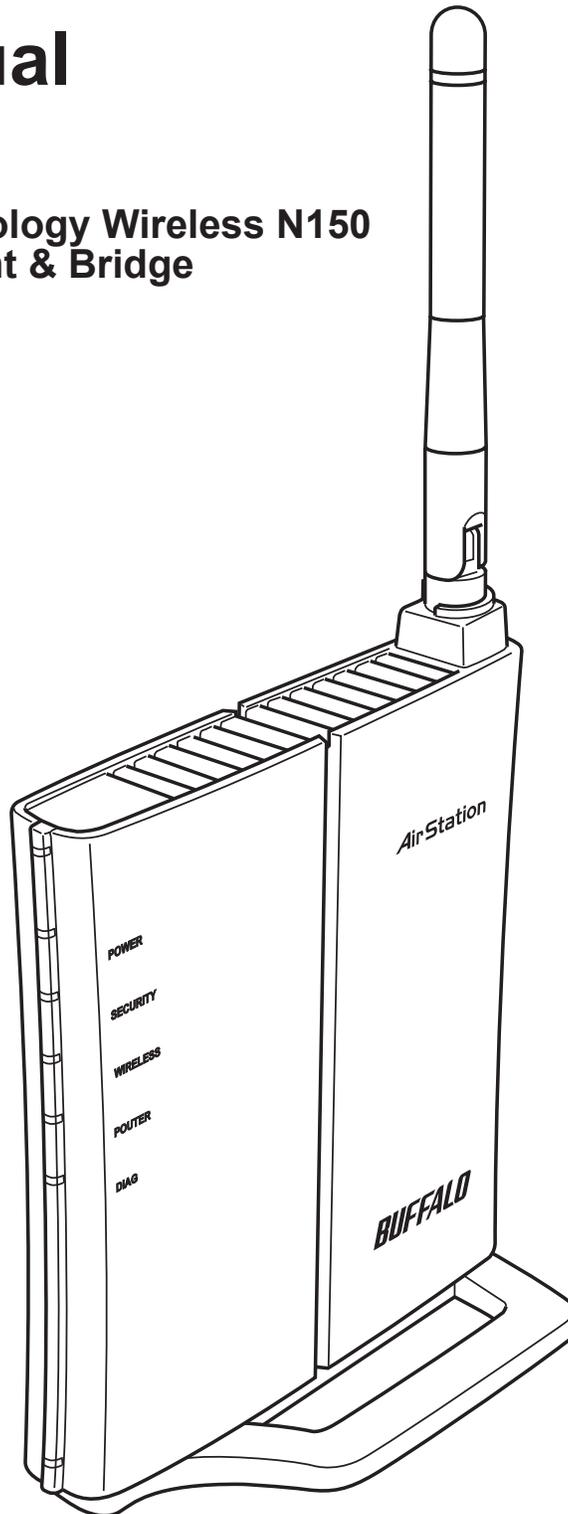


User Manual

WCR-GN

AirStation N Technology Wireless N150
Router Access Point & Bridge



www.buffalotech.com

Contents

| | |
|--|-----------|
| Chapter 1 Product Overview | 5 |
| Features | 5 |
| Air Navigator CD Requirements | 6 |
| 150 Mbps High Speed Mode..... | 6 |
| Package Contents..... | 7 |
| Hardware Overview..... | 8 |
| Front Panel LED's..... | 8 |
| Back Panel..... | 10 |
| Bottom..... | 11 |
| Right Side | 12 |
| Chapter 2 Placing Your AirStation | 13 |
| Vertical Placement | 13 |
| Horizontal Placement..... | 14 |
| Chapter 3 Installation | 15 |
| CD Setup..... | 15 |
| Manual Setup..... | 15 |
| WDS Setup | 17 |
| CD Setup | 18 |
| Manual Setup..... | 20 |
| Chapter 4 Configuration | 23 |
| How to Access the Web-Based Configuration Utility..... | 23 |
| Configuration Menu (Router Mode)..... | 25 |
| Configuration Menu (Bridge Mode)..... | 27 |
| Setup..... | 29 |

| | |
|---|----|
| Internet/LAN (LAN Config) | 31 |
| Internet (Router Mode only) | 31 |
| PPPoE (Router Mode only)..... | 32 |
| DDNS (Router Mode only) | 34 |
| LAN | 36 |
| DHCP Lease (Router Mode only) | 38 |
| NAT (Router Mode only) | 39 |
| Route | 40 |
| Wireless Config | 41 |
| WPS..... | 41 |
| AOSS | 42 |
| Basic | 44 |
| Advanced | 48 |
| WMM..... | 49 |
| MAC Filter | 51 |
| WDS (Bridge Mode only) | 52 |
| Security (Router Mode only) | 54 |
| Firewall (Router Mode only)..... | 54 |
| IP Filter (Router Mode only)..... | 56 |
| VPN Pass Through (Router Mode only) | 57 |
| LAN Config (Router Mode only) | 58 |
| Port Forwarding (Router Mode only)..... | 58 |
| DMZ (Router Mode only) | 59 |
| UPnP (Router Mode only)..... | 60 |
| QoS (Router Mode only) | 61 |
| Admin Config..... | 62 |
| Name | 62 |
| Password | 63 |
| Time/Date | 64 |
| NTP | 65 |
| Access | 66 |
| Log..... | 67 |
| Save/Restore | 68 |
| Initialize/Restart | 69 |

| | |
|----------------------|----|
| Update | 70 |
| Diagnostic | 71 |
| System Info | 71 |
| Logs | 73 |
| Packet Info | 74 |
| Client Monitor | 75 |
| Ping | 76 |

Chapter 5 Connect to a Wireless Network 77

| | |
|---|----|
| Automatic Secure Setup (AOSS/WPS)..... | 77 |
| Windows 7/Vista (Client Manager V) | 78 |
| Windows XP (Client Manager 3)..... | 79 |
| Other Devices (e.g. Game Console)..... | 79 |
| Manual Setup | 80 |
| Windows 7 (WLAN AutoConfig) | 80 |
| Windows Vista (WLAN AutoConfig) | 81 |
| Windows XP (Wireless Zero Configuration)..... | 84 |

Chapter 6 Trouble Shooting 85

| | |
|---|----|
| Cannot connect to the Internet over wired connection..... | 85 |
| Cannot access the web-based configuration utility. | 85 |
| Cannot connect to the network wirelessly. | 85 |
| You forgot AirStation's SSID, Encryption Key, or Password... .. | 86 |
| The link speed is slower than 150 Mbps (Maximum link speed is only 72Mbps)..... | 86 |
| Other Tips..... | 86 |

Appendix A Specifications 90

Appendix B Default Configuration Settings..... 91

| | |
|--|------------|
| Appendix C TCP/IP Settings in Windows | 96 |
| Appendix D Restoring the Default Configuration..... | 99 |
| Appendix E Regulatory Compliance Information..... | 100 |
| Appendix F Environmental Information | 105 |
| Appendix G GPL Information | 106 |
| Appendix H Warranty Information | 107 |
| Appendix I Contact Information | 108 |

Chapter 1

Product Overview

Features

Supports IEEE802.11n and IEEE802.11b/g

With support for Wireless-N, Wireless-G, and Wireless-B standards, the AirStation can transfer data to and from all standard 2.4 GHz wireless clients.

Supports WDS connection

Extend the coverage of wireless connection using WDS feature.

Dual speed mode

Dual speed mode makes wireless transmission faster by using 2 channels, allowing 150Mbps data transmission.

Support AOSS and WPS

Both AOSS (AirStation One-touch Secure System) and WPS (Wi-Fi Protected Setup) are supported. These automatic connection standards make connection with compatible wireless devices easier.

Security Features

The AirStation is equipped with following security features:

- AOSS
- WPS
- WPA-PSK (TKIP/AES)
- WPA2-PSK(TKIP/AES)
- WPA/WPA2 mixed PSK
- WEP(128/64bit)
- Privacy Separator
- MAC address access restriction
- Deny Any Connection/SSID stealth feature
- Web configuration screen with password
- Firewall feature with easy rules

Automatic Channel Selection

Monitors wireless interference and automatically assigns the clearest, best channel.

Initialization

To restore settings back to the factory defaults, hold down the Reset button on the bottom of the unit.

Browser Based Administration

This unit can be easily configured from a web browser on your computer.

Air Navigator CD Requirements

The AirStation wireless router and access point works with most wired and wireless devices. The automatic installation program on the CD requires Windows 7, Vista or XP to run. Client Manager software is included for Windows 7, Vista and XP. The use of other operating systems may require that the AirStation be manually configured from a browser window.

150 Mbps High Speed Mode

150 Mbps is the link speed of WCR-GN when using Wireless-N mode. It represents actual wireless data speeds, including overhead. Because the overhead is not available for user data transfer, usable wireless throughput will be substantially slower.

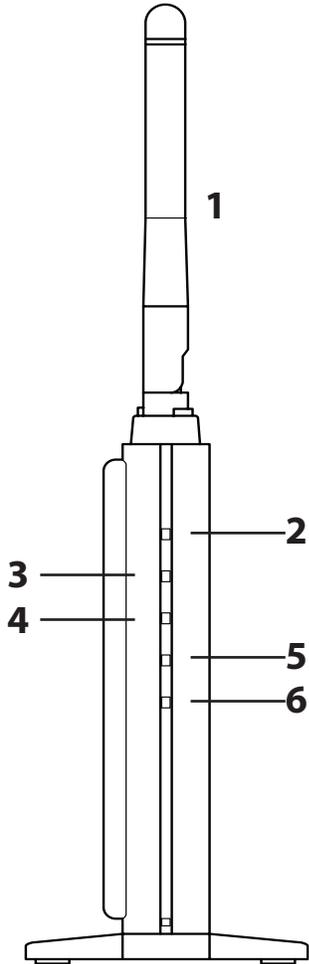
Package Contents

Following items are included in your AirStation. If any of the items are missing, please contact your vender.

- Main unit.....1
- Stand1
- AC adapter.....1
- LAN cable.....1
- Air Navigator CD.....1
- Quick Setup Guide.....1

Hardware Overview

Front Panel LED's



1 Flexible antenna

Adjust the angle for the best signal as needed. Turning the unit so that the antenna points straight up will probably give the strongest signal.

2 POWER LED (Green)

On: The AC adapter is connected
Off: The AC adapter is not connected

3 SECURITY LED (Amber)

Indicates security status.

Off: Encryption is not set

On: Encryption has been set

Double blink: The unit is waiting for an AOSS or WPS security key

Blinking: AOSS/WPS error; failed to exchange security keys

Note: When the Security LED is lit, an encryption key has been set. Wireless clients will need the same key to connect.

4 WIRELESS LED (Green)

Indicates wireless LAN status.

Blinking: Wireless LAN is transmitting

On: Wireless LAN is connected but not active

5 ROUTER LED (Green)

On: Router functionality is enabled

Off: Router functionality is disabled

6 DIAG LED (Red)

This indicates the status of the unit depending on the number of blinks per cycle.

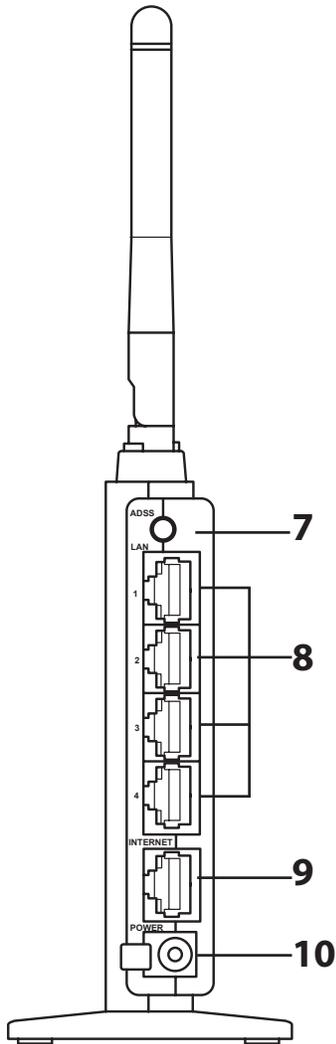
Note: When the unit is first turned on or restarted, the Diag LED will blink for almost a minute during boot. This is normal.

| Diag LED status | Meaning | Status |
|--------------------------------------|---|---|
| 2 blinks * ¹ | Flash ROM error | Cannot read or write to the flash memory. |
| 3 blinks * ¹ | Ethernet (wired) LAN error | Ethernet LAN controller is malfunctioning. |
| 4 blinks * ¹ | Wireless LAN error | Wireless LAN controller is malfunctioning. |
| 5 blinks | IP address setting error | Because the network addresses of both the Internet port (WAN port) and the LAN port are the same, it is not possible to establish communication. Change the LAN side IP address of this unit. |
| Continuously blinking * ² | Updating the firmware Saving settings Initializing settings | Updating the firmware. Saving the settings. Initializing the settings. |

*1 Unplug the AC adapter from the wall socket, wait for a few seconds, and then plug it again. If the light still flashes, please contact technical support.

*2 Never unplug the AC adapter while the Diag LED is blinking continuously.

Back Panel



7 AOSS Button

Hold down this button until the Security LED flashes (about 1 second), while the unit's power is on, initiates AOSS/WPS mode, allowing the unit to exchange security keys with AOSS or WPS compatible devices.

8 LAN Port

Connect your computer, hub, or other Ethernet devices to these ports. This switching hub supports 10Mbps and 100Mbps connections.

9 INTERNET Port

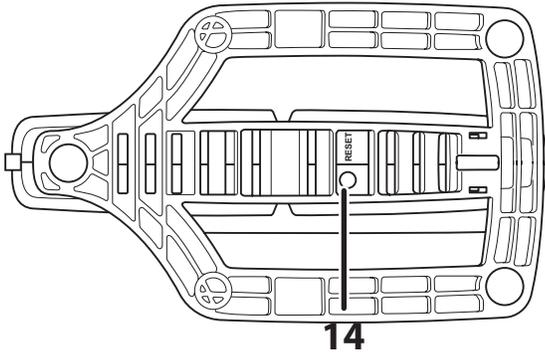
10Mbps and 100Mbps connections are supported.

Note: In bridge/AP mode, the Internet port becomes a regular LAN port, for a total of 5 usable LAN ports.

10 Power Connector

Connect the included AC adapter.

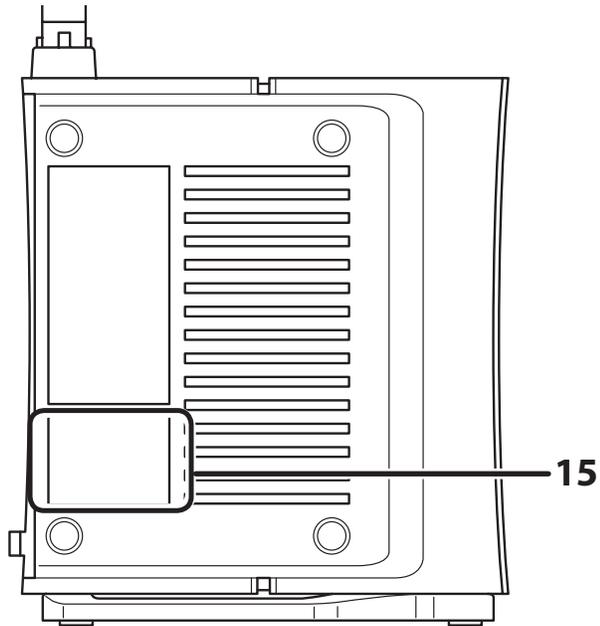
Bottom



14 RESET Button

Holding this button until the Diag LED comes on, while the unit's power is on, will initialize its settings.

Right Side



15 Factory Default Settings

This sticker shows the default information of AirStation's SSID and WPS PIN.

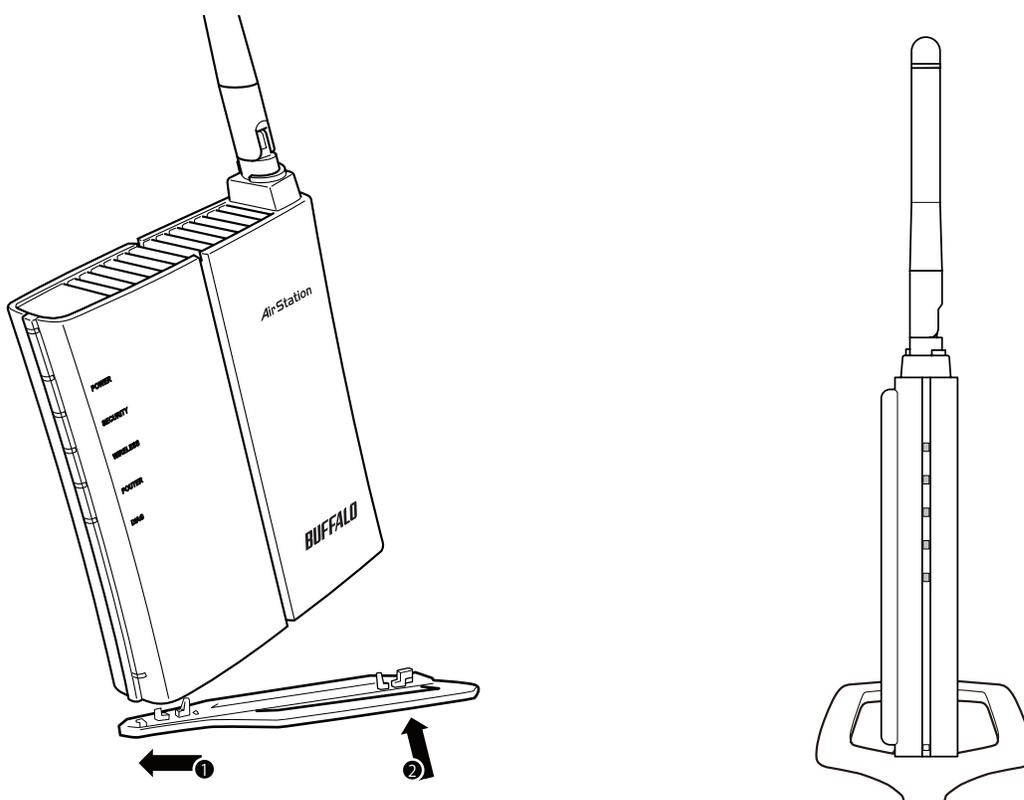
Chapter 2

Placing Your AirStation

Note all the illustrations refer to WCR-GN.

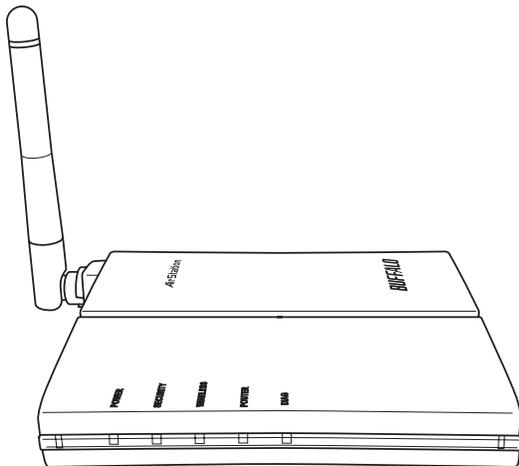
Vertical Placement

To place unit vertically, refer to the following figure to place the vertical stand.



Horizontal Placement

Place the unit horizontally as the figure below.



Chapter 3

Installation

CD Setup

You can set up this unit with the included software CD. Insert the CD into your PC and follow the instructions on the screen.

* CD Setup is supported for Windows 7/Vista/XP only.

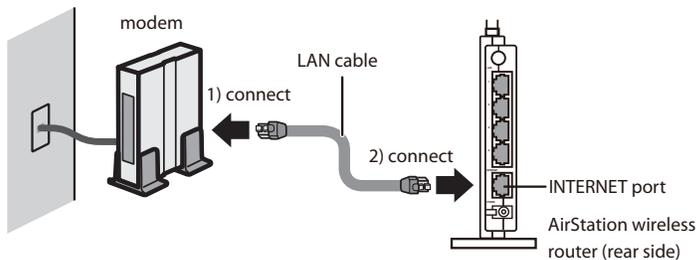
Manual Setup

To configure your AirStation manually, follow the procedure below.

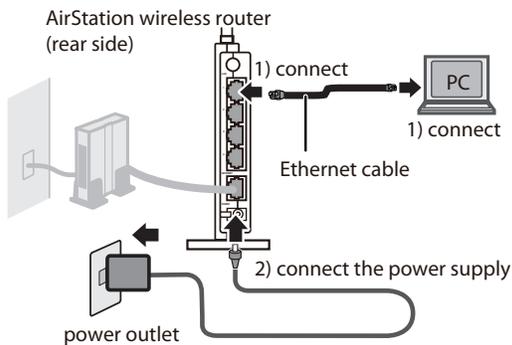
1 Turn off your computer and modem.



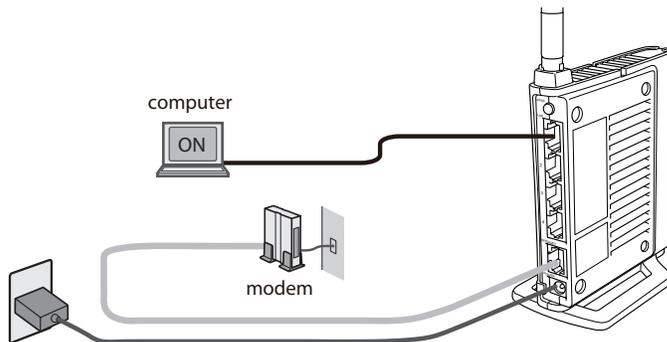
3 Plug one end of the LAN cable into your modem and the other side to the Internet port of the AirStation. Turn on your modem.



- 4 Connect your computer to one of the AirStation's LAN ports with the Ethernet cable. Turn on the AirStation, wait one minute, and then turn on your computer.



- 5 Confirm the devices are connected correctly as the below diagram shows.



- 6 Wait for a while, and then make sure that the AirStation's LEDs are lit as described below:

| | |
|----------|-------------------------------|
| POWER | Green light is on |
| WIRELESS | Green light is on |
| ROUTER | Green light is on |
| DIAG | Off |
| LAN | Green light is on or blinking |
| INTERNET | Green light is on or blinking |

※ Refer to page 8 and 10 for LED locations and other details.

- 7 Launch a web browser. If the "home" setup screen is displayed, setup is complete. If a user name and password screen are displayed, enter "root" (in lower case) for the user name, leave the password blank, and click "OK". Follow the instructions on the screen to complete setup.

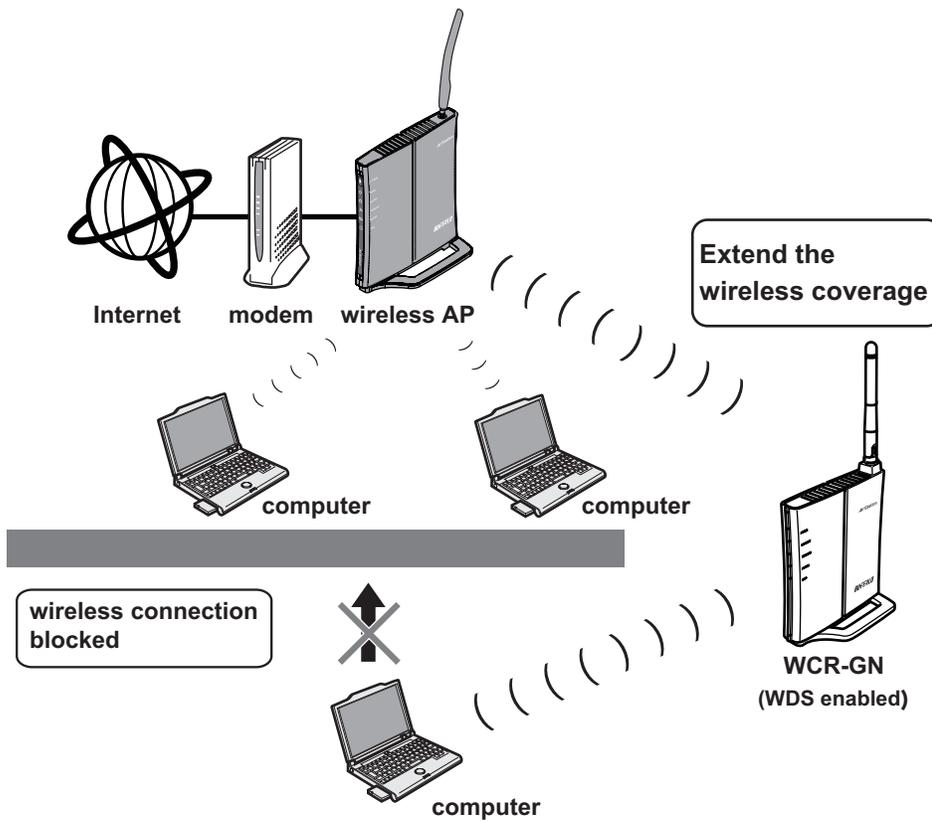
You've completed initial setup of your AirStation. Refer to Chapter 4 for advanced settings.

WDS Setup

To extend Wireless coverage, add a new Airstation to an existing Wireless network. Install the new AirStation between the existing Wireless AP and wireless devices by using WDS feature.

Refer to the following procedure to set up WDS connection.

Note: Confirm the target wireless AP supports WDS.



CD Setup

- 1 Insert the CD into your PC and follow the instructions on the screen.
- 2 When the below screen appears, click "Start" and follow the instruction on the screen by clicking "Next".



- 4 When the below screen appears, click "WDS Setup". The wizard will guide you through connection and LED's meanings.



- 5** When the below screen appears, select “AOSS configuration” or “Manual Configuration” from “Select WDS Setup method”.

AirStation will attempt to connect to other wireless AP to set up WDS.

If the target wireless AP is the AirStation that supports WDS, select “AOSS configuration” and push AOSS button on the target AP.

If the target AP is not the AirStation, select “Manual Configuration” then click “Scan for SSID”. A list of available wireless AP will be generated. Select the target AP’s SSID from the list and click “Next” to continue with security information settings.



- 6** Step through the wizard to complete the setup.

If you’ve selected “AOSS configuration” during the setup, the existing AOSS connection between the target wireless AP and computers has been disconnected. Set up AOSS connection again (page 77).

Manual Setup

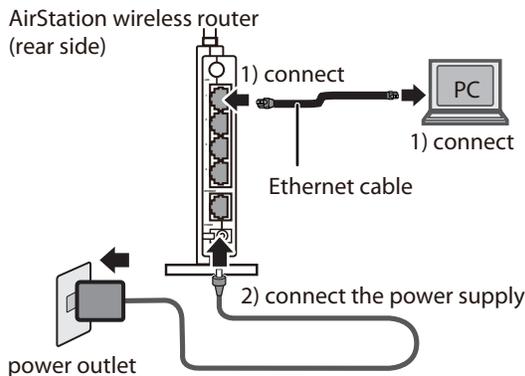
To configure the WDS without using the utility CD, follow the procedure below.

- 1 Fix your computer's IP address. For details, please refer to Appendix C (page 96).

| | |
|----------------------|---------------|
| ex) IP address | 192.168.11.80 |
| Subnet mask | 255.255.255.0 |
| Default gateway | blank |
| Preferred DNS server | blank |
| Alternate DNS server | blank |

- 2 Turn off your computer.

- 3 Connect your computer to one of the AirStation's LAN ports with the Ethernet cable. Turn on the AirStation, wait one minute, and then turn on your computer.

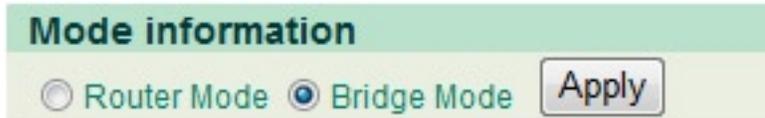


- 4 Wait for a while, and then make sure that the AirStation's LEDs are lit as described below:

| | |
|----------|-------------------|
| POWER | Green light is on |
| WIRELESS | Green light is on |
| ROUTER | Green light is on |
| DIAG | Off |

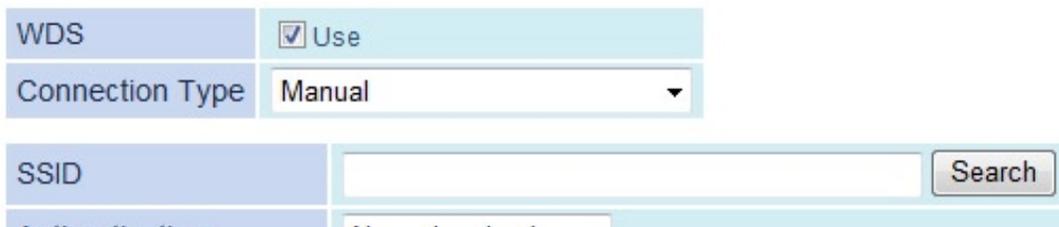
※ Refer to page 8 and 10 for LED locations and other details.

- 5 Open the web configuration screen. Refer to page 23 for the instruction as necessary.
- 6 In the "Mode information" menu, select "Bridge Mode" and click "Apply".



When this below screen appears, re-enter the user name "root" and password set up for web configuration screen. Click "OK".

- 8 Web configuration screen will open again. Click "Wireless Config", then "WDS".
- 9 Check "Use" option and select "Manual" from the "Connection type". Click "Search"



- 10** A list of available wireless APs will be generated. Select the target AP and click "Select". Click "Search again" if no APs are found.

Select AirStation (Master) to connect to.

| Select | BSSID | SSID | Wireless ch | Signal | Encryption | Wireless mode |
|----------------------------------|--------------|--------------|-------------|-----------|------------|---------------|
| <input checked="" type="radio"/> | 0018E76A1E23 | 0018E76A1E23 | 1 | Excellent | -- | n/b/g |
| <input type="radio"/> | 0016010405D3 | Buffalo_G | 8 | Good | YES | b/g |
| <input type="radio"/> | 000D0BCA741B | 000D0BCA741B | 1 | Good | -- | b/g |

- 11** Configure the security information of the target AP and click "Apply".

| | |
|-------------------------|--|
| WDS | <input checked="" type="checkbox"/> Use |
| Connection Type | Manual |
| SSID | 0018E76A1E23 <input type="button" value="Search"/> |
| Authentication | No authentication |
| Encryption for wireless | No encryption |

- 12** Revert to the original IP address setting. Refer to Appendix C (page 96) again.

- ex) IP address obtain an IP address automatically
- Subnet mask obtain DNS server address automatically

You've completed the WDS setup. Refer to Chapter 4 for advanced settings.

Chapter 4

Configuration

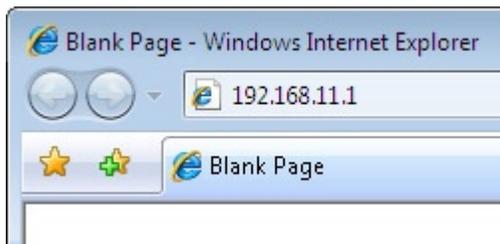
This chapter explains the advanced settings for the AirStation. To change advanced settings, use the AirStation's web-based configuration utility.

How to Access the Web-Based Configuration Utility

To display the configuration of the AirStation, follow the procedure below.

1 Launch a web browser.

2



Enter the router's LAN-side IP address in the address field, and press the "Enter" key.

Note:

- The AirStation's default LAN-side IP address depends on its mode setting.
In router mode: 192.168.11.1
In bridge mode: 192.168.11.100
- If you change the IP address of this unit, use the new IP address.

3

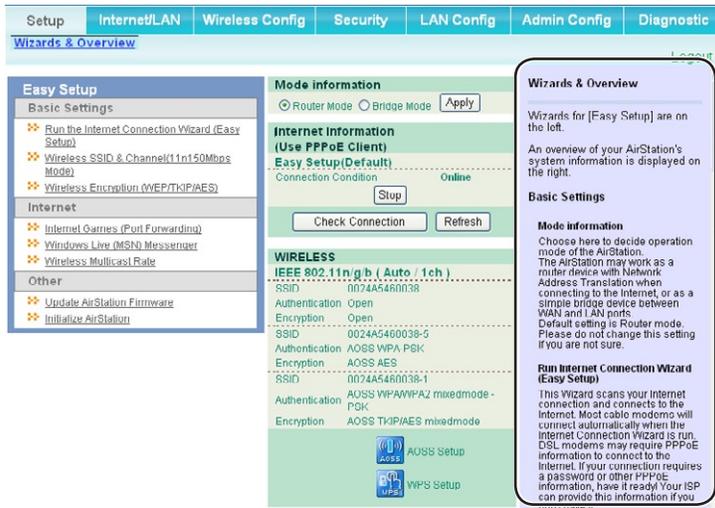


When this screen appears, enter "root" (in lower case) for the user name and the password that you set during initial setup. Click "OK".

Note:

- By default, the password is blank (not set).
- If you forget your password, hold down the Reset button (page 11) to initialize all settings. The password will then be blank. Note that all other settings will also revert to their default values.

4



The configuration screen is displayed.

Help is always displayed on the right side of the configuration screen. Refer to the Help screens for more information on each page in the web-based configuration screens.

Configuration Menu (Router Mode)

The menu structure for the AirStation in router mode is the following. Please refer to the pages listed at right for explanations of each item.

| Main screen | Descriptions | Page |
|------------------------|---|---------|
| Internet/LAN | | |
| Internet | Configure Internet side port and settings | Page 31 |
| PPPoE | PPPoE settings (DSL login) | Page 32 |
| DDNS | DNS settings | Page 34 |
| LAN | LAN side port and DHCP server configuration | Page 36 |
| DHCP Lease | DHCP lease settings | Page 38 |
| NAT | Network address translation settings, used to connect LAN side devices to the Internet | Page 39 |
| Route | Configure the IP communication route that the AirStation uses | Page 40 |
| Wireless Config | | |
| WPS | WPS settings and status | Page 41 |
| AOSS | AOSS (AirStation One-touch Secure System) settings and status | Page 42 |
| Basic | Configure basic wireless settings | Page 44 |
| Advanced | Configure advanced wireless settings | Page 48 |
| WMM | Set priorities for Wireless Multimedia Extensions (Wi-Fi Multimedia) | Page 49 |
| MAC Filter | Limit access to specific devices | Page 51 |
| Security | | |
| Firewall | Protect your computer from outside intruders | Page 54 |
| IP Filter | Edit IP filters which relates to the packets passing through the LAN side and the Internet side | Page 56 |
| VPN Pass Through | Configure IPv6 passthrough, PPPoE passthrough, and PPTP passthrough | Page 57 |
| LAN Config | | |
| Port Forwarding | Configure port translation and exceptions for games and other programs | Page 58 |

| | | |
|---|---|---------|
| DMZ | Configure a destination to transfer communication packets without a LAN side destination. | Page 59 |
| UPnP | Configure UPnP (Universal Plug and Play) | Page 60 |
| QoS | Configure priority for packets that require a certain data flow | Page 61 |
| Admin Config | | |
| Name | Configure the AirStation's name | Page 62 |
| Password | Configure the AirStation's login password for access to configuration screens | Page 63 |
| Time/Date | Configure the AirStation's internal clock | Page 64 |
| NTP | Configure the AirStation to synchronize with an NTP server to automatically set the AirStation's internal clock | Page 65 |
| Access | Configure access restrictions to the AirStation's configuration screens | Page 66 |
| Log | Configure a syslog server to manage the AirStation's logs | Page 67 |
| Save/Restore | Save or restore the AirStation's configuration from a configuration file | page 68 |
| Initialize/Restart | Initialize the AirStation or reboot it | Page 69 |
| Update | Update the AirStation's firmware | Page 70 |
| Diagnostic | | |
| System Info | View current system information for the AirStation | Page 71 |
| Logs | Check the AirStation's logs | Page 73 |
| Packet Info | View all packets transferred by the AirStation | Page 74 |
| Client Monitor | View all devices currently connected to the AirStation | Page 75 |
| Ping | Test the AirStation's connection to other devices on the network | Page 76 |
| Logout | | |
| Click this to log out of the AirStation's configuration screens | | |

Configuration Menu (Bridge Mode)

The menu structure during a bridge mode is the following. Please refer to respective page for explanations regarding to each item.

| Main screen | Descriptions | Page |
|------------------------|---|---------|
| LAN Config | | |
| LAN | Configure LAN side ports and devices | Page 36 |
| Route | Configure the IP communication route that the AirStation uses | Page 40 |
| Wireless Config | | |
| WPS | WPS settings and status | Page 41 |
| AOSS | AOSS (AirStation One-touch Secure System) settings and status | Page 42 |
| Basic | Configure basic wireless settings | Page 44 |
| Advanced | Configure advanced wireless settings | Page 48 |
| WMM | Set priorities for Wireless Multimedia Extensions (Wi-Fi Multimedia) | Page 49 |
| MAC Filter | Limit access to specific devices | Page 51 |
| WDS | Configure communication among AirStation | Page 52 |
| Admin Config | | |
| Name | Configure the AirStation's name | Page 62 |
| Password | Configure the AirStation's login password for access to configuration screens | Page 63 |
| Time/Date | Configure the AirStation's internal clock | Page 64 |
| NTP | Configure the AirStation to synchronize with an NTP server to automatically set the AirStation's internal clock | Page 65 |
| Access | Configure access restrictions to the AirStation's configuration screens | Page 66 |
| Log | Configure a syslog server to manage the AirStation's logs | Page 67 |
| Save/Restore | Save or restore the AirStation's configuration from a configuration file | page 68 |
| Initialize/Restart | Initialize the AirStation or reboot it | Page 69 |
| Update | Update the AirStation's firmware | Page 70 |
| Diagnostic | | |
| System Info | View current system information for the AirStation | Page 71 |
| Logs | Check the AirStation's logs | Page 73 |
| Packet Info | View all packets transferred by the AirStation | Page 74 |

| | | |
|---|--|---------|
| Client Monitor | View all devices currently connected to the AirStation | Page 75 |
| Ping | Test the AirStation's connection to other devices on the network | Page 76 |
| Logout | | |
| Click this to log out of the AirStation's configuration screens | | |

Setup

The home page of the configuration screen. You can verify settings and the status of the AirStation here.

The screenshot shows the configuration interface with the following sections:

- Navigation Tabs:** Setup, Internet/LAN, Wireless Config, Security, LAN Config, Admin Config, Diagnostic.
- Left Sidebar (Easy Setup):**
 - Basic Settings: Run the Internet Connection Wizard, Wireless SSID & Channel, Wireless Encryption.
 - Internet: Internet Games, Windows Live, Wireless Multicast Rate.
 - Other: Update AirStation Firmware, Initialize AirStation.
- Main Content Area:**
 - Mode information:** Router Mode (selected), Bridge Mode, Apply.
 - Internet Information (Use PPPoE Client):** Easy Setup (Default), Connection Condition: Online, Stop, Check Connection, Refresh.
 - WIRELESS (IEEE 802.11n/g/b (Auto / 1ch)):**
 - SSID: 0024A5460038, Authentication: Open, Encryption: Open.
 - SSID: 0024A5460038-5, Authentication: AOSS WPA-PSK, Encryption: AOSS AES.
 - SSID: 0024A5460038-1, Authentication: AOSS WPA/WPA2 mixedmode - PSK, Encryption: AOSS TKIP/AES mixedmode.
 - Buttons:** AOSS Setup, WPS Setup.
- Right Sidebar (Wizards & Overview):**
 - Logout
 - Wizards for [Easy Setup] are on the left.
 - An overview of your AirStation's system information is displayed on the right.
 - Basic Settings:**
 - Mode information:** Choose here to decide operation mode of the AirStation.
 - Run Internet Connection Wizard (Easy Setup):** This Wizard scans your Internet connection and connects to the Internet.

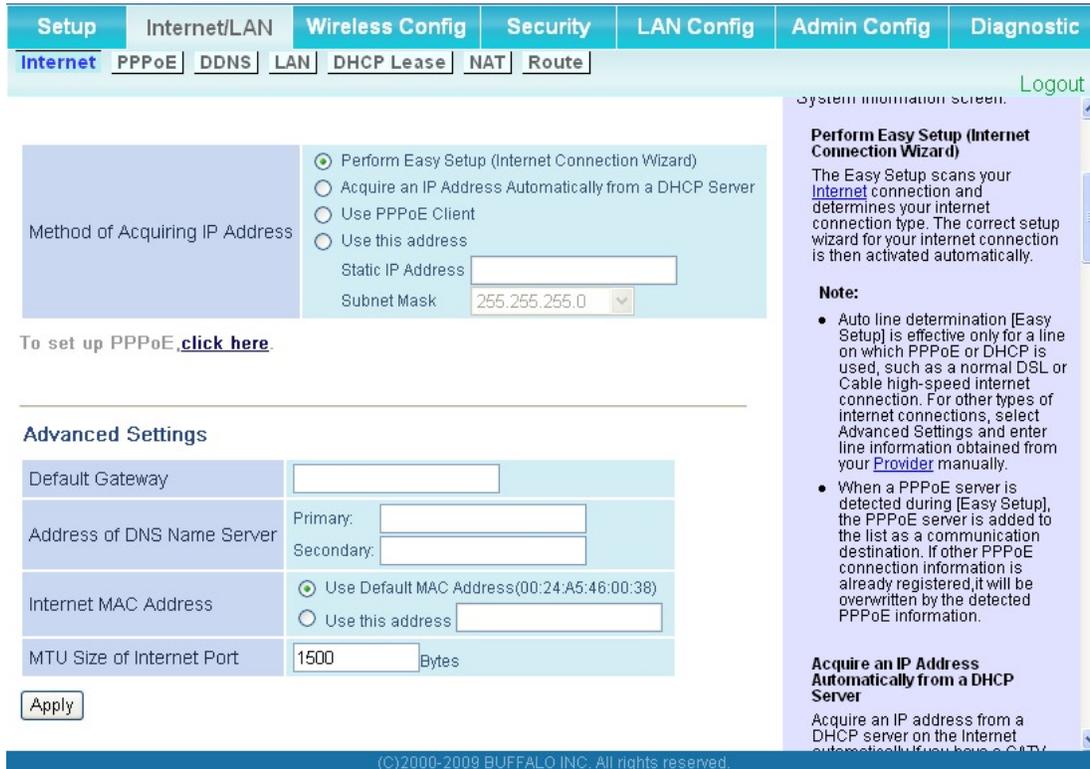
| Parameter | Meaning |
|---------------------------|--|
| Internet/LAN (LAN Config) | Click this tab to display the configuration screen for the Internet port and LAN ports. |
| Wireless Config | Click this tab to display the configuration screen for wireless settings. |
| Security | Click this tab to display the configuration screen for security. |
| LAN Config | Click this tab to display the configuration screen to open ports for games and applications. |

| Parameter | Meaning |
|---|--|
| Admin Config | Click this tab to display the configuration screen which is related to the administration of the AirStation. |
| Diagnostic | Click this tab to display the status of the AirStation. |
| Easy Setup | Enable you to configure the AirStation easily such as an encryption method of the wireless signal or changing a wireless channel. |
| Mode Information | Switches router mode and bridge mode. |
| Internet Information *Router mode only | Displays the current information where the AirStation is connected on the Internet side. |
| Check Connection *Router mode only | Clicking this button to check if the AirStation is connected to the Internet properly. |
| Refresh *Router mode only | Clicking this button to refresh the screen which is currently displayed. |
| WIRELESS | Displays the current wireless settings. |
| AOSS | Click this button to display the AOSS configuration screen. |
| WPS | Click this button to display the WPS configuration screen. |
| Language | Enable you to select the language you use. If <i>Auto</i> is selected, the same language displayed on the browser will be selected automatically. |
| Logout | Log out from the configuration screen of the AirStation. If the web configuration screen is not used for 5 minutes, it will log out automatically. |

Internet/LAN (LAN Config)

Internet (Router Mode only)

The screen to configure a port of the Internet side.



| Parameter | Meaning |
|--------------------------------|---|
| Method of Acquiring IP Address | Specify how the Internet side IP address is obtained. |
| Default Gateway | Configure an IP address for the default gateway. |
| Address of DNS Name Server | Specify an IP address of the DNS server. |
| Internet MAC Address | Configure the Internet side MAC address. Note: Configuring an improper MAC address may make the AirStation unusable. Change this setting at your own risk. |
| MTU size of Internet Port | Configure the MTU value of the Internet port from the range of 578 to 1500 bytes. |

PPPoE (Router Mode only)

The screen to configure PPPoE settings.

PPPoE Connection

Name of Connection: Easy Setup

User Name: _____

Password: ●●●●●● (Confirmation)

Service Name: _____

Advanced Settings

Connection Type: Connection on Demand

Automatic disconnection: Disconnect Condition: When both incoming and outgoing traffic stops; Disconnect Time: 20 Minutes

Authorization: Automatic Authorization

MTU Size: 1492 Bytes

MRU Size: 1492 Bytes

Keep Alive: Enable

Edit PPPoE Connection

This field lets you edit or add a line to the table below.

Name of Connection
Enter a unique name such as the **Provider** name as the destination name. This must be entered, and you cannot enter an existing destination name. Up to 32 alphanumeric characters can be entered. Two-byte characters cannot be used. (Example) Yahoo! BB FLETS-ADSL Flet's square

Note:
The Easy Setup configures the **Internet** side IP address. If the PPPoE server is detected, the [AUTO] connection is added to the connection list.

User Name
Enter the user name exactly as provided by your **Provider**. A maximum of 64 characters may be entered. Also, use the given name (full name including characters after the @ symbol) if

Parameter

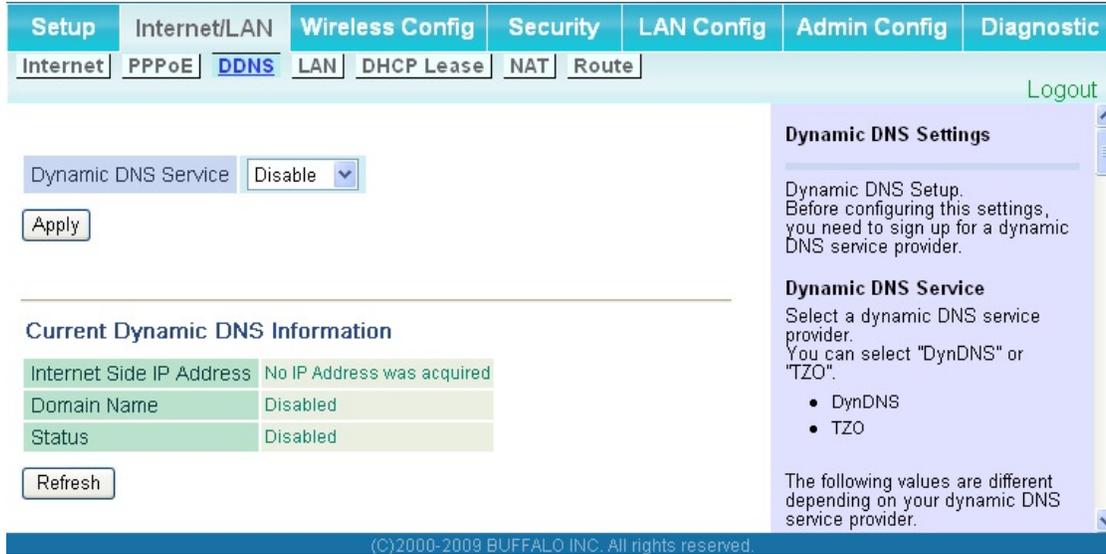
Meaning

| | |
|--------------------|---|
| Name of Connection | Enter the name to identify the connected destination. You may enter up to 32 alphanumeric characters and symbols. |
| User Name | Set the user name which is specified by your provider, used for a PPPoE certification. You may enter up to 32 alphanumeric characters and symbols. |
| Password | Set the password specified by your provider for PPPoE certification. You may enter up to 32 alphanumeric characters and symbols. |
| Service Name | Fill in this field only when your provider specifies a Service Name. Leave blank otherwise. You may enter up to 32 alphanumeric characters and symbols. |
| Connection Type | Specifies the timing for the AirStation to connect to your provider. |

| Parameter | Meaning |
|-------------------------|--|
| Automatic disconnection | Sets the timer for disconnection if the connection method is set to "Connect on Demand" or "Manual". You can enter up to 1440 minutes. |
| Authorization | Configure an authorization method with a provider. |
| MTU Size | Configure MTU value in the range of 578 to 1492, which is used for communication on PPPoE. |
| MRU size | Configure MRU (Maximum Receive Unit) value in the range of 578 to 1492, which is used for communication on PPPoE. |
| Keep Alive | The AirStation will request LCP echo to the PPP server once in a minute. Internet connection will be automatically cut off if the connection server does not respond for more than 6 minutes. Disable this function if the PPP connection is cut at short intervals. |

DDNS (Router Mode only)

The screen to configure Dynamic DNS settings.

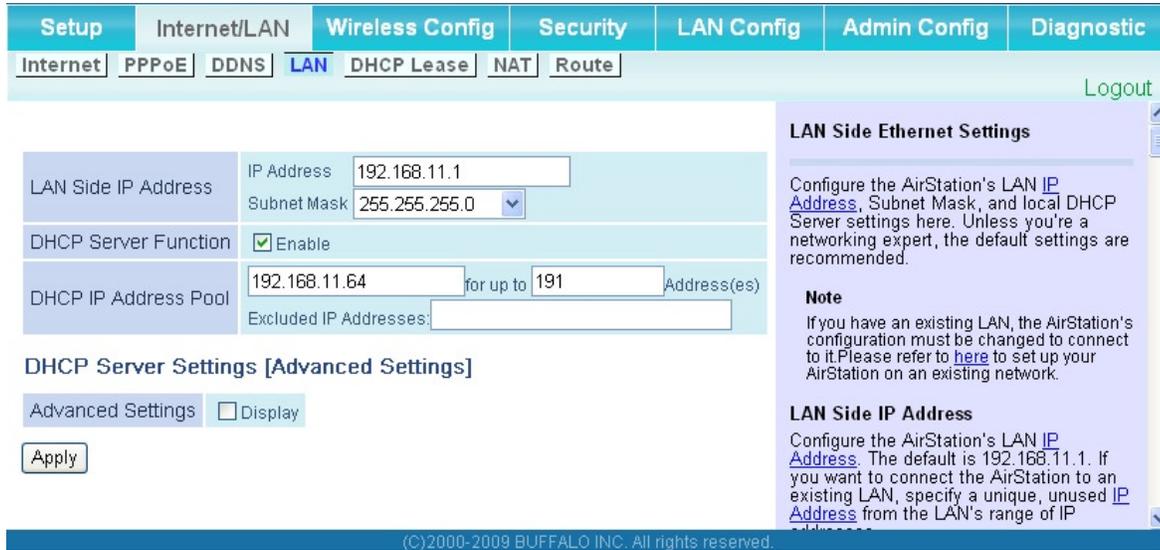


| Parameter | Meaning |
|---|--|
| Dynamic DNS Service | Select a provider (DynDNS or TZO) for Dynamic DNS. |
| User Name * Only when DynDNS is selected | Enter the user name which is registered to the Dynamic DNS service. You may enter up to 64 alphanumeric characters and symbols. |
| Password * Only when DynDNS is selected | Enter the user name which is registered to the Dynamic DNS service. You may enter up to 64 alphanumeric characters and symbols. |
| Host Name * Only when DynDNS is selected | Enter the host name which is registered to the Dynamic DNS service. You may enter up to 255 alphanumeric characters, hyphens, and periods. |
| Email Address * Only when selecting TZO | Enter the email address which is registered to the Dynamic DNS service. You may enter up to 64 alphanumeric characters and symbols. |
| TZO Key * Only when selecting TZO | Enter the TZO Key which is registered to the Dynamic DNS service. You may enter up to 64 alphanumeric characters and symbols. |

| Parameter | Meaning |
|--|--|
| Domain Name * Only when selecting TZO | Enter the domain name which is registered to the Dynamic DNS service. You may enter up to 255 alphanumerical characters, hyphens, and periods. |
| IP Address Update Period | Specifies the period to notify the dynamic DNS service provider of the current IP address. When DynDNS is selected, set it between 0 and 35 days. When TZO is selected, set it between 0 and 99 days. If 0 (zero) day is set, no periodic update is performed. |
| Internet Side IP Address | The WAN-side IP address of the AirStation's Internet port. This address is sent to the dynamic DNS service provider. |
| Domain Name | The domain name assigned by the dynamic DNS Service provider. The AirStation can be accessed from the Internet using this domain name. |
| Status | Display the status of dynamic DNS service. |

LAN

Configure the LAN side port and DHCP server settings.

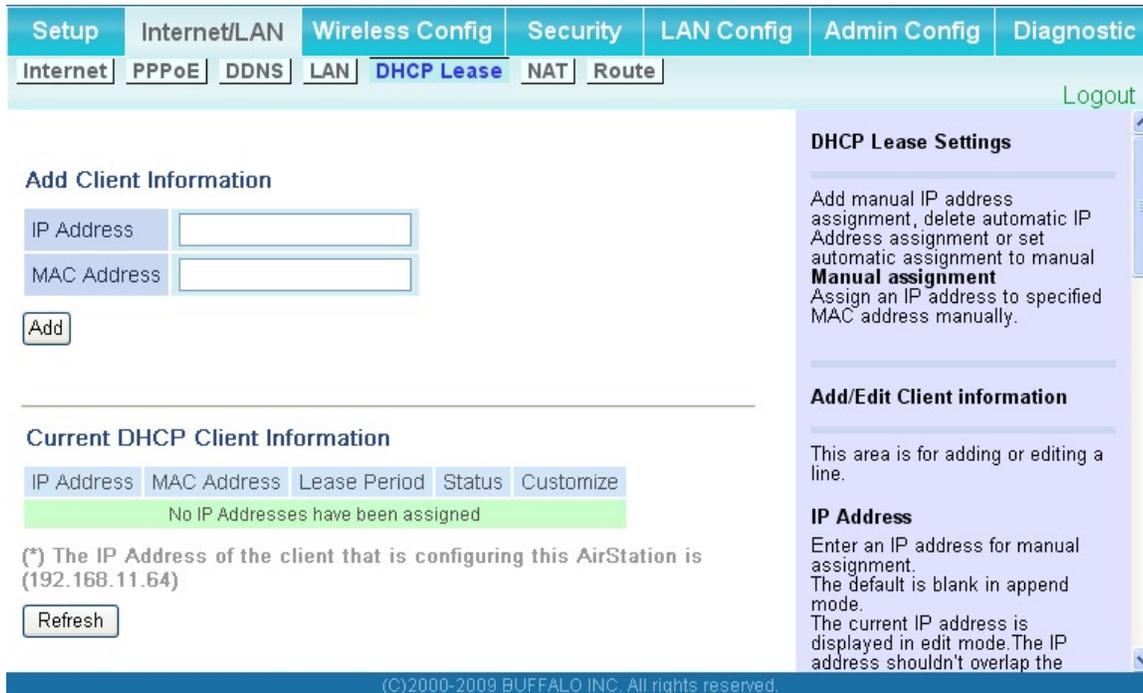


| Parameter | Meaning |
|--|--|
| LAN Side IP Address | Set a LAN side IP address and subnet mask. |
| DHCP Server Function * Router Mode only | Enable or disable the DHCP server, which assigns IP addresses automatically. |
| DHCP IP Address Pool * Router Mode only | Configure the range of IP addresses to be assigned by the DHCP server and IP addresses to be excluded from that range. Values from 0-253 may be entered. |
| Advanced Settings * Router Mode only | Select Display to display the advanced settings options for the DHCP server. |
| Lease Period * Router Mode only | Set the effective period of an IP address assigned by the DHCP server. Up to 999 hours may be entered. |
| Default Gateway * Router Mode only | Set the default gateway IP address for the DHCP server to issue to clients. |

| Parameter | Meaning |
|--|---|
| DNS Servers * Router Mode only | Set the dDNS server IP address for the DHCP server to issue to clients. |
| WINS Server * Router Mode only | Set the WINS server IP address for the DHCP server to issue to clients. |
| Domain Name * Router Mode only | Set the domain name for the DHCP server to issue to clients. You may enter up to 127 alphanumerical characters, hyphens, and periods. |
| Default Gateway * Bridge Mode only | Set the default gateway IP address. |
| DNS Server Address * Bridge Mode only | Set the DNS server IP address. |

DHCP Lease (Router Mode only)

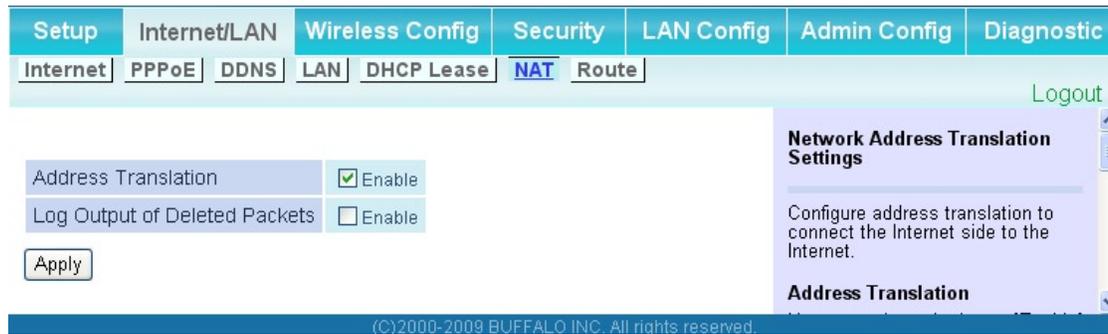
The screen to configure DHCP lease.



| Parameter | Meaning |
|---------------------------------|--|
| IP Address | Enter an IP address to lease manually. The IP address should be from the same subnet as the DHCP scope, but not be within the range that DHCP is assigning to other devices. |
| MAC Address | Enter the MAC address which identifies the client. |
| Current DHCP Client Information | Displays information for current leases. An IP address which is leased automatically can be changed to be leased manually by clicking "Manual Assignment". |

NAT (Router Mode only)

The screen to configure settings relating to the network address translation function which is used to connect the LAN side to the Internet.



| Parameter | Meaning |
|-------------------------------|--|
| Address Translation | Enable to use Network Address Translation. |
| Log Output of Deleted Packets | Enable to log deleted packets (such as errors) during address translation. |

Route

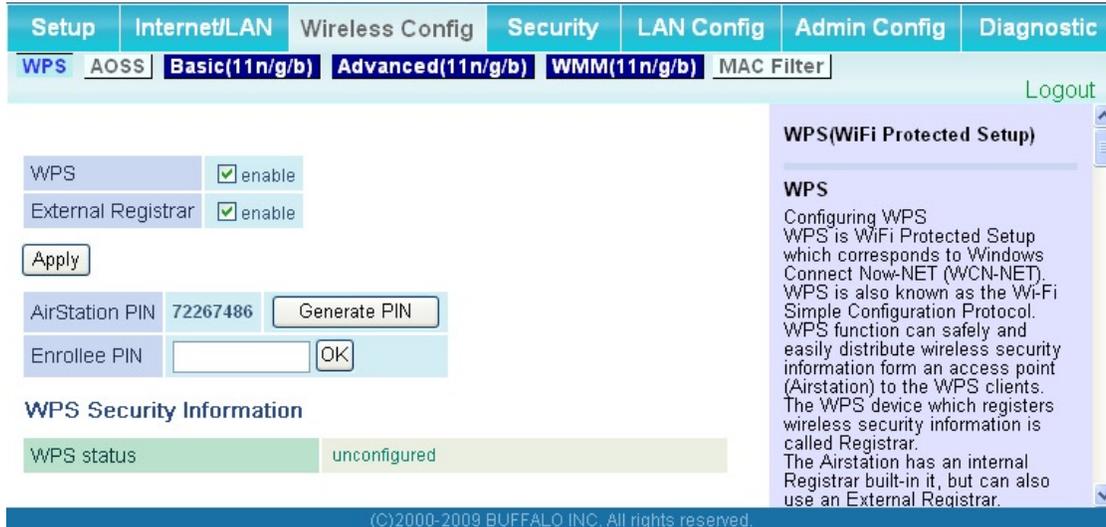
The screen to configure the communication IP route that the AirStation uses.

| Parameter | Meaning |
|---------------------|---|
| Destination Address | Adds a destination IP address and subnet mask to a routing table. |
| Gateway | Adds a gateway address to a routing table. |
| Metric | The metric is the maximum number of router hops a packet may take on the way to its destination address. Values between 1 and 15 may be entered. The default value is 15. |
| Routing Information | Manual entries will appear here after being added. |

Wireless Config

WPS

The screen to see the detailed settings and status of WPS.



Setup Internet/LAN Wireless Config Security LAN Config Admin Config Diagnostic

WPS AOSS Basic(11n/g/b) Advanced(11n/g/b) WMM(11n/g/b) MAC Filter Logout

WPS enable

External Registrar enable

Apply

AirStation PIN 72267486 Generate PIN

Enrollee PIN OK

WPS Security Information

WPS status unconfigured

WPS(WiFi Protected Setup)

WPS

Configuring WPS
WPS is WiFi Protected Setup which corresponds to Windows Connect Now-NET (WCN-NET). WPS is also known as the Wi-Fi Simple Configuration Protocol. WPS function can safely and easily distribute wireless security information from an access point (Airstation) to the WPS clients. The WPS device which registers wireless security information is called Registrar. The Airstation has an internal Registrar built-in it, but can also use an External Registrar.

(C)2000-2009 BUFFALO INC. All rights reserved.

| Parameter | Meaning |
|--------------------|---|
| WPS | Enable to use WPS automatic configuration. |
| External Registrar | Enable to accept the external configure requests from other WPS devices. Note: External configure requests will not be accepted if AOSS is in use. |
| AirStation PIN | Displays the PIN code of the AirStation. Clicking "Generate PIN" will generate a new PIN code. This code can be entered into other wireless devices that support WPS. |
| Enrollee PIN | Enter the PIN code for the other wireless device and click "OK". |
| WPS status | Displays WPS security information. "configured" or "unconfigured" will appear depending on the connection status. Refer to the online help for more detail. |

AOSS

The screen to see the detailed settings and status of AOSS.

Parameter

Meaning



Initiates AOSS automatic wireless configuration. Click this, then press or click the AOSS button on your AOSS-compatible wireless client. Repeat for additional AOSS clients.



Click this button to disconnect AOSS connections.
 Note: If AOSS connections are disconnected, the SSID and encryption keys will be restored to their most recent settings before using AOSS.

| Parameter | Meaning |
|--|--|
| Encryption Type of Exclusive SSID for WEP | You may allow a separate SSID specifically for WEP connections. If "disabled" is selected, then clients will not be able to connect with WEP. |
| Encryption level expansion function | Expands security method from TKIP to WPA/WPA2-PSK-mixed mode. |
| Dedicated WEP SSID isolation | Set a separate SSID and network segment specifically for WEP connections. Devices connected with WEP will not be able to communicate with devices connected using AES/TKIP. All connected devices will be able to communicate with the internet. |
| AOSS Button on the AirStation Unit | Determine whether configure AOSS or not when the physical AOSS button is pressed. |
| Current Encryption Information * AOSS Connection only | Displays the encryption type, SSID, an encryption key configured by AOSS. |
| [Random] | Click to enter random values for SSID, encryption key, and other settings. |
| [Reset] | Click to return the SSID, encryption key, and other wireless settings to their previous values. |
| AOSS Client Information* * AOSS Connection only | Displays AOSS clients connected to the AirStation and information of the devices which are wirelessly communicated. |

Basic

The screen to configure a basic wireless settings.

| Setup | Internet/LAN | Wireless Config | Security | LAN Config | Admin Config | Diagnostic |
|-------|--------------|-----------------|-------------------|--------------|--------------|------------|
| WPS | AOSS | Basic(11n/g/b) | Advanced(11n/g/b) | WMM(11n/g/b) | MAC Filter | Logout |

| | |
|------------------|--|
| Wireless Radio | <input checked="" type="checkbox"/> Enable |
| Wireless Channel | Auto Channel (Current Channel: 2) |
| 150Mbps Mode | Band Width: 20 MHz Extension Channel: Channel 2 |
| Broadcast SSID | <input checked="" type="checkbox"/> Allow |

SSID1

| | |
|------------------|--|
| Separate feature | <input type="checkbox"/> Use |
| SSID | <input checked="" type="radio"/> Name SSID based on MAC address(0024A5460038) <input type="radio"/> Enter: 0024A5460038 |
| Authentication | No authentication |
| Encryption | No authentication/No encryption |

SSID2

| | |
|---------------------------|--|
| WPA-Mixed/PSK | <input checked="" type="checkbox"/> Use |
| Separate feature | <input type="checkbox"/> Use |
| SSID | <input type="radio"/> Name SSID based on MAC address(0024A5460038-1) <input checked="" type="radio"/> Enter: 0024A5460038-2 |
| Authentication/Encryption | No authentication/No encryption |

SSID3

| | |
|--------------------------|--|
| AES | <input type="checkbox"/> Use |
| Separate feature | <input type="checkbox"/> Use |
| SSID | <input checked="" type="radio"/> Name SSID based on MAC address(0024A5460038-2) <input type="radio"/> Enter: 0024A5460038-2 |
| WPA-PSK (Pre-Shared Key) | ••••• |

SSID4

| | |
|--------------------------|--|
| WEP | <input type="checkbox"/> Use |
| Separate feature | <input type="checkbox"/> Use |
| SSID | <input checked="" type="radio"/> Name SSID based on MAC address(0024A5460038-3) <input type="radio"/> Enter: 0024A5460038-3 |
| Setup WEP encryption key | Character Input : 13 characters(WEP128) <input checked="" type="radio"/> 1: ••••• <input type="radio"/> 2: ••••• <input type="radio"/> 3: ••••• <input type="radio"/> 4: ••••• |
| Rekey interval | 60 minutes |

Basic Wireless Setting(11n/g/b)

You can set basic configuration information for your wireless LAN manually here. If encryption is not used, communication will be established just by this basic setup. Encryption is highly recommended, however.

Wireless Radio
Un-checking "Enable" will disable wireless LAN functionality. When disabled, all wireless functionality, including broadcasting, is halted. Default value is enabled.

Wireless Channel
You may specify a channel (frequency band) for your wireless communication. If there are other wireless clients near the AirStation, you may get interference. Change to a different (and preferably non-overlapping) channel in this case. Available channels vary with which wireless standard you're using. When Auto channel is selected, a vacant channel is selected automatically. 11n/g/b : Auto, 1-11 Channel (Default value : Auto channel)

150Mbps Mode
Wireless communication commonly uses 20MHz per channel. 150Mbps Mode is a method to increase wireless transmission throughput to 40MHz per channel. When 150Mbps Mode is used, the channel display on the wireless client is likely going to differ from the channel display on the AP. The wireless client channel display may not display the Control Channel but the center frequency. In this case, the channel between the Wireless Channel and the Extension Channel is displayed. Example : When channel 3 is selected as Wireless Channel, and channel 7 is selected as the Extension Channel, channel 5 is displayed.

Band Width
You can select weather 20MHz or 40MHz (150Mbps Mode) are used for wireless communication. Default value is 20MHz

Extension Channel
When 40MHz has been selected under Band Width, two channels are used. A Control Channel and an Extension Channel. The Control Channel is specified by the [Wireless Channel] setting, and the Extension Channel is specified by the [Extension Channel] setting.

(C)2000-2009 BUFFALO INC. All rights reserved.

| Parameter | Meaning |
|------------------|--|
| Wireless Radio | Determines whether to allow wireless communication. If this is unchecked, then no wireless connections will be allowed. |
| Wireless Channel | Sets a channel (a range of frequencies) used for wireless connections. Available range of the channel is 1-11. With <i>Auto</i> Channel selected, the AirStation will automatically use the best available channel. This parameter is disabled if WDS feature is activated. |
| 150Mbps Mode | 150 Mbps mode uses twice the normal frequency range, 40 MHz instead of 20 MHz. In uncongested areas this can increase performance. To use 150 Mbps mode, set the Bandwidth to 40 MHz and choose an Extension Channel. Note: If using Auto Channel for the wireless channel, then the Extension Channel is set automatically. This parameter is disabled if WDS feature is activated. |
| Broadcast SSID | If " <i>Allow</i> " is checked, then the AirStation will respond to SSID searches from wireless devices by broadcasting its SSID. If " <i>Allow</i> " is unchecked, then the AirStation ignore SSID searches from wireless devices. |
| SSID1 | Always enabled and support all wireless security methods of the AirStation. Security can be disabled if necessary. |
| SSID2 | SSID2 can use WPA-PSK-TKIP or WPA/WPA2-Mixed for wireless security. Security can be disabled if necessary. |
| SSID3 | SSID3 can use WPA-PSK-AES for wireless security. |
| SSID4 | SSID4 can use WEP for wireless security. |
| Separate feature | When " <i>Enabled</i> ", wireless devices connected to the AirStation can communicate only with the Internet side, not with each other. This parameter does not function if WDS is enabled. |
| SSID | Set SSID using 1-32 alphanumeric character (s). |
| Authentication | Specifies an authentication method used when connecting to a wireless device. |

| Parameter | Meaning |
|--------------------------|--|
| Encryption | <p>Select a type of data encryption for wireless communication from the following options:</p> <p>No encryption Data is transmitted without encryption. Avoid this option since any communication may be intercepted. <i>"No encryption"</i> can be selected only when <i>"No authentication"</i> is selected for Wireless authentication.</p> <p>WEP WEP is a common encryption method supported by most devices. Use an encryption key to communicate with a wireless device. WEP can only be selected when <i>"No authentication"</i> is selected for Wireless authentication.</p> <p>TKIP TKIP is an encryption method which is more secure than WEP, but slower. Use an pre-shared-key to communicate with a wireless device. TKIP can be selected only when WPA-PSK or WPA2-PSK is selected for Wireless authentication.</p> <p>AES AES is more secure than TKIP, and faster. Use a pre-shared-key to communicate with a wireless device. AES can be selected only when WPA-PSK or WPA2-PSK is selected for Wireless authentication.</p> <p>TKIP/AES mixed mode TKIP/AES mixed mode allows both TKIP and AES authentication and communication. TKIP/AES mixed mode can be selected only when WPA/WPA2 mixed mode - PSK is selected for Wireless authentication.</p> |
| WPA-PSK (Pre-Shared Key) | <p>Enter a pre-shared key for use with wireless authentication.</p> <p>* Use 8 to 63 alphanumeric characters (case-sensitive) for a preshared key when you select character type as an input method. Enter 64 digits using 0 to 9 and a to f (not case-sensitive) when you select hexadecimal type as an input method.</p> |

| Parameter | Meaning |
|--------------------------|--|
| Setup WEP encryption key | Enter an encryption key to encrypt wireless data. * Use 5 or 13 alphanumeric characters (case-sensitive) for an encryption key when you select character type as the input method. Enter 10 or 26 digits using 0 to 9 and a to f (not case-sensitive) when you select hexadecimal type as the input method. |
| Rekey interval | Set the interval between 0 and 1440 (minutes) to update a communication encryption key. |

Advanced

The screen to configure the advanced wireless settings.



| Parameter | Meaning |
|-------------------|--|
| Multicast Rate | Set the communication speed of multi-cast packets. |
| DTIM Period | Set the beacon responding interval (1 -255) which is notified to a wireless device. This setting is effective only when the power management feature is enabled on a wireless device. |
| Privacy Separator | If enabled, the Privacy Separator blocks communication between wireless devices connected to the AirStation. Wireless devices will be able to connect to the Internet but not with each other. Devices that are connected to the AirStation with wired connections will still be able to connect to wireless devices normally. |

WMM

The screen to set the priorities for specific communications the AirStation performs.

Setup
Internet/LAN
Wireless Config
Security
LAN Config
Admin Config
Diagnostic

WPS
AOSS
Basic(11n/g/b)
Advanced(11n/g/b)
WMM(11n/g/b)
MAC Filter
Logout

WMM Enable

WMM-EDCA Parameters

| Priority | Parameter | For AP | For STA |
|----------------|-------------|--------|---------|
| AC_BK(Low) | CWmin: | 15 | 15 |
| | CWmax: | 1023 | 1023 |
| | AIFSN: | 7 | 7 |
| | TXOP Limit: | 0 | 0 |
| AC_BE(Normal) | CWmin: | 15 | 15 |
| | CWmax: | 63 | 1023 |
| | AIFSN: | 3 | 3 |
| | TXOP Limit: | 0 | 0 |
| AC_VI(High) | CWmin: | 7 | 7 |
| | CWmax: | 15 | 15 |
| | AIFSN: | 1 | 2 |
| | TXOP Limit: | 94 | 94 |
| AC_VO(Highest) | CWmin: | 3 | 3 |
| | CWmax: | 7 | 7 |
| | AIFSN: | 1 | 2 |
| | TXOP Limit: | 47 | 47 |

WMM Settings (11g)

Prioritized AirStation communication for specific transactions. This settings provides some real time communication, which can help improve the quality of VOIP or other streaming protocols.

WMM
 NOW PRINTING

WMM-EDCA Parameters

It is usually not necessary to change this value.

Priority
 The priority is ranked (Highest)8 : (High)4 : (Normal)2 : (Low)1 for each packet.

Parameter
CWmin, CWmax
 The maximum and minimum value for the contention window. The contention window is used to control the frame collision avoidance system in IEEE802.11.

AIFSN
 Interval of the sending frame. The unit defines a time-slot (similar to the window value of CWmin, CWmax). Lower values define a higher priority as the back-off algorithm starts earlier.

TXOP Limit
 The time for the queue to obtain send priority. The minimum value

(C)2000-2009 BUFFALO INC. All rights reserved.

| Parameter | Meaning |
|---------------------|---|
| WMM | Check WMM to enable QoS features. WMM is a standard that includes basic Quality of Service (QoS) features for wireless networks. |
| WMM-EDCA Parameters | You don't usually need to change these settings. Using the default settings is recommended. Priority The following priorities may be applied to individual transmission packets: (Highest) 8, (High) 4, (Normal) 2, and (Low) 1. From the queue, these packets are processed in order of priority. CWmin, CWmax The maximum and minimum value of the contention window. The contention window is used in the frame collision avoidance structure performed in IEEE802.11, and generally the smaller the value in the window, the higher the probability that the queue obtains the right to send. AIFSN The interval to send frames. The unit of the AIFSN is a slot, just as the window defined by CWmin and CWmax is. The smaller the interval of sending frames, the faster the algorithm can restart. As a result, the priority of the queue is higher. TXOP Limit The period of time that the queue can use after obtaining the right to send. The unit is 32 ms. The longer this time, the more frames can be sent per right to send. However, the que may interfere with other packet transmissions. If TXOP Limit is set to 0 (zero), only one frame can be sent per right to send. |

MAC Filter

The screen to configure the access restrictions from wireless devices.



| Parameter | Meaning |
|--|---|
| Enforce MAC Filtering | Enable to restrict wireless connections to devices with registered MAC addresses. |
| Registration List | Displays the MAC addresses of registered devices which are permitted to connect wirelessly. |
| [Edit Registration List] | Click this button to add a MAC address of a wireless device to the list of permitted devices. |
| MAC Addresses to be Registered | Enter a MAC address of a wireless device you permit to connect to the AirStation. Click "Register" to add that MAC address to the list. |
| List of all clients that are associated with this AirStation | Display the list of all MAC addresses of wireless devices connected to the AirStation. |

WDS (Bridge Mode only)

The screen to configure WDS settings, which supports communication between Wireless AP. Refer to page 17 for setup process.

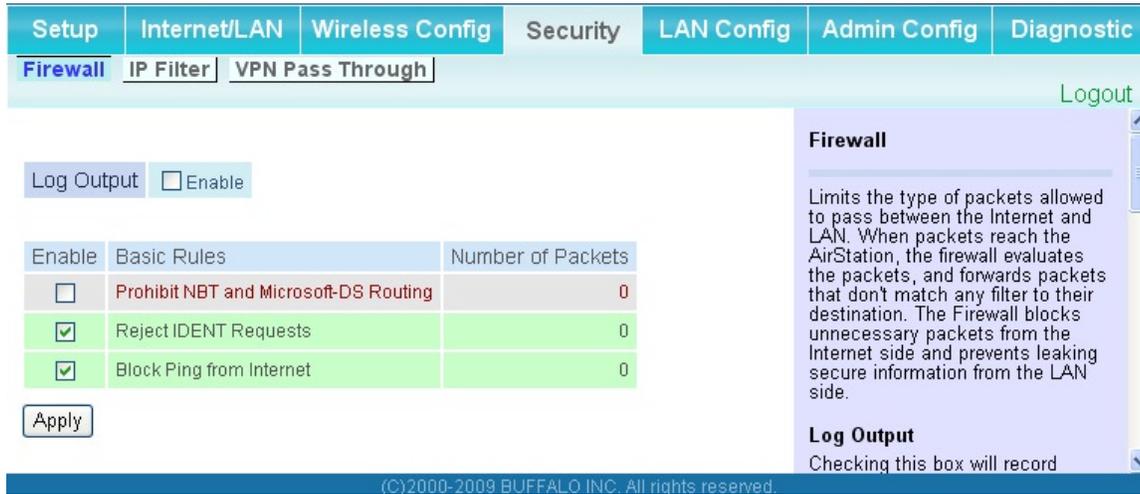
| Parameter | Meaning |
|-----------------|---|
| WDS | check to use WDS connection. |
| Connection type | Select AirStation's connection method for WDS. Manual Specify the target wireless AP's SSID and security information manually. AOSS Connect with the AirStation using AOSS. If this option is selected, a special AOSS button will appear. This button can be used for WDS connection only. Refer to page 17 for setup process. Once AOSS connection is set up, WCR-GN will have the same security setting as the target wireless AP. |

| Parameter | Meaning |
|----------------------------|---|
| Connection Status | Displays the WDS connection status. |
| SSID | Configure the target Airstation's SSID. |
| [Search] | Click this button to search the target AirStation's SSID. |
| Authentication | Configure the target AirStation's wireless authentication method. |
| Encryption for wireless | Configure the target AirStation's Encryption method. |
| WPA-PSK (Pre-shared KEY) | Set the target AP's Encryption key if necessary. |
| WEP encryption key setting | Set the target AP's WEP key if necessary. |

Security (Router Mode only)

Firewall (Router Mode only)

The screen to configure firewall features of the AirStation.



Setup Internet/LAN Wireless Config **Security** LAN Config Admin Config Diagnostic

Firewall IP Filter VPN Pass Through Logout

Log Output Enable

| Enable | Basic Rules | Number of Packets |
|-------------------------------------|---------------------------------------|-------------------|
| <input type="checkbox"/> | Prohibit NBT and Microsoft-DS Routing | 0 |
| <input checked="" type="checkbox"/> | Reject IDENT Requests | 0 |
| <input checked="" type="checkbox"/> | Block Ping from Internet | 0 |

Apply

Firewall
Limits the type of packets allowed to pass between the Internet and LAN. When packets reach the AirStation, the firewall evaluates the packets, and forwards packets that don't match any filter to their destination. The Firewall blocks unnecessary packets from the Internet side and prevents leaking secure information from the LAN side.

Log Output
Checking this box will record

(C)2000-2009 BUFFALO INC. All rights reserved.

| Parameter | Meaning |
|-------------|---|
| Log Output | Enable to output a log of firewall activity. |
| Basic Rules | <p>Enable to use any of the quick filters. Preconfigured quick filters include:</p> <p>Prohibit NBT and Microsoft-DS Routing When this is enabled, you cannot use the Microsoft network feature from the Internet side to the LAN side and from the LAN side to the Internet. You can configure this with PPPoE if you select "Use PPPoE Client" or "Use IP Unnumbered" in Method of Acquiring IP address (on page 31), or if Easy Setup identified a PPPoE connection during setup.</p> |

| Parameter | Meaning |
|-----------|--|
| | <p data-bbox="641 327 932 359">Reject IDENT Requests</p> <p data-bbox="662 365 1458 653">Enabling this option will answer IDENT requests from the Internet side with corresponding rejection packets. Enable this option if you experienced slower transfer speed for network application such as sending mail, using ftp or displaying on browser. If you have configured transfer of IDENT requests to the LAN side computer in the address translation settings (DMZ or TCP port:113), that setting has higher priority, and overrides this setting.</p> <p data-bbox="641 684 959 716">Block Ping from Internet</p> <p data-bbox="662 722 1458 863">If this is enabled, the AirStation will not respond to pings from the Internet side. You can configure this with PPPoE if you select "<i>Use PPPoE Client</i>" in Method of Acquiring IP address (page 25), or if Easy Setup identified a PPPoE connection during setup.</p> |

IP Filter (Router Mode only)

The screen to edit IP filters which relates to the packets passing through the LAN side and the Internet side.

| Parameter | Meaning |
|-----------------------|--|
| Log Output | If enabled, IP filter activity is saved to a log. |
| Operation | Specify how to process target packets. |
| Direction | Specify the transmission direction of target packets. |
| IP Address | Specify the sender's IP address and receiver's IP address of the target packets. |
| Protocol | Select a protocol for target transmission packet. |
| IP Filter Information | Display the list of IP filters which have been registered. |

VPN Pass Through (Router Mode only)

The screen to configure IPv6 pass through, PPPoE pass through, and PPTP pass through.



| Parameter | Meaning |
|--------------------|--|
| IPv6 Pass Through | Enable to use IPv6 Pass Through for address translation. |
| PPPoE Pass Through | Enable to use PPPoE bridge. Using PPPoE bridge lets you automatically obtain an IP address from your provider using the PPPoE protocol from your computer connected to the LAN side because all PPPoE packets can pass through between the Internet and LAN. |
| PPTP Pass Through | Enable to use the PPTP Pass Through for address translation. |

LAN Config (Router Mode only)

Port Forwarding (Router Mode only)

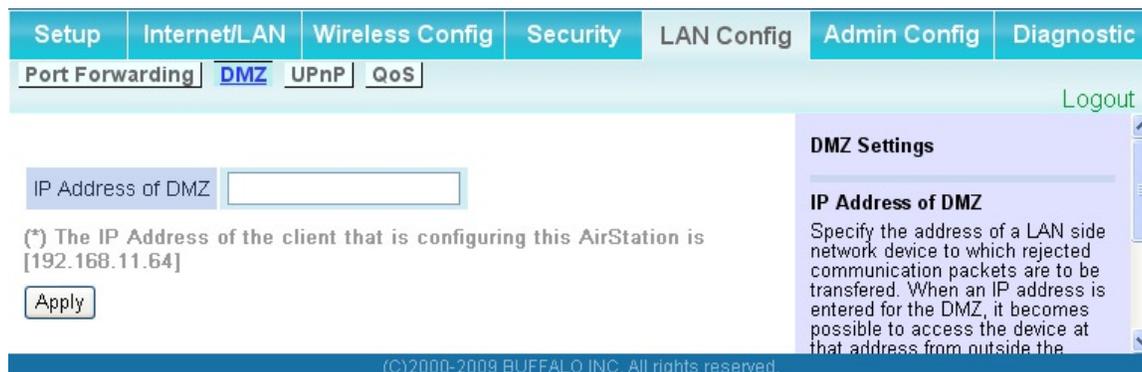
The screen to configure the port translation.

| Parameter | Meaning |
|--------------------------|--|
| Group | Specify a group name for a new rule to belong to. Select "New Group" and enter the new group name in the Group Name field to create a new group. A group name can include up to 16 alphanumeric letters. |
| Internet Side IP Address | Enter the Internet side IP address (before translation) for the port translation table entry. |
| Protocol | Select the Internet side protocol (before translation) for the port translation table entry. |

| Parameter | Meaning |
|--|---|
| LAN Side IP Address | Enter the LAN side IP address (after translation) for the port translation table entry. |
| LAN Side Port | Select the LAN side (after translation) port number (1 - 65535) for the port translation table entry. |
| Port Forwarding Registration Information | Shows current entries in the port translation table. |

DMZ (Router Mode only)

The screen to configure a destination to transfer communication packets without a LAN side destination.



| Parameter | Meaning |
|-------------------|---|
| IP Address of DMZ | Enter the IP address of the destination to which packets which are not routed by a port translation table are forwarded. Note: RIP protocol packets (UDP port number 520) will not be forwarded. |

UPnP (Router Mode only)

The screen to configure UPnP (Universal Plug and Play).



| Parameter | Meaning |
|-----------|---|
| UPnP | Enable or disable Universal Plug and Play (UPnP) functionality. |

QoS (Router Mode only)

The screen to configure the priority control of packets sent to the Internet.

QoS for transmission to the Internet Enable

Upload bandwidth Kbps

| No. | Enable | application name | protocol | destination port | priority |
|-----|--------------------------|------------------|----------|------------------|----------|
| 1 | <input type="checkbox"/> | VoIP | UDP | | high |
| 2 | <input type="checkbox"/> | ssh | TCP | 22 | medium |
| 3 | <input type="checkbox"/> | telnet | TCP | 23 | medium |
| 4 | <input type="checkbox"/> | ftp | TCP | 21 | low |
| 5 | <input type="checkbox"/> | | TCP | | high |
| 6 | <input type="checkbox"/> | | TCP | | high |
| 7 | <input type="checkbox"/> | | TCP | | high |
| 8 | <input type="checkbox"/> | | TCP | | high |

©2000-2009 BUFFALO INC. All rights reserved.

QoS Setting

QoS is a technology to use the bandwidth on the network more effectively. When two or more packets arrive at the same time, the packet with higher priority is processed first. This can be used to give priority to communications that require real time processing, such as VOIP.

QoS for transmission to the Internet

If checked, this gives priority to packets being transmitted to the Internet. When enabled, you will be able to add four levels of increased priority for specific applications. By default, this is disabled.

Uplink Bandwidth

Specify the bandwidth transferred from this unit to the Internet in kbps. The real uplink bandwidth should be entered. If a bandwidth value larger than the real line speed is entered, the uplink bandwidth will be limited by

| Parameter | Meaning |
|--------------------------------------|---|
| QoS for transmission to the Internet | Determine whether or not control the priority of packets to send to the Internet. Check this box to enable QoS. |
| Upload bandwidth | Specify the upstream bandwidth in kbps from the AirStation to the internet side. * Set the actual value for the upstream bandwidth. |
| Enable | Enable or disable this entry. |
| application name | Enter an application name. Names may use up to 32 alpha numerical characters, double or single tick marks ("), quotation marks ("), and semicolons (;). |
| protocol | Select either TCP or UDP. |

| Parameter | Meaning |
|------------------|--|
| destination port | Specify a destination port with the value of 1 - 65535. If this field is empty, a random port is selected. |
| priority | Select high, medium or low. * If packets do not qualify for classification as a type on the list, then their priority is treated as a level between medium and low. |

Admin Config

Name

The screen to configure the AirStation's name.



| Parameter | Meaning |
|-----------------|--|
| AirStation Name | Enter a name for the AirStation. Names may include up to 64 alphanumeric characters and hyphens (-). |

Password

The screen to configure the password to login to the configuration screen of the AirStation.



| Parameter | Meaning |
|------------------------|---|
| Administrator Name | The user name to log in to the configuration screen of the AirStation. This name is fixed as "root". |
| Administrator Password | The password to log in to the configuration screen of the AirStation. The password may contain up to 8 alphanumeric characters and underscores (_). |

Time/Date

The screen to configure the internal clock in the AirStation.



| Parameter | Meaning |
|------------|---|
| Local Date | You may manually set the date of the AirStation's internal clock. |
| Local Time | You may manually set the time of the AirStation's internal clock. |
| Time Zone | Specify the time zone (offset of Greenwich Mean Time) of the AirStation's internal clock. |

NTP

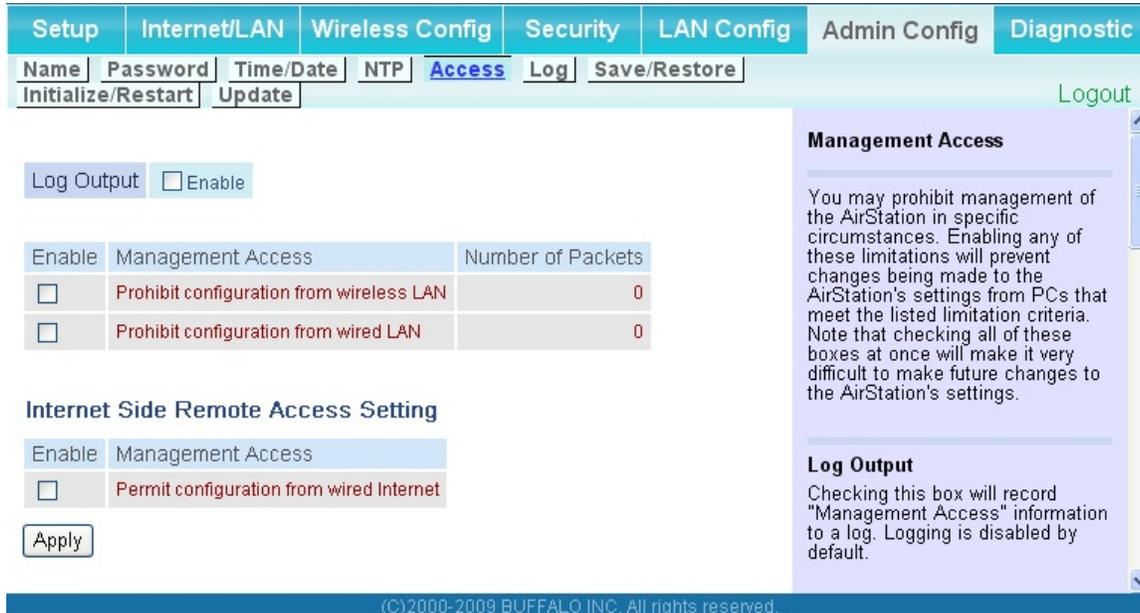
The screen to configure an NTP server to automatically synchronise the AirStation's internal clock.



| Parameter | Meaning |
|-------------------|--|
| NTP Functionality | Enable to use an NTP server to automatically set the AirStation's internal clock. |
| NTP Server | Enter the name of the NTP server as a host name, host name with domain name, or IP address. Up to 255 alphanumeric characters, hyphens (-), and underscores (_) may be used. |
| Update Interval | How often should the AirStation submit a time request to the NTP server? Intervals of 1 - 24 hours may be set. |

Access

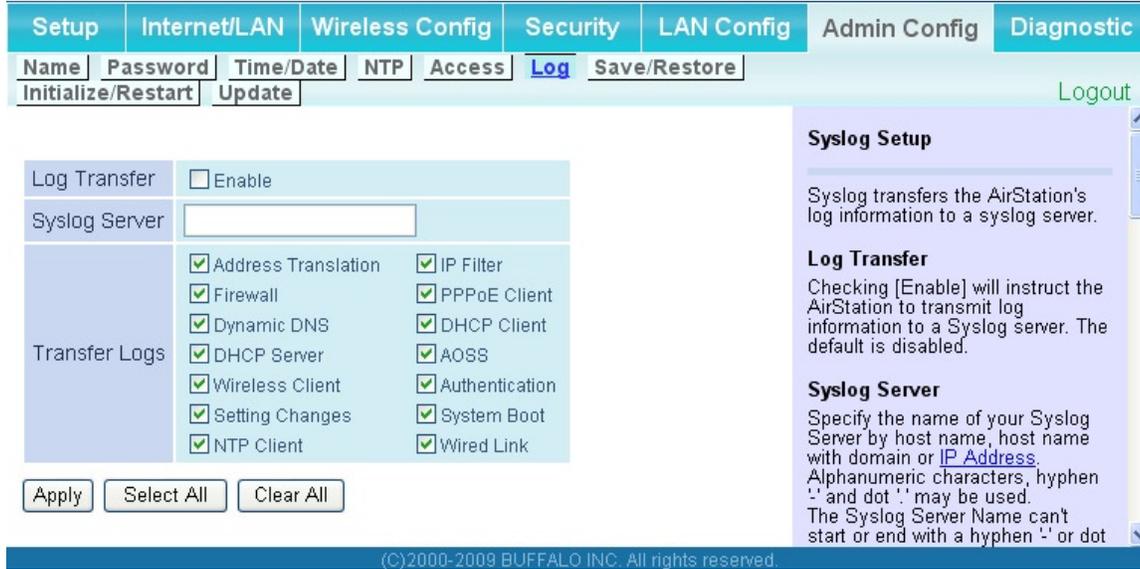
The screen to restrict access to the AirStation's settings screens.



| Parameter | Meaning |
|---|---|
| Log Output | Enabling outputs a log of changes to access settings. |
| Prohibit configuration from wireless LAN | If enabled, prevents access to settings screens from wirelessly connected devices (only wired devices may configure). |
| Prohibit configuration from wired LAN | If enabled, prevents access to settings screens from wired devices (only wirelessly connected devices may configure). |
| Permit configuration from wired Internet *Router mode only | If enabled, allows access to settings screens from network devices on the Internet side. |
| Permitted IP address *Router mode only | Displayed only if Internet side configuration is enabled. Enter the IP address of the device that is permitted to configure the AirStation remotely from the Internet side. |
| Permitted Port *Router mode only | Displayed only if Internet side configuration is enabled. Set a port number (1 - 65535) if configuring the AirStation from the Internet side. |

Log

The screen to transfer the log information of the AirStation by the syslog.



| Parameter | Meaning |
|---------------|--|
| Log Transfer | Enable to send logs to a syslog server. |
| Syslog Server | Identify the syslog server by host name, host name with domain name, or IP address. You may enter up to 255 alphanumeric characters, hyphens (-), and underscores (_). |
| Transfer Logs | Choose which logs will be transferred to the syslog server. |

Save/Restore

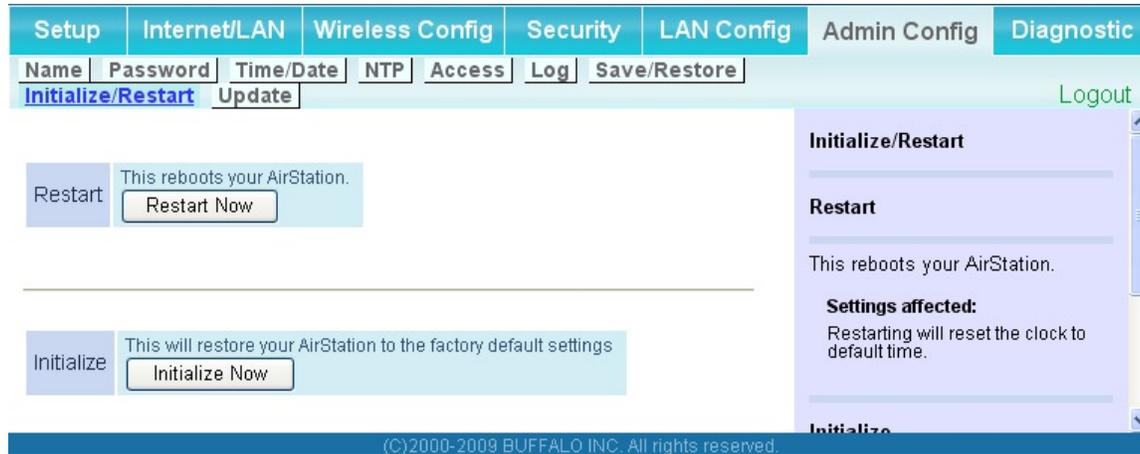
The screen to save to or restore from an AirStation configuration file.



| Parameter | Meaning |
|--|--|
| Save current settings | Clicking "Save" will save the current configuration of the AirStation to a file. If the "Encrypt the configuration file with a password" option is checked, then the configuration file will be password protected with the specified password. |
| Restore Configuration from Backup File | Restore the configuration of the AirStation from a saved configuration file by clicking the "Browse" button, navigating to the configuration file, and then clicking Restore. If the configuration file was password protected, then put a check next to "To restore from the file you need the password", enter the password, and click "Open". |

Initialize/Restart

The screen to initialize and restore the AirStation.



| Parameter | Meaning |
|------------|---|
| Restart | Click " <i>Restart Now</i> " to restart the AirStation. |
| Initialize | Click " <i>Initialize Now</i> " to initialize and restart the AirStation. |

Update

The screen to update the AirStation's firmware.



| Parameter | Meaning |
|--------------------|---|
| Firmware Version | Displays the current firmware version of the AirStation. |
| Firmware File Name | Click " <i>Browse</i> " to specify a firmware file and click " <i>Update Firmware</i> ." This will update the firmware. |

Diagnostic

System Info

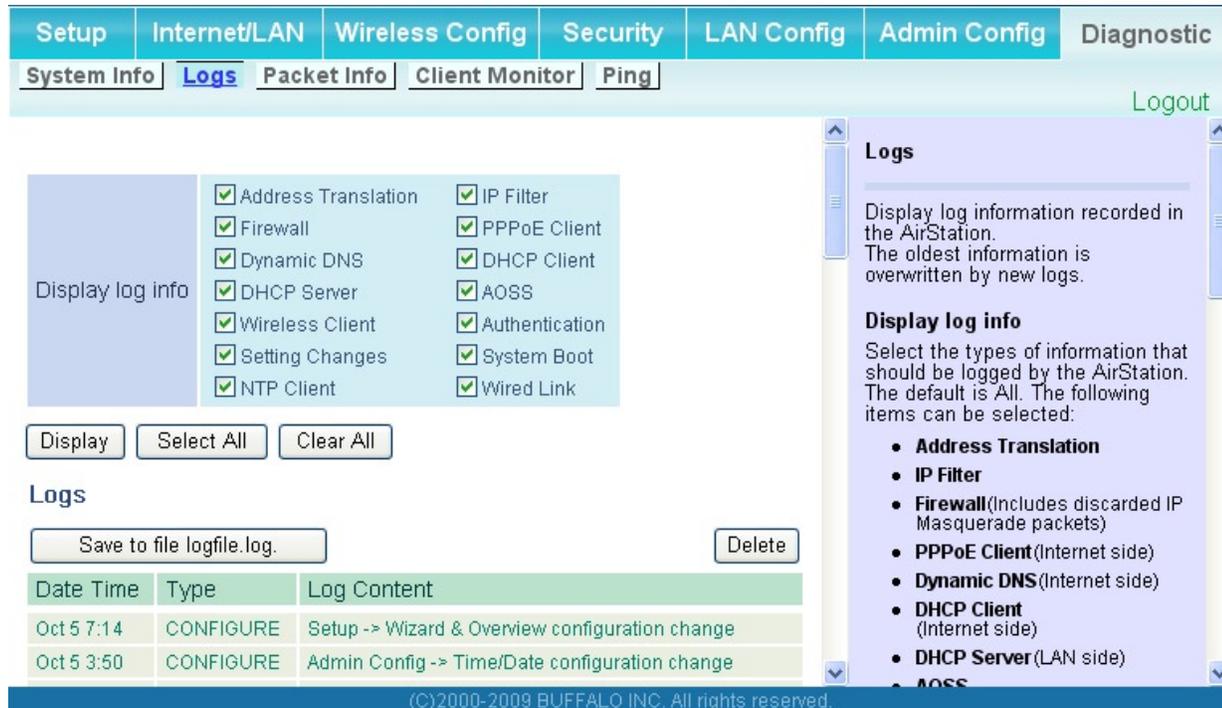
The screen to verify the system information of the AirStation.

| Setup | Internet/LAN | Wireless Config | Security | LAN Config | Admin Config | Diagnostic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------------------|--------------------------|----------|------------|--------------|------------|------------------------------|--|--|--|--|-----------------|----------------|--|--|--|--|------------------|----------------|--|--|--|--|----------|--------------------------------|-------------------------|--|--|--|------------|--------------------------|--|--|--|-------------|-------------------|--|--|--|-----|------------|--------------|--|--|--|-------------|---------------|--|--|--|-------------|---------|--|--|--|-------------|-------------------|--|--|--|-----------------------|-----------------|---------|--|--|--|-------|--------------|--|--|--|----------------|------|--|--|--|------------|------|--|--|--|-------|----------------|--|--|--|----------------|------|--|--|--|------------|------|--|--|--|----------------|--------|--|--|--|-------------------|---------|--|--|--|------------------|---------|--|--|--|--------------|--------|--|--|--|-------------|-------------------|--|--|--|---|
| System Info Logs Packet Info Client Monitor Ping | | | | | | Logout | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>Model</td> <td colspan="5">WCR-GN Ver.1.00(R1.20/B1.13)</td> </tr> <tr> <td>AirStation Name</td> <td colspan="5">AP0024A5460038</td> </tr> <tr> <td>Operational Mode</td> <td colspan="5">Router Mode ON</td> </tr> <tr> <td rowspan="3">Internet</td> <td>Method of Acquiring IP Address</td> <td colspan="4">Auto Detect Mode -PPPoE</td> </tr> <tr> <td>Wired Link</td> <td colspan="4">100Base-TX (Full-duplex)</td> </tr> <tr> <td>MAC Address</td> <td colspan="4">00:24:A5:46:00:38</td> </tr> <tr> <td rowspan="4">LAN</td> <td>IP Address</td> <td colspan="4">192.168.11.1</td> </tr> <tr> <td>Subnet Mask</td> <td colspan="4">255.255.255.0</td> </tr> <tr> <td>DHCP Server</td> <td colspan="4">Enabled</td> </tr> <tr> <td>MAC Address</td> <td colspan="4">00:24:A5:46:00:38</td> </tr> <tr> <td rowspan="10">Wireless(802.11n/g/b)</td> <td>Wireless Status</td> <td colspan="4">enabled</td> </tr> <tr> <td>SSID1</td> <td colspan="4">0024A5460038</td> </tr> <tr> <td>Authentication</td> <td colspan="4">Open</td> </tr> <tr> <td>Encryption</td> <td colspan="4">Open</td> </tr> <tr> <td>SSID2</td> <td colspan="4">0024A5460038-2</td> </tr> <tr> <td>Authentication</td> <td colspan="4">Open</td> </tr> <tr> <td>Encryption</td> <td colspan="4">Open</td> </tr> <tr> <td>Broadcast SSID</td> <td colspan="4">Enable</td> </tr> <tr> <td>Privacy Separator</td> <td colspan="4">Disable</td> </tr> <tr> <td>Wireless Channel</td> <td colspan="4">2(Auto)</td> </tr> <tr> <td>150Mbps Mode</td> <td colspan="4">20 MHz</td> </tr> <tr> <td>MAC Address</td> <td colspan="4">00:24:A5:46:00:38</td> </tr> </table> | | | | | | Model | WCR-GN Ver.1.00(R1.20/B1.13) | | | | | AirStation Name | AP0024A5460038 | | | | | Operational Mode | Router Mode ON | | | | | Internet | Method of Acquiring IP Address | Auto Detect Mode -PPPoE | | | | Wired Link | 100Base-TX (Full-duplex) | | | | MAC Address | 00:24:A5:46:00:38 | | | | LAN | IP Address | 192.168.11.1 | | | | Subnet Mask | 255.255.255.0 | | | | DHCP Server | Enabled | | | | MAC Address | 00:24:A5:46:00:38 | | | | Wireless(802.11n/g/b) | Wireless Status | enabled | | | | SSID1 | 0024A5460038 | | | | Authentication | Open | | | | Encryption | Open | | | | SSID2 | 0024A5460038-2 | | | | Authentication | Open | | | | Encryption | Open | | | | Broadcast SSID | Enable | | | | Privacy Separator | Disable | | | | Wireless Channel | 2(Auto) | | | | 150Mbps Mode | 20 MHz | | | | MAC Address | 00:24:A5:46:00:38 | | | | <p>System Information</p> <p>Display the AirStation's main settings.</p> <p>Model Displays the model name and firmware version of the AirStation.</p> <p>AirStation Name Displays the AirStation's host name.</p> <p>Operational Mode Displays the current mode of operation.</p> <p>Internet AirStation's Internet port side information.</p> <p>Method of Acquiring IP Address Acquiring a Internet IP address.</p> <p>Name of the Connection The name of the PPPoE connection specified in the configuration.</p> <p>Connection Status Displays the current Internet side status.</p> <p>Operational Mode The Operational Mode will show if any DHCP or PPPoE configuration is active. If DHCP is in use, the following commands can be executed.</p> <ul style="list-style-type: none"> • [Release] : Releases the IP address assigned by the DHCP Server. • [Renew] : Renews the IP address from the DHCP Server. |
| Model | WCR-GN Ver.1.00(R1.20/B1.13) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AirStation Name | AP0024A5460038 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operational Mode | Router Mode ON | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Internet | Method of Acquiring IP Address | Auto Detect Mode -PPPoE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Wired Link | 100Base-TX (Full-duplex) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAC Address | 00:24:A5:46:00:38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LAN | IP Address | 192.168.11.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Subnet Mask | 255.255.255.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | DHCP Server | Enabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MAC Address | 00:24:A5:46:00:38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wireless(802.11n/g/b) | Wireless Status | enabled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SSID1 | 0024A5460038 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Authentication | Open | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Encryption | Open | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | SSID2 | 0024A5460038-2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Authentication | Open | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Encryption | Open | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Broadcast SSID | Enable | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Privacy Separator | Disable | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Wireless Channel | 2(Auto) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 150Mbps Mode | 20 MHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MAC Address | 00:24:A5:46:00:38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Refresh | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (C)2000-2009 BUFFALO INC. All rights reserved. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Parameter | Meaning |
|-------------------------------|---|
| Model | Displays the product name of the AirStation and the firmware version. |
| AirStation Name | Displays AirStation Name (refer to page 62). |
| Operational Mode | Displays the current operational mode of the AirStation. |
| Internet *Router mode only | Displays the information about the Internet port. |
| LAN | Displays the information about the LAN port. |
| Wireless | Displays the wireless status. |
| WDS *Brdige mode only | Displays the WDS status. |

Logs

The screen to check log information recorded by the AirStation.



Parameter

Meaning

Display log info

Choose the types of log information to display.

Logs

Displays the log information recorded in the AirStation.

Packet Info

The screen to verify the total amount of packets the AirStation transfers.

The screenshot shows a web interface with a navigation menu at the top: Setup, Internet/LAN, Wireless Config, Security, LAN Config, Admin Config, and Diagnostic. Under Diagnostic, there are sub-menus: System Info, Logs, Packet Info (selected), Client Monitor, and Ping. A Logout link is also visible.

The main content area features a table with the following data:

| Interface | Sent | | Received | |
|----------------------------|--------|--------|----------|--------|
| | Normal | Errors | Normal | Errors |
| Wired Internet | 0 | 0 | 0 | 0 |
| Wired LAN | 2837 | 0 | 2149 | 0 |
| Wireless LAN (802.11n/g/b) | 3178 | 0 | 115607 | 0 |

Below the table is a "Refresh" button. To the right, the "Packet Traffic Information" section explains that the table shows the total numbers of packets sent and received by the AirStation, along with errors. It also includes a "[Refresh] button" which renews the displayed information.

At the bottom of the page, a copyright notice reads: (C)2000-2009 BUFFALO INC. All rights reserved.

Parameter

Meaning

Sent

Displays the number of packets sent to the Internet side of Ethernet, the LAN side of the Ethernet, and the LAN side of the wireless connection.

Received

Displays the number of packet received from the Internet side of Ethernet, the LAN side of the Ethernet, and the LAN side of the wireless connection.

Client Monitor

This screen shows devices that are connected to the AirStation.

| MAC Address | Lease IP Address | Hostname | Communication Method | Wireless Authentication | 802.11n |
|-------------------|------------------|-----------|----------------------|-------------------------|---------|
| 00:1D:73:92:0B:7F | 192.168.11.65 | pc-suzuki | Wireless | Authorized | Enable |
| 00:11:09:5C:86:F1 | 192.168.11.64 | suzuki-xp | Wired | - | - |

Refresh

Client Monitor

Displays the LAN side clients (PCs) that are accessing the AirStation.

The following information is displayed:

MAC address
Shows client's MAC address

(C)2000-2009 BUFFALO INC. All rights reserved.

| Parameter | Meaning |
|----------------|---|
| Client Monitor | Displays information (MAC address, lease IP address, host name, communication method, wireless authentication and 802.11n) for devices that are connected to the AirStation. |

Ping

A Ping test checks whether the AirStation can communicate with a specific network device.

The screenshot shows the 'Ping' utility interface. At the top, there is a navigation bar with tabs for 'Setup', 'Internet/LAN', 'Wireless Config', 'Security', 'LAN Config', 'Admin Config', and 'Diagnostic'. Below this, there is a sub-menu with 'System Info', 'Logs', 'Packet Info', 'Client Monitor', and 'Ping'. A 'Logout' link is located in the top right corner. The main content area features a 'Destination Address' input field, an 'Execute' button, and a 'Result' section. The 'Result' section displays the following information:

| | |
|-------------|--|
| Destination | 192.168.11.3 |
| Result | 64 bytes from 192.168.11.3: icmp_seq=0 ttl=128 time=1.4 ms |
| Result | 64 bytes from 192.168.11.3: icmp_seq=1 ttl=128 time=3.0 ms |
| Result | 64 bytes from 192.168.11.3: icmp_seq=2 ttl=128 time=0.9 ms |

A help sidebar on the right side of the interface provides additional information:

Ping

A Ping test can be performed from the AirStation. With a ping test, you can determine whether the AirStation can communicate with a specific network device.

Destination Address

Enter the network IP address that you want to ping; e.g. 192.168.11.3 or www.buffalotech.com.

Execute

Click [Execute] to ping the

| Parameter | Meaning |
|---------------------|---|
| Destination Address | Enter an IP address or a host name of the device for which you try to verify the connection, and click "Execute". The result will be displayed in the "Result" field. |

Chapter 5

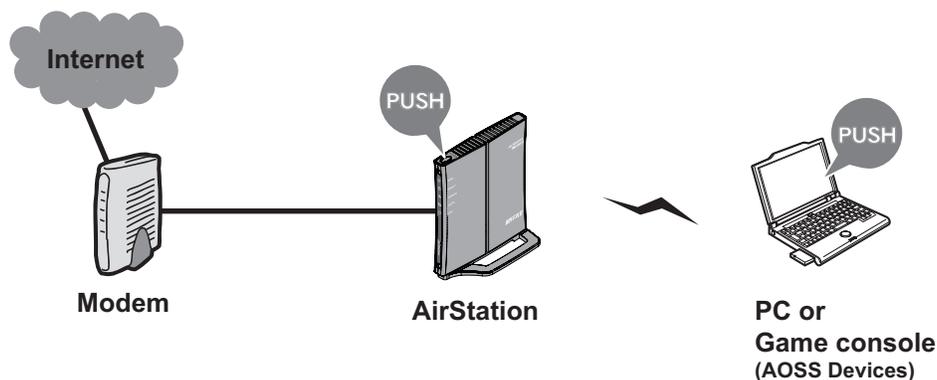
Connect to a Wireless Network

Automatic Secure Setup (AOSS/WPS)

AOSS and WPS are systems which enables you to automatically configure wireless LAN settings. Just pressing the buttons will connect wireless devices and complete security settings. Utilize this system to connect to wireless devices, computers, or game machines which support AOSS or WPS.



AOSS (AirStation One-Touch Secure System) is technology developed by BUFFALO. WPS was created by the Wi-Fi Alliance.



- Before using AOSS/WPS to connect to a Buffalo wireless client, install Client Manager software from the included AirNavigator CD. Consult your wireless client's documentation for more information.
- Buffalo's Client Manager software can be used with the wireless LAN devices built into your computer. However, it is not guaranteed to work with all wireless LAN devices available.

Note:

When setting WDS connection, only the AOSS button displayed in the WDS configuration screen functions properly. Refer to the setup process in page 17.

If you've completed WDS setup by AOSS method, the existing AOSS connection between the target AP and computers has been disconnected. Refer to the following procedure to set up the connection again.

Windows 7/Vista (Client Manager V)

If you are using Windows 7/Vista, use the included Client Manager V software to connect wirelessly with AOSS/WPS.

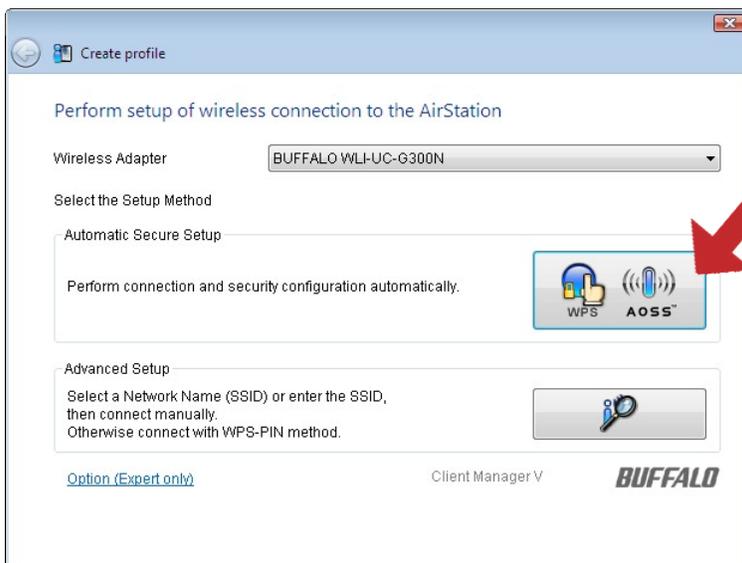
- 1 Click the icon  in the system tray, or navigate through "Start" menu > All Programs > BUFFALO > AirStation Utility > ClientManagerV.

- 2 When the screen at left is displayed, click "Create Profile".



- 3 When the message "A Program needs your permission to continue" appears, click "Continue".

- 4 When the screen shown at left is displayed, click the "WPS AOSS" button.

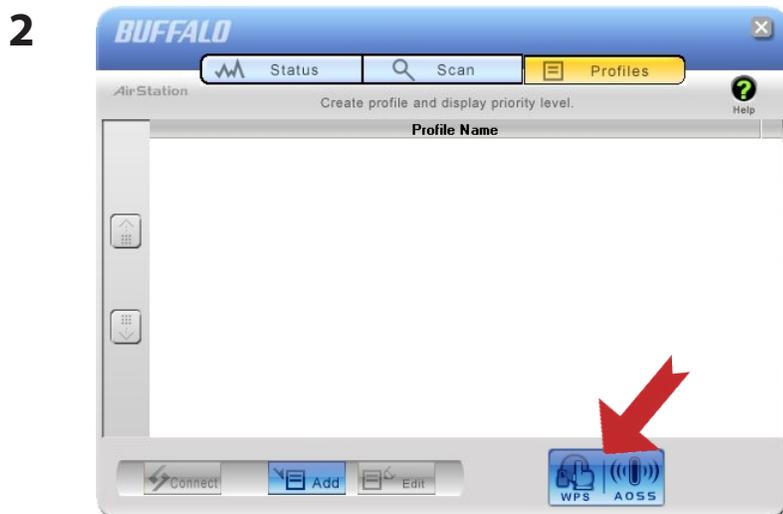


Follow the instructions displayed on the screen. After you configure the settings and the Security LED (page 8) stops flashing and is lit, the AOSS/WPS connection is completed.

Windows XP (Client Manager 3)

If you are using Windows XP, use the included Client Manager 3 software to connect wirelessly with AOSS/WPS.

1 Right click on the icon  displayed in the system tray, and select "Profile".



When the screen shown at left is displayed, click "WPS AOSS" button.

Follow the instructions displayed on the screen. After you configure the settings and the SECURITY LED (on page 8) stops flashing and is lit, the AOSS/WPS connection is completed.

Other Devices (e.g. Game Console)

If you are using a game machine which supports AOSS or WPS, refer to that device's manual to initiate AOSS/WPS. When instructed, hold down the AOSS button (page 10) on the AirStation for 1 second.

After you configure the settings and the SECURITY LED (on page 8) stops blinking and is lit, the AOSS/WPS connection is completed.

Manual Setup

You can also connect to the AirStation without installing Client Manager V or Client Manager 3 by using Windows standard utility.

The procedure varies depending on which version of Windows you are using.

Windows 7 (WLAN AutoConfig)

Use Windows standard utility (WLAN AutoConfig) to connect to the AirStation.

- 1 Click on the network icon  in the system tray.

- 2  Select the target AirStation's name and click "Connect". For future use, checking "Connect automatically" is recommended.

3



If this screen is displayed, enter the encryption key (such as WEP key or pre-shared key) and click "OK".

Windows Vista (WLAN AutoConfig)

Use Windows standard utility (WLAN AutoConfig) to connect to the following AirStation.

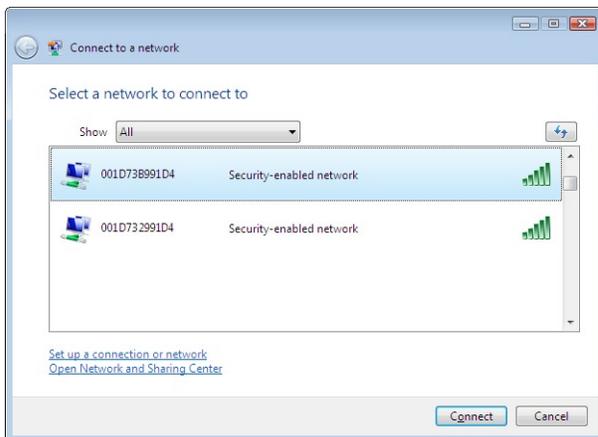
1

Right click on the wireless network icon  in the system tray.

2

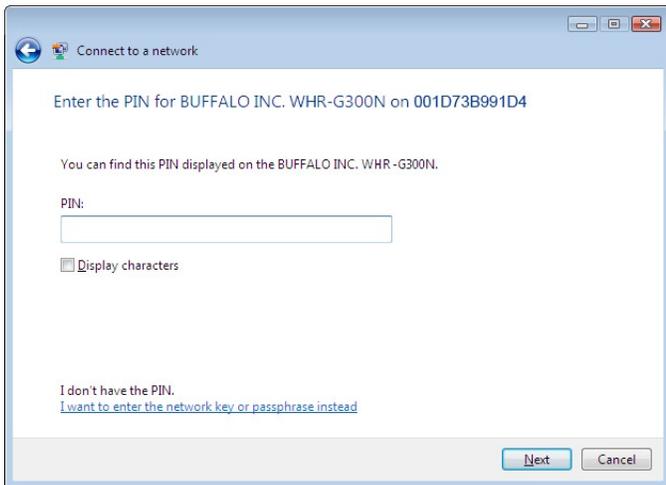
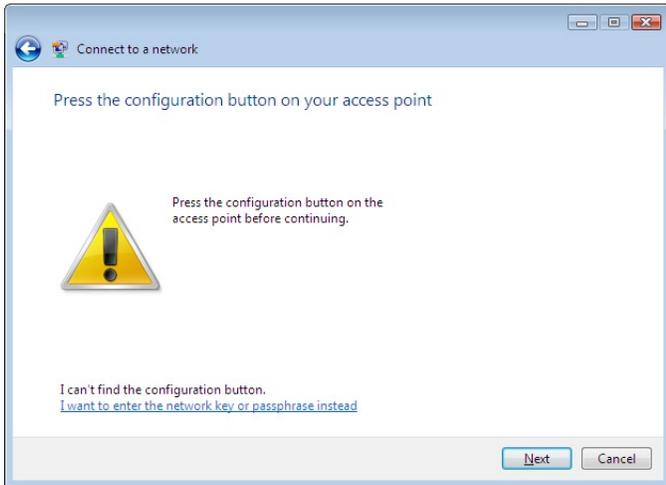
Click "Connect to a network".

3

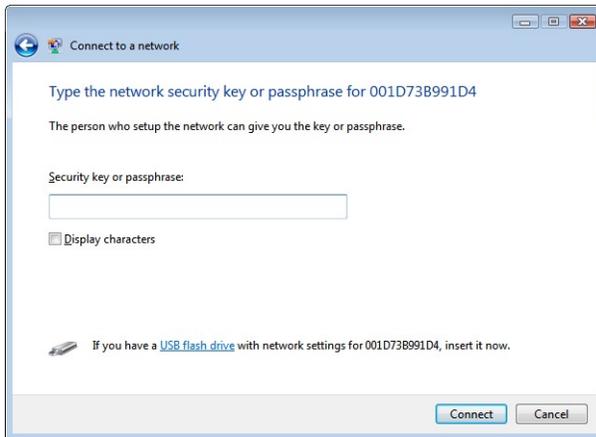


When the screen at left is displayed, select the network to connect to and click "Connect".

If the screen below is displayed, click *"I want to enter the network key or passphrase instead"*.
(If this screen is not displayed, go to step 4)



4



When the screen at left is displayed, enter an encryption key (such as WEP key or pre-shared key) and click “Connect”.

Follow the instructions displayed on the screen to finish configuration.
(If the Set Network Location screen is displayed, select “Home”, “Work”, or “Public location” depending where you’re using the AirStation.)

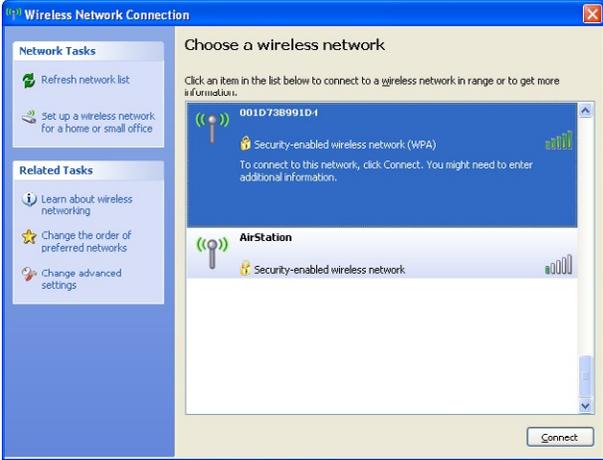
Windows XP (Wireless Zero Configuration)

Windows XP includes a built-in utility to connect to your AirStation.

Note: If Client Manager 3 is installed on your computer, Wireless Zero Configuration is disabled. Uninstall Client Manager 3 to use Wireless Zero Configuration, or just use Client Manager 3 to connect to the AirStation.

1 Right click on the wireless network icon  displayed in the system tray.

2 Click "View Available Wireless Networks".

3  When the screen at left is displayed, select the network to connect to and click "Connect".

4  When the screen at left is displayed, enter the encryption key (such as WEP key or pre-shared key) and click "Connect".

Follow the instructions displayed on the screen to finish configuration.

Chapter 6

Trouble Shooting

Cannot connect to the Internet over wired connection.

- Make sure that your AirStation is plugged in!
- Check that the status LEDs of your AirStation are lit as below:

| | |
|----------|--|
| POWER | Green light is ON |
| WIRELESS | Green light is ON or flashing |
| ROUTER | Green light is ON or OFF (the status varies depending on your environment) |
| DIAG | OFF |
- Make sure that your computer is set to *"obtain an IP address automatically"*. (Refer to page 96)
- Restart your AirStation.

Cannot access the web-based configuration utility.

- Display the configuration screen by following the procedure on page 23.
- Enter the correct user name and password to login to the configuration screen.
If you are using AirStation in factory default settings, enter "root" (in lower case) for the user name and leave the password blank (enter nothing)
- Verify that your web browser is not set to use proxies.
- Make sure that your computer is configured to *"Obtain an IP Address Automatically."* (page 96)
- Restart your AirStation.

Cannot connect to the network wirelessly.

- Configure your wireless device with the same SSID, encryption type, and encryption key as used for your AirStation.

The following are the factory default settings of the AirStation:

SSID - Printed on the label of the AirStation

Encryption Method - No Authenticate

Encryption Key - No Encryption

- Place your AirStation and wireless devices 2 - 10 feet apart.
- Restart your AirStation.

You forgot AirStation's SSID, Encryption Key, or Password.

Hold down the RESET button (page 99) on your AirStation for 5 seconds to initialize its settings. All settings, including your password, SSID, and encryption key will be initialized to their defaults.

The followings are the factory default settings of the AirStation.

SSID - Printed on the label of the AirStation

Encryption Method - No Authenticate

Encryption Key - No Encryption

The link speed is slower than 150 Mbps (Maximum link speed is only 72Mbps).

By default, the AirStation's 150 Mbps mode is not enabled. To enable it, use the following procedure:

1. Open the configuration screen of your AirStation (page 23).
2. Click "*Wireless SSID & Channel (11n 150Mbps Mode)*" in Easy Setup.
3. Change the value in "*150 Mbps Mode*" - "*Band Width*" to 40 MHz and click "*Apply*".

If you still cannot connect at 150 Mbps, check the settings of your wireless client device.

Other Tips

Issue:

I reset my wireless router to factory settings and forgot how to log in.

Answer:

Open your browser and enter 192.168.11.1 as the browser address and hit Enter. You will be prompted to log in. Enter the user name as root and the password box is left empty (no password). Click "OK" to complete the login and the option to reset your password will be available on the first page.

Issue:

How do I forward ports on my wireless router for my gaming console?

Answer:

Log in to the router. From the home page, go to the Internet Game/ Port Mapping section. Enter the port that needs to be forwarded, and the IP address of the gaming console.

Issue:

How do I enable or modify security encryption settings on the wireless router?

Answer:

Log in to the wireless router with your browser. Go to the Wireless Config tab and then select the Basic tab. Buffalo recommends the use of WPA/WPA2 mixed for wireless encryption. The passphrase/ key should be at least 8 characters in length.

Issue:

How do I change my wireless router's broadcasted network name (SSID)?

Answer:

Log in to the wireless router with your browser. Go to the Wireless Config tab and then select the Basic tab if necessary. Find the settings area called SSID. Select the "Use" check box and enter the name you wish to use for your network in the text field provided. Click "Apply" to save the settings. Once the wireless router has rebooted, you will need to manually select the new network name for all wireless devices and enter your encryption key if necessary.

Issue:

What can I do if my wireless connection drops randomly or seems slow?

Answer:

There are many environmental factors that may affect this behavior. First, ensure the issue is not range related by locating the wireless router and the device dropping connection in closer proximity and check whether the connection drops continue.

In some cases, interference from other wireless networks or sources such as 2.4 GHz wireless phones may impact performance. To work around this scenario, change the wireless channel used by your wireless router.

Log in to the wireless router with your browser. Click on the Wireless Config tab and then the Basic tab. The Wireless Channel setting can be selected from channels 1 to 11. If an Auto-Channel option is available, attempt to use this option to remedy the problem. If Auto-Channel is unavailable, manually select an alternate channel and click "Apply".

Issue:

Though I am able to successfully make a connection with my wireless router, I am unable to access the Internet with my web browser.

Answer:

First, power off the Cable or DSL modem, the wireless router, and your computer. Move the router's mode switch to the *on* position. Verify that the modem is connected to the wireless router with an Ethernet cable to the WAN port. Power on the modem and wait one minute. Power on the wireless router and wait another minute. Power on the computer. Open a browser on the computer and navigate to a familiar website to verify whether the Internet connection is functioning normally.

If after these steps, an Internet connection is still unavailable, power off the Cable or DSL modem and computer again and directly connect your computer to the Cable or DSL modem with a cable between the computer and the port on the modem. Power on the modem and wait one minute. Power on the computer and again check for an Internet connection.

If an Internet connection IS NOT available with a direct connection to the computer, please call the Internet Service Provider who installed the modem.

If an Internet connection IS available with a direct connection to the computer, please call our customer support.

Issue:

Where can I download the latest drivers, firmware and instructions for my Buffalo wireless products?

Answer:

The latest drivers and firmware are available online at
www.buffalotech.com

Appendix A

Specifications

| Wireless LAN Interface | |
|-------------------------------|---|
| Standard Compliance | IEEE802.11b / IEEE802.11g / IEEE802.11n technology |
| Transmission Method | Direct Sequence Spread Spectrum (DSSS), OFDM, SISO |
| Frequency Range | 2,412 - 2,462MHz (Channels 1 - 11) |
| Transmission Rate | 802.11b/g 54, 48, 36, 24, 18, 12, 9, 6, 11, 5.5, 2, 1Mbps 802.11n 20MHz Channel (LongGI)65,58.5,52,39,26,19.5,13,6.5(1stream) (ShortGI)72.2,65.57.8,43.3,28.9,21.7,14.4,7.2(1stream) 40MHz Channel (LongGI)135,121.5,108,61,54,40.5,27,13.5(1stream) (ShortGI)150,135,120,90,60,45,30,15(1stream) |
| Access Mode | Infrastructure Mode |
| Security | AOSS, WPA2-PSK (TKIP/AES), WPA/WPA2 mixed PSK, WPA-PSK (TKIP/AES), 128/64bit WEP, Mac Address Filter |
| Wired LAN Interface | |
| Standard Compliance | IEEE802.3u (100BASE-TX), IEEE802.3 (10BASE-T) |
| Transmission Rate | 10 / 100Mbps |
| Transmission Encoding | 100BASE-TX 4B5B/MLT-3, 10BASE-T Manchester Coding |
| Access Method | CSMA/CD |
| Speed and Flow Control | 10/100, Auto Sensing, Auto MDIX |
| Number of LAN Ports | 4 |
| LAN Port Connector | RJ-45 |
| Other | |
| Power Supply | External AC 100-240V Universal, 50/60Hz |
| Power Consumption | Approx. 5.8W (Max) |
| Dimensions | 110mm x 103mm x 23mm (4.6 x 4.1 x 0.9 in.) |
| Weight | 144g (4.5oz.) *stand not included |
| Operating Environment | 0-40°C (32-104°F) , 20-80% (non-condensing) |

Appendix B

Default Configuration Settings

| Feature | Parameter | Default Setting |
|--------------------------------|--|---|
| Internet (Router Mode only) | Method of Acquiring IP Address | Perform Easy Setup (Internet Connection Wizard) |
| | Default Gateway | none |
| | Address of DNS Name Server | none |
| | Internet MAC Address | Use Default MAC Address |
| | MTU Size of Internet Port | 1500 Bytes |
| PPPoE (Router Mode only) | Name of Connection | none |
| | User Name | none |
| | Password | none |
| | Service Name | none |
| | Connection Type | Connection on Demand |
| | Automatic disconnection | (Disconnect Condition) When both incoming and outgoing traffic stops (Disconnect Time) 5 Minutes |
| | Authorization | Automatic Authorization |
| | MTU Size | 1454 Bytes |
| | MRU size | 1454 Bytes |
| | Keep Alive | Enable |
| DDNS (Router Mode only) | Dynamic DNS Service | Disable |
| | Current Dynamic DNS Information | none |
| LAN | LAN Side IP Address | Router Mode: 192.168.11.1 (255.255.255.0) Bridge Mode 192.168.11.100 (255.255.255.0) |
| | DHCP Server Function (Router Mode only) | Enable |
| | DHCP IP Address Pool (Router Mode only) | 192.168.11.2 for up to 64 Addresses |
| | Lease Period (Router Mode only) | 48 hours |

| Feature | Parameter | Default Setting |
|----------------------------------|--|---|
| | Default Gateway (Router Mode only) | AirStation's IP Address |
| | DNS Servers (Router Mode only) | AirStation's IP Address |
| | WINZ Server (Router Mode only) | Assigned IP address |
| | Domain Name (Router Mode only) | Assigned Domain Name |
| | Default Gateway (Bridge Mode only) | none |
| | DNS Server Address (Bridge Mode only) | none |
| DHCP Lease (Router Mode only) | Current DHCP Client Information | none |
| NAT (Router Mode only) | Address Translation | Enable |
| | Log Output of Deleted Packets | Disable |
| Route | Routing Information | none |
| WPS | WPS | Enable |
| | External Registrar | Enable |
| | AirStation PIN | An 8-digit random value (Printed on the label of the AirStation) |
| | WPS Security Information | WPS status: unconfigured |
| AOSS | Encryption level expansion function | Enable |
| | Dedicated WEP SSID isolation | Disable |
| | AOSS Button on the AirStation Unit | Enable |

| Feature | Parameter | Default Setting | | |
|------------|---|---|--------|---------|
| Basic | Wireless Radio | Enable | | |
| | Wireless Channel | Auto Channel | | |
| | 150Mbps Mode | Band Width: 20MHz Extension Channel: - | | |
| | Broadcast SSID | Allow | | |
| | Separate feature | SSID1: used SSID2: not used | | |
| | SSID | SSID1: Configure AirStation's MAC address SSID2: Configure AirStation's MAC address + "-1" SSID3: not used SSID4: not used | | |
| | Authorization | No Authorization | | |
| | Encryption | No encryption | | |
| | Rekey interval | 60 minutes | | |
| Advanced | Multicast Rate | 1Mbps | | |
| | DTIM Period | 1 | | |
| | Privacy Separator | Disable | | |
| WMM | WMM | Enable | | |
| | WMM-EDCA Parameters (Priority AC_BK (Low)) | | For AP | For STA |
| | | CWmin | 15 | 15 |
| | | CWmax | 1023 | 1023 |
| | | AIFSN | 7 | 7 |
| | | TXOP Limit | 0 | 0 |
| | WMM-EDCA Parameters (Priority AC_BE (Normal)) | | For AP | For STA |
| | | CWmin | 15 | 15 |
| | | CWmax | 63 | 1023 |
| | | AIFSN | 3 | 3 |
| TXOP Limit | | 0 | 0 | |

| Feature | Parameter | Default Setting | | |
|---|--|--|-----------------------------|---------|
| | WMM-EDCA Parameters (Priority AC_VI (High)) | | For AP | For STA |
| | | CWmin | 7 | 7 |
| | | CWmax | 15 | 15 |
| | | AIFSN | 1 | 2 |
| | | TXOP Limit | 94 | 94 |
| | WMM-EDCA Parameters (Priority AC_VO (Highest)) | | For AP | For STA |
| | | CWmin | 3 | 3 |
| | | CWmax | 7 | 7 |
| | | AIFSN | 1 | 2 |
| | | TXOP Limit | 47 | 47 |
| MAC Filter | Enforce MAC Filter | Disable | | |
| | Registration List | none | | |
| WDS | WDS | not used | | |
| Firewall (Router Mode only) | Log Output | Disable | | |
| | Basic Rules | Prohibit NBT and Microsoft-DS Routing Reject IDENT Requests Block Ping from Internet | Disable Enable Enable | |
| IP Filter (Router Mode only) | Log Output | Disable | | |
| | IP Filter Information | none | | |
| VPN Pass Through (Router Mode only) | IPv6 Pass Through | Disable | | |
| | PPPoE Pass Through | Disable | | |
| | PPTP Pass Through | Disable | | |
| Port Forwarding (Router Mode only) | Port Forwarding Registration Information | none | | |
| DMZ (Router Mode only) | IP Address of DMZ | none | | |
| UPnP (Router Mode only) | UPnP | Enable | | |
| QoS (Router Mode only) | QoS for transmission to the Internet | Disable | | |
| Name | AirStation Name | AP + AirStation's MAC Address | | |
| Password | Administrator Name | root (fixed) | | |
| | Administrator Password | none | | |

| Feature | Parameter | Default Setting |
|-----------|-------------------|---|
| Time/Date | Local Date | 2009 Year 1 Month 1 Day |
| | Local Time | 0 Hour 0 Minute 0 Seconds |
| | Time Zone | (GMT-00:00) Greenwich Mean Time, London |
| NTP | NTP Functionality | Disable |
| | NTP Server | none |
| | Update Interval | 24 hours |
| Access | Log Output | Disable |
| | Limitation Item | Prohibit configuration from wireless LAN Disable Prohibit configuration from wired LAN Disable Permit configuration from wired Internet Disable |
| Log | Log Transfer | Disable |
| | Syslog Server | none |
| | Transfer Logs | Router Mode: Address Translation, IP Filter, Firewall, PPPoE Client, Dynamic DNS, DHCP Client, DHCP Server, AOSS, Wireless Client, Authentication, Setting Changes, System Boot, NTP Client, and Wired Link Bridge Mode: IP Filter, DHCP Client, AOSS, Wireless Client, Authentication, Setting Changes, System Boot, NTP Client, and Wired Link |

Appendix C

TCP/IP Settings in Windows

Windows 7

To perform the settings for Windows 7, follow the procedure below.

- 1** Click *Start > Control Panel > Network and Internet*.
- 2** Double click *"Network and Sharing Center"*.
- 3** Click *"Change Adapter Settings"* on the left side menu.
- 4** Right click on *"Local Area Connection"*, then click *"Properties"*.
- 5** If the message *"Windows needs your permission to continue"* appears, click *"Continue"*.
- 6** Select *"Internet Protocol Version 4 (TCP/IPv4)"* then click *"Properties"*.
- 7** Select *"Obtain an IP address automatically"* and *"Obtain DNS server address automatically"*, then click *"OK"* in normal situations.

If you fix the IP address, enter the value as necessary.

ex) If the router's IP address is 192.168.11.1,

| | |
|----------------------|---------------|
| IP address | 192.168.11.80 |
| Subnet mask | 255.255.255.0 |
| Default gateway | blank |
| Preferred DNS server | blank |
| Alternate DNS server | blank |

- 8** Click *"OK"*.

Windows Vista

To perform the settings for Windows Vista, follow the procedure below.

- 1** Click *Start > Control Panel*.
- 2** Double click *"Network and Sharing Center"*.
- 3** Click *"Manage network connections"* on the left side menu.
- 4** Right click on *"Local Area Connection"*, then click *"Properties"*.
- 5** When the message *"Windows needs your permission to continue"* appears, click *"Continue"*.
- 6** Select *"Internet Protocol Version 4 (TCP/IPv4)"* then click *"Properties"*.
- 7** Select *"Obtain an IP address automatically"* and *"Obtain DNS server address automatically"*, then click *"OK"* in normal situations.

If you fix the IP address, enter the value as necessary.

ex) If the router's IP address is 192.168.11.1,

| | |
|----------------------|---------------|
| IP address | 192.168.11.80 |
| Subnet mask | 255.255.255.0 |
| Default gateway | blank |
| Preferred DNS server | blank |
| Alternate DNS server | blank |

- 8** Click *"Close"*.

Windows XP

To perform the settings for Windows XP, follow the procedure below.

- 1** Click *Start > Settings > Control Panel*.
- 2** Double click *"Network"*.
- 3** Right click on *"Local Area Connection"*, then click *"Properties"*.
- 4** Select *"Internet Protocol (TCP/IP)"*, then click *"Properties"*.
- 5** Select *"Obtain an IP address automatically"* and *"Obtain DNS server address automatically"*, and then click *"OK"* in normal situations.

If you fix the IP address, enter the value as necessary.

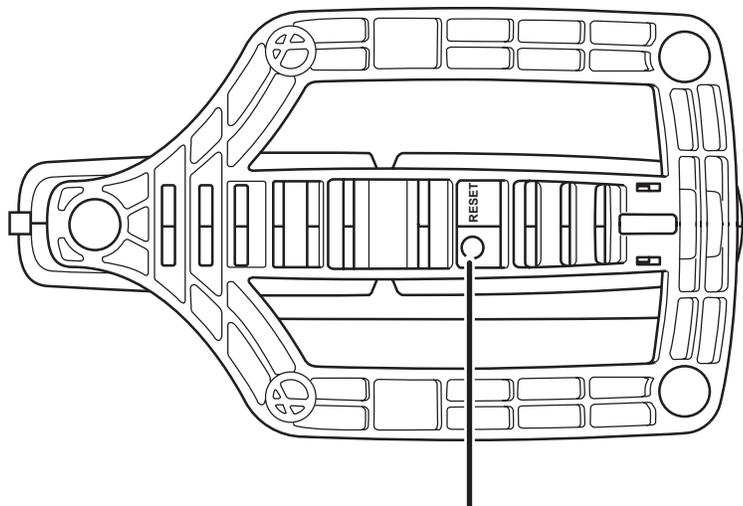
ex) If the router's IP address is 192.168.11.1;

| | |
|----------------------|---------------|
| IP address | 192.168.11.80 |
| Subnet mask | 255.255.255.0 |
| Default gateway | blank |
| Preferred DNS server | blank |
| Alternate DNS server | blank |

- 6** Click *"Close"*.

Appendix D

Restoring the Default Configuration



Hold down this button for 3 seconds. The AirStation will be initialized.

Appendix E

Regulatory Compliance Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against 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 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.

FCC Caution:

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

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.

FCC ID:

WCR-GN: FDI-09102082-0

Important Note - FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for uncontrolled equipment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

European Union Notice:

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

- EN60950-1:
2006 Safety of Information Technology Equipment
- EN 50385: 2002
Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields (110MHz - 40 GHz) - General public
- EN 300 328 V1.7.1 (2006-10)
Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive
- EN 301 489-1 V1.8.1 (2008-04)
Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
- EN 301 489-17 V1.3.2 (2008-04)
Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment

This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.



Česky[Czech]

Buffalo Technology Inc. tímto prohlašuje, že tento AirStation WCR-GN je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.

Dansk[Danish]

Undertegnede Buffalo Technology Inc. erklærer herved, at følgende udstyr AirStation WCR-GN overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.

Deutsch[German]

Hiermit erklärt Buffalo Technology Inc. dass sich das Gerät AirStation WCR-GN in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.

Eesti[Estonian]

Käesolevaga kinnitab Buffalo Technology Inc. seadme AirStation WCR-GN vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

English

Hereby, Buffalo Technology Inc. declares that this AirStation WCR-GN is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Español[Spanish]

Por medio de la presente Buffalo Technology Inc. declara que el AirStation WCR-GN cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Ελληνική[Greek]

ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Buffalo Technology Inc. ΔΗΛΩΝΕΙ ΟΤΙ AirStation WCR-GN ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/EK.

Français[French]

Par la présente Buffalo Technology Inc. déclare que l'appareil AirStation WCR-GN est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

Italiano[Italian]

Con la presente Buffalo Technology Inc. dichiara che questo AirStation WCR-GN è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.

Latviski[Latvian]

Ar šo Buffalo Technology Inc. deklarē, ka AirStation WCR-GN atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

Lietuvių[Lithuanian]

Šiuo Buffalo Technology Inc. deklaruoja, kad šis AirStation WCR-GN atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Nederlands[Dutch]

Hierbij verklaart Buffalo Technology Inc. dat het toestel AirStation WCR-GN in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.

Malti[Maltese]

Hawnhekk, Buffalo Technology Inc. , jiddikjara li dan AirStation WCR-GN jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Direttiva 1999/5/EC.

Magyar[Hungarian]

Alulírott, Buffalo Technology Inc. nyilatkozom, hogy a AirStation WCR-GN megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.

Polski[Polish]

Niniejszym, Buffalo Technology Inc. , deklaruje, że AirStation WCR-GN spełnia wymagania zasadnicze oraz stosowne postanowienia zawarte Dyrektywie 1999/5/EC.

Português[Portuguese]

Buffalo Technology Inc. declara que este AirStation WCR-GN está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Slovensko[Slovenian]

Buffalo Technology Inc. izjavlja, da je ta AirStation WCR-GN v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.

Slovensky[Slovak]

Buffalo Technology Inc. týmto vyhlasuje, že AirStation WCR-GN spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

Suomi[Finnish]

Buffalo Technology Inc. vakuuttaa täten että AirStation WCR-GN tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.

Svensk[Swedish]

Härmed intygar Buffalo Technology Inc. att denna AirStation WCR-GN står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

For Taiwan 警語

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Appendix F

Environmental Information

- The equipment that you have purchased has required the extraction and use of natural resources for its production.
- The equipment may contain hazardous substances that could impact health and the environment.
- In order to avoid the dissemination of those substances in our environment and to diminish the pressure on the natural resources, we encourage you to use the appropriate take-back systems.
- The take-back systems will reuse or recycle most of the materials of your end life equipment in a sound way.
- The crossed-out wheeled bin symbol invites you to use those systems.



- If you need more information on the collection, reuse and recycling systems, please contact your local or regional waste administration.

Appendix G

GPL Information

The source code for Buffalo products that use GPL code is available at <http://opensource.buffalo.jp/> .

Appendix H

Warranty Information

Buffalo Technology (Buffalo Inc.) products come with a two-year limited warranty from the date of purchase. Buffalo Technology (Buffalo Inc.) warrants to the original purchaser the product; good operating condition for the warranty period. This warranty does not include non-Buffalo Technology (Buffalo Inc.) installed components. If the Buffalo product malfunctions during the warranty period, Buffalo Technology/(Buffalo Inc.) will, replace the unit, provided the unit has not been subjected to misuse, abuse, or non-Buffalo Technology/(Buffalo Inc.) authorized alteration, modifications or repair.

All expressed and implied warranties for the Buffalo Technology (Buffalo Inc) product line including, but not limited to, the warranties of merchantability and fitness of a particular purpose are limited in duration to the above period.

Under no circumstances shall Buffalo Technology/(Buffalo Inc.) be liable in any way to the user for damages, including any lost profits, lost savings or other incidental or consequential damages arising out of the use of, or inability to use the Buffalo products.

In no event shall Buffalo Technology/(Buffalo Inc.) liability exceed the price paid for the product from direct, indirect, special, incidental, or consequential damages resulting from the use of the product, its accompanying software, or its documentation. Buffalo Technology (Buffalo Inc.) does not offer refunds for any product.

@ 2003-2009 Buffalo Technology (Buffalo, Inc.)

Appendix I

Contact Information

Asia Pacific

| | |
|-------------------|---|
| Australia | TEL: 1300 761 310 |
| China | TEL: 86-800-820-8262 e-mail: support@buffalo-china.com |
| Hong Kong | TEL: 852-2345-0005 e-mail: support@hornington.com |
| India | TEL: 1-8004256210 e-mail: csbuffalo@accelfrontline.in |
| Indonesia | TEL: 021-6231-2893 |
| Malaysia | TEL: 03-5032-0138 e-mail: buffalo@ecsm.com.my |
| Philippines | TEL: 2-688-3999 e-mail: digisupport@msi-ecs.com.ph |
| Republic of Korea | TEL: 02-2057-2095 e-mail: support@buffalotech.co.kr |
| Singapore | TEL: 65-6297-2085 e-mail: buffalo@blumm.com |
| Taiwan | TEL: 0800-660-886 e-mail: support@buffalo-tech.com.tw |
| Thailand | TEL: 02-716-6669 |
| Other Areas | Please contact the shop or distributor where you purchased the unit, referring to the attached warranty card issued by the distributor. |