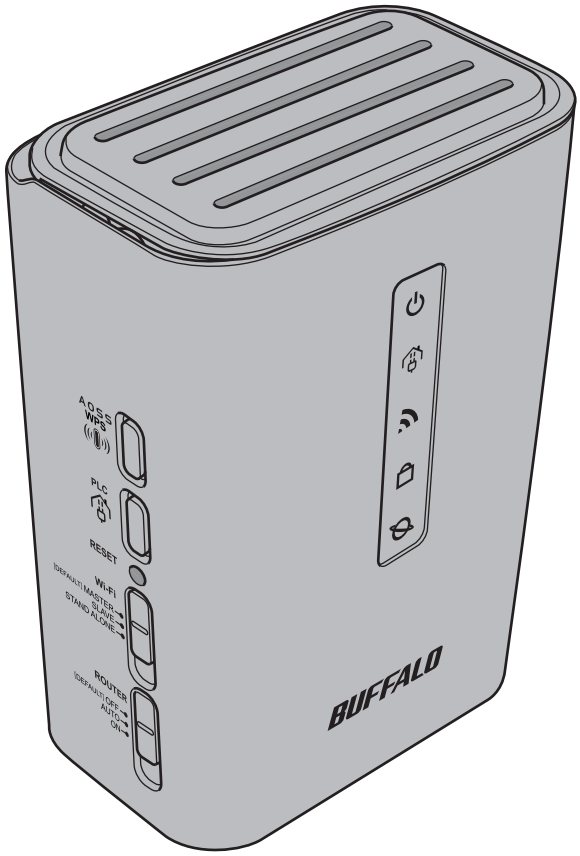
User Manual

English

Powerline 500AV Wireless-N Router

Powerline 500AV Wireless-N Router Starter kit

WPL-05G300 Series



www.buffalotech.com

35012288-01

Contents

Chapter 1 - Product Overview 5

Features 5
Package Contents 6
WPL-05G300/2 6
WPL-05G300 6
Hardware Overview 7
Front Panel LEDs 7
Bottom Panel 9
Side Panel 9
Back Side 11

Chapter 2 - Installation 12

Maximizing the Performance of Your AirStation 12
Starter Kit Installation Procedure 12
Extender Kit Installation Procedure 16

Chapter 3 - Configuration 19

Installing the AirStation Configuration Tool (Windows) 19
Setting the AirStation IP Address (Windows) 20
Setting the AirStation IP Address (Mac OS X) 23
Accessing the Web-based Configuration Interface (Windows) 26
Accessing the Web-based Configuration Interface (Mac OS X) ... 28
Configuration Interface Menus in Router Mode 30
Configuration Interface Menus in Bridge Mode 32
Setup 34
Internet/LAN (LAN Config) 36
Internet (Router Mode only) 36
PPPoE (Router Mode only) 37

DDNS (Router Mode only) 40
VPN server (Router Mode Only) 42
PLC 44
LAN 45
DHCP Lease (Router Mode only) 47
NAT (Router Mode only) 48
Route 49
Wireless Config 50
WPS 50
Basic 51
Advanced 54
WMM 55
MAC Filter 57
Multicast Control 58
AOSS 59
Security (Router Mode only) 61
Firewall (Router Mode only) 61
IP Filter (Router Mode only) 63
VPN Passthrough (Router Mode only) 64
LAN Config 65
Port Forwarding (Router Mode only) 65
DMZ (Router Mode only) 66
UPnP (Router Mode only) 67
QoS (Router Mode only) 68
Movie Engine (QoS) 69
Admin Config 71
Name 71
Password 72
Time/Date 73
NTP 74
ECO 75
Access 77
Log 78
Save/Restore 79

Initialize/Restart 80
Update 81
Diagnostic 83
System Info 83
Logs 85
Packet Info 86
Client Monitor 87
Ping 88

Chapter 4 - Connect to a Wireless Network 89

Automatic Secure Setup (AOSS/WPS) 89
Windows 7/Vista (Client Manager V) 90
Windows XP (Client Manager 3) 91
Mac OS X (AOSS Assistant) 92
Other Devices (e.g. Game Console) 93
Manual Setup 93
Windows 7 (WLAN AutoConfig) 93
Windows Vista (WLAN AutoConfig) 94
Windows XP (Wireless Zero Configuration) 97
Mac OS X (Wi-Fi) 98

Chapter 5 - Troubleshooting 99

Cannot connect to the Internet over wired connection. 99
Cannot access the web-based configuration Interface. 99
Cannot connect to the network wirelessly. 100
You forgot the AirStation's SSID, Encryption Key, or Password. .. 100
If the AirStation is reset, it is disconnected from the network. . 101
The link speed is slower than 300 Mbps. 101
Other Tips 102

Chapter 6 - Default Configuration Settings 104

Chapter 7 - Checking Wireless Signal Quality 110

Windows 7/Vista 110
Mac OS X 111

Chapter 8 - TCP/IP Settings 113

Windows 7 113
Windows Vista 114
Windows XP 115
Mac OS X 116

Chapter 9 - Restoring the Default Configuration 117

Appendix A - Specifications 118

Appendix B - Regulatory Compliance Information 120

Appendix C - Environmental Information 126

Appendix D - GPL Information 127

Appendix E - Warranty Information 128

Chapter 1 - Product Overview

Features

Supports Homeplug AV 500
High-speed home network via household electrical wiring with transmission rates of up to 500 Mbps.

Supports 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.

Supports 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 the following security features:

- AOSS
- WPS
- WPA-PSK (AES)
- WPA2-PSK (AES)
- WPA/WPA2 mixed PSK
- WEP (64-bit and 128-bit)
- Privacy Separator
- MAC address access restriction
- Deny Any Connection/SSID stealth
- Password for web-based control interface
- Firewall with easy rules

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

Auto Mode (Router/Bridge Automatic Recognition)
In Auto mode, the AirStation will detect whether or not your network has a router and automatically switch to the appropriate router or bridge mode. You can also manually switch between modes. (See page 9.)

Package Contents

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

WPL-05G300/2

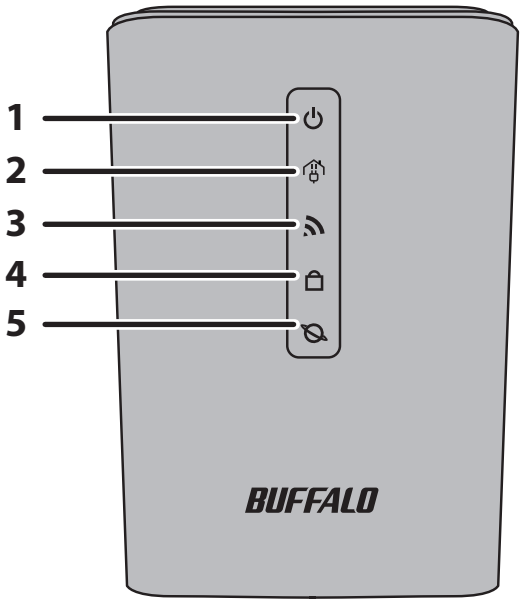
- WPL-05G300..... 2
- LAN cable..... 2
- Setup CD 1
- Quick Setup Guide..... 1

WPL-05G300

- WPL-05G300..... 1
- LAN cable..... 1
- Setup CD 1
- Quick Setup Guide..... 1

Hardware Overview

Front Panel LEDs



1 Power LED

Indicates the status of the AirStation power and PLC.

On (Green) :	Power is on.
Blinking (Green) :	PLC connection in progress.
2 blinks (Green) :	PLC connection failed. PLC connection timeout. Either hold down the PLC button for 1 to 3 seconds, or wait for about 30 minutes for the indicator (green) to turn on.
3 blinks (Green) :	Disconnecting the PLC connection.
Off :	Power is off.
2 blinks (Amber) *1 :	Flash ROM error.
3 blinks (Amber) *1 :	Wired Ethernet LAN error.
4 blinks (Amber) *1 :	Wireless LAN error.
5 blinks (Amber) :	IP address setting error.
Continuously blinking (Amber) *2 :	Updating firmware, saving settings, or initializing settings.

*1 Turn off AirStation first, wait for a few seconds, then turn it back on.

*2 If the power LED keeps blinking, do not turn off the AirStation nor unplug its power cable.

2 PLC LED (Green)

Indicates the AirStation PLS status.

On :	PLC connected.
Off :	PLC is disabled.

3 Wireless LED (Green)

Indicates wireless LAN status.

On:	Wireless LAN is transmitting.
Off:	Wireless LAN is disabled.

4 Security LED (Amber)

Indicates security status.

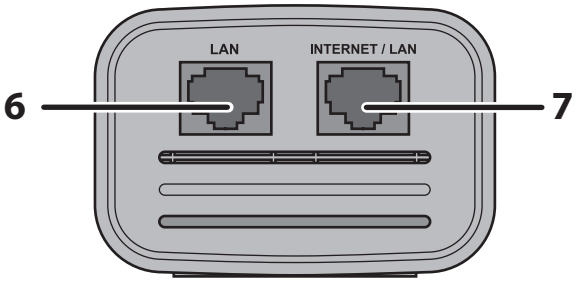
On:	AOSS/WPS activated; accessed to exchange security keys. Wireless security has been set.
Off:	AOSS or Encryption is not set.
2 blinks:	AirStation is waiting for an AOSS or WPS security key.
Blinking:	AOSS/WPS error; failed to exchange security keys.

Note: The Security LED is lit if an security key has been set.

5 Router LED (Green)

On:	Router functionality is enabled.
Off:	Router functionality is disabled.

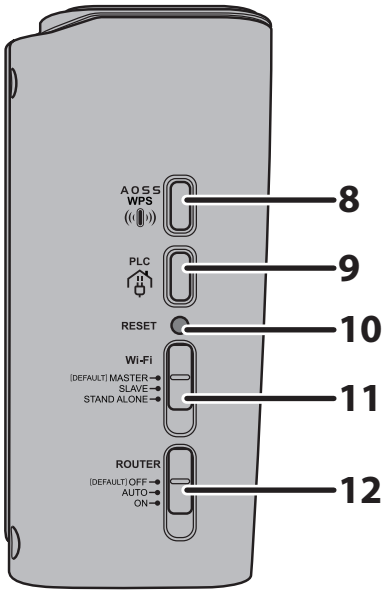
Bottom Panel



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

7 **Internet / LAN Port** 10 Mbps and 100 Mbps connections are supported.
Note: In bridge/AP mode (router switch off), the Internet port becomes a regular LAN port, for a total of 2 usable LAN ports.

Side Panel



8 AOSS Button

To initiate AOSS, hold down this button until the Security LED flashes (about 1 second). Then, push or click the AOSS button on your wireless client device to complete the connection. Both devices must be powered on for this to work.

9 PLC Button

Hold down for 1 to 3 seconds:	This starts the PLC connection process or cancels the connection process. If the Power LED indicates that the PLC connection has failed, the Power LED stops blinking.
Hold down for 10 seconds:	This disconnects the PLC connection.

10 Reset Button

To reset all settings, hold down this button until the amber power LED flashes (about 3 seconds). Power must be on.

11 Wireless Button

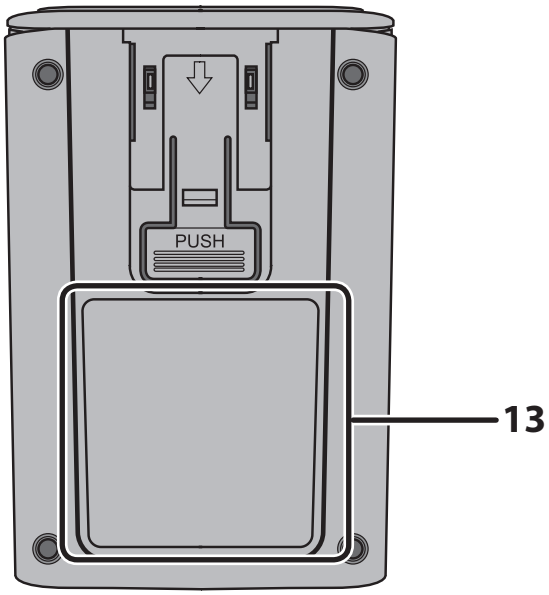
This is not used in this product.

12 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.

Back Side



13 Factory Default Settings This sticker shows the AirStation's SSID, default encryption key, MAC address, WPS PIN code, and Device Password. By default, encryption is disabled for AirStations sold in Asia Pacific.

Chapter 2 - Installation

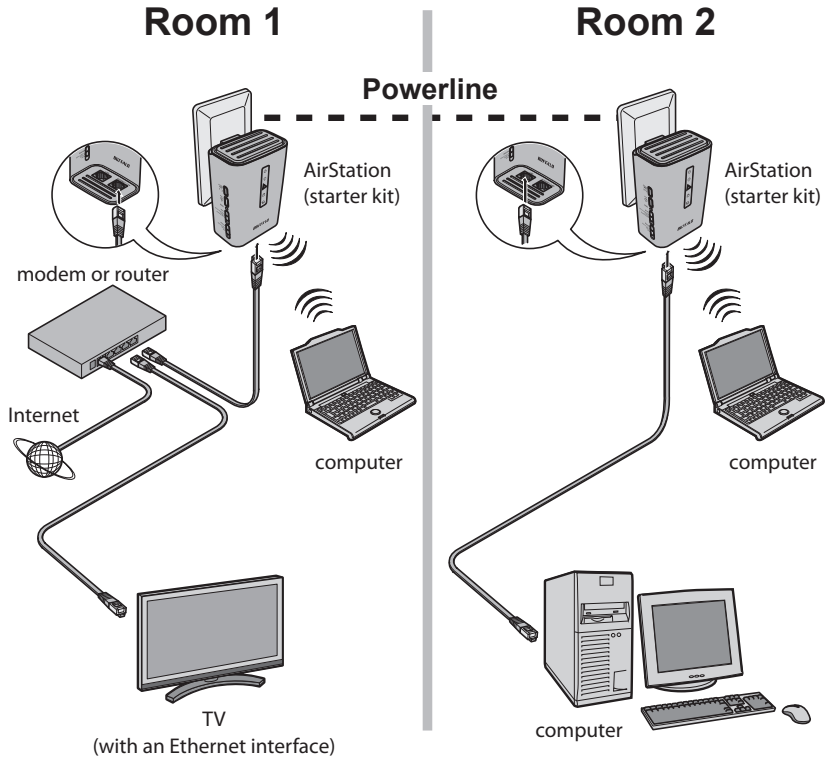
Maximizing the Performance of Your AirStation

For best performance, plan the location of your AirStation:

- Use an electrical outlet that is not controlled by a wall switch to avoid someone unknowingly turning off the power to the outlet.
- Don't plug in AirStation to a power strip, extension cord, or surge protector as this might prevent them from working correctly or reduce the network performance.
- Avoid plugging AirStation into electrical outlets located near an appliance that uses a lot of power, such as a washer or dryer, or a refrigerator. This could potentially prevent the AirStation from working correctly, or reduce network performance.

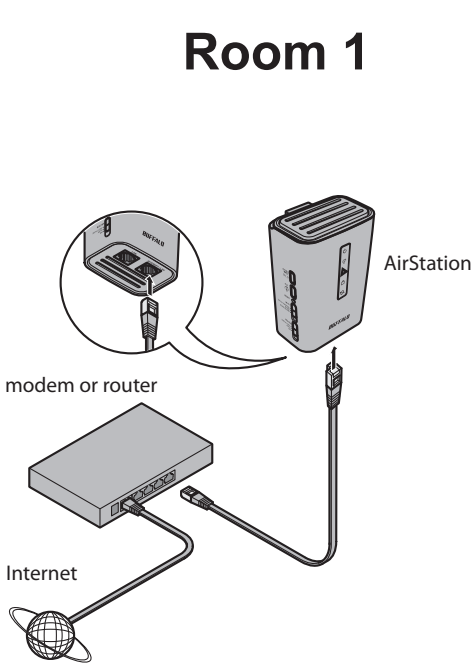
Starter Kit Installation Procedure

To configure Starter Kit, follow the procedure below.



1 Check that connection to the Internet is possible without using the AirStation. Then, turn off the modem or router.

2



Connect one end of the LAN cable to the modem or router, and connect the other end to the Internet port of the AirStation.
Turn on the modem or router.

3 Connect the AirStation to the power outlet.

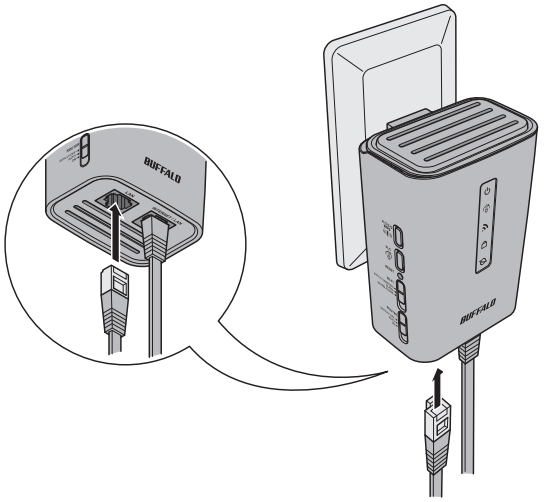
4 Once the AirStation is turned on, check that the LEDs appear as shown below:

Power	Green LED on.
PLC	Off
Wireless	Green LED on or blinking.
Router	Off

For LED locations, refer to chapter 1.

5

Room 1



AirStation

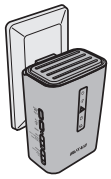
Connect the AirStation to your computer or TV. If using a wired connection, connect the AirStation LAN port to your computer or TV with a LAN cable.
If connecting to your computer with a wireless connection, see Chapter 4.

6 Start your browser. If the home screen is displayed, setup for the first AirStation is complete.

Note:
- If the home screen is not displayed, check that the AirStation and computer are connected correctly. If the AirStation and computer are connected correctly, disconnect the AirStation from the power outlet, set the Router switch to ON, and then reconnect to the power outlet.
- After waiting one minute, start your browser. If the home screen is displayed, setup for the first AirStation is complete. If the screen for entering the user name and password is displayed without showing the home screen, follow the on-screen instructions to complete the settings.

7

Room 2



AirStation

Bring the other AirStation to the location where you want to install it and connect it to the power outlet.

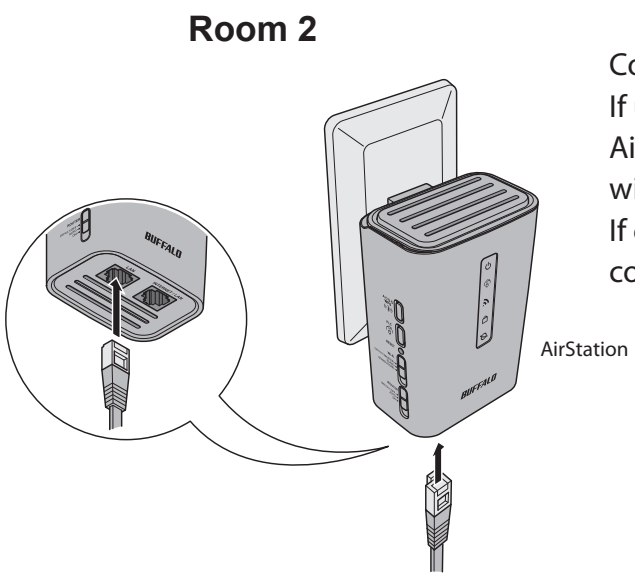
8 Check that the LEDs appear as shown below when the AirStation power is turned on.

Power	Green LED on.
PLC	Green LED on.
Wireless	Green LED on or blinking.
Router	Off

For LED locations, refer to chapter 1.

Note: If the PLC LED does not turn on even after waiting one minute, install near the first AirStation that was installed in step 3.

9



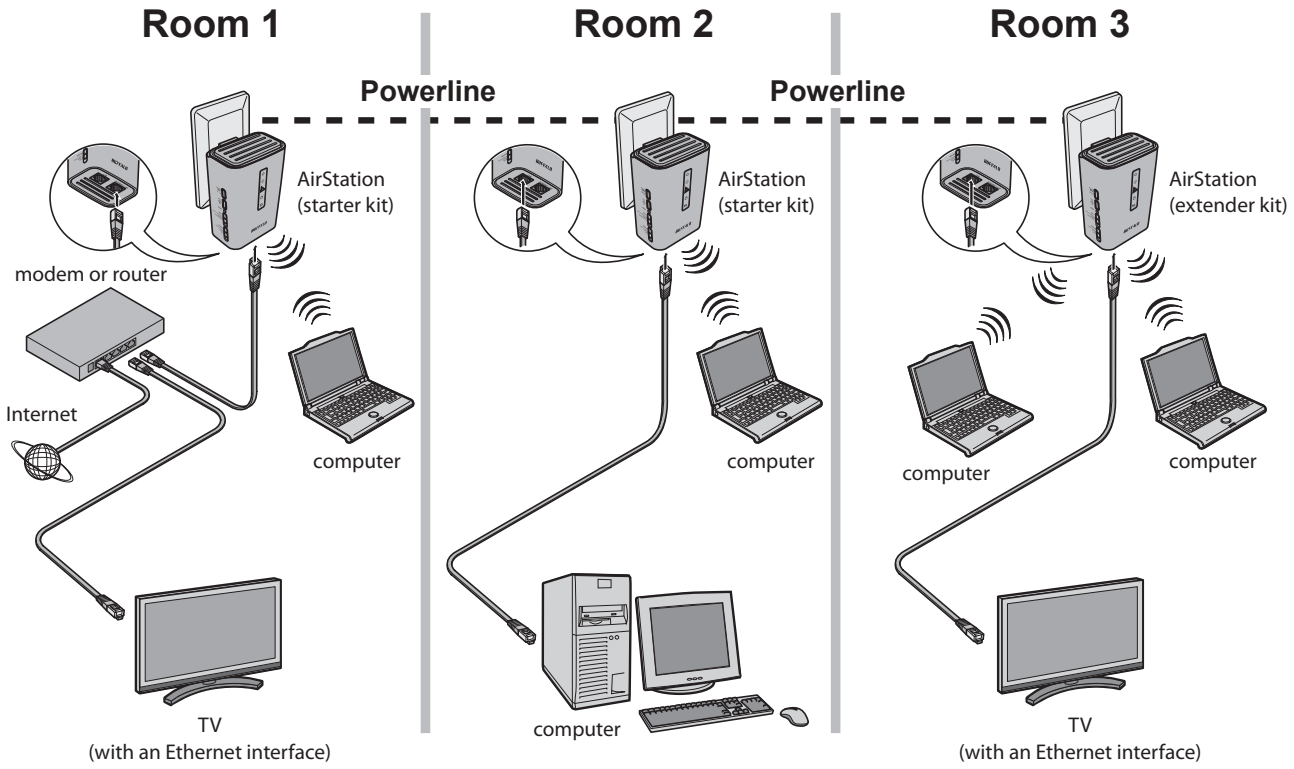
Connect the AirStation to your computer or TV. If using a wired connection, connect the AirStation LAN port to your computer or TV with a LAN cable.
If connecting to your computer with a wireless connection, see Chapter 4.

10 Start your browser. If the home screen is displayed, setup for the second AirStation is complete.

Note: If the home screen is not displayed, check that the AirStation and computer are connected correctly.

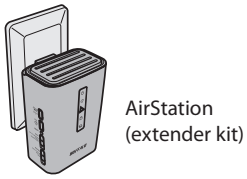
Extender Kit Installation Procedure

To configure the Extender Kit, follow the procedure below.



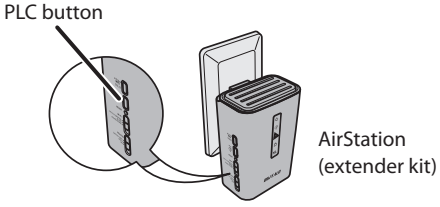
1 **Room 3**

Bring the AirStation to the location where you want to install it and connect it to the power outlet.



2 **Room 3**

Hold down the PLC button of the AirStation over 10 seconds when the AirStation power is turned on.

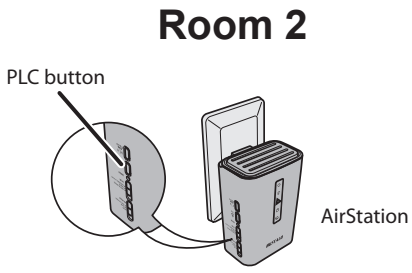


3 Check that the LEDs appear as shown below.

Power	Green LED on.
PLC	Off
Wireless	Green LED on or blinking.
Router	Off

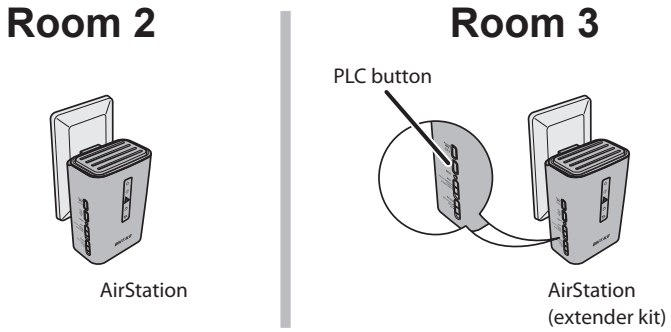
For LED locations, refer to chapter 1.

4



Hold down the PLC button of the AirStation that is already installed until the Power LED starts blinking green (about one second).

5



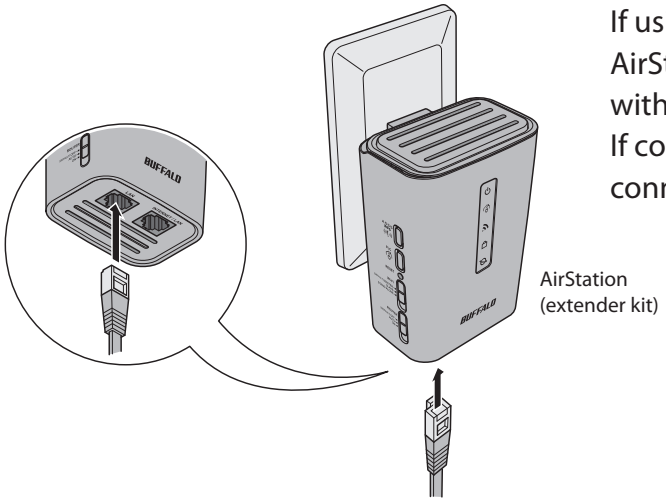
Within 2 minutes, hold down the PLC button of the AirStation that was installed in step 1 until the Power LED starts blinking green (about one second).

6 Check that the PLC LED changes to steady green after about 1 minutes.

Note: If the PLC LED does not turn steady green after about one minute, perform the setup procedure again from the beginning.

7

Room 3



AirStation
(extender kit)

Connect the AirStation to your computer or TV. If using a wired connection, connect the AirStation LAN port to your computer or TV with a LAN cable.
If connecting to your computer with a wireless connection, see Chapter 4.

8 Start your browser. If the home screen is displayed, setup for the AirStation is complete.

Note: If the home screen is not displayed, check that the AirStation and computer are connected correctly.

Chapter 3 - Configuration

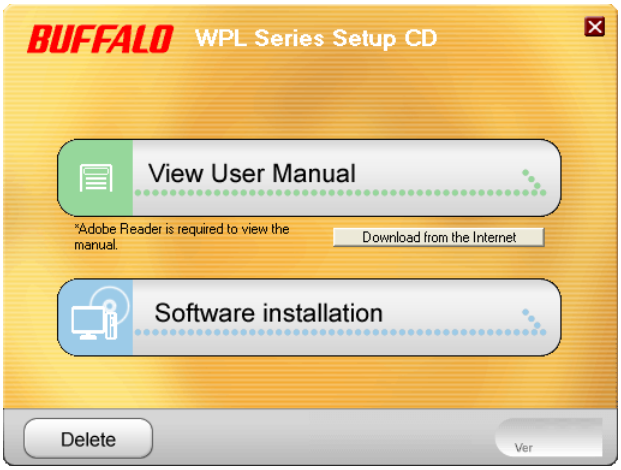
The web-based configuration tool lets you change advanced settings for the AirStation. Don't change these settings unless you know what you're doing.

Installing the AirStation Configuration Tool (Windows)

The AirStation Configuration Tool is required to display the AirStation Configuration Interface in a Windows computer. Use the procedure below to perform the installation.

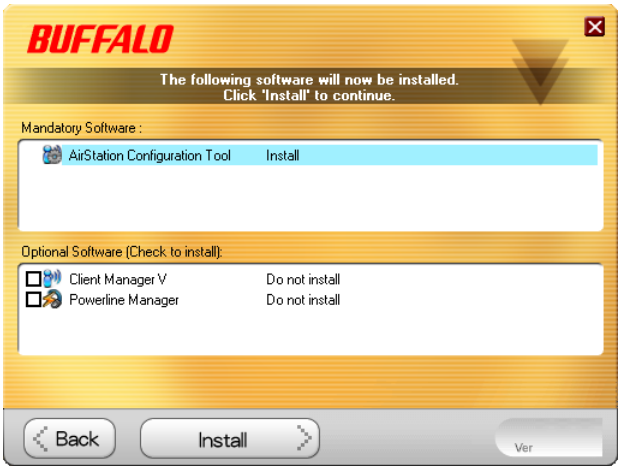
1 Load the Setup CD into your computer.

2



Click [Software Installation].

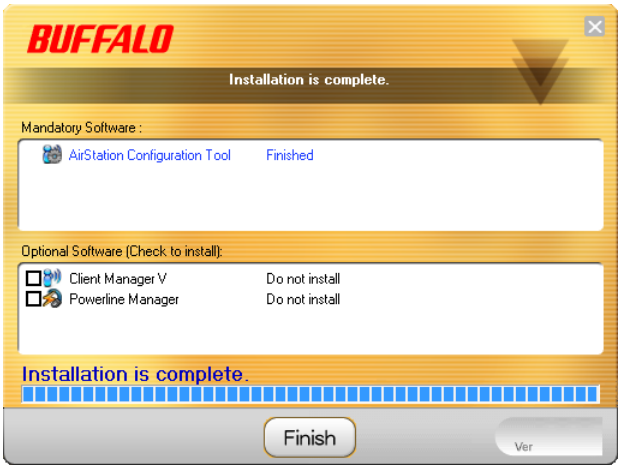
3



Click [Install].

4 Follow the on-screen instructions to install the AirStation Configuration Tool.

5



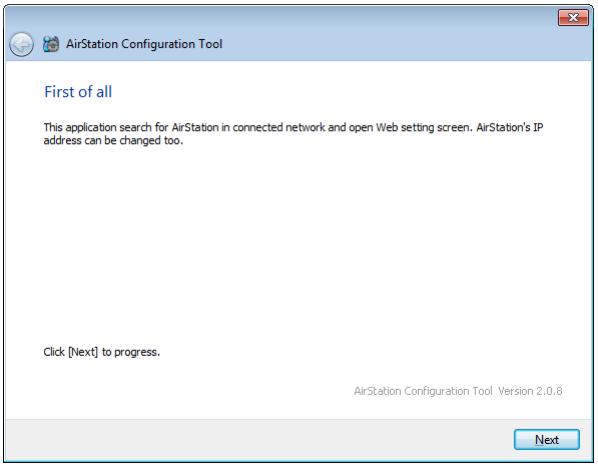
After installation is completed, click [Finish].

Setting the AirStation IP Address (Windows)

The AirStation Configuration Tool can be used to change the IP address of the AirStation. If using a Windows computer, follow the procedure below to set the AirStation IP address.

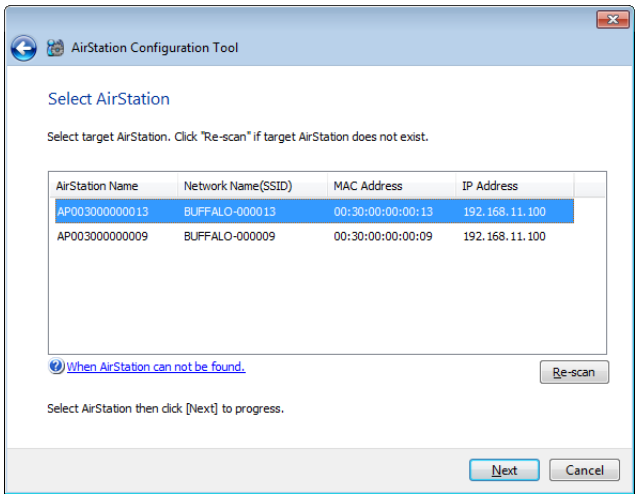
1 Click [Start] > [All Programs] > [BUFFALO] > [AirStation Utility] > [AirStation Configuration Tool].

2



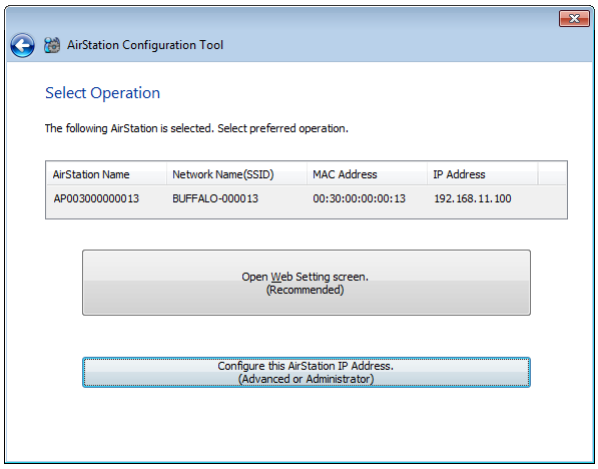
Click [Next].

3



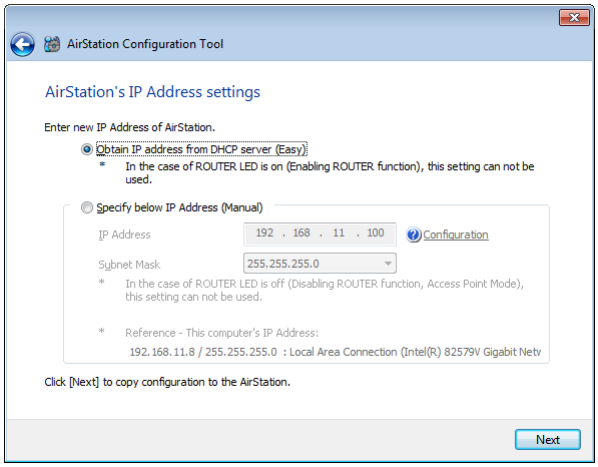
Select the AirStation displayed in the list, and click [Next].

4



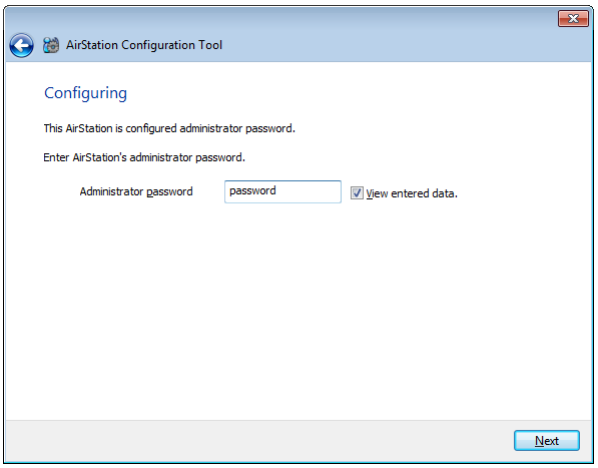
Click [Configure this AirStation IP Address].

5



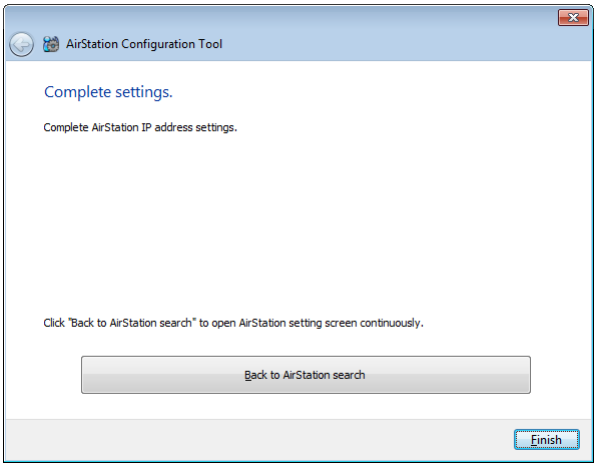
Select "Obtain IP address from DHCP server (Easy)", and click [Next].

6



Enter "password" for the administrator password, and click [Next].

7



The new IP address is set to the AirStation. Once the settings are complete, the "Complete settings" screen is displayed. Click [Finish].

Setting the AirStation IP Address (Mac OS X)

The AirStation Configuration Tool can be used to change the IP address of the AirStation. If using a Mac, follow the procedure below to set the AirStation IP address.

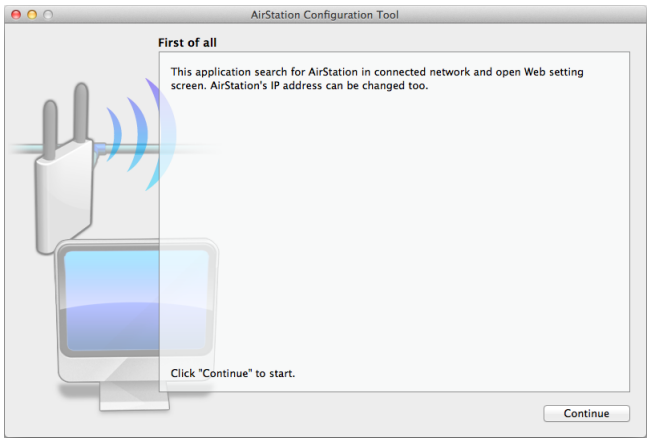
1 Load the Setup CD into your Mac.

2 From the menu bar, click [Go] > [Computer].

3 Double-click the CD icon, and then double-click [AirStation Configuration Tools] in the "Mac" folder.

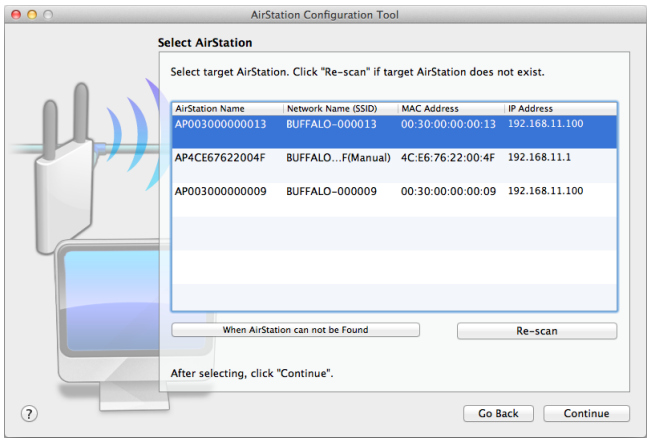
4 The software license screen is displayed. Click [Agree] to proceed.

5



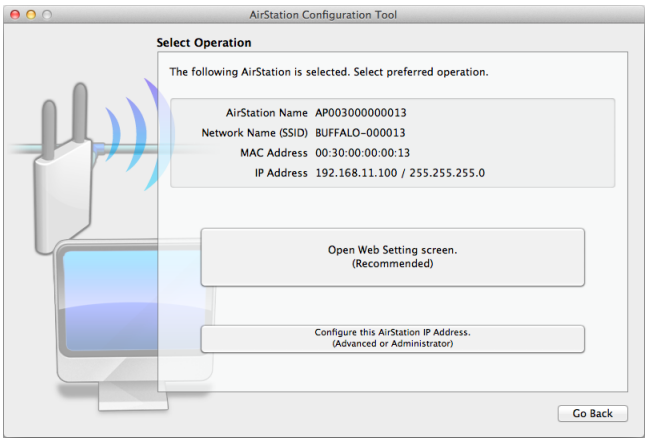
Click [Continue].

6



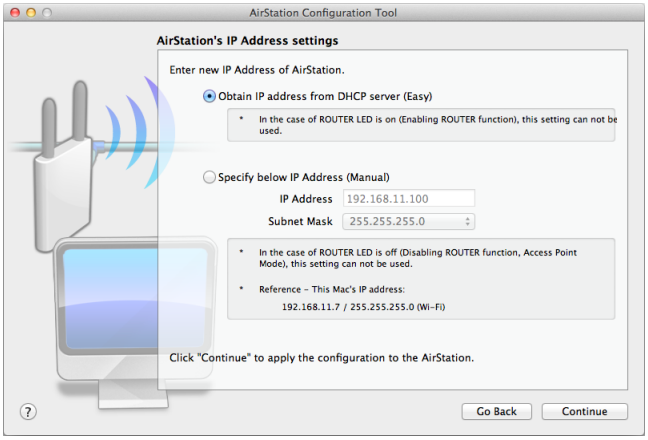
Select the AirStation displayed in the list, and click [Continue].

7



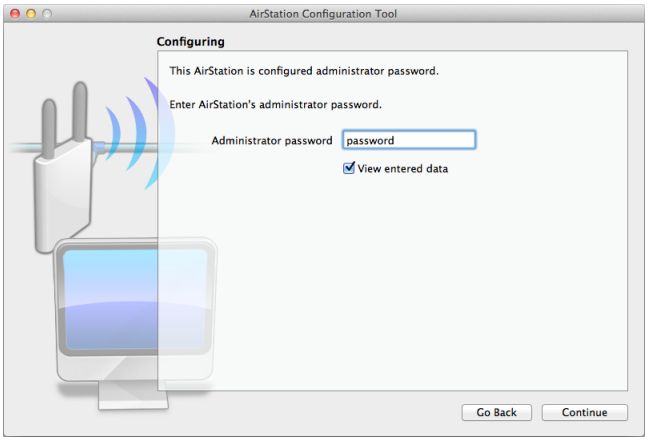
Click [Configure this AirStation IP Address].

8



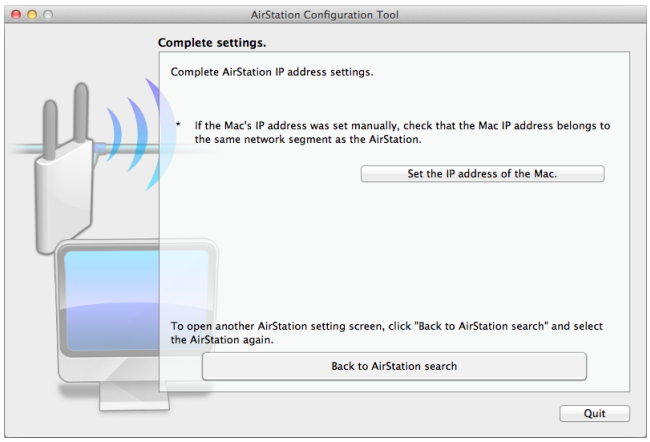
Select "Obtain IP address from DHCP server (Easy)", and click [Continue].

9



Enter "password" for the administrator password, and click [Continue].

10



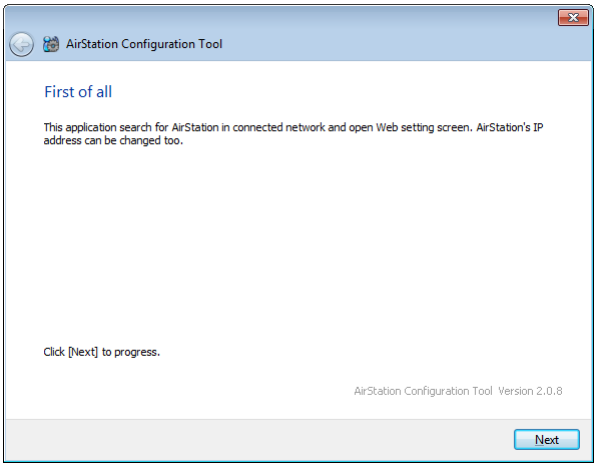
The new IP address is set to the AirStation. Once the settings are complete, the “Complete settings” screen is displayed. Click [Quit].

Accessing the Web-based Configuration Interface (Windows)

To manually set the AirStation advanced settings from a Windows computer, use the procedure below to log into the AirStation Configuration interface.

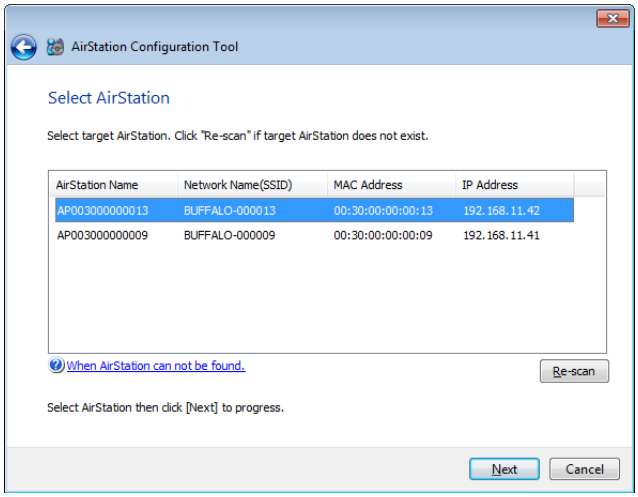
1 Click [Start] > [All Programs] > [BUFFALO] > [AirStation Utility] > [AirStation Configuration Tool].

2



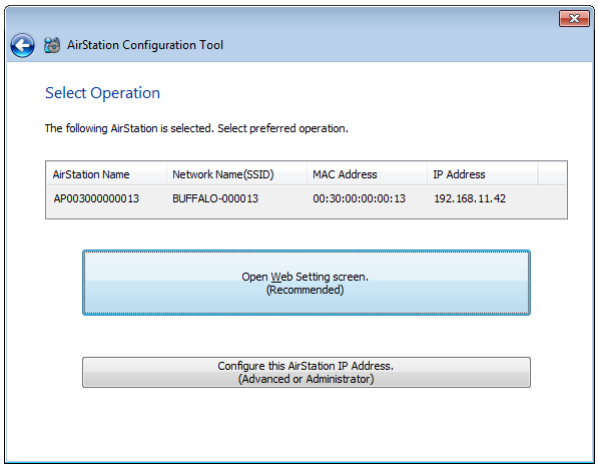
Click [Next].

3



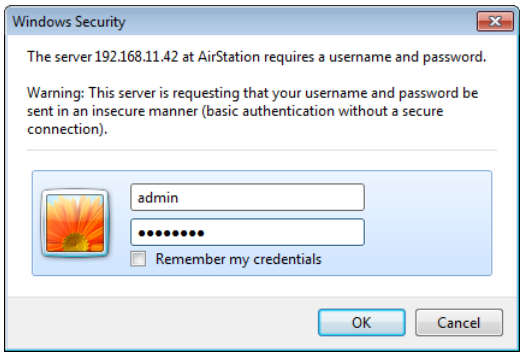
Select the AirStation displayed in the list, and click [Next].

4



Click [Open Web Setting screen].

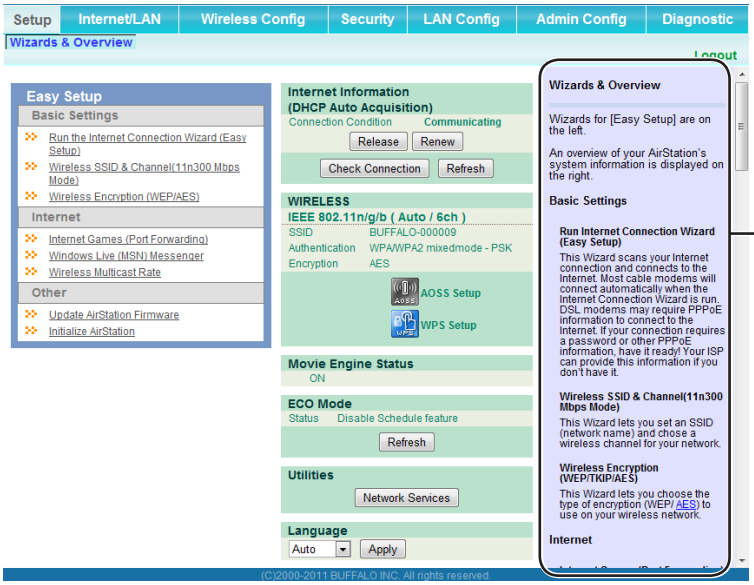
5



Enter "admin" for the user name and "password" for the password, and click [OK].

Note:
- The default password is "password".
- If you forget your password, hold down the reset button (page 10) to initialize all settings.

6



This is the configuration interface, where most AirStation settings can be configured.

Help is always displayed on the right side of each screen. Refer to the Help screens for more information on using the configuration interface.

Once the settings are complete, the "Complete settings" screen is displayed. Click [Finish].

Accessing the Web-based Configuration Interface (Mac OS X)

To manually set the AirStation advanced settings from a Mac, use the procedure below to log into the AirStation Configuration interface.

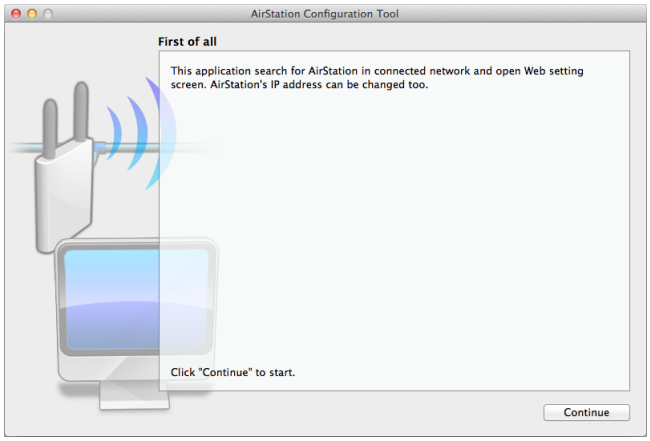
1 Load the Setup CD into your Mac.

2 From the menu bar, click [Go] > [Computer].

3 Double-click the CD icon, and then double-click [AirStation Configuration Tools] in the "Mac" folder.

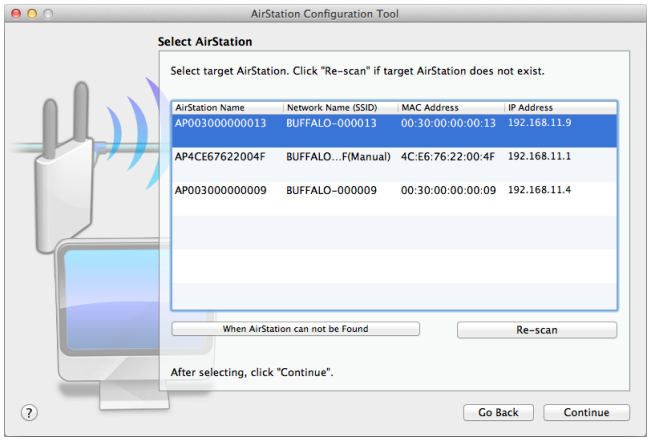
4 The software license screen is displayed. Click [Agree] to proceed.

5



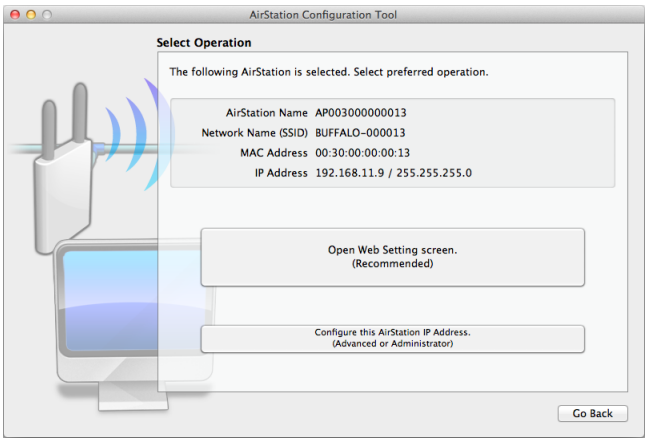
Click [Continue].

6



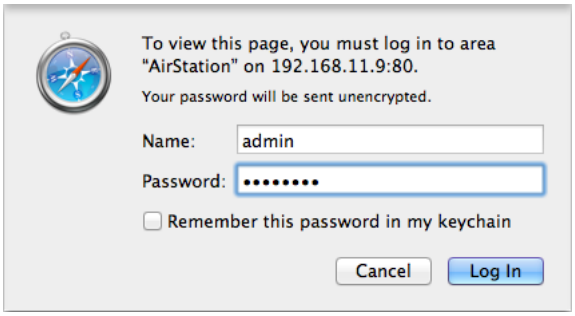
Select the AirStation displayed in the list, and click [Continue].

7



Click [Open Web Setting screen].

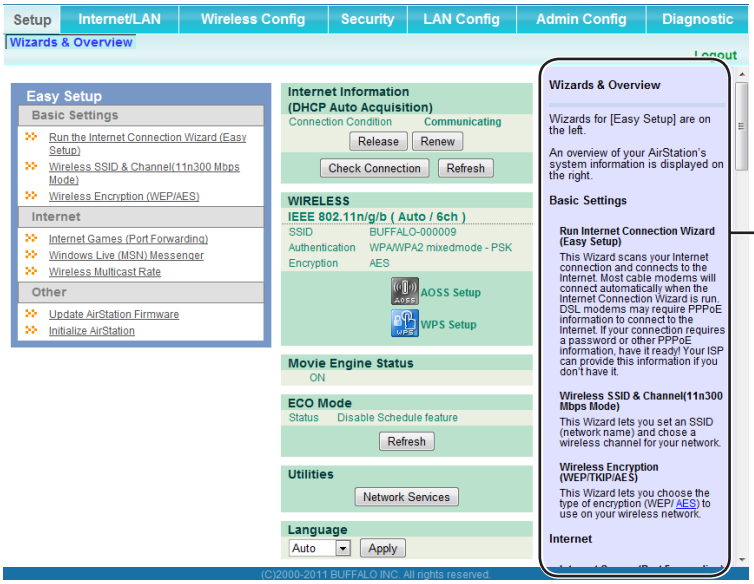
8



Enter "admin" for the name and "password" for the password, and click [Log In].

Note:
- The default password is "password".
- If you forget your password, hold down the reset button (page 10) to initialize all settings.

9



This is the configuration interface, where most AirStation settings can be configured.

Help is always displayed on the right side of each screen. Refer to the Help screens for more information on using the configuration interface.

Once the settings are complete, the "Complete settings" screen is displayed. Click [Quit].

Configuration Interface Menus in Router Mode

The menu structure for the AirStation in router mode is as follows. 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 36
PPPoE	PPPoE settings (DSL login).	Page 37
DDNS	DNS settings.	Page 40
VPN Server	VPN server settings.	Page 42
PLC	Configure PLC settings.	Page 44
LAN	LAN side port configuration.	Page 45
DHCP Lease	DHCP lease settings.	Page 47
NAT	Network address translation settings, used to connect LAN side devices to the Internet.	Page 48
Route	Configure the AirStation's IP communication route.	Page 49
Wireless Config		
WPS	WPS settings and status.	Page 50
Basic	Configure basic wireless settings.	Page 51
Advanced	Configure advanced wireless settings.	Page 54
WMM	Set priorities for Wireless Multimedia Extensions (Wi-Fi Multimedia).	Page 55
MAC Filter	Limit access to specific devices.	Page 57
Multicast Control	Configure limits on sending unnecessary multicast packets to the wireless LAN port.	Page 58
AOSS	AOSS (AirStation One-touch Secure System) settings and status.	Page 59
Security		
Firewall	Protect your computer from outside intruders.	Page 61
IP Filter	IP filters for packets passing through the LAN side and the Internet side.	Page 63
VPN Passthrough	Configure IPv6 passthrough, PPPoE passthrough, and PPTP passthrough.	Page 64
LAN Config		
Port Forwarding	Configure port translation and exceptions for games and other programs.	Page 65
DMZ	Configure a destination to transfer communication packets without a LAN side destination.	Page 66
UPnP	Configure UPnP (Universal Plug and Play).	Page 67

QoS	Configure priority for packets that require a guaranteed data flow.	Page 68
Movie Engine	Configure options for the Movie Engine feature.	Page 69
Admin Config		
Name	Configure the AirStation's name.	Page 71
Password	Configure the AirStation's login password for access to the configuration interface.	Page 72
Time/Date	Configure the AirStation's internal clock.	Page 73
NTP	Configure the AirStation to synchronize with an NTP server to automatically set the AirStation's internal clock.	Page 74
ECO	Configure the AirStation's ECO Mode.	Page 75
Access	Configure access restrictions to the AirStation's configuration interface.	Page 77
Log	Configure a syslog server to manage the AirStation's logs.	Page 78
Save/Restore	Save or restore the AirStation's configuration from a configuration file.	Page 79
Initialize/Restart	Initialize the AirStation or reboot it.	Page 80
Update	Update the AirStation's firmware.	Page 81
Diagnostic		
System Info	View current system information for the AirStation.	Page 83
Logs	Check the AirStation's logs.	Page 85
Packet Info	View all packets transferred by the AirStation.	Page 86
Client Monitor	View all devices currently connected to the AirStation.	Page 87
Ping	Test the AirStation's connection to other devices on the network.	Page 88
Logout		
Click this to log out of the AirStation's configuration interface.		

Configuration Interface Menus in Bridge Mode

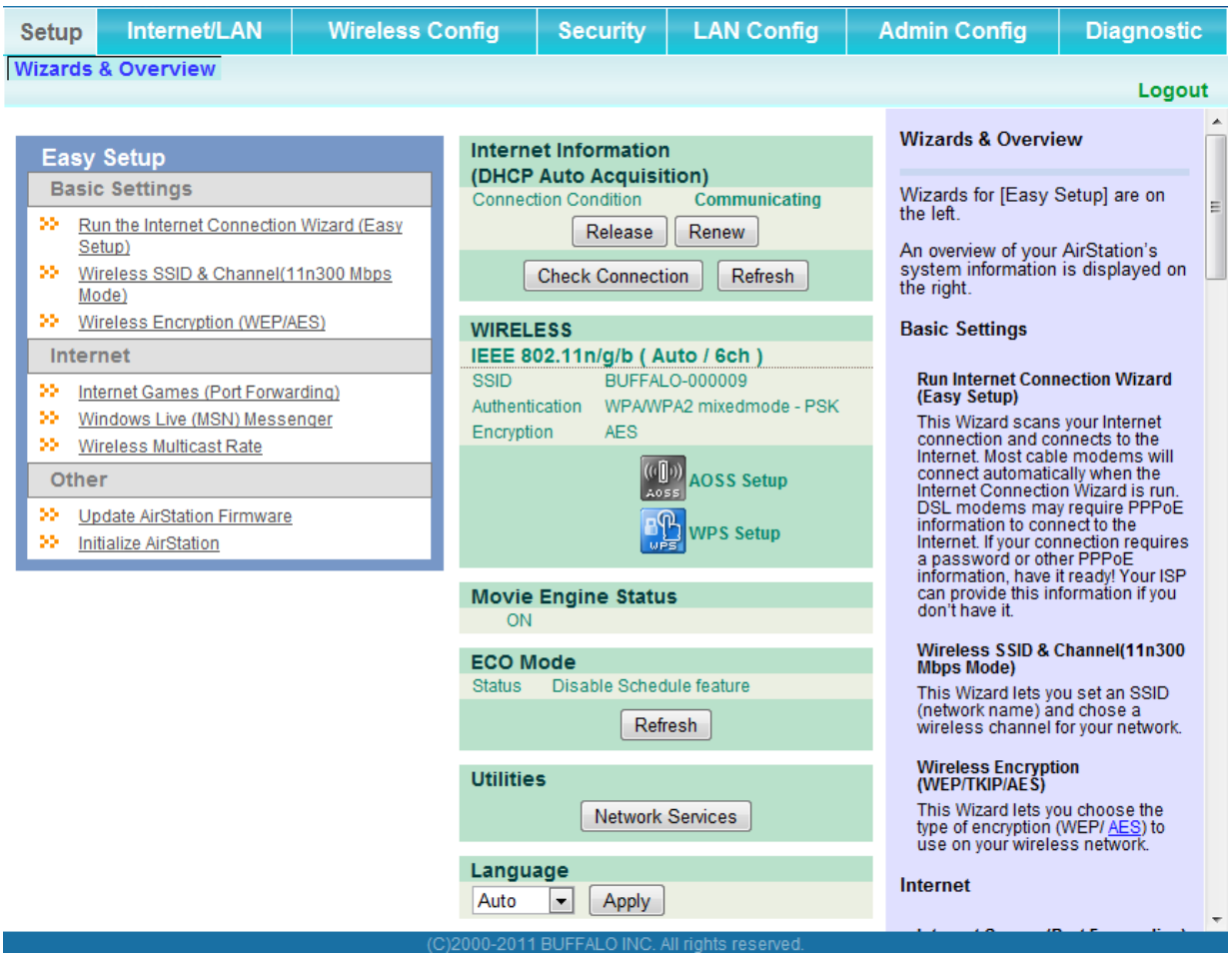
The menu structure in bridge mode is as follows. Please refer to the pages listed at right for explanations of each item.

Main screen	Descriptions	Page
LAN Config		
PLC	Configure PLC settings.	Page 44
LAN	Configure LAN side ports and devices.	Page 45
Route	Configure the AirStation's IP communication route.	Page 49
Wireless Config		
WPS	WPS settings and status.	Page 50
Basic	Configure basic wireless settings.	Page 51
Advanced	Configure advanced wireless settings.	Page 54
WMM	Set priorities for Wireless Multimedia Extensions (Wi-Fi Multimedia).	Page 55
MAC Filter	Limit access to specific devices.	Page 57
Multicast Control	Configure limits on sending unnecessary multicast packets to the wireless LAN port.	Page 58
AOSS	AOSS (AirStation One-touch Secure System) settings and status.	Page 59
QoS		
Movie Engine	Configure options for the Movie Engine feature.	Page 69
Admin Config		
Name	Configure the AirStation's name.	Page 71
Password	Configure the AirStation's login password for access to configuration interface.	Page 72
Time/Date	Configure the AirStation's internal clock.	Page 73
NTP	Configure the AirStation to synchronize with an NTP server to automatically set the AirStation's internal clock.	Page 74
ECO	Configure ECO Mode.	Page 75
Access	Configure access restrictions to the AirStation's configuration interface.	Page 77
Log	Check the AirStation's logs.	Page 78
Save/Restore	Save or restore the AirStation's configuration from a configuration file.	Page 79
Initialize/Restart	Initialize the AirStation or reboot it.	Page 80
Update	Update the AirStation's firmware.	Page 81

Diagnostic		
System Info	View current system information for the AirStation.	Page 83
Logs	Check the AirStation's logs.	Page 85
Packet Info	View all packets transferred by the AirStation.	Page 86
Client Monitor	View all devices currently connected to the AirStation.	Page 87
Ping	Test the AirStation's connection to other devices on the network.	Page 88
Logout		
Click this to log out of the AirStation's configuration interface.		

Setup

Setup is the home page of the configuration interface. You can verify settings and the status of the AirStation here.



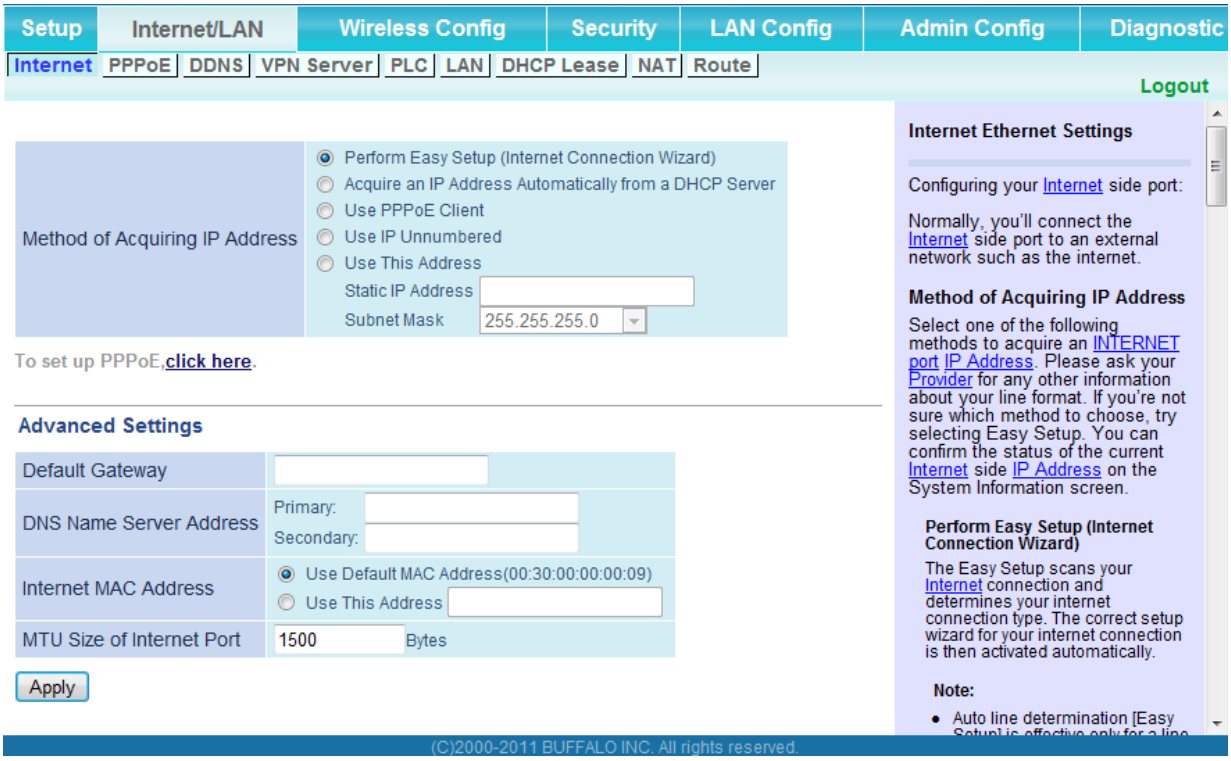
Parameter	Meaning
Internet/LAN (LAN Config)	Displays the configuration screen for the Internet port and LAN ports.
Wireless Config	Click this button to display the configuration screen for wireless settings.
Security	Click this button to display the configuration screen for security.
LAN Config	Click 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 for administration settings.
Diagnostic	Click this button to display the status of the AirStation.
Easy Setup	Enables you to easily configure the AirStation's network settings automatically.
MODE Information	This indicates the operation mode of the AirStation.
Internet Information	Displays WAN-side system information for the AirStation.
Check Connection	Click this button to check if the AirStation is connected to the Internet properly.
Refresh	Click this button to refresh the current screen.
WIRELESS	Displays the current wireless settings.
AOSS Setup	Click this button to display the AOSS configuration screen.
WPS Setup	Click this button to display the WPS configuration screen.
Movie Engine Status	Displays the current Movie Engine Status.
ECO Mode	This indicates the operating status of ECO Mode.
Network Services	Displays the list of the network devices for which information is provided from the network on the LAN-side.
Language	Enables you to select the language you use.
Logout	Log out of the configuration interface. If the AirStation does not communicate for 5 minutes, it will log out automatically.

Internet/LAN (LAN Config)

Internet (Router Mode only)

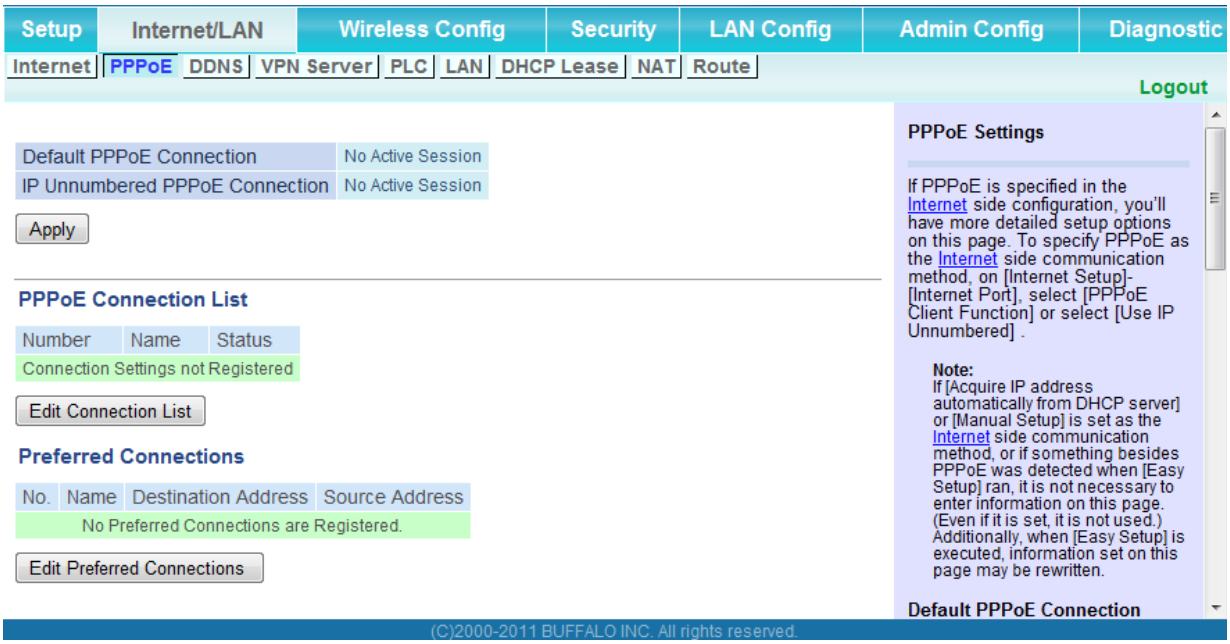
Configure the WAN-side port (“Internet port”).



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

PPPoE (Router Mode only)

Configure PPPoE settings.



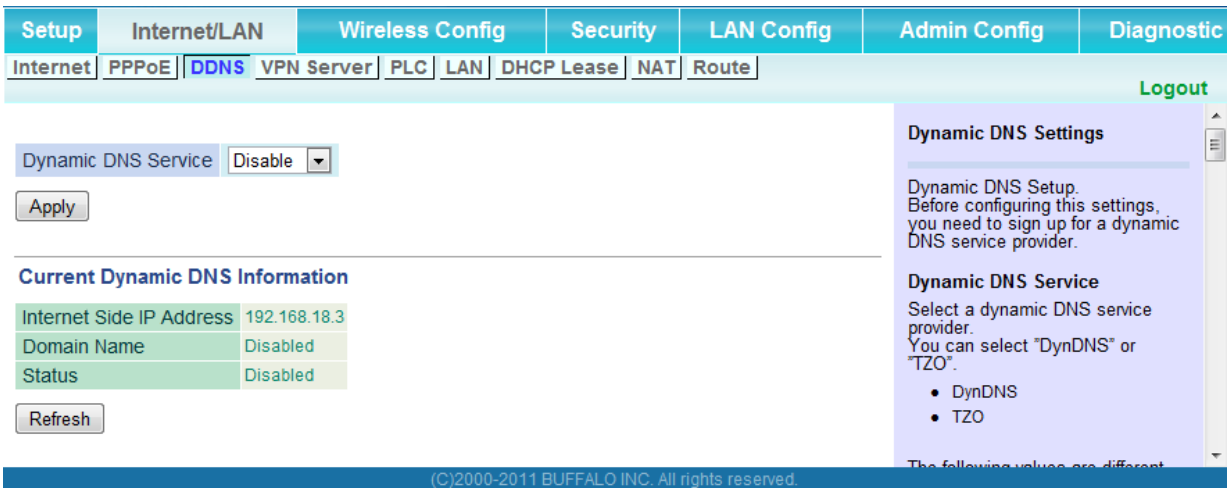
Parameter	Meaning
Default PPPoE Connection	If you have registered multiple connection destinations in the PPPoE Connection List, connection destinations selected here have priority. You need to configure the route to which PPPoE is connected to if you don't use the default settings.
IP Unnumbered PPPoE Connection	Select the destination from the PPPoE Connection List which is used when "Use IP Unnumbered" is chosen for the Method of Acquiring IP Address (page 36).
PPPoE Connection List	Edit PPPoE destination. You can register up to 5 sessions.
[Edit Connection List]	Click this button to edit destination settings.

Parameter	Meaning
PPPoE Connection No.*-Add	This is displayed when [Edit Connection List] is clicked. **Name of Connection** Enter the name to identify the connected destination. You may enter up to 32 alphanumerical characters and symbols. **Username** Enter the username specified by your ISP for PPPoE certification. You may enter up to 32 alphanumerical characters and symbols. **Password** Enter the password specified by your ISP for PPPoE certification. You may enter up to 32 alphanumerical characters and symbols. **Service Name** Fill in this field only if your ISP specifies a Service Name. Leave blank otherwise. You may enter up to 32 alphanumerical characters and symbols. **Connection Type** Specifies the timing for the AirStation to connect to your provider. **Automatic disconnection** Set time to disconnect after communication is stopped when the connection method is set to [Connect on Demand] or [Manual]. You can enter up to 1440 minutes. **Authorization** Configure an authorization method with a provider. **MTU Size** Configure the MTU size for PPPoE. Values of 578 to 1500 bytes may be entered. **MRU Size** Configure MRU (Maximum Receive Unit) for PPPoE. Values of 578 to 1492 may be entered.

Parameter	Meaning
PPPoE Connection No. *-Add	**Keep Alive** If Keep Alive is enabled, then the AirStation will issue an LCP echo request once a minute in order to maintain the connection with the PPPoE. If the server does not respond for more than 6 minutes, the line is recognized as disconnected and the AirStation will terminate the connection. [Disabled] is the recommended setting.
Preferred Connections	Displays information you have set regarding to the connection destination route.
[Edit Preferred Connections]	Click to edit the connection destination route settings.
Preferred PPPoE Connection -Add	Click [Edit Preferred Connections] to display. **Name** The destination to connect by PPPoE if [Destination address] and [Source address] match. Select the destination registered to the PPPoE Connection List. **Destination address** When communicating to this address, the AirStation will communicate with [Name of Connection.] **Source address** When communicating from this address, the AirStation will communicate with [Name of Connection.]

DDNS (Router Mode only)

Configure Dynamic DNS settings. Many settings are only available when the appropriate Dynamic DNS service is enabled.

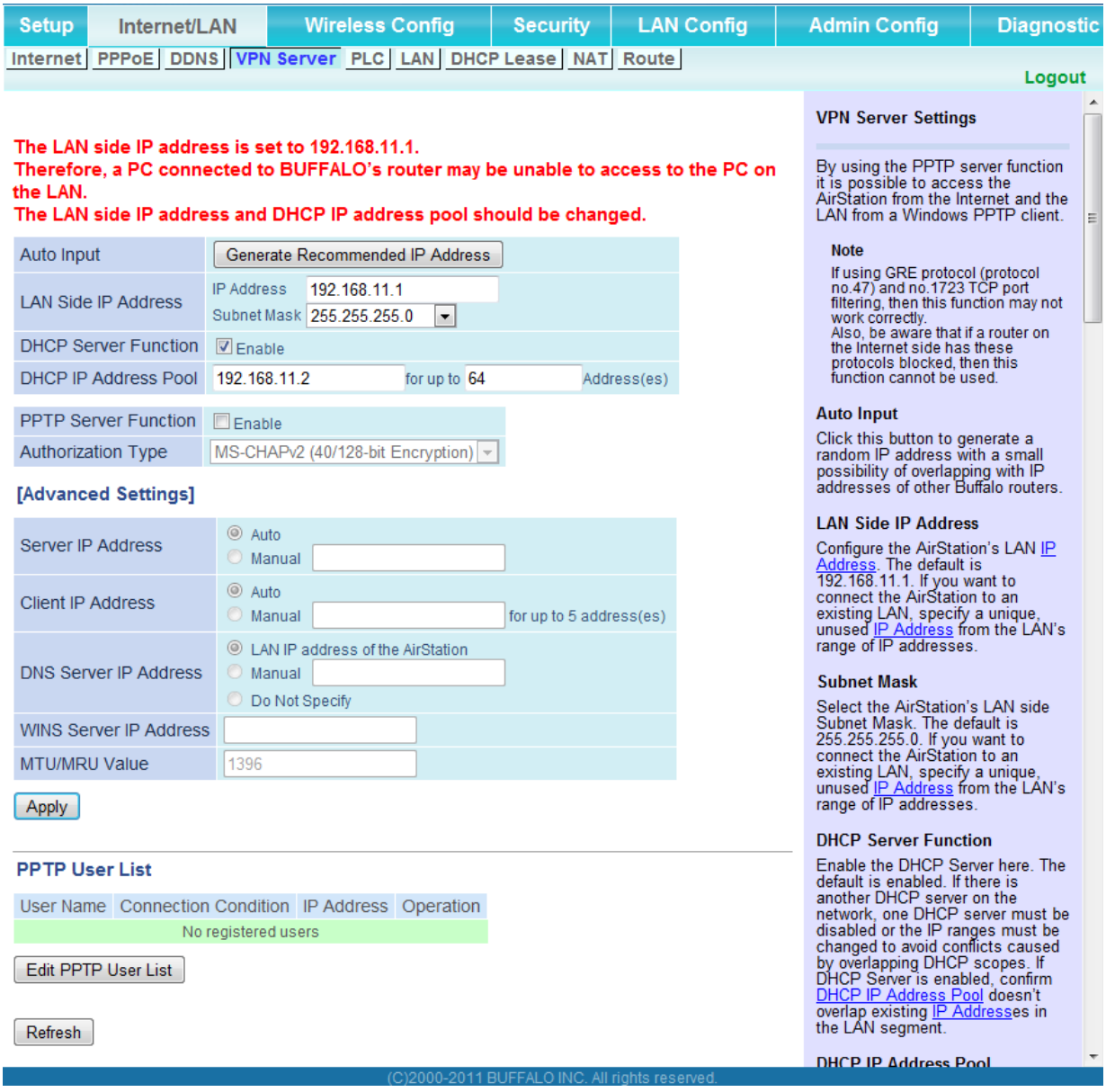


Parameter	Meaning
Dynamic DNS Service	Select a provider (DynDNS or TZO) for Dynamic DNS.
Username	Enter the Dynamic DNS username. You may enter up to 64 alphanumerical characters and symbols.
Password	Enter the Dynamic DNS password. You may enter up to 64 alphanumerical characters and symbols.
Hostname	Enter the Dynamic DNS hostname. You may enter up to 255 alphanumerical characters, hyphens, and periods.
Email Address	Enter the email address which is registered to the Dynamic DNS service. You may enter up to 64 alphanumerical characters and symbols.
TZO Key	Enter the TZO Key which is registered to the Dynamic DNS service. You may enter up to 64 alphanumerical characters and symbols.
Domain Name	Enter the domain name which is registered to the Dynamic DNS service. You may enter up to 255 alphanumerical characters, hyphens, and periods.

Parameter	Meaning
IP Address Update Period	Specifies the period to notify the dynamic DNS service provider of the current IP address. For DynDNS, set it between 0 and 35 days. For TZO, set it between 0 and 99 days. If 0 (zero) days 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.

VPN server (Router Mode Only)

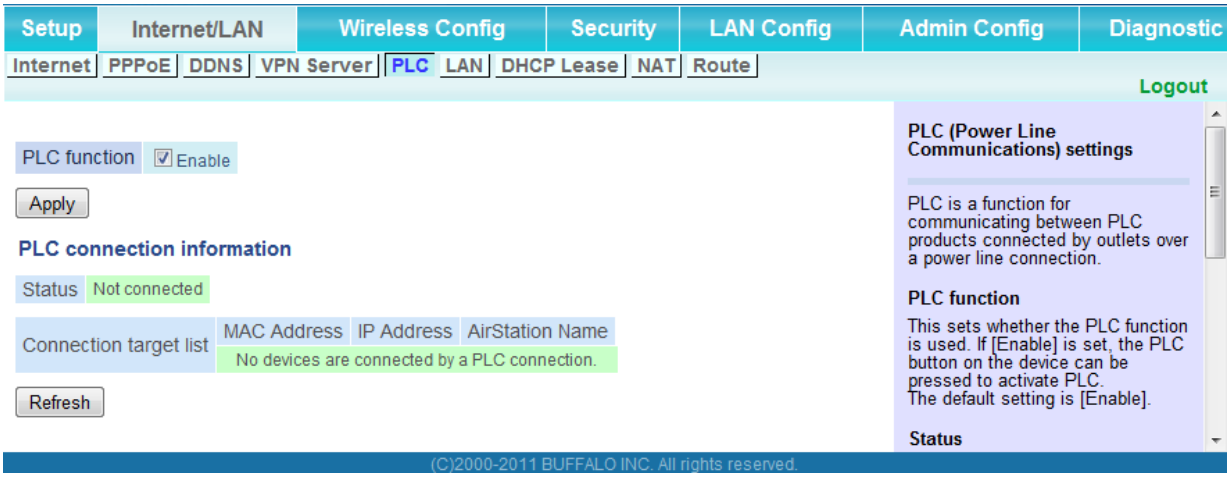
Configure the VPN server.



Parameter	Meaning
Auto Input	Click to generate a random IP address.
LAN Side IP Address	Set a LAN side IP address and subnet mask.
DHCP Server Function	Enable or disable the DHCP server, which assigns IP addresses automatically.
DHCP IP Address Pool	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.
PPTP Server Function	Enable to use a PPTP server.
Authorization Type	Select the authentication method for PPTP connection.
Server IP Address	Select the server IP address.
Client IP Address	Select the IP address range.
DNS Server IP Address	Choose the IP address for the DHCP server.
WINS Server IP Address	Choose the IP address for the WINS server.
[Edit PPTP User List]	Click to edit user information.
Username	Enter the username to connect to the PPTP server. You may enter up to 16 alphanumerical characters and symbols.
Password	Enter the password to connect to the PPTP server. You may enter up to 16 alphanumerical characters and symbols.
Method of Acquiring IP Address	Select the method to be used to assign the IP address is assigned to the PPTP client.
PPTP User List	Displays the PPTP connection user information.

PLC

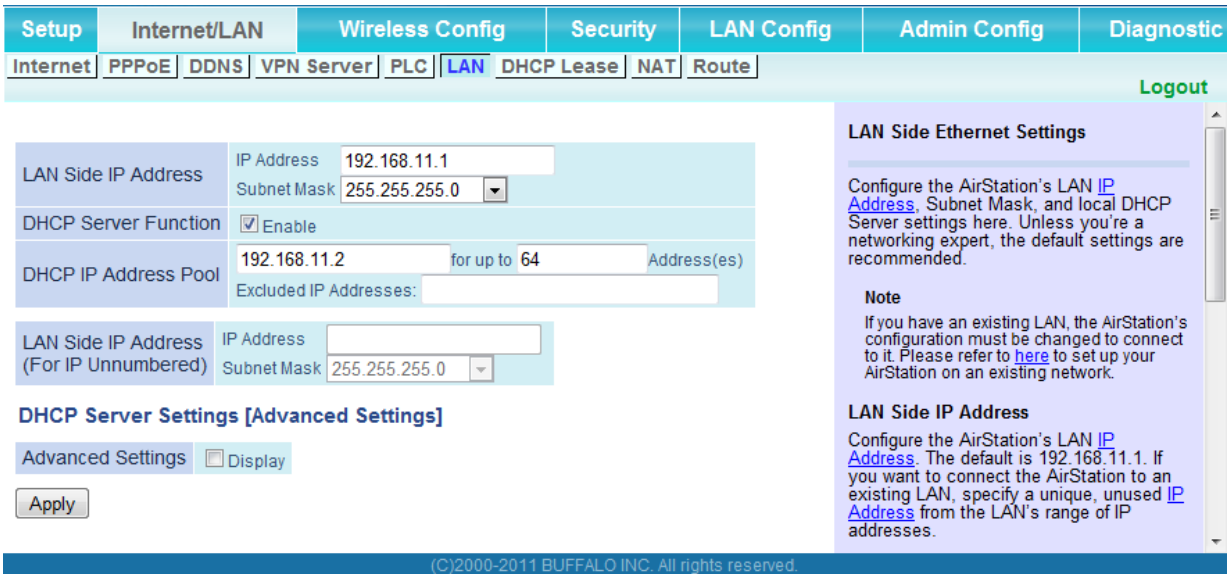
Configure the PLC.



Parameter	Meaning
PLC function	This sets whether the PLC (Powerline Communications) function is used.
Status	This indicates the PLC link status.
Connection target list	This shows the devices connected by this AirStation and PLC.

LAN

Configure LAN-side and DHCP Server settings.

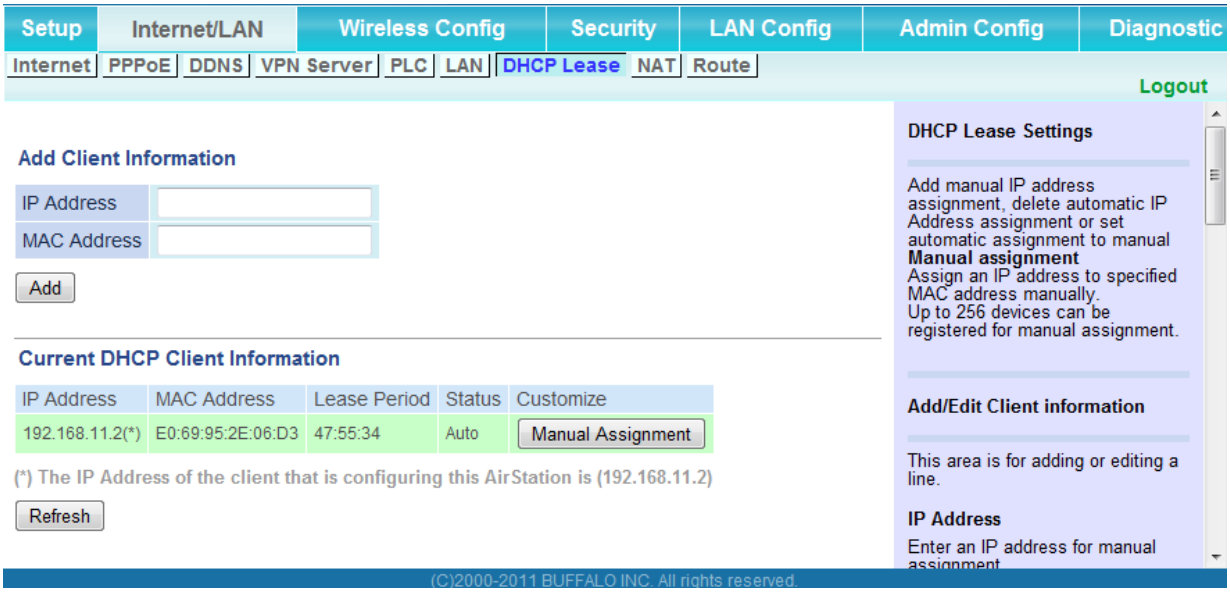


Parameter	Meaning
LAN Side IP Address	By default, the LAN side IP address is 192.168.11.1 with subnet mask 255.255.255.0. You may change it here.
DHCP Server Function	Enable or disable the DHCP server, which assigns LAN-side IP addresses automatically.
DHCP IP Address Pool	Configure the range of IP addresses 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)	Set an IP unnumbered LAN side IP address. Note: A PC with a normal LAN side IP address and a PC with an IP Unnumbered IP address cannot communicate each other.
Advanced Settings	Check [Display] to display DHCP server advanced settings options.
Lease Period	Set the effective period of an IP address assigned by the DHCP server. Up to 999 hours may be entered.
Default Gateway	Set the default gateway IP address for the DHCP server to issue to clients.

Parameter	Meaning
DNS Servers Router Mode only	Set the DNS 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)

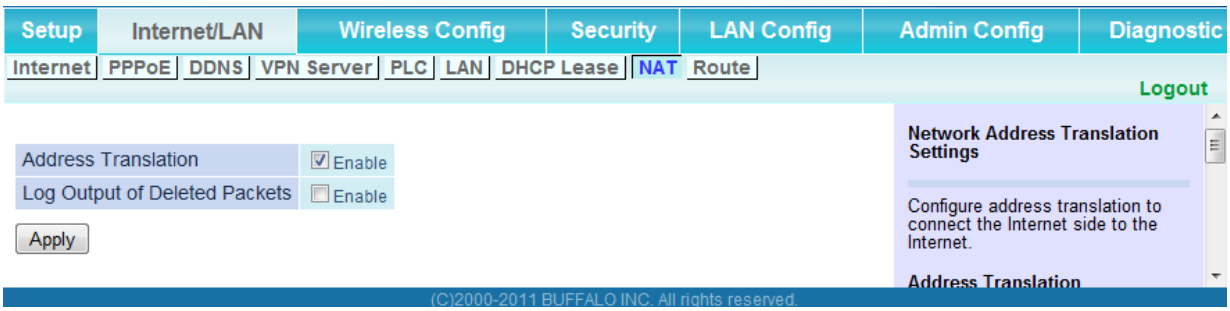
Configure DHCP Exceptions.



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 manual leasing by clicking [Manual Assignment].

NAT (Router Mode only)

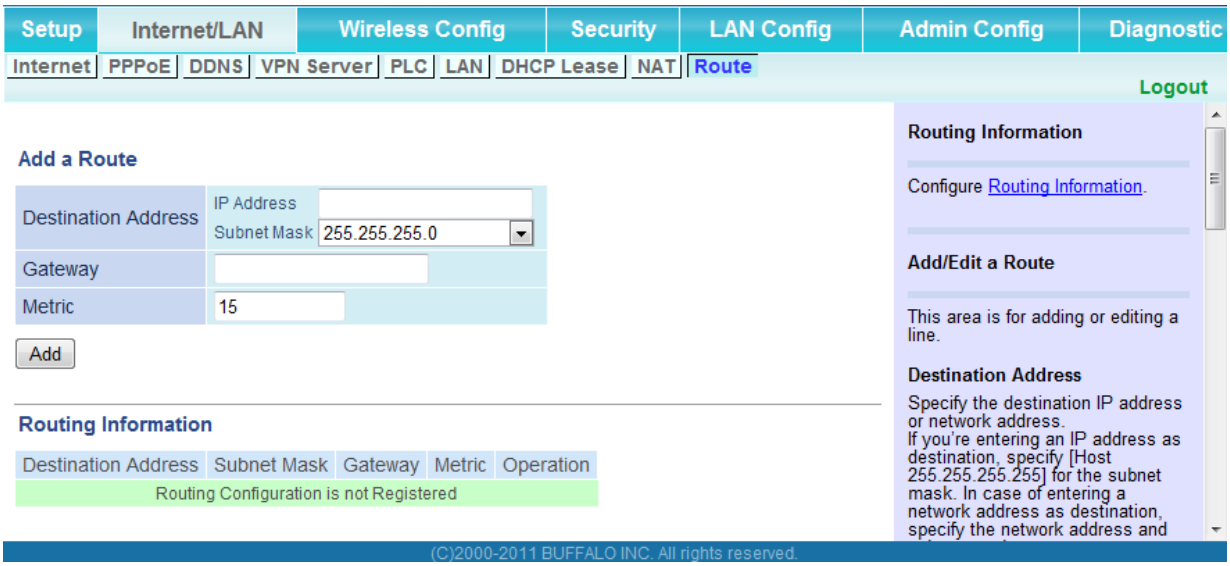
Configure network address translation settings. This enables LAN-side devices to communicate with the Internet.



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

Configure the AirStation's IP communication route.

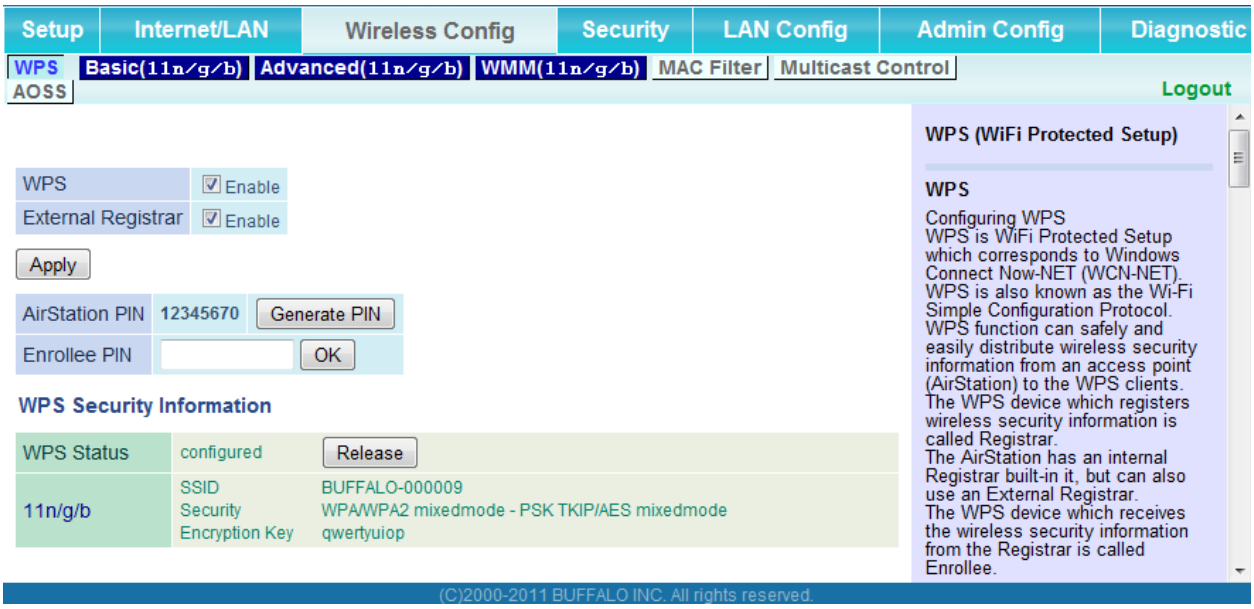


Parameter	Meaning
Destination Address	Adds a destination IP address and subnet mask to a routing table.
Gateway	Adds a gateway address to a routing table.
Metric	The metric is the maximum number of router hops a packet may take on the way to its destination address. Values between 1 and 15 may be entered.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

Wireless Config

WPS

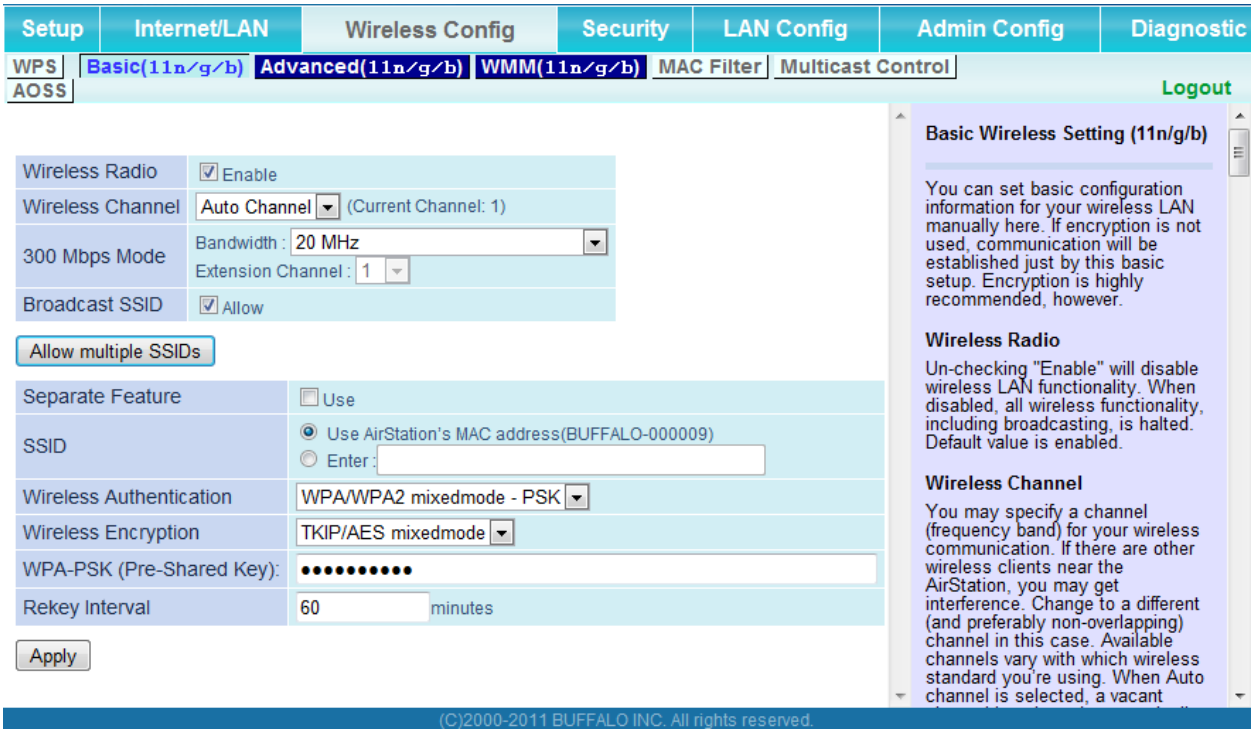
WPS Status and Settings.



Parameter	Meaning
WPS	Enable to use WPS automatic configuration.
External Registrar	Enable to accept configure requests from other WPS devices. Note: 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.

Basic

The screen to configure a basic wireless settings.



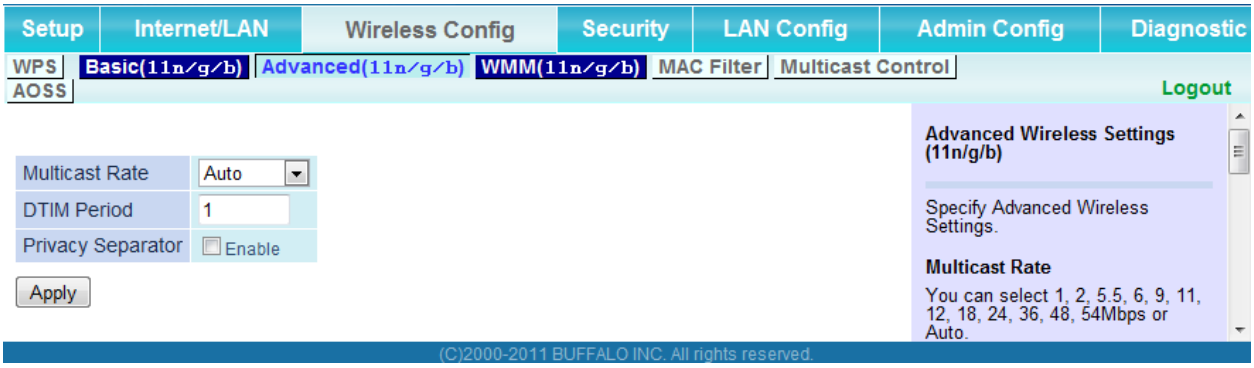
Parameter	Meaning
Wireless Radio	Determines whether to allow wireless communication. If this is unchecked, then no wireless connections will be allowed.
Wireless Channel	Sets a channel (a range of frequencies) for wireless connections. With Auto Channel selected, the AirStation will automatically use the best available channel.
300 Mbps 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 Auto Channel is selected, then the Extension Channel is set automatically.

Parameter	Meaning
Broadcast SSID	If [Allow] is checked, then the AirStation will respond to SSID searches from wireless devices by broadcasting its SSID. If [Allow] is unchecked, then the AirStation ignores SSID searches from wireless devices.
[Allow multiple SSIDs] [Use Single SSID]	Clicking [Allow multiple SSIDs] will enable Multi Security, allowing the use of multiple SSIDs, each with different wireless security settings. Clicking [Use Single SSID] will disable Multi Security. The AirStation will then allow one SSID and one type of wireless security. Note: When using Multi Security, enable at least one of the following: SSID1,or SSID2.
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	When enabled, wireless devices connected to the AirStation can communicate only with the Internet side, not with each other.
SSID	Set SSID using 1 - 32 alphanumeric characters.
Wireless authentication	Specifies an authentication method used when connecting to a wireless device.

Parameter	Meaning
Wireless encryption	You may use any of the following types of encryption: **No encryption** Data is transmitted without encryption. With this setting, anyone within range can connect to your wireless network and might be able to access data on the network. Not recommended for anyone with private data that needs to be kept secure. [No encryption] can be selected only when [No authentication] is selected for wireless authentication. **WEP** WEP is a common encryption method supported by most devices. WEP can only be selected when wireless authentication is set to [No authentication]. Note that WEP's encryption is weak, and networks protected with WEP are not much more secure than those with no encryption at all. Not recommended for anyone with private data that needs to be kept secure. **AES** AES is more secure than WEP, 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. **TKIP/AES mixed mode** TKIP/AES mixed mode allows both TKIP and AES authentication and communication. This is no more secure than TKIP alone, but more convenient for some users. TKIP/AES mixed mode can be selected only when WPA/WPA2 mixed mode - PSK is selected for wireless authentication.
WPA-PSK (Pre-Shared Key)	A pre-shared key or passphrase is the password for your wireless connections. There are two different formats for a pre-shared key. Use 8 to 63 alphanumeric characters (case-sensitive) for an ASCII passphrase, or use 64 alphanumeric characters (0 to 9 and a to f, not case-sensitive) for a hexadecimal passphrase.
Rekey interval	Set the update interval for the encryption key between 0 and 1440 (minutes).
Set up WEP encryption key	A WEP encryption key (passphrase) may have any of four different formats. An ASCII passphrase may use either 5 or 13 alphanumeric characters (case-sensitive). A hexadecimal passphrase may use either 10 or 26 alphanumeric characters (0 to 9 and a to f, not case-sensitive).

Advanced

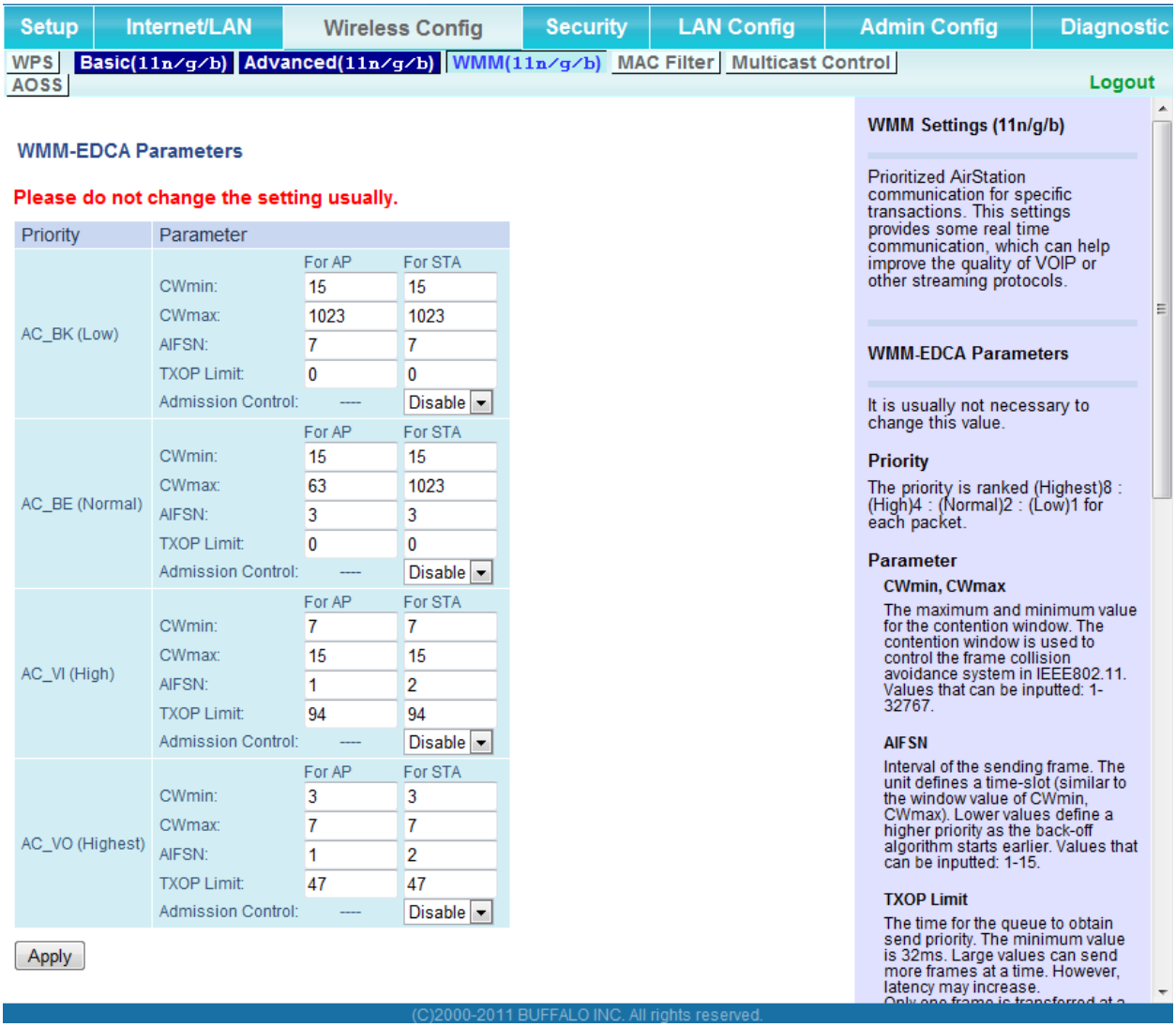
Configure advanced wireless settings.



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

WMM

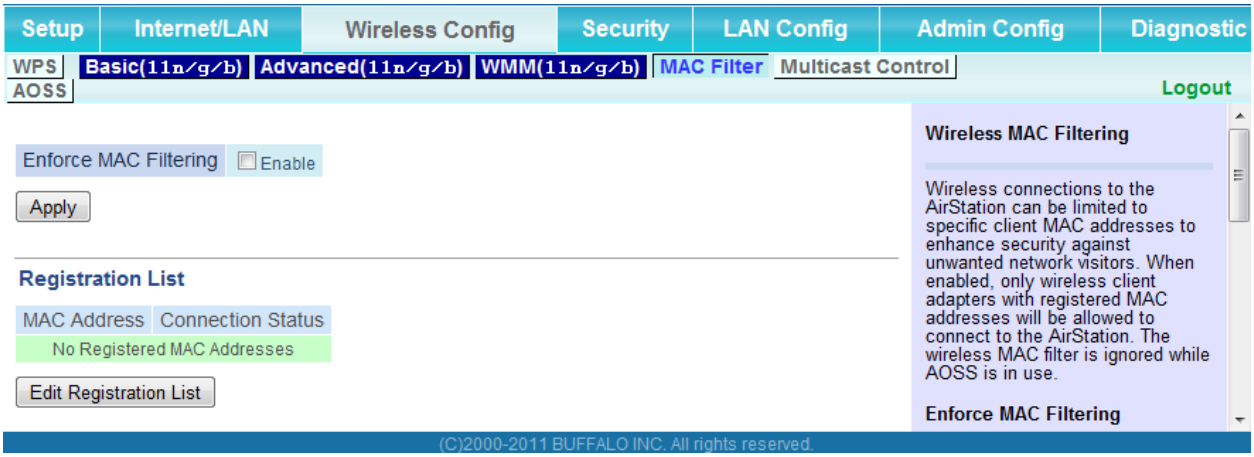
Set priorities for specific communications.



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

MAC Filter

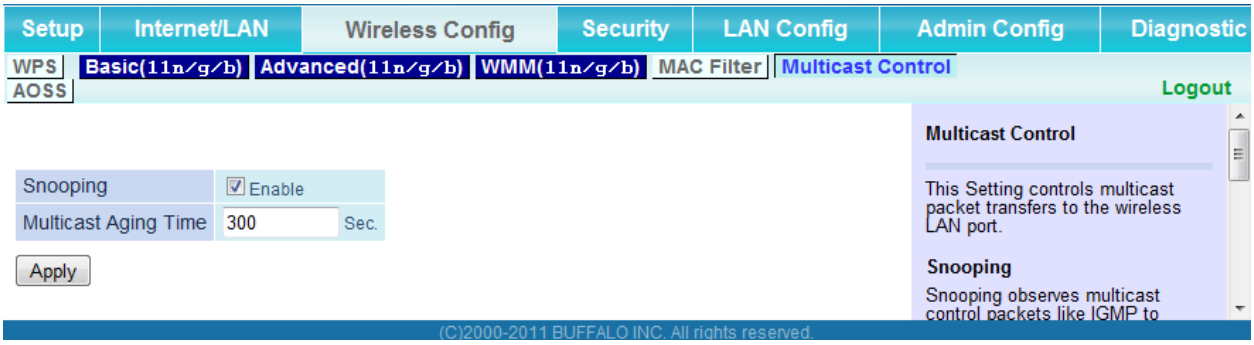
Restrict access to specific wireless devices.



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	Adds a wireless device to the list of permitted devices.
MAC Addresses to be Registered	Enter a MAC address of a wireless device to permit to connect to the AirStation. Click [Register] to add that MAC address to the list.
List of all clients associated with this AirStation	Display the list of all MAC addresses of wireless devices connected to the AirStation.

Multicast Control

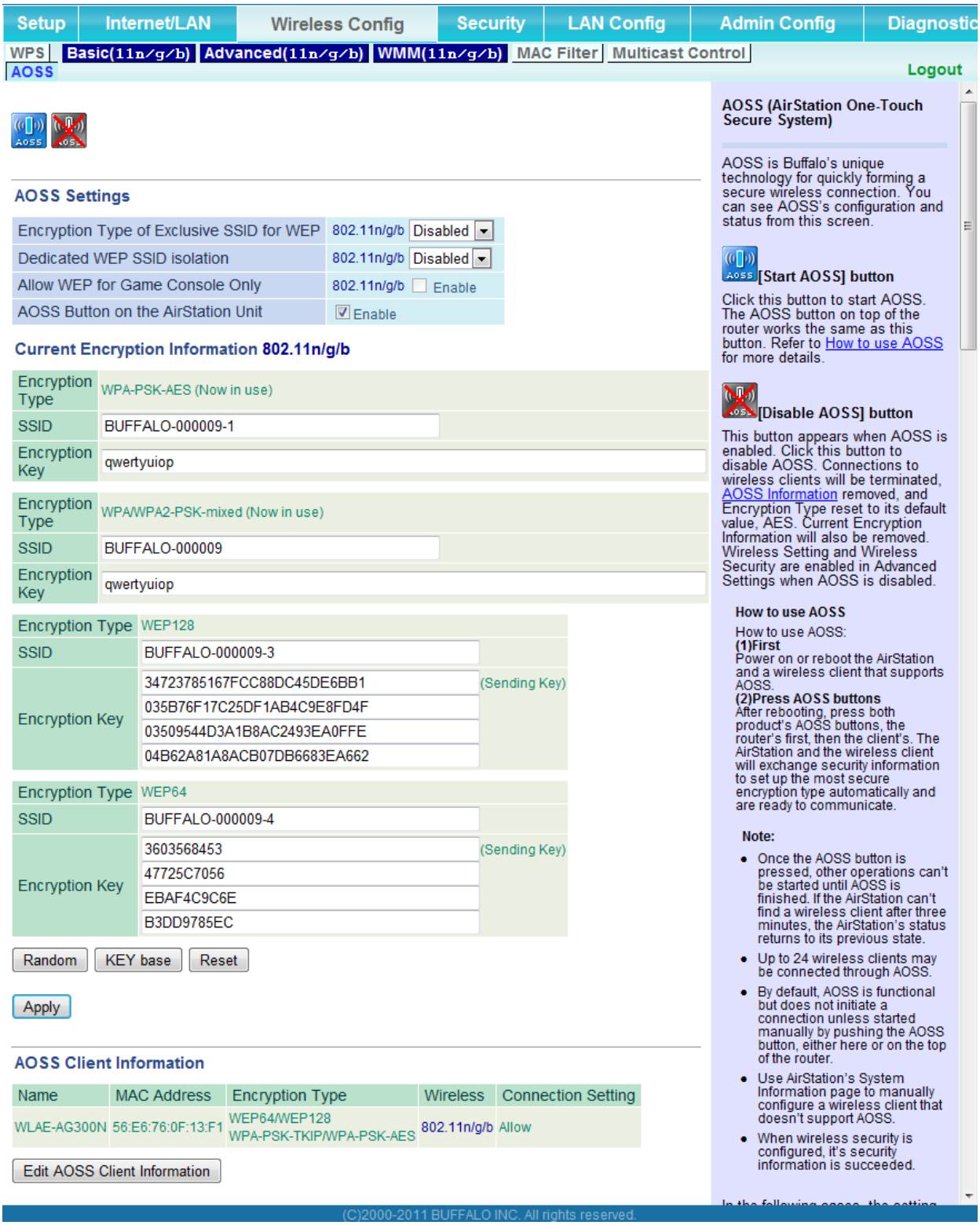
Configure restrictions on unnecessary multicast packets sent to the wireless LAN port.



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). Enter a value bigger than the IGMP/MLD query interval.

AOSS

AOSS Status and Settings.

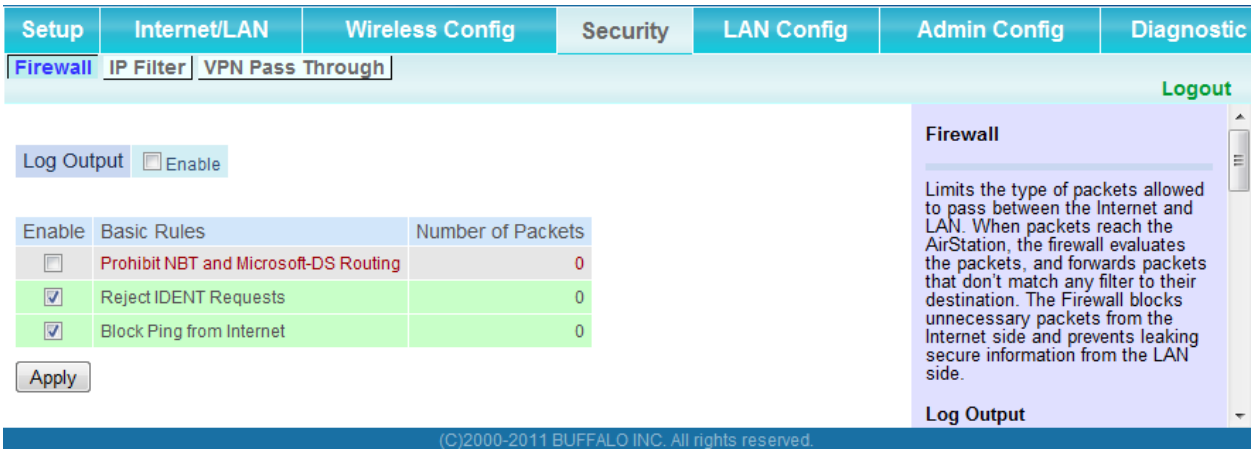


Parameter	Meaning
	Initiates AOSS automatic wireless configuration. Click this, then press or click the AOSS button on your AOSS-compatible wireless client. Repeat for additional AOSS clients.
	Click this button to disconnect AOSS connections. Note: If AOSS connections are disconnected, the SSID and encryption keys will be restored to their last settings from before AOSS was used.
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.
Dedicated WEP SSID isolation	Set a separate SSID and network segment specifically for WEP connections. Devices connected with WEP will not be able to communicate with devices connected using AES/TKIP. All connected devices will be able to communicate with the internet.
Allow WEP for Game console only	When enabled, the AirStation allows wireless devices to connect with 64-bit or 128-bit WEP.
AOSS Button on the AirStation Unit	Uncheck to disable the physical AOSS button on the AirStation.
Current Encryption Information (AOSS connection only)	Displays the encryption type, SSID, and encryption key configured by AOSS.
[Random]	Click to enter random values for SSID, encryption key, and other settings.
[KEY base]	Click to return the SSID, encryption key, and other wireless settings to the values on the case sticker.
[Reset]	Click to return the SSID, encryption key, and other wireless settings to their previous values.
AOSS Client Information	Displays AOSS clients connected to the AirStation and information of the devices which are wirelessly communicated.
AOSS Ethernet Converter Information Only displayed if there are AOSS Connections	Displays information about Ethernet converters connected to the AirStation via AOSS.

Security (Router Mode only)

Firewall (Router Mode only)

Configure the AirStation's firewall.

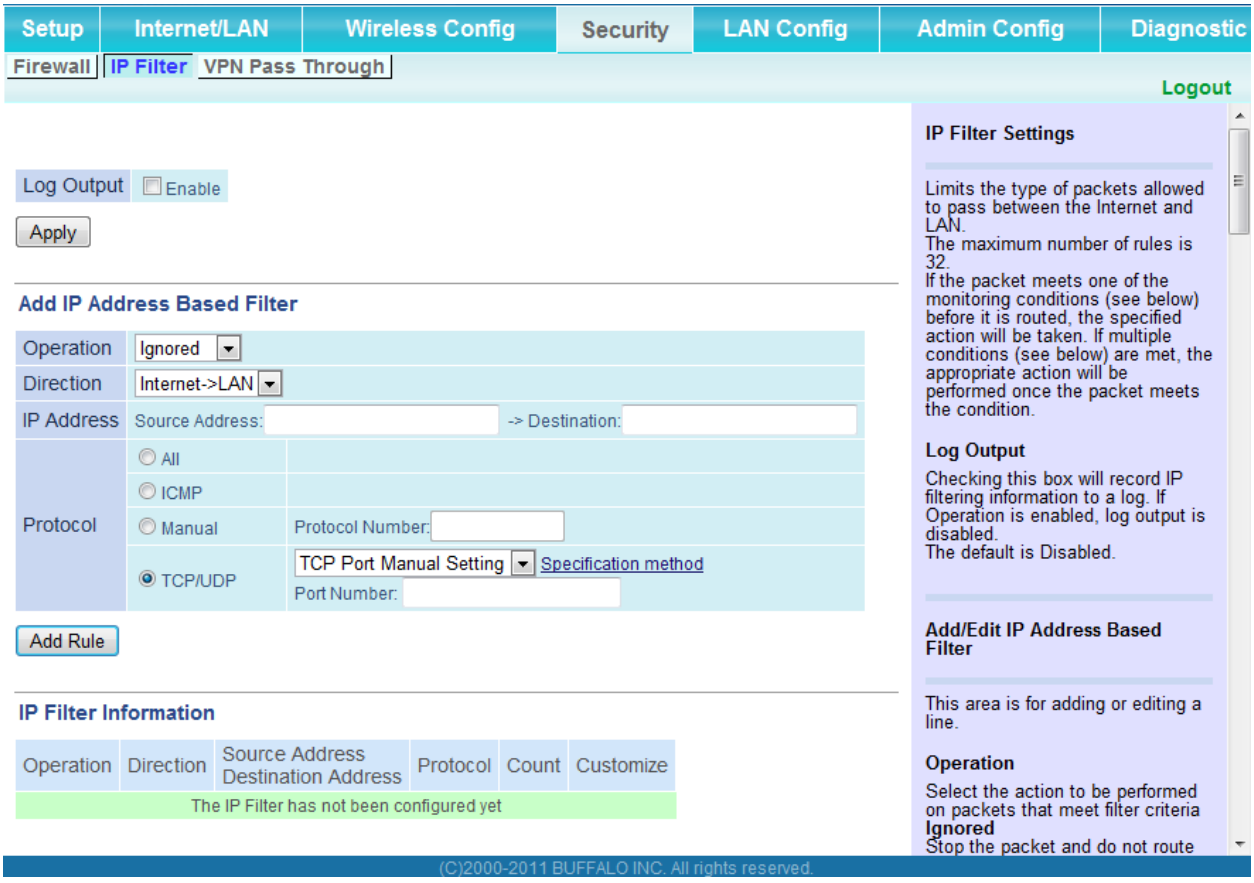


Parameter	Meaning
Log Output	Enable to output a log of firewall activity.
Basic Rules	Enable to use any of the quick filters. Preconfigured quick filters include: **Prohibit NBT and Microsoft-DS Routing** Enabling this blocks communication using these protocols from the WAN side to the LAN side or from 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 (page 36), or if Easy Setup identified a PPPoE connection during setup.

Parameter	Meaning
	Reject IDENT Requests Enabling this option will answer IDENT requests from the Internet side with corresponding rejection packets. Enable this option if you experienced slow transfer speeds for network applications such as mail, ftp or web browsing. If you have configured transfer of IDENT requests to the LAN side computer in the address translation settings (DMZ or TCP port 113), then that setting has higher priority, and overrides this setting. **Block Ping from Internet** If this is enabled, the AirStation will not respond to pings from the Internet side. You can configure this with PPPoE if you select [Use PPPoE Client] or [Use IP Unnumbered] in Method of Acquiring IP address (page 36), or if Easy Setup identified a PPPoE connection during setup.

IP Filter (Router Mode only)

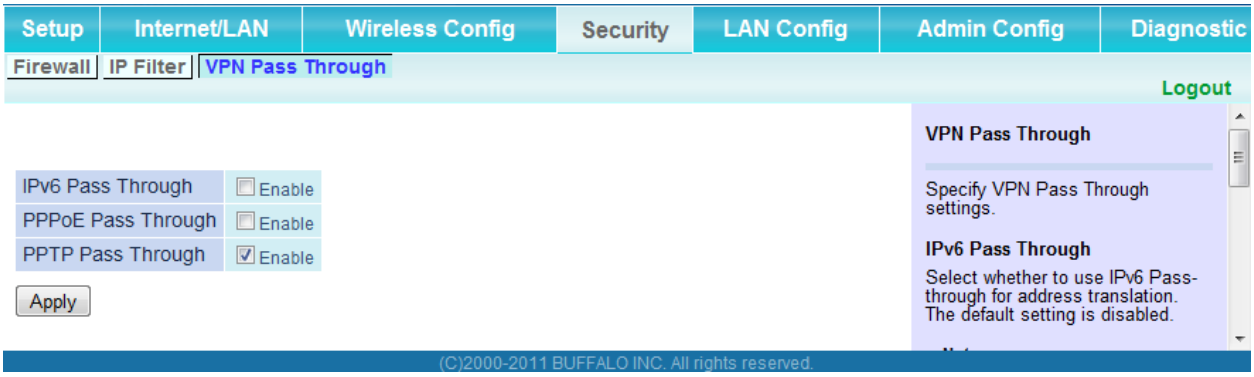
Edit IP filters.



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 Passthrough (Router Mode only)

Configure IPv6 passthrough, PPPoE passthrough, and PPTP passthrough.

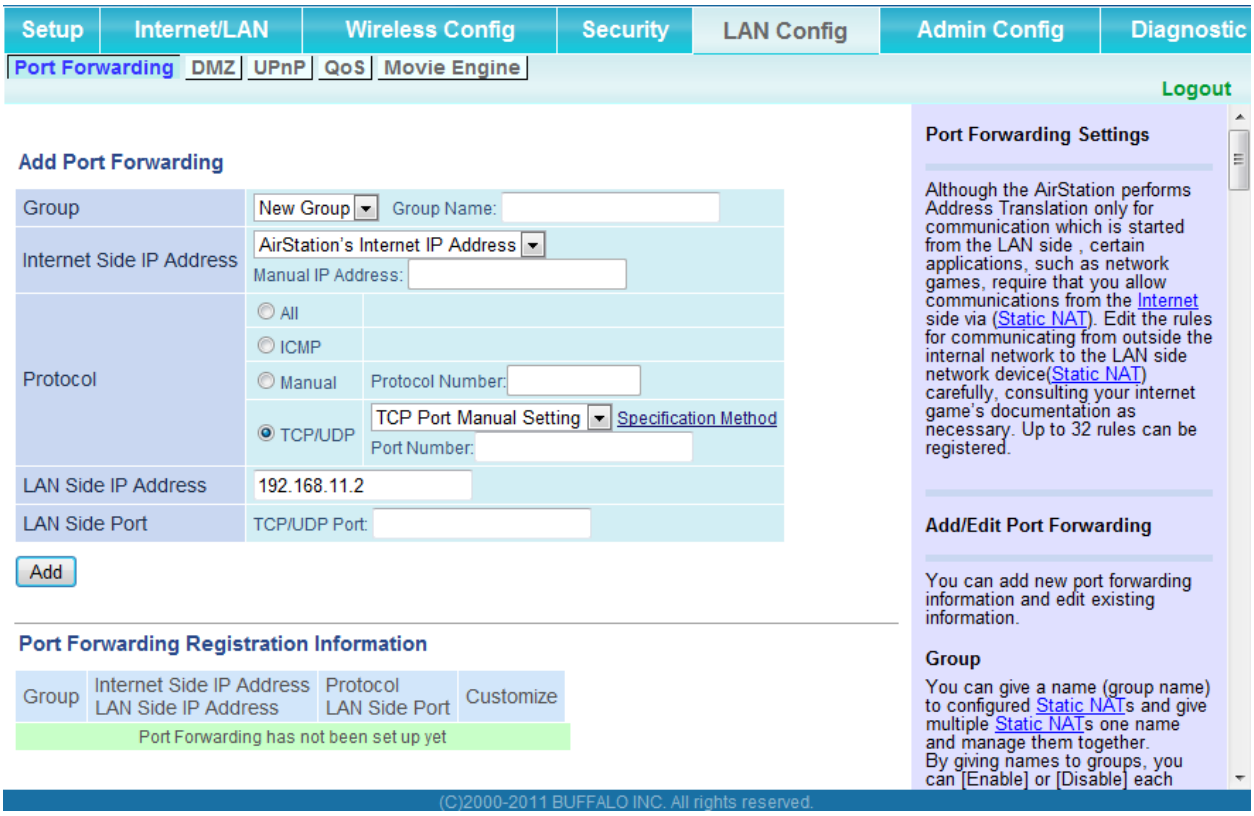


Parameter	Meaning
IPv6 Passthrough	Enable to use IPv6 Passthrough for address translation.
PPPoE Passthrough	Enable to use PPPoE bridging. PPPoE bridging lets you automatically obtain an IP address from your provider for your LAN-side computer using the PPPoE protocol because PPPoE packets can pass between the Internet and LAN.
PPTP Passthrough	Enable to use PPTP passthrough for address translation.

LAN Config

Port Forwarding (Router Mode only)

Configure 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 characters.
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)

Configure a destination to transfer communication packets without a LAN side destination to.

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.

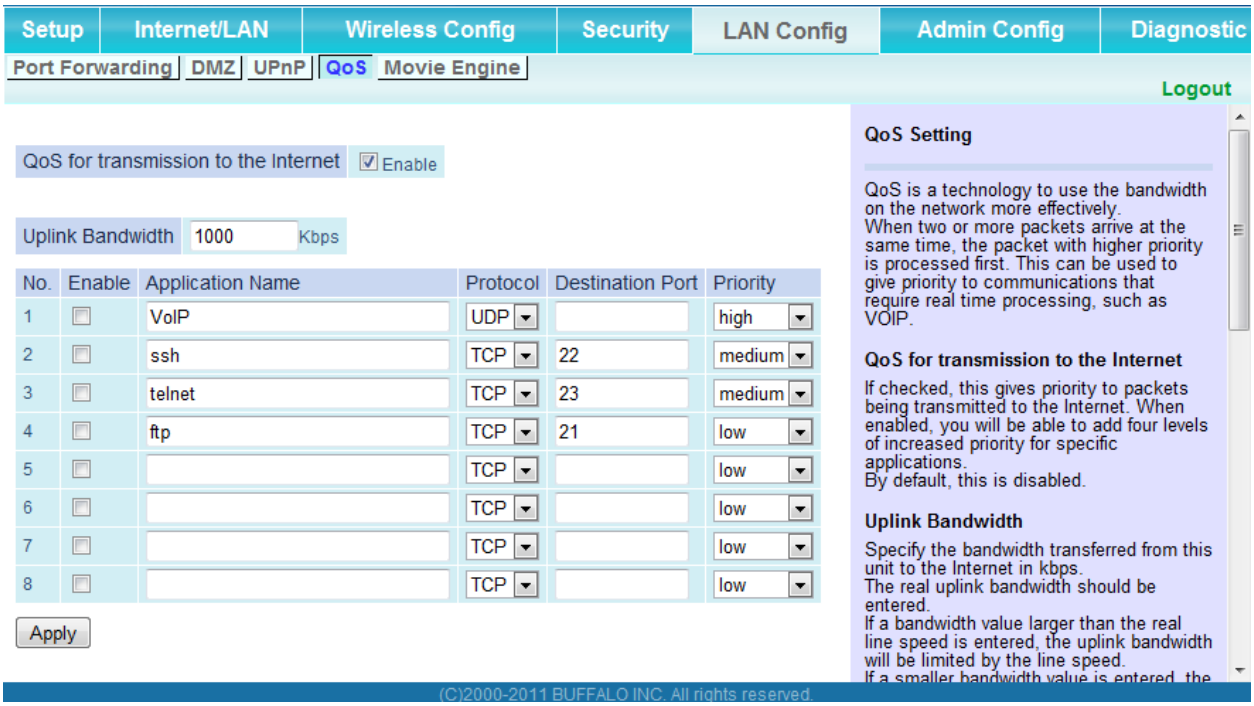
UPnP (Router Mode only)

Configure UPnP (Universal Plug and Play).

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

QoS (Router Mode only)

Configure the priority of packets sent to the Internet.

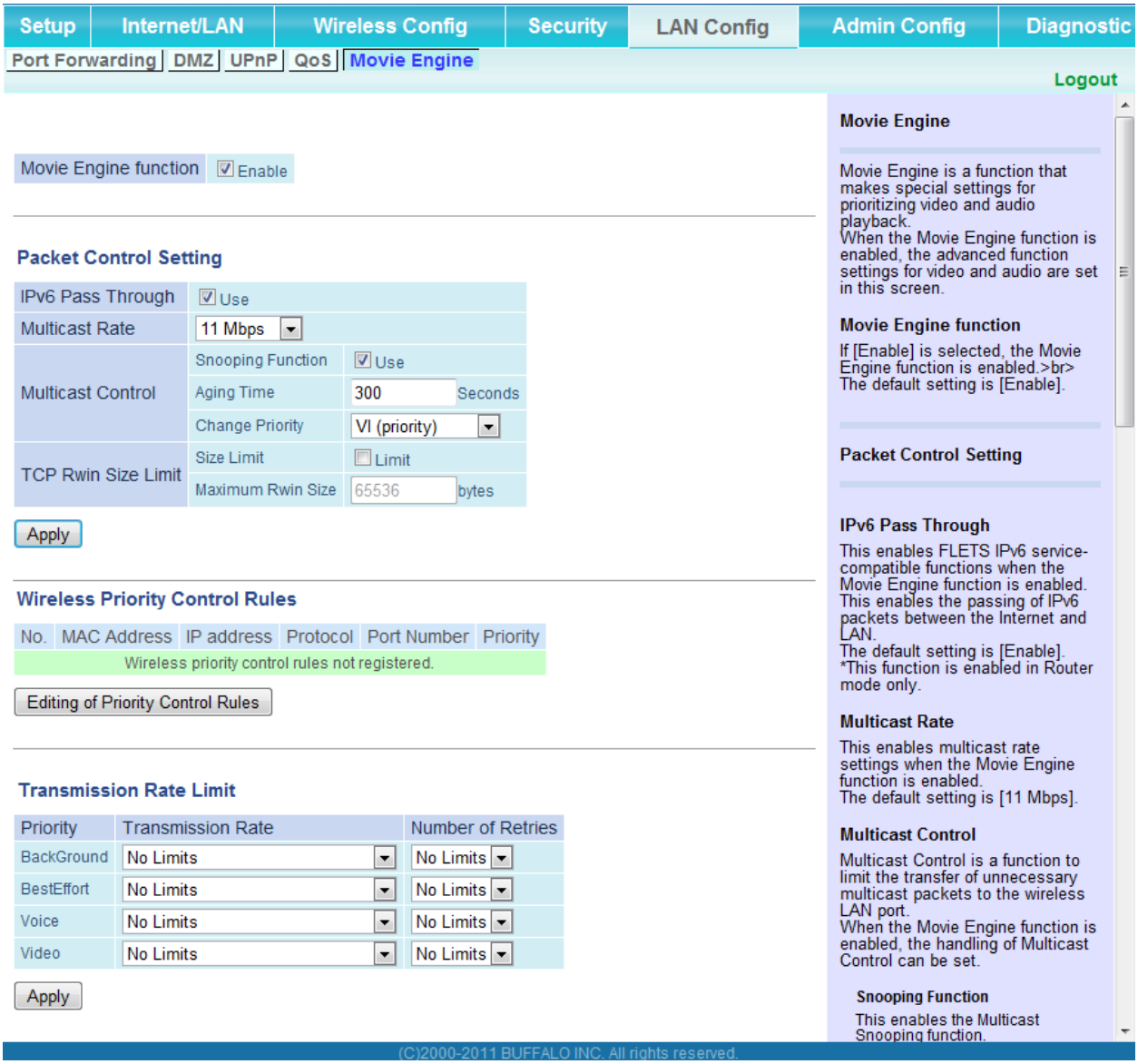


Parameter	Meaning
QoS for transmission to the Internet	Determine whether or not to prioritize packets sent to the Internet. Check this box to enable QoS.
Uplink bandwidth	Specify the upstream bandwidth in kbps from the AirStation to the internet side. Set the actual value for the upstream bandwidth.
Enable	Enable or disable this entry.
application name	Enter an application name. Names may use up to 32 alphanumerical characters, double or single tick marks ("'), quotation marks (“), and semicolons (;).
protocol	Select either TCP or UDP.
destination Port	Specify a destination port from 1 - 65535. If this field is empty, a random port is selected.

Parameter	Meaning
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.

Movie Engine (QoS)

Configure Movie Engine options.

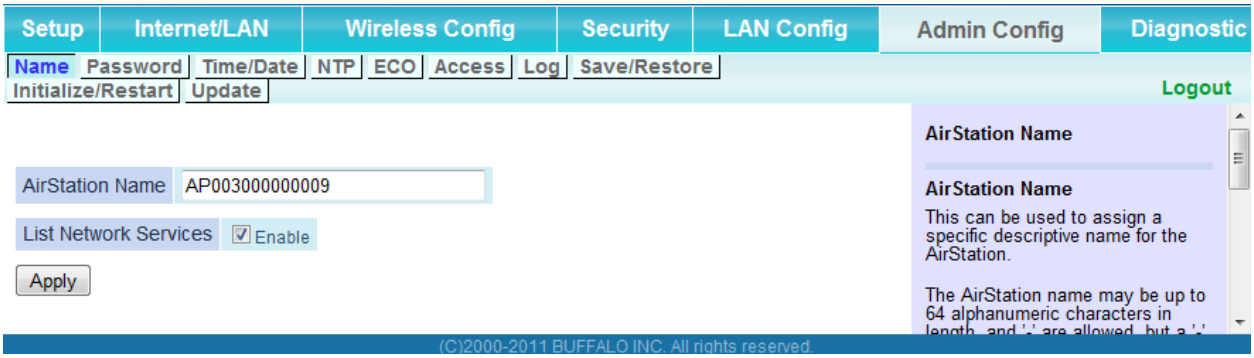


Parameter	Meaning
Movie Engine function	Enable to use Movie Engine function.
IPv6 Passthrough	Set to enable the IPv6 pass-through.
Multicast Rate	Select the Multicast Control rate.
Multicast Control	Turn on Multicast Control.
TCP Rwin Size Limit	Limits the maximum size of TCP Rwin packets passing through the AirStation's wireless LAN.
Wireless Priority Control Rules	Display the list of rules controlling the priority of packets passing through the AirStation's wireless LAN.
Transmission Rate	Select the maximum transmission rate.

Admin Config

Name

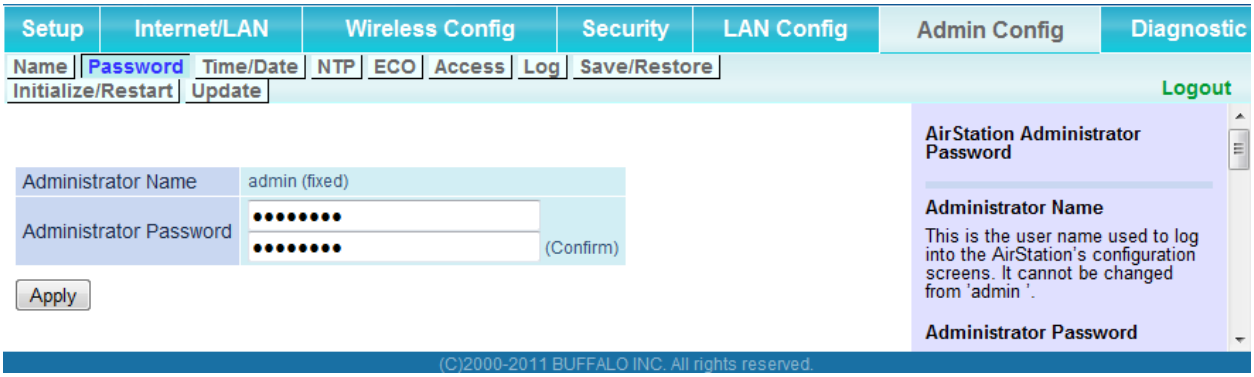
Configure basic AirStation settings.



Parameter	Meaning
AirStation Name	Enter a name for the AirStation. Names may include up to 64 alphanumeric characters and hyphens (-).
List Network Services	Enable or disable this to display the computers and devices on your network with their supported services.

Password

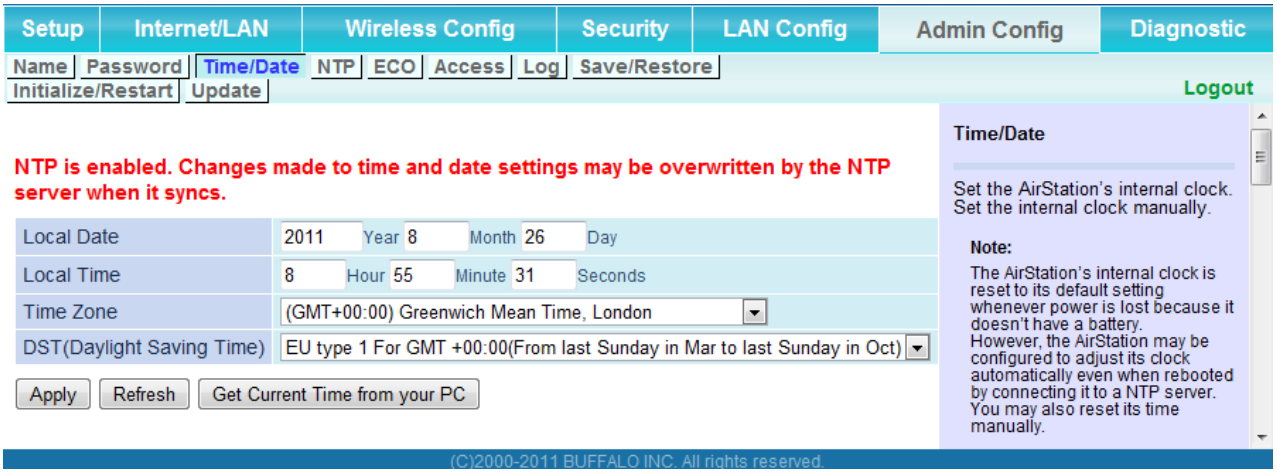
Configure the password to log in to the AirStation's configuration screen.



Parameter	Meaning
Administrator Name	The name of the Administrator account is "admin".
Administrator Password	The Administrator password may contain up to 8 alphanumeric characters and underscores (_).

Time/Date

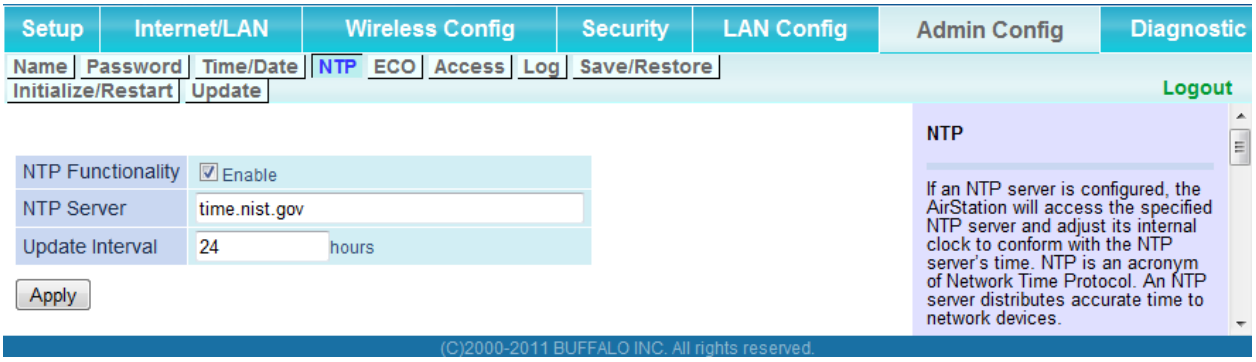
Configure the AirStation's internal clock.



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.
DST (Daylight Saving Time)	You may configure the AirStation to automatically use DST (Daylight Saving Time). If selected, the AirStation will automatically adjust the time at the beginning and end of DST.

NTP

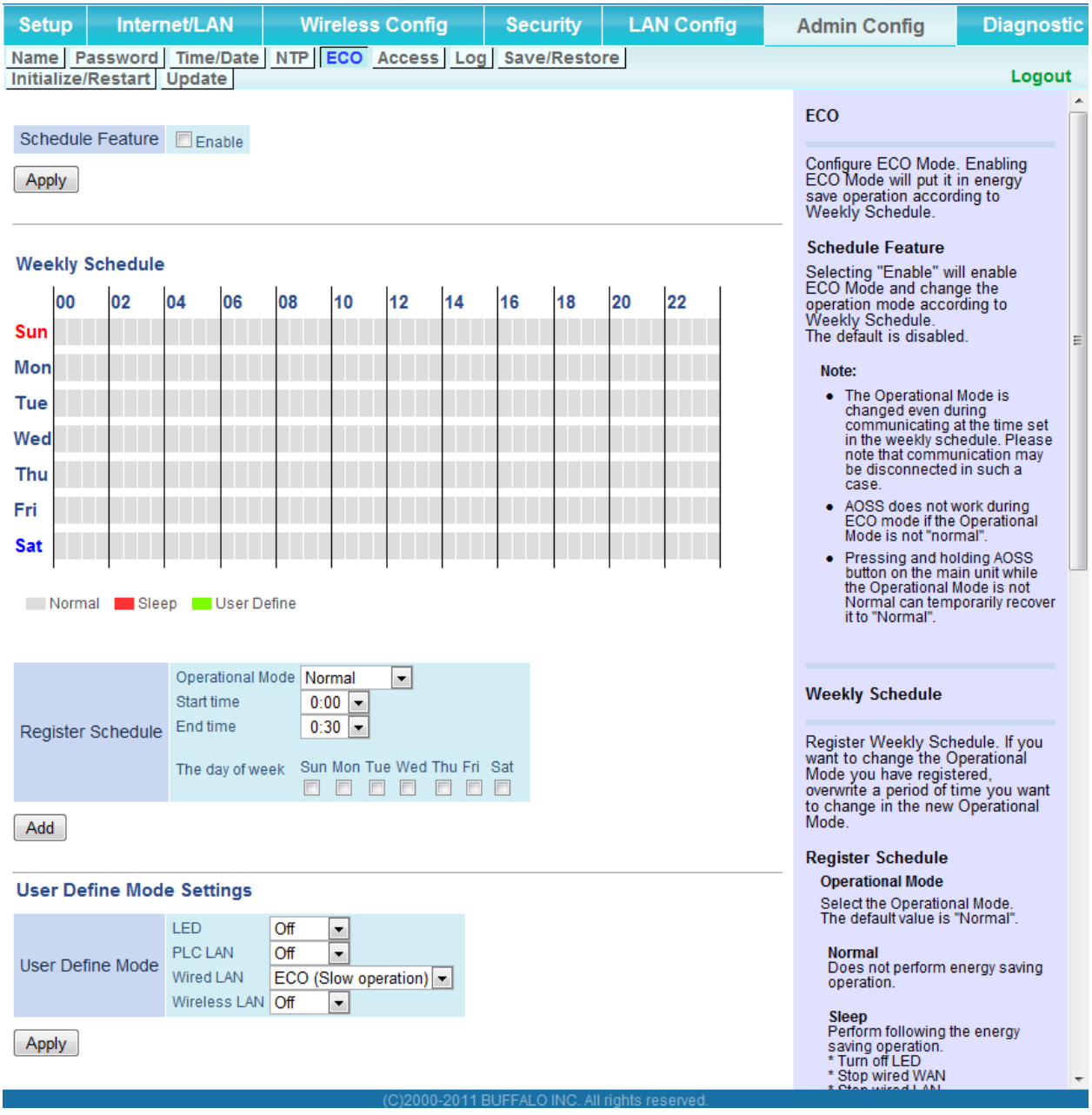
Configure an NTP server to automatically synchronise the AirStation's internal clock.



Parameter	Meaning
NTP Functionality	Enable to use an NTP server. The default is Enabled.
NTP Server	Enter the name of the NTP server as a hostname, hostname with domain name, or IP address. Up to 255 alphanumeric characters, hyphens (-), and underscores (_) may be used. The default is "time.nist.gov".
Update Interval	How often will the AirStation check the NTP server for the correct time? Intervals of 1 - 24 hours may be set. The default is 24 hours.

ECO

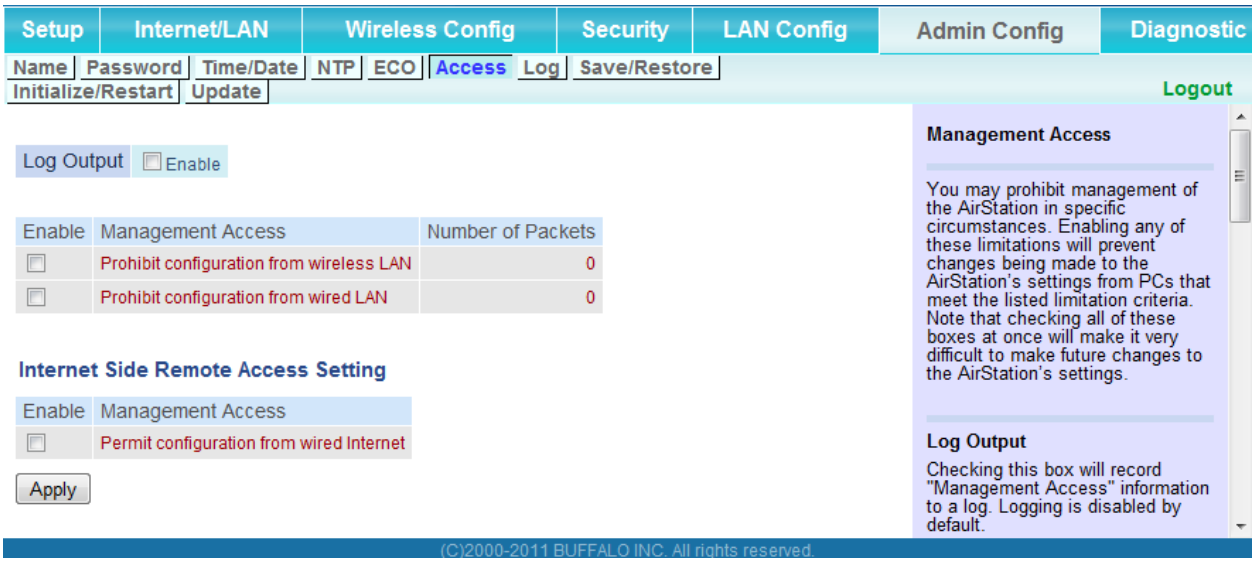
Configure Eco mode from this screen.



Parameter	Meaning
Schedule feature	Enable to schedule Eco Mode. If Eco mode is enabled, AOSS will function only when the AirStation is in Normal operating mode.
Weekly schedule	Graphically displays the configured schedule.
Register schedule	Configure operational mode for time periods in the weekly schedule. If User Defined mode is chosen, configure it below.
User Defined Mode	Individual power saving elements may be configured for User Defined mode.

Access

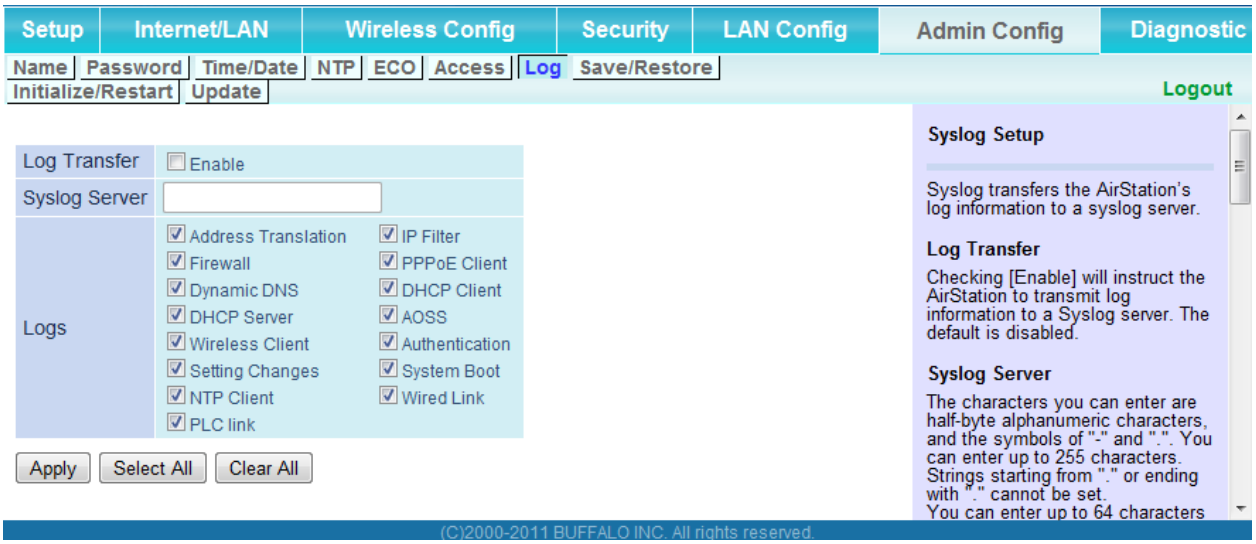
Restrict access to the AirStation's settings screens.



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 WAN (Internet) side.
Permitted IP address	Displayed only if Internet side configuration is enabled. Enter the IP address of a device that is permitted to configure the AirStation remotely from the WAN (Internet) side.
Permitted Port	Displayed only if Internet side configuration is enabled. Set a port number (1 - 65535) to configure the AirStation from the WAN (Internet) side.

Log

Transfer the AirStation's logs to a syslog server.



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

Save/Restore

Save AirStation settings as a file, and restore from them later.

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.
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].

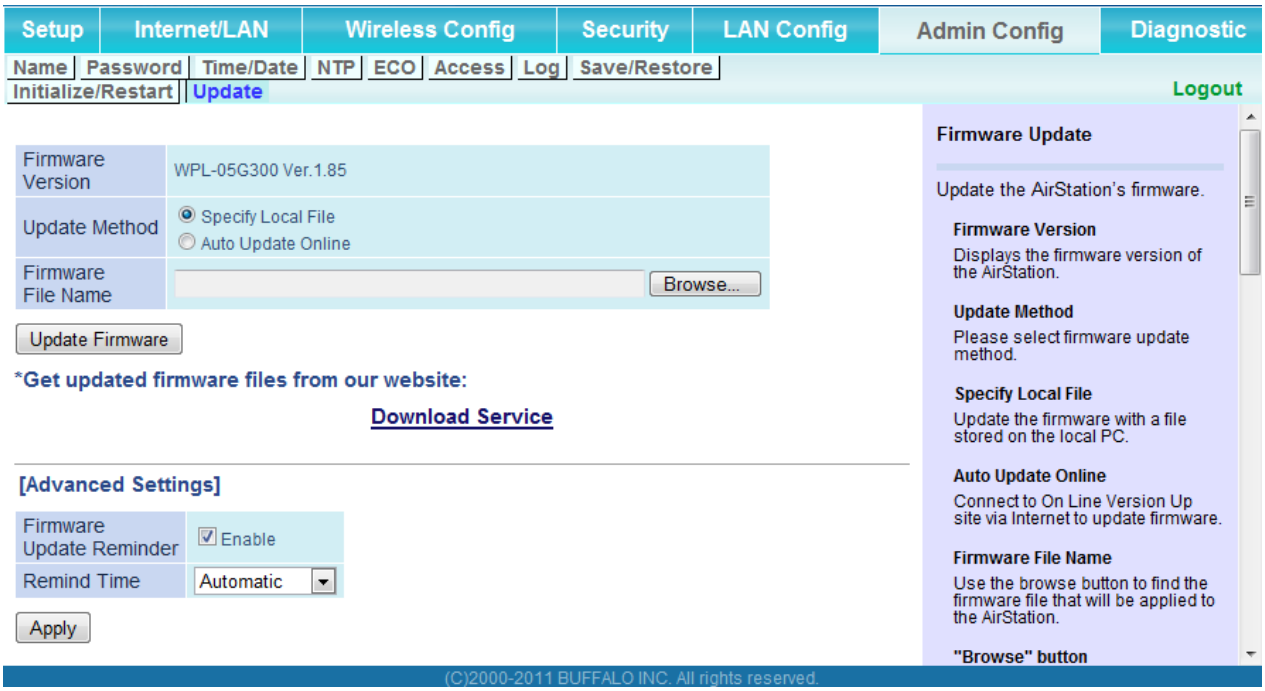
Initialize/Restart

Initialize or restart the AirStation.

Parameter	Meaning
Restart	Click [Restart Now] to restart the AirStation.
Timer restart	This sets the schedule for restarting the AirStation.
Initialize	Click [Initialize Now] to initialize and restart the AirStation.

Update

Update the AirStation's firmware.



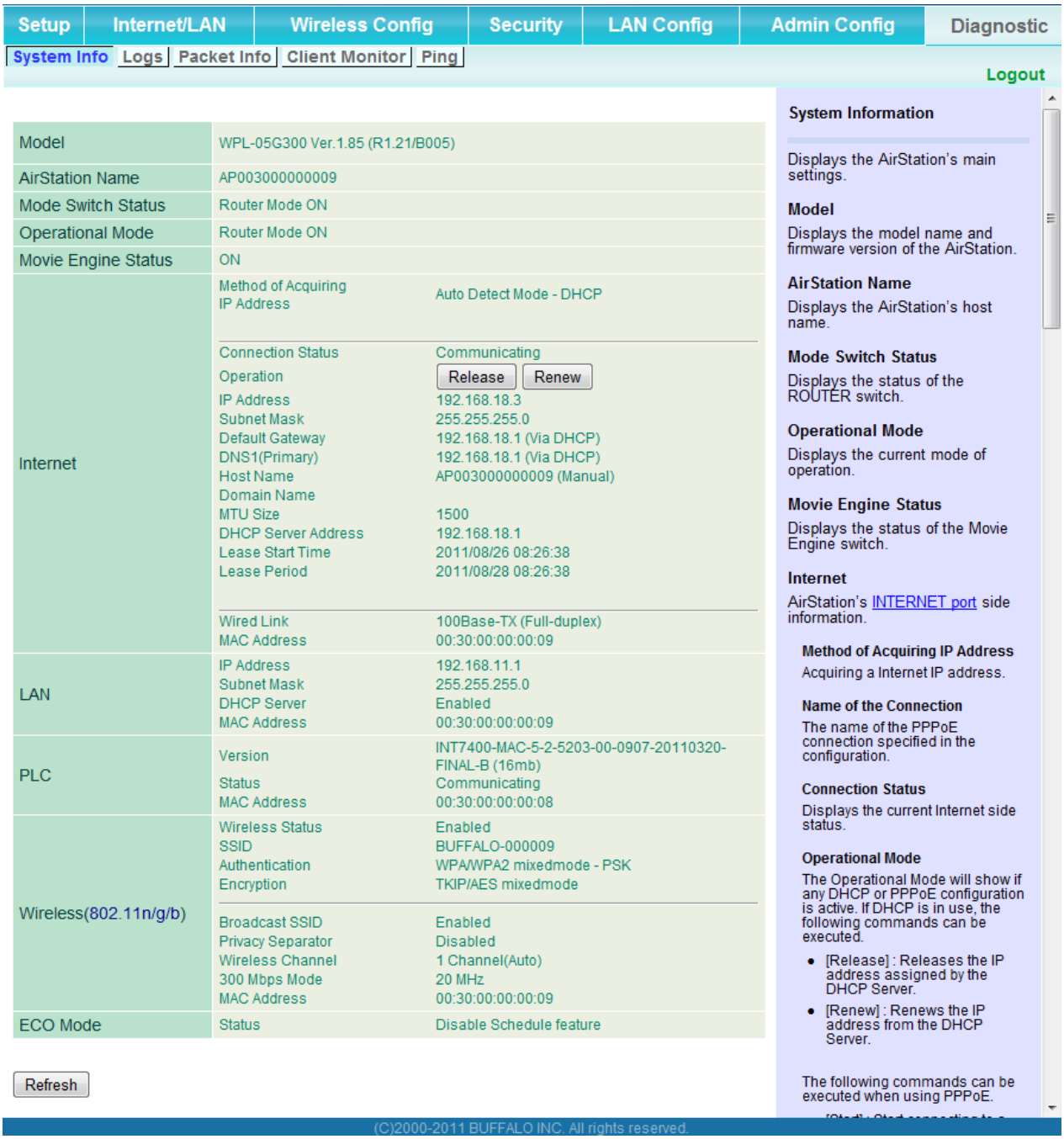
Parameter	Meaning
Firmware Version	Displays the current firmware version of the AirStation.
Update Method	**Specify Local File** Updates from a firmware file stored on your computer. **Automatic Update Online** Automatically updates to the latest firmware available.
Firmware File Name	Click [Browse...] to navigate to the firmware file on your computer if [Specify Local File] was selected. You don't need to specify the firmware location if you're using [Automatic Update]. Click [Update Firmware] to update the firmware.

Parameter	Meaning
Firmware Update Reminder	This sets whether the Firmware Update Reminder function is used. When enabled, if new firmware is found, notification is sent to the Configuration Interface.
Remind Time	This sets the interval for checking whether a new firmware version has been released.

Diagnostic

System Info

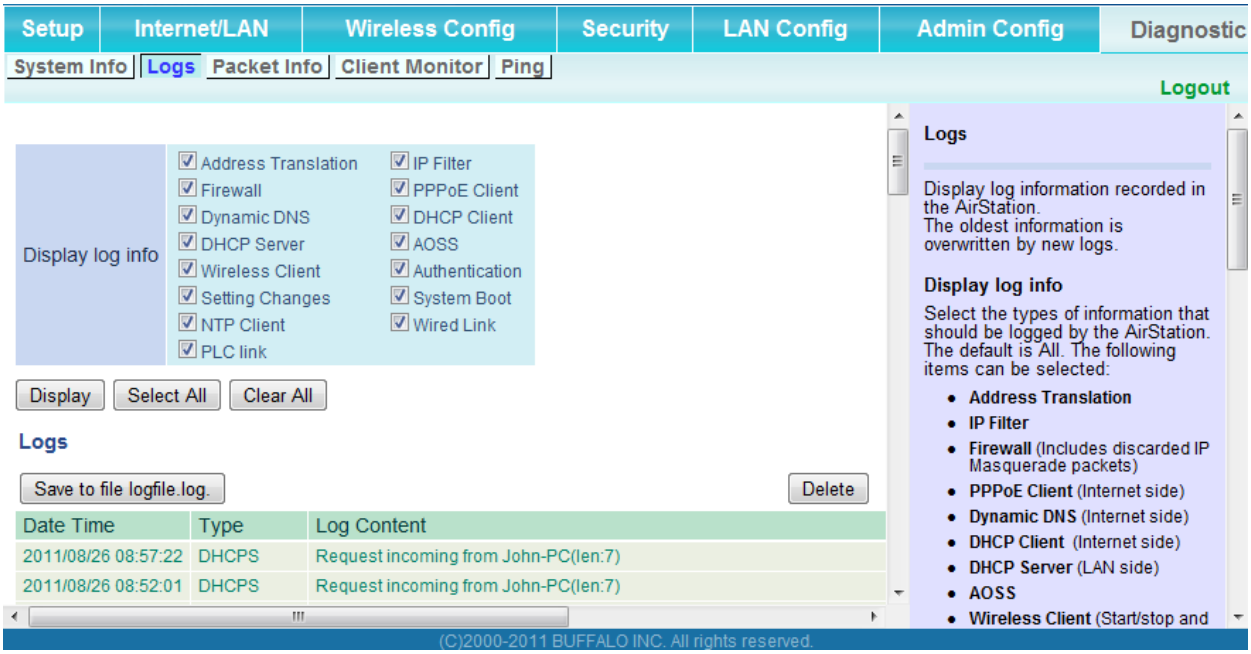
View system information for the AirStation.



Parameter	Meaning
Model	Displays the product name of the AirStation and the firmware version.
AirStation Name	Displays the name of the AirStation.
Mode Switch Status	Displays the status of the AirStation's mode switch.
Operational Mode	Displays the AirStation's current operational mode.
Movie Engine Status	Displays the current Movie Engine Status.
Internet	Displays information about the Internet port.
LAN	Displays information about the LAN port.
PLC	Displays the current PLC function setting.
Wireless	Displays the wireless status.
ECO Mode	This indicates the operating status of ECO Mode.

Logs

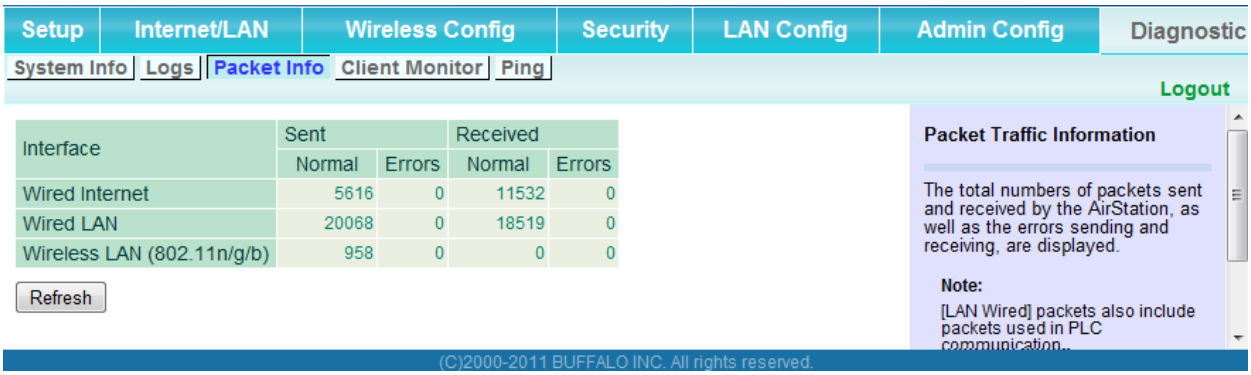
The AirStation's logs are recorded here.



Parameter	Meaning
Display log info	Choose the types of logs to display.
Logs	Displays the log information recorded in the AirStation.

Packet Info

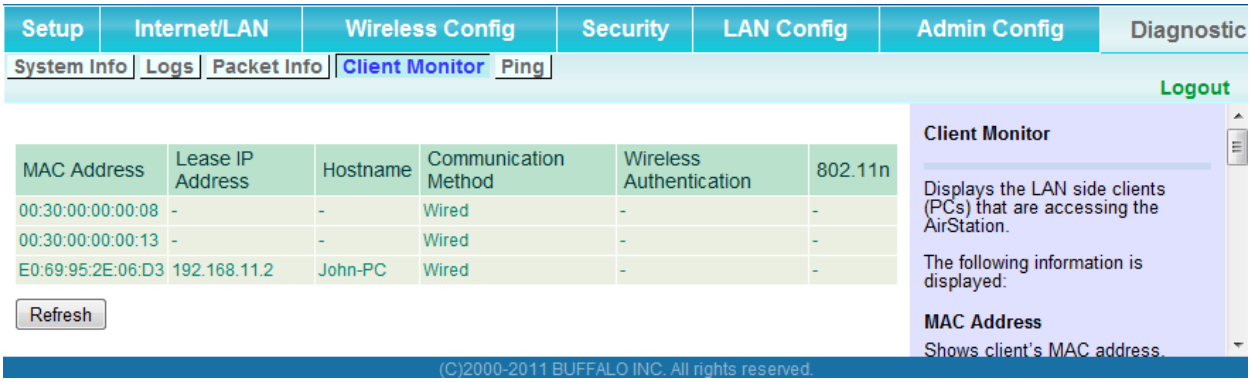
View packet transfer information.



Parameter	Meaning
Sent	Displays the number of packets sent to the WAN, the LAN, and the wireless LAN.
Received	Displays the number of packets received from the WAN, the LAN, and the wireless LAN.

Client Monitor

This screen shows devices that are connected to the AirStation.



Parameter	Meaning
Client Monitor	Displays information (MAC address, lease IP address, hostname, 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.

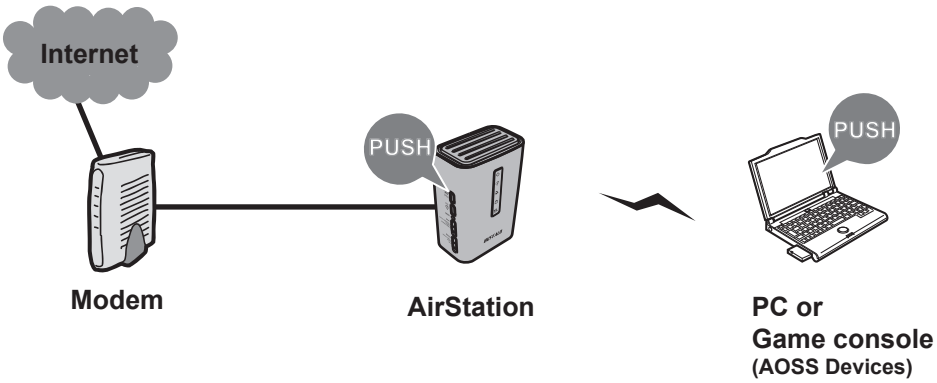
Parameter	Meaning
Destination Address	Enter the IP address or hostname of the device that you are testing communication with, then click [Execute]. The result will be displayed below.

Chapter 4 - Connect to a Wireless Network

Automatic Secure Setup (AOSS/WPS)

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

AOSS (AirStation One-Touch Secure System) was developed by Buffalo Technology. WPS was created by the Wi-Fi Alliance.



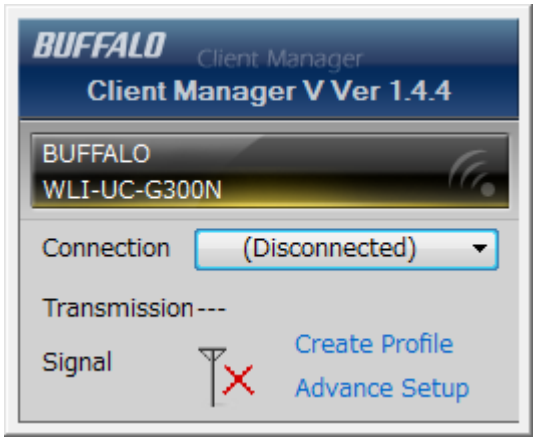
- Before using AOSS/WPS to connect to a Buffalo wireless client, install Client Manager software from the included Setup CD. Consult your wireless client's documentation for more information.
- Buffalo's Client Manager software can be used with the wireless LAN devices built into most computers. However,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

Windows 7/Vista (Client Manager V)

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

1 Click [Start] > [All Programs] > [BUFFALO] > [AirStation Utility] > [Client Manager V].

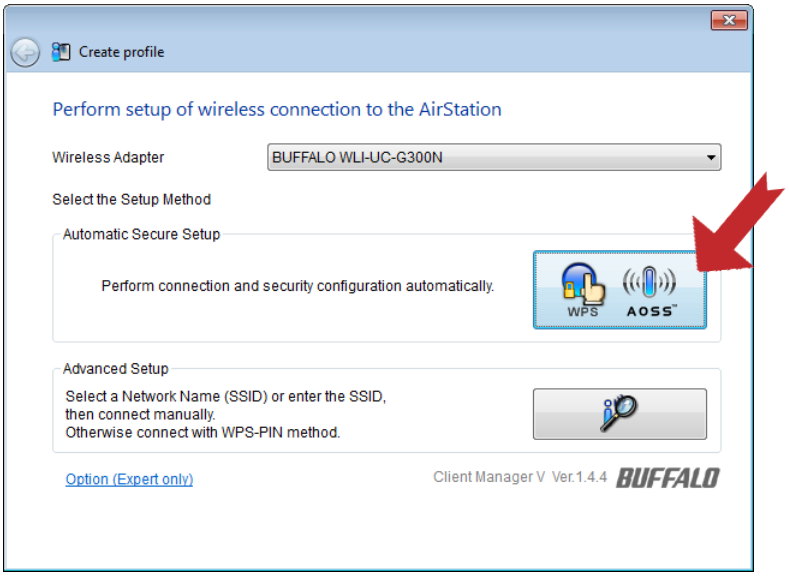
2



Click [Create Profile].

3 If the User Account Control screen opens, click [Yes] or [Continue].

4



Click the [WPS AOSS] button.

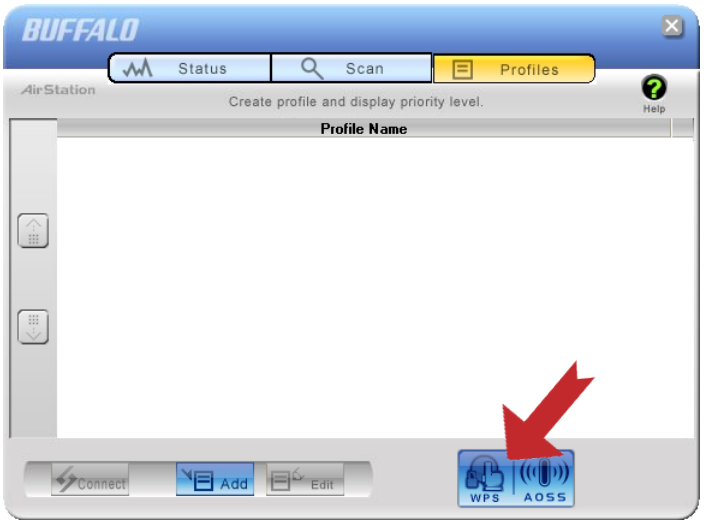
Follow any instructions displayed on the screen. When the Security LED on the front of the AirStation stop flashing and glows steadily, the connection is complete.

Windows XP (Client Manager 3)

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

1 Right click on the icon in the system tray and select [Profile].

2



Click the [WPS AOSS] button.

It will take several seconds for your wireless connection to be configured. When the Security LED on the front of the AirStation stop flashing and glows steadily, the connection is complete.

Mac OS X (AOSS Assistant)

If you are using Mac OS X 10.7 / 10.6 / 10.5 / 10.4, use the included AOSS Assistant software to connect wirelessly with AOSS.

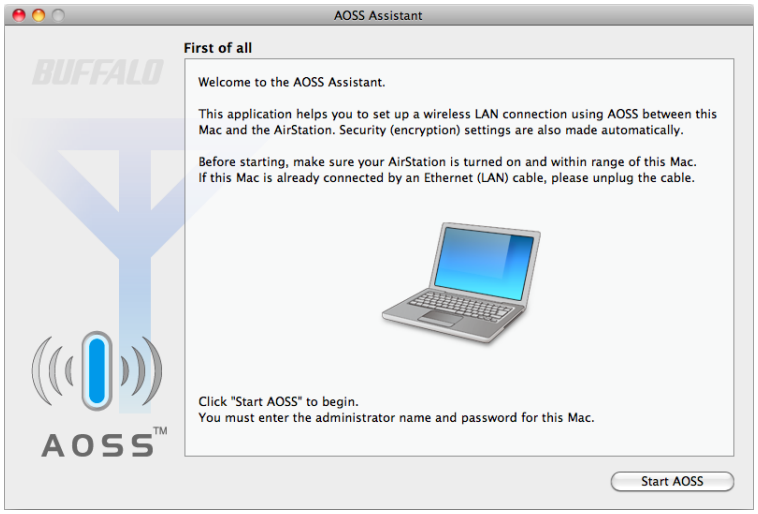
1 Load the Setup CD in your Macintosh.

2 From the menu bar, click [Go] > [Computer].

3 Double-click the CD icon, and then double-click [AOSS Assistant] in the "Mac" folder.

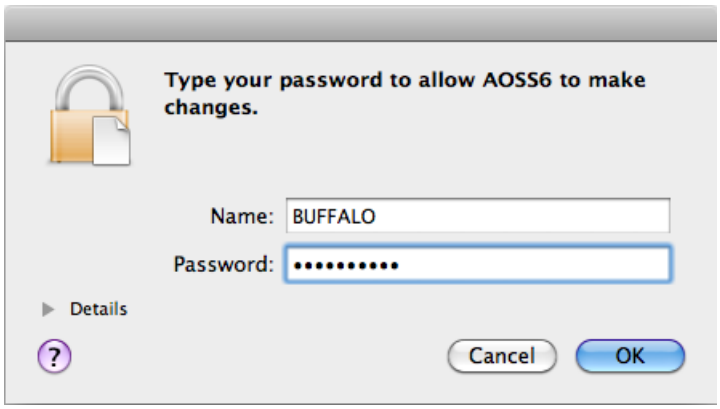
4 The software license screen is displayed. Click [Agree] to proceed.

5



Click [Start AOSS].

6



Enter the Mac's username and password and click [OK].

It will take several seconds for your wireless connection to be configured. When the Security LED on the front of the AirStation stop flashing and glows steadily, the connection is complete.

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 on the AirStation for 1 second.

When the Security LED on the front of the AirStation stop flashing and glows steadily, the connection is complete.

Manual Setup

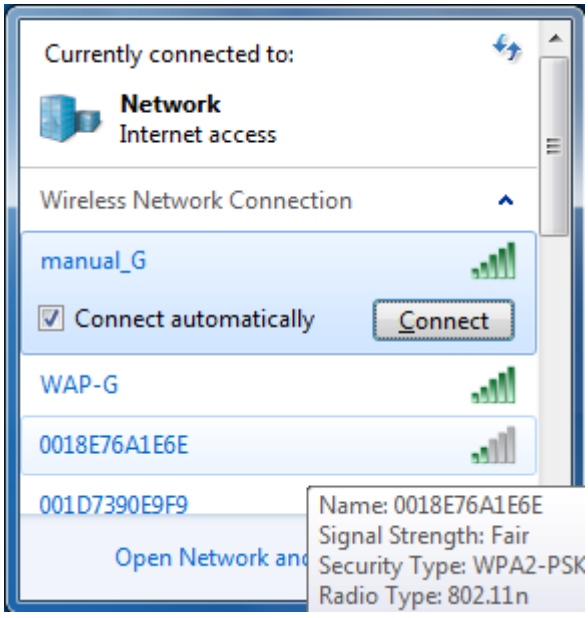
You can also connect to the AirStation without installing Client Manager V or Client Manager 3 by using the utility built-in to Windows. The procedure varies depending on which version of Windows you are using.

Windows 7 (WLAN AutoConfig)

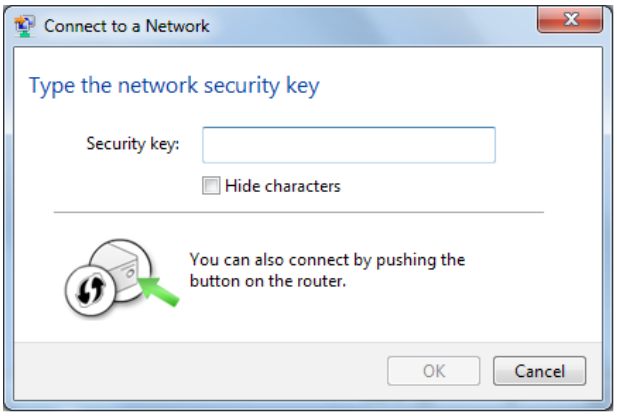
With Windows 7, use WLAN AutoConfig to connect to the AirStation.

1 Click on the network  icon in the system tray.

2



Select the target AirStation and click [Connect]. If you will be connecting to this device in the future, checking [Connect automatically] is recommended.

3 

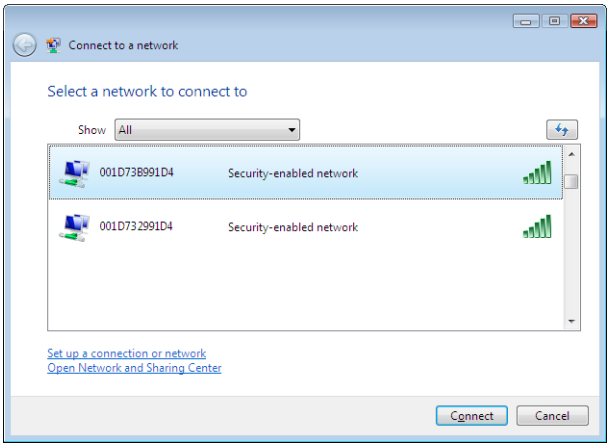
Enter the encryption key and click [OK].

Windows Vista (WLAN AutoConfig)

With Vista, use WLAN AutoConfig to connect to the AirStation.

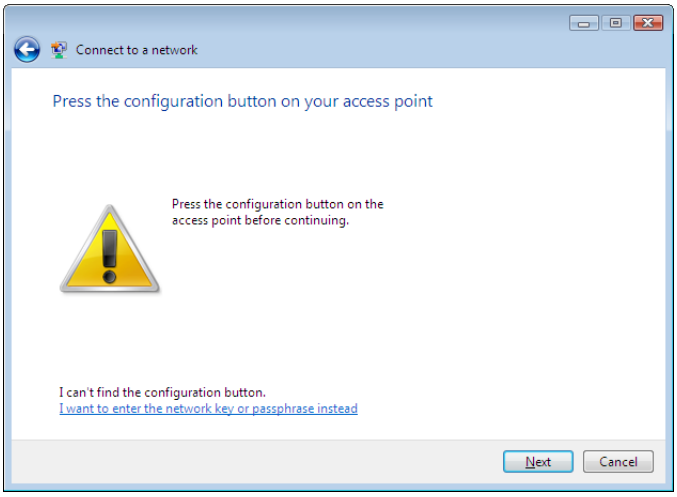
1 Right click on the wireless network  icon in the system tray.

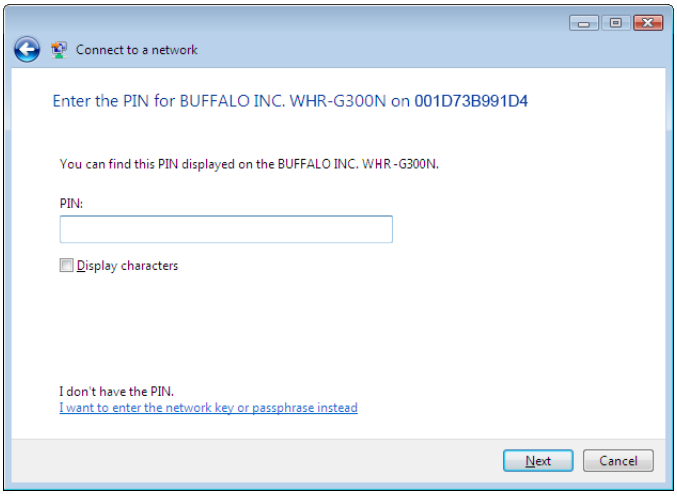
2 Click [Connect to a network].

3 

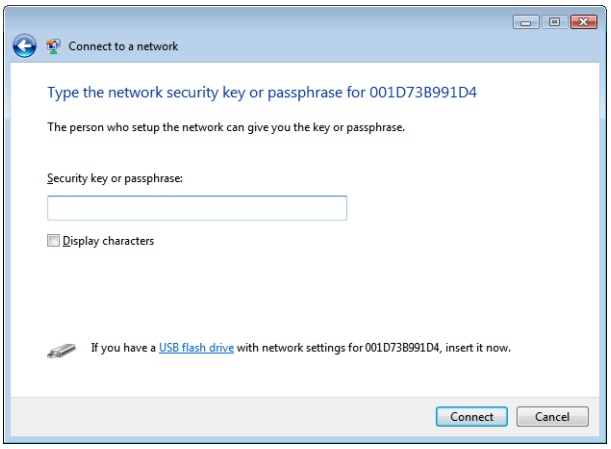
When this screen is displayed, select your network and click [Connect].

If the screen below is displayed, click [I want to enter the network key or passphrase instead]. Otherwise, go to step 4.





4



Enter the encryption key and click [Connect].

Step through the wizard to finish configuration.
If the Set Network Location screen is displayed, select [Home], [Work], or [Public location] depending on where you're using the AirStation.

Windows XP (Wireless Zero Configuration)

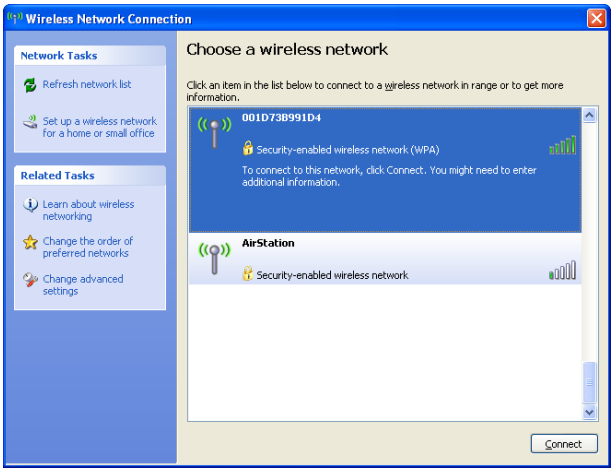
Windows XP includes Wireless Zero Config, a built-in utility to connect to your AirStation.

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

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

2 Click [View Available Wireless Networks].

3



Select the network to connect to and click [Connect].

4

Enter the encryption key (twice) and click [Connect].

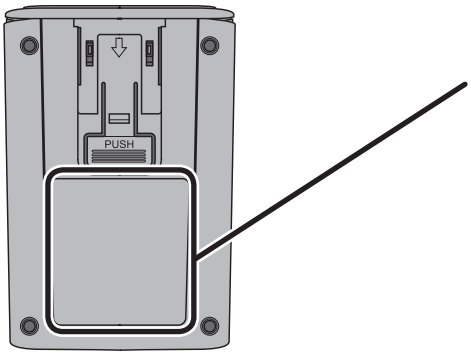
It will take several seconds for configuration to complete.

Mac OS X (Wi-Fi)

Use Wi-Fi on a Mac to connect to the AirStation.

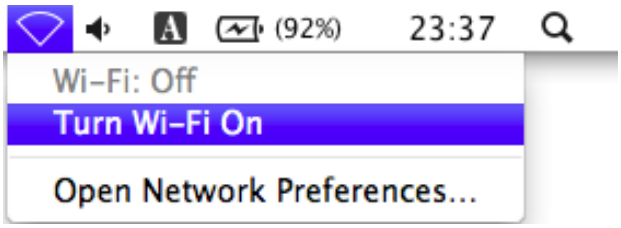
Note: In Mac OS X 10.6 and earlier, "Wi-Fi" appears as "AirPort".

1



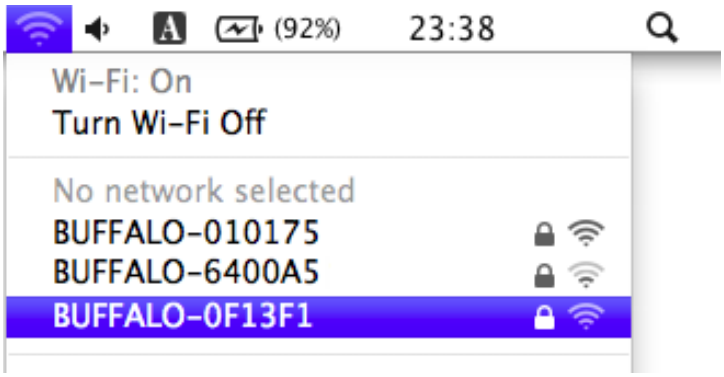
Refer to the label on the back of the AirStation.
Make a note of the SSID and KEY printed on the label.

2



Click the icon in the top section of the screen and select [Turn Wi-Fi On].

3



Find the SSID from step 1 on the list. Click it to highlight it.

4

Enter the KEY from step 1 into the Password entry box, check [Remember this network], and click [OK].

It will take several seconds for configuration to complete.

Chapter 5 - Troubleshooting

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 LED is on
  PLC Green LED is on
  Router Green LED is on or off (depending on your environment)

- Make sure that your computer is configured to "obtain an IP address automatically from DHCP". (See chapter 8)
- Restart your AirStation.

Cannot access the web-based configuration Interface.

- See chapter 3 for instructions to open the AirStation's configuration interface.
- Enter the correct username and password to log in to the configuration interface. The factory defaults are "admin" for the username and "password" for the password. If you changed the password, enter the new password that you set.
- Verify that your web browser is not set to use proxies.
- Make sure that your computer is configured to "obtain an IP address automatically from DHCP". (See chapter 8)
- Restart your AirStation.

Cannot connect to the network wirelessly.

- Configure your wireless client with the same SSID, encryption type, and encryption key as set on the AirStation.

  The factory defaults are:

  SSID - BUFFALO-XXXXXX (the last 6 digits of the AirStation's MAC address)

  Encryption Type - WPA/WPA2 mixed mode - PSK (Connect with either WPA-PSK TKIP or WPA2-PSK AES).

  Encryption Key - Printed on the label of the AirStation.

  Note: Encryption is disabled by default in Asia Pacific.

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

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

Hold down the reset button on the base of your AirStation for 3 seconds to initialize its settings. All settings, including your password, SSID, and encryption key will be initialized to their defaults. The factory defaults are:

SSID - BUFFALO-XXXXXX (the last 6 digits of the AirStation's MAC address)

Encryption Type - WPA/WPA2 mixed mode - PSK (Connect with either WPA-PSK TKIP or WPA2-PSK AES).

Encryption Key - Printed on the label of the AirStation.
(Encryption is disabled by default for Asia Pacific AirStations.)

If the AirStation is reset, it is disconnected from the network.

If the Power LED is flashing, use the procedure below to set the pairing.

1. Hold down the PLC button of the AirStation until the Power LED starts blinking (about one second).
2. Within 2 minutes, hold down the PLC button of the other AirStation until the Power LED starts blinking (about one second).
3. Check that the Power LED changes to steady green after about 1 minute.

If the Power LED does not stop blinking, pairing has failed. Try performing the procedure again from the beginning.

The link speed is slower than 300 Mbps.

By default, the AirStation's 300 Mbps mode is not enabled. You may enable it with the following procedure:

1. Open the configuration interface (chapter 3).
2. In Easy Setup, click [Wireless SSID & Channel (11n 300 Mbps Mode)].
3. Change the value in [300 Mbps Mode] - [Bandwidth] to 40 MHz and click [Apply].

If you still cannot connect at 300 Mbps, check the settings of your wireless client devices.

Other Tips

Issue:

I reset my AirStation to factory settings and forgot how to log in to the configuration interface.

Answer:

Refer to Chapter 3 to login to the AirStation's configuration screen. The user name is "admin" and the password is "password" by default.

Issue:

How do I forward ports on my AirStation for my gaming console?

Answer:

Log in to the router's configuration interface. 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 AirStation?

Answer:

Log in to the configuration interface with your browser. Go to [Wireless Config] - [Security]. Buffalo recommends WPA for wireless encryption. The passphrase/key should be at least 8 characters in length.

Issue:

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

Answer:

Log in to the configuration interface. Go to the Wireless Config tab and then select the Basic tab if necessary. Find the settings area for 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, select the new network name for all wireless devices and re-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 cause this. First, ensure the issue is not range related by moving the AirStation and the client device closer together. If the connection drops continue, then range is probably not the issue.
Other 2.4 GHz devices such as microwaves, other wireless networks, and 2.4 GHz wireless phones may impact performance. Try a different wireless channel for your AirStation. Log in to the AirStation with your browser. Click on the Wireless Config tab and then the Basic tab. Wireless channels from 1 - 11 may be selected. Try the Auto-Channel option if available. Otherwise, manually select an alternate channel and click [Apply].

Issue:

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

Answer:

First, power off the cable or DSL modem, the AirStation, and your computer. Move the router's mode switch to the on position. Verify that the modem is connected to the AirStation with an Ethernet cable to the WAN port. Power on the modem and wait one minute. Power on the AirStation and wait another minute. Power on the computer. Open a browser on the computer and navigate to a familiar website to verify whether the Internet connection is functioning normally.
If after these steps, an Internet connection is still unavailable, power off the cable or DSL modem and computer again and directly connect your computer to the cable or DSL modem with a cable between the computer and the port on the modem. Power on the modem and wait one minute. Power on the computer and again check for an Internet connection.
If an Internet connection IS NOT available with a direct connection to the computer, please call the Internet Service Provider who installed the modem.
If an Internet connection IS available with a direct connection to the computer, please call our customer support.

Issue:

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

Answer:

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

Chapter 6 - 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
	DNS Name Server Address	none
	Internet MAC Address	Use Default MAC Address
	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 (Router Mode only)	Dynamic DNS Service	Disabled
	Current Dynamic DNS Information	none
VPN Server (Router Mode only)	LAN Side IP Address	192.168.11.1 (255.255.255.0)
	DHCP Server Function	Enabled
	DHCP IP Address Pool	192.168.11.2 for up to 64 Address(es)
	PPTP Server Function	Disabled
	Authorization Type	MS-CHAPv2 (40/128-bit Encryption)
	Server IP Address	Auto
	Client IP Address	Auto
	DNS Server IP Address	LAN IP address of the AirStation
	WINS Server IP Address	none
	MTU/MRU value	1396
	PPTP User List	none
PLC	PLC Function	Enabled
	PLC connection information	none

Feature	Parameter	Default Setting
LAN	LAN Side IP Address	Router Mode (Router Switch AUTO/ON): 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 AUTO): Obtain automatically from DHCP Server
	DHCP Server Function (Router Mode only)	Enabled
	DHCP IP Address Pool (Router Mode only)	192.168.11.2 for up to 64 Addresses
	LAN Side IP Address (For IP Unnumbered) (Router Mode only)	none
	Lease Period (Router Mode only)	48 Hours
	Default Gateway (Router Mode only)	AirStation's IP Address
	DNS Servers (Router Mode only)	AirStation's IP Address
	WINS 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	Enabled
	Log Output of Deleted Packets	Disabled
Route	Routing Information	none

Feature	Parameter	Default Setting
WPS	WPS	Enabled
	External Registrar	Enabled
	AirStation PIN	An 8-digit random value (Printed on the label of the AirStation)
	WPS Security Information	WPS status: configured SSID: BUFFALO-XXXXXX (the last 6 digits of the AirStation's MAC address) Security: WPA/WPA2 mixedmode - PSK TKIP/AES mixedmode or none Encryption key: Either a 13-digit random value or disabled. Printed on the label of the AirStation. Encryption is disabled by default settings on AirStation for Asia Pacific.
Basic	Wireless Radio	Enabled
	Wireless Channel	Auto Channel
	300 Mbps Mode	Bandwidth: 20 MHz Extension Channel: -
	Broadcast SSID	Allow
	Separate feature	not used
	SSID	Use AirStation's MAC address
	Wireless authentication	WPA/WPA2 mixedmode - PSK, or no authentication
	Wireless encryption	TKIP/AES mixedmode, or no encryption
	WPA-PSK (Pre-Shared Key)	A 13-digit random value or disabled (Printed on the label of the AirStation. Encryption is disabled in default settings on AirStation for Asia Pacific.)
	Rekey interval	60 minutes
Advanced	Multicast Rate	Auto
	DTIM Period	1
	Privacy Separator	Disabled

Feature	Parameter	Default Setting		
WMM	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	-----	Disabled
	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	-----	Disabled
	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	-----	Disabled
	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	-----	Disabled
MAC Filter	Enforce MAC Filtering	Disabled		
	Registration List	none		
Multicast Control	Snooping	Enabled		
	Multicast Aging Time	300 Sec.		
AOSS	Encryption Type of Exclusive SSID for WEP	none		
	Dedicated WEP SSID isolation	Disabled		
	Allow WEP for Game Console Only	Disabled		
	AOSS Button on the AirStation Unit	Enabled		

Feature	Parameter	Default Setting
Firewall (Router Mode only)	Log Output	Disabled
	Basic Rules	Prohibit NBT and Microsoft-DS Routing Disabled Reject IDENT Requests Enabled Block Ping from Internet Enabled
IP Filter (Router Mode only)	Log Output	Disabled
	IP Filter Information	none
VPN Pass Through (Router Mode only)	IPv6 Pass Through	Disabled
	PPPoE Pass Through	Disabled
	PPTP Pass Through	Enabled
Port Forwarding (Router Mode only)	Port Forwarding Registration Information	none
DMZ (Router Mode only)	IP Address of DMZ	none
UPnP (Router Mode only)	UPnP	Enabled
QoS (Router Mode only)	QoS for transmission to the Internet	Disabled
Movie Engine	Movie Engine function	Enabled
	IPv6 Pass Through	Used
	Multicast Rate	11 Mbps
	Multicast Control	Snooping Function Use Aging Time 300 Seconds Change Priority VI (priority)
	TCP Rwin Size Limit	Size Limit No limit Maximum Rwin Size 65536 bytes
	Wireless Priority Control Rules	None
	Transmission Rate Limit	No Limits
Name	AirStation Name	AP + AirStation's MAC Address
	List Network Services	Enabled
Password	Administrator Name	admin (fixed)
	Administrator Password	password

Feature	Parameter	Default Setting
Time/Date	Local Date	2011 Year 1 Month 1 Day
	Local Time	0 Hour 0 Minute 0 Seconds
	Time Zone	(GMT+00:00) Greenwich Mean Time,London
	DST (Daylight Saving Time)	EU type 1 For GMT+00:00(From Last Sunday in Mar to last Sunday in Oct)
NTP	NTP Functionality	Enabled
	NTP Server	time.nist.gov
	Update Interval	24 hours
ECO	Schedule feature	Disabled
	Register schedule	Operational Mode: Normal Start time: 0:00 End time: 0:30 The day of week: none
	User Define Mode	LED: Off PLC LAN: Off Wired LAN: ECO (Slow operation) Wireless LAN: Off
Access	Log Output	Disabled
	Limitation Item	Prohibit configuration from wireless LAN Disabled Prohibit configuration from wired LAN Disabled Permit configuration from wired Internet Disabled
Log	Log Transfer	Disabled
	Syslog Server	none
	Logs	Router Mode: Address Translation, IP Filter, Firewall, PPP Client, Dynamic DNS, DHCP Client, DHCP Server, AOSS, Wireless Client, Authentication, Setting Changes, System Boot, NTP Client, Wired Link, and PLC link Bridge Mode: IP Filter, DHCP Client, AOSS, Wireless Client, Authentication, Setting Changes, System Boot, NTP Client, Wired Link, and PLC link
Initialize / Restart	Timer restart	Disabled
Update	Update Method	Specify Local File
	Firmware Update Reminder	Enabled
	Remind Time	Automatic

Chapter 7 - Checking Wireless Signal Quality

For users of Windows 7, Vista, or Mac OS X (10.4 and later), software supplied with the AirStation can be used to check the quality and strength of the wireless signal.

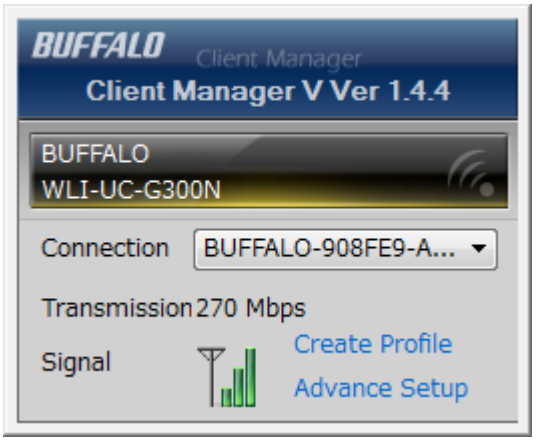
Windows 7/Vista

Note: · If Client Manager V is not already installed, install it from the Setup CD.

· Client Manager V does not support Windows XP.

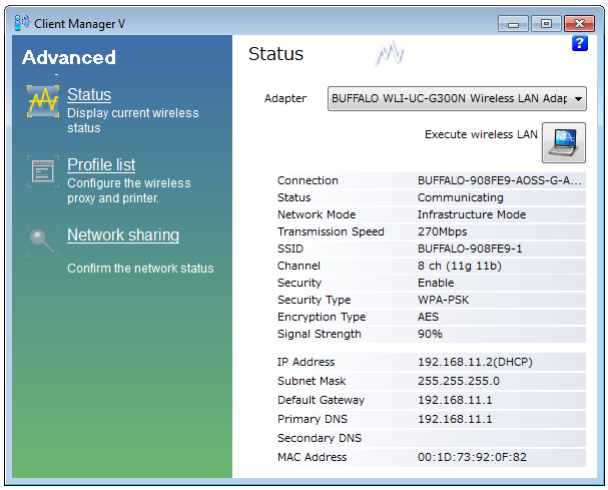
1 Click [Start] > [All Programs] > [BUFFALO] > [AirStation Utility] > [Client Manager V].

2



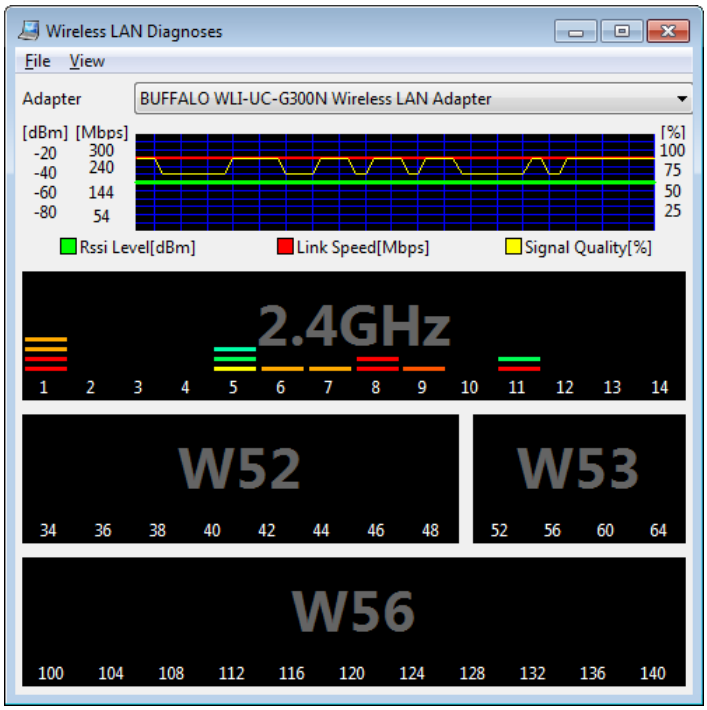
Click [Advanced Setup].

3



When the Client Manager V status screen is displayed, click  .

4



Parameter	Meaning
Connection status	Signal strength (dBm), link speed (Mbps), and signal quality (%) are displayed in one-minute intervals on a real-time graph.
Usage status by channel	The 11b/11g display shows usage in the 2.4 GHz band channels 1 to 11.

Colors are used to indicate the signal strength of the access point. Colors closer to red indicate an access point with a stronger signal strength, and colors closer to blue indicate an access point with a weaker signal strength.

Mac OS X

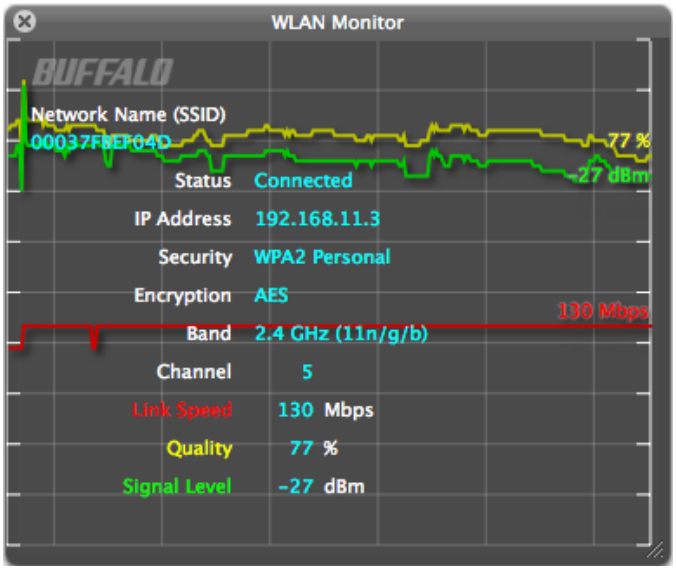
1 Load the Setup CD into your Mac.

2 From the menu bar, click [Go] > [Computer].

3 Double-click the CD icon, and then double-click [WLAN Monitor] in the "Mac" folder.

4 The software license screen is displayed when starting for the first time only. Click [Agree] to proceed.

5



Parameter	Meaning
Network name (SSID)	This displays the SSID of the AirStation that is currently connected.
Status	This indicates the current connection status.
IP Address	This indicates the IP address of the current wireless network port (Wi-Fi).
Security	This indicates the authentication method for the current connection target.
Encryption	This displays the encryption type for the current connection target.
Band	This displays the wireless band for the current connection target.
Channel	This displays the wireless channel for the current connection target.
Link Speed (Mbps)	This displays the current link speed.
Quality (%)	This displays the current signal quality.
Signal Level (dBm)	This indicates the strength of the current signal.

Chapter 8 - TCP/IP Settings

Windows 7

To configure TCP/IP in Windows 7, follow the procedure below.

1 Click [Start] > [Control Panel] > [Network and Internet].

2 Click [Network and Sharing Center].

3 Click [Change Adapter Settings] on the left side menu.

4 Right-click on [Local Area Connection], then click [Properties].

5 If the User Account Control screen opens, click [Yes] or [Continue].

6 Select [Internet Protocol Version 4 (TCP/IPv4)] then click [Properties].

7 To have DHCP set your IP address settings automatically, check [Obtain an IP address automatically] and [Obtain DNS server address automatically].

To set your IP address settings manually, enter values for each setting. Examples:

If the router's IP address is 192.168.11.1,

IP address	192.168.11.80
Subnet mask	255.255.255.0
Default gateway	192.168.11.1
Preferred DNS server	192.168.11.1
Alternate DNS server	blank

8 Click [OK].

Windows Vista

To configure TCP/IP in Windows Vista, follow the procedure below.

1 Click [Start] > [Settings] > [Control Panel].

2 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 If the User Account Control screen opens, click [Yes] or [Continue].

6 Select [Internet Protocol Version 4 (TCP/IPv4)], then click [Properties].

7 To have DHCP set your IP address settings automatically, check [Obtain an IP address automatically] and [Obtain DNS server address automatically].

To set your IP address settings manually, enter values for each settings. Example:

If the router's IP address is 192.168.11.1,

IP address	192.168.11.80
Subnet mask	255.255.255.0
Default gateway	192.168.11.1
Preferred DNS server	192.168.11.1
Alternate DNS server	blank

8 Click [Close].

Windows XP

To configure TCP/IP in 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 To have DHCP set your IP address settings automatically, check [Obtain an IP address automatically] and [Obtain DNS server address automatically].

To set your IP address settings manually, enter values for each setting. Examples:

If the router's IP address is 192.168.11.1,

IP address	192.168.11.80
Subnet mask	255.255.255.0
Default gateway	192.168.11.1
Preferred DNS server	192.168.11.1
Alternate DNS server	blank

6 Click [Close].

Mac OS X

To configure TCP/IP in Mac OS X, follow the procedure below.

1 Click [Apple menu] > [System Preferences…].

2 Click [Network].

3 Click [Ethernet].

4 To have DHCP set your IP address settings automatically, select [Using DHCP] in the Configure IPv4 field.

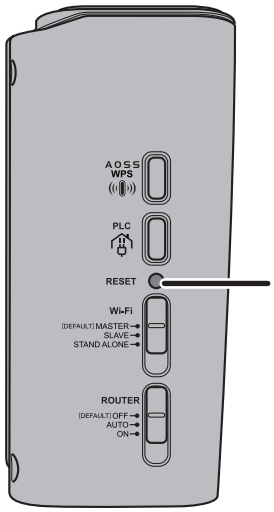
To set your IP address settings manually, select [Manually] in the Configure IPv4 field and enter values for each setting. Examples:

If the router's IP address is 192.168.11.1,

IP Address	192.168.11.80
Subnet Mask	255.255.255.0
Router	192.168.11.1
DNS Server	192.168.11.1
Search Domains	blank

5 Click [Apply].

Chapter 9 - Restoring the Default Configuration



With the AirStation powered on, hold down this button for 3 seconds to return it to factory default settings.

Appendix A - Specifications

Wireless LAN Interface	
Standard Compliance	IEEE802.11b / IEEE802.11g / IEEE802.11n
Transmission Method	Direct Sequence Spread Spectrum (DSSS), OFDM, MIMO
Frequency Range	2,412 - 2,462 MHz (Channels 1 - 11)
Transmission Rate	802.11b: 11, 5.5, 2, 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11n 20 MHz BW (Long GI) 130, 117, 104, 78, 52, 39, 26, 13 Mbps (2 stream) 65, 58.5, 52, 39, 26, 19.5, 13, 6.5 Mbps (1 stream) (Short GI) 144.4, 130, 115.6, 86.7, 57.8, 43.3, 28.9, 14.4 Mbps (2 stream) 72.2, 65, 57.8, 43.3, 28.9, 21.7, 14.4, 7.2 Mbps (1 stream) 40 MHz BW (Long GI) 270, 243, 216, 162, 108, 81, 54, 27 Mbps (2 stream) 135, 121.5, 108, 81, 54, 40.5, 27, 13.5 Mbps (1 stream) (Short GI) 300, 270, 240, 180, 120, 90, 60, 30 Mbps (2 stream) 150, 135, 120, 90, 60, 45, 30, 15 Mbps (1 stream)
Access Mode	Infrastructure Mode
Security	AOSS, WPA2-PSK (AES), WPA/WPA2 mixed PSK, WPA-PSK (AES), 64-bit or 128-bit WEP, Mac Address Filter
Wired LAN Interface	
Standard Compliance	IEEE 802.3u (100 BASE-TX), IEEE 802.3 (10 BASE-T)
Transmission Rate	10 / 100 Mbps
Transmission Encoding	100 BASE-TX 4B5B/MLT-3, 10 BASE-T Manchester Cording
Access Method	CSMA/CD
Speed and Flow Control	10 / 100 Mbps, Auto Sensing, Auto MDIX
Number of LAN Ports	2
LAN Port Connector	RJ-45
PLC Interface	
Standard Compliance	HomePlug AV, IEEE 1901
Transmission Rate	up to 500 Mbps
Security	128-bit AES encryption over power supply grid (enabled at the touch of a button)

Other	
Power Supply	AC 100-240 V Universal, 50/60 Hz
Power Consumption	About 5.9 W (Max)
Dimensions	77 mm x 112 mm x 54 mm (3.0 x 4.4 x 2.1 in.)
Weight	250 g (8.8 oz.)
Operating Environment	0 - 40° C (32 - 104° F), 10 - 85% (non-condensing)

Appendix B - 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 this 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.

Important Note - FCC Radiation Exposure Statement:

This equipment complies with FCC 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 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.

Industry Canada statement:
Industrie Canada déclaration:

This Class B digital apparatus complies with Canadian ICES-003.
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.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.
Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes:
(1) le dispositif ne doit pas produire de brouillage préjudiciable, et
(2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Important Note - Radiation Exposure Statement:
Note Importante - Déclaration d'exposition aux radiations:

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 and your body.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peutfonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pourl'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectriqueà l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que lapuissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire àl'établissement d'une communication satisfaisante.

Europe – EU Declaration of Conformity

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 +A11: 2009
Safety of Information Technology Equipment

EN50385 : (2002-08)
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 spread spectrum 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 V2.1.1 (2009-05)
Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for Broadband Data Transmission Systems

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.

CE 0560 ⓘ

Česky [Czech]
Buffalo Technology Inc. tímto prohlašuje, že tento AirStation WPL-05G300 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 WPL-05G300 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 WPL-05G300 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 WPL-05G300 vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

English
Hereby, Buffalo Technology Inc. declares that this AirStation WPL-05G300 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 WPL-05G300 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 WPL-05G300 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.

Français [French]
Par la présente Buffalo Technology Inc. déclare que l'appareil AirStation WPL-05G300 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 WPL-05G300 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 WPL-05G300 atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

Lietuvių [Lithuanian]
Šiuo Buffalo Technology Inc. deklaruoja, kad šis AirStation WPL-05G300 atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Nederlands [Dutch]
Hierbij verklaart Buffalo Technology Inc. dat het toestel AirStation WPL-05G300 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 WPL-05G300 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 WPL-05G300 megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.

Polski [Polish]
Niniejszym Buffalo Technology Inc. oświadcza, że AirStation WPL-05G300 jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.

Português [Portuguese]
Buffalo Technology Inc. declara que este AirStation WPL-05G300 está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Slovensko [Slovenian]
Buffalo Technology Inc. izjavlja, da je ta AirStation WPL-05G300 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.

Slovensky [Slovak]
Buffalo Technology Inc. týmto vyhlasuje, že AirStation WPL-05G300 spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

Suomi [Finnish]
Buffalo Technology Inc. vakuuttaa täten että AirStation WPL-05G300 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 WPL-05G300 står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

根據 NCC 低功率電波輻射性電機管制辦法：

第十二條：

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。

第十四條：

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。

해당 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없음

기종별	사 용 자 안 내 문
B 급 기기 (가정용 정보통신기기)	이 기기는 가정용 (B 급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며 , 모든 지역에서 사용할 수 있습니다 .

Appendix C - 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 collection, reuse, and recycling systems, please contact your local or regional waste administration.

Appendix D - GPL Information

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

Appendix E - 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 of 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.