

Wireless Broadband Router

User Guide

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FCC Interference Statement:

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference. (2) This device must accept any interference received including interference that may cause undesired operation. 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 such interference.

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.

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 relative to electromagnetic compatibility.

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Chapter 1 Introduction

Congratulations on your purchase of this outstanding SMC Wireless Broadband Router. This product is designed specifically for small office and home office needs. It provides a complete SOHO solution for Internet access and is easy to configure and operate even for non-technical users. Instructions for installing and configuring this product are included in this manual. Before you install and use this product, please read the manual carefully so you may take full advantage of its functions.

1.1 Functions and Features

• High speed for wireless LAN connection

11Mbps data rate by incorporating Direct Sequence Spread Spectrum (DSSS).

Roaming

Provides seamless roaming within the IEEE 802.11b WLAN infrastructure.

• IEEE 802.11b compatible

Allowing inter-operation among multiple vendors.

Auto fallback

11Mbps, 5Mbps, 2Mbps, 1Mbps data rate with auto-fallback.

• Broadband modem and IP sharing

Connects multiple computers to a broadband (cable or DSL) modem or an Ethernet router to surf the Internet.

• Auto-sensing Ethernet Switch

Equipped with a 3-port auto-sensing Ethernet switch.

• VPN supported

Supports multiple PPTP sessions and allows you to set up VPN server and VPN clients.

• Firewall

All unwanted packets from outside sources and other intruders are blocked to protect your Intranet.

• DHCP server supported

All of the networked computers can retrieve TCP/IP settings automatically from this product.

• Web-based configuring

Configurable through any networked computer's web browser using Netscape or Internet Explorer.

• Access Control supported

Allows you to assign different access rights for different users.

• Virtual Server supported

Enables you to expose WWW, FTP and other services on your LAN for access by Internet users.

• User-Definable Application Sensing Tunnel

User can define the attributes to support the special applications requiring multiple connections, such as Internet gaming, videoconferencing, Internet telephony, etc.. This product can then sense the application type and open the correct multi-port tunnel for it.

• DMZ Host supported

Lets a networked computer be fully open to the Internet; this function is used when the special application-sensing tunnel feature is insufficient to allow an application to function correctly.

1.2 Packing List

- One wireless broadband router unit
- One installation CD-ROM
- One power adapter
- One CAT-5 UTP Fast Ethernet cable

Chapter 2 Hardware Installation

2.1 Panel Layout

2.1.1. Front Panel

LEDs monitor the status of each port.



Figure 2-1 Front Panel

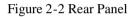
LED:

LED	Function	Color	Status	Description
POWER	Power indication	Green	On	Power is being applied to this product.
M1	System status 1	Orange	Blinking	This product is functioning properly.
M2	Sustan status 2	Oren en	On	This product is working for a specific service.
IVI2	System status 2	Orange	Blinking	This product is being configured or upgraded. Don't turn it off !
	XXA NI word		On	The WAN port is linked.
WAN	WAN port activity	Green	Blinking	The WAN port is sending or receiving data.
W.LAN	Wireless activity	Green	Blinking	Sending or receiving data via wireless
Link/Act.	Link status	Green	On	An active station is connected to the corresponding LAN port.
1~3	Link status	Gleen	Blinking	The corresponding LAN port is sending or receiving data.
SPEED 1~3	Data Rate	Green	On	Data is transmitting in 100Mbps on the corresponding LAN port.

2.1.2. Rear Panel

The rear panel features three 10/100 Mbps Ethernet ports and one Wide Area network (WAN) port. The WAN port connects your DSL or cable modem to the router. The LAN ports are used to connect to your computers or other network devices.





Ports:

Port Description

RESET To reset system settings to factory defaults, please follow the steps:

- 1. Power off the device,
- 2. Press the reset button and hold,
- 3. Power on the device,
- 4. Keep the button pressed about 5 seconds,
- 5. Release the button,
- 6. Watch the M1 and M2 LEDs, they will flash 8 times and then M1 flashes once per second.
- **PRINTER** Printer Port (Optional)
- **COM** Serial port (connect dial-up modem or console cable)
- **WAN Port** The port where you will connect your cable (or DSL) modem or Ethernet router.
- **Port 1-3** The ports where you will connect networked computers and other devices.
- **DC IN** Power inlet (DC 12V)

2.2 Procedure for Hardware Installation

1. Decide Where to Place Your Wireless Broadband Router:

You can place your Wireless Broadband Router on a desk or other flat surface, or you can mount it on a wall. For optimal performance, place your Wireless Broadband Router in the center of your office (or your home) in a location that is away from any potential source of interference, such as a metal wall or microwave oven. This location must be close to power and network connections.

2. Set up LAN connection:

- **a.** Wired LAN connection: connect an Ethernet cable from your computer's Ethernet port to one of the LAN ports of this product.
- **b.** Wireless LAN connection: make sure the antennae are in a vertical position.

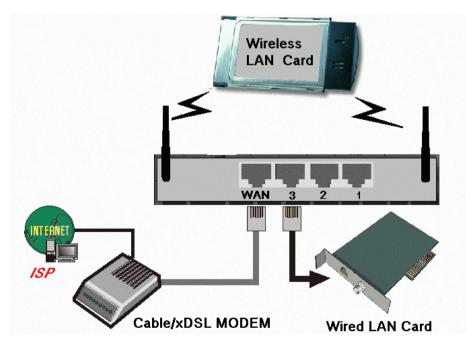


Figure 2-3 Setup of LAN and WAN connections for this product.

3. Set up WAN connection: Connect an Ethernet cable from the WAN port to your cable/xDSL modem or Ethernet backbone. Figure 2-3 illustrates the WAN connection.

4. Power on:

By connecting the power cord to the power inlet and turning the power switch on, this product will automatically enter the self-test phase. When it is in the self-test phase, the indicators M1 and M2 will be lighted ON for about 10 seconds, and then M1 and M2 will be flashed 3 times to indicate that the self-test operation has finished. Finally, the M1 will be continuously flashed once per second to indicate that this product is in normal operation.

Chapter 3 Network Settings and Software Installation

To use this product correctly, you have to properly configure the network settings of your computers and install the attached setup program on your computer (Windows 95/98/ME/NT/2000).

3.1 Make Correct Network Settings of Your Computer

The default *IP address* of this product is 192.168.123.254, and the default *subnet mask* is 255.255.255.0. These addresses can be changed as needed, but the default values are used in this manual. If the TCP/IP environment of your computer has not yet been installed, you can refer to *Appendix A* to configure it. Once TCP/IP is installed, configure it as follows:

- 1. Configure *IP* as 192.168.123.1, *subnet mask* as 255.255.255.0 and *gateway* as 192.168.123.254, or, more easily,
- 2. Configure your computers to "Obtain an IP address automatically," that is, via DHCP server of this product.

After configuring the TCP/IP communication protocol, you can use the *ping* command to check if your computer has successfully connected to this product. The following example shows the ping procedure for Windows 95 platforms. First, execute the *ping* command from a DOS window:

ping 192.168.123.254

If the following messages appear:

Pinging 192.168.123.254 with 32 bytes of data:

Reply from 192.168.123.254: bytes=32 time=2ms TTL=64

a communication link between your computer and this product has been successfully established. Otherwise, if you get the following messages,

Pinging 192.168.123.254 with 32 bytes of data:

-10-

Request timed out.

there must be something wrong in your installation procedure. You have to check the following items in sequence:

- Is the Ethernet cable correctly connected between this product and your computer?
 Tip: The LAN LED of this product and the link LED of the network card on your computer must be lit.
- 2. Is the TCP/IP environment of your computers properly configured?

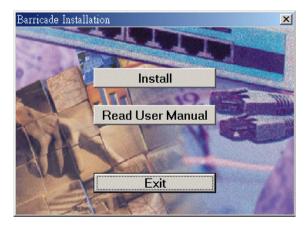
Tip: If the IP address of this product is 192.168.123.254, the IP address of your computer must be 192.168.123.X and the default gateway must be 192.168.123.254.

Now you can configure the Internet Sharer (refer to Chapter 4).

3.2 Install the Software Into Your Computers

Skip this section if you do not want to use the print server function of this product.

Step 1: Insert the installation CD-ROM into the CD-ROM drive. The following window will be shown automatically. If it isn't, please run "install.exe" on the CD-ROM.



Step 2: Click on the *INSTALL* button. Wait until the following *Welcome* dialog appears, and click on the *Next* button.



Step 3: Select the destination folder and click on the *Next* button. The setup program will then begin to install the programs into the destination folder.



Step 4: When the following window is displayed, click on the *Finish* button.

Setup Complete	
	Setup has finished installing Barricade on your computer.
	Click Finish to complete Setup.
	< Back Finish

Step 5: Select the item to restart the computer, then click the *OK* button to reboot your computer.

reboot	
To complete the Barricade set up, please remember to reboot your computer.	
C Yes, I want to restart my computer now.	
No, I will restart my computer later.	
OK	

Step 6: After rebooting your computer, the software installation procedure is complete.

Now, you can configure the Internet Sharer (refer to Chapter 4) and set up the Print Server (refer to Chapter 5).

Chapter 4 Configuring Wireless Broadband Router

This product provides a Web-based configuration scheme, i.e., configuring by Netscape Communicator or Internet Explorer. This approach can be adopted in any MS Windows, Macintosh or UNIX based platform.

4.1 Startup and Login

SMC Barricade Wireless Broadband Router - Microsoft Internet Explorer				
<u>F</u> ile <u>E</u> dit <u>V</u> iew F <u>a</u>	vorites <u>T</u> ools <u>H</u> elp			
	SMC Barricade Wireless	Broadband Router		
SMC Networks		System Status		
Status	Item	WAN Status	Sidenote	
System Password	Remaining Lease Time	00:00:00		
	IP Address	0.0.0.0		
(default: admin)	Subnet Mask	0.0.0.0		
	Gateway	0.0.0.0		
Log in	Domain Name Server	0.0.0.0		
	<u> </u>		<u></u>	
	Item	Peripheral Status	Sidenote	

Activate your browser, and *disable the proxy* or *add the IP address of this product into the exceptions*. Then, type this product's IP address in the *Location* (for Netscape) or *Address* (for IE) field and press ENTER. For example: *http://192.168.123.254*.

After the connection is established, you will see the web user interface of this product. There are two appearances of web user interface: *for general users* and *for system administrator*.

To log in as an administrator, enter the system password (the factory setting is "*admin*") in the *System Password* field and click on the *Log in* button. If the password is correct, the web appearance will be changed into administrator configure mode. As listed in its main menu, there are several options for system administration.

4.2 Status

SMC Barricade Wireless Broadband Router - Microsoft Internet Explorer				
<u>F</u> ile <u>E</u> dit <u>V</u> iew F <u>a</u> ∨	orites <u>T</u> ools <u>H</u> elp			
	SMC Barricade Wireless	Broadband Router		
SMC Networks		System Status	İ	
<u>Status</u> Toolbox	Item	WAN Status	Sidenote	
Designation Statem	Remaining Lease Time	00:00:00		
Primary Setup	IP Address	0.0.0.0		
DHCP Server	Subnet Mask	0.0.0.0		
<u>Virtual Server</u> Special AP	Gateway	0.0.0.0		
Access Control	Domain Name Server	0.0.0.0		
<u>Misc Items</u>	<u>t</u>		л	
Wireless 🚽	Item	Peripheral Status	Sidenote	

This option provides the function for observing this product's working status:

A. WAN Port Status.

If the WAN port is assigned a dynamic IP, there may appear a "**Renew**" or "**Release**" button on the *Sidenote* column. You can click this button to renew or release IP manually.

- B. Modem Status.
- C. Printer Status. The possible kinds of printer status include "*Ready*", "*Not* ready", "*Printing..*", and "*Device error*".

When a job is printing, there may appear a "Kill Job" button on the Sidenote column. You can click this button to kill a current printing job manually.

4.3 Toolbox

🚰 SMC Barricade Wirele	SMC Barricade Wireless Broadband Router - Microsoft Internet Explorer				
∫ <u>F</u> ile <u>E</u> dit ⊻iew F <u>a</u> vor	ites <u>T</u> ools <u>H</u> elp	1			
	SMC Barricade Wireless Broadband Router				
SMC Networks	Administrator's Toolbox	<u>^</u>			
Status	Change Administrator's Password				
 <u>Toolbox</u> <u>Primary Setup</u> <u>DHCP Server</u> <u>Virtual Server</u> Special AP 	Old Password OK Clear				
<u>Access Control</u> <u>Misc Items</u>	Miscellaneous Information & Commands				
• <u>Wireless</u> Log out	Firmware version: R1.90 WAN's MAC Address: FF-FF-FF-FF-FF View Log Reboot Backup Setting Clone MAC				
	Reset to Default Firmware Upgrade	•			

This option enables you change the administrator password. Besides, you can get the information about *Firmware version* and *WAN's MAC Address*.

You can also reboot this product by clicking the **Reboot** button.

You can backup your settings by clicking the **Backup Setting** button and save it as a bin file. Once you want to restore these settings, please click **Firmware Upgrade** button and use the bin file you saved.

You can Clone MAC address by clicking Clone MAC button.

You can upgrade firmware by clicking Firmware Upgrade button.

Note: we strongly recommend you to change the system password for security reason.

4.4 Primary Setup

SMC Barricade Wireless I	Broadband Router - Microsoft Inter	net Explorer	<u> </u>
<u>F</u> ile <u>E</u> dit ⊻iew <u>G</u> o F <u>a</u>	avorites <u>H</u> elp		<u></u>
	SMC Barricade Wireless Br	oadband Router	
SMC Networks		Primary Setup	
• <u>Status</u>	Item	Setting	
 <u>Toolbox</u> 	▶ LAN IP Address	192.168.123.254	
Primary Setup	🕨 WAN Type	Dynamic IP Address Change	
<u>DHCP Server</u> Virtual Server <u>Special AP</u> <u>Access Control</u> <u>Misc Items</u>	 Host Name Renew IP Forever Save Undo Help 	(optional)	
<u>Wireless</u> Log out			

This option is essential to enable this product to work properly. The setting items and the web appearance depend on the WAN type. Choose the correct WAN type before you start.

- LAN IP Address: this product's IP address. The default address is 192.168.123.254. You can change it if necessary.
- 2. *WAN Type*: WAN connection type of your ISP. You can click **Change..** button to choose a correct one from the following four options:
 - A. Static IP Address: ISP assigns you a static IP address.
 - B. Dynamic IP Address: Obtain an IP address from ISP automatically.
 - C. *PPP over Ethernet*: Some ISPs require the use of PPPoE to connect to their services.
 - D. Dial-up Network: To surf the Internet via PSTN/ISDN.

4.4.1 Static IP Address

WAN IP Address, Subnet Mask, Gateway, Primary and Secondary DNS: enter the proper setting value provided by your ISP.

4.4.2 Dynamic IP Address

- 1. *Host Name*: optional, required by some ISPs, for example, @Home.
- 2. *Renew IP Forever*: this feature enables this product to renew the IP address automatically when the lease time is expired even with the system in an idle state.

4.4.3 PPP over Ethernet

- 1. *PPPoE Account* and *Password*: the account and password your ISP assigned to you. If you don't want to change the password, keep it empty.
- 2. PPPoE Service Name: optional. Input the service name if your ISP requires it.
- 3. *Maximum Idle Time*: the time of no activity required to disconnect your PPPoE session. Setting it to 0 will disable this feature.

4.4.4 Dial-up Network

- 1. *Dial-up Telephone*, *Account* and *Password*: assigned by your ISP. If you don't want to change the password, keep it empty.
- 2. *Primary* and *Secondary DNS*: automatically assigned if they are configured as "0.0.0.0."
- 3. *Maximum Idle Time*: the time of no activity required to disconnect your dial-up session.
- 4. *Baud Rate*: the communication speed between this product and your MODEM or ISDN TA.
- 5. *Extra Setting*: needed to optimize the communication quality between the ISP and your MODEM or ISDN TA

4.5 DHCP Server

🚰 SMC Barricade Wire	eless Broadband Router - Mici	rosoft Internet Explorer	<u>_ ×</u>
∫ <u>F</u> ile <u>E</u> dit <u>V</u> iew F <u>a</u> v	vorites <u>T</u> ools <u>H</u> elp		
	SMC Barricade Wirele	ess Broadband Router	
SMC Networks		DHCP Server	
• <u>Status</u>	Item	Setting	
• <u>Toolbox</u>	DHCP Server	⊂Disable ⊙Enable	
 <u>Primary Setup</u> 	▶ IP Pool Starting Address	100	
 <u>DHCP Server</u> <u>Virtual Server</u> <u>Special AP</u> 	▶ IP Pool Ending Address ▶ Domain Name	199	
<u>Access Control</u> <u>Misc Items</u>	Save Undo Clients	s List Help	
<u>Wireless</u> Log out			
Log Sut			

The settings of the TCP/IP environment include Host IP, Subnet Mask, Gateway, and DNS configurations. It is not easy to correctly configure all the computers in your LAN environment. Fortunately, DHCP provides a simple approach to handle these settings. This product supports the function of DHCP server. If you enable this product's DHCP server and configure your computers as "automatic IP allocation" mode, when your computer is powered on it will automatically load the proper TCP/IP settings from this product. The settings of DHCP server include the following items:

- 1. DHCP Server: Choose "Disable" or "Enable."
- 2. *Range of IP Address Pool*: Whenever there is a request, the DHCP server will automatically allocate an unused IP address from the *IP address pool* to the requesting computer. You must specify the starting and ending address of the IP address pool.
- 3. Domain Name: Optional: this information will be passed to the client.

4.6 Virtual Server

jile <u>E</u> dit <u>∨</u> iew F <u>a</u> v	vorites <u>T</u> oo	s <u>H</u> elp		
	SMO	C Barricade Wireless Broa	adband Router	
SIMC Networks		Vir	tual Server	
<u>Status</u> Toolbox	D	Service Port	Server IP	Enable
<u>100100x</u>	1	21	192.168.123. 1	ব
Primary Setup	2	80	192.168.123. 1	ম
DHCP Server	3	1723	192.168.123.2	ঘ
<u>Virtual Server</u> Special AP	4		192.168.123.	
Access Control	5		192.168.123.	Г
<u>Misc Items</u>	6		192.168.123.	
Wireless	7		192.168.123.	
Log out	8		192.168.123.	

This product's NAT firewall filters out unrecognized packets to protect your Intranet, thus all hosts behind this product are externally invisible. If you wish, you can make some of them accessible by enabling the *Virtual Server Mapping*.

A virtual server is defined as a *Service Port*, and all requests to this port will be redirected to the computer specified by the *Server IP*.

For example, if you have an FTP server (port 21) at 192.168.123.1, a Web server (port 80) at 192.168.123.2, and a VPN server at 192.168.123.6, then you need to specify the following virtual server mapping table:

Service Port	Server IP	Enable
21	192.168.123.1	V
80	192.168.123.2	V
1723	192.168.123.6	V

4.7 Special AP

🚰 SMC Barricade Wireless Broadband Router - Microsoft Internet Explorer 📃 🔲 🗙					
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		SMC Barricade	Wireless Broadband Router		
SMC Networks	-		Special Applications	<u>*</u>	
Status Toolborr	D	Trigger	Incoming Ports	Enable	
<u>Toolbox</u>	1	6112	6112	<u> </u>	
Primary Setup	2	7175	51200-51201,51210	N	
DHCP Server	3	2019	2000-2038,2050-2051,2069,2085,301		
Virtual Server Special AP	4				
Access Control	5				
Misc Items	6				
Wireless	7				
Log out	• 8				

Some applications require multiple connections, such as Internet games, video conferencing, Internet telephony, etc.. Due to the firewall function, these applications cannot work with a pure NAT router. **Special Applications** enables some of these applications to work with an NAT router. If **Special Applications** is insufficient to allow an application to function correctly, try **DMZ** host in the *Misc. Items* options.

- 1. *Trigger*: the outbound port number the application issued first.
- 2. *Incoming Ports*: when the trigger packet is detected, the inbound packets directed to the specified port numbers are allowed to pass the firewall.

This product provides some predefined settings in the gray pad on the bottom of the web page. Choose the **Popular application** and click **Copy to** copy the predefined setting.

Note: Only one PC can use each Special Application tunnel at any time.

4.8 Access Control

🦉 SI	AC Bar	ricade	Wireless I	Broadba	nd Rout	er - Microsoft Internet Explorer	<u>_ 🗆 ×</u>
<u> </u>	<u>E</u> dit	⊻iew	F <u>a</u> vorites	Tools	<u>H</u> elp		<u>*</u>
				SMC E	Barricade	e Wireless Broadband Router	
N						Router Access Control	<u>^</u>
	itus			Iten	ı	Setting	
• 10	<u>olbox</u>		► A	.ccess C	ontrol	🔽 Enable	
• Pr	imary	Setup	D	efault G	roup: al	l hosts except those listed on the other groups	
			- F	\llow 💌] ports		
	<u>ICP Se</u> rtual Se		▶ G	roup 1 r	nembers	5 100-149	
	<u>ecial A</u> cess C	_	- F	Allow 💌	ports	25,53,80,110	
	se Iten		▶ G	roup 2 r	nembers	5 150-199	
• <u>w</u>	ireless		L E	3lock 💌	ports	21,119	
	SSIATALOUTATA		🕨 🕨 G	roup 3 r	nembers	10,20	
	Log o	ut	۲E	Block 🔻	ports		

Access Control allows you to assign different access rights to different users. First, you have to divide users into different groups. Users are identified by their IP addresses. You can assign access rights to the members of Group 1, 2 and 3. The others are all members of the Default Group. Next, you have to assign the access rights of each group. Access rights can allow or block users to access specified TCP and UDP ports. For example:

Group	Members	Access Right	Comments
Default	-	Allow 0	No access right (allow nothing)
Group 1	100-199		Can browse(80), receive(110) and send(25) email only
Group 2	50-99	Block (21,119)	Cannot read net news(119) and FTP(21) only
Group 3	1-9,20	Block 0	Fully access (block nothing)

4.9 Misc. Items

🎒 SMC Barricade	Wireless I	Broadba	nd Route	- Microsoft Ir	ternet E	xplorer	_	- 🗆 ×
∫ <u>E</u> ile <u>E</u> dit ⊻iew	F <u>a</u> ∨orites	Tools	<u>H</u> elp					
	SMC Barricade Wireless Broadband Router							
SMC [*]				Misce	llane	ous Items		
 <u>Status</u> To alb arr 			Item			Setting	Enable	
• <u>Toolbox</u>	▶ 11	Addres	s of DMZ	Host	192.1	.68.123.8		
 <u>Primary Setup</u> 	▶ R	emote A	dministra	tor Host	0.0.0	.0		
 <u>DHCP Server</u> Virtual Server 			ator Time		600	seconds (0 to disable		
 <u>Virtual Server</u> <u>Special AP</u> 				ı WAN side				
 <u>Access Control</u> <u>Misc Items</u> 	▶ N	on-stand	ard FTP p	oort	0			
• <u>Wireless</u>	Sa	ve Un	do He	lp				
Log out								

- 1. *IP Address of DMZ Host*: The DMZ (Demilitarized Zone) Host is a host without the protection of a firewall. It allows a computer to be exposed to unrestricted 2-way communication. (Note that this feature should be used only when necessary.)
- 2. *Remote Administrator Host*: In general, only Intranet users can browse the built-in web pages to perform administration tasks. This feature enables you to perform administration tasks from a remote host. When this feature is enabled, only the specified IP address can perform remote administration. If the specified IP address is 0.0.0.0, any host can connect to the Barricade to perform administration tasks. When this feature is enabled, the web port will be shifted to 88.
- 3. *Administrator Time-out*: The time of no activity to logout automatically. Set it to zero to disable this feature.
- 4. *Discard PING from WAN side*: When this feature is enabled, any host on the WAN cannot ping the barricade.
- 5. *Non-standard FTP port*: You have to configure this item if you want to access an FTP server whose port number is not 21. *This setting will be lost after rebooting*.

4.10 Wireless Setting

🚰 SMC Barricade Wireless Broadband Router - Microsoft Internet Explorer 📃					
_ <u>F</u> ile <u>E</u> dit ⊻iew F <u>a</u>	vorites <u>T</u> ools <u>H</u> elp		1		
	SMC Barricade Wi	reless Broadband Router			
SMC Networks		Wireless Setting	<u> </u>		
 <u>Status</u> Toolbox 	Item	Setting			
<u>100100x</u>	Network ID(SSID)	default			
 <u>Primary Setup</u> 	Channel	6			
 DHCP Server 	WEP Security	🕫 Disable WEP			
<u>Virtual Server</u>		C Enable IEEE 64 bit Shared Key security			
 <u>Special AP</u> 		C Enable IEEE 128 bit Shared Key security			
 <u>Access Control</u> <u>Misc Items</u> 	👁 WEP Key 1				
 Wireless 	O WEP Key 2				
<u>wireless</u>	C WEP Key 3				
Log out	O WEP Key 4		-		

Wireless settings allow you to set the wireless configuration items.

- Network ID (SSID): Network ID is used to identify the WLAN. Client stations can roam freely on this product and other Access Points that have the same Network ID. (The factory setting is "default")
- 2. *Channel*: The radio channel number. The permissible number of channels depends on the Regulatory Domain.

The factory setting is as follow: *Channel 6* for North America; *Channel 7* for European (ETSI); *Channel 7* for Japan.

- 3. *WEP Security*: Select the data privacy algorithm you want. Enabling the security can protect your data while it is transferred from one station to another. The standardized IEEE 802.11 WEP (128 or 64-bit) is used here.
- 4. *WEP Key 1, 2, 3 & 4*: When you enable the 128 or 64 bit WEP key security, please select one WEP key to be used and input 26 (for 128-bit) or 10 (for 64-bit) hexi-decimal digits.

Chapter 5 Print Server

This product provides the function of the network print server for MS Windows 95/98/NT/2000 and Unix-based platforms.

You must configure each station individually to connect to your server printer.

5.1 Configuring on Windows 95/98 Platforms

After you complete the software installation procedure described in Chapter 3, your computer possesses the network printing facility provided by this product. For convenience, we call the printer connected to the printer port of this product as *server printer*. On a Windows 95/98 platform, open the *Printers* window in the *My Computer* menu:



Yon can now configure the print server of this product:

1. Find out the corresponding icon of your s*erver printer*, for example, the **HP LaserJet**

6L.	Click the mouse'	s right button	on that icon,	and then select	the <i>Properties</i> item:

HP LaserJet 6L (PCL) Properties	? ×
General Details Sharing Paper Print Quality Fonts Device Options	
HP LaserJet 6L (PCL)	
<u>C</u> omment:	
Security and Transl	
Separator page: (none) Browse	
Print <u>I</u> est Page	
OK Cancel Apply He	þ

2. Click the *Details* item:

HP LaserJet 6L (PCL) Properties
General Details Sharing Paper Print Quality Fonts Device Options
HP LaserJet 6L (PCL)
Print to the following port:
PRTmate: (All-in-1) Add Port
Print using the following driver:
HP LaserJet 6L (PCL) New Driver
Capture Printer Port End Capture
Timeout settings
Not selected: 15 seconds
Transmission retry: 45 seconds
Spool Settings Port Settings
OK Cancel Apply Help

- 3. Choose the "PRTmate: (All-in-1)" from the list attached at the *Print To* item. Be sure that the *Printer Driver* item is configured to the correct driver of your*server printer*.
- 4. Click on the button of *Port Settings*:

Printer Position	×
Enter the Product's IP :	ОК
192.168.123.254	Cancel

Type in the IP address of this product and then click the OK button.

5. Make sure that all the settings mentioned above are correct, and then click the *OK* button.

5.2 Configuring on Windows NT Platforms

The configuration procedure for a Windows NT platform is similar to that of Windows 95/98 except the screen of printer *Properties*:

Hewlett Packard	LaserJet 6L Properti	es ?
General Ports S	cheduling Sharing Sec	curity Device Settings
Hewlett Pa	sckard LasesJet 6L	
checked port.	port(s). Documents will p	rint to the first free
LPT3	Local Port Local Port	Firker
COM2:	Local Port	
COM3:	Local Port Local Port	
FILE:	Local Port	
FRTmate	Local Port Local Port	Hewlett Packard L 👤
Add Port	Delete Port	Configure Port
=		
Enable bidirectio		
Enable printer p	ooling	
****		OK Cancel
		Caricei

Compared to the procedure in the previous section, the selection of *Details* is equivalent to the selection of **Ports**, and *Port Settings* is equivalent to *Configure Port*.

5.3 Configuring on Windows 2000 Platforms

The configuration procedure for a Windows 2000 platform is similar to that of Windows 95/98, except for the screen of printer *Properties*:

HP LaserJet 6L	Properties	? 2			
General Sharing P	orts Advanced Securi	ty Device Settings			
HP LaserJ					
Print to the following checked port.	port(s). Documents will prin	t to the first free			
Сом1:	Serial Port				
□ сом2:	Serial Port				
Сомз:	Serial Port				
🗆 сом4:	Serial Port				
FILE:	Print to File				
PRTmate	Local Port	HP LaserJet 6L 📃 💌			
		•			
Add Port	Delete Port	Configure Port			
Enable bidirectional support					
Enable printer pooling					
	ОК	Cancel Apply			

Compared to the procedure in the previous section, the selection of *Details* is equivalent to the selection of **Ports**, and *Port Settings* is equivalent to *Configure Port*.

5.4 Configuring on Unix-based Platforms

Please follow the traditional configuration procedure on Unix platforms to set up the print server of this product. The printer name is "lp."

Appendix A: TCP/IP Configuration for Windows 95/98

This section advises on how to install TCP/IP protocol into your personal computer. It assumes you have successfully installed one network card on your personal computer. If not, please refer to your network card manual. Also, Section A.2 tells you how to set TCP/IP values for working with this IP Sharer correctly.

A.1 Install TCP/IP Protocol Into Your PC

- 1. Click *Start* button and choose *Settings*, then click *Control Panel*.
- 2. Double click *Network* icon and select *Configuration* tab in the Network window.
- 3. Click Add button to add network component into your PC.
- 4. Double click *Protocol* to add TCP/IP protocol.

Select Network Component Type	? ×
Click the type of network component you want to install:	
📃 Client	<u>A</u> dd
Adapter	
Y Protocol	Cancel
Service	
Protocol is a 'language' a computer uses. Computers must use the same protocol to communicate.	
de la companya de la	

5. Select the *Microsoft* item in the *manufacturers* list. Choose *TCP/IP* in the *Network Protocols*. Click *OK* button to return to Network window.

Select Network Protocol	×
	otocol that you want to install, then click OK. If you have this device, click Have Disk.
Manufacturers:	Network Protocols:
a Banyan a IBM Microsoft a Novell	Fast Infrared Protocol Fast Infrared Protocol IPX/SPX-compatible Protocol Microsoft 32-bit DLC Microsoft DLC NetBEUI TCP/IP
	Have Disk
	OK Cancel

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

A.2 Set TCP/IP Protocol for Working With IP Sharer

1. Click *Start* button and choose *Settings*, then click *Control Panel*.

2. Double click *Network* icon. Select the TCP/IP line that has been associated to your network card in the *Configuration* tab of the Network window.

Network ?X
Configuration Identification Access Control
25 ₁₀
The following network components are installed:
PCI Fast Ethernet DEC 21140 Based Adapter
NetBEUI -> PCI Fast Ethernet DEC 21140 Based Adapter
TCP/IP -> Dial-Up Adapter
TCP/IP -> PCI Fast Ethernet DEC 21140 Based Adapter
File and printer sharing for Microsoft Networks
Add Remove Properties
Primary Network Logon:
Client for Microsoft Networks
File and Print Sharing
Description TCP/IP is the protocol you use to connect to the Internet and
wide-area networks.
OK Cancel

- 3. Click *Properties* button to set the TCP/IP protocol for this IP Sharer.
- 4. You now have two setting methods:
 - A. Get IP via DHCP server

a. Select *Obtain an IP address automatically* in the *IP Address* tab.

TCP/IP Properties		? ×
Bindings	Advanced	NetBIOS
DNS Configuration	Gateway WINS Confi	iguration IP Address
If your network doe	be automatically assigne es not automatically assig nistrator for an address, a	n IP addresses, ask
	address automatically	
C Specify an IF	address:	
[P Address:		
S <u>u</u> bnet Mas	k:	
	OK	Cancel

b. Do not input any value in the *Gateway* tab.

TCP/IP Properties		? ×
Bindings DNS Configuration	Advanced Gateway WINS Confi	NetBIOS iguration IP Address
	n the Installed Gateway li in the list will be the order	
New gateway:	. <u>A</u> dd	
<u>_Installed gateway</u>	rs:	VE
	OK	Cancel

c. Choose *Disable DNS* in the *DNS Configuration* tab.

TCP/IP Properties		? ×
Bindings DNS Configuration	Advanced Gateway WINS Confi	NetBIOS iguration IP Address
Disable DNS		
C Enable DNS-		
Host:	D <u>o</u> main:	
DNS Server Sear	rch Order	
	•	≜dd
	B	emove
Domain Suffix Se	arch Order	
		Add
	B	emove
I		
	04	Cancel

- B. Configure IP manually
 - a. Select *Specify an IP address* in the *IP Address* tab. The default IP address of this product is 192.168.123.254. Therefore, please use 192.168.123.xxx (xxx is between 1 and 253) for *IP Address* field and 255.255.255.0 for *Subnet Mask* field.

TCP/IP Properties			? ×
Bindings	Advanced	Net	BIOS (
DNS Configuration	Gateway WINS Conf	guration	IP Address
If your network doe	be automatically assigne as not automatically assig nistrator for an address, a	n IP addres	ses, ask
◯ <u>O</u> btain an IP	address automatically		
Specify an IF	address:		
<u>I</u> P Address:	192.168.123	.115	
S <u>u</u> bnet Mas	k: 255.255.255	. 0	
	40		Cancel

b. In the *Gateway* tab, add the IP address of this product (default IP is 192.168.123.254); in the *New gateway* field and click *Add* button.

TCP/IP Properties		? ×
Bindings DNS Configuration	Advanced Gateway WINS Confi	NetBIOS iguration IP Address
	n the Installed Gateway li in the list will be the order	
<u>N</u> ew gateway: 192.168.12	2 3.254 Add	1
<u>_Installed gateway</u>	s: <u>H</u> emo	VE
	Ok	Cancel

c. In the *DNS Configuration* tab, add the DNS values which are provided by the ISP into *DNS Server Search Order* field and click *Add* button.

TCP/IP Properties
Bindings Advanced NetBIOS DNS Configuration Gateway WINS Configuration IP Address
© Disable DNS © Enable DNS
Host: MyComputer Domain:
DNS Server Search Order
168.95.192.1 <u>A</u> dd
168.95.1.1 <u>H</u> emove
Domain Suffix Search Order
A <u>d</u> d
Remove
OK Cancel