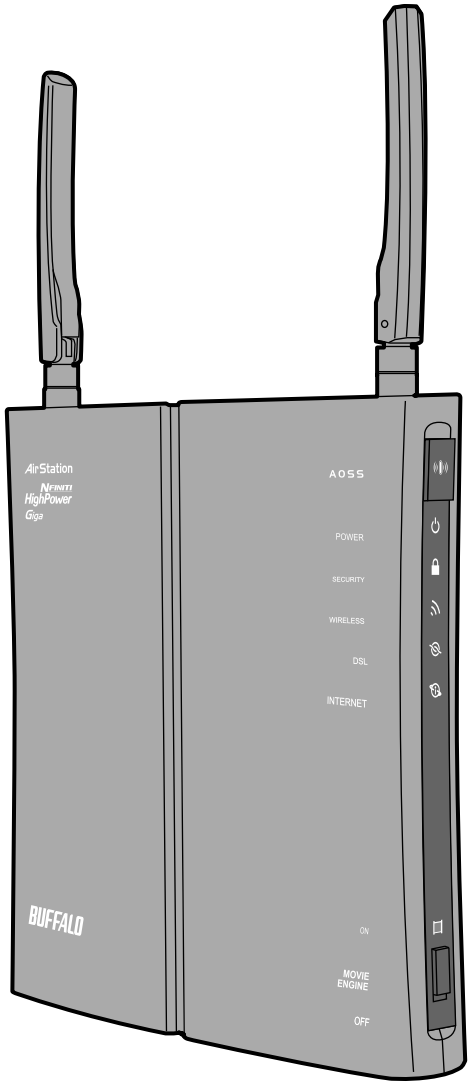
User Manual

Nfiniti High Power Giga Broadband ADSL2+ Modem Router

WBMR-HP-G300H



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Contents

Chapter 1 - Product Overview

Features

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.

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

Security Features
The AirStation is equipped with the following security features:

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

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

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

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

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

MovieEngine
MovieEngine uses QoS to optimise your network for mutimedia streaming. This can reduce jumps, distorted audio, and dropped frames while watching streamed video.

NAS (Network Attached Storage)
Attach a USB hard drive to the AirStation and share it on the network as a NAS. All connected clients can access it.

Gigabit Ethernet
This unit supports Gigabit Ethernet, allowing transmission rates of up to a billion bits per second.

Air Navigator CD Requirements

The AirStation wireless router and access point works with most wired and wireless devices. However, the automatic installation program on the CD requires a connected Windows 7, Vista or XP computer to run. If you use the AirStation with a different operating system, you will have to configure your network settings manually from a browser window.

300 Mbps High Speed Mode

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

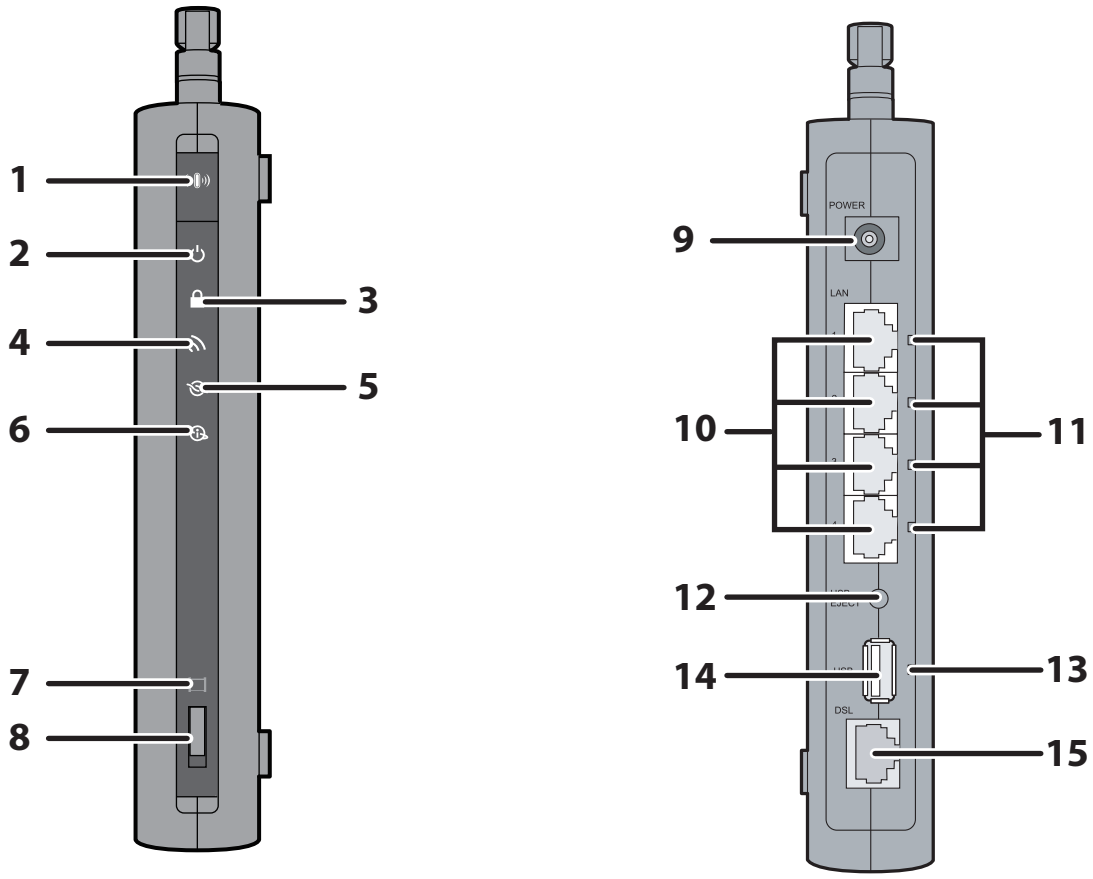
Package Contents

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

- WBMR-HP-G300H 1
- Detachable antennas 2
- AC adapter 1
- Stand for vertical/horizontal/wall-mounting 1
- Screws for wall-mounting 2
- LAN cable 1
- Air Navigator CD 1
- Quick Setup Guide 1

Hardware Overview

Front Panel LEDs / Back Panel



1 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.

2 Power LED

On (Green) : The AC adapter is connected.
Off (Green) : The AC adapter is not connected.
Shows AirStation status.
2 blinks (Red) *1 : Flash ROM error.
3 blinks (Red) *1 : Wired Ethernet LAN error.
4 blinks (Red) *1 : Wireless LAN error.
5 blinks (Red) *1 : Network error.

9 blinks (Red) *1 : System error.
Continuously blinking (Red) *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.

3 Security LED (Amber)

Indicates security status.

Off : AOSS or Encryption is not set.
On : AOSS/WPS activated; accessed to exchange security keys. Encryption has been set.
2 blinks : The unit 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 encryption key has been set.

4 Wireless LED (Green)

Indicates wireless LAN status.

On : Wireless LAN is transmitting.
Off : Wireless LAN is not active.

5 DSL LED (Green)

Indicates DSL status.

On : The DSL port is connected.

6 Internet LED

Indicates Internet status.

On (Green) : Connected to Internet
Blinking (Green) : Communicating over Internet
On (Red) : Not connected to Internet
Off : Operating in bridge mode

7 Movie Engine LED (Blue)

Indicates Movie Engine status.

On : Movie Engine functionality is enabled.
Off : Movie Engine functionality is disabled.

8 Movie Engine Switch

Switches the movie engine function between enabled and disabled.

On : Movie Engine functionality is enabled.
Off : Movie Engine functionality is disabled.

9 DC Connector

Connect the included AC adapter here.

10 LAN Port

Connect your computer, hub, or other Ethernet devices to these ports. This switching hub supports 10 Mbps, 100 Mbps, and 1000 Mbps connections.

11 LAN LED (Green)

On :	An Ethernet device is connected.
Blinking :	An Ethernet device is communicating.

12 USB Eject Button

To dismount a USB hard drive, hold down this button until the USB LED flashes (about 3 seconds). The USB drive can then be unplugged safely.

13 USB LED (Green)

On :	The USB disk is connected.
Blinking :	The USB disk can be removed.
Off :	The USB disk is not connected.

Note : Never disconnect the USB disk or turn off the unit, while the USB LED lights up.

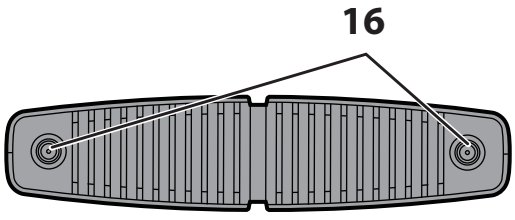
14 USB Port

Connect the USB drive.
Note : Refer to the technical restriction on page 129.

15 DSL Port

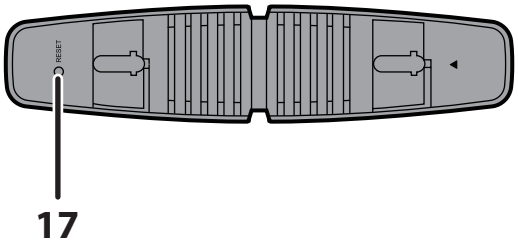
Connect your ADSL line to this port.

Top



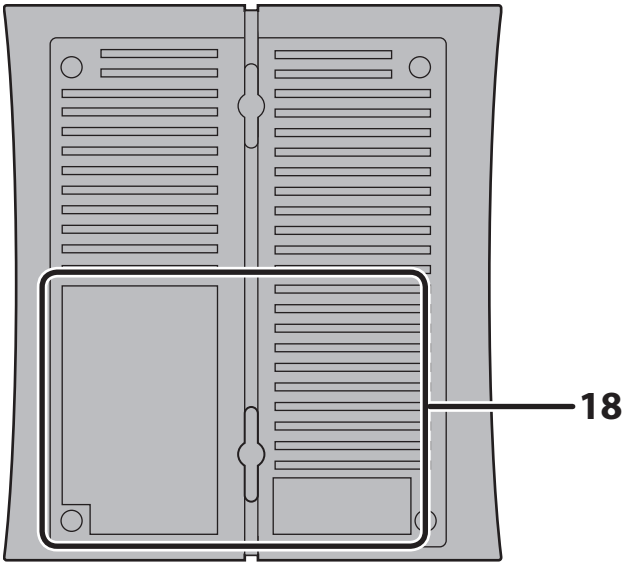
16 Antenna connector Screw on the antennas here.

Bottom



17 Reset Button To reset all settings, hold down this button until the Power LED comes on (about 3 seconds). Power must be on.

Right Side



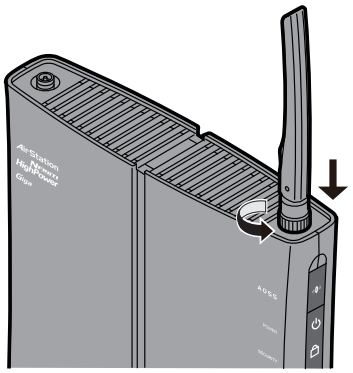
Note: The right side of the unit may become hot. Please be careful not to place anything next to it that could be damaged by heat.

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

Chapter 2 - Placing Your AirStation

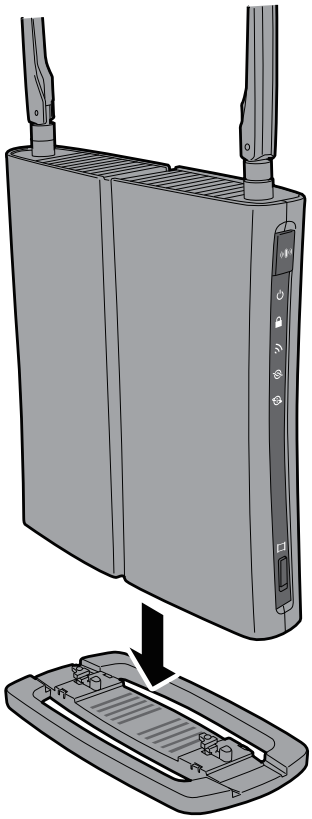
Antenna Placement

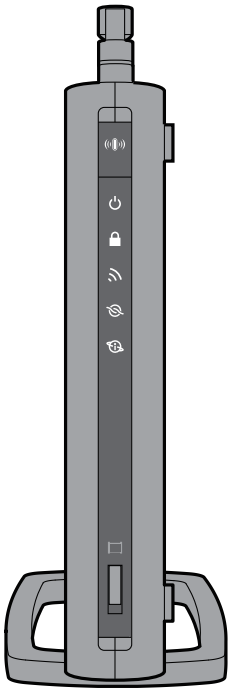
The antennas are included in the package. Screw the antennas clockwise to install.



Vertical Placement

If the AirStation is to be placed vertically, attach the stand as shown.

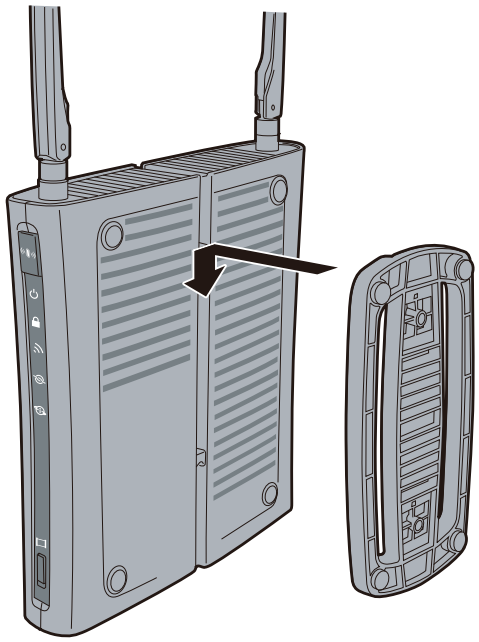




Horizontal Placement

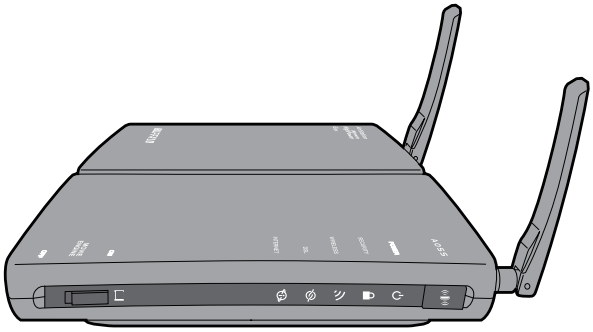
When installing the AirStation horizontally, attach the stand for better heat dissipation.

1



Attach the stand as shown in the figure.

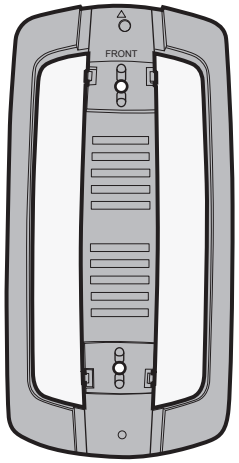
2

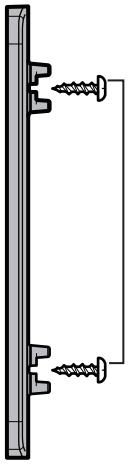


Horizontal installation..

Wall-Mounting

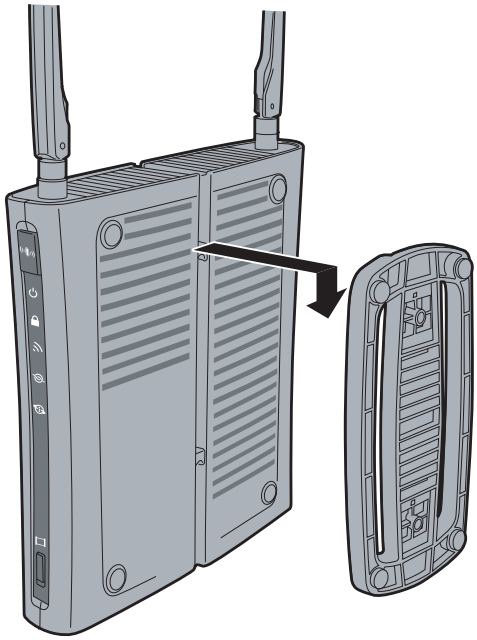
1





To wall-mount the AirStation, attach the stand to the wall with the two screws (included).

2 Snap the center of the AirStation to the stand as shown.



Chapter 3 - Installation

Automatic Setup

The AirNavigator CD can step you through installing your AirStation. To step through the setup program, insert the CD into your Windows 7/Vista/XP PC and follow the instructions on the screen. If your computer uses a different operating system, use manual setup instead.

Note:
- **To use a wireless client in Windows 7 or Vista, perform setup using the AirNavigator CD to automatically generate a profile for wirelessly connecting to the AirStation. After setup is complete, once the LAN cable is removed, you can connect from your wireless client to the AirStation.**
- **Before performing setup, make the settings to enable the wireless client of the computer.**

Manual Setup

To configure your AirStation manually, follow the procedure below.

1 Power off your computers and networking equipment.

2 Connect your computer to one of the LAN ports on the rear of the AirStation with the supplied Ethernet network cable.

3 Connection for the AirStation to the ADSL line varies by country and region. Typically it involves a microfilter or a microfilter with built-in splitter to allow simultaneous use of ADSL service and telephone service on the same telephone line. Please read the following steps carefully and select the appropriate method.

- If your telephone service and ADSL service are on the same telephone line, ADSL microfilters are needed for each telephone and device, such as answering machine, fax machine, and caller ID display. Additional splitters may be used to separate telephone lines for telephone and Router.

  Note: Do not connect the ADSL microfilter between the wall jack and the Router—this will prevent ADSL service from reaching the modem.

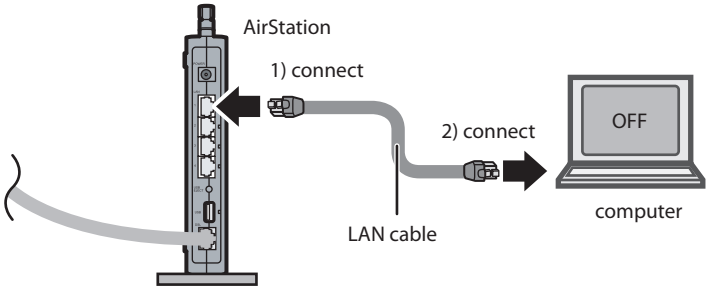
- If your telephone service and ADSL service are on the same telephone line and you are using an ADSL microfilter with built-in splitter, connect the splitter to the telephone wall jack providing ADSL service. Then, connect the telephone cord from the ADSL microfilter RJ11 port generally labelled 'DSL' to the gray RJ11 port labelled 'DSL line' on the back of your Router. Connect the telephony device to the other port on the ADSL splitter commonly labelled 'Phone'.

  Note: An RJ11 telephone cord is supplied. When inserting an RJ11 plug, be sure the tab on the plug clicks into position correctly.

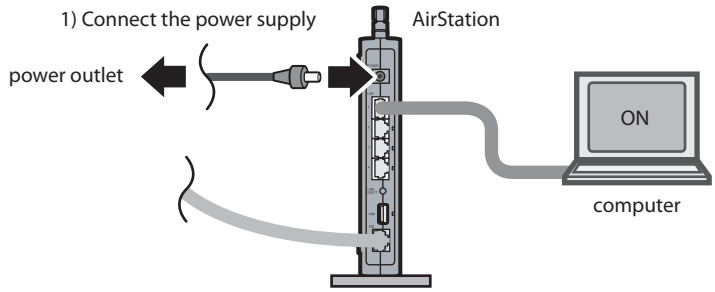
- If you have a dedicated ADSL service telephone line with an RJ11 wall jack, simply connect a telephone cord from the wall jack to the DSL port on the back of the AirStation.

- If you have an RJ45 wall jack for your ADSL service, connect an RJ45-to-RJ11 converter to the wall jack. Then connect one end of the telephone cord to the converter and the other end to the DSL port on the back of the AirStation.

4 Connect your computer to one of the AirStation's LAN ports with the LAN cable.



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



6 Once your computer has booted, the AirStation's LEDs should be lit as described below:

POWER	Green light on.
WIRELESS	Green light on or blinking.
DSL	Green light on or off depending on your network.
INTERNET	Green light on.
LAN	Green light on or blinking.

For LED locations, refer to chapter 1.

7 Launch a web browser. If the [home] setup screen is displayed, setup is complete. If a user name and password screen is displayed, enter [root] (in lower case) for the user name, leave the password blank, and click [OK]. Step through the wizard to complete setup.

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

Chapter 4 - Configuration

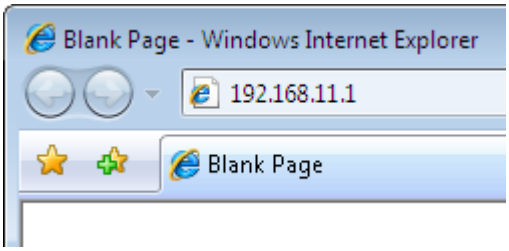
The web-based configuration tool lets you change advanced settings for the AirStation. Don't change these settings unless you know what you're doing.

How to Access the Web-Based Configuration Utility

To configure the AirStation's advanced settings manually, log in to the web-based configuration utility as shown below.

1 Launch a web browser.

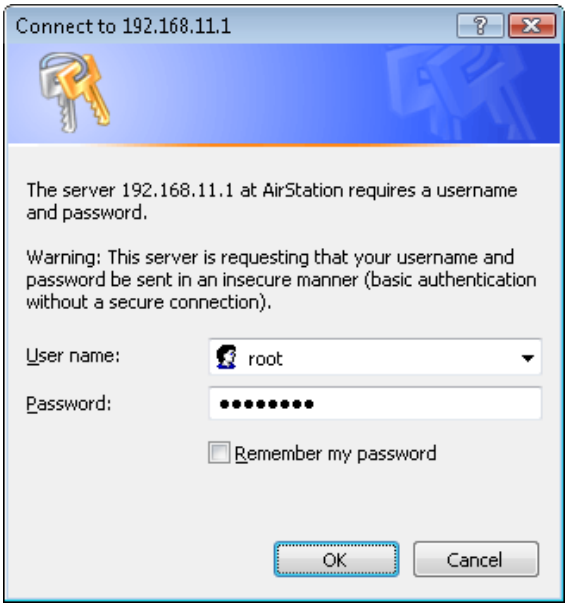
2



Enter the AirStation's LAN-side IP address in the address field, and press the [Enter] key.

Note:
- The AirStation's default LAN-side IP address is 192.168.11.1.
- If you changed the IP address of the AirStation, then use the new IP address.

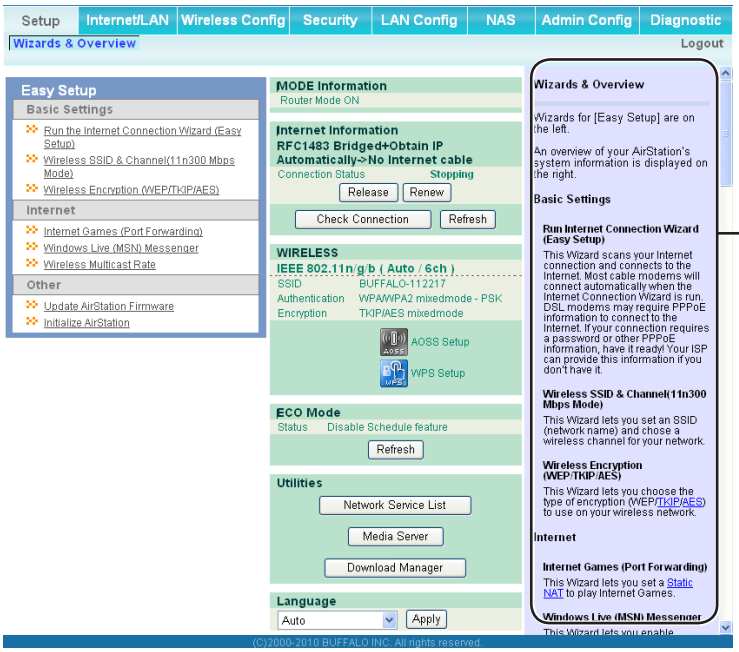
3



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

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

4



This is the configuration utility, 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 utility.

Configuration Utility 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		
ADSL	Configure DSL port and settings.	Page 26
DDNS	DNS settings.	Page 29
VPN Server	VPN server settings.	Page 31
LAN	LAN side port configuration.	Page 33
DHCP Lease	DHCP lease settings.	Page 35
NAT	Network address translation settings, used to connect LAN side devices to the Internet.	Page 36
Route	Configure the AirStation's IP communication route.	Page 37
Wireless Config		
WPS	WPS settings and status.	Page 38
AOSS	AOSS (AirStation One-touch Secure System) settings and status.	Page 39
Basic	Configure basic wireless settings.	Page 41
Advanced	Configure advanced wireless settings.	Page 45
WMM	Set priorities for Wireless Multimedia Extensions (Wi-Fi Multimedia).	Page 46
MAC Filter	Limit access to specific devices.	Page 48
Multicast Control	Configure limits on sending unnecessary multicast packets to the wireless LAN port.	Page 49
Security		
Firewall	Protect your computer from outside intruders.	Page 50
IP Filter	IP filters for packets passing through the LAN side and the Internet side.	Page 52
VPN Passthrough	Configure IPv6 passthrough, PPPoE passthrough, and PPTP passthrough.	Page 53
LAN Config		
Port Forwarding	Configure port translation and exceptions for games and other programs.	Page 54
DMZ	Configure a destination to transfer communication packets without a LAN side destination.	Page 56
UPnP	Configure UPnP (Universal Plug and Play).	Page 57
QoS	Configure priority for packets that require a guaranteed data flow.	Page 58
Movie Engine	Configure options for the Movie Engine feature.	Page 60

NAS		
Disk management	View the status and configure of attached USB disks.	Page 62
Shared Folder	Set the USB disk to use as shared folders.	Page 64
User Management	Configure users to access shared folders.	Page 66
Shared Service	Configure shared folder access.	Page 67
Web Access	Configure Web Access.	Page 68
Media Server	Configure a Media Server.	Page 70
BitTorrent	Configure a BitTorrent client.	Page 71
Admin Config		
Name	Configure the AirStation's name.	Page 73
Password	Configure the AirStation's login password for access to the configuration utility.	Page 74
Time/Date	Configure the AirStation's internal clock.	Page 75
NTP	Configure the AirStation to synchronize with an NTP server to automatically set the AirStation's internal clock.	Page 76
ECO	Configure the AirStation's ECO Mode.	Page 77
Network-USB	Configure Network-USB from this screen.	Page 79
Access	Configure access restrictions to the AirStation's configuration screens.	Page 80
Log	Configure a syslog server to manage the AirStation's logs.	Page 81
Save/Restore	Save or restore the AirStation's configuration from a configuration file.	Page 82
Initialize/Restart	Initialize the AirStation or reboot it.	Page 83
Update	Update the AirStation's firmware.	Page 84
Diagnostic		
System Info	View current system information for the AirStation.	Page 85
Logs	Check the AirStation's logs.	Page 87
Packet Info	View all packets transferred by the AirStation.	Page 88
Client Monitor	View all devices currently connected to the AirStation.	Page 89
Ping	Test the AirStation's connection to other devices on the network.	Page 90
DSL Connection	View DSL Connection for the AirStation.	Page 91
Logout		
Click this to log out of the AirStation's configuration screens.		

Configuration Utility Menus in Bridge Mode

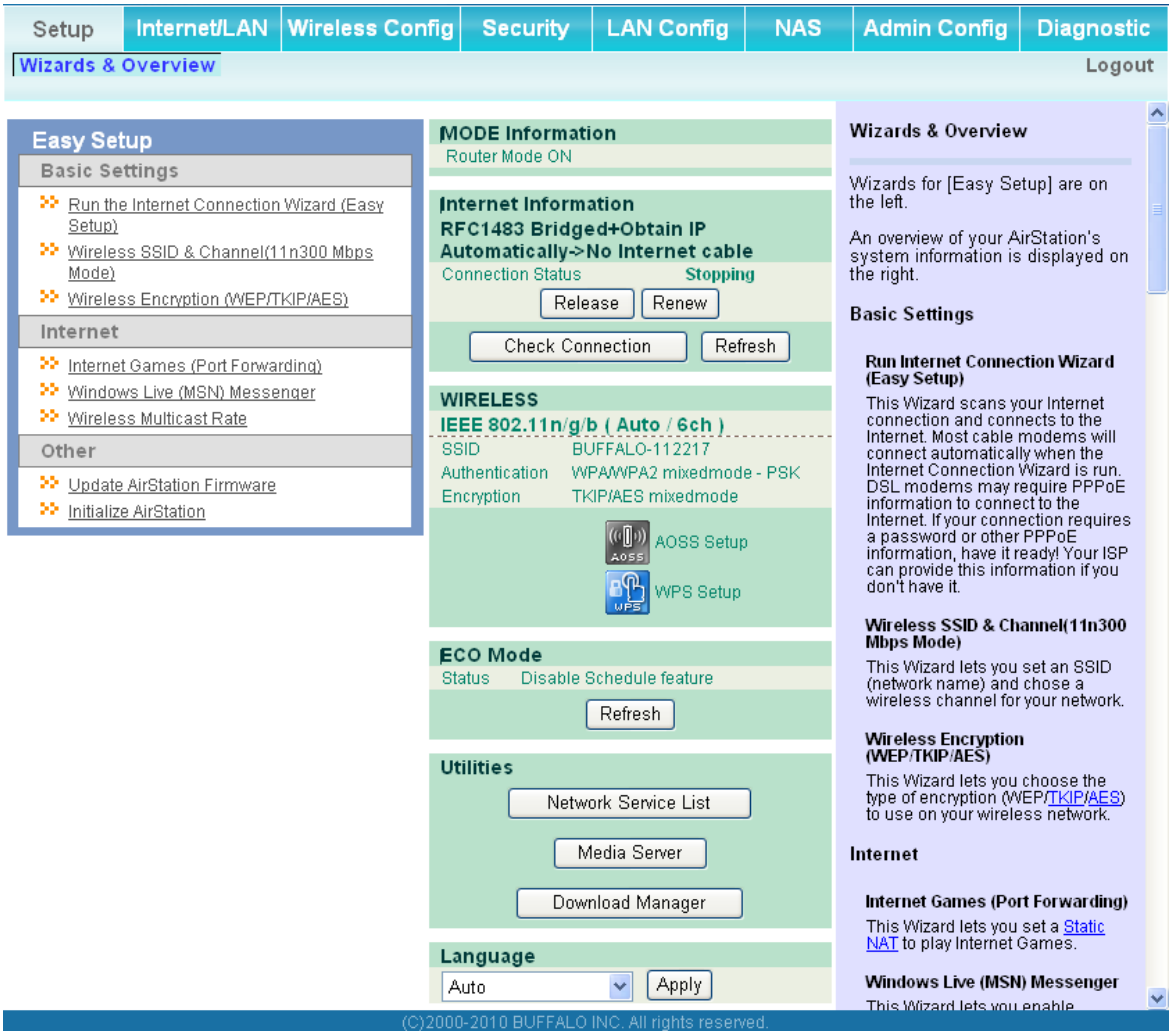
The menu structure in bridge mode is as follows. Please refer to the pages listed at right for explanations of each item.

Main screen	Descriptions	Page
LAN Config		
ADSL	Configure DSL port and settings.	Page 26
LAN	LAN side port configuration.	Page 33
Route	Configure the AirStation's IP communication route.	Page 37
Wireless Config		
WPS	WPS settings and status.	Page 38
AOSS	AOSS (AirStation One-touch Secure System) settings and status.	Page 39
Basic	Configure basic wireless settings.	Page 41
Advanced	Configure advanced wireless settings.	Page 45
WMM	Set priorities for Wireless Multimedia Extensions (Wi-Fi Multimedia).	Page 46
MAC Filter	Limit access to specific devices.	Page 48
Multicast Control	Configure limits on sending unnecessary multicast packets to the wireless LAN port.	Page 49
QoS		
Movie Engine	Configure options for the Movie Engine feature.	Page 60
NAS		
Disk management	View the status and configure of attached USB disks.	Page 62
Shared Folder	Set the USB disk to use as shared folders.	Page 64
User Management	Configure users to access shared folders.	Page 66
Shared Service	Configure shared folder access.	Page 67
Web Access	Configure Web Access.	Page 68
Media Server	Configure a Media Server.	Page 70
BitTorrent	Configure a BitTorrent client.	Page 71
Admin Config		
Name	Configure the AirStation's name.	Page 73
Password	Configure the AirStation's login password for access to the configuration utility.	Page 74
Time/Date	Configure the AirStation's internal clock.	Page 75
NTP	Configure the AirStation to synchronize with an NTP server to automatically set the AirStation's internal clock.	Page 76

ECO	Configure the AirStation's ECO Mode.	Page 77
Network-USB	Configure Network-USB from this screen.	Page 79
Access	Configure access restrictions to the AirStation's configuration screens.	Page 80
Log	Configure a syslog server to manage the AirStation's logs.	Page 81
Save/Restore	Save or restore the AirStation's configuration from a configuration file.	Page 82
Initialize/Restart	Initialize the AirStation or reboot it.	Page 83
Update	Update the AirStation's firmware.	Page 84
Diagnostic		
System Info	View current system information for the AirStation.	Page 85
Logs	Check the AirStation's logs.	Page 87
Packet Info	View all packets transferred by the AirStation.	Page 88
Client Monitor	View all devices currently connected to the AirStation.	Page 89
Ping	Test the AirStation's connection to other devices on the network.	Page 90
Logout		
Click this to log out of the AirStation's configuration screens.		

Setup

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



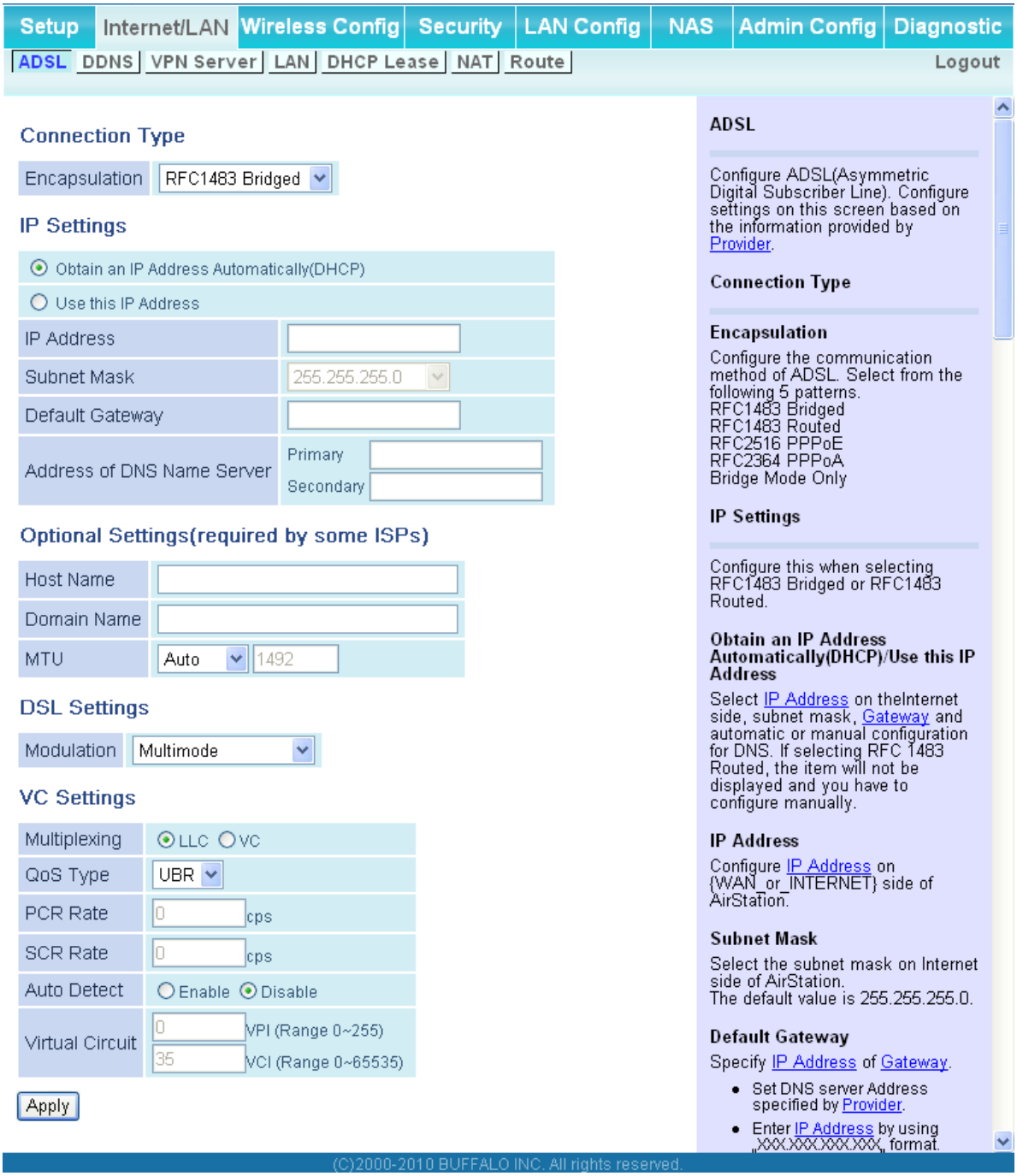
Parameter	Meaning
Internet/LAN (LAN Config)	Displays the configuration screen for the Internet port and LAN ports.
Wireless Config	Click this button to display the configuration screen for wireless settings.
Security	Click this button to display the configuration screen for security.
LAN Config	Click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

Parameter	Meaning
NAS	Click this button to display the configuration screen for NAS settings.
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.
Internet Information	Displays WAN-side system information for the AirStation.
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.
ECO Mode	Displays the status of the ECO mode.
Network Service List	Displays the list of the network devices for which information is provided from the network on the LAN-side.
Media Server	Displays the status of the media server.
Download List	Displays the list of BitTorrent files downloading.
Language	Enables you to select the language you use.
Logout	Log out from the configuration screen of the AirStation. If the AirStation does not communicate for 5 minutes, it will log out automatically.

Internet/LAN (LAN Config)

ADSL

The ADSL (Asymmetric Digital Subscriber Line) settings are made here. For details on the settings, refer to the documentation provided by your ADSL provider.

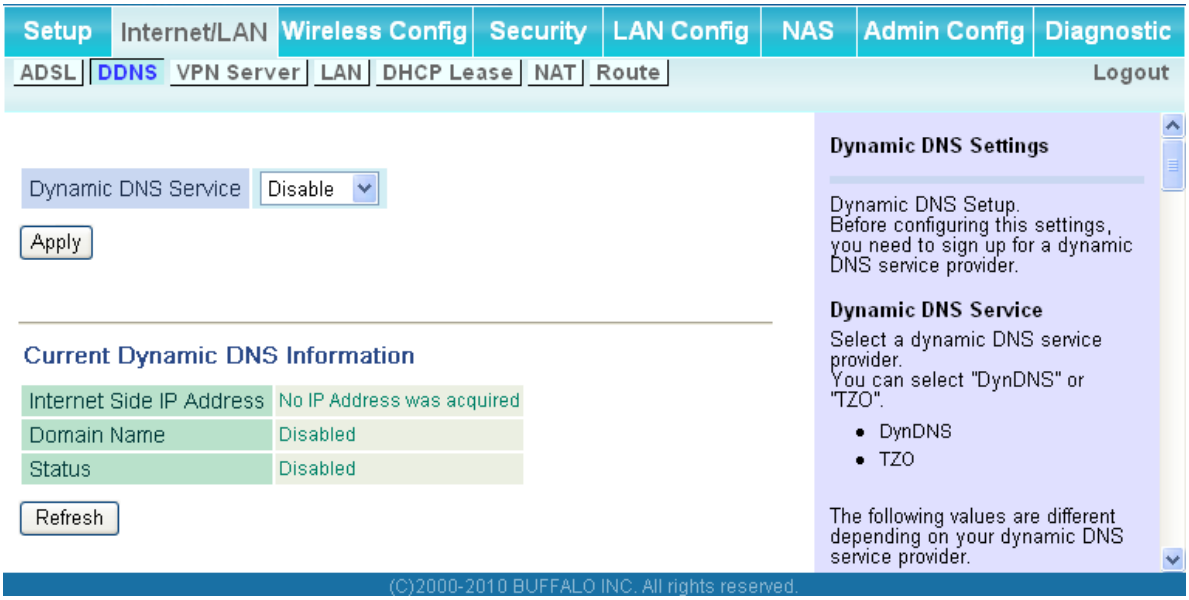


Parameter	Meaning
Encapsulation	Set the ADSL communication method.
Obtain an IP Address Automatically(DHCP)/Use this IP Address	This option is displayed when RFC1483 Bridged is selected in the Encapsulation field. Select whether the IP address, subnet mask, gateway, and DNS are obtained automatically or manually.
IP Address	Set the IP address of the AirStation.
Subnet Mask	Set the Internet subnet mask of the AirStation.
Default Gateway	Set the DNS server address specified by the provider.
Address of DNS Name Server	Set the DNS server address specified by the provider.
Service Name	Set the service name specified by the provider in 64 or less single-byte alphanumeric characters.
User Name	Set the user name (PPP login name) specified by the provider in 64 or less single-byte alphanumeric characters and symbols. If the name specified by the provider contains an @ mark, the characters after the @ mark cannot be omitted when entering the User Name.
Password	Set the password specified by the provider in 64 or less single-byte alphanumeric characters and symbols.
Connect on Demand/Keep Alive	Select the Connect on Demand or Keep Alive. When Connect on Demand is selected, the AirStation is automatically connected to the server only when communication is performed. The connection is disconnected if the communication is not performed for a preset time (disconnect time). Set the disconnect time in the range from 1 to 9999 minutes. When Keep Alive is selected, the AirStation issues an LCP echo request to the server periodically at preset time intervals, and the response received from the server is used to confirm that communication is enabled. If no response from the server is received, the AirStation assumes that the line is disconnected, and it disconnects the connection. Set the Keep Alive time interval in the range from 20 to 180 seconds.
Host Name	Set the host name that is sent to the server when acquiring the IP address from the Internet.

Parameter	Meaning
Domain Name	Set the domain name.
MTU	Set the MTU (Maximum Transmission Unit) that is used in communication. Select from Auto or Manual. When set to Manual, the available range is from 576 to 1500 bytes.
Modulation	Set the modulation system used in ADSL communication.
Multiplexing	Set the encapsulation system for VC multiplexing. Select from LLC (Logical Link Control Encapsulation) which can handle multiple protocols or VC (Circuit Circuit) for a single protocol.
QoS Type	Set the QoS (Quality of Service). Select which of three service categories (UBR, CBR, VBR) for QoS to guarantee.
PCR Rate	Set the PCR (Peak Cell Rate) when CBR or VBR is selected for QoS Type. The network upper limit transfer speed is set in the range from 1 to 65534 cps.
SCR Rate	Set the SCR (Sustainable Cell Rate) when CBR or VBR is selected for QoS Type. The network sustainable transfer speed is set in the range from 1 to 65534 cps.
Auto Detect	Set to VPI (Virtual Path Identification) or VCI (Virtual Channel Identification) of the virtual circuit when Auto Detect is disabled.
Virtual Circuit	Set automatic detection of the virtual circuit.

DDNS (Router Mode only)

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

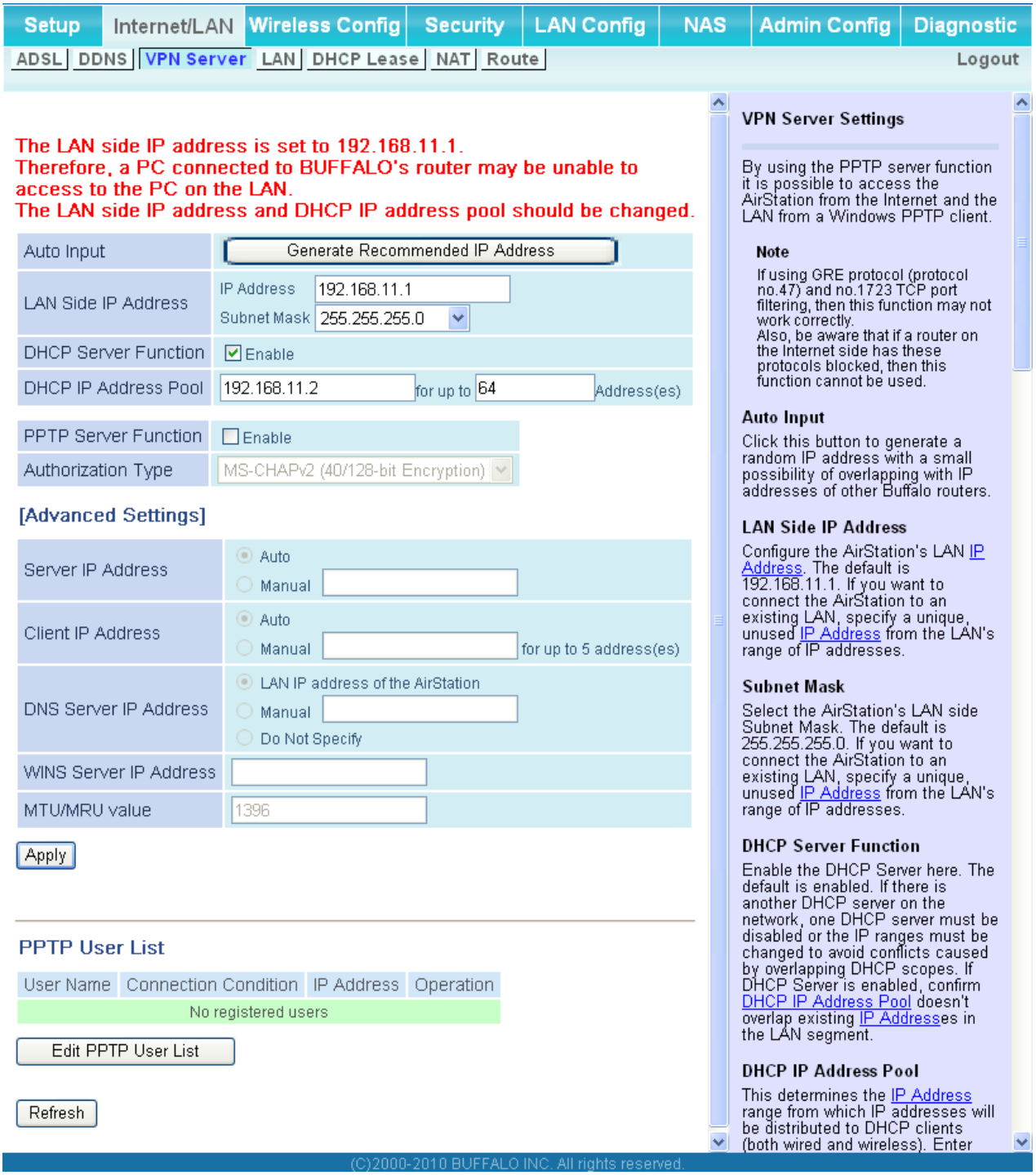


Parameter	Meaning
Dynamic DNS Service	Select a provider (DynDNS or TZO) for Dynamic DNS.
User Name	Enter the Dynamic DNS user name. You may enter up to 64 alphanumerical characters and symbols.
Password	Enter the Dynamic DNS password. You may enter up to 64 alphanumerical characters and symbols.
Host Name	Enter the Dynamic DNS host name. 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)

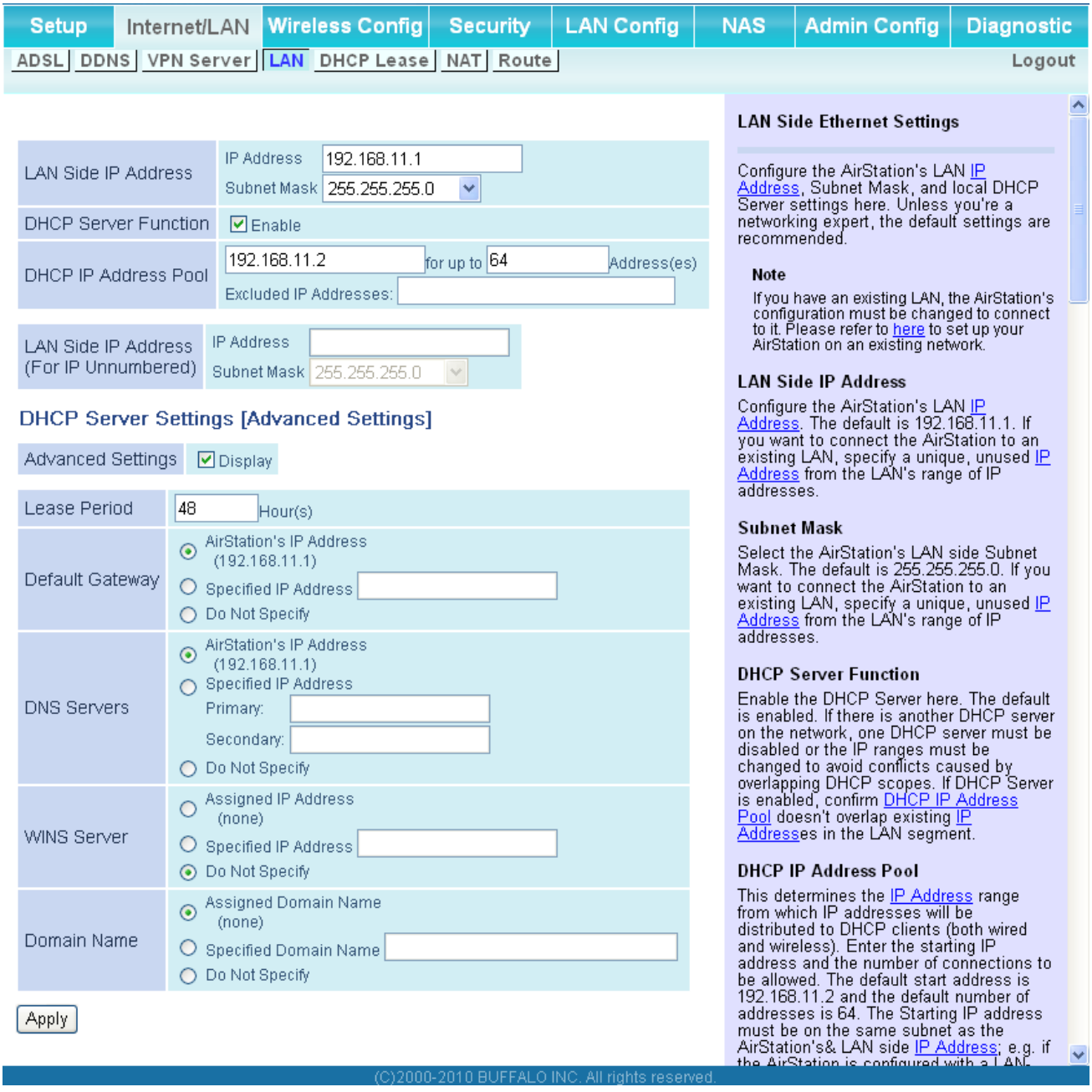
Configure the VPN server.



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	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	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	Set the DNS server IP address for the DHCP server to issue to clients.
WINS Server IP Address	Set the WINS server IP address for the DHCP server to issue to clients.
[Edit User Information]	Click to edit user information.
User Name	Enter the user name 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.

LAN

Configure LAN-side settings.

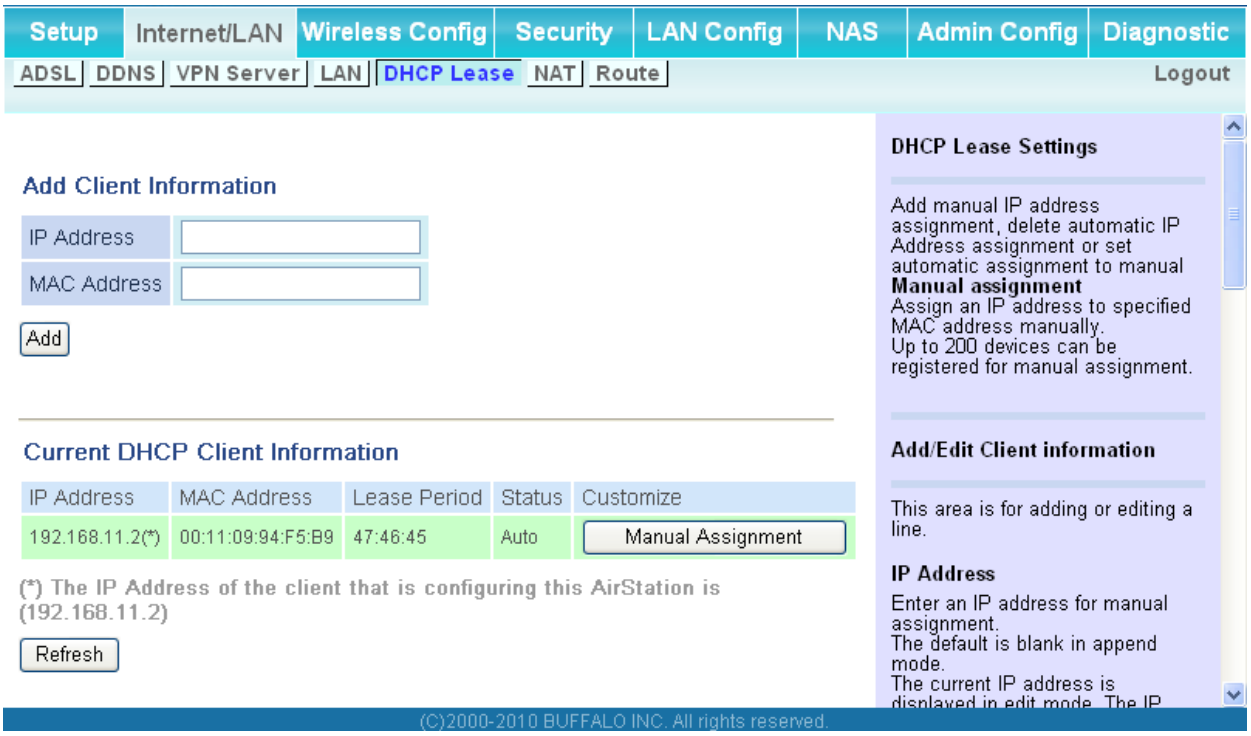


Parameter	Meaning
LAN Side IP Address	By default, the LAN side IP address is 192.168.11.1 with subnet mask 255.255.255.0. You may change it here.

Parameter	Meaning
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.
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)

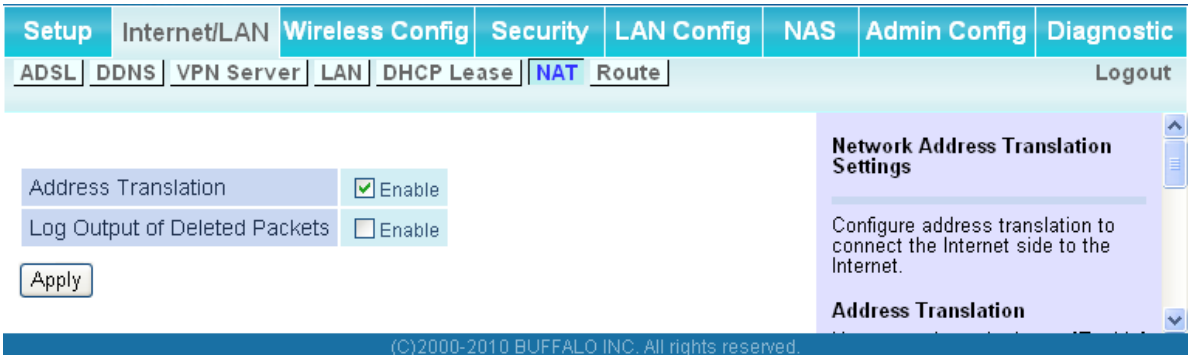
Configure DHCP Exceptions.



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 be leased manually by clicking [Manual Assignment].

NAT (Router Mode only)

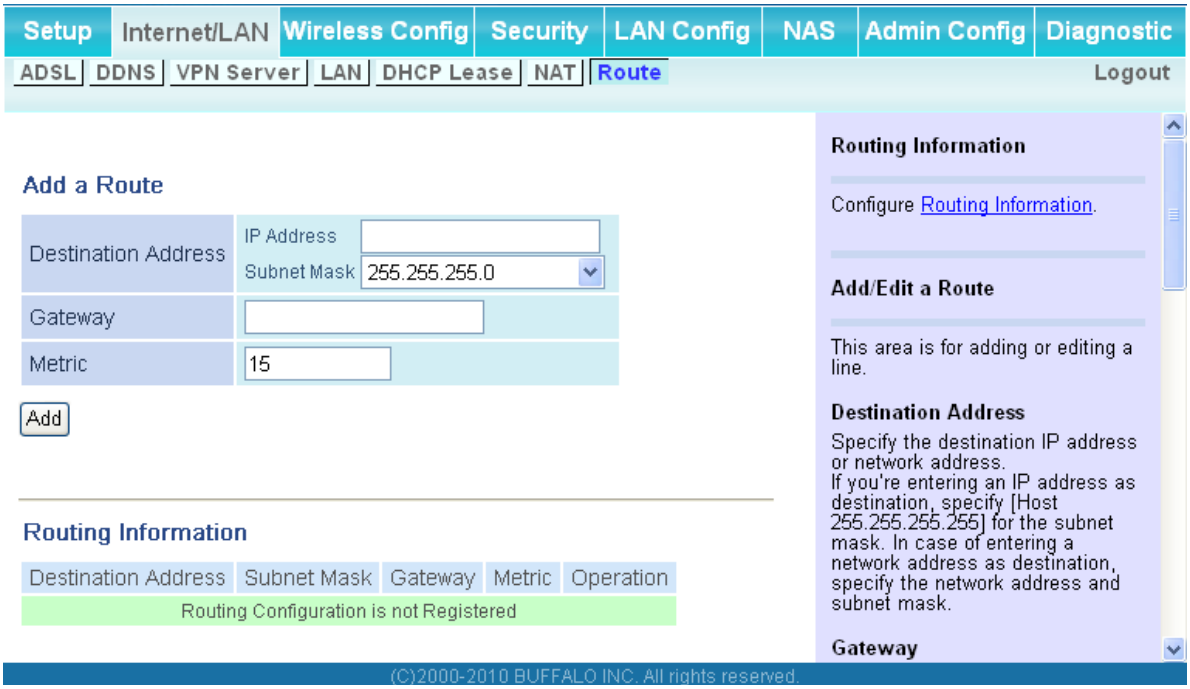
Configure network address translation settings. This enables LAN-side devices to communicate with the Internet.



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.

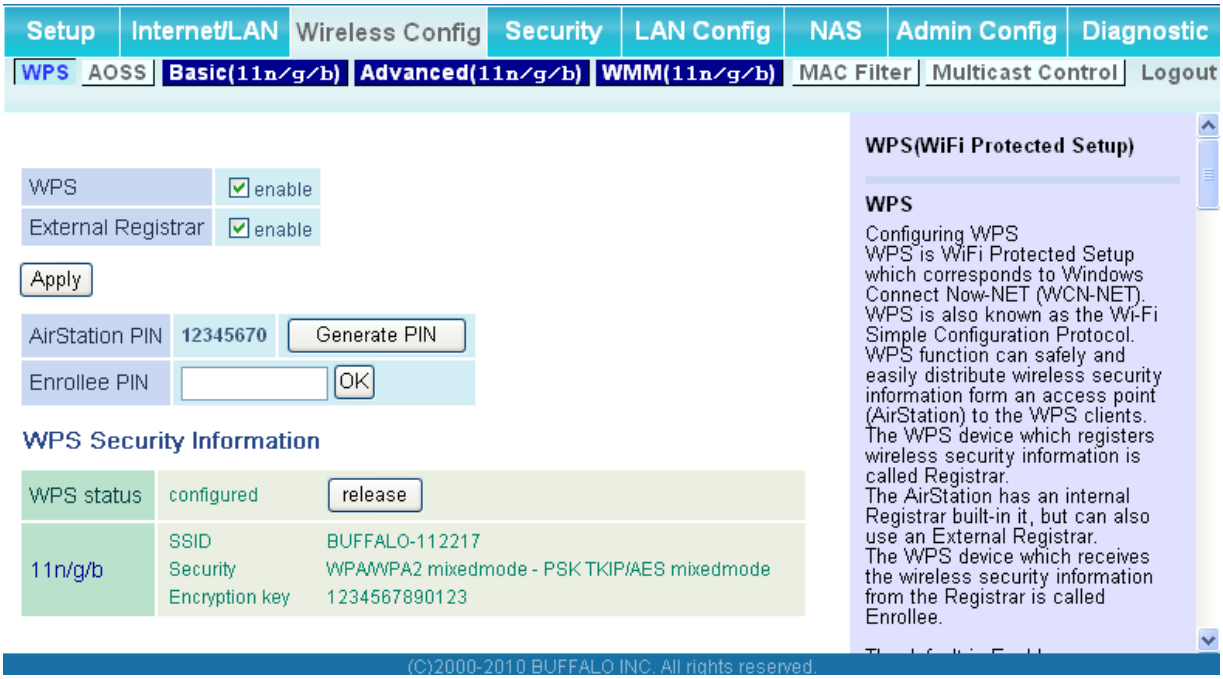


Parameter	Meaning
Destination Address	Adds a destination IP address and subnet mask to a routing table.
Gateway	Adds a gateway address to a routing table.
Metric	The metric is the maximum number of router hops a packet may take on the way to its destination address. Values between 1 and 15 may be entered.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

Wireless Config

WPS

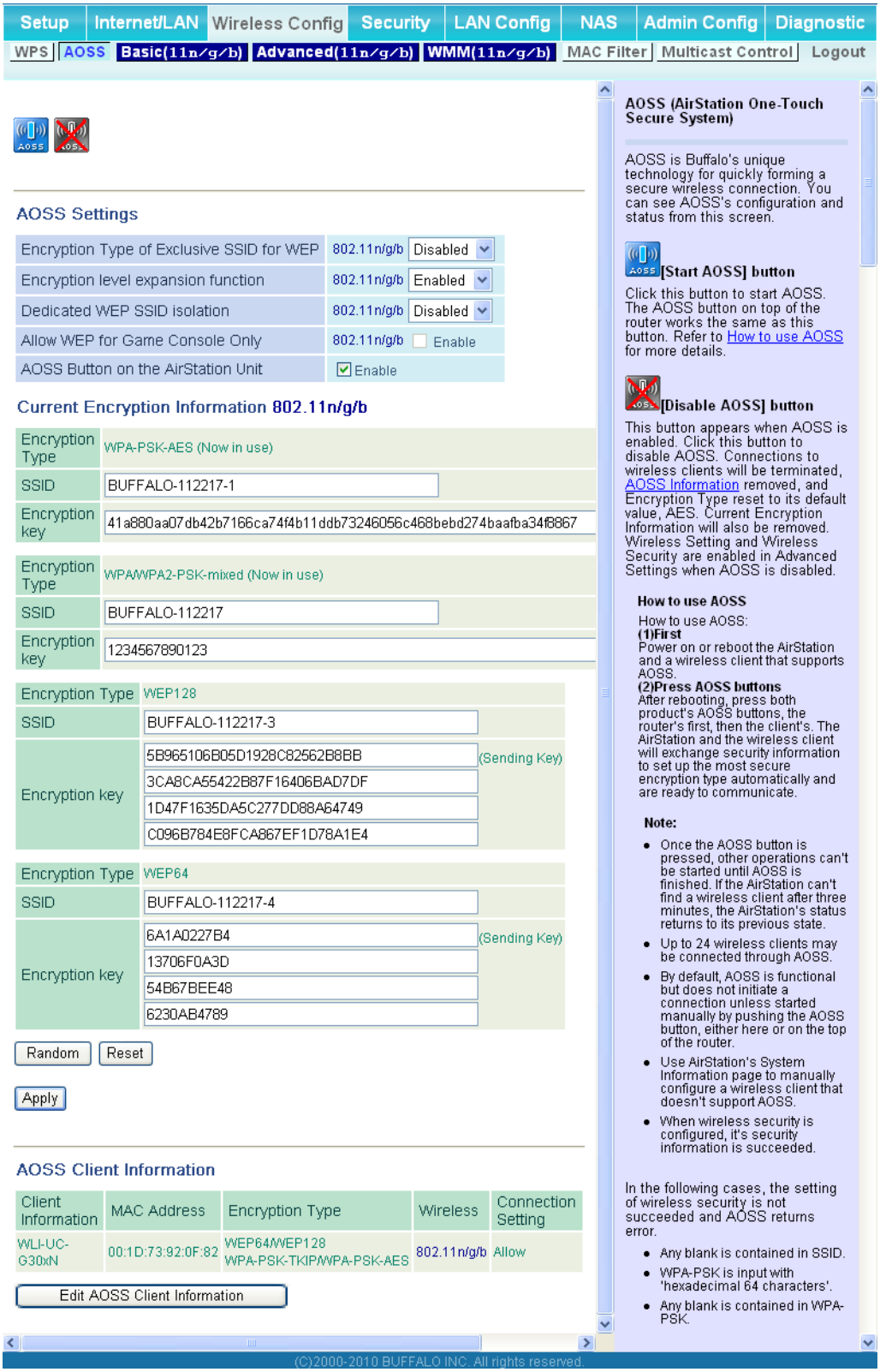
WPS Status and Settings.



Parameter	Meaning
WPS	Enable to use WPS automatic configuration.
External Registrar	Enable to accept the external configure requests from other WPS devices. Note: External configure requests will not be accepted if AOSS is in use.
AirStation PIN	Displays the PIN code of the AirStation. Clicking [Generate PIN] will generate a new PIN code. This code can be entered into other wireless devices that support WPS.
Enrollee PIN	Enter the PIN code for the other wireless device and click [OK].
WPS status	Displays [configured] if all available wireless bands are configured. Displays [unconfigured] if at least one wireless band is unconfigured.

AOSS

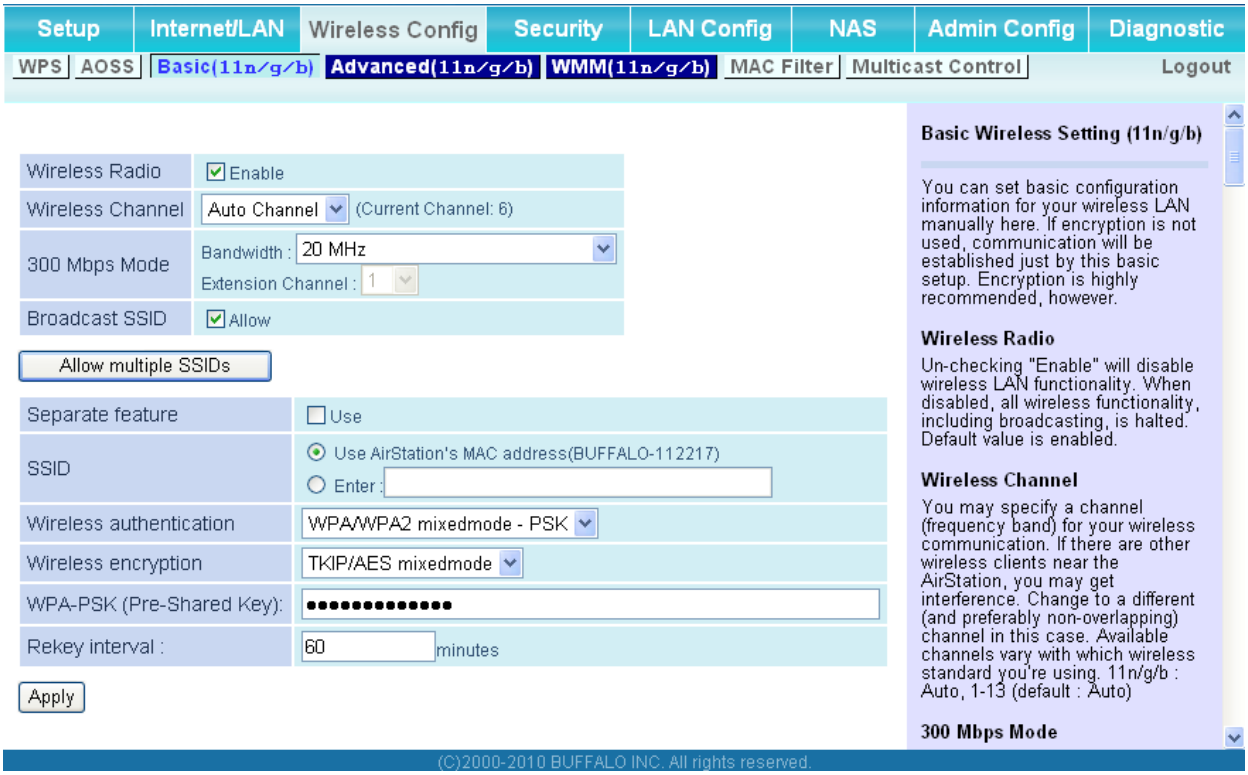
AOSS Status and Settings.



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 most recent settings before using AOSS.
Encryption Type of Exclusive SSID for WEP	You may allow a separate SSID specifically for WEP connections. If [disabled] is selected, then clients will not be able to connect with WEP.
Encryption level expansion function	Expands security method from TKIP to WPA/WPA2-PSK-mixed mode.
Dedicated WEP SSID isolation	Set a separate SSID and network segment specifically for WEP connections. Devices connected with WEP will not be able to communicate with devices connected using AES/TKIP. All connected devices will be able to communicate with the internet.
Allow WEP for Game Console Only	When enabled, the AirStation allows wireless devices to connect with 64 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, an 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 wirelesss 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* * AOSS Connection only	Displays AOSS clients connected to the AirStation and information of the devices which are wirelessly communicated.

Basic

The screen to configure a basic wireless settings.



Parameter	Meaning
Wireless Radio	Determines whether to allow wireless communication. If this is unchecked, then no wireless connections will be allowed.
Wireless Channel	Sets a channel (a range of frequencies) used for wireless connections. With Auto Channel selected, the AirStation will automatically use the best available channel.
300Mbps Mode	300 Mbps mode uses twice the normal frequency range, 40 MHz instead of 20 MHz. In uncongested areas this can increase performance. To use 300 Mbps mode, set the Bandwidth to 40 MHz and choose an Extension Channel. Note: If using Auto Channel for the wireless channel, then the Extension Channel is set automatically.

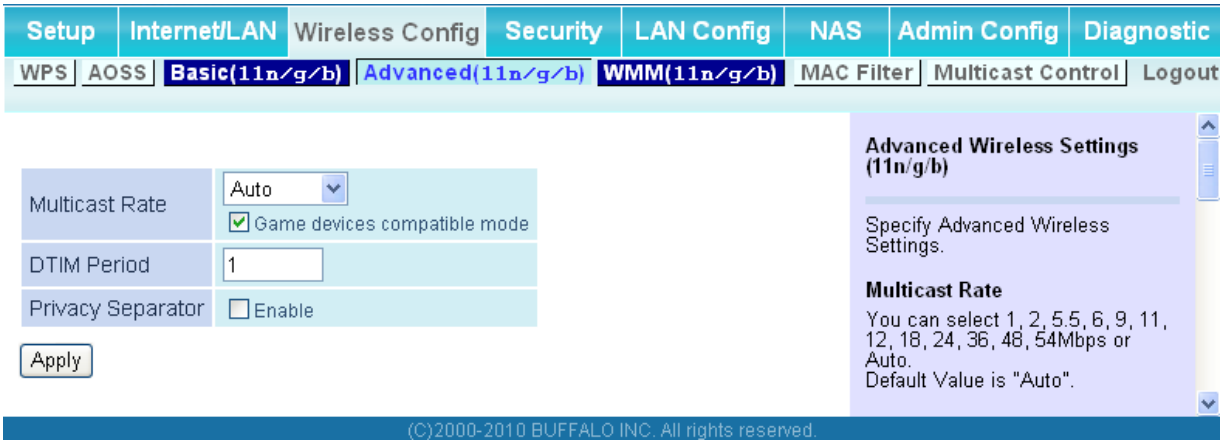
Parameter	Meaning
Broadcast SSID	If [Allow] is checked, then the AirStation will respond to SSID searches from wireless devices by broadcasting its SSID. If [Allow] is unchecked, then the AirStation ignores SSID searches from wireless devices.
[Allow multiple SSIDs] [Use Single SSID]	Clicking [Allow multiple SSIDs] will enable Multi Security, allowing the use of multiple SSIDs, each with different wireless security settings. Clicking [Use Single SSID] will disable the Multi Security function. The AirStation will then allow one SSID and one type of wireless security. Note: When using Multi Security, you need to enable at least one of the following: SSID1, SSID2, or SSID3.
SSID1	Multi Security SSID1 can use WPA-PSK-TKIP or WPA/WPA2-Mixed for wireless security.
SSID2	Multi Security SSID2 can use WPA-PSK-AES for wireless security.
SSID3	Multi Security SSID3 can use WEP for wireless security.
Separate feature	When [Separate] is 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. Avoid this option since any communication may be intercepted. [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. Use an encryption key to communicate with a wireless device. WEP can only be selected when [No authentication] is selected for Wireless authentication. **TKIP** TKIP is an encryption method which is more secure than WEP, but slower. Use an pre-shared-key to communicate with a wireless device. TKIP can be selected only when WPA-PSK or WPA2-PSK is selected for Wireless authentication. **AES** AES is more secure than TKIP, and faster. Use a pre-shared-key to communicate with a wireless device. AES can be selected only when WPA-PSK or WPA2-PSK is selected for Wireless authentication. **TKIP/AES mixed mode** TKIP/AES mixed mode allows both TKIP and AES authentication and communication. TKIP/AES mixed mode can be selected only when WPA/WPA2 mixed mode - PSK is selected for Wireless authentication.
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 a [character] (ASCII) passphrase, or use 64 digits using 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).

Parameter	Meaning
Set up WEP encryption key	A WEP encryption key (passphrase) may have any of four different formats. A "character" (ASCII) passphrase may use either 5 or 13 alphanumeric characters (case-sensitive). A "hexadecimal" passphrase may use either 10 or 26 digits using 0 to 9 and a to f (not case-sensitive).

Advanced

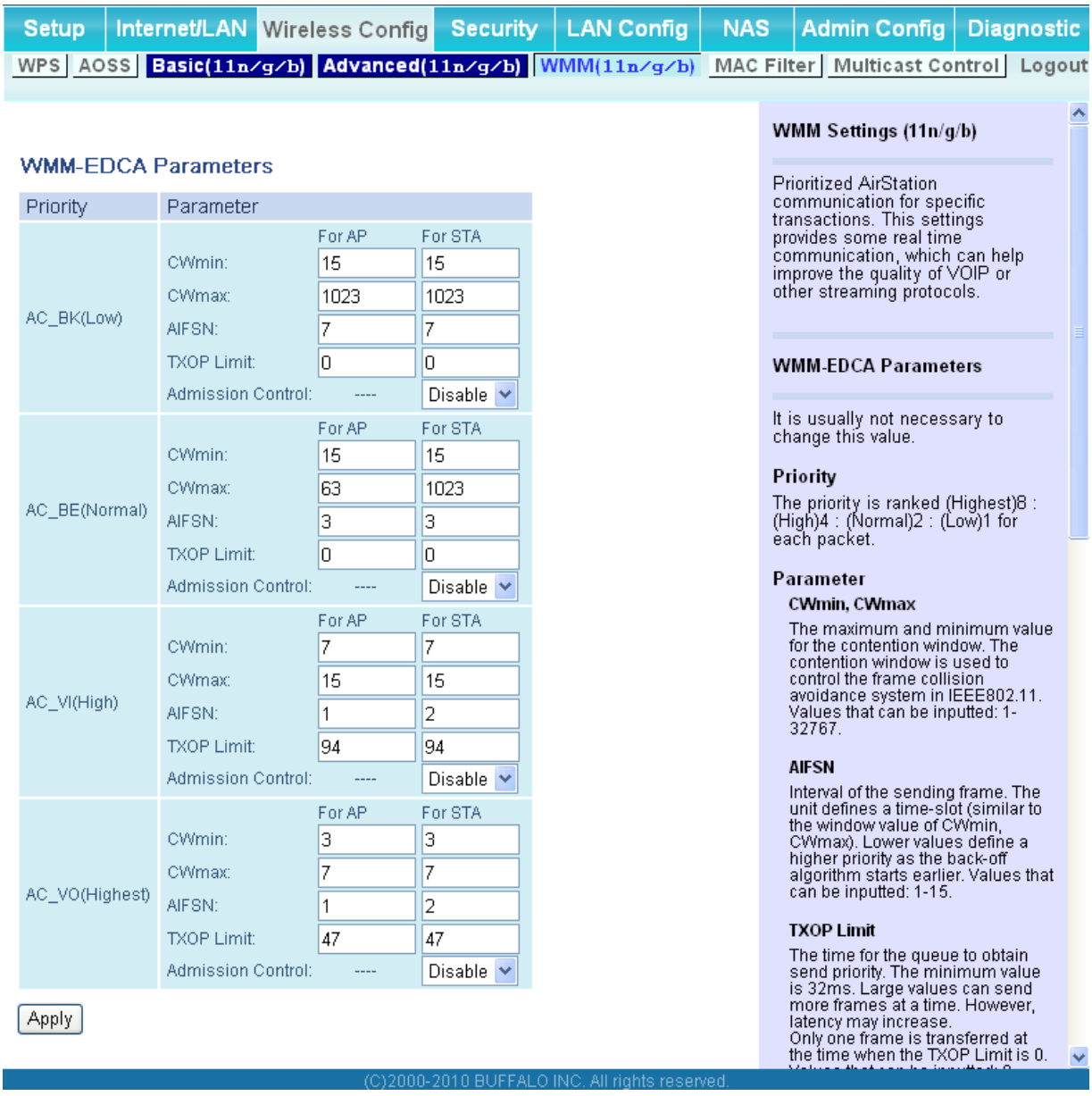
Configure advanced wireless settings.



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

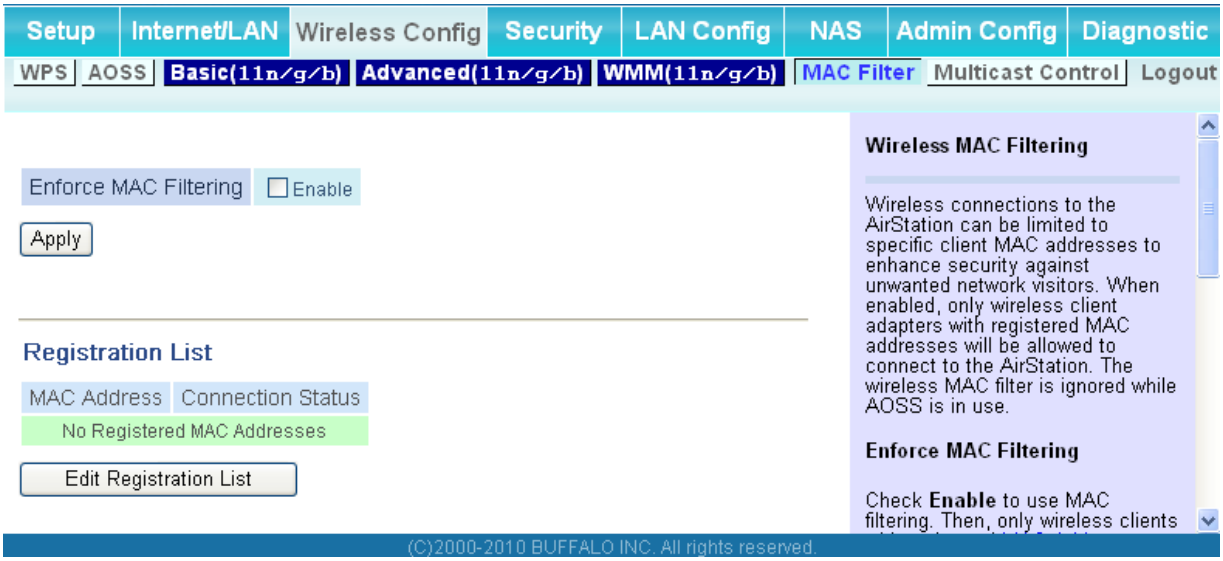
Set priorities for specific communications.



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

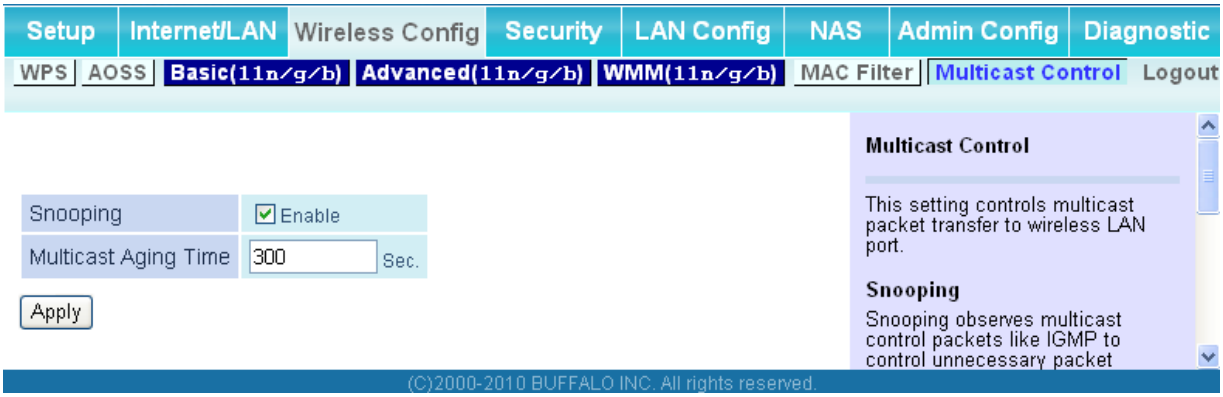
Restrict access to specific wireless devices.



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]	Click to add 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 that are 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.

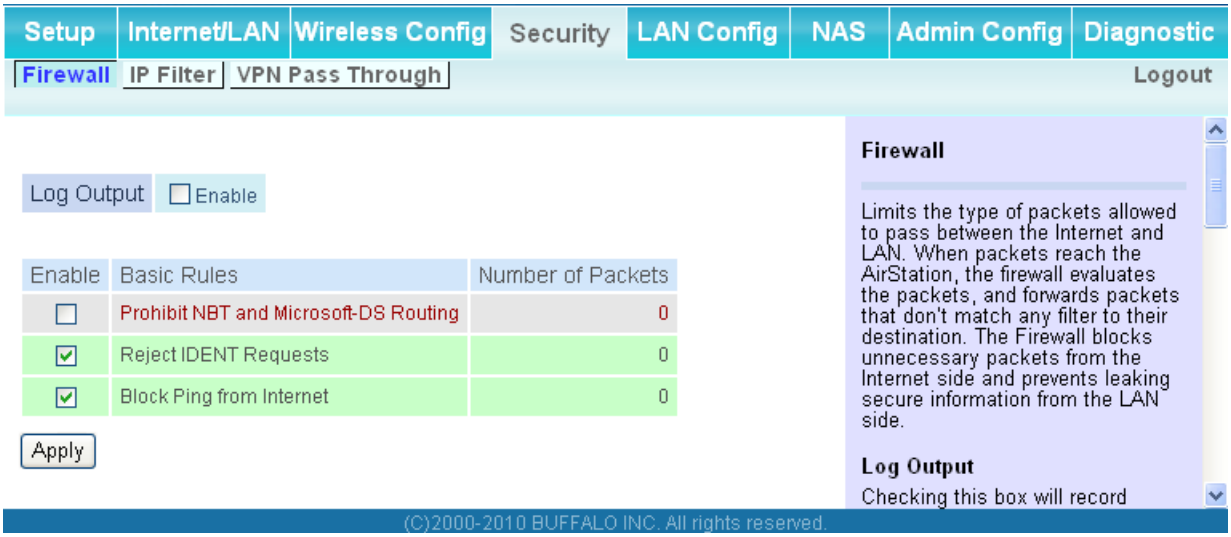


Parameter	Meaning
Snooping	If enabled, snooping supervises multicast administrative packets such as IGMP and restricts unnecessary multicast transfers to wired or wireless ports.
Multicast Aging Time	Set the time to hold the data from multicast snooping in the range of 1 to 3600 (seconds). Enter a value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

Security (Router Mode only)

Firewall (Router Mode only)

Configure the AirStation's firewall.

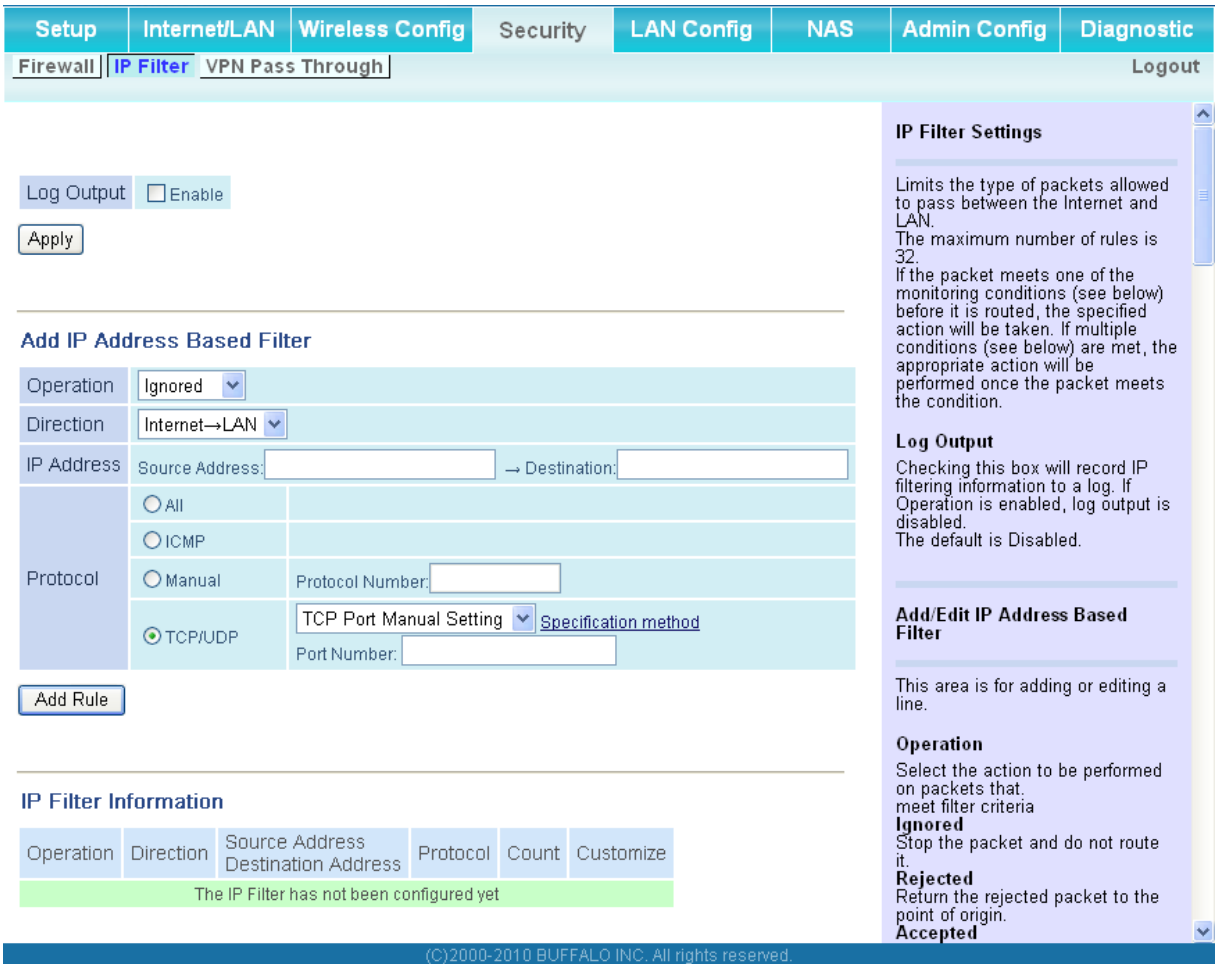


Parameter	Meaning
Log Output	Enable to output a log of firewall activity.
Basic Rules	Enable to use any of the quick filters. Preconfigured quick filters include: **Prohibit NBT and Microsoft-DS Routing** When this is enabled, you cannot use the Microsoft network feature from the Internet side to the LAN side and from the LAN side to the Internet.

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 slower transfer speed for network application such as sending mail, using ftp or displaying on browser. If you have configured transfer of IDENT requests to the LAN side computer in the address translation settings (DMZ or TCP port:113), 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.

IP Filter (Router Mode only)

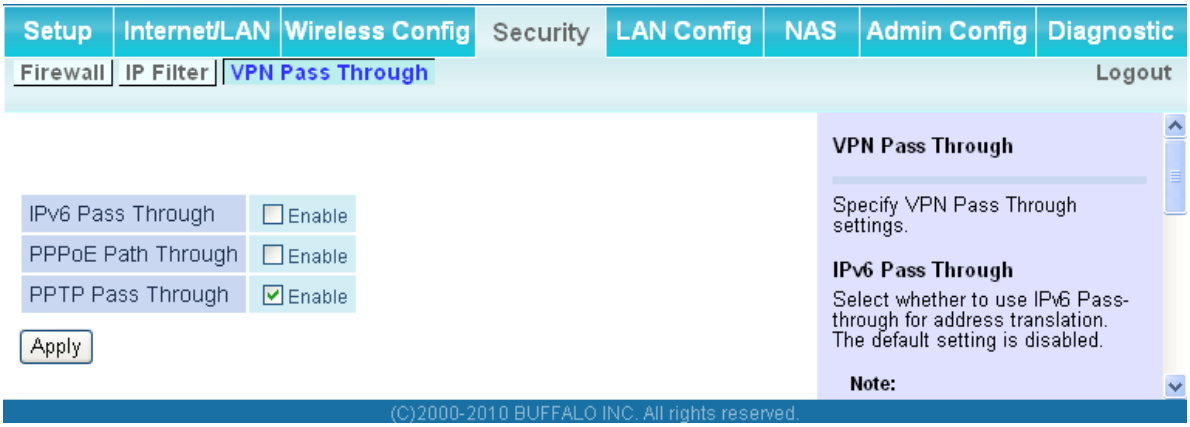
Edit IP filters.



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 Pass Through (Router Mode only)

Configure IPv6 pass through, PPPoE pass through, and PPTP pass through.

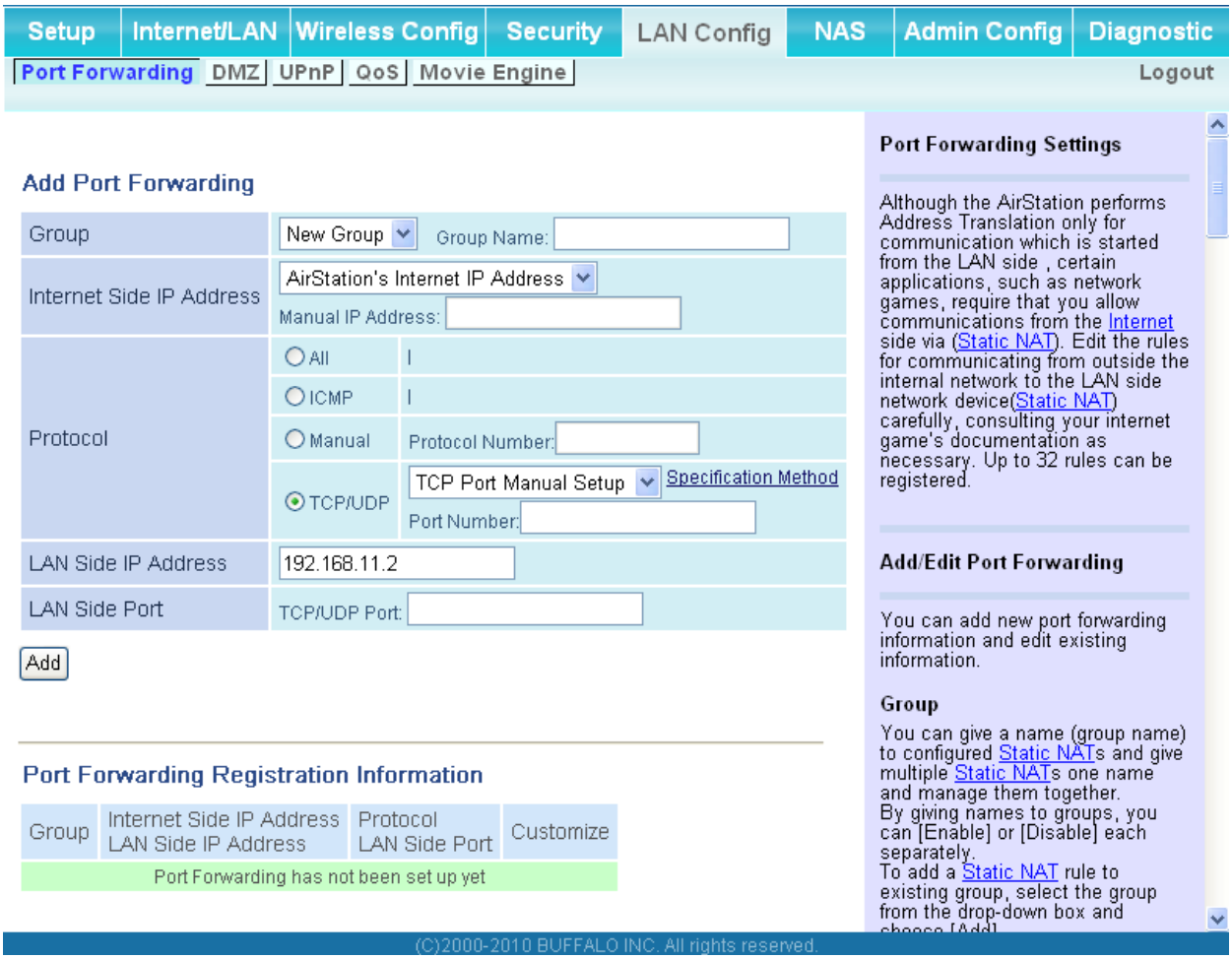


Parameter	Meaning
IPv6 Pass-through	Enable to use IPv6 pass-through for address translation.
PPPoE Pass-through	Enable to use PPPoE bridge. Using PPPoE bridge lets you automatically obtain an IP address from your provider using the PPPoE protocol from your computer connected to the LAN side because all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

LAN Config (QoS)

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 letters.
Internet Side IP Address	Enter the Internet side IP address (before translation) for the port translation table entry.

Parameter	Meaning
Protocol	Select the Internet side protocol (before translation) for the port translation table entry.
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.

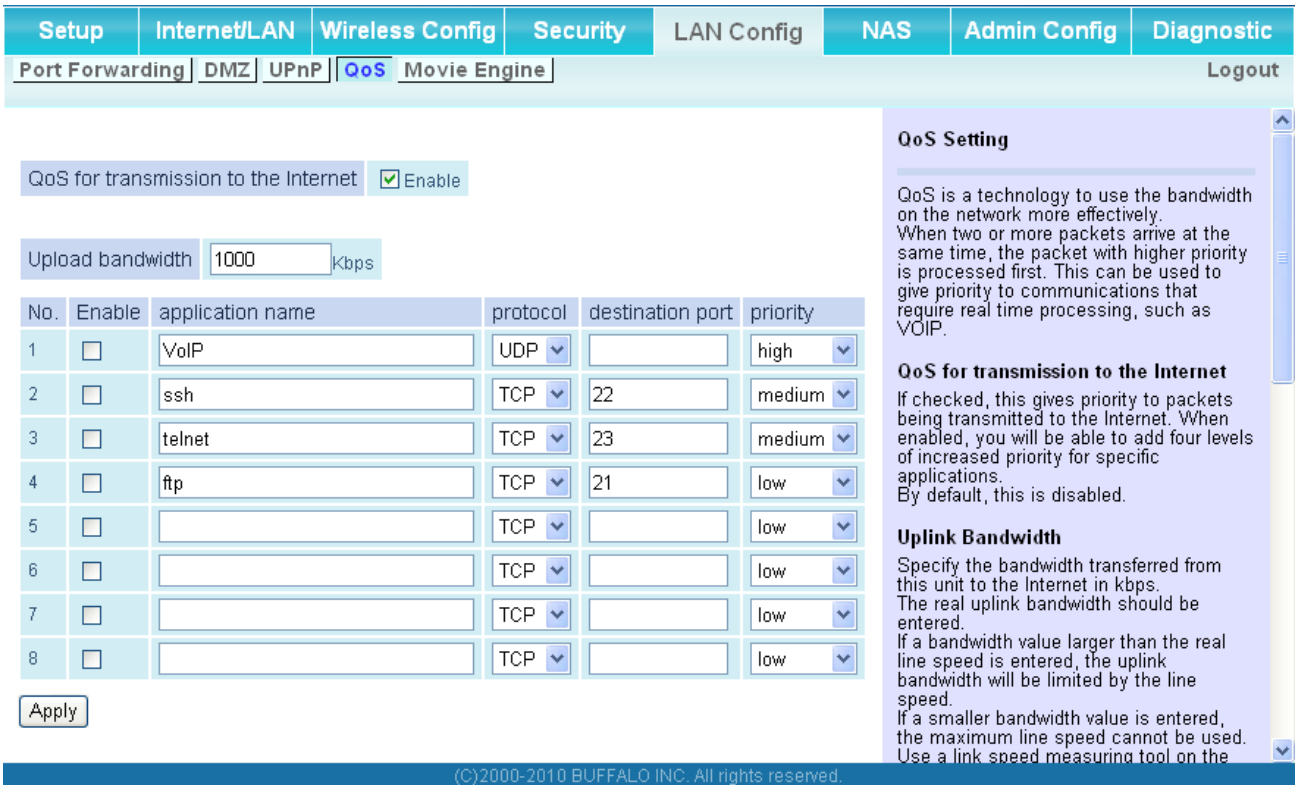
UPnP (Router Mode only)

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.

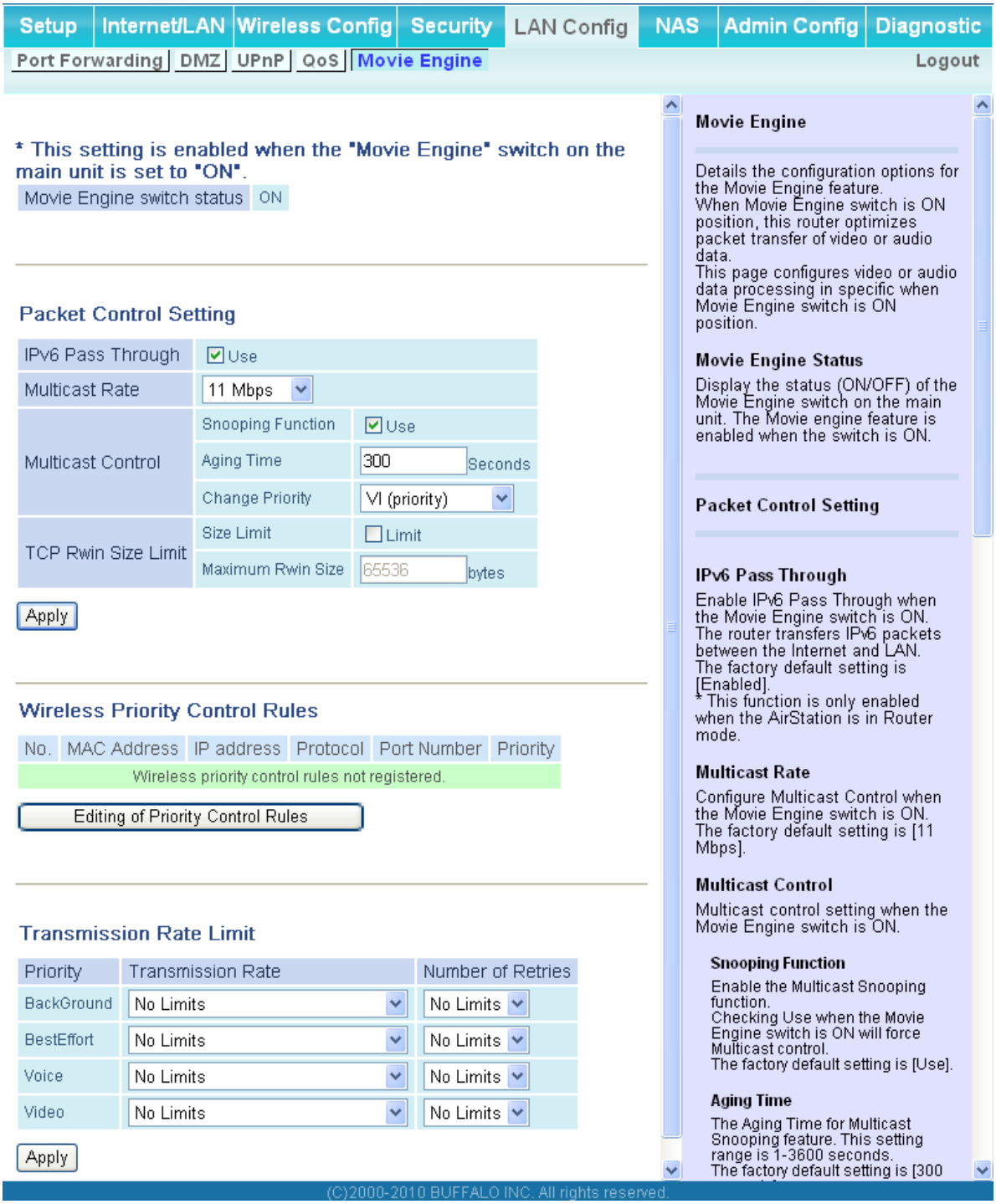


Parameter	Meaning
QoS for transmission to the Internet	Determine whether or not to prioritize packets sent to the Internet. Check this box to enable QoS.
Upload bandwidth	Specify the upstream bandwidth in kbps from the AirStation to the internet side. Set the actual value for the upstream bandwidth.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

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

Movie Engine

Configure Movie Engine options.

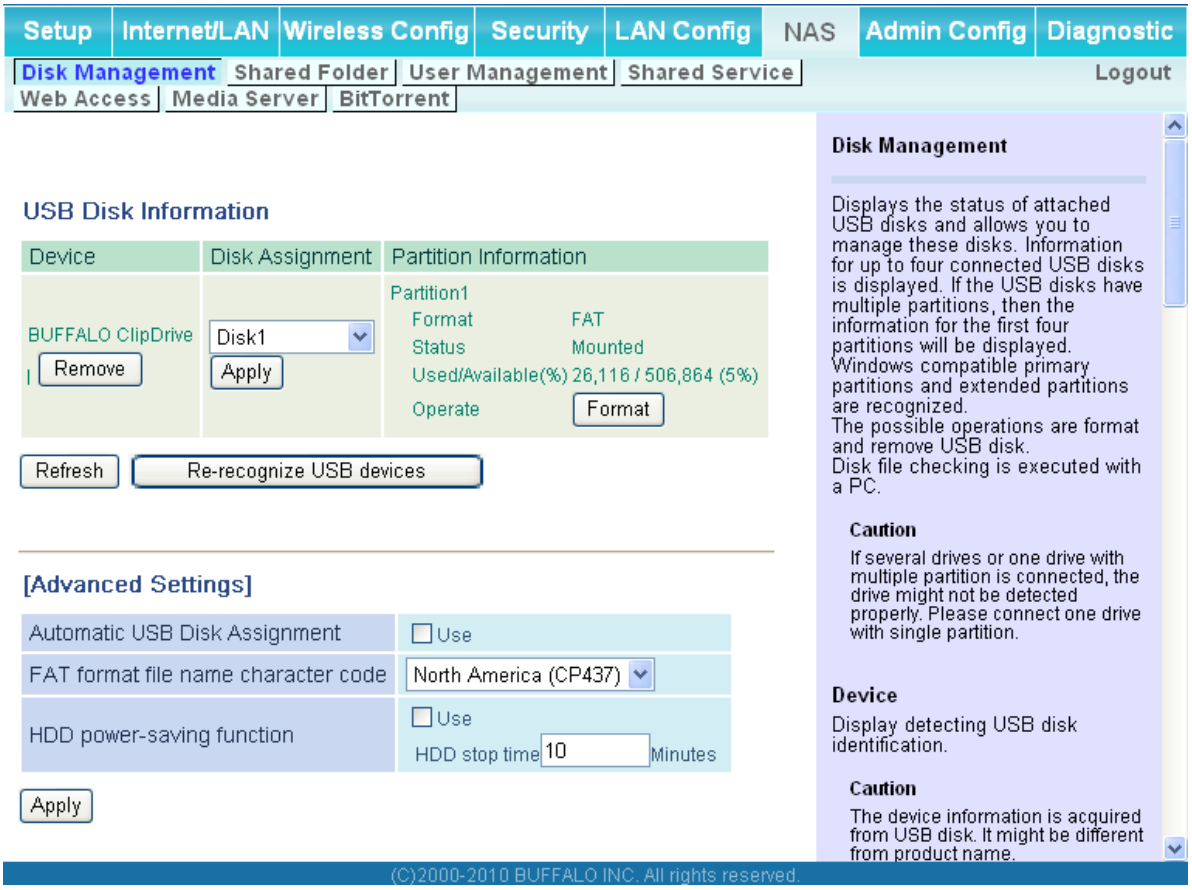


Parameter	Meaning
Movie Engine switch status	Display the status of the Movie Engine switch.
IPv6 Pass Through	Set to enable the IPv6 Pass Through.
Multicast Rate	Select the rate of the Multicast Control.
Multicast Control	Set the Multicast Control setting to on.
TCP Rwin Size Limit	Configure TCP packets Rwin size limitation to pass AirStation's wireless LAN.
Wireless Priority Control Rules	Display the list of rules controlling the pass-through priority of packets in the AirStation wireless LAN.
Transmission Rate Limit	Select the transmission limit to prevent transmission rate fall-down.
Number of Retries	Select limit number of retries.

NAS

Disk management

View the status of and configure attached USB hard disks.

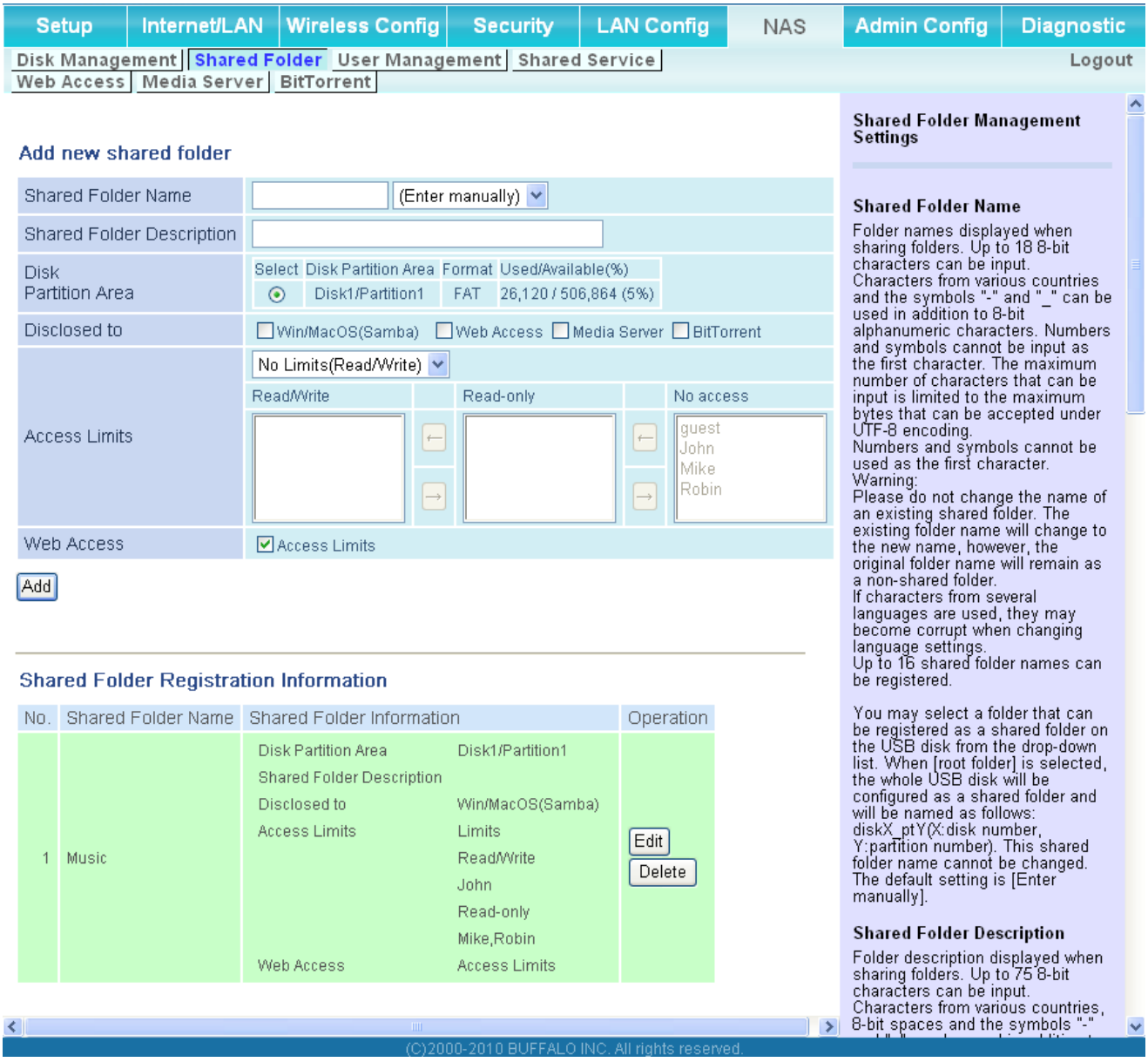


Parameter	Meaning
Device	Displays information for attached USB disks. Disks are removed when [Remove] in the Device column is clicked.
Disk Assignment	A disk number will be automatically assigned to the disk or you can choose a number. Select a disk number, or select [Do not assign], and then click [Apply] to assign a disk number.
Partition Information	Displays the partition information for the selected USB disk. Click [Format] to format the disk. Note: formatting a disk will erase all information from it.

Parameter	Meaning
Re-recognize USB devices	Click this to re-scan for connected USB disks.
Automatic USB Disk Assignment	Check [Use] to automatically select an attached USB hard disk. The entire drive will be used as the shared folder. To configure your disk and share manually, uncheck [Use]. [Use] is selected by default.
FAT format file name character code	Select the file name character code used for FAT formatting.
HDD power-saving function	Enable or disable HDD power saving.
HDD stop time	Select a time duration after which to stop the HDD.

Shared Folder

Configure a USB hard disk for use with shared folders.



Parameter	Meaning
Shared Folder Name*	Enter a name for the shared folder. Up to 18 alphanumeric characters, space, hyphens (-), and underscores (_) may be used.
Shared Folder Description*	Enter a description of the shared folder (optional). Up to 75 alphanumeric characters, space, hyphens (-), and underscores (_) may be used.
Disk Partition Area*	Displays the partition area, format type, and the capacity of the USB disk.
Disclosed to*	Check the functionality that you want to support. Win/Mac OS (Samba NAS), Web Access, Media Server, and/or BitTorrent may be checked. Only one folder may be chosen for either Media Server or BitTorrent functionality.
Access Limits	If access limits are enabled, use the arrows to move highlighted users between the columns for [Read/Write], [Read-only] or [No access] privileges.
Web Access	You may also select to enforce access limits on users accessing through Web Access by checking the Access Limits checkbox. Users will have the same access levels as assigned above. If Access Limits is not checked, then all users accessing the shared folder via Web Access will have [Read only] access..
Shared Folder Registration Information*	Displays information about the shared folder.

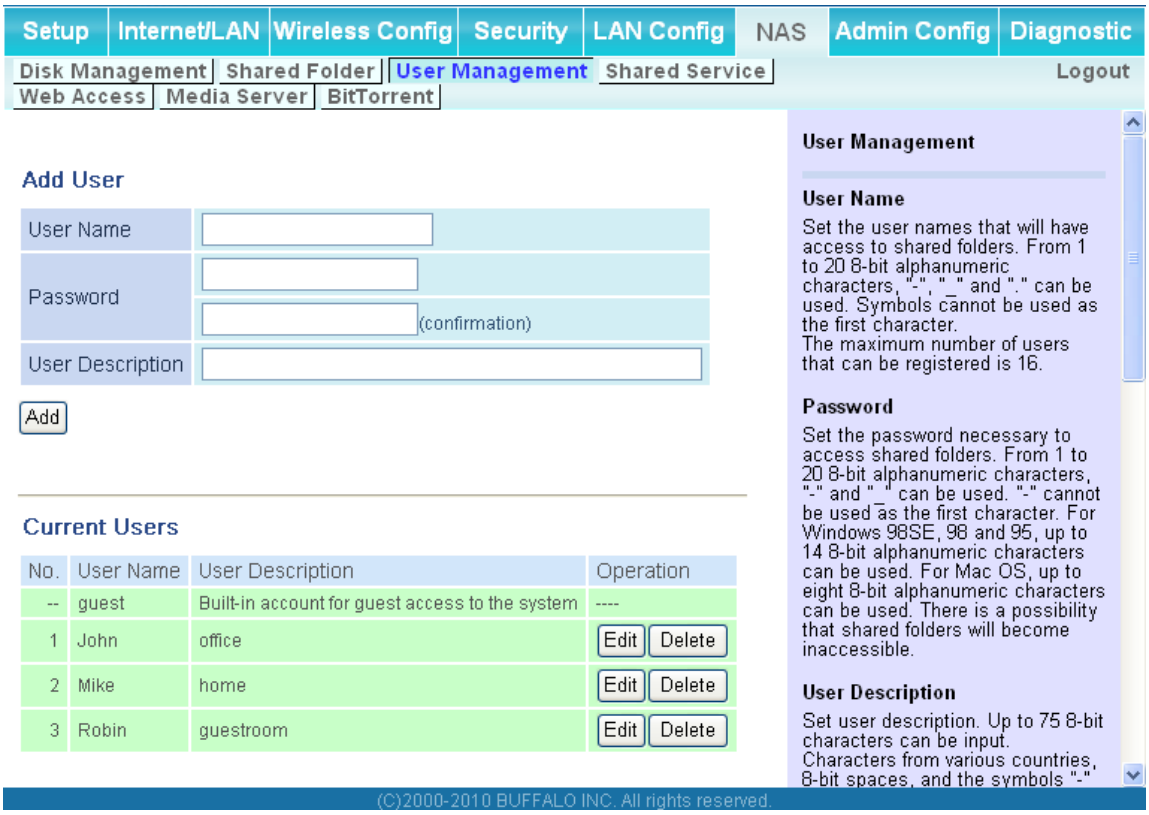
* These parameters are displayed when [Automatic USB Disk Assignment] (page 65) is not used:

The following settings are used for [Shared Folder] when [Disk Management] is activated.

- All folders: [Access Limits] settings in effect.
- Shared Folder/ Web Access: All folders are shared.
- Media Server/BitTorrent: The first folder is shared.

User Management

This screen lets you add users to the access list with the ability to access shared folders.



Parameter	Meaning
User Name	Enter the name of a user to be given access to the shared folder. Up to 20 alphanumeric characters, spaces, hyphens (-), and underscores (_) may be used for each user. Up to 16 users may be entered.
Password	Enter the user's password. Use of the same password that they use to log into their computer is recommended. Up to 20 alphanumeric characters, spaces, hyphens (-), and underscores (_) may be used. For Windows 98SE/98/95 users, up to 14 alphanumeric characters may be used. Mac OS users may use up to 8 alphanumeric characters. If you enter a longer password than your users can use, then they will not be able to access the share.
User Description	Describe the user (optional). Up to 75 alphanumeric characters, spaces, hyphens (-), and underscores (_) may be used.
Current Users	Lists current users, including [guest]. [guest] is a built-in account that cannot be changed or deleted.

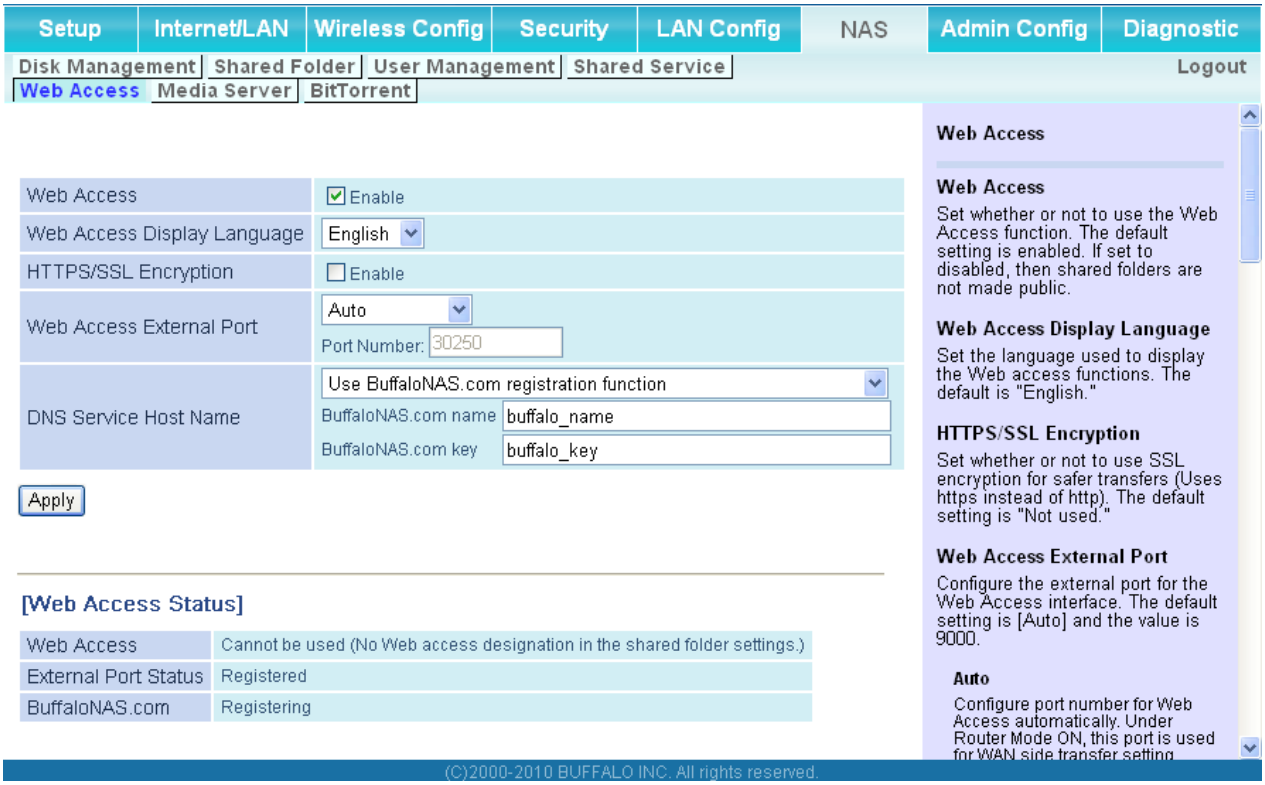
Shared Service

Assign AirStation and workgroup names to access shared folders.

Parameter	Meaning
Shared Folder	Enable to make a USB disk available on your local network.
AirStation name	Rename your AirStation if desired. Up to 15 alphanumeric characters, spaces, and hyphens (-), may be used. The AirStation name is also used as the host name that will be used with the shared service. The shared service may not be available you use over 15 alphanumeric characters in your AirStation's name.
AirStation Description	Describe the AirStation (optional). Up to 48 alphanumeric characters, spaces, hyphens (-), and underscores (_) may be used.
Workgroup name	Enter your workgroup name. Up to 15 alphanumeric characters, spaces, hyphens (-), underscores (_) and periods (.) may be used.
Windows Client Language	Select the language to be used by the Windows client.
Shared Service	Displays the status of the USB disk that is to be used with the shared service.

Web Access

The screen to configure Web Access.

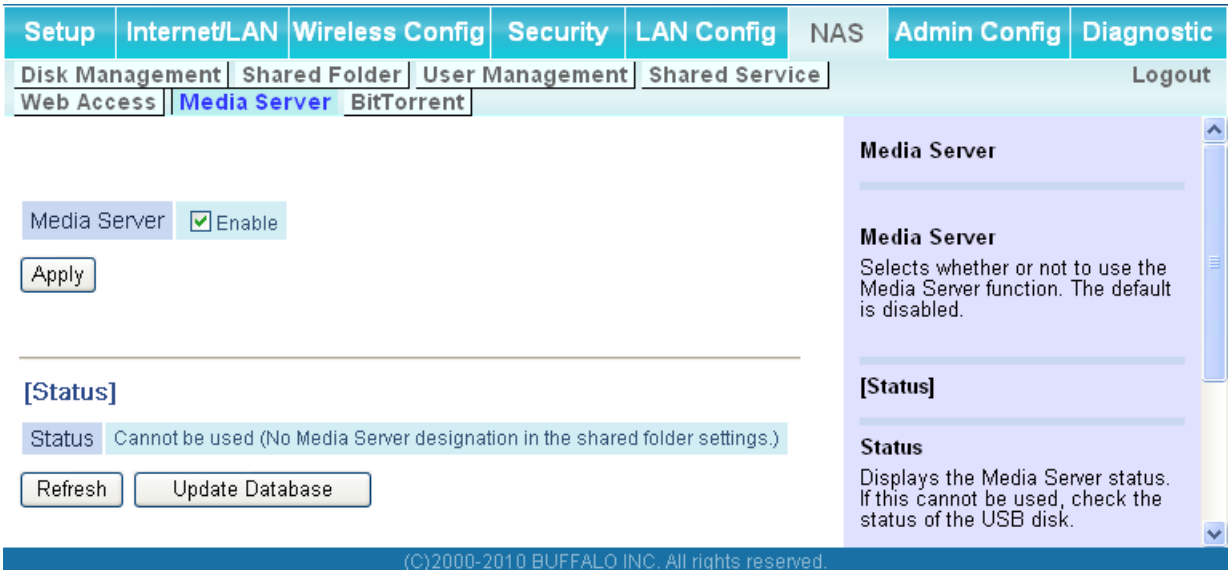


Parameter	Meaning
Web Access	Check [Enable] to use Web Access.
Web Access Display Language	Set the language to be used with Web Access.
HTTPS/SSL Encryption	Check [Enable] to use SSL encryption for protected data transfer.
Web Access External Port	Automatically sets the external port used for Web Access. To select the port manually, select [Manual].

Parameter	Meaning
DNS Service Host Name	Sets the DNS Service Host Name when the Web access function is activated. Select [Use BuffaloNAS.com registration function] to use Web Access easily. You'll have to configure a [BuffaloNAS.com name] and [BuffaloNAS.com key] to use BuffaloNAS.com. Up to 3-20 alphanumeric characters, space, hyphens (-), underscores (_) and period (.), may be used in the BuffaloNAS.com name. Up to 3-20 alphanumeric characters, space, hyphens (-), underscores (_) and period (.), may be used in the BuffaloNAS.com key. Note: The registered name is deleted from the server if the AirStation is disconnected from power, even for a moment.
Web Access	Displays the status of web access.
External Port Status	Display the status of the external port.
BuffaloNAS.com	Display the status of BuffaloNAS.com.

Media Server

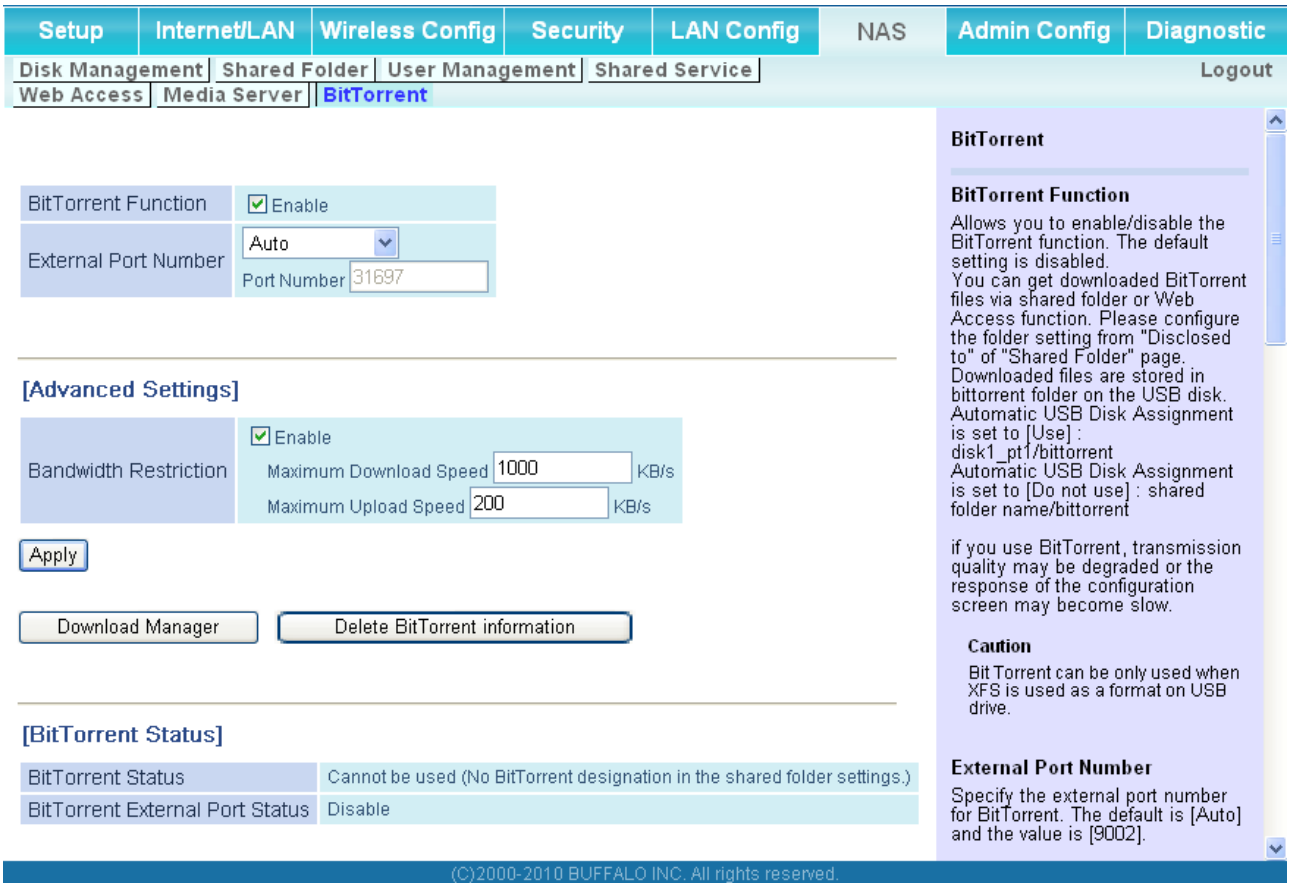
Media Server settings.



Parameter	Meaning
Media Server	Enable to use the media server.
Status	Displays the status of the media server.

BitTorrent

Configure the BitTorrent client.



Parameter	Meaning
BitTorrent Function	Enable to use the BitTorrent client. If the BitTorrent client is enabled, overall communication performance may decrease and the reactions to setting screens slow down. If that happens, reformat the USB disk with XFS. This may improve performance.
External Port Number	Select the external port number.

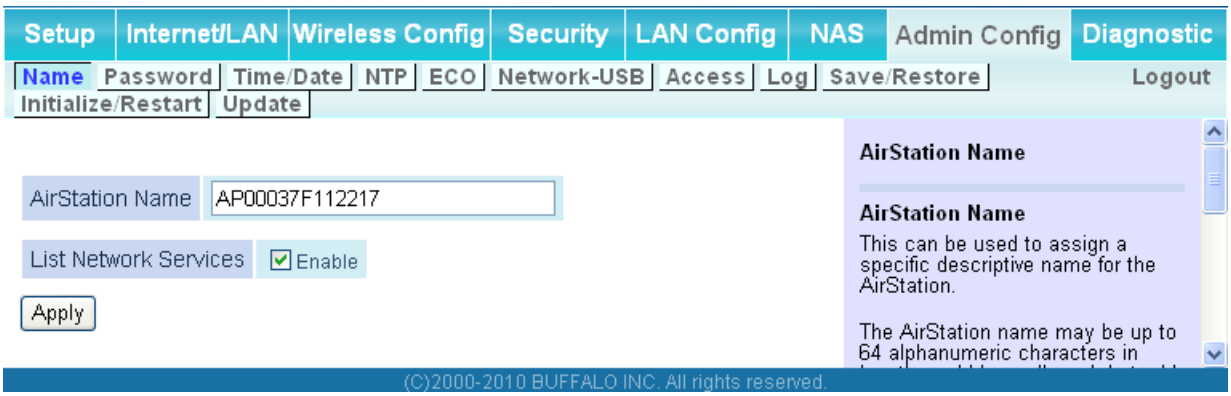
Parameter	Meaning
Bandwidth Restriction	Set a bandwidth limit for BitTorrent.
[Download Manager]	Displays the BitTorrent download manager screen. Add a torrent and then click [Add] to download the file(s).
[Delete BitTorrent information]	Deletes all files, including the torrent files and files which are currently downloading. The downloaded file is not deleted.
BitTorrent Status	Display the status of the BitTorrent client.
BitTorrent External Port Status	Display the external port status of the BitTorrent client.

To download the latest BitTorrent client, go to bittorrent's website.
http://www.bittorrent.com/

Admin Config

Name

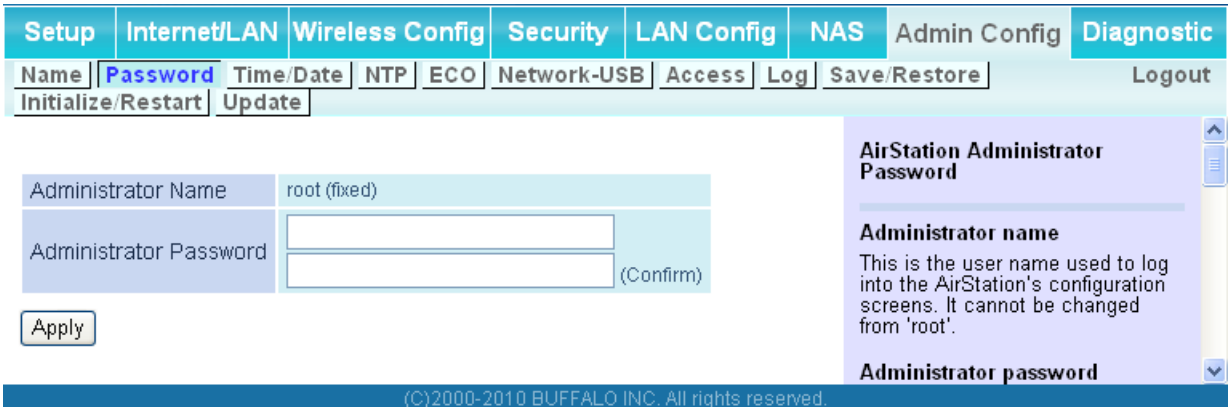
Configure basic AirStation's settings.



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 item to display the computers and devices on your network with their supported services.

Password

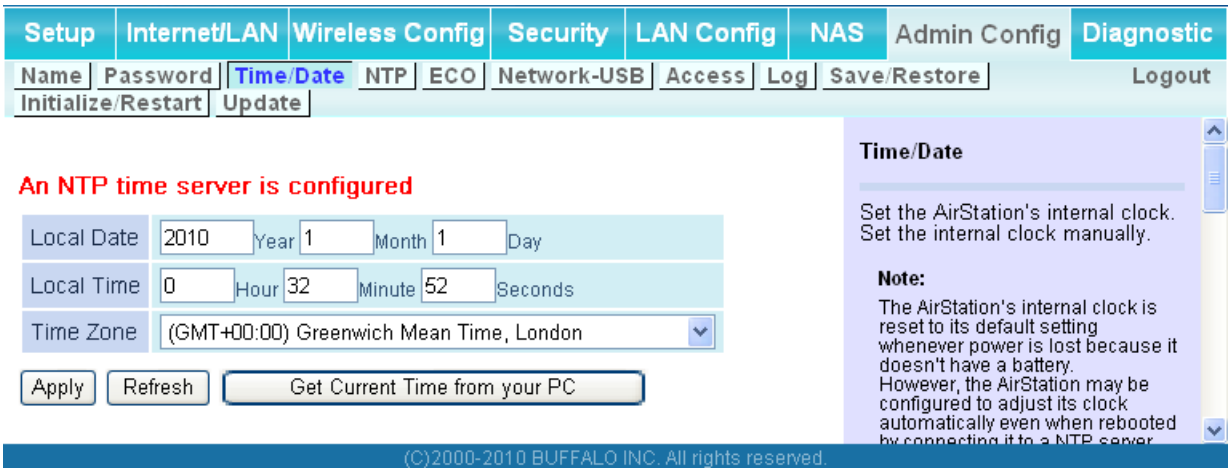
Configure the password to log in to the AirStation's configuration screen.



Parameter	Meaning
Administrator Name	The name of the Administrator account is "root". This account is used to log in to the AirStation's configuration utility.
Administrator Password	The password for the administrator account may contain up to 8 alphanumeric characters and underscores (_).

Time/Date

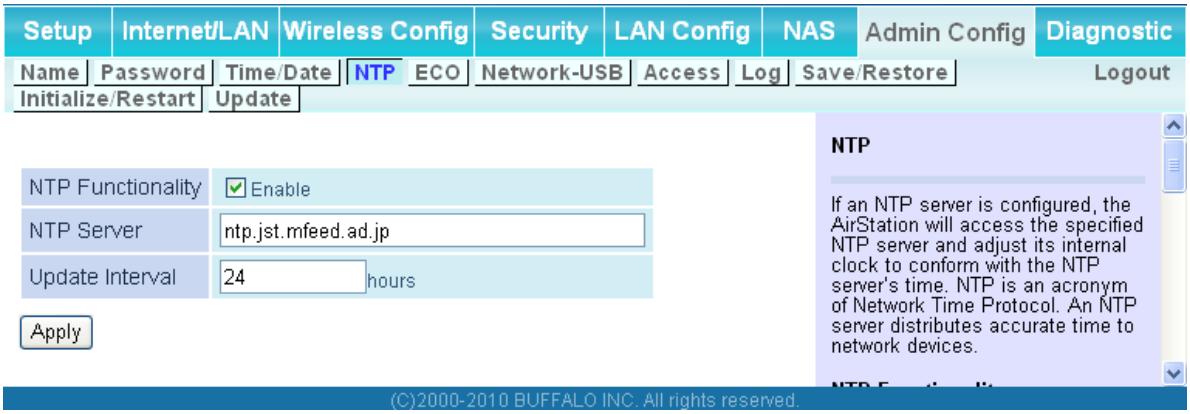
Configure the AirStation's internal clock.



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.

NTP

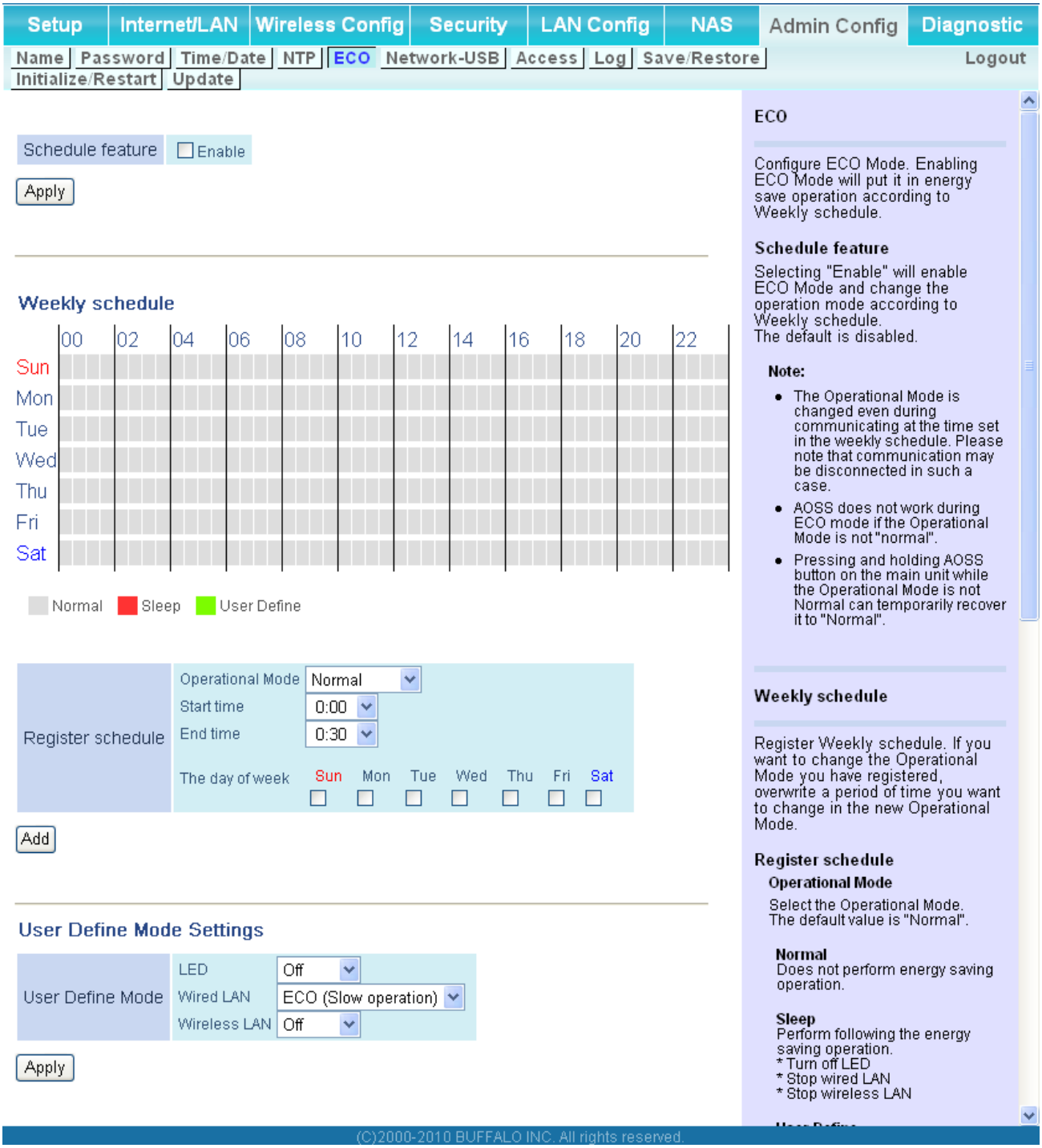
Configure an NTP server to automatically synchronise the AirStation's internal clock.



Parameter	Meaning
NTP Functionality	Enable to use an NTP server. NTP is enabled by default.
NTP Server	Enter the name of the NTP server as a host name, host name with domain name, or IP address. Up to 255 alphanumeric characters, hyphens (-), and underscores (_) may be used. 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

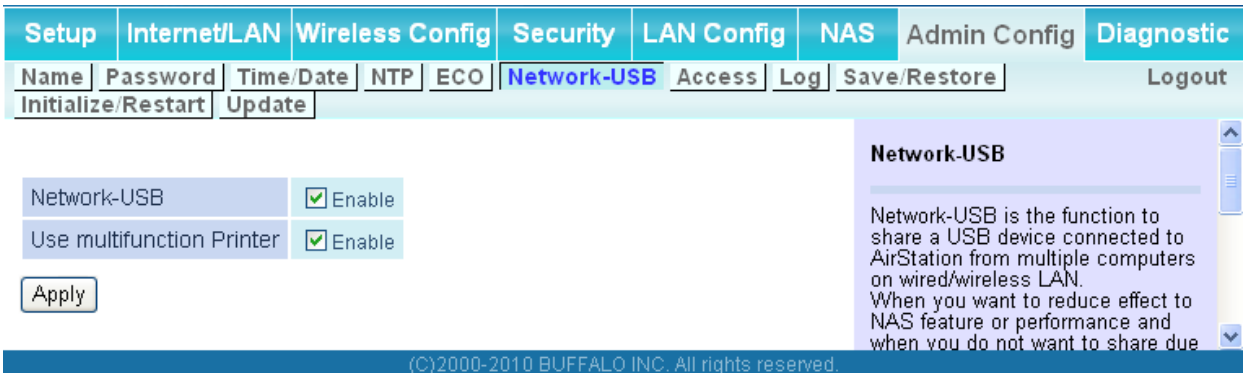
Configure Eco mode from this screen.



Parameter	Meaning
Schedule feature	Enable to schedule Eco mode. **Note:** If Schedule is enabled, AOSS will only function while 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 Define Mode	Individual power saving elements may be configured individually for User Defined mode.

Network-USB

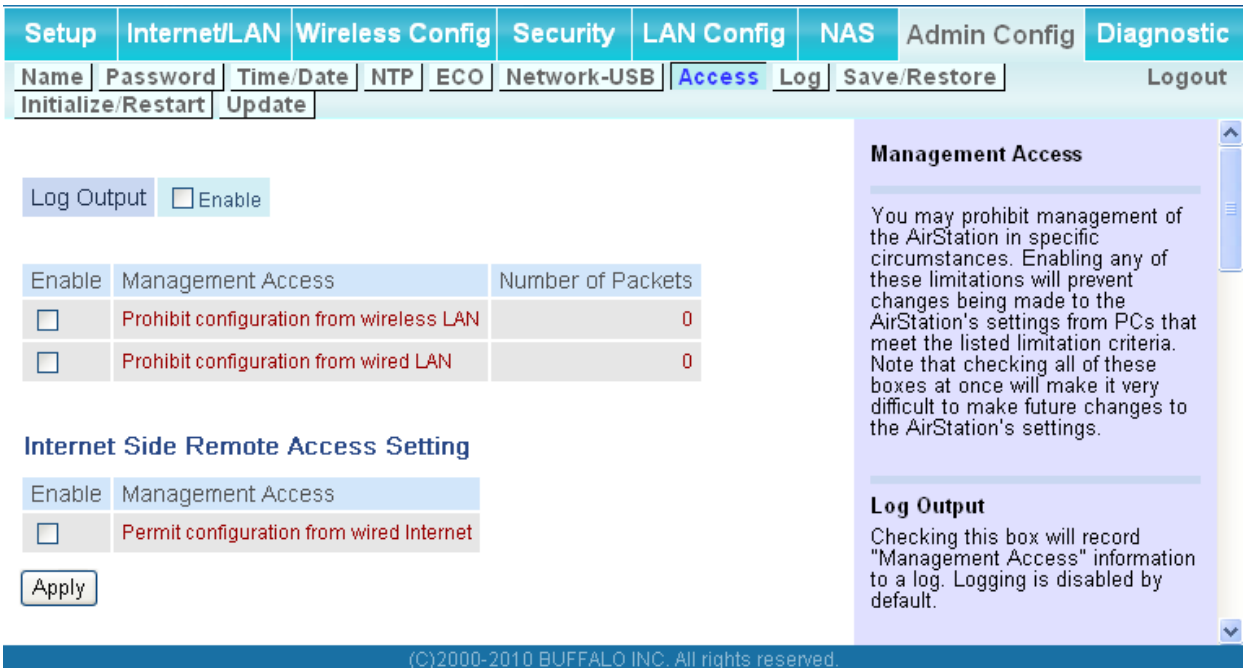
Configure Network-USB from this screen.



Parameter	Meaning
Network-USB	Network-USB allows sharing USB devices connected to the AirStation from multiple computers on a wired or wireless LAN. Disable to reduce the impact on the NAS and other functions, improve performance, or for security reasons.
Use multifunction Printer	This uses a multifunction printer supporting mass storage classes as a printer. Disable if using as a NAS instead.

Access

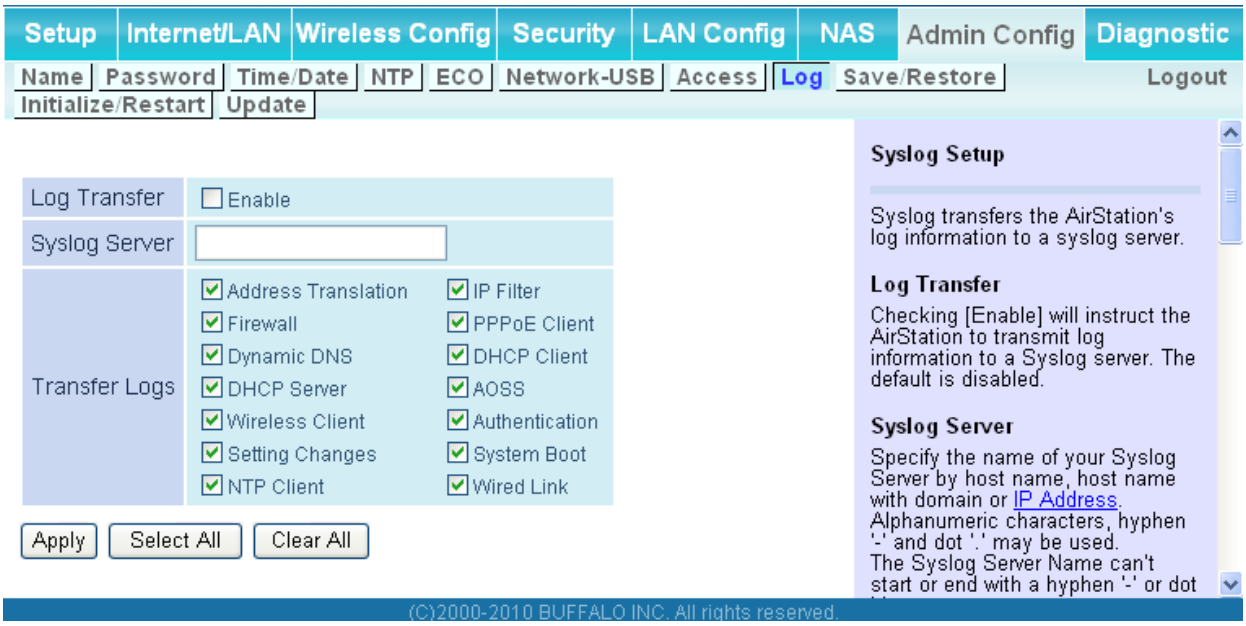
Restrict access to the AirStation's settings screens.



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

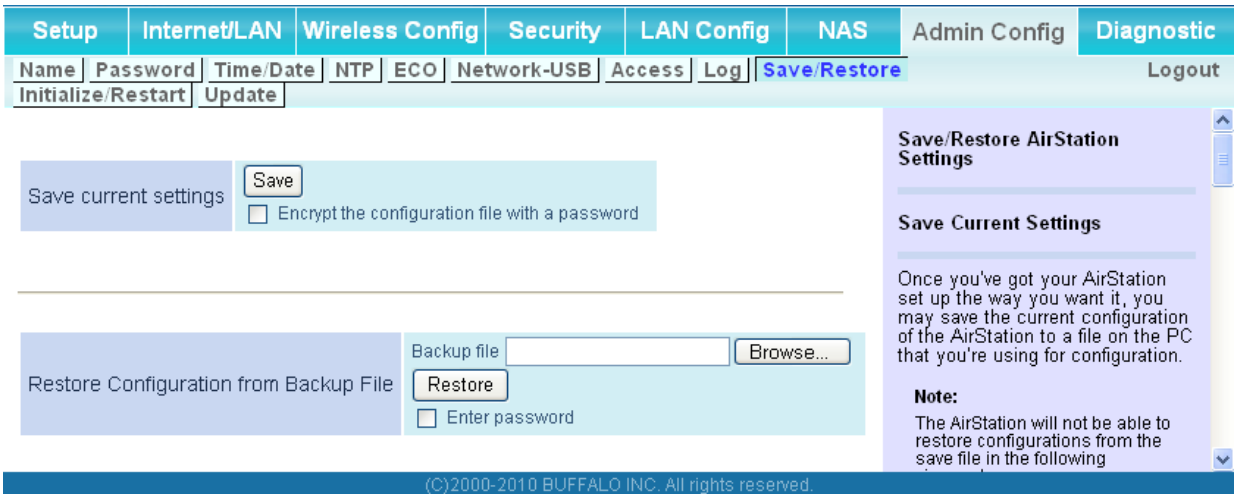
Transfer the AirStation's logs to a syslog server.



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

Save/Restore

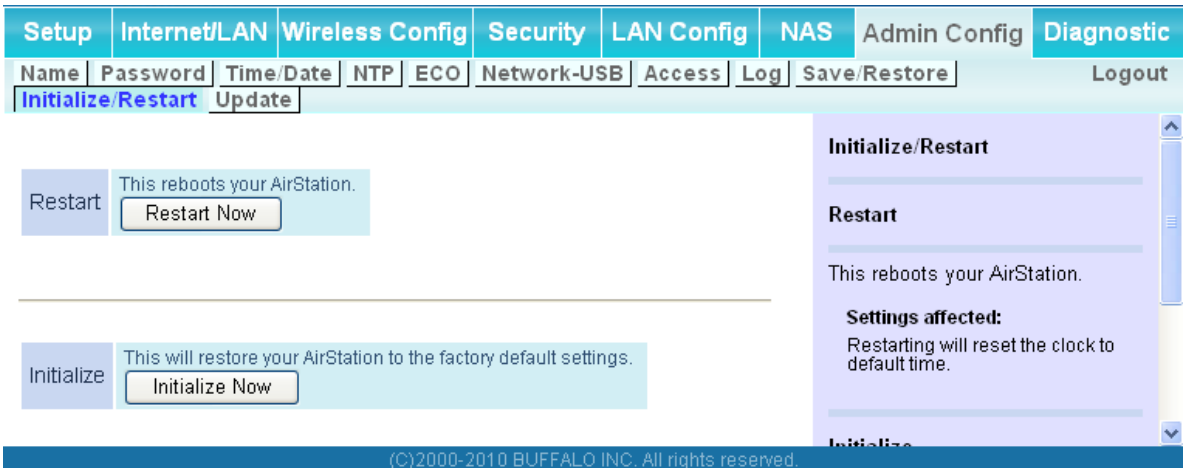
Save AirStation settings as a file, and restore from them later.



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

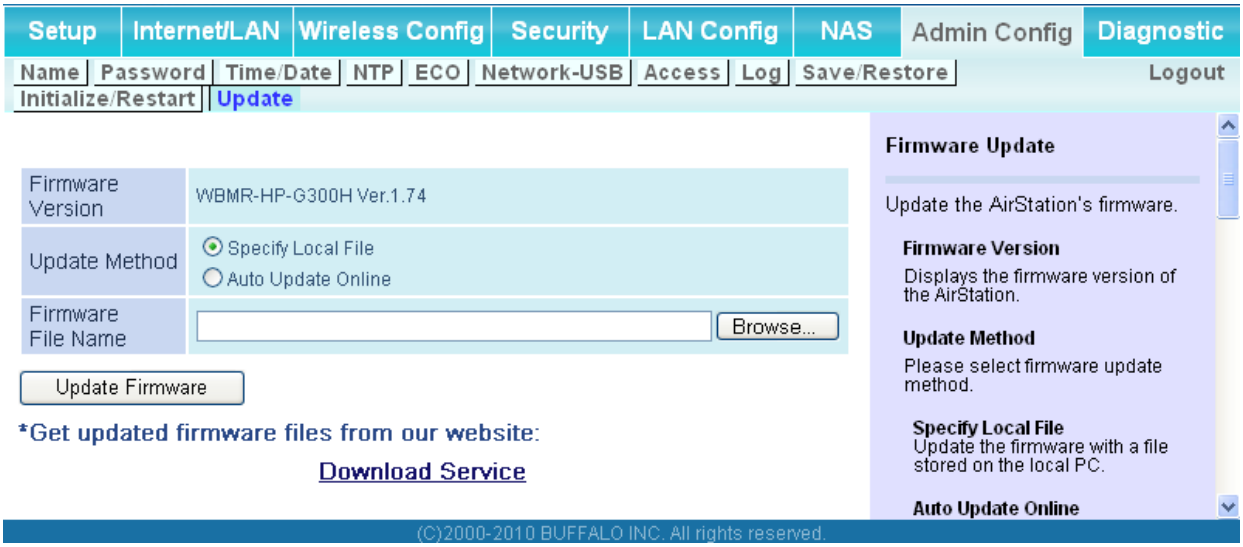
Initialize or restart the AirStation.



Parameter	Meaning
Restart	Click [Restart Now] to restart the AirStation.
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 the firmware stored on your computer. **Auto Update Online** Automatically updates the latest firmware that is available online.
Firmware File Name	Click [Browse...] to specify a firmware file, then click [Update Firmware.] You don't need to specify the firmare lodcation if selecting [Auto Update Online].

Diagnostic

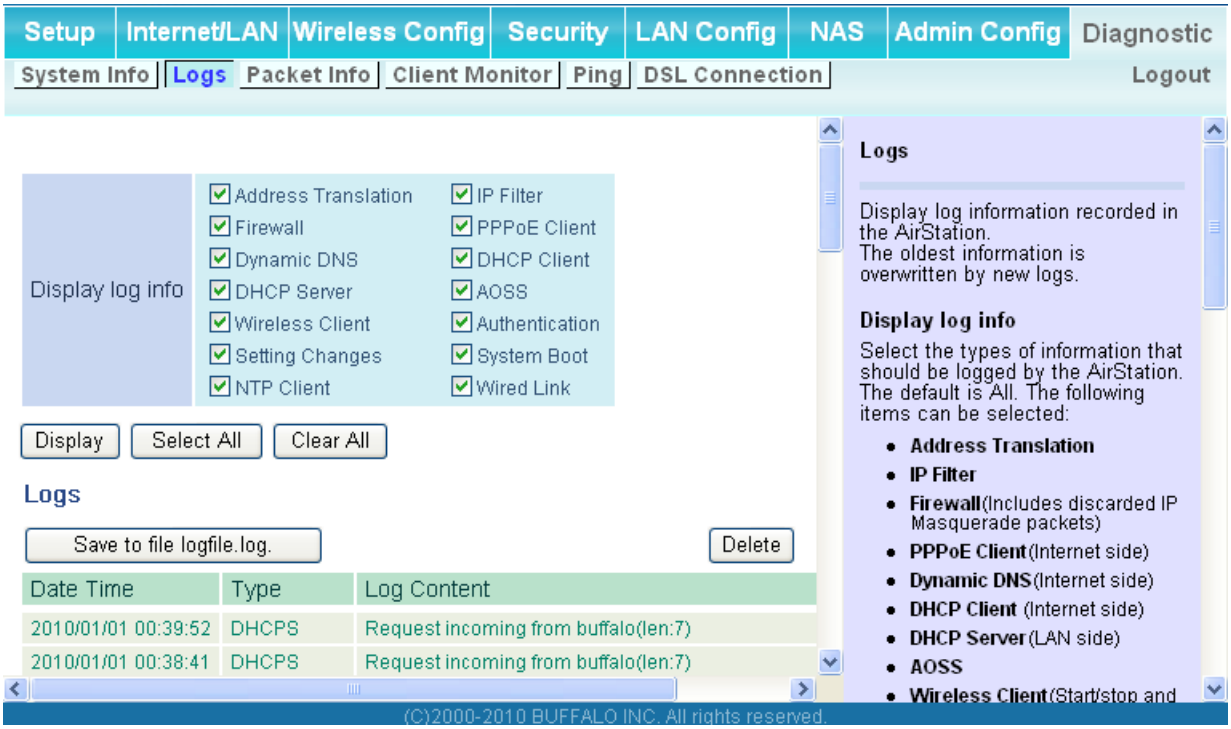
System Info

View system information for the AirStation.

Parameter	Meaning
Model	Displays the product name of the AirStation and the firmware version.
AirStation Name	Displays the AirStation Name.
Operational Mode	Displays the current operational mode of the AirStation.
Movie Engine Status	Displays the current Movie Engine Status.
Internet	Displays the information about the Internet port.
LAN	Displays the information about the LAN port.
Wireless	Displays the wireless status.
NAS	Displays the information about USB disk.
ECO Mode	Display current ECO Mode status.

Logs

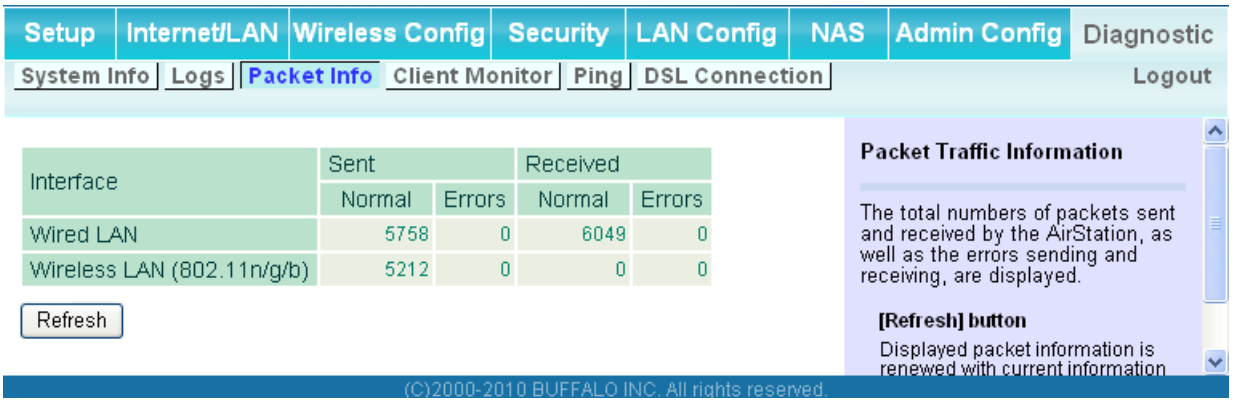
The AirStation's logs are recorded here.



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

Packet Info

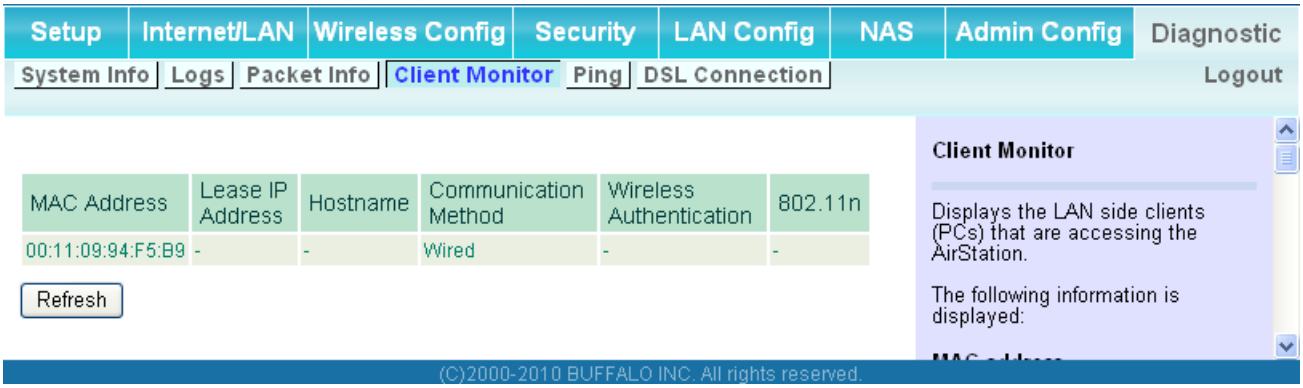
View packet transfer information.



Parameter	Meaning
Sent	Displays the number of packets sent to the Internet side of Ethernet, the LAN side of the Ethernet, and the LAN side of the wireless connection.
Received	Displays the number of packets received from the Internet side of Ethernet, the LAN side of the Ethernet, and the LAN side of the wireless connection.

Client Monitor

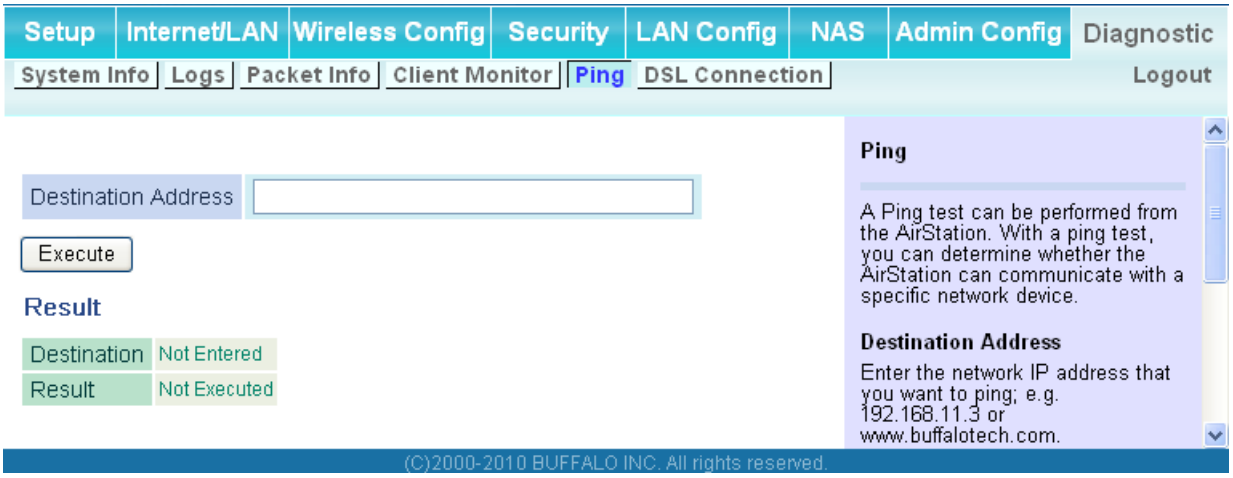
This screen shows devices that are connected to the AirStation.



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

Ping

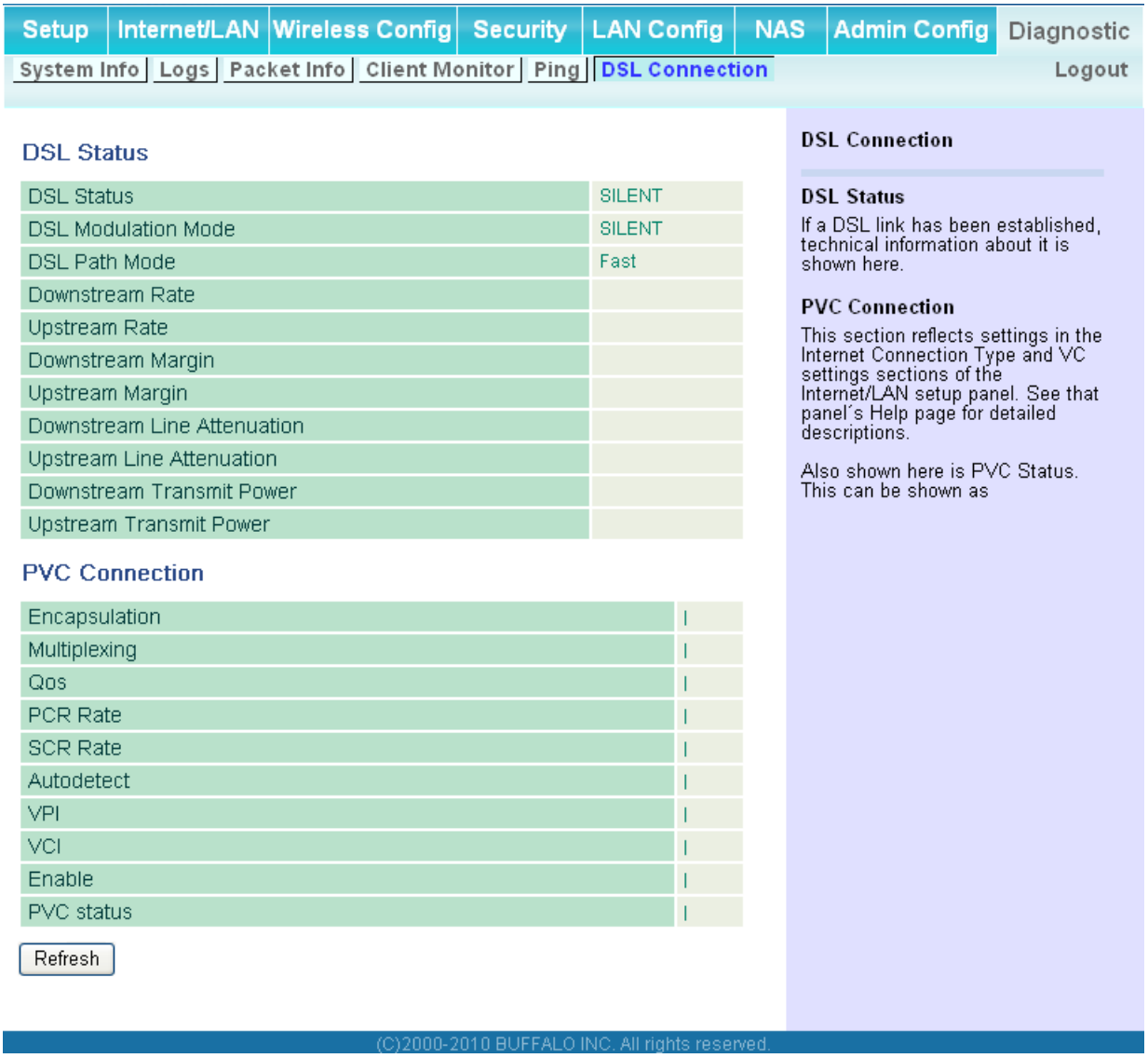
A Ping test checks whether the AirStation can communicate with a specific network device.



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

DSL Connection (Router Mode only)

View DSL Connection for the AirStation.



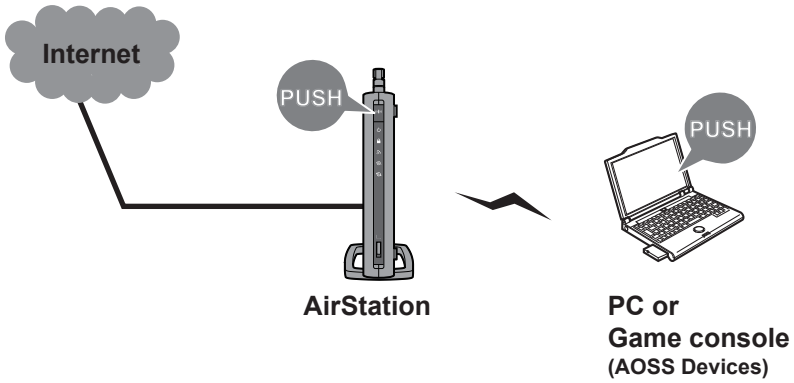
Parameter	Meaning
DSL Status	If a DSL link has been established, technical information about it is shown here.
PCV Connection	This section reflects settings in the Internet Connection Type and VC settings sections of the Internet/LAN setup panel. See that panel's Help page for detailed descriptions.

Chapter 5 - Connect to a Wireless Network

Automatic Secure Setup (AOSS/WPS)

AOSS and WPS are systems which enable you to automatically configure wireless LAN settings. Just pressing the buttons will connect wireless devices and complete security settings. Easily connect to any 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.



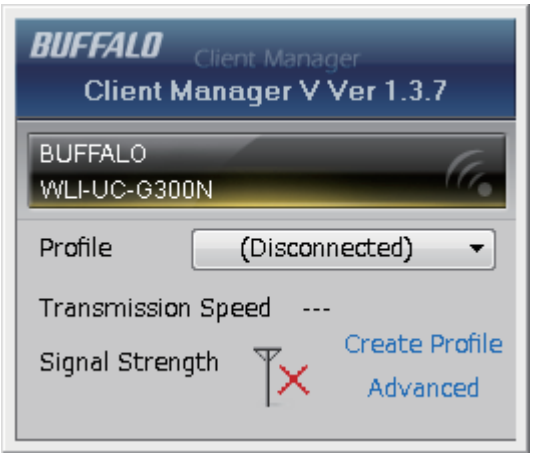
- Before using AOSS or WPS to connect to a Buffalo wireless client, install Client Manager software from the included AirNavigator CD. Consult your wireless client's documentation for more information.
- Buffalo's Client Manager software can be used with the wireless LAN devices built into your computer.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

2



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

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

4

Click the [WPS AOSS] button.

It will take about a minute for the process to complete. When the security LED on the front of the AirStation stops 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 about a minute for the process to complete. When the Security LED on the front of the AirStation stops 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 stops blinking 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.

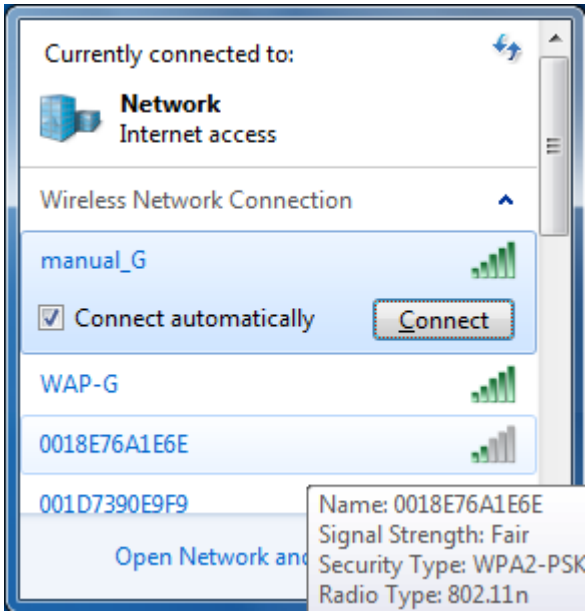
Note:
- **If you used the AirNavigator CD to configure the AirStation, then all settings were completed during the setup process. You may now unplug your LAN cable. Your client is connected to the AirStation wirelessly.**
- **Before begining setup, enable the computer's wireless client.**

Windows 7 (WLAN AutoConfig)

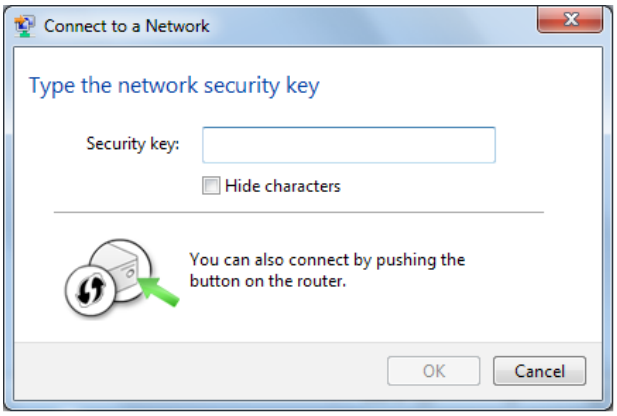
With Windows 7, use WLAN AutoConfig to connect to the AirStation.

1 Click on the network icon  in the system tray.

2



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

3 

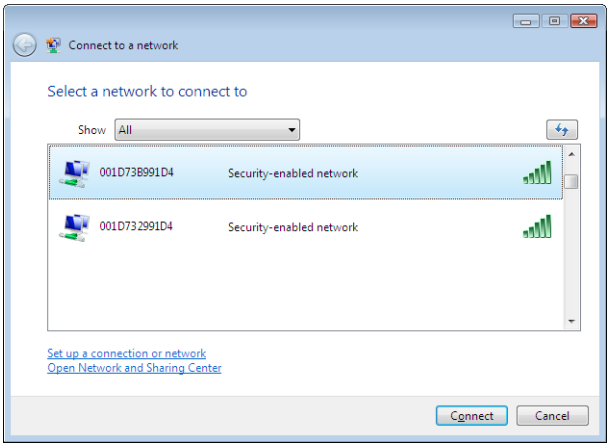
Enter the encryption key and click [OK].

Windows Vista (WLAN AutoConfig)

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

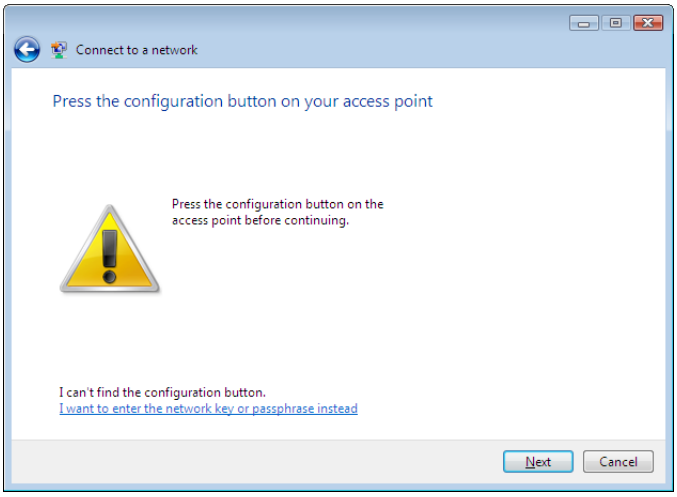
1 Right click on the wireless network icon  in the system tray.

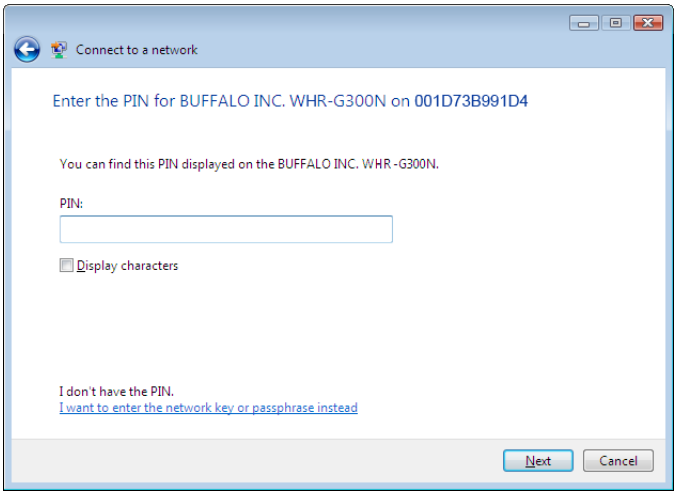
2 Click [Connect to a network].

3 

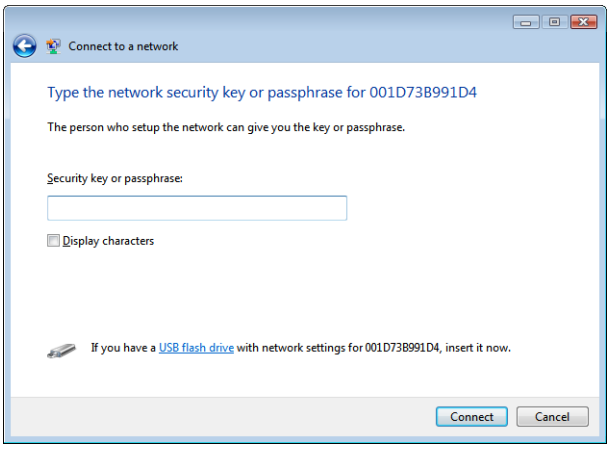
When the screen at left is displayed, select the network to connect to and click [Connect].

If the screen below is displayed, click [I want to enter the network key or passphrase instead]. 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 where you're using the AirStation.

Windows XP (Wireless Zero Configuration)

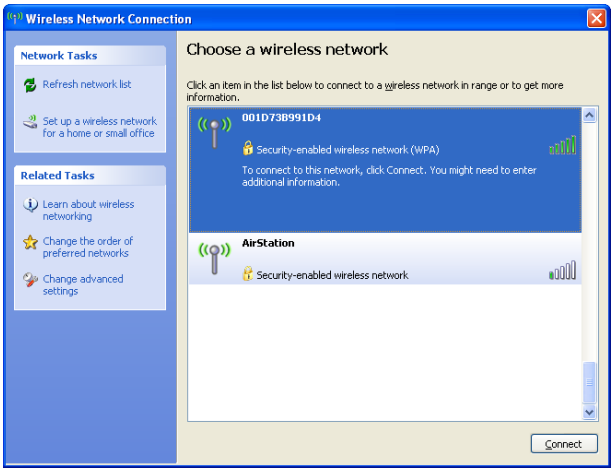
Windows XP includes a built-in utility to connect to your AirStation.

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

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

2 Click [View Available Wireless Networks].

3



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

4

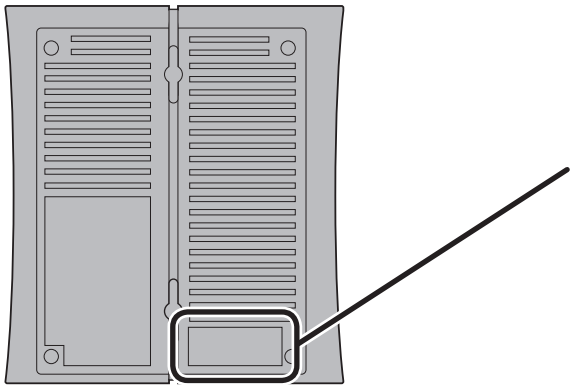
Enter the encryption key (twice) and click [Connect].

Follow the instructions displayed on the screen to finish configuration.

Mac OS X (AirPort)

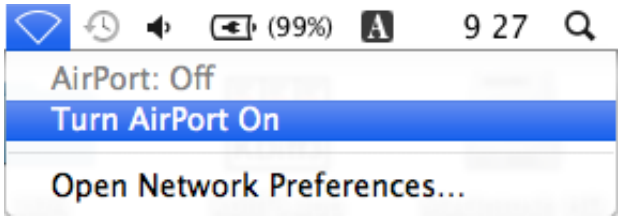
You may use your Mac's AirPort to connect to the AirStation.

1



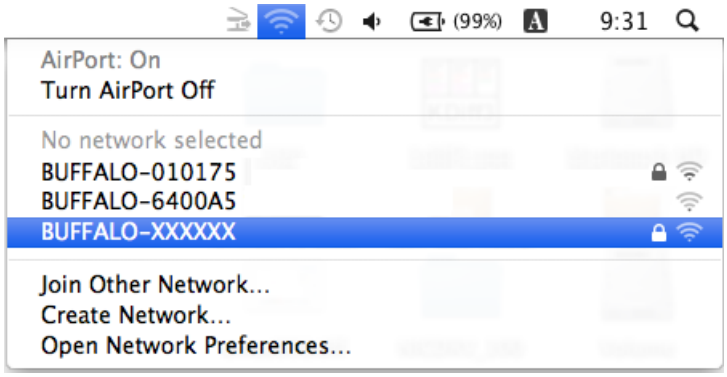
Refer to the label on the side of the AirStation and make a note of the SSID and KEY printed there.

2



Click the icon in the top section of the screen and select [Turn Airport On].

3



Click the SSID that you noted in step 1.

4

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

Your Mac will now connect to the AirStation.

Chapter 6 - Trouble Shooting

Cannot connect to the Internet over wired connection.

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

  Power Green light is on
  DSL Green light is on or off (depending on your environment)
  Internet Green light is on or flashing

- Make sure that your computer is set to "Obtain an IP address automatically". See appendix D for more information.
- Refer to the documentation provided by your provider to make the correct ADSL settings.
- Restart your AirStation.

Cannot access the web-based configuration utility.

- See chapter 4 for instructions to open the AirStation's configuration utility.
- Enter the correct username and password to login to the configuration screen. The factory defaults are "root" (in lower case) for the username and a blank password (enter nothing). 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 set to "Obtain an IP address automatically". See appendix D for more information.
- 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 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.)

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

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

1. Open the configuration utility (chapter 4).
2. Click [Wireless SSID & Channel (11n 300 Mbps Mode)] in Easy Setup.
3. Change the value in [300Mbps Mode] - [Band Width] to 40 MHz and click [Apply].

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

Other Tips

Issue:

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

Answer:

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

Issue:

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

Answer:

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

Issue:

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

Answer:

Log in to the configuration utility with your browser. Go to the Wireless Config tab and then select the Security tab. Buffalo recommends WPA for wireless encryption. The passphrase/key should be at least 8 characters in length.

Issue:

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

Answer:

Log in to the configuration utility. 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, you will need to manually select the new network name for all wireless devices and enter your encryption key if necessary.

Issue:

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

Answer:

There are many environmental factors that may cause this. First, ensure the issue is not range related by moving the wireless router 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 wireless router. Log in to the wireless router 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:

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

Answer:

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

Appendix A - Specifications

Wireless LAN Interface	
Standard Compliance	IEEE802.11b / IEEE802.11g / IEEE802.11n
Transmission Method	Direct Sequence Spread Spectrum (DSSS), OFDM, MIMO
Frequency Range	2,412 - 2,462 MHz (Channels 1 - 11)
Transmission Rate	802.11b/g: 54, 48, 36, 24, 18, 12, 9, 6, 11, 5.5, 2, 1 Mbps 802.11n 20 MHz BW (LongGI) 130, 117, 104, 78, 52, 39, 26, 13Mbps (2 streams) 65, 58.5, 52, 39, 26, 19.5, 13, 6.5Mbps (1 stream) (ShortGI) 130, 115.5, 86.6, 57.7, 43.3, 28.8, 14.4Mbps (2 streams) 65, 72.2, 57.8, 43.3, 28.9, 21.7, 14.4, 6.5Mbps (1 stream) 40 MHz BW (LongGI) 270, 243, 216, 162, 108, 81, 54, 27Mbps (2 streams) 135, 121.5, 108, 61, 54, 40.5, 27, 13.5Mbps (1 stream) (ShortGI) 300, 270, 240, 180, 120, 90, 60, 30Mbps (2 streams) 150, 135, 120, 90, 60, 45, 30, 15Mbps (1 stream)
Access Mode	Infrastructure Mode
Security	AOSS, WPA2-PSK (TKIP/AES), WPA/WPA2 mixed PSK, WPA-PSK (TKIP/AES), 128-bit/64-bit WEP, Mac Address Filter
Wired LAN Interface	
Standard Compliance	IEEE802.3u (100BASE-TX), IEEE802.3 (10BASE-T)
Transmission Rate	10 / 100 / 1000 Mbps
Transmission Encoding	1000BASE-T 4DPAM5, 100BASE-TX 4B5B/MLT-3, 10BASE-T Manchester Coding
Access Method	CSMA/CD
Speed and Flow Control	10/100/1000 Mbps, Auto Sensing, Auto MDIX
Number of LAN Ports	4
LAN Port Connector	RJ-45
DSL Interface	
Standard Compliance	ADSL2+
Number of DSL Ports	1
DSL Port Connector	RJ-11

USB Interface	
Interface	USB 2.0
Connector Type	Type A (plug)
Compliance	5.0 V 500 mA (max 1000 mA)
Other	
Power Supply	External AC 100-240 V Universal, 50/60 Hz
Power Consumption	About 12.0 W (max)
Dimensions	165 mm x 158 mm x 35 mm; 6.5″ x 6.2″ x 1.3″ (not including the stand)
Weight	330g; 11.6 oz. (not including the stand)
Operating Environment	0 - 40° C (32 - 104° F), 10 - 85% (non-condensing)

Appendix B - Default Configuration Settings

Feature	Parameter	Default Setting
ADSL	Encapsulation	RFC1483 Bridged
	IP Settings	Obtain an IP Address Automatically (DHCP)
	Host Name	none
	Domain Name	none
	MTU	Auto
	Modulation	Multimode
	Multiplexing	LLC
	QoS Type	UBR
	PCR Rate	0 cps
	SCR Rate	0 cps
	Auto Detect	Disabled
	Virtual Circuit	0 VPI 35 VCI
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	none
	PPTP User List	none

Feature	Parameter	Default Setting
LAN	LAN Side IP Address	192.168.11.1
	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 (IP Unnumbered) (Router Mode only)	none
	Lease Period (Router Mode only)	48Hours
	Default Gateway (Router Mode only)	AirStation's IP Address
	DNS Servers (Router Mode only)	AirStation's IP Address
	WINZ Server (Router Mode only)	Do Not Specify
	Domain Name (Router Mode only)	Assigned Domain Name
	Default Gateway (Bridge Mode only)	none
	DNS Server Address (Bridge Mode only)	none
DHCP Lease (Router Mode only)	Current DHCP Client Information	none
NAT (Router Mode only)	Address Translation	Enabled
	Log Output of Deleted Packets	Disabled
Route	Routing Information	none
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 or unconfigured 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: 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.)

Feature	Parameter	Default Setting
AOSS	Encryption Type of Exclusive SSID for WEP	none
	Encryption level expansion function	Enabled
	Dedicated WEP SSID isolation	Disabled
	Allow WEP for Game Console Only	Disabled
	AOSS Button on the AirStation Unit	Enabled
Basic	Wireless Radio	Enabled
	Wireless Channel	Auto Channel
	300Mbps Mode	Band Width: 20MHz 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 for AirStation to 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 Filter	Disabled		
	Registration List	none		
Multicast Control	Snooping	Enabled		
	Multicast Aging Time	300 Sec.		
Firewall (Router Mode only)	Log Output	Disabled		
	Basic Rules	Prohibit NBT and Microsoft-DS Routing Reject IDENT Requests Block Ping from Internet		Disabled Enabled Enabled
IP Filter (Router Mode only)	Log Output	Disabled		
	IP Filter Information	none		

Feature	Parameter	Default Setting
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 switch status	OFF
	IPv6 Pass Through	Use
	Multicast Rate	11 Mbps
	Multicast Control	Snooping Function Use Aging Time Seconds 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
Disk Management	Automatic USB Disk Assignment	Use
	FAT format file name character code	North America (CP437)
	HDD power-saving function	Not used HDD stop time 10 Minutes
Shared Folder	Access Limits	No Limits (Read/Write)
	Web Access	Use Access Limits
User Management	Current Users	guest
Shared Service	Shared Folder	Enabled
	AirStation Name	AP + AirStation's MAC Address
	AirStation Description	none
	Workgroup Name	WORKGROUP
	Windows Client Language	North America (CP437)
	Shared Service	none

Feature	Parameter	Default Setting
Web Access	Web Access	Disabled
	Web Access Display Language	English
	HTTPS/SSL Encryption	Disabled
	Web Access External Port	Auto (Port Number:9000)
	DNS Service Host Name	Use BuffaloNAS.com registration function
	Web Access status	none
Media Server	Media Server	Disabled
	Status	none
BitTorrent	BitTorrent Function	Disabled
	External Port Number	Auto (Port Number: 9002)
	Bandwidth Restriction	Enabled Maximum Download Speed 1000 kB/s Maximum Upload Speed 200 kB/s
	BitTorrent Status	none
Name	AirStation Name	AP + AirStation's MAC Address
	List Network Services	Enabled
Password	Administrator Name	root (fixed)
	Administrator Password	none
Time/Date	Local Date	2010 Year 1 Month 1 Day
	Local Time	0 Hour 0 Minute 0 Seconds
	Time Zone	(GMT+00:00) Greenwich Mean Time, London
NTP	NTP Functionality	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 Wired LAN: ECO (Slow operation) Wireless LAN: Off

Feature	Parameter	Default Setting
Network-USB	Network-USB	Enabled
	Use multifunction Printer	Enabled
Access	Log Output	Disable
	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
	Transfer Logs	Router Mode: Address Translation, IP Filter, Firewall, PPPoE Client, Dynamic DNS, DHCP Client, DHCP Server, AOSS, Wireless Client, Authentication, Setting Changes, System Boot, NTP Client, and Wired Link Bridge Mode: IP Filter, DHCP Client, AOSS, Wireless Client, Authentication, Setting Changes, System Boot, NTP Client, and Wired Link

Appendix C - Network-USB Navigator

Network-USB Navigator is compatible only with printers and multifunction printers (all-in-one devices with a printer, scanner, and memory card reader). It cannot be used with any other type of USB devices.

Initial Setup for Windows Users

1 Insert the AirNavigator CD into your computer.

The setup wizard will launch automatically. If not, open the CD and click on "ASSetWiz.exe" in the "win" folder.

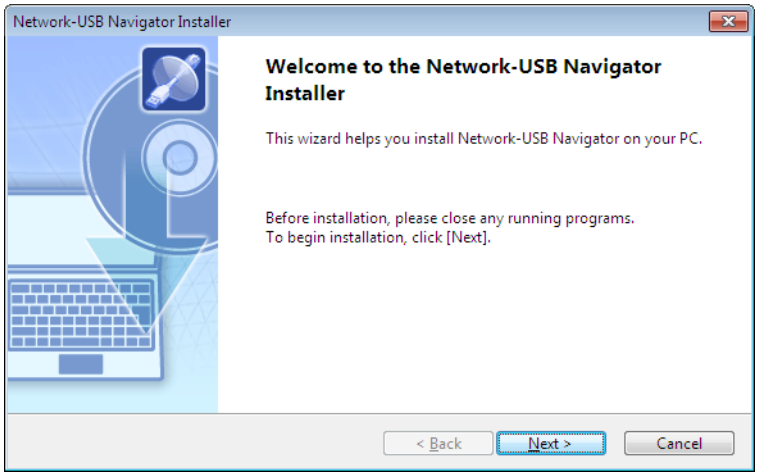
2

Click [Install Network-USB Navigator].

3

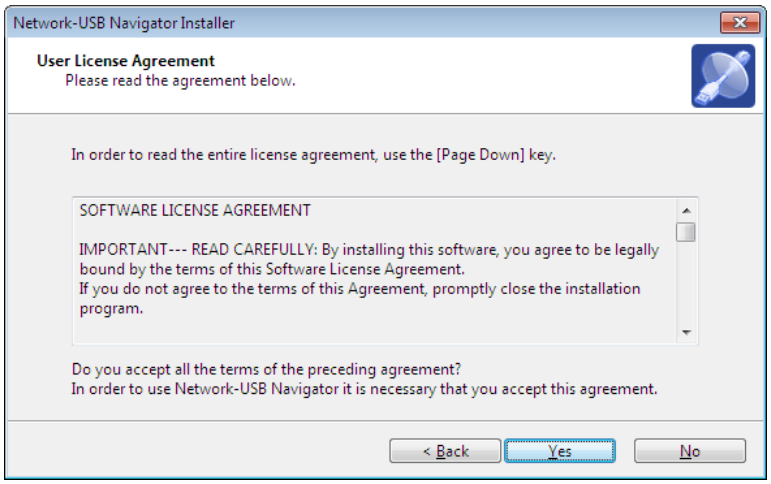
Click [Next].

4



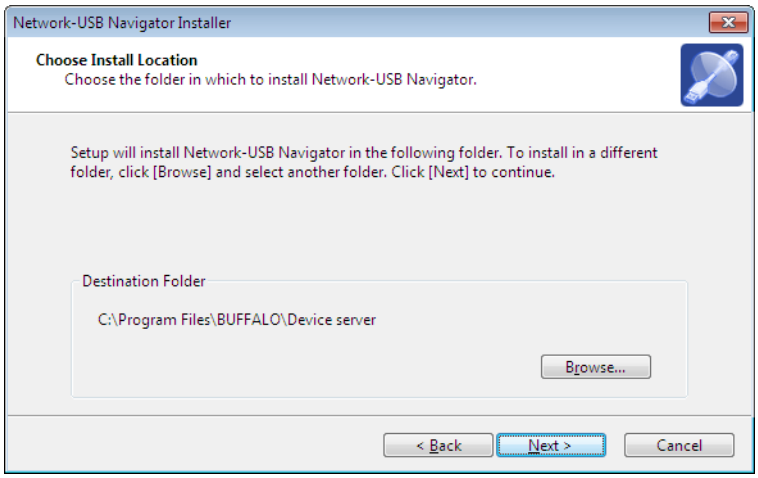
Click [Next].

5



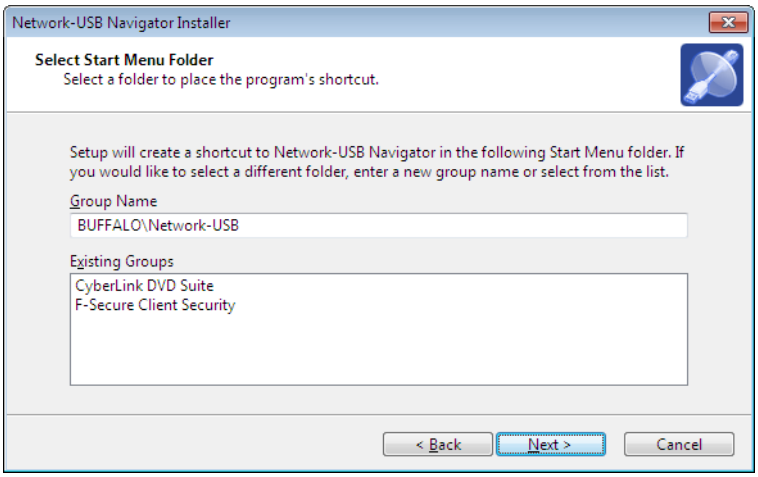
Click [Yes].

6



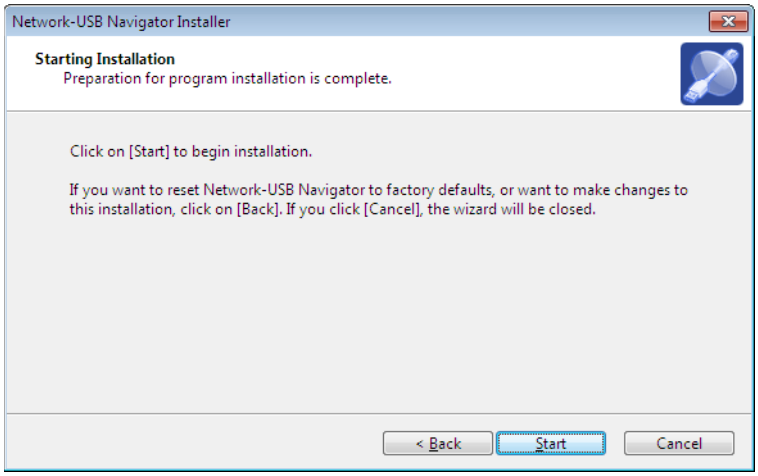
Click [Next].

7



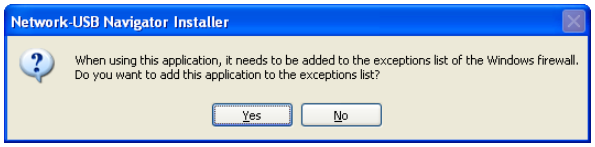
Click [Next].

8



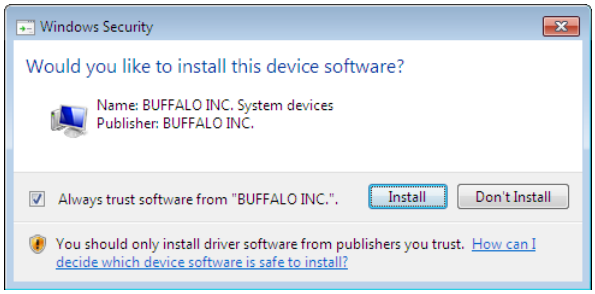
Click [Start].

- Installation on Windows XP (SP2 or later)

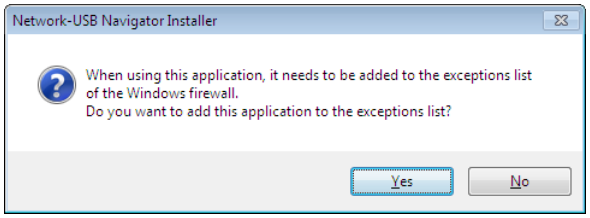


Click [Yes] when this screen is shown.

- Installation on Windows 7/Vista

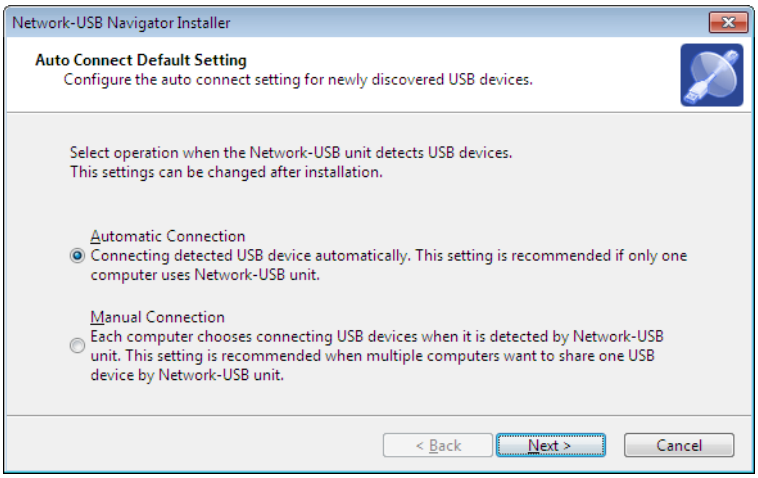


Click [Install] when this screen is shown.



Click [Yes] when this screen is shown.

9



1 You can select the behavior of this product when a USB device is detected. Select the connection behavior suited to your usage environment.

2 Click [Next].

10 Click [Finish] when the "Network-USB Navigator Install is Complete" screen is shown.

Network-USB Navigator installation is complete.

Initial Setup for Macintosh Users

1 Insert the Air Navigator CD.

2 Double-click the CD-ROM on the desktop, then double-click the Mac folder.

3 Double-Click [USB-Navigator], then [Cosetup.app].

4

Click [Continue].

5

Click [Continue].

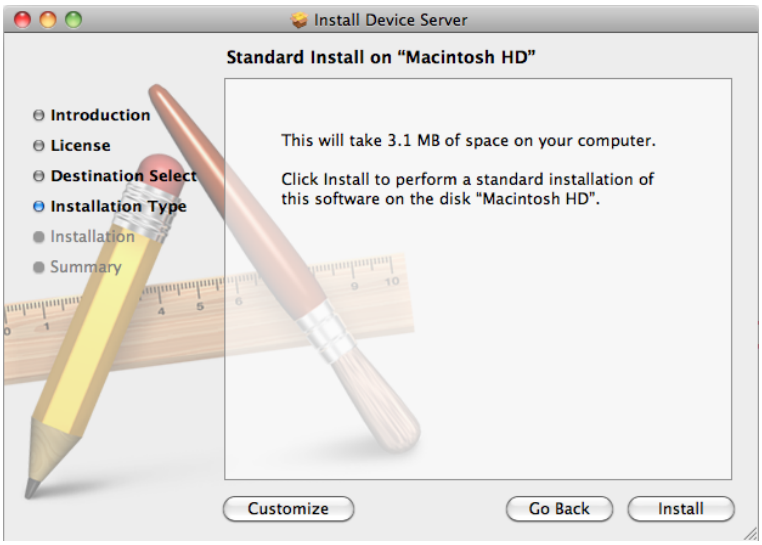
6

Click [Agree].

7

Click [Continue].

8



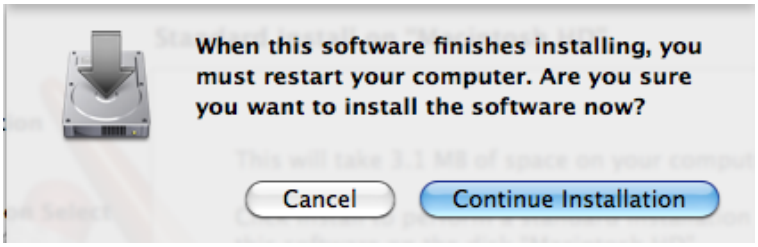
Click [Install].

9

Input your name and password.

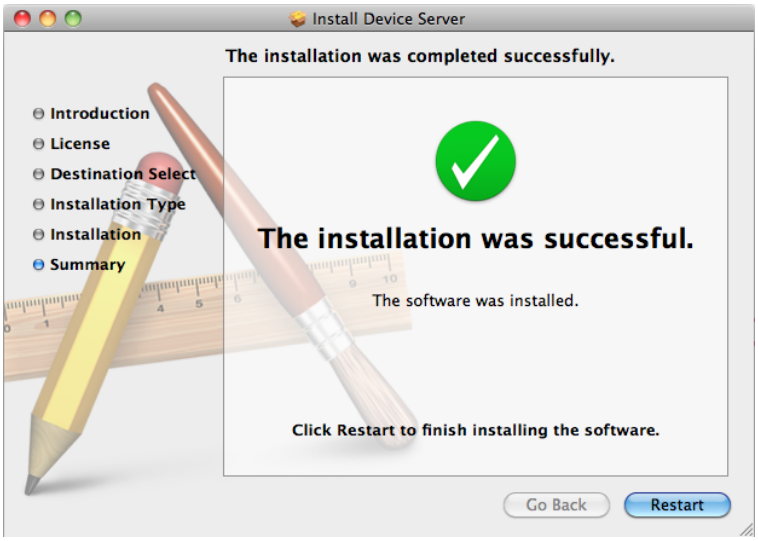
Click [OK].

10



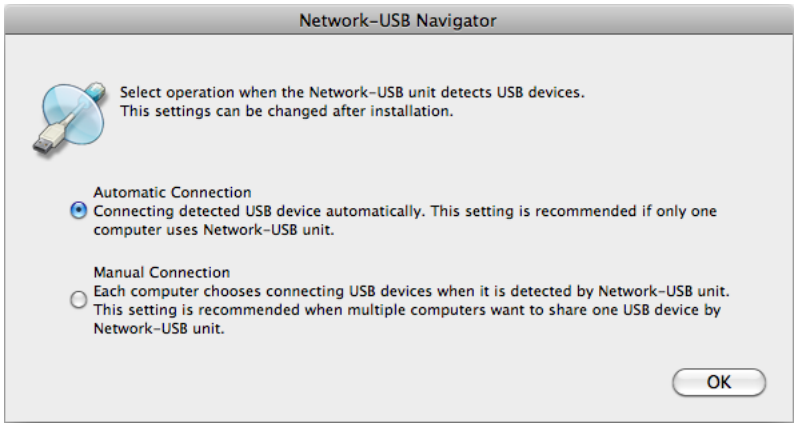
Click [Continue Installation].

11



Click [Restart].

12



1 During the first program launch only, the screen at left will appear before the main program screen is displayed. From here, you can select the behavior of this product when a USB device is detected. Select the connection behavior suited to your usage environment.

2 Click [OK].

Network-USB Navigator installation is complete.

Opening the Network-USB User Manual

1 Launch Network-USB Navigator.

There are two ways to launch the program.

Windows Users

a) Click the task tray icon  .

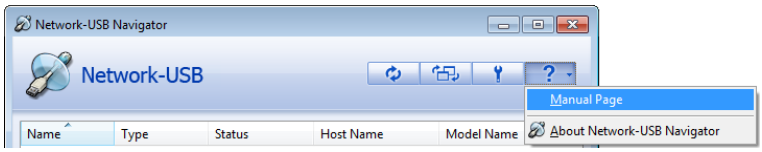
b) From the Start menu, click [(All) Programs]-[BUFFALO]-[Network-USB Navigator]-[Network-USB Navigator].

Macintosh Users

a) Click the Dock icon  .

b) Click [Macintosh HD]-[Applications]-[BUFFALO]-[Device Server]-[Network-USB Navigator].

2



Click , then click [Manual Page].

3 Network-USB User Manual will open.

How to use Network-USB

To configure Network-USB, refer to the "Network-USB User Manual".

Appendix D - 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 Select [Obtain an IP address automatically] and [Obtain DNS server address automatically], then click [OK].

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 Select [Obtain an IP address automatically] and [Obtain DNS server address automatically], then click [OK].

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 Select [Obtain an IP address automatically] and [Obtain DNS server address automatically], then click [OK].

6 Click [Close].

Mac OS X

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

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

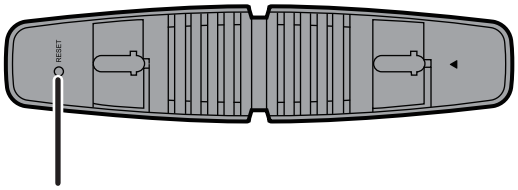
2 Click [Network].

3 Click [Ethernet].

4 Select [Using DHCP] in the Configure IPv4 field, then click [Apply].

5 Close the window.

Appendix E - Restoring the Default Configuration



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

Appendix F - Shared Folders and the USB Port

There are several restrictions on using the AirStation's USB port:

• Bus powered hard drives are not supported. Always use the hard drive's AC adapter.

• When using full-byte characters (such as Japanese), keep folder and file names within 80 characters. You may not be able to copy a folder or a file whose name length is more than 80 characters.

•You cannot apply attributes (hidden or read-only) to folders or files on the AirStatoin.

• When using access restrictions, you can register up to 16 users for the AirStation.

• Please note that you are not allowed to use any of the following words as a user or group name: adm, administrator, all, bin, daemon, disk, ftp, guest, halt, hdusers, kmen, lp, mail, man, news, nobody, nogroup, none, operator, root, shadow, shutdown, sshd, sync, sys, ttyusers, utmp, uucp, www.

• Please note that you are not allowed to use any of the following words as a shared folder name: global, homes, printers, bittorrent, disk1_pt1, disk1_pt2, disk1_pt3, disk1_pt4, disk2_pt1, disk2_pt2, disk2_pt3, disk2_pt4, disk3_pt1, disk3_pt2, disk3_pt3, disk3_pt4, disk4_pt1, disk4_pt2, disk4_pt3, disk4_pt4.

• If shared folder names, work group names and file names contain any of the following characters, you may not access data or manipulate files on the AirStation properly. In such a case, use a different character.

• If a file created on a Macintosh contains any of the following characters, it will not be displayed correctly under Windows OS. Also, you cannot copy or properly display a file when connecting via SMB from Mac OS X if it contains any of these characters:
? [ ] / \ = + < > ; : ", | *

• Cancelling or aborting a file copy may leave the file incomplete, and you may no longer be able to delete the incomplete file. This can also happen during a power outage or if the LAN cable is suddenly disconnected. If it happens, restart the AirStation, delete the file, and try copying the file again.

• Use the same user name and password for the AirStation as the user's Windows login. If they are different, the user may not be able to access shared folders with access restrictions on the AirStation.

• Date and Time stamps stored on the USB hard disk may be updated by the OS accessing the AirStation. File creation or access dates may not be maintained.

• If you display and check the size of hard drives from the browser, it shows a bigger value than when you see it in Windows' drive properties. This is because the browser shows the size in gigabytes, but Windows displays gibibyes instead.

• If you have logged in using a guest account from Windows 7, Vista, XP, or 2000, access restrictions may not work properly. A (different) guest account already exists on the AirStation.

• If you access a shared folder from a Macintosh computer, additional Mac OS X information files may be automatically generated. Do not delete these files from a Windows computer. Otherwise, you may no longer be able to access folders from a Macintosh.

• The following types of devices may be connected to the AirStation's USB connector: USB hard drives, USB memory, or a USB card reader. Card readers with 5 or more slots are not supported. USB devices such as a digital cameras, CD/DVD drives, USB hubs, mice, or keyboards are not supported.

• Encrypted USB hard drives are not supported.

• Only one single drive may be connected to the AirStation's USB port at a time. Drives manufactured by other companies besides Buffalo Technology are not supported.

• If your hard disk has an auto power mode switch, move the switch to *manual* or *on*. Leaving the switch set to *auto* may result in unpredictable behavior.

• Up to 4 partitions can be recognized on a USB hard disk.

• Available file systems for USB hard disks are FAT12, FAT16, FAT32, and XFS.

Appendix G - Regulatory Compliance Information

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

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

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Important Note - FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for uncontrolled equipment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

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
Safety of Information Technology Equipment

EN 50385: 2002
Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields (110MHz - 40 GHz) - General public

EN 300 328 V1.7.1 (2006-10)
Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

EN 301 489-1 V1.8.1 (2008-04)
Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

EN 301 489-17 V1.3.2 (2008-04)
Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems , 5 GHz high performance RLAN equipment and 5,8GHz Broadband Data Transmitting 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 WBMR-HP-G300H 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 WBMR-HP-G300H 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 WBMR-HP-G300H 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 WBMR-HP-G300H vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

English
Hereby, Buffalo Technology Inc. declares that this AirStation WBMR-HP-G300H 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 WBMR-HP-G300H 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 WBMR-HP-G300H 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 WBMR-HP-G300H 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 WBMR-HP-G300H 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 WBMR-HP-G300H atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

Lietuvių[Lithuanian]
Šiuo Buffalo Technology Inc. deklaruoja, kad šis AirStation WBMR-HP-G300H atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Nederlands[Dutch]
Hierbij verklaart Buffalo Technology Inc. dat het toestel AirStation WBMR-HP-G300H 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 WBMR-HP-G300H 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 WBMR-HP-G300H megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.

Polski[Polish]
Niniejszym, Buffalo Technology Inc. , deklaruję, że AirStation WBMR-HP-G300H spełnia wymagania zasadnicze oraz stosowne postanowienia zawarte Dyrektywie 1999/5/EC.

Português[Portuguese]
Buffalo Technology Inc. declara que este AirStation WBMR-HP-G300H está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Slovensko[Slovenian]
Buffalo Technology Inc. izjavlja, da je ta AirStation WBMR-HP-G300H v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.

Slovensky[Slovak]
Buffalo Technology Inc. týmto vyhlasuje, že AirStation WBMR-HP-G300H spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

Suomi[Finnish]
Buffalo Technology Inc. vakuuttaa täten että AirStation WBMR-HP-G300H 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 WBMR-HP-G300H står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Safety

This equipment is designed with the utmost care for the safety of those who install and use it. However, special attention must be paid to the dangers of electric shock and static electricity when working with electrical equipment. All guidelines of this manual and of the computer manufacturer must therefore be allowed at all times to ensure the safe use of the equipment.

FCC Part 68 Statement

This equipment complies with Part 68 of FCC Rules and the requirements adopted by the ACTA.. On the bass unit of this equipment is a label that contains, among other information, a product identifier in the format US: ACYDL01BAR7516VW. If requested, this number must be provided to the telephone company. The REN for this product is part of the product identifier that has the format US: ACYDL01BAR7516VW. The digits represented by 01 are the REN without a decimal point.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.
A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.
If your equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. If advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC. Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service. If you experience trouble with this telephone equipment, please contact the following address and phone number for information on obtaining service or repairs:

The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.
This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

Buffalo Technology (USA) Inc.
11100 Metric Boulevard, Suite 750, Austin, TX 78758 USA
TEL:1-800-688-7466

Appendix H - Environmental Information

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

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

Appendix I - GPL Information

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

Appendix J - Warranty Information

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

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

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

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

35012234 ver.01

Internet Connection Setting Table

This table provides references to select and configure Internet connection in setting up your ADSL connection. Many ISPs use different settings depending on the region and equipment they use. You may try the setting for the ISPs in your region. If it does not work, please contact your ISP for your specific setting.

Country	ISPs	Encapsulation	Multiplexing	VPI	VCI
Australia	iiNet	RFC 1483 PPPoE	LLC	8	35
Australia	Internode	RFC 1483 PPPoE	LLC	8	35
Australia	Optus	RFC 1483 PPPoE	LLC	8	35
Australia	Soul	RFC 2364 PPPoA	VC	8	35
Australia	Telstra	RFC 1483 PPPoE	LLC	8	35
Australia	TPG	RFC 1483 PPPoE	LLC	8	35
Australia	default-other	RFC 1483 PPPoE	LLC	8	35
Argentina	Telecom	RFC 1483 PPPoE	LLC	0	35
Argentina	Telefonica	RFC 1483 PPPoE	LLC	8	35
Argentina	default-other	RFC 1483 PPPoE	LLC	0	35
Austria	Tiscali	RFC 2364 PPPoA	LLC	8	48
Austria	UTA	RFC 1483 PPPoE	LLC	0	32
Austria	Ultanet	RFC 2364 PPPoA	VC	8	48
Austria	default-other	RFC 2364 PPPoA	VC	8	48
Bahrain	Batelco	RFC 2364 PPPoA	VC	8	35
Bahrain	default-other	RFC 2364 PPPoA	VC	8	35
Belgium	Academic Broadband	RFC 1483 PPPoE	LLC	8	35
Belgium	Belgacom	RFC 1483 PPPoE	LLC	8	35
Belgium	Scarlet	RFC 1483 PPPoE	LLC	8	35
Belgium	Skynet	RFC 1483 PPPoE	LLC	8	35
Belgium	Versatel	RFC 2364 PPPoA	LLC	8	35
Belgium	Scarlet	RFC 1483 PPPoE	LLC	8	35
Belgium	Tele2	RFC 1483 PPPoE	LLC	8	35
Belgium	default-other	RFC 1483 PPPoE	LLC	8	35
Brazil	Brasil Telecom (All other States)	RFC 1483 PPPoE	LLC	0	35
Brazil	Brasil Telecom (Rio Grande do Sul State)	RFC 1483 PPPoE	LLC	1	32
Brazil	CTBC	RFC 1483 PPPoE	LLC	0	35
Brazil	Telefonica	RFC 1483 PPPoE	LLC	8	35
Brazil	Telemar / Oi	RFC 1483 PPPoE	LLC	0	33
Brazil	default-other	RFC 1483 PPPoE	LLC	0	35
Canada	Telus	RFC 1483 PPPoE	LLC	0	35
Canada	default-other	RFC 1483 Bridged	LLC	0	35
Chile	Telefonica	RFC 1483 PPPoE	LLC	8	32
Chile	Entel	RFC 1483 PPPoE	LLC	8	35
China	中国网通 China NetCom (Beijing)	RFC 1483 PPPoE	LLC	0	35
China	中国电信 China Telecom (GuangZhou_1)	RFC 1483 PPPoE	LLC	8	32
China	中国电信 China Telecom (GuangZhou_2)	RFC 1483 PPPoE	LLC	8	35
China	中国电信 China Telecom (Shanghai_1)	RFC 1483 PPPoE	LLC	8	81
China	中国电信 China Telecom (Shanghai_2)	RFC 1483 PPPoE	LLC	8	35
China	中国电信 China Telecom (Shanghai_3)	RFC 1483 PPPoE	LLC	0	81
China	中国电信 China Telecom (ShenZhen_1)	RFC 1483 PPPoE	LLC	8	35
China	中国电信 China Telecom (ShenZhen_2)	RFC 1483 PPPoE	LLC	0	100
China	default-other	RFC 1483 PPPoE	LLC	8	35
Croatia	H Telecom	RFC 1483 PPPoE	LLC	1	32
Croatia	default-other	RFC 1483 PPPoE	LLC	1	32
Czech Republic	Cesky Telecom	RFC 1483 PPPoE	LLC	8	48
Czech Republic	Telefonica O2	RFC 1483 PPPoE	LLC	8	48
Czech Republic	default-other	RFC 1483 PPPoE	LLC	8	48
Denmark	Arrownet	RFC 1483 Bridged	LLC	0	35
Denmark	ComX	RFC 1483 Bridged	LLC	0	35
Denmark	Cybercity	RFC 2364 PPPoA	VC	0	35
Denmark	Dansk Kabel TV	RFC 1483 Bridged	LLC	0	35
Denmark	Foroya	RFC 2364 PPPoA	LLC	1	47
Denmark	Fullrate	RFC 2364 PPPoA	VC	0	101
Denmark	Galnet	RFC 1483 Bridged	LLC	0	35
Denmark	Get2Net	RFC 1483 Bridged	LLC	0	35
Denmark	Stofa Net	RFC 1483 Bridged	LLC	0	35
Denmark	TDC	RFC 1483 Bridged	LLC	0	101
Denmark	TDC-Privat	RFC 1483 Bridged	LLC	0	35
Denmark	TDC-erhverv	RFC 1483 Bridged	LLC	0	35
Denmark	Tele2 (PPPoE)	RFC 1483 PPPoE	LLC	0	35
Denmark	Tele2 (Dynamic)	RFC 1483 Bridged	LLC	0	35
Denmark	Telelet	RFC 1483 Bridged	LLC	0	35
Denmark	Tiscali(World Online)	RFC 2364 PPPoA	VC	0	35
Denmark	default-other	RFC 2364 PPPoA	VC	0	35
Edypt	EgyNet	RFC 2364 PPPoA	VC	8	35

Country	ISPs	Encapsulation	Multiplexing	VPI	VCI
Edypt	Internet Egypt	RFC 2364 PPPoA	VC	8	35
Edypt	LINKdotNET	RFC 2364 PPPoA	VC	0	35
Edypt	MenaNet	RFC 2364 PPPoA	VC	0	35
Edypt	Nile Online	RFC 1483 PPPoE	LLC	0	35
Edypt	NOOR	RFC 2364 PPPoA	VC	8	35
Edypt	Raya Telecom	RFC 2364 PPPoA	VC	8	80
Edypt	TE Data	RFC 2364 PPPoA	VC	0	35
Edypt	default-other	RFC 2364 PPPoA	VC	0	35
Finland	Elisa	RFC 1483 Bridged	LLC	0	100
Finland	Oulun Puhelin	RFC 1483 PPPoE	LLC	0	33
Finland	Telia / Sonera	RFC 1483 Bridged	LLC	0	33
Finland	default-other	RFC 1483 Bridged	LLC	0	33
France	9Online	RFC 2364 PPPoA	VC	8	35
France	Alice	RFC 2364 PPPoA	LLC	8	35
France	AOL	RFC 2364 PPPoA	VC	8	35
France	Cegetel	RFC 2364 PPPoA	VC	8	35
France	Claranet	RFC 2364 PPPoA	VC	8	35
France	Club-Internet	RFC 2364 PPPoA	VC	8	35
France	Free	RFC 2364 PPPoA	VC	8	35
France	Free(Degroupe)	RFC 1483 Bridged - Static IP	VC	8	36
France	HRNet	RFC 2364 PPPoA	VC	8	35
France	Nerim	RFC 2364 PPPoA	VC	8	35
France	Neuf	RFC 2364 PPPoA	VC	8	35
France	Nordnet	RFC 2364 PPPoA	VC	8	35
France	Orange	RFC 2364 PPPoA	VC	8	35
France	Tele2	RFC 1483 PPPoE	LLC	8	35
France	Wanadoo eXtense	RFC 1483 PPPoE	LLC	8	35
France	Telecom Italia	RFC 1483 PPPoE	LLC	8	35
France	EasyConnect	RFC 1483 PPPoE	LLC	8	35
France	Tiscali	RFC 2364 PPPoA	VC	8	35
France	default-other	RFC 2364 PPPoA	VC	8	35
Germany	1 & 1	RFC 1483 PPPoE	LLC	1	32
Germany	AOL	RFC 1483 PPPoE	LLC	1	32
Germany	Arcor	RFC 1483 PPPoE	LLC	1	32
Germany	Compuserve	RFC 1483 PPPoE	LLC	1	32
Germany	Congster	RFC 1483 PPPoE	LLC	1	32
Germany	Freenet	RFC 1483 PPPoE	LLC	1	32
Germany	GMX	RFC 1483 PPPoE	LLC	1	32
Germany	Hanse Net - Alice	RFC 1483 PPPoE	LLC	1	32
Germany	HTP (Local ISP)	RFC 1483 PPPoE	LLC	1	32
Germany	Kamp-DSL	RFC 1483 PPPoE	LLC	1	32
Germany	Express-Net	RFC 1483 PPPoE	LLC	1	32
Germany	Lycos	RFC 1483 PPPoE	LLC	1	32
Germany	NetCologne	RFC 1483 PPPoE	LLC	8	35
Germany	Tiscali	RFC 1483 PPPoE	LLC	1	32
Germany	T-Online	RFC 1483 PPPoE	LLC	1	32
Germany	Versatel	RFC 1483 PPPoE	LLC	1	32
Germany	default-other	RFC 1483 PPPoE	LLC	1	32
Germany	NetCologne	RFC 1483 PPPoE	LLC	8	35
Greece	Altec Telecoms	RFC 2364 PPPoA	VC	8	35
Greece	Forthnet	RFC 2364 PPPoA	VC	8	35
Greece	HOL	RFC 2364 PPPoA	VC	8	35
Greece	Lannet	RFC 2364 PPPoA	VC	8	35
Greece	OTEnet	RFC 1483 PPPoE	LLC	8	35
Greece	Teledome	RFC 2364 PPPoA	VC	8	35
Greece	Tellas	RFC 2364 PPPoA	VC	8	35
Greece	Vivodi	RFC 2364 PPPoA	VC	8	35
Greece	default-other	RFC 2364 PPPoA	VC	8	35
Honduras	default-other	RFC 1483 PPPoE	LLC	0	35
Hong Kong	PCCW	RFC 1483 PPPoE	LLC	1	32
Hong Kong	default-other	RFC 1483 PPPoE	LLC	1	32
Hungary	Actel	RFC 1483 PPPoE	LLC	1	32
Hungary	GTS Datanet	RFC 1483 PPPoE	LLC	1	32
Hungary	Invitel (csak internet)	RFC 1483 PPPoE	VC	8	35
Hungary	T-Online	RFC 1483 PPPoE	VC	1	32
Hungary	Matav	RFC 1483 PPPoE	LLC	1	32
Hungary	default-other	RFC 1483 PPPoE	LLC	1	32
Iceland	Islandssimi	RFC 2364 PPPoA	VC	0	35
Iceland	Landssimi	RFC 2364 PPPoA	VC	8	48
Iceland	default-other	RFC 2364 PPPoA	VC	0	35
India	Airtel/Bharti	RFC 1483 PPPoE	LLC	1	32
India	BSNL	RFC 1483 PPPoE	LLC	0	35
India	Data infosys	RFC 1483 PPPoE	LLC	0	35
India	HCL Infinet Ltd.	RFC 1483 PPPoE	LLC	0	35
India	MTNL	RFC 1483 PPPoE	LLC	0	32

Country	ISPs	Encapsulation	Multiplexing	VPI	VCI
India	MTNL	RFC 2364 PPPoA	LLC	0	32
India	Tata Indocom	RFC 1483 PPPoE	LLC	0	32
India	Videsh Sanchar Nigam Ltd. (PPPoE)	RFC 1483 PPPoE	LLC	0	35
India	Videsh Sanchar Nigam Ltd. (PPPoA)	RFC 2364 PPPoA	LLC	0	35
India	default-other	RFC 1483 PPPoE	LLC	0	35
Indonesia	Telkom DSLAM "Alcatel"	RFC 2364 PPPoA	LLC	8	35
Indonesia	Telkom DSLAM "Ericsson"	RFC 1483 PPPoE	LLC	0	35
Indonesia	Telkom DSLAM "Huawei"	RFC 1483 PPPoE	LLC	0	35
Indonesia	Telkom DSLAM "Siemens"	RFC 2364 PPPoA	VC	1	35
Indonesia	default-other	RFC 2364 PPPoA	LLC	0	35
Ireland	Eircom	RFC 1483 PPPoE	LLC	8	35
Ireland	Esat	RFC 1483 PPPoE	LLC	8	35
Ireland	NTL	RFC 1483 PPPoE	LLC	8	35
Ireland	default-other	RFC 1483 PPPoE	LLC	8	35
Italy	Albacom	RFC 2364 PPPoA	VC	8	35
Italy	Aruba	RFC 2364 PPPoA	VC	8	35
Italy	Bisnet	RFC 1483 Routed	LLC	8	35
Italy	MC-Link	RFC 2364 PPPoA	VC	8	35
Italy	Nextra	RFC 2364 PPPoA	VC	8	35
Italy	Telecom Italia	RFC 2364 PPPoA	LLC	8	35
Italy	Telecom Italia PPPoE	RFC 1483 PPPoE	LLC	8	35
Italy	Telvia	RFC 2364 PPPoA	VC	8	35
Italy	Tiscali	RFC 2364 PPPoA	VC	8	35
Italy	Wind	RFC 2364 PPPoA	VC	8	35
Italy	default-other	RFC 2364 PPPoA	VC	8	35
Jordan	Wanadoo	RFC 1483 PPPoE	LLC	8	35
Jordan	default-other	RFC 1483 PPPoE	LLC	8	35
Korea	Hanaro Telecom	RFC 1483 PPPoE	LLC	0	67
Korea	KT	RFC 1483 PPPoE	LLC	0	32
Korea	default-other	RFC 1483 PPPoE	LLC	0	32
Kuwait	Fast Telco	RFC 2364 PPPoA	VC	1	100
Kuwait	Quality Net	RFC 2364 PPPoA	VC	8	35
Kuwait	United Networks	RFC 1483 PPPoE	LLC	0	35
Kuwait	Zajil	RFC 2364 PPPoA	VC	0	35
Kuwait	default-other	RFC 2364 PPPoA	VC	0	35
Lichtenstein	Telecom FL	RFC 1483 PPPoE	LLC	8	35
Lichtenstein	default-other	RFC 1483 PPPoE	LLC	8	35
Macau	CTM	RFC 1483 PPPoE	LLC	1	33
Macau	default-other	RFC 1483 PPPoE	LLC	1	33
Macedonia	Maktel	RFC 1483 PPPoE	LLC	1	32
Macedonia	default-other	RFC 1483 PPPoE	LLC	1	32
Malaysia	Streamyx home	RFC 1483 PPPoE	LLC	0	35
Malaysia	Streamyx Business	RFC 2364 PPPoA	LLC	0	35
Malaysia	Streamyx PutraJaya	RFC 1483 PPPoE	LLC	130	32
Malaysia	TM Net	RFC 1483 PPPoE	LLC	0	35
Malaysia	Jaring	RFC 1483 PPPoE	LLC	0	35
Malaysia	default-other	RFC 1483 PPPoE	LLC	0	35
Mexico	default-other	RFC 1483 PPPoE	LLC	0	35
Morocco	Maroc Telecom	RFC 2364 PPPoA	VC	8	35
Morocco	default-other	RFC 2364 PPPoA	VC	8	35
Netherlands	12Move - KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	12Move - Tiscali	RFC 1483 Bridged	LLC	0	34
Netherlands	bART	RFC 1483 Bridged	LLC	0	35
Netherlands	BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	CistroN	RFC 1483 Bridged	LLC	0	35
Netherlands	Concepts ICT - BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	Concepts ICT - KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	Concepts ICT - Versatel	RFC 1483 Bridged	LLC	0	32
Netherlands	Dataweb	RFC 1483 Bridged	LLC	0	32
Netherlands	Demon - BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	Demon - KPN	RFC 1483 Bridged	LLC	0	34
Netherlands	Demon - Versatel	RFC 1483 Bridged	LLC	0	32
Netherlands	Euronet	RFC 2364 PPPoA	VC	8	48
Netherlands	Eweka	RFC 1483 Bridged	LLC	0	35
Netherlands	Fiberworld - BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	Fiberworld - KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	Freeler	RFC 2364 PPPoA	VC	8	48
Netherlands	HCC-Net	RFC 2364 PPPoA	VC	8	48
Netherlands	Hetnet	RFC 2364 PPPoA	VC	8	48
Netherlands	IAE	RFC 1483 Bridged	LLC	0	35
Netherlands	InterNLnet - BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	InterNLnet - KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	KPN	RFC 2364 PPPoA	VC	2	32
Netherlands	Ladot	RFC 1483 Bridged	LLC	0	35

Country	ISPs	Encapsulation	Multiplexing	VPI	VCI
Netherlands	Orange	RFC 1483 Bridged	LLC	8	35
Netherlands	Planet	RFC 2364 PPPoA	VC	8	48
Netherlands	Publish Net	RFC 1483 Bridged	LLC	0	35
Netherlands	Quicknet	RFC 1483 Bridged	LLC	0	34
Netherlands	Scarlet - BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	Scarlet - KPN	RFC 2364 PPPoA	VC	8	38
Netherlands	Scarlet - Tiscali	RFC 1483 Bridged	LLC	0	34
Netherlands	Solcon - KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	Solcon - tiscali	RFC 1483 Bridged	LLC	0	34
Netherlands	Solcon - Versatel	RFC 1483 Bridged	LLC	0	32
Netherlands	Solcon BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	Speeding - BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	Speeding - KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	Speeding - Tiscali	RFC 1483 Bridged	LLC	0	34
Netherlands	SpeedXS	RFC 1483 Bridged	LLC	0	35
Netherlands	Tele2 - BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	Tele2 - KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	Tele2 - Versatel	RFC 1483 Bridged	LLC	0	32
Netherlands	Telebyte - BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	Telebyte - Tiscali	RFC 1483 Bridged	LLC	0	34
Netherlands	Tiscali	RFC 1483 Bridged	LLC	0	34
Netherlands	Trido Internet - BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	Trido Internet - KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	TweakDSL	RFC 1483 Bridged	LLC	0	35
Netherlands	Unet - BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	Unet - KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	Versatel	RFC 2364 PPPoA	VC	0	32
Netherlands	Wanadoo - KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	Wanadoo - Wanadoo	RFC 1483 Bridged	LLC	8	35
Netherlands	Xenosite	RFC 1483 Bridged	LLC	0	35
Netherlands	XS4all - BBnet	RFC 1483 Bridged	LLC	0	35
Netherlands	XS4all - KPN	RFC 2364 PPPoA	VC	8	48
Netherlands	XS4all - KPN	RFC 2364 PPPoA	VC	2	32
Netherlands	default-other	RFC 2364 PPPoA	VC	8	48
New Zealand	default-other	RFC 2364 PPPoA	VC	0	100
Norway	Telenor	RFC 1483 Bridged	LLC	8	35
Norway	Nexgentel	RFC 1483 PPPoE	LLC	1	32
Norway	default-other	RFC 1483 Bridged	LLC	8	35
Oman	Oman Tel	RFC 1483 PPPoE	LLC	0	35
Oman	default-other	RFC 1483 PPPoE	LLC	0	35
Pakistan	Paknet	RFC 1483 PPPoE	LLC	0	35
Pakistan	default-other	RFC 1483 PPPoE	LLC	0	35
Panama	default-other	RFC 1483 PPPoE	LLC	0	35
Paraguay	TIGO	RFC 1483 PPPoE	LLC	0	35
Paraguay	TIGO	RFC 1483 PPPoE	LLC	0	35
Paraguay	default-other	RFC 1483 PPPoE	LLC	0	35
Philippines	PLDT myDSL MetroManila	RFC 1483 PPPoE	LLC	0	100
Philippines	default-other	RFC 1483 PPPoE	LLC	0	100
Poland	Dialnet DSL	RFC 1483 Bridged	LLC	1	32
Poland	Multimo	RFC 1483 PPPoE	LLC	0	35
Poland	Netia Net24	RFC 1483 PPPoE	LLC	8	35
Poland	Tele2	RFC 1483 PPPoE	LLC	0	35
Poland	TPSA Neostrada	RFC 2364 PPPoA	VC	0	35
Poland	default-other	RFC 2364 PPPoA	VC	0	35
Portugal	AR Telecom	RFC 1483 PPPoE	LLC	0	35
Portugal	Clix	RFC 1483 PPPoE	LLC	0	35
Portugal	Oniduo	RFC 1483 PPPoE	LLC	0	35
Portugal	Oninet	RFC 1483 PPPoE	LLC	0	35
Portugal	Portugal Telecom	RFC 1483 PPPoE	LLC	0	35
Portugal	Sapo	RFC 1483 PPPoE	LLC	0	35
Portugal	Telepac	RFC 1483 PPPoE	LLC	0	35
Portugal	VIA	RFC 1483 PPPoE	LLC	0	35
Portugal	default-other	RFC 1483 PPPoE	LLC	0	35
Qatat	Qtel	RFC 2364 PPPoA	VC	8	35
Qatat	default-other	RFC 2364 PPPoA	VC	8	35
Romania	Romtelecom	RFC 1483 PPPoE	VC	0	35
Romania	default-other	RFC 2364 PPPoA	VC	8	35
Russia	Combellga	RFC 2364 PPPoA	VC	8	63
Russia	Domolink CentrTelekom	RFC 1483 PPPoE	LLC	0	35
Russia	Jdsl Volgatelekom	RFC 1483 PPPoE	LLC	1	100
Russia	Stream	RFC 1483 PPPoE	LLC	1	50
Russia	default-other	RFC 1483 PPPoE	LLC	1	50
Saudi Arabia	STC	RFC 1483 PPPoE	LLC	0	35
Saudi Arabia	default-other	RFC 1483 PPPoE	LLC	0	35
Singapore	Pacific Internet	RFC 1483 PPPoE	LLC	0	100

Country	ISPs	Encapsulation	Multiplexing	VPI	VCI
Singapore	Singnet	RFC 1483 PPPoE	LLC	0	100
Singapore	LGA	RFC 1483 PPPoE	LLC	0	100
Singapore	default-other	RFC 1483 PPPoE	LLC	0	100
Slovakia	Slovac	RFC 1483 PPPoE	LLC	1	32
Slovakia	Slovacnet	RFC 1483 PPPoE	LLC	1	32
Slovakia	T-COM SK	RFC 1483 PPPoE	LLC	1	32
Slovakia	default-other	RFC 1483 PPPoE	LLC	1	32
South Africa	Telcom SA	RFC 1483 PPPoE	LLC	8	35
South Africa	default-other	RFC 1483 PPPoE	LLC	8	35
Spain	Albura	RFC 2364 PPPoA	VC	1	32
Spain	Arrakis	RFC 2364 PPPoA	VC	0	35
Spain	Arsys	RFC 2364 PPPoA	VC	1	33
Spain	AUNA	RFC 2364 PPPoA	VC	8	35
Spain	Colt Telecom	RFC 2364 PPPoA	VC	0	35
Spain	Comunitel	RFC 2364 PPPoA	VC	0	33
Spain	ERES MAS	RFC 2364 PPPoA	LLC	8	35
Spain	Jazztel	RFC 2364 PPPoA	LLC	8	35
Spain	Jazztel 20Megas	RFC 1483 PPPoE	LLC	8	35
Spain	Ola Internet	RFC 2364 PPPoA	VC	0	35
Spain	Orange	RFC 1483 PPPoE	LLC	8	35
Spain	Retevision	RFC 2364 PPPoA	VC	8	35
Spain	Tele2	RFC 2364 PPPoA	VC	8	35
Spain	Telefonia IP Dinamica	RFC 1483 PPPoE	LLC	8	32
Spain	Telefonica IP Estatica	RFC 1483 Routed	LLC	8	32
Spain	Telefonia IP Fija	IPoA	LLC	8	32
Spain	Telepac	RFC 1483 PPPoE	LLC	0	35
Spain	Terra	RFC 1483 Routed	LLC	8	32
Spain	Terra IP Dinamica	RFC 1483 PPPoE	LLC	8	32
Spain	Terra IP Fija	IPoA	LLC	8	32
Spain	Ticali	RFC 2364 PPPoA	VC	1	32
Spain	Uni2	RFC 2364 PPPoA	VC	1	33
Spain	Wanadoo Spain	RFC 1483 Routed	LLC	8	32
Spain	Wanadoo IP Dinamica	RFC 2364 PPPoA	VC	8	35
Spain	Wanadoo IP Estatica	RFC 1483 Routed	LLC	8	32
Spain	Ya.com	RFC 1483 PPPoE	LLC	8	32
Spain	Ya.com IP Dinamica	RFC 1483 PPPoE	LLC	8	32
Spain	Ya.com IP Estatica	RFC 1483 Routed	LLC	8	32
Spain	YA.com IP Fija	IPoA	LLC	8	32
Spain	default-other	RFC 2364 PPPoA	VC	8	35
Sweden	BBB / Bostream (PPPoE)	RFC 1483 PPPoE	LLC	8	35
Sweden	BBB / Bostream (Dynamic)	RFC 1483 Bridged	LLC	8	35
Sweden	Bredbandsbolaget(PPPoE)	RFC 1483 PPPoE	LLC	8	35
Sweden	Bredbandsbolaget(Static IP)	RFC 1483 Bridged - Static IP	LLC	8	35
Sweden	Bredband2	RFC 1483 Bridged	LLC	8	35
Sweden	Chello	RFC 1483 Bridged	LLC	8	35
Sweden	Comhem	RFC 1483 Bridged	LLC	8	35
Sweden	GlocalNet	RFC 1483 PPPoE	LLC	8	35
Sweden	Glocalnet(PPPoE)	RFC 1483 PPPoE	LLC	8	35
Sweden	Glocalnet(Static IP)	RFC 1483 Bridged - Static IP	LLC	8	35
Sweden	NetAtOnce	RFC 1483 Bridged	LLC	8	35
Sweden	No Com	RFC 1483 Bridged - Static IP	LLC	8	35
Sweden	Ownit	RFC 1483 Bridged	LLC	8	35
Sweden	Skanova	RFC 1483 Bridged	LLC	8	35
Sweden	Sky Com	RFC 1483 Bridged - Static IP	LLC	8	35
Sweden	Spray	RFC 1483 PPPoE	LLC	8	35
Sweden	Tele 2	RFC 1483 PPPoE	LLC	8	35
Sweden	Telia	RFC 1483 Bridged	LLC	8	35
Sweden	Universal	RFC 1483 Bridged - Static IP	LLC	8	35
Sweden	Vattenfalll	RFC 1483 Bridged - Static IP	LLC	8	35
Sweden	default-other	RFC 1483 PPPoE	LLC	8	35
Swizerland	Bluewin	RFC 2364 PPPoA	LLC	8	35
Swizerland	CyberNet	RFC 1483 PPPoE	LLC	8	35
Switzerland	Econophone	RFC 1483 PPPoE	LLC	8	35
Swizerland	Green	RFC 1483 PPPoE	LLC	8	35
Switzerland	VTX	RFC 1483 PPPoE	LLC	8	35
Swizerland	NetStream	RFC 1483 PPPoE	LLC	8	35
Swizerland	Solnet	RFC 2364 PPPoA	LLC	8	35
Swizerland	Sunrise	RFC 1483 PPPoE	LLC	8	35
Swizerland	Swisscom	RFC 1483 PPPoE	LLC	8	35
Swizerland	Tele 2	RFC 1483 PPPoE	VC	8	35
Swizerland	TIC	RFC 2364 PPPoA	LLC	8	35
Swizerland	Tiscali	RFC 1483 PPPoE	LLC	8	35
Swizerland	default-other	RFC 1483 PPPoE	LLC	8	35
Taiwan	CHT	RFC 1483 PPPoE	LLC	0	33
Taiwan	default-other	RFC 1483 PPPoE	LLC	0	33

Country	ISPs	Encapsulation	Multiplexing	VPI	VCI
Thailand	ADC	RFC 1483 PPPoE	LLC	0	35
Thailand	Buddy Broadband	RFC 1483 PPPoE	LLC	0	35
Thailand	CAT Telecom	RFC 1483 PPPoE	LLC	0	35
Thailand	CS-Loxinfo	RFC 1483 PPPoE	LLC	0	35
Thailand	Ji-net	RFC 1483 PPPoE	LLC	0	66
Thailand	KSC	RFC 1483 PPPoE	LLC	0	66
Thailand	Q-net	RFC 1483 PPPoE	LLC	0	40
Thailand	Samart	RFC 1483 PPPoE	LLC	0	35
Thailand	TOT	RFC 1483 PPPoE	LLC	1	32
Thailand	TRUE Internet	RFC 1483 PPPoE	LLC	0	100
Thailand	TT&T	RFC 1483 PPPoE	LLC	0	33
Thailand	TT&T - Hinet	RFC 1483 PPPoE	LLC	0	66
Thailand	UBT	RFC 1483 PPPoE	LLC	0	100
Thailand	UCOM	RFC 1483 PPPoE	LLC	0	100
Thailand	default-other	RFC 1483 PPPoE	LLC	0	35
Turkey	Smile (PPPoA)	RFC 2364 PPPoA	VC	8	35
Turkey	Smile (PPPoE)	RFC 1483 PPPoE	LLC	8	35
Turkey	Superonline (RFC 2364 PPPoA)	RFC 2364 PPPoA	VC	8	35
Turkey	Superonline (RFC 1483 PPPoE)	RFC 1483 PPPoE	LLC	8	35
Turkey	Ttnet (PPPoA)	RFC 2364 PPPoA	VC	8	35
Turkey	Ttnet (PPPoE)	RFC 1483 PPPoE	LLC	8	35
Turkey	Turk Telekom (RFC 2364 PPPoA)	RFC 2364 PPPoA	VC	8	35
Turkey	Turk Telekom (RFC 1483 PPPoE)	RFC 1483 PPPoE	LLC	8	35
Turkey	default-other	RFC 1483 PPPoE	LLC	8	35
United Arab Emirates	Etisalat RFC 2364 PPPoA for Business	RFC 2364 PPPoA	VC	0	50
United Arab Emirates	Etisalat RFC 2364 PPPoA for All Shamil	RFC 2364 PPPoA	LLC	0	50
United Arab Emirates	default-other	RFC 2364 PPPoA	VC	0	50
United Kingdom	AOL	RFC 2364 PPPoA	VC	0	38
United Kingdom	Bulldog	RFC 2364 PPPoA	VC	0	38
United Kingdom	BT Broadband	RFC 2364 PPPoA	VC	0	38
United Kingdom	Demon Internet	RFC 2364 PPPoA	VC	0	38
United Kingdom	Easynet	RFC 2364 PPPoA	VC	0	38
United Kingdom	Carphone Warehouse	RFC 2364 PPPoA	VC	0	38
United Kingdom	Nildram	RFC 2364 PPPoA	VC	0	38
United Kingdom	Tiscali	RFC 2364 PPPoA	VC	0	38
United Kingdom	Orange	RFC 2364 PPPoA	VC	0	38
United Kingdom	Pipex	RFC 2364 PPPoA	VC	0	38
United Kingdom	Sky	RFC 2364 PPPoA	VC	0	38
United Kingdom	Tesco.Net	RFC 2364 PPPoA	VC	0	38
United Kingdom	UK Online	RFC 2364 PPPoA	VC	0	38
United Kingdom	OneTel	RFC 2364 PPPoA	VC	0	38
United Kingdom	Virgin ADSL	RFC 2364 PPPoA	VC	8	35
United Kingdom	Virgin.Net	RFC 2364 PPPoA	VC	0	38
United Kingdom	Wanadoo	RFC 2364 PPPoA	VC	0	38
United Kingdom	Zen Internet	RFC 2364 PPPoA	VC	0	38
United Kingdom	default-other	RFC 2364 PPPoA	VC	0	38
Uruguay	ANTEL	RFC 1483 PPPoE	LLC	0	35
Uruguay	default-other	RFC 1483 PPPoE	LLC	0	35
US	AT&T	RFC 1483 PPPoE	LLC	0	35
US	AOL	RFC 1483 Bridged	LLC	0	35
US	BellSouth	RFC 1483 PPPoE	LLC	0	35
US	Covad	RFC 1483 PPPoE	LLC	0	35
US	EathLink	RFC 1483 PPPoE	LLC	0	35
US	Qwest	RFC 1483 Bridged	LLC	0	32
US	SBC	RFC 1483 PPPoE	LLC	0	35
US	Sprint (PPPoA)	RFC 1483 PPPoA	LLC	0	35
US	Sprint (PPPoE)	RFC 1483 PPPoE	LLC	8	35
US	URON	RFC 1483 Bridged	LLC	0	35
US	Verizon (PPPoE)	RFC 1483 PPPoE	LLC	0	35
US	Verizon (Dynamic)	RFC 1483 Bridged	LLC	0	35
US	default-other	RFC 1483 PPPoE	LLC	0	35
Venezuela	CANTV Servicios	RFC 1483 PPPoE	LLC	0	35
Venezuela	default-other	RFC 1483 PPPoE	LLC	0	35
Vietnam	FPT	RFC 1483 PPPoE	LLC	0	33
Vietnam	NATNAM	RFC 1483 PPPoE	LLC	0	33
Vietnam	SPT	RFC 1483 PPPoE	LLC	0	33
Vietnam	Viettel	RFC 1483 PPPoE	LLC	8	35
Vietnam	VNN (in Hanoi)	RFC 1483 PPPoE	LLC	0	35
Vietnam	VET TEL	RFC 1483 PPPoE	LLC	8	35
Vietnam	VNN (in HCM)	RFC 1483 PPPoE	LLC	8	38
Vietnam	SAIGON NET	RFC 1483 PPPoE	LLC	8	38
Vietnam	default-other	RFC 1483 PPPoE	LLC	0	35