

Wireless Gaming Adapter

**IEEE 802.11b
11Mbps**

User's Manual

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Chapter 1 Introduction

This product is a Wireless Gaming Adapter for IEEE 802.11b 2.4GHz wireless network. You can use this Wireless Gaming Adapter to make a game console or network device with wired Ethernet have wireless LAN access capability. This Wireless Gaming Adapter provides a button to switch between “Head to Head mode (or Ad Hoc mode)” and “Infrastructure mode” that help users quickly and easily setup this device.

This Wireless Gaming Adapter supports most popular game consoles, like X-Box, PlayStation 2, Nintendo and Game Boyetc.

The product supports WEP and ESSID functions to consolidate the wireless network security. With ESSID authentication and 64/128 bit WEP encryption you can prevent unauthorized wireless stations from accessing your wireless network.

The product’s dipole antenna is detachable by connecting to a RP-SMA connector. Users can install a high gain antenna to the connector for better network link quality so that you can build wireless network with more flexibility.

This product provides easy to use user interface and allows users to do advanced configuration from web browser or Windows utility. With the versatile of features, this product is the best choice for you to integrate your wireless and wired network seamlessly.

1.1 Package Contents

The Wireless Gaming Adapter package includes the following items:

- One Wireless Gaming Adapter
- One Power Adapter
- One CD-ROM
- One Quick Installation Guide

1.2 Features

- Let network device with wired Ethernet have wireless LAN access capability.
- Supports X-Box, PlayStation 2, Nintendo and Game Boyetc.
- Complies with the IEEE 802.11b (DSSS) 2.4GHz specification.
- High data rate 11, 5.5, 2 and 1Mbps network speed.
- Auto rate fallback in case of obstacles or interferences.
- Provide 64/128-bit WEP Data Encryption function to protect the wireless data transmissions.
- Provides Windows Utility and Web-based configuration.

1.3 Specifications

- Standards: IEEE 802.11b (Wireless), IEEE 802.3 (Wired)
- Data Rate: 11/5.5/2/1Mbps auto fallback
- Security: 64/128-bit WEP Data Encryption
- Frequency Band: 2.400~2.4835GHz (Industrial Scientific Medical Band)
- Modulation: CCK@11/5.5Mbps, DQPSK@2Mbps and DBPSK@1Mbps
- Radio Technology: Direct Sequence Spread Spectrum (DSSS)
- Antenna: External detachable dipole antenna (with RP-SMA connector)
- Connectors: 10/100Mbps RJ-45 x 1
- Button: Switch between “Head to Head mode (or Ad Hoc mode)” and “Infrastructure mode”
- Power: 12VDC, 0.5A
- Transmit Power: 18dBm (Typical)
- LEDs: Power, LAN Link/Activity, Wireless Activity
- Dimension: 30(H) x 127(W) x 96(D) mm

- Temperature:
Operating: 32~131°F (0~55°C)
Storage: -4~158°F(-20~70°C)
- Humidity: 10-90% (Noncondensing)
- Certification: FCC, CE

1.4 Physical Description

Front Panel

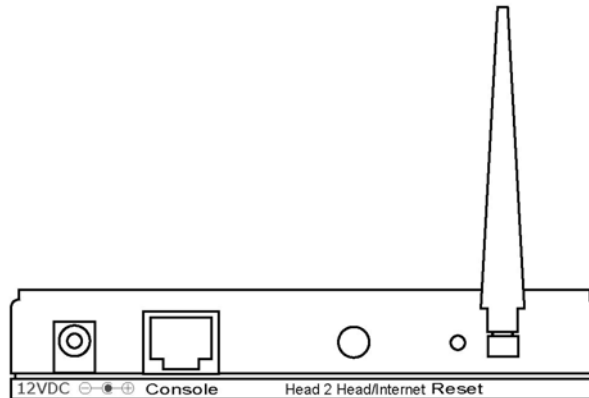
On the Wireless Gaming Adapter's front panel there are LED lights that inform you of the Wireless Gaming Adapter's current status. Below is an explanation of each LED.



LED	Color	Status	Description
Power	Green	Lit	Power is supplied.
		Flash	System is booting
		Off	No Power.
Status	Yellow	Flash	No Access Point detected.
	Yellow	On	PC configuration required (static IP detected or multiple access points detected).
	Green	On	Ready to use.
Head 2 Head	Green	On	Working in "Head to Head mode (or Ad Hoc mode)".
		Off	Working in "Infrastructure mode".
Console	Green	On	A valid link is established.
		Flash	It is transmitting or receiving data.
		Off	No link is established.

Back Panel

Wireless Gaming Adapter's connection ports are located on the back panel. Below is the description of each connection port.

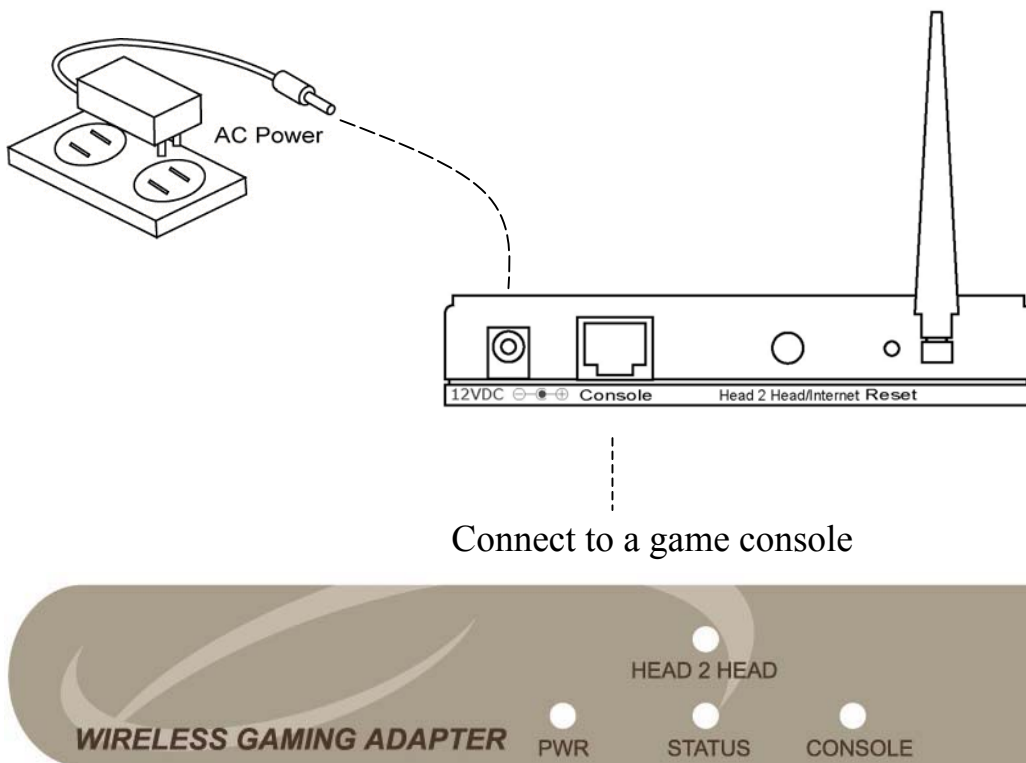


- **Antenna Connector**
This round connection is standard Reverse SMA connector where any antennas with Reverse SMA connector can connect to the Access Point.
- **DC Adapter Port**
Insert the power jack of the power adapter into this port.
- **Console Port**
The Wireless Gaming Adapter's console port is where you connect to your game console or other device with wired Ethernet.
- **Head 2 Head / Infrastructure button**
Press this button once and the Wireless Gaming Adapter will switch from "Head to Head mode" to "Infrastructure mode" if it is currently in "Head to Head mode" or will switch from "Infrastructure mode" to "Head to Head mode" if it is currently in "Infrastructure mode".
- **Reset**
The Reset button allows you to do one of two things.
 - 1) If problems occur with your Wireless Gaming Adapter, press the reset button with a pencil tip (for less than 4 seconds) and the Wireless Gaming Adapter will re-boot itself, keeping your original configurations.

- 2) If problems persist or you experience extreme problems or you forgot your password, press the reset button for longer than 4 seconds and the Wireless Gaming Adapter will reset itself to the factory default settings (warning: your original configurations will be replaced with the factory default settings).

Chapter 2 Quick Installation

2.1 Hardware Installation



1. Connect the Wireless Gaming Adapter to your game console.

Connect one end of standard UTP cable to the Wireless Gaming Adapter's Console Port and connect the other end of the cable to your game console.

2. Connect the DC Power Adapter to the Wireless Gaming Adapter's Power Socket.

Only use the power adapter supplied with the Wireless Gaming Adapter. Using a different adapter may damage the product.

3. Check the LED.

After power on both Wireless Gaming Adapter and your game console, the “PWR” and “CONSOLE” LEDs of the Wireless Gaming Adapter should be light.

The Hardware Installation is complete.

2.2 Getting Started

Play head to head games

1. If you have more than one game console and want to connect these game consoles together to play head to head games, you have to switch the Wireless Gaming Adapter to “Head to Head mode”. If the “Head 2 Head” LED is light, then the Wireless Gaming Adapter is already in “Head to Head mode” and your game consoles can start to communicate with wireless network now. If the “Head 2 Head” LED is not light, press the “Head 2 Head/Infrastructure” button once and the Wireless Gaming Adapter will switch to “Head to Head mode” automatically.
2. When the Wireless Gaming Adapters are successfully connected, the “STATUS” LED will be light and green.
3. After all the Wireless Gaming Adapters being set to “Head to Head mode” and are connected to your game consoles, you can start to enjoy head to head games through wireless LAN.

Play Internet games

1. Make sure that you already have an Internet connection and can be access from the wireless LAN.
2. If you want your game console to connect to the Internet game servers and play Internet game through wireless LAN, you have to set the Wireless Gaming Adapter to “Infrastructure mode”. If the “Head 2 Head” LED is off , then the Wireless Gaming Adapter is already in “Infrastructure mode” and your game consoles can start to communicate with wireless network now. If the “Head 2

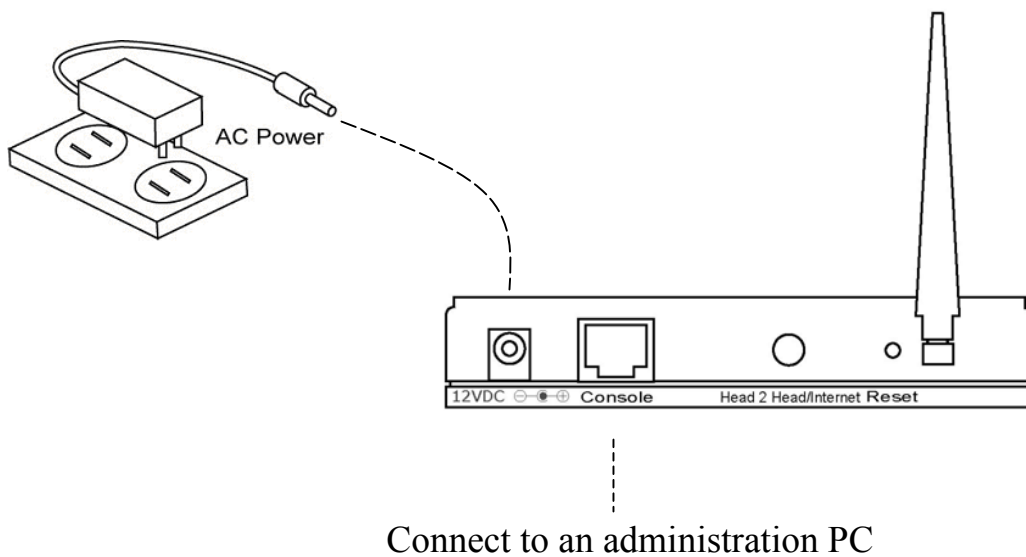
Head” LED is light, press the “Head 2 Head/Infrastructure” button once and the Wireless Gaming Adapter will switch to “Infrastructure mode” automatically.

3. When the Wireless Gaming Adapter is successfully connected to the wireless LAN, the “STATUS” LED will be light and green.
4. After the Wireless Gaming Adapter being set to “Internet mode” and is connected to your game consoles, you can start to enjoy Internet games through wireless LAN.

Chapter 3 Windows Setup Wizard

The Wireless Gaming Adapter provides Windows setup wizard that can guide you through the configuration process step by step. Please follow the instructions below to get started configuration:

1. Follow the picture below to connect the Wireless Gaming Adapter to your administration PC.



2. Insert CD-ROM for Wireless Gaming Adapter into the administration PC. The installation program will be executed automatically and the window below will pop up. If the installation program is not executed automatically, please manually execute the setup.exe file in the CD-ROM.



3. Click "Setup Wizard" to start the setup process.

- Click “Search” and this setup wizard will start to search for all accessible Wireless Gaming Adapters. After a few seconds, you can see a list of all accessible Wireless Gaming Adapters. Select the one you want to configure and click “Configure”.

The screenshot shows the Hawking HGA11 Wireless Gaming Adapter Setup Wizard. The interface includes the Hawking Technology logo at the top left. The main title is "HGA11 Wireless Gaming Adapter Gaming Adapter Setup Wizard". On the left, there is an image of the HGA11 device and a diagram showing a Gaming Adapter connected to a PC. The main content area is titled "Wireless Gaming Adapter Name" and contains a table with two columns: "Alias Name" and "Device Name". Below the table is a "Status" field. A note states: "Make sure that the Wireless Gaming Adapter is powered on and is connected to your PC through the 'Console' port on the HGA11." Below the note, it says: "Please search and select the Wireless Gaming Adapter that you wish to configure." At the bottom right, there are two buttons: "Search" and "Configure".

HAWKING TECHNOLOGY

HGA11 Wireless Gaming Adapter **Gaming Adapter Setup Wizard**

Wireless Gaming Adapter Name

Alias Name	Device Name

Status

Make sure that the Wireless Gaming Adapter is powered on and is connected to your PC through the "Console" port on the HGA11.

Please search and select the Wireless Gaming Adapter that you wish to configure.

5. Select the mode for the Wireless Gaming Adapter. If you want to play Internet game, select the “Internet Gaming Mode (Infrastructure)” and click “Next” and jump to step 6. This mode let the Wireless Gaming Adapter connect to an access point, and through this access point connect to the Internet. If you want to play head to head game, select the “Head to Head Gaming Mode (Ad Hoc)” and click “Next” and jump to step 8. This mode let the Wireless Gaming Adapter peer-to-peer connect to another Wireless Gaming Adapter or other wireless devices with Ad Hoc mode.



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HGA11 Wireless Gaming Adapter

Gaming Adapter Setup Wizard

Set Your Wireless Adapter Mode

- Internet Gaming Mode (Infrastructure)**
If you wish to use the Wireless Gaming Adapter to connect to your Wireless Access Point for Online Gaming, please select this mode.
- Head to Head Gaming Mode (Ad-Hoc)**
If you wish to play head to head with another Wireless Gaming Adapter, please choose this mode.

Back Next

- In the “Internet Gaming Mode (Infrastructure)”, the Wireless Gaming Adapter has to connect to an access point before going to the Internet. You can select “Scan For Your Local Wireless Network” to let the Wireless Gaming Adapter automatically scan for an available access point and jump to step 7. If already know the SSID of the available access point, you also can select “Assign Your Wireless Network Manually”, enter the SSID of the access point and jump to step 10.



- The Wireless Gaming Adapter automatically scans for all available access points and lists their SSID. If the Wireless Gaming Adapter does not find any access point, click “Scan” to let it search again. You can select one access point and click “Next”. Jump to step 10.

The screenshot shows the 'Gaming Adapter Setup Wizard' for the HGA11 Wireless Gaming Adapter. The interface is titled 'HAWKING TECHNOLOGY' and 'HGA11 Wireless Gaming Adapter'. The main heading is 'Gaming Adapter Setup Wizard'. On the left, there is an image of the HGA11 adapter and a progress diagram showing 'Wireless Router' → 'Gaming Adapter' → 'PC'. The main content area is titled 'Wireless Network Name (SSID)' and contains a large empty text box for input. Below the text box are two buttons: 'Scan' and 'Status'. Below these buttons is a paragraph of instructions: 'Please scan and select the name of your Wireless Network from the list above. If you do not see your Wireless Network please check to see if your Wireless Network is setup correctly and re-scan.' At the bottom right of the main content area are two buttons: 'Back' and 'Next'.

8. In the “Head to Head Gaming Mode (Ad Hoc)”, the Wireless Gaming Adapter can peer-to-peer connect to another Wireless Gaming Adapter or other wireless devices with Ad Hoc mode. You can select “Scan For Your Local Wireless Network” to let the Wireless Gaming Adapter scan for all wireless devices available for connection and jump to step 9. If you already know the configuration of the wireless device you want to connect, select “Assign Your Wireless Network Manually” and enter the SSID and Channel number manually and jump to step 10. You also can select “Automatically Select Channel” to let the Wireless Gaming Adapter automatically scan and select a suitable channel.



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HGA11 Wireless Gaming Adapter

Gaming Adapter Setup Wizard

Connect To Your Wireless Network

Scan For Your Local Wireless Network
Let the Wizard automatically scan for your Wireless Network (SSID)

Assign Your Wireless Network Manually

Enter your own Wireless Network ID (SSID) Manually

Channel Selection

Automatically Select Channel

Manually Select Channel

Back Next

- The Wireless Gaming Adapter automatically scans for all available wireless devices, including Wireless Gaming Adapters, with Ad Hoc mode and lists their SSID. If the Wireless Gaming Adapter does not find any wireless device, click “Scan” to let it search again. You can select one wireless device you want to connect to and click “Next”.

The screenshot shows the Hawking HGA11 Wireless Gaming Adapter Setup Wizard. The interface is titled "HAWKING TECHNOLOGY" at the top left and "Gaming Adapter Setup Wizard" at the top right. Below the title bar, it says "HGA11 Wireless Gaming Adapter". On the left side, there is an image of the HGA11 adapter and a diagram showing the connection flow: "Wireless Router" → "Gaming Adapter" → "PC".

The main content area is titled "Wireless Network Name (SSID)" and contains a large empty text box for input. Below the text box are two buttons: "Scan" and "Status". Below these buttons, there is a small text box for the status of the scan. The instructions below the status box read: "Please scan and select the name of your Wireless Network from the list above. If you do not see your Wireless Network please check to see if your Wireless Network is setup correctly and re-scan." At the bottom right of the main content area, there are two buttons: "Back" and "Next".

10. The Wireless Gaming Adapter needs an IP for you to configure by Web interface. You can select “Automatically Obtain IP Settings (DHCP)” to let the Wireless Gaming Adapter get IP settings from a DHCP server. You also can select “Set Your IP Manually” to manually assign static IP settings for the Wireless Gaming Adapter.



The screenshot shows the web interface for the Hawking HGA11 Wireless Gaming Adapter. The top header features the Hawking Technology logo. Below the header, the page is titled "HGA11 Wireless Gaming Adapter" and "Gaming Adapter Setup Wizard". On the left, there is an image of the HGA11 device. The main content area is titled "Configure Your Adapter's IP Address" and contains two radio button options: "Automatically Obtain IP Settings (DHCP)" (which is selected) and "Set Your IP Manually". The DHCP option includes a note: "Obtain your IP Settings from your Wireless Access Point / Router. (DHCP must be enabled on your Wireless Access Point / Router)". The manual IP option includes three rows of input fields for "IP Address", "Subnet", and "Gateway", each with four individual boxes. At the bottom of the form are "Back" and "Next" buttons.

HAWKING TECHNOLOGY

HGA11 Wireless Gaming Adapter **Gaming Adapter Setup Wizard**

Configure Your Adapter's IP Address

Automatically Obtain IP Settings (DHCP)
Obtain your IP Settings from your Wireless Access Point / Router. (DHCP must be enabled on your Wireless Access Point / Router)

Set Your IP Manually

IP Address

Subnet

Gateway

11. The WEP is used to encrypt the data communication of your wireless network. If you do not use WEP, select “OFF” and click “Next”. If you want to use the WEP to protect your wireless network, click “ON” and select correct key length, 64 bit or 128 bit, and enter for encryption keys and then click “Next”. Note that the key length and the four encryption keys should be the same among all wireless network device to make the wireless connection success.



The screenshot shows the Hawking HGA11 Wireless Gaming Adapter Setup Wizard. The interface is titled "HAWKING TECHNOLOGY" at the top left and "HGA11 Wireless Gaming Adapter" on the left side. The main heading is "Gaming Adapter Setup Wizard". On the left, there is an image of the HGA11 device. The main content area is titled "Wireless Security (WEP)" and contains the following text: "If you wish to activate (WEP) wireless security or your wireless network is already running wireless security you may configure your settings here. (Note) All Wireless Devices on your network must use the same WEP Key to function correctly." Below this text, there are radio buttons for "OFF" (selected) and "ON". Under the "ON" option, there are radio buttons for "64 bit" (selected) and "128 bit". Below these are four input fields labeled "Key 1", "Key 2", "Key 3", and "Key 4". At the bottom right, there are "Back" and "Next" buttons.

12. After you have done the previous setting process, this page shows all the configuration parameters. If all the settings are correct, click “Finish” to confirm the settings. You also can click “Back” to modify the previous settings.



The screenshot displays the configuration interface for the Hawking HGA11 Wireless Gaming Adapter. The page features the Hawking Technology logo at the top left. The main heading is "Gaming Adapter Status". On the left, there is an image of the HGA11 device. The central text area indicates "Setup Complete" and provides a summary of the configuration:

- Setup Complete**
You have successfully set up your Wireless Gaming Adapter!
- Summary:**
 - Gaming Adapter Name: Game Adapter Name
 - Gaming Mode: Ad-Hoc Mode
 - Wireless Network SSID: SSID No.
 - IP Settings: IP Address: 192.168.1.100
Subnet: 255.255.255.0
Gateway: 192.168.1.1
 - WEP: Off

At the bottom right, there are two buttons: "Back" and "Finish".

13. You have finished the configuration for the Wireless Gaming Adapter.

Chapter 4 Web Configuration

4.1 Getting Started

This Gaming Adapter provides web-based configuration tool allowing you to configure from wired or wireless stations. We suggest you Web Configuration only when you have already set static IP to the Gaming Adapter. Follow the instructions below to get started configuration.

From Wired Station

1. Make sure your wired station is in the same subnet with the Gaming Adapter. The default IP Address and Sub Mask of the Gaming Adapter is:

Default IP Address: 192.168.2.1

Default Subnet: 255.255.255.0

Configure your PC to be in the same subnet with the Access Point.

1a) Windows 95/98/Me

1. Click the *Start* button and select *Settings*, then click *Control Panel*. The *Control Panel* window will appear.
2. Double-click *Network* icon. The *Network* window will appear.
3. Check your list of *Network Components*. If TCP/IP is not installed, click the *Add* button to install it now. If TCP/IP is installed, go to **step 6**.
4. In the *Network Component Type* dialog box, select *Protocol* and click *Add* button.
5. In the *Select Network Protocol* dialog box, select *Microsoft and TCP/IP* and then click the *OK* button to start installing the TCP/IP protocol. You may need your Windows CD to complete the installation.
6. After installing TCP/IP, go back to the *Network* dialog box. Select *TCP/IP* from the list of *Network Components* and then click the *Properties* button.
7. Check each of the tabs and verify the following settings:
 - **Bindings:** Check *Client for Microsoft Networks* and *File and printer sharing for Microsoft Networks*.
 - **Gateway:** All fields are blank.
 - **DNS Configuration:** Select *Disable DNS*.
 - **WINS Configuration:** Select *Disable WINS Resolution*.

- **IP Address:** Select *Specify an IP Address*. Specify the IP Address and Subnet Mask as following example.
 - ✓ IP Address: 192.168.2.3 (any IP address within 192.168.2.2~192.168.2.254 is available, **do not setup 192.168.2.1**)
 - ✓ Subnet Mask: 255.255.255.0
8. Reboot the PC. Your PC will now have the IP Address you specified.

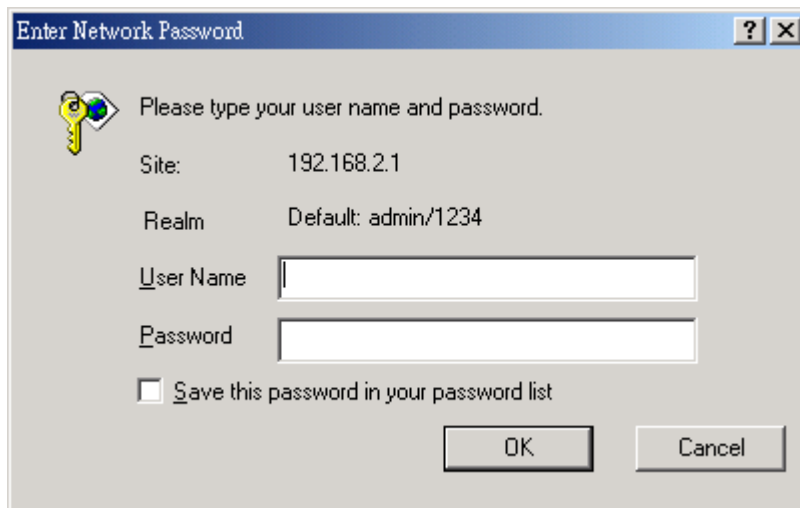
1b) Windows 2000

1. Click the *Start* button and select *Settings*, then click *Control Panel*. The *Control Panel* window will appear.
2. Double-click *Network and Dial-up Connections* icon. In the *Network and Dial-up Connection* window, double-click *Local Area Connection* icon. The *Local Area Connection* window will appear.
3. In the *Local Area Connection* window, click the *Properties* button.
4. Check your list of *Network Components*. You should see *Internet Protocol [TCP/IP]* on your list. Select it and click the *Properties* button.
5. In the *Internet Protocol (TCP/IP) Properties* window, select *Use the following IP address* and specify the IP Address and Subnet mask as following.
 - ✓ IP Address: 192.168.2.3 (any IP address within 192.168.2.2~192.168.2.254 is available, **do not setup 192.168.2.1**)
 - ✓ Subnet Mask: 255.255.255.0
6. Click *OK* to confirm the setting. Your PC will now have the IP Address you specified.

1c) Windows NT

1. Click the *Start* button and select *Settings*, then click *Control Panel*. The *Control Panel* window will appear.
2. Double-click *Network* icon. The *Network* window will appear. Select the *Protocol* tab from the *Network* window.
3. Check if the *TCP/IP Protocol* is on your list of *Network Protocols*. If *TCP/IP* is not installed, click the *Add* button to install it now. If *TCP/IP* is installed, go to **step 5**.
4. In the *Select Network Protocol* window, select the *TCP/IP Protocol* and click the *Ok* button to start installing the *TCP/IP protocol*. You may need your Windows CD to complete the installation.
5. After you install *TCP/IP*, go back to the *Network* window. Select *TCP/IP* from the list of *Network Protocols* and then click the *Properties* button.
6. Check each of the tabs and verify the following settings:

- **IP Address:** Select *Specify an IP address*. Specify the IP Address and Subnet Mask as following example.
 - ✓ IP Address: 192.168.2.3 (any IP address within 192.168.2.2~192.168.2.254 is available, **do not setup 192.168.2.1**)
 - ✓ Subnet Mask: 255.255.255.0
 - **DNS:** Let all fields are blank.
 - **WINS:** Let all fields are blank.
 - **Routing:** Let all fields are blank.
7. Click **OK** to confirm the setting. Your PC will now have the IP Address you specified.
2. Enter **192.168.2.1** from Web Browser to get into the Gaming Adapter's configuration tool.
3. A screen will be popped up and request you to enter user name and password. The default user name and password is as follows.
User Name: admin
Password: 1234
Enter the default user name and password, then press **OK** button directly.

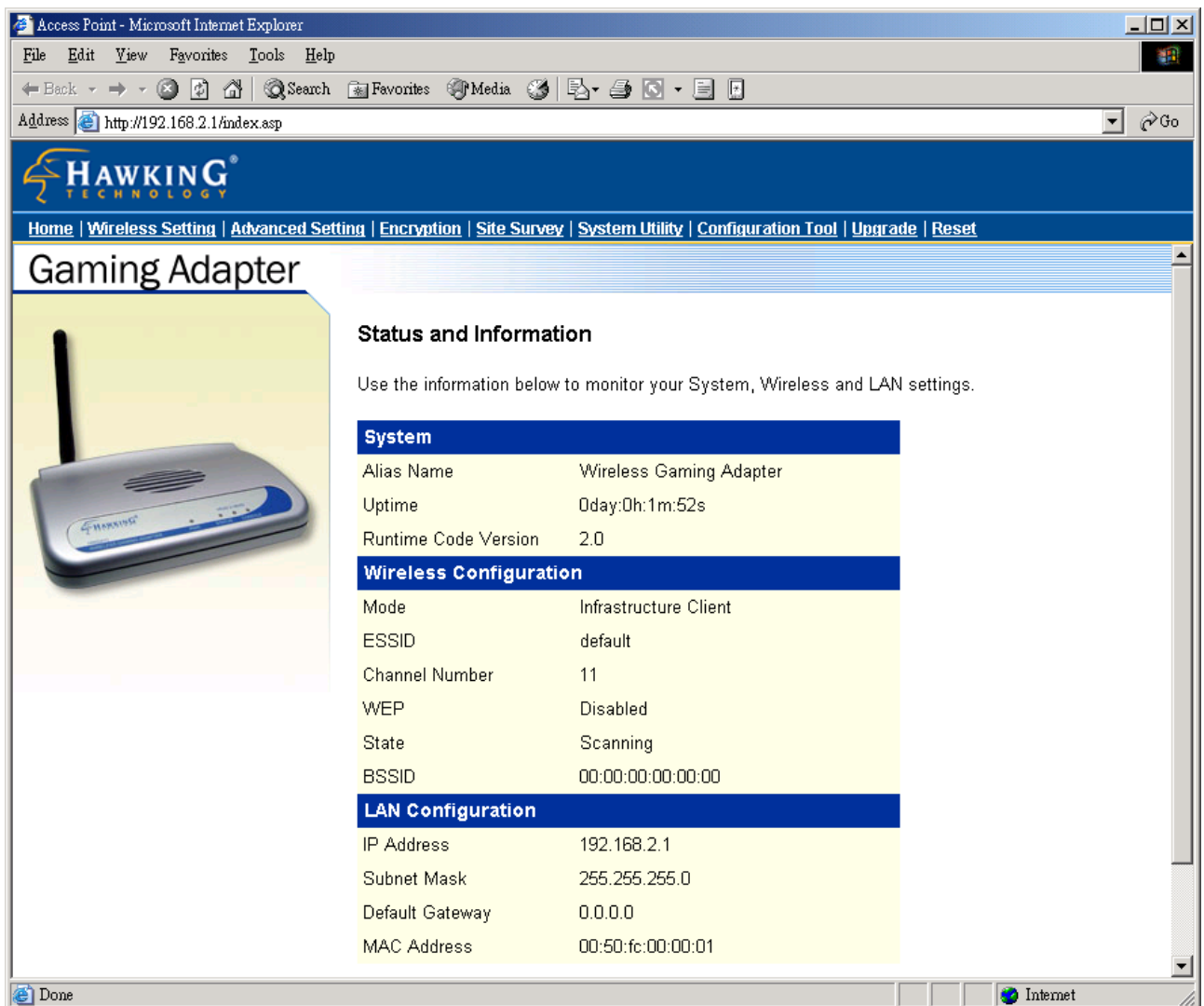


4. You can start configuring the Gaming Adapter.

4.2 Configuring the Gaming Adapter

4.2.1 Status and Information

On this screen, you can see the general information of the Gaming Adapter including Alias Name, Firmware Version, ESSID, Channel Number, Status, IP Address, MAC Address, etc.



The screenshot shows a web browser window titled "Access Point - Microsoft Internet Explorer" with the address bar displaying "http://192.168.2.1/index.asp". The page features the Hawking Technology logo and a navigation menu. The main content area is titled "Gaming Adapter" and includes a photograph of the device. Below the photo is a "Status and Information" section with the following data:

Use the information below to monitor your System, Wireless and LAN settings.

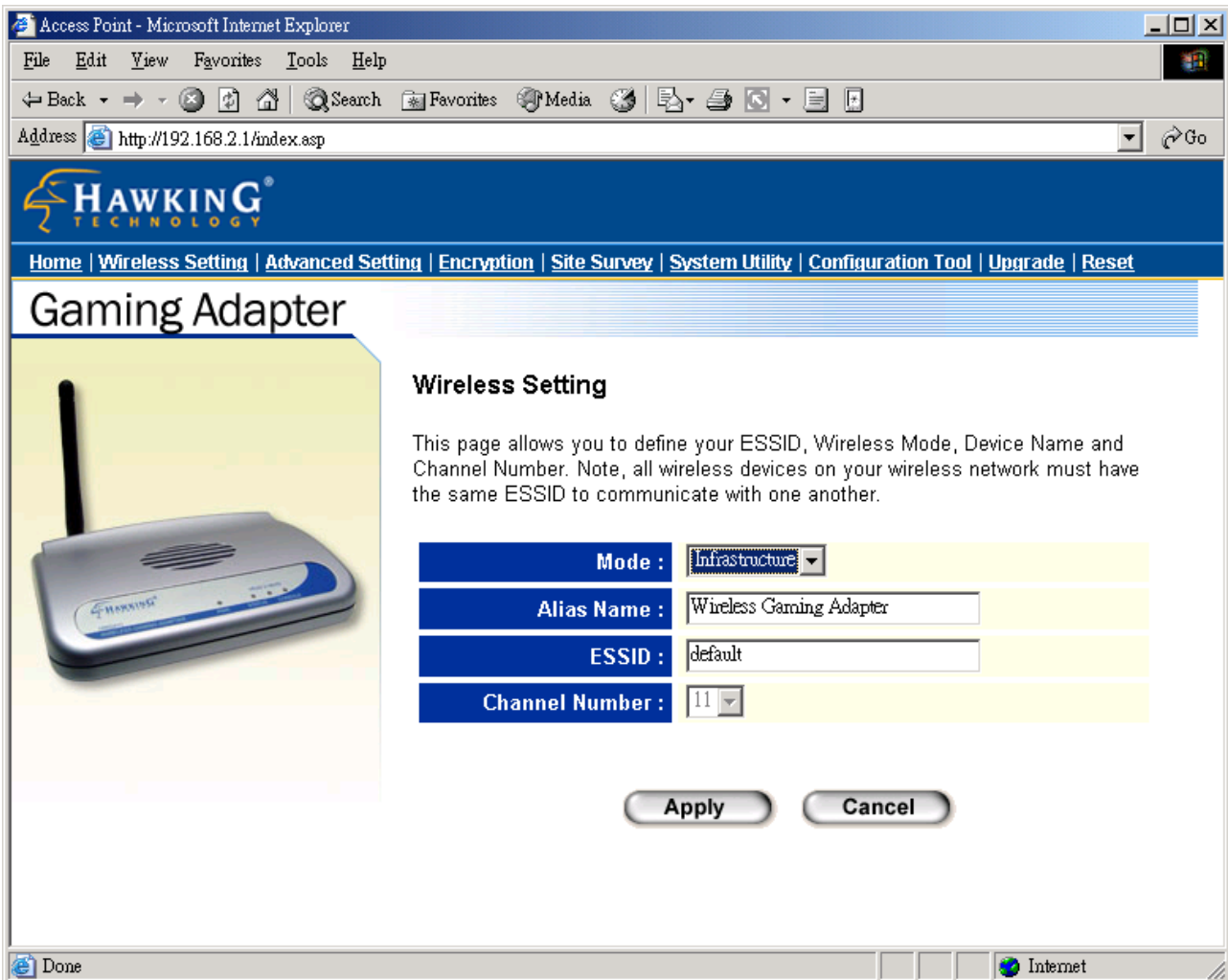
System	
Alias Name	Wireless Gaming Adapter
Uptime	0day:0h:1m:52s
Runtime Code Version	2.0

Wireless Configuration	
Mode	Infrastructure Client
ESSID	default
Channel Number	11
WEP	Disabled
State	Scanning
BSSID	00:00:00:00:00:00

LAN Configuration	
IP Address	192.168.2.1
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
MAC Address	00:50:fc:00:00:01

4.2.2 Wireless Setting

This Gaming Adapter provides both “Ad Hoc mode” and “Infrastructure mode”. With “Ad Hoc mode”, it can let your game console join a wireless LAN with peer-to-peer communication. With “Infrastructure mode”, it can let your game console join a wireless LAN through an access point.



Parameter	Description
Mode	The operation mode of this Gaming Adapter. You can select “Ad Hoc” if you use peer-to-peer wireless LAN connection to play head to head games. You can select “Infrastructure” if you are using a access point to build up a wireless LAN.
Alias Name	The alias name of this Gaming Adapter.

ESSID The ESSID (up to 31 printable ASCII characters) is the unique name identified in a WLAN. The ID prevents the unintentional merging of two co-located WLANs. Please make sure that the ESSID of all stations in the same WLAN network are the same. The default ESSID is “**default**”.

Channel Number Select the appropriate channel from the list provided to correspond with your network settings. Channels differ from country to country.

Channel 1-11 (North America)

Channel 1-14 (Japan)

Channel 1-13 (Europe)

There are 14 channels available.

Click **Apply** button at the bottom of the screen to save the above configurations. You can now configure other advance sections or start using the Gaming Adapter.

4.2.3 Advanced Setting

You can set advanced parameters of this Gaming Adapter. The parameters include Authentication Type, Fragment Threshold, RTS Threshold, Beacon Interval, Data Rate, Preamble Type, Broadcast ESSID. You should not change these parameters unless you know what effect the changes will have on this Gaming Adapter.

Parameter	Description
Authentication Type	There are two authentication types: "Open System" and "Shared Key". When you select "Open System", your access point allows this Gaming Adapter to associate with it without WEP encryption. When you select "Shared Key", you should also setup WEP key in the "Encryption" page. This Gaming Adapter will use WEP encryption in the authentication phase to associate with your access point. If you select "Both", the

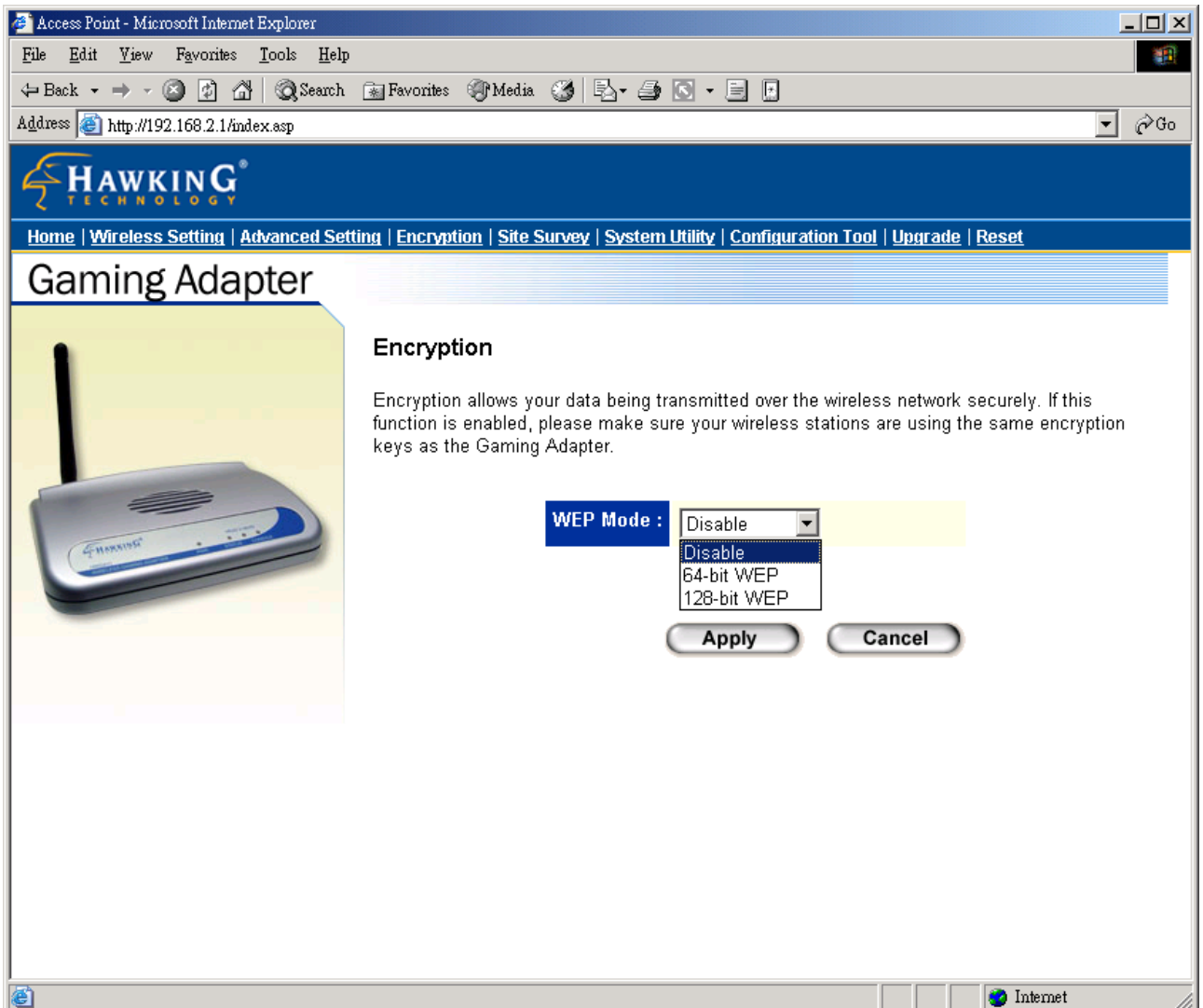
Gaming Adapter can associate with your access point or other wireless devices by using any one of these two authentication types.

Fragment Threshold	“Fragment Threshold” specifies the maximum size of packet during the fragmentation of data to be transmitted. If you set this value too low, it will result in bad performance.
RTS Threshold	When the packet size is smaller the RTS threshold, the Gaming Adapter will not use the RTS/CTS mechanism to send this packet.
Beacon Interval	The interval of time that this Gaming Adapter broadcast a beacon. Beacon is used to synchronize the wireless network.
Data Rate	The “Data Rate” is the rate this Gaming Adapter uses to transmit data packets. The Gaming Adapter will use the highest possible selected transmission rate to transmit the data packets.
Preamble Type	Preamble type defines the length of CRC block in the frames during the wireless communication. “Short Preamble” is suitable for high traffic wireless network. “Long Preamble” can provide more reliable communication.
Broadcast ESSID	If you enable “Broadcast ESSID”, every wireless station located within the coverage of this Gaming Adapter can discover this Gaming Adapter easily. Disabling “Broadcast ESSID” can provide better security.

Click **Apply** button at the bottom of the screen to save the above configurations. You can now configure other advance sections or start using the Gaming Adapter.

4.2.4 Encryption

WEP is an authentication algorithm, which protects authorized Wireless LAN users against eavesdropping. The Authentication type and WEP key of wireless stations must be the same with each other. This Gaming Adapter supports 64/128-bit WEP Encryption function. With this function, your data will be transmitted over the wireless network securely.



Parameter	Description
WEP Mode	You can select the 64-bit or 128-bit to encrypt transmitted data. Larger WEP key length will provide higher level of security, but the throughput will be lower. You also can select Disable to transmit data without encryption.

Access Point - Microsoft Internet Explorer


File Edit View Favorites Tools Help

Address <http://192.168.2.1/index.asp>

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Home | [Wireless Setting](#) | [Advanced Setting](#) | [Encryption](#) | [Site Survey](#) | [System Utility](#) | [Configuration Tool](#) | [Upgrade](#) | [Reset](#)

Gaming Adapter



Encryption

Encryption allows your data being transmitted over the wireless network securely. If this function is enabled, please make sure your wireless stations are using the same encryption keys as the Gaming Adapter.

Key format : Hex (10 characters)

Key Length : 64-bit

Enter a key into the table.

Default Key : Key1

Key 1 :

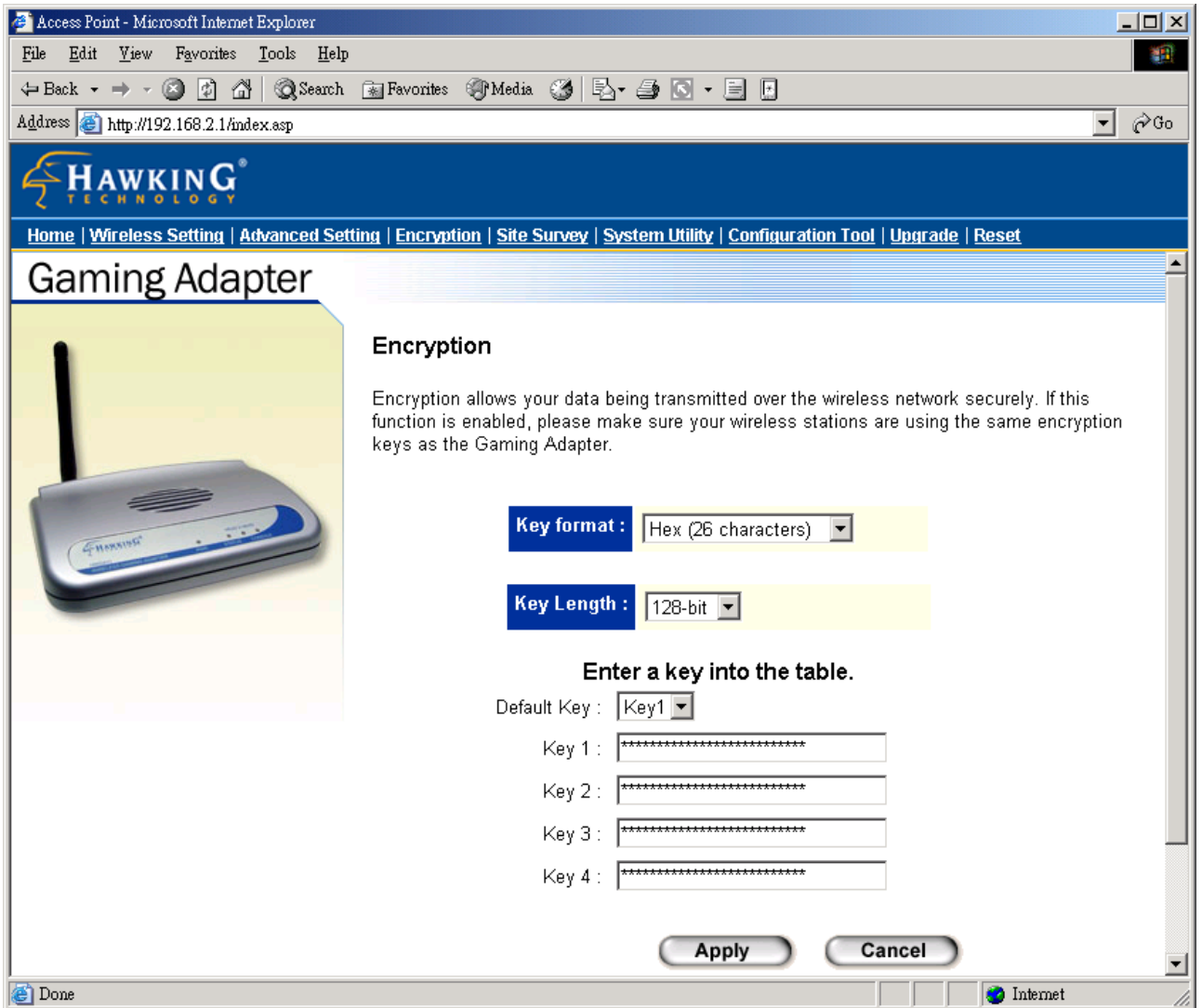
Key 2 :

Key 3 :

Key 4 :

Apply Cancel

Done Internet



Parameter	Description
Key Format	You may select to select ASCII Characters (alphanumeric format) or Hexadecimal Digits (in the “A-F”, “a-f” and “0-9” range) to be the WEP Key. For example: ASCII Characters: guest Hexadecimal Digits: 12345abcde
Key Length	You may disable or enable the WEP function from the setting item. The selections in the setting item are changed based on the key format.
Key 1 - Key 4	The WEP keys are used to encrypt data transmitted in the wireless network. Fill the text box by following the rules below. 64-bit WEP: input 10-digit Hex values (in the “A-F”, “a-f” and “0-9” range) or 5-digit ASCII character as the encryption keys.

128-bit WEP: input 26-digit Hex values (in the “A-F”, “a-f” and “0-9” range) or 10-digit ASCII characters as the encryption keys.

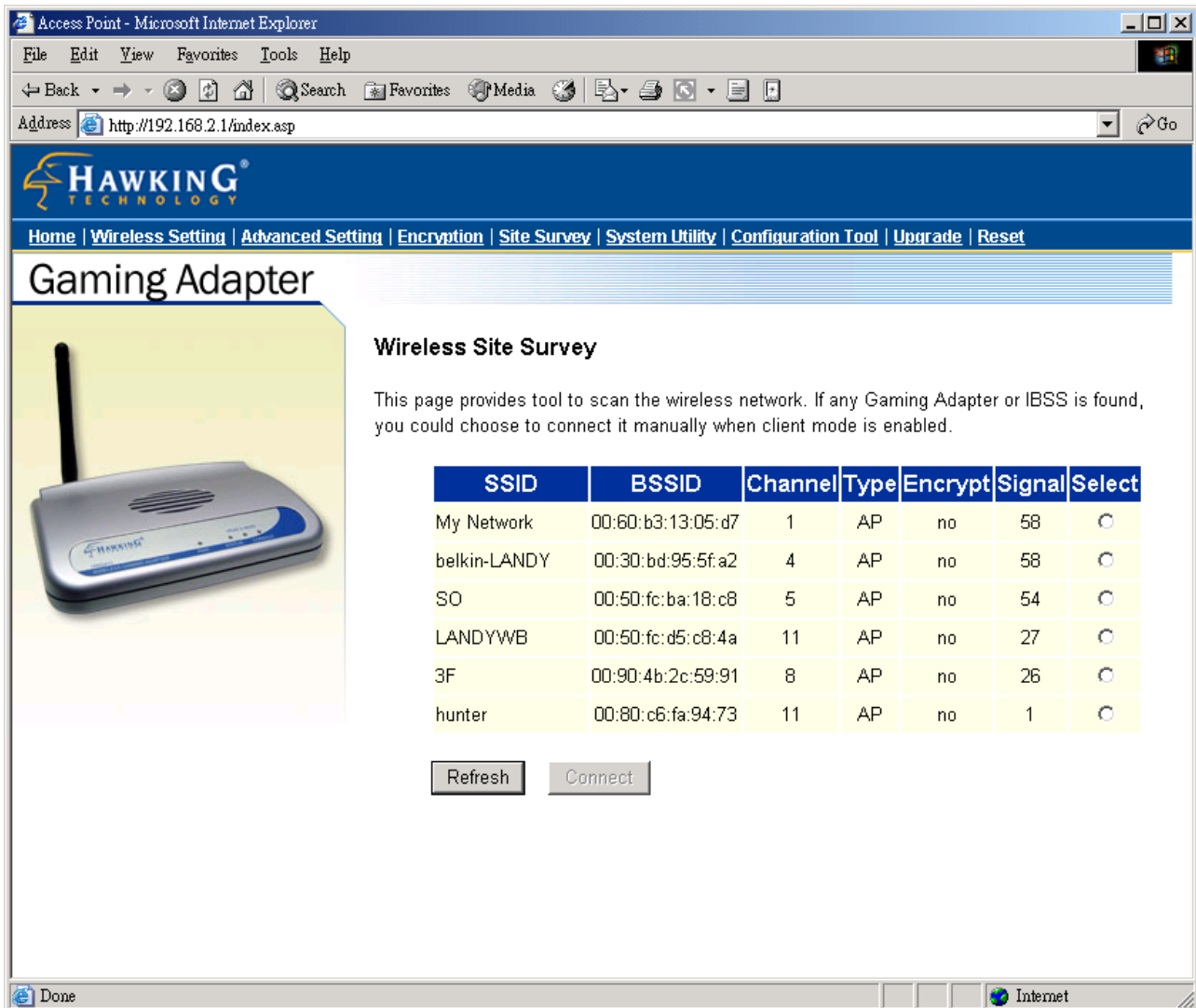
Default Key

Select one of the four keys to encrypt your data. Only the key you select it in the “Default key” will take effect.

Click **Apply** button at the bottom of the screen to save the above configurations. You can now configure other advance sections or start using the Gaming Adapter.

4.2.5 Wireless Site Survey

“Wireless Site Survey” searches for all available access points near by. You can select one access point listed in this table.



Access Point - Microsoft Internet Explorer

File Edit View Favorites Tools Help


Back Forward Stop Home Search Favorites Media Print Mail

Address http://192.168.2.1/index.asp

HAWKING
TECHNOLOGY

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Gaming Adapter



Wireless Site Survey

This page provides tool to scan the wireless network. If any Gaming Adapter or IBSS is found, you could choose to connect it manually when client mode is enabled.

SSID	BSSID	Channel	Type	Encrypt	Signal	Select
My Network	00:60:b3:13:05:d7	1	AP	no	58	<input type="radio"/>
belkin-LANDY	00:30:bd:95:5f:a2	4	AP	no	58	<input type="radio"/>
SO	00:50:fc:ba:18:c8	5	AP	no	54	<input type="radio"/>
LANDYWB	00:50:fc:d5:c8:4a	11	AP	no	27	<input type="radio"/>
3F	00:90:4b:2c:59:91	8	AP	no	26	<input type="radio"/>
hunter	00:80:c6:fa:94:73	11	AP	no	1	<input type="radio"/>

Done Internet

4.2.6 System Utility

From here, you can define the Gaming Adapter's IP Address and Login Password.

Parameter	Description
Current Password	Enter the current password (up to 15-digit alphanumeric string) of the Gaming Adapter. The default password for the Gaming Adapter is 1234 . Note that the password is case-sensitive.
New Password	Enter the password (up to 15-digit alphanumeric string) you want to login to the Gaming Adapter. Note that the password is case-sensitive.
Re-Enter Password	Reconfirm the password (up to 15-digit alphanumeric string) you want to

login to the Gaming Adapter. Note that the password is case-sensitive.

Management IP

You can select “Obtain an IP address automatically” to let this Gaming Adapter get an IP from DHCP server. If you want to manual assign an IP to this Gaming Adapter, select “Use the following IP address”.

IP Address

Designate the Gaming Adapter’s IP Address. This IP Address should be unique in your network. The default IP Address is **192.168.2.1**.

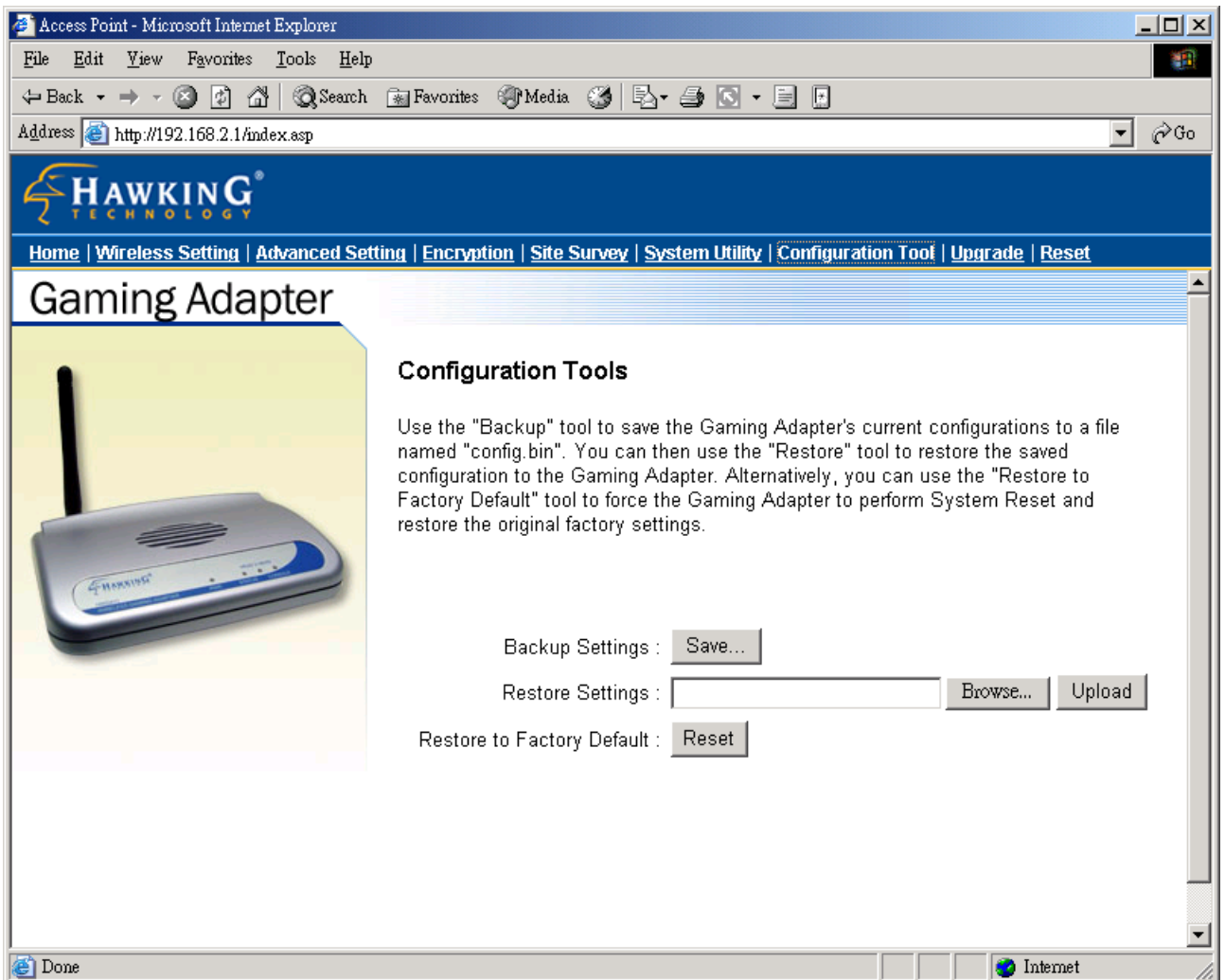
Subnet Mask

Specify a Subnet Mask for your LAN segment.

Click **Apply** button at the bottom of the screen to save the above configurations. You can now configure other advance sections or start using the Gaming Adatper.

4.2.7 Configuration Tool

The Configuration Tools screen allows you to save (**Backup**) the Gaming Adapter's current configuration setting. Saving the configuration settings provides an added protection and convenience should problems occur with the Gaming Adapter and you have to reset to factory default. When you save the configuration setting (Backup) you can re-load the saved configuration into the Gaming Adapter through the **Restore** selection. If extreme problems occur you can use the **Restore to Factory Default** selection, this will set all configurations to its original default settings (e.g. when you first purchased the Gaming Adapter).

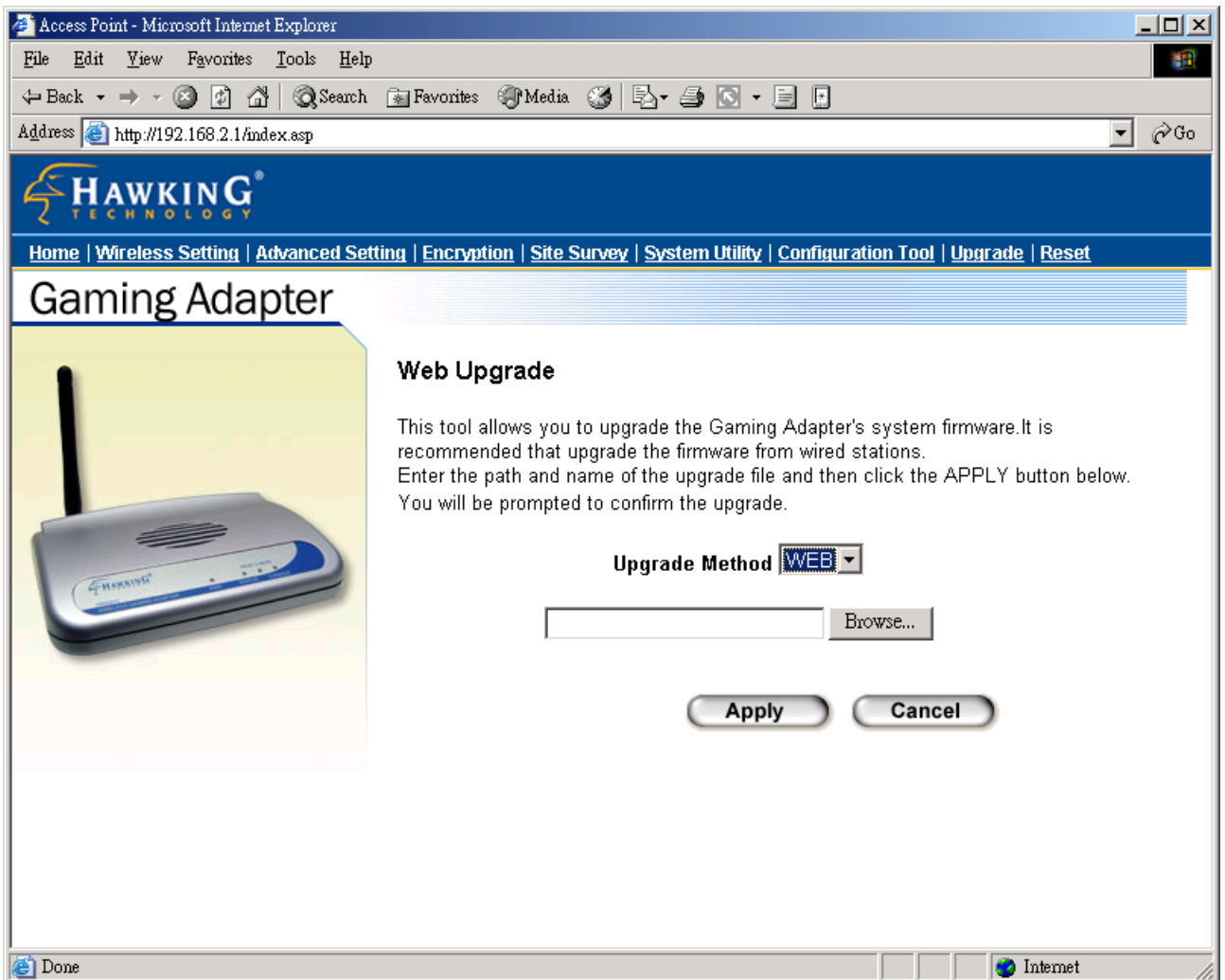


Parameter	Description
Configuration Tools	Use the "Backup" tool to save the Gaming Adapter's current configuration to a file named "config.bin" on your PC. You can then use

the "**Restore**" tool to upload and restore the saved configuration to the Gaming Adapter. Alternatively, you can use the "**Restore to Factory Default**" tool to force the Gaming Adapter to perform a power reset and restore the original factory settings.

4.2.8 Firmware Upgrade

This page allows you to upgrade the Gaming Adapter's firmware.

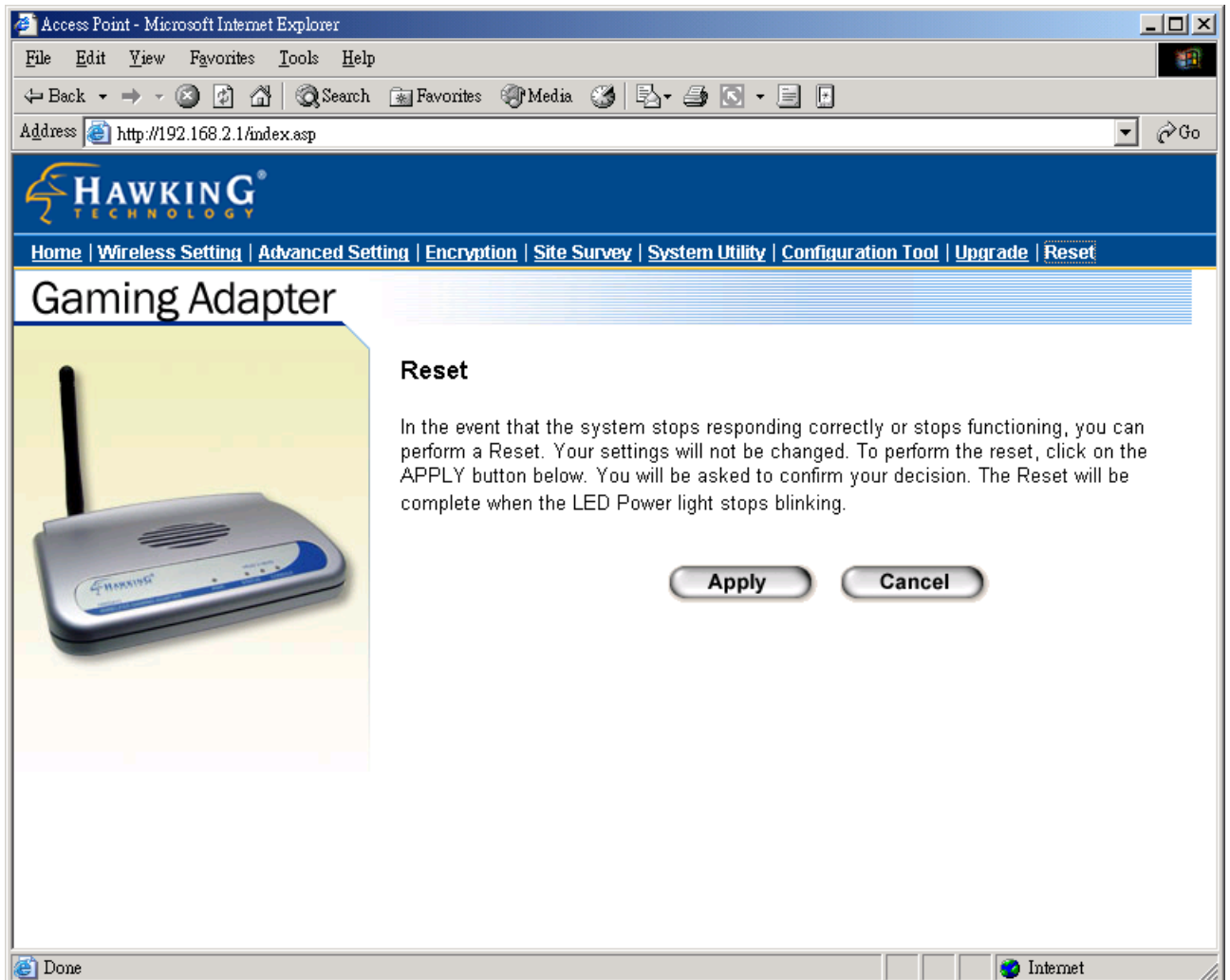


Parameter	Description
Firmware Upgrade	This tool allows you to upgrade the Gaming Adapter's system firmware. To upgrade the firmware of your Gaming Adapter, you need to download the firmware file to your local hard disk, and enter that file name and path in the appropriate field on this page. You can also use the Browse button to find the firmware file on your PC. Please reset the Gaming Adapter when the upgrade process is complete.

Once you've selected the new firmware file, click **Apply** button at the bottom of the screen to start the upgrade process. (You may have to wait a few minutes for the upgrade to complete). Once the upgrade is complete you can start using the Gaming Adapter.

4.2.9 Reset

You can reset the Gaming Adapter's system should any problem exist. The reset function essentially Re-boots your Gaming Adapter's system.



Parameter	Description
Reset	In the event that the system stops responding correctly or in some way stops functioning, you can perform a reset. Your settings will not be changed. To perform the reset, click on the Apply button. You will be asked to confirm your decision. Once the reset process is complete you may start using the Gaming Adapter again.

Chapter 5 Troubleshooting

This chapter provides solutions to problems usually encountered during the installation and operation of the Gaming Adapter.

1. How to manually find your PC's IP and MAC Address?

- 1) In Windows, open the Command Prompt program
- 2) Type **ipconfig /all** and **Enter**
 - Your PC's IP address is the one entitled **IP address**
 - Your PC's MAC Address is the one entitled **Physical Address**

2. What is Ad-hoc?

An Ad-hoc wireless LAN is a group of computers, each with a WLAN adapter, connected as an independent wireless LAN.

3. What is Infrastructure?

An integrated wireless and wired LAN is called an Infrastructure configuration.

4. What is BSS ID?

A group of wireless stations and an Access Point compose a Basic Service Set (BSS). Computers in a BSS must be configured with the same BSSID.

5. What is ESSID?

An Infrastructure configuration could also support roaming capability for mobile workers. More than one BSS can be configured as an Extended Service Set (ESS). Users within an ESS could roam freely between BSSs while maintaining a continuous connection to the wireless network stations and the Wireless LAN Access Points.

6. Can data be intercepted while transmitting through the air?

WLAN features two-fold protection in security. On the hardware side, as with Direct Sequence Spread Spectrum technology, it has the inherent scrambling security feature. On the software side, the WLAN series offers the encryption function (WEP) to enhance security and access control.

7. What is WEP?

WEP stands for Wired Equivalent Privacy, a data privacy mechanism based on a 64(40)-bit shared key algorithm.

8. What is a MAC Address?

The Media Access Control (MAC) address is a unique number assigned by the manufacturer to any Ethernet networking device, such as a network adapter, that allows the network to identify it at the hardware level. For all practical purposes, this number is usually permanent. Unlike IP addresses, which can change every time a computer logs on to the network, the MAC address of a device stays the same, making it a valuable identifier for the network.

FCC Warning Statement

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

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

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 harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Prohibition of co-location

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter

Safety Information

To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm between the radiator and your body. Use on the supplied antenna.

CAUTION: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Declaration of Conformity for R&TTE directive 1999/5/EC

Essential requirements – Article 3

Protection requirements for health and safety – Article 3.1a

Testing for electric safety according to EN 60950 has been conducted. These are considered relevant and sufficient.

Protection requirements for electromagnetic compatibility – Article 3.1b

Testing for electromagnetic compatibility according to EN 301 489-1 and EN 301 489-17 has been conducted. These are considered relevant and sufficient.

Effective use of the radio spectrum – Article 3.2

Testing for radio test suites according to EN 300 328- 2 has been conducted. These are considered relevant and sufficient.

CE Mark Warning

This is a Class B product, in a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.