRamp's local WAN address, in the WebRamp Setup Page, click the **Status** button. On the WebRamp Status page, the address appears next to each connection.

Setting Up Local Servers

As your business grows, you may want to host a web server or a mail server on your LAN. These servers are called **local servers**, and appear to computers on the Internet as if they have the same IP address as your WebRamp's WAN IP address. You must get a static IP address from your ISP for this process. (See "Setting Up a Single Static IP Address" in this chapter for more information on this process.) When your LAN uses local servers, the WebRamp forwards requests from the Internet to the correct local server.

You can only use the Local Servers feature with the modem configured for the ISP 1 account. A benefit of the Local Servers feature is that you can use more than one computer as local servers on your LAN. However, each server must be a different type—such as a web server, a mail server, and so on.

Here is an example of how to set up a local server. If your ISP gives you *205.172.1.7* as a static IP address and you want to set up a web server on the computer that uses the IP address *192.168.1.2,* here are the steps to set up the web server:

1. In the WebRamp Setup page, click **Advanced**.

2. Click **Local Configuration**, and then click **Applications**.

3. Click **Local Servers**, and then click **Enable**.

4. Click **Add**.

5. Enter *192.168.1.2* as the IP address, click **Web (HTTP)** in the Server list, and then click **Apply**.

You have now set up a web server on your LAN. To access the web server, a computer on the Internet uses the address *205.172.1.7*, and the WebRamp forwards the request to *192.168.1.2*, the web server's address.

WARNING – Make certain that the computer you are using as the local server has the WebRamp as its default gateway. If you do not do this, the local server will not work.

Also, if you try to set up a local server while Modem 1 is connected to the Internet, you must drop the call before your changes can take effect.

To set up a mail server, you can follow the same steps, but you must change step 5: substitute the IP address of the mail server and then click **Mail (SMTP)** in the Server list. (The pull-down menu shows other services that you can host locally.)

Setting Up Visible Computers

In addition to Local Servers, the WebRamp has another feature called Visible Computers. This feature is a similar to, but more generic than the Local Servers feature. It allows all incoming traffic on any of the WebRamp's modems to be forwarded to one specific computer on the LAN. You can use the Visible Computers feature to forward network traffic to a web server or mail server. The Visible Computers feature is different from the Local Servers feature because it forwards all of the incoming traffic (regardless of the type) to only one computer. There are two typical uses of this feature:

• hosting a web site

• allowing some Internet application (like an Internet game or NetMeeting) to work with a particular computer.

Since this feature is enabled for each modem, you can have up to two visible computers on your network. Users on the Internet have to connect to the appropriate modem's IP address to reach the corresponding visible computer.

Here is an example of setting up a visible computer:

1. In the WebRamp Setup page, click **Advanced**.

2. Click **Local Configuration**, and then click **Applications**.

3. Click **Visible Computers.**

4. Click **Visible Computers 1** or **Visible Computers 2**.

5. Click **Enable Access to the Local Computer**.

6. Enter *192.168.1.2* as the IP address, and then click **Apply**.

Clicking one of the checkboxes for Web (HTTP), Telnet, and SNMP allows computers to access your WebRamp from the Internet using one of these methods. If you check one of these, you cannot host a server of the same type on your LAN.

Using Internet Applications and Local Servers

The WebRamp provides the ability to use Internet applications with a local server. This is an advanced feature: you should use it only if you have an in-depth knowledge of how an Internet application uses TCP/IP ports to connect to a server on the Internet.

In general, an Internet application, like CUSeeMe, uses two (or more) TCP/IP connections in order to work properly. One TCP/IP connection is made from a computer on your LAN, through the WebRamp, to a server on the Internet. The second TCP/IP connection (or more) is a separate connection made from the Internet server back to the computer on your LAN. The first connection is for control purposes: for example, to establish and close the CUSeeMe session. The second connection is for data, such as data from a video or chat session. Because both connections are associated with one computer, the WebRamp keeps track of these connections as one Internet application session. The WebRamp only allows one type of Internet application (or local server) to be in use at a time. By default, this feature is enabled for the Internet applications CUSeeMe and Diablo.

Assigning Addresses to Computers on Your LAN

DHCP is the abbreviation for *Dynamic Host Configuration Protocol*. It allows computers on a LAN to automatically obtain network information from a server, called the *DHCP server*. The WebRamp has a built-in DHCP server that can be used to assign IP addresses and other network information to the computers on its LAN.

Here is a list of the information that can be provided by the WebRamp's DHCP server:

• IP address range for computers on the LAN

• Gateway address to be assigned for computers on the LAN

• Primary and secondary DNS server IP addresses

• WINS server IP addresses

If you do not want to use the WebRamp's DHCP server, you must disable it because the WebRamp's DHCP server is enabled by default. You can configure DHCP options through the Local Configuration page. See "DHCP Server Configuration," given later in this chapter, for more information.

NOTE – You can use the Easy Start utility to configure each PC to use DHCP. This utility is provided on the WebRamp CD. The filename is Esetup.exe.

Using Domain Names Instead of IP Addresses

DNS is the abbreviation for *Domain Name Service*. DNS allows Internet users to use names like www.rampnet.com instead of IP addresses to find computers on the Internet. The WebRamp uses DNS to find the computers that your browser (or any other Internet application) requests information from. The Internet has many DNS computers (called *DNS servers*) that share names with each other so that you can reach a computer anywhere in the world by just using a name.

Because the WebRamp (and other computers on the Internet) really use an IP address to reach a web site instead of a name, there is a conversion between the name you entered and the IP address. The DNS server does this conversion, which is called a *DNS resolution*. When your WebRamp needs to reach www.rampnet.com, a few things happen:

1. The WebRamp looks in its tables to see if it knows the IP address. If not, it forwards your browser's request to a DNS Server that can resolve the IP Address for that web site.

2. The DNS server responds with the IP address of the www.rampnet.com web site.

3. The WebRamp uses the IP address to get you the web page.

There are two basic ways to configure your WebRamp to use DNS to reach web sites or other Internet resources:

• **Let your Internet Service Provider (ISP) provide it to you automatically.**

   Many ISPs provide the IP address of their preferred DNS server automatically when you connect. If you select **Automatically Obtain the DNS Server Addresses** when you set up the WebRamp, it will learn the address when you connect to the ISP. You can set up this option when you use the Connection Wizard or when you modify the default server options of the DNS server (see "DNS Server" in this chapter for more information).

- **You enter the DNS Server's IP address yourself.**

   There are many other ISPs that do not provide the DNS server address automatically when you connect. In this case, you need to enter an IP address of a DNS server. The WebRamp uses this address to resolve names it cannot resolve by itself. If you do not enter this address, your computer may not be able to browse on the Internet. You can set up this option when you use the Connection Wizard or when you modify the default server options of the DNS server (see "DNS Server" in this chapter for more information).

   For additional information, see "Local DNS Configuration" in this chapter.

Modem Configuration

You use the Modem Configuration page to modify modem values that you set when you configured or added a modem to the WebRamp. There are different configuration pages for Modem 1 and Modem 2.

Modem 1 Configuration

The internal modem, modem 1, allows you to choose the speaker volume level and whether to give outgoing voice calls preference over data calls.

1. From the Advanced Options page, click **Modem 1.**

2. Choose the speaker volume level of the internal modem. You can also choose whether you want outgoing voice calls to have priority over data calls.

3. Choose the modem dialing mode: Tone or Pulse. Change the dialing mode from tone to pulse only if your phone company does not support tone.

4. Click **Apply**.

Modem 2 Configuration

The Modem 2 Configuration page allows you to enter the information for an external modem.

1. From any page in the WebRamp configuration, click **Advanced.**

2. From the Advanced Options page, click **Modem 2.**

3. Enter the following information:

   • Modem Manufacturer. Use the drop-down menu to find the name of your modem's manufacturer. If the name does not appear on the list, choose **Standard Modem** or **Other**. (If you are using an ISDN T/A, choose

Standard Modem.) If you have trouble connecting, choose **Other** and then enter an initialization string, which is provided by the modem manufacturer.)

- Modem Speed. Use the drop-down menu to choose the speed of your modem. (For ISDN T/A, choose 115,200 bps.)

- Additional Modem Initialization String. Some analog modems also require the use of an additional initialization string in case the modem does not connect properly. If so, choose **Other** for Modem Manufacturer and enter an initialization string. You must check the modem documentation or contact the modem manufacturer to get an initialization string.

- Choose the modem dialing mode: Tone or Pulse. Change the dialing mode from tone to pulse only if your phone company does not support tone.

- Click **Apply**.

Internet Connection

The Internet Connection page lets you disable or enable different configuration information. From the Internet Connection page you can reach the following pages, where you can check and modify your current settings:

- Modem Bonding
- ISP Options

• Filter Selection

Modem Bonding

The Modem Bonding Options page lets you configure your modem bonding information. You can bond up to two modems together to improve Internet access speed. Follow these steps for modem bonding:

1. Click the modems to be used with the Internet connection.

2. Click either **Use Separate Account for Each modem (COLT)** or **Use the Same Account for Both Modems (Multilink PPP).**

NOTE – If you click **Use the Same Account for All Modems,** your ISP must support Multilink PPP over analog phone lines.

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3. Click either **Simultaneously** or **Dynamically** to bring up the modem connection.

   • *Simultaneously* dials both modems for the Internet connection.

   • *Dynamically* dials the first modem initially and dials the second modem when the first modem has been running at full speed for a pre-determined length of time. The pull-down menus for the second modem contain thresholds that you can change at any time.

NOTE – Ramp Networks recommends using the default values for bonding parameters.

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4. Click **Apply.** If you have more than one modem configured for your Internet connection, clicking Apply takes you to the Success page. (This page verifies that the modems were bonded successfully, and instructs you to update and verify your modem account information as required.)

5. Click **Next**.

6. On the Internet Connection page, click **ISP Options** to reach the ISP Configuration page, where you can modify your ISP information.

NOTE – The contents of the Success page depends on the modem bonding option (COLT or Multilink PPP) you chose on the Modem Bonding page.

ISP Options

You use the ISP Configuration page to modify the ISP settings used for the Internet connection. From this page you have the following choices:

- Account Information
- IP Configuration
- Advanced Configuration
- Login Script

Account Information

You use the Account Information page to modify the ISP account information for the Internet connection. You may want to modify the ISP information, for example, if you change your ISP. After you make your changes, click **Apply.**

IP Configuration

You enter your ISP's IP address assignment information in the IP Configuration page. Follow these steps:

1. Choose the IP address assignment method (**Dynamic** or **Static**) used by your ISP.

    *   If your ISP has not provided an IP address, click **Dynamic.**

    *   If your ISP has provided an IP address, click **Static** and enter the IP address.

NOTE – If you want to host a web page or set up a mail server (local servers), you must enter a static IP address.

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2. Click **Apply.**

Advanced Configuration

You use the Advanced Configuration page to add advanced options to the Internet connection. From this page you can do the following:

*   Select compression options.

    *   If your ISP supports VJ (Van Jacobson) header compression, click **Use VJ Header Compression.**

*   Select modem disconnect options.

    *   If you always want to be connected to the Internet, click **Never Disconnect the Modem, Even If Idle.**

    *   If you want to set the length of time the WebRamp stays connected to the Internet after there is no activity, enter the number of seconds in the **Disconnect After An Idle Time Of** field. (The default is 300 seconds.)

*   Enter the value for the Maximum Receive Unit (MRU). The default is 1524, and Ramp Networks recommends that you do not change this value unless the ISP's router does not support the default value.

Click **Apply** after you make all your changes.

Login Script

Some ISPs, primarily located outside North America and Canada, require login scripts to enable Internet access. If you need help writing a login script, you can click the Help button on the Login Script page. You should also check with your ISP for information about their login script requirements. When you are ready to enter your login script, follow these steps:

1. Click **Enable Login Script.**

2. Enter the login script and then click **Apply**.

IP Filter Selection

You use the IP Filter Selection page to select the filter set to use with the current Internet connection. The drop-down menu displays the available filters. Select an active filter set and then click **Apply**. The default filter is None. Before you can select the filters, you must configure them as described in "Filters" later in this chapter.

Local Configuration

You reach the Local Configuration page from Advanced Options. From the Local Configuration page you click links to reach other pages where you can modify your local network settings, set up filtering, and so on. You have the following choices:

• DNS Server

• DHCP Server

• Local IP Address

• Filters

• Routing

• Applications

• Administrative Password

DNS Server

The DNS Server Configuration page shows whether the DNS server on the WebRamp is currently enabled or disabled. From this page you can click the following links to reach other pages where you can modify your current settings:

• You click the Default Server Options link to reach the Domain Name Server Configuration page where you can modify the default DNS IP addresses for Internet access.

- You click the Local DNS Options link to reach the Local DNS Configuration page where you can modify the local domain name, host, and forwarder information.

Domain Name Server Configuration

From the Domain Name Server Configuration page you configure the default DNS forwarder's address or addresses, which are typically provided by your ISP. If the WebRamp DNS Server is unable to resolve a name to an IP address, it forwards the request to the DNS server configured on this page.

1. Click **Automatically Obtain the DNS Server Addresses** if the ISP can dynamically supply DNS server IP addresses.

   Click **Use the Following DNS Server Addresses Provided by My ISP** if the ISP did supply IP address. Enter the primary and secondary DNS server addresses.

2. Click **Apply**.

Local DNS Configuration

From this page you click the following links to reach other configuration pages:

- Domain Name
- Local Hosts
- Local Forwarders

Domain Name

The WebRamp's default domain name is ramphome.com. You can use the Domain Name page to specify the local domain name, such as mycompany.com. Enter the local domain name and then click **Apply.**

Local Hosts

You use the Local Hosts page to configure the hosts for the local domain. For example, the WebRamp is Host 1. You can configure up to ten hosts.

- To add a host, click **Add Host**, enter the name of the local host to be added and the IP address, and then click **Apply**.

- To delete a host, click **Delete Host**, enter the name of the local host to be deleted and the IP address, and then click **Apply**.

Local Forwarders

You use the Local Forwarders page to configure additional name server addresses that may be present within the LAN.

• To add additional name servers, enter the primary and secondary name server addresses, and then click **Apply**.

DHCP Server Configuration

The DHCP Server Configuration page summarizes the DHCP settings for the WebRamp. This page shows the current DHCP information and whether DHCP is currently enabled or disabled. Click **Configure** to change any of the settings.

When you restart a computer with DHCP capability, the computer sends a query over the network to the DHCP Server for the settings. The DHCP server assigns one of the IP addresses from the available pool of addresses.

Using DHCP eliminates configuring the settings on each computer manually. If necessary, change the DHCP information and then restart the computers. The DHCP server will assign new information to the computers.

You may want to change the DHCP information for the following reasons:

- You have computers on your LAN that cannot use DHCP. For example, a computer running Windows 3.1 cannot use DHCP. In this case, you would need to reserve or exclude the IP address from the DHCP address range, and assign it to the computer.

- You have an existing network and you do not want to use the DHCP server.

NOTE – If you disable DHCP, you must manually set the IP and DNS addresses, as well as the domain name and gateway information on your computers.

To make further DHCP server modifications, click **Configure** on the DHCP Server Configuration page. You can then click the following links to reach other pages where you can make your changes:

- Define New Range
- Show Current Range
- Gateway IP Address
- DNS Parameters
- WINS Addresses

Define New Range

You use the IP Address Range page to specify how many individual computers, up to 254, can automatically receive IP addresses from the WebRamp. Ramp Networks recommends that you use the default values on this page.

- To define a new IP address range for DHCP, enter the starting IP address, the number of IP addresses for your LAN, and then click **Apply**.

- If you have previously defined a new IP address range, click **Default Range** to use the default values (192.168.1.1 through 192.168.1.254). This range depends on the subnet mask values.

Show Current Range

The Address Table page shows the DHCP Address Table, including IP and MAC addresses for each computer with DHCP enabled.

- If AUTO appears with the IP address, it means the IP address is not reserved or excluded and can be assigned

- If FREE appears with the IP address, it means the IP address is not currently assigned

- If USED appears with the IP address, it means the IP address has been previously assigned

You may reserve IP addresses on your network for servers where the IP addresses need to be fixed and known by other computers on the network. This does not affect the computer's ability to access the Internet.

To modify the DHCP Address Table, follow these steps:

1. In the IP Address field, enter the last 3 digits (0 to 254) of the IP address.

2. You then have the following choices:

    - Click **Exclude** to exclude an IP address. The IP address is removed from the DHCP Address Table, and must be manually configured on the computer. You may want to exclude or remove an IP address that may conflict with an existing IP address. This function is commonly used to set aside IP addresses for computers that do not support DHCP. (Before a used IP address can be excluded, it must be free.)

    - Click **Include** to include an IP address. The IP address is added back into the DHCP Address Table.

    - Click **Reserve** to reserve an IP address. Enter the MAC address of the computer and then click **Apply**. You may want to reserve an IP address to set aside the address for devices such as servers, mail hosts or Intranet servers that must have a fixed address for access purposes. The IP address is assigned by the WebRamp's DHCP server. For example, you can reserve an IP address to be used by remote users to check e-mail.

    - Click **Free** to free an IP address. You may want to free an IP address that was previously reserved. When an IP address is free, it is placed back into the DHCP Address Table.

NOTE – You cannot free your WebRamp's IP address.

Gateway IP Address

The Gateway IP Address page shows the gateway address of the network. The WebRamp's address is the default address. Make sure the gateway IP address is an unused address on your network. This is the address the DHCP server provides to the computers on your network for Internet access.

Change the gateway IP address only if you have an existing network and need to use another device as the gateway. To change the gateway IP address, enter the IP address and then click **Apply**.

DNS Parameters

You use the DNS Configuration page to configure Domain Name Server addresses. You can use this page if, for example, you switched to a different ISP or your current ISP changed their domain name or domain name servers.

If DNS is enabled, the WebRamp will provide its own DNS address. You can also supply two additional DNS server IP addresses. You need these server addresses to access the Internet when using names such as *www.mycompany.com*. The DNS Server will resolve this name to an appropriate IP address for communication.

To change the DNS parameters, enter the domain name and domain name server address and then click **Apply**.

WINS Addresses

The WINS Configuration page shows the WINS configuration. Enter the WINS IP addresses for your local network and the optional scope ID. Select the node type from the pull-down menu and then click **Apply**.

Access Controls

Access controls let you choose which Internet features the users on your LAN have access to. You can also use access controls to restrict access to your network and the WebRamp configuration information. From the Access Controls page, click the links to reach the following pages:

- User Access Controls
- WebRamp Access Controls
- Log Messages

User Access Controls

On the user access controls page you can enable and disable access controls and modify settings. From this page click these links to reach the other pages where you can make modifications:

- Refresh
- Modify Range
- Modify User
- Default
- Add
- Delete

This page also contains the User Access Controls table. This table lists all users, up to 75, currently connected to your LAN. See "Refresh" for more information about the table.

Refresh

When you click Refresh, the WebRamp searches for all the computers currently connected to the LAN by sending out an ARP (Address Resolution Protocol) request. It polls every host address on the network and identifies each computer by its MAC address. (Depending on the size of your network, this process can take 20 to 30 seconds.) It then lists all the computers in the User Access Controls table, providing the following information:

- Index
- User name
- IP address
- MAC address
- Allowed applications

Modify Range

You use the Modify a Range of Users page to modify the access parameters for a group of users. You enter the starting and ending index numbers to specify the range of users and then click **Apply.**

Modify User

You use the Modify a User Entry page to modify the access parameters for an individual user. Follow these steps:

1. From the pull-down menu, choose the user to modify and then click **Apply.**

2. On the Modify a User Entry page, enter the appropriate information, and then click **Apply.**

Default

You use the Default Access page to set the default access parameters for unlisted users, that is, users that are not currently connected to the LAN and that don't appear in the table. By default, unlisted users are blocked from all Internet access.

Add

Users connected to your LAN automatically appear in the User Access Controls table after you click Refresh. However, if you have hosts behind other routers, that information won't appear in the table because the refresh doesn't cross routers, even if the hosts are connected to your network. You must add those users to the table manually if you want to apply access controls.

Delete

If you have host behind other routers that you manually add to the User Access Controls table, you must also manually delete this information, because it remains in the table even when those users are no longer connected to the network.

You can also delete users if you exceed the limit of 75 that can be listed in the table. That user then becomes unlisted and has the same access controls as other unlisted users. You can use this to delete IP addresses that appear in the table, but are not on your network.

WebRamp Access Controls

You use the WebRamp Access Controls page to do the following:

- Accept incoming and allow outgoing calls
- Allow access to the WebRamp's configuration information through Telnet and the Internet

By default, all these things are allowed. You can restrict access by deselecting the appropriate checkbox or checkboxes.

Log Messages

The Log Messages page monitors user and WebRamp access violations. The information appears in the Event Log. To begin monitoring access violations, click **Enable.**

Local IP Address

The WebRamp's default local IP address is 192.168.1.1. You use the Local IP Address Configuration page to change the LAN IP address for the WebRamp. If your local LAN has an existing IP addressing scheme, then you need to use this page to configure the local IP address of the WebRamp.

The IP address of a WebRamp is always the WebRamp's LAN address. If you change the local IP address, you must change the gateway IP address and the DHCP address range in the DHCP table. (See "DHCP Server Configuration" in this chapter.)

NOTE – You must restart your computers if you change the WebRamp's IP address.

If you accidentally enter an incorrect IP address, you may need to recover the WebRamp IP address using WebRamp Finder, a utility provided on the WebRamp CD. See Appendix B for information on recovering the WebRamp's IP address.

Filters

From the Filters page you can set up filtering capabilities that determine what information you send and receive on your network. You can use filtering to provide security for your network and to prevent selected local network traffic from leaving your LAN through the WebRamp. The WebRamp supports the IP filters: The IP filtering module is composed of one default filter set and two configurable filter sets. After you configure the filter set, you apply it to a connection.

IP Filter Sets

You configure filters from the IP Filter Sets page that prevent IP spoofing. In IP spoofing, an outside source tries to gain access to your local LAN by pretending to be one of the hosts. The filters prevent this by setting up the following criteria:

•   *Reject IP spoofing*: Any incoming packets that have the source address the same as your LAN address are dropped. The local address is determined when the WebRamp LAN address is configured.

•   *Allow incoming mail*: All incoming connection requests to TCP port 25 (used by SMTP mail servers) are allowed. All other TCP port requests are denied (including telnet and FTP). This information is set in the Start of Connection field.

- *Allow all other information*: This last rule permits all other incoming information. You set this rule by choosing Ignore from the Filter Based On Protocol pull-down menu.

NOTE – Filtering should be configured by a network administrator who has experience with the TCP/IP protocols and is familiar with IP addressing, ports, and so on.

IP filters may be configured with the help of two custom filter sets. These sets provide up to 16 filters for incoming data and 16 filters for outgoing data. These protocols may be applied on connections that have IP routing enabled.

Follow these steps to view, set, modify, and clear the IP filter set:

1. On the IP Filter Sets page, choose **Default, Custom 1,** or **Custom 2** from the Filter Set pull-down menu.

NOTE – The default filter set is read-only and cannot be modified.

---

2. In the Direction field, click **Incoming** or **Outgoing.**

3. Click **Show** to reach the IP Filter Set Configuration page.

IP Filter Set Configuration

The IP Filter Set Configuration page shows the current IP filter set configuration. The terms Source and Destination are referenced by which filter direction you are working with. Source for outgoing information is referenced from the LAN side. Source for incoming information is referenced from the WAN side of the WebRamp. Also, although the 16 filters are in series, you may enable and configure any number without regard to a particular sequence. Filters are viewed in sequence and disabled filters are skipped.

The two custom filter sets initially do not perform any filtering and can be modified to meet individual requirements. Both Incoming and Outgoing filters are identical. The following descriptions cover both filter directions.

Follow these steps to configure the IP filter set (the steps cover both incoming and outgoing filter setup):

1. Check **Enable This Filter.**

2. In the Action field, click either **Permit** or **Deny.**

The filter action determines what should be done with matching information. You can either permit (pass) or deny (discard) information.

3. From the pull-down menu in the Filter Based On Protocol field, choose the protocol being carried by the information.

4. From the pull-down menu in the Start of Connection field, choose the start of connection options. Protocol options have prerequisites that must be met to be active. The choices are as follows:

    • Ignore: Does not match depending on TCP start of connection

    • Yes: Matches only the initiating packet in a TCP connection

    • No: Matches any TCP packet except the initiating packet in a TCP connection

5. In the Source IP Address field, enter the source IP address to be checked against the source IP address field of the examined packet.

6. In the Compare Bitmask field, enter the source compare bitmask, used in conjunction with the source IP address, to determine how many bits of the IP address should be compared.

7. In the Destination IP field, enter the destination IP address to be checked against the destination IP address of the examined packet. The destination IP address works the same as the source IP address.

8. In the Compare Bitmask field, enter the destination compare bitmask, used in conjunction with the destination IP address, to determine how many bits of the IP address should be compared.

9. In the Source Port Compare field, choose one of the following from the pull-down menu:

    • Ignore: Allows any port

    • Equal To: Selects a specific port

    • Not Equal To: Any port except the Source Port Number

    • Greater Than: Any port whose number is higher than the port in the Source Port Number field

    • Less Than: Any port whose number is less than the port in the Source Port Number field

NOTE – *Greater than* and *Less than* are used as shown in the following example: If you want to make ports from 20 up available, choose **Greater Than,** and enter **19** in the Source Port Number field. If you want to make any port from 87 to 1 available, choose **Less Than** and enter the number **88** in the Source Port Number field.

10. Enter the source port number.

11. In the Destination Port Compare field, choose one of the following from the pull-down menu (the values are the same as those for Source Port Compare):

   • Ignore: Allows any port

   • Equal To: Selects a specific port

   • Not Equal To: Any port except the Source Port Number

   • Greater Than: Any port whose number is higher than the port in the Source Port Number field

   • Less Than: Any port whose number is less than the port in the Source Port Number field

12. Enter the Destination Port Number.

13. Click **Apply** to save the filter configuration.

14. Click **Next** to configure the next filter or click **Previous** to click the previous filter.

To clear the current IP filter set, follow these steps:

1. Choose **Custom 1** or **Custom 2** from the Filter Set pull-down menu.

NOTE – The default filter set cannot be modified.

2. In the Direction field, click **Incoming** or **Outgoing.**

3. In the Filter Number field, enter the number of the filter you want to clear.

4. Click the **Show** button to reach the IP Filter Set Configuration page.

5. Click the **Clear** button.

6. Click **Apply** to clear the filter.

Routing

On the Local Configuration page, you can click the Routing link to reach the IP Routing page, where you can configure routing information for IP networks.

IP Routing

The IP Routing page shows the current entries in the routing table. From this page you can click the following links to reach other pages where you can modify the routing information:

WARNING – Changing the routing information can affect your connection capabilities. You should have experience working with routing tables before modifying the routing information.

- Modify Default Route
- Add Route
- Delete Route

Modify Default Route

You can set the default route of the WebRamp to any of the interfaces: for example, Internet and so on. Choose the interface that should be the default route. If you want any other router in your local network to be the default route of the WebRamp, please specify the address of the router. If the Internet connection is selected, there is no need to specify the IP address.

- Choose the interface for the default route. The choices are:

  - Local Network: The gateway attached to the same local network as the WebRamp. Specify the IP address of the gateway in the Gateway IP Address field.

  - Internet Connection: The gateway is the Internet Connection

Add Route

From the Add IP Route page, you can add routes to other networks or hosts on any of the interfaces. Choose the type of route to be added and the interface corresponding to the route. Network administrators typically use this page to add a route to the routing table for networks and computers that may be behind other routers on the local network.

WARNING – Adding incorrect routing information can affect the connection to a remote network or host. You must have experience working with routing tables before using this option.

Follow these steps to add routes:

1. In the Route Type field, click **Permanent** or **Static** to choose the route type. Permanent routes are stored in nonvolatile memory and maintained until explicitly deleted. Static routes are temporary routes that are stored in volatile memory. The route is deleted when power is turned off to the WebRamp or when the WebRamp is reset.

2. In the Destination field, click **Network** or **Host** to choose the type of destination. All IP routing is destination-oriented: the flow is always toward the recipient.

3. Enter the Destination IP Address of either the receiving network or host on the recipients network.

4. In the Gateway Interface field, choose the gateway interface from the pull-down menu. The Gateway Interface is the next gateway attached to the WebRamp.

5. If you selected Local Network in step 4, enter the gateway IP address. If you selected the Internet connection you don't need to enter the gateway IP address.

6. Click **Apply.**

Delete Route

You can use the Delete IP Route page to delete a route from the Routing Table.

1. In the Route Type field, click either **Permanent** or **Static.**

2. Enter the destination and gateway IP addresses.

3. Click **Apply.**

Applications
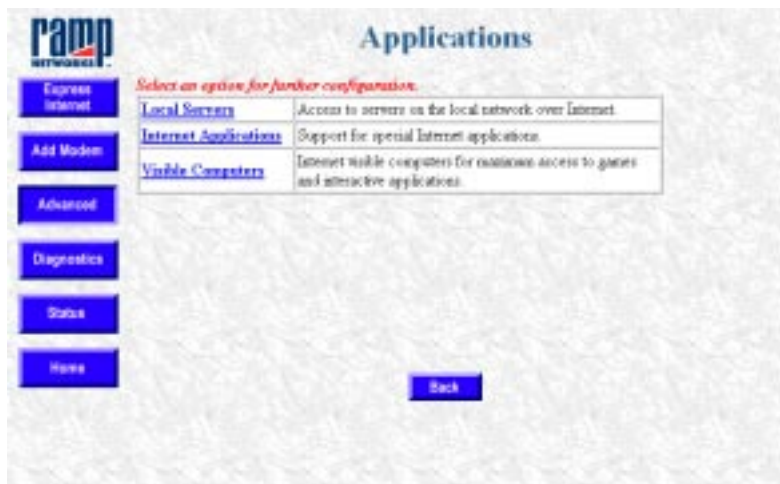
From this page you click the following links to reach other pages:

• Local Servers

- Internet Applications
- Visible Computers

Local Servers

The WebRamp offers support for hosting servers on the LAN that can be accessed from the Internet. Although the addresses on the WebRamp LAN are not directly accessible by an external Internet computer, the WebRamp allows for selective access by mapping incoming requests for a particular service to a particular LAN server. The incoming requests are sent to the WebRamp's external (WAN) IP address. The WebRamp can then, based on the service requested, (web, e-mail, and so on) re-direct the requests to the appropriate server on the LAN.

There can be only one server of a particular type on the LAN that can be accessed from the Internet. Therefore, there can only be one web server on the LAN that can be accessed by a remote Internet computer. Internet computers trying to access your local server or servers must use the IP address of the ISP-1 account.

From the Local Server page, you can add, delete, and enable or disable a local server.

Add Local Server

Follow these steps to prepare to set up a local server:

1. Obtain a single static (fixed) IP address from your ISP. This IP address is the address that all your local servers will access.

NOTE – Local Servers also work if you have a dynamic IP address, but the address used to access your servers can change each time the WebRamp connects to the Internet. As a general rule, it is better to get a static IP address.

2. Configure the Internet connection using Modem 1. It is important that Modem 1 is configured with this account because local servers can only be accessed using the IP address assigned to the ISP-1 account.

3. From the WebRamp Setup page, click **Advanced**, then **Local Configuration**, then **Applications,** then **Local Servers,** and then **Add** to reach the Add Local Server page.

4. Enter the IP address of the local computer.

5. In the Server field, choose the server type from the pull-down menu.

6. Click **Apply**.

To add other local servers, repeat these steps. When you finish this process, to access the local server from a remote client over the Internet, a user enters the ISP-assigned static IP address of the WebRamp as the server's address. To the remote client it appears that the WebRamp is the server.

Delete Local Server

To delete a local server, select the local server to be deleted from the pull-down menu and then click **Apply**.

Internet Applications

The WebRamp comes configured with three Internet applications that use special data and control ports.

- CuSeeMe
- Diablo
- XWindows

If you want to add other special Internet applications, you use the Internet Applications page. From this page you can view the current Internet application configurations, and then modify, add, and delete those configurations.

- To modify, add, and delete the Internet application configuration information, choose the application from the pop-up menu and then click **Add, Edit,** or **Delete.**

NOTE – You should configure the WebRamp for Internet Applications only if you have in-depth knowledge of how applications use TCP/IP ports to connect to servers.

Add Internet Application

To add new Internet applications, which need special data and control ports, click **Add.** Enter the new application name and click **Apply,** which takes you to the Modify Application Settings page. Follow the steps in that section.

Modify Application Name and Ports

The Modify Applications Settings page allows you to enable or disable an Internet application, delete the application's port range, and change its name and port information.

- Click Add to change the port ranges, choose the connection type (outgoing control or incoming data), and the protocol (TCP or UDP). Click **Apply** after entering the information.

NOTE – When you create a new application, it must have at least one control and one data port configured before it can be enabled.

- Click Delete to delete the port range of the application shown in the pull-down menu. (One incoming and one outgoing port range must be shown in the pull-down menu.) Click **Apply** after entering the information.
- Click Rename to change the name of an application. Click **Apply** after entering the new name.

Delete Internet Application

From the Internet Application Configuration page, choose the application you want to delete and click **Delete.**

WARNING – When you click **Delete,** the application is immediately deleted.

Visible Computers

Visible computers are used to make a LAN computer "visible" to the Internet. The visible computer is accessed from the Internet using the IP address associated with the modem connection that corresponds to that visible computer—this address is shown in the WebRamp Status page as the Local WAN IP address.

The WebRamp allows you to designate one to two local computers to serve as Internet-visible computers, allowing the maximum access to games and interactive applications. You can configure one Internet-visible computer per ISP account, and only one visible computer can be configured per modem. For example, if you have both modems configured for Internet access, you can have two visible computers.

WARNING – A visible computer can pose a security risk to your network, because the computer is essentially an Internet node. The WebRamp's inherent IP address firewall does not apply to a visible computer. Avoid running any servers on the computer configured as visible. The risk is the same as if you were to use PPP software to directly connect the computer to the Internet using an attached modem.

As a general policy, use visible computers only if the Internet application you are using does not seem to work, and you do not have enough knowledge of the application to create a Special Application entry.

Visible Computer Setup

You can designate one of two local computers to serve as Internet-visible computers, allowing maximum access to games and interactive applications. You can configure one Internet visible computer per ISP account.

Follow these steps to set up a visible computer:

NOTE – Visible Computer **does** pose a security risk to your network, because the computer is essentially an Internet node. Avoid running any servers on the computer configured as visible. The WebRamp's inherent IP address firewall does not apply to this computer.

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1 Click **Advanced**, click **Local Configuration**, click **Applications,** and then click **Visible Computers**.

2 Select the visible computer to configure, click **Enable** (if disabled), and then enter the IP address of the local computer.

3 Click **Enable Access to the Local Computer,** and enter the IP address. If necessary, deselect any applications that should be diverted.

4 Click **Apply**.

Administrative Password

The WebRamp configuration password is also known as the administrative password used to configure the WebRamp. The default password is **trancell**.

NOTE – If you change the default values on this page, the next time you access the WebRamp Configuration page, you will be prompted for the new password.

You can change this password at any time to protect the WebRamp configuration. If you do change this password, store the password in a safe place and then click **Apply**. If you forget or lose your password, you can use the configuration Reset button located on the back of the WebRamp to reset the WebRamp to its default values.

WARNING – When you press the configuration Reset button, **all** the configuration parameters are reset to the original default values.

8

Troubleshooting

This chapter provides information you can use to help solve problems you might be having connecting to the Internet with your WebRamp. In addition the chapter contains FAQs (frequently asked questions) and the answers to those questions, as well as descriptions of the WebRamp's diagnostic pages.

WebRamp Problem Solving Pages

The WebRamp's graphical user interface (GUI) includes problem-solving pages that can help you determine where problems are occurring when you are trying to connect to the Internet. You access these pages by clicking either **Status** or **Diagnostics.**

WebRamp Status

The WebRamp Status page shows connection status, the modems in use, modem connection speed, and the total connection time. This page also provides IP address and WebRamp version information. Click **Status** to view the WebRamp Status page.

WebRamp Diagnostics

The WebRamp Diagnostics page contains links to other pages from which you can view recent actions or events that occurred on the WebRamp, download new software, backup WebRamp configuration information, and perform various diagnostic tests. This section provides an overview of each of these pages. Click **Diagnostics** to view the WebRamp Diagnostics page.

Event Log

The Event Log page shows recent actions or events that have occurred on the WebRamp. You can use the information in this page to diagnose problems you may be experiencing in connecting to the Internet. You should try to replicate your problem and then view the Event Log. Attempt to connect to the Internet and then return to this page to view the resulting messages. Refresh this page to see an updated event log.

Modem Test

The Modem Test page checks the initialization strings and connectivity for the modem. Modem failure can mean that the connection between the WebRamp and the modem is not working properly, or the correct modem information wasn't entered at setup.

If you have a modem connected to the Modem 2 port, check your modem cable to make sure it is securely connected and that the modem is turned on. Verify that the correct modem information is entered in the Modem Configuration page before you perform the modem test.

Upgrade Key

Typical maintenance upgrades are free and do not require an upgrade key. You use the Firmware Upgrade Key page to enter an upgrade key that you receive from a WebRamp reseller. When the upgrade key is authenticated, click **Diagnostics** and then **Firmware Upgrade** to start upgrading your WebRamp. A key is only needed to upgrade your WebRamp to a version with more functionality.

Reset WebRamp

You use the Reset WebRamp page to clear connections, restart, and re-initialize the WebRamp. This procedure does not affect any configuration parameters, but it will discard all static IP routes.

Drop Calls

You use the Drop Active Calls page to disconnect active modem connections. You can disconnect modems individually or all at once.

NOTE – All outgoing modem connections will disconnect after a period of inactivity, based on the "idle time" set in the ISP settings.

Export Configuration

The Export Configuration page allows you to back up the WebRamp's current configuration information to your computer using the TFTP server. You might use this feature if you want to change the configuration of your WebRamp but want to save the existing settings to use again. You usually pair this procedure with the import configuration procedure.

Problem Report

You use the Problem Report Configuration page to report problems with your WebRamp to Ramp Networks Technical Support.

1. From Problem Report Configuration page click **Create** to reach the Problem Report page. Fill in the appropriate information and click **Next** to generate the problem report.

NOTE – If you don't have a trouble-ticket number, leave that field blank.

2. Copy and send the report as an e-mail or a fax to Ramp Networks Technical Support:
   • Fax: 1(408)988-6363, attention Technical Support
   • E-mail: support@rampnet.com

Ping Test

The ping test verifies that the WebRamp can reach a remote location from a computer on the local LAN. This test verifies that the WebRamp is connected to a specific Internet host and to an ISP through which the ping data would have to travel.

When a computer is pinged, a network packet is sent to the specified IP address. The ping test can be used to test DNS server addresses or determine if a host is working. Some ISPs allow you to ping their fixed gateways for testing purposes. At the end of the test, you receive either an error message or success message.

If the ping succeeds but the computer cannot ping this address, verify the local computer's gateway IP address. The gateway IP address should be the IP address of the WebRamp.

NOTE – The ping test is executed from the WebRamp to the given IP address, not from the configuring computer.

Upgrade Firmware

You use the Firmware Upgrade page to update the WebRamp's internal software. Each time a new version of software is available, you use this page to download the new firmware directly to your WebRamp.

Set Factory Defaults

You use the Factory Default Settings page to reset the WebRamp to its default values. You usually do this in conjunction with the import and export configuration capabilities.

WARNING – This procedure resets all configuration parameters back to the original default values. Set factory defaults only if you are sure you want to erase all of the WebRamp's configuration information. See the table in Appendix A for the factory default settings.

NOTE – To change the WebRamp's IP address to match the IP address of your computer, use the WebRamp Finder utility.

Frequently Asked Questions

When you click this link from the Diagnostics page, you go directly to the Ramp Networks Technical Support web site. You must be connected to the Internet to access this page.

Import Configuration

You use this page to import new or previously saved configuration information from the TFTP server to the WebRamp. You usually pair this procedure with the export configuration procedure.

NOTE – Ramp Networks recommends that you set the WebRamp to factory defaults before you import configuration information, and that you import configuration information from the LAN TFTP server.

DHCP Troubleshooting

There are usually two problems associated with DHCP:

- the computer cannot communicate with the DHCP server

- the information provided by the DHCP server is not correct

If you are using the WebRamp's DHCP server, you can check your settings on the WebRamp problem-solving pages. Click **Advanced, Local Configuration,** and then **DHCP Server.** You can then view and configure various settings.

DHCP Communication

If your computer gets its IP address from the WebRamp's DHCP server, verify the following:

- DHCP is enabled on the WebRamp

- The WebRamp's LAN IP address is on the same network as the IP addresses in the DHCP table. For example, if the WebRamp's IP address is 192.168.1.1, the IP addresses in the DHCP table should be 192.168.1.2, 192.168.1.3, and so on. (It's ok if the WebRamp's IP address appears in the DHCP table; it will not assign its own address to a computer.)

- The gateway address is the WebRamp's LAN IP address. (If there is another router on the same LAN, the gateway address may be different than the WebRamp's.)

- The computers on the LAN should obtain their IP addresses from the DHCP server. Verify this in the computer's network settings.

If you do not want to use the WebRamp's DHCP server, you must disable it. See "DHCP Server Configuration" in Chapter 7 for more information.

DHCP Information

All of the data provided by the DHCP server is important, with the IP address range and the gateway IP address being the most important. Verify the following information DHCP information:

- The WebRamp has a LAN IP address that is on the same network as the IP addresses in the DHCP table. For example, if the WebRamp's IP address is 192.168.1.1, the IP addresses in the DHCP table should be 192.168.1.2, 192.168.1.3, and so on. (It's ok if the WebRamp's IP address appears in the DHCP table; it will not assign its own address to a computer.)

- The gateway address is the WebRamp's LAN IP address. (If there is another router on the same LAN, the gateway address may be different than the WebRamp's.)

- The DNS server information is correct. (This information is usually provided by your ISP.)

    By default, the WebRamp provides computers with its LAN IP address as the first DNS server to try. The two additional IP addresses are backup servers the WebRamp tries if it cannot resolve a name to an IP address.

- The WINS information is correct. If you are using Microsoft networking and have a Windows Internet name server (WINS) on your LAN, enter the IP address of that server in the WINS Configuration page. WINS is used to locate other computers that use Microsoft networking by name.

LAN Adapters and PPP Connections

A Windows 95 computer can be configured with both a LAN adapter connected to an IP network and a Dial-Up Adapter for a PPP connection to the Internet or another IP LAN. When such a computer attempts to access a particular IP address, the destination server is located by checking the routing table and using the following process:

- If the destination IP address indicates that it is on the same IP subnet as the workstation's LAN adapter, then data is sent using the LAN adapter.

- If the destination IP address indicates that it is not on the same subnet as the workstation's LAN adapter, then data is sent to the default gateway. The default gateway then locates the destination route on behalf of the computer. By default, the dial-up connection becomes the default gateway.

This configuration becomes complicated for a user who is either dialing into the Internet when connected to a local private IP network or, conversely, when connected directly to the Internet and dialing into a private IP network. This is because PPP creates a default route if the option named Use Default Gateway On Remote Net is checked.

The default route that PPP creates establishes a priority for this connection in the computer's routing table. This priority allows full access to the remote network for name resolution and forwarding packets. However, it means more limited access for the local connection, because the default gateway used for network communications becomes the default gateway specified for the PPP connection. You will probably become aware of problems that this can cause when you try to connect to computer on a remote subnet, but Windows 95 reports that it can't find that computer name.

Basically this problem occurs because neither the Domain Name System nor the TCP/IP protocol suite is designed to support multiple address spaces, which is the situation that occurs when a computer is simultaneously connected to a private IP network and the public Internet (or another private IP network).

To resolve the name resolution problems that can occur when you maintain a local network connection while using a Dial-Up connection to the Internet, see the Windows 95 Route command documentation for instructions on modifying the route table.

Gateway Problems

Your computer may be experiencing gateway problems if either of the following occurs:

- The WebRamp doesn't bring up the line and connect to the ISP when the web browser tries to reach a web site.

- The WebRamp is connected to the remote site and the computer cannot reach the remote computer.

Follow these steps to determine if the problem is with the WebRamp:

1. Check the computer's network information.

    *   The IP address should be on the same network as the WebRamp. For example, if you are using the WebRamp's default addresses, the computer's IP address should be something such as 192.168.1.2.

    *   The computer's subnet mask should match the WebRamp's subnet mask. You can check the WebRamp's subnet mask on the Local IP Address Configuration page. See "Local IP Address" in Chapter 7 for more information.

    *   The default gateway value should be the WebRamp's IP address.

    *   The DNS Server (Name Server) should contain the WebRamp's IP address and up to two additional addresses.

    If you changed any of the settings, try connecting again. If all of these settings are correct, proceed to step 2.

2. Ping the computer from the WebRamp.

    *   From the Advanced Options page, click **Diagnostics,** and then **Ping Test.** Enter the IP address of the computer and then click the **Ping** button.

    If the Success page appears, the computer should be able to communicate with the WebRamp. Proceed to step 3.

3. Check the WebRamp's profile information.

    Check the following for an Internet connection:

    *   From the Advanced Options page, click **Internet.** Verify that the Internet profile is enabled.

    *   From the **Advanced Options** page, click **Internet,** then **ISP Options,** then **Account Information.** Verify that the phone number, user name, and password are correct.

    *   From the **Advanced Options** page, click **Diagnostics,** and then **Event Log** to check for error messages.

4. Ping the remote site's router WAN interface.

    *   From the Advanced Options page, click **Diagnostics,** and then **Ping Test.** Enter the IP address of the remote router's WAN address and then click the **Ping** button.

    If the Success page appears, proceed to step 5.

5. Check the routing table of the remote router for these things:

NOTE – If you can't perform this step from your location, contact the remote router's network administrator

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• Does the remoter router have a route for the connection between it and the WebRamp? This allows the router to forward traffic to your WebRamp.

• Does the remoter router have a route to the computer's network? (192.168.1.0 if you are using the default WebRamp IP address.) This allows the router to determine that your network, 192.168.1.0, is available via the WebRamp.

When troubleshooting WebRamp connections, note the following:

• Do not use the host name when you are testing the WebRamp; instead, use the IP address to avoid any problems related to the HOST or LMHOSTS files, DNS server, WINS server, or any other methods of name resolution.

• In most cases, the subnet mask should be the same for all hosts on the same side of the WebRamp.

• Either router can use these steps to troubleshoot the connection. However, if one of the routers is not a WebRamp, you must consult the documentation or a that router's network administrator.

Frequently Asked Questions

This section contains questions and answers to common problems users have when using the WebRamp to connect to the Internet. The FAQs are organized topically to help you quickly find the information you need to get up and running.

General

What does EasyStart do?

EasyStart checks for a network card driver, the presence of TCP/IP, and sets certain TCP/IP settings on computers running Windows 95, Windows 98, or Windows NT. See "Setting Up Your Computer" in Chapter 2 for more information.

What platforms does EasyStart run on?

EasyStart runs on computers running Windows 95, Windows 98, and Windows NT 4.0. If you have a Macintosh computer, see "Setting Up a Macintosh Computer" in Chapter 2 for information on setting that computer up to work with the WebRamp.

Can I run EasyStart on Macintosh or UNIX computers that are running SoftWindows?

No. EasyStart works only with computers running Windows 95, Windows 98, and Windows NT 4.0.

Do I have to run EasyStart to configure the WebRamp?

No. After you set up your hardware, see "Setting Up Your Computer" in Chapter 2. You can find information on setting up the WebRamp with both Windows and Macintosh systems in a new network without using EasyStart.

Do I have to run EasyStart to set up my computer to access the Internet with the WebRamp?

No. After you set up your hardware, see "Setting Up Your Computer" in Chapter 2. You can find information on setting up the WebRamp with both Windows and Macintosh systems in a new network without using EasyStart.

Should I use Express Internet or Connection Wizard to configure the WebRamp?

- Express Internet is the easiest way to set up the WebRamp to connect to the Internet. It sets up the Internet connection using modem 1.

- Connection Wizard allows you to choose which modem you want to use for your Internet connection. You can use Connection Wizard if you want to choose the modem you connect with.

Why isn't the power LED light on?

The power may not be connected. Check that the power cable is firmly plugged into an active power outlet and into the WebRamp's power jack.

Why isn't the Ethernet LED light on?

Check the following:

- Verify that the computer is on.

- The Ethernet cable may not be connected. Check that one end of the Ethernet cable is firmly plugged into an Ethernet port on the WebRamp and that the other end is firmly plugged into the Ethernet port on the computer. If both ends are firmly plugged in and the light still isn't on, the Ethernet cable may be damaged and you should replace it.

- You may have a bad network card.

After I configure my computer and WebRamp, how do I browse the Internet?

Verify that the power is on to the computer and WebRamp, and then simply open your browser to connect to the Internet.

I've configured my computer and my WebRamp; why can't I browse the Internet?

If you are connected to the Internet, the Ethernet and Modem LEDs will be flashing because information is being passed back and forth. If the LEDs are green but not flashing, you may have set TCP/IP incorrectly on your computer. Check the following:

- Check that your computer's network settings—gateway address and IP address— match that of the WebRamp

I typed 192.168.1.1 in the address area of my web browser; why can't I access the WebRamp Setup page?

You may not be able to access the WebRamp Setup page for the following reasons:

- The Ethernet cable is not connected properly. Verify that both ends are firmly plugged in.

- (Windows 95) The IP address on your computer may be set incorrectly. From the Start menu, choose **Run** and then type **winipcfg** and click **OK**. When the IP Configuration window displays, click **Release All** and then **Renew All**. Your IP address should appear as **192.168.1.x** (x is any number other than 1—192.168.1.1 is the IP address reserved for the WebRamp). Click **OK** to close winipcfg.

- The Ethernet cable is damaged—obtain another Ethernet cable and try connecting again.

Why do I get the No DNS Server error message?

- You may have configured the DNS settings incorrectly. If you are using the WebRamp DHCP server and have completed configuration, simply restart your computer to update the network settings.

- If you are not using the WebRamp DHCP server, open the **Network** control panel, double-click **TCP/IP**, select the **DNS Configuration** tab and enter the WebRamp's IP address in the DNS IP address field. If you don't want to use the WebRamp's DNS server, then enter the DNS IP address provided by your ISP. Click **OK** twice to restart your computer and update the settings.

Modem

The cable for my Macintosh modem doesn't match the connector on the WebRamp. Do I need a different modem?

No. You can order a special adapter from the Technical Support group at Ramp Networks. Contact Technical Support at support@rampnet.com.

Why isn't my external modem responding?

If your modem isn't responding, verify the following:

- The modem connector is firmly attached to the WebRamp.

- The modem is turned on.

- The cable connecting the WebRamp to the modem is correct.

Why do I get a modem error when I try to connect?

You may have entered the wrong external modem information during setup. For example, you may have a US Robotics modem connected, but the configuration information is for a Motorola modem. Verify your modem settings in the Modem Configuration page.

Why do I hear the number dialing sequence when the computer is attempting to connect to the Internet but the connection doesn't complete?

The phone number the modem is trying to dial may be incorrect, the remote site modem may be busy, or there may be a line problem. Check your configuration to verify that the information is correct.You can also look at the Event Log for diagnostic information about the connection. To reach the Event Log page, click **Diagnostics** from any of the WebRamp pages and then click **Event Log.** Listing 8-1 shows an example of the data that appears in the Event Log after a successful connection:

Listing 8-1   Event Log data

```
PPP call initiated by packet: proto: TCP
sip:1.1.1.4 sport: 4896 dip:17.254.0.91 dport:80
PPP initiating a call to remote:2224600 on Modem 2
```

```
DEM connection successful:Modem 2:CARRIER 31200
PPP LCP Started on channel:Modem 2
PPP LCP Successful on channel:Modem 2
PPP LCP Negotiated Parameters on Modem 2: R_MRU:1524
R_MRRU:1600 R_AUTH:CHAP S_MRU:1500 S_MRRU:1600 S_AUTH:PAP
PPP Authentication started on:M2 type:PAP
PPP Authentication Succeeded on:M2 for user:
PPP IPCP Started on:Modem 2
PPP IPCP Dynamic IP Address negotiation successful:
Local: 206.14.182.216 Remote: 206.14.182.1
PPP IPCP connection successful.
MODEM connection successful:Modem 1:~
CONNECT 26400
PPP LCP Started on channel:Modem 1
PPP LCP Successful on channel:Modem 1
PPP LCP Negotiated Parameters on Modem 1: R_MRU:1524
R_MRRU:1600 R_AUTH:CHAP S_MRU:1500 S_MRRU:1600 S_AUTH:PAP
PPP Authentication started on:M1 for user:
PPP IPCP Started on:Modem 1
PPP IPCP Dynamic IP Address negotiation successful:
Local: 206.14.182.137 Remote: 206.14.182.1
PPP IPCP connection successful
```

Why doesn't the WebRamp dial the modem?

There may be some problems with the modem configuration. You can try the following:

1. From the WebRamp Setup page, click **Diagnostics,** and then click **Modem Test.** Click the appropriate button, **Modem 1 or Modem 2** to verify that the modem is connected to and can be initialized by the WebRamp.

If you chose Other as your modem choice when you set up your modem configuration, you may need to provide an initialization string. Contact the modem manufacturer and specify that you need an initialization string that covers these conditions:

• Modem reports DCE to DCE speed and not DTE to DCE speed

• Modem provides hardware flow control

• Modem detects busy tones

• DCD signal follows the carrier state

• DSR is always on

- DTR causes the modem to hang up and auto answer is inhibited

- Modem performs auto fall back/forward, depending on line quality

- Modem negotiates auto reliable link

When I use the WebRamp, do I need to start dial-up networking to bring up the modem and access the Internet?

No. Simply open your browser and the WebRamp will connect you to the Internet.

I am not seeing 3x's 56K performance on the WebRamp. What could be the problem?

- Your ISP must support 56K modems.

- You won't see this performance for file transfers unless your ISP uses Multilink PPP.

- Very few modems truly deliver data transfer speeds of 56K.

- Verify that your connection speed is greater than 48K.

- The WebRamp can support modem speeds up to 3 times that of a single modem (assuming use of three modems). 56K modems must dial into special ports located at the ISP to get performance above 33.6K. Make sure your ISP supports 56K modems.

Can I use a leased-line modem with the WebRamp?

Yes, the WebRamp supports leased-line modems.

Can I adjust the time interval for dropping the modem connection?

Yes. The default idle time is 300 seconds, but you can increase or decrease that interval. You can change the default setting by following these steps:

1. Click **Advanced** and then **Internet** to reach the Internet Connection page.

2. From the Internet Connection page, click **ISP Options** to reach the ISP Configuration page. Click **Advanced Configuration.**

3. On the Advanced Configuration page enter the appropriate number in the Idle Time in Seconds field. The default is 300 seconds. (Setting the idle time to zero keeps the call connected indefinitely.)

Network

Why doesn't my computer find the WebRamp on the local LAN?

There may be a problem with the Ethernet cable on the WebRamp. Check that one end of the Ethernet cable is fully plugged into an Ethernet port on the WebRamp and that the other end is fully plugged into the Ethernet port on the computer.

If the Ethernet cable connection is working, check the IP address of the computer. Follow these steps:

1. From the Start menu choose **Run**. Type in **winipcfg** and then click **OK.**

2. In the IP Configuration window, click **Release All,** then **Renew All** to get an IP address from the WebRamp.

Why can't my Web browser find the WebRamp using its LAN IP address?

There may be a problem with the Ethernet cable on the WebRamp. Check that the Ethernet cable is firmly connected to the WebRamp and the computer. If the Ethernet LED is green but not flashing, you may have set TCP/IP incorrectly on your computer. See Chapter 2, "Installing the WebRamp," for more information.

Why do I hear normal modem activity but the connection comes up only briefly?

Check these WebRamp pages and compare the network settings to the information provided by the ISP:

• IP Configuration page (for Internet connections)

Will the WebRamp work without DHCP?

Yes, you can disable DHCP from the WebRamp Setup page.

1. From the WebRamp Setup page, click **Advanced**, and then **Local Configuration.**

2. From the Local Configuration page, click **DHCP Server** to reach the DHCP Server Configuration page. To disable DHCP click the **Disable** button.

NOTE – If DHCP is disabled, you must manually enter the IP address, gateway address and DNS server addresses (typically provided by the WebRamp) for each computer on the LAN.

I want to use my existing DHCP server; why won't the WebRamp's DHCP server disable itself?

- Verify that all the IP addresses of the computers on your network correspond the WebRamp.

- Verify that you have only one DHCP server running on your network.

Also, see "Setting Up the WebRamp in a Dynamic IP Address Network" in Chapter 3 for information on using your existing DHCP server.

Will the WebRamp work with a proxy server?

Yes, the LAN computers would send Internet traffic to the Proxy server, which in turn would use the WebRamp to send and receive traffic from the Internet. The WebRamp would be the proxy server's gateway.

Can I dial into an NT server or Cisco or other router?

Yes. The WebRamp can dial into any other router.

I don't have a DNS server on the remote network. How do I contact the remote computers?

Type in the IP address of the remote computer or web server in your browser's URL line.

Why can't I connect to a Netcom account?

You may have entered your account information incorrectly. For Netcom accounts you must enter your information using this format:

us, *ppp*, *account ID*

What routing protocols does the WebRamp support?

The WebRamp supports TCP/IP.

Internet Applications and Local Servers

When do I use Local Servers?

When you set up a computer on your LAN as a server that computers on the Internet can access, that computer is a Local Server. Because the WebRamp's security features do not allow computers to access your LAN by default, you must configure the WebRamp to allow traffic to reach this Local Server. The Local Server feature can only be configured with Modem 1. You can set up more

than one Local Computer on your LAN, but each server must be of a different type. For example, a web server, a mail server, and so on. See our web site at www.rampnet.com/service/apps for a complete list of servers and set up instructions.

When do I use the Internet Applications page?

This is an advanced feature and should be used only if you have in-depth knowledge of how an Internet application uses TCP/IP ports to connect to a server on the Internet. In general, these are Internet applications, such as CuSeeMe, that use two or more TCP/IP connections to work properly. One connection is made from a computer on your LAN, through the WebRamp, to a server on the Internet. The other connection is a separate connection made from the Internet server back to the computer on your LAN. The first connection is for control purposes, and the other is for data. Because both connections are associated with one computer, the WebRamp keeps track of the connections as one Internet application session.

When do I use a visible computer?

A visible computer is a computer on your LAN that computers on the Internet can access. A visible computer is different from a Local Server in that all incoming traffic (regardless of type) is forwarded on any of the WebRamp's modems to one specific computer on the LAN. This feature can be used to forward traffic to a web server or mail server. You can use this feature to host a web site or allow an Internet application such as CuSeeMe to work with a particular computer. You can configure up to three visible computers on your network.

Why can't I run the same Internet Application on more than one computer at the same time?

The WebRamp allows only one type of Internet application (or Local Server) to be in use at a time. If you must have more than one of the same kind of server on the LAN side of the WebRamp, you can use the Visible Computer feature. See www.rampnet.com/support for a complete list of supported applications.

A

WebRamp's Default Settings

Table A-1 The default settings of the WebRamp

Local IP Address	192.168.1.1	
DNS Settings	Domain Name ramphome.com	DNS Server IP Address 192.168.1.1
DHCP Settings	Gateway Address 192.168.1.1	IP Address Range 192.168.1.1– 192.168.1.254
User Name	wradmin (Not configurable)	
Administrative Password	trancell	
Idle Time-Out	300 Seconds	

Appendix

B

Recovering the WebRamp's IP Address

The WebRamp's default IP address is 192.168.1.1, with a subnet mask of 255.255.255.0. If you accidentally change the WebRamp's IP address, you can use the WebRamp Finder utility to restore the default address.

Before you begin, make sure that the computer has TCP/IP installed and that it's connected to the WebRamp through an Ethernet cable.

Using WebRamp Finder

Follow these steps to recover the WebRamp's IP address using WebRamp Finder:

1. From the WebRamp CD, click **Tools** and open the WebRamp Finder utility.

2. Click **Set IP Address.**

3. Enter the new IP address and the subnet mask for the WebRamp, and click **OK.**