

Rhine II

10/100 Mbps Broadband Router

User's Manual

Broad Net Technology Inc.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with 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 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.

FCC Caution: To assure continued compliance, (example - use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two 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.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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Congratulations on your purchase of the Rhine II.

The Rhine II is a Broadband Router designed to share Internet Access, provide security, and to network multiple devices for a variety of users. The Rhine II's simple installation setup can be used by the least experienced of users, while providing networking professionals with easy to configure advanced features. Please read the User Guide for advanced features of this product.

Thank you for purchasing a BRN product. We know you will enjoy the many features of the Rhine II.

This Package Contains

- One Rhine II
- One Power Adapter
- This Quick Installation Guide
- One Installation CD
- One Category 5 Fast Ethernet Cable

Confirm That You Meet Installation Requirements

Before proceeding with the installation of your Rhine II, please be sure you have the following:

- A computer with an Ethernet network card installed.
- Your Windows CD, if your computer is running Windows 95, 98, or ME
- An Internet connection through a cable or DSL modem or an external dial-up or ISDN modem.
- An additional Ethernet network cable.
- A Web browser such as Internet Explorer or Netscape.

Hardware Setup

Rhine II – Front Panel

1. **Connecting Computers:** Connect computers directly to the Rhine II on ports **1-4** on the front panel. If you have more than 4 computers to plug in, connect a hub or a switch (using its uplink port) and connect additional computers to that device.
2. **Connecting a Cable Modem or DSL Modem:** Connect your Cable or DSL modem to the **WAN** port on the rear panel.
3. **Power:** Plug the power cord into the power jack.

Rhine II – Rear Panel

Indicator LEDs

The front panel of the Rhine II provides indicator LEDs (Light Emitting Diodes) for easy monitoring. The following table defines the function of each LED.

| LED | Condition | Status |
|------------------|-----------|--|
| Power (green) | On | Rhine II is receiving power. |
| WAN (green) | On | The WAN port has established a valid network connection. |
| | Flashing | The WAN port is transmitting or receiving data. |
| Link/Act (green) | On | The indicated LAN port has established a valid network connection. |
| | Flashing | The indicated LAN port is transmitting or receiving data. |
| 10/100 (amber) | On | The indicated LAN port is operating at 100Mbps. |
| | Off | The indicated LAN port is operating at 10Mbps. |
| FDX/COL | On | The indicated LAN port is operating in full-duplex mode. |
| | Flashing | A collision occurred on the indicated LAN port. |

Configuring Your Computer

This Quick Installation Guide provides configuration instructions for Windows 95, 98, ME, NT 4.0, and 2000 and for Macintosh OS 7.x. Please be sure that you are following the proper instruction set for your operating system.

- [Configuring Your Computer with Windows 95/98/ME](#) begins on this page.
- [Configuring Your Computer with Windows 2000](#) begins on page 8.
- [Configuring Your Computer with Windows NT 4.0](#) begins on page 12.
- [Configuring Your Macintosh Computer](#) begins on page 17.

Configuring Your Computer with Windows 95/98/ME

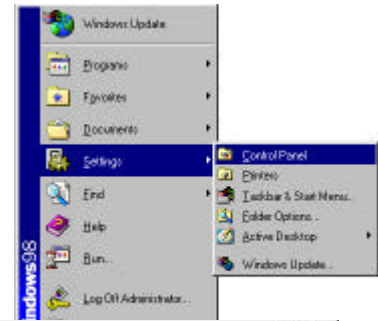
You may find that the instructions here do not exactly match your version of Windows. This is because these steps and screenshots were created from Windows 98. Windows 95 and Windows Millennium Edition are very similar, but not identical, to Windows 98.

Step 1. Configure TCP/IP Settings

After you have completed the hardware setup by connecting your devices, you need to configure your computer to connect to your Rhine II. You need to determine how your ISP issues your IP address. Many ISPs issue these numbers automatically using a networking technology known as Dynamic Host Control Protocol, or DHCP. Other ISPs will specify your IP address and associated numbers, which you must enter manually. This is also known as a static IP address. How your ISP assigns your IP address determines how you will configure your computer.

Here is what to do:

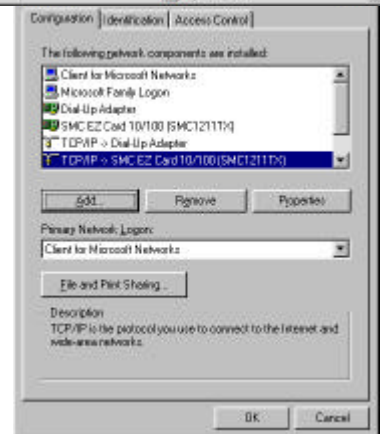
1. From the Windows desktop, click the “Start” button. Choose “Settings,” then click “Control Panel.”



2. From “Control Panel,” double-click the “Network” icon.



3. In the “Network” window, under the “Configuration” tab, double-click the “TCP/IP” entry that is listed with your network card.



4. Select the “IP Address” tab.

If “Obtain an IP address automatically” is already selected, your computer is already configured for DHCP. Click “Cancel” to close each window, and skip to Step 2 “Disable HTTP Proxy.”

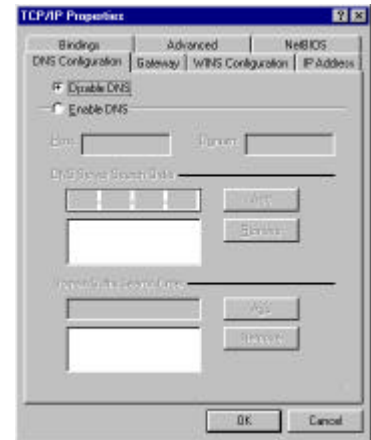
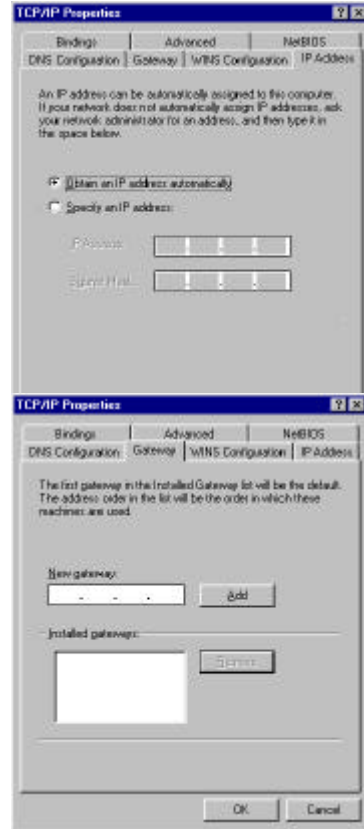
5. Locate your IP address and Subnet Mask. Record them in the spaces provided below.

6. Click the “Gateway” tab and record the numbers listed under “Installed gateways.”

7. Click the “DNS Configuration” tab. Locate the DNS servers listed under “DNS Server Search Order.” Record the listed addresses.

8. After writing down your settings, check to make sure you have recorded them correctly. Click the “IP Address” tab and then click “Obtain an IP address automatically.” Click OK.

9. Windows may need your Windows 95/98/ME CD to copy some files. After it finishes copying, it will then prompt you to restart your system. Click “Yes” and your computer will shut down and restart.



TCP/IP Configuration Setting

IP Address _____

Subnet Mask _____

Primary DNS Server _____

Secondary DNS Server _____

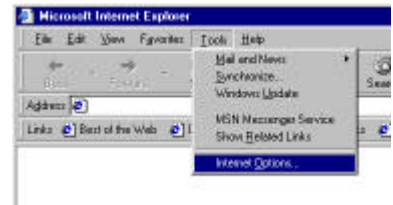
Default Gateway _____

Step 2. Disable HTTP Proxy

You will need to verify that the “HTTP Proxy” feature of your Web browser is disabled. This is so that your Web browser will be able to view the configuration pages inside your Rhine II. The following steps are for Internet Explorer and for Netscape. Determine which browser you use and follow the appropriate steps.

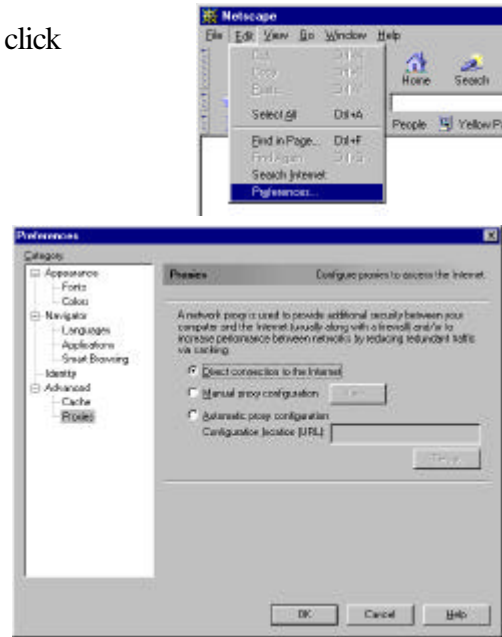
Internet Explorer

1. Open Internet Explorer and click the stop button. Click “Tools,” then “Internet Options.”
2. In the “Internet Options” window click the “Connections” tab. Next, click the “LAN Settings..” button.
3. Clear all the checkboxes.
4. Click “OK,” and then click “OK” again to close the “Internet Options” window.



Netscape

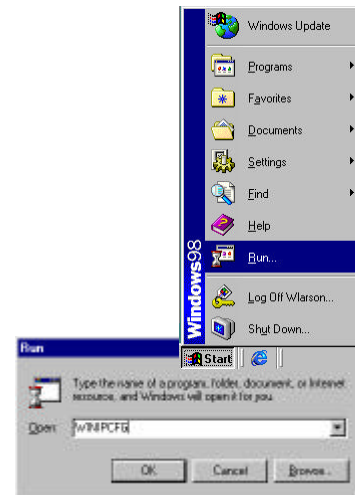
1. Open Netscape and click the stop button. Click “Edit,” then click “Preferences..”
2. In the “Preferences” window, under “Category” double-click “Advanced,” then click “Proxies.” Select “Direct connection to the Internet.” Click “OK.”
3. Repeat these steps for each Windows 95/98/Me computer connected to your Rhine II.



Step 3. Obtain IP Settings from Your Rhine II

Now that you have configured your computer to connect to your Rhine II, it needs to obtain new network settings. By releasing any old IP settings and renewing them with settings from your Rhine II, you will also verify that you have configured your computer correctly.

1. Click “Start,” then “Run..”
2. Type “WINIPCFG” and click “OK.” It may take a minute or two for the “IP Configuration” window to appear.
3. From the drop-down menu, select your network card. Click “Release” and then “Renew.” **Verify that your IP address is now 192.168.0.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168. 0.1. These values confirm that your Rhine II is functioning.** Click “OK” to close the “IP Configuration” window.



Now that your computer is configured to connect to your Rhine II, please skip to “**Configuring Your Rhine II**” on page 21.

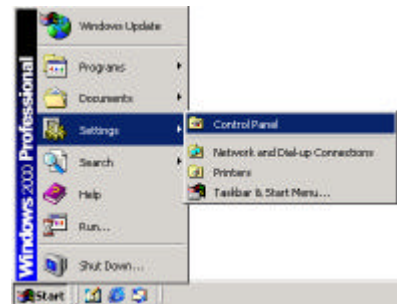
Configuring Your Computer with Windows 2000

Step 1. Configure TCP/IP Settings

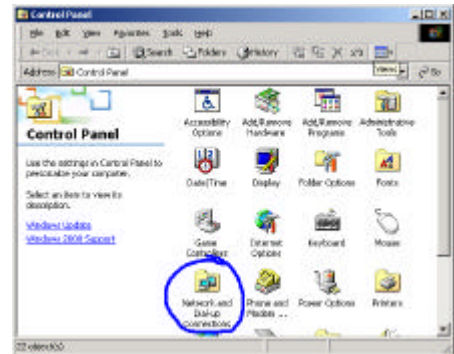
After you have completed the hardware setup, you need to configure your computer to connect to your Rhine II. You also need to determine how your ISP issues your IP address. Many ISPs issue these numbers automatically, using a networking technology known as Dynamic Host Control Protocol, or DHCP. Other ISPs will specify your IP address and associated numbers, which you must enter manually. This is also known as a static IP address. How your ISP assigns your IP address determines how you will configure your computer.

Here is what to do:

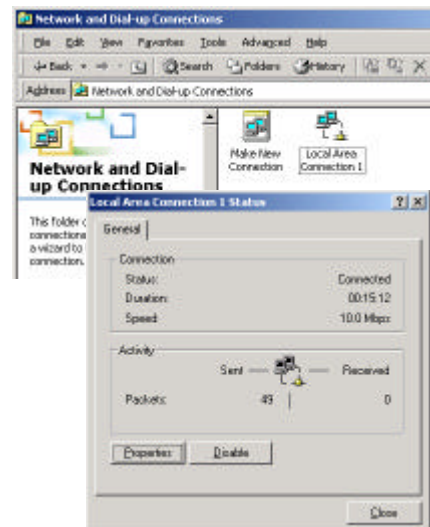
1. From the Windows desktop, click the “Start” button. Choose “Settings,” then click “Control Panel.”



2. Double-click the “Network & Dial-Up Connections” icon.

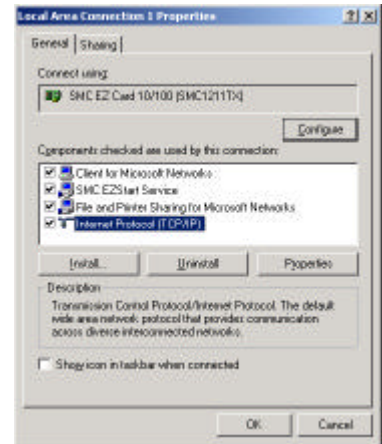


3. Double-click the icon that corresponds to the connection to your Rhine II.



4. Click “Properties.”

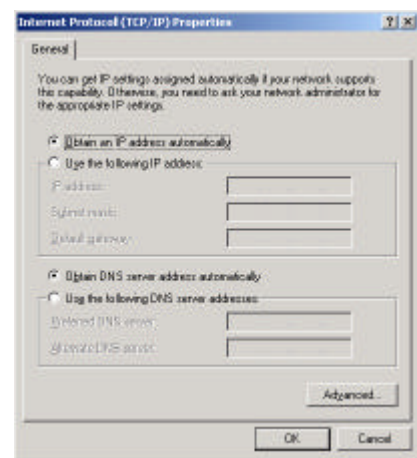
5. Double-click “Internet Protocol (TCP/IP).”



6. All the information that you need to record is on the “Internet Protocol (TCP/IP) Properties” dialog box. Use the spaces below to record the information.

If “Obtain an IP address automatically” and “Obtain DNS server address automatically” are already selected, your computer is already configured for DHCP. Click “Cancel” to close each window, and skip to Step 2 “Disable HTTP Proxy.”

7. Select “Obtain an IP address automatically” and then select “Obtain DNS server address automatically.” Then click “OK.” Click “OK” or “Close” to close each window.



TCP/IP Configuration Setting

IP Address _____ . _____ . _____ . _____

Subnet Mask _____ . _____ . _____ . _____

Primary DNS Server _____ . _____ . _____ . _____

Secondary DNS Server _____ . _____ . _____ . _____

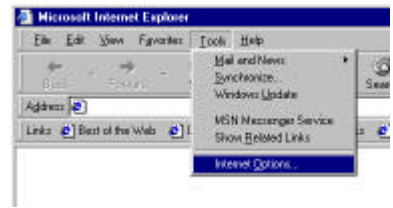
Default Gateway _____ . _____ . _____ . _____

Step 2. Disable HTTP Proxy

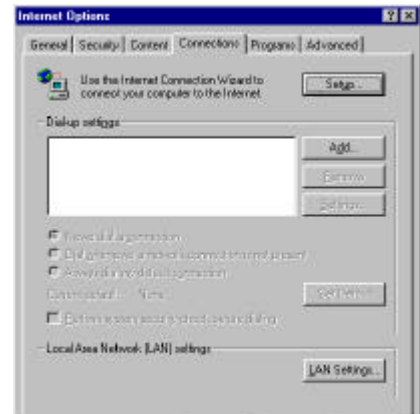
You will need to verify that the “HTTP Proxy” feature of your Web browser is disabled. This is so that your Web browser will be able to view the configuration pages inside your Rhine II. The following steps are for Internet Explorer and for Netscape. Determine which browser you use and follow the appropriate steps.

Internet Explorer

1. Open Internet Explorer and click the stop button. Click “Tools,” then “Internet Options.”



2. In the “Internet Options” window click the “Connections” tab. Next, click the “LAN Settings..” button.



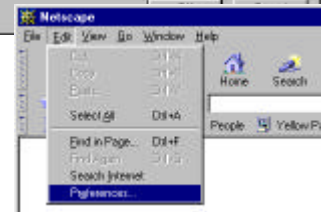
3. Clear all the checkboxes.



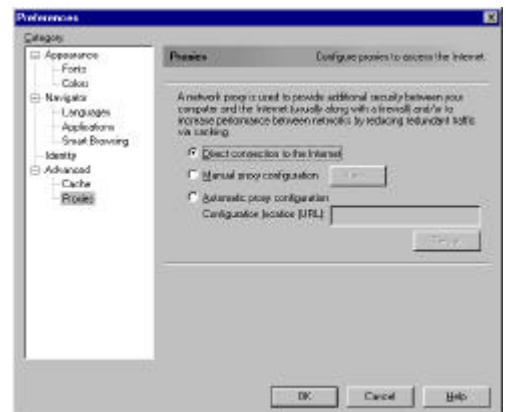
4. Click “OK,” and then click “OK” again to close the “Internet Options” window.

Netscape

1. Open Netscape and click the stop button. Click “Edit,” then click “Preferences..”



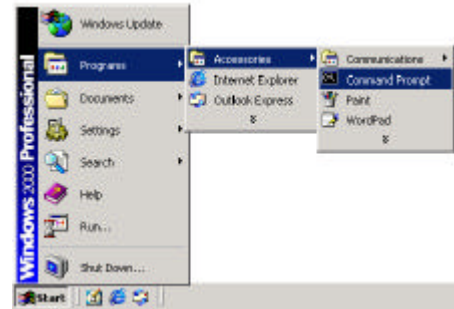
2. In the “Preferences” window, under “Category” double-click “Advanced,” then click “Proxies.” Select “Direct connection to the Internet.” Click “OK.”



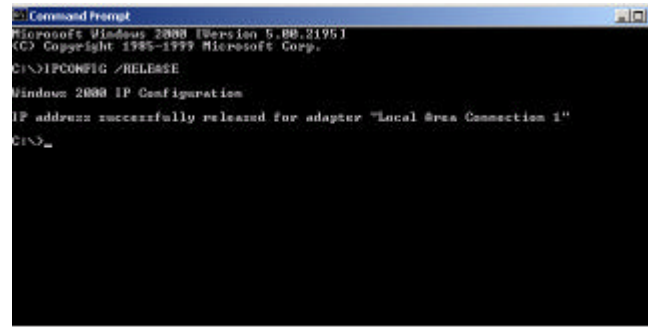
Step 3. Obtain IP Settings From Your Rhine II

Now that you have configured your computer to connect to your Rhine II, it needs to obtain new network settings. By releasing any old IP settings and renewing them with settings from your Rhine II, you will also verify that you have configured your computer correctly.

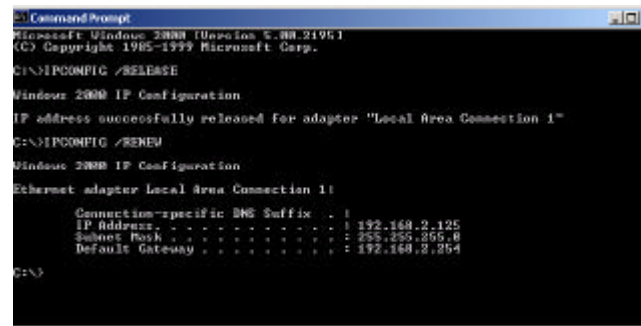
1. From the Windows desktop, click the “Start” button, then “Programs,” then “Accessories,” and then click “Command Prompt.”



2. In the “Command Prompt” window, type “IPCONFIG /RELEASE” and press the <ENTER> key.



3. Type “IPCONFIG /RENEW” and press the <ENTER> key. **Verify that your IP address is now 192.168.0.xxx (2-255), your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.0.1. These values confirm that your Rhine II is functioning.**



4. Type “EXIT” and press <ENTER> to close the “Command Prompt” window.

Now that your computer is configured to connect to your Rhine II, please skip to “[Configuring Your Rhine II](#)” on page 21.

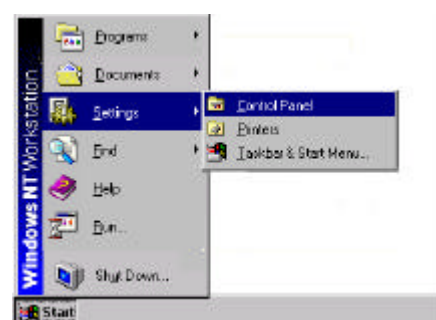
Configuring Your Computer with Windows NT 4.0

Step 1. Configure TCP/IP Settings

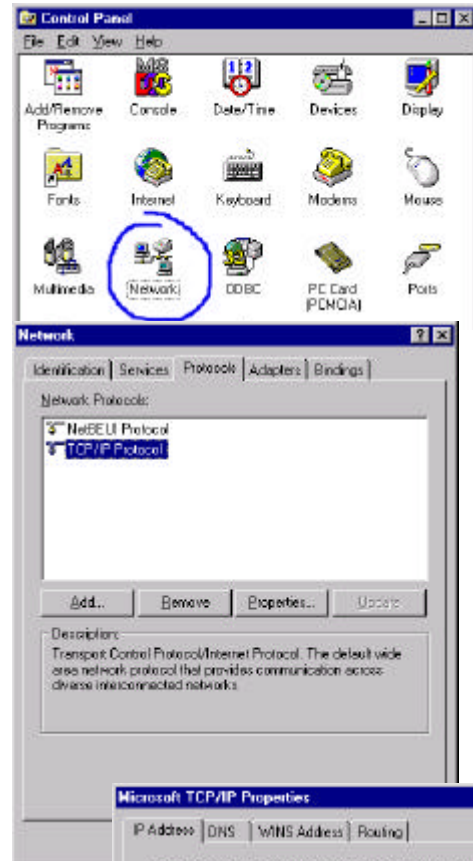
After you have completed the hardware setup, you need to configure your computer to connect to your Rhine II. You need to determine how your ISP issues your IP address. Many ISPs issue these numbers automatically using a networking technology known as Dynamic Host Control Protocol, or DHCP. Other ISPs will specify your IP address and associated numbers, which you must enter manually. This is also known as a static IP address. How your ISP assigns your IP address determines how you will configure your computer.

Here is what to do:

1. From the Windows desktop click “Start,” then “Settings,” and click “Control Panel.”

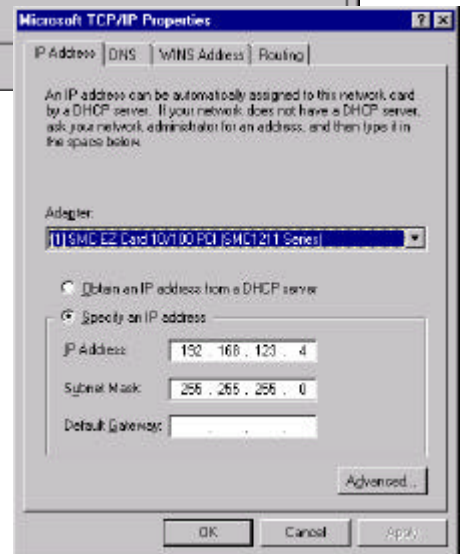


2. Double-click the “Network” icon.



3. Select the “Protocols” tab.

4. Double-click “TCP/IP Protocol.”



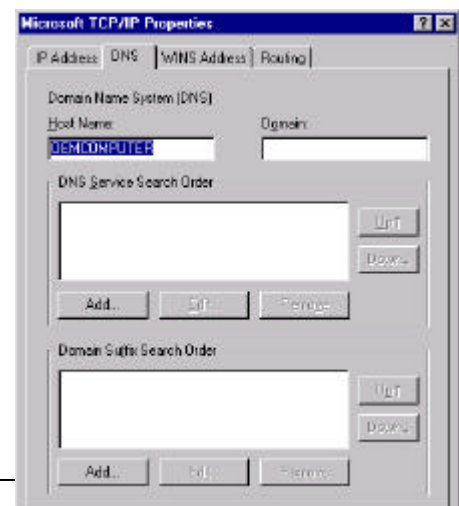
5. Select the “IP Address” tab.

6. In the “Adapter” drop-down list, be sure your Ethernet adapter is selected.

If “Obtain an IP address automatically” is already selected, your computer is already configured for DHCP. Click “Cancel” to close each window, and skip to Step 2 “Disable HTTP Proxy.”

7. In the “TCP/IP Properties” dialog box, click the IP address tab to locate your IP address, subnet Mask, and default gateway. Record these values in the space provided below.

8. Click the “DNS” tab to see the primary and secondary DNS servers. Record these values in the appropriate spaces below.



9. After writing down your IP settings, click the IP address tab. Select “Obtain IP address automatically” and click OK. Click OK again to close the “Network” window.
10. Windows may copy some files, and will then prompt you to restart your system. Click “Yes” and your computer will shut down and restart.

TCP/IP Configuration Setting

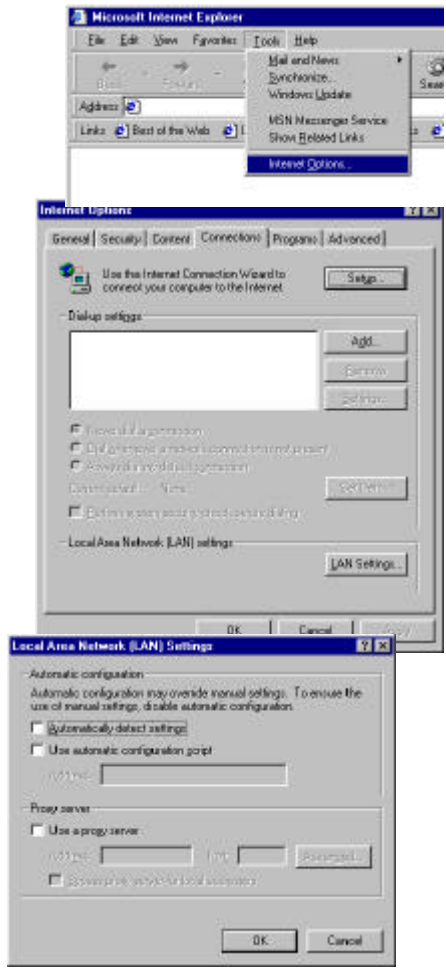
| | |
|----------------------|-------------------------------|
| IP Address | _____ . _____ . _____ . _____ |
| Subnet Mask | _____ . _____ . _____ . _____ |
| Primary DNS Server | _____ . _____ . _____ . _____ |
| Secondary DNS Server | _____ . _____ . _____ . _____ |
| Default Gateway | _____ . _____ . _____ . _____ |

Step 2. Disable HTTP Proxy

You will need to verify that the “HTTP Proxy” feature of your Web browser is disabled. This is so that your Web browser will be able to view the configuration pages inside your Rhine II. The following steps are for Internet Explorer and for Netscape. Determine which browser you use and follow the appropriate steps.

Internet Explorer

1. Open Internet Explorer and click the stop button. Click “Tools,” then “Internet Options.”
2. In the “Internet Options” window click the “Connections” tab. Next, click the “LAN Settings..?” button.
3. Clear all the checkboxes.
4. Click “OK,” and then click “OK” again to close the “Internet Options” window.



Netscape

1. Open Netscape and click the stop button. Click “Edit,” then

click “Preferences..”

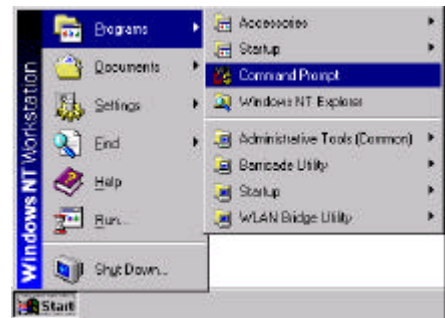
2. In the “Preferences” window, under “Category” double-click “Advanced,” then click “Proxies.” Select “Direct connection to the Internet.” Click “OK.”



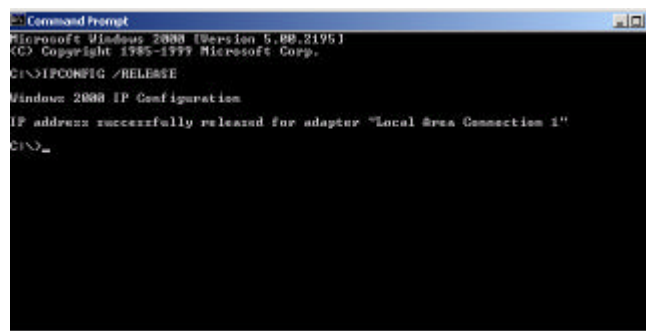
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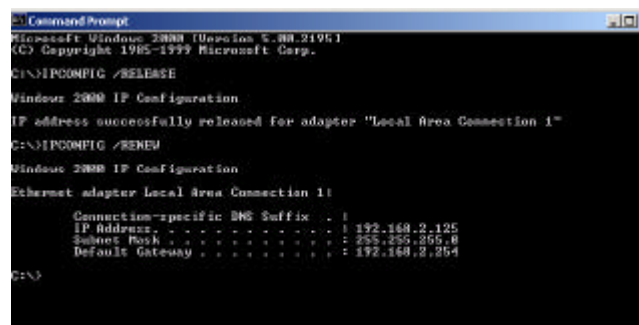
1. From the Windows desktop, click the “Start” button, then “Programs,” and then select “Command Prompt.”



2. In the “Command Prompt” window, type “IPCONFIG /RELEASE” and press the <ENTER> key.



3. Type “IPCONFIG /RENEW” and press the <ENTER> key. **Verify that your IP address is now 192.168.0.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.0.1. These values confirm that your Rhine II is functioning.**



4. Type “EXIT” and press <ENTER> to close the “Command Prompt” window.

Now that your computer is configured to connect to your Rhine II, please continue to “[Configuring Your Rhine II](#)”.