

CHAPTER 3

CONFIGURING CLIENT PCs

TCP/IP Configuration

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

Gateway IP Address: 192.168.2.1
Subnet Mask: 255.255.255.0

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

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

All PCs connected to the Barricade Plus must be set to the same IP subnet as the Barricade Plus. The default subnet address of the Barricade Plus is 192.168.2.X (where X means 2–254) and the subnet mask is 255.255.255.0. You can set the IP address for client PCs either by automatically obtaining an IP address from the Barricade Plus' DHCP service or by manual configuration. See "Setting TCP/IP to Work with the Barricade Plus" on page 5-5.

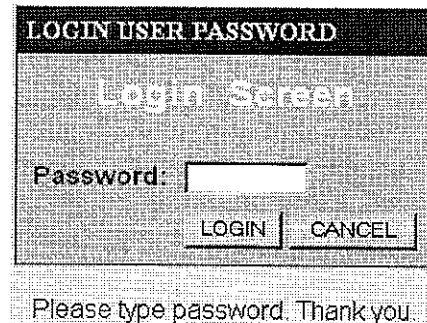
TCP/IP CONFIGURATION

CHAPTER 4

CONFIGURING THE BARRICADE PLUS

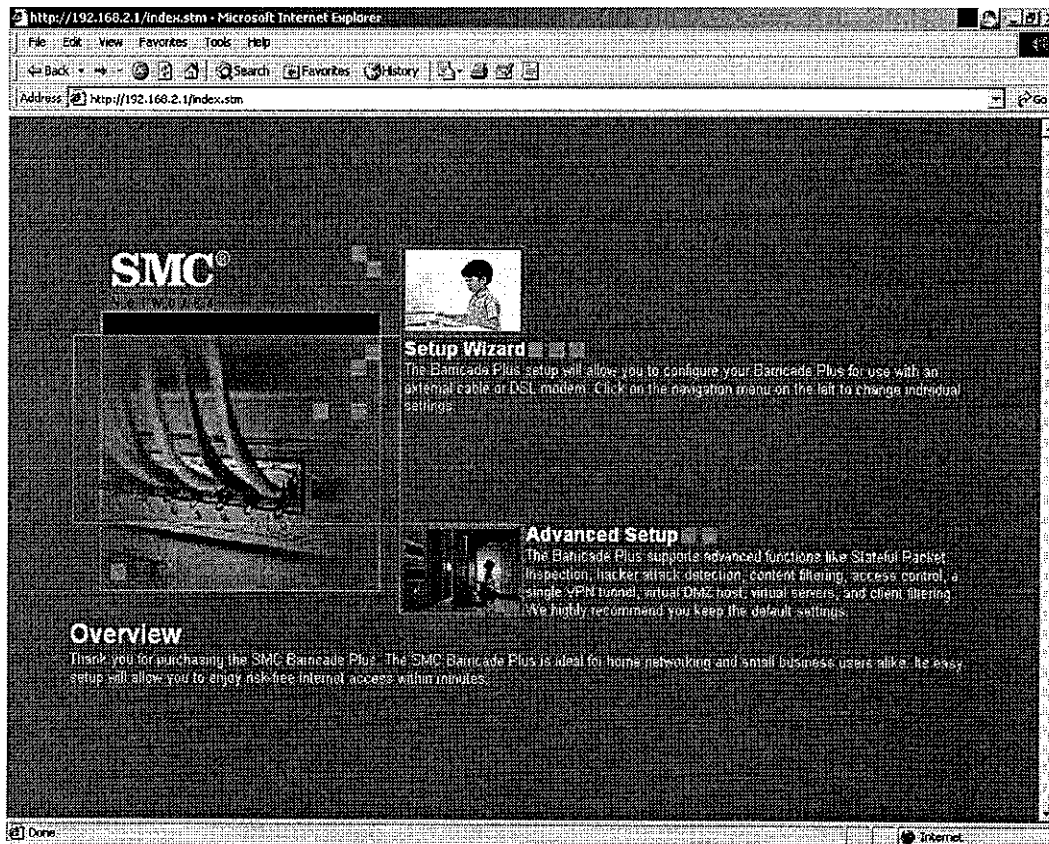
After you have configured TCP/IP on a client computer, you can use a Web browser to configure the Barricade™ Plus Wireless Firewall Router. The Barricade Plus can be configured by any Java-supported browser including Internet Explorer 4.0 or above, or Netscape Navigator 4.0 or above. Using the Web management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

To access the Barricade Plus' management interface, enter the IP address of the Barricade Plus in your Web browser `http://192.168.2.1`. Then login the Barricade Plus system with no password (by default, there is no password).



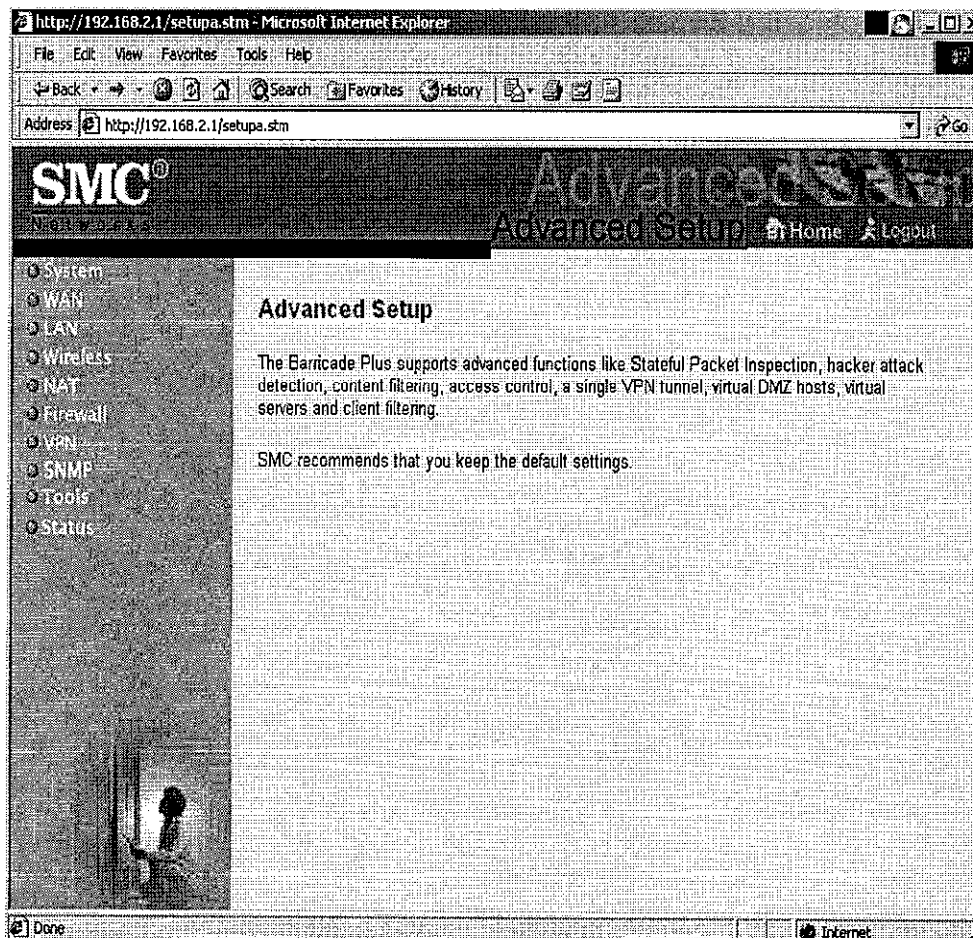
Note: For some browsers it may be necessary to include “:88” after the management IP address. For example,
`http://192.168.2.1:88`

The home page displays the “Setup Wizard” and “Advanced Setup” options. (Please refer to Quick Installation Guide for basic configurations.)



Advanced Setup Menu

Selecting the “Advanced Setup” displays the main menu on the left-hand side of the screen and descriptive information on the right-hand side. The Main Menu links are used to navigate to other menus that display configuration parameters and statistics.



Navigating the Web Browser Interface

The Barricade Plus' advanced management interface includes ten key menus – System, WAN, LAN, Wireless, NAT, Firewall, VPN, SNMP, Tools, and Status. The System menu provides general information on the current settings and how to configure the

Barricade Plus. The WAN, LAN, Wireless, NAT, Firewall, VPN and SNMP menus are used to configure the LAN, WAN and wireless interface, as well as other functions. While the Tools menu is used to backup the Barricade Plus, restore the factory settings, update the firmware, or reset the Barricade Plus. The Status menu is used to see the connection status for the Barricade Plus' WAN/LAN interfaces, firmware, and hardware version numbers, any illegal attempts to access your network, as well as information on all DHCP client PCs currently connected on your network.

Main Menu

Using the Web management interface, you can define system parameters, manage and control the Barricade Plus and its ports, or monitor network conditions. The following table briefly describes the selections available from this "Advanced Setup" screen.

Menu	Description
<i>System Menu</i>	Configures TCP/IP settings and client services.
Time Zone	Sets the local time zone.
Password Settings	Sets the password for administrator access.
Remote Management	Sets the IP address for remote management station.
<i>WAN Menu</i>	• Specifies the Internet connection type: (1) Dynamic IP host configuration and the physical MAC address of each media interface, (2) PPPoE configuration, or (3) Static IP and gateway address. • Specifies DNS servers to use for domain name resolution.
<i>LAN Menu</i>	Sets the TCP/IP configuration of the Barricade Plus' LAN interface and all DHCP clients.
<i>Wireless</i>	Configures the radio frequency, domain, and encryption for wireless communications.

Menu	Description
<i>NAT Menu</i>	Configures system IP settings, including: • Address Mapping • Virtual Server
<i>Firewall Menu</i>	Configures a variety of packet filtering and specialized functions, including: • Access Control • URL Blocking • Schedule Rule • Intusion Detection • DMZ (Demilitarized Zone)
<i>VPN Menu</i>	Provides one Virtual Private Network tunnel for secure Internet communication.
IPsec	Configures inbound and outbound Security Association (SA).
PPTP Client	Authenticates a PPTP tunnel to the destination host.
PPTP Server	Authorizes remote users using the PPTP tunneling protocol.
<i>SNMP Menu</i>	Displays and modifies parameters for the Simple Network Management Protocol (SNMP).
Community	Configures the community strings authorized for management access. Up to 5 community names may be entered.
Trap	Specify management stations that will receive authentication failure messages or other unsolicited message from the SNMP agent. Up to 5 trap managers may be entered.
<i>Tools Menu</i>	Contains options to reset the system, restore configuration settings, or update system firmware.
Configuration Tools	Allows you to backup the system configurations, restore the saved backup configuration file, or restore all configuration settings to the factory defaults.
Firmware Upgrade	Upgrades the system with the latest firmware obtained from SMC's website at www.smc.com

Menu	Description
Reset	Reboots the system and retains all of your configuration settings.
Status Menu	Displays WAN/LAN connection status, firmware and hardware version numbers, as well as information on all DHCP client PCs connected.
Help Button 	Contains information for product support, troubleshooting, and network terminology.
Home Button 	Go to the overview page of this Web management interface.
Logout Button 	Exit the Barricade Plus system.

Making Configuration Changes

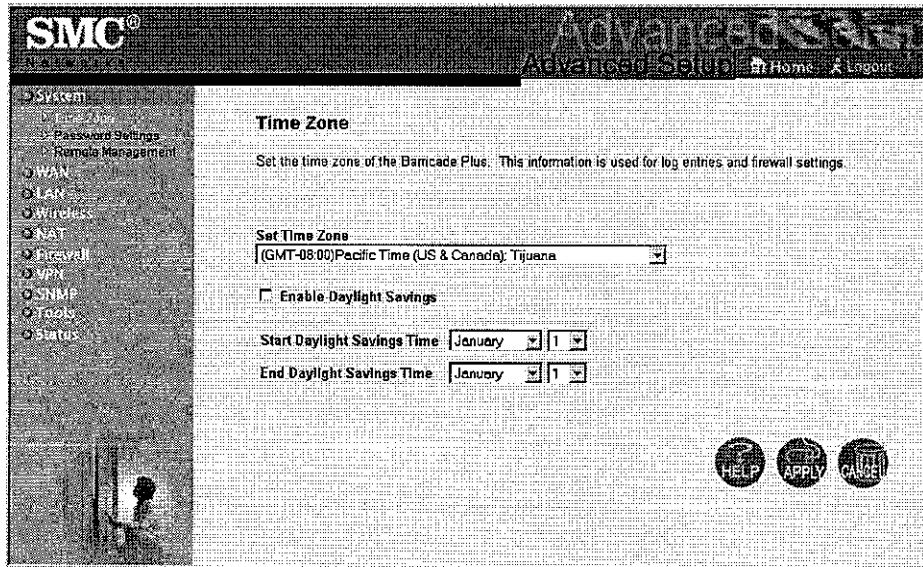
Configurable parameters have a dialog box or a drop-down list. Once a configuration change has been made on a page, be sure to click the “**APPLY**” button at the bottom of the page to confirm the new settings.



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.”

System Settings

Set Time Zone



The screenshot shows the SMC Barricade Plus Advanced Setup web interface. The left sidebar contains a navigation menu with the following items: System, LAN, Wireless, NAT, Firewall, VPN, SNMP, Tools, and Status. The main content area is titled "Time Zone" and includes the following text: "Set the time zone of the Barricade Plus. This information is used for log entries and firewall settings." Below this text is a "Set Time Zone" section with a dropdown menu currently set to "(GMT-08:00) Pacific Time (US & Canada): Tijuana". There is an unchecked checkbox labeled "Enable Daylight Savings". Below the checkbox are two rows of date pickers: "Start Daylight Savings Time" and "End Daylight Savings Time", both set to "January 1". At the bottom right of the form are three buttons: "HELP", "APPLY", and "CANCEL".

Set the time zone for the Barricade Plus. This information is used for log entries and client filtering.

Setting a Password

If this is your first time to access the Barricade Plus, you should define a new password, record it and put it in a safe place. From the “Advanced Setup” menu, select “System” and click on “Password Settings” and follow the instructions on the screen.

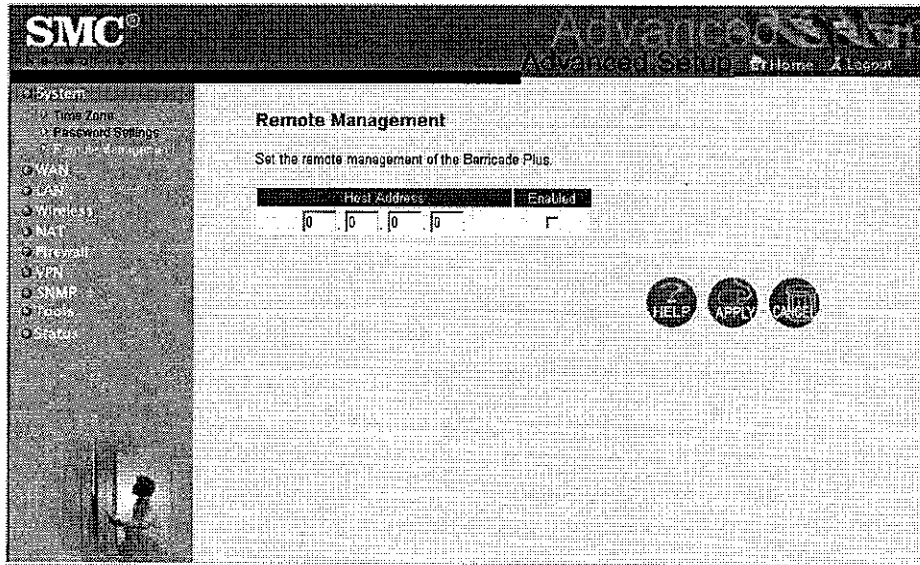
The screenshot shows the SMC Barricade Plus Advanced Setup interface. The top navigation bar includes 'Advanced Setup', 'Home', and 'Logout'. A left sidebar lists menu items: System, Time Zone, Remote Management, WAN, LAN, Wireless, NAT, Firewall, VPN, SNMP, Tools, and Status. The main content area is titled 'Password Settings' and contains the following text: 'Set a password to restrict management access to the Barricade Plus. If you want to manage the Barricade Plus from a remote location (outside of the local network), you must also specify the IP address of the remote PC. You can do this in the Firewall - Access Control menu.' Below this text are three input fields: 'Current Password:', 'New Password:', and 'Re-Enter Password for Verification:'. To the right of these fields is a label 'Idle Time Out: 10 Min (Idle Time = 0 : NO Time Out)'. At the bottom right of the form are three buttons: 'HELP', 'APPLY', and 'CANCEL'.

Use this menu to restrict management access based on a specific password. Anyone can access the “Setup Wizard,” “Advanced Setup” and Help menus, but you must enter a password to access the configuration options provided by the “Setup Wizard” and “Advanced Setup” menus. By default, there is no password. Please assign a password to the Barricade Plus as soon as possible, and store it in a safe place.

Passwords can contain from 3–12 alphanumeric characters, and are case sensitive.

Note: If your password is lost, or you cannot gain access to the management interface, press the Reset button on the front panel (holding it down for at least five seconds) to restore the factory defaults.

Remote Management



By default, management access is only available to users on your local network. However, you can also manage the Barricade Plus from a remote host by adding the IP address of an administrator to this screen.

Note: If you specify an IP address of 0.0.0.0, any host can manage the Barricade Plus. You can also manage the Barricade Plus from a remote host by typing “http://192.168.2.1:8080” in the “Address” field of your Web browser.

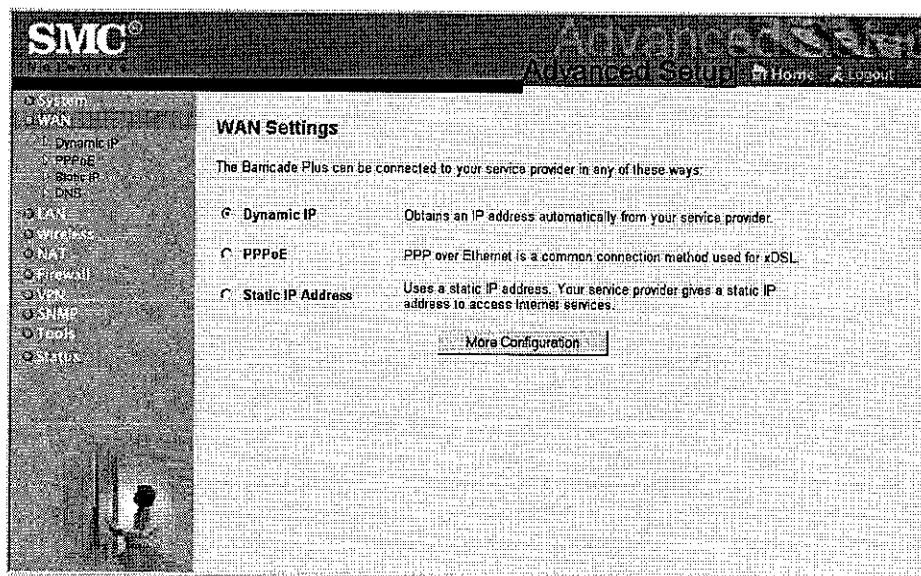
Networking and Client Services

You can use the “Setup Wizard” to change the required settings, or you can select the basic configuration items you need to change from the “Setup Wizard” screen. (Refer to Quick Installation Guide for configuring basic settings using the “1-2-3 Setup Wizard”.)

Use the “Advanced Setup” menu to configure the WAN connection options, the LAN interface (including TCP/IP parameters for the Barricade Plus’ gateway address, DHCP address pool for dynamic client address allocation), and other advanced services.

WAN Configuration

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



Specify one of the first three options to configure a WAN connection through the RJ-45 port (i.e., a connection to an xDSL modem or cable modem).

Dynamic IP Address – DHCP

The screenshot shows the SMC Barricade Plus Advanced Settings interface. The left sidebar contains a menu with options: System, WAN, LAN, Wireless, NAT, Firewall, VPN, SNMP, Tools, and Status. The 'WAN' option is selected. The main content area is titled 'Dynamic IP'. It contains a text box for 'Host Name' and a 'MAC Address' field with six input boxes containing the values 00, 70, 45, 00, 00, and 02. Below the MAC address field is a 'Clone Mac Address' button. At the bottom right of the main content area are three circular buttons labeled 'HELP', 'APPLY', and 'CANCEL'. The top of the interface features the SMC logo and the text 'Advanced Settings'.

Dynamic IP

The Host Name is optional, but may be required by some Service Provider's. The default MAC address is set to the WAN's physical interface on the Barricade Plus. If required by your Service Provider, you use the "Clone MAC Address" button to copy the MAC address of the Network Interface Card installed in your PC and replace the WAN MAC address with this MAC address. If necessary, you can use the "Release" and "Renew" buttons to release and renew the WAN IP address.

Host Name

MAC Address

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

PPP over Ethernet – PPPoE

The screenshot shows the SMC Advanced Setup web interface. On the left is a navigation menu with options: System, WAN, Dynamic IP, Static IP, DNS, LAN, Wireless, NAT, Firewall, VPN, SNMP, Tools, and Status. The main content area is titled 'PPPoE'. It contains a paragraph explaining that the user should enter the PPPoE user name and password assigned by their Service Provider, and that the Service Name is normally optional. It also mentions that a Maximum Idle Time can be defined to drop the connection if it is inactive for longer than the specified time. Below this, it states: 'If your Internet Service Provider requires the use of PPPoE, enter the information below.' A form titled 'Use PPPoE Authentication' contains the following fields: 'User Name' (text input), 'Password' (password input), 'Please retype your password' (password input), 'Service Name' (text input), 'MTU' (numeric input with a value of 1492 and a range of 1440 to 1492), 'Maximum Idle Time' (numeric input with a value of 10), and a checkbox for 'Auto-reconnect' which is checked. At the bottom right of the form are three buttons: 'HELP', 'APPLY', and 'CANCEL'.

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

Specify the value of MTU (Maximum Transmission Unit) for proper Internet access such as browsing web sites and using E-mail. (Default: 1492)

Enter the maximum idle time for the Barricade Plus (in seconds).

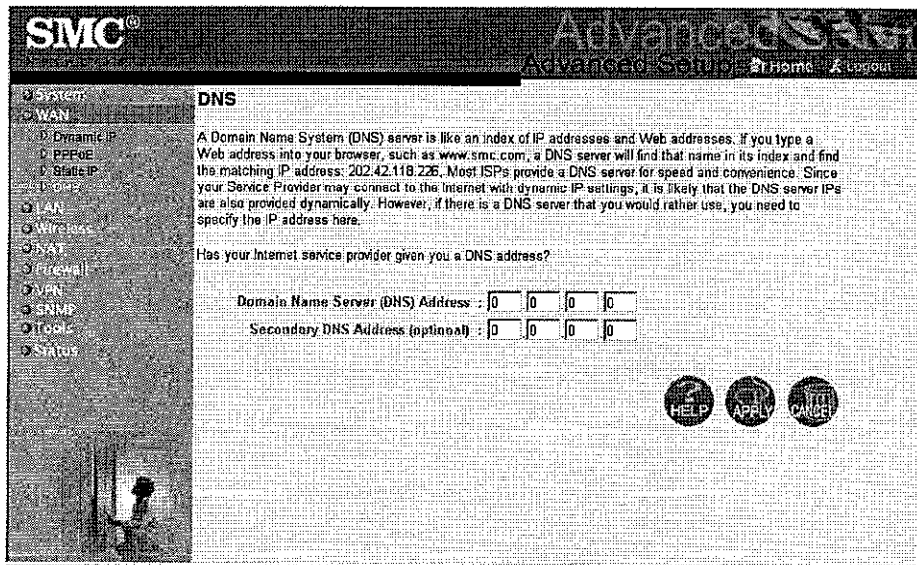
Static IP Address – Fixed IP

The screenshot shows the SMC Advanced Setup web interface. On the left is a navigation menu with options: System, WAN, Dynamic IP, PPPoE, DNS, LAN, Wireless, NAT, Firewall, VPN, SNMP, Tools, and Status. The main content area is titled "Static IP". It contains the following text: "If your Service Provider has assigned a fixed IP address, enter the assigned IP address, subnet mask and the gateway address provided." and "Has your Service Provider given you an IP address and Gateway address?". Below this text are three input fields, each with a label and a four-digit numeric input box: "IP address assigned by your Service Provider", "Subnet Mask", and "Service Provider Gateway Address". At the bottom right of the main content area are three circular buttons labeled "HELP", "APPLY", and "CANCEL".

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

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

DNS Configuration



The screenshot shows the SMC Advanced Setup web interface. On the left is a navigation menu with options: System, WAN, Dynamic IP, PPPoE, Static IP, LAN, Wireless, NAT, Firewall, VPN, SNMP, Tools, and Status. The main content area is titled 'DNS'. It contains an explanatory paragraph about DNS servers, a question 'Has your Internet service provider given you a DNS address?', and two input fields for 'Domain Name Server (DNS) Address' and 'Secondary DNS Address (optional)'. Each field is a four-part numeric input (0-255). At the bottom right are three buttons: HELP, APPLY, and CANCEL.

SMC® Advanced Setup

DNS

A Domain Name System (DNS) server is like an index of IP addresses and Web addresses. If you type a Web address into your browser, such as www.smc.com, a DNS server will find that name in its index and find the matching IP address: 202.42.118.226. Most ISPs provide a DNS server for speed and convenience. Since your Service Provider may connect to the Internet with dynamic IP settings, it is likely that the DNS server IPs are also provided dynamically. However, if there is a DNS server that you would rather use, you need to specify the IP address here.

Has your Internet service provider given you a DNS address?

Domain Name Server (DNS) Address :

Secondary DNS Address (optional) :

HELP **APPLY** **CANCEL**

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

LAN Gateway and DHCP Settings

SMC® Advanced Router

AP | VPN | Tools | Settings | Home | Logout

- System
- LAN
- Wireless
- NAT
- Firewall
- VPN
- SNMP
- Tools
- Status

LAN Settings

You can enable DHCP to dynamically allocate IP addresses to your client PCs, or configure filtering functions based on specific clients or protocols. The Barricade Plus must have an IP address for the local network.

LAN IP

IP Address: 192 . 168 . 2 . 1

IP Subnet Mask: 255.255.255.0

DHCP Server: ☒ Enabled ☐ Disabled

Lease Time: One Week

IP Address Pool

Start IP: 192 . 168 . 2 . 100

End IP: 192 . 168 . 2 . 199

Domain Name:

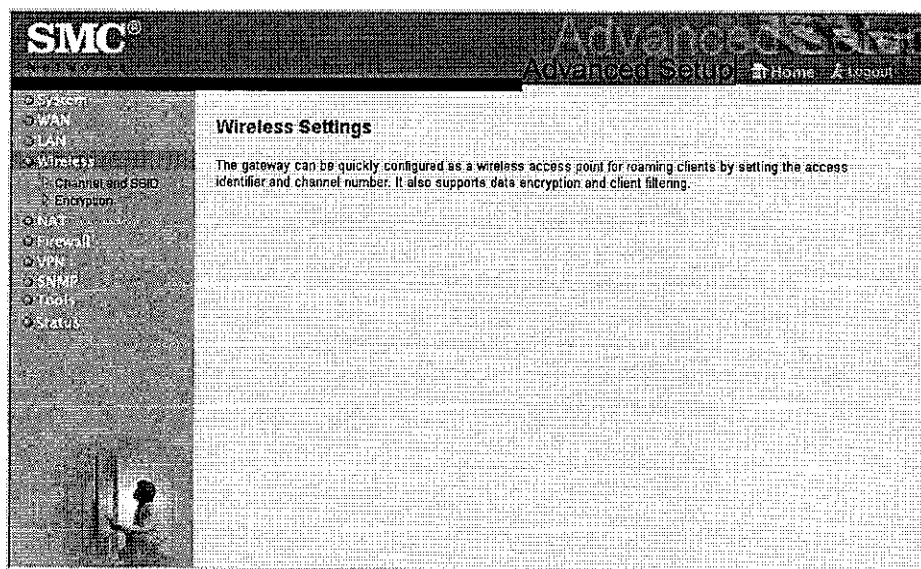
Configure the gateway address of the Barricade Plus. To dynamically assign the IP address for client PCs, enable the DHCP Server, set the lease time, and then specify the address range. Also remember to configure all of your client PCs for dynamic address allocation.

Valid IP addresses consist of four numbers, and are separated by periods. The first three fields are the network portion, and can be from 0–255, while the last field is the host portion and can be from 1–254. However, remember not to include the gateway address of the Barricade Plus in the client address pool. If you change the pool range, make sure the first three octets match the gateway's IP address, i.e., 192.168.2.xxx.

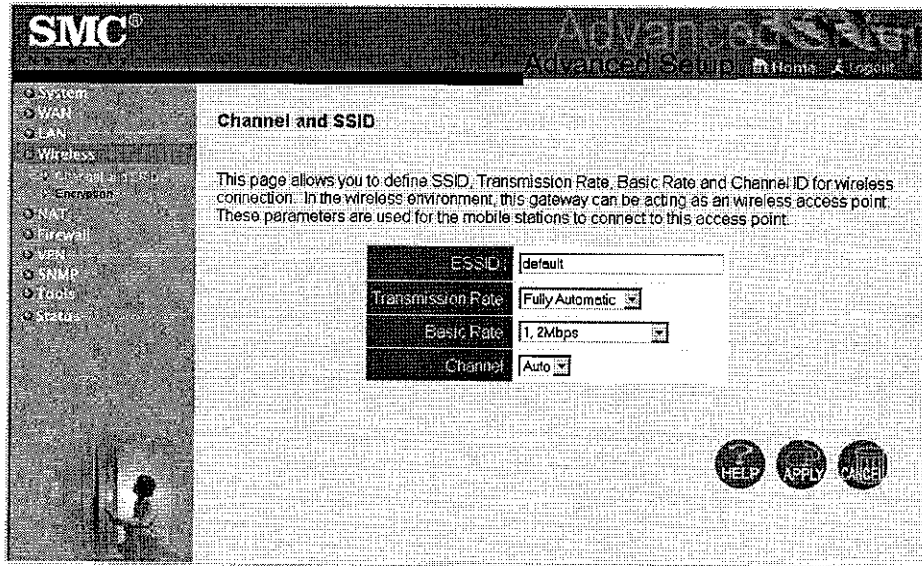
Note: Verify that your IP address pool is from 192.168.2.2 to 192.168.2.255, your subnet mask is 255.255.255.0 and your default gateway is 192.168.2.1.

Wireless Configuration

To configure the Barricade Plus as a wireless access point for wireless clients (either stationary or roaming), all you need to do is define the radio channel, the domain identifier, and encryption options.



Channel and SSID

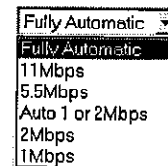


You must specify a common radio channel and SSID (Service Set ID) to be used by the Barricade Plus and all of your wireless clients. Be sure you configure all of your clients to the same values.

ESSID: The Service Set ID. This should be set to the same value as other wireless devices in your network.

Note: The SSID is case sensitive and can consist of up to 32 alphanumeric characters.

Transmission Rate: Set the signal strength transmitted from the Barricade Plus. The longer transmission distance, the higher transmission power required. (Default: Fully Automatic)



Basic Rate: Select "All (1, 2, 5.5, 11Mbps)" from the drop-down list to optimize the data transfer speed for your network. (Default: 1, 2Mbps)

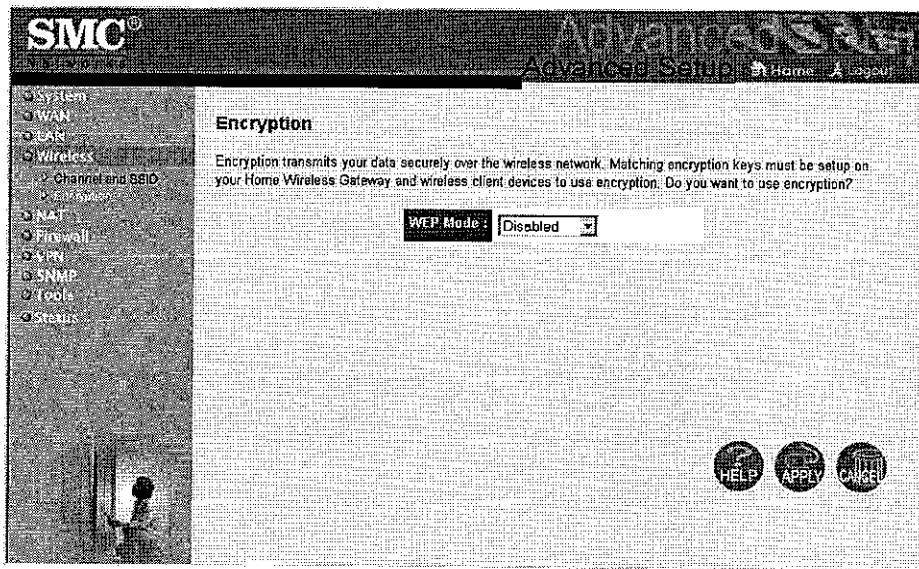


Channel: The radio channel through which the Barricade Plus communicates to PCs in its BSS. (Default: "Auto")

Note: The available channel settings are limited to local regulations, which determine the number of channels that are available.

Auto
1
2
3
4
5
6
7
8
9
10
11

Encryption



If you are transmitting sensitive data across wireless channels, you should enable encryption. Encryption requires you to use the same set of encryption/decryption keys for the Barricade Plus and all of your wireless clients. You can choose between standard 64-bit or the more robust 128-bit encryption keys.

WEP Mode:	Disabled
	Disabled
	64-bit WEP
	128-bit WEP