Plug&Share™
Wireless Router
54 Mbps 802.11g

6800G

User Manual

Table of Contents

IMPORTANT!

Use only the AC power adapter provided with the product. Do not attempt to use any other AC power adapter. If you need a replacement, please call 1-877-800-5400.

AT&T offers a full line of data networking
and broadband accessories.

Please visit us at

www.plugandshare.att.com

1-877-800-5400

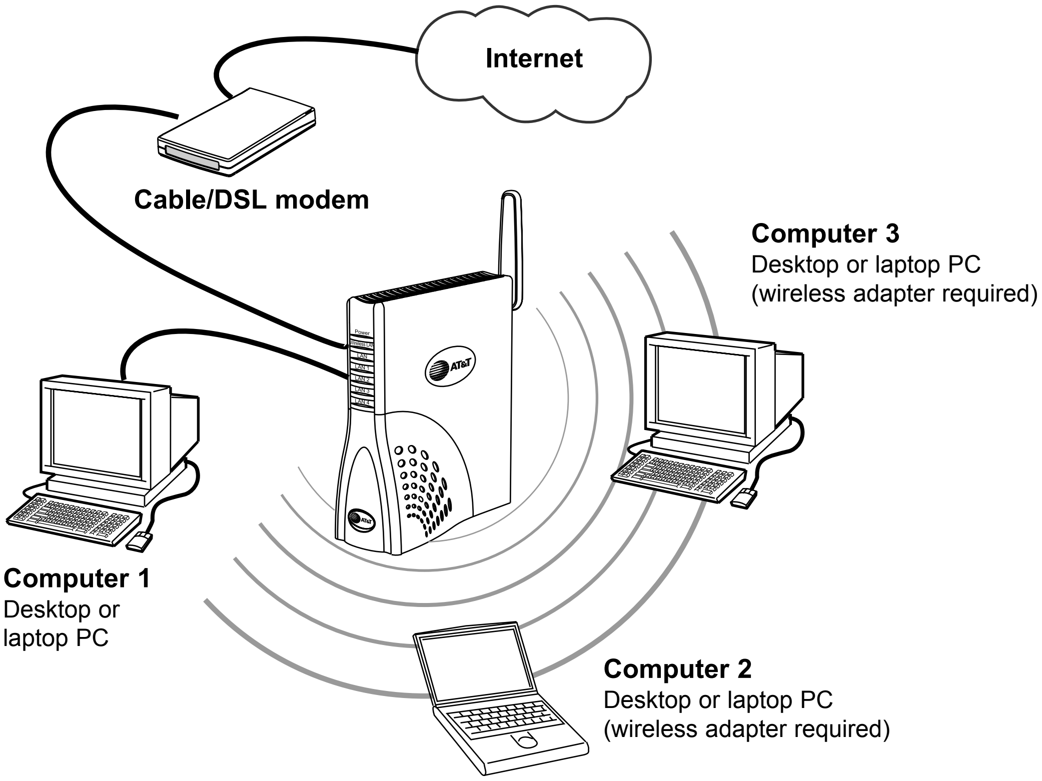
About Your New Wireless Router

Your new AT&T Plug&Share™ Wireless Router gives you the freedom to share files, programs, storage devices, scanners, printers and even broadband Internet access among all the computers in your network — without the inconvenience and expense of a tangle of network cabling.

Designed for fast, easy setup and use, your new router transfers data at up to 54 Mbps (megabits per second). Built-in “firewall” capabilities help keep your network secure and protect your privacy.

The AT&T Plug&Share™ Wireless Router can be used with computers equipped with Windows® XP, 2000, Me or 98 SE operating systems and can also be integrated into a larger network.

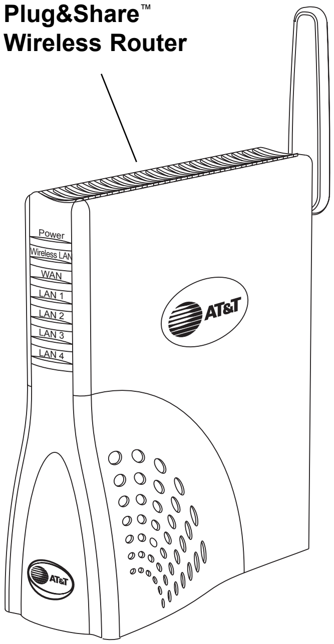
Before you begin, please turn to the next page to check package contents and system requirements. Then follow the step-by-step directions to install and configure the router for optimum performance on your network.



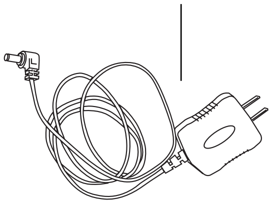
Package Contents

Please check to make sure your package contains the following items:

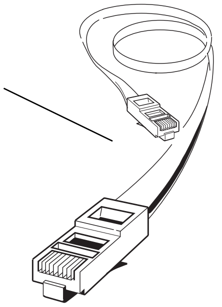
Plug&Share™ Wireless Router



Power adapter
Use ONLY the supplied adapter. Do not attempt to use any other power adapter.



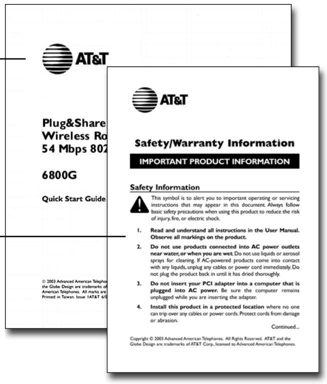
RJ45 Ethernet cable
Connects the router to the host computer, which is the computer you are using to set up your router.



CD-ROM
Contains printable versions of this User Manual, Quick Start Guide and Safety & Warranty Information.

Quick Start Guide

Safety & Warranty Information

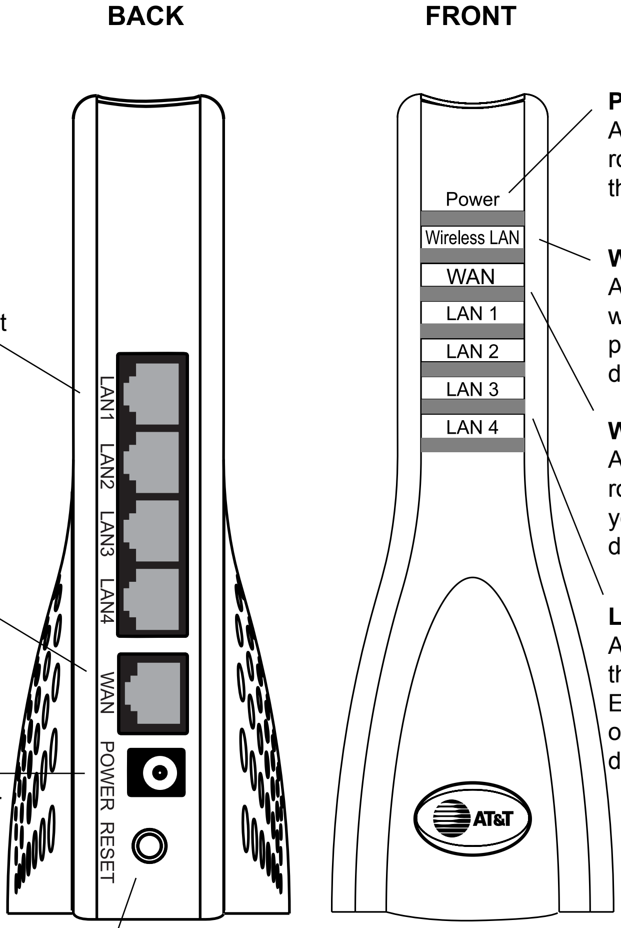


System Requirements:

You must have a personal computer with the following applications & hardware:

- Windows® 98 SE, Me, 2000 or XP
- Internet Explorer® 5.5 or later version
- Intel® Pentium II (or higher)
- 64MB of RAM
- CD-ROM drive
- 10/100 Base-T Ethernet Port
- 5 MB of available hard-disk space (60 MB to load Adobe® Acrobat® Reader®)
- Cable modem or DSL modem with Broadband Service

Router Controls, Connections and Indicator Lights



LAN Ports 1- 4
RJ45 jacks for cable connections to a local area network. After installation and setup, you will not need cabling to wirelessly share resources throughout the network.

WAN Port
This port provides Internet access when connected to a DSL or cable modem. (“WAN” stands for “Wide Area Network.”)

Power
Plug in your power adapter here, then plug it into an electrical outlet.

Reset button
Make sure the router is plugged in and turned on, then press and hold this button for 15 seconds to restore factory programmed default settings. You will have to run the Setup Wizard again if you use this feature (see page 8).

Power
A steady light indicates that the router is properly connected to the power supply.

Wireless LAN
A steady light indicates that the wireless connection is working properly. The light blinks during data transfer.

WAN
A steady light indicates the router is properly connected to your modem. The light blinks during data transfer.

LAN1- LAN 4
A steady light indicates that there is a connection to an Ethernet-enabled computer on one of the ports. The light blinks during data transfer.

Step 1: Make sure that you have Internet access

Before you begin, launch your web browser to make sure you can connect to the Internet. If you can connect to web sites as usual, proceed to Step 2, below. If you cannot connect to the Internet, check your modem connections, or consult the User Manual provided by your broadband/Internet service supplier. You must have Internet access before installing the router.

Step 2: Connect router to your cable/DSL modem and to your computer

1 Connect power adapter

Connect the power adapter to the router, then plug it into an electrical outlet not controlled by a wall switch.

2 Connect router to computer

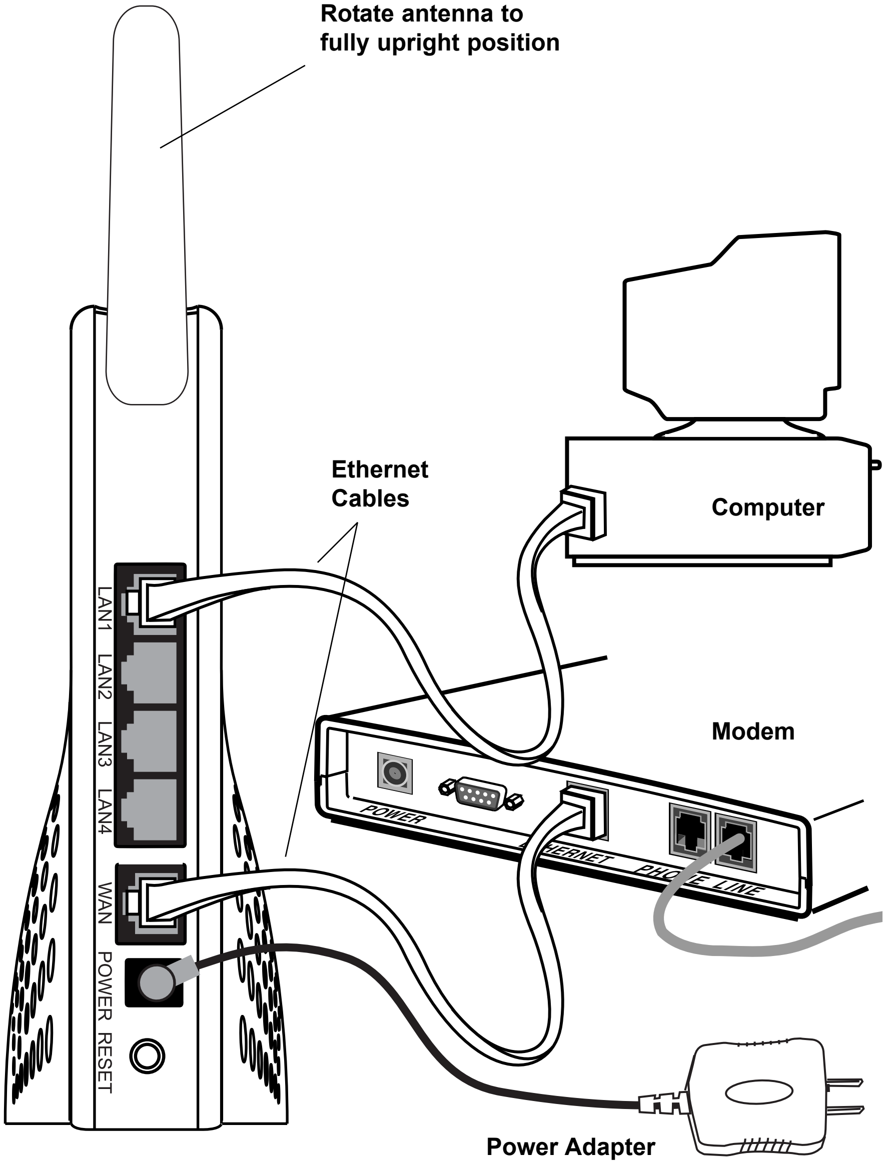
Unplug the Ethernet cable from your modem, then plug it into the LAN 1 port of the router. (You can use the other ports to connect devices not equipped for wireless networking).

3 Connect router to modem

Use the supplied Ethernet cable to connect the modem to the WAN port of the router. WAN stands for Wide Area Network (Internet).

4 Check lights & connections

Before proceeding, make sure all connections match the diagram at right. Check the front of the router to make sure the Power, WAN and LAN1 lights are on (see page 6).



Step 3: Run the Setup Wizard

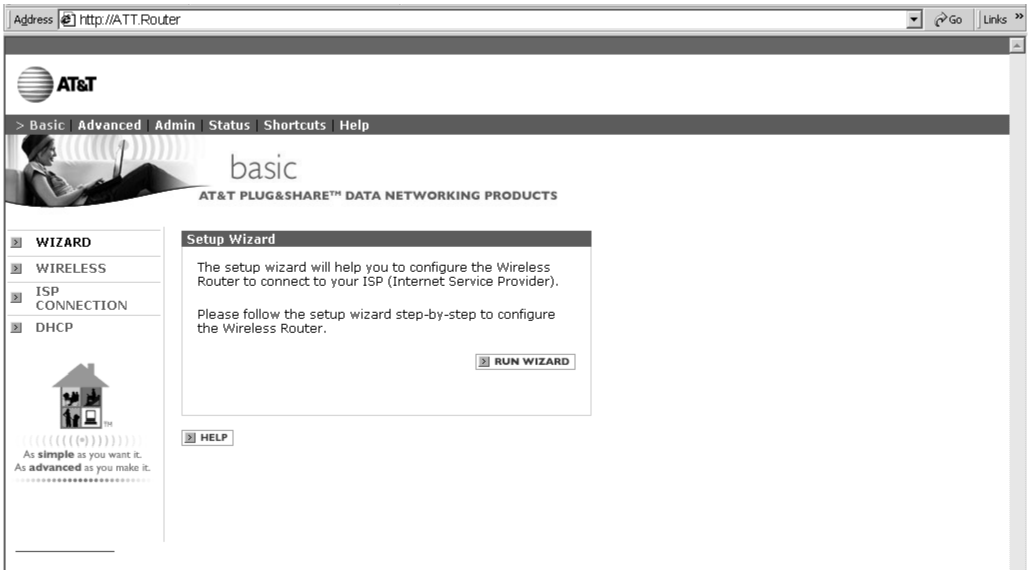
To configure your router for use, launch your web browser, then follow the steps below.

NOTE: The screens you will see are stored in the router; they are not web site pages. During setup, ignore alerts that prompt you to re-connect to the Internet.

1 In the address window, type http://ATT.Router (do NOT type www).

2 Press **Enter** to display the Wizard screen. If this screen does not appear, type http://192.168.0.1 then press **Enter**.

3 Click the **Run Wizard** button to display the Internet Connection Type screen (see below).


Address http://ATT.Router
Go
Links
AT&T
> Basic | Advanced | Admin | Status | Shortcuts | Help
basic
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
WIZARD
WIRELESS
ISP CONNECTION
DHCP
As simple as you want it.
As advanced as you make it.
RUN WIZARD
HELP

Setup Wizard

The setup wizard will help you to configure the Wireless Router to connect to your ISP (Internet Service Provider).

Please follow the setup wizard step-by-step to configure the Wireless Router.

Internet Connection Type

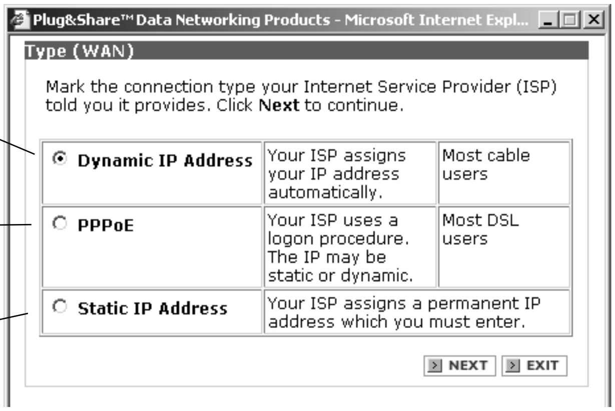
At this screen you must choose an Internet connection type (you will be allowed to choose only one). If you are not sure which to choose, ask your Internet Service Provider.

After you make a selection, press **Next** to display a setup screen for the option you've chosen.

Dynamic IP Address
Cable modems usually require this setting. Choose this setting if you don't have to log on to the Internet when you've turned on your computer, and if your ISP assigns your IP address.

PPPoE
DSL modems usually require this setting. Choose this setting if you have to log on to the Internet when you turn on your computer.

Static IP
This setting is rarely required. Contact your ISP before choosing this option.


Plug&Share™ Data Networking Products - Microsoft Internet Expl...
NEXT
EXIT

Type (WAN)

Mark the connection type your Internet Service Provider (ISP) told you it provides. Click **Next** to continue.

● **Dynamic IP Address**	Your ISP assigns your IP address automatically.	Most cable users
○ **PPPoE**	Your ISP uses a logon procedure. The IP may be static or dynamic.	Most DSL users
○ **Static IP Address**	Your ISP assigns a permanent IP address which you must enter.	

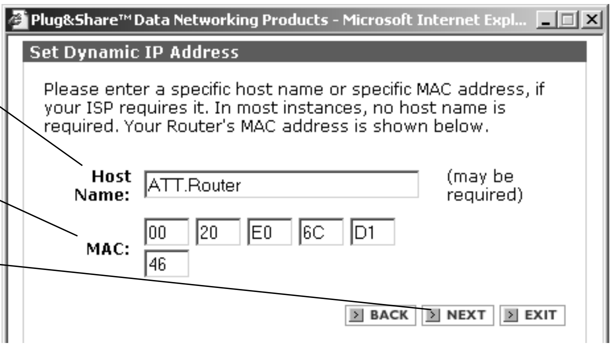
Set Dynamic IP Address

The following screen appears if you select Dynamic IP Address as your Internet connection type.

Host Name: If your ISP requires that you enter a host name, enter it here.

MAC (Media Access Control): The address of your computer's network adapter should appear here as the default. It is usually not necessary to change it.

Click **Next** to display the Wireless LAN Connection screen (see next page).


Plug&Share™ Data Networking Products - Microsoft Internet Expl...
BACK
NEXT
EXIT

Set Dynamic IP Address

Please enter a specific host name or specific MAC address, if your ISP requires it. In most instances, no host name is required. Your Router's MAC address is shown below.

Host Name: ATT.Router (may be required)

MAC: 00 20 E0 6C D1 46

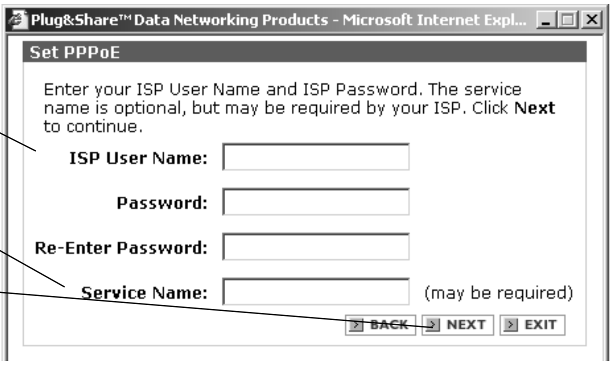
Set PPPoE

The following screen appears if you select PPPoE as your Internet connection type.

Enter the user name and password you use for access to your Internet Service Provider.

If your ISP requires you to use a service name, enter it here.

Click **Next** to display the Wireless LAN Connection screen (see next page).


Plug&Share™ Data Networking Products - Microsoft Internet Expl...
BACK
NEXT
EXIT

Set PPPoE

Enter your ISP User Name and ISP Password. The service name is optional, but may be required by your ISP. Click **Next** to continue.

ISP User Name:

Password:

Re-Enter Password:

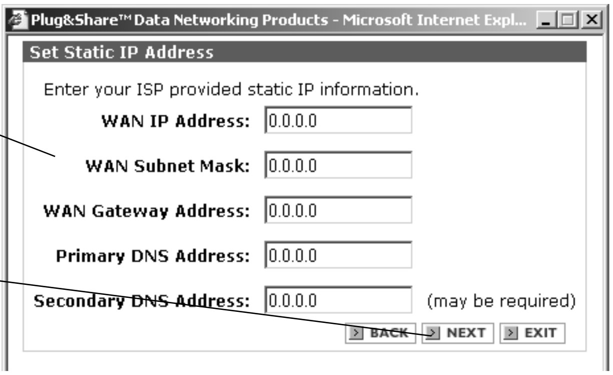
Service Name: (may be required)

Set Static IP Address

The following screen appears if you select Static IP Address as your Internet connection type.

Delete anything that appears in these fields when the screen is displayed, then enter the WAN and DNS addresses provided by your ISP.

Click **Next** to display the Wireless LAN Connection screen (see next page).


Plug&Share™ Data Networking Products - Microsoft Internet Expl...
BACK
NEXT
EXIT

Set Static IP Address

Enter your ISP provided static IP information.

WAN IP Address: 0.0.0.0

WAN Subnet Mask: 0.0.0.0

WAN Gateway Address: 0.0.0.0

Primary DNS Address: 0.0.0.0

Secondary DNS Address: 0.0.0.0 (may be required)

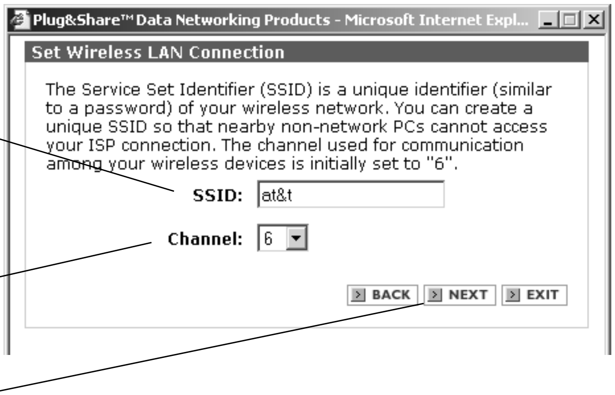
Set Wireless LAN Connection

This screen displays the default settings for your wireless network.

SSID (Service Set Identifier): This feature provides protection against unauthorized access to your network. The default SSID is at&t. You should change this name to any alphanumeric (numbers and/or letters) identifier up to 32 characters long. All wireless adapters on your network must use the same SSID as your wireless router and/or access point. The SSID is case sensitive (i.e., “cat” and “Cat” are not the same).

Channel: Click to choose any channel from 1 to 11. (Default is 6.) All wireless devices on the network must be set to the same channel.

Click **Next** to display the Setup Completed screen.



Plug&Share™ Data Networking Products - Microsoft Internet Expl...

Set Wireless LAN Connection

The Service Set Identifier (SSID) is a unique identifier (similar to a password) of your wireless network. You can create a unique SSID so that nearby non-network PCs cannot access your ISP connection. The channel used for communication among your wireless devices is initially set to "6".

SSID: at&t

Channel: 6

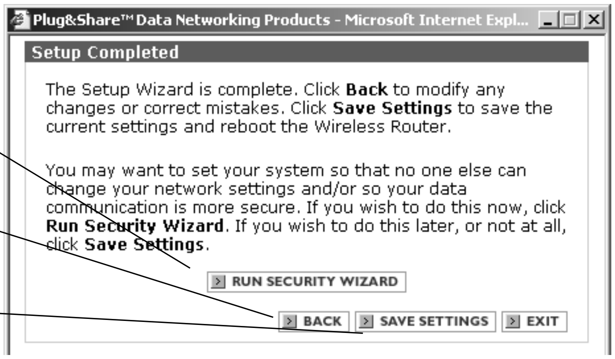
CAUTION: SSID and Channel number must be identical in all wireless network devices.

Setup completed

Click **Run Security Wizard** to provide privacy for your wireless network and help protect against unauthorized access (see next page).

Click **Back** if you want to change any settings.

Click **Save Settings** to end the setup session now. (See Close Wizard description, page 12.)



Plug&Share™ Data Networking Products - Microsoft Internet Expl...

Setup Completed

The Setup Wizard is complete. Click **Back** to modify any changes or correct mistakes. Click **Save Settings** to save the current settings and reboot the Wireless Router.

You may want to set your system so that no one else can change your network settings and/or so your data communication is more secure. If you wish to do this now, click **Run Security Wizard**. If you wish to do this later, or not at all, click **Save Settings**.

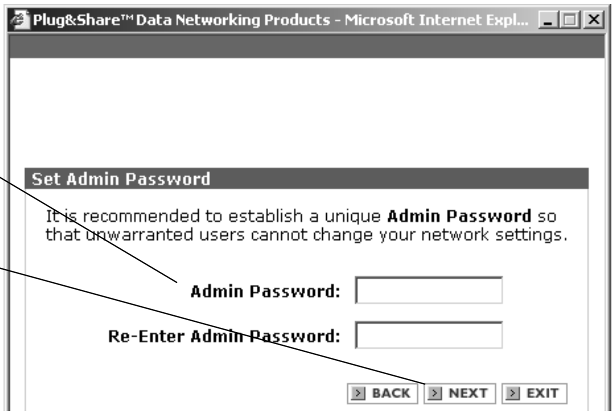
Security Wizard: Set Admin Password

You can protect against unauthorized access to network settings by entering a password here. Only those who know the password will be allowed to change network settings.

NOTE: Be sure to choose a password you can remember. If you forget your password, you will not have access to any settings until you reset the router to factory programmed default settings.

Enter your password twice. Symbols will replace your key strokes on the screen. The password can be up to 15 characters (letters, numbers, spaces and other punctuation marks). The password is case sensitive (i.e., “cat” and “Cat” are not the same).

Click **Next** to display the WEP Encryption screen.


Set Admin Password

It is recommended to establish a unique **Admin Password** so that unwarranted users cannot change your network settings.

Admin Password:
Re-Enter Admin Password:

Plug&Share™ Data Networking Products - Microsoft Internet Expl...
BACK
NEXT
EXIT

Set WEP Encryption

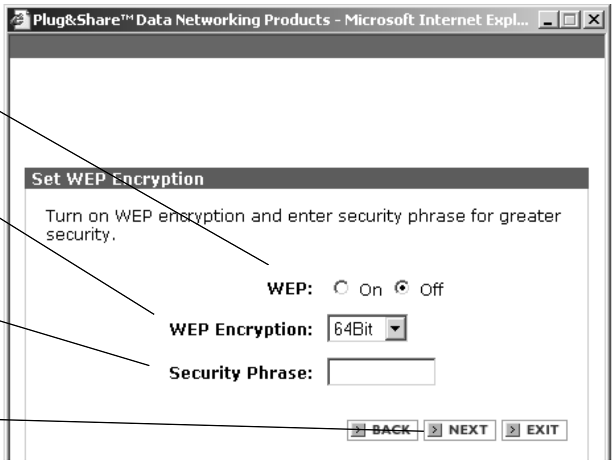
WEP (Wired Equivalent Privacy) helps protect your privacy by scrambling data that passes through your network.

WEP: Click **On** to activate WEP encryption.

WEP encryption: Select encryption strength from the drop down menu (64, 128 or 152-bit). Larger numbers will make your system more secure, but may result in slower data transfer.

Security Phrase: Enter a security phrase in the last text box. (You can use letters, numbers, spaces, and punctuation marks. You must enter five characters for 64-bit, 13 characters for 128-bit, or 16 characters for 152-bit encryption.)

Click **Next** to display the Security Setup Completed screen.


Set WEP Encryption

Turn on WEP encryption and enter security phrase for greater security.

WEP: ○ On ● Off
WEP Encryption: 64Bit
Security Phrase:

Plug&Share™ Data Networking Products - Microsoft Internet Expl...
BACK
NEXT
EXIT

CAUTION: All WEP settings must be identical in all wireless network devices. WEP Security Phrase must match the WEP settings used in all your wireless adapters (may be called Security Phrase, Ascii/Hex Key or other term).

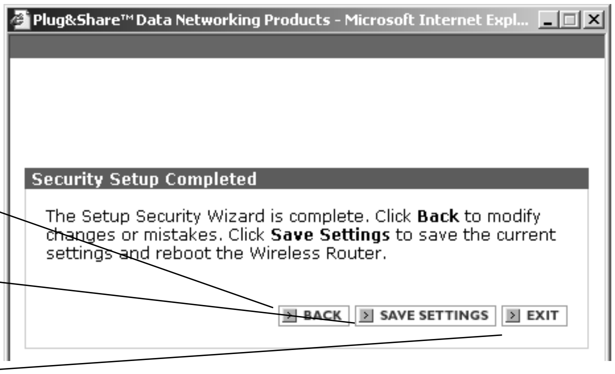
Security setup completed

Your setup is complete. For additional security protection, turn to the Wireless Settings section (page 15).

Click **Back** to change any settings

Click **Save Settings** to end the setup session now. Your router will restart automatically and the Close Wizard screen will appear.

Click **Exit** to return to the current settings.


Plug&Share™ Data Networking Products - Microsoft Internet Expl...
BACK
SAVE SETTINGS
EXIT

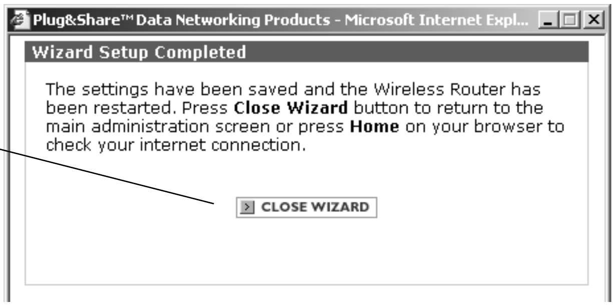
Security Setup Completed

The Setup Security Wizard is complete. Click **Back** to modify changes or mistakes. Click **Save Settings** to save the current settings and reboot the Wireless Router.

Close Wizard

Click **Close Wizard** to allow access to advanced administration screens.

To check your Internet connections, click the **Home** button on your Internet web browser at the top of your screen.


Plug&Share™ Data Networking Products - Microsoft Internet Expl...
CLOSE WIZARD

Wizard Setup Completed

The settings have been saved and the Wireless Router has been restarted. Press **Close Wizard** button to return to the main administration screen or press **Home** on your browser to check your internet connection.

Test your connections

Click on the icon for your web browser. Your designated home page should appear. If your home page does not appear, try the following:

- Reboot your computer.
- Turn off or unplug your modem for a few seconds, then turn it back on.
- If you still have no Internet access, please turn to the Troubleshooting section (page 68).

Note: After your initial setup is complete you can use wireless adapters to connect other devices to your network. The Ethernet cable is not necessary, and can be disconnected.

System settings

To change your network settings, launch your web browser, type http://ATT.Router in the address field, then press **Enter**. If the router page does not appear, type http://192.168.0.1 then press **Enter**.

Click tabs in the blue menu bar at the top of the page to choose the type of settings you want to review or change. For more information, click the **Help** button at the bottom of each page.

Basic settings

- Wizard (rerun the setup wizard)
- Wireless (view or change wireless security settings)
- ISP Connection (view or change the IP address and related information)
- DHCP (view or change the settings that control communication within your network)

Advanced settings

Do not change these settings unless you have advanced knowledge of network technology.

- Virtual Server (view or change remote user access settings)
- Multi-mode Applications (view or change settings for multiple connections, such as games)
- Filters (view or change access filters to control Internet access)
- Firewall (view or change settings to protect against unauthorized access to and from your network)
- DMZ (view or change list of computers allowed full access to the Internet)
- Routing (verify network addresses in the routing table)
- Performance (view or change wireless performance features, speed and security)

Administrator settings

These settings can help you protect against unauthorized access and manage your router firmware.

- Passwords (administer passwords and remote management)
- Settings (set router system time, IP Address, DNS and Plug & Play settings)
- Backup (save and restore system settings, or reboot router)
- Other (send and block ping tests, and set VPN pass-through)

Status screens

Status screens display reports of network activity and traffic.

- Router Info (view current firmware version, LAN, WAN, and wireless status)
- Activity (display and save the system activities)
- Traffic (view traffic statistics)
- WLAN (displays a list of wireless devices connected to the router)

Shortcuts

These mini-Wizards help you quickly set up basic functionality for several useful features.

- Parental Control (restrict access from certain computers)
- Gaming (change settings for compatibility with Internet gaming)
- Personal Web Site (use a computer on your network to host your web site)
- Personal FTP Site (use a computer on your network to host your FTP site)
- Internet Telephony (change settings for compatibility with Internet telephone services)

Help

Choose Help to find additional information about system settings, or to upload new router firmware.

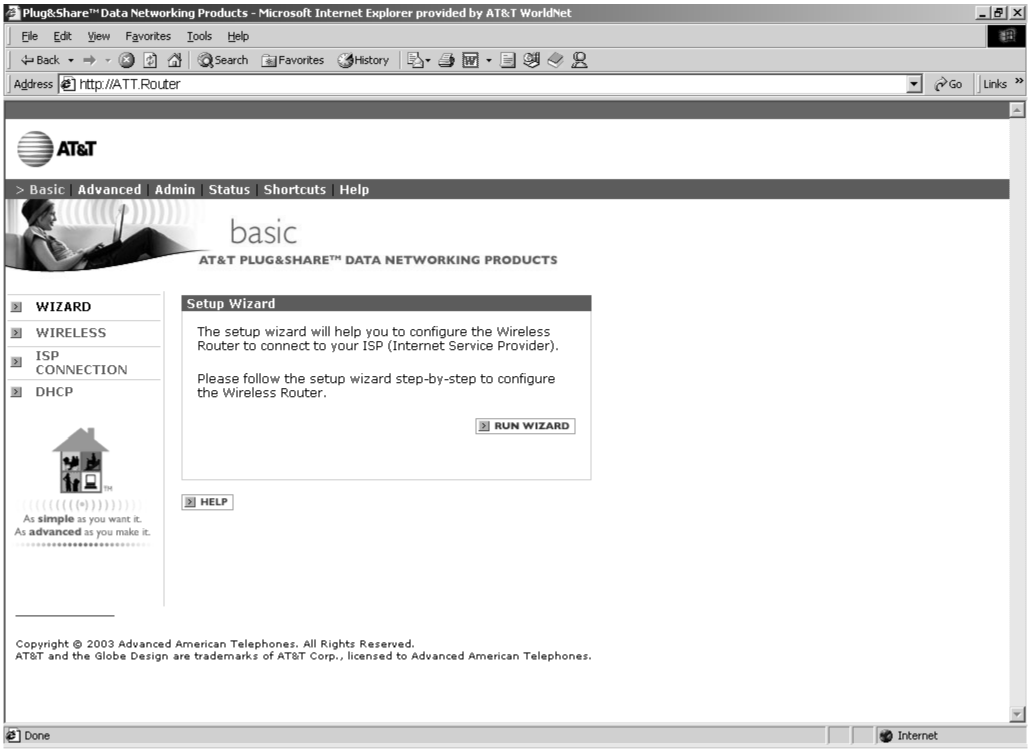
- Firmware Upgrade (downloads new firmware if a more recent version is available)

Basic > Advanced > Admin > Status > Shortcuts > Help

Wizard
Wireless
ISP Connection
DHCP

Setup Wizard

Click Run Wizard for a simple, step-by-step configuration of your router settings. (It is usually not necessary to do this after initial setup is complete.)


Plug&Share™ Data Networking Products - Microsoft Internet Explorer provided by AT&T WorldNet
File Edit View Favorites Tools Help
Back Search Favorites History
Address http://ATT.Router
Go Links
AT&T
> Basic | Advanced | Admin | Status | Shortcuts | Help
basic
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
WIZARD
WIRELESS
ISP CONNECTION
DHCP
As simple as you want it.
As advanced as you make it.
Setup Wizard
RUN WIZARD
HELP
Done
Internet

The setup wizard will help you to configure the Wireless Router to connect to your ISP (Internet Service Provider).

Please follow the setup wizard step-by-step to configure the Wireless Router.

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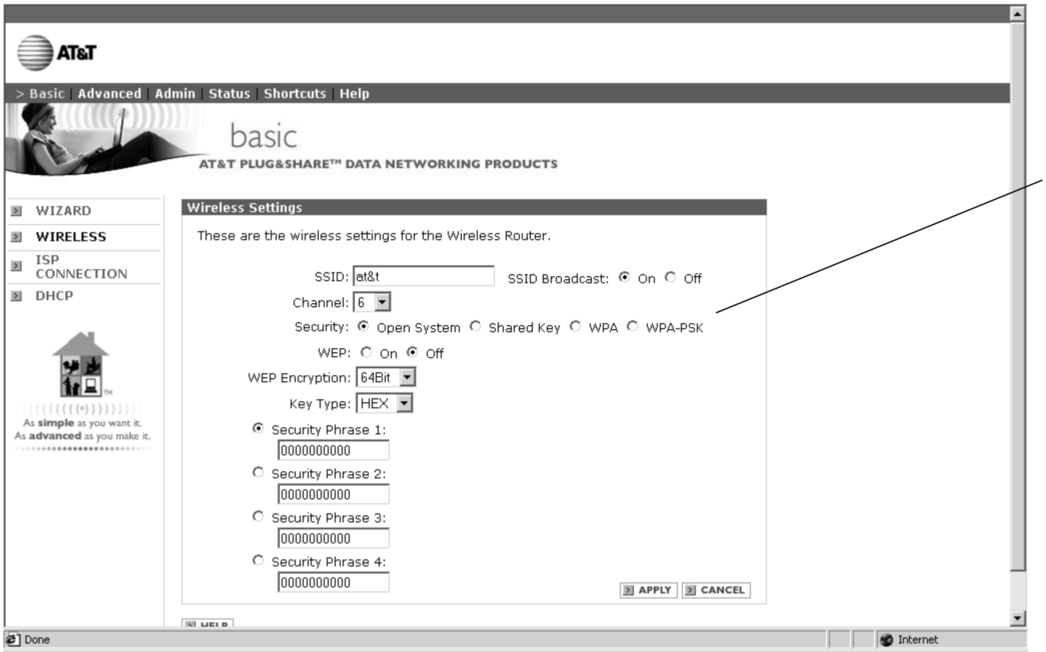
Basic > Advanced > Admin > Status > Shortcuts > Help

Wizard
Wireless
ISP Connection
DHCP

Wireless settings

Options on this page allow you to control security features that can protect your privacy. Remember that all devices connected to the wireless network must share the same security settings.


AT&T
> Basic | Advanced | Admin | Status | Shortcuts | Help
basic
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
WIZARD
WIRELESS
ISP CONNECTION
DHCP
As simple as you want it.
As advanced as you make it.
APPLY
CANCEL
HELP
Done
Internet

Wireless Settings

These are the wireless settings for the Wireless Router.

SSID: at&t SSID Broadcast: ● On ○ Off
Channel: 6
Security: ● Open System ○ Shared Key ○ WPA ○ WPA-PSK
WEP: ○ On ● Off
WEP Encryption: 64Bit
Key Type: HEX
● Security Phrase 1: 0000000000
○ Security Phrase 2: 0000000000
○ Security Phrase 3: 0000000000
○ Security Phrase 4: 0000000000

Click a radio button to display options for the security type you prefer

- **SSID:** (Default at&t) The Service Set Identifier is the name of your wireless local area network. The factory default name is "at&t". For privacy, you should change this to a unique name. If you leave the default name, users of other wireless networks nearby may have access to your computers or your Internet access (if they are using the same SSID). Remember that all computers on your network must share the same SSID.
- **Channel:** (Default 6) The router uses radio signals to communicate with other devices on the network. You can change the frequency by selecting a different channel. Remember that all computers on your network must use the same channel. Devices using AT&T Plug&Share™ wireless adapters will automatically detect the channel used by the router and change to it.

  You may have to change the channel if you are experiencing problems such as intermittent connection and disconnection. You can perform a site survey on your wireless adapter to find out which channels are being used by other wireless networks nearby. If other networks use the same channel (or an adjacent one), change yours to one as far away as possible from the others in use. (For example, if other networks use channels 6, 9 and 11, try changing yours to channel 1.)

Security

Security options allow you to choose the type of encryption you prefer. Click a radio button to select one:

- **Open System:** No security. Not recommended.
- **Shared Key:** Moderate security (see page 16).
- **WPA:** Suitable only for large enterprise networks (see page 16).
- **WPA-PSK:** High security for home, home-office & small business (see page 16).

Shared Key Security

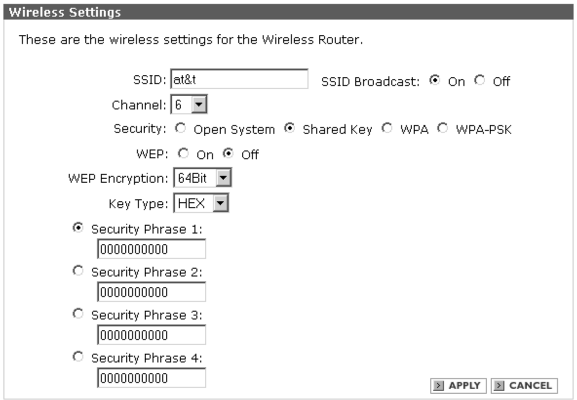
(WEP: Wired Equivalent Privacy): Select this option for a moderate level of security.

Phrase/Key: Enter a security phrase. If you choose the Hex Key Format (see below), you must use hexadecimal digits (0-9, a-f). If you choose the ASCII Key Format you can use letters, numbers, spaces, and punctuation marks. For the ASCII Key Format you must enter five characters for 64-bit, 13 characters for 128-bit or 16 characters for 152-bit encryption. Whichever format you use, <u>the security phrase you enter must be shared by all wireless devices on the network</u>. You can create up to four different security phrases, for different wireless networks. Remember that security phrases are case sensitive (i.e., “cat” and “Cat” are not the same).

Key Format: Choose ASCII or hexadecimal format. If you choose ASCII, you can use names that you know and can easily remember.

Length: Use the drop-down menu to choose a key length (64, 128 or 152-bit). The higher the number, the slower but more secure your system will be.

If you change any setting above, click the **Apply** button.



Wireless Settings

These are the wireless settings for the Wireless Router.

SSID: at&t SSID Broadcast: ● On ○ Off

Channel: 6

Security: ○ Open System ● Shared Key ○ WPA ○ WPA-PSK

WEP: ○ On ● Off

WEP Encryption: 64Bit

Key Type: HEX

● Security Phrase 1: 0000000000

○ Security Phrase 2: 0000000000

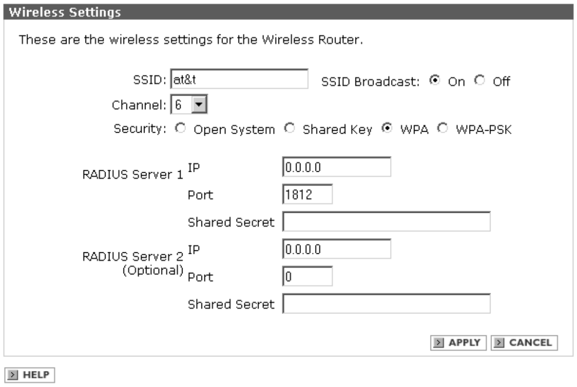
○ Security Phrase 3: 0000000000

○ Security Phrase 4: 0000000000

WPA Enterprise Security

(WiFi Protected Access) Select this option <u>only</u> if you are using your router in a large enterprise network environment such as a company or school.

Consult your network administrator for advice before selecting this option.



Wireless Settings

These are the wireless settings for the Wireless Router.

SSID: at&t SSID Broadcast: ● On ○ Off

Channel: 6

Security: ○ Open System ○ Shared Key ● WPA ○ WPA-PSK

RADIUS Server 1 IP 0.0.0.0

Port 1812

Shared Secret

RADIUS Server 2 (Optional) IP 0.0.0.0

Port 0

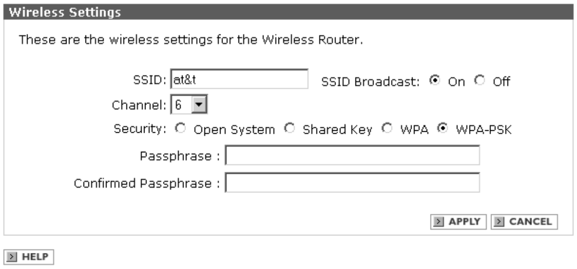
Shared Secret

WPA Personal Security

(WiFi Protected Access, Preshared Key) Select this option for the highest level of security protection in a home, home office or small business environment.

Passphrase: Enter a security phrase at least eight characters long. <u>The phrase you enter must must be shared by all wireless devices on the network</u>. Remember that security phrases are case sensitive (i.e., “cat” and “Cat” are not the same).

Enter your passphrase again to confirm, then click the **Apply** button to activate WPA-PSK encryption.



Wireless Settings

These are the wireless settings for the Wireless Router.

SSID: at&t SSID Broadcast: ● On ○ Off

Channel: 6

Security: ○ Open System ○ Shared Key ○ WPA ● WPA-PSK

Passphrase :

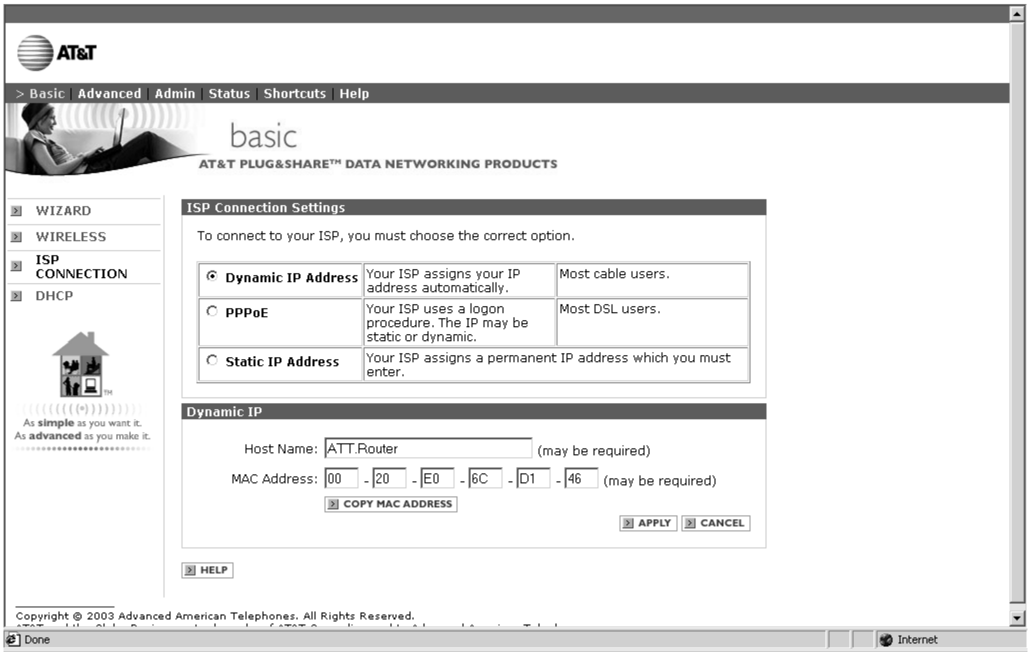
Confirmed Passphrase :

Basic > Advanced > Admin > Status > Shortcuts > Help

Wizard
Wireless
ISP Connection
DHCP

ISP Connection Type

At this screen you must choose an Internet connection type compatible with your Internet Service Provider (ISP). If you are unsure which to choose, contact your ISP. When you make a selection, the screen will change to show options available for that connection type (see next page).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ISP CONNECTION
DHCP
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As advanced as you make it.
COPY MAC ADDRESS
APPLY
CANCEL
HELP
Done
Internet

ISP Connection Settings

To connect to your ISP, you must choose the correct option.

● Dynamic IP Address	Your ISP assigns your IP address automatically.	Most cable users.
○ PPPoE	Your ISP uses a logon procedure. The IP may be static or dynamic.	Most DSL users.
○ Static IP Address	Your ISP assigns a permanent IP address which you must enter.	

Dynamic IP

Host Name: ATT.Router (may be required)

MAC Address: 00 - 20 - E0 - 6C - D1 - 46 (may be required)

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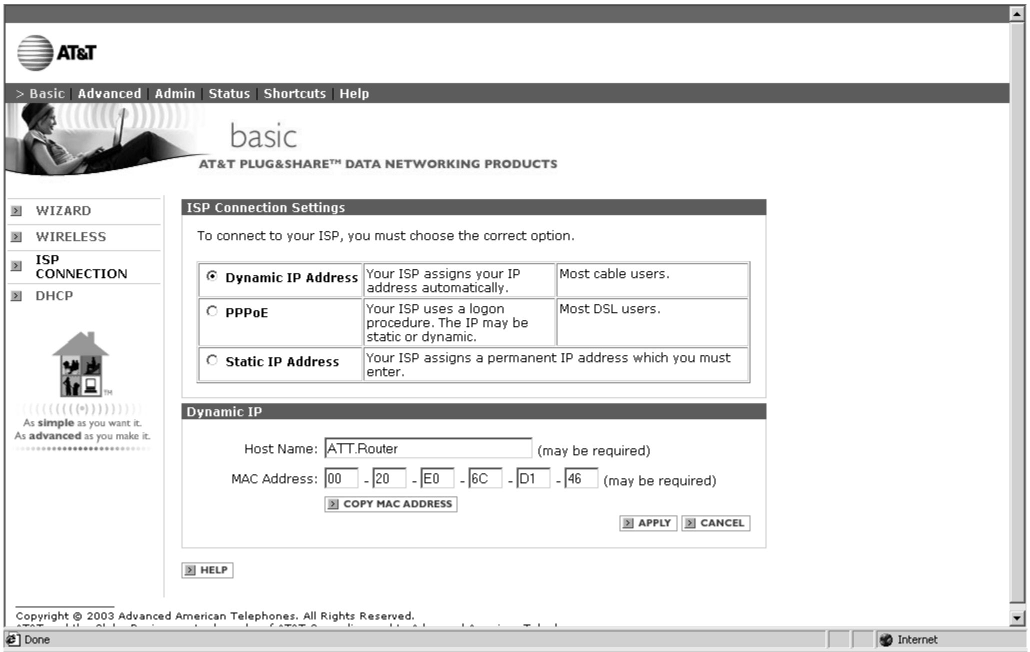
- **Dynamic IP Address:** Cable modems usually require this setting. Choose this setting if you don't have to log on to the Internet when you've turned on your computer, and if your ISP assigns your IP address.
- **PPPoE:** DSL modems usually require this setting. Choose this setting if you have to log on to the Internet when you turn on your computer.
- **Static IP Address:** This setting is rarely required. Contact your ISP before choosing this option.

ISP Connection Type: Dynamic IP Address

This setting is usually required for use with cable modems. Choose this setting if you don't have to log on to the Internet when you turn on your computer (IP addresses are assigned by your ISP).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Internet

ISP Connection Settings

To connect to your ISP, you must choose the correct option.

● Dynamic IP Address	Your ISP assigns your IP address automatically.	Most cable users.
○ PPPoE	Your ISP uses a logon procedure. The IP may be static or dynamic.	Most DSL users.
○ Static IP Address	Your ISP assigns a permanent IP address which you must enter.	

Dynamic IP

Host Name: ATT.Router (may be required)

MAC Address: 00 - 20 - E0 - 6C - D1 - 46 (may be required)

COPY MAC ADDRESS

APPLY CANCEL

HELP

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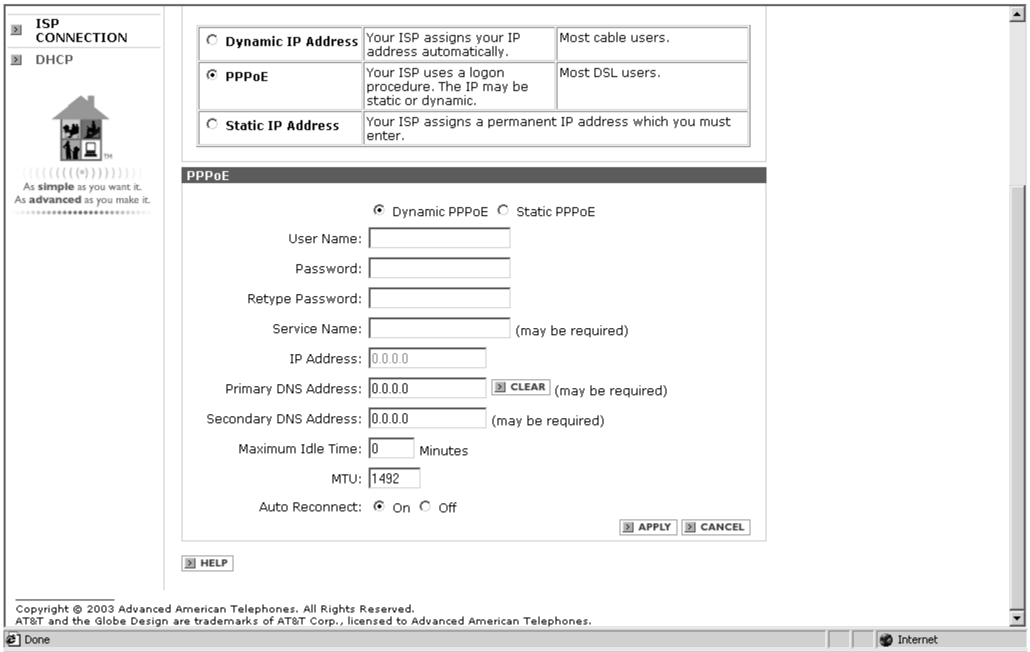
- **Host Name:** (Default ATT.Router) Enter a host name here if required by your Internet Service Provider.
- **MAC Address:** Enter a MAC (Media Access Control) number if required by your Internet Service Provider. By default, the number used is the MAC address of the WAN interface in the router. You can click the **Copy MAC Address** button to insert the MAC address of the Ethernet card in your computer.

ISP Connection Type: PPPoE

PPPoE stands for “Point to Point Protocol over Ethernet,” often used by DSL service providers. Select **Dynamic PPPoE** to obtain an IP address automatically for your PPPoE connection (the option most often used). Select **Static PPPoE** to use a static IP address for your PPPoE connection.



○ **Dynamic IP Address**	Your ISP assigns your IP address automatically.	Most cable users.
● **PPPoE**	Your ISP uses a logon procedure. The IP may be static or dynamic.	Most DSL users.
○ **Static IP Address**	Your ISP assigns a permanent IP address which you must enter.	

PPPoE

● Dynamic PPPoE ○ Static PPPoE

User Name:

Password:

Retype Password:

Service Name: (may be required)

IP Address: 0.0.0.0

Primary DNS Address: 0.0.0.0 CLEAR (may be required)

Secondary DNS Address: 0.0.0.0 (may be required)

Maximum Idle Time: 0 Minutes

MTU: 1492

Auto Reconnect: ● On ○ Off

APPLY CANCEL

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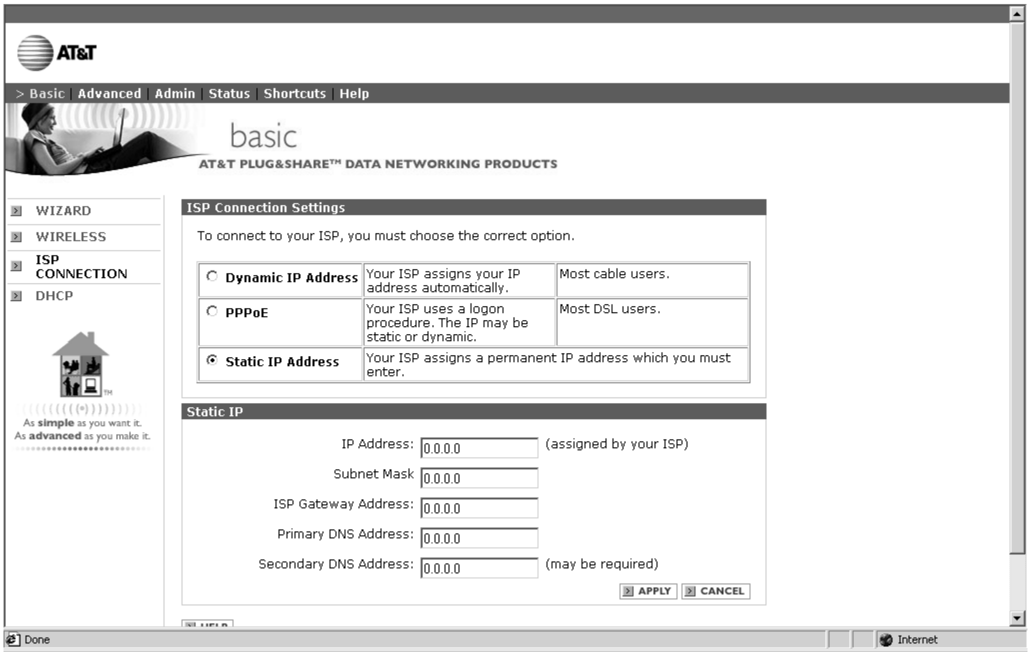
- **User Name:** Enter the user name required by your ISP when you connect to the Internet.
- **Password:** Enter the password required by your ISP when you connect to the Internet.
- **Service Name** (optional)**:** If your ISP uses a service name for the PPPoE connection, enter the service name here. (Example: @att.net)
- **IP Address:** If you choose Static PPPoE, enter the static IP address for the PPPoE connection.
- **Primary/Secondary DNS Address:** If you choose Static PPPoE, ask your Internet Service Provider for your primary and secondary DNS addresses (also called IP numbers) and enter them here.
- **Maximum Idle Time:** (Default 0) To avoid periodic disconnection from the Internet, leave this value set to zero. To allow your computer to disconnect after a period of inactivity, enter the time in minutes. (For example, enter 10 to disconnect 10 minutes after you’ve stopped using the computer.)
- **MTU:** (Default 1492) Data sent over networks is divided into “packets” of a certain size. MTU (Maximum Transfer Unit) specifies the largest packet size to be used. This value typically does not need to be changed. Do not change it unless advised to do so by your Internet Service Provider.
- **Auto-reconnect:** (Default On) If your computer remains connected to the Internet most or all of the time, this setting will automatically re-establish your Internet connection whenever it is dropped.

Basic > Advanced > Admin > Status > Shortcuts > Help

Wizard
Wireless
ISP Connection
DHCP

ISP Connection Type: Static IP Address

This connection type is rarely required. Contact your ISP before choosing this option.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CANCEL
Done
Internet

ISP Connection Settings

To connect to your ISP, you must choose the correct option.

○ **Dynamic IP Address**	Your ISP assigns your IP address automatically.	Most cable users.
○ **PPPoE**	Your ISP uses a logon procedure. The IP may be static or dynamic.	Most DSL users.
● **Static IP Address**	Your ISP assigns a permanent IP address which you must enter.	

Static IP

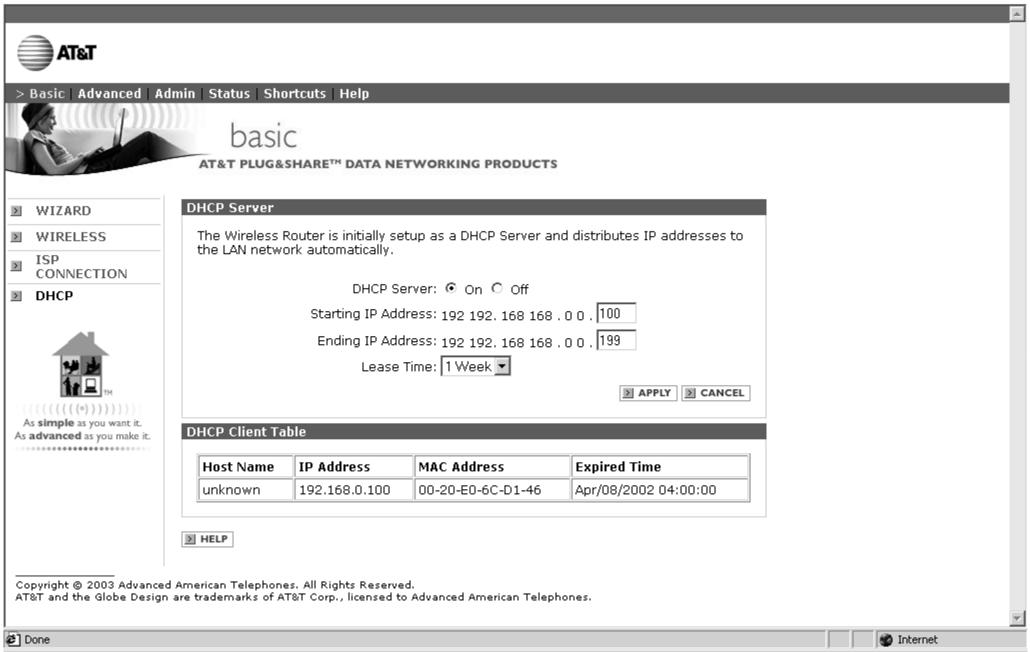
IP Address: 0.0.0.0 (assigned by your ISP)
Subnet Mask 0.0.0.0
ISP Gateway Address: 0.0.0.0
Primary DNS Address: 0.0.0.0
Secondary DNS Address: 0.0.0.0 (may be required)

- **To set a static IP address:** Contact your Internet Service Provider and obtain the IP address, subnet mask, gateway address, and DNS (domain name server) numbers required, and enter them in the fields on this screen. Remember that each number must be in the correct format (four sets of numbers separated by periods, with no spaces).

  Example: 192.168.100.100

DHCP Server

When any device on your network is turned on, it must be assigned an IP address to communicate with other devices on the network. DHCP (Dynamic Host Configuration Protocol) assigns these IP addresses to devices on your network. Leave DHCP set to **On** and be sure that you have selected "Obtain an IP address automatically" in the Internet Protocol (TCP/IP) Properties dialog box on your client computers.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APPLY
CANCEL
HELP
Done
Internet

DHCP Server

The Wireless Router is initially setup as a DHCP Server and distributes IP addresses to the LAN network automatically.

DHCP Server: ● On ○ Off

Starting IP Address: 192 192. 168 168 . 0 0 . 100

Ending IP Address: 192 192. 168 168 . 0 0 . 199

Lease Time: 1 Week

DHCP Client Table

Host Name	IP Address	MAC Address	Expired Time
unknown	192.168.0.100	00-20-E0-6C-D1-46	Apr/08/2002 04:00:00

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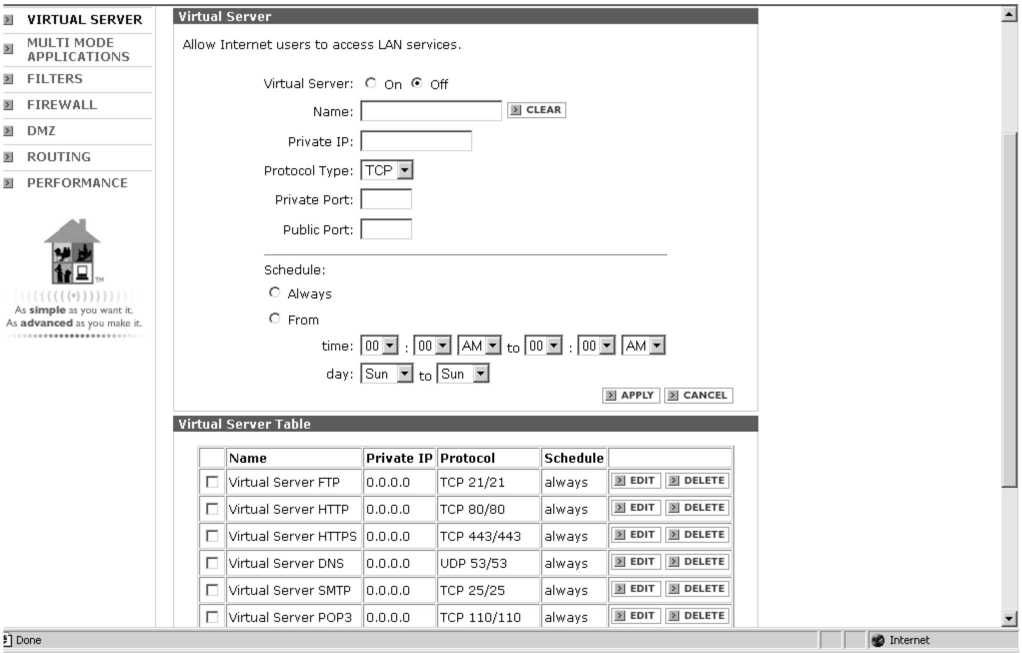
- **Starting IP address:** The starting IP address for the DHCP server's IP assignment.
- **Ending IP address:** The ending IP address for the DHCP server's IP assignment.
- **Lease Time:** The length of time for the LAN IP address lease.
- **DHCP Client Table:** This is a list of all network computers, showing the host hame, IP address, MAC address and expired time for each.

Basic > **Advanced** > Admin > Status > Shortcuts > Help

Virtual Server
Multi-Mode Applications
Filters
Firewall
DMZ
Routing
Performance

Virtual Server

If you want to use a network computer as a virtual server (to host web sites or FTP sites, for example) you can configure the router to direct incoming traffic to your server.



Virtual Server

Allow Internet users to access LAN services.

Virtual Server: ○ On ● Off
Name:
Private IP:
Protocol Type: TCP
Private Port:
Public Port:

Schedule:
○ Always
○ From
time: 00 : 00 AM to 00 : 00 AM
day: Sun to Sun

Virtual Server Table

	Name	Private IP	Protocol	Schedule	
□	Virtual Server FTP	0.0.0.0	TCP 21/21	always	EDIT DELETE
□	Virtual Server HTTP	0.0.0.0	TCP 80/80	always	EDIT DELETE
□	Virtual Server HTTPS	0.0.0.0	TCP 443/443	always	EDIT DELETE
□	Virtual Server DNS	0.0.0.0	UDP 53/53	always	EDIT DELETE
□	Virtual Server SMTP	0.0.0.0	TCP 25/25	always	EDIT DELETE
□	Virtual Server POP3	0.0.0.0	TCP 110/110	always	EDIT DELETE

- **Virtual Server:** (Default Off) Click **On** to designate a local network computer as a server.
- **Name:** Enter a name for the computer to be designated as a server.
- **Private IP:** Enter the IP number of the computer to be designated as a server .
- **Protocol Type:** (Default TCP) The protocol used for the virtual service.
- **Private Port:** Enter the port number of the service used by the Private IP computer.
- **Public Port:** Enter the port number on the WAN side that will be used to access the virtual service.
- **Schedule:** Enter times when you want to allow access to the server (or click **Always** to allow unlimited access).

You can create a new virtual server by entering the above fields, or use settings for several of the most commonly used services by clicking an **Edit** button in the Virtual Server table at the bottom of the screen. This will copy the proper settings into the fields above. You will only need to enter the IP address of your server computer (you can find this number by displaying the DHCP screen; see page 21).

Example: To host a personal web site, click the **Edit** button beside Virtual Server HTTP, then enter a name for your server and its IP address (from the DHCP screen shown on page 21).

Name: My Web Server ← Enter a name here
Private IP: 192.168.0.25 ← Enter your server's IP address here
Protocol Type: TCP
Private Port: 80
Public Port: 80
Schedule: Always

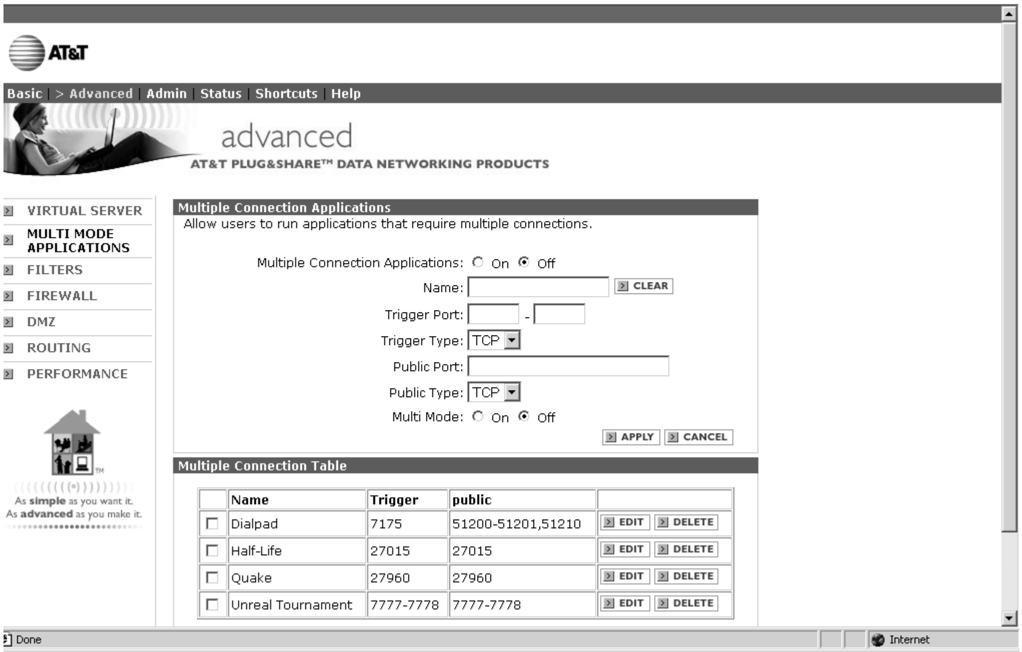
← Following fields are filled in automatically

Basic > **Advanced** > Admin > Status > Shortcuts > Help

Virtual Server
Multi-mode Applications
Filters
Firewall
DMZ
Routing
Performance

Multiple Connection Applications

This option allows compatibility with applications that require multiple connections (video conferencing, Internet telephony, gaming, etc.).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CLEAR
APPLY
CANCEL
EDIT
DELETE
Done
Internet

Multiple Connection Applications

Allow users to run applications that require multiple connections.

Multiple Connection Applications: ○ On ● Off

Name:

Trigger Port: -

Trigger Type: TCP

Public Port:

Public Type: TCP

Multi Mode: ○ On ● Off

Multiple Connection Table

	Name	Trigger	public	
□	Dialpad	7175	51200-51201,51210	EDIT DELETE
□	Half-Life	27015	27015	EDIT DELETE
□	Quake	27960	27960	EDIT DELETE
□	Unreal Tournament	7777-7778	7777-7778	EDIT DELETE

You can set up as many profiles as you like for applications that require multiple connections. You can enter settings for several of the most commonly used applications by clicking an **Edit** button in the table at the bottom of the screen. This will copy the proper settings into the fields above.

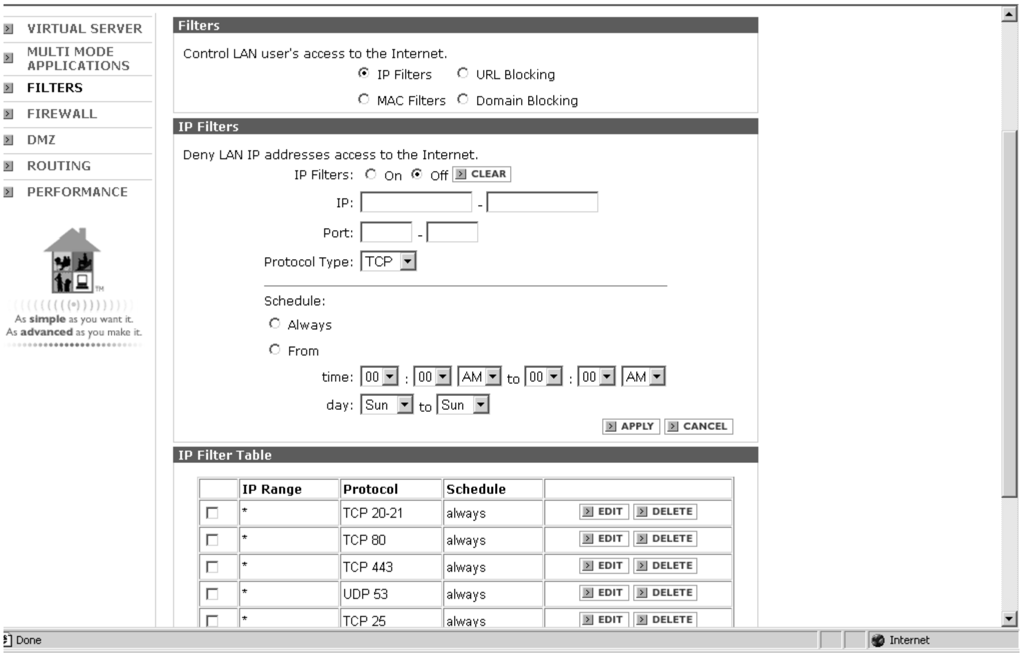
- **Multiple Connection Applications:** (Default Off) Click **On** to enable multiple connections.
- **Name:** Enter a name for this application.
- **Trigger Port:** Enter a port for use by this application. You can enter a single port or a range of ports.
- **Trigger Type:** Choose a protocol to be used by this application (usually TCP).
- **Public Port:** This is the port number on the WAN side that will be used to access the application. You may define a single port or a range of ports. You can use a comma to add multiple ports or port ranges.
- **Public Type:** Choose a protocol to be used by this application (usually TCP).
- **Multi Mode:** Select **On** to enable multiple connections.

When you are finished, click **Apply** to establish your new application. It will be added to the table of applications at the bottom of the screen.

Filters

Filters allow you to control Internet access from networked computers. Options allow you to restrict access to specific web sites, restrict access to all web sites except those you designate, or restrict access to other computers on your local area network (LAN). There are four types of filters:

- **IP filters:** Prohibit Internet access by particular LAN IP addresses (see below).
- **MAC filters:** Prohibit Internet access or LAN access by specific computers (see page 25).
- **URL blocking:** Prohibit access to groups of web sites by key word (see page 26).
- **Domain blocking:** Prohibit access to web sites specified by name (see page 27).



Filters

Control LAN user's access to the Internet.

● IP Filters ○ URL Blocking
○ MAC Filters ○ Domain Blocking

IP Filters

Deny LAN IP addresses access to the Internet.

IP Filters: ○ On ● Off CLEAR

IP: ______ - ______

Port: ______ - ______

Protocol Type: TCP

Schedule:
○ Always
○ From
time: 00 : 00 AM to 00 : 00 AM
day: Sun to Sun

APPLY CANCEL

IP Filter Table

	IP Range	Protocol	Schedule	
□	*	TCP 20-21	always	EDIT DELETE
□	*	TCP 80	always	EDIT DELETE
□	*	TCP 443	always	EDIT DELETE
□	*	UDP 53	always	EDIT DELETE
□	*	TCP 25	always	EDIT DELETE

IP Filters

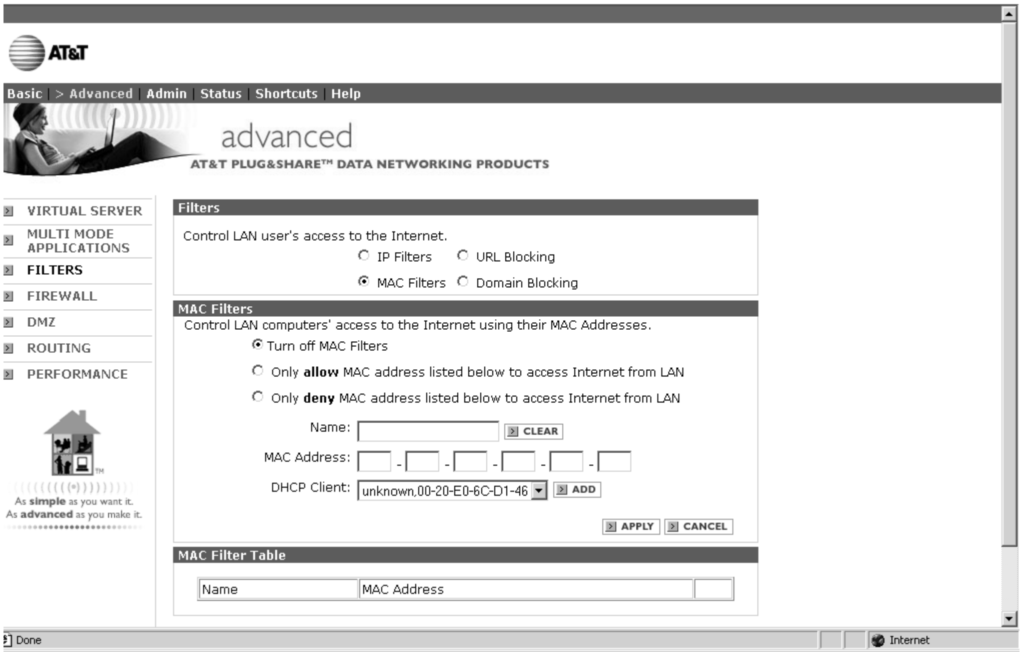
To add a new filter, fill in the fields above and click **Apply**. You can block access to several of the most commonly used ports by clicking an **Edit** button in the IP Filter table at the bottom of the screen. This will copy the proper settings into the fields above. You will only need to enter the IP address of the computer to be affected by the filter (you can find this number by displaying the DHCP screen; see page 21).

- **IP Filters:** (Default Off) Click **On** to enable IP filters.
- **IP:** Enter the IP address of any network computer to block Internet access from that computer. To block access for multiple computers, you can enter a range of IP addresses.
- **Port:** Enter a single port or a range of ports that will be denied Internet access. (Leave this field blank to deny access to all ports.)
- **Protocol Type:** Choose a protocol type to block.
- **Schedule:** Enter times when Internet access will be blocked, or click **Always** to allow no Internet access at any time.

When you are finished, click **Apply** to add a new filter to the list.

MAC Filters

A MAC address is a unique serial number for each hardware adapter. This filter allows you to block Internet and LAN access from network computers by specifying the computer's MAC address (you can find this address by displaying the DHCP screen; see page 21).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CLEAR
ADD
APPLY
CANCEL
Done
Internet

Filters

Control LAN user's access to the Internet.

○ IP Filters ○ URL Blocking

● MAC Filters ○ Domain Blocking

MAC Filters

Control LAN computers' access to the Internet using their MAC Addresses.

● Turn off MAC Filters

○ Only **allow** MAC address listed below to access Internet from LAN

○ Only **deny** MAC address listed below to access Internet from LAN

Name: [ ]

MAC Address: [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

DHCP Client: unknown,00-20-E0-6C-D1-46

MAC Filter Table

Name	MAC Address	

- **Turn off MAC Filters:** (Default On) Click another option below to enable MAC filters.
- **Only Allow...:** Click to allow Internet and LAN access to the computer you select (all others are denied access).
- **Only Deny...:** Click to deny Internet and LAN access to the computer you select (all others are allowed access).
- **Name:** Enter a name to identify the filter you are creating.
- **MAC Address:** This field displays the MAC address of a computer selected from the DHCP Client list (see description below).
- **DHCP Client:** Computers assigned a number by the DHCP client are listed here. Click the drop-down list, select a computer and click **Add** to designate a computer that will be affected by the filter you are creating.

When you are finished, click **Apply** to add a new filter to the list.

Basic > **Advanced** > Admin > Status > Shortcuts > Help

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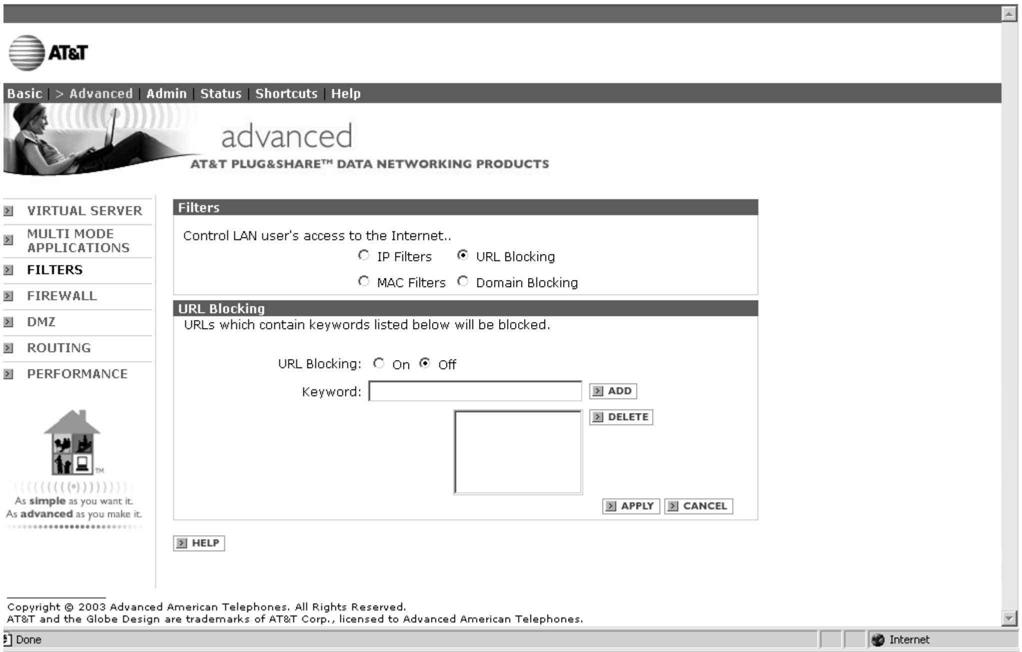
URL Blocking

Use URL Blocking to prohibit access to groups of web sites by using key words. A URL (Uniform Resource Locator) is the Internet address of a web site (usually beginning with "http://"). The key words you enter will determine which web sites are blocked. If the key word you enter appears in any part of the URL, access to that site will be denied.



Filters

Control LAN user's access to the Internet..

○ IP Filters ● URL Blocking
○ MAC Filters ○ Domain Blocking

URL Blocking

URLs which contain keywords listed below will be blocked.

URL Blocking: ○ On ● Off

Keyword:

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ADD
DELETE
APPLY
CANCEL
HELP
Done
Internet

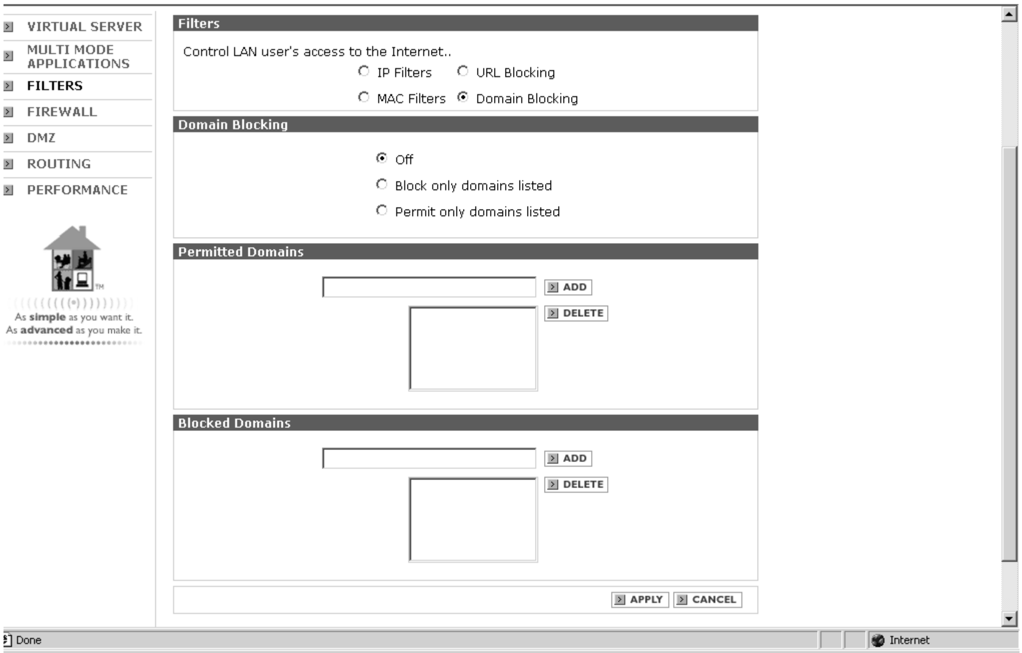
- **URL Blocking:** (Default Off) Click **On** to activate blocking, or **Off** to disable blocking and allow access to all web sites.
- **Keyword:** Enter a key word that commonly appears in the URL of sites you want to block, then click **Add**. Access will be denied to all web sites whose addresses contain this keyword. You may enter as many keywords as you like.
- **Delete Keyword:** To remove a keyword, highlight it, then click **Delete**. This will allow access to web sites whose addresses contain this keyword.

When you are finished, click **Apply** to add a new filter to the list.

Example: To help prevent network computer users from visiting retail shopping web sites, you could enter "shop" as a keyword. Access to sites with the word "shop" in the web site address would be denied.

Domain Blocking

Use Domain Blocking to prohibit access to specific web sites. This option allows you to enter the full name of each web site to be blocked. Domain blocking will allow or deny all types of access (http, ftp, etc.) to each web site listed.



Filters

Control LAN user's access to the Internet..

○ IP Filters ○ URL Blocking
○ MAC Filters ● Domain Blocking

Domain Blocking

● Off
○ Block only domains listed
○ Permit only domains listed

Permitted Domains

Blocked Domains

- **Domain Blocking:** (Default Off) Click another option below to enable domain blocking.
- **Block Only...:** Click to prohibit access to the sites you enter (all other sites are accessible).
- **Permit Only...:** Click to allow access only to the sites you enter (no other sites are accessible).
- **Permitted Domains:** Enter the full URL of an approved site, then click **Add**.
- **Blocked Domains:** Enter the full URL of a site you want to block, then click **Add**.

When you are finished, click **Apply** to add a new filter to the list.

Example: Households with young children may wish to allow access only to certain web sites. Click the **Permit Only** option, then add approved site addresses to the “Permitted Domains” list. Access will be denied to any site not listed here.

Basic > **Advanced** > Admin > Status > Shortcuts > Help

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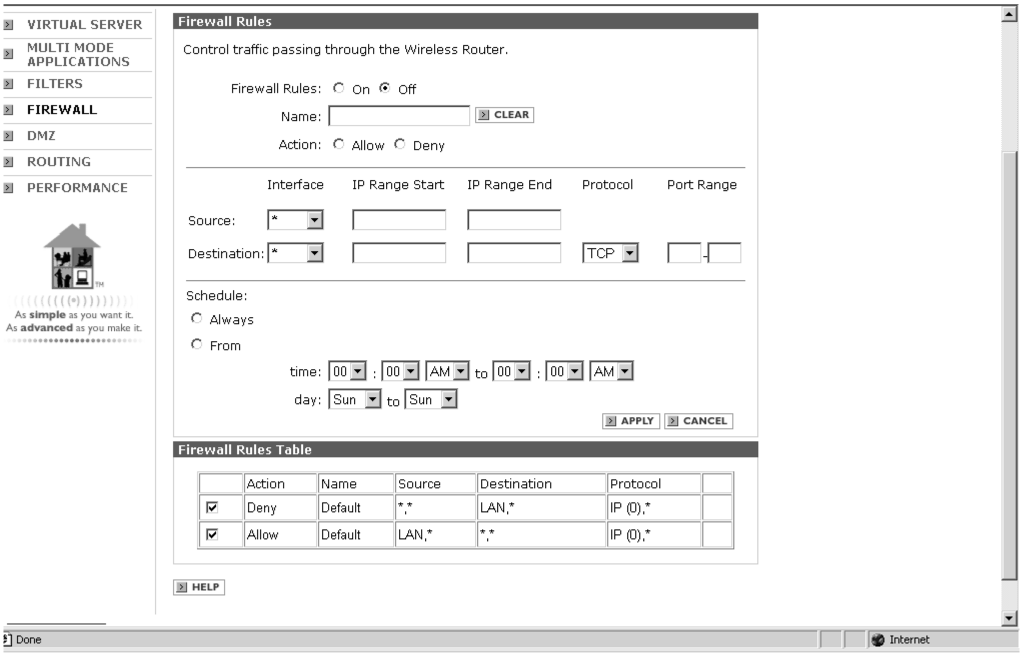
Performance

Firewall Rules

This feature can provide additional security protection by helping to prohibit unauthorized access to your network.



Firewall Rules

Control traffic passing through the Wireless Router.

Firewall Rules: ○ On ● Off

Name: [ ] CLEAR

Action: ○ Allow ○ Deny

	Interface	IP Range Start	IP Range End	Protocol	Port Range
Source:	*				
Destination:	*			TCP	-

Schedule:

○ Always

○ From

time: 00 : 00 AM to 00 : 00 AM

day: Sun to Sun

APPLY CANCEL

Firewall Rules Table

	Action	Name	Source	Destination	Protocol	
☑	Deny	Default	*,*	LAN,*	IP (0),*	
☑	Allow	Default	LAN,*	*,*	IP (0),*	

HELP

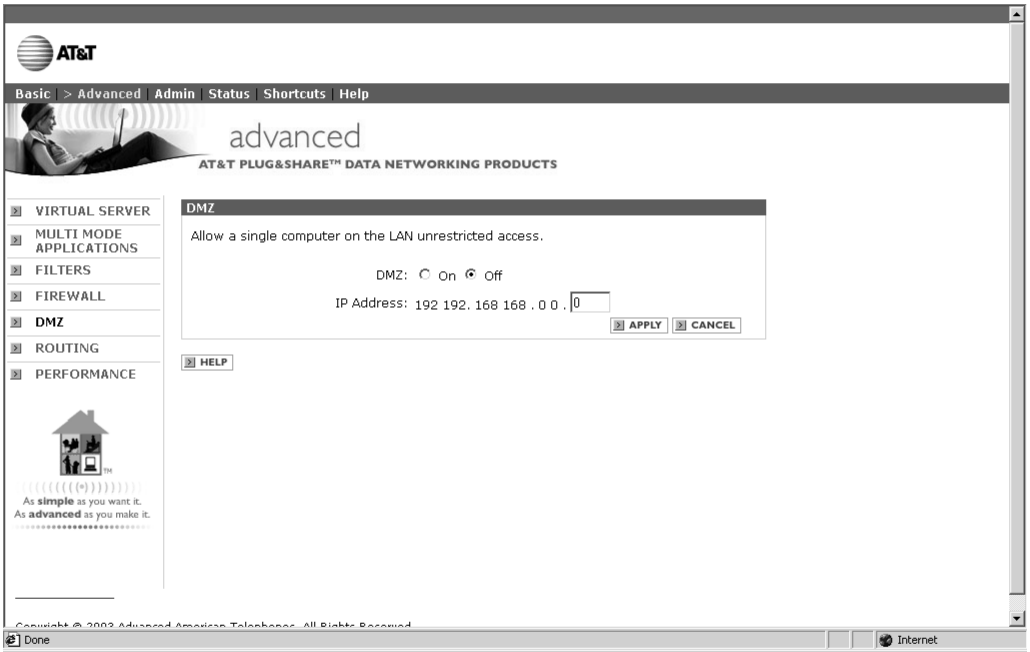
- **Firewall Rules:** (Default Off) Click **On** to enable firewall protection.
- **Name:** Enter a name to identify the firewall profile you are creating.
- **Action:** Click **Allow** to permit specified computers access to your network, or **Deny** to prohibit access to them.
- **Interface:** (Default All) Choose **LAN** to protect against incursion from users of your local area network, **WAN** to protect against incursion from others who may have access through the Internet, or ***** (all) to select both.
- **IP Range:** Enter an IP address of a computer that will be allowed or denied access to your network. To include multiple computers, you can enter a range of IP addresses.
- **Protocol:** Select a protocol type to be applied to this firewall profile.
- **Port Range:** Enter a port (or a range of ports) to be allowed or denied access to your network. If you leave this field blank, all ports will be allowed or denied access.
- **Schedule:** Enter times when this firewall profile will be in effect, or click **Always** to provide continuous protection.

When you are finished, click **Apply** to add a new firewall profile to the table at the bottom of the screen.

DMZ

DMZ (Demilitarized Zone) is a feature that allows specified network computers unrestricted Internet access. Computers designated as DMZ are not affected by other security measures (firewall protection, parental controls, etc.).

Use this option with caution. Computers designated as DMZ may be vulnerable to security risks.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APPLY
CANCEL
HELP
Done
Internet

Allow a single computer on the LAN unrestricted access.

DMZ: ○ On ● Off

IP Address: 192 192. 168 168 . 0 0 . 0

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- **DMZ:** (Default Off) Click **On** to allow unrestricted Internet access to designated computers.
- **IP Address:** Enter the IP address of a computer to be allowed unrestricted Internet access.

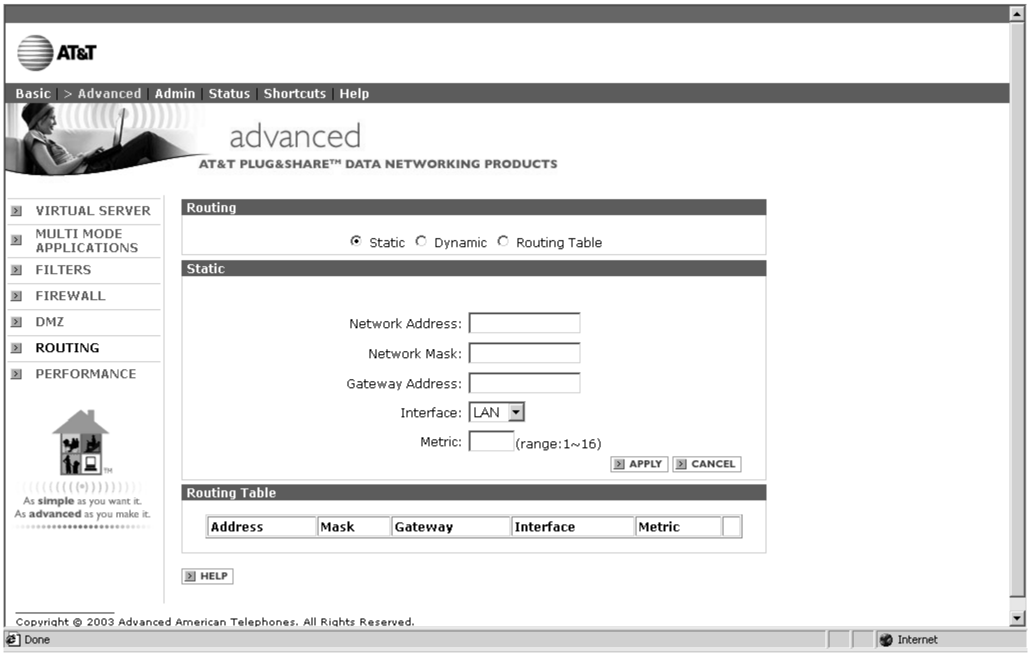
When you are finished, click **Apply**.

Basic > **Advanced** > Admin > Status > Shortcuts > Help

Virtual Server
Multi-Mode Applications
Filters
Firewall
DMZ
Routing
Performance

Routing

Options on this page should be changed only if necessary to manage very complex setups, such as a network that is subdivided into several sub-networks. These options can control how your router manages information between the subnetworks. Unless you are very skilled at network administration, do not change the default settings.


AT&T
Basic | > Advanced | Admin | Status | Shortcuts | Help
advanced
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VIRTUAL SERVER
MULTI MODE APPLICATIONS
FILTERS
FIREWALL
DMZ
ROUTING
PERFORMANCE
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APPLY
CANCEL
HELP
Done
Internet

Routing

● Static ○ Dynamic ○ Routing Table

Static

Network Address:
Network Mask:
Gateway Address:
Interface: LAN
Metric: (range:1~16)

Routing Table

Address	Mask	Gateway	Interface	Metric

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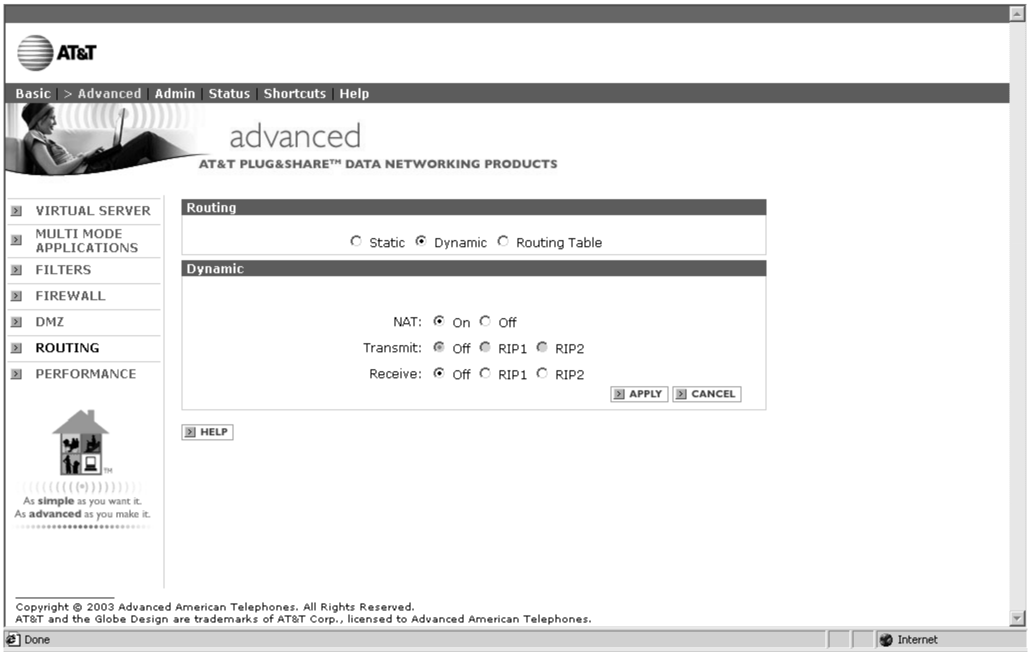
Static routing

Enter information at this screen to add a static (permanent) route to a subnetwork.

- **Network Address:** Enter the static IP address of the subnetwork. Your ISP or network administrator may provide you with this information.
- **Network Mask:** Enter the network (or subnetwork) mask for your network. If you leave this field blank, the network mask defaults to 255.255.255.0.
- **Gateway Address:** Enter the gateway address for your network. Your ISP or network administrator may provide you with this information.
- **Interface:** Select the interface you use to connect to the subnetwork (LAN, if local area network, or WAN, if wide area network).
- **Metric:** Enter the metric you want to apply to this route.

Dynamic Routing

Select this option to control how the router automatically builds routing information. Consult your network administrator before doing so.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FILTERS
FIREWALL
DMZ
ROUTING
PERFORMANCE
APPLY
CANCEL
HELP
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As advanced as you make it.
Done
Internet

Routing

○ Static ● Dynamic ○ Routing Table

Dynamic

NAT: ● On ○ Off

Transmit: ● Off ○ RIP1 ○ RIP2

Receive: ● Off ○ RIP1 ○ RIP2

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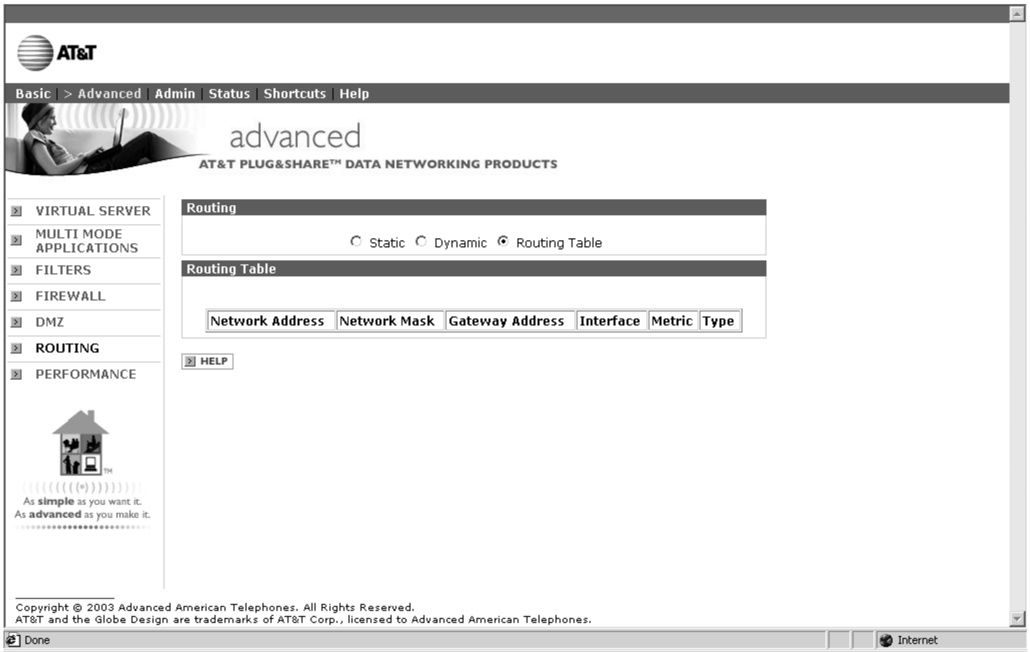
NOTE: Consult your Internet Service Provider (ISP) or network administrator before changing these settings.

- **NAT:** (Default On) NAT stands for Network Address Translation (also known as IP masquerading) which enables your local area network to identify itself to the Internet with one address. You should leave this setting on unless directed to do otherwise by your network administrator.
- **Transmit:** (Default Off) If you enable dynamic routing, you should choose **RIP2** (Routing Information Protocol 2) unless directed to do otherwise by your network administrator.
- **Receive:** (Default Off) If you enable dynamic routing, you should choose **RIP2** unless directed to do otherwise by your network administrator.

Routing Table

This screen displays existing routes to various subnetworks.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FILTERS
FIREWALL
DMZ
ROUTING
PERFORMANCE
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HELP
Done
Internet

Routing

○ Static ○ Dynamic ● Routing Table

Routing Table

Network Address	Network Mask	Gateway Address	Interface	Metric	Type

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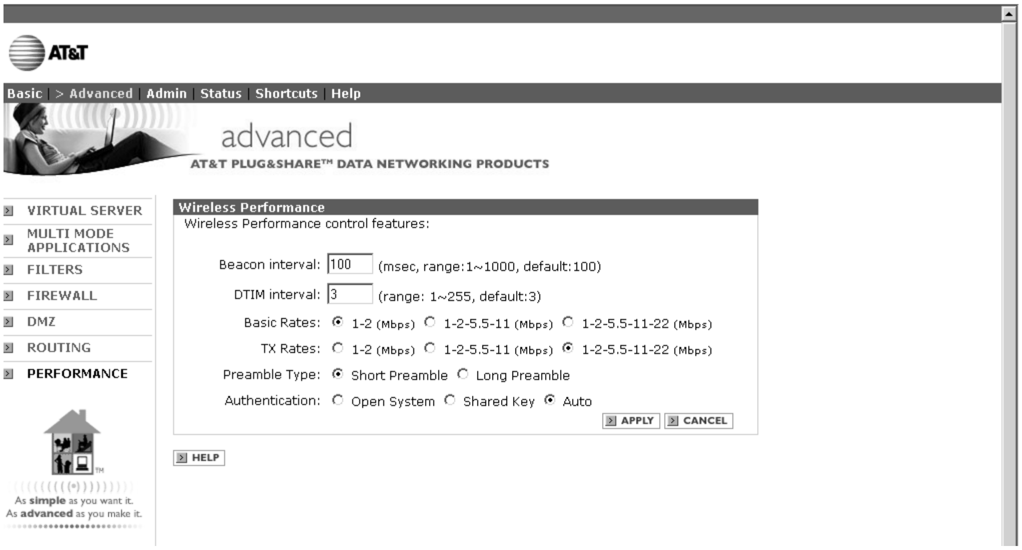
- **Network Address:** Displays the network IP address of the connected subnetwork.
- **Network Mask:** Displays the network mask of the connected subnetwork.
- **Gateway Address:** Displays the gateway address to connect the subnetwork.
- **Interface:** Displays whether the subnetwork is connected via a WAN or LAN.
- **Metric:** Displays the metric of the connected subnetwork.
- **Type:** Displays whether the subnetwork has a static or dynamic IP route.

Basic > **Advanced** > Admin > Status > Shortcuts > Help

Virtual Server
Multi-Mode Applications
Filters
Firewall
DMZ
Routing
Performance

Wireless Performance

If excessive data errors occur repeatedly, you may be able to correct the problem by adjusting the settings on this screen. The default settings usually work well, and any changes you make may degrade network performance. Consult your network administrator before making any changes.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MULTI MODE APPLICATIONS
FILTERS
FIREWALL
DMZ
ROUTING
PERFORMANCE
APPLY
CANCEL
HELP
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Wireless Performance

Wireless Performance control features:

Beacon interval: 100 (msec, range:1~1000, default:100)

DTIM interval: 3 (range: 1~255, default:3)

Basic Rates: ● 1-2 (Mbps) ○ 1-2-5.5-11 (Mbps) ○ 1-2-5.5-11-22 (Mbps)

TX Rates: ○ 1-2 (Mbps) ○ 1-2-5.5-11 (Mbps) ● 1-2-5.5-11-22 (Mbps)

Preamble Type: ● Short Preamble ○ Long Preamble

Authentication: ○ Open System ○ Shared Key ● Auto

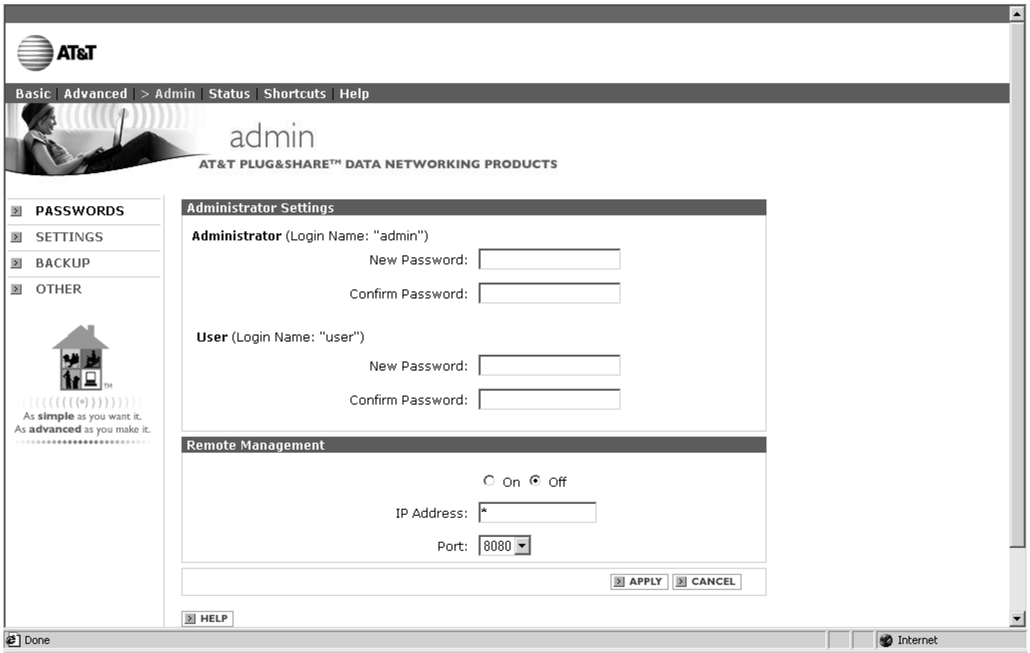
- **Beacon interval:** (Default 100) Beacons are packets sent by the router to synchronize a wireless network. Higher numbers make performance more reliable; lower numbers increase speed. You can set a beacon interval between 1 and 1000 milliseconds. You should not change this setting unless directed to do so by a network administrator.
- **DTIM interval:** (Default 3) Delivery Traffic Indication Message specifies the interval between notifications sent by your router to client computers. Higher numbers generate more frequent notifications.
- **Basic Rates:** (Default 1-2 Mbps) Choose a basic transfer rate compatible with the slowest wireless adapter connected to your wireless network.
- **TX Rates:** (Default 1-2-5.5-11-22-54 Mbps) TX stands for Transmission Rate. Choose a transmission rate compatible with the slowest wireless adapter connected to your wireless network.
- **Preamble Type:** (Default Short Preamble) The Preamble Type refers to the radio preamble, or header, which is transmitted at the beginning of a packet of data.You should not change this setting unless directed to do so by a network administrator.
- **Authentication:** (Default Auto) Authentication Type enables the user to configure type of client authentication used for acquiring access to the wireless network. Open authentication allows all clients to connect to the network. Shared Key authentication requires the client to use the same WEP encryption key as that used by the wireless router. You should not change this setting unless directed to do so by a network administrator.

Basic > Advanced > **Admin** > Status > Shortcuts > Help

Passwords
Settings
Backup
Other

Passwords

To protect your network you can set passwords to prevent unauthorized access. The Administrator you designate can change all router settings, including the passwords. Users can view settings, but cannot change them.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admin
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PASSWORDS
SETTINGS
BACKUP
OTHER
As simple as you want it.
As advanced as you make it.
APPLY
CANCEL
HELP
Done
Internet

Administrator Settings

Administrator (Login Name: "admin")

New Password:

Confirm Password:

User (Login Name: "user")

New Password:

Confirm Password:

Remote Management

○ On ● Off

IP Address: *

Port: 8080

Administrator settings

- Enter passwords for Administrator and User. Confirm by re-entering them in the fields below.

Remote Management (Default Off)

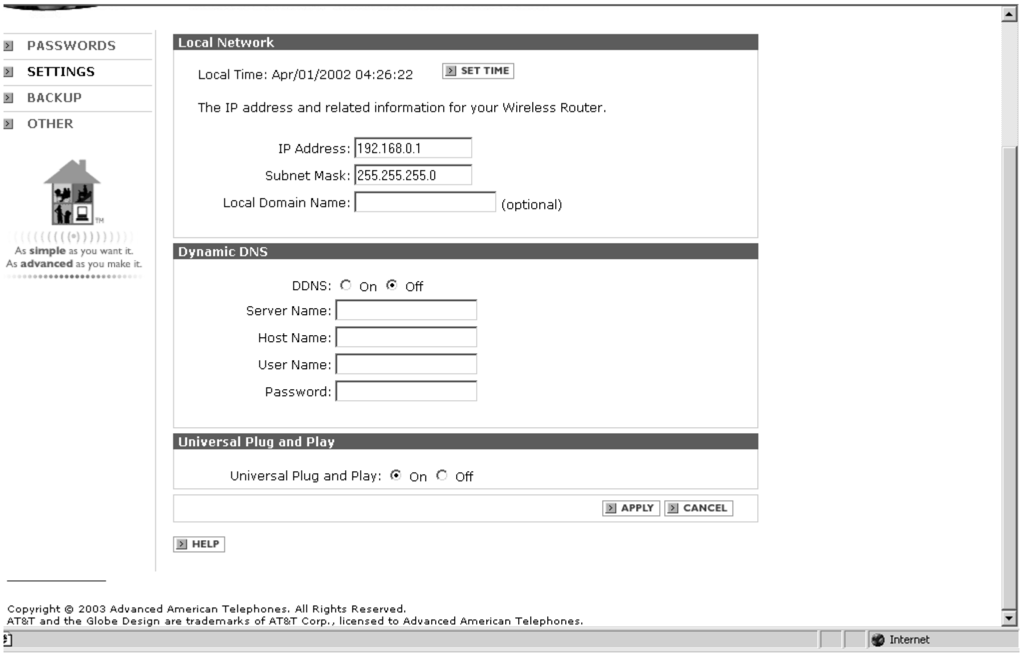
If turned on, this feature allows you to change router settings from a remote location (i.e., via the Internet). A username and password is required for access to the browser-based management interface.

- **IP Address:** Enter the Internet IP address of a computer that has access to the router. You can use a wildcard asterisk (*) to allow all Internet IP addresses access to your network.
- **Port:** Enter the port number used for access to the router.

Example: http://x.x.x.x:8080

(Where x.x.x.x is the WAN IP address of the router and 8080 is the port used for the web management interface.)

Settings


PASSWORDS
SETTINGS
BACKUP
OTHER
As **simple** as you want it.
As **advanced** as you make it.
SET TIME
APPLY
CANCEL
HELP
Internet

Local Network

Local Time: Apr/01/2002 04:26:22

The IP address and related information for your Wireless Router.

IP Address: 192.168.0.1
Subnet Mask: 255.255.255.0
Local Domain Name: (optional)

Dynamic DNS

DDNS: ○ On ● Off
Server Name:
Host Name:
User Name:
Password:

Universal Plug and Play

Universal Plug and Play: ● On ○ Off

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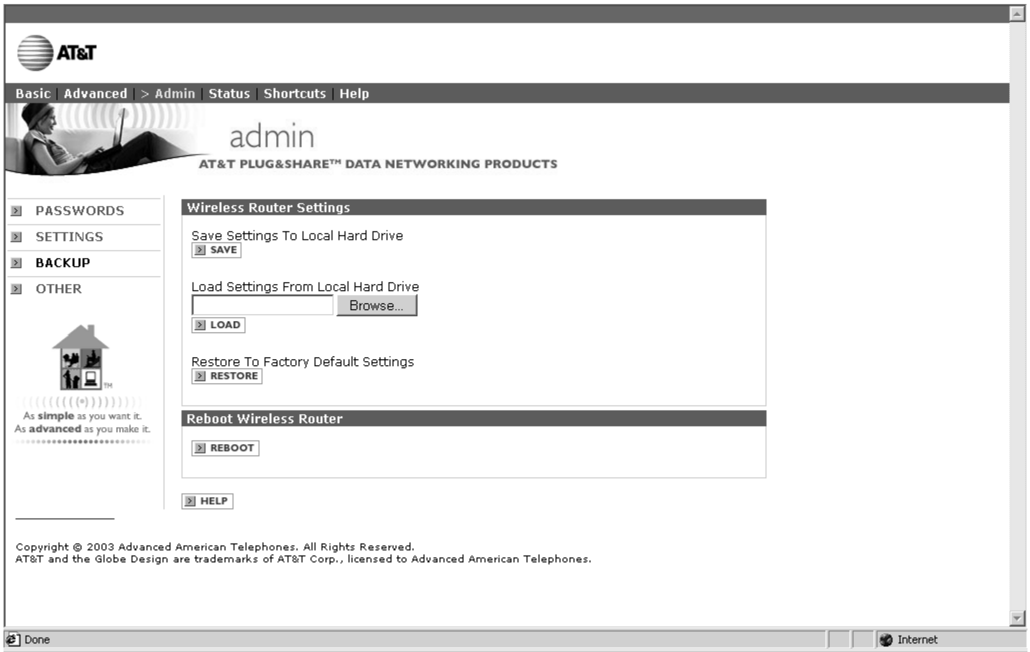
- **Local Time:** Click **Set Time** to set the date and time manually, or set the router to obtain time automatically by connecting to a Network Time Protocol server (NTP). Correct time setting is important for activities such as event scheduling and logging.
- **IP Address:** (Default 192.168.0.1.) The Internet Protocol (IP) address of your router is private and cannot be seen on the Internet. You can change this number if needed, but it is usually not necessary to do so.
- **Subnet Mask:** (Default 255.255.255.0.) The subnet mask (subnetwork mask) is an address used to direct messages to a specified network segment (i.e., a subnet). You should not change this address unless directed to do so by your network administrator.
- **Local Domain Name** (optional): If desired, you can enter a name here to identify your wireless network.
- **DDNS:** (Default Off) This stands for Dynamic Domain Name System. You should click **On** to enable this feature if you host a web site or FTP site visited by users outside your local area network. This will assure access to your site even if the IP address is changed by your Internet Service Provider.
- **Names and password:** If you enable DDNS, enter the name of the server hosting your site, and the site host name, user name and password required for access.
- **Universal Plug and Play:** (Default On) This option makes the router compliant with the Universal Plug and Play standard, which allows compatibility with equipment made by different manufacturers. You should leave this feature turned on unless directed to turn it off by your network administrator.

Backup Router System Settings

At this screen you can back up all system settings by saving them in a file on your local hard drive, or restore saved settings if the router becomes unstable and needs to be reset.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admin
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
PASSWORDS
SETTINGS
BACKUP
OTHER
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As advanced as you make it.
Wireless Router Settings
Save Settings To Local Hard Drive
SAVE
Load Settings From Local Hard Drive
Browse...
LOAD
Restore To Factory Default Settings
RESTORE
Reboot Wireless Router
REBOOT
HELP
Done
Internet

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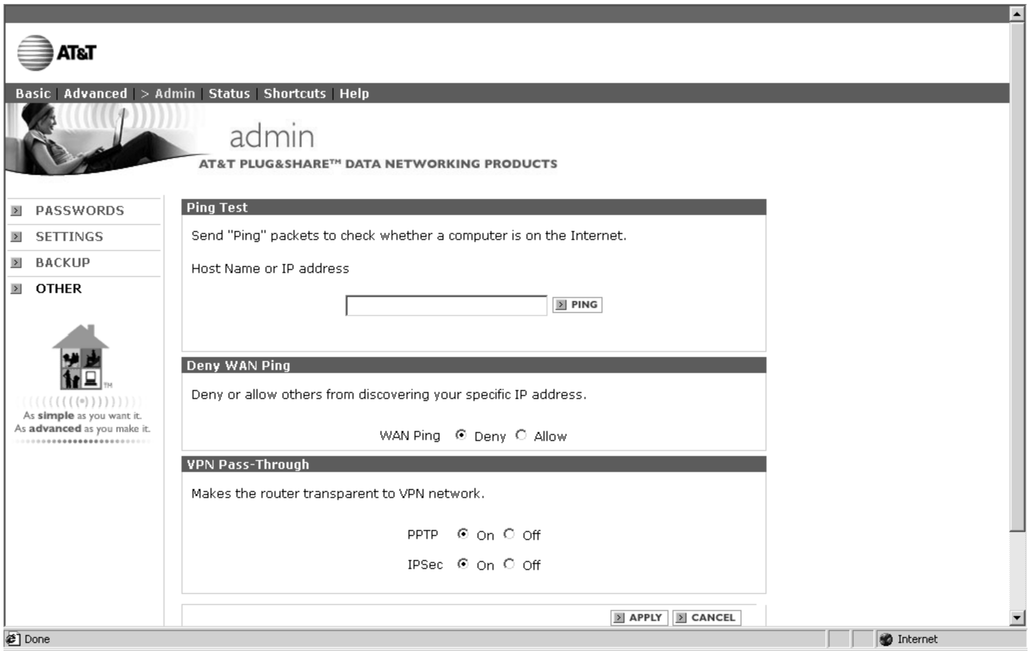
- **Save Settings to Local Hard Drive:** To back up your system settings, press **Save**, then choose a location on your local hard drive where you want to keep the backup file.
- **Load Settings from Local Hard Drive:** To restore saved settings, click **Browse** to search the local hard drive for the backup file you want to use. Highlight it, then click **Load** to restore saved settings.
- **Restore to Factory Default Settings:** Click **Restore** to reset the router to its original factory default settings. You should not use this option unless directed to do so by your network administrator. It will delete all changes you have made to all settings.
- **Reboot:** This option saves all current settings, then shuts down and restarts the router to reinitialize it.

Basic > Advanced > **Admin** > Status > Shortcuts > Help
Passwords
Settings
Backup
Other

Other Options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admin
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
PASSWORDS
SETTINGS
BACKUP
OTHER
As simple as you want it.
As advanced as you make it.
PING
APPLY
CANCEL
Done
Internet

Ping Test

Send "Ping" packets to check whether a computer is on the Internet.

Host Name or IP address

Deny WAN Ping

Deny or allow others from discovering your specific IP address.

WAN Ping ● Deny ○ Allow

VPN Pass-Through

Makes the router transparent to VPN network.

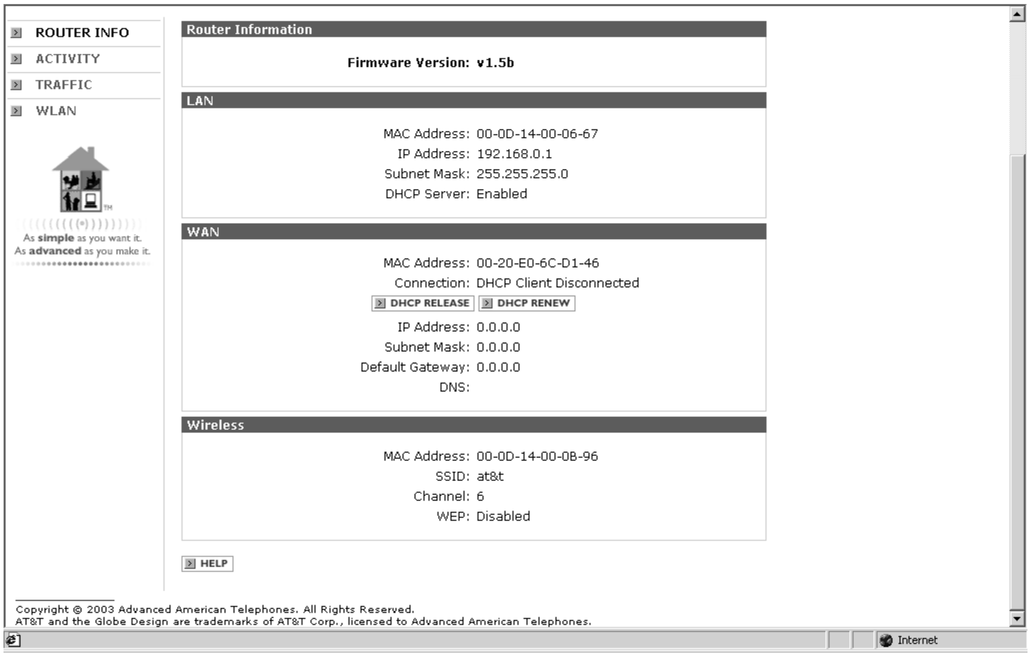
PPTP ● On ○ Off

IPSec ● On ○ Off

- **Ping Test:** To check whether a computer is connected to the Internet or to your LAN, enter its host name or IP address, then click **Ping** (“Packet Internet Groper”). If the computer is currently connected to the Internet (or to your LAN) you will see a verification message (unless that computer is set to deny Ping queries; see below).
- **WAN Ping:** (Default Deny) This option instructs your network to ignore Ping queries, to protect against unauthorized access by others outside your network. You should leave this option set to Deny unless instructed to do otherwise by your network administrator.
- **VPN Pass-Through:** (Default On) The router supports VPN (Virtual Private Network) pass-through for both PPTP (Point-to-Point Tunneling Protocol) and IPSec (IP Security). Turning both of these **On** prevents your router from blocking access to another network you may wish to use.

Router Information

This screen displays the current status of the router (see descriptions below).



Router Information

Firmware Version: v1.5b

LAN

MAC Address: 00-0D-14-00-06-67
IP Address: 192.168.0.1
Subnet Mask: 255.255.255.0
DHCP Server: Enabled

WAN

MAC Address: 00-20-E0-6C-D1-46
Connection: DHCP Client Disconnected
IP Address: 0.0.0.0
Subnet Mask: 0.0.0.0
Default Gateway: 0.0.0.0
DNS:

Wireless

MAC Address: 00-0D-14-00-0B-96
SSID: at&t
Channel: 6
WEP: Disabled

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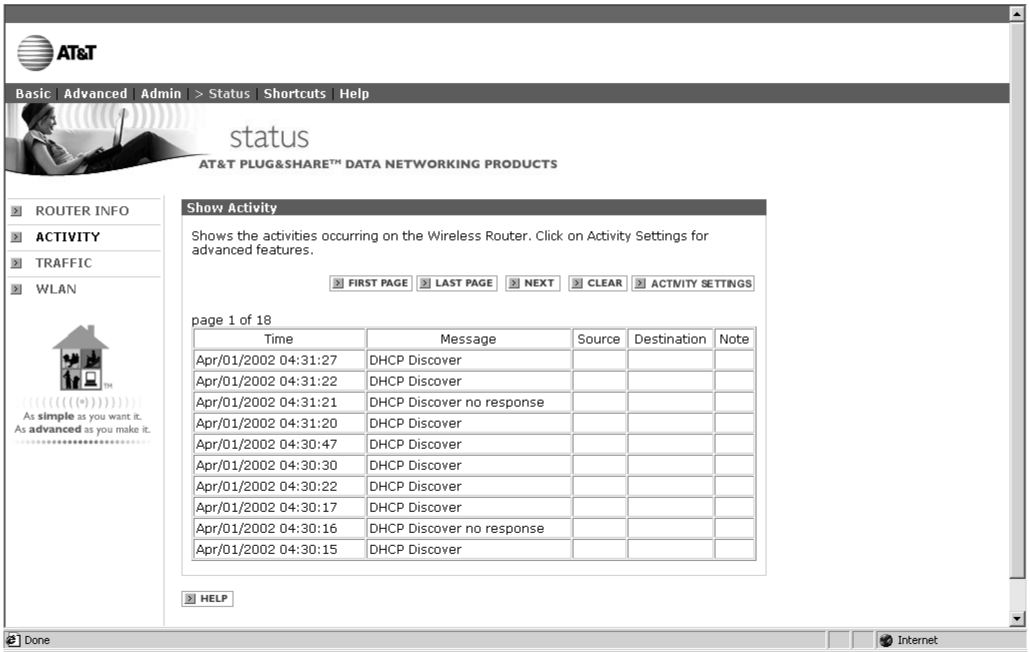
- **Router Information:** Displays the router’s current firmware version. (See page 47 to download a more recent version if one is available.)
- **LAN:** Displays the status of your Local Area Network connections (MAC Address of the Ethernet LAN connection, IP Address, Subnet Mask, and DHCP server setting).
- **WAN:** Displays the status of your Wide Area Network connections (MAC Address of the Ethernet WAN connection, IP Address, Subnet Mask, Default Gateway, and DNS (Domain Name Server). The connection type will be displayed if you are connected. If you have a dynamic connection, buttons allow you to release or renew the IP Address assigned by your Internet Service Provider. If you have a PPPoE connection, you will see options for connecting or disconnecting it.
- **Wireless:** Displays the MAC Address of the wireless connection, SSID, channel, and WEP Encryption status.

Activity

This screen displays a record of the most recent 200 network events. After 200 events are recorded, new entries will overwrite older ones. Each time the router is reset or turned off, all entries are deleted. The Activity Settings option allows you to keep a permanent record of these events (see below).


AT&T
Basic | Advanced | Admin | > Status | Shortcuts | Help
status
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
ROUTER INFO
ACTIVITY
TRAFFIC
WLAN
As simple as you want it.
As advanced as you make it.
FIRST PAGE
LAST PAGE
NEXT
CLEAR
ACTIVITY SETTINGS
HELP
Done
Internet

Show Activity

Shows the activities occurring on the Wireless Router. Click on Activity Settings for advanced features.

page 1 of 18

Time	Message	Source	Destination	Note
Apr/01/2002 04:31:27	DHCP Discover			
Apr/01/2002 04:31:22	DHCP Discover			
Apr/01/2002 04:31:21	DHCP Discover no response			
Apr/01/2002 04:31:20	DHCP Discover			
Apr/01/2002 04:30:47	DHCP Discover			
Apr/01/2002 04:30:30	DHCP Discover			
Apr/01/2002 04:30:22	DHCP Discover			
Apr/01/2002 04:30:17	DHCP Discover			
Apr/01/2002 04:30:16	DHCP Discover no response			
Apr/01/2002 04:30:15	DHCP Discover			

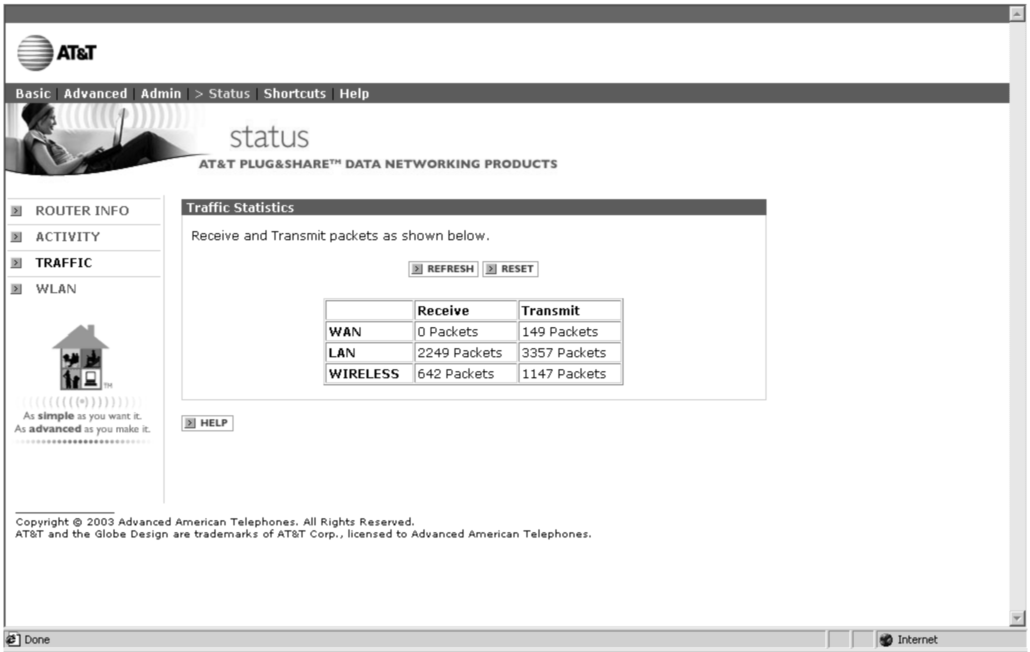
- **First Page:** Go to the beginning of log entries.
- **Last Page:** Go to the end of log entries.
- **Previous:** Move back one page.
- **Next:** Move forward one log page.
- **Clear:** Delete all log entries.
- **Activity Settings:** Displays a page allowing you to save log entries, or automatically send them by email to another location.

Basic > Advanced > Admin > **Status** > Shortcuts > Help

Router Info
Activity
Traffic
WLAN

Traffic Statistics

This screen displays a summary of traffic handled by your wireless network (volume of data sent and received by your Local Area Network and Wide Area Network).


AT&T
Basic | Advanced | Admin | > Status | Shortcuts | Help
status
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
ROUTER INFO
ACTIVITY
TRAFFIC
WLAN
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As advanced as you make it.
REFRESH
RESET
HELP
Done
Internet

Traffic Statistics

Receive and Transmit packets as shown below.

	Receive	Transmit
WAN	0 Packets	149 Packets
LAN	2249 Packets	3357 Packets
WIRELESS	642 Packets	1147 Packets

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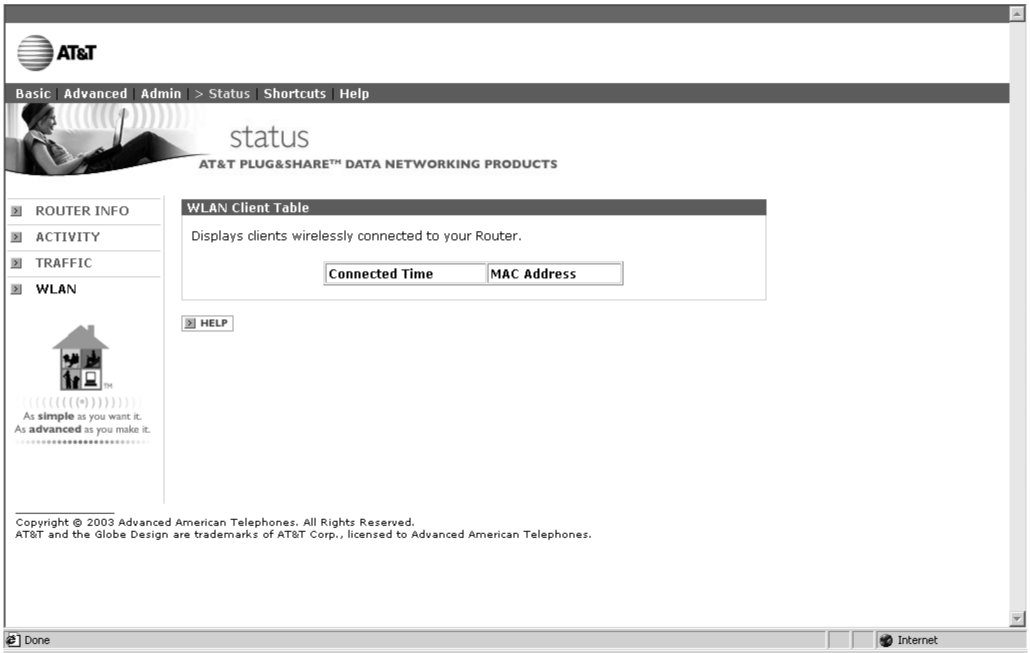
- **Refresh:** Click to update the screen and see the most recent traffic statistics.
- **Reset:** Click to delete all recorded data.

Wireless

This screen displays a list of all client computers currently connected to your wireless router.


AT&T
Basic | Advanced | Admin | > Status | Shortcuts | Help
status
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
ROUTER INFO
ACTIVITY
TRAFFIC
WLAN
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As advanced as you make it.
HELP
Done
Internet

WLAN Client Table

Displays clients wirelessly connected to your Router.

Connected Time	MAC Address

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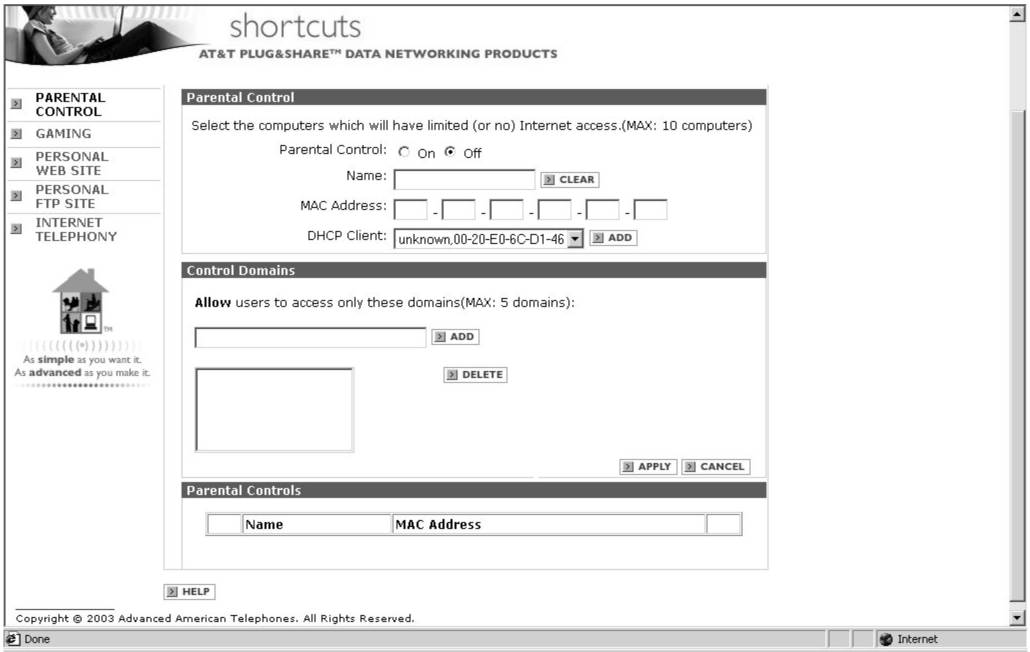
Parental Control

This option allows you to restrict Internet access from networked computers. You can completely deny access to the Internet for a specific computer, or you can restrict access to a list of approved web sites (for example, you might enter "childs_school.com" , "reference.com" and similar web sites to allow your child to use the internet for homework).



Parental Control

Select the computers which will have limited (or no) Internet access.(MAX: 10 computers)

Parental Control: ○ On ● Off

Name:

MAC Address: - - - - -

DHCP Client: unknown,00-20-E0-6C-D1-46

Control Domains

Allow users to access only these domains(MAX: 5 domains):

Parental Controls

	Name	MAC Address	

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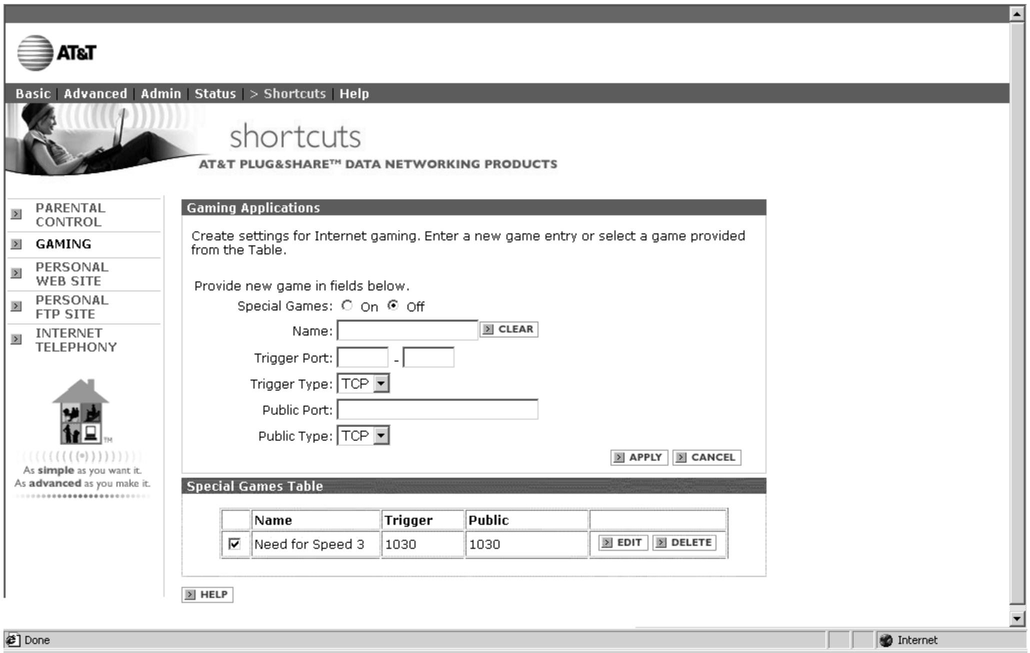
- **Parental Control:** (Default Off) Click **On** to activate Parental Control for the selected computer. To select a computer, enter a computer name or MAC address, or click the drop-down menu to select a computer from a list of DHCP Client computers. In the Name field, enter a name for this Parental Control profile.
- **Control Domains:** Enter approved web site names here, then click the **Add** button after each entry. You many enter up to 5 web sites. Users of this computer will be denied access to any sites not listed. To remove a web site from the list, highlight it and click **Delete**. Click **Apply** when you are finished modifying the list.

  NOTE: If you want to prohibit all Internet access from this computer, delete all names from the Control Domains field (leaving it empty), then click **Apply**.
- **Parental Controls:** The parental control profiles you have created are listed in the table at the bottom of the page. To modify any existing profile, highlight the profile name and click the **Edit** button.

Basic > Advanced > Admin > Status > **Shortcuts** > Help
Parental Control
Gaming
Personal Web Site
Personal FTP Site
Internet Telephony

Gaming

At this screen you can create profiles for Internet games that require multiple connections. These profiles are sometimes necessary to allow interactive gaming, by preventing other settings (such as Network Address Translation) from inhibiting the multiple connections.


AT&T
Basic | Advanced | Admin | Status | > Shortcuts | Help
shortcuts
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
PARENTAL CONTROL
GAMING
PERSONAL WEB SITE
PERSONAL FTP SITE
INTERNET TELEPHONY
As simple as you want it.
As advanced as you make it.
CLEAR
APPLY
CANCEL
EDIT
DELETE
HELP
Done
Internet

Gaming Applications

Create settings for Internet gaming. Enter a new game entry or select a game provided from the Table.

Provide new game in fields below.

Special Games: ○ On ● Off
Name:
Trigger Port: -
Trigger Type: TCP
Public Port:
Public Type: TCP

Special Games Table

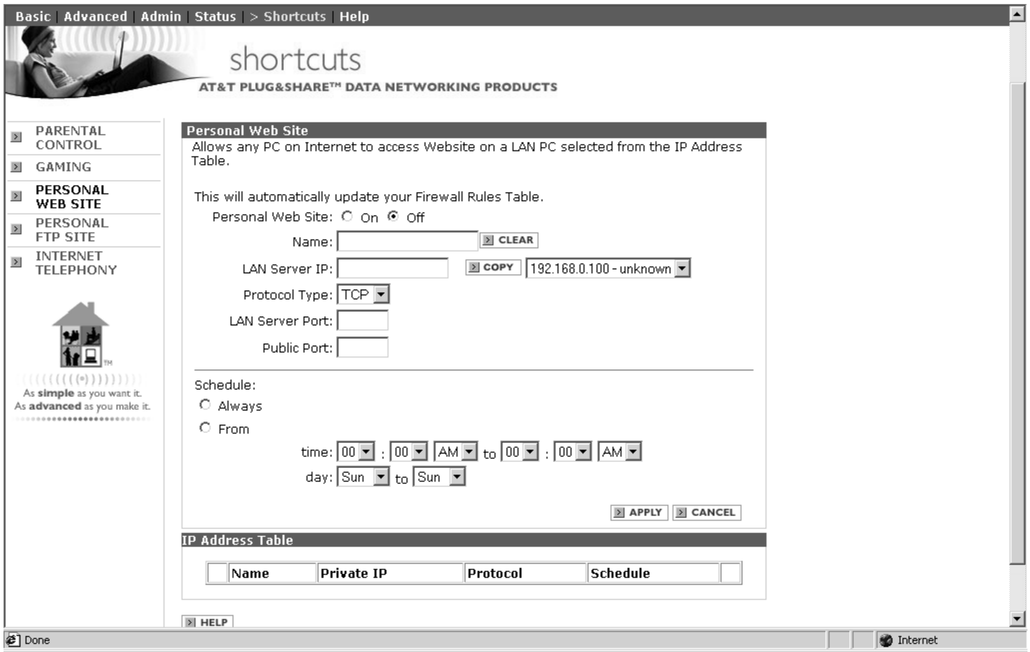
	Name	Trigger	Public	
☑	Need for Speed 3	1030	1030	EDIT DELETE

- **Special Games:** (Default <u>Off</u>) Click **On** to activate this feature. Click **Off** to prohibit access to games requiring multiple connections. (Click the check box beside any game profile to allow or deny access to an individual game.)
- **Name:** Enter a name to describe the game profile you are creating.
- **Trigger Port:** Enter a port for use by this application. You can enter a single port or a range of ports.
- **Trigger Type:** Select the protocol (TCP, UDP, or both) to be used for access to the game.
- **Public Port:** Enter a public port for use by this application.
- **Public Type:** Select the protocol (TCP, UDP, or both) to be used by the incoming communication.
- **Apply:** Click to add a new game profile to the table at the bottom of the screen.
- **Cancel:** Click to clear all fields and begin again.
- **Special Games Table:** Click the checkbox beside any listing to enable or disable a game profile. Click anywhere on the line, then click **Edit** to change its attributes or **Delete** to remove it from the Special Games Table.

Basic > Advanced > Admin > Status > **Shortcuts** > Help
Parental Control
Gaming
Personal Web Site
Personal FTP Site
Internet Telephony

Personal Web Site

This option allows you to designate a network computer as a virtual server to host your personal web site. You can create a profile for each site, so that site visitors will be directed to the server hosting that site.


Basic | Advanced | Admin | Status | > Shortcuts | Help
shortcuts
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
PARENTAL CONTROL
GAMING
PERSONAL WEB SITE
PERSONAL FTP SITE
INTERNET TELEPHONY
As simple as you want it.
As advanced as you make it.
CLEAR
COPY
APPLY
CANCEL
HELP
Done
Internet

Personal Web Site

Allows any PC on Internet to access Website on a LAN PC selected from the IP Address Table.

This will automatically update your Firewall Rules Table.

Personal Web Site: ○ On ● Off

Name:

LAN Server IP: 192.168.0.100 - unknown

Protocol Type: TCP

LAN Server Port:

Public Port:

Schedule:
○ Always
○ From
time: 00 : 00 AM to 00 : 00 AM
day: Sun to Sun

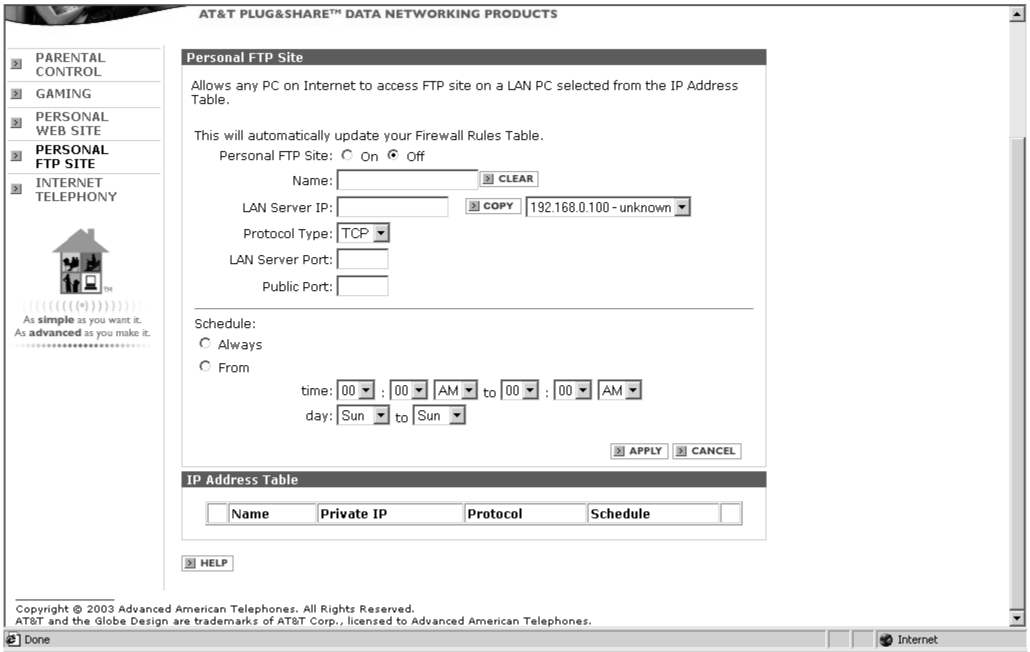
IP Address Table

Name	Private IP	Protocol	Schedule

- **Personal Web Site:** (Default Off) Click **On** to allow access to the virtual server for the web site.
- **Name:** Enter a name to describe the virtual server.
- **LAN Server IP:** Enter the LAN IP address of the computer you want to use as a virtual server (or click the drop-down menu to see a list of computers, highlight one, and click **Copy** to add it to the list).
- **Protocol Type:** Select the protocol (TCP or UDP) you want to use for the virtual server.
- **LAN Server Port:** Enter the port number of the computer used as a virtual server.
- **Public Port:** Enter the port number on the WAN that will be used to provide access to the virtual server.
- **Schedule:** Enter times when you want to allow access to the server, or click **Always** to allow access at any time.
- **Apply:** Click to add the virtual server to the table below.

Personal FTP Site

This option allows you to designate a network computer as a virtual server to host your personal FTP site. You can create a profile for each site, so that site visitors will be directed to the server hosting that site.


AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
PARENTAL CONTROL
GAMING
PERSONAL WEB SITE
PERSONAL FTP SITE
INTERNET TELEPHONY
As simple as you want it.
As advanced as you make it.

Personal FTP Site

Allows any PC on Internet to access FTP site on a LAN PC selected from the IP Address Table.

This will automatically update your Firewall Rules Table.

Personal FTP Site: ○ On ● Off

Name: CLEAR

LAN Server IP: COPY 192.168.0.100 - unknown

Protocol Type: TCP

LAN Server Port:

Public Port:

Schedule:

○ Always

○ From

time: 00 : 00 AM to 00 : 00 AM

day: Sun to Sun

APPLY CANCEL

IP Address Table

	Name	Private IP	Protocol	Schedule	

HELP

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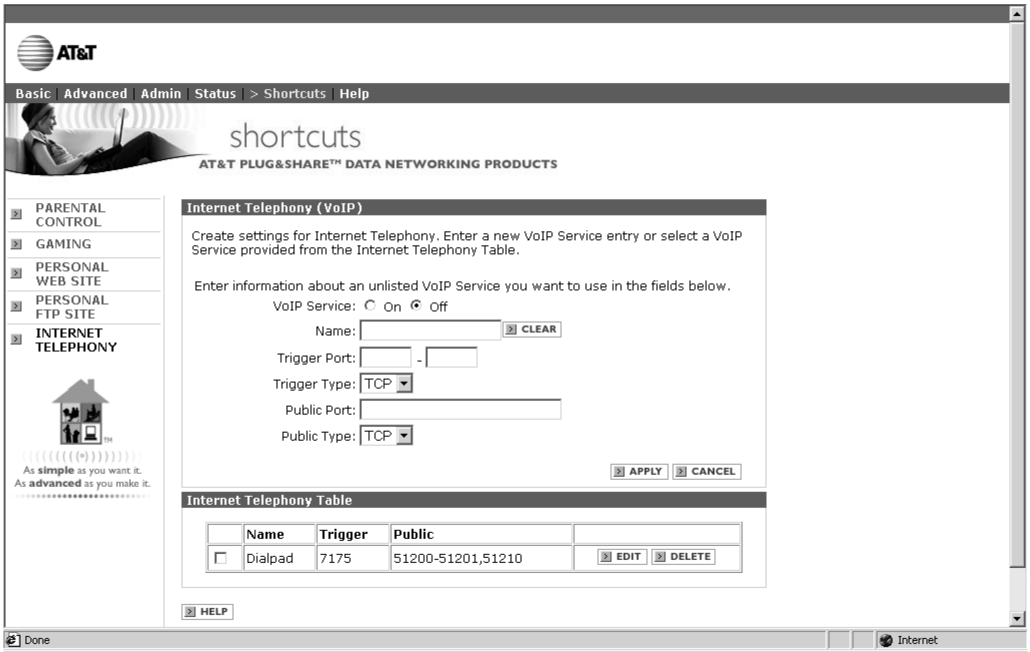
Done Internet

- **Personal FTP Site:** (Default Off) Click **On** to allow access to the virtual server for the FTP site.
- **Name:** Enter a name to describe the virtual server.
- **LAN Server IP:** Enter the LAN IP address of the computer you want to use as a virtual server (or click the drop-down menu to see a list of computers, highlight one, and click **Copy** to add it to the list).
- **Protocol Type:** Select the protocol (TCP or UDP) you want to use for the virtual server.
- **LAN Server Port:** Enter the port number of the local computer that is being used as a virtual server.
- **Public Port:** Enter the port number on the WAN that will be used to provide access to the virtual server.
- **Schedule:** Enter times when you want to allow access to the server, or click **Always** to allow access at any time.
- **Apply:** Click to add the virtual server to the table at the bottom of the screen.

Internet Telephony (VoIP)

At this screen you can create profiles for Internet telephone services that require multiple connections. These profiles are sometimes necessary to allow Internet telephone use, by preventing other settings (such as Network Address Translation) from inhibiting the multiple connections.


AT&T
Basic | Advanced | Admin | Status | > Shortcuts | Help
shortcuts
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
PARENTAL CONTROL
GAMING
PERSONAL WEB SITE
PERSONAL FTP SITE
INTERNET TELEPHONY
As simple as you want it.
As advanced as you make it.
CLEAR
APPLY
CANCEL
EDIT
DELETE
HELP
Done
Internet

Internet Telephony (VoIP)

Create settings for Internet Telephony. Enter a new VoIP Service entry or select a VoIP Service provided from the Internet Telephony Table.

Enter information about an unlisted VoIP Service you want to use in the fields below.

VoIP Service: ○ On ● Off
Name:
Trigger Port: -
Trigger Type: TCP
Public Port:
Public Type: TCP

Internet Telephony Table

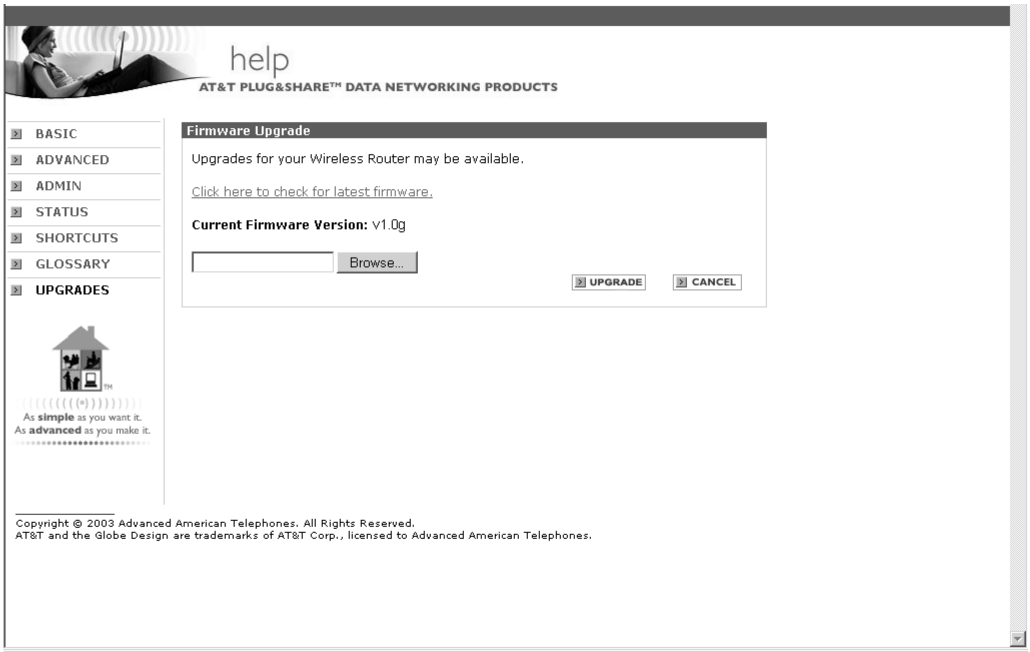
	Name	Trigger	Public	
□	Dialpad	7175	51200-51201,51210	EDIT DELETE

- **VoIP Service:** (Default Off) Click **On** to activate this feature and allow users to make and receive Internet telephone calls. (Click the check box beside any VoIP profile to allow or deny access.)
- **Name:** Enter a name to describe the VoIP profile you are creating.
- **Trigger Port:** Enter a port for use by this application. You can enter a single port or a range of ports.
- **Trigger Type:** Select the protocol (TCP, UDP, or both) to be used for access this VoIP profile.
- **Public Port:** Enter a public port for use by this application.
- **Public Type:** Select the protocol (TCP, UDP, or both) that can be used by the incoming communication.
- **Apply:** Click to add this VoIP profile to the table at the bottom of the screen.

Firmware Upgrade

At this screen you can check to see if a new firmware version is available, and install it. (Firmware controls your router’s operation, and newer versions may give you more options or increase performance.)

Before downloading and installing new firmware, you should connect your computer to the router with an Ethernet cable (see page 7).


help
AT&T PLUG&SHARE™ DATA NETWORKING PRODUCTS
BASIC
ADVANCED
ADMIN
STATUS
SHORTCUTS
GLOSSARY
UPGRADES
As simple as you want it.
As advanced as you make it.
Browse...
UPGRADE
CANCEL

Firmware Upgrade

Upgrades for your Wireless Router may be available.

Click here to check for latest firmware.

Current Firmware Version: v1.0g

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- **Click here to check for latest firmware:** Click this link to find out if new firmware is available. If so, follow the instructions to download the new firmware to your local hard drive.
- Click **Browse** to search the local hard drive for the firmware to be used for the upgrade.
- Click **Apply** to complete the upgrade. The screen will display a notice that the router is restarting.

NOTE: Upgrading the firmware will not change any of your system settings, but you should save your system settings before upgrading your firmware (see page 35).

Change Network Settings

After your wireless network is installed you can view or change settings at any time. Launch your Internet browser and enter http://ATT.Router in the URL (web address) field. If the router page does not appear, enter http://192.168.0.1

Choose the types of settings you want to view or change. Use the horizontal tabs to display appropriate vertical buttons and click on the vertical buttons on the left of your screen to display the desired screen.

Once you have changed settings on any screen, click **Apply** to apply the change to the router.

Configuring Windows® for File and Printer Sharing

Some configuration of Windows® is necessary to make full use of your wireless network. It will take a few minutes, but it is a one-time process that you will not need to repeat.

Please turn to the pages listed for instructions on how to configure your operating system.

Windows® XP ....Pages 49-55

Windows® 2000 ....Pages 56-61

Windows® Me/98 SE ....Pages 62-67

Caution

Before making any changes to your networking settings, please review this section carefully.

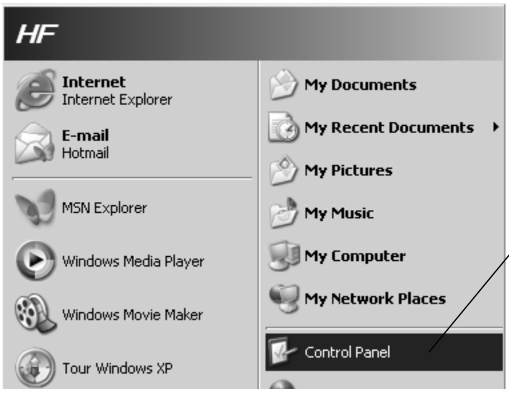
Failure to follow these instructions precisely may result in the inability to log into your network or computer.

If your computer is part of a work environment, please contact your IT professional before proceeding.

Configure Windows® XP for Network Sharing

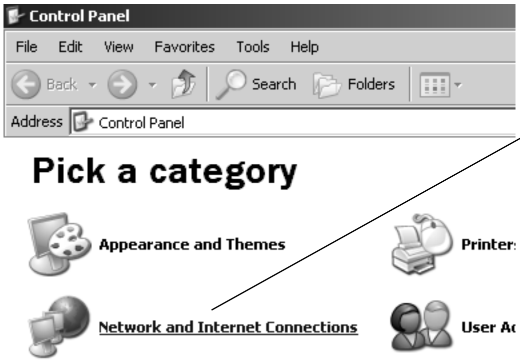
Caution

Before making any changes to your networking settings, please review this section carefully. Failure to follow these instructions precisely may result in the inability to log into your network or computer. If your computer is part of a work environment, please contact your IT professional before proceeding.



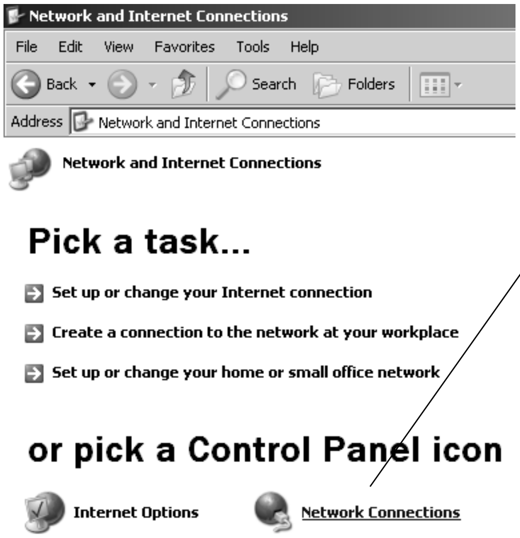
Step 1

Click **Start** > **Control Panel**.



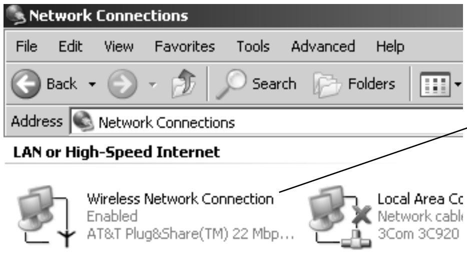
Step 2

Click **Network and Internet Connections**.


Network and Internet Connections
File Edit View Favorites Tools Help
Back Search Folders
Address Network and Internet Connections
Network and Internet Connections
Pick a task...
Set up or change your Internet connection
Create a connection to the network at your workplace
Set up or change your home or small office network
or pick a Control Panel icon
Internet Options
Network Connections

Step 3

Click **Network Connections**.



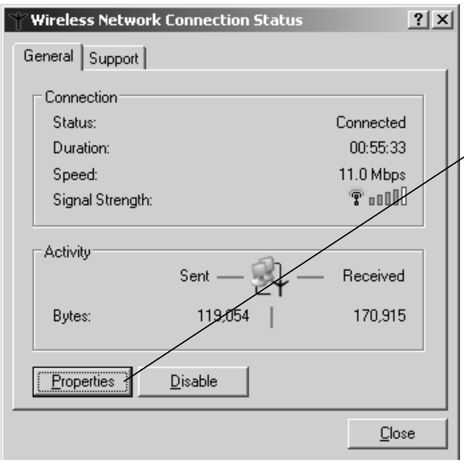
LAN or High-Speed Internet

Wireless Network Connection
Enabled
AT&T Plug&Share(TM) 22 Mbp…

Local Area Co
Network cabl
3Com 3C920

Step 4

Click **Wireless Network Connection**.



Connection

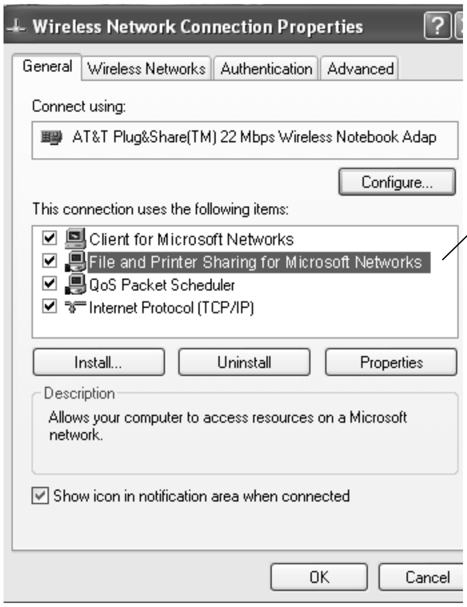
Status:	Connected
Duration:	00:55:33
Speed:	11.0 Mbps
Signal Strength:	

Activity

	Sent	Received
Bytes:	119,054	170,915

Step 5

Click the **Properties** button.



Connect using:

AT&T Plug&Share(TM) 22 Mbps Wireless Notebook Adap

This connection uses the following items:

☑ Client for Microsoft Networks
☑ File and Printer Sharing for Microsoft Networks
☑ QoS Packet Scheduler
☑ Internet Protocol (TCP/IP)

Description

Allows your computer to access resources on a Microsoft network.

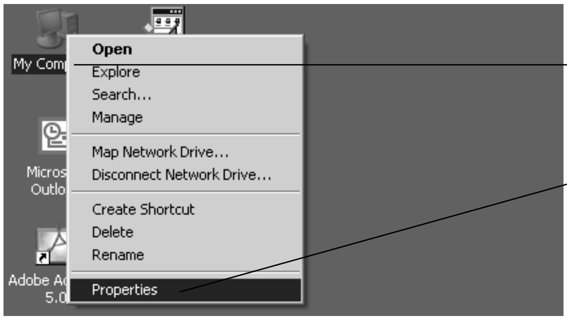
☑ Show icon in notification area when connected

Step 6

Make sure **File and Printer Sharing for Microsoft Networks** appears in this list, and check it if it is unchecked.

If you do not see it in the list, click the **Install** button and follow directions to install **File and Printer Sharing for Microsoft Networks**.

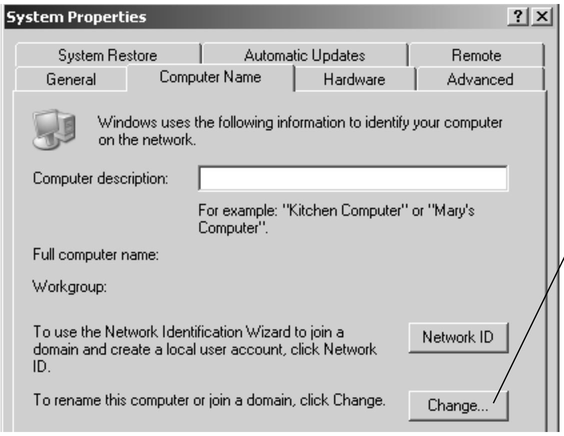
Click **OK** when **File and Printer Sharing** is installed and checked.



Step 7

Highlight the **My Computer** icon on your desktop, then click the right mouse button.

Scroll down to click on **Properties**.



Windows uses the following information to identify your computer on the network.

Computer description:

For example: "Kitchen Computer" or "Mary's Computer".

Full computer name:

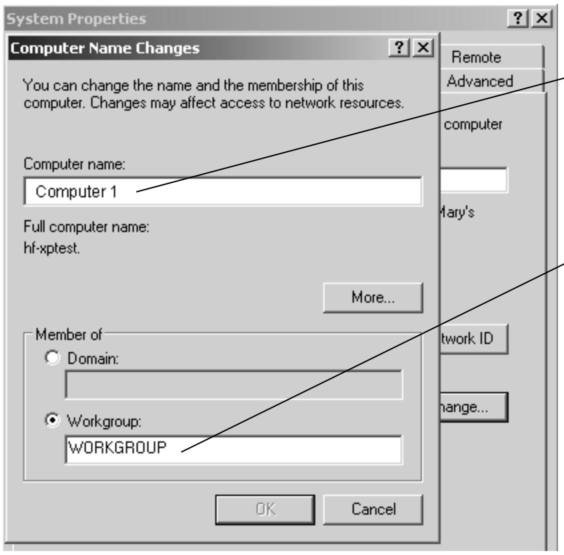
Workgroup:

To use the Network Identification Wizard to join a domain and create a local user account, click Network ID.

To rename this computer or join a domain, click Change.

Step 8

Click the **Change** button.



You can change the name and the membership of this computer. Changes may affect access to network resources.

Computer name: Computer 1

Full computer name:
hf-xptest.

Member of

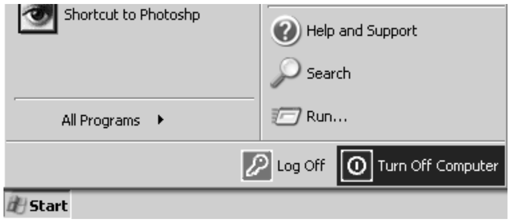
○ Domain:

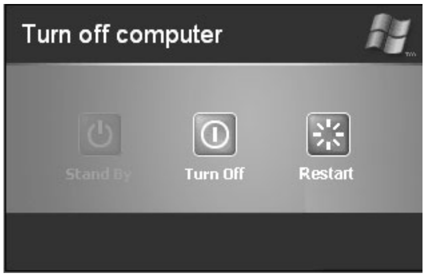
● Workgroup: WORKGROUP

Step 9

Enter a unique name to identify your computer. Each computer must have a different name.

Enter a workgroup name. All computers must use the same workgroup. It may be easiest to use the default name, “Workgroup.”

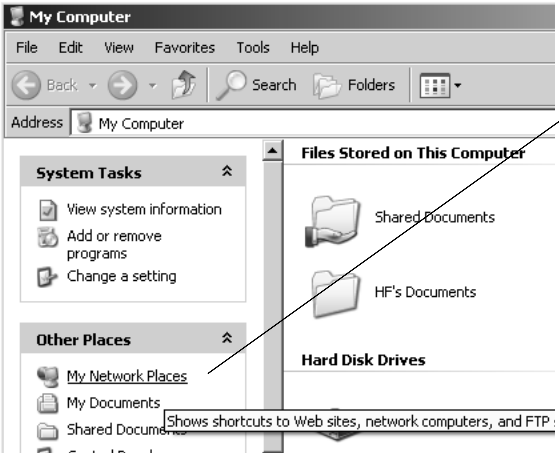


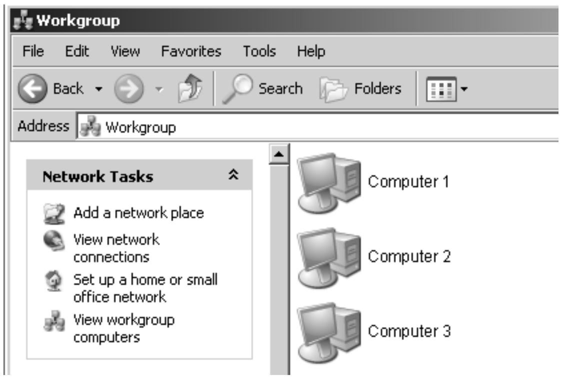


Step 10

When configuration is complete, you must restart Windows®.

When Windows® restarts you will be prompted to enter a **user name** and **password**. Be sure to record these in a safe place. You will be required to enter them for access to the network each time you restart Windows®.





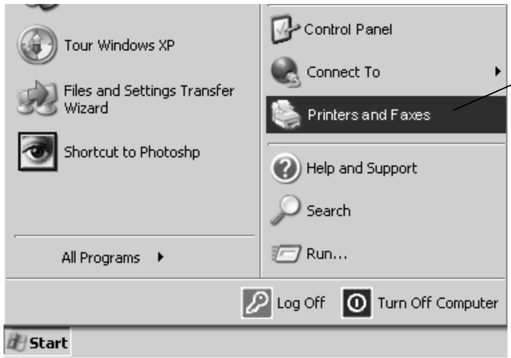
Step 11

To verify that configuration is complete, double-click the **My Computer** icon on your desktop, then double-click **My Network Places**.

In the next window displayed you should see the names of all network computers.

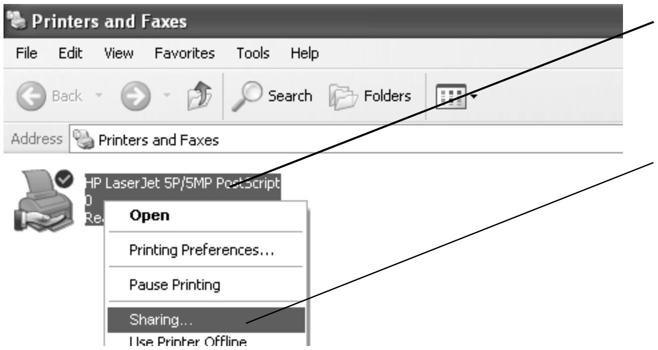
If any computers do not appear, you will have to follow the steps in this section on each computer to configure them for network sharing. Make sure each computer is assigned a different name, and all share the same Workgroup name you entered at Step 9.

Configure Windows® XP for Printer Sharing



Step 1

Click **Start** > **Printers and Faxes**.

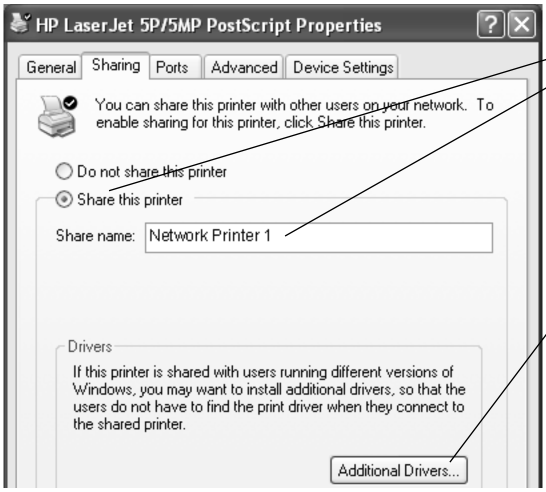


Step 2

Place the cursor on the printer you want to share, then click the right mouse button.

Scroll down to select **Sharing**.

NOTE: If your printer is not listed in this window, double-click **Add a Printer**, then follow the instructions to set up your printer for use.



You can share this printer with other users on your network. To enable sharing for this printer, click Share this printer.

○ Do not share this printer

● Share this printer

Share name: Network Printer 1

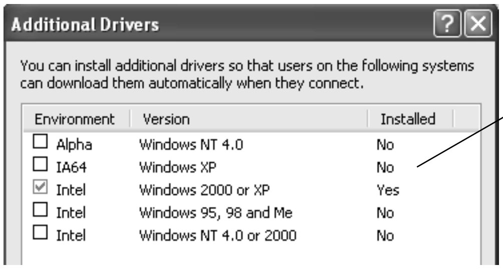
Drivers

If this printer is shared with users running different versions of Windows, you may want to install additional drivers, so that the users do not have to find the print driver when they connect to the shared printer.

Step 3

Click the **Share this printer** button, then enter a unique name for this printer.

To continue, click the **Additional Drivers** button.



You can install additional drivers so that users on the following systems can download them automatically when they connect.

Environment	Version	Installed
☐ Alpha	Windows NT 4.0	No
☐ IA64	Windows XP	No
☑ Intel	Windows 2000 or XP	Yes
☐ Intel	Windows 95, 98 and Me	No
☐ Intel	Windows NT 4.0 or 2000	No

Step 4

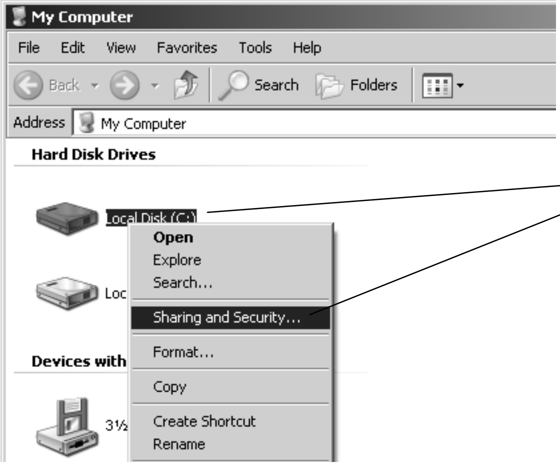
Check boxes for all operating systems that will use this printer.

Click **OK** when finished.

Configure Windows® XP for File Sharing

Step 1

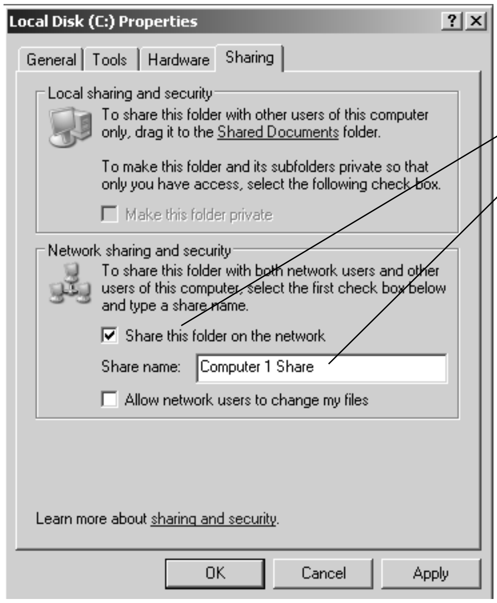
Double-click the **My Computer** icon on your desktop.



Step 2

Place the cursor on the disk drive you want to share (usually Drive C:), then click the right mouse button and scroll down to select **Sharing and Security**.

NOTE: This will allow others access to all files on this computer. To restrict access to certain folders, double-click on the disk, highlight a folder you want to share, then follow steps 2-3.



Local sharing and security

To share this folder with other users of this computer only, drag it to the Shared Documents folder.

To make this folder and its subfolders private so that only you have access, select the following check box.

□ Make this folder private

Network sharing and security

To share this folder with both network users and other users of this computer, select the first check box below and type a share name.

☑ Share this folder on the network

Share name: Computer 1 Share

□ Allow network users to change my files

Learn more about sharing and security.

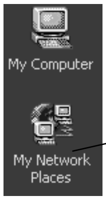
Step 3

Check the **Share this folder on the Network** box, then enter a unique name for the drive or folder you want to share.

NOTE: To protect your files with higher levels of security, please refer to instructions provided with your Windows® operating system.

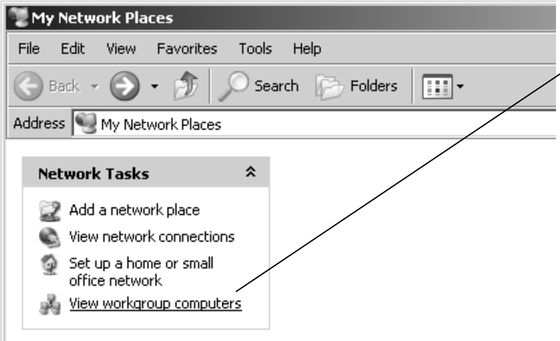
Click **OK** when finished.

To Share Network Files in Windows® XP



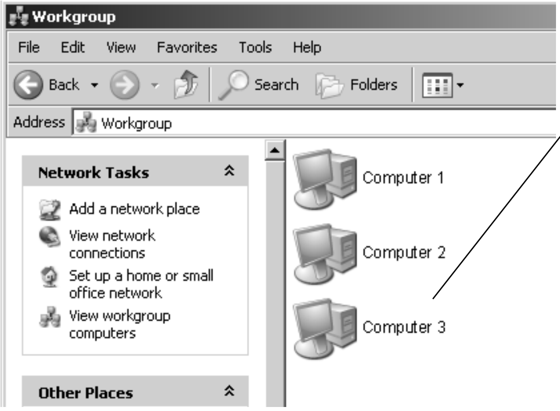
Step 1

Double-click the **My Network Places** icon on your desktop.



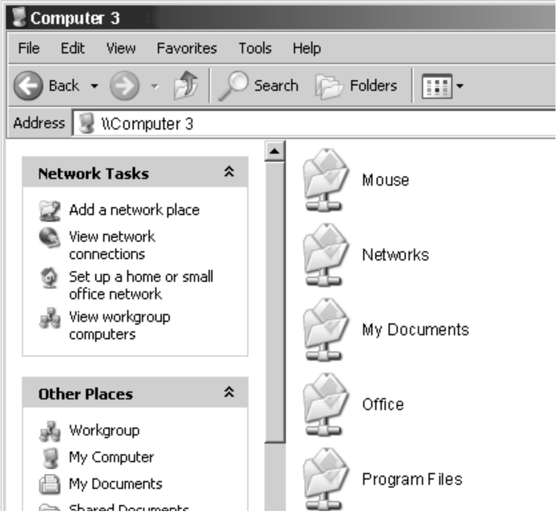
Step 2

Double-click **View Workgroup Computers** to see a list of all computers connected to your network.



Step 3

Double-click any icon to see a list of all shared folders on that computer.



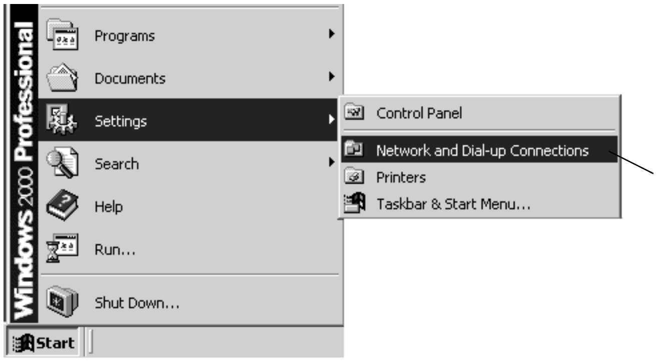
Step 4

Double-click any folder for access to any file in that folder.

Configure Windows® 2000 for Network Sharing

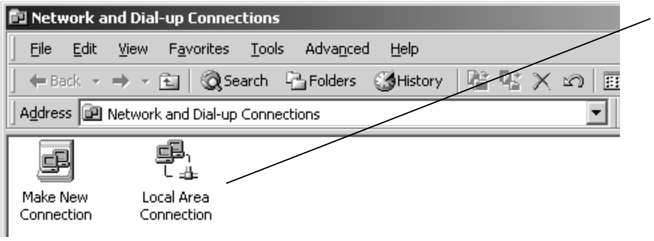
Caution

Before making any changes to your networking settings, please review this section carefully. Failure to follow these instructions precisely may result in the inability to log into your network or computer. If your computer is part of a work environment, please contact your IT professional before proceeding.



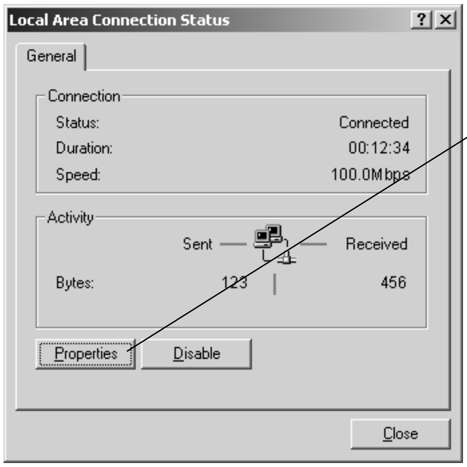
Step 1

Click **Start** >
Settings >
Network and Dial-up Connections.



Step 2

Double-click **Local Area Connections**.



Connection

Status: Connected

Duration: 00:12:34

Speed: 100.0Mbps

Activity

Sent — Received

Bytes: 123 | 456

Step 3

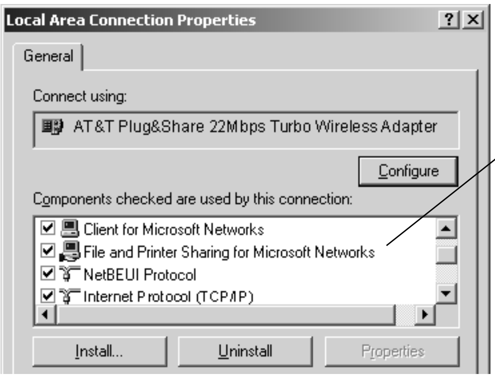
Click the **Properties** button.

Step 4

Make sure **File and Printer Sharing for Microsoft Networks** appears in this list, and check it if it is unchecked.

If you do not see it in the list, click the **Install** button and follow directions to install **File and Printer Sharing for Microsoft Networks**.

Click **OK** when **File and Printer Sharing** is installed and checked.



Connect using:

AT&T Plug&Share 22Mbps Turbo Wireless Adapter

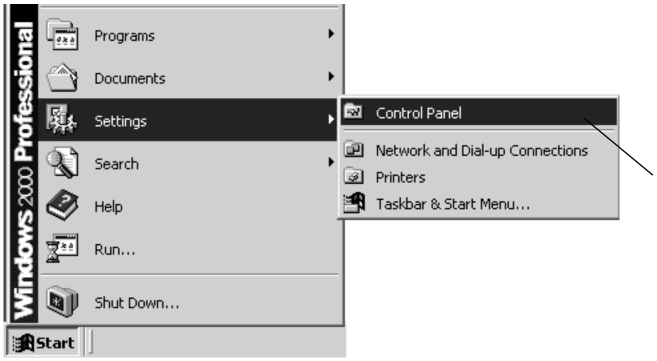
Components checked are used by this connection:

☑ Client for Microsoft Networks

☑ File and Printer Sharing for Microsoft Networks

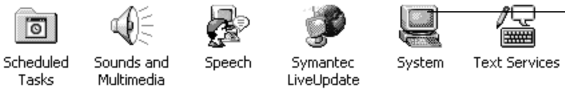
☑ NetBEUI Protocol

☑ Internet Protocol (TCP/IP)



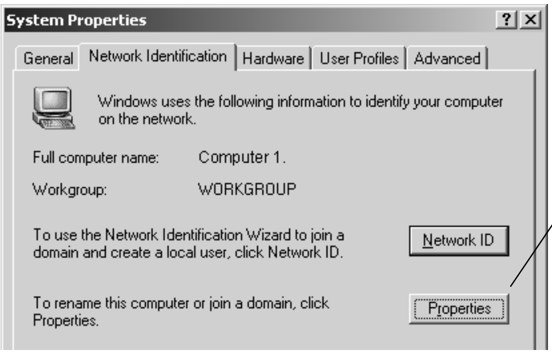
Step 5

Click **Start** > **Settings** > **Control Panel**.



Step 6

Double-click **System**.



Windows uses the following information to identify your computer on the network.

Full computer name: Computer 1.

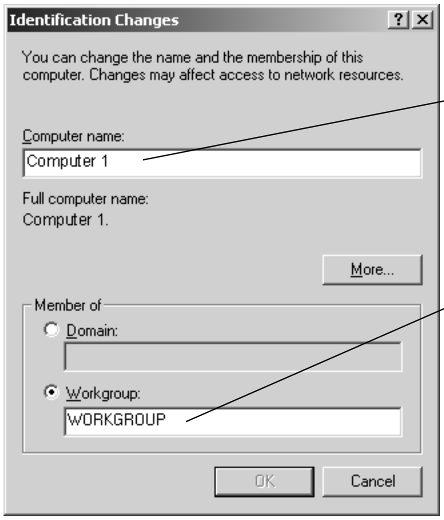
Workgroup: WORKGROUP

To use the Network Identification Wizard to join a domain and create a local user, click Network ID.

To rename this computer or join a domain, click Properties.

Step 7

Click the **Properties** button.



You can change the name and the membership of this computer. Changes may affect access to network resources.

Computer name: Computer 1

Full computer name: Computer 1.

○ Domain:

● Workgroup: WORKGROUP

Step 8

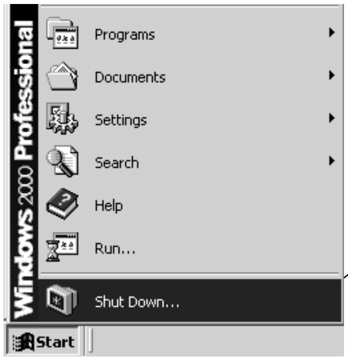
Enter a unique name to identify your computer. Each computer must have a different name.

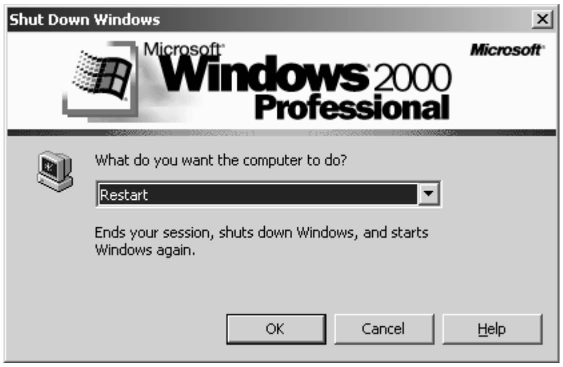
Enter a workgroup name. All computers must use the same workgroup. It may be easiest to use the default name, “Workgroup.”

Step 9

When configuration is complete, you must re-start Windows®.

When Windows® restarts you will be prompted to enter a **user name** and **password**. Be sure to record these in a safe place. You will be required to enter them for access to the network each time you restart Windows®.





What do you want the computer to do?

Restart

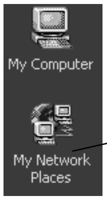
Ends your session, shuts down Windows, and starts Windows again.

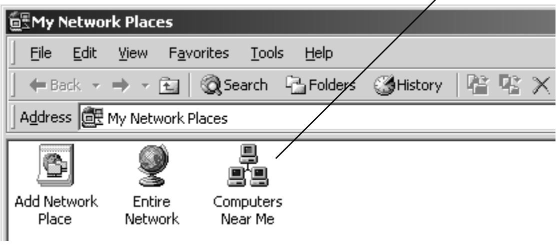
Step 10

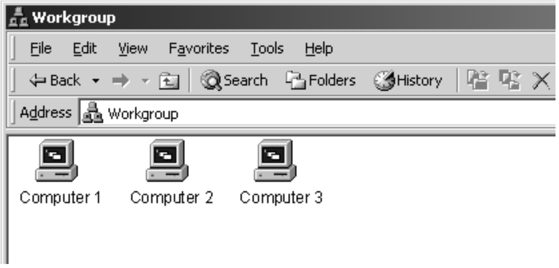
To verify that configuration is complete, double-click the **My Network Places** icon on your desktop, then double-click **Computers Near Me**.

In the next window displayed you should see the names of all network computers.

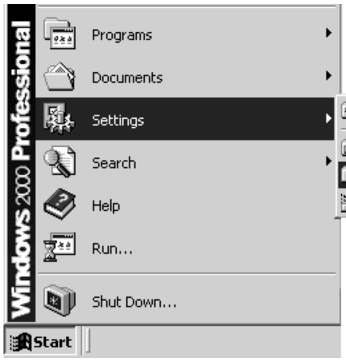
If any computers do not appear, you will have to follow the steps in this section on each computer to configure them for network sharing. Make sure each computer is assigned a different name, and all share the same Workgroup name you entered at Step 8.





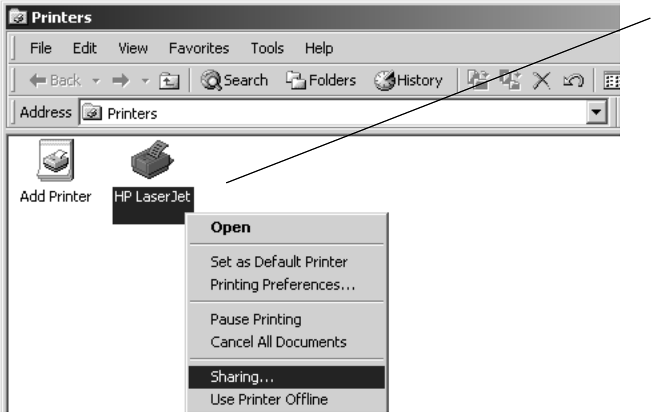


Configure Windows® 2000 for Printer Sharing



Step 1

Click **Start** > **Settings** > **Printers**.

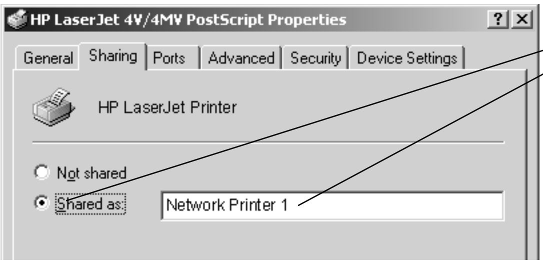


Step 2

Place the cursor on the printer you want to share, then click the right mouse button.

Scroll down to select **Sharing**.

NOTE: If your printer is not listed in this window, double-click **Add Printer**, then follow the instructions to set up your printer for use.



HP LaserJet Printer

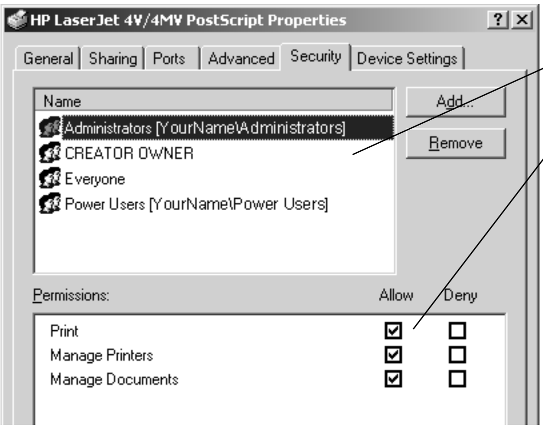
○ Not shared

● Shared as: Network Printer 1

Step 3

Click the **Shared As** button, then enter a unique name for this printer.

To continue, click on the **Security** tab at the top of this window.



Name

- Administrators [YourName\Administrators]
- CREATOR OWNER
- Everyone
- Power Users [YourName\Power Users]

Permissions:	Allow	Deny
Print	☑	□
Manage Printers	☑	□
Manage Documents	☑	□

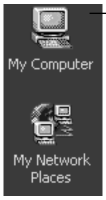
Step 4

At this screen you can set permissions for each user of the printer. Unless you have special needs for security, it may be easiest to check **Allow** for all permissions and all user names listed.

NOTE: To set more restrictive printer permissions, please refer to instructions provided with your Windows® operating system.

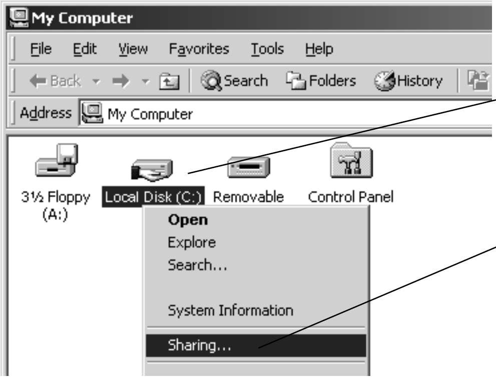
Click **OK** when finished.

Configure Windows® 2000 for File Sharing



Step 1

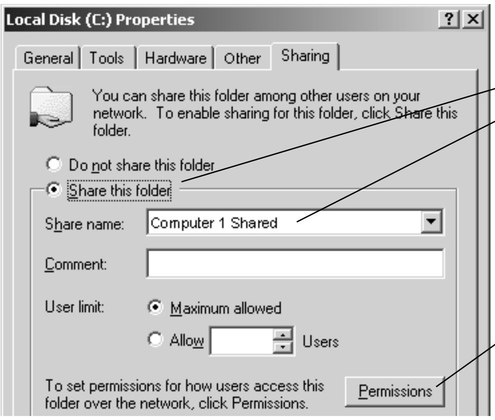
Double-click the **My Computer** icon on your desktop.



Step 2

Place the cursor on the disk drive you want to share (usually Local Drive C:), then click the right mouse button and scroll down to select **Sharing**.

NOTE: This will allow others access to all files on this computer. To restrict access to certain folders, double-click on the disk, highlight a folder you want to share, then follow steps 2-4.


Local Disk (C:) Properties
General Tools Hardware Other Sharing
Permissions

You can share this folder among other users on your network. To enable sharing for this folder, click Share this folder.

○ Do not share this folder
● Share this folder

Share name: Computer 1 Shared

Comment:

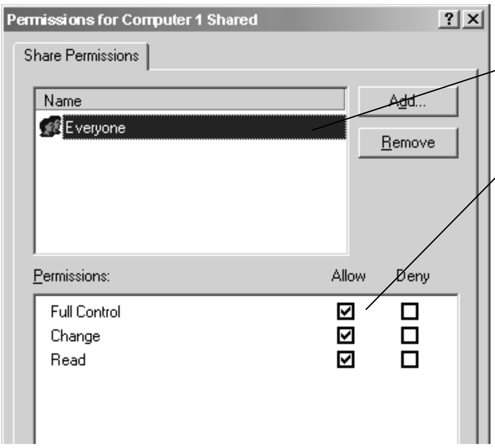
User limit: ● Maximum allowed
○ Allow Users

To set permissions for how users access this folder over the network, click Permissions.

Step 3

Click the **Share this folder** button, then enter a unique name for the drive or folder you want to share.

To continue, click the **Permissions** button.



Name: Everyone

Permissions:	Allow	Deny
Full Control	☑	□
Change	☑	□
Read	☑	□

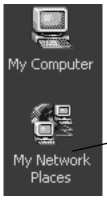
Step 4

At this screen you can set permissions for each user of shared documents. Unless you have special needs for security, it may be easiest to check **Allow** for all permissions.

NOTE: To set more restrictive permissions, please refer to instructions provided with your Windows® operating system.

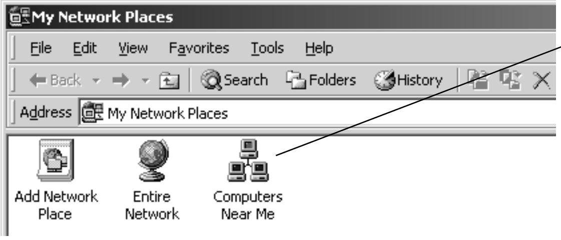
Click **OK** when finished.

To Share Network Files in Windows® 2000



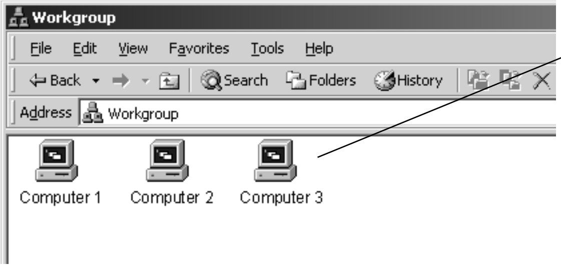
Step 1

Double-click the **My Network Places** icon on your desktop.


My Network Places
File Edit View Favorites Tools Help
Back Search Folders History
Address My Network Places
Add Network Place
Entire Network
Computers Near Me

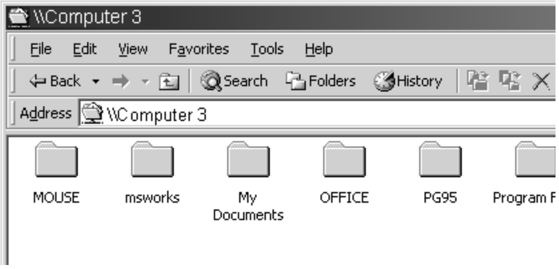
Step 2

Double-click **Computers Near Me** to see a list of all computers connected to your workgroup.


Workgroup
File Edit View Favorites Tools Help
Back Search Folders History
Address Workgroup
Computer 1
Computer 2
Computer 3

Step 3

Double-click any icon to see a list of all shared folders on that computer.



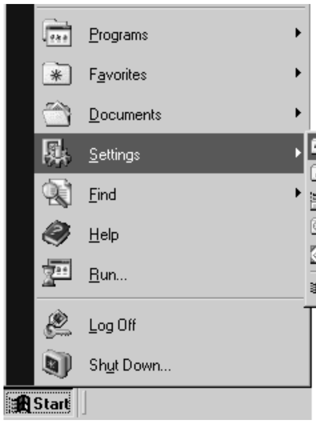
Step 4

Double-click any folder for access to any file in that folder.

Configure Windows® 98/Me for Network Sharing

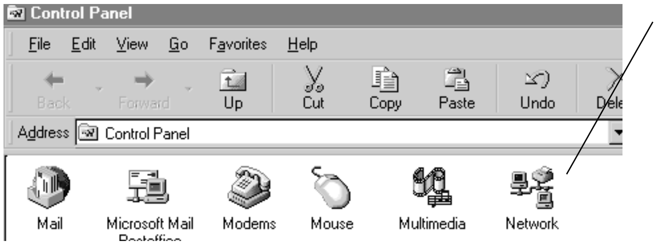
Caution

Before making any changes to your networking settings, please review this section carefully. Failure to follow these instructions precisely may result in the inability to log into your network or computer. If your computer is part of a work environment, please contact your IT professional before proceeding.



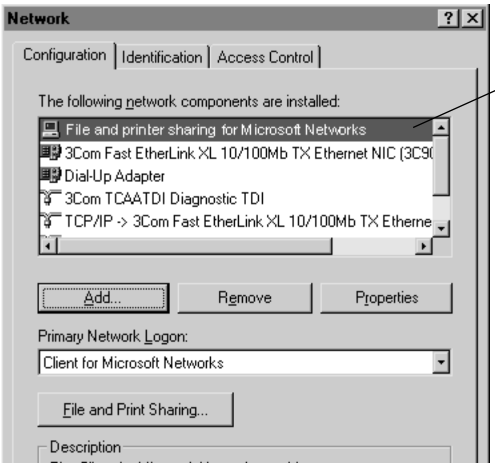
Step 1

Click **Start** > **Settings** > **Control Panel**.



Step 2

Double-click **Network**.



The following network components are installed:

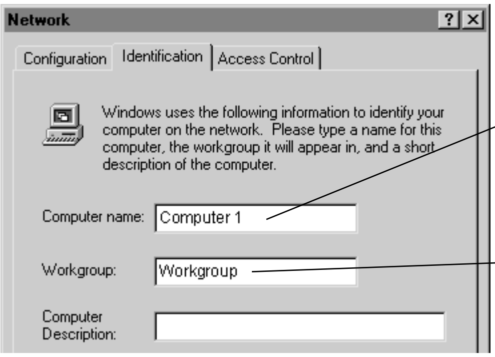
- File and printer sharing for Microsoft Networks
- 3Com Fast EtherLink XL 10/100Mb TX Ethernet NIC (3C9(
- Dial-Up Adapter
- 3Com TCAATDI Diagnostic TDI
- TCP/IP -> 3Com Fast EtherLink XL 10/100Mb TX Etherne

Primary Network Logon: Client for Microsoft Networks

Step 3

Scroll down to make sure **File and Printer Sharing for Microsoft Networks** appears in this list.

If you do not see it in the list, click the **Add** button and follow directions to install **File and Printer Sharing for Microsoft Networks**.



Windows uses the following information to identify your computer on the network. Please type a name for this computer, the workgroup it will appear in, and a short description of the computer.

Computer name: Computer 1

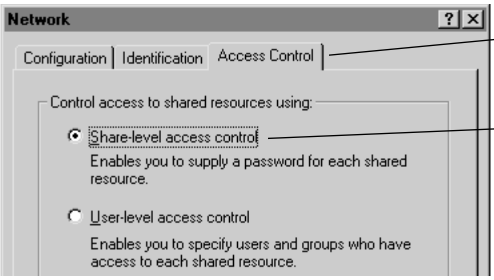
Workgroup: Workgroup

Computer Description:

Step 4

Click the **Identification** tab at the top of this screen, then enter a unique name to identify your computer. Each computer must have a different name.

Enter a workgroup name. All computers must use the same workgroup. It may be easiest to use the default name, “Workgroup.”



Control access to shared resources using:

● Share-level access control

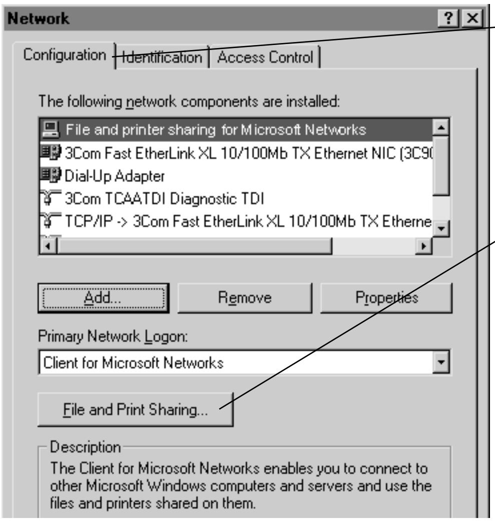
Enables you to supply a password for each shared resource.

○ User-level access control

Enables you to specify users and groups who have access to each shared resource.

Step 5

Click the **Access Control** tab at the top of this screen, then click on the **Share- Level access control** button.


Network
Configuration
Identification
Access Control
File and printer sharing for Microsoft Networks
3Com Fast EtherLink XL 10/100Mb TX Ethernet NIC (3C9(
Dial-Up Adapter
3Com TCAATDI Diagnostic TDI
TCP/IP -> 3Com Fast EtherLink XL 10/100Mb TX Etherne
Add...
Remove
Properties
File and Print Sharing...

The following network components are installed:

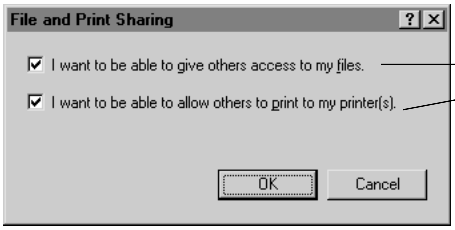
Primary Network Logon: Client for Microsoft Networks

Description

The Client for Microsoft Networks enables you to connect to other Microsoft Windows computers and servers and use the files and printers shared on them.

Step 6

Click the **Configuration** tab at the top of this screen, then click the **File and Print Sharing** button.



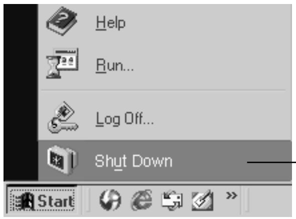
☑ I want to be able to give others access to my files.

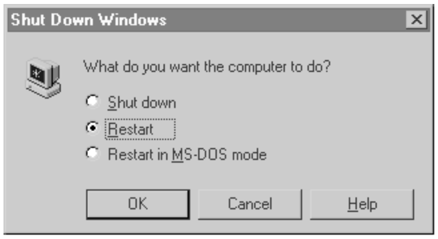
☑ I want to be able to allow others to print to my printer(s).

Step 7

Check the first option (I want to be able to give others access to my files). Check the second option if you want to share a printer connected to this computer.

Click **OK** when finished.





What do you want the computer to do?

○ Shut down

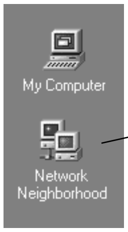
● Restart

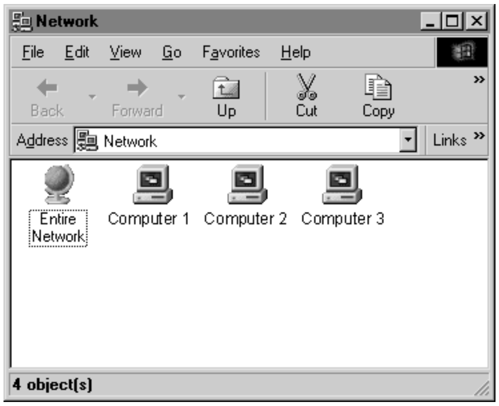
○ Restart in MS-DOS mode

Step 8

When configuration is complete, you must re-start Windows®.

When Windows® restarts you will be prompted to enter a **user name** and **password**. Be sure to record these in a safe place. You will be required to enter them for access to the network each time you restart Windows®.





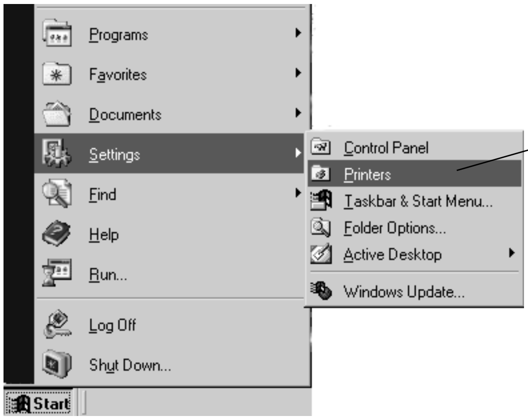
Step 9

To verify that configuration is complete, double-click the **Network Neighborhood** icon on your desktop.

In the next window displayed you should see the names of all network computers.

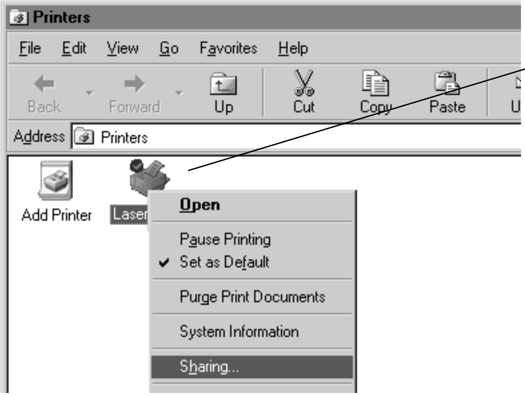
If any computers do not appear, you will have to follow the steps in this section on each computer to configure them for network sharing. Make sure each computer is assigned a different name, and all share the same Workgroup name you entered at Step 4.

Configure Windows® 98/Me for Printer Sharing



Step 1

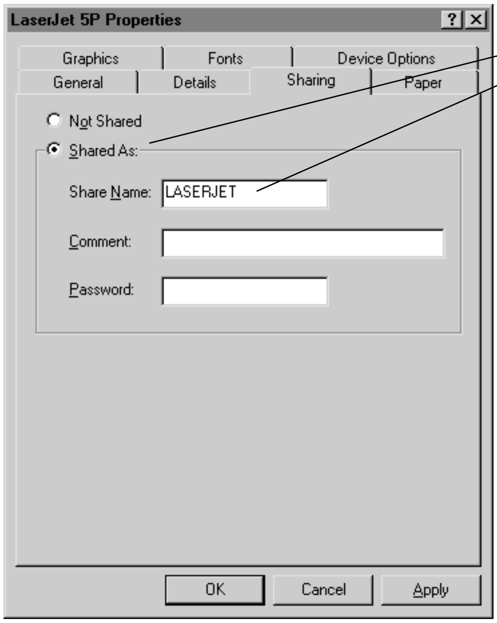
Click **Start** > **Settings** > **Printers**.



Step 2

Place the cursor on the printer you want to share, then click the right mouse button and scroll down to select **Sharing**.

NOTE: If your printer is not listed in this window, double-click **Add Printer**, then follow the instructions to set up your printer for use.


LaserJet 5P Properties

Graphics | Fonts | Device Options | General | Details | Sharing | Paper

○ Not Shared

● Shared As:

Share Name: LASERJET

Comment:

Password:

OK | Cancel | Apply

Step 3

Click the **Shared As** button, then enter a unique name for this printer.

To help you identify this printer, you can enter a description in the Comment box.

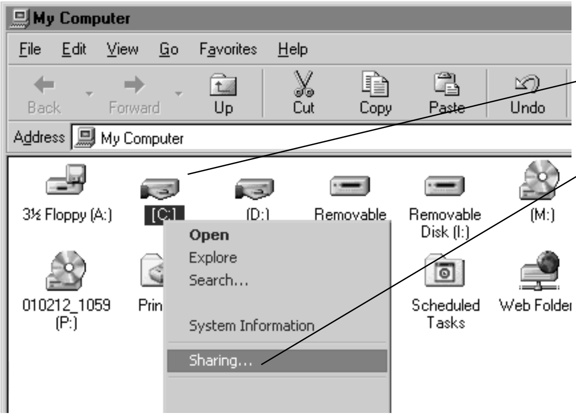
To restrict access to this printer, you can enter a password (please refer to instructions provided with your Windows® operating system).

Click **OK** when finished.

Configure Windows® 98/Me for File Sharing

Step 1

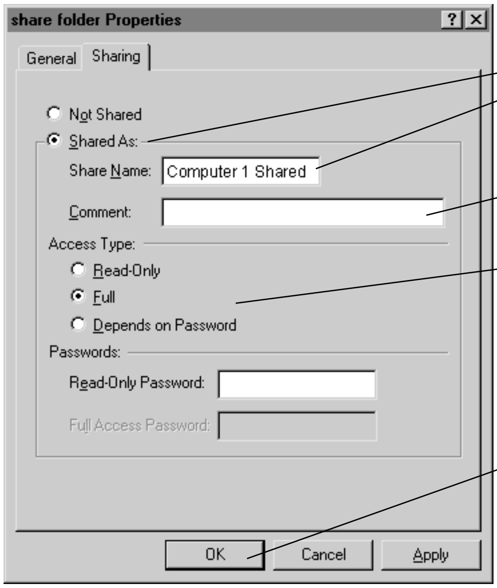
Double-click the **My Computer** icon on your desktop.



Step 2

Place the cursor on the disk drive you want to share (usually Drive C:), then click the right mouse button and scroll down to select **Sharing**.

NOTE: This will allow others access to all files on this computer. To restrict access to certain folders, double-click on the disk, highlight a folder you want to share, then follow steps 2-3.



● Shared As:
Share Name: Computer 1 Shared
Comment:
● Full

Step 3

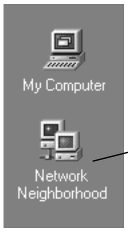
Click the **Shared As** button, then enter a unique name for the drive or folder you want to share.

To help you identify this shared resource, you can enter a description in the **Comment** box.

Access Type options allow you to restrict access to each shared resource (please refer to instructions provided with your Windows® operating system).

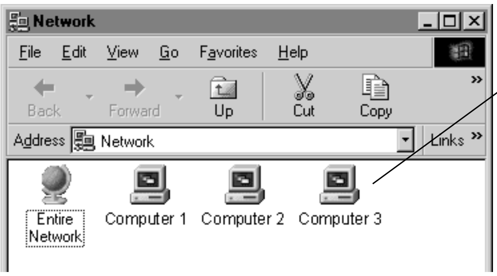
Click **OK** when finished.

To Share Network Files in Windows® 98/Me



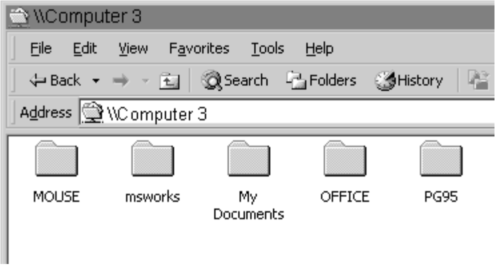
Step 1

Double-click the **Network Neighborhood** icon on your desktop.



Step 2

Double-click any icon to see a list of all shared folders on that computer.



Step 3

Double-click any folder for access to any file in that folder.

Troubleshooting

If your router does not work properly, try the following suggestions before seeking repair assistance.

Problem	Solution
No lights on the router	• Make sure that both ends of the AC adapter are firmly plugged in. • Make sure the router is plugged into a working electrical outlet not controlled by a wall switch. • Unplug the router’s power adapter, wait 15 seconds, then plug it back in. • If these remedies do not work, reset the router (see page 69).
No access to router	• If this problem occurs during initial installation, make sure your computer is connected to the router with an Ethernet cable. • Make sure you are not typing "www." • Try entering http://192.168.0.1 instead of http://ATT.Router. • Has this computer ever been on a different network? If so, see page 70. • Reboot the router (see page 69). • Restore saved router settings (see page 69). • If these remedies do not work, reset the router (see page 69).
Cannot connect to Help	• The Help screen opens in a separate window and may be obscured by the application screen. Minimize your application screen to see if the Help screen is behind it.
Internet pages not updating	• Your browser may be displaying outdated screens stored in memory. Go to a web site you haven’t visited recently to see if you have Internet access. If you cannot display the page, see "No access to router,” above.
Cannot remember password	• If you cannot remember a password you entered for security protection, you will have to reset the router (see page 69).
Cannot connect to the Internet	• Verify that your modem is properly connected and powered. • Turn off your modem, leave it off for 15 seconds, then turn it back on, reboot your computer and check for Internet access. • Confirm that the ISP account information has been entered correctly. Type "http://ATT.Router" as the IP address on your web browser. Click on the **Run Wizard** button on the Basic tab. Enter the account information provided by your ISP on the following screens. • Disconnect your router, connect your PC directly to the modem and verify that you can connect to the internet. If you can connect, see page 70. If you cannot, contact your ISP.

Problem **Solution**

Other wireless devices cannot connect to the router

- Check the Wireless icon (4 stacked bars) in the System Tray at the bottom right corner of your screen. If there is an “X” over the icon, see “No Access to Router” on previous page. If the icon is white, try the following steps:
- Double-click on the **Wireless** icon. Click on the **Site Survey** tab. Click the **Refresh** button. Select a router or access point, then click **Connect**.
- If you still have no connection, click on the **Wizard** tab. Verify that settings for SSID, Channel, and WEP (if enabled) are identical for the router and the wireless adapter.
- If you still have no connection, click on the **Configuration** tab. Verify that settings for SSID and Channel are identical for the router and the wireless adapter.
- Make sure the router and adapter are close enough to connect (150-300 feet without obstructions).
- Check the DHCP table to see if the adapter is listed (see page 21).
- Ping adapter addresses in the DCHP table (see page 37).
- If these remedies do not work, reinstall the adapter software from the original CD-ROM.

Corrective procedures (try these only if suggestions on previous pages have not worked)

To reboot the router

This procedure will restart the router and restore all current settings.

- Type http://ATT.Router in the address field of your web browser, then press **Enter**.
- Click on the **Admin** tab.
- Click on the **Backup** button on the left side of the screen, and follow directions to backup your system settings.
- Click on the **Reboot** button at the bottom of the page.
- Click on the **OK** button to confirm your selection.

To restore saved router settings

This procedure will delete all current settings and restore those that were in place when you last backed up router settings.

- Type http://ATT.Router in the address field of your web browser, then press **Enter**.
- Click on the **Admin** tab.
- Click on the **Backup** button on the left side of the screen.
- Click on the **Restore** button at the bottom of the page, browse and select the settings profile you want to restore.
- Click on the **OK** button to restore saved settings.

To reset the router

This procedure will delete all current settings and restore factory default settings.

- Make sure the router is plugged in and turned on, then use a paper clip or a pen to press and hold the Reset button on the back of the router for 15 seconds.
- **Caution:** Do this only as a last resort. This will delete all settings. After doing so you will have to run the Setup Wizard to reconfigure all router settings (see page 8).

Corrective procedures (continued from previous page)

Set Windows® to automatically detect IP settings

Consult your network administrator before attempting this change.

This procedure allows your computer to automatically detect IP settings, which may allow you to connect to the Internet.

If your computer is new, it may not have an IP address, which is required for Internet access. If you do not need a static IP address for some special purpose, you can set your computer to automatically detect the IP settings (see steps 1-6, below).

If your network uses static IP addresses, you should **not** follow the procedure below. You will have to enter the IP address assigned to you by your service provider.

If you use this computer on another network (perhaps at your workplace), you should consult a technician familiar with the network before attempting this change.

Record all settings before changing them in case you need to restore them later.

1 Start Internet Explorer®. Whether you can connect to the Internet or not, the browser screen will appear.

2 Select **Tools**.

3 Select **Internet Options** from the dropdown menu.

4 Select **Connections**.

5 Select **LAN Settings**.

6 Select **Automatically detect settings**.

If you still have difficulty operating this product, or if you need more information or help, please visit our website at

www.plugandshare.att.com

or call our Customer Service Center at

1-877-800-5400.

Glossary

Access Point

Access points are the contact points (wireless routers and transmitters) in a wireless LAN that are connected to an Ethernet hub or server. Users can roam within the range of access points and their wireless device connections are passed from one access point to the next.

Administrator

The network administrator is the person who manages the LAN. The administrator's tasks include ensuring network security, keeping software, hardware, and firmware up-to-date, and keeping track of network activity. Your router Administrator is the person in control of access to your router. The system starts out with all users as administrators.

Authentication

Authentication refers to the verification of a transmitted message's integrity.

Beacon Interval

Refers to the interval between packets sent by routers for the purposes of synchronizing wireless LANs.

Broadband

Usually refers to Internet connections that provide faster data transfer than standard dial-up connections (cable modem, DSL, T-1, etc.)

DDNS

Dynamic DNS (Domain Name System).

DHCP

DHCP (Dynamic Host Configuration Protocol) software automatically assigns IP addresses to client stations logging onto a TCP/IP network, which eliminates the need to manually assign permanent IP addresses.

DHCP Client

The DHCP client list shows all of the computers attached to your local network. The list shows the host name of the computer.

DMZ

DMZ (Demilitarized Zone) is a part of an network that is located between a secure LAN and an insecure WAN. DMZs provide a way for some clients to have unrestricted access to the Internet.

DNS

DNS stands for Domain Name System. DNS converts domain names to the IP addresses that all machines on the Internet have. It translates from name to address and from address to name.

Domain Name

The domain name is the "readable" version of an Internet site address. A typical domain name has the form "www.somedomainname.com" or "www.somedomainname.org", etc.

DTIM

DTIM (Delivery Traffic Indication Message) provides client stations with information on the next opportunity to monitor for broadcast or multicast messages.

Filter

Filters only allow specified data to be transmitted or received. For example, the router can filter specific IP addresses so that users cannot connect to those addresses.

Firewall

Firewalls are methods used to keep networks secure from intruders and unauthorized access. Firewalls use filters to prevent unwanted data from being transmitted to and/or from a local network. Firewalls are typically used to prevent outsiders from accessing your private data resources and for controlling what outside (WAN) resources your users can access.

Firmware

Firmware refers to memory chips that retain their content without electrical power (for example, BIOS ROM). The router firmware stores all of the router administration settings.

Fragmentation

Refers to the breaking up of data packets during transmission.

FTP

FTP (File Transfer Protocol) is used to transfer files over a TCP/IP network, and is typically used for transferring large files or uploading the HTML pages for a web site to the web server.

Gateway

Gateways are computers that convert protocols enabling different networks, applications, and operating systems to exchange information.

Host Name

The name given to a computer or client station that acts as a source for information on the network.

HTTP

HTTP (HyperText Transfer Protocol) is the communications protocol used to connect to servers on the World Wide Web. HTTP establishes a connection with a web server and transmits HTML pages to client browser (for example Windows® IE). HTTP addresses all begin with the prefix "http://" (for example, http://www.somedomainname.com).

ICMP

ICMP (Internet Control Message Protocol) is a TCP/IP protocol used to send error and control messages over the LAN (for example, it is used by the router to notify a message sender that the destination node is not available).

IP

IP (Internet Protocol) is the protocol in the TCP/IP communications protocol suite that contains a network address and allows messages to be routed to a different network or subnet. However, IP does not ensure delivery of a complete message; TCP provides the function of ensuring delivery.

IP Address

The IP (Internet Protocol) address refers to the address of a computer attached to a TCP/IP network. Every client and server station must have a unique IP address. Clients are assigned either a permanent address or have one dynamically assigned to them via DHCP. IP addresses are written as four sets of numbers separated by periods (for example, 211.23.181.189).

ISP

An ISP (Internet Service Provider) is an organization providing Internet access service via modems, ISDN (Integrated Services Digital Network), private lines or other means.

LAN

LANs (Local Area Networks) are networks that serve users within specific geographical areas, such as your home or in a company building. LANs consist of a group of computers and related devices that share a common communication link (wired and/or wireless). A LAN allows you to share data and resources among the devices on the LAN.

MAC Address

A MAC address is a unique serial number for hardware adapters, giving the adapter a unique identification.

Metric

A number that indicates how long a packet takes to get to its destination.

MTU

MTU (Maximum Transmission/Transfer Unit) is the largest packet size that can be sent over a network. Messages larger than the MTU are divided into smaller packets.

NAT

NAT (Network Address Translation — also known as IP masquerading) enables a LAN to present itself to the Internet with one address. NAT converts the address of each LAN node into one IP address for the Internet (and vice versa). NAT also provides a certain amount of security by acting as a firewall by keeping individual IP addresses hidden from the WAN.

Network Administrator

The network administrator is the person who manages the LAN. The administrator's tasks include ensuring network security, keeping software, hardware, and firmware up-to-date, and keeping track of network activity.

NTP

NTP (Network Time Protocol) is used to synchronize the realtime clock in a computer. Internet primary and secondary servers synchronize to Coordinated Universal Time (UTC).

Open System

Open authentication allows all clients to connect to the network. After accessing the network, the client may encrypt data to prevent it from being easily seen by other users in the immediate area.

Packet

A packet is a portion of data that is transmitted in network communications. Packets are also sometimes called frames and datagrams. Packets contain not only data, but also the destination IP address.

Passphrase

A Passphrase is used within the WPA-PSK mode to enable a client to initiate authentication with a router. If the passphrase is identical to the passphrase on the router, the router allows the client to access the network. The passphrase can be between 8 and 63 characters.

Ping

Ping (Packet Internet Groper) is a utility used to find out if a particular IP address is present online.

Port

Ports are the physical and/or logical communications pathways in and out of computers and network devices (routers and switches). Most PCs have serial and parallel ports, which are external sockets for connecting devices such as printers, modems, and mice. All network adapters also use ports to connect to the LAN. Finally, applications that communicate over the Internet also have ports; these are the endpoints of the application and are given a specific "port number."

PPPoE

PPPoE (Point-to-Point Protocol Over Ethernet) is a protocol used to communicate between two computers using a serial interface, such as dial-up Internet connections, over an Ethernet link.

Preamble

The Preamble Type refers to the radio preamble, or header, which is transmitted at the beginning of a packet of data. The preamble contains information required for the access point and adapters to transmit information. Since the Preamble is attached to each packet of data, a Short Preamble improves data throughput, but it may cause connection problems with early wireless devices that only support long preambles. The Long Preamble option ensures compatibility with these early wireless devices.

Protocol

A protocol is a rule that governs the communication of data.

Radius Server

RADIUS (Remote Authentication Dial-in User Service) Server must be configured to properly authenticate client devices for access to the network. The IP address and port number are based on the configuration of the RADIUS server in your enterprise network. The shared secret is a password that is used to identify the client in a RADIUS authenticated network. The shared secret can be from 22 to 128 characters long.

RIP

RIP (Routing Information Protocol) is a routing protocol that is integrated in the TCP/IP protocol. RIP finds a route that is based on the smallest number of hops between the source of a packet and its destination.

RTS

RTS (Request To Send) is a signal sent from the transmitting station to the receiving station requesting permission to transmit data.

Security Phrase

At least 1 and up to 4 unique Security Phrases must be set when WEP is "On." The encryption types for these Security Phrases may be either Hexadecimal (HEX) or American Standard Code for Information. Interchange (ASCII). ASCII Security Phrases are subject to the following character limitations: 64 Bit encryption: 5 characters; 128 Bit encryption: 13 characters; 152 Bit encryption: 16 characters.

Server

Servers are typically powerful and fast computers that store programs and data. The programs and data are shared by client computers (workstations) on the network.

Shared Key

Shared Key authentication requires the client to use the same WEP encryption key as that used by the wireless router. When the client attempts to connect to the network through the wireless router the router sends a challenge text message to the client to authenticate the client. The client returns the challenge text message encrypted using the WEP encryption key. The wireless router decrypts the message using it's WEP key and if the decrypted message is the same as the original challenge text message, then it is assumed that the client has the correct WEP key and the client is allowed to access the network.

SMTP

SMTP (Simple Mail Transfer Protocol) is the standard Internet e-mail protocol. SMTP is a TCP/IP protocol defining message format and includes a message transfer agent that stores and forwards mail.

SNMP

SNMP (Simple Network Management Protocol) is a widely used network monitoring and control protocol. SNMP hardware or software components transmit network device activity data to the workstation used to oversee the network.

SSID

SSID (Service Set Identifier) is the name designated for a LAN. It serves as a simple security measure used in Wireless LANs (WLANs). The SSID is attached to packets sent over WLANs. This identifier acts as a password when a wireless device attempts communication on the WLAN. Because an SSID distinguishes WLANS from each other, routers and wireless devices trying to connect to a WLAN must use the same SSID.

Subnet Mask

Subnet Masks (SUBNETwork masks) are used by IP protocol to direct messages into a specified network segment (i.e., subnet). A subnet mask is stored in the client machine, server or router and is compared with an incoming IP address to determine whether to accept or reject the packet.

SysLog Server

A SysLog server monitors incoming System log messages and decodes the messages for logging purposes.

TCP

(Transmission Control Protocol) is the transport protocol in TCP/IP that ensures messages over the network are transmitted accurately and completely.

TCP/IP

TCP/IP (Transmission Control Protocol/Internet Protocol) is the main Internet communications protocol suite. TCP ensures that data is completely sent and received at the other end. The IP component of TCP/IP provides data routability, meaning that data packets contain the destination station and network addresses, enabling TPC/IP messages to be sent to multiple networks within the LAN or in the WAN.

Telnet

Telnet is a terminal emulation protocol commonly used on the Internet and TCP- or IP-based networks. Telnet is used for connecting to remote devices and running programs. Telnet is a high level application protocol that uses the TCP/IP communications protocol.

UDP

(User Datagram Protocol) is a protocol within TCP/IP that is used to transport information when accurate delivery isn't necessary (for example, realtime video and audio where packets can be dumped since there is no time for retransmitting the data).

Virtual Servers

Virtual servers are client servers (such as web servers) that share resources with other virtual servers (i.e., it is not a dedicated server).

VoIP

(Voice Over Internet Protocol) is a method used to deliver voice information over the Internet. VoIP services allow telephone calls using your PC or LAN.

WEP

WEP (Wired Equivalent Privacy) is the most common security protocol for wireless LANs, providing the "equivalent" security available in hardwired networks.

Wireless LAN (WLAN)

Wireless LANs are local area networks that use wireless communications for transmitting data. Transmissions are usually in the 2.4 GHz band. WLAN devices do not need to be lined up for communications like infrared devices. WLAN devices use routers which are connected to the wired LAN and provide connectivity to the LAN. The radio frequency of WLAN devices is strong enough to be transmitted through non-metal walls and objects, and can cover an area up to a thousand feet. Laptops and notebooks use wireless LAN PCMCIA cards while PCs use plug-in cards to access the WLAN.

WAN

WAN (Wide Area Network) is a communications network that covers a wide geographic area such as a country (contrasted with a LAN, which covers a small area such as a company building).

WPA

WPA (WiFi Protected Access) is an enhanced security specification to increase the level of access control and data protection for wireless data networks. WPA authentication requires that an authentication server authenticate all client adapters before being allowed access to a wireless network. This authentication mode is designed for enterprise applications requiring very high levels of security.

WPA-PSK

Authentication mode enables the user to configure a type of client authentication used for acquiring access to the wireless network. The WPA-PSK mode has been designed for those environments where high data security is desired, but there is no authentication server. The client initiates authentication by sending a password called a passphrase to the wireless router. If the passphrase is identical to the passphrase on the wireless router, the wireless router allows the client to access the network. The passphrase can be between 8 and 63 characters.

Technical Specifications

Standards

- IEEE 802.11
- IEEE 802.11b
- IEEE 802.11g
- IEEE 802.3u
- IEEE 802.3

Operating Systems

- Windows® XP, 2000, Me, 98 SE

VPN Pass Through/Multi-Sessions

- PPTP
- L2TP
- IPSec

Advanced Firewall Features

- NAT with VPN Pass through
- MAC filtering
- IP filtering
- URL Filtering
- Domain Blocking
- Scheduling

Device Management

- Web-based (Internet Explorer® v5.5 or later)

Wireless Data Rates

With Automatic Fallback

- 54 Mbps
- 22 Mbps
- 11 Mbps
- 5.5 Mbps
- 2 Mbps
- 1 Mbps

Encryption

- WEP 64/128/152-bit RC4

Media Access Control

- CSMA/CA with ACK

Frequency Range

- 2.4GHz to 2.472GHz

Operating Range

- Indoors: Up to 300 feet (100m)
- Outdoors: Up to 980 feet (300m)

Modulation Technology

- DSSS: Direct Sequence Spread Spectrum

Modulation Techniques

- Barker (1Mbps/0db)
- Barker (2Mbps/3db)
- CCK (5.5Mbps/5.5db)
- PBCC (5.5 Mbps/1.5db)
- CCK (11Mbps/8.5db)
- PBCC (11Mbps/4.5db)
- PBCC (22Mbps/8.5db)

Transmit Power

- 15dBm ± 2dB

External Antenna Type

- Integrated 360-degree omnidirectional

Ethernet Cable

- RJ45 Ethernet cable

Operating Climate Range

- Temperature: 32° to 131°F (0° to 55°C)
- Humidity: 32% to 90% relative humidity

Storage Climate Range

- Temperature: -40° to 140°F (-40° to 60°C)
- Humidity: 15% to 90% relative humidity

Power Input

- External Power Supply DC 5V, 2.4A

Safety & Emissions

- FCC
- UL

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