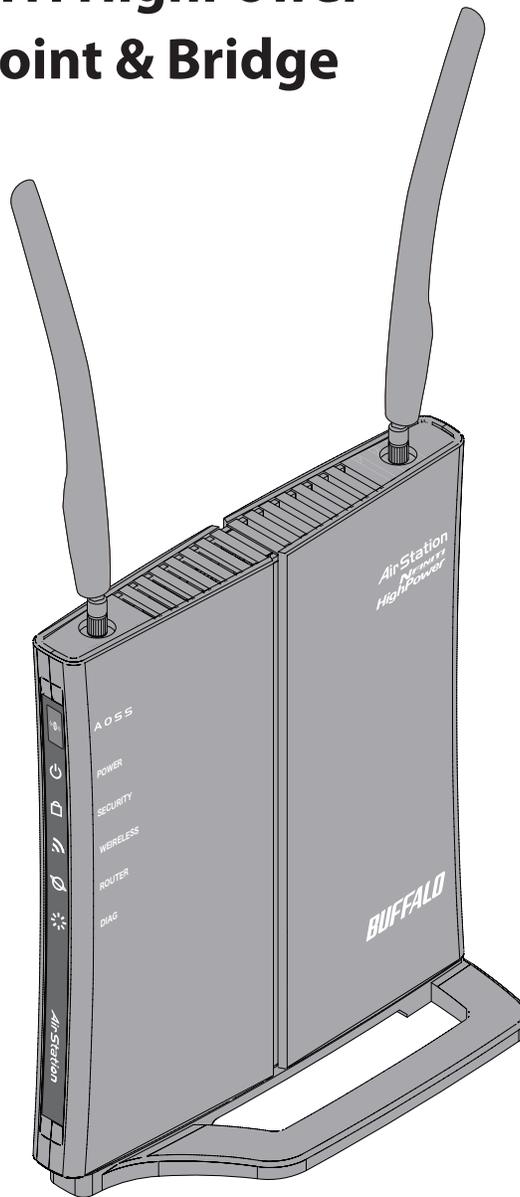


User Manual

WHR-HP-G300N

AirStation NFINITI HighPower Router, AccessPoint & Bridge



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Chapter 1

Product Overview

Features

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

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

Dual speed mode

Dual speed mode makes wireless transmission faster by using 2 channels, allowing 300 Mbps 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
- Setting screen with password
- Wireless transmission output restriction
- Firewall feature with easy rules

Automatic Channel Selection

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

Roaming

You can use multiple AirStations to cover a large area. Wireless clients can automatically switch AirStations for the best signal.

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.

Auto Mode (Router/Bridge Automatic Recognition)

Auto mode detects whether your network has a router or not and automatically switches to the appropriate router or bridge mode. You can also manually switch between modes. (See page 10).

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 Vista or XP to run. Client Manager software is included for Windows Vista and XP/2000. The use of other operating systems may require that the AirStation be manually configured from a browser window.

300 Mbps High Speed Mode

300 Mbps is the link speed 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.

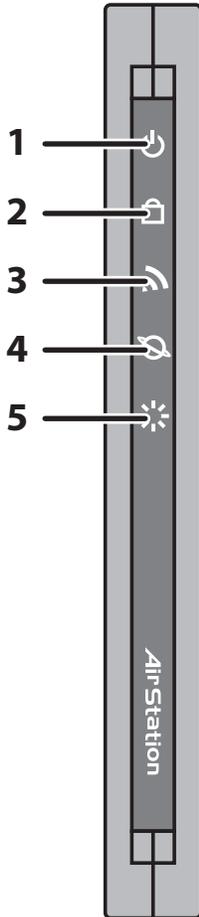
Package Contents

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

- WHR-HP-G300N..... 1
- AC adapter..... 1
- Stand for vertical/wall-mounting..... 1
- Screws for wall-mounting..... 2
- LAN cable..... 1
- Air Navigator CD..... 1
- Quick Setup Guide..... 1

Hardware Overview

Front Panel LED's



1 POWER LED (Green)

- On: The AC adapter is connected
- Off: The AC adapter is not connected
- Blinking: An Ethernet connection is transmitting

2 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. You can verify that the encryption key has been set in the screen on page 37.

3 WIRELESS LED (Green)

- Indicates wireless LAN status.
- On: Wireless LAN is connected
- Blinking: Wireless LAN is transmitting

4 ROUTER LED (Green)

- On: Router functionality is enabled
- Blinking: Router functionality is disabled

5 DIAG LED (Red)

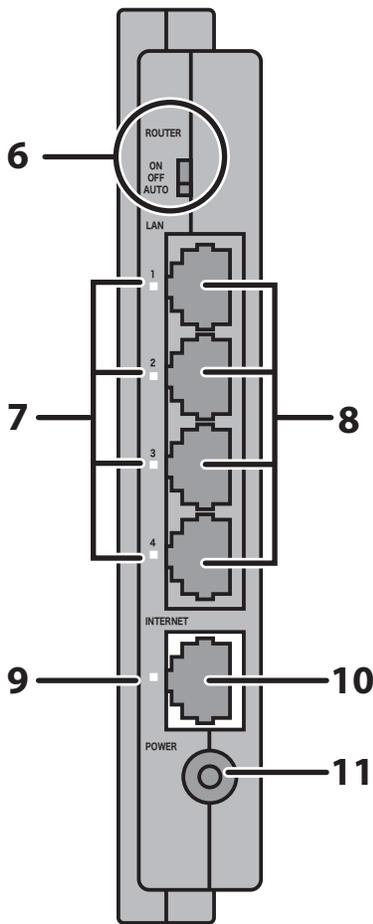
- This indicates the status of this unit depending on the number of blinks per cycle.
- Note: When the unit is first turned on or restarted, the Diag LED will blink for almost a minute during boot. This is normal.

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



6 ROUTER SWITCH

Switches router mode between enabled, disabled, and auto.

On: Router functionality is enabled (router mode).

Off: Router functionality is disabled (bridge/AP mode).

Auto: This switches between modes automatically based on whether or not another router is detected on the Internet port. The default setting for this switch is Auto.

7 POWER LED (Green)

On: An Ethernet device is connected.

Flashing: An Ethernet device is communicating.

8 LAN Port

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

9 INTERNET LED (Green)

On: The Internet port is connected.

Flashing: The Internet port is transmitting data.

10 INTERNET Port

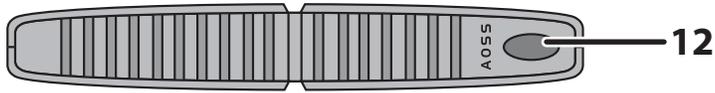
10Mb/s and 100Mb/s connections are supported.

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

11 DC Connector

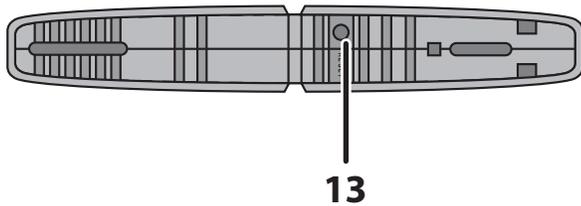
Connect the included AC adapter.

Top



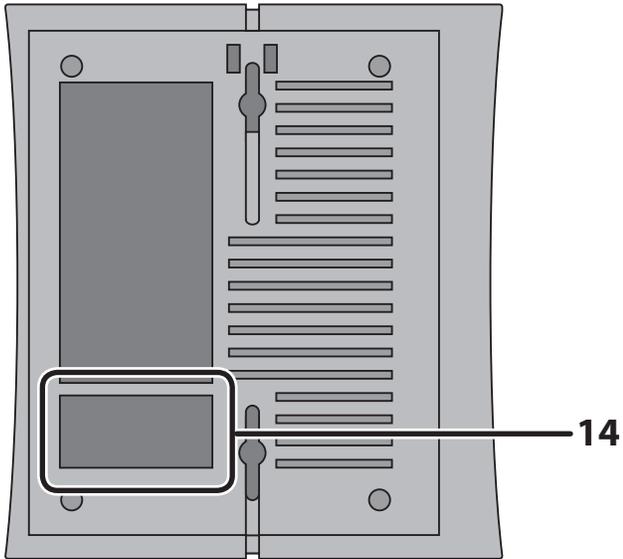
- 12 AOSS Button** Hold down this button until the Security LED flashes (about 1 second), while the unit's power is on, initiates AOSS/WPS mode, allowing the unit to exchange security keys with AOSS or WPS compatible devices.

Bottom



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

Right Side



14 Factory Default Settings

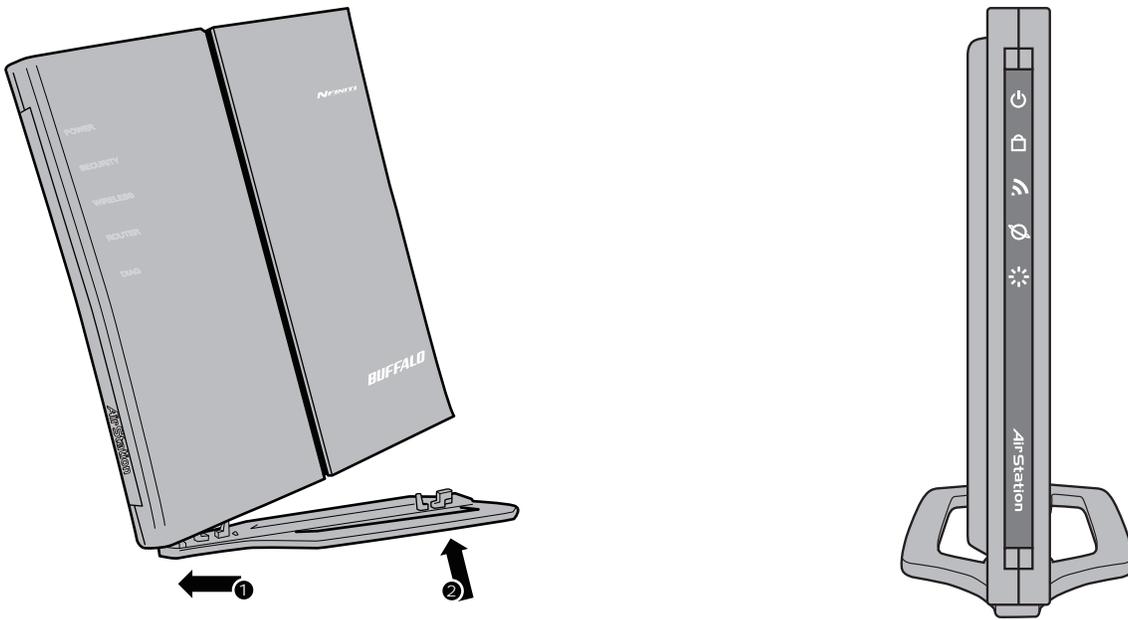
This sticker shows the AirStation's MAC address (SSID), WPS PIN, and default encryption key.

Chapter 2

Placing Your AirStation

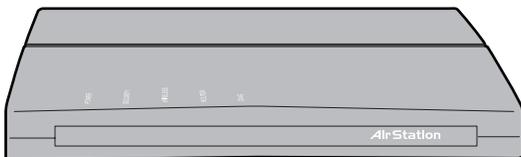
Vertical Placement

To place unit vertically, refer to the following figure to place the vertical/wall-mounting stand.



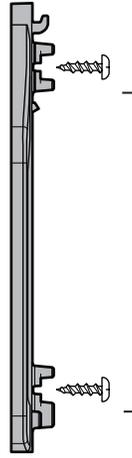
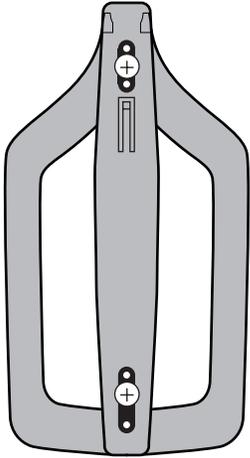
Horizontal Placement

Place the unit horizontally as the figure below.



Wall-Mounting

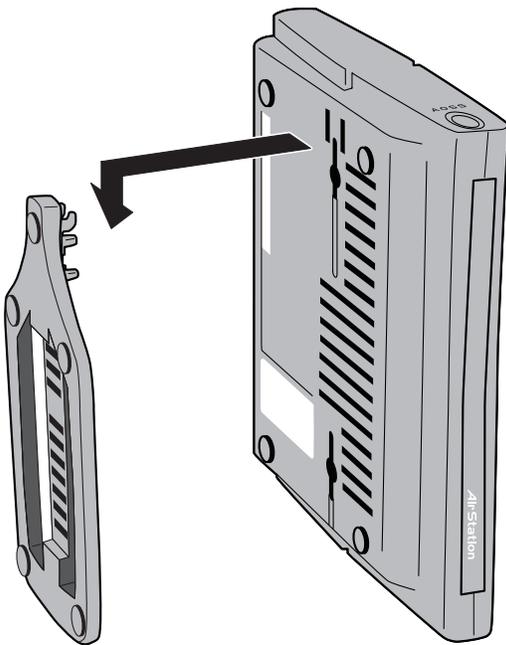
1



8.5 cm
(~3.3 inches)

Fix the vertical/wall-mount stand on the wall using screws.

2



Match the centers of your AirStation and its vertical/wall-mounting stand, and slide downward as shown on the left.

Chapter 3 Installation

CD Setup

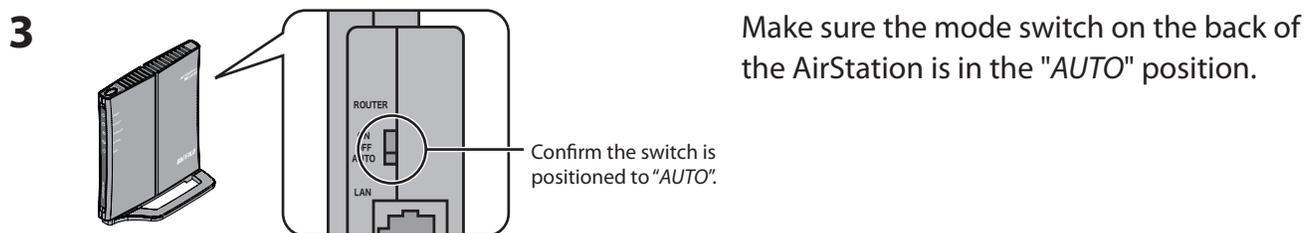
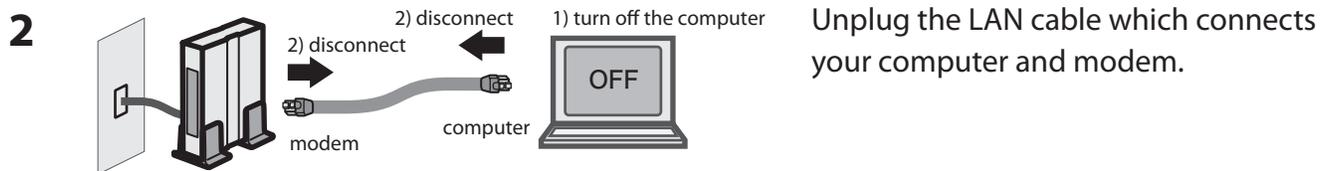
You can set up this unit with the included software CD. Insert the CD into your PC and follow the instructions on the screen.

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

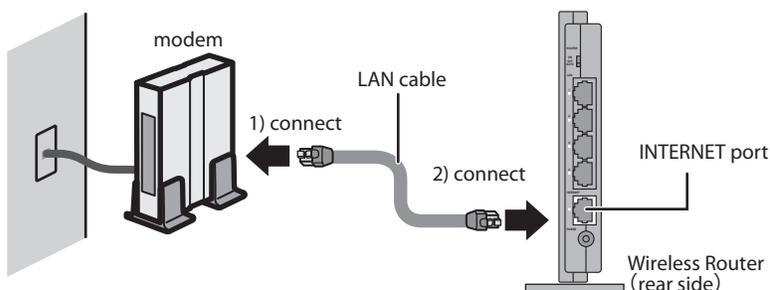
Manual Setup

To configure your AirStation manually, follow the procedure below.

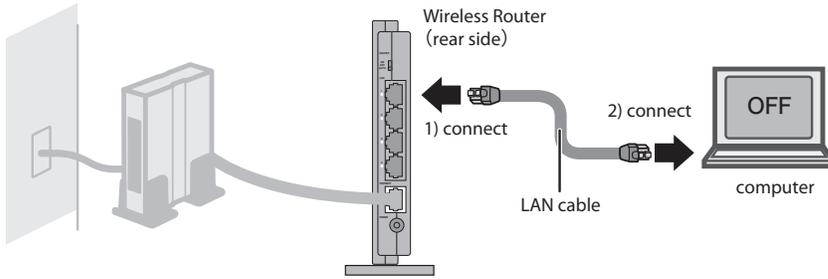
1 Turn off your computer and modem.



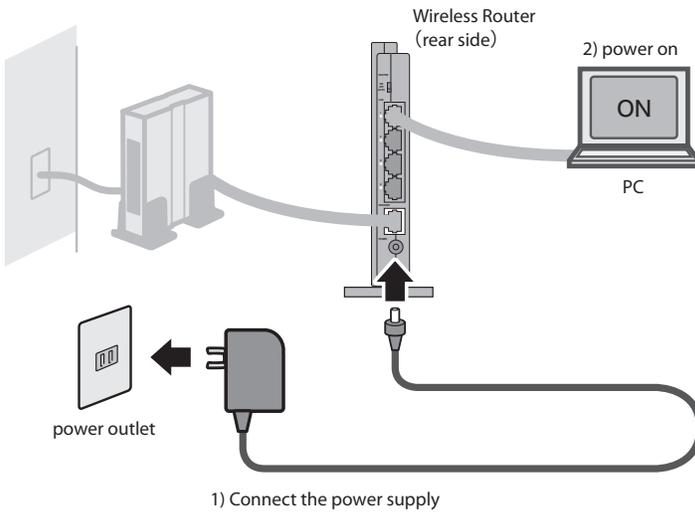
4 Plug one end of the LAN cable into your modem and the other side to the Internet port of the AirStation. Turn on your modem.



5 Connect you computer to one of the AirStation's LAN ports with the LAN cable.



6 Turn on the AirStation, wait one minute, and then turn on your computer.



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

POWER	Green light is on
SECURITY	Amber light is on
WIRELESS	Green light is on or blinking
ROUTER	Green light is on or off depending on your network
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.

8 Launch a web browser. If the "home" setup screen is displayed, setup is complete. If a user name and password screen is 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.

Chapter 4

Configuration

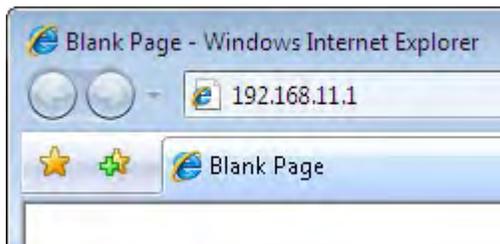
This chapter explains the advanced settings for the AirStation. To change advanced settings, use the AirStation's web-based configuration utility.

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 the position of the mode switch.
In router mode: 192.168.11.1
In bridge mode: 192.168.11.100(*)
Note: If the router switch is set to "AUTO" and the unit is working in bridge mode, an IP address is assigned to this unit from a DHCP server.
 - If you change the IP address of this unit, use the new IP address.

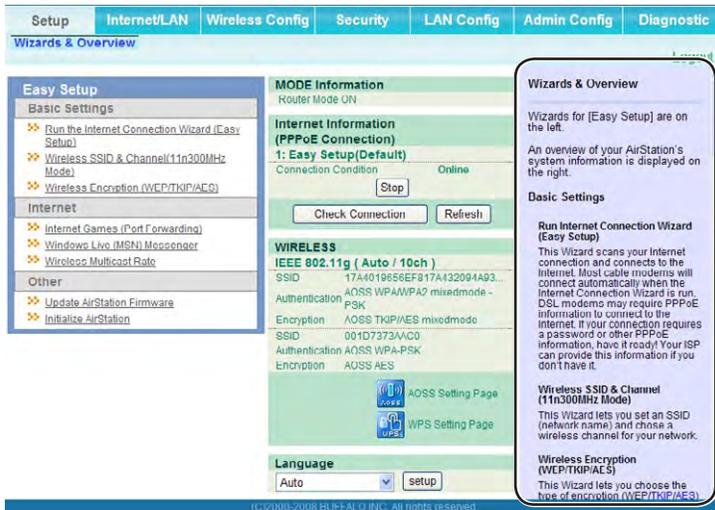
3



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 91) 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 25
PPPoE	PPPoE settings (DSL login)	Page 26
DDNS	DNS settings	Page 29
LAN	LAN side port configuration	Page 31
DHCP Lease	DHCP server and lease settings	Page 33
NAT	Network address translation settings, used to connect LAN side devices to the Internet	Page 34
Route	Configure the IP communication route that the AirStation uses	Page 35
Wireless Config		
WPS	WPS settings and status	Page 36
AOSS	AOSS (AirStation One-touch Secure System) settings and status	Page 37
Basic	Configure basic wireless settings	Page 39
Advanced	Configure advanced wireless settings	Page 43
WMM	Set priorities for Wireless Multimedia Extensions (Wi-Fi Multimedia)	Page 44
MAC Filter	Limit access to specific devices	Page 46
Multicast Control	Configure limits on sending unnecessary multicast packets to the wireless LAN port	Page 47
Security		
Firewall	Protect your computer from outside intruders	Page 48
IP Filter	The screen to edit IP filters which relates to the packets passing through the LAN side and the Internet side	Page 50
VPN Passthrough	Configure IPv6 passthrough, PPPoE passthrough, and PPTP passthrough.	Page 51
LAN Config		
Port Forwarding	Configure port translation and exceptions for games and other programs.	Page 52

DMZ	Configure a DMZ for services with external users, secure from normal LAN operations.	Page 53
UPnP	Configure UPnP (Universal Plug and Play).	Page 54
QoS	Configure priority for packets that require a certain data flow.	Page 55
Admin Config		
Name	Configure the AirStation's NetBIOS name .	Page 56
Password	Configure the AirStation's login password for access to configuration screens.	Page 57
Time/Date	Configure the AirStation's internal clock.	Page 58
NTP	Configure the AirStation to synchronize with an NTP server to automatically set the AirStation's internal clock	Page 59
Access	Configure access restrictions to the AirStation's configuration screens	Page 60
Log	Configure a syslog server to manage the AirStation's logs.	Page 61
Save/Restore	Save or restore the AirStation's configuration from a configuration file.	page 62
Initialize/Restart	Initialize the AirStation or reboot it.	Page 63
Update	Update the AirStation's firmware.	Page 64
Diagnostic		
System Info	View current system information for the AirStation.	Page 65
Logs	Check or configure the AirStation's logs.	Page 67
Packet Info	View all packets transferred by the AirStation.	Page 68
Client Monitor	View all devices currently connected to the AirStation.	Page 69
Ping	Test the AirStation's connection to other devices on the network.	Page 70
Logout		
Click this to log out of the AirStation's configuration screens.		

Configuration Menu (Bridge Mode)

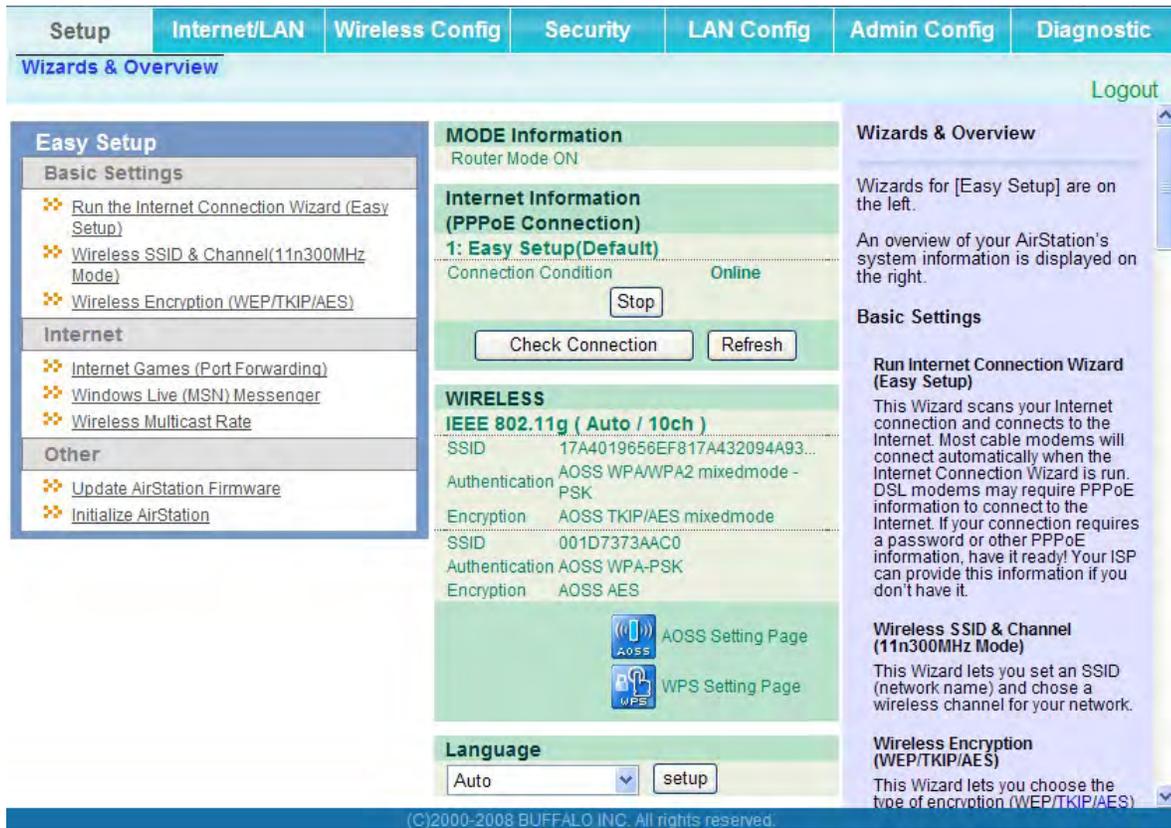
The menu structure during a bridge mode is the following. Please refer to respective page for explanations regarding to each item.

Main screen	Descriptions	Page
LAN Config		
LAN	Configure LAN side ports and devices	Page 31
Route	Configure the IP communication route that the AirStation uses	Page 35
Wireless Config		
WPS	WPS settings and status	Page 36
AOSS	AOSS (AirStation One-touch Secure System) settings and status	Page 37
Basic	Configure basic wireless settings	Page 39
Advanced	Configure advanced wireless settings	Page 43
WMM	Set priorities for Wireless Multimedia Extensions (Wi-Fi Multimedia)	Page 44
MAC Filter	Limit access to specific devices	Page 46
Multicast Control	Configure limits on sending unnecessary multicast packets to the wireless LAN port	Page 47
Admin Config		
Name	Configure the AirStation's NetBIOS name	Page 56
Password	Configure the AirStation's login password for access to configuration screens	Page 57
Time/Date	Configure the AirStation's internal clock.	Page 58
NTP	Configure the AirStation to synchronize with an NTP server to automatically set the AirStation's internal clock	Page 59
Access	Configure access restrictions to the AirStation's configuration screens	Page 60
Log	Configure a syslog server to manage the AirStation's logs.	Page 61
Save/Restore	Save or restore the AirStation's configuration from a configuration file	page 62
Initialize/Restart	Initialize the AirStation or reboot it	Page 63
Update	Update the AirStation's firmware.	Page 64
Diagnostic		
System Info	View current system information for the AirStation.	Page 65
Logs	Check or configure the AirStation's logs.	Page 67

Packet Info	View all packets transferred by the AirStation.	Page 68
Client Monitor	View all devices currently connected to the AirStation.	Page 69
Ping	Test the AirStation's connection to other devices on the network.	Page 70
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.



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

Parameter	Meaning
Admin Config	Click this button to display the configuration screen which is related to the administration of the AirStation.
Diagnostic	Click this button 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.
Internet Information	Displays the current information where the AirStation is connected on the Internet side.
Check Connection	Clicking this button to check if the AirStation is connected to the Internet properly.
Refresh	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.
Logout	Logout from the configuration screen of the AirStation. If the AirStation does not communicate for 5 minutes, it will logout automatically.

Internet/LAN (LAN Config)

Internet (Router Mode only)

The screen to configure a port of the Internet side.

As for the IP address acquisition method, "Perform Easy Setup (Internet Connection Wizard)" is set up.

To set up PPPoE, [click here](#).

Advanced Settings

Default Gateway	<input type="text"/>
Address of DNS Name Server	Primary: <input type="text"/>
	Secondary: <input type="text"/>
Internet MAC Address	<input checked="" type="radio"/> Use Default MAC Address(00:1D:73:73:AA:C0) <input type="radio"/> Use this address <input type="text"/>
Internet Communication Format	SPEED: <input type="text" value="Auto"/>
MTU Size of Internet Port	<input type="text" value="1500"/> Bytes

Internet Ethernet Settings

Configuring your [Internet](#) side port:

Normally, you'll connect the [Internet](#) side port to an external network such as the internet.

Method of Acquiring IP Address

Select one of the following methods to acquire a [Internet port IP Address](#). Please ask your [Provider](#) for any other information about your line format. If you're not sure which method to choose, try selecting Easy Setup. You can confirm status of the current [Internet](#) side [IP Address](#) on the System Information screen.

Perform Easy Setup (Internet Connection Wizard)

The Easy Setup scans your [Internet](#) connection and determines your internet connection type. The correct setup wizard for your internet connection is then activated automatically.

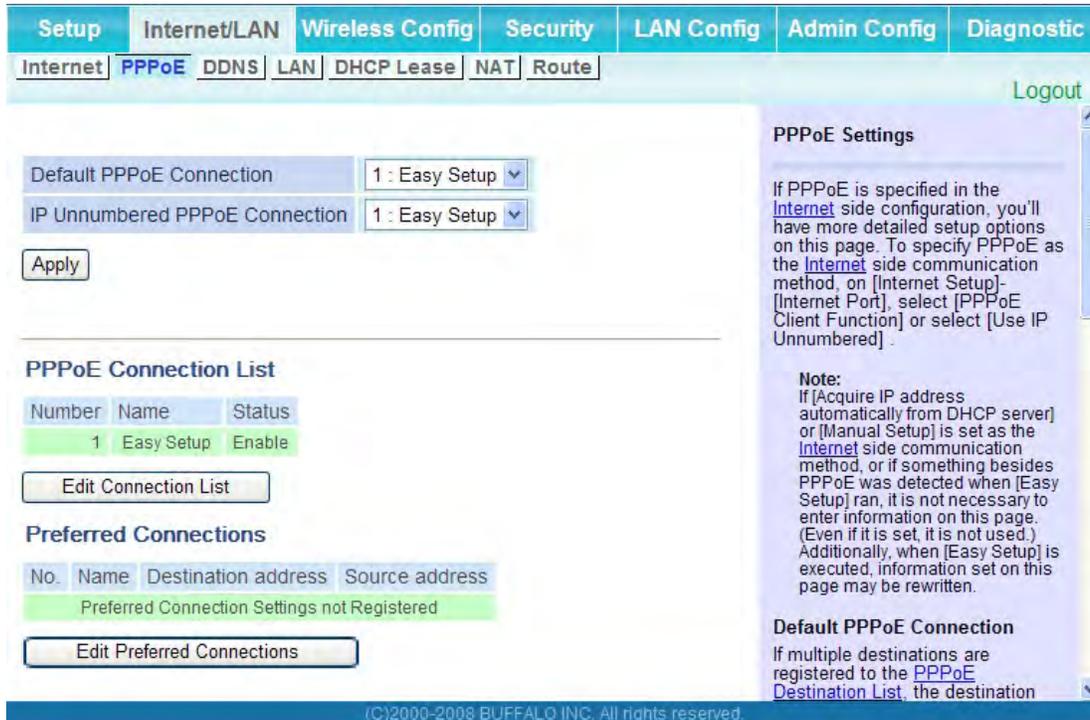
Note:

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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.
Internet Communication Format	Specify a communication method for the Internet port.
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.



Parameter	Meaning
-----------	---------

Default PPPoE Connection	If you have registered multiple connection destinations in PPPoE Connection List, connection destination selected here have priority. You need to configure the route to which PPPoE is connected to if you don't use the default setting.
IP Unnumbered PPPoE Connection	Select the destination from the PPPoE Connection List which is used when specifying "Use IP Unnumbered" in Method of Acquiring IP Address (page 25).
PPPoE Connection List	Edit PPPoE destination. You can register up to 5 sessions.
"Edit Connection List"	Click this button to display the screen to edit the settings of destination.

Parameter	Meaning
PPPoE Connection No.*-Add	<p data-bbox="641 327 1268 359">This is displayed when clicking "<i>Edit Connection List</i>".</p> <p data-bbox="641 390 906 422">Name of Connection</p> <p data-bbox="662 428 1422 491">Enter the name to identify the connected destination. You may enter up to 32 alphanumerical characters and symbols.</p> <p data-bbox="641 522 781 554">User Name</p> <p data-bbox="662 560 1419 665">Set the user name which is specified by your provider, used for a PPPoE certification. You may enter up to 32 alphanumerical characters and symbols.</p> <p data-bbox="641 697 764 728">Password</p> <p data-bbox="662 735 1430 837">Set the password specified by your provider for PPPoE certification. You may enter up to 32 alphanumerical characters and symbols.</p> <p data-bbox="641 869 818 900">Service Name</p> <p data-bbox="662 907 1451 1012">Fill in this field only when your provider specifies a Service Name. Leave blank otherwise. You may enter up to 32 alphanumerical characters and symbols.</p> <p data-bbox="641 1043 857 1075">Connection Type</p> <p data-bbox="662 1081 1463 1113">Specifies the timing for the AirStation to connect to your provider.</p> <p data-bbox="641 1144 964 1176">Automatic disconnection</p> <p data-bbox="662 1182 1451 1276">Set time to disconnect after communication is stopped when the connection method is set to "<i>Connect on Demand</i>" or "<i>Manual</i>". You can enter up to 1440 minutes.</p> <p data-bbox="641 1308 821 1339">Authorization</p> <p data-bbox="662 1346 1289 1377">Configure an authorization method with a provider.</p> <p data-bbox="641 1409 760 1440">MTU Size</p> <p data-bbox="662 1446 1425 1509">Configure MTU value in the range of 578 to 1492, which is used for communication on PPPoE.</p> <p data-bbox="641 1541 760 1572">MRU Size</p> <p data-bbox="662 1579 1451 1642">Configure MRU (Maximum Receive Unit) value in the range of 578 to 1492, which is used for communication on PPPoE.</p>

Parameter	Meaning
PPPoE Connection No. *-Add	<p>Keep Alive</p> <p>When enabling Keep Alive, the AirStation issues LCP echo request in order to maintain the connection with the PPPoE server once a minute. If the server does not respond more than 6 minutes the line is recognized as disconnected and the AirStation will terminate the connection. If a PPPoE connection is often disconnected, the server may not reply to Keep Alive. Set this to "Disable."</p>

Parameter	Meaning
Preferred Connections	Displays information you have set regarding to the connection destination route.
[Edit Preferred Connections]	Click this button to display the screen to edit the settings of connection destination route.
Preferred PPPoE Connection -Add	<p>This is displayed when clicking "<i>Edit Preferred Connections</i>".</p> <p>Name</p> <p>The name of destination to connect by PPPoE if "<i>Destination address</i>" and "<i>Source address</i>" of the communication match. Select the destination registered to PPPoE Connection List.</p> <p>Destination address</p> <p>Destination address to communicate. When communicating to this destination address, the AirStation will communicate with "<i>Name of Connection</i>."</p> <p>Source address</p> <p>Source address to communicate. When communicating from this source address, the AirStation will communicate with "<i>Name of Connection</i>."</p>

DDNS (Router Mode only)

The screen to configure Dynamic DNS settings.

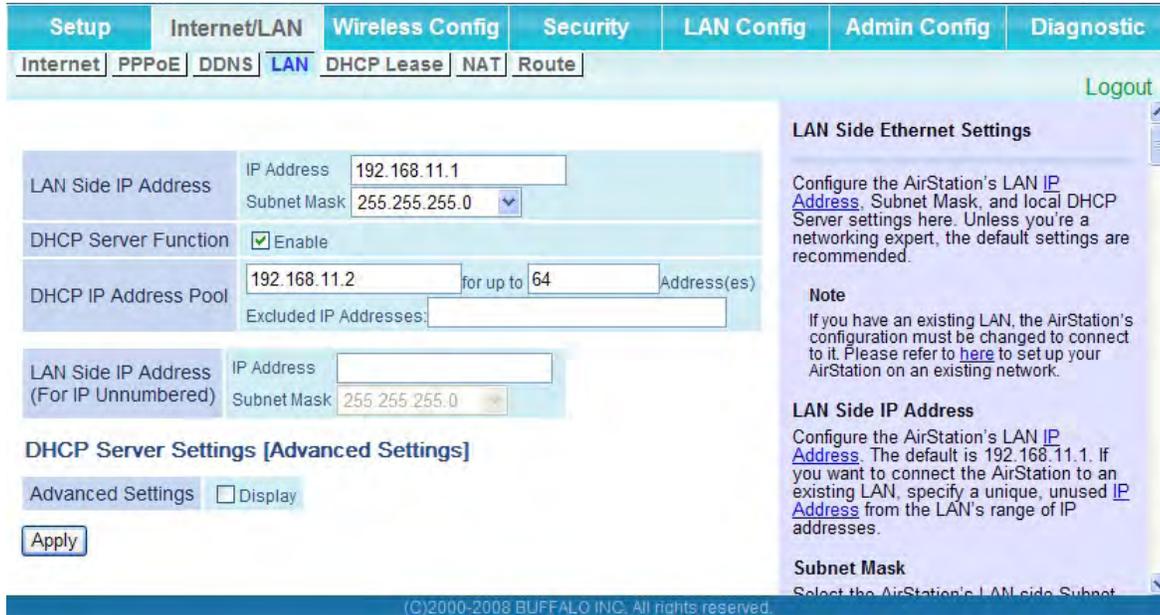


Parameter	Meaning
Dynamic DNS Service	Select a provider (DynDNS or TZO) for Dynamic DNS.
User Name * Only when DynDNS is selected	Enter the user name which is registered to the Dynamic DNS service. You may enter up to 64 alphanumeric characters and symbols.
Password * Only when DynDNS is selected	Enter 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

The screen to configure a port of the LAN side.

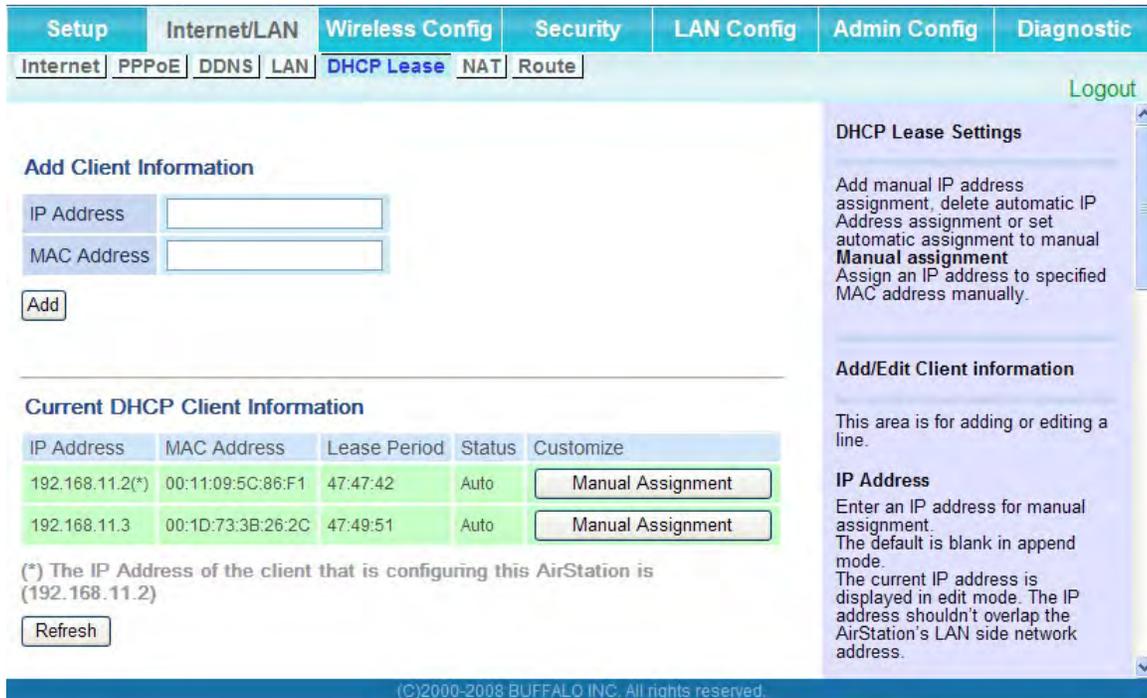


Parameter	Meaning
LAN Side IP Address	Set a LAN side IP address and subnet mask.
DHCP Server Function * Router Mode only	Enable or disable the DHCP server, which assigns IP addresses automatically.
DHCP IP Address Pool * Router Mode only	Configure the range of IP addresses to be assigned by the DHCP server and IP addresses to be excluded from that range. Values from 0-253 may be entered.
LAN Side IP Address (For IP Unnumbered) * Router Mode only	Set a LAN side IP address for IP unnumbered. Note: A PC with a normal LAN side IP address and a PC with an LAN side IP address for IP Unnumbered cannot communicate each other.
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.

Parameter	Meaning
Default Gateway * Router Mode only	Set the default gateway IP address for the DHCP server to issue to clients.
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)

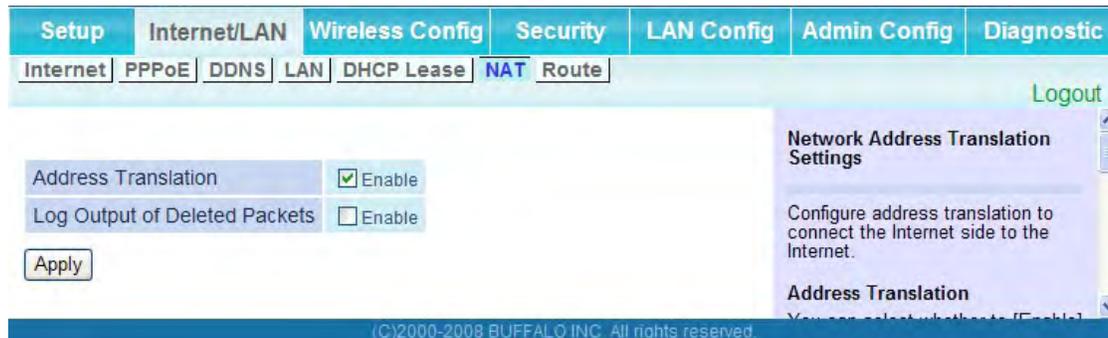
The screen to configure DHCP lease.



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)

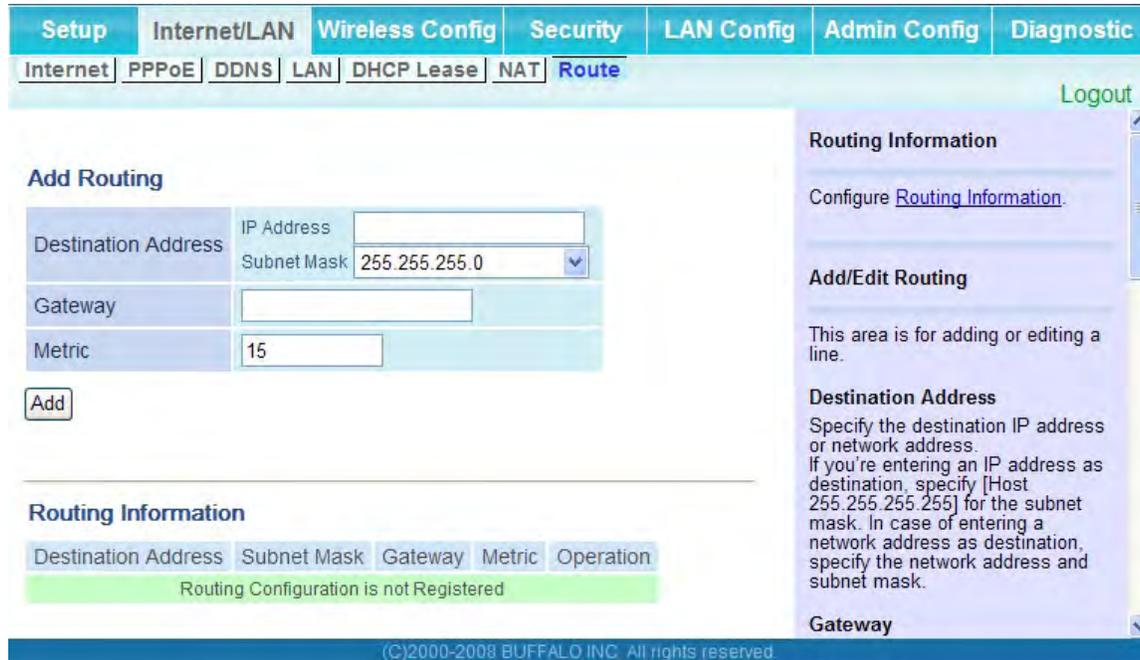
The screen to configure settings relating to the network address translation function which is used to connect the LAN side to the Internet.



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.

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 "configured" if all available wireless bands are configured. Displays "unconfigured" if at least one wireless band is unconfigured.

AOSS

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

The screenshot shows the Buffalo router's web interface with the following sections:

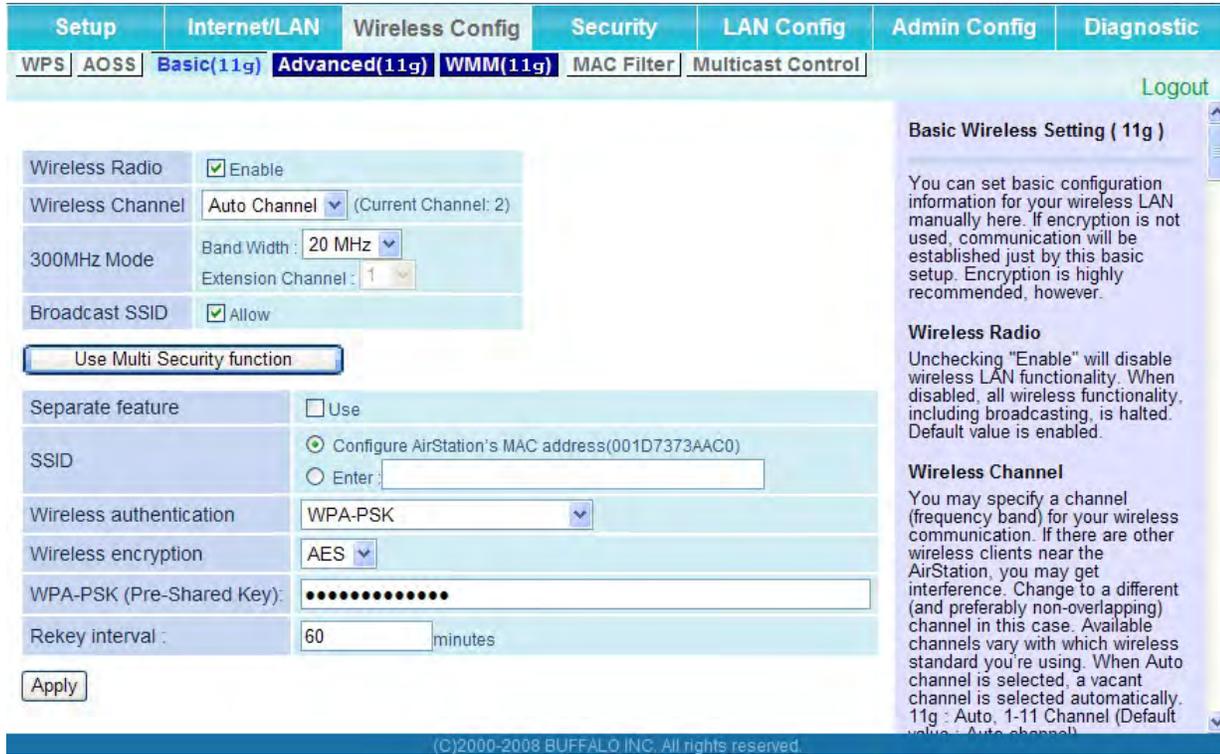
- Navigation Tabs:** Setup, Internet/LAN, Wireless Config, Security, LAN Config, Admin Config, Diagnostic. Sub-tabs under Security include WPS, AOSS, Basic(11g), Advanced(11g), WMM(11g), MAC Filter, and Multicast Control.
- AOSS Settings - Edit AOSS Client Information:**
 - Encryption Type of Exclusive SSID for WEP: Stop
 - Advanced Encryption Level feature: Enable
 - Exclusive SSID for WEP: Disable
 - AOSS Button on the AirStation Unit: Enable
 - Apply button
- AOSS Client Information Table:**

Client Information	MAC Address	Encryption Type	Wireless	Connection Setting
WLP-UC-AG300	00:1D:73:3B:26:2C	WEP64/WEP128 WPA-PSK-TKIP/WPA-PSK-AES	802.11g	Allow
- AOSS Ethernet Converter Information:** Client Information, MAC Address, Encryption Type
- Current Security Information 802.11g:**
 - Encryption Level: WPA-PSK-AES (Inuse)
 - SSID: 001D7373AAC0
 - Encryption Key: 27532n4379w35
 - Encryption Level: WPAWPA2-PSK-mixed (Inuse)
 - SSID: 17A4019656EF817A432094A9323A031F
 - Encryption Key: c1545b589b6d5e267d64ec773b399c66ae4e324432a7e12f7d137d14deff090
 - Encryption Level: WEP128
 - SSID: 19010801080F19D30988D1507DD761F
- Right Panel (AOSS (AirStation One-Touch Secure System)):**
 - AOSS is Buffalo's unique technology for quickly forming a secure wireless connection. You can see AOSS's configuration and status from this screen.
 - [Start AOSS] button:** Click this button to start AOSS. The AOSS button on top of the router works the same as this button. Refer to [How to use AOSS](#) for more details.
 - [Disable AOSS] button:** This button appears when AOSS is enabled. Click this button to disable AOSS. Connections to wireless clients will be terminated, AOSS Information removed, and Encryption Type reset to its default value, AES. Current Encryption Information will also be removed. Wireless Setting and Wireless Security are enabled in Advanced Settings when AOSS is disabled.
 - How to use AOSS:**
 - (1)First: Power on or reboot the AirStation and a wireless client that supports AOSS.
 - (2)Press AOSS buttons: After rebooting, press both products' AOSS buttons, the router's first, then the client's. The AirStation and the wireless client will exchange security information to set up the most secure encryption type automatically and are ready to communicate.
 - Note:**
 - Once the AOSS button is pressed, other operations can't be started until AOSS is finished. If the AirStation can't find a wireless client after three minutes, the AirStation's status returns to its previous state.
 - Up to 24 wireless clients may

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.
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.
Advanced Encryption Level feature	Allow AOSS to make connections encrypted with WPA/WPA2-PSK-mixed mode.
Exclusive SSID for WEP	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.
AOSS Client Information*	Displays AOSS clients connected to the AirStation and information of the devices which are wirelessly communicated.
AOSS Ethernet Converter Information*	Displays information about ethernet converters connected to the AirStation via AOSS.
* Only displayed if there are AOSS Connections	
Current Security Information	Displays an encryption level, SSID, an encryption key configured by AOSS.
* AOSS Connection only	

Basic

The screen to configure a basic wireless settings.



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 Auto Channel selected, the AirStation will automatically use the best available channel.
300Mbps Mode	300 Mbps mode uses twice the normal frequency range, 40 MHz instead of 20 MHz. In uncongested areas this can increase performance. To use 300 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.

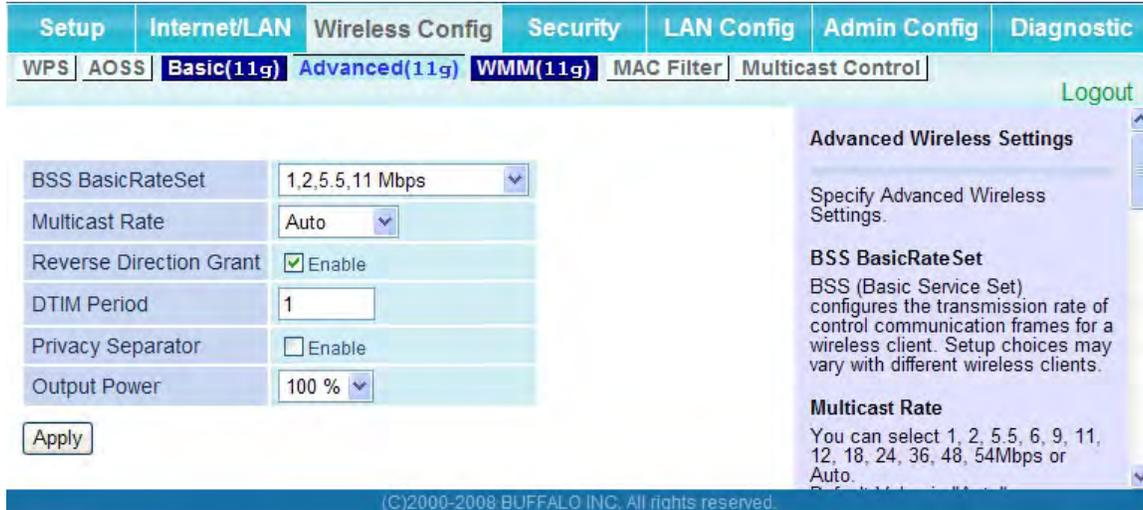
Parameter	Meaning
Broadcast SSID	If " <i>Allow</i> " is checked, then the AirStation will respond to SSID searches from wireless devices by broadcasting its SSID. If " <i>Allow</i> " is unchecked, then the AirStation ignore SSID searches from wireless devices.
[Use Multi Security function] [Do not use Multi Security function]	Clicking " <i>Use Multi Security function</i> " will enable the Multi Security function, allowing the use of multiple SSIDs, each with different wireless security settings. Clicking " <i>Do not use Multi Security function</i> " will disable the Multi Security function. The AirStation will then allow one SSID and one type of wireless security. Note: When using Multi Security, you need to enable at least one of the following SSID1, SSID2, or SSID3.
SSID1	Multi Security SSID1 can use WPA-PSK-TKIP or WPA/WPA2-Mixed for wireless security.
SSID2	Multi Security SSID2 can use WPA-PSK-AES for wireless security.
SSID3	Multi Security SSID3 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.
SSID	Set SSID using 1-32 alphanumeric character (s).
Wireless authentication	Specifies an authentication method used when connecting to a wireless device.

Parameter	Meaning
Wireless 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. "No encryption" can be selected only when "No authentication" 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 "No authentication" 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>
Rekey interval	<p>Set the interval between 0 and 1440 (minutes) to update a communication encryption key.</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.

Advanced

The screen to configure the advanced wireless settings.



Parameter	Meaning
BSS Basic Rate Set	Set the communication speeds of administrative and communication control frames of the AirStation and wireless devices.
Multicast Rate	Set the communication speed of multi-cast packets.
Reverse Direction Grant	For faster wireless communication, you may enable receiving packets while sending 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.
Output Power	You may reduce the wireless radio power output. The power of a radio wave and the distance that that radio wave reaches are almost proportional, so if the output power is reduced, the distance that the signal reaches also becomes smaller.

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(11g)
Advanced(11g)
WMM(11g)
MAC Filter
Multicast Control
Logout

WMM Enable

WMM-EDCA Parameters

Priority	Parameter	For AP	For STA
AC_BK(Low)	CWmin:	<input type="text" value="15"/>	<input type="text" value="15"/>
	CWmax:	<input type="text" value="1023"/>	<input type="text" value="1023"/>
	AIFSN:	<input type="text" value="7"/>	<input type="text" value="7"/>
	TXOP Limit:	<input type="text" value="0"/>	<input type="text" value="0"/>
	Admission Control:	—	Disable ▾
AC_BE(Normal)	CWmin:	<input type="text" value="15"/>	<input type="text" value="15"/>
	CWmax:	<input type="text" value="63"/>	<input type="text" value="1023"/>
	AIFSN:	<input type="text" value="3"/>	<input type="text" value="3"/>
	TXOP Limit:	<input type="text" value="0"/>	<input type="text" value="0"/>
	Admission Control:	—	Disable ▾
AC_VI(High)	CWmin:	<input type="text" value="7"/>	<input type="text" value="7"/>
	CWmax:	<input type="text" value="15"/>	<input type="text" value="15"/>
	AIFSN:	<input type="text" value="1"/>	<input type="text" value="2"/>
	TXOP Limit:	<input type="text" value="94"/>	<input type="text" value="94"/>
	Admission Control:	—	Disable ▾
AC_VO(Highest)	CWmin:	<input type="text" value="3"/>	<input type="text" value="3"/>
	CWmax:	<input type="text" value="7"/>	<input type="text" value="7"/>
	AIFSN:	<input type="text" value="1"/>	<input type="text" value="2"/>
	TXOP Limit:	<input type="text" value="47"/>	<input type="text" value="47"/>
	Admission Control:	—	Disable ▾

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 is 32ms. Large values can send more frames at a time. However, latency may increase. Only one frame is transferred at the time when the TXOP Limit is 0.

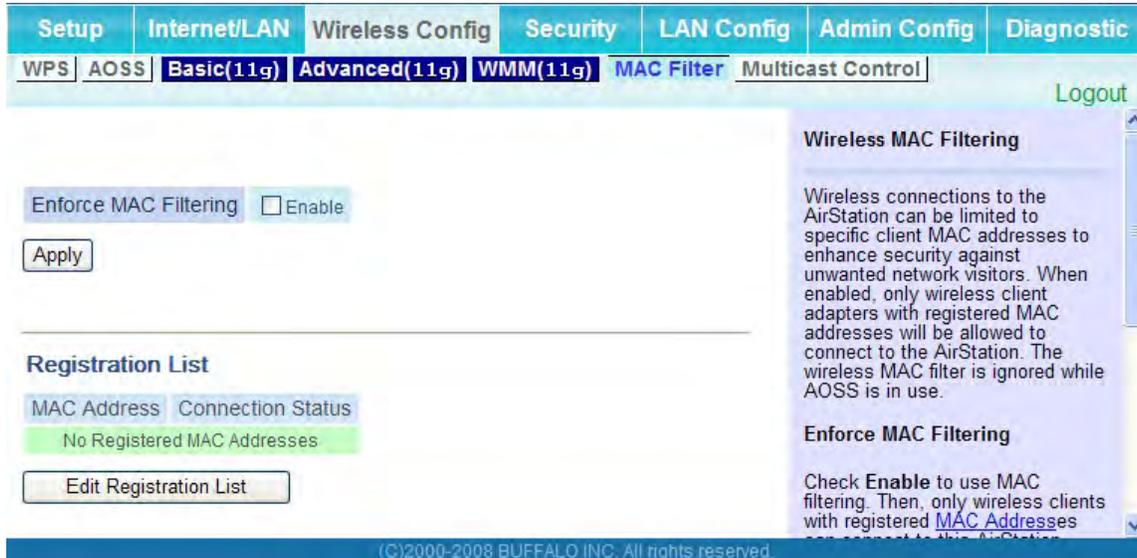
Admission Control ▾

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Parameter	Meaning
WMM	WMM is a standard that includes basic Quality of Service (QoS) features for wireless networks. If disabled, QoS features will not be available.
WMM-EDCA Parameters	<p>You don't usually need to change these settings. Using the default settings is recommended.</p> <p>Priority</p> <p>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.</p> <p>CWmin, CWmax</p> <p>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.</p> <p>AIFSN</p> <p>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.</p> <p>TXOP Limit</p> <p>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.</p> <p>Admission Control</p> <p>Restricts new frames from interfering with a previous queue. New packets are prioritized lower until a queue of them is collected. As the new queue accumulates more packets, its priority increases.</p>

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.

Multicast Control

The screen to configure restrictions on unnecessary multicast packets sent to the wireless LAN port.

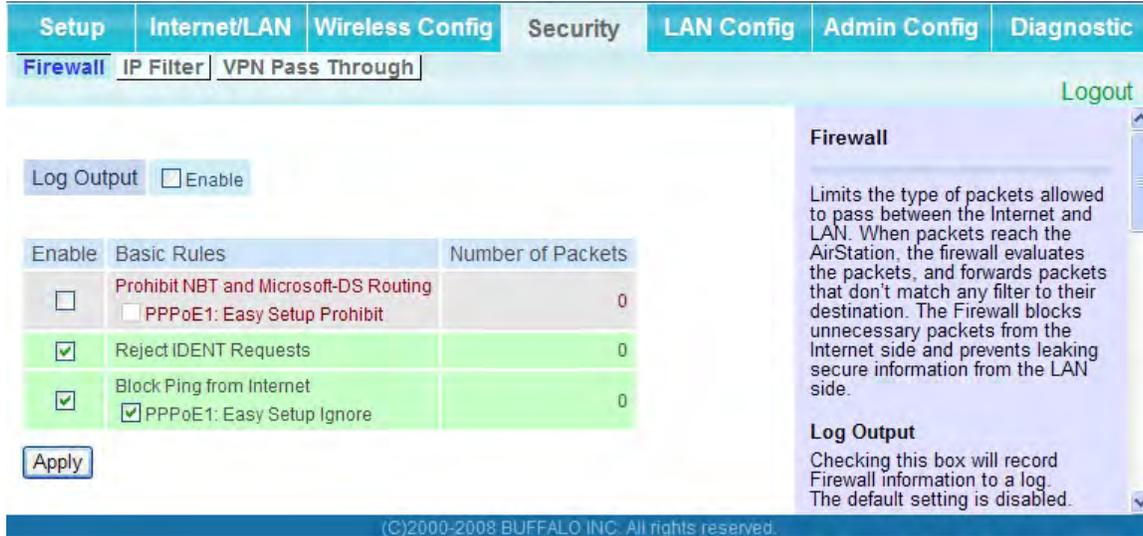


Parameter	Meaning
Snooping	If enabled, snooping supervises multicast administrative packets such as IGMP and restricts unnecessary multicast transfers to wired or wireless ports.
Multicast Aging Time	Set the time to hold the data from multicast snooping in the range of 1 to 3600 (seconds). You need to enter a value which is bigger than the interval of a IGMP/MLD query.

Security (Router Mode only)

Firewall (Router Mode only)

The screen to configure firewall features of the AirStation.



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</p> <p>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 25), 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 898">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> or <i>“Use IP Unnumbered”</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.

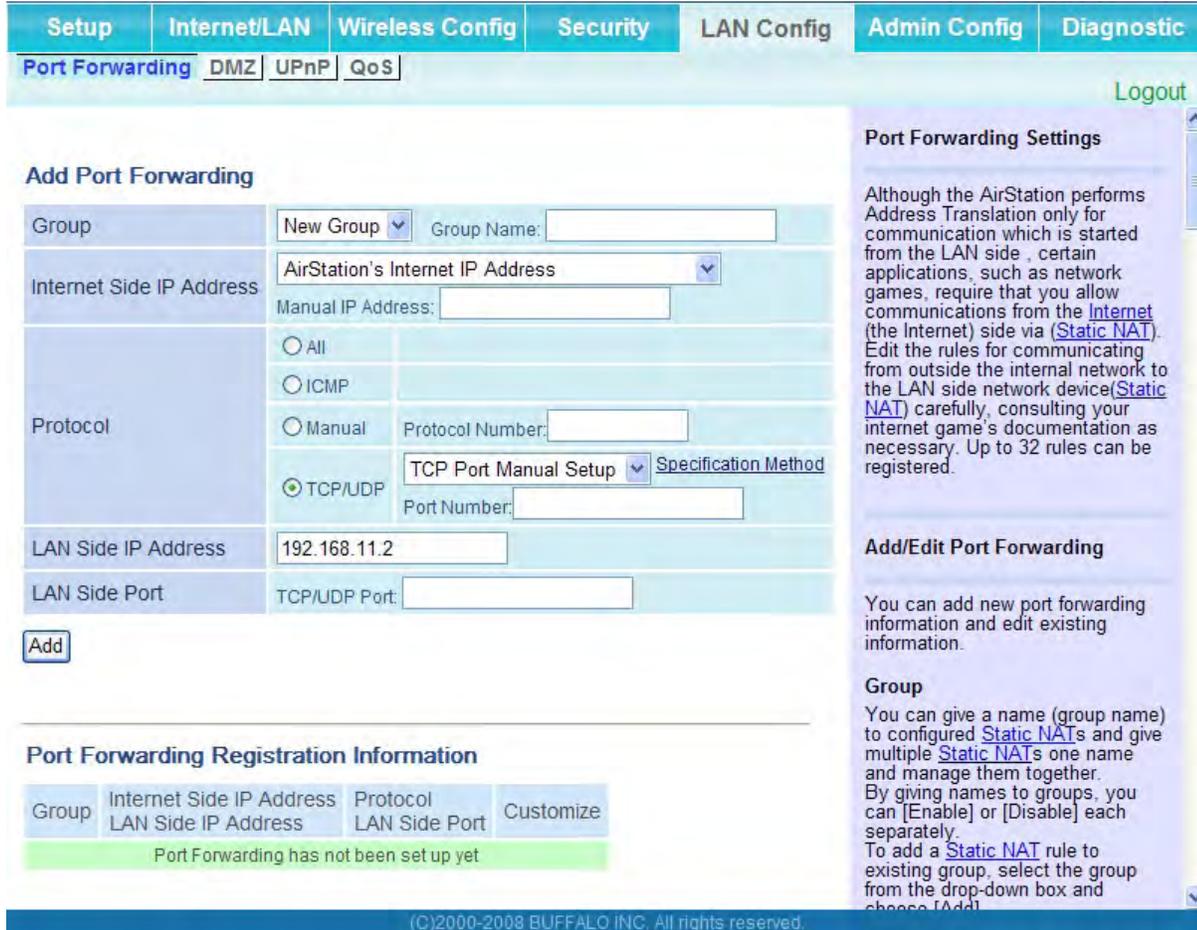


Parameter	Meaning
IPv6 Pass Through	Enable to use IPv6 Pass Through for address translation.
PPPoE Pass Through	Enable to use PPPoE bridge. Using PPPoE bridge lets you automatically obtain an IP address from your provider using the PPPoE protocol from your computer connected to the LAN side because all 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		low
6	<input type="checkbox"/>		TCP		low
7	<input type="checkbox"/>		TCP		low
8	<input type="checkbox"/>		TCP		low

Apply

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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 the line speed. If a smaller bandwidth value is entered, the maximum line speed cannot be used. Use a link speed measuring tool on the

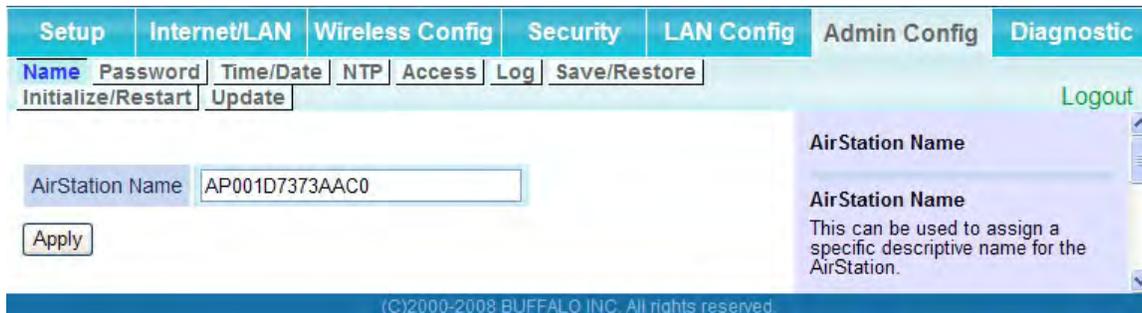
Parameter	Meaning
QoS for transmission to the Internet	Determine whether or not control the priority of packets to send to the Internet. Check this box to enable QoS.
Upload bandwidth	Specify the upstream bandwidth in kbps from the AirStation to the internet side. * Set the actual value for the upstream 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

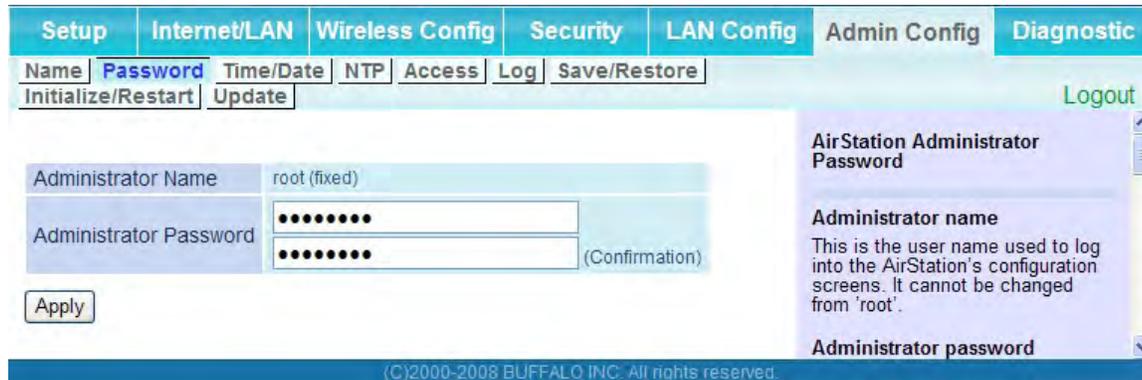
The screen to configure the AirStation's name.



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

Password

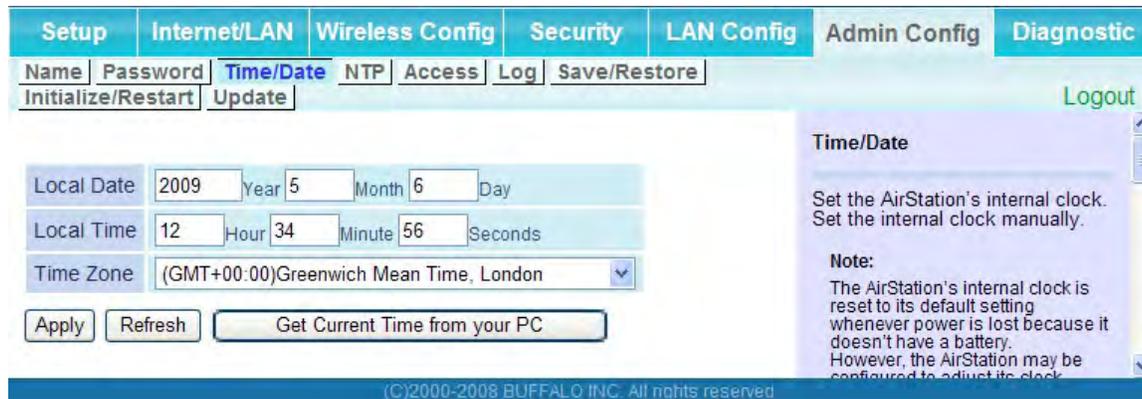
The screen to configure the password to login to the configuration screen of the AirStation.



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

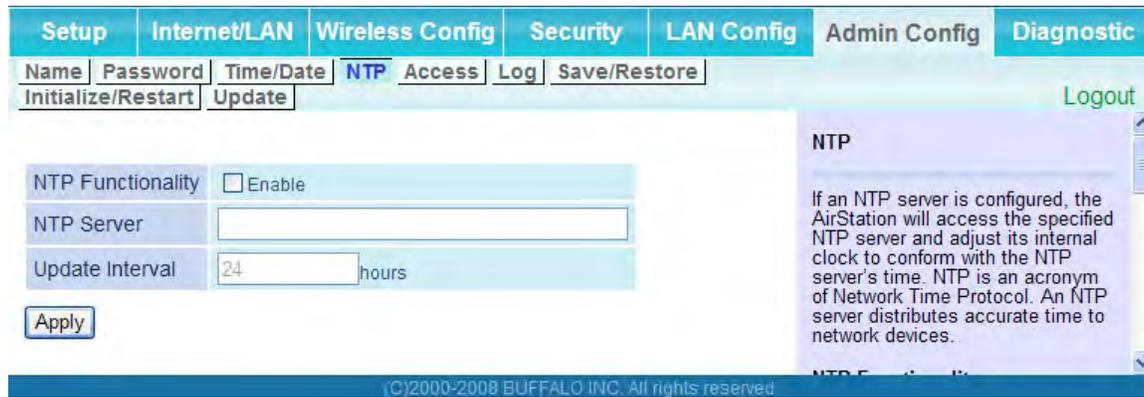
The screen to configure the internal clock in the AirStation.



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

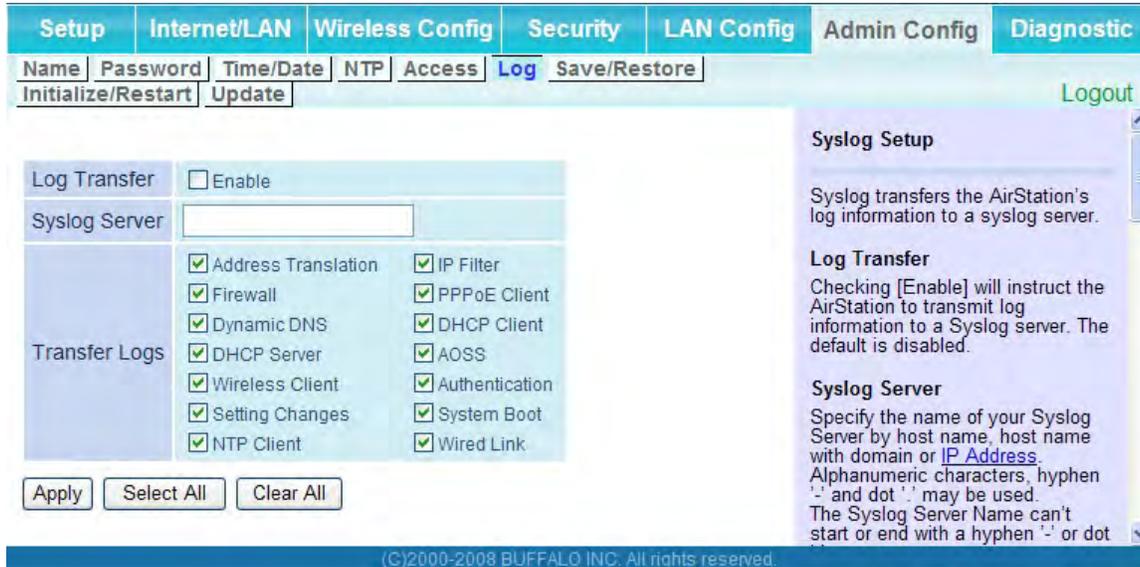
The screen to restrict access to the AirStation's settings screens.



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	If enabled, allows access to settings screens from network devices on the Internet side.
Permitted IP address	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	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

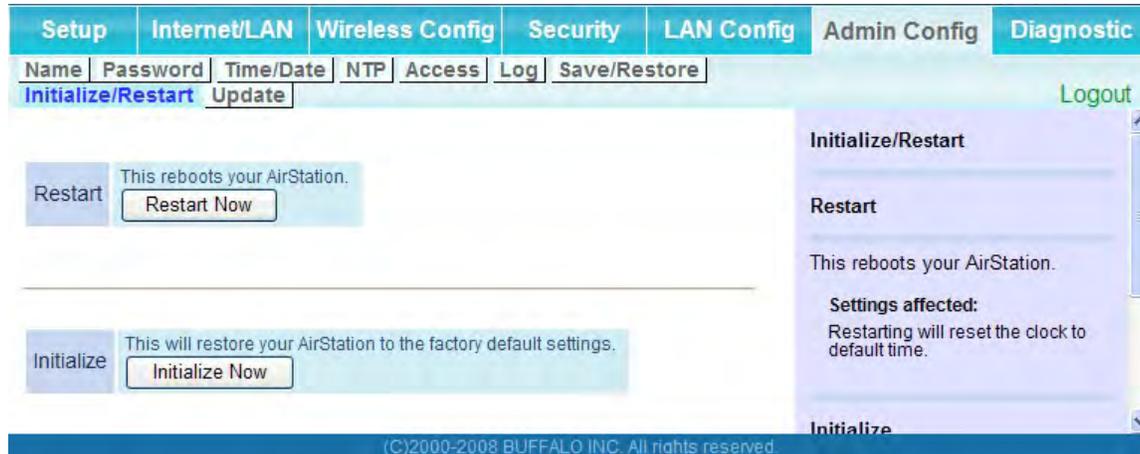
The screen to save to or restore from an AirStation configuration file.



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 current Administrator Password (page 57).
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	

Model	WHR-G300N Ver.1.60 (R1.49/B1.09)		
AirStation Name	AP001D7373AAC0		
Hardware Mode Switch Status	Automatic Mode		
Operational Mode	Router Mode ON		
Internet	Method of Acquiring IP Address	Auto Detect Mode - PPPoE	
	Name of Connection	Easy Setup (Default Connection)	
	Connection Status	Online	
	Operation	<input type="button" value="Stop"/>	
	IP Address	222.14.100.85	
	PPP Server IP	222.4.71.203	
	DNS1(Primary)	210.196.3.183 (Auto)	
	DNS2(Secondary)	210.141.112.163 (Auto)	
	MTU Size	1454	
	Wired Link	100Base-TX (Full-duplex)	
MAC Address	00:1D:73:73:AA:C0		
LAN	IP Address	192.168.11.1	
	Subnet Mask	255.255.255.0	
	DHCP Server	Enabled	
	MAC Address	00:1D:73:73:AA:C0	
Wireless(802.11g)	Wireless Status	Enabled	
	SSID	17A4019656EF817A432094A9323A031F	
	Authentication	AOSS WPA/WPA2 mixedmode - PSK	
	Encryption	AOSS TKIP/AES mixedmode	
	SSID	001D7373AAC0	
	Authentication	AOSS WPA-PSK	
	Encryption	AOSS AES	
	Broadcast SSID	Enable	
	Privacy Separator	Disable	
	Wireless Channel	10 (Auto)	
300MHz Mode	20 MHz		
MAC Address	00:1D:73:73:AA:C0		

System Information

Display the AirStation's main settings.

Model
Displays the model name and firmware version of the AirStation.

AirStation Name
Displays the AirStation's host name.

Operational Mode
Displays the current mode of operation.

Internet
AirStation's [Internet port](#) side information.

Method of Acquiring IP Address
Acquiring a Internet IP address.

Name of the Connection
The name of the PPPoE connection specified in the configuration.

Connection Status
Displays the current Internet side status.

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.

- [Release] : Releases the IP address assigned by the DHCP Server.
- [Renew] : Renews the IP address from the DHCP Server.

The following commands can be executed when using PPPoE.

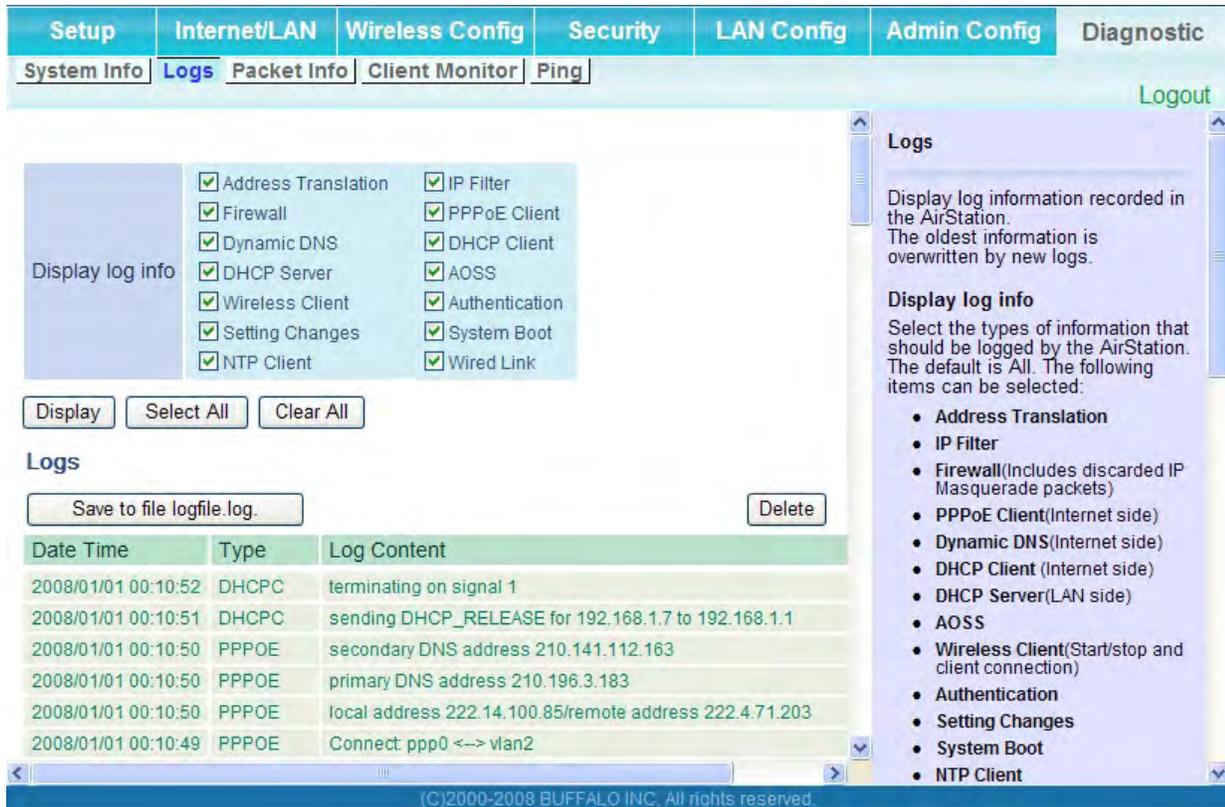
- [Start] : Start connecting to a PPPoE Server from idle/stop.
- [Connect] : Connect to PPPoE from an idle condition.

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Parameter	Meaning
Model	Displays the product name of the AirStation and the firmware version.
AirStation Name	Displays AirStation Name (refer to page 55).
Hardware Mode Switch Status	Displays the status of the mode switch on the back of the AirStation.
Operational Mode	Displays the current operational mode of the AirStation.
Internet	Displays the information about the Internet port.
LAN	Displays the information about the LAN port.
Wireless	Displays the wireless status.

Log

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 the 'Packet Info' page in a web interface. At the top, there are navigation tabs: Setup, Internet/LAN, Wireless Config, Security, LAN Config, Admin Config, and Diagnostic. Below these are sub-tabs: System Info, Logs, Packet Info (selected), Client Monitor, and Ping. A 'Logout' link is visible in the top right. The main content area features a table with the following data:

Interface	Sent		Received	
	Normal	Errors	Normal	Errors
Wired LAN	7529	0	5713	0
Wired Internet	2361	0	3389	0
Wireless LAN (802.11g)	2031	0	40	0
PPPoE No.1: Easy Setup	5	0	13	0

Below the table is a 'Refresh' button. To the right of the table is a 'Packet Traffic Information' section with the following text: 'The total numbers of packets sent and received by the AirStation, as well as the errors sending and receiving, are displayed.' Below this is a '[Refresh] button' section with the text: 'Displayed packet information is renewed with current information when this button is clicked.' At the bottom of the page, there is a copyright notice: '(C)2000-2008 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.

The screenshot shows a web interface with a top navigation bar containing tabs: Setup, Internet/LAN, Wireless Config, Security, LAN Config, Admin Config, and Diagnostic. Below this is a secondary navigation bar with tabs: System Info, Logs, Packet Info, Client Monitor (selected), and Ping. A Logout link is visible in the top right. The main content area features a table with the following data:

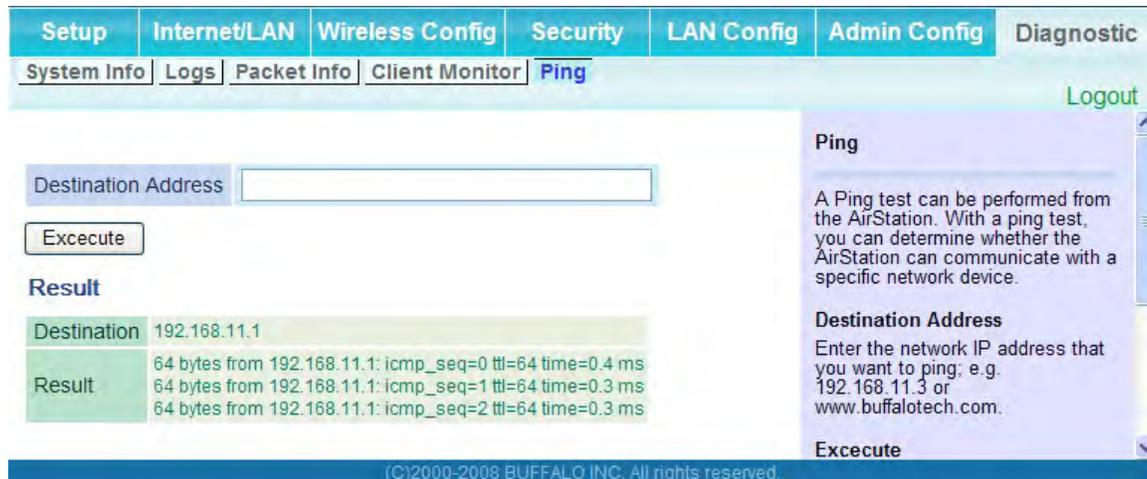
MAC Address	Lease IP Address	Hostname	Communication Method	Wireless Authentication	802.11n
00:11:09:5C:86:F1	192.168.11.2	T-3304-0001	Wired	-	-

Below the table is a Refresh button. To the right, a sidebar titled 'Client Monitor' contains the text: 'Displays the LAN side clients (PCs) that are accessing the AirStation. The following information is displayed: MAC address'. At the bottom of the interface, a copyright notice reads: '(C)2000-2008 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.



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

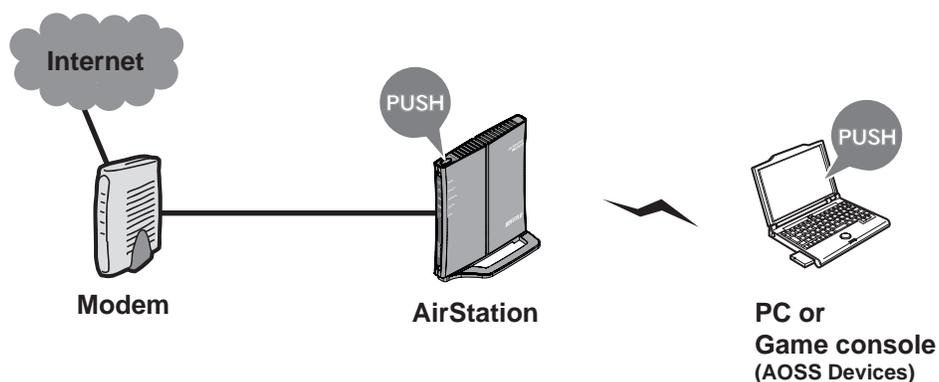
Connect to a Wireless Network

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.

Windows Vista (Client Manager V)

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

1 Click the icon  in the system tray.



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

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



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".

2



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 11) 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.

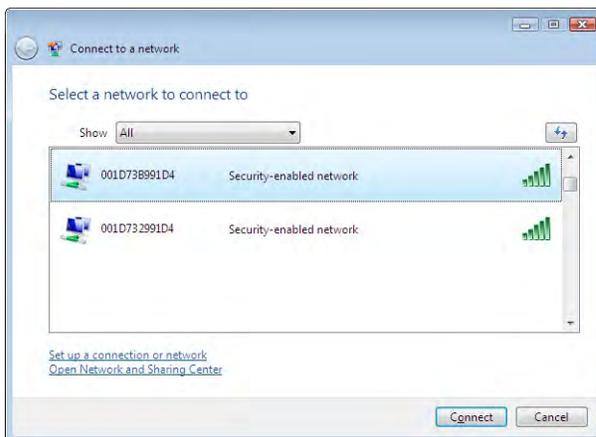
The procedure varies depending on which version of Windows you are using.

Windows Vista (WLAN AutoConfig)

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

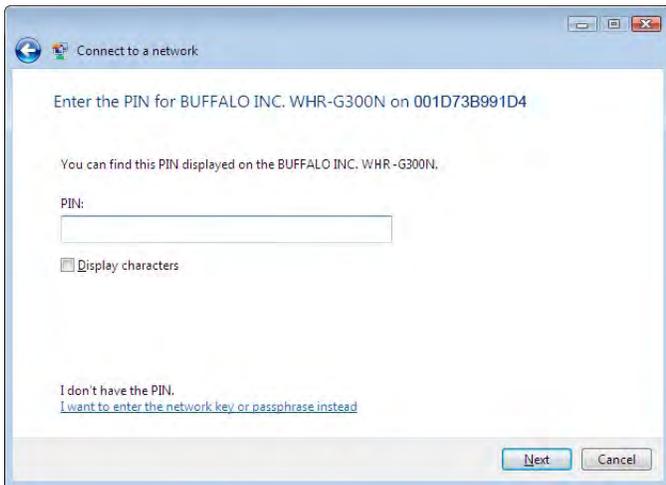
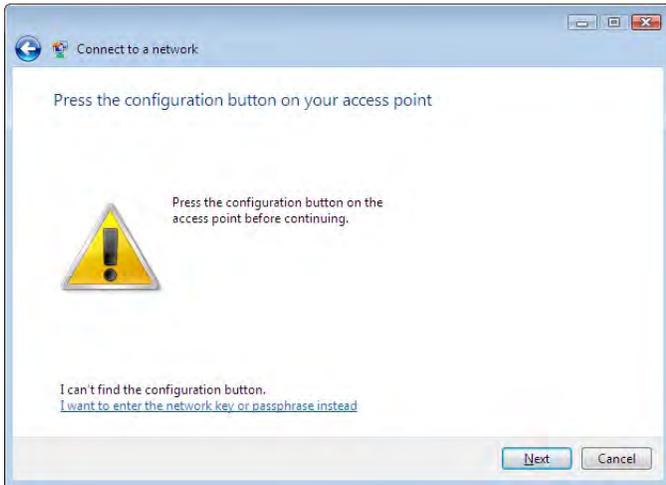
- 1 Right click on the wireless network icon in the system tray.
- 2 Click "Connect to a network".

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)

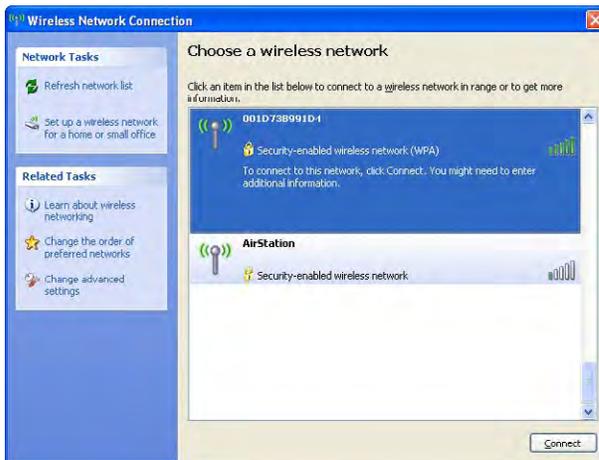
Windows XP includes a built-in utility to connect to your AirStation.

Note: If Client Manager 3 is installed on your computer, Windows Zero Config is disabled. Uninstall Client Manager 3 to use Windows Zero Config, 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
SECURITY	Amber 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
LAN	Green light is ON or flashing
INTERNET	Green light is ON or flashing
- Make sure that your computer is set to "*obtain an IP address automatically*". (Refer to page 90)
- Restart your AirStation.

Cannot access the web-based configuration utility.

- Display the configuration screen by following the procedure on page 17.
- 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 89)
- Restart your AirStation.

Cannot connect to the network wirelessly.

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

The following are the factory default settings of the AirStation:

SSID - Printed on the label of the AirStation

Encryption Method - WPA-PSK (AES)

Encryption Key - Printed on the label of the AirStation

- 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 91) 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 - WPA-PSK (AES)

Encryption Key - Printed on the label of the AirStation

The link speed is slower than 300 Mbps (Maximum link speed is only 144Mbps).

By default, the AirStation's 300 Mbps mode is not enabled. To enable it, use the following procedure:

1. Open the configuration screen of your AirStation (page 17).
2. Click "*Wireless SSID & Channel (11n 300Mbps Mode)*" in Easy Setup.
3. Change the value in "300 MHz Mode" - "*Band Width*" to 40 MHz and click "*Apply*".

If you still cannot connect at 300 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 Security tab. Buffalo recommends the use of WPA 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" radio button 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 a 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 (Draft 2.0)
Transmission Method	Direct Sequence Spread Spectrum (DSSS), OFDM, MIMO
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 (Draft 2.0) 20MHz BW (ShortGI) 144.4, 130, 115.5, 86.6, 57.7, 43.3, 28.8, 14.4Mbps (2stream) 65, 72.2, 57.8, 43.3, 28.9, 21.7, 14.4, 6.5Mbps (1stream) 40MHz BW (LongGI) 270, 243, 216, 162, 108, 81, 54, 27Mbps (2stream) 135, 121.5, 108, 61, 54, 40.5, 27, 13.5Mbps (1stream) (ShortGI) 300, 270, 240, 180, 120, 90, 60, 30Mbps (2stream) 150, 135, 120, 90, 60, 45, 30, 15Mbps (1stream)
Access Mode	Infrastructure Mode
Security	WPA2, 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	About 6.0W (Max)
Dimensions	140mm x 127mm x 25mm (5.5 x 5 x 1 in.)
Weight	200g (7 oz.)
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
	Internet Communication Format	SPEED: Auto
	MTU Size of Internet Port	1500 Bytes
PPPoE (Router Mode only)	Default PPPoE Connection	No Active Session
	IP Unnumbered PPPoE Connection	No Active Session
	PPPoE Connection List	none
	Preferred Connections	none
DDNS	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 (Router Switch OFF): 192.168.11.100 (255.255.255.0) Bridge Mode (Router Switch OFF): Obtain automatically from DHCP Server
	DHCP Server Function (Router Mode only)	Enable

Feature	Parameter	Default Setting
	DHCP IP Address Pool (Router Mode only)	192.168.11.2 for up to 64 Addresses
	LAN Side IP Address (IP Unnumbered) (Router Mode only)	none
	Lease Period (Router Mode only)	48Hours
	Default Gateway (Router Mode only)	AirStation's IP Address
	DNS Servers (Router Mode only)	AirStation's IP Address
	WINZ Server (Router Mode only)	Do Not Specify
	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	8A 13-digit random value (Printed on the label of the AirStation)
	WPS Security Information	WPS status: configured SSID: AirStation's MAC Address Security: WPA-PSK AES Encryption key: A 13-digit random value (Printed on the label of the AirStation)
AOSS	AOSS Button on the AirStation Unit	Enable
Basic	Wireless Radio	Enable
	Wireless Channel	Auto Channel

Feature	Parameter	Default Setting		
	300Mbps Mode	Band Width: 20MHz Extension Channel: -		
	Broadcast SSID	Allow		
	Separate feature	not used		
	SSID	Configure AirStation's MAC address		
	Wireless authentication	WPA-PSK		
	Wireless encryption	AES		
	WPA-PSK (Pre-Shared Key)	A 13-digit random value (Printed on the label of the AirStation)		
	Rekey interval	60 minutes		
Advanced	BSS Basic Rate Set	1,2,5.5,11 Mbps		
	Multicast Rate	Auto		
	Reverse Direction Grant	Enable		
	DTIM Period	1		
	Privacy Separator	Disable		
	Output power	100%		
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
		Admission Control	-----	Disable
	WMM-EDCA Parameters (Priority AC_BE (Normal))		For AP	For STA
		CWmin	15	15
		CWmax	63	1023
		AIFSN	3	3
		TXOP Limit	0	0
		Admission Control	-----	Disable

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
		Admission Control	-----	Disable
	WMM-EDCA Parameters (Priority AC_VO (Highest))		For AP	For STA
		CWmin	3	3
		CWmax	7	7
		AIFSN	1	2
		TXOP Limit	47	47
		Admission Control	-----	Disable
MAC Filter	Enforce MAC Filter	Disable		
	Registration List	none		
Multicast Control	Snooping	Enable		
	Multicast Aging Time	300 Sec.		
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		

Feature	Parameter	Default Setting
Name	AirStation Name	AP + AirStation's MAC Address
Password	Administrator Name	root (fixed)
	Administrator Password	none
Time/Date	Local Date	2008 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 Enable Permit configuration from wired Internet Enable
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 Vista

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

- 1** Click *Start > Settings > 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"*, 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"*, and then click *"OK"*.
- 8** Click *"Close"*.

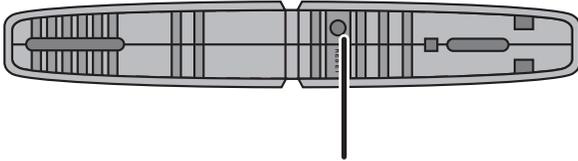
Windows XP

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"*.
- 6** Click *"Close"*.

Appendix D

Restoring the Default Configuration



Hold down this button for 5 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:

FDI-09101621-0

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 WHR-HP-G300N 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 WHR-HP-G300N 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 WHR-HP-G300N 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 WHR-HP-G300N vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

English

Hereby, Buffalo Technology Inc. declares that this AirStation WHR-HP-G300N 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 WHR-HP-G300N 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 WHR-HP-G300N 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 WHR-HP-G300N 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 WHR-HP-G300N 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 WHR-HP-G300N atbilst Direktīvas 1999/5/EK

būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

Lietuvių[Lithuanian]

Šiuo Buffalo Technology Inc. deklaruoja, kad šis AirStation WHR-HP-G300N atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Nederlands[Dutch]

Hierbij verklaart Buffalo Technology Inc. dat het toestel AirStation WHR-HP-G300N 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 WHR-HP-G300N jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.

Magyar[Hungarian]

Alulírott, Buffalo Technology Inc. nyilatkozom, hogy a AirStation WHR-HP-G300N megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.

Polski[Polish]

Niniejszym, Buffalo Technology Inc. , deklaruję, że AirStation WHR-HP-G300N spełnia wymagania zasadnicze oraz stosowne postanowienia zawarte Dyrektywie 1999/5/EC.

Português[Portuguese]

Buffalo Technology Inc. declara que este AirStation WHR-HP-G300N está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Slovensko[Slovenian]

Buffalo Technology Inc. izjavlja, da je ta AirStation WHR-HP-G300N v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.

Slovensky[Slovak]

Buffalo Technology Inc. týmto vyhlasuje, že AirStation WHR-HP-G300N spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

Suomi[Finnish]

Buffalo Technology Inc. vakuuttaa täten että AirStation WHR-HP-G300N 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 WHR-HP-G300N står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Industry Canada statement

This device complies with RSS-210 of the Industry Canada 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.

IMPORTANT NOTE:

Radiation Exposure Statement:

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

This device has been designed to operate with an antenna having a maximum gain of 2 dB. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

Industry Canada ID: 6102A-025

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。

CONDICIONES (Mexico)

PRIMERA

-El certificado provisional tiene vigencia de un año a partir de esta fecha y prodrá ser renovado hasta en dos ocasiones por el mismo período, para lo cual, previo a la fecha de vencimiento del Certificado deberá solicitar por escrito a esta Comisión su renovación. El Certificado definitivo tiene vigencia indefinida.

SEGUNDA

-El Certificado de Homologación, podrá ser cancelado a petición del solicitante a cuando la Comisión Federal de Telecomunicaciones así lo determine con fundamento en el Artículo 149 del Reglamento de Telecomunicaciones, o bien de acuerdo a lo señalado en el Capítulo Segundo de la Ley Federal de Procedimiento Administrativo.

TERCERA

-Los equipos amparados por este Certificado de Homologación deberán tener indicado en alguna parte visible, firmemente adherido, el número de Certificado de Homologación correspondiente, así como la marca y modelo con la que se expide este Certificado.

CUARTA

-La Comisión Federal de Telecomunicación podrá requerir en cualquier momento a la empresa presentación de información técnica adicional, así como las muestras del equipo para realizar pruebas de comportamiento y verificar las características del mismo.

QUINTA

-Cualquier modificación estructural o de configuración técnica deberá someterse a consideración de la Comisión, para que ésta determine si procede el otorgamiento de una ampliación del Certificado de Homologación o si requiere de un nuevo Certificado.

SEXTA

-El equipo que ampara el presente certificado deberá operar conforme a las regulaciones técnicas, reglas, reglamentos y otras disposiciones administrativas vigente o que llegara a emitir o adoptar la Comisión Federal de Telecomunicaciones y/o la Secretaría de Comunicaciones y Transportes.

SEPTIMA

-El equipo de radiocomunicación que ampara el presente certificado deberá operar de conformidad con el Reglamento de Radiocomunicaciones de la Unión Internacional de Telecomunicaciones y el Cuadro Nacional de Atribución de Frecuencias México vigente.

OCTAVA

-Las antenas de las estaciones terrenas deberán cumplir con el patrón de radiación Recomendado por la Unión Internacional de Telecomunicaciones, Sector de Radio Frecuencia UIT-R, en el caso de sistemas de microondas las antenas de los mismos deberán cumplir con las recomendaciones del UIT-R, conforme a su banda de operación.

NOVENA

-La homologación de este equipo no implica la autorización para prestar servicios públicos de telecomunicaciones ni para establecer aplicaciones que obstruyan o invadan cualquier vía general de comunicación.

DECIMA

- El incumplimiento de las condiciones estipuladas en este Certificado será motivo de sanción con base a lo dispuesto en la Ley de Vías General de Comunicación, Ley Federal de Telecomunicación y en el Reglamento de Telecomunicaciones.

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.

@ 2003-2008 Buffalo Technology (Buffalo, Inc.)

Appendix I

Contact Information

North America

Buffalo Technology USA Inc.
11100 Metric Blvd, Suite 750
Austin, TX 78758

GENERAL INQUIRIES

Monday through Friday

8:30am-5:30pm CST

Direct: 512-794-8533 | **Toll-free:** 800-456-9799 | **Fax:** 512-794-8520 |

Email: sales@buffalotech.com

TECHNICAL SUPPORT

North American Technical Support by phone is available 24 hours a day, 7 days a week. (USA and Canada).

Toll-free: (866) 752-6210 | **Email:** info@buffalotech.com

Europe

Buffalo Technology UK Ltd.
2 Bracknell Beeches, Old Bracknell Lane
Bracknell, Berkshire, RG12 7BW
United Kingdom

GENERAL INQUIRIES

Email: *sales@buffalo-technology.com*

TECHNICAL SUPPORT

Buffalo Technology provides technical support in English, German, French, Italian, and Spanish. For opening hours and relevant telephone numbers, please go to *www.buffalo-technology.com/contact*