



# Cable/DSL Broadband Router

Built-in 4-Port 10/100Mbps Switch

**USER GUIDE**

**SMC7004VBR**

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## CHAPTER 1 | Introduction

Congratulations on your purchase of a Barricade™ Cable/DSL Broadband Router (SMC7004VBR). SMC is proud to provide you with a powerful yet simple communication device for connecting your local area network (LAN) to the Internet.

### 1.0 | Features and Benefits

- **EZ 3-Click Installation Wizard** - A new and improved way to install your Barricade. In 3 simple clicks, you will be connected to the Internet.
- Internet connection to DSL or cable modem via a 10/100 Mbps WAN port
- Local network connection via 10/100 Mbps Ethernet switch ports
- DHCP for dynamic IP configuration, and DNS for domain name mapping
- Firewall with Stateful Packet Inspection, client privileges, hacker prevention, DoS, and NAT
- NAT also enables multi-user access with a single-user account, and virtual server functionality (providing protected access to Internet services such as web, mail, FTP, and Telnet)
- Virtual Private Network support using PPTP, L2TP, or IPSec pass-through
- User-definable application sensing tunnel supports applications requiring multiple connections
- Parental controls allows the user to block access to certain web sites
- Email alerts when the users network is being compromised
- Easy setup through a web browser on any operating system that supports TCP/IP
- Compatible with all popular Internet applications

### 1.1 | Package Contents

Before installing the Barricade™ Cable/DSL Broadband Router, verify that you have the items listed under "Package Contents." Also be sure that you have the necessary cabling. If any of the items are missing or damaged, contact your local SMC distributor.

- Barricade Broadband Router
- Power adapter
- One CAT-5 Ethernet cable
- Four rubber feet
- CD with User Guide and EZ 3-Click Installation Wizard
- Quick Installation Guide

If possible, retain the carton and original packing materials in case there is a need to return the product.

### 1.2 | Minimum Requirements

- Cable or DSL Modem with Ethernet connection and Internet access from your local telephone company or Internet Service Provider (ISP) using a DSL modem or cable modem.
- A computer equipped with a 10 Mbps, 100 Mbps, or 10/100 Mbps Fast Ethernet card, or USB-to-Ethernet converter.
- Network adapter with Ethernet (UTP CAT 5) cabling and TCP/IP protocol installed per PC
- Internet Explorer 4.0 (or Higher) or Netscape Navigator 4.7 (or Higher) for Web-based configuration of the Barricade

## CHAPTER 2 | Getting to Know the Barricade

The SMC7004VBR Barricade Cable/DSL Broadband Router is the perfect solution for the home/office environment. This full-featured router offers:

- 4 - 10/100 Mbps Auto-Sensing LAN ports with Auto-MDI MDIX feature
- 1 - 10/100 Mbps WAN port with Auto-MDI MDIX feature
- Comprehensive LEDs for network status and troubleshooting
- Reset Button



### 2.1 | LED Indicators

The Barricade includes LED indicators on the front panel that simplify installation and network troubleshooting.

LED	ON	OFF	FLASHING
<b>POWER</b>	Receiving power	Not receiving power	N/A
<b>WAN</b>	Good WAN connection detected	No WAN connection detected	Transmitting or receiving traffic
<b>LINK/ACT</b>	Good LAN connection detected	No LAN connection detected	Transmitting or receiving traffic
<b>10/100 Mbps</b>	LAN port operating at 100 Mbps	LAN port operating at 10 Mbps	N/A

#### Resetting the Barricade

The Reset button is located on the rear panel of the Barricade Broadband Router. Use a paper clip or a pencil tip to push the Reset button.

#### Reset

If the Router is having problems connecting to the Internet, simply unplug the router for 3 seconds then plug back in.

#### Restore Factory Defaults

If resetting the router does not resolve your issue, then you can follow these steps:

1. Leave power plugged into the router
2. Locate the reset button on the back panel, press and hold until WAN LED flashes off.
3. Release reset button.

## CHAPTER 3 | Getting Connected

The SMC7004VBR Barricade Cable/DSL Broadband router is connected between the Cable/DSL Broadband Modem and your computers. If you have more than one computer to connect, simply plug the other computers into the LAN ports on the back of the router.



### 3.1 | Basic Installation Procedure

1. **Connect the LAN**  
Run an Ethernet cable from one of the LAN ports on the back of the Barricade to your computer's network adapter.
2. **Connect the WAN**  
Connect an Ethernet cable from your cable or DSL modem to the Barricade's WAN port on the back on the router.
3. **Power on**  
Connect the power cable to the Barricade.

Once you have completed connecting all of the hardware, simply insert the Barricade CD-ROM and the **EZ 3-Click Installation Wizard** will automatically connect you to the Internet.

For manual configuration of the PCs, see Chapter 4.

For advanced configuration of the Barricade Broadband Router, see Chapter 5.

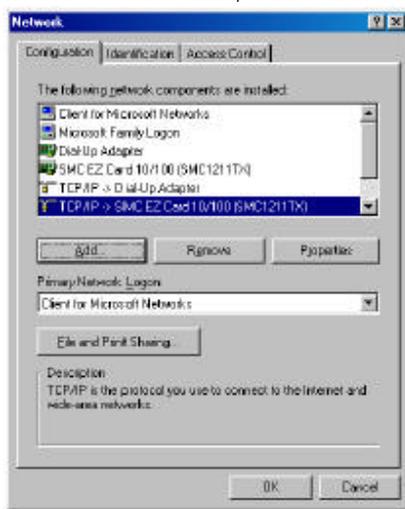
## CHAPTER 4 | Configuring your Computer

The information outlined in this chapter will guide you through the configuration for the following Operating Systems:

- Windows 95/98
- Windows Me
- Windows 2000
- Windows XP
- Apple Macintosh

### 4.1 | Configuring Windows 95/98/Me

1. Access your Network settings by clicking [Start], choose [Settings], and then select [Control Panel].
2. In the Control Panel, locate and double-click the [Network] icon.



3. Highlight the TCP/IP line that has been assigned to your network card on the [Configuration] tab of the [Network] properties window.
4. Next, click the [Properties] button to view that adapter's TCP/IP settings.



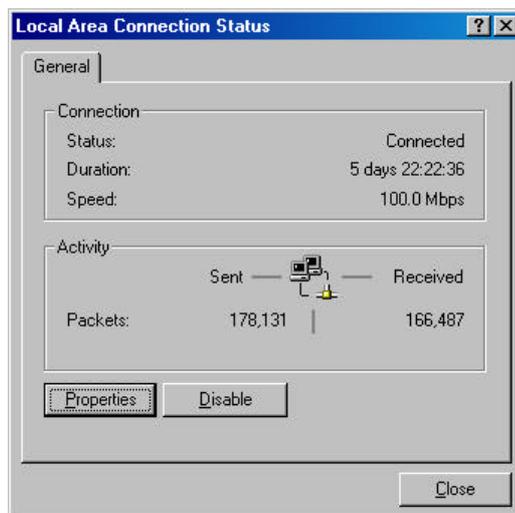
5. From the TCP/IP Properties dialog box, click the [Obtain an IP address automatically] option.
6. Next click on the [Gateway] tab and verify the Gateway field is blank. If there are IP addresses listed in the Gateway section, highlight each one and click [Remove] until the section is empty.
7. Click the [OK] button to close the TCP/IP Properties window.
8. On the Network Properties Window, click the [OK] button to save these new changes.

NOTE: Windows may ask you for the original Windows installation disk or additional files. Check for the files at c:\windows\options\cabs, or insert your Windows CD-ROM into your CD-ROM drive and check the correct file location, for example, D:\win98, D:\win9x. (assume "D" is your CD-ROM drive).

9. Windows may prompt you to restart the PC. If so, click the [Yes] button. If Windows does not prompt you to restart your computer, do so anyways to ensure your settings.

## 4.2 | Configuring Windows 2000

1. Access your Network settings by clicking [Start], choose [Settings], and then select [Control Panel]
2. In the Control Panel, locate and double-click the [Network and Dial-up Connections] icon
3. Locate and double-click the [Local Area Connection] icon for the Ethernet adapter that is connected to the Barricade. When the Status dialog box window opens, click the [Properties] button.

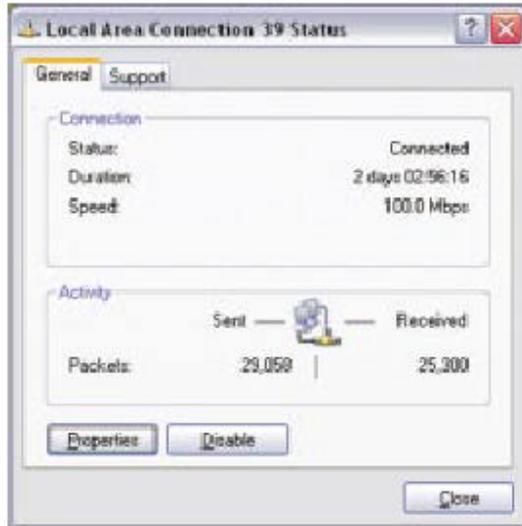


4. On the [Local Area Connection] Properties box, verify the box next to Internet Protocol (TCP/IP) is checked. Then highlight the Internet Protocol (TCP/IP), and click the Properties button.
5. Select Obtain an IP address automatically to configure your computer for DHCP. Click the [OK] button to save this change and close the Properties window.
6. Click the [OK] button again to save these new changes.
7. Reboot your PC.

### 4.3 | Configuring Windows XP

The following instructions assume you are running Windows XP with the default interface. If you are using the Classic interface (where the icons and menus look like previous Windows versions), please follow the instructions for Windows 2000 outlined above.

1. Access your Network settings by clicking [Start], choose [Control Panel], select [Network and Internet Connections] and then click on the [Network Connections] icon.
2. Locate and double-click the Local Area Connection icon for the Ethernet adapter that is connected to the Barricade Router. Next, click the [Properties] button.



3. On the [Local Area Connection] Properties box, verify the box next to Internet Protocol (TCP/IP) is checked. Then highlight the Internet Protocol (TCP/IP), and click the Properties button.
4. Select Obtain an IP address automatically to configure your computer for DHCP. Click the [OK] button to save this change and close the Properties window.
5. Click the [OK] button again to save these new changes.
6. Reboot your PC.

### 4.4 | Configuring a Macintosh Computer

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

1. Pull down the Apple Menu. Click [Control Panel] and select TCP/IP.
2. In the TCP/IP dialog box, make sure that [Ethernet] is selected in the [Connect Via:] field.

If [Using DHCP Server] is already selected in the [Configure] field, your computer is already configured for DHCP. Close the TCP/IP dialog box, and skip to Step 2 Disable HTTP Proxy (bottom of this page).

3. All the information that you need to record is on the [TCP/IP] dialog box. Use the space below to record the information.
4. Select [Using DHCP Server] in the [Configure] field and close the window.
5. Another box will appear asking whether you want to save your TCP/IP settings. Click [Save].

## CHAPTER 5 | Configuring the Barricade

After you have configured TCP/IP on a client computer, use a web browser to configure the Barricade™ Broadband Router. The Barricade can be configured by any Java-supported browser including Internet Explorer 4.0 or above, or Netscape Navigator 4.7 or above. Using the web management interface, you may configure the Barricade and view statistics to monitor network activity.

**NOTE:** Before you attempt to configure your router, if you have access to the Internet please visit [www.smc.com](http://www.smc.com) and download the latest firmware update.

Before you attempt to log into the Barricade's Web-based Administration, please verify the following:

1. Your browser is configured properly. (see below)
2. Disable any firewall or security software that may be running.
3. Confirm that you have a good "link" LED where your computer is plugged into the Barricade. If you don't have a "link" light, try another cable until you get a good link.

### 5.1 | Browser Configuration

Confirm your browser is configured for a direct connection to the Internet using the Ethernet cable that is installed in the computer. This is configured through the options/preference section of your browser.

### 5.2 | Disable Proxy Connection

You will also need to verify that the "HTTP Proxy" feature of your web browser is disabled. This is so that your web browser will be able to view the Barricade configuration pages. The following steps are for Internet Explorer and for Netscape. Determine which browser you use and follow the appropriate steps.

#### Internet Explorer (5 or above)

1. Open Internet Explorer. Click [Tools], and then select [Internet Options].
2. In the [Internet Options] window, click the [Connections] tab.
3. Click the [LAN Settings] button.
4. Clear all the check boxes and click [OK] to save these LAN settings changes.
5. Click [OK] again to close the [Internet Options] window.

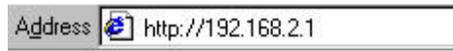
#### Netscape (4 or above)

1. Open Netscape. Click [Edit], and then select [Preferences].
2. In the [Preferences] window, under [Category], double-click [Advanced], then select the [Proxies] option.
3. Check [Direct connection to the Internet].
4. Click the [OK] button to save the changes.

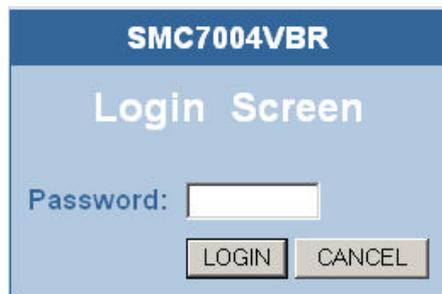
### 5.3 | Accessing the Barricade Management

To access the Barricade's web-based management screens, follow the steps below:

1. Launch your web-browser.  
**NOTE:** Your computer does not have to be ONLINE to configure the Barricade Router.
2. In the Address Bar, type: <http://192.168.2.1>



3. When the Barricade's Login screen appears, enter the default password, and click the [Login] button to access the router.



**NOTE:** The Barricade default password is "smcadmin". The password is case sensitive.

4. Once you have logged into the Barricade web-based admin screens, you have 2 options which are outlined in Chapter 6 | Navigating the Web-based Administration

## CHAPTER 6 | Navigating the Web-based Administration

The Barricade's management interface features a Setup Wizard and an Advanced Setup section. Use the Setup Wizard if you want to quickly setup the Barricade for use with a cable modem or DSL modem. Advanced setup supports more advanced functions like hacker attack detection, IP and MAC address filtering, intrusion detection, virtual server setup, virtual DMZ hosts, as well as other advanced functions.

### 6.1 | Making Configuration Changes

Configurable parameters have a dialog box or a drop-down list. Once a configuration change has been made on a page, be sure to click the "Apply" or "Next" button at the bottom of the page to enable the new setting.

**Note:** To ensure proper screen refresh after a command entry, be sure that Internet Explorer 5.0 is configured as follows: Under the menu "Tools/Internet Options/General/Temporary Internet Files/Settings," the setting for "Check for newer versions of stored pages" should be "Every visit to the page."



## 6.1 | Setup Wizard

Below is an outline of each option available from the Setup Wizard section. This wizard takes 3 steps to complete an ISP configuration.

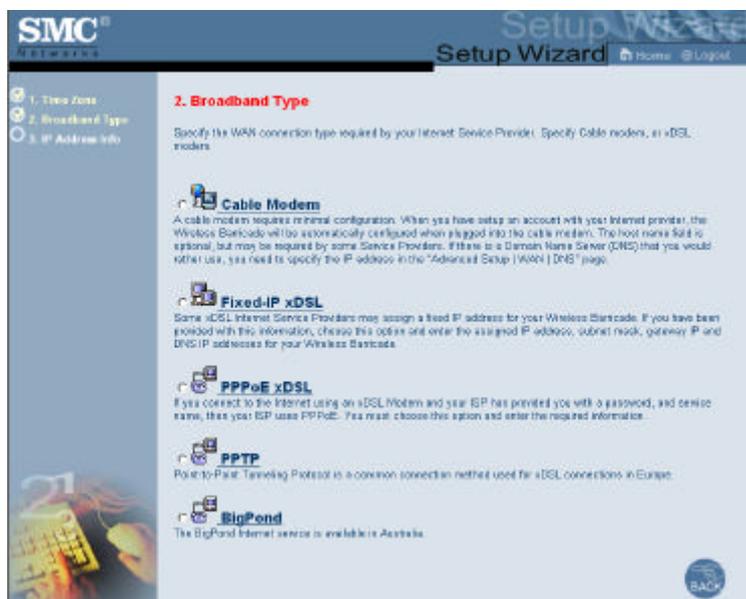
### 6.1.1 | Step One: Time Zone

The first step is to configure the Time Zone you are located in. This setting is used for accurate timing of client filtering and log events.



### 6.1.2 | Step Two: Broadband Type

Select the type of broadband connection you have.



- **Cable Modem**  
Your ISP may have given you a host name. If so, enter it into this field.
- **Fixed-IP xDSL**  
Some xDSL Internet Service Providers may assign a fixed (static) IP address for your gateway. If you have been provided with this information, choose this option and enter the assigned IP address, subnet mask, gateway IP, and DNS IP addresses for the Barricade.

- **PPPoE**  
Enter the PPPoE user name and password assigned by your Service Provider. The Service Name is normally optional, but may be required by some service providers. Leave the Maximum Transmission Unit (MTU) on the default value (1492) unless you have a particular reason to change it. Enter a Maximum Idle Time (in minutes) to define a maximum period of time for which the Internet connection is maintained during inactivity. If the connection is inactive for longer than the Maximum Idle Time, it will be dropped. Enable the Auto-reconnect option to automatically re-establish the connection as soon as you attempt to access the Internet again.
- **PPTP**  
Point-to-Point Tunneling Protocol is a common connection method used for xDSL connections in Europe.
- **BigPond®**  
The BigPond Internet service is used in Australia.

### 6.1.2 | Step Three: Finish Configuration

Once you have configured your type of ISP connection, simply click the [Finish] button and the Barricade will automatically configure your Internet connection.

## 6.2 | Advanced Setup

Below is an outline of the Advanced Setup section. This section is used to manually configure your ISP connection and also define the advanced system parameters, manage and control the Barricade and its ports, or monitor network conditions.

### 6.2.1 | System

This section is used to configure the local time zone, password for administrator access, and the IP address of a PC that will be allowed to manage the Barricade remotely.

- **Time Zone**

Use this option to configure the time zone for the Barricade. This information is used for log entries and client access control.

There are 3 options to configure the Router's internal clock:

- **Using preset or custom NTP servers**
- **Using your computer system's clock**
- **Manually configure the Time and Date**

The screenshot shows the SMC Advanced Setup web interface. The page title is "Time Zone". The left sidebar contains a navigation menu with options: SYSTEM, WAN, LAN, NAT, Firewall, DDNS, VPN, Tools, and Status. The main content area has a blue header with "SMC ADVANCED SETUP" and "Advanced Setup" with "Home" and "Logout" links. Below the header, there is a description of the Time Zone settings and a "Set Time Zone" button. The configuration area is divided into three sections:

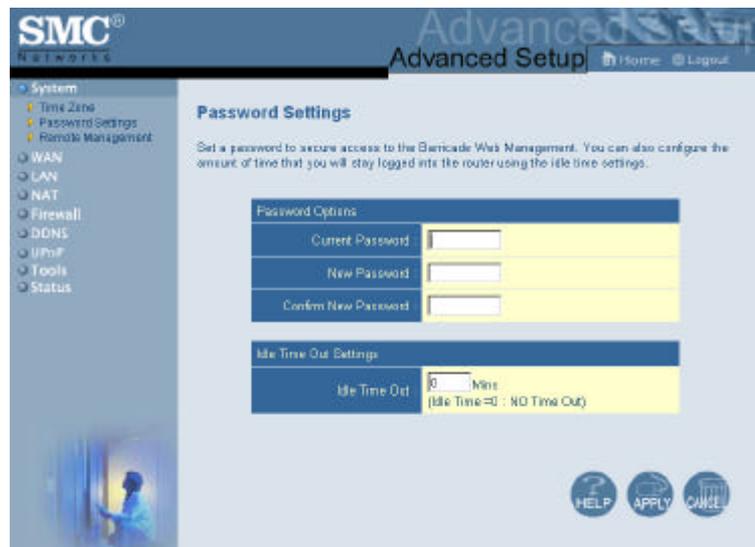
- Get Date and Time by online Time Servers (NTP):** This section includes a "Time Zone" dropdown menu set to "GMT-08:00 Pacific Time (US & Canada) (Yasac)", a "Pre-set Servers" dropdown menu set to "time.kist.gov", and a "Custom Server" text input field with a "Sync Now!" button.
- Get Date and Time using PC's Date and Time:** This section includes a "Computer Time/Date" text input field set to "Thursday, June 18, 2008 11:08:06 PM".
- Set Date and Time manually:** This section includes fields for "Date" (Year: 2008, Month: Jun, Day: 18) and "Time" (Hour: 02 (0-23), Minute: 05 (0-59), Second: 44 (0-59)).

At the bottom right of the page, there are three circular buttons: "HELP", "APPLY", and "CANCEL".

- **Password Settings**

Use this menu to restrict access based on a password. By default, the password is “smcadmin”.

**NOTE:** Passwords can contain up to 9 alphanumeric characters and are case sensitive.

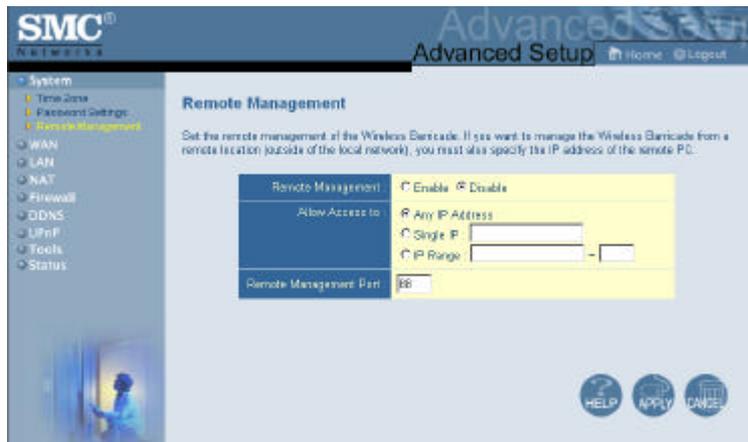


- **Remote Management**

This feature allows a remote PC to configure, manage, and monitor the Barricade using a standard web browser.

1. Check “Enable”
2. Set the “Allow Access” policy to one of the 2 options:
  - **Any IP Address** – you can remotely manage the Barricade from any IP address on the WAN side.
  - **Single IP** – you can only remotely managed the Barricade from this IP address on the WAN side.
  - **IP Range** – you can remotely manage the Barricade from any IP address in this range.
3. Set the Remote Management Port to the port through which you want to remotely access the Barricade.

**NOTE:** Do not set this for a port that is already in use. For example, if you are running a web server on port 80, you can’t set the remote admin port to 80.



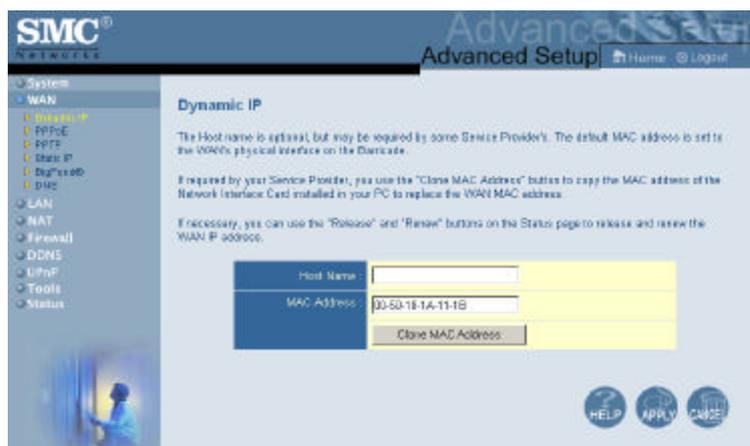
### 6.2.2 | WAN

Specify the WAN connection type provided by your Internet Service Provider, then click “More Configuration” to enter detailed configuration parameters for the selected connection type.

- **Dynamic IP**

The Host Name is optional, but it may be required by some ISPs. The default MAC address is set to the WAN’s physical interface on the Barricade. Use this address when registering for Internet service, and do not change it unless required by your ISP. If your ISP used the MAC address of an Ethernet card as an identifier when first setting up your broadband account, connect only the PC with the registered MAC address to the Barricade and click the “Clone MAC Address” button. This will replace the current Barricade MAC address with the already registered Ethernet card MAC address.

If you are unsure of which PC did the broadband technician originally set up, call your ISP and request they register a new MAC address for your account. Register using the Barricade’s MAC address.



- **PPPoE**

Enter the PPPoE user name and password assigned by your Service Provider. The Service Name is normally optional, but may be required by some service providers. The MTU (Maximum Transmission Unit) governs the maximum size of the data packets. Leave this on the default value (1492) unless you have a particular reason to change it.

Enter a Maximum Idle Time (in minutes) to define a maximum period of time for which the Internet connection is maintained during inactivity. If the connection is inactive for longer than the Maximum Idle Time, it will be dropped. Enable the Auto-reconnect option to automatically re-establish the connection when an application attempts to access the Internet again.

The screenshot shows the 'Advanced Setup' window for PPPoE configuration. The left sidebar lists various system settings, with 'WAN' expanded to show 'PPPoE' selected. The main content area is titled 'PPPoE' and contains a form with the following fields:

User Name:	<input type="text"/>
Password:	<input type="password"/>
Please retype your password:	<input type="password"/>
Service Name:	<input type="text"/>
MTU:	1492 (1440=MTU Value-1600)
Maximum Idle Time (in minutes):	10 (0=UNLESS)
	<input checked="" type="checkbox"/> Auto-reconnect

At the bottom right of the form area are three buttons: HELP, APPLY, and CANCEL.

- **PPTP**

Point-to-Point Tunneling Protocol (PPTP) allows the secure remote access over the Internet by simply dialing in a local point provided by an ISP. Using the above screen allows client PCs to establish a normal PPTP session and provides hassle-free configuration of the PPTP client on each client PC.

The screenshot shows the 'Advanced Setup' window for PPTP configuration. The left sidebar lists various system settings, with 'WAN' expanded to show 'PPTP' selected. The main content area is titled 'PPTP' and contains a form with the following fields:

PPTP Account:	<input type="text"/>
PPTP Password:	<input type="password"/>
Please retype your password:	<input type="password"/>
Server IP Address:	0.0.0.0
My IP Address:	0.0.0.0
My Subnet Mask:	255.255.255.0
Connection ID:	<input type="text"/>
MTU:	1492 (1400-1450)
Maximum Idle Time (in minutes):	10
	<input checked="" type="checkbox"/> Auto-reconnect

At the bottom right of the form area are three buttons: HELP, APPLY, and CANCEL.

- **Static IP Address**

If your Internet Service Provider has assigned a fixed IP address to you, enter the assigned address and subnet mask for the Barricade, and then enter the gateway address of your ISP. You may need a fixed address if you want to provide Internet services, such as a web server, or FTP server.

The screenshot shows the 'Static IP' configuration page in the SMC Advanced Setup utility. The page title is 'Static IP' and it includes a note: 'If your Service Provider has assigned a fixed IP address, enter all of the information below.' The configuration fields are as follows:

IP Address	0.0.0.0
Subnet Mask	255.255.255.0
Gateway Address	0.0.0.0
Primary DNS Server	0.0.0.0
Secondary DNS Server	0.0.0.0

At the bottom right of the page, there are three buttons: HELP, APPLY, and CANCEL.

- **BigPond®**

Use this section to configure the built-in client.

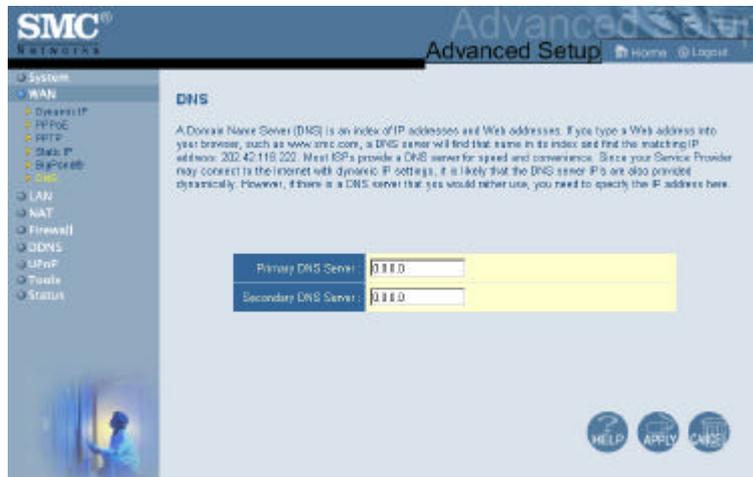
The screenshot shows the 'BigPond' configuration page in the SMC Advanced Setup utility. The page title is 'BigPond' and it includes a note: 'In this section you can configure the built-in client for the BigPond internet service available in Australia.' The configuration fields are as follows:

User Name	
Password	
Please retype your password	
Authentication Service Name	(optional)

At the bottom right of the page, there are three buttons: HELP, APPLY, and CANCEL.

- **DNS**

Domain Name Servers map numerical IP addresses to the equivalent domain name (e.g., www.smc.com). Your ISP should provide the IP address of one or more domain name servers. Enter those addresses on this screen.



### 6.2.3 | LAN

From this section, you can configure the TCP/IP configuration for the Barricade LAN interface and DHCP clients.

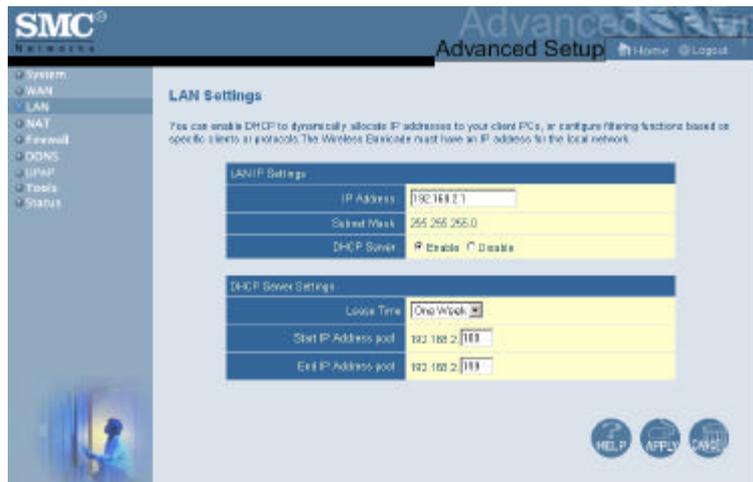
- **LAN IP**

Use the LAN menu to configure the LAN IP address for the Barricade and to enable the DHCP server for dynamic client addresses allocation. Set a period for the lease time if required. For home networks, this may be set to “Forever”, which means there is no time limit on the IP address lease.

- **IP Address Pool**

A dynamic IP start address may be specified by the user, e.g. 192.168.2.100 (default value). In this example, the IP addresses run from 192.168.2.100 to 192.168.2.199 which will be part of the dynamic IP address pool. IP addresses from 192.168.2.2 to 192.168.2.99, and 192.168.2.200 to 192.168.2.254 will be available as static IP addresses.

**NOTE:** Do not include the address of the Barricade in the DHCP client address pool.



## 6.2.4 | NAT

From this section, you can configure the Virtual Server and Special Application features that provide control over the port openings in the router's firewall. This section can be used to support several Internet based applications such as VPN connections.

- **Virtual Server**

You can configure the Barricade as a virtual server. Remote users accessing services such as the Web or FTP at your local site via public IP addresses can be automatically redirected to local servers configured with private IP addresses. To provide the most flexibility, the Barricade can support either a single port (80) or a range of ports (80-100). The traffic type can also be defined as TCP, UDP, or both (UDP and TCP).

Some of the more common ports include: HTTP: 80, FTP: 21, Telnet: 23 and POP3: 110.



- **Special Applications**

Some applications, such as Internet gaming, videoconferencing, Internet telephony require multiple connections. These applications cannot work with Network Address Translation (NAT) enabled. If you need to run applications that require multiple connections, use the following screen to specify the additional public ports to be opened for each application.

Specify the port or port range normally associated with an application in the “Trigger Port” field, select the protocol type as TCP or UDP, and then enter the public ports and data type associated with the trigger port to open them for inbound traffic.

The maximum range that you can use for all NAT ports is 0 to 65535.

**Special Applications**

Some applications require multiple connections, such as Internet gaming, videoconferencing, Internet telephony and others. These applications cannot work when Network Address Translation (NAT) is enabled. If you need to run applications that require multiple connections, specify the port normally associated with an application in the "Trigger Port" field, select the protocol type as TCP or UDP. Then enter the public ports associated with the trigger port to open them for inbound traffic.

Trigger application:

ID	Trigger Ports	Trigger Type	Incoming Ports	Data Type	Enable
1	<input type="text"/>	<input type="text" value="TCP"/>	<input type="text"/>	<input type="text" value="TCP"/>	<input type="checkbox"/>
2	<input type="text"/>	<input type="text" value="TCP"/>	<input type="text"/>	<input type="text" value="TCP"/>	<input type="checkbox"/>
3	<input type="text"/>	<input type="text" value="TCP"/>	<input type="text"/>	<input type="text" value="TCP"/>	<input type="checkbox"/>
4	<input type="text"/>	<input type="text" value="TCP"/>	<input type="text"/>	<input type="text" value="TCP"/>	<input type="checkbox"/>
5	<input type="text"/>	<input type="text" value="TCP"/>	<input type="text"/>	<input type="text" value="TCP"/>	<input type="checkbox"/>
6	<input type="text"/>	<input type="text" value="TCP"/>	<input type="text"/>	<input type="text" value="TCP"/>	<input type="checkbox"/>
7	<input type="text"/>	<input type="text" value="TCP"/>	<input type="text"/>	<input type="text" value="TCP"/>	<input type="checkbox"/>
8	<input type="text"/>	<input type="text" value="TCP"/>	<input type="text"/>	<input type="text" value="TCP"/>	<input type="checkbox"/>
9	<input type="text"/>	<input type="text" value="TCP"/>	<input type="text"/>	<input type="text" value="TCP"/>	<input type="checkbox"/>
10	<input type="text"/>	<input type="text" value="TCP"/>	<input type="text"/>	<input type="text" value="TCP"/>	<input type="checkbox"/>

### 6.2.5 | Firewall

The firewall does not significantly affect system performance, so we advise enabling it to protect your network users. To enable the Stateful Packet Inspection (SPI) firewall, click on “Advanced” under the Firewall section and select “Enable” and click the “Apply” button.

The Barricade SPI firewall can provide the access control of connected client PCs, block common hacker attacks, including IP Spoofing, Land Attack, Ping of Death, IP with zero length, Smurf Attack, UDP Port Loopback, Snork Attack, TCP Null Scan, and TCP SYN Flooding.

- **Parental Control**

Using this option allows you to specify different privileges for the client PCs. This is an excellent tool to control a child’s access to specific content and/or general internet access for a specific time and/or date.

**To setup a Parental Control Rule:** Click on “Click here to configure a new Parental Control Rule” link. This will take you to the Rule Setup section.

Parental Control :  Enable  Disable

Create Rule : [Click here to configure a new Parental Control Rule](#)

Rule Description	<input type="text"/>	
DHCP menu option	<input type="radio"/> Computer Name: <input type="text" value="DHCP client list"/>	
	<input checked="" type="radio"/> Single IP: 192.168.2. <input type="text" value="0"/>	
	<input type="radio"/> IP Range: 192.168.2. <input type="text"/> - <input type="text"/>	
Schedule for Rule	<input checked="" type="radio"/> Rule is Active all the time <input type="radio"/> Set Time and Date Rule is Active	

Pre-Defined Blocking Options		
Block	Block Information	Enable
Any Internet Access	HTTP, TCP Port 80, 3128, 8080, 8080, 8081	<input type="checkbox"/>
Specific Web Sites	Set Web Sites and Keywords you want to block	<input type="checkbox"/>
Secure Web Sites	HTTPS, TCP Port 443	<input type="checkbox"/>
E-mail Sending	SMTP, TCP Port 25	<input type="checkbox"/>
E-mail Receiving	POP3, TCP Port 110	<input type="checkbox"/>
Newsgroup Access	NNTP, TCP Port 119	<input type="checkbox"/>
FTP Access	FTP, TCP Port 20,21	<input type="checkbox"/>

Custom Blocking Options			
Block	Port Types	Enable	
Ports: <input type="text"/> - <input type="text"/>	TCP Traffic	<input type="checkbox"/>	
Ports: <input type="text"/> - <input type="text"/>	TCP Traffic	<input type="checkbox"/>	
Ports: <input type="text"/> - <input type="text"/>	TCP Traffic	<input type="checkbox"/>	
Ports: <input type="text"/> - <input type="text"/>	TCP Traffic	<input type="checkbox"/>	

**Rule Description:** Set a Rule Description so you know what this rule applies to. Ex. Jon's Internet Access.

**DHCP Option:** Apply this rule to a specific IP Address or range of IP's on your network. You can use the DHCP client list to quickly add IP addresses that were provided via DHCP connections.

**Schedule Rule:** Set the time and date this rule is active. You can have this rule be active all the time or configure it to only be active on set days and times.

You can pick the dates you want this rule to be active by checking the box next to the date.

For time, set the start time you want the Rule to active, and then set how long you want the rule to run.

Schedule for Rule :	<input type="radio"/> Rule is Active all the time <input checked="" type="radio"/> Set Time and Date Rule is Active	
Rule is Active on :	<input type="checkbox"/> Sunday <input type="checkbox"/> Monday <input type="checkbox"/> Tuesday <input type="checkbox"/> Wednesday <input type="checkbox"/> Thursday <input type="checkbox"/> Friday <input type="checkbox"/> Saturday	
Rule Starts at :	<input type="text"/> : <input type="text"/> AM	
Rule is Active for :	<input type="text"/> hours <input type="text"/> minutes	

- **MAC Filtering**

The MAC Filtering feature of the Barricade allows you to control access to your network based on the MAC (Media Access Control) Address of the client machine. This ID is unique to each network adapter.

You can configure that MAC address to be allowed to access your network, or to deny access to the network.

This tool will also allow you to MAP DHCP IP Addresses to certain MAC Addresses. This tool works well in conjunction with the Parental Control rules to provide maximum control.

**SMC** Advanced Setup

System  
 DNS  
 LAN  
 NAT  
 Firewall  
 Parental Control  
**MAC Filtering**  
 Advanced  
 DNS  
 Setup  
 Tools  
 Status

**MAC Filtering Table**

This section helps provide MAC Filter configuration. When enabled, only MAC addresses configured will have access to your network. All other client devices will get denied access. This security feature can support up to 32 devices and applies to clients.

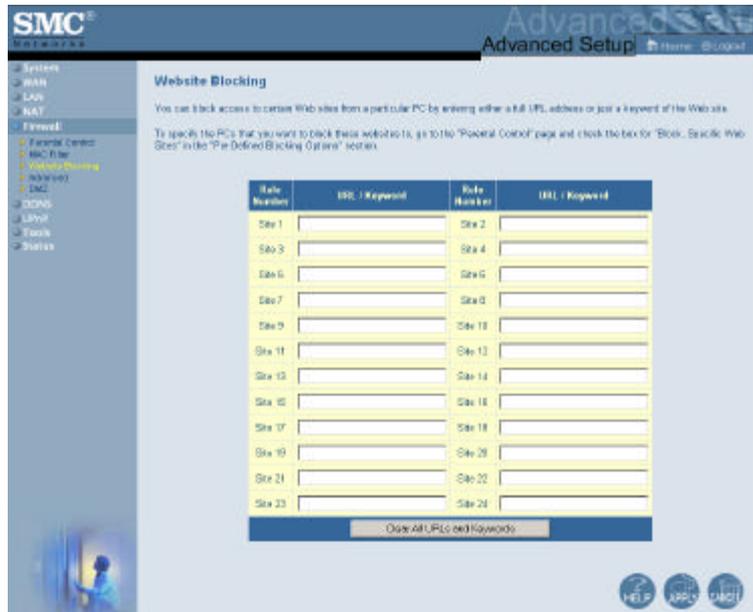
MAC Address Control:  Enable  Disable

DHCP Client List:

ID	Computer Name	IP Address	MAC Address	Allow	Deny
1	<input type="text"/>	192.168.2. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	<input type="text"/>	192.168.2. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	<input type="text"/>	192.168.2. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	<input type="text"/>	192.168.2. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	<input type="text"/>	192.168.2. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	<input type="text"/>	192.168.2. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	<input type="text"/>	192.168.2. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	<input type="text"/>	192.168.2. <input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

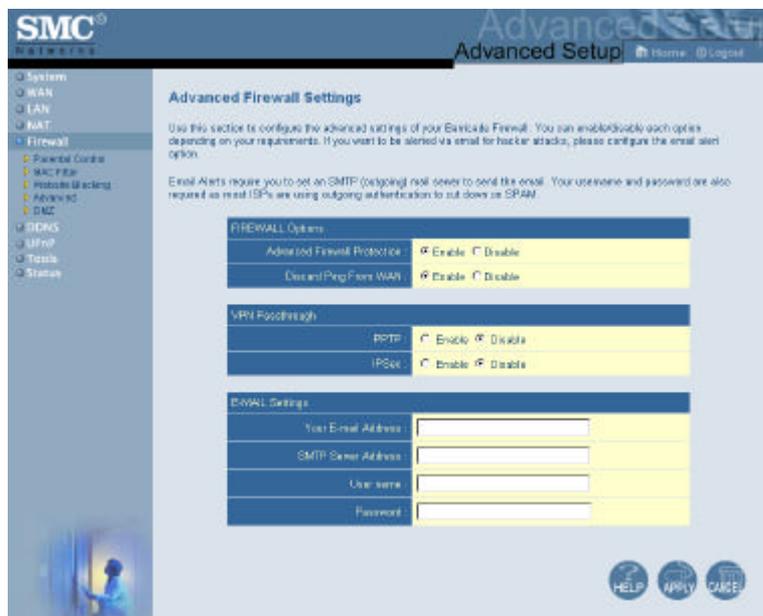
- **Website Blocking**

The Website Blocking feature of the Barricade limits access to website domains (i.e. [www.somesite.com](http://www.somesite.com)) or by using keywords which will block any websites that have that keyword in the URL. This feature is an ideal way to protect your family members from questionable content on the Internet



- **Advanced Settings**

This section allows you to configure several advanced features for the Barricade Firewall.



- The following features can be set on this page:
  - **Advanced Firewall Protection:** Enable/Disable SPI section of firewall.
  - **Discard Ping from WAN:** When this feature is enabled, any host on the WAN cannot ping this product. This helps avoid unnecessary attacks from the WAN side because your connection is invisible. It is recommended that you enable this option for security.
  - **VPN Pass-through:** Enable this option if you are using a PPTP, L2TP or IPsec VPN connection.
  - **Email Alert:** Configure this option if you want the Barricade to email when hackers attempt to attack your network to a specific email address. You will need to configure your email address, username and password, as well as a SMTP server to send the mail through.
  
- **DMZ (Demilitarized Zone)**  
 If you have a client PC that cannot run an Internet application properly from behind the firewall, then you can open the client PC up to unrestricted two-way Internet access. Enter the LAN IP address of a DMZ host and click "Enable".

**NOTE:** Adding a client to the DMZ (Demilitarized Zone) may expose your local network to a variety of security risks. Only use this option as a last resort.

### 6.2.6 | DDNS (Dynamic DNS)

The Barricade has an integrated Dynamic DNS feature that provides users on the Internet a method to tie their domain name(s) to computers or servers. DDNS allows your domain name to follow your IP address automatically by having your DNS records changed when your IP address changes.

The section also has a "Server Configuration" section that automatically opens the port options checked in the Virtual Server section. Simply enter in the IP Address of your server, such as a web server, and then click on the port option HTTP Port 80 so users can access your server from the WAN connection (Internet).

The screenshot shows the SMC Advanced Setup web interface. The left sidebar contains a navigation menu with options: System, WAN, LAN, NAT, Firewall, DDNS (selected), UPS, Tools, and Status. The main content area is titled "DDNS (Dynamic DNS) Settings". Below the title, there is a description: "Dynamic DNS provides users on the Internet a method to tie their domain name(s) to computers or servers. DDNS allows your domain name to follow your IP address automatically by having your DNS records changed when your IP address changes." The "Dynamic DNS" section has a radio button for "Enable" which is selected. The "Service Configuration" section includes fields for "DNS Service" (set to "DynDNS.org(Dynamic)"), "Domain Name", "Username / Email", and "Password / Key". The "Server Configuration" section includes a "Server IP" field (set to "192.168.2") and a "Server Type" section with checkboxes for "Web Server: (HTTP) Port 80", "FTP Server: Port 20", "Email Server: (POP) Port 110", and "SMTP: Port 25". At the bottom right, there are "HELP", "APPLY", and "CANCEL" buttons.

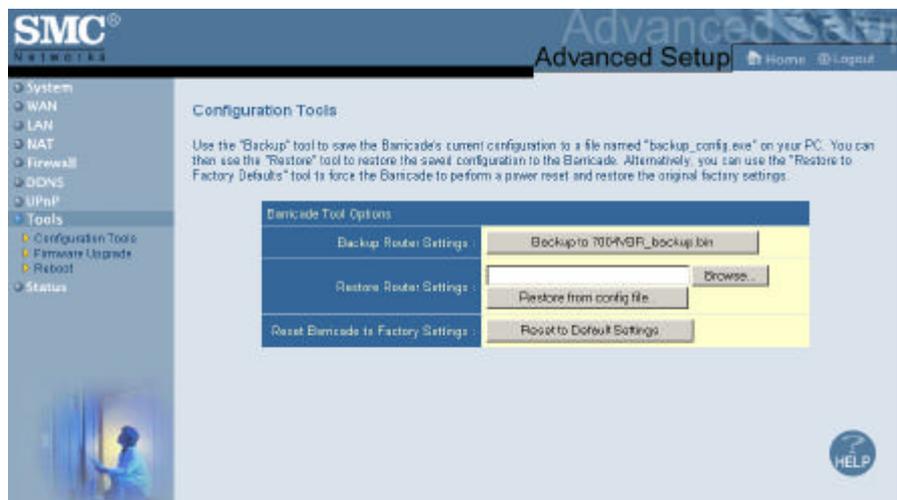
### 6.2.7 | UPnP

The Barricade supports UPnP (Universal Plug and Play), a networking architecture that provides compatibility amongst networking equipment. This feature allows an UPnP based operating system, like Windows XP to automatically communicate with the Barricade and open the required services when needed.

### 6.2.8 | Tools

Use the “Tools” menu to backup the current configuration, restore a previously saved configuration, restore factory settings, update firmware, and reset the Barricade.

- **Configuration Tools**
  - **Backup**  
Backup saves the Barricade’s configuration to a file.
  - **Restore**  
To restore settings from a saved backup configuration file.
  - **Restore to factory defaults**  
Restores the Barricade settings back to the factory default settings.



- **Firmware Upgrade**  
This tool permits easy downloading of the latest Firmware. Download the upgrade file from the SMC website ([www.smc.com](http://www.smc.com)) and save it to your hard drive. Browse for the file and then click “Apply”. Check the Status page Information section to confirm that the upgrade process was successful.
- **Reboot**  
Click “Apply” to reboot the Barricade. The reset will be complete when the power LED stops blinking.

**Note:** Some options, when enabled, will require you to reboot the router. You can use this option to perform that function.

### 6.2.9 | Status

The Status screen displays WAN/LAN connection status, firmware, and hardware version numbers, illegal attempts to access your network, as well as information on DHCP clients connected to your network.

The following items are included on this screen:

1. **INTERNET**  
Displays WAN connection type and status.
2. **GATEWAY**  
Displays system IP settings, as well as DHCP and Firewall status.
3. **INFORMATION**  
Displays the number of attached clients, the firmware versions, and the physical MAC address for each media interface, as well as the hardware version and serial number.
4. **Security Log**  
Displays illegal attempts to access your network.
  - a. Save Click on this button to save a security log file.
  - b. Clear Click on this button to delete the access log.
  - c. Refresh Click on this button to refresh the screen.
5. **DHCP Client Log**  
Displays information on all DHCP clients on your network.

For additional information on the 7004VBR, please visit [www.smc.com](http://www.smc.com).

## APPENDIX A | Troubleshooting

The information outlined in this section describes some useful steps for getting your computer and Barricade router online.

### A.1 | Verify you are connected to the Barricade Router

If you are unable to access the Barricade's web-based administration pages, then you may not be properly connected or configured. The screen shots in this section were taken on a Windows 2000 machine, but the same steps will apply to Windows 95/98/Me/XP.

To determine your TCP/IP configuration status, please follow the steps below:

1. Click [Start] then choose [Run]
2. Type "cmd" or "command" (without the quotes) to open a DOS prompt.
3. In the DOS window, type "ipconfig" and verify the information that is displayed.
4. If your computer is setup for DHCP, then your TCP/IP configuration should be similar to the information displayed:
  - IP Address: 192.168.2.X (x is number between 100 and 199)
  - Subnet: 255.255.255.0
  - Gateway: 192.168.2.1



```

C:\WINNT\System32\cmd.exe
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.
C:\>ipconfig

Windows 2000 IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : 
    IP Address . . . . . : 192.168.2.109
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.2.1

C:\>
  
```

If you have an IP address that starts with 169.254.XXX.XXX then see section A.2.

If you have another IP address configured, see section A.3.

### A.2 | I am getting an IP Address that starts with 169.254.XXX.XXX

If you are getting this IP Address, then you need to check that you are properly connected to the Barricade Router.

Confirm that you have a good link light on the Barricade's port to which this computer is connected. If not, please try another cable.

If you have a good link light, please open up a DOS window as described in section A.1 and type "ipconfig /renew" (without the quotes)

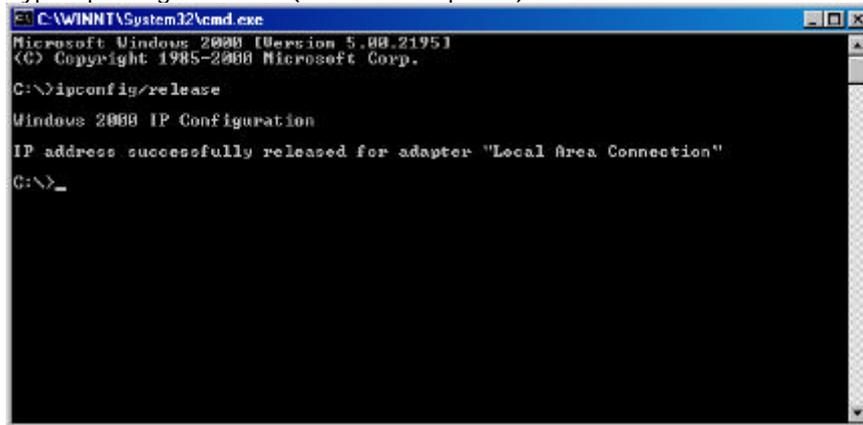
If you are still unable to get an IP Address from the Barricade, reinstall your network adapter. Please refer to your adapter manual for instructions.

### A.3 | I have another IP Address displayed

If you have another IP address listed, then the PC may not be configured for a DHCP connection. Please refer to **Chapter 4 | Configure your Computer** for information.

Once you have confirmed your computer is configured for DHCP, then please follow the steps below.

1. Open a DOS window as described above.
2. Type "ipconfig /release" (without the quotes)



```

C:\WINNT\System32\cmd.exe
Microsoft Windows [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

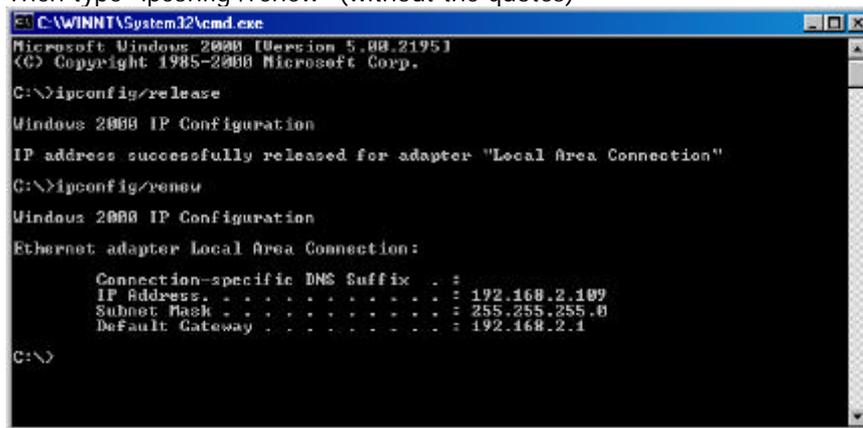
C:\>ipconfig/release

Windows 2000 IP Configuration

IP address successfully released for adapter "Local Area Connection"

C:\>_
  
```

3. Then type "ipconfig /renew" (without the quotes)



```

C:\WINNT\System32\cmd.exe
Microsoft Windows [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>ipconfig/release

Windows 2000 IP Configuration

IP address successfully released for adapter "Local Area Connection"

C:\>ipconfig/renew

Windows 2000 IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix . : 
    IP Address. . . . . : 192.168.2.109
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.2.1

C:\>
  
```

Once you are able to get a valid IP address from the Barricade Router, then you can now access the web-based Administration pages.

If you still are not getting an IP address from the Barricade, please reset the router as outlined in Chapter 2 and follow the steps outlined in this appendix again.

If you still cannot access the router once you have reset it, please contact SMC Technical Support.

#### **A.4 | I have a Dynamic IP connection and I can't get online**

Most cable companies use a Dynamic IP configuration to provide Internet access. If you have this type of connection, and are unable to get connected, please follow the steps outlined below:

1. Unplug the power from your Cable or DSL modem for 2 mins.
2. Confirm that your Barricade router is configured for a Dynamic IP configuration
3. Plug the power back into your Modem.
4. Wait for your Modem to connect to the network, and then click on the status page of the router to confirm that you are online.

The reason this process works is because certain broadband connections require a MAC address to gain network access. This MAC address can be changed by following the above process to re-set the approved MAC address to the MAC address of the Barricade router.

## APPENDIX B | Technical Specifications

Below is an outline of the Technical Specifications for the Barricade 4-Port Cable/DSL Broadband Router (SMC7004VBR)

### Standards

802.3, 802.3u

### WAN Port

1 - 10/100Mbps RJ45, with Auto MDI/MDIX

### LAN Port

4 - 10/100Mbps RJ45, with Auto MDI/MDIX

### Supported WAN type

Static IP  
Dynamic IP  
PPP over Ethernet  
PPTP  
Big Pond

### NAT

Maximum 253 Users

### Protocol

IP Protocol  
TCP/IP v4  
DHCP server  
Proxy DNS server

### Management and Configuration

Web-based

### Firewall

NAT firewall and SPI firewall

### VPN

VPN pass-through including  
PPTP/L2TP/IPsec

### User Authentication

Password protected browser-based UI  
PAP/CHAP/MSCHAP Authentication protocol supported

### Upgrade method

Web-based

### LEDs

Power  
WAN  
Link  
Activity

### Input Power

DC 5V 2A

### Operating Temperature

0°~40°C

### Humidity

10%~90% non-condensing

### Storage Temperature

-20o~70oC

### Humidity

0~95% non-condensing

### Compliance

FCC  
CE  
UL

### Dimensions

5.2 x 3.4 x 1.3"

### Weight

0.42 lbs

# APPENDIX C | Warranty

## APPENDIX D | Compliances

### FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against radio interference in a commercial environment. This equipment can generate, use and radiate radio frequency energy and, if not installed and used in accordance with the instructions in this manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures are necessary to correct the interference.

### CE Declaration of Conformity

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022/A1 Class B, and EN 50082-1. This meets the essential protection requirements of the European Council Directive 89/336/EEC on the approximation of the laws of the member states relation to electromagnetic compatibility.

### Industry Canada - Class B

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

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques," NMB-003 édictée par le ministère des Communications.

## **APPENDIX E | Technical Support**

### **PHONE**

From U.S.A. and Canada (24 hours a day, 7 days a week)

- (800) SMC-4-YOU
- (949) 679-8000
- Fax: (949) 679-1481

From Europe (8:00 AM - 5:30 PM UK Time)

- 44 (0) 118 974 8700
- Fax: 44 (0) 118 974 8701

### **INTERNET**

E-mail addresses:

- [techsupport@smc.com](mailto:techsupport@smc.com)
- [european.techsupport@smc-europe.com](mailto:european.techsupport@smc-europe.com)

Driver updates:

- [http://www.smc.com/index.cfm?action=tech\\_support\\_drivers\\_downloads](http://www.smc.com/index.cfm?action=tech_support_drivers_downloads)

World Wide Web:

- <http://www.smc.com/>
- <http://www.smc-europe.com/>

### FOR TECHNICAL SUPPORT, CALL:

From U.S.A. and Canada (24 hours a day, 7 days a week)  
(800) SMC-4-YOU; Ph: (949) 679-8000; Fax: (949) 679-1481  
From Europe (8:00 AM - 5:30 PM UK Time)  
44 (0) 118 974 8700; Fax: 44 (0) 118 974 8701

### INTERNET

#### E-mail addresses:

- techsupport@smc.com
- european.techsupport@smc-europe.com

#### Driver updates:

- [http://www.smc.com/index.cfm?action=tech\\_support\\_drivers\\_downloads](http://www.smc.com/index.cfm?action=tech_support_drivers_downloads)

#### World Wide Web:

- <http://www.smc.com/>
- <http://www.smc-europe.com/>

<b>U.S.A. and Canada:</b>	<b>(800) SMC-4-YOU</b>	<b>Fax (949) 679-1481</b>
<b>Spain:</b>	<b>34-93-477-4935</b>	<b>Fax 34-93-477-3774</b>
<b>UK:</b>	<b>44 (0) 118 974 8700</b>	<b>Fax 44 (0) 118 974 8701</b>
<b>France:</b>	<b>33 (0) 41 38 32 32</b>	<b>Fax 33 (0) 41 38 01 58</b>
<b>Italy:</b>	<b>39 02 739 12 33</b>	<b>Fax 39 02 739 14 17</b>
<b>Benelux:</b>	<b>31 33 455 72 88</b>	<b>Fax 31 33 455 73 30</b>
<b>Central Europe:</b>	<b>49 (0) 89 92861-0</b>	<b>Fax 49 (0) 89 92861-230</b>
<b>Switzerland:</b>	<b>41 (0) 1 9409971</b>	<b>Fax 41 (0) 1 9409972</b>
<b>Nordic:</b>	<b>46 (0) 868 70700</b>	<b>Fax 46 (0) 887 62 62</b>
<b>Northern Europe:</b>	<b>44 (0) 118 974 8700</b>	<b>Fax 44 (0) 118 974 8701</b>
<b>Eastern Europe:</b>	<b>34 -93-477-4920</b>	<b>Fax 34 93 477 3774</b>
<b>Sub Saharan Africa:</b>	<b>27-11 314 1133</b>	<b>Fax 27-11 314 9133</b>
<b>North Africa:</b>	<b>34 93 477 4920</b>	<b>Fax 34 93 477 3774</b>
<b>Russia:</b>	<b>7 (095) 290 29 96</b>	<b>Fax 7 (095) 290 29 96</b>
<b>PRC:</b>	<b>86-10-6235-4958</b>	<b>Fax 86-10-6235-4962</b>
<b>Taiwan:</b>	<b>886-2-2659-9669</b>	<b>Fax 886-2-2659-9666</b>
<b>Asia Pacific:</b>	<b>(65) 238 6556</b>	<b>Fax (65) 238 6466</b>
<b>Korea:</b>	<b>82-2-553-0860</b>	<b>Fax 82-2-553-7202</b>
<b>Japan:</b>	<b>81-3-5645-5715</b>	<b>Fax 81-3-5645-5716</b>
<b>Australia:</b>	<b>61-2-8875-7887</b>	<b>Fax 61-2-8875-7777</b>
<b>India:</b>	<b>91-22-8204437</b>	<b>Fax 91-22-8204443</b>

If you are looking for further contact information, please visit [www.smc.com](http://www.smc.com) or [www.smc-europe.com](http://www.smc-europe.com)