



Pocket Wireless Access Point  
WL-330g

User Guide

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**E1499**

**Revised Edition V2  
December 2003**

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## Federal Communications Commission Statement

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

- This device may not cause harmful interference, and
- 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 Federal Communications Commission (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.



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**CAUTION!** You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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# Safety statements

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## Regulatory Information/Disclaimers

Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment. The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution of the connecting cables and equipment other than manufacturer specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines.



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**CAUTION!** 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. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.

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## Safety Information

In order to maintain compliance with the FCC RF exposure guidelines, this equipment should be installed and operated with minimum distance **[20cm]** between the radiator and your body. Use only with supplied antenna.

Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.



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**CAUTION!** Any changes or modifications not expressly approved in this manual could void your authorization to use this device.

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## MPE Statement

Your device contains a low power transmitter. When device is transmitted it sends out Radio Frequency (RF) signal.

### **Caution Statement of the FCC Radio Frequency Exposure**

This Wireless LAN radio device has been evaluated under FCC Bulletin OET 65C and found compliant to the requirements as set forth in CFR 47 Sections 2.1091, 2.1093, and 15.247(b)(4) addressing RF Exposure from radio frequency devices. The radiation output power of this Wireless LAN device is far below the FCC radio frequency exposure limits. Nevertheless, this device shall be used in such a manner that the potential for human contact during normal operation – as a mobile or portable device but use in a body-worn way is strictly prohibit. When using this device, a certain separation distance between antenna and nearby persons has to be kept to ensure RF exposure compliance. In order to comply with the RF exposure limits established in the ANSI C95.1 standards, the distance between the antennas and the user should not be less than [20cm].

### **RF Exposure**

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

# About this guide

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This user guide contains the information you need to install and configure your ASUS Pocket Wireless Access Point (AP).

## How this guide is organized

This guide contains the following parts:

- **Chapter 1: Product introduction**  
This chapter describes the physical features of the ASUS Pocket Wireless AP. It also presents the package contents, LED indicators, and recommended network settings.
- **Chapter 2: Hardware installation**  
This chapter provides information on how to install the ASUS Pocket Wireless AP.
- **Chapter 3: Configuration**  
This chapter describes the utilities for configuring the ASUS Pocket Wireless AP.
- **Chapter 4: Simple Setup**  
This chapter provides step-by-step instructions on how to setup your ASUS Pocket Wireless AP.
- **Chapter 5: Troubleshooting**  
The Appendix contains a troubleshooting guide for solving common problems you may encounter when using the ASUS Pocket Wireless AP.

## Conventions used in this guide

To make sure that you perform certain tasks properly, take note of the following symbols used throughout this guide.



**WARNING:** Information to prevent injury to yourself when trying to complete a task.



**CAUTION:** Information to prevent damage to the components when trying to complete a task.



**IMPORTANT:** Information that you **MUST** follow to complete a task.



**NOTE:** Tips and additional information to aid in completing a task.

# ASUS contact information

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## WL-330 specification summary\*

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<b>Standard</b>	IEEE 802.11b
<b>Technology</b>	<b>OFDM,DSSS</b>
<b>Data Transfer Rate</b>	<b>802.11g:6, 9, 12, 18, 24, 36, 48, 54Mbps</b>
	<b>802.11b:1, 2, 5.5, 11Mbps</b>
<b>Frequency Band</b>	2.4 GHz ~ 2.5 GHz
<b>Security</b>	64-bit/128-bit configurable WEP encryption
<b>Operating Distance</b>	Indoors: 100 ft (30 m) @ 11Mbps Outdoors: 1000 ft (300 m) @ 11Mbps
<b>Supported OS</b>	Windows® 98SE/ME/2000/XP
<b>Antenna</b>	Internal antenna

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*\*Specifications are subject to change without notice.*



# Chapter 1

This chapter describes the physical features of the ASUS Pocket Wireless Access Point. It also presents the package contents, LED indicators, and recommended network settings.

▶ ***Product introduction***

# Product introduction

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## 1.1 Welcome!

Thank you for choosing the ASUS Pocket Wireless Access Point!

The ASUS Pocket Wireless AP is an easy-to-install wireless access point and wireless bridge in one. Conforming to IEEE 802.11b standard for wireless local area network (WLAN), the ASUS Pocket Wireless AP is capable of up to 11Mbps data transmission rate on the 2.4GHz to 2.5GHz band.

The ASUS Pocket Wireless AP also features the latest wireless technology developed by ASUS to keep you ahead in the world of wireless computing.

## 1.2 Package contents

Check the following items in your ASUS Pocket Wireless AP package. Contact your retailer if any item is damaged or missing.

- ✓ ASUS Pocket Wireless AP (WL-330g)
- ✓ Universal power adapter and plug (100V ~ 240V)
- ✓ Soft case
- ✓ RJ-45 connector and cable
- ✓ Support CD
- ✓ Quick Start Guide
- ✓ Software case guide



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Unless otherwise specified, the term “device” in this User Guide refers to the ASUS Pocket Wireless AP.

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# Product introduction

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## 1.5 Network setup

The ASUS Pocket Wireless AP may be configured as an Access Point (AP) or wireless bridge. . In AP mode, the device acts as the central link between computers in a wireless network.



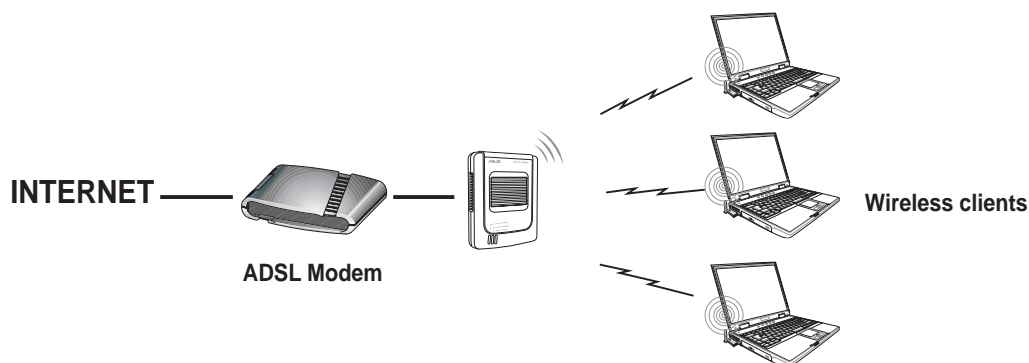
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Determine your network settings before installing the ASUS Pocket Wireless AP to avail all its features. The following network settings are recommended.

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### 1.5.1 Access Point mode

In Access Point mode the ASUS Pocket Wireless AP allows wireless clients to connect to a wired or wireless LAN.



# Chapter 2

This chapter provides information on how to install the ASUS Pocket AP.

 ***Installation***

# Installation

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## 2.1 System requirements

Before installing the ASUS Pocket Wireless AP, make sure that your system meets the following requirements:

- An Ethernet (10Base-T or 100Base-TX) adapter for wired client
- At least one 802.11b (11Mbps) wireless adapter for wireless mobile client
- TCP/IP and an Internet browser installed

## 2.2 Installing the ASUS Pocket Wireless AP

### 2.2.1 Before you proceed

Take note of the following guidelines before installing the ASUS Pocket Wireless AP.

- The length of the Ethernet cable that connects the device to the network must not exceed 100 meters.
- Place the device on a flat, stable surface as far from the ground as possible
- Keep the device clear from metal obstructions and away from direct sunlight.
- Keep the device away from transformers, heavy-duty motors, fluorescent lights, microwave ovens, refrigerators, and other industrial equipment to prevent signal loss.
- Install the device in a central area to provide ideal coverage for all wireless mobile devices.



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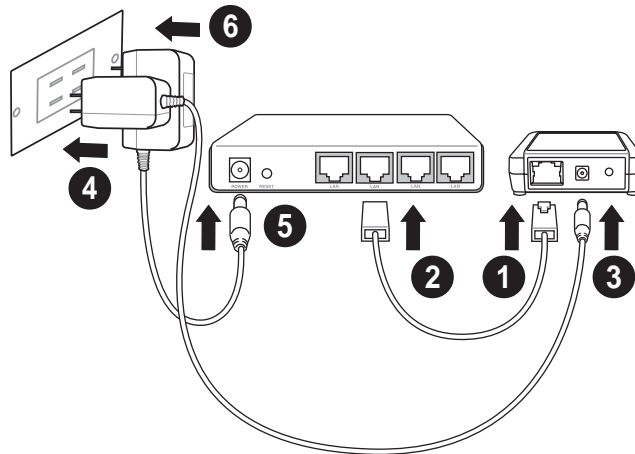
Install this device at least 20 centimeters from any person to insure that the product is operated in accordance with the RF Guidelines for Human Exposure which have been adopted by the Federal Communications Commission.

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## 2.2.2 Installation procedures

Follow these instructions to install the ASUS Pocket Wireless AP.

### Access point mode (DC power)



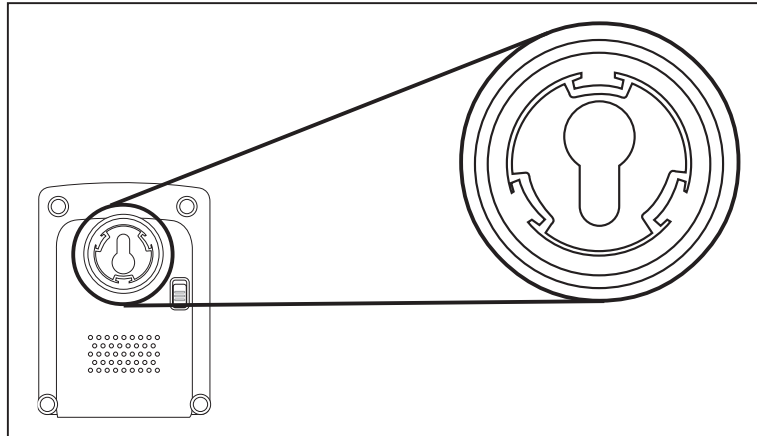
1. Connect one end of the RJ-45 cable to the Ethernet port of the device.
2. Connect the other end of the RJ-45 cable to the 10Base-T port of a network hub, switch, router, or wall patch panel.
3. Insert the universal power adapter plug to the DC-IN socket of the device.
4. Connect the universal power adapter to a wall socket.
5. Insert the power plug to the DC-IN socket of the network hub, switch, or router.
6. Plug the power adapter of the network hub, switch, or router to a wall socket.



Use only the power adapter and plug that came with the ASUS Pocket Wireless AP package. Using other power adapter and plug may damage the device.

## 2.3 Mounting

Aside from desktop placement, you may install the ASUS Pocket Wireless AP vertically on a concrete or wooden wall using the mounting hooks at the bottom of the and a mounting screw.



To mount the ASUS Pocket Wireless AP on a concrete or wooden wall:

1. Locate the mounting hook at the bottom of the device.
2. Select an ideal location for the device following the guidelines in section 2.2.1.
3. Tighten a round head screw on the concrete or wooden wall until only 1/4" is showing.
4. Latch the device into the screw.



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Adjust the screw if you cannot latch the device or if the screw is too loose.

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# Installation

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## 2.4 Operating range

### 2.4.1 Range

The ASUS Pocket Wireless AP range is dependent on the operating environment. Every home or office layout varies in obstacles, barriers, or wall types which may reflect or absorb radio signals. For example, two 802.11b radios in an open space may achieve an operating distance of up to 1000 meters, while the same two units may only achieve up to 300 meters of range when used indoors.

By default, the device automatically adjusts the data rate to maintain a usable radio connection. Therefore, a client that is close to the device may operate at higher speeds while a client that is on the fringe of coverage may operate at lower speeds. You can configure the data rates that the device uses. If you limit the range of data rates available to the ASUS Pocket AP, you may reduce the effective wireless range of the WLAN coverage.

### 2.4.2 Site survey

A site survey (utility provided with the ASUS Pocket Wireless AP) analyzes the installation environment and provides users with recommendations for equipment and its placement. The optimum placement differ depending on the device design and specifications.

## 2.5 Roaming information

If there are several ASUS Pocket Wireless APs operating on a network, then a wireless mobile client may seamlessly roam from one ASUS Pocket Wireless AP to another.

Each ASUS Pocket Wireless AP creates its own wireless cell or coverage area known as a Basic Service Set (BSS). Any wireless mobile client can communicate with a particular ASUS AP if it is within that AP's coverage area.



If the cells of multiple ASUS Pocket APs overlap, then the wireless mobile client may switch from one ASUS Pocket Wireless AP to another. During the transfer from one ASUS AP to another, the wireless mobile client maintains an uninterrupted connection to the network. This is called “roaming.”

Multiple ASUS Pocket APs connected to a common Ethernet network form an Extended Service Set (ESS). All members of an Extended Service Set are configured with an ID, known as the SSID or ESSID. Wireless mobile clients must be configured with the same SSID as the ASUS Pocket APs on the network since it can only roam between ASUS Pocket APs sharing the same SSID.

## Important notes on roaming

- An ASUS WLAN card can only roam between APs of the same type.
- All ASUS Pocket Wireless APs must have the same SSID.
- All computers with ASUS WLAN cards must have the same SSID as the Access Points to enable roaming.
- If WEP encryption is enabled, all ASUS APs and client adapters must use the same encryption level and WEP key(s) to establish connection.
- ASUS Pocket Wireless AP's cells must overlap to provide an uninterrupted connection for a roaming client.
- ASUS Pocket Wireless APs that use the same channel should be installed away from each other to reduce potential interference.
- We strongly recommended that you perform a site survey using the ASUS Pocket Wireless AP utility to determine the best location for each device.

# Chapter 3

This chapter describes the ASUS Pocket Wireless AP configuration using the utilities available from the support CD.

▶ ***Configuration***

# Configuration

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## 3.1 Installing the utilities

The support CD contains the utilities for configuring the ASUS Pocket Wireless AP.

To install the device utilities in your computer:

1. Insert the support CD to the optical drive.
2. Click “**Install ASUS WLAN AP Utilities**” when the ASUS Wireless Access Point WL-330 installation window appears.
3. The device utilities are copied into your computer.



If Autorun is NOT enabled in your computer, browse the contents of the support CD and double click the Setup.exe file to run the CD.

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### Other support CD options

**Uninstall ASUS WLAN Card Utilities/Driver.** Click this option to uninstall the ASUS Pocket Wireless AP utilities from your system.

**Run Setup Wizard Utility.** Click this option to run the Setup Wizard utility.

**Read/Install User Documentation.** Click to view the installation and quick setup guides in PDF format.

**Explore this CD.** Click this option to explore the support CD contents.

**Browse our Web Site.** Click this option to visit the ASUS website.

Click **EXIT** to close the installation window.

## 3.2 Using the Setup Wizard utility

The Setup Wizard utility allows easy configuration of the ASUS Pocket Wireless AP settings in both access point and wireless bridge modes. You may launch the Setup Wizard utility directly from the support CD or from the Windows® desktop.

### 3.2.1 Launching the Setup Wizard utility

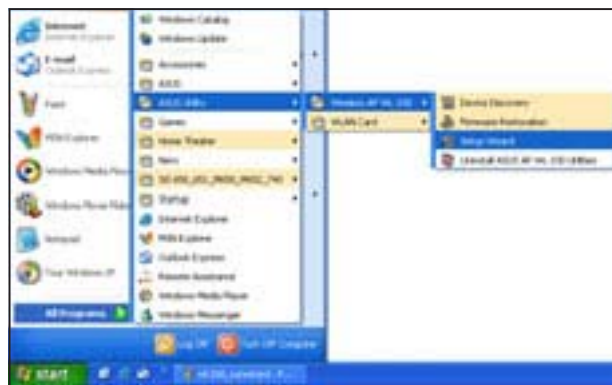
To launch the Setup Wizard utility from the support CD:

1. Insert the support CD to the optical drive.
2. Click the **Run Setup Wizard Utility** option from the installation window.
3. The Setup Wizard utility window appears.



To launch the Setup Wizard from the Windows® desktop:

1. Install the device utilities following the steps in section 3.1.
2. From the Windows® desktop, click **Start > All Programs > ASUS Utility > Wireless AP WL-330 > Setup Wizard**.
3. The Setup Wizard utility window appears.



# Configuration

## 3.2.2 Access Point (AP) mode

By default, the ASUS Pocket Wireless AP is set to access point (AP) mode. The Setup Wizard auto-detects and displays the device SSID, channel, encryption, MAC, and IP addresses. Click **Configure** to change these settings.

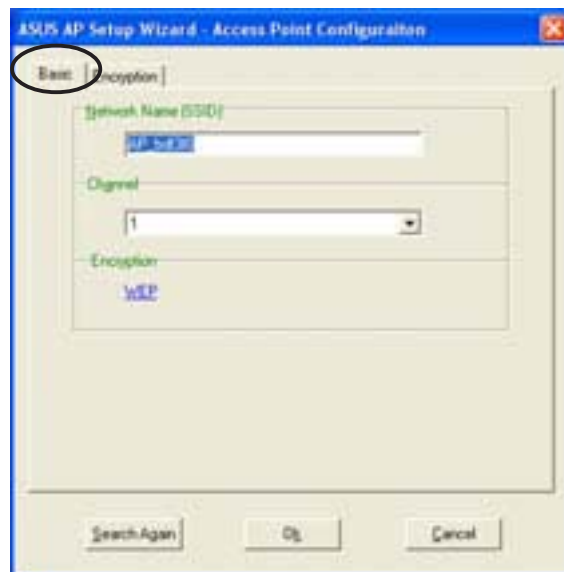


### Basic tab

**Network Name (SSID).** This field allows you to set the ASUS Pocket Wireless AP SSID. The SSID is an identification string of up to 32 ASCII characters that differentiate the device from other manufacturers.



A wireless client must have the same SSID with the ASUS Pocket Wireless AP to establish connection.



**Channel.** Select a radio channel the ASUS Pocket Wireless AP uses in communicating with other wireless device(s). IEEE 802.11b devices are direct sequence spread spectrum devices that spread a radio signal over a range of frequencies. A channel is a range of frequencies used by a direct sequence device.

Click the **Encryption** tab to configure the device WEP encryption settings.

## Encryption tab

The Encryption tab allows you to enable or disable the Wired Equivalent Privacy (WEP) encryption. WEP encryption secures data transmission between devices in a wireless network.

**Authentication Method.** This option allows you to select the Authentication method for WEP encryption.

*Open System or Shared Key* - When selected, the AP accepts connection requests from any wireless device within its operating range.

*Shared Key* - In Shared Key method, wireless device(s) must have the same WEP encryption as that of the AP to establish connection.

**Key Format** allows you to set a hexadecimal digit or ASCII character WEP key.

**Key Length** allows you to choose a 64-bit or a 128-bit WEP key. A 64-bit encryption contains 10 hexadecimal digits or 5 ASCII characters. A 128-bit encryption contains 26 hexadecimal digits or 13 ASCII characters.



- 64-bit and 40-bit WEP keys use the same encryption method and can interoperate on wireless networks. This lower level of WEP encryption uses a 40-bit (10 hexadecimal digits assigned by the user) secret key and a 24-bit Initialization Vector assigned by the wireless LAN adapter. 104-bit and 128-bit WEP keys use the same encryption method.
- All wireless clients in a network must have identical WEP keys with the access point to establish connection.
- Keep a record of the WEP encryption keys.

# Configuration

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## 3.2 Device Discovery

The Device Discovery utility searches and identifies the ASUS WLAN products connected to your computer.

To launch the Device Discovery from the Windows® desktop:

1. Click **Start > All Programs > ASUS Utility > Wireless AP WL-330 > Device Discovery**.

2. The Device Discovery window appears.



3. Click **Search** to scan for wireless LAN devices connected to your computer. The Device Discovery auto-detects the device(s) and displays the SSID, IP Address, Subnet mask, and Printer.

4. Click **Config** to open the Web Configuration utility. See the next section for details.

5. Click **Exit** to close the utility.



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The Device Discovery window also appears when you launch the Setup Wizard utility. Do any of the following to configure the device.

- Click the **Config** button to launch the Web Configuration utility, or
  - Click **Exit**, then re-launch the Setup Wizard utility.
-

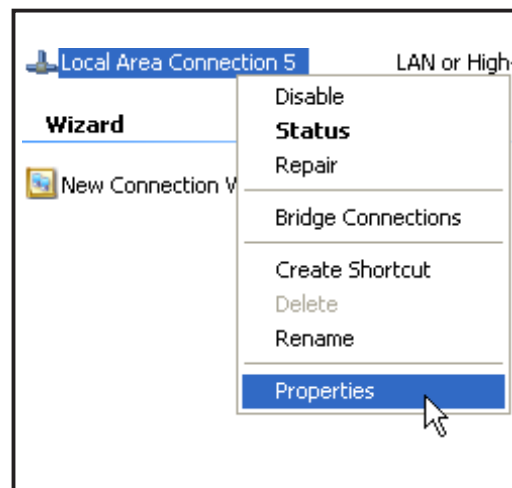
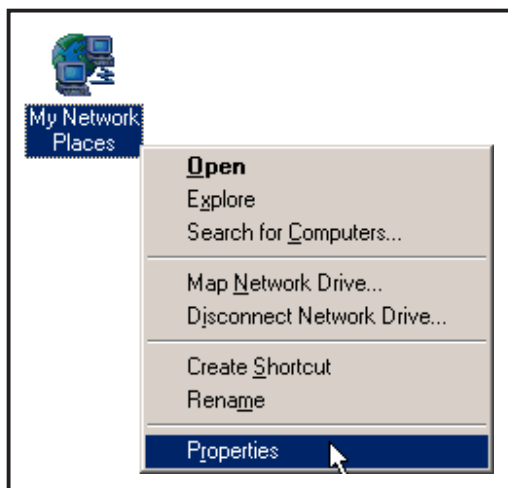
## 3.3 Web Configuration utility

The Web Configuration utility allows you to configure the ASUS Pocket Wireless AP using a web browser on your computer. The following sections provide information on how to launch and use this utility.

### Adjusting the TCP/IP settings

By default, the IP address of the ASUS Pocket Wireless AP is 192.168.1.1, and the Subnet Mask is 255.255.255.0. To access the configuration utility, assign a different IP address to the network adapter where the ASUS Pocket Wireless AP is connected.

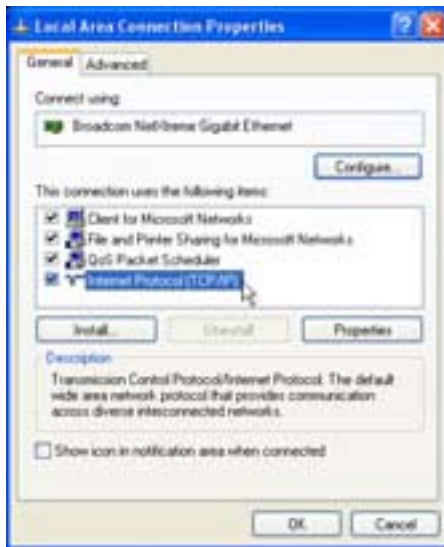
To adjust the TCP/IP settings of the network adapter:



1. Right-click the **My Network Places** icon in the Windows® desktop, then select **Properties** from the pop-up menu. The **Network and Dial-up Connections** window appears.
2. Right-click the network adapter used by the the ASUS Pocket Wireless AP, then select **Properties** from the pop-up menu. The **Local Area Connection Properties** window appears.



# Configuration



3. Double-click the **Internet Protocol (TCP/IP)** item to display the **Internet Protocol (TCP/IP) Properties** window.



4. Check the **Use the following IP address** option, then enter the IP address for the network adapter. The **IP address** must be **192.168.1.X**. (**X** can be any number between 2 and 254 that is not used by another device.)



Changing the TCP/IP settings may require system reboot. Switch on the device immediately after rebooting.

5. Set the **Subnet Mask** to 255.255.255.0. Click **OK** when finished.

## 3.4 Launching the Web Configuration utility

To launch the Web Configuration utility:

1. Open a web browser.
2. Disable your web proxy, if you are using one.
3. Type `http://192.168.1.1` on the address bar, then press <Enter>.
4. The configuration utility home page appears.

The screenshot shows the ASUS Pocket Wireless AP web configuration utility. The page has a purple header with the ASUS logo and navigation tabs for 'Simple Setup', 'Access Control', and 'Firmware Upgrade'. The 'Simple Setup' tab is active. The 'Wireless Interface' section is highlighted in yellow and contains the following settings:

SSID: <a href="#">Associated Stations</a>	AP_123456
<input checked="" type="checkbox"/> Response to Broadcast SSID requests	
Channel:	Channel 1
Basic Rate Set:	<input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input checked="" type="checkbox"/> 5.5 <input checked="" type="checkbox"/> 11 Mbps
Preamble:	Long
Authentication Method:	Open System or Shared Key
Encryption(WEP):	None
Pass Phrase:	[Redacted]
WEP Key 1 (10 or 26 hex digits):	[Redacted]
WEP Key 2 (10 or 26 hex digits):	[Redacted]
WEP Key 3 (10 or 26 hex digits):	[Redacted]
WEP Key 4 (10 or 26 hex digits):	[Redacted]
Default Key:	1

The 'Ethernet Interface' section is also highlighted in yellow and contains the following settings:

<input type="radio"/> Enable DHCP:	
<input checked="" type="radio"/> Use the following IP Setting:	
Ip Address:	192.168.1.1
Subnet Mask:	255.255.255.0
Default Gateway:	

Setting Status: Please Enter Valid Data.

Buttons: Restore, Launch

Restore: Clear the above settings and restore the settings in effect.  
Launch: Confirm all settings and launch WL330 immediately.

The window displays the default values of the ASUS Pocket Wireless AP. If you wish to load the default values after changing these settings, press the reset button for more than five seconds. Refresh your browser to display the default values.

# Configuration

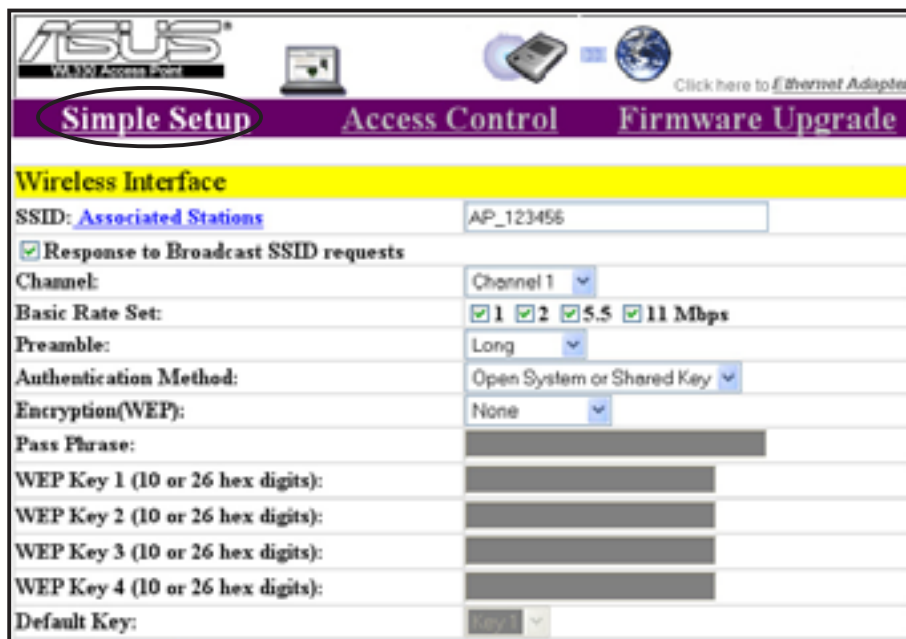
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## 3.5 Access Point mode

### 3.5.1 Simple Setup

The **Simple Setup** page allows you to configure the ASUS Pocket Wireless AP configuration in access point mode.

#### Wireless Interface



The screenshot shows the ASUS Wireless Interface configuration page. At the top, there is a navigation bar with three tabs: "Simple Setup" (which is circled in red), "Access Control", and "Firmware Upgrade". Below the navigation bar, the "Wireless Interface" section is highlighted in yellow. The configuration fields are as follows:

SSID: <a href="#">Associated Stations</a>	AP_123456
<input checked="" type="checkbox"/> Response to Broadcast SSID requests	
Channel:	Channel 1
Basic Rate Set:	<input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input checked="" type="checkbox"/> 5.5 <input checked="" type="checkbox"/> 11 Mbps
Preamble:	Long
Authentication Method:	Open System or Shared Key
Encryption(WEP):	None
Pass Phrase:	[Redacted]
WEP Key 1 (10 or 26 hex digits):	[Redacted]
WEP Key 2 (10 or 26 hex digits):	[Redacted]
WEP Key 3 (10 or 26 hex digits):	[Redacted]
WEP Key 4 (10 or 26 hex digits):	[Redacted]
Default Key:	Key 1

**SSID (Service Set Identifier).** This field displays the SSID of the device.

Enabling the **Response to Broadcast SSID requests** option allows the device to broadcast its SSID in a wireless network. This allows other wireless devices to scan and establish communication with the device. Unchecking this option hides the SSID to prevent other wireless devices from recognizing and connecting to the device.

Click the **Associated Stations** link (beside the SSID) to displays the list of wireless device(s) associated with the ASUS Pocket Wireless AP. The list includes the wireless device(s) MAC address and connection status.



Click **Back** to return to the **Simple Setup** page.

**Channel.** Allows you to specify the channel the device uses to communicate with other wireless device(s) in the network.

The 802.11b specification supports up to 14 overlapping channels for radio communication. If several ASUS Pocket Wireless APs are operating in the same area, assign a non-overlapping channel to each device to avoid interference. Refer to page 3-24 for channel information.

**Basic Rate Set.** This option allows you to specify the data transmission rate. Select from 11, 5.5, 2 and 1 Mbps data transfer rate.

**Preamble.** Allows you to set the preamble mode for a 2.4GHz/11Mb network to Long, Short, or Auto. The default preamble mode is Long.

**Authentication Method.** The Authentication Method field allows you to enable or disable the Wired Equivalent Privacy (WEP) encryption. Refer to page 3-5 for details.

**Encryption.** This option allows you to specify a 64-bit or a 128-bit WEP key. A 64-bit encryption contains 10 hexadecimal digits or 5 ASCII characters. A 128-bit encryption contains 26 hexadecimal digits or 13 ASCII characters.



- 64-bit and 40-bit WEP keys use the same encryption method and can interoperate on wireless networks. This lower level of WEP encryption uses a 40-bit (10 hexadecimal digits assigned by the user) secret key and a 24-bit Initialization Vector assigned by the device. 104-bit and 128-bit WEP keys use the same encryption method.
- All wireless clients in a network must have identical WEP keys with the access point to establish connection. Keep a record of the WEP encryption keys.

# Configuration

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**Pass Phrase.** Type a combination of up to 64 letters, numbers, or symbols in the Pass Phrase field. The Wireless Settings utility uses an algorithm to generate four WEP keys based on the typed combination.



This option allows you to use WEP keys without having to remember or write them down. The WEP keys generated using the Pass Phrase is compatible with other ASUS WLAN products. The Pass Phrase option is not as secure as manual assignment.

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**Default Key.** This option allows you to select the default WEP key.

Click **Launch** after configuration to save your settings. Click **Restore** to load the default values.

## Ethernet Interface

The **Ethernet Interface** allows you to configure the network settings of the ASUS Pocket Wireless AP.

Ethernet Interface	
<input type="radio"/> Enable DHCP:	
<input checked="" type="radio"/> Use the following IP Setting:	
Ip Address:	192.168.1.1
Subnet Mask:	255.255.255.0
Default Gateway:	
Setting Status: Please Enter Valid Data.	
<input type="button" value="Restore"/>	<input type="button" value="Launch"/>
Restore: Clear the above settings and restore the settings in effect.	
Launch: Confirm all settings and launch WL330 immediately.	

**Enable DHCP.** When selected, the Dynamic Host Configuration Protocol (DHCP) server automatically assigns the IP address, Subnet Mask, and Default Gateway for the ASUS Pocket Wireless AP.

**Use the following IP setting.** Allows you to manually enter the IP address, Subnet Mask, and Default Gateway of the device.

Click **Launch** after configuring the network settings of the ASUS Pocket Wireless AP to save your settings. Click **Restore** to load the default values.

## 3.5.2 Access Control

The **Access Control** page allows you to control connection requests from other devices or enable the Wireless Distribution System (WDS) feature of the ASUS Pocket Wireless AP.

### MAC Access Control

Check **Accept association requests from any station** to accept all connection requests from other wireless devices. Disabling this option enables the **MAC Address** table.

The Media Access Control (MAC) is the hardware address a device in a network. Enter the MAC address(es) of wireless device(s) allowed to associate with the ASUS Pocket Wireless AP in the table.

Click **Launch** when done.

ASUS Wireless Access Point

Simple Setup **Access Control** Firmware Upgrade

MAC Access Control Wireless Distribution System

### MAC Access Control

Accept association requests from any station

Stations allowed to be associated:

Number	MAC Address
1	00 00 00 00 00 00
2	00 00 00 00 00 00
3	00 00 00 00 00 00
4	00 00 00 00 00 00
5	00 00 00 00 00 00
6	00 00 00 00 00 00
7	00 00 00 00 00 00
8	00 00 00 00 00 00
9	00 00 00 00 00 00
10	00 00 00 00 00 00
11	00 00 00 00 00 00
12	00 00 00 00 00 00

Restore Launch

**Restore:** Clear the above settings and restore the settings in effect.  
**Launch:** Confirm all settings and launch WL330 immediately.

# Configuration

## Wireless Distribution System

The Wireless Distribution System allows your ASUS Pocket Wireless AP to communicate simultaneously with wireless clients (AP mode) and with other APs (wireless bridge mode) in your location. The WDS is a cost-effective and easy way of integrating multiple wireless networks.

Number	MAC Address
1	00:0C:6E:63:52:E9
2	00:00:00:00:00:00
3	00:00:00:00:00:00
4	00:00:00:00:00:00
5	00:00:00:00:00:00
6	00:00:00:00:00:00

**AP Mode.** The AP mode allows you to select the device mode in a WDS environment. Select an AP mode from the drop-down menu. Refer to the next section for details on the AP modes.

Access Point only  
Access Point only  
Hybrid-Active (connects to APs in the list)  
Hybrid-Passive (waits for anonymous connection)

**Channel.** Select the channel you wish to use in communicating with other APs in your location. All APs in a wireless bridge mode must specify the same channel to establish connection.

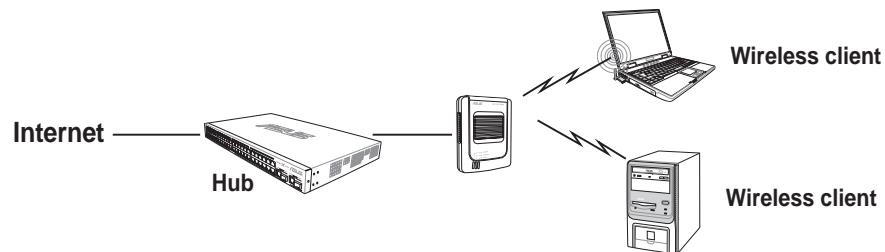
**WDS APs allowed to be connected.** This table allows you to specify the MAC address(s) of a device(s) allowed to connect to the ASUS Pocket Wireless AP. The table is activated only when the AP Mode is set to **Hybrid-Active**.

Click **Launch** after configuration to save your settings. Click **Restore** to load the default values.

## AP Modes

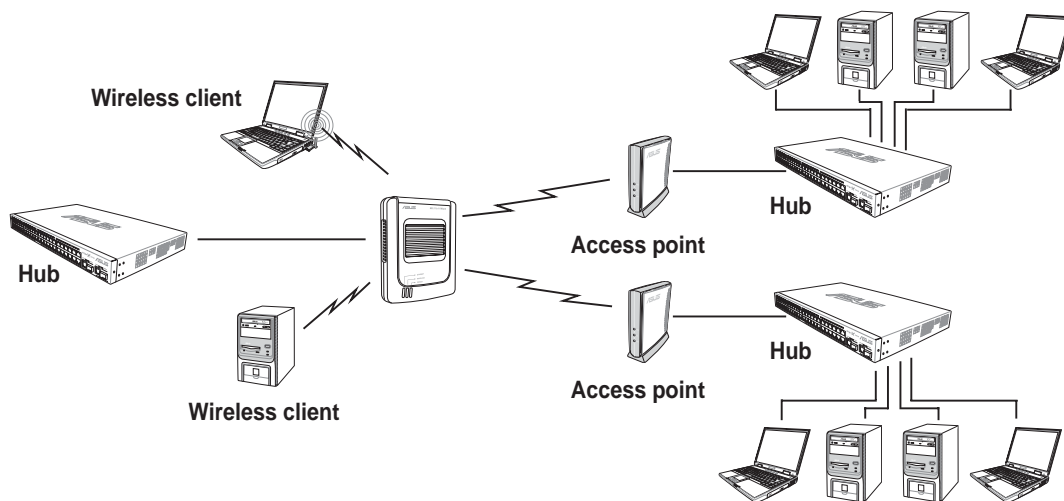
### Access Point Only

The ASUS Pocket Wireless AP is set to Access Point Only mode by default. In this mode, the device only performs as an AP that connects wireless clients to a wired Ethernet network. The picture below illustrates the device in Access Point Only mode.



### Hybrid-Active

When set to Hybrid-Active mode, the ASUS Pocket Wireless AP actively connects to all APs specified in the MAC address list upon startup to form a **wireless bridge** while maintaining connection with the wireless clients in its own network. The MAC address list is enabled when the AP mode is set to Hybrid-Active.



### Hybrid-Passive

The ASUS Pocket Wireless AP performs the same function in Hybrid-Passive mode. However, in this mode, the device waits for anonymous connection requests from other APs to form a wireless bridge. The MAC address list is disabled when you select this mode.



# Configuration

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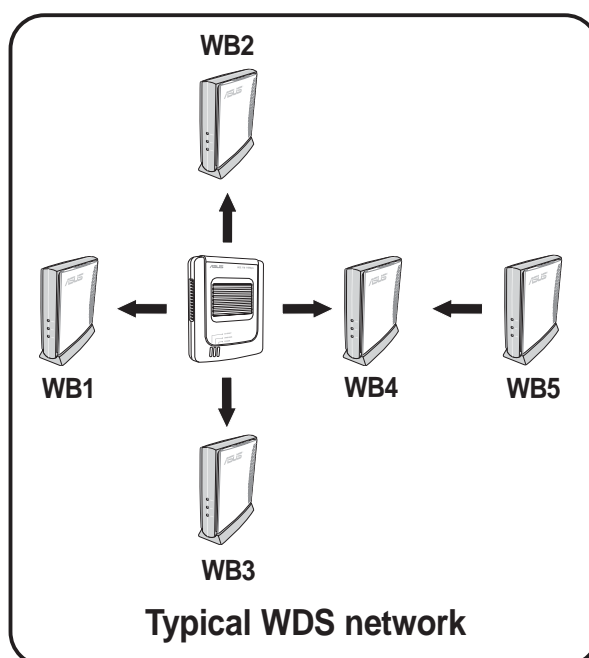
## WDS setup

To setup a Wireless Distribution System network:

1. Set the AP mode to **Hybrid-Active**.
2. Enter the MAC address(es) of the target AP(s) you wish to bridge with the ASUS Pocket Wireless AP in the MAC address list.
3. Specify the channel to be used. All target AP(s) must specify the same channel to establish connection to the ASUS Pocket Wireless AP.
4. Click **Launch**.

In a typical WDS network, the ASUS Pocket Wireless AP serves as a central link to all connected APs (functioning as wireless bridge). The APs communicate with each other using the central AP, while maintaining network connections to their respective wireless clients.

In this setup, WB4 and WB5 may communicate using point-to-point connection but WB5 may not communicate with the ASUS Pocket Wireless AP, WB1, WB2, and WB3 since multipoint-to-point connection is not supported.



## 3.5.3 Firmware Upgrade

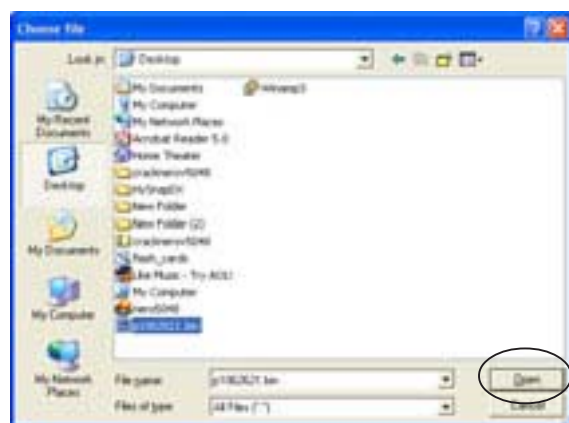
The **Firmware Upgrade** page displays the product ID, firmware version, and regulation domain. This page also allows you to restore or update the ASUS Pocket Wireless AP firmware when it becomes outdated or corrupted.



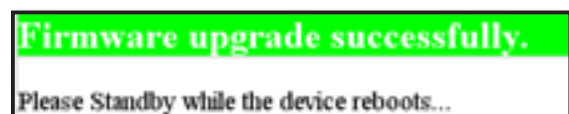
The Power LED blinks continuously when the firmware is corrupted or when the firmware upgrade fails.

To restore or update the device firmware:

1. Download the latest firmware file from the ASUS website ([www.asus.com](http://www.asus.com)).
2. Open the **Firmware Upgrade** window, then click **Browse**.
3. Select the updated firmware file when the **Choose file** window appears, then click **Open**.
4. Click the **Upgrade** button.



5. The browser displays this message after the firmware is successfully updated.



# Configuration

6. The browser displays this message when firmware updating fails.

Try updating the firmware again using the instructions in this section.



## Regulation Domain

IEEE 802.11b networks are regulated worldwide since these networks use the 2.4GHz ~ 2.5GHz ISM (Instrumentation, Scientific, and Medical) Band. The ASUS Pocket Wireless AP is shipped with a default regulation domain allowed in your country/location.

The FCC (US) and ETSI (Europe) specify operation from 2.4 GHz to 2.4835 GHz. For Japan, operation is specified as 2.4 GHz to 2.497 GHz. For each supported regulatory domain, all channels marked with “Yes” are supported. The channel center frequencies and CH ID numbers are shown below.

**Table 1: DSSS PHY frequency channel plan**

CH ID	Frequency	Regulatory Domains		
		X'10' FCC	X'30' ETSI	X'40' MKK
1	2412 MHz	Yes	Yes	Yes
2	2417 MHz	Yes	Yes	Yes
3	2422 MHz	Yes	Yes	Yes
4	2427 MHz	Yes	Yes	Yes
5	2432 MHz	Yes	Yes	Yes
6	2437 MHz	Yes	Yes	Yes
7	2442 MHz	Yes	Yes	Yes
8	2447 MHz	Yes	Yes	Yes
9	2452 MHz	Yes	Yes	Yes
10	2457 MHz	Yes	Yes	Yes
11	2462 MHz	Yes	Yes	Yes
12	2467 MHz	–	Yes	Yes
13	2472 MHz	–	Yes	Yes
14	2484 MHz	–	–	Yes

In a multiple cell network topology, overlapping and/or adjacent cells using different channels can operate simultaneously without interference if the distance between the center frequencies is at least 30 MHz. Channel 14 is specifically designated for operation in Japan.

**Table 2: Regulating bodies and allowed channels**

Country	Regulating body	Allowed channels
Unites States	FCC	1-11
Europe	ETSI	1-13
Japan	MKK	1-14

Use only the allowed channels when you set the ASUS Pocket Wireless AP in access point mode.

### 3.5.4 Restoring the default values

The following are the default values of the ASUS Pocket Wireless AP (AP mode). You may restore these values by pressing the reset button for more than five seconds.

Parameter	Default value
<i>Wireless Interface</i>	
SSID .....	AP_123456
Response to broadcast SSID requests .....	Enabled
Channel .....	1
Basic Rate Set .....	1, 2, 5.5, 11 Mbps
Preamble .....	Long
Authentication Method .....	Open System or Shared Key
Encryption .....	None
<i>Ethernet Interface</i>	
Get IP Address from DHCP Server .....	No
IP Address .....	192.168.1.1
Subnet Mask .....	255.255.255.0
Default Gateway .....	Blank
<i>Access Control</i>	
Accept association requests from any station .....	Enabled