

**Wireless Internet Gateway
For ADSL/Cable**

Quick Installation Guide

**Web Edition
Nov. 2001**

Contents

INTRODUCTION	4
PACKAGE CONTENTS	5
PRE - INSTALLATION	5
SYSTEM REQUIREMENTS	5
FEATURES BENEFITS	6
ONE - PORT WIRELESS INTERNET GATEWAY ADSL/CABLE ROUTER	8
THE WIRELESS INTERNET GATEWAY FRONT VIEW	8
THE WIRELESS INTERNET GATEWAY REAR VIEW	9
4 - PORTS WIRELESS INTERNET GATEWAY ADSL/CABLE ROUTER	10
THE WIRELESS INTERNET GATEWAY FRONT VIEW	10
THE WIRELESS INTERNET GATEWAY REAR VIEW	11
CONNECTING WIRELESS INTERNET GATEWAY TO THE NETWORK	12
CONFIGURING YOUR WIRELESS ROUTER	14
SETUP WIZARD	15
TIME SETTNGS	15
DEVICE IP SETTINGS	16
ADSL/CABLE ISP SETTINGS	17
ISP ADDITIONAL SETTINGS(PPPoE SETTINGS)	18
WIRELESS SETTINGS	19
MODEM SETTINGS	20
SAVE & RESTART	21
DEVICE INFORMATION	22
DHCP SERVER SETTINGS	24
IP Address Pool Range	24
IP Address Reservation	24
VIRTUAL SERVER SETTINTGS	25
ACCESS CONTROL SETTINGS	26
STATIC ROUTING SETTINGS	28
DYNAMIC ROUTING SETTINGS	29
FILTER SETTINGS - LAN FILTER SETTINGS	30
FILTER SETTINGS - WAN FILTER SETTINGS	31
MODE STRING SETTINGS	32
ADMINISTRATION SETTINGS	33
SAVE & RESTART	35
SYSTEM TOOLS	36
INTRUDER DETECTION LOG	36
DISPLAY ROUTING TABLE	36
SYSTEM DIAGNOSTICS	37
SAVE & RESTART	38
LOAD SETTINGS - LOAD DEFAULT SETTINGS	39
LOAD SETTINGS - LOAD SETTINGS FROM FILE	39
UPGRADE FIRMWARE	40
RESET DEVICE	40
HOW USING TELNET TO CONFIGURE YOUR WIRELESS INTERNET GATEWAY	41
HOW CONFIGURING YOUR PCS CONNECT TO THE WIRELESS ROUR	44

FCC Statement

Note: This digital equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the installation manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning:

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

CE Approved

The Digital device has CE Approval

Introduction

This manual details instructions of set-up and functions of the wireless Internet gateway.

This is a breakthrough for SOHO users who need to share a high speed broadband Internet connection to the Internet. The high-powered antenna design assures its wireless connection even in large building.

The wireless Internet gateway enables your network to connect through any ADSL/Cable modem onto the Internet--providing a simple network solution for SMB and SOHO users.

The one port Wireless Internet gateway is equipped with:

- A WAN Ethernet port (to connect to ADSL/Cable modem)
- An Ethernet port (10/100Mbps)
- One asynchronous port

The 4 ports Wireless Internet gateway is equipped with:

- A WAN Ethernet port (to connect to ADSL/Cable modem)
- 4 Ethernet ports (10/100Mbps) include one port to select uplink
- An uplink port (to extend to an external hub)
- One asynchronous port.

Once the WAN Ethernet is connected to an ADSL/Cable modem, your ISP will **automatically** activate your account. In this way, the entire LAN can share one high-speed line to the Internet.

The asynchronous port may connect to a 56K modem or to an ISDN TA (to be used as a dialup backup to the ADSL/Cable connection should the ADSL/Cable connection fail). If there is no ADSL/Cable service in your area, the dialup backup can also serve as your Internet access solution.

PACKAGE CONTENTS

Please inspect your package. The following items should be included:

- 1). Wireless internet gateway (the Device)
- 2). Power adapter
- 3). Quick Installation Guide

If any of the above items are damaged or missing, please contact your dealer immediately.

PRE-INSTALLATION CHECKLIST

Before installing the wireless internet gateway, you should:

- Have carefully read the entire manual.
- Be familiar with the terminology and concepts of browsers. (This guide works under the assumption that you are proficient with the browsers you are using).
- Have met all the hardware and software requirements.

SYSTEM REQUIREMENTS

- Microsoft I.E 4.0 or later version or Netscape Navigator 4.0 or later version
- One computer with an installed 10Mbps, 100Mbps or 10/100Mbps Ethernet card
- One Modem or ISDN TA (if a dialup backup connection is needed)
- One RJ-45 ADSL/Cable Internet connection
- TCP/IP protocol installed
- UTP network Cable with a RJ-45 connection

FEATURES AND BENEFITS

High speed for wireless LAN connection

Support up to 11 Mbps data rate by incorporating Direct Sequence Spread Spectrum (DSSS) technology.

IEEE 802.11b compatible

Fully compatible with the IEEE 802.11b standard

Wireless AP features

Provides Roaming, Best Access Point Selection

Wireless Encryption Protocol

Capable of up to 128 Bit WEP encryption

IP sharing

Shared Internet Access for up to 253 users

ADSL/Cable Backup

Supports dialup backup in case ADSL/Cable connection fails

PPPoE Client

Supports PPPoE client function to connect to the remote PPPoE server

Idle Timer

Let you set a specified idle-time before automatically disconnecting

Routing Protocol

Supports static route, RIP 1/2

Built-in NAT function

Allows multiple PCs and devices to share one Internet connection

Virtual Server

Allows internal workstations (servers) to be accessible from Internet

New feature Upgradeable

New features are upgradeable in the future

Web-Based Configuration

Web based configuration

Firewall Protection

Built-in NAT firewall guarantees network security

DHCP Server

Automatically assigns IP information to network users

DHCP Client

Automatically acquires IP information for ADSL/Cable from your ISP

Dial-on Demand

Eliminates the need for Dial-up and automatically logs in to your ISP

Hacker Attack Logging

Supports general hacker attack pattern monitoring and logging

VPN Support

Support PPTP, L2TP and IPSec pass through function

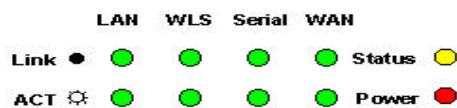
DMZ (demilitarized Zone)

It prevents outside users from getting direct access to server that has company data, and un-permitted access Internet from inside LAN

One Port Wireless Internet Gateway ADSL/Cable Router

The Wireless Internet Gateway Front View

Wireless Router

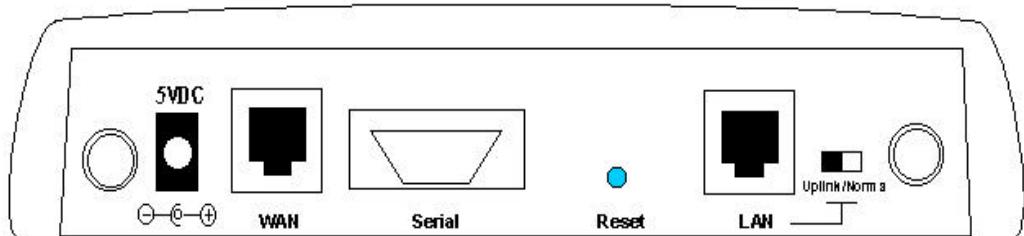


LED indicators

LAN	ACT (Green)	Green LED will BLINK if packet is transmitting or receiving.
	LNK (Green)	Green LED will LIGHT when a good link is established.
WLS	ACT (Green)	Green LED will BLINK when data is transmitting or receiving.
	LNK (Green)	Green LED will LIGHT when Wireless LAN is ready.
Serial	ACT (Green)	Green LED will BLINK when data is transmitting or receiving.
	LNK (Green)	Green LED will LIGHT when remote carrier has been detected.
WAN	ACT (Green)	Green LED will BLINK if packet is transmitting or receiving.
	LNK (Green)	Green LED will LIGHT when a good link is established.
STATUS	(Yellow)	Orange LED will BLINK when device boot and upgrade firmware.
POWER	(Red)	Red LED will LIGHT if the gateway is receiving power.

The Wireless Internet Gateway Rear View

The rear panel of the wireless Internet gateway is where all connections are made.



POWER (5 VDC)

The power port is where you will connect the AC to DC switching power adapter

WAN

The WAN 10M Ethernet port is where you will connect your ASDL/Cable modem

Async

The Async port is where you will connect the 56K modem or ISDN TA

LAN

The LAN port on the rear panel. This is where you will connect networked devices, such as PCs, ftp servers or anything else you want to put on your network.

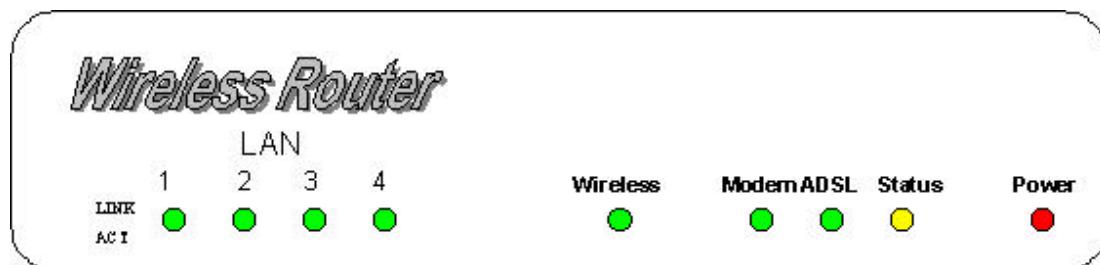
NOTE: I The Reset Button

If you would like to load default settings, press the reset button and hold it for 5 ~ 6seconds. It will load the factory default settings for the device.

Please be careful. Do not press the reset button unless you want to clear the current data.

4 - Ports Wireless Internet Gateway ADSL/Cable Router

The Wireless Internet Gateway Front View

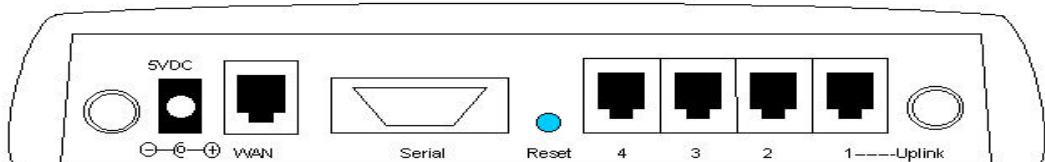


LED indicators

LINK (Green) Green LED will LIGHT when a good link is established.		
LAN [1:4] Link/Act		
	ACT (Green)	Green LED will BLINK if packet is transmitting or receiving.
Wireless	(Green)	Green LED will BLINK if packet is transmitting or receiving.
Serial	(Green)	Green LED will LIGHT when a good link is established.
WAN	(Green)	Green LED will LIGHT when a good link is established.
STATUS	(Yellow)	Yellow LED will BLINK when device boot and upgrade firmware.
POWER	(Red)	Red LED will LIGHT if the gateway is receiving power.

The Wireless Internet Gateway Rear View

The rear panel of the wireless Internet gateway is where all connections are made.



POWER (5 VDC) The power port is where you will connect the AC to DC switching power adapter.

WAN The WAN 10M Ethernet port is where you will connect your ASDL/Cable modem.

Serial The Serial port is where you will connect the 56K modem or ISDN TA.

LAN[1:4] The LAN port on the rear panel. This is where you will connect networked devices, such as PCs, ftp servers or anything else you want to put on your network.

NOTE: I The Reset Button

If you would like to load default settings, press the reset button and hold it for 5 ~ 6 seconds. It will load the factory default settings for the device.

Please be careful. Do not press the reset button unless you want to clear the current data.

Connecting Wireless Internet Gateway To The Network

Preface

In order to install the wireless Internet gateway: you will need to check your PCs settings and the values from your ISP before connecting your gateway to the network.

The information offered by your ISP

- Dynamic IP settings
- Your fixed IP address for the gateway
- Your subnet mask for the gateway
- Your default gateway IP address
- Your DNS IP address

NOTE !

If you would like to use PPPoE, you will need the following values from your ISP in order to install your router:

- Username
- Password

The static IP settings for the PC

- Your PC's fixed IP address
- Your PC's subnet mask
- Your PC's default gateway
- Your PC's primary DNS IP address

NOTE !

The router's default IP address settings is 192.168.2.1

The dynamic IP settings for the PC

We recommend that you leave your IP settings as automatically assigned. By default, the gateway is a DHCP server, and it will give your PC the necessary IP settings.

NOTE !

If the gateway assigns your PC's IP address, you have to enable the function that obtains the IP address automatically for your PC. (please See Page 41)

Confirm Hardware Installation

After you have the previous values on hand, you can begin to configure your wireless Internet gateway.

1. Confirm power of the equipments, on your PCs, your ADSL/Cable modem and the wireless Internet gateway.
2. Connect the power-supply cable to the power port at the rear of the wireless Internet gateway. Plug the supplied power cable into a power outlet. Plug the other end into the back of the power adapter.
3. Connect a network cable from one of your PCs' Ethernet ports to one of the LAN ports on the back of the wireless Internet gateway. Do the same with all the PCs you wish to connect to the wireless Internet gateway. (If your PCs install with the station cards, you can connect to the device without cabling)
4. Connect the network cable from your ADSL/Cable modem to the WAN Ethernet port on the rear of the wireless Internet gateway.

If everything is done, please continue to configure the wireless Internet gateway's settings on next page

Configuring Your Wireless Router

Launch your web browser and type the device IP address (**http:// 192.168.2.1**) in the browser's address box. This IP address is the default value of your gateway. Press **Enter**

NOTE !

Please make sure your PC's IP address is in the same network as the router's. In the windows 95/98 you can type **WINIPCFG**, in the windows 2000/NT you can type **IPCONFIG** (please see page 43)

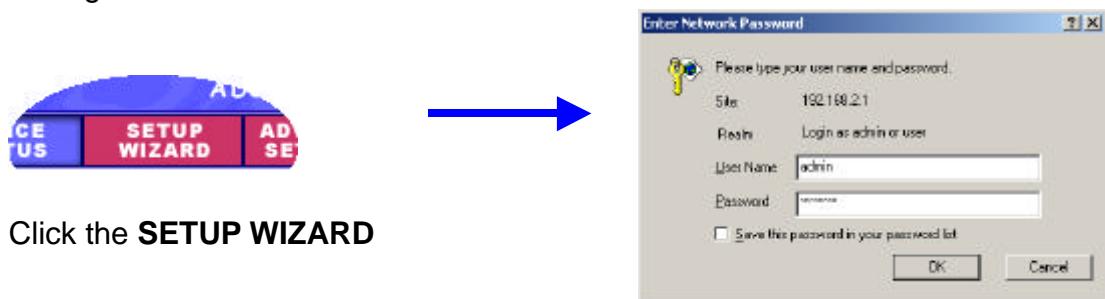


The main menu will appear. It displays all the functions that you can browse, as well as setup for the wireless internet gateway.



SETUP WIZARD

Setup wizard is a step-by-step process that will let you input all the basic settings.



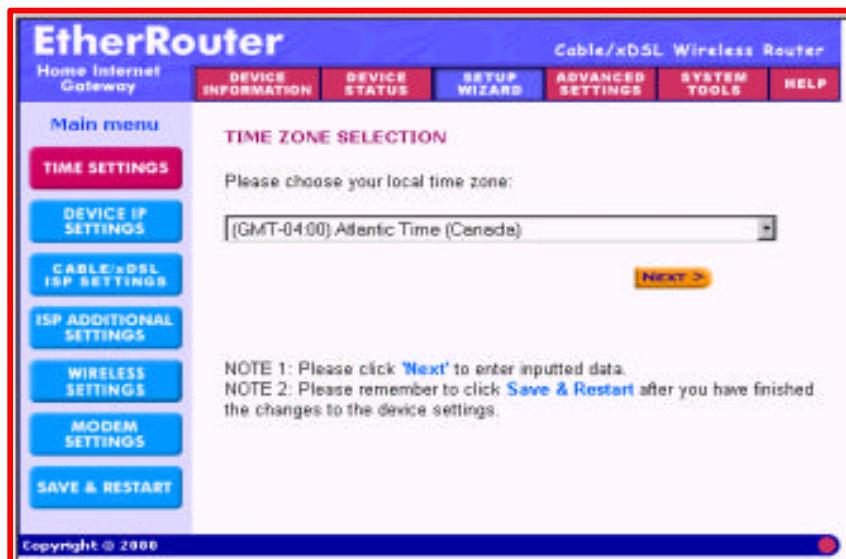
Click the **SETUP WIZARD**

A username and password will appear. Leave the password box empty and type **admin** (the default username) in the username box. Click **OK**. The setup wizard's page will appear.

NOTE ! If you would like to change the password please **See Page 31**

TIME SETTINGS

Please choose the local time zone. After selecting please click **Next** button to continue to the next step. You can also click the buttons on the left to set up the configuration.



DEVICE IP SETTINGS

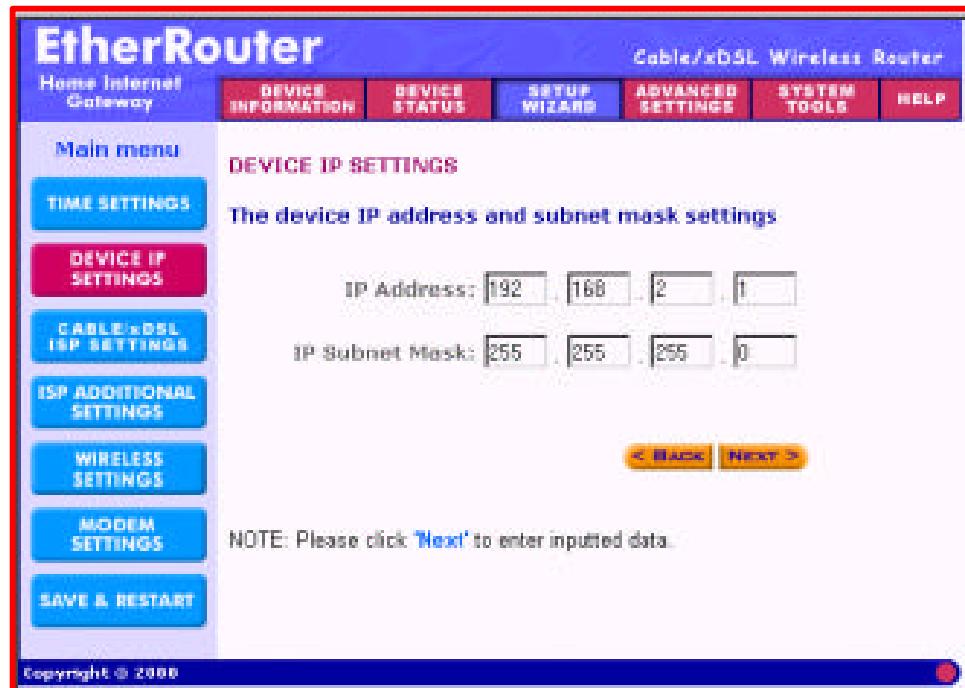
You have to give your internet gateway an IP address on your network. This is not the IP address from your ISP but the local internal LAN IP address. The IP address “192.168.2.1” is the default value of your gateway.

Device IP Address

The internal LAN IP address of your internet gateway

Device IP Subnet Mask

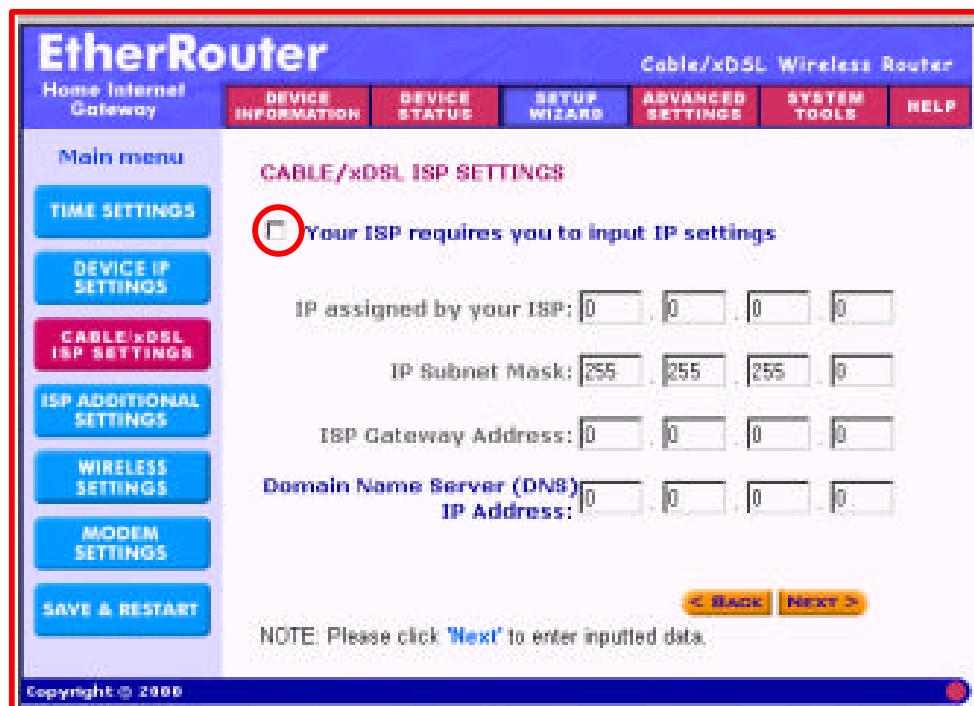
The subnet mask can usually be left as its default entry “255.255.255.0”



ADSL/Cable ISP SETTINGS

If you would like to use ADSL/Cable ISP settings, you have to enable this function by configuring this page. Some ISPs may give you Static IP settings. If this is the case for your ISP, then you need to:

- Enter the IP address that is provided by your ISP
- Enter the IP subnet mask
- Enter the ISP gateway address
- Enter the DNS IP address



The screenshot shows the EtherRouter web interface. The top navigation bar includes 'Home Internal Gateway', 'DEVICE INFORMATION', 'DEVICE STATUS', 'SETUP WIZARD', 'ADVANCED SETTINGS', 'SYSTEM TOOLS', and 'HELP'. The main menu on the left lists 'TIME SETTINGS', 'DEVICE IP SETTINGS', 'CABLE/xDSL ISP SETTINGS' (which is highlighted in red), 'ISP ADDITIONAL SETTINGS', 'WIRELESS SETTINGS', 'MODEM SETTINGS', and 'SAVE & RESTART'. The 'CABLE/xDSL ISP SETTINGS' page contains the following fields:
- IP assigned by your ISP: 0 0 0 0
- IP Subnet Mask: 255 255 255 0
- ISP Gateway Address: 0 0 0 0
- Domain Name Server (DNS) IP Address: 0 0 0 0

A note at the top of the page says: "Your ISP requires you to input IP settings". A red circle highlights this note. At the bottom, there are 'Back' and 'Next >' buttons, and a note: "NOTE: Please click 'Next' to enter inputted data".

ISP ADDITIONAL SETTINGS (PPPoE SETTINGS)

If you would like to use ISP additional settings, you have to enable this function and configure this page. Some ISP use this protocol for authentication purposes; if this is the case, you need to enter:

User name: Enter the user name of your ISP account.

Password: Enter the password of your ISP account.

Retype password: Enter the password of your ISP account again to re-confirm.

Some ISPs use Host Name to authenticate the user; if this is the case, you need to enter:

Host Name: Enter the name of the gateway.

Domain Name: Enter the domain name provided by your ISP.

Some ISP require you input the LAN card Mac address; if this is the case, you need to enter:

Mac Address: Enter this LAN card Mac address.

NOTE !

Some ISP may recognize your LAN card Mac address as a legal user; In this case, you have to copy the LAN card Mac address in the Mac address field.

For WIN 95/98 you can run **winipcfg** to see the LAN card Mac address

For WIN 2000/NT you can run **ipconfig/all** to see the LAN card Mac address

Main menu

ISP ADDITIONAL SETTINGS

Your ISP requires you to input username/password (PPPoE Settings)

User Name:

Password:

Retype Password:

Idle Timer:

Your ISP requires you to input Host Computer Name or Domain Name

Host Name: Wireless

Domain Name:

Your ISP requires you to input WAN Ethernet Mac

Mac Address: 00 90 40 00 02 68

< BACK **NEXT >**

NOTE: Please click 'Next' to enter inputted data.

Copyright © 2000

WIRELESS SETTINGS

Here allows user to configure ESSID, Channel, WEP Encryption and the level of WEP Encryption.

ESSID

ESSID is a unique name shared among all points in a wireless network.

CHANNEL

To avoid interference, user should choose a proper Channel in wireless network.

WEP

WEP (Wired Equivalent Privacy) is method of encrypting data that is transmitted over your wireless network to ensure data security. If you would like to use this function, you can **select the method of encryption (40 Bit or 128 Bit)**.

If Encryption (40 Bit or 128 Bit) option is Checked, **User has to enter encryption key manually.**

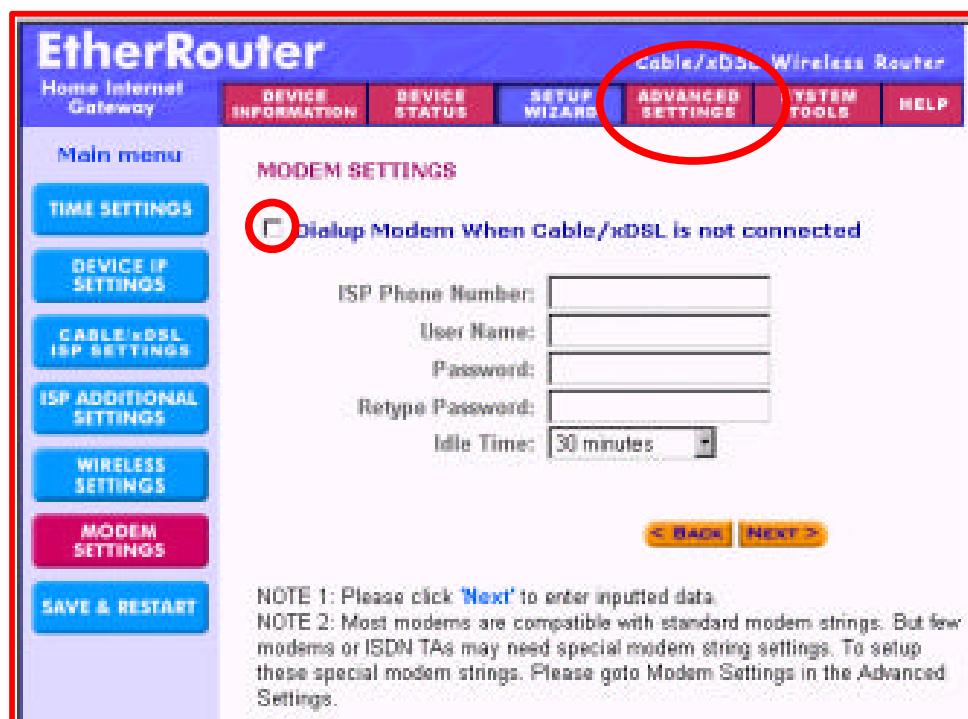
Key 1:	b1	a0	03	04	23
Key 2:	0	0	0	0	0
Key 3:	0	0	0	0	0
Key 4:	0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

MODEM SETTINGS

The modem dialup can be used as a backup for the ADSL/Cable connection. If you would like to use modem backup you need to enable the modem settings function; click on the square shown below and input the ISP account information.

Note: If you want to change the baudrate settings, please click on the “ADVANCED SETTINGS”. Then click on the **MODEM SETTINGS** button.



The screenshot shows the EtherRouter web interface. The top navigation bar includes links for Home, Internal Gateway, Device Information, Device Status, Setup Wizard, Advanced Settings (which is circled in red), System Tools, and Help. The main menu on the left lists Time Settings, Device IP Settings, Cable/xDSL ISP Settings (which is circled in red), ISP Additional Settings, Wireless Settings, Modem Settings (which is circled in red), and Save & Restart. The current page is 'MODEM SETTINGS', which contains a checkbox labeled 'Dialup Modem When Cable/xDSL is not connected'. Below the checkbox are fields for ISP Phone Number, User Name, Password, Retype Password, and Idle Time (set to 30 minutes). At the bottom of the page are 'BACK' and 'NEXT >' buttons, and notes about modem strings.

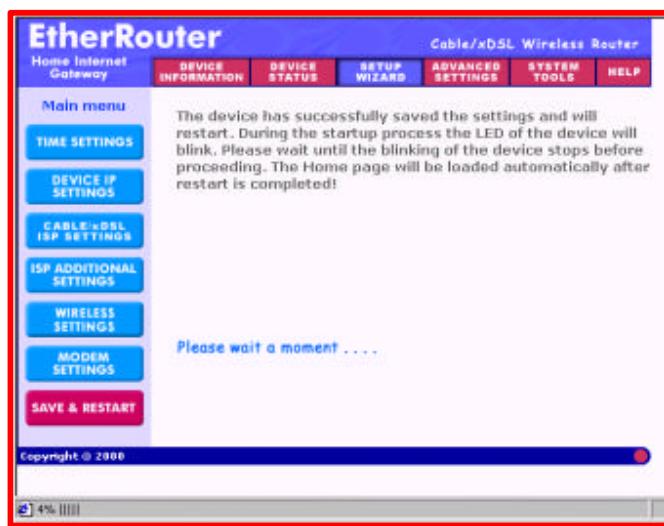
NOTE 1: Please click **Next** to enter inputted data.
NOTE 2: Most modems are compatible with standard modem strings. But few modems or ISDN TAs may need special modem string settings. To setup these special modem strings. Please goto Modem Settings in the Advanced Settings.

SAVE & RESTART

After you have finished making all the changes on the various pages, please **click Save & Restart to save the settings** and **restart the device**. After the restart, the device will function according to the saved settings.

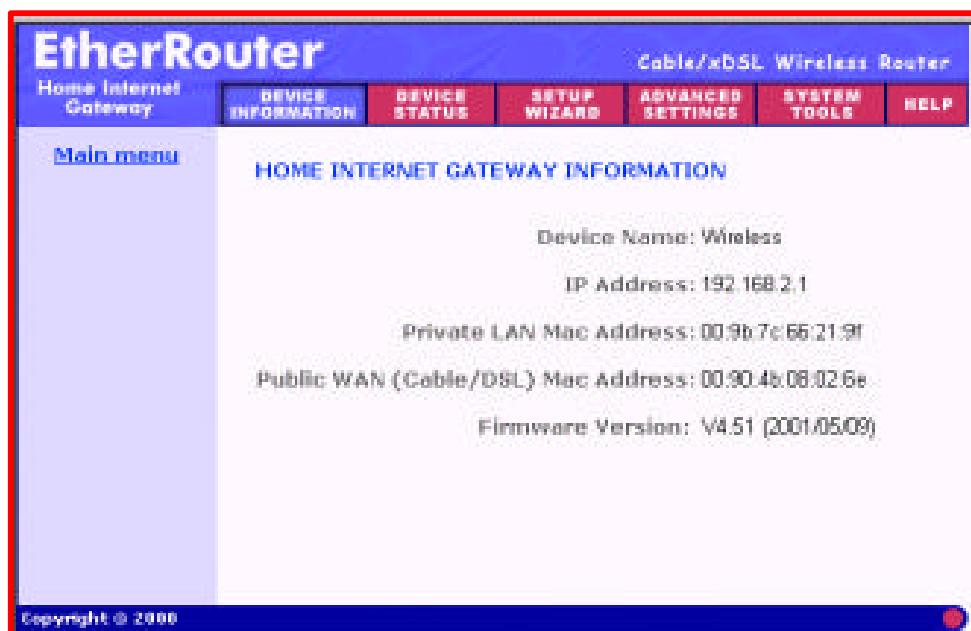


During the startup process the LED of the device will blink. Please **wait** until the blinking of the device stops before proceeding.



Device Information

Device information displays the current settings of the wireless internet gateway.



Device Name

The host name of the wireless internet gateway

IP Address

The IP address of the wireless internet gateway

Private LAN Mac Address

The Mac address of the wireless internet gateway LAN port

Public WAN (ADSL/Cable) Mac Address

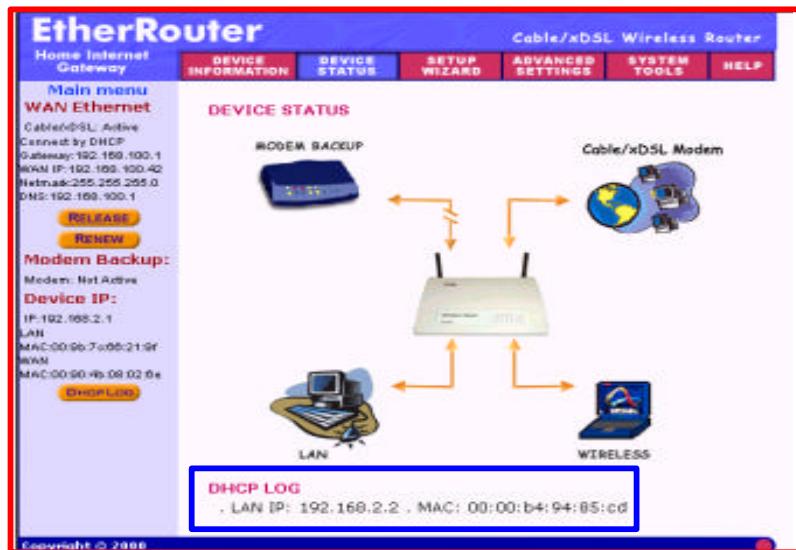
The Mac Address of the wireless internet gateway WAN Ethernet port

Firmware version

Displays the Firmware Version and its release date

Device Status

Device status displays the current connection status of the internet gateway.



Modem Backup

The modem can be used as a dialup backup for the ADSL/Cable connection. If the current connection is via modem, it will show “**Modem: Active**,” otherwise it will show “**Not Active**”.

Device IP

Shows the Device IP address, private LAN Mac address and public WAN Mac address of the wireless internet gateway.

Release and Renew

Click **Release** button, the wireless internet gateway will disconnect with the ADSL/Cable modem.

Click **Renew** button, the wireless internet gateway will connect with the ADSL/Cable modem again.

DHCP Log

Click **DHCP Log** button, the screen will display the current DHCP client information.

Advanced Settings

Advanced settings include DHCP server, virtual server and password settings.

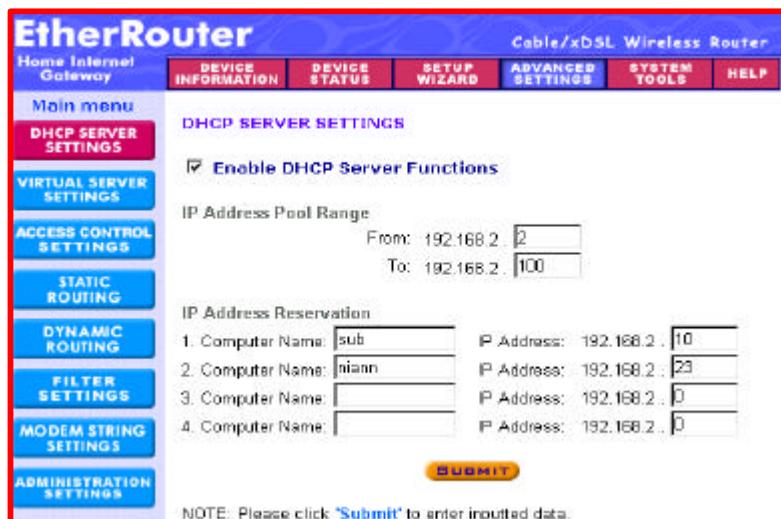
A username and password dialog will appear. Type “**admin**” in the user name box, and type the password that you have set for the device (the default is no password) Click **OK**.

The Advanced Settings page will appear.



DHCP SERVER SETTINGS

The wireless internet gateway's DHCP server is enabled by default. If you would like to disable the DHCP server, uncheck on the square circled below.



IP Address Pool Range

The IP address pool contains the range of the IP address that will automatically be assigned to the clients of your network.

Default setting is from **192.168.2.2** to **192.168.2.100**

IP Address Reservation

You can use IP address reservation option to give particular computers on your network the same static IP address every time the computer is turned on.

VIRTUAL SERVER SETTINGS

Virtual server settings allow clients on the Internet to access your LAN via the Internet. You can use the IP mapping function to access an FTP server or Telnet server etc. remotely through Internet.

DMZ function can be applied to a single client behind the VPN gateway to expose it to the Internet and ensure complete Internet application compatibility even if specific ports are not known. If you would like to enable DMZ function, enter an IP address into the DMZ IP field. The value of '0' means that the DMZ function is disabled.

EtherRouter Cable/xDSL Wireless Router

Home Internet Gateway DEVICE INFORMATION DEVICE STATUS SETUP WIZARD ADVANCED SETTINGS SYSTEM TOOLS HELP

Main menu

DHCP SERVER SETTINGS

VIRTUAL SERVER SETTINGS

ACCESS CONTROL SETTINGS

STATIC ROUTING

DYNAMIC ROUTING

FILTER SETTINGS

MODEM STRING SETTINGS

ADMINISTRATION SETTINGS

VIRTUAL SERVER SETTINGS

DMZ

Internal IP	Service Port Range
01. 192.168.2.10	80 ~ 80
02. 192.168.2.23	21 ~ 21
03. 192.168.2.3	23 ~ 23
04. 192.168.2.4	1000 ~ 2000
05. 192.168.2.0	0 ~ 0
06. 192.168.2.0	0 ~ 0
07. 192.168.2.0	0 ~ 0
08. 192.168.2.0	0 ~ 0
09. 192.168.2.0	0 ~ 0
10. 192.168.2.0	0 ~ 0
11. 192.168.2.0	0 ~ 0
12. 192.168.2.0	0 ~ 0
13. 192.168.2.0	0 ~ 0
14. 192.168.2.0	0 ~ 0
15. 192.168.2.0	0 ~ 0
16. 192.168.2.0	0 ~ 0

FTP 20,21
Telnet 23
SMTP 25
DNS 53
TFTP 69
HTTP 80
POP3 110
News 144
SNMP 161
SNMP-trap 162

SUBMIT

NOTE: Please click **Submit** to enter inputted data.

Copyright © 2000

ACCESS CONTROL SETTINGS

Access control settings allow you to define the list of Access Control.

First option is " **Disable Access Control List** " , which disable this function.

Second option is "**Enable Grant Access List**", which allows user to define a list of MAC address. Only packets with these MAC address can pass through router.

Third option is "**Enable Deny Access List**", which allows user to define a list of MAC address. Packets with these MAC address cannot pass through router.

For second and third options, user can type in the MAC address, and click ' **Add**' to add to the list. The list will be shown, and can be deleted by clicking the ' **Del**' button.



- Disable Access Control List

EtherRouter Cable/xDSL Wireless Router

Main menu

- DHCP SERVER SETTINGS**
- VIRTUAL SERVER SETTINGS**
- ACCESS CONTROL SETTINGS**
- STATIC ROUTING**
- DYNAMIC ROUTING**
- MODEM STRING SETTINGS**
- FILTER SETTINGS**
- ADMINISTRATION SETTINGS**

DEVICE INFORMATION **DEVICE STATUS** **SETUP WIZARD** **ADVANCED SETTINGS** **SYSTEM TOOLS** **HELP**

1. Select the Access Control List below
 Enable Grant Access List

2. For each user, enter the MAC address of their wireless network adapter and then click Add.
 MAC Address : : : : :
 Users allowed to access the wireless network (Grant Access List)
 The maximum number of users on this list is 32.

Del	MAC Address
<input checked="" type="checkbox"/>	65:10:23:65:03:04

3. To delete a MAC address from the list, make sure that the checkbox is checked and click Delete.

4. When you are finished, click Submit to send your request to the Home Internet Gateway.

- Enable Deny Access List

EtherRouter Cable/xDSL Wireless Router

Main menu

- DHCP SERVER SETTINGS**
- VIRTUAL SERVER SETTINGS**
- ACCESS CONTROL SETTINGS**
- STATIC ROUTING**
- DYNAMIC ROUTING**
- MODEM STRING SETTINGS**
- FILTER SETTINGS**
- ADMINISTRATION SETTINGS**

DEVICE INFORMATION **DEVICE STATUS** **SETUP WIZARD** **ADVANCED SETTINGS** **SYSTEM TOOLS** **HELP**

1. Select the Access Control List below
 Enable Deny Access List

2. For each user, enter the MAC address of their wireless network adapter and then click Add.
 MAC Address : : : : :
 Users allowed to access the wireless network (Deny Access List)
 The maximum number of users on this list is 32.

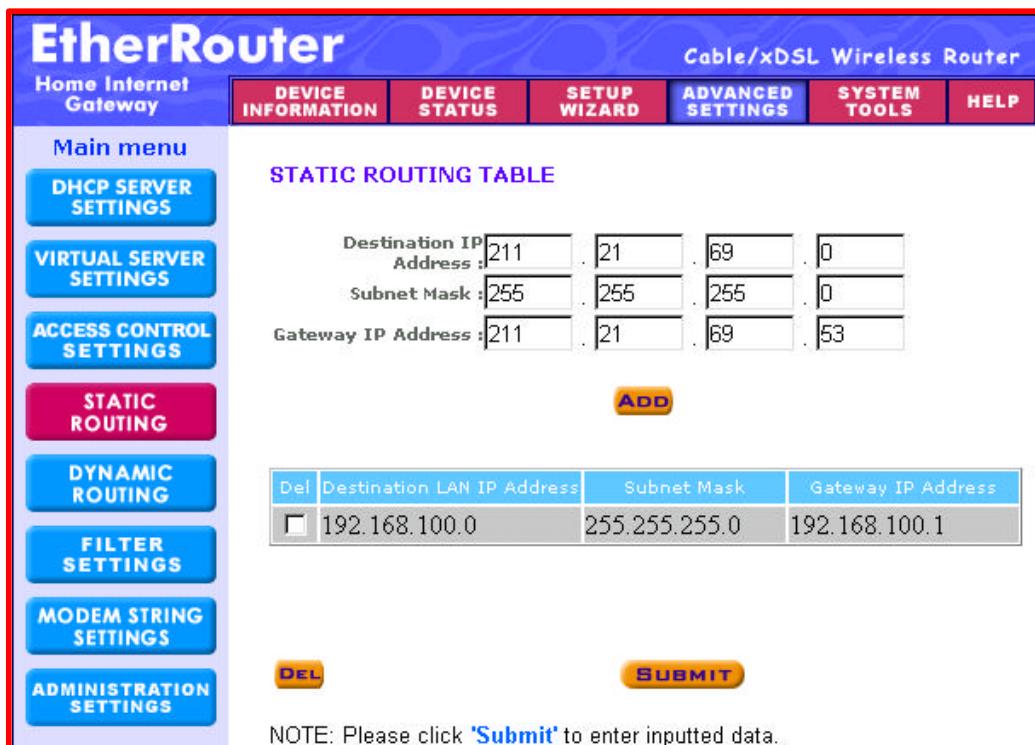
Del	MAC Address
<input checked="" type="checkbox"/>	00:06:22:20:06:bf

3. To delete a MAC address from the list, make sure that the checkbox is checked and click Delete.

4. When you are finished, click Submit to send your request to the Home Internet Gateway.

STATIC ROUTING SETTINGS

Static routing settings allow the wireless internet gateway to route IP packets to another network. The routing table stores the routing information so that your network device knows where to redirect the IP packets to the proper network.



The screenshot shows the 'EtherRouter' interface for a 'Cable/xDSL Wireless Router'. The main menu on the left includes options like Main menu, DHCP SERVER SETTINGS, VIRTUAL SERVER SETTINGS, ACCESS CONTROL SETTINGS, STATIC ROUTING (which is selected and highlighted in pink), DYNAMIC ROUTING, FILTER SETTINGS, MODEM STRING SETTINGS, and ADMINISTRATION SETTINGS. The top navigation bar has tabs for DEVICE INFORMATION, DEVICE STATUS, SETUP WIZARD, ADVANCED SETTINGS, SYSTEM TOOLS, and HELP. The central area is titled 'STATIC ROUTING TABLE' and contains fields for Destination IP Address (211.21.69.0), Subnet Mask (255.255.255.0), and Gateway IP Address (211.21.69.53). Below these fields is an 'ADD' button. A table lists a single entry: Destination LAN IP Address (192.168.100.0), Subnet Mask (255.255.255.0), and Gateway IP Address (192.168.100.1). Buttons for 'DEL' and 'SUBMIT' are located at the bottom of the table. A note at the bottom of the page says: 'NOTE: Please click 'Submit' to enter inputted data.'

Destination IP Address

The destination IP is the address of the remote network to which you want to assign a static route.

Subnet Mask

Enter the subnet mask of your network IP address.

Gateway IP Address

The IP address of the interface used to link to the remote network.

DYNAMIC ROUTING SETTINGS

Dynamic routing settings allow the home internet gateway to route IP packets from one network to others automatically. The RIP protocol is applied, and broadcasts the routing information to other routers on the network regularly.

The screenshot shows the EtherRouter web interface for a Cable/xDSL Wireless Router. The main menu on the left includes options like Home Internet Gateway, Main menu, DHCP SERVER SETTINGS, VIRTUAL SERVER SETTINGS, ACCESS CONTROL SETTINGS, STATIC ROUTING, DYNAMIC ROUTING (which is highlighted in pink), FILTER SETTINGS, MODEM STRING SETTINGS, and ADMINISTRATION SETTINGS. The top navigation bar includes links for DEVICE INFORMATION, DEVICE STATUS, SETUP WIZARD, ADVANCED SETTINGS, SYSTEM TOOLS, and HELP. The title of the current page is 'DYNAMIC SETTINGS'. The configuration area shows two sections: 'SEND' and 'RECEIVE'. Under 'SEND', the 'Protocol' dropdown is set to 'RIP1 Compatible' (selected with a radio button). Under 'RECEIVE', the 'Protocol' dropdown is set to 'Both RIP1/2' (selected with a radio button). A 'SUBMIT' button is located at the bottom of the form. A note at the bottom states: 'NOTE: Please click 'Submit' to enter inputted data.'

For the SEND option choosing the proper protocol by which you transmit the data on the network.

For the RECEIVE option choosing the proper protocol by which the home internet gateway receive the data on the network.

FILTER SETTINGS - LAN FILTER SETTINGS

LAN Filter Settings allow administrator to define whether local user has the permission to access internet. To active this feature, check **LAN Side Filter Enabled**. Then, you can define the filtering policy by entering an IP address range, network port number and select the protocol(s).

For example, to prevent the local user of IP addresses range (from **101** to **200**) to access port **80 (HTTP)**, the settings are as follow,

LAN Side Filter Enabled: **Enabled**

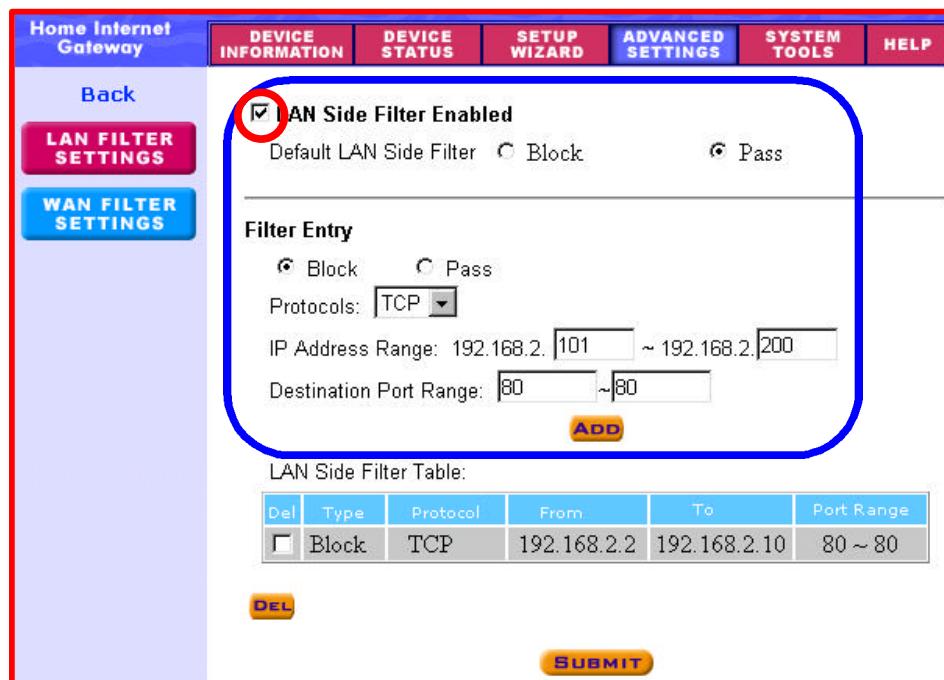
Default LAN Side Filter: **Pass**

Filter: **Block**

Protocol: **TCP**

IP Address Range: **101 ~ 200**

Destination Port Range: **80 ~ 80 (HTTP)**



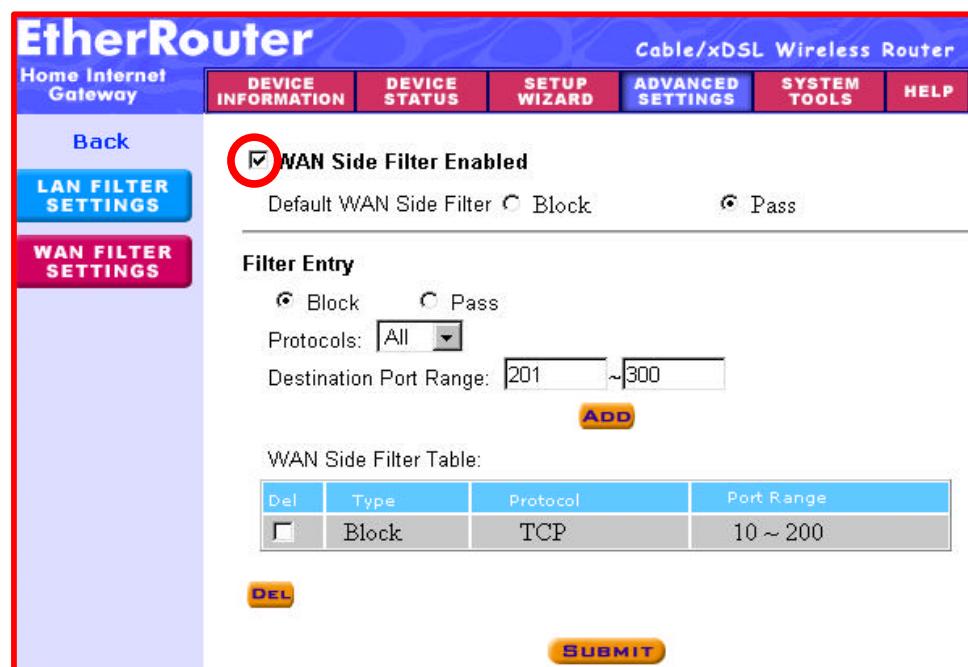
The screenshot shows the 'LAN FILTER SETTINGS' page of a web-based interface. The top navigation bar includes 'DEVICE INFORMATION', 'DEVICE STATUS', 'SETUP WIZARD', 'ADVANCED SETTINGS', 'SYSTEM TOOLS', and 'HELP'. On the left sidebar, 'LAN FILTER SETTINGS' is selected. The main content area shows the 'LAN Side Filter Enabled' checkbox is checked (indicated by a red circle). Below it, 'Default LAN Side Filter' has 'Pass' selected. The 'Filter Entry' section is highlighted with a blue rounded rectangle and contains the following settings: 'Block' selected for filter type, 'TCP' selected for protocol, 'IP Address Range: 192.168.2. [101] ~ 192.168.2. [200]' (with '101' and '200' in red boxes), and 'Destination Port Range: [80] ~ [80]' (with '80' in red boxes). An 'ADD' button is located below these fields. Below the filter entry section is a table titled 'LAN Side Filter Table' with one row:

Del	Type	Protocol	From	To	Port Range
<input type="checkbox"/>	Block	TCP	192.168.2.2	192.168.2.10	80 ~ 80

At the bottom of the page are 'DEL' and 'SUBMIT' buttons.

FILTER SETTINGS - WAN FILTER SETTINGS

WAN Filter Settings allow administrator to define whether remote/outside user has the permission to access the local network. To active this feature, check **WAN Side Filter Enabled**. Then, you can define the filtering policy by entering a port range and select the protocol(s).



EtherRouter Cable/xDSL Wireless Router

Home Internet Gateway **DEVICE INFORMATION** **DEVICE STATUS** **SETUP WIZARD** **ADVANCED SETTINGS** **SYSTEM TOOLS** **HELP**

Back **LAN FILTER SETTINGS** **WAN FILTER SETTINGS**

WAN Side Filter Enabled

Default WAN Side Filter Block Pass

Filter Entry

Block Pass

Protocols:

Destination Port Range: ~ **ADD**

WAN Side Filter Table:

Del	Type	Protocol	Port Range
<input type="checkbox"/>	Block	TCP	10 ~ 200

DEL **SUBMIT**

MODEM STRING SETTINGS

Modem string settings allow user to detail settings for the modem. If you want to change the baudrate settings, please check the initial string. (You can refer to your manual of the modem or TA.)

The screenshot shows the EtherRouter web interface with a blue header bar. The header includes the router's name 'EtherRouter' and the model 'Cable/xDSL Wireless Router'. Below the header is a navigation menu with several tabs: 'DEVICE INFORMATION', 'DEVICE STATUS', 'SETUP WIZARD', 'ADVANCED SETTINGS' (which is highlighted in blue), 'SYSTEM TOOLS', and 'HELP'. On the left side, there is a vertical 'Main menu' with the following options: 'DHCP SERVER SETTINGS', 'VIRTUAL SERVER SETTINGS', 'ACCESS CONTROL SETTINGS', 'STATIC ROUTING', 'DYNAMIC ROUTING', 'FILTER SETTINGS', 'MODEM STRING SETTINGS' (which is highlighted in pink), and 'ADMINISTRATION SETTINGS'. The main content area is titled 'MODEM SETTINGS'. It contains four input fields: 'Baudrate Settings' with a dropdown menu set to '115200bps(28.8K/33.6K/56K modem or ISDN TA)', 'Pre-Initial String' with the value 'AT', 'Initial String' with the value 'AT SO=1', and 'Dialup String' with the value 'ATDT'. Below these fields is a blue 'SUBMIT' button. A note at the bottom of the page says: 'NOTE: Please click 'Submit' to enter inputted data.'

ADMINISTRATION SETTINGS

PASSWORD SETTINGS

You can give your internet gateway a new password. This password is required the next time you configure your internet gateway. To enter a password, type your password in the new password field and type it again in the retype password field.

NOTE !

It is important to remember your password. If for any reason you lose or forget your password, press the small reset button located on the back of the device for 5~6 seconds. Reset action will re-initialize the settings. All configurations, including password, will be reset, and requires re-entering.

Home Internet Gateway		DEVICE INFORMATION	DEVICE STATUS	SETUP WIZARD	ADVANCED SETTINGS	SYSTEM TOOLS	HELP
Main menu		PASSWORD SETTINGS					
DHCP SERVER SETTINGS		The new password will be used to authenticate the user when configuring the device.					
VIRTUAL SERVER SETTINGS		New Password: <input type="text" value="*****"/>					
ACCESS CONTROL SETTINGS		Retype Password: <input type="text" value="*****"/>					
STATIC ROUTING		SYSTEM ADMINISTRATION					
DYNAMIC ROUTING		HTTP Port No: <input type="text" value="80"/>					
FILTER SETTINGS		Telnet Port No: <input type="text" value="23"/>					
MODEM STRING SETTINGS		<input type="checkbox"/> Allow remote user to configure the device					
ADMINISTRATION SETTINGS		Remote administration host					
		IP Address: <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>					
		<input checked="" type="checkbox"/> Allow remote user to ping the device					
		SYSTEM Log					
		<input type="checkbox"/> Enable System Log Function					
		Log server IP address <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>					
SUBMIT							
NOTE 1: Please click 'Submit' to enter inputted data.							
NOTE 2: This function will enable the system log daemon to log all the system information to the system log server.							

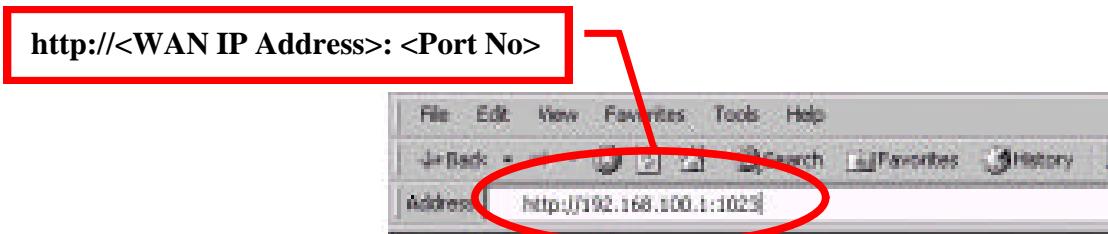
SYSTEM ADMINISTRATION

Here allows remote user to configure and administrate the wireless internet gateway through Internet.

The default port no for **HTTP** and **TELNET** are **80** and **23** respectively.

The default IP address of remote administration host is: **0.0.0.0**. (IP address 0.0.0.0 means that any PC on the network can remote access and manage the wireless internet gateway)

If you use this function you have to **enable** the feature “**Allow remote user to configure the device**” first. Once you have enabled this function, type the wireless internet gateway **WAN IP address** (**http://192.168.100.1:1023**) into the browser of any or specific PC on the network.



NOTE !

Once HTTP port no (**NOT PORT 80**) have be changed and the users of LAN terminal want to configure the wireless internet gateway, the users have to type the wireless internet gateway **LAN IP address with port no** (**http://192.168.2.1:1023**)

SYSTEM LOG

System Log function allows the administrator to assign the IP address of a server, on which, a log server is running. When a particular event happens, the router sends a notification to the log server. The log server can then present the log to the users. [Free log server can be download from internet, such as Kiwis SysLog Daemon]

If you finished all the settings, please click Submit button to go to the next page ...

SAVE & RESTART

Here show all the functions of the **ADVANCED SETTINGS**. If you have finished making all the changes on the various pages, please **click Save & Restart** to save the settings and restart the device. If you want to configure the setting again, you can browse those functions then click them. After the restart, the device will function according to the saved settings.

Save & Restart lets you save the input settings to the wireless internet gateway (so as to be retrieved at a later time) and then restart it.



System Tools

System tools

Detects the status of the wireless internet gateway.

INTRUDER DETECTION LOG

The event messages show the possible hacker attacks that have occurred on your internet gateway. Up to 32 hacker attacks may be logged in this manner.

Index	Time	Protocol	Source IP (Port)	Dest IP (Port)	Event
(1)	2001/10/17 3:49:42	IP	192.168.2.2 (1476)	192.168.2.1 (80)	Login Failed attempt

DISPLAY ROUTING TABLE

Here show the current static routing configuration.

Type	Destination LAN IP Address	Subnet Mask	Gateway IP Address	Hop Count
INTF	192.168.2.0	255.255.255.0	192.168.2.1	1
INTF	192.168.100.0	255.255.255.0	192.168.100.57	1

SYSTEM DIAGNOSTICS

System diagnostics shows your internet gateway's information. It will perform a check-up on your internet gateway to make sure that everything is functioning properly.

EtherRouter Cable/xDSL Wireless Router

Home Internet Gateway

DEVICE INFORMATION **DEVICE STATUS** **SETUP WIZARD** **ADVANCED SETTINGS** **SYSTEM TOOLS** **HELP**

Main menu

INTRUDER DETECTION LOG

DISPLAY ROUTING TABLE

SYSTEM DIAGNOSTICS

SAVE SETTINGS

LOAD SETTINGS

UPGRADE FIRMWARE

RESET DEVICE

SYSTEM DIAGNOSTIC

Configuration

Firmware Version: V4.65

ISP Settings

IP assigned method: Assigned by ISP DHCP server
IP address: 0.0.0.0
Gateway IP address: 0.0.0.0
DNS Server IP address: 0.0.0.0
Telephone Number:
Dial-up User Name:
Idle Timeout: 30 minutes
Pre Initial String: AT
Initial String: AT S0=1
Dialup String: ATDT

Device Settings

Device IP address as: 192.168.2.1
Device Network Mask: 255.255.255.0
DHCP Server: Enabled
Pool from: 192.168.2.2
Pool to: 192.168.2.100

Diagnosis

ISP Status

Cable / xDSL IP address: 192.168.100.57
ISP Gateway IP address: 192.168.100.1
DNS IP address: 192.168.100.1
Modem (async) IP address: 0.0.0.0

Link Status

Cable/xDSL	Connected
LAN	Connected

Current WAN connection

Cable/xDSL	Connected
------------	-----------

LAN MAC Table

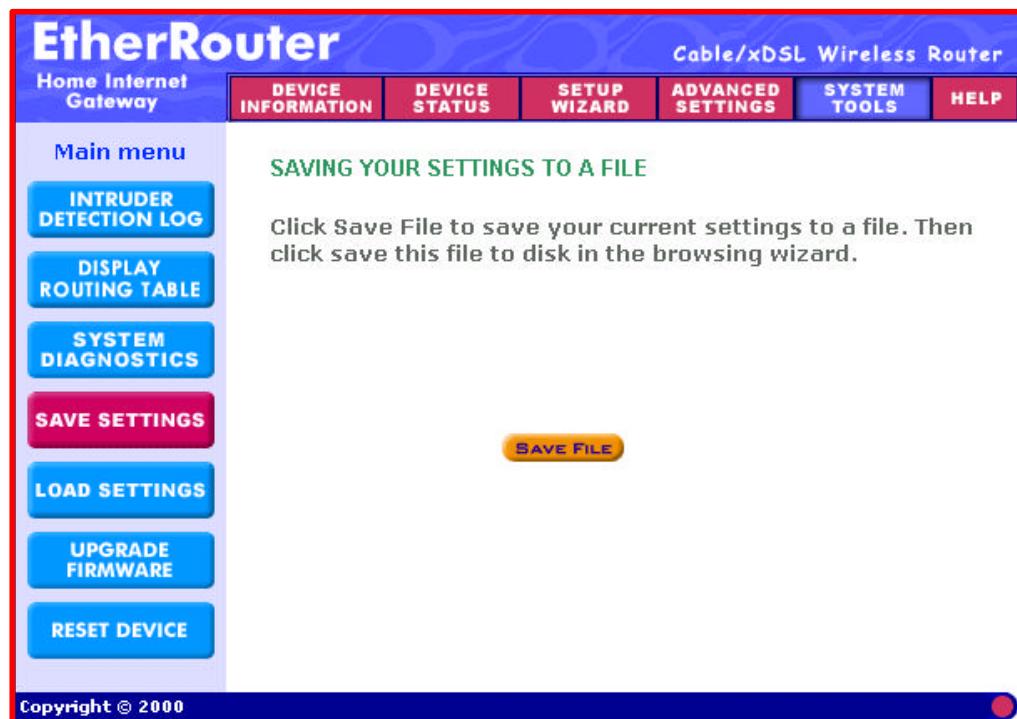
LAN IP: 192.168.2.2 . MAC: 00:90:cc:0b:8c:9b

WAN MAC Table

LAN IP: 192.168.100.24 . MAC: 00:90:cc:15:6c:fe
LAN IP: 192.168.100.1 . MAC: 12:34:56:78:90:12

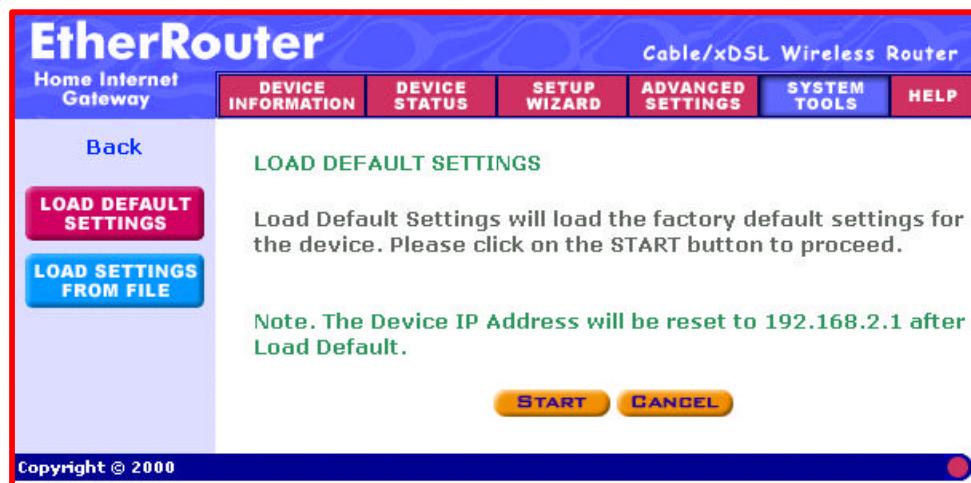
SAVE SETTINGS

Here allow you to save the configuration to a file. If you would like to do this, click **Save File** to save your current settings to a file. Then click save this file to disk in the browsing wizard.



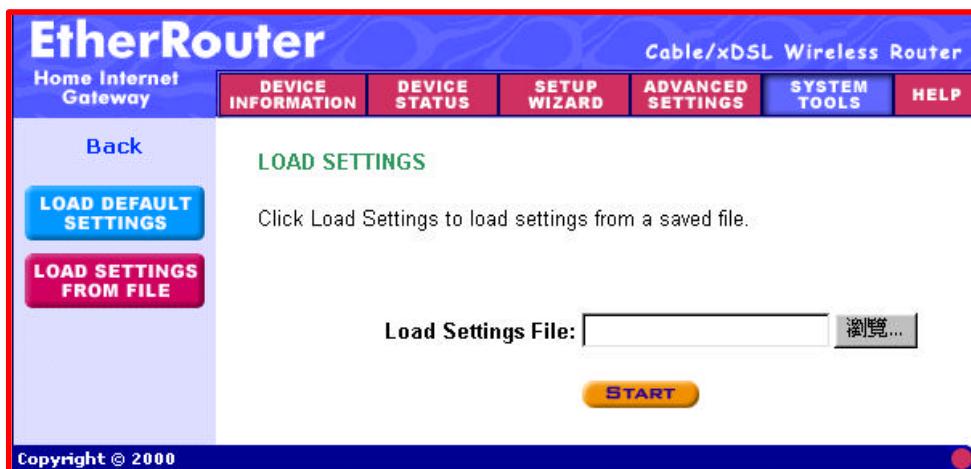
LOAD SETTINGS - LOAD DEFAULT SETTINGS

Here allow you to load the original default settings of your wireless broadband router.



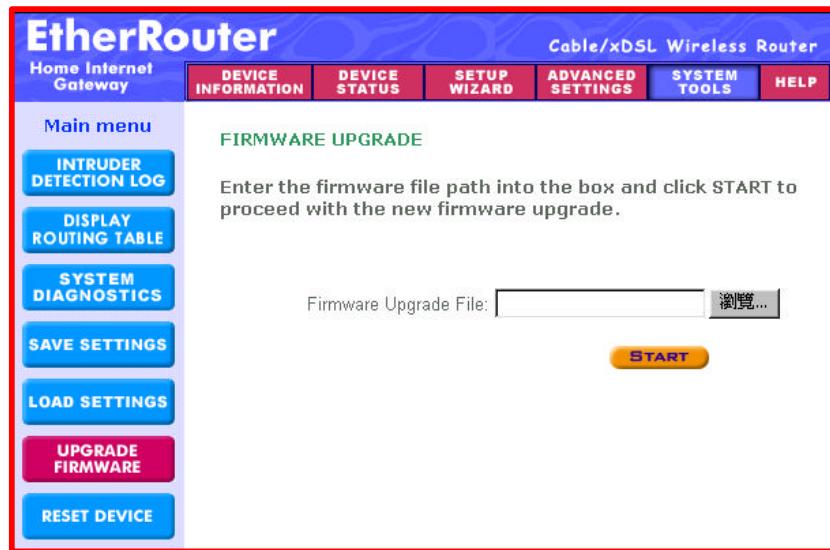
LOAD SETTINGS - LOAD SETTINGS FROM FILE

Here allow you to load the settings from a file.



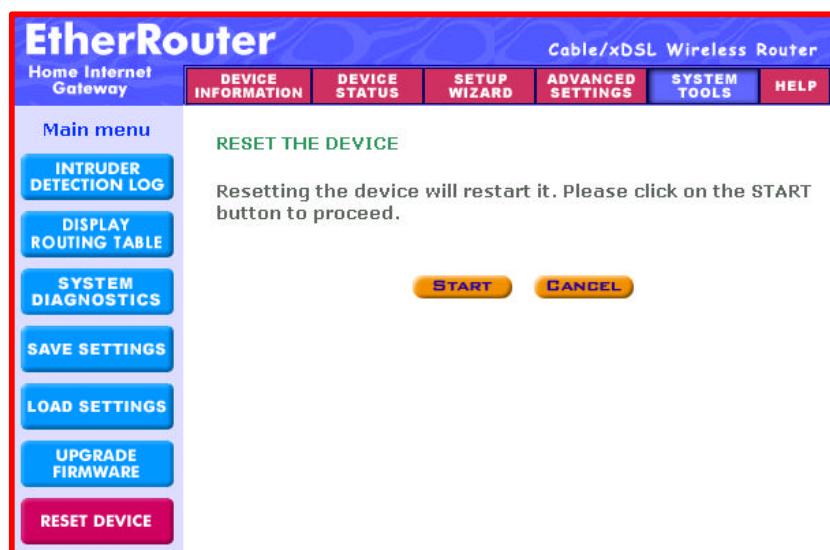
UPGRADE FIRMWARE

The upgrade firmware option allows you to upgrade the latest firmware to your wireless internet gateway.



RESET DEVICE

Resetting the device will restart it. Click on the **START** button to restart.



How Using Telnet To Configure Your Wireless Internet Gateway

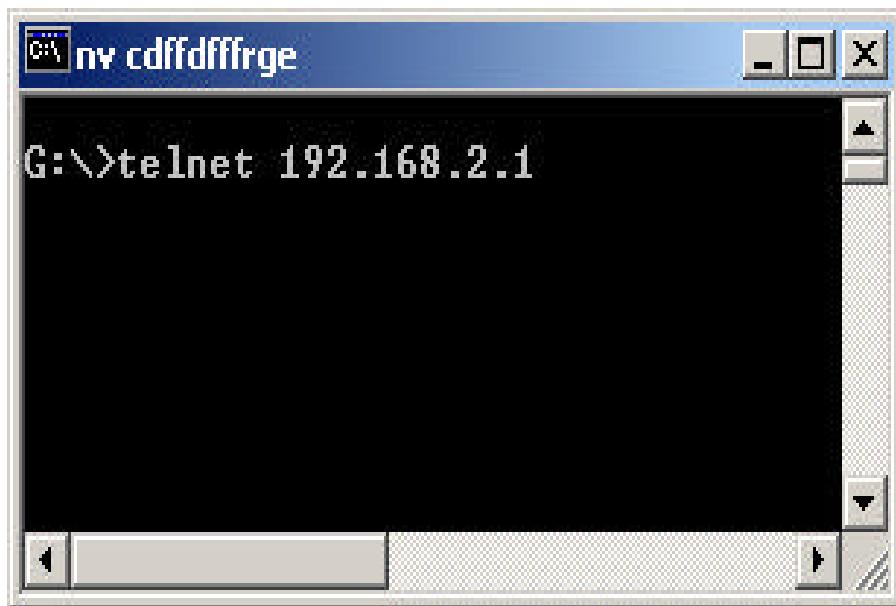
Telnet is a telecommunications software utility, which allows you to access a remote device. The internet gateway has a built-in telnet server that enables a telnet client to remotely configure the gateway using a menu system.

NOTE !

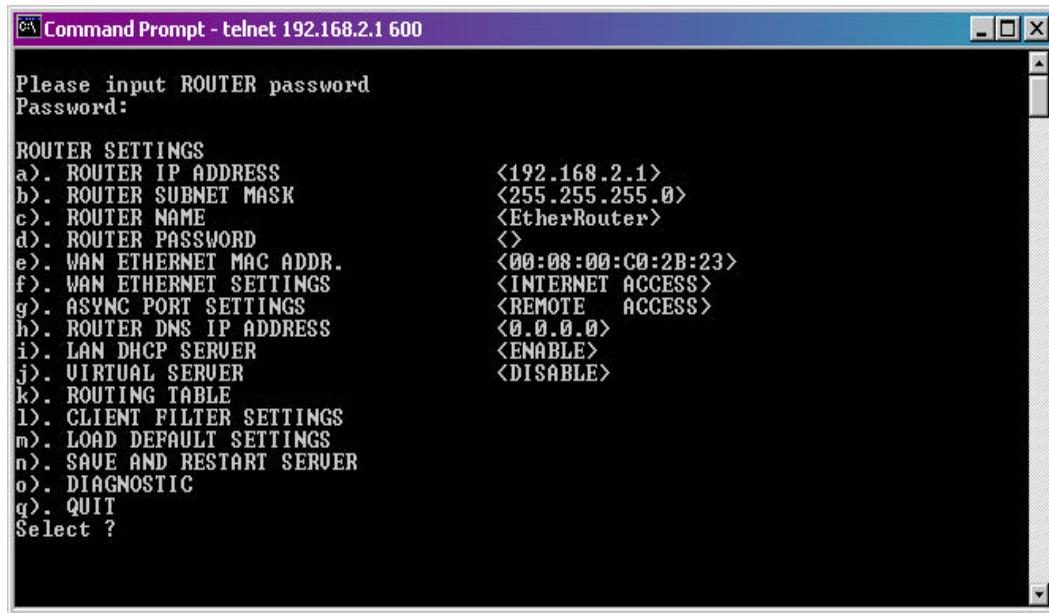
To successfully configure your internet gateway using telnet, TCP/IP have to be correctly configured on your PCs and router. And your PCs have to be located on the same subnet.

Launch DOS command prompt and type **Telnet**, followed by router's IP address (default IP address is 192.168.2.1) then press **Enter**.

NOTE: If you change **Telnet** port no (**NOT PORT 23**), you should type:
192.168.2.1 <Port No>.



When prompted to input the router password, press **Enter**. The wireless internet gateway telnet server menu will be shown as below.



```
Command Prompt - telnet 192.168.2.1 600

Please input ROUTER password
Password:

ROUTER SETTINGS
a>. ROUTER IP ADDRESS <192.168.2.1>
b>. ROUTER SUBNET MASK <255.255.255.0>
c>. ROUTER NAME <EtherRouter>
d>. ROUTER PASSWORD <>
e>. WAN ETHERNET MAC ADDR. <00:08:00:C0:2B:23>
f>. WAN ETHERNET SETTINGS <INTERNET ACCESS>
g>. ASYNC PORT SETTINGS <REMOTE ACCESS>
h>. ROUTER DNS IP ADDRESS <0.0.0.0>
i>. LAN DHCP SERVER <ENABLE>
j>. VIRTUAL SERVER <DISABLE>
k>. ROUTING TABLE
l>. CLIENT FILTER SETTINGS
m>. LOAD DEFAULT SETTINGS
n>. SAVE AND RESTART SERVER
o>. DIAGNOSTIC
q>. QUIT
Select ?
```

Define the **Router IP Address**, **Router Subnet Mask**, **Router Name** and **Password** by selecting menu letter corresponding to each item. (item a-d)

WAN Ethernet Mac Address

Displays the hardware address of the board. You may change the Mac address if required by your ISP.

WAN Ethernet Settings

Selects the function of the WAN Ethernet port as **Internet Access**. Complete the **External IP Port Address**, **External IP Port Netmask**, **Gateway IP Address** and **DNS IP Address** fields using the IP address provided by your ISP.

Async Port Settings

Selects the function of the async port as **IP Routing** if you have an analog modem or ISDN TA connected to the async port. Complete the **Telephone number**, **User name** and **Password** needed to make the connection to your ISP. Use the menu options to provide specific information about your modem's **Serial baudrate (speed)**, **Modem Pre-initial**, **initial**, **dial-up** and **hangup strings**. You may also use the menu options to create or edit **Login Scripts**.

Router DNS IP Address

Enter the IP address of your ISP system's DNS as provided by your ISP.

LAN DHCP Server

You can enable or disable the DHCP function on the internet gateway. If you select enable, you will be prompted to enter the address range from which the router will issue IP address.

Virtual Server (IP Mapping)

Define the list of mapped internal and external IP address. For example, you may want to use IP mapping to access an FTP server on your LAN via the internet.

Load default Settings

Sets the router back to its original factory settings.

Apply and Save Changes

Saves the current configurations into the internet gateway's memory.

NOTE: you must select **Apply and Save Changes** before leaving the menu or your configuration changes will be lost when the gateway is powered off.

Diagnostic

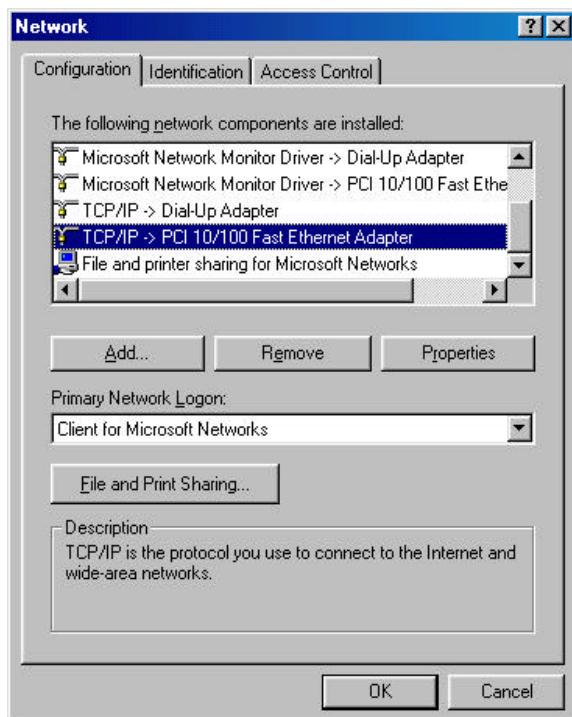
Select Diagnostic to perform basic hardware checking and display the gateway's firmware version. You may also use this option to assign WAN and LAN Mac address if required by your ISP.

When all options have been configured and after you have selected **Apply and Save Changes**, select q.) **Quit**.

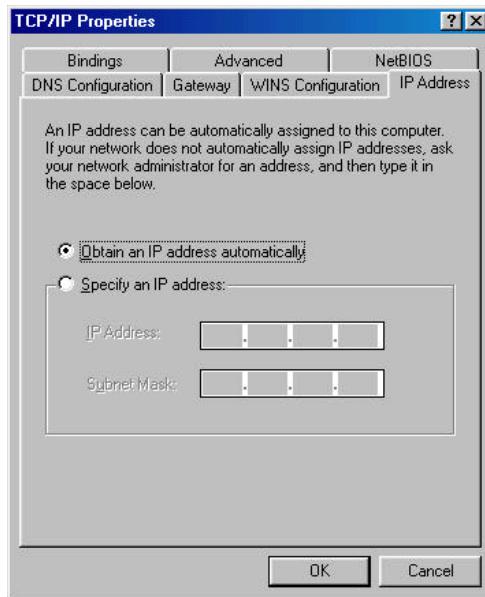
How Configuring Your PCs Connect To The Wireless Router

If you **do not** wish to set a static IP address on your PC, you will need to configure your PC to accept the IP address that your gateway will provide.

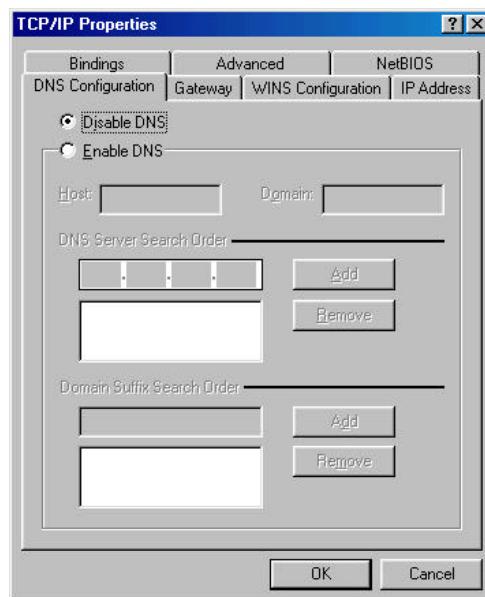
1. Click **Start** button, select **Settings**, then **Control Panel**
2. Double-click the **Network** Icon
3. In the **configuration** windows, select the **TCP/IP protocol line** that has been associated with your network card/adapter. If there is no TCP/IP line listed, you will need to install the TCP/IP now.



4. Click the **Properties** button, then choose the **IP ADDRESS** tab. Select **Obtain an IP address automatically**.



5. Then select **DNS configuration** tab to add **DNS IP address**. If you do not wish to add DNS you can **Disable DNS function**. Press **OK**. You have completed the client settings.
6. After clicking **OK**, windows will ask you to restart the PC. Click **Yes**.



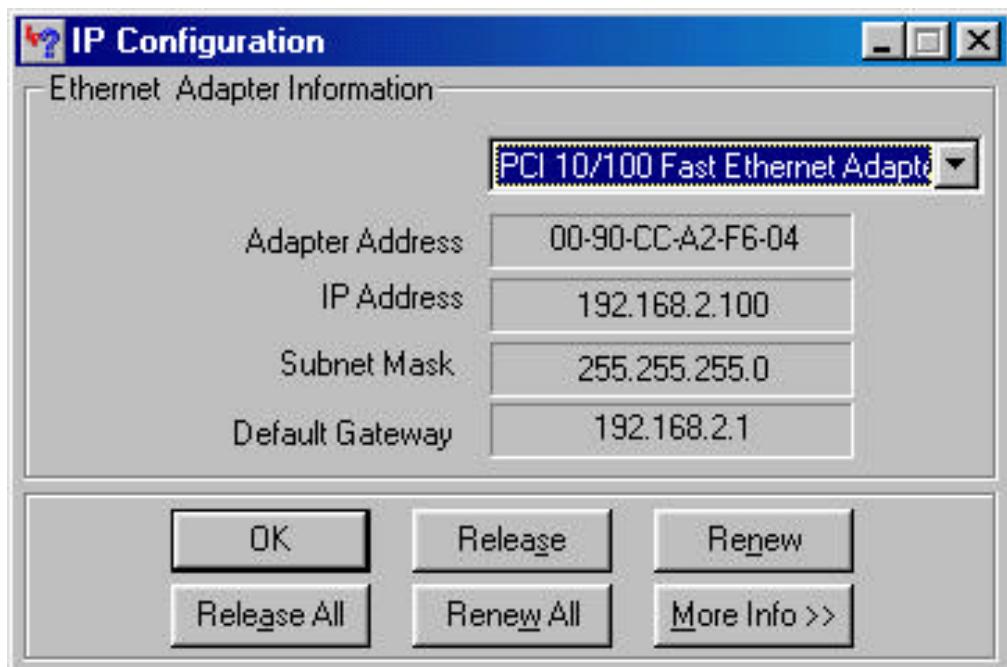
CONFIRM YOUR PC's IP CONFIGURATION

There are two tools which are great for finding out a computer's IP configuration: MAC address and default gateway.

- **WINIPCFG (for windows 95/98)**

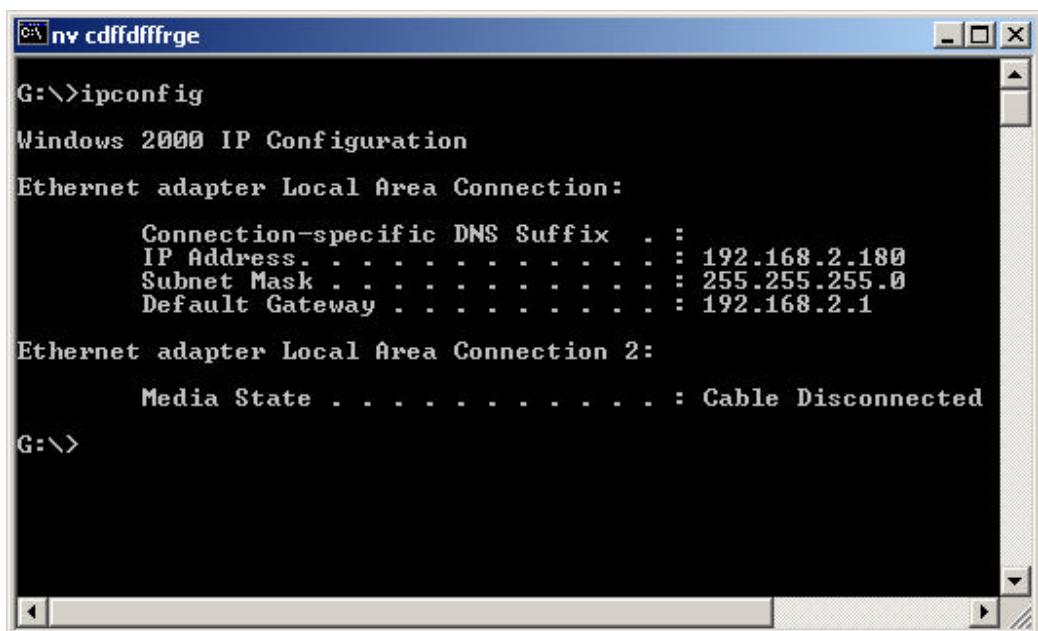
Inside the windows 95/98 **Start** button, select **Run** and type **winipcfg**. In the example below this computer has a IP address of 192.168.2.100 and the default gateway is 192.168.2.1. The default gateway should be the network device IP address. The MAC address in windows 95/98 is called the Adapter Address.

NOTE ! You can also type **winipcfg** in the DOS command.



- **IPCONFIG (for windows 2000/NT)**

In the DOS command type **IPCONFIG** and press **Enter**. Your PC IP information will be displayed as shown below.



```
nv cdffdfdfge
G:>ipconfig
Windows 2000 IP Configuration

Ethernet adapter Local Area Connection:
  Connection-specific DNS Suffix . . . . . : 192.168.2.180
  IP Address . . . . . : 192.168.2.180
  Subnet Mask . . . . . : 255.255.255.0
  Default Gateway . . . . . : 192.168.2.1

Ethernet adapter Local Area Connection 2:
  Media State . . . . . : Cable Disconnected

G:>
```

This concludes the user manual.

Should you require further assistance or have other inquires please contact your distributor.