COMPLIANCES

FCC - Class B

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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that the 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 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

EC Conformance Declaration - Class B

This information technology equipment complies with the requirements of the Council Directive 89/336/EEC on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility and 73/23/EEC for electrical equipment used within certain voltage limits and the Amendment Directive 93/68/EEC. For the evaluation of the compliance with these Directives, the following standards were applied:
compliance with these Directives, the following standards were applied:

RFI:
- Limit class B according to EN 55022:1998
- Limit class A for harmonic current emissions according to EN 61000-3-2:1995
- Limitation of voltage fluctuation and flicker in low-voltage supply systems according to EN 61000-3-3:1995

Emission:
- Product family standard according to EN 55022:1998
- Electrostatic Discharge according to EN 61000-4-2:1995 (Contact Discharge: 8 kV, Air Discharge: 1.5 kV)
- Radiated frequency electromagnetic field according to EN 55022:1998
- Electrical fast transient/burst according to EN 61000-4-4:1995 (AC/DC power supply: 2kV, Data/Signal lines: 2kV)
- Surge immunity test according to EN 61000-4-5:1995 (AC/DC Line to Line: ±5kV, AC/DC Line to Earth: ±5kV)
- Immunity to conducted disturbances, induced by radiated frequency fields: EN 61000-4-6:1995 (15-80 MHz, AM 10% Modulation: 3V/m)
- Power frequency magnetic field immunity test according to EN 61000-4-8:1995 (LV at frequency 50Hz)
- Voltage dips, short interruptions and voltage variations immunity test according to EN 61000-4-11:1994 (>95% Reduction @10ms, 30% Reduction @60ms, >97% Reduction @5000ms)

LVD:

Industry Canada - Class B
This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme NMB-003 édictée par le ministère des Communications.

Japan VCCI Class B
この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると受信障害を引き起こすことがあります。
取り扱い説明書に従って正しい取り扱いをして下さい。

TABLE OF CONTENTS

1 Introduction ........................................... 1-1
- About the Sharing Router .............................. 1-1
- Features and Benefits ................................. 1-2
- Applications ........................................ 1-3

2 Installation ............................................ 2-1
- Package Contents ...................................... 2-1
- Description of Hardware .............................. 2-2
- System Requirements .................................. 2-5
- Connect the System .................................... 2-5
- Basic Installation Procedure .......................... 2-6
- Attach to Your Network Using Ethernet Cabling .... 2-6
- Attach the Sharing Router to the Internet .......... 2-8
- Connecting the Power Adapter ....................... 2-9
- Verify Port Status ..................................... 2-9

3 Configuring Client PCs ................................. 3-1
- TCP/IP Configuration ................................... 3-1

4 Configuring the Sharing Router ....................... 4-1
- Navigating the Web Browser Interface ............... 4-2
- Main Menu ............................................ 4-3
- Time Zone ........................................... 4-5
- Wan Type ............................................. 4-6
- Wan Setting .......................................... 4-6
- Cable Modem (Dynamic IP) .......................... 4-6
- Fixed-IP xDSL ........................................ 4-7
- Dial-Up xDSL (PPLoE) ............................... 4-7
- PPTP .................................................. 4-8
- DNS ................................................... 4-8
- Advanced Setup ...................................... 4-9
- System Setting ....................................... 4-9
5 Configuring Client TCP/IP

Installing TCP/IP Protocol in Your PC ........................................... 5-1
Setting TCP/IP to Work with the Sharing Router ......................... 5-3
Configuring Your Computer with Windows 95/98/ME .................. 5-4
  Step 1. Configure TCP/IP Settings .................................... 5-4
  Step 2. Disable HTTP Proxy ........................................... 5-7
  Step 3. Obtain IP Settings from Your Sharing Router .......... 5-9
Configuring Your Computer with Windows 2000 ....................... 5-11
  Step 1. Configure TCP/IP Settings .................................... 5-11
  Step 2. Disable HTTP Proxy ........................................... 5-13
  Step 3. Obtain IP Settings From Your Sharing Router .......... 5-15
Configuring Your Computer with Windows NT 4.0 ..................... 5-18

A Troubleshooting ................................................................. A-1
B Cables ................................................................................ B-1
  Ethernet Cable .................................................................. B-1
    Specifications .................................................................. B-1
    Twisted-pair Cable ....................................................... B-1
    Straight-through Cable ................................................. B-2
    Crossover Cable ............................................................ B-2
    RJ-45 Port Pin Assignments ............................................ B-3
C Specifications ....................................................................... C-1
  Internet Sharing Router ..................................................... C-2
D Ordering Information ............................................................ D-1
CHAPTER 1
INTRODUCTION

Congratulations on your purchase of the Sharing Router. We are proud to provide you with a powerful yet simple communication device for connecting your local area network (LAN) to the Internet. For those who want to surf on the Internet at the lowest possible cost, this Sharing Router provides a convenient and powerful solution.

About the Sharing Router

The Sharing Router provides Internet access to multiple users by sharing a single-user account. The most outstanding feature of the Sharing Router is the single-port WAN interface which allows you to connect to an xDSL or Cable modem.

The Sharing Router provides extensive firewall protection and Virtual Private Network (VPN) pass through services.

The Sharing Router supports dial-on-demand for PPPoE and PPTP service, automatically connecting to the Internet when there are requests and terminating the connection if no further requests occur.

This new Sharing Router technology provides many cost-effective functions and management benefits. It is simple to configure and can be up and running in minutes.
Features and Benefits

- Internet connection to xDSL or Cable modem via a 10/100 Mbps WAN port
- Local network connection via 10/100 Mbps Ethernet ports
- DHCP for dynamic IP configuration, and DNS for domain name mapping
- Firewall with client privileges, hacker prevention, and NAT
- NAT also enables multi-user access with a single-user account, and virtual server functionality (providing protected access to Internet services such as Web, FTP, mail and Telnet)
- User-definable application. sessions. supports applications requiring multiple connections
- Easy setup through a Web browser on any operating system that supports TCP/IP
- Compatible with all popular Internet applications

Applications

- Many advanced applications are provided by the Sharing Router, such as:

  - **LAN Access**
    The Sharing Router provides connectivity to 10/100 Mbps devices, making it easy to create a network in small offices or homes.

  - **Internet Access**
    This device supports Internet access through an xDSL, Cable, or other connection. Since many DSL providers use PPPoE to establish communications with end users, the Sharing Router includes a built-in client for this protocol, eliminating the need to install this service on your computer.

  - **Shared IP Address**
    The Sharing Router provides Internet access for up to 253 users with a shared IP address. Using only one ISP account, multiple users on your network can browse the Web at the same time.

  - **Virtual Server**
    If you have a fixed IP address, you can set up the Sharing Router to act as a virtual host for network address translation. Remote users access various services at your site using a constant IP address. Then, depending on the requested service (or port number), the Sharing Router can route the request to the appropriate server (at another internal IP address). This secures your network from direct attack by hackers, and provides more flexible management by allowing you to change internal IP addresses without affecting outside access to your network.
User-Definable Application Sensing Tunnel

You can define special applications that require multiple connections such as Internet gaming, videoconferencing, and Internet telephony. The Sharing Router can then sense the application type and open a multi-port tunnel for it.

DMZ Host Support

Allows a networked computer to be fully exposed to the Internet. This function is used when the special application sensing tunnel feature is insufficient to allow an application to function correctly.

Security

The Sharing Router supports security features that can deny Internet access to specified users, or filter all requests for specific services the administrator does not want to serve. The Sharing Router firewall can also block common hacker attacks, including IP Spoofing, Land Attack, Ping of Death, IP with zero length, Smurf Attack, UDP port loopback, Snork Attack, TCP null scan, and TCP SYN flooding.

CHAPTER 2

SHARING ROUTER INSTALLATION

Before installing the Sharing Router, verify that you have all the items listed under "Package Contents." If any of the items are missing or damaged, contact your local distributor. Also be sure that you have all the necessary cabling before installing the Sharing Router. After installing the Sharing Router, refer to the Web-based configuration program in Chapter 4 for information on configuring the router.

Package Contents

After unpacking the Sharing Router, check the contents of the box to be sure you’ve received the following components:

- 49074 DSL/Broadband Router DR-10
- Power adapter
- Four rubber feet
- Users’ Manual
Description of Hardware:

The Sharing Router can be connected to the Internet via a remote Internet service provider (ISP) through a DSL or cable modem. The modem connects to the Sharing Router via an Ethernet cable. The Sharing Router then connects to the Internet via a Remote Internet Service Provider (RISP).

Access to the Internet depends on your service type. Full-rate ADSL can provide up to 1.5 Mbps downstream and 1 Mbps upstream. Faster (full duplex) ADSL provides up to 3 Mbps downstream and 15 Mbps upstream. Cable modems can provide up to 30 Mbps downstream and 2 Mbps upstream. However, you should note that the actual performance provided by specific service providers may vary significantly from these upper limits.

Although access speed to the Internet is determined by the modem type connected to your Sharing Router, data passing between devices connected to your local area network can run at 100 Mbps over the Fast Ethernet ports.

The Sharing Router includes an LCD display on the front panel for system power and port indicators that simplify installation and network troubleshooting. It also provides 4 RJ-45 LAN ports on the front panel, as well as one RJ-45 WAN port on the rear panel.

- 4 RJ-45 ports for connection to a 10BASE-T/100BASE-TX Ethernet Local Area Network (LAN). These ports can auto-negotiate the operating speed to 10/100 Mbps and the mode to half/full duplex.

- One RJ-45 port for connection to an xDSL or Cable modem. This port is fixed at 10/100 Mbps, full duplex. This port only supports MDI-X pin signals, so you will have to use either straight-through or crossover cable depending on the port type used on the modem.

The following figure shows the components of the Sharing Router:

![Sharing Router Components](image)

Figure 2-1. Front Panel

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEDs</td>
<td>Power, WAN and LAN port status indicators (See Verify Port Status on page 2-10)</td>
</tr>
</tbody>
</table>
System Requirements

- You must have an ISP that meets the following minimum requirements:
  - Internet access from your local telephone company or Internet Service Provider (ISP) using an xDSL modem, Cable modem.
  - A PC using a fixed IP address or dynamic IP address assignment via DHCP, as well as a Gateway server address and DNS server address from your service provider.
  - A computer equipped with a 10 Mbps, 100 Mbps, or 10/100 Mbps Fast Ethernet card, or a USB-to-Ethernet converter.
  - TCP/IP network protocol installed on each PC that needs to access the Internet.
  - A Java-enabled Web browser, such as Microsoft Internet Explorer 5.0-5.6 or above or Netscape Communicator 4.76/6.0.6.2 or above installed on one PC at your site for configuring the Sharing Router.

Connect the System

The Sharing Router can be positioned at any convenient location in your office or home. No special wiring or cooling requirements are needed. You should, however, comply with the following guidelines:

- Keep the Sharing Router away from any heating devices.
You should also remember to turn off the power, remove the power cord from the outlet, and keep your hands dry when you install the Sharing Router.

**Basic Installation Procedure**

1. **Connect the LAN**: You can connect the Sharing Router to your PC, or to a hub or switch. Run Ethernet cable from one of the LAN ports on the front of the Sharing Router to your computer network adapter or to another network device.

2. **Connect the WAN**: Prepare an Ethernet cable for connecting the Sharing Router to a Cable/DSL modem or Ethernet router.

3. **Power on**: Connect the power adapter to the Sharing Router.

![Diagram of Connecting the Sharing Router](image)

**Figure 2-2. Connecting the Sharing Router**

**Attach to Your Network Using Ethernet Cabling**

The 4 LAN ports on the Sharing Router can auto-negotiate the connection speed to 10 Mbps Ethernet or 100 Mbps Fast Ethernet, as well as the transmission mode to half-duplex or full-duplex. (See Appendix B for details on wiring.)

Use twisted-pair cable to connect any of the 4 LAN ports on the Sharing Router to an Ethernet adapter on your PC. Otherwise, you can cascade any of the LAN ports on the Sharing Router to an Ethernet hub or switch, and then connect your PC or other network equipment to the hub or switch. When inserting an RJ-45 plug, be sure the tab on the plug clicks into position to ensure that it is properly seated.

**Warning**: Do not plug a phone jack connector into any RJ-45 port. This may damage the Sharing Router. Instead, use only twisted-pair cables with RJ-45 connectors that conform with FCC standards.

**Notes**: Use 100-ohm shielded or unshielded twisted-pair cable with RJ-45 connectors for all connections. Use Category 3, 4 or 5 for connections that operate at 10 Mbps, and Category 5 for connections that operate at 100 Mbps.
2. Make sure each twisted-pair cable does not exceed 100 meters (328 feet).

Attach the Sharing Router to the Internet

If Internet services are provided through an ADSL or Cable modem, use unshielded or shielded twisted-pair Ethernet cable (Category 3 or greater) with RJ-45 plugs to connect the broadband modem directly to the WAN port on the Sharing Router. Use either straight-through or crossover cable depending on the port type provided by the modem (see Appendix B).

Note: When connecting to the WAN port, use 100-ohm Category 3, 4 or 5 shielded or unshielded twisted-pair cable with RJ-45 connectors at both ends for all connections.

Connecting the Power Adapter

Plug the power adapter into the power socket on the Sharing Router, and the other end into a power outlet. Check the indicator marked Power on the front panel to be sure it is on. If the Power indicator does not light up, refer to Troubleshooting in Appendix A.

Verify Port Status

Check the power and port indicators as shown in the following table:

<table>
<thead>
<tr>
<th>LED</th>
<th>Condition</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (Green)</td>
<td>On</td>
<td>Sharing Router is receiving power.</td>
</tr>
<tr>
<td>WAN (Green)</td>
<td>On</td>
<td>The WAN port has established a valid network connection.</td>
</tr>
<tr>
<td></td>
<td>Flashing</td>
<td>The WAN port is transmitting or receiving traffic.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>The WAN port is not connected.</td>
</tr>
<tr>
<td>Link/Act (Green)</td>
<td>On</td>
<td>The indicated LAN port has established a valid network connection.</td>
</tr>
<tr>
<td></td>
<td>Flashing</td>
<td>The indicated LAN port is transmitting or receiving traffic.</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>The network port is not connected.</td>
</tr>
</tbody>
</table>
CHAPTER 3
CONFIGURING CLIENT PCs

TCP/IP Configuration

To access the Internet through the Sharing Router, you must configure the network settings of the computers on your LAN to use the same IP subnet as the Sharing Router. The default network settings for the Sharing Router are:

IP Address: 192.168.1.1
Subnet Mask: 255.255.255.0

These settings can be changed to fit your network requirements, but you must first configure at least one computer as described in Chapter 5 to access the Sharing Router Web configuration interface. (See Chapter 4 for information on configuring the Sharing Router.)

If you have not previously configured TCP/IP for your computer, refer to “Installing TCP/IP Protocol in Your PC” on page 5-1.

All PCs connected to the Sharing Router must be set to the same IP subnet as the Gateway. The default subnet address of the Sharing Router is 192.168.1.X (where X means 2-254) and the subnet mask is 255.255.255.0. You can set the IP address for client PCs either by automatically obtaining an IP address from the Sharing Router’s DHCP service or by manual configuration. See “Setting TCP/IP to work with the Sharing Router” on page 5-3.
CHAPTER 4
CONFIGURING THE SHARING ROUTER

After you have configured TCP/IP on a client computer, you can use a Web browser to configure the Sharing Router. The Sharing Router can be configured by any Java-supported browser including Internet Explorer 5.0 or above, or Netscape Navigator 4.71 or above. Using the Web management interface, you can configure the Sharing Router and view statistics to monitor network activity.

To access the Sharing Router management interface, enter the IP address of the Sharing Router in your Web browser http://192.168.1.1 (The Sharing Router automatically switches to Port 80 for management access.) Then login the Sharing Router system with no password (by default, there is no password). The home page displays the Main Menu on the left-hand side of the screen and descriptive information on the right-hand side. The Main Menu links are used to navigate to other menus that display configuration parameters and statistics.
Navigating the Web Browser Interface

The Sharing Router's management interface includes two key menus - Setup wizard, and Advanced Setup. The setup wizard menus provide general information on the current settings and how to configure the Sharing Router. The Advanced Setup menu is used to configure the LAN and WAN interface, as well as other advanced functions such as reset the Sharing Router, restore the factory settings, or upgrade firmware.

Main Menu

Using the Web management interface, you can define system parameters, manage and control the Sharing Router and its ports, or monitor network conditions. The following table briefly describes the selections available from this program.

<table>
<thead>
<tr>
<th>Menu</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setup Wizard</td>
<td>Follow the wizard through each step to setup the Sharing Router</td>
</tr>
<tr>
<td>Advanced Setup</td>
<td>Advanced functions settings</td>
</tr>
<tr>
<td>Setup Wizard Menu</td>
<td>Sets the cable or DSL settings</td>
</tr>
<tr>
<td>Time Zone</td>
<td>Sets the local time zone</td>
</tr>
<tr>
<td>WAN Type</td>
<td>Specifies the WAN connection type: (1) Cable modem(dynamic IP), (2) Fixed-IP sDSL, (3) Dial-up sDSL, (4) PPTP, (5) PPPoE, (6) PPTP, (7) DNS</td>
</tr>
<tr>
<td>WAN Setting</td>
<td>Basic the WAN settings</td>
</tr>
<tr>
<td>DNS</td>
<td>Specifies DNS servers to use for domain name resolution</td>
</tr>
</tbody>
</table>

Advanced Setup Menu

| System                      | Basic Configures settings and client services                              |
| WNS                         | Specifies the Internet connection type: (1) Dynamic IP, (2) Static IP, (3) PPTP, (4) PPTP, (5) DNS |
| LAN                         | Sets the TCP/IP configuration for the Sharing Router LAN interface and all DHCP clients. |
| NAT                         | Network Address Translation (NAT) allows multiple users IP address          |
| Firewall                    | The Sharing Router provides extensive firewall protection by restricting connection parameters to limit the risk of injection and defending against a wide array of common hacker attacks. Configures a variety of packet filtering and specialized functions, including: |
|                            | Block WAN Pkg                                                                 |
|                            | Client Filtering                                                             |
|                            | MAC Controls                                                                 |
|                            | DMZ                                                                         |
### System Menu

**System Time**
Sets the local time zone.

**Administrator Settings**
Sets the password and Remote Management for administrator access.

**Firmware Upgrade**
Upgrades the system with the latest firmware obtained from our website.

**Configuration Tools**
Restores all configuration settings to the factory defaults.

**Status**
Displays WAN/LAN connection status, as well as firmware and hardware version numbers.

**Security Log**
Displays any illegal attempts to access your network.

**Reset**
Reboots the system and reverts all of your configuration settings.

### WAN Menu

**Dynamic IP**
Obtain an IP address automatically from your service provider.

**Static IP**
Uses a static IP address to access Internet services.

**PPPoE**
PPPoE over Ethernet is a common connection method used for xDSL.

**PPPo**
PPPo Protocol can support multi-protocol Virtual Private Networks (VPNs).

**DNS**
Specifies DNS servers to use for domain name resolution.

### LAN Menu

**LAN Settings**
Enable DHCP to dynamically allocate IP address to your client PCs.

**DHCP Client List**
The DHCP client list allows you to see which clients are connected to the Sharing Router via IP address, host name, and MAC address.

### NtT Menu

**Special Application**
Applications such as Internet gaming, video conferencing, and Internet telephony require multiple connections. The Special Application feature allows these applications to work properly.

### Menu Description

<table>
<thead>
<tr>
<th><strong>Menu</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Virtual Server</strong></td>
<td>You can configure the Sharing Router as a virtual server to service remote users accessing services such as the Web or FTP at your local site via public IP addresses which can be automatically redirected to local servers configured with private IP addresses.</td>
</tr>
<tr>
<td><strong>Firewall Menu</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Block WAN Ping</strong></td>
<td>When you &quot;Block WAN Ping&quot;, you are causing the public WAN IP address on the Sharing Router to not respond to ping commands.</td>
</tr>
<tr>
<td><strong>Client Filtering</strong></td>
<td>You can block certain client PCs accessing the Internet based on IP addresses.</td>
</tr>
<tr>
<td><strong>MAC Control</strong></td>
<td>You can block certain client PCs accessing the Internet based on MAC addresses.</td>
</tr>
<tr>
<td><strong>DMZ</strong></td>
<td>If you have a local client PC that cannot run an Internet application properly from behind the NAT Firewall, you can open the client up to unrestricted two-way Internet access by defining a virtual DMZ Host.</td>
</tr>
</tbody>
</table>

### Time Zone

Set the time zone for the Sharing Router. This information is used for log entries and client filtering.
WAN Type

Specify the WAN connection type required by your Internet Service Provider. Specify a Cable modem (Dynamic IP), Fixed-IP xDSL, PPPoE xDSL, or PPTP.

WAN Setting

Cable Modem (Dynamic IP)

Set Cable modem host name and MAC address.

Fixed-IP xDSL

Enter the IP address, subnet mask, and gateway provided to you by your ISP in the appropriate fields.

Dial-Up xDSL (PPPoE)

Enter the User Name and Password required by your ISP in the appropriate fields. If your ISP has provided you with a Service Name, enter it in the Service Name field, otherwise, leave it blank.
**Advanced Setup**

The Sharing Router supports advanced functions like: attack detection, client filtering, virtual servers, special application access, and a virtual DMZ host. We recommend you keep the default settings.

**System Setting**

**System Time**

Connecting to a Simple Network Time Protocol (SNTP) server allows the Sharing Router to synchronize the system clock to the global Internet. The synchronized clock in the Sharing Router is used to record the security log and control client filtering.
Administrative Settings

- Enable administrative access based on a specific protocol. Allows the management of the network interface.
- Connect the device to the network and enter the credentials.
- Configure the server's IP address and network settings.
- Check the configuration options provided by the server.
- Disconnect from the server.
- Restart the server.

Note: Administrative Access. The server's IP address is saved. If the server goes down, the administrative access is lost.

Configuration:

- Connect to the server using the configured protocol.
- Enter the configured IP address.
- Configure the server's settings.
- Restart the server.

Use the 'backup' feature to restore the server's configuration. The database is saved for later use. Use the configured IP address to restore the server's settings.

Configuration:

- Connect to the server using the configured protocol.
- Enter the configured IP address.
- Configure the server's settings.
- Restart the server.

Use the 'backup' feature to restore the server's configuration. The database is saved for later use. Use the configured IP address to restore the server's settings.
Dynamic IP

The Host Name is optional, but may be required by some ISPs. The default MAC address is set to the WAN’s physical interface on the Sharing Router. Use this address when registering for Internet service, and do not change it unless required by your ISP. You can use the “Clone MAC Address” button to copy the MAC address of the Ethernet Card installed by your ISP into your PC and replace the WAN MAC address with this MAC address.

Static IP

If your Internet Service Provider has assigned a fixed address, enter the assigned address and subnet mask for the Sharing Router, then enter the gateway address of your ISP.

Note: You may need a fixed address if you want to provide Internet services, such as a Web server or FTP server.

ppPoE

Enter the PPPoE user name and password assigned by your ISP. The Service Name is normally optional, but may be required by some providers.

PPTP

The acronym of Point to Point Tunneling Protocol, PPTP encapsulates the packet for transmission over the Internet. It looks like it creates a private “tunnel” over the large public network to have the almost equal security of a private network without actually leasing a private line. If your Internet Service Provider requires the use of PPTP, enter the information below.

Note: PPTP for a WAN connection is most popular in Europe.
DNS

Domain Name Servers are used to map an IP address to the equivalent domain name. Your ISP should provide the IP address for one or more domain name servers. Enter those addresses on this screen.

LAN

LAN Settings

Configure the gateway address of the Sharing Router. To dynamically assign the IP address for client PCs, enable the DHCP Server, set the lease time, and then specify the address range. Also remember to configure all of your client PCs for dynamic address allocation.

Valid IP addresses consist of four numbers, and are separated by periods. The first three fields are the network portion, and can be from 0-255, while the last field is the host portion and can be from 1-254. However, remember not to include the gateway address of the Sharing Router in the client address pool.

DHCP Client List

The DHCP client list allows you to see which clients are connected to the Sharing Router via IP address, host name, and MAC address.

NAT Setting

Special Application

Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephone and others. These applications may not work when Network Address Translation (NAT) is enabled. If you need to run applications that require multiple connections, use the following screen to specify the additional public ports to be opened for each application.
Virtual Server

If you configure the Sharing Router as a virtual server, remote users accessing services such as Web or FTP at your local site via public IP addresses can be automatically redirected to local servers configured with private IP addresses. In other words, depending on the requested service (TCP/UDP port number), the Sharing Router redirects the external service request to the appropriate server (located at another internal IP address).

Firewall Setting

The Sharing Router’s firewall can block common hacker attacks, including IP Spoofing, Land Attack, Ping of Death, IP with zero length, Smurf Attack, UDP port loopback, Strook Attack, TCP null scan, and TCP SYN flooding. The firewall does not significantly affect system performance, so we advise leaving it enabled to protect your network users.

Block WAN Ping

When you “Block WAN Ping”, you are causing the public WAN IP address on the Elite to not respond to ping commands. Pinging public WAN IP addresses is a common method used by hackers to test whether your WAN IP address is valid and supports a network.

Client Filtering

You can filter Internet access for local clients based on IP address, application type (i.e., HTTP port), and time of day.

For example, this screen shows that clients in the address range 192.168.1.50-99 are permanently restricted from using FTP (Port 21), while clients in the address range 192.168.1.110-119 are blocked from browsing the Internet from Monday through Friday.
MAC Control

You can block certain client PCs accessing the Internet based on MAC addresses.

DMZ (Demilitarized Zone)

The DMZ Host application allows unrestricted 2-way communication between a single LAN PC and other Internet users or servers. This application is useful for supporting special-purpose services such as video-conferencing and gaming that require proprietary client software and/or 2-way user communication. To use this application, obtain a fixed Public IP Address from your ISP. Note that, in order to provide unrestricted access, the Firewall provided by the Sharing Router to protect this port is disabled, thus creating a potentially serious security risk. It is recommended that this application should be disabled when it is not in use by entering “0” in the “DMZ Host” field.

CHAPTER 5
SHARING ROUTER CONFIGURING CLIENT TCP/IP

If you have not previously installed the TCP/IP protocol on your client PCs, refer to the following section. If you need information on how to configure a TCP/IP address on a PC, refer to “Setting TCP/IP to work with the Sharing Router” on page 5-3.

Installing TCP/IP Protocol in Your PC

1. Click the Start button and choose Settings, then click Control Panel.
2. Double click the Network icon and select the Configuration tab in the Network window.
3. Click the Add button to add the network component to your PC.
4. Double click Protocol to add the TCP/IP protocol.
Select the Microsoft item in the manufacturers list. And choose TCP/IP in the Network Protocols. Click the OK button to return to the Network window.

The TCP/IP protocol will be listed in the Network window. Click OK to complete the install procedure and restart your PC to enable the TCP/IP protocol.

Setting TCP/IP to Work with the Sharing Router

1. Click the Start button and choose Settings, then click Control Panel.
2. Double click the Network icon. Select the TCP/IP line that has been assigned to your network card in the Configuration tab of the Network window.
3. Click the Properties button to set the TCP/IP protocol for the Sharing Router.
4. You can dynamically assign TCP/IP address settings to a client, or you can manually configure a client with address settings to meet your specific network requirements. (Note that the default IP address of the Sharing Router is 192.168.1.1.)
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 Sharing Router. 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.

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.
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 Sharing Router. 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.

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 Sharing Router. The following steps are for Internet...
Step 1: Obtain IP settings from Your Sharing Device

Here are the steps to configure your computer to connect to your sharing device:

1. Open the Network tab, click the "Sharing" button, and then select "Sharing Options" window.

2. In the "Sharing" window, click the "Sharing" button and then select "Sharing Options" window.

3. Select the "Sharing" option and enable Windows 192.168.0.10 connection to your Sharing Device.

Notices:

1. When the browser is not opened, close the browser and then open it again.

2. In the "Sharing" window, click the "Sharing" button and then select "Sharing Options" window.

3. Select the "Sharing" option and enable Windows 192.168.0.10 connection to your Sharing Device.
1. Click "Start," then "Run..."

2. Type "WINPCFG" and click "OK." It may take a minute or two for the "IP Configurations" 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 192.168.1.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.1.1. These values confirm that your Sharing Router is functioning. Click "OK" to close the "IP Configuration" window.

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 Sharing Router. 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 Sharing Router.

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 Settings

- 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 Sharing Router. 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 Sharing Router

Now that you have configured your computer to connect to your Sharing Router, it needs to obtain new network settings. By releasing any old IP settings and renewing them with settings from your Sharing Router, 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 "IPCcfg /RELEASE" and press the <ENTER> key.

3. Type "IPCcfg /RENEW" and press the <ENTER> key. Verify that your IP address is now 192.168.1.xxx (1-255), your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.1.1. These values confirm that your Sharing Router is functioning.

4. Type "EXIT" and press <ENTER> to close the "Command Prompt" window.
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 Internet Service Provider (ISP). You need to determine how your ISP issues your IP address. Most 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.


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

<table>
<thead>
<tr>
<th>IP Address</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Subnet Mask</td>
<td></td>
</tr>
<tr>
<td>Primary DNS Server</td>
<td></td>
</tr>
<tr>
<td>Secondary DNS Server</td>
<td></td>
</tr>
<tr>
<td>Default Gateway</td>
<td></td>
</tr>
</tbody>
</table>
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 Sharing Router

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

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 192.168.1.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.1.1. These values confirm that your Sharing Router is functioning.
4. Type "EXIT" and press <ENTER> to close the "Command Prompt" window.

Configuring Your Macintosh Computer

You may find that the instructions here do not exactly match your screen. This is because these steps and screenshots were created using Mac OS 8.5. Mac OS 7.x and above are all very similar, but may not be identical to Mac OS 4.5.

Step 1. Configure TCP/IP Settings

After you have completed the hardware setup, you need to configure your computer to connect to your Sharing Router. 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. Pull down the Apple Menu. Click "Control Panels" and select TCP/IP.

2. In the TCP/IP dialog box, make sure that "Ethernet" is selected in the "Connect Via:" field.

   If "Using DHCP Server" is already selected in the "Configure" field, your computer is already configured for DHCP. Close the TCP/IP dialog box, and skip to Step 2 "Disable HTTP Proxy."
3. All the information that you need to record is on the “TCP/IP” dialog box. Use the space below to record the information.

4. After writing down your IP settings, select “Using DHCP Server” in the “Configure” field and close the window.

5. Another box will appear asking whether you want to save your TCP/IP settings. Click Save.

TCP/IP Configuration Setting
- IP Address
- Subnet Mask
- Router
- Name Server

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 Sharing Router. 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 “Edit” and select “Preferences.”

2. In the Internet Explorer Preferences window, under Network, select Proxies.

3. Uncheck all checkboxes and click OK.

Netscape

1. Open Netscape and click the stop button. Click “Edit” and select “Preferences.”
2. In the "Preferences" dialog box, in the left-hand column labeled "Category," select "Advanced." Under the "Advanced" category, select "Proxy."  

3. Select "Direct Connection to the Internet" and click OK.

**Step 3. Obtain IP Settings From Your Sharing Router**

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

1. Pull down the Apple Menu. Click "Control Panels" and select TCP/IP.

2. In the TCP/IP window, your new settings will be shown. Verify that your IP address is now 192.168.1.xxx, your Subnet Mask is 255.255.255.0 and your Default Gateway is 192.168.1.1. These values confirm that your Sharing Router is functioning.

3. Close the TCP/IP window.
Dynamic IP Allocation via a DHCP Server

Select Obtain an IP address automatically in the IP Address tab. Do not input any values under the Gateway tab, and choose Disable DNS in the DNS Configuration tab. These settings will be automatically configured by the DHCP server. Click OK and reboot your system to implement the changes.

Manual IP Configuration

1. Select Specify an IP address in the IP Address tab. Select an IP address based on the default network 192.168.1.0 (where X is between 2 and 254), and use 255.255.255.0 for the subnet mask.

2. In the Gateway tab, add the IP address of the Sharing Router (default: 192.168.1.1) in the New gateway field and click Add.

3. In the DNS Configuration tab, add the IP address for the Sharing Router and click Add. This automatically relays DNS requests to the DNS server(s) provided by your ISP. Otherwise, add specific DNS servers into the DNS Server Search Order field and click Add.
4. After finishing TCP/IP setup, click OK, and then reboot the computer. After that, set up other PCs on the LAN according to the procedures described above.

Verifying Your TCP/IP Connection

After installing the TCP/IP communication protocol and configuring an IP address in the same network with the Sharing Router, you can use the Ping command to check if your computer is successfully connected to the Sharing Router. The following example shows how the Ping procedure can be executed in an MS-DOS window.

First, execute the Ping command:

`ping 192.168.1.1`

If the following messages appear:

Ping 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=2ms TTL=64

a communication link between your computer and the Sharing Router has been successfully established.

Otherwise, if you get the following messages,

Ping 192.168.1.1 with 32 bytes of data:
Request timed out.

There may be something wrong in your installation procedure. Check the following items in sequence:

1. Is the Ethernet cable correctly connected between the Sharing Router and your computer?
   The LAN LED on the Sharing Router and the Link LED of the network card on your computer must be on.

2. Is TCP/IP properly configured on your computer?
   If the IP address of the Sharing Router is 192.168.1.1, the IP address of your PC must be from 192.168.1.2 - 192.168.1.254 and the default gateway must be 192.168.1.1.

If you can successfully Ping the Sharing Router, then you are now ready to connect to the Internet!

APPENDIX A

SHARING ROUTER TROUBLESHOOTING

This appendix describes common problems you may encounter and possible solutions. The Sharing Router can be easily monitored through panel indicators to identify problems. If you cannot resolve any connection problems after checking the indicators, then refer to the other sections in the following table.

<table>
<thead>
<tr>
<th>Troubleshooting Chart</th>
<th>LED Indicators</th>
<th>Action</th>
</tr>
</thead>
</table>
| Power LED is Off      |                | • External power supply has failed or is disconnected.  
|                       |                | • Check connections between the Sharing Router, the external power supply, and the wall outlet.  
|                       |                | • If the power indicator does not turn on when the power cord is plugged in, you may have a problem with the power outlet, power cord, or external power supply. However, if the unit powers off after running for a while, check for loose power connections, power losses or surges at the power outlet.  
|                       |                | • If you still cannot isolate the problem, then the external power supply may be defective. In this case, contact Technical Support for assistance. |
### Troubleshooting Chart

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LED Indicators</strong></td>
<td></td>
</tr>
<tr>
<td>Link LED is Off</td>
<td>• Verify that the Sharing Router and attached device are powered on.</td>
</tr>
<tr>
<td></td>
<td>• Be sure the cable is plugged into both the Sharing Router and the corresponding device.</td>
</tr>
<tr>
<td></td>
<td>• Verify that the proper cable type is used and that its length does not exceed the specified limits.</td>
</tr>
<tr>
<td></td>
<td>• Be sure that the network interface on the attached device is configured for the proper communication speed and duplex mode.</td>
</tr>
<tr>
<td></td>
<td>• Check the adapter on the attached device and cable connections for possible defects. Replace any defective adapter or cable if necessary.</td>
</tr>
<tr>
<td><strong>Network Connection Problems</strong></td>
<td></td>
</tr>
<tr>
<td>Cannot Ping the Sharing Router from the</td>
<td>• Verify that the IP addresses are properly configured. For most applications, you should use the Sharing Router's DHCP function to</td>
</tr>
<tr>
<td>attached LAN, or the Sharing Router cannot</td>
<td>dynamically assign IP addresses to any host on the attached LAN. However, if you manually configure any IP addresses on the LAN, verify</td>
</tr>
<tr>
<td>Ping any device on the attached LAN</td>
<td>that the same network address (network component of the IP address) and subnet mask are used for both the Sharing Router and any</td>
</tr>
<tr>
<td></td>
<td>attached LAN devices.</td>
</tr>
<tr>
<td></td>
<td>• Be sure the device you want to Ping (or from which you are Pinging) has been configured for TCP/IP.</td>
</tr>
</tbody>
</table>
APPENDIX B
SHARING ROUTER
CABLES

Ethernet Cable

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Cable Types and Specifications</th>
<th>Max. Length</th>
<th>Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable</td>
<td>Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10BASE-T</td>
<td>Cat. 3, 4, 5 100-ohm UTP</td>
<td>100 m (328 ft)</td>
<td>RJ-45</td>
</tr>
<tr>
<td>100BASE-TX</td>
<td>Cat. 5 100-ohm UTP</td>
<td>100 m (328 ft)</td>
<td>RJ-45</td>
</tr>
</tbody>
</table>

Twisted-pair Cable

**Caution:** DO NOT plug a phone jack connector into any RJ-45 port. Use only twisted-pair cables with RJ-45 connectors that conform with FCC standards.

For 10BASE-T/100BASE-TX connections, a twisted-pair cable must have two pairs of wires. Each wire pair is identified by two different colors. For example, one wire might be red and the other, red with white stripes. Also, an RJ-45 connector must be attached to both ends of the cable.
Figure B-1 illustrates how the pins on the RJ-45 connector are numbered. Be sure to hold the connectors in the same orientation when attaching the wires to the pins.

**Figure B-1. RJ-45 Connector Pin Numbers**

### Straight-through Cable

<table>
<thead>
<tr>
<th>Pin</th>
<th>MDI Signal Name*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Transmit Data (TD+)</td>
</tr>
<tr>
<td>2</td>
<td>Transmit Data (TD-)</td>
</tr>
<tr>
<td>3</td>
<td>Receive Data (RD+)</td>
</tr>
<tr>
<td>6</td>
<td>Receive Data (RD-)</td>
</tr>
</tbody>
</table>

Pins 4,5,7 and 8 are not connected.

### Crossover Cable

<table>
<thead>
<tr>
<th>Pin</th>
<th>MDI Signal Name*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3(TD+)</td>
</tr>
<tr>
<td>2</td>
<td>6(TD-)</td>
</tr>
<tr>
<td>3</td>
<td>1(RD+)</td>
</tr>
<tr>
<td>6</td>
<td>2(RD-)</td>
</tr>
</tbody>
</table>

Pins 4,5,7 and 8 are not connected.

---

**RJ-45 Port Pin Assignments**

All LAN ports on the Switch Roster support MDI configuration. There are pin signals as following:

<table>
<thead>
<tr>
<th>Pin</th>
<th>MDI Signal Name*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Transmit Data (TD+)</td>
</tr>
<tr>
<td>2</td>
<td>Transmit Data (TD-)</td>
</tr>
<tr>
<td>3</td>
<td>Receive Data (RD+)</td>
</tr>
<tr>
<td>6</td>
<td>Receive Data (RD-)</td>
</tr>
</tbody>
</table>

* The “+” and “-” signs represent the polarity of the wires that make up each wire pair.
APPENDIX C
SPECIFICATIONS

WAN Interface
- 10BASE-T/100BASE-TX, 1 RJ-45 port

Management
- Web management

Advanced Features
- Dynamic IP Address Configuration - DHCP, DNS
- Firewall - Client privileges, hacker prevention and logging
- Virtual Private Network - PPTP, L2TP, IPsec pass-through

Internet Standards
- ARP (RFC 826), IP (RFC 791), ICMP (RFC 792), UDP (RFC 768), TCP (RFC 793), Telnet (RFC 854-858), MDS (RFC 1323), BOOTP Extension (RFC 1497), PPP LCP Extension (RFC 1576), PPPoE (RFC 2516), NAT (RFC 1631), PPP (RFC 1661), HTML (RFC 1866), HTTP (RFC 1945), CHAP (RFC 1994), DHCP (RFC 2131), PPTP (RFC 2083)

Temperature
- Operating: 32 to 104°F (0 to 40°C)
- Storage: -4 to 149°F (-20 to 65°C)

Humidity
- 5% to 95% (non-condensing)

Compliances
- CE Mark
- Emissions
  - FCC Class B
  - EN55022 (CISPR 22) Class B
Immunity
EN 61000-3-2/3
EN 61000-4-2/3/4/5/6/8/11

Sharing Router

LAN Interface
10BASE-T/100BASE-TX
4 RJ-45 ports

Indicator Panel
LAN (Link, Activity), WAN (Link, Activity), Power

Dimensions
103.5 x 83.5 x 26.0 mm (4.07 x 3.28x 1.02 inch)

Weight
0.55 lbs (0.25 kg)

Input Power
5V DC (2.4A)

Maximum Current
0.40A RMS max. @110V, 0.4A RMS max. @240V

Power Consumption
6.5 Watts max. @ 100-240 VAC

Heat Dissipation
144 BTU/hr max. @ 100-240 VAC

APPENDIX D
SHARING ROUTER
ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Internet Sharing Router Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>49074 Sharing Router</td>
</tr>
<tr>
<td>4-port Internet Gateway</td>
</tr>
<tr>
<td>- WAN/LAN</td>
</tr>
</tbody>
</table>