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User Manual for Professional Firmware WZR-HP-G300NH / WZR-HP-G300NH2

Nfiniti High Power Wireless N Router & Access Point



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1. Introduction

1.1. Welcome

This AirStation wireless router comes with two different firmware packages. You may use either the dd-wrt-based Professional firmware or the simple User-friendly firmware. By default, the Professional firmware is preinstalled for US/EU products, and the User-friendly firmware is preinstalled for Asia-Pacific products.

1.2. Device Configuration

From the factory, the router is configured as a network bridge. That means that all network interfaces can communicate with each other using this default bridge. The router is ready to use with a few simple adjustments.

1.2.1. Factory Settings

Because all interfaces are attached to the bridge by default, they all have the same IP configuration:

IP address	192.168.11.1
Subnet Mask	255.255.255.0
DHCP server	enabled
DHCP-Range	192.168.11.2 - 66

The Wireless LAN interface is activated by default with an SSID generated from the device's MAC address. For security, unused interfaces should be disabled. Wireless LAN interfaces that are not disabled should be configured with secure encryption (WPA2 or WPA is recommended) and a secure password.

1.2.2. Initial Operation

Connect your computer to the router with an Ethernet LAN cable and power the router on. It will take about 30 seconds to boot. You can then access it via telnet or web browser at the IP address 192.168.11.1. The DHCP server in the router is enabled by default. If your PC's Ethernet is configured for DHCP it should receive an IP address from the router's DHCP server. If not, please configure the Ethernet interface with an address from the 192.168.11.x subnet.

Because all relevant settings can be made using the web interface, this manual refers to configuration via the web GUI only.

2. Configuration via the Web Interface

The router contains an integrated web server that provides an easy to use web interface. It allows configuration, administration, and status checking in a simple but effective way.

When accessing the web GUI for the first time, change the default username and password. By default, the router's status page can be accessed without authentication, but this can be disabled.

The web interface was successfully tested on the following browsers:

- Internet Explorer 7.x and newer versions
- Firefox 2.x and newer versions
- Safari 2.x and newer versions

2.1. Preparation

Connect your PC to the router and power the router on as described in 1.2.2. After the router has loaded its operating system, you can communicate with it via your LAN network interface.

The easiest way to test if your PC can communicate with the router is to ping 192.168.11.1.

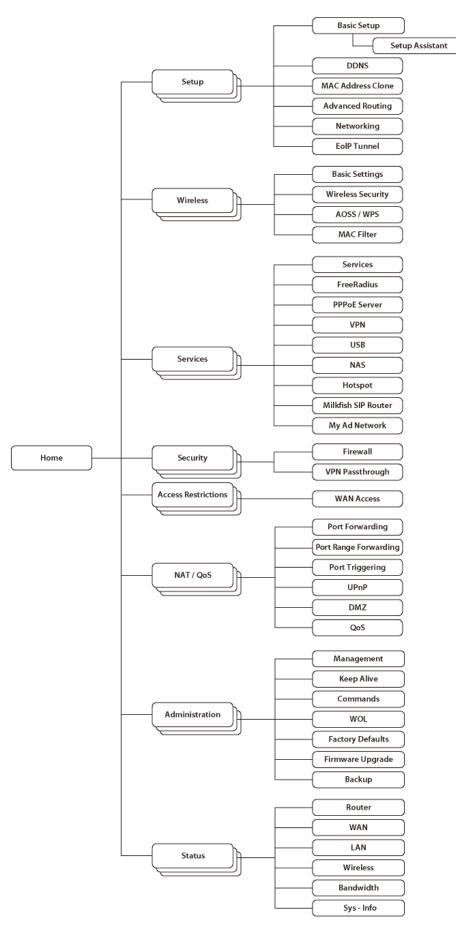
2.2. Web Interface Access

Open a browser window. Enter the address http://192.168.11.1 into the address bar. The status page will be displayed.

When you click on a tab, the login window will pop up. Enter the username and password you previously set.

Authentifizier	ung erforderlich	×
?	http://192.168.1.1 verlangt einen Benutzernamen und ein Passwort. Ausgabe der Website: "DD-WRT"	
Benutzername:		
Passwort:		
	OK Abbrechen	

2.3. Web Interface Structure



2.3.1. Setup

2.3.1.1. Basic Configuration

Setup Assistant

The setup assistant provides a step-by-step interface for basic router configuration. This configures most common settings automatically.

WAN Setup

Here you'll find the most important settings to configure your internet access and WAN port. DHCP is enabled by default, but you can also use PPPOE, PPTP, L2TP, static IP, or HeartBeat Signal. If you don't use a password to log in to your ISP, you may need to enter "0000" for the password. Also, for some ISPs you should not enter the service name, as it will prevent establishing the connection. If you experience connection problems, then leave the service name empty.

WAN Connection Type	Description
Disabled	The WAN port is disabled.
Static IP	A static IP address will be used - enter the IP address, subnet mask, gateway, and server manually.
Automatic Configuration - DHCP	The router obtains its WAN-side IP address from a DHCP server.
PPPOE	Configure as PPPoE-client. For VDSL, check the "VDSL-Tagging" box.
PPTP	Establishes connection via PPTP.
L2TP	Establishes connection via L2TP.
HeartBeat Signal	If you use a HeartBeat connection, consult your ISP for setup information. HeartBeat Signal is used only in Australia.

Network Setup

Network Setup configures the router's basic settings to match the local network. By default these settings are valid for all network ports except the WAN because they are all attached to the default bridge. If ports are disassociated from the bridge they will have different settings.

2.3.1.2. Dynamic DNS (DynDNS or DDNS)

Dynamic DNS allows the assignment of a DNS record to a dynamically assigned WAN-side IP address. A DynDNS client updates DNS records when your WAN-side IP address changes.

The router's firmware offers presets for the most common DynDNS services plus an option to define individual settings.

DynDNS Service	Description
Disabled	Default, no DynDNS
DynDNS.org	
freedns.afraid.org	
ZoneEdit.com	
No-IP.com	
3322.org	
easyDNS.com	
TZO.com	
DynSIP.org	
Custom	Individual DynDNS service configuration

2.3.1.3. MAC Address Cloning

MAC address cloning lets you assign a different MAC address to the router than the one encoded in the hardware.

2.3.1.4. Advanced Routing

Operating Mode

The default operating mode of the router is *Gateway*. Other routing protocols are available.

Modus	Description
Gateway	Gateway (default)
BGP	BGP Routing
Rip2 Router	Rip2 Routing
Router	Router

Static Routing

The Static Routing section lets you add static routes. The input parameters are equivalent to the parameters of the Linux command "route".

2.3.1.5. Networking

The Networking section allows detailed network configuration.

VLAN Tagging Use this option to configure VLAN tagging.

Bridging

By default, one bridge (br0) is defined and active. In this section you can define additional bridges and change the interface assignment according to your requirements. Bonding Bonding offers the ability to "bond" interfaces together. Bonding can be used to enhance throughput or provide failover capabilities.

Port Setup The port setup section allows further configuration of the routers network interfaces. Network interfaces can be separated from the bridge and it is possible to assign separate network settings for each interface. If an interface is separated from the bridge, add routing rules to allow communication between the interface and the bridge or other unbridged interfaces.

DHCPD

Besides the default DHCP server, you can define additional DHCP servers.

2.3.1.6. EoIP Tunnel

EoIP (Ethernet over IP) tunnels can transport Ethernet data packages via a tunnel over existing IP connections. You can define up to 10 tunnels that can also be bonded.

2.3.2. Wireless

2.3.2.1. Basic Settings

Each Wireless LAN interface has its own section in the wireless basic settings screen. The wireless interfaces are labelled ath0 and ath0.1 - ath0.4 depending on the number of radios installed. To correctly identify the antenna connectors, please compare the MAC addresses printed on the enclosure with the addresses displayed in the web interface.

Wireless Mode This parameter is used to define the operating mode of the Wireless LAN interface. You can select among the following modes:

Modus	Description
AP	WLAN Access Point mode (default)
Client	WLAN Client mode
Client-Bridge	Client-Bridge mode allows connecting to another Wireless LAN access point and establishing a network bridge with that access point
Adhoc	Adhoc operating mode, required for building mesh networks
WDS Station	WDS Station is the client in a WDS-AP <-> WDS station bridge. This is a special wireless networking mode that offers better flexibility and security than the classical MAC address based WDS.
WDS AP	WDS AP is the AP side for WDS AP <-> WDS Station. A WDS AP allows connections from WDS Stations and Wireless Clients.

Wireless Network Mode Defines the IEEE802.11 networking mode.

Mode	Description
Disabled	Interface is disabled
Mixed	2.4 GHz 802.11b / 802.11g / 802.11n mixed mode
B-Only	2.4 GHz 802.11b mode (802.11g and 802.11n devices cannot connect)
G-Only	2.4 GHz 802.11g mode (802.11b, and 802.11n devices cannot connect)
BG-Mixed	2.4 GHz 802.11b & 802.11g mixed mode (802.11n devices cannot connect)
NG-Mixed	2.4 GHz 802.11n & 802.11g mixed mode (802.11b devices cannot connect)
N-Only (2.4 GHz)	2.4 GHZ 802.11n mode (802.11a, 802.11b, and 802.11g devices cannot connect)

Channel Width

Some wireless network modes support wireless channel widths besides the standard 20 MHz. 802.11g & 802.11n offer the option to use 40 MHz channels for enhanced throughput. Both the AP and the client must support 40 MHz channels to use them.

Wireless Channel (AP only)

Set the desired wireless channel, or let the router choose a free channel automatically. If the router is in classic WDS (MAC address based) mode, then the wireless channel must be selected manually.

Wireless Network Name (SSID)

The name of the wireless network the radio transmits or connects to (depending on the wireless mode)

Wireless SSID Broadcast (AP only)

The name of the wireless network (SSID) may be broadcasted or not. Not broadcasting does not prevent the network from being detected by a wireless network sniffer; it just hides the name.

Advanced Settings

Check this box to get access to advanced wireless settings. These advanced parameters should be only modified by experienced users.

2.3.2.2. Wireless Security

Because wireless data packets can easily be sniffed, wireless connections require a greater level of security to ensure that data cannot be read by unauthorized users.

Security Mode

Mode	Description
Disabled	No encryption set (not recommended!)

WPA Personal	WPA encryption with a passphrase (text password)
WPA Enterprise (AP	WPA encryption with Radius Client
only)	authentication according to 802.1x
WPA2 Personal	WPA2 encryption with a passphrase (text password)
WPA2 Enterprise (AP	WPA2 encryption with Radius Client
only)	authentication according to 802.1x
WPA2 Personal Mixed	WPA & WPA2 encryption in WPA/WPA2 mixed mode with a passphrase (text password)
WPA2 Enterprise Mixed (AP only)	WPA & WPA2 encryption in WPA/WPA2 mixed with Radius Client authentication according to 802.1x
RADIUS	
WEP	WEP 64 Bit / 128 Bit encryption (insecure; not recommended!)
802.1x (Client only)	Client side mode to connect to AP's working with WPA Enterprise Modes via RADIUS authentication

When using WEP encryption (not recommended), the user can choose between 64 bit and 128 bit keys. Keys can be entered as passphrases that are used to generate the Hex keys. Theoretically 128 bit keys offer a higher level of security but because of design flaws, that's not the case in actual use.

Key length	Description
64 Bit (10 Hexadecimal characters)	Standard
128 Bit (26 Hexadecimal characters)	

With WPA or WPA2 encryption, there are several encryption algorithms to choose from. AES is more secure but TKIP is more widely supported. There is also a TKIP + AES setting, but that does not offer more security than TKIP.

Algorithm	Description
TKIP	TKIP encryption, supported by most clients devices
AES	AES encryption offers a better level of security but might not be supported by a number of client devices and requires less CPU processing power.
TKIP + AES	Mixed mode - offers best compatibility but doesn't work in all environments

If RADIUS security is used, the MAC address format has to be set accordingly.

RADIUS MAC format options	Description
aabbcc-ddeeff	Standard
aabbccddeeff	
aa:bb:cc:dd:ee:ff	
aa-bb-cc-dd-ee-ff	

2.3.2.3. AOSS/WPS

AOSS (AirStation One-touch Secure Setup) is Buffalo Technology's system to automatically connect wireless clients to an access point. Just press the button on the AirStation, then press the button for the wireless client (which might be in its software). AOSS will connect the wireless devices automatically. AOSS is recommended if all of your wireless devices support it. AOSS can only be used in AP mode.

The WPS is a standard created by the Wi-Fi Alliance. There are two methods of configuration, PBC and PIN. PBC is similar to AOSS. PIN uses a unique PIN code to register the wireless client to the AirStation. If your wireless devices support it, WPS makes configuration simple and automatic.

Enable AOSS Enables the AOSS Service. When disabled, AOSS cannot be used.

Start AOSS Negotiation To initiate AOSS, either click the AOSS button in the GUI or hold down the AOSS button on the front of the router for 3 seconds.

Security Modes You may choose which security modes are offered in the AOSS negotiation process. The use of WEP in general is not recommended due to security concerns.

WPS Button Enables the WPS button. When disabled, WPS button cannot be used.

WPS PIN Enter the PIN code printed on your client device or your client authentication application.

2.3.2.4. MAC Filter

The MAC Filter defines a list of client MAC addresses that are allowed to connect wirelessly. MAC addresses that aren't on the list aren't allowed to connect.

2.3.3. Services

2.3.3.1. Services

The services section allows the configuration of basic service settings. Telnet and SSH can be configured this way. Remote access options are configured in the *Administration* section.

Available DHCP Server Domains	Description
WAN	Standard
LAN / WLAN	

Rflow / MACupd Interface Options	Description
LAN & WLAN	Standard
LAN	
WLAN	

2.3.3.2. FreeRadius

Certain applications (for example, Chillispot hotspot software) benefit from a RADIUS server for management of user credentials and settings.

Server Certificate This section contains the parameters to generate the RADIUS server certificate. The certificate needs to be generated before clients can be configured to connect to the RADIUS server.

Certificate Status Displays the server certificate creation status.

Settings Choose the port that the RADIUS server uses for client communication. The default port is 1812.

Clients This section is used to define RADIUS clients (required for HotSpot usage).

Users Lists the users defined in the RADIUS servers. Allows creation and modification of accounts.

2.3.3.3. PPPoE Server

Some applications require a PPPoE server on the router, which can be configured here. The PPPoE server is disabled by default.

2.3.3.4. VPN

The router can also be configured as VPN server or VPN client.

PPTP

When defining the PPTP server's IP range, avoid overlap with the range of IP addresses handed out by DHCP if DHCP is enabled. The IP range is defined using the following syntax:

xxx.xxx.<start-ip>-<end-ip>

for example

192.168.1.20-30

Enter client login data follows:

<username> * <password> *

for example

testuser * test *

The encryption options can be set as follows

PPTP server type	Settings	
DD-WRT Router	mppe required (Standard)	
Windows PPTP Server	<pre>mppe required,no40,no56,stateless or mppe required,no40,no56,stateful</pre>	

OpenVPN

OpenVPN is a powerful and flexible VPN solution. OpenVPN security is based on certificates that cannot created on the router itself. Please refer to OpenVPN's online documentation for instructions on creating certificates and configuring OpenVPN.

2.3.3.5. USB

The router's USB port can be used for several purposes. Here the basic and advanced USB parameters are defined. Besides enabling USB and defining the USB hardware standard to use you can also define if printer and storage support for USB shall be enabled.

2.3.3.6. NAS

If USB hard drive support is enabled, you can start the integrated ProFTPd server to share data on an attached hard disk via FTP.

The User/Password data are entered as follows:

<username> * <password> *

for example

testuser * test *

Be careful enabling anonymous login. If anonymous login is enabled, everyone accessing your network has permission to read and write data.

2.3.3.7. Hotspot

Most hotspot software requires a server to store user settings and login information. Please note that Sputnik is a commercial hotspot service that requires an agreement with Sputnik for usage.

2.3.3.8. Milkfish SIP Router

This package is an implementation of the Milkfish SIP router.

2.3.3.9. My Ad Network

Allows the creation of an AnchorFree Hotspot that can be used to create revenue via AnchorFree.

2.3.4. Security

2.3.4.1. Firewall

Aside from enabling and disabling the firewall, you can also set additional filters, block certain network requests for the WAN interface, and manage logs.

2.3.4.2. VPN Pass-through

VPN settings effect how the firewall handles IPSec, PPTP, and L2TP connections. By default, pass-through is enabled. Please note that disabling pass-through will usually prevent you from establishing VPN connections from computers located in your local network to VPN servers on the internet.

2.3.5. Access Restrictions

2.3.5.1. WAN Access

The WAN access settings allow the definition of time and service related access rules.

2.3.6. NAT / QoS

2.3.6.1. Port Forwarding

Port forwarding allows the assigning of WAN ports to specific internal IP addresses and matching ports. Bidirectional external traffic can be forwarded to specific internal devices and computers. Each port forwarding entry defines a source port and a target IP address.

Before adding or removing a port forwarding entry, save all changed settings. Any changes not saved will be lost when a port forwarding entry is added or deleted.

2.3.6.2. Port Range Forwarding

Port range forwarding works similarly to port forwarding. Unlike port forwarding, instead of a single port, a range of ports is forwarded to the same range of ports at the internal target IP address.

2.3.6.3. Port Triggering

Port triggering is a kind of port range forwarding where outgoing traffic on specific ports enables previously defined port forwards for the activating device. This temporarily opens required ports when specific applications are opened on computers on the LAN. This offers a greater level of security than port forwarding or port range forwarding because the ports are only opened when needed.

2.3.6.4. UPnP

UPnP allows UPnP capable applications and devices to open and close required ports automatically as needed. This is simple to use and does not require further configuration steps.

2.3.6.5. DMZ

A DMZ computer is a special computer in the internal network that gets all incoming traffic forwarded. The task of that computer is managing this traffic. When the DMZ feature is activated the internal firewall is activated. This can pose a security issue if not handled with care. Furthermore, several services of the router, that have to be accessible from the WAN side, will not work because the associated traffic is forwarded to the DMZ computer.

2.3.6.6. QoS

QoS (Quality of Service) is a procedure to prioritise network traffic by application. Specific services can be assigned specific bandwidth.

Aside from upstream and downstream bandwidth, you can define settings for specific services and IP and MAC address ranges.

2.3.7. Administration

2.3.7.1. Management

The Management section contains settings for remotely accessing the router and other basic settings that are usually not changed. The settings for the language used in the Web GUI are also located here. You may choose between Chinese (simplified & traditional), Croatian, Dutch, French, German, Hungarian, Italian, Japanese, Latvian, Polish, Portuguese, Romanian, Russian, Slovenian, Spanish, and Swedish. The default setting is English.

Before using Telnet or SSH, activate the associated service(s) in this section.

2.3.7.2. Keep Alive

Keep-Alive lets you configure monitoring options that automatically reboot the router if a service malfunction causes it to fail to respond.

2.3.7.3. Commands

Entering Linux commands is one of the most powerful ways to access the router's functionality. This enables you to access services and configure options that are not accessible via the Web GUI. Using shell commands can lead to unexpected results. Use them with utmost care.

Aside from executing the shell commands directly you can also save custom start up and firewall scripts.

2.3.7.4. WOL

With Wake-on-LAN, you can send special data packets to compatible devices on your LAN, causing them to exit sleep mode.

WOL data packets can be triggered manually or scheduled automatically.

2.3.7.5. Factory Defaults

With this feature you can reset the router's settings to factory defaults. After a reset, the router will restart.

2.3.7.6. Firmware Upgrade

The firmware upgrade option can be used to install a different firmware version. When doing this you can choose if the router's settings will be restored to factory defaults or kept.

2.3.7.7. Backup

You can use this feature to store your current configuration into a backup file, or to restore from a previously stored configuration. This also makes it simple to set up a number of routers with the exact same configuration.

2.3.8. Status

2.3.8.1. Router

The status screen displays information about the router, such as cpu load, memory consumption, and currently active IP connections. Status is updated automatically.

2.3.8.2. WAN

If the WAN interface is enabled, this screen displays WAN settings and throughput statistics.

2.3.8.3. LAN

Here you can find LAN-related information like active clients and DHCP clients.

2.3.8.4. Wireless

The wireless LAN status screen displays the current wireless LAN interface configuration, wireless LAN clients (in AP modes), and access points (in client modes). If there's more than one wireless LAN interface, you can switch between them via the interface pull down menu.

2.3.8.5. Bandwidth

Bandwidth monitoring displays real time diagrams for incoming and outgoing traffic for each network interface.

2.3.8.6. SysInfo

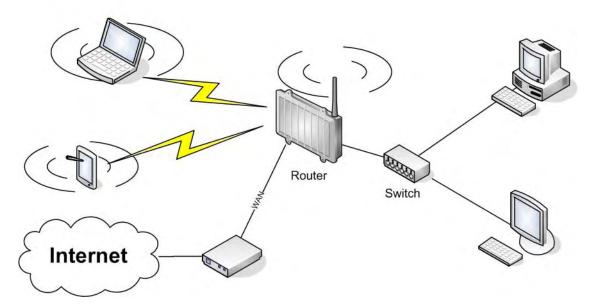
The SysInfo screen combines the most important information of the other status pages. By default, the SysInfo page can be accessed from LAN devices without authentication. That can be changed in the *Management* section of the *Administration* area.

3. Use Cases

The following use cases relate to the most commonly used router configurations. The related router configuration is explained step by step.

3.1. Access Point

Access Point (AP, sometimes also called "Infrastructure Mode") is the mode where the router is also the central wireless hub that connects to the LAN and provides access to wireless devices. These wireless clients of the AP can communicate with each other and with wired devices on the network such as the Internet.



Connect your computer to the router as described in 2.1. and access the web interface according to 2.2.

3.1.1. Access Point with NAT / DHCP

Setup -> Basic Setup

- WAN Setup
 - o In "Connection Type", choose the type of WAN connection you want to use and complete the related settings.
- Network Setup
 - o Enter the desired LAN IP address for the router into "Router IP".
 - o Set "DHCP Type" to "DHCP Server" (this is the default).
 - o "Enable" DHCP Server (this is the default).
 - o Adjust the DHCP address range to match your requirements.
- Time Settings o Choose your time zone.
- Click "Save".

Wireless -> Basic Settings

- Enter your country in "Regulatory Domain"
- In the "Antenna Gain" field, please enter the gain of the antenna on your router. The firmware will adjust the transmit power accordingly to meet regulatory requirements. Please keep in mind that very long cables can dampen the HF signal thus reducing the usable antenna gain.
- Configure "Wireless Mode" to "AP"
- Set your desired wireless mode in "Wireless Network Mode". Please note that mixed modes will lead to reduced performance because of maintaining compatibility.
- Enter a name for your wireless network into "Wireless Network Name (SSID)"
- Click "Save"

Wireless -> Wireless Security

- Choose and configure a security mode. Please note that WEP is insecure and should only be used if no other option is available.
- Click "Apply Settings"

You can now connect the router to the Internet and your local network. After you successfully connect wireless devices, they will then be displayed on the "SysInfo" and "WLAN Status" pages.

3.1.1. Access Point attached to a network / Internet gateway

Setup -> Basic Setup

- WAN Setup
 - o For "Connection Type", choose "Disabled".
- Network Setup
 - o Enter the desired LAN-side IP address for the router into "Router IP".
 - o Set the "DHCP Type" to "DHCP Server" (this is the default).
 - o "Disable" "DHCP Server".
- Time Settings
 - o Choose your time zone.
- Click "Save".

Wireless -> Basic Settings

- Enter your country in "Regulatory Domain"
- In the "Antenna Gain" field, please enter the gain of the antenna on your router. The firmware will adjust the transmit power accordingly to meet regulatory requirements. Please keep in mind that very long cables can dampen the HF signal thus reducing the usable antenna gain.
- Configure "Wireless Mode" to "AP"
- Choose a wireless mode in "Wireless Network Mode". Please note that mixed modes will lead to reduced performance because of maintaining compatibility.

- Enter a name for your wireless network into "Wireless Network Name (SSID)".
- Click "Save".

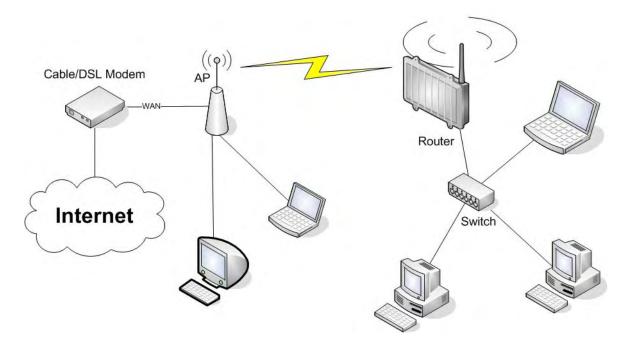
Wireless -> Wireless Security

- Choose and configure your desired security mode. Please note that WEP is insecure and should only be used if no other option is available.
- Click "Apply Settings"

You can now connect the router to the Internet and your local network. If you're running a DHCP server in your LAN, connected wireless devices will get their IP addresses from the server.

3.2. Wireless Client

The router can be also used as a wireless LAN client. This can be useful if you want to connect devices to your wireless LAN that do not have a wireless LAN interface. In this configuration, the wireless LAN interface acts as a wireless client. Attached wired Ethernet devices can also access the WAN through the wireless connection.



Setup -> Basic Setup

- WAN Setup
 - o Set "Connection Type" to "DHCP" to have the AirStation get its IP address from a DHCP server, or to a "Static IP" if no DHCP server is available.
- Network Setup
 - o Enter the desired LAN-side IP address for the router in "Router IP".
 - o Set the "DHCP Type" to "DHCP Server" (this is the default setting).
 - o "Enable" "DHCP Server" (this is the default setting).
 - o Adjust the DHCP address range to match your requirements.

- Time Settings o Choose your time zone.
- Click "Save".

Wireless -> Basic Settings

- Enter your country in "Regulatory Domain"
- In the "Antenna Gain" field, please enter the gain of your AirStation's antenna. The firmware will adjust the transmit power automatically to meet regulatory requirements. Please note that the use of a long extension cable for your antenna will reduce the usable antenna gain.
- Configure "Wireless Mode" to "Client".
- Configure "Wireless Network Mode" to match the capabilities of the access point you want to connect to.
- Enter the network name (SSID) of the AP you want to connect to into "Wireless Network Name (SSID)".
- Click "Save".

Wireless -> Wireless Security

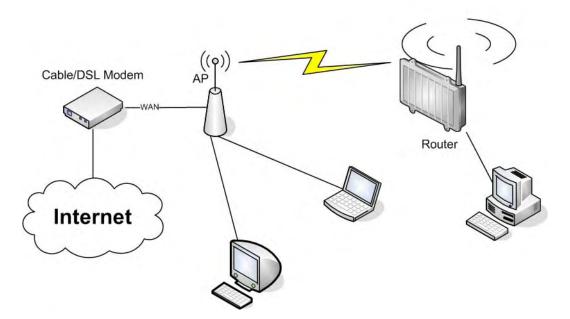
- Configure the security mode to match the security settings of the access point you want to connect to.
- Click "Apply Settings".

After the router reboots, please confirm that it has connected to the access point. If there is a DHCP server available on the access point side, and the router is configured to request an IP address, then it should receive an IP address for its WAN-side interface.

You can now either connect wired clients to the access point or configure another wireless network interface as an access point to grant access to wireless clients.

3.3. Wireless Client Bridge

A wireless client bridge offers the ability to transparently integrate the router's LAN into a different LAN that another access point is connected to. Clients connected to such a router can access devices in both LANs and vice versa. In that configuration the router's WAN interface is disabled.



Setup -> Basic Setup

- WAN Setup
 - o Choose "Disabled" for "Connection Type" (this will be set automatically).
- Network Setup
 - o Enter the desired LAN-side IP address for the router into "Router IP".
 - o "Disable" "DHCP Server".
- Time Settings o Choose your time zone.
- Click "Save".

Wireless -> Basic Settings

- Enter your country in "Regulatory Domain".
- In the "Antenna Gain" field, please enter the gain of your AirStation's antenna. The firmware will adjust the transmit power automatically to meet regulatory requirements. Please note that the use of a long extension cable for your antenna will reduce the usable antenna gain.
- Configure "Wireless Mode" to "Client Bridge".
- Set "Wireless Network Mode" to match the access point you want to connect to.
- Enter the network name (SSID) of the AP you want to connect to.
- Click "Save".

Wireless -> Wireless Security

- Configure security to match the security settings of the access point you want to connect to.
- Click "Apply Settings".

After the router reboots, please confirm that it has connected to the access point. If there is a DHCP server available on the access point

side, a pc in the router's LAN configured to request an address from DHCP should receive an IP address.

3.4. FTP Server

The router can be used as an FTP server when a USB disk (such as a hard disk or flash memory device) is connected to the USB port on the rear of the router.

3.4.1. Examples

Services -> USB

•Make the settings in the USB Support section, then click [Apply Settings].

Core USB Support	💿 Enable 🔘 Disable
USB 1.1 Support (UHCI)	Inable O Disable
USB 1.1 Support (OHCI)	● Enable ○ Disable
USB 2.0 Support	● Enable ○ Disable
USB Printer Support	◯ Enable ④ Disable
USB Storage Support	● Enable ○ Disable
Automatic Drive Mount	● Enable ○ Disable
Run-on-mount Script Name	
Disk Mount Point	/mnt 💌
Disk Info	

Examples:

Core USB Support	Enabled
USB 1.1 Support	Enabled
(UHCI)	
USB 1.1 Support	Enabled
(OHCI)	
USB 2.0 Support	Enabled
USB Storage	Enabled
Support	
Automatic Drive	Enabled
Mount	
Run-on-mount	blank
Script Name	
Disk Mount Point	/mnt

•Connect a USB disk to the router.

After a short wait, the disk information is displayed in the Disk Info section.

Disk Info
/dev/sda
Block device, size 496 MiB (520093696 bytes)
Windows NTLDR boot loader
DOS/MBR partition map
Partition 1: 496.0 MiB (520061952 bytes, 1015746 sectors from 62)
Type 0x0B (Win95 FAT32)
FAT32 file system (hints score 4 of 5)
Volume size 492.0 MiB (515866624 bytes, 125944 dusters of 4 KiB)
FAT32 file system (hints score 4 of 5)
Volume size 495.0 MiB (519061504 bytes, 126724 dusters of 4 KiB)
Status: Mounted on /mnt

Services -> NAS

•Make the settings in the ProFTPD section, and click [Apply Settings].

ProFTPD	3		·
FIGHTED			
ProFTPD	💿 Enable 🔘 Disable		
Server Port	21	(Default: 21)	
Files Directory	/mnt 💌		
Allow Write	💿 Enable 🔘 Disable	(Default: Disable)	
User Password List	buffalo 12345678		~
			~
			<u></u>
Anonymous Login (Read-only)	🔘 Enable 💿 Disable		

Setting example:

Enable
21
/mnt
Enable
buffalo
12345678
Disable

Separate the username (example: buffalo) and password (example: 12345678) with a space.

3.4.2. Logging into the FTP server

Open a command prompt window.
Enter "ftp 192.168.11.1" to access the FTP server.
Enter the user name, and press the Enter key.
Enter the password, and press the Enter key.
When the login is successful, "ftp>" appears on the screen.
To logout, enter the "bye" command.
Microsoft Windows [Version 6.1.7600]
Copyright (c> 2009 Microsoft Corporation. All rights reserved.
C:\Users\John>ftp 192.168.11.1
Connected to 192.168.11.1
200 ProFTPD 1.3.3 Server (DD-WRT) [192.168.11.1]
User (192.168.11.1:(none>): buffalo
331 Password required for buffalo
Password:
230 User buffalo logged in ftp>

3.4.3. Common FTP commands

Command	Description	Entry example
ftp	Starts FTP	ftp
ls	Displays a list of	ls
	the remote	
	directory's files	
pwd	Displays the	pwd
	current directory	
	on the remote	
	computer	
cd	Changes the current	cd img
	working directory	
	on the remote	
	computer	
mkdir	Creates a remote	mkdir test
	directory	
rmdir	Deletes a remote	rmdir test
	directory	
lcd	Changes the current	lcd E:\test
	working directory	
	on the local	
	computer	
asc	Switches to ASCII	asc
	transfer mode	
bin	Switches to binary	bin
	transfer mode	
put	Uploads a file to	put test.pdf
	the remote computer	
mput	Uploads multiple	mput test1.jpg
	files to the remote	test2.jpg
	computer	test3.jpg
get	Downloads a file to	get index.html
	the local computer	
mget	Downloads multiple	mget test1.jpg
	files to the local	test2.jpg
	computer	test3.jpg

delete	Deletes a file on	delete
	the remote computer	test1.jpg
mdelete	Deletes multiple	mdelete
	files on the remote	test1.jpg
	computer	test2.jpg
		test3.jpg
rename	Renames a file on	rename
	the remote computer	test1.jpg
		new1.jpg
help	Displays the Help	help
	for FTP commands	
bye	Exits FTP	bye

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User Manual for User-friendly Firmware Nfiniti High Power Wireless Router & Access Point WZR-HP-G300NH / WZR-HP-G300NH2



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Chapter 1 - Product Overview

Installing Your AirStation

To install your AirStation, insert the software CD from your package into your computer and follow the directions on the screen. For more information about installation, turn to chapter 3 of this manual.

Professional or User-friendly?

This AirStation wireless router comes with two different firmware packages. You may use either the dd-wrt-based Professional firmware or the simple User-friendly firmware. By default, the Professional firmware is preinstalled for US/EU products, and the User-friendly firmware is preinstalled for Asia-Pacific products. Turn to page 20 for instructions on switching between the two firmware packages.

Note : Most of this manual documents the user-friendly version of the firmware. For more information on the dd-wrt-based professional firmware, consult the help files in its web-based configuration interface or the *WZR-HP-G300NH / WZR-HP-G300NH2 User Manual for Professional Firmware*, available for download from Buffalo Technology.

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.

Supports AOSS and WPS

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

Security Features

The AirStation is equipped with the following security features:

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

Automatic Channel Selection

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

Roaming

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

Initialization

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

Browser Based Administration

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

Auto Mode (Router/Bridge Automatic Recognition)

In Auto mode, the AirStation will detect whether or not your network has a router and automatically switch to the appropriate router or bridge mode. You can also manually switch between modes. (See page 11.)

MovieEngine

MovieEngine uses QoS to optimise your network for multimedia 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.

AirNavigator 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.

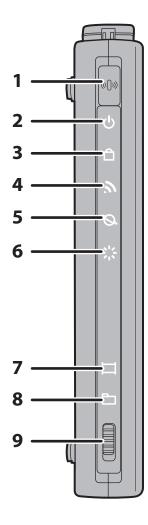
Package Contents

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

WZR-HP-G300NH or WZR-HP-G300NH2	1
AC adapter	1
Stand for vertical/wall-mounting	
Screws for wall-mounting	
LAN cable	
AirNavigator CD	1
Quick Setup Guide	

Hardware Overview

Front Panel LEDs



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 (Green)

On: The AC adapter is connected.	
----------------------------------	--

Off: The AC adapter is not connected.

3 Security LED (Amber)

Indicates security status.

Off:	AOSS or Encryption is not set.
------	--------------------------------

On: AOSS/WPS activated; accessed to exchange security keys.

Wireless security has been set.

- 2 blinks: AirStation is waiting for an AOSS or WPS security key.
- Blinking: AOSS/WPS error; failed to exchange security keys.

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

4 Wireless LED (Green)

Indicates wireless LAN status.

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

5 Router LED (Green)

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

6 Diag LED (Red) This indicates the status of this unit depending on the number of blinks per cycle.

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

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

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

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

7 Movie Engine On LED (Blue)

On: Movie Engine functionality is enabled.

Off: Movie Engine functionality is disabled.

8 Movie Engine Off LED (Blue)

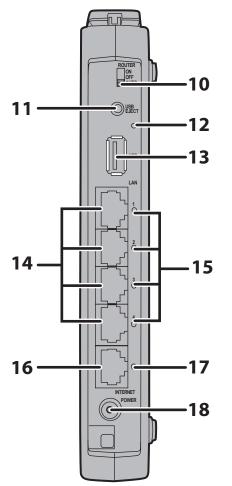
On:Movie Engine functionality is disabled.Off:Movie Engine functionality is enabled.

9 Movie Engine Switch

Switches the movie engine function between enabled and disabled.

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

Back Panel



10 Router Switch

Switches router mode between enabled, disabled, and auto.

- On:Router functionality is enabled (router mode).Off:Router functionality is disabled (bridge/AP
- mode). Auto: This switches between modes automatically based on whether or not another router is detected on the Internet port. The default setting for this switch is Auto.

11 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.

12 USB LED (Blue)

On: The USB disk is connected.

Off: The USB drive can be removed or no USB drive is connected.

Flashing: Overcurrent detected.

Note: When this LED is blinking, the connected USB drive cannot be used. Remove the connected USB drive. If the LED continues to blink even after the USB drive is removed, restart the AirStation.

Do not remove the USB drive or turn off the AirStation while the USB LED is on.

- **13 USB Port**Connect the USB drive.Note: USB hubs are not supported.
- **14 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.

15 LAN LED (Green)

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

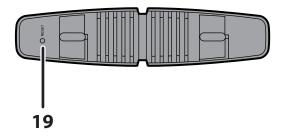
16 Internet Port10 Mbps, 100 Mbps, and 1000 Mbps connections are supported.
Note: In bridge/AP mode (router switch off), the Internet port becomes a
regular LAN port, for a total of 5 usable LAN ports.

17 Internet LED (Green)

DC Connector	Connect the included AC adapter here.
Flashing:	The Internet port is transmitting data.
On:	The Internet port is connected.

Bottom

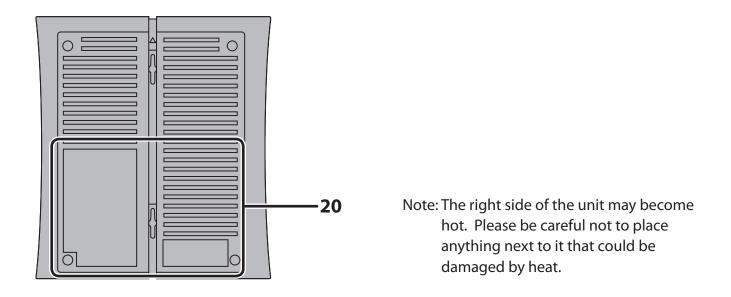
18



19 Reset Button

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

Right Side



20 Factory Default Settings

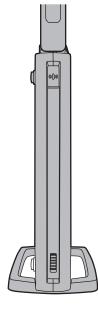
This sticker shows the AirStation's SSID, default encryption key, and WPS PIN code. By default, encryption is disabled for AirStations sold in Asia Pacific.

Chapter 2 - Placing Your AirStation

Vertical Placement

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



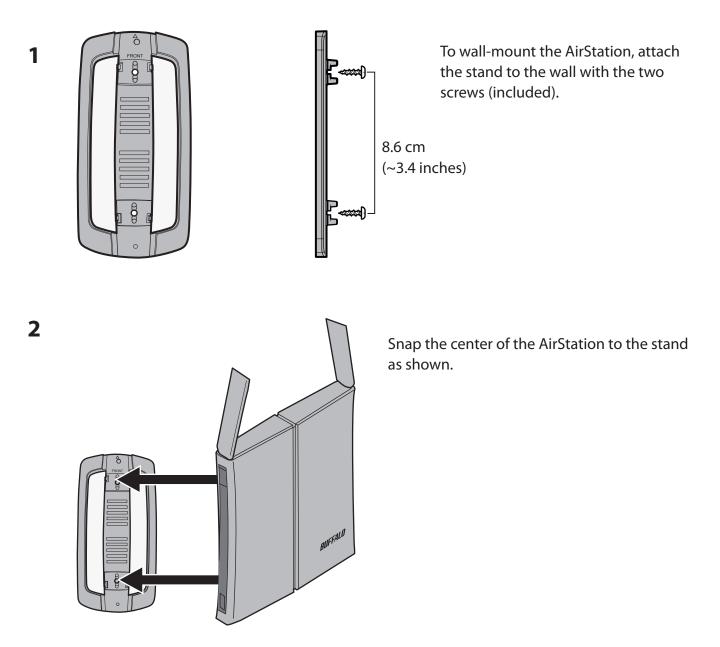


Horizontal Placement

The stand is not used if the AirStation is placed horizontally.



Wall-Mounting



Chapter 3 - Installation

Automatic Setup

Windows 7 / Vista / XP

The AirNavigator CD can guide you through installing your AirStation. To launch the setup program please insert the CD into your Windows 7/Vista/XP PC and follow the instructions on the screen. If you deactivated auto-run for CD's please navigate to [CD drive]:\Win\ and launch ASSetWiz.exe.

- 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, enable your computer's wireless client.

Mac OS X

For a Mac, open the Mac folder on the CD and launch the AirStation Configuration tool. Search and select the Buffalo AirStation you want to set up. You can either configure the IP or open the web interface for all settings. Please refer to "Manual Setup" in the next section.

Note: You can use the easy and simple setup via AOSS to connect the Mac wirelessly. Please press the AOSS button on the Buffalo router, start the AOSS assistant and follow the steps. The WLAN monitor in the same folder shows the wireless status regardless which method you use to connect.

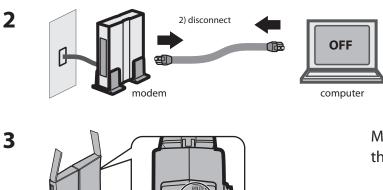
Other OS

If your computer uses a different operating system, use manual setup instead. Please refer to the next section "Manual Setup".

Manual Setup

To configure your AirStation manually, follow the procedure below.

1 Verify that you can connect to the internet without the AirStation, then turn off your modem and computer.



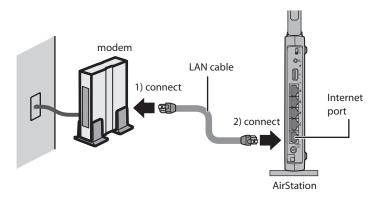
Unplug the LAN cable which connects your computer and modem.

Make sure the mode switch on the back of the AirStation is in the "auto" position.

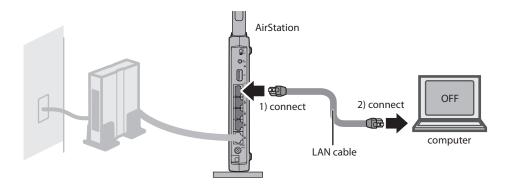
4 Plug one end of the LAN cable into your modem and the other end to the AirStation's Internet (WAN) port. Turn on the modem.

Confirm that the switch is positioned to

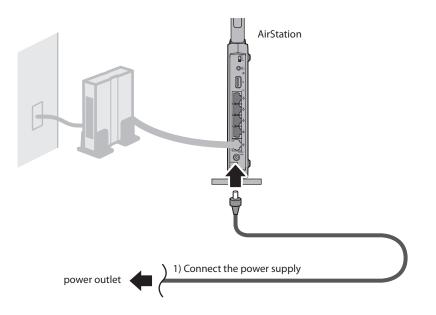
[AUTO].



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



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



7 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.
Router	Green light on or off depending on your network.
Diag	Off
LAN	Green light on or blinking.
Internet	Green light on or blinking.

For LED locations, refer to chapter 1.

8 Launch a web browser. If the home screen is displayed, setup is complete. If username and password fields are displayed, enter "root" for the username. Enter "admin" for the password if you're using the professional firmware (default), or leave the password field blank if you've switched to the user-friendly firmware. Click [OK]. Step through the wizard to complete setup.

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

Firmware Differences

You can choose between two different firmwares for your AirStation. By default, the professional firmware (dd-wrt) is preinstalled for US/EU products. If you prefer, you may install the user-friendly firmware instead. The two firmwares have slightly different features, as shown in the chart below.

Function	Professional firmware (dd-wrt)	User-friendly firmware
Router mode switch functionality	—	✓
Default administrator name	root	root (fixed)
Default administrator password	admin	none
AOSS	✓	✓
WPS	✓	✓
WDS	✓	✓

Changing Firmware

To change between the professional firmware (dd-wrt) and the user-friendly firmware, follow the steps below.

Windows

1 Insert the AirNavigator CD into your computer. The setup wizard will automatically launch. Note: If the Setup Wizard does not launch, open the CD and double-click [ASSetWiz.exe] in the "Win" folder.





Click [Change Firmware].



The procedure for wiring will be displayed. Step through the wizard to connect your AirStation.



When this screen is displayed, click [Change Firmware].

5

Connect to 192.1	68,11.1	? ×
1		
The server 192.1 and password.	68,11.1 at AirStation requires a	username
	ver is requesting that your use in an insecure manner (basic a connection),	
User name:	😰 root	Ť
Password:	******	
	Remember my passwor	d
	OK	Cancel

If requested, enter the AirStation's username and password.

Note: By default, the professional firmware doesn't have a username and password configured. Set them before you go to the next step. **6** When the following screen is displayed, make sure that the firmware file name is displayed, click [Upgrade] or [Apply], and follow the instructions on the screen.

Note: If the firmware name is not displayed on the screen, click [Browse...] and select the desired firmware. The firmware files are contained in the "Firmware" folder of the AirNavigator CD.

Professional firmware (dd-wrt) update screen:

lanagement Keep Alive Comm Firmware Management	ands WOL Factory Defaults Firmware Upgrade Backup	Help more
irmware Upgrade After flashing, reset to lease select a file to upgrade	Don't reset	Firmware Upgrade: Click on the <i>Browse…</i> button to select the firmware file to be uploaded to the router. Click the <i>Upgrade</i> button to begin the upgrade process. Upgrade mus not be interrupted.
	W A R N I N G rading firmware may take a few minutes. turn off the power or press the reset button!	

User-friendly firmware update screen:

etup	
etup	
date Firmware	
Select the AirStation firmwar	e update file.
	Specify Local File
Update Method	O Auto Update Online
Firmware File Name	Browse
	odate, do not unplug the router or close the browser window until the update has the front of the router has stopped blinking. Get updated firmware files from our
	<u>Buffalo Technology</u>
Back	Apply
	(C)2000-2010 BUFFALO INC. All rights reserved.

Macintosh

- **1** Open the configuration Interface of the AirStation.
- To replace the professional firmware with the user-friendly firmware, click [Administration] > [Firmware Upgrade].
 To replace the user-friendly firmware with the professional firmware, go to [Easy Setup] and click [Update AirStation Firmware].
- **3** Click [Browse...] to select the firmware file, and click [Upgrade] or [Apply].

Note: The firmware files are contained in the "Firmware" folder of the AirNavigator CD.

Professional firmware	(dd-wrt)	update	screen:
-----------------------	----------	--------	---------

Firmware Management	nands WOL Factory Defaults Firmware Upgrade Backup		ore
irmware Upgrade After flashing, reset to lease select a file to upgrade	Don't reset	Firmware Upgrade: Click on the <i>Browse</i> button select the firmware file to be uploaded to the router. Click the <i>Upgrade</i> button to the upgrade process. Upgra not be interrupted.	begin
	W A R N I N G grading firmware may take a few minutes. t turn off the power or press the reset button!		

etup Setup	
octup.	
date Firmware	
Select the AirStation firmwa	are update file.
Update Method	 Specify Local File Auto Update Online
Circuit Cile Marca	
Firmware File Name	Browse
Once you start the firmware u	pdate, do not unplug the router or close the browser window until the update has
finished and the DIAG LED or	n the front of the router has stopped blinking. Get updated firmware files from our
website:	Buffalo Technology
Back	

User-friendly firmware update screen:

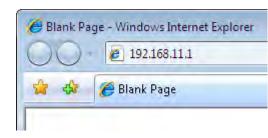
Chapter 4 - Configuration

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.

Accessing the Web-based Configuration Interface

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

1 Launch a web browser.



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 depends on the position of the mode switch. In router mode: 192.168.11.1

In bridge mode: 192.168.11.100

Note: If the router switch is set to auto and the unit is in bridge mode, then the AirStation's IP address was assigned by an external DHCP server.

 $\cdot\,\,$ If you changed the IP address of the AirStation, then use the new IP address.

3

2

1		
The server 192.1 and password.	168.11.1 at AirStation requir	res a username
the second se		
	rver is requesting that your t in an insecure manner (ba: connection),	
password be sen	t in an insecure manner (bas	
password be sen without a secure	t in an insecure manner (bas connection).	

When this screen appears, enter "root" (in lower case) for the username 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 12) to initialize all settings. The password will then be blank. Note that all other settings will also revert to their default values.

Setup Internet/LAN Wireless Cor	fig Security	LAN Config	NAS	Admin Config	Diagnos
Wizards & Overview					
	MODE Informat	ion	(Wizards & Overview)
Easy Setup Basic Settings	Router Mode ON				
Sun the Internet Connection Wizard (Easy Seluc) Wrieless SSID & Channel(11n300Mbps Model Wrieless Encryption (WEP/TkIP/AES) Internet Internet Games. (Port Forwarding) Windows Live (MSN) Messenger Wireless Multicast Rate Other Vupdate AirStation Firmware Initalize AirStation	Authentication W	in Online Stop Online b (Auto / Sch) DO3/F78EF04D PAVIPA2 mixedmode	esh - PSK	Wizads for [Easy Set the left. An overview of your A system information is the nght. Basic Settings Run Internet Conne (Easy Setup) This Wizard scans y connection and com internet Nicet cable on the state of the state internet a Connection DSL modemes may information to come a password or other can provide this info	ction Wizard our Internet nects to the modems will when the Wizard is run, require PPPOE act to the ection require PPPOE ead V Your ISF
	Utilities	WPS Setup Schedule feature Refresh]	don't have it. Wireless SSID & Ch (11a)00Mbps Mode This Wizard lets you (network name) and wireless Encryption (WEPTIXIPIAES) This Wizard lets you type of encryption (M to use on your wirele Internet	annel set an SSID chose a ryour network n choose the /EP/TKIP/AES

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

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

Configuration Interface Menus in Router Mode

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

lain screen	Descriptions	Page
Internet/LAN		
Internet	Configure Internet side port and settings.	Page 33
PPPoE	PPPoE settings (DSL login).	Page 34
DDNS	DNS settings.	Page 37
VPN Server	VPN server settings.	Page 39
LAN	LAN side port configuration.	Page 41
DHCP Lease	DHCP lease settings.	Page 43
NAT	Network address translation settings, used to connect LAN side devices to the Internet.	Page 44
Route	Configure the AirStation's IP communication route.	Page 45
Wireless Config		
WPS	WPS settings and status.	Page 46
AOSS	AOSS (AirStation One-touch Secure System) settings and status.	Page 47
Basic	Configure basic wireless settings.	Page 49
Advanced	Configure advanced wireless settings.	Page 52
WMM	Set priorities for Wireless Multimedia Extensions (Wi-Fi Multimedia).	Page 53
MAC Filter	Limit access to specific devices.	Page 55
Multicast Control	Configure limits on sending unnecessary multicast packets to the wireless LAN port.	Page 56
WDS	Configure communication between AirStations.	Page 57
Security		
Firewall	Protect your computer from outside intruders.	Page 59
IP Filter	IP filters for packets passing through the LAN side and the Internet side.	Page 61
VPN Passthrough	Configure IPv6 passthrough, PPPoE passthrough, and PPTP passthrough.	Page 62
LAN Config		
Port Forwarding	Configure port translation and exceptions for games and other programs.	Page 63
DMZ	Configure a destination to transfer communication packets without a LAN side destination.	Page 64

UPnP	Configure UPnP (Universal Plug and Play).	Page 65
QoS	Configure priority for packets that require a guaranteed data flow.	Page 66
Movie Engine	Configure options for the Movie Engine feature.	Page 68
NAS		
Disk Management	View the status and configure of attached USB disks.	Page 70
Shared Folder	Set the USB disk to use as shared folders.	Page 72
User Management	Configure users to access shared folders.	Page 74
Shared Service	Configure shared folder access.	Page 75
Web Access	Configure Web Access.	Page 76
Media Server	Configure a Media Server.	Page 78
BitTorrent	Configure a BitTorrent client.	Page 79
Admin Config		
Name	Configure the AirStation's name.	Page 81
Password	Configure the AirStation's login password for access to the configuration interface.	Page 82
Time/Date	Configure the AirStation's internal clock.	Page 83
NTP	Configure the AirStation to synchronize with an NTP server to automatically set the AirStation's internal clock.	Page 84
ECO	Configure the AirStation's ECO Mode.	Page 85
NTP	Configure Network-USB from this screen.	Page 87
Access	Configure access restrictions to the AirStation's configuration interface.	Page 88
Log	Configure a syslog server to manage the AirStation's logs.	Page 89
Save/Restore	Save or restore the AirStation's configuration from a configuration file.	Page 90
Initialize/Restart	Initialize the AirStation or reboot it.	Page 91
Update	Update the AirStation's firmware.	Page 92
Diagnostic		
System Info	View current system information for the AirStation.	Page 93
Logs	Check the AirStation's logs.	Page 95
Packet Info	View all packets transferred by the AirStation.	Page 96
Client Monitor	View all devices currently connected to the AirStation.	Page 97
Ping	Test the AirStation's connection to other devices on the network.	Page 98
Logout		
Click this to log out	of the AirStation's configuration interface.	

Configuration Interface Menus in Bridge Mode

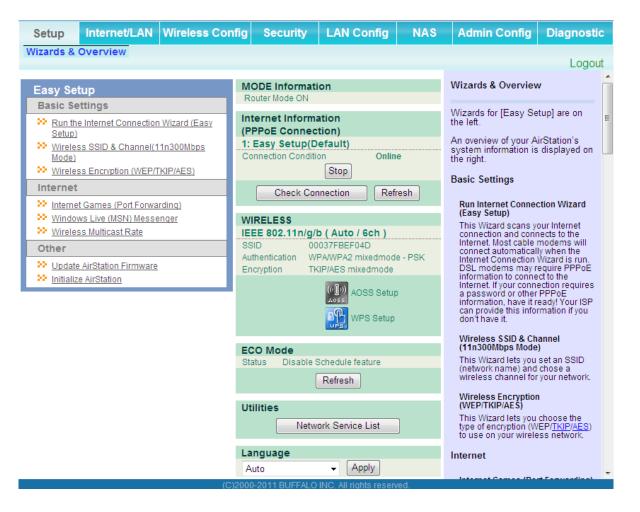
The menu structure in bridge mode is as follows. Please refer to the pages listed at right for explanations of each item.

lain screen	Descriptions	Page
LAN Config		
LAN	Configure LAN side ports and devices.	Page 41
Route	Configure the AirStation's IP communication route.	Page 45
Wireless Config		
WPS	WPS settings and status.	Page 46
AOSS	AOSS (AirStation One-touch Secure System) settings and status.	Page 47
Basic	Configure basic wireless settings.	Page 49
Advanced	Configure advanced wireless settings.	Page 52
WMM	Set priorities for Wireless Multimedia Extensions (Wi-Fi Multimedia).	Page 53
MAC Filter	Limit access to specific devices.	Page 55
Multicast Control	Configure limits on sending unnecessary multicast packets to the wireless LAN port.	Page 56
WDS	Configure communication between AirStations.	Page 57
QoS		
Movie Engine	Configure options for the Movie Engine feature.	Page 68
NAS		
Disk Management	View the status and configure of attached USB disks.	Page 70
Shared Folder	Set the USB disk to use as shared folders.	Page 72
User Management	Configure the name to access shared folders.	Page 74
Shared Service	Configure the name to access shared folders.	Page 7
Web Access	Set to use the Web Access function.	Page 76
Media Server	Set to use the Media Server function.	Page 78
BitTorrent	Set to use the BitTorrent function.	Page 79
Admin Config		
Name	Configure the AirStation's name.	Page 8
Password	Configure the AirStation's login password for access to configuration interface.	Page 82
Time/Date	Configure the AirStation's internal clock.	Page 83

NTP	Configure the AirStation to synchronize with an NTP server to automatically set the AirStation's internal clock.	Page 84
ECO	Configure ECO Mode.	Page 85
NTP	Configure Network-USB from this screen.	Page 87
Access	Configure access restrictions to the AirStation's configuration interface.	Page 88
Log	Check the AirStation's logs.	Page 89
Save/Restore	Save or restore the AirStation's configuration from a configuration file.	Page 90
Initialize/Restart	Initialize the AirStation or reboot it.	Page 91
Update	Update the AirStation's firmware.	Page 92
Diagnostic		
System Info	View current system information for the AirStation.	Page 93
Logs	Check the AirStation's logs.	Page 95
Packet Info	View all packets transferred by the AirStation.	Page 96
Client Monitor	View all devices currently connected to the AirStation.	Page 97
Ping	Test the AirStation's connection to other devices on the network.	Page 98
Logout		
Click this to log out	of the AirStation's configuration interface.	

Setup

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



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

Parameter	Meaning
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.
MODE Information	This indicates the operation mode of the AirStation.
Internet Information	Displays WAN-side system information for the AirStation.
Check Connection	Click this button to check if the AirStation is connected to the Internet properly.
Refresh	Click this button to refresh the current screen.
WIRELESS	Displays the current wireless settings.
AOSS Setup	Click this button to display the AOSS configuration screen.
WPS Setup	Click this button to display the WPS configuration screen.
ECO Mode	This indicates the operating status of 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 of the configuration interface. If the AirStation does not communicate for 5 minutes, it will log out automatically.

Internet/LAN (LAN Config)

Internet (Router Mode only)

Configure the WAN-side port ("Internet port").

Setup	Internet/LAN	Wireless Config	Security	LAN Config	NAS	Admin Config	Diagnostic	
Internet	PPPOE DDNS	VPN Server LA	DHCP Le	ase <u>NAT</u> Rou	te		Logout	
						Internet Ethernet Set	A	
	e IP address acqu Easy Setup (Inter	iisition method, rnet Connection Wiz	ard)" is set u	р.		Configuring your <u>Intern</u>	et side port:	
To set up F	PPoE, <u>click here</u>					Normally, you'll conne Internet side port to an network such as the in	i external	
Advance	d Settings					Method of Acquiring Select one of the follow methods to acquire an	wing	
Default G	ateway					methods to acquire an port IP Address. Pleas Provider for any other i	information	
Address of	of DNS Name Ser	ver Primary: Secondary:				about your line format. sure which method to selecting Easy Setup. confirm the status of th	chóose, try You can he current	
Internet M	IAC Address	 Use Default Use this add 	· · · · ·	00:24:A5:C0:00:D8)		Internet side IP Address on the System Information screen. This setting can only be changed when the hardware mode switch on the		
MTU Size	of Internet Port	1500	Bytes			AirSation is set to [RO		
Apply						Perform Easy Setup Connection Wizard)	Internet	
						The Easy Setup scan Internet connection ar		

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

PPPoE (Router Mode only)

Configure PPPoE settings.

Setup Internet/LAN Wireless Internet PPPoE DDNS VPN Se		/ LAN Config	NAS	Admin Config	Diagnostic	
Internet PPPOE DDNS VPN Se	IVER LAN DHOP I	ease NAT Rou	le		Logout	
			Р	PPoE Settings	<u>^</u>	
Default PPPoE Connection	1 : Easy Setup 🔻		If	PPPoE is specified in	n the	
IP Unnumbered PPPoE Connection	1 : Easy Setup 🔻		in h	Internet side configuration, you'll have more detailed setup options		
Apply			oith m[li	on this page. To specify PPPoE as the <u>Internet</u> side communication method, on [Internet Setup]- [Internet Port], select [PPPoE Client Function] or select [Use IP Unnumbered].		
PPPoE Connection List				Note:		
Number Name Status		If [Acquire IP address automatically from DHCP server] or [Manual Setup] is set as the Internet side communication method, or if something besides				
1 Easy Setup Enable						
Edit Connection List				PPPoE was detected Setup] ran, it is not no	l when [Easy	
Preferred Connections				enter information on (Even if it is set, it is r Additionally, when [E	this page. not used.) asy Setup] is	
No. Name Destination address S		executed, information page may be rewritte				
No Preferred Connections are Re	gistered.		D	efault PPPoE Conn	ection	
Edit Preferred Connections]			multiple destinations		
	(C)2000-2010 BLIEFAL		D	gistered to the <u>PPPo</u> estination List, the de		

Parameter	Meaning
Default PPPoE Connection	If you have registered multiple connection destinations in the PPPoE Connection List, connection destinations selected here have priority. You need to configure the route to which PPPoE is connected to if you don't use the default settings.
IP Unnumbered PPPoE Connection	Select the destination from the PPPoE Connection List which is used when "Use IP Unnumbered" is chosen for the Method of Acquiring IP Address (page 33).
PPPoE Connection List	Edit PPPoE destination. You can register up to 5 sessions.
[Edit Connection List]	Click this button to edit destination settings.

Parameter	Meaning
PPPoE Connection No.*-Add	This is displayed when [Edit Connection List] is clicked.
	Name of Connection Enter the name to identify the connected destination. You may enter up to 32 alphanumerical characters and symbols.
	Username Enter the username specified by your ISP for PPPoE certification. You may enter up to 32 alphanumerical characters and symbols.
	Password Enter the password specified by your ISP for PPPoE certification. You may enter up to 32 alphanumerical characters and symbols.
	Service Name Fill in this field only if your ISP specifies a Service Name. Leave blank otherwise. You may enter up to 32 alphanumerical characters and symbols.
	Connection Type Specifies the timing for the AirStation to connect to your provider.
	Automatic disconnection Set time to disconnect after communication is stopped when the connection method is set to [Connect on Demand] or [Manual]. You can enter up to 1440 minutes.
	Authorization Configure an authorization method with a provider.
	MTU Size Configure the MTU size for PPPoE. Values of 578 to 1500 bytes may be entered.
	MRU Size Configure MRU (Maximum Receive Unit) for PPPoE. Values of 57 to 1492 may be entered.

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

DDNS (Router Mode only)

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

Setup Internet/LAN	Wireless (Config Security	LAN Config	NAS	Admin Config	Diagnostic
Internet PPPoE DDN	S VPN Serv	er LAN DHCPL	ease NAT Rou	te		Logout
				Dy	mamic DNS Setting	js E
Dynamic DNS Service I Apply I	Disable 🔻			Bé	namic DNS Setup. fore configuring this u need to sign up for NS service provider.	
Current Dynamic DNS	Information			Se	namic DNS Servic elect a dynamic DNS ovider. ou can select "DynDI	service
Internet Side IP Address	61.117.83.211				ZO".	
Domain Name	Disabled				 DynDNS 	
Status	Disabled				• TZO	
Refresh			O.INC. All rights maga	de se	e following values are pending on your dyn rvice provider.	e different amic DNS

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

Parameter	Meaning
IP Address Update Period	Specifies the period to notify the dynamic DNS service provider of the current IP address. For DynDNS, set it between 0 and 35 days. For TZO, set it between 0 and 99 days. If 0 (zero) days is set, no periodic update is performed.
Internet Side IP Address	The WAN-side IP address of the AirStation's Internet port. This address is sent to the dynamic DNS service provider.
Domain Name	The domain name assigned by the dynamic DNS Service provider. The AirStation can be accessed from the Internet using this domain name.
Status	Display the status of dynamic DNS service.

VPN server (Router Mode Only)

Configure the VPN server.

	AN Wireless Config		LAN Config	NAS	Admin Config	Diagnostic
Internet PPPoE DDN	IS VPN Server LAN	DHCP Lease	NAI Route			Logout
The LAN side IP addre				Â	VPN Server Setting	
Therefore, a PC connection of the PC on the LAN. The LAN side IP addre	ected to BUFFALO's r	outer may be		s to	By using the PPTP so it is possible to acces AirStation from the Int LAN from a Windows	ss the ternet and the
Auto Input	Generate Recon	nmended IP Add	ress		Note	
LAN Side IP Address	IP Address 192.168.11. Subnet Mask 255.255.25				If using GRE protoco no.47) and no.1723 filtering, then this fun work correctly. Also, be aware that if	TCP port ction may not
DHCP Server Function	Enable				the Internet side has protocols blocked, th	these
DHCP IP Address Pool	192.168.11.2	for up to 64	Address(e	s)	function cannot be us	
PPTP Server Function	Enable				Click this button to ge	enerate a
Authorization Type	MS-CHAPv2 (40/128-bit I	Encryption) 👻			random IP address wi possibility of overlapp addresses of other Bu	ith a small ing with IP
[Advanced Settings]					LAN Side IP Addres	
Server IP Address	AutoManual				Configure the AirStati Address. The default i 192.168.11.1. If you w connect the AirStation	is vant to n to an
Client IP Address	Auto Manual		for up to 5 address(e	s)	existing LAN, specify unused <u>IP Address</u> fro range of IP addresses	a unique, om the LAN's s.
DNS Server IP Address	 LAN IP address of the Manual Do Not Specify 	e AirStation			Subnet Mask Select the AirStation's Subnet Mask. The de 255.255.255.0. If you	fault is want to
WINS Server IP Address	S				connect the AirStation existing LAN, specify unused <u>IP Address</u> fro	
MTU/MRU value	1396				unused <u>IP Address</u> fro range of IP addresses	om the LAN's 3.
Apply					DHCP Server Functi Enable the DHCP Ser default is enabled. If the another DHCP server network, one DHCP s	rver here. The here is
PPTP User List					disabled or the IP ran changed to avoid conf	ges must be
	registered users	Operation			by overlapping DHCP DHCP Server is enabl DHCP IP Address Po overlap existing IP Ad	scopes. If led, confirm <u>ol</u> doesn't
Edit PPTP User List					the LAN segment. DHCP IP Address Po	ool
Refresh				*	This determines the <u>I</u> range from which IP a be distributed to DHC (both wired and wirele	ddresses will P clients

Parameter	Meaning
Auto Input	Click to generate a random IP address.
LAN Side IP Address	Set a LAN side IP address and subnet mask.
DHCP Server Function	Enable or disable the DHCP server, which assigns IP addresses automatically.
DHCP IP Address Pool	Configure the range of IP addresses to be assigned by the DHCP server and IP addresses to be excluded from that range. Values from 0-253 may be entered.
PPTP Server Function	Enable to use a PPTP server.
Authorization Type	Select the authentication method for PPTP connection.
Server IP Address	Select the server IP address.
Client IP Address	Select the IP address range.
DNS Server IP Address	Choose the IP address for the DHCP server.
WINS Server IP Address	Choose the IP address for the WINS server.
[Edit PPTP User List]	Click to edit user information.
Username	Enter the username to connect to the PPTP server. You may enter up to 16 alphanumerical characters and symbols.
Password	Enter the password to connect to the PPTP server. You may enter up to 16 alphanumerical characters and symbols.
Method of Acquiring IP Address	Select the method to be used to assign the IP address is assigned to the PPTP client.
PPTP User List	Displays the PPTP connection user information.

LAN

Configure LAN-side and DHCP Server settings.

Setup Internet/L	AN Wireless Config	Security	LAN Config	NAS	Admin Config	Diagnostic
Internet PPPoE DDN	VPN Server LAN	DHCP Lease	NAT Route			Logout
				LAN Si	de Ethernet Setting	
LAN Side IP Address	IP Address 192.168.11. Subnet Mask 255.255.255			Address	re the AirStation's LA	local DHCP
DHCP Server Function	🗹 Enable				settings here. Unless ing expert, the defaul	
DHCP IP Address Pool	192.168.11.2 Excluded IP Addresses:	for up to 64	Address(es)	Note	have an existing LAN, t	the AirStation's
LAN SIDE IF Address	IP Address Subnet Mask 255.255.255.) -		to it. P AirSta	uration must be chang lease refer to <u>here</u> to s tion on an existing net de IP Address	set up your
DHCP Server Setting	s [Advanced Settings]			Configu Address	re the AirStation's LA . The default is 192.	N <u>IP</u> 168.11.1. If
Advanced Settings	nt to connect the AirS LAN, specify a unique from the LAN's ranges.	Station to an ue, unused IP				
				Subnet	Mask	
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Parameter	Meaning
LAN Side IP Address	By default, the LAN side IP address is 192.168.11.1 with subnet mask 255.255.255.0. You may change it here.
DHCP Server Function	Enable or disable the DHCP server, which assigns LAN-side IP addresses automatically.
DHCP IP Address Pool	Configure the range of IP addresses to be assigned by the DHCP server and IP addresses to be excluded from that range. Values from 0-253 may be entered.
LAN Side IP Address (For IP Unnumbered)	Set an IP unnumbered LAN side IP address. Note: A PC with a normal LAN side IP address and a PC with an IP Unnumbered IP address cannot communicate each other.
Advanced Settings	Check [Display] to display DHCP server advanced settings options.
Lease Period	Set the effective period of an IP address assigned by the DHCP server. Up to 999 hours may be entered.
Default Gateway	Set the default gateway IP address for the DHCP server to issue to clients.

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

DHCP Lease (Router Mode only)

Configure DHCP Exceptions.

Setup Int	ernet/LAN Wir	eless Config	Secu	ırity	LAN Config	NAS	Admin Config	Diagnostic
Internet PPPoE DDNS VPN Server LAN DHCP Lease NAT Route Logout								
							DHCP Lease Setting	×
Add Client Int IP Address MAC Address Add							Add manual IP addres assignment, delete au Address assignment of automatic assignment Manual assignment Assign an IP address MAC address manual Up to 200 devices can registered for manual	tomatic IP or set to manual to specified y. be
Current DHC	P Client Informa	tion				—	Add/Edit Client infor	mation
IP Address	MAC Address	Lease Period	Status	Custo	mize		This area is for adding	or editing a
192.168.11.2(*)	00:11:09:94:F5:B9	47:36:47	Auto	M	lanual Assignmer	nt	line.	
(*) The IP Addre	ess of the client the	at is configuring	, this Air	Station	is(192.168.11.2)		IP Address Enter an IP address for assignment. The default is blank in mode. The current IP address	append

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

NAT (Router Mode only)

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

Setup Internet/LAN Wire	less Config	Security	LAN Config	NAS	Admin Config	Diagnostic
Internet PPPoE DDNS VPM	N Server LA	N DHCP Le	ase NAT Rou	te		Logout
					etwork Address Tra ettings	
Address Translation Log Output of Deleted Packets	Enable Enable			Co	nfigure address trans nnect the Internet sid	slation to le to the
Apply					ernet. Idress Translation	
				A	dress Translation	
	(C)2000-2	2010 BUFFALO	INC. All rights rese	V.		••• (Feeble)
Parameter	(C)2000-;	2010 BUFFALO Meanir		V.		ete (Fachle)
Parameter Address Translation	(C)2000-;	Meanir	ng	ved.		ete (Feeble)

Route

Configure the AirStation's IP communication route.

Setup	Internet/L	AN Wireles	s Config	Securit	y L/	AN Config	NAS	Admin Config	Diagnost	ic
Internet	PPPoE D	DNS VPN S	erver LAI	DHCP	Lease	NAT Rou	ite		Logo	.+
									Logou	.IL
								Routing Information		
Add a Ro	oute							Configure Routing Infor	mation.	-
Dectinati	ion Address	IP Address								=
Desinal	ION Address	Subnet Mask	255.255.255	.0	-			Add/Edit a Route		
Gateway	r]						
Metric		15						This area is for adding ine.	or editing a	
Add								Destination Address		
								Specify the destination or network address.	n IP address	
								f you're entering an IP destination, specify [H	address as ost	
Routing	Information	1						destination, specify [H 255.255.255.255] for th mask. In case of enter	ing a	
Destinati	ion Address	Subnet Mask	Gateway	Metric	Operat	tion		network address as de specify the network ad		
	Routin	g Configuration	is not Regist	ered				subnet mask.		
								Gateway		-
			(C)2000-2		LOINC	All rights reser				

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

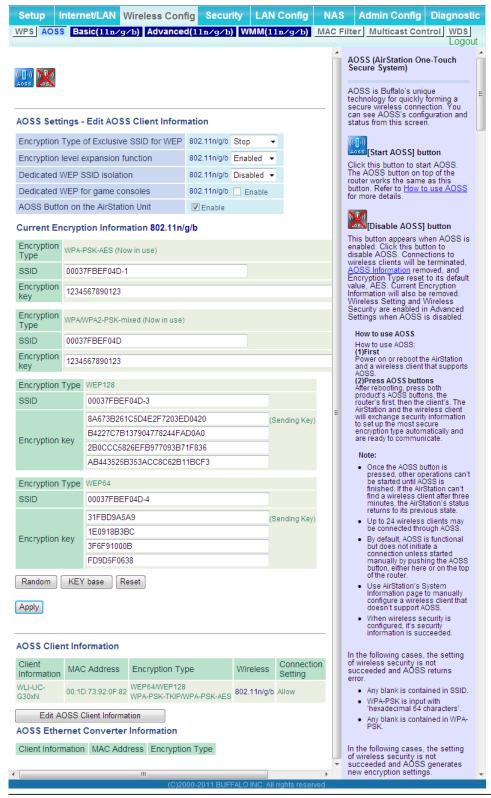
WPS Status and Settings.

Setup Int	ternet/LAN V	Vireless Config	Security	LAN Config	NAS	Ad	lmin Config	Diagnos	stic
WPS AOSS	Basic(11n/g	/b) Advanced(1	.1n∕g⁄b) W	/MM(11n/g/b)	MAC	Filter	Multicast Co	ontrol WI Logou	
					1	WPS(M	/iFi Protected	Setup)	
WPS	Enable	e				WPS			
External Reg	istrar 🔽 Enabl	e				Configui	ring WPS		
Apply						WPS is which c Connect	WiFi Protected orresponds to W t Now-NET (WC also known as	/indows N-NET).	
AirStation PI	N 12345670	Generate PIN				Simple	Configuration Pr	otocol.	
Enrollee PIN		OK			i	easily d nformat	nction can safel istribute wireles ion from an acc	s security ess point	
WPS Securi	ty Information				1	The WP wireless	ion) to the WPS S device which security inform	registers	
WPS status	configured	release				The AirS	legistrar. Station has an ir ar built-in it, but (
11n/g/b	SSID Security Encryption key	00037FBEF04D WPA/WPA2 mixedm 1234567890123	node - PSK TKIF	P/AES mixedmode	t	he wire	ar built-in it, but External Registr S device which less security inf Registrar is ca	ormation	
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Parameter	Meaning
WPS	Enable to use WPS automatic configuration.
External Registrar	Enable to accept configure requests from other WPS devices. Note: Configure requests will not be accepted if AOSS is in use.
AirStation PIN	Displays the PIN code of the AirStation. Clicking [Generate PIN] will generate a new PIN code. This code can be entered into other wireless devices that support WPS.
Enrollee PIN	Enter the PIN code for the other wireless device and click [OK].
WPS status	Displays "configured" if all available wireless bands are configured. Displays "unconfigured" if at least one wireless band is unconfigured.

AOSS

AOSS Status and Settings.



Parameter	Meaning
(((<mark>])))</mark> A055	Initiates AOSS automatic wireless configuration. Click this, then press or click the AOSS button on your AOSS-compatible wireless client. Repeat for additional AOSS clients.
	Click this button to disconnect AOSS connections. Note: If AOSS connections are disconnected, the SSID and encryption keys will be restored to their last settings from before AOSS was used.
Encryption Type of Exclusive SSID for WEP	You may allow a separate SSID specifically for WEP connections. If "disabled" is selected, then clients will not be able to connect with WEP.
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 consoles	When enabled, the AirStation allows wireless devices to connect with 64-bit or 128-bit WEP.
AOSS Button on the AirStation Unit	Uncheck to disable the physical AOSS button on the AirStation.
Current Encryption Information (AOSS connection only)	Displays the encryption type, SSID, and encryption key configured by AOSS.
[Random]	Click to enter random values for SSID, encryption key, and other settings.
[KEY base]	Click to return the SSID, encryption key, and other wireless settings to the values on the case sticker.
[Reset]	Click to return the SSID, encryption key, and other wireless settings to their previous values.
AOSS Client Information*	Displays AOSS clients connected to the AirStation and information of the devices which are wirelessly communicated.
AOSS Ethernet Converter Information* *Only displayed if there are AOSS Connections	Displays information about Ethernet converters connected to the AirStation via AOSS.

Basic

The screen to configure a basic wireless settings.

Setup	Inte	rnet/LAN	Wireless Config	Security	LAN Config	NAS	Admin Config	Diagnostic
WPS AOSS	Basi	i c(11n/g/]	b) Advanced(11n/	g∕b) WMM(1	1n/g/b) MAC F	ilter Multic	ast Control WDS	Logout
							Basic Wireless Set	
Wireless Ra	Wireless Radio Vou can set basic configuration							
Wireless Cha	annel	Auto Chan	nel 🔻 (Current Channel	: 5)			information for your v	vireless LAN
300Mbps Mo	300Mbps Mode Band Width : 20 MHz manually here. If encryption is not used, communication will be established just by this basic setup. Encryption is highly recommended, however.							n will be his basic highly
Broadcast S	SID	Allow					Wireless Radio	
Use Mu	lti Secu	urity function					Un-checking "Enable	e" will disable
Separate fea	ature		Use				wireless LAN functio disabled, all wireless including broadcastir Default value is enab	functionality, no. is halted.
SSID			Our Station's MAC	Caddress(00037F	BEF04D)			ieu.
			© Enter :				Wireless Channel You may specify a c	hannel
Wireless aut	thentica	ation	WPA/WPA2 mixedmo	de - PSK 🔻			(frequency band) for communication If the	your wireless
Wireless end	cryption	n	TKIP/AES mixedmode	•			wireless clients near AirStation, you may	the
WPA-PSK (Pre-Shared Key): ••••••••••• interference. Chan					interference. Change (and preferably non-c	to a different		
Rekey interval : 60 minutes channel in this case. Av channels vary with which					Available			
Apply Standard you're using. When Auto channel is selected, a vacant channel is selected automatically. 11n/g/b : Auto, 1-11 Channel						g. When Auto a vacant automatically.		
			(C)200	0-2011 BUFFALO	INC. All rights reserv	/ed.	(Deffult velve v Avite	-learnel)

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

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

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

Parameter	Meaning
Rekey interval	Set the update interval for the encryption key between 0 and 1440 (minutes).
Set up WEP encryption key	A WEP encryption key (passphrase) may have any of four different formats. An ASCII passphrase may use either 5 or 13 alphanumeric characters (case-sensitive). A hexadecimal passphrase may use either 10 or 26 alphanumeric characters (0 to 9 and a to f, not case-sensitive).

Advanced

Configure advanced wireless settings.

Setup Internet	VLAN Wire	less Config	Security	LAN Config	NAS	Admin Config	Diagnostic
WPS AOSS Bas	i c(11n∕g∕b)	Advanced(:	l1n∕g∕b) V	VMM(11n/g/b)	MAC Fi	Iter Multicast Co	Logout
						vanced Wireless S n/g/b)	ettings
Multicast Rate	Auto 👻						
DTIM Period	1					ecify Advanced Wirel tings.	ess
Privacy Separator	🔲 Enable				Mu	Iticast Rate	
Apply					12, Aut	u can select 1, 2, 5.5 18, 24, 36, 48, 54M :o. ault Value is "Auto"	
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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.

Setup	Internet/L	AN W	ireless Con	fig Security	LAN Config	NAS	Admin Config	Diagnos	stic
WPS AO	SS Basic	(11n/g/	'b) Advance	ed(11n∕g⁄b)	WMM(11n/g/b)	MAC	Filter Multicast C		
								Logo	ut
						V	VMM Settings (11n/g	/b)	
WMM-ED	CA Param	eters							
Priority	Para	meter				C	rioritized AirStation ommunication for spec		
			For AP	For STA		D	ansactions. This setti rovides some real time	eĭ	
	CWm	nin:	15	15		in	ommunication, which nprove the quality of V	OIP or	
	CWm	nax:	1023	1023		ot	ther streaming protoco	ols.	
AC_BK(Lo	W) AIFSI	V:	7	7					Ε
	TXOF	P Limit:	0	0		W	VMM-EDCA Paramet	ers	
	Admi	ssion Con	itrol:	Disable 👻					
			For AP	For STA			is usually not necess hange this value.	ary to	
	CWm	nin:	15	15			Ŭ		
10.0501	CWm	nax:	63	1023			r iority he priority is ranked (H	-lighaet)8 -	
AC_BE(No	AIFSI	V:	3	3		(†	High)4 : (Normal)2 : (L	ow)1 for	
	TXOF	P Limit:	0	0		e	ach packet.		
	Admi	ssion Con	itrol:	Disable 👻		P	arameter		
			For AP	For STA			CWmin, CWmax The maximum and min	nimum value	
	CWm	nin:	7	7			for the contention wind contention window is u	low. The	
	CWm	nax:	15	15			control the frame collis avoidance system in I	sion	
AC_VI(Hig	n) AIFSI	V:	1	2			Values that can be inp 32767.		
	TXOF	P Limit:	94	94					
	Admi	ssion Con	itrol:	Disable 👻			AIF SN Interval of the sending	frame. The	
			For AP	For STA			unit defines a time-slo the window value of C	t (similar to	
	CWm	nin:	3	3			CWmax). Lower values	s define a	
	CWm	iax:	7	7			higher priority as the b algorithm starts earlier	r. Values that	
AC_VO(Hig	AIFSI	V:	1	2			can be inputted: 1-15.		
	TXOF	P Limit:	47	47			TXOP Limit		
	Admi	ssion Con	itrol:	Disable 🔻			The time for the queue send priority. The mini	mum value	
Apply							is 32ms. Large values more frames at a time latency may increase. Only one frame is trans the time when the TXO	. However, sferred at	Ŧ

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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.

Setup	Internet/LAN	Wireless Config	Security	LAN Config	NAS	Adm	in Config	Diagnos	tic
WPS AC	SS Basic(11n	∕g∕b) Advanced(1	l1n∕g∕b) V	VMM(11n/g/b)	MAC Fi	lter N	Multicast Co	ontrol WD Logou	
Fafaara		Enable			Wir	eless I	MAC Filtering	Ŭ	Â
Apply	MAC Filtering	Wireless connections to the AirStation can be limited to specific client MAC addresses to enhance security against unwanted network visitors. When enabled, only wireless client							
Registra	tion List	a Status			add con wire	resses nect to eless M.	vith registered will be allowe the AirStation IAC filter is igr	d to n. The	
	gistered MAC Addre					SS is in			
Edit F	Registration List				Che filte	eck Ena	AC Filtering able to use M nen, only wirel	AC	Ŧ
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Parameter	Meaning
Enforce MAC Filtering	Enable to restrict wireless connections to devices with registered MAC addresses.
Registration List	Displays the MAC addresses of registered devices which are permitted to connect wirelessly.
Edit Registration List	Adds a wireless device to the list of permitted devices.
MAC Addresses to be Registered	Enter a MAC address of a wireless device to permit to connect to the AirStation. Click [Register] to add that MAC address to the list.
List of all clients associated with this AirStation	Display the list of all MAC addresses of wireless devices connected to the AirStation.

Multicast Control

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

	AN Wireless Con 11n/g/b) Advance	fig Security LAN Config ed(11n/g/b) WMM(11n/g/b)	NAS Admin Config Diagnostic MAC Filter Multicast Control WDS Logout		
			Multicast Control		
Snooping	Enable		packet transfer to wireless LAN		
Multicast Aging Time	300 Sec.				
Apply	(C)200	0-2011 BUFFALO INC. All rights reserve	Snooping Snooping observes multicast control packets like IGMP to control unnecessary packet d.		
Parameter		Meaning			
Snooping If enabled, snooping supervises multicast administrative pages such as IGMP and restricts unnecessary multicast transfers to or wireless ports.					
Multicast Aging Ti	me	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.

WDS

WDS bridging allows communication between AirStations.

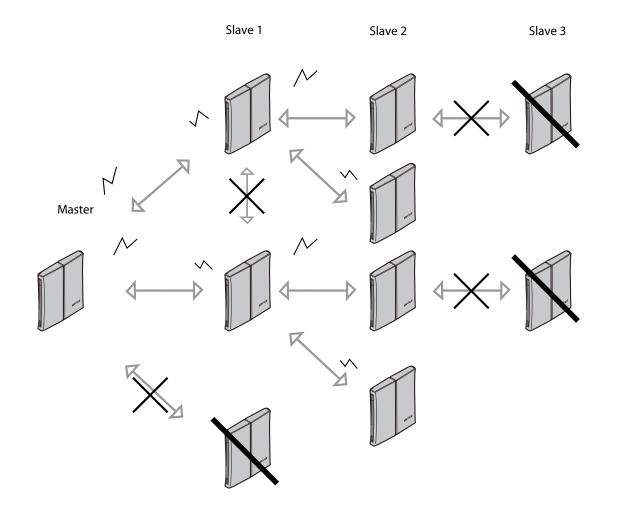
Setup	Internet/LAN	Wireless Config	Security	LAN Config	NAS	Admin Config	Diagnos	tic
WPS AO	SS Basic(11n	/g/b) Advanced(1	l1n∕g∕b) V	VMM(11n/g/b)	MAC	Filter Multicast C	control WE	
WDS	Use				v	/DS	Logot	(E)
Specify M	laster/Slave	Master 👻			C	onfigure establish the onnection with anothe	wireless r AirStation.	
SSID	[Search		the communication b		
Wireless	authentication	Do not authenticate 👻]		C	irStation and wireless annot be established ecause the distance b	or constant	
Encryptic	n for wireless	Not encrypted Not en						
Apply						lave wireless devices /DS to solve these pro		
					Т	he destination connec	tion needs	-
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Parameter	Meaning
WDS	Check to use WDS bridging.
Specify Master/Slave	Define this AirStation's role in a WDS bridge.
	Master This AirStation will be the master in a WDS bridge. It will have the Internet connection, and other AirStations in the bridge will be connected through this AirStation.
	Slave Slave AirStations are connected to the master AirStation.
	 Auto Automatically switches between Master and Slave modes depending on the surrounding network. If an AirStation works as a router, it will automatically be set as a master. If the Airstation works as a bridge and a DHCP server exists in the network, it will automatically be set as a master . If the AirStation works as a bridge and no DHCP server is available, it will automatically be set as a slave.

Parameter	Meaning
SSID	Configure the Master Airstation's SSID.
[Search]	Click to search for other AirStations' SSIDs.
Wireless authentication	Configure authentication method for the master AirStation
Encryption for wireless	Choose encryption type for the master AirStation.
WPA-PSK (Pre Shared Key)	Set the master AirStation's Encryption key.

Notes: Two AirStation can be connected per one Master AirStation.

The slave AirStation is allowed to connect to another slave AirStation as lower slave AirStation. The lower slave AirStation is not allowed to connect to another slave AirStation. The slave AirStation is not allowed to communicate with the lower Slave AirStation or client adapters when it is not connected to a master AirStation.



Security (Router Mode only)

Firewall (Router Mode only)

Configure the AirStation's firewall.

	Setup	Internet/LAN Wireless Confi	g Security	LAN Config	NAS	Admin Config	Diagnostic		
Γ	Firewall	IP Filter VPN Pass Through					Logout		
	Firewall								
	0				LA	mits the type of pack pass between the In N. When packets re	ach the		
	Enable	Basic Rules	Number of Pack	kets		rStation, the firewall (e packets, and forwa			
		Prohibit NBT and Microsoft-DS Routing PPPoE1: Easy Setup Prohibit		0	th de	at don't match any fil stination. The Firewa necessary packets f	ter to their II blocks		
		Reject IDENT Requests		0	Int	ernet side and prevent	nts leaking		
		Block Ping from Internet PPPoE1: Easy Setup Ignore		0	si	de.			
	Apply				CI Fi Th	og Output necking this box will i rewall information to ie default setting is d			

Parameter	Meaning
Log Output	Enable to output a log of firewall activity.
Basic Rules	Enable to use any of the quick filters. Preconfigured quick filters include:
	Prohibit NBT and Microsoft-DS Routing Enabling this blocks communication using these protocols from the WAN side to the LAN side or from the LAN side to the Internet. You can configure this with PPPoE if you select [Use PPPoE Client] or [Use IP Unnumbered] in Method of Acquiring IP address (page 33), or if Easy Setup identified a PPPoE connection during setup.

Parameter	Meaning
	Reject IDENT Requests Enabling this option will answer IDENT requests from the Internet side with corresponding rejection packets. Enable this option if you experienced slow transfer speeds for network applications such as mail, ftp or web browsing. If you have configured transfer of IDENT requests to the LAN side computer in the address translation settings (DMZ or TCP port 113), then that setting has higher priority, and overrides this setting.
	Block Ping from Internet If this is enabled, the AirStation will not respond to pings from the Internet side. You can configure this with PPPoE if you select [Use PPPoE Client] or [Use IP Unnumbered] in Method of Acquiring IP address (page 33), or if Easy Setup identified a PPPoE connection during setup.

IP Filter (Router Mode only)

Edit IP filters.

Setup	Internet/L	AN Wireless C	onfig Securi	ty LAN C	onfig	NAS	Admin Config	Diagnostic
Firewall	Filter VPN	Pass Through						Langet
								Logout
							IP Filter Settings	
Log Output	Enable						Limits the type of part to pass between the LAN. The maximum number 32. If the packet meets of monitoring conditions before it is routed, the	Internet and er of rules is one of the s (see below) e specified
Add IP Add	ress Based	Filter					action will be taken. I conditions (see below appropriate action will	v) are met, the
Operation	Ignored -						performed once the p the condition.	acket meets
Direction	Internet→LA	N 🕶					Log Output	
IP Address	Source Addres	ss:	→ Desti	nation:			Checking this box wi	
	All						filtering information to Operation is enabled disabled.	, log output is
	O ICMP						The default is Disable	ed.
Protocol	🔘 Manual	Protocol Numb	per:					
	TCP/UDP	TCP Port Ma Port Number:	nual Setting 👻 <u>Spe</u>	ecification method	d		Add/Edit IP Address Filter	s Based
Add Rule							This area is for addin line.	g or editing a
							Operation	
IP Filter Inf	ormation						Select the action to t on packets that. meet filter criteria Ignored	be performed
Operation	L)Irection	ource Address estination Address	Protocol Count	Customize			Stop the packet and it.	do not route
	The IP	Filter has not been co	onfigured yet				Rejected Return the rejected p	acket to the
							point of origin. Accepted	-

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

VPN Passthrough (Router Mode only)

Configure IPv6 passthrough, PPPoE passthrough, and PPTP passthrough.

Setup Internet/L	AN Wirele	ss Config	Security	LAN Config	NAS	Admin Config	Diagnostic
Firewall IP Filter	/PN Pass Th	nrough					Logout
							Logout
					v	PN Pass Through	
							=
IPv6 Pass Through	🔳 Enable					pecify VPN Pass Thr ettings.	ough
PPPoE Path Through	Enable				IF	Pv6 Pass Through	
PPTP Pass Through	Enable					elect whether to use	
Apply					th Ti	rough for address tra ne default setting is d	nslation. isabled.
						Note:	-
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Parameter	Meaning
IPv6 Passthrough	Enable to use IPv6 Passthrough for address translation.
PPPoE Passthrough	Enable to use PPPoE bridging. PPPoE bridging lets you automatically obtain an IP address from your provider for your LAN- side computer using the PPPoE protocol because PPPoE packets can pass between the Internet and LAN.
PPTP Passthrough	Enable to use PPTP passthrough for address translation.

LAN Config

Port Forwarding (Router Mode only)

Configure port translation.

	nternet/LAN			Security	LAN Config	g NAS	Admin Config	Diagnostic
Port Forwar	ding DMZ	UPnP QoS	Movie	Engine				Logout
Add Dart Ea							Port Forwarding Set	J
Add Port Fo	orwarding		_			_	Although the AirStatio Address Translation o	n performs
Group		New Group	Group	Name:			communication which from the LAN side . ce	is started
Internet Side	Internet Side IP Address							network
internet olde		Manual IP Add	ress:				games, require that yo communications from	the Internet
		in all					side via (<u>Static NAT</u>). for communicating from	m outside the
		O ICMP					internal network to the network device(Static	NAT)
Protocol		🔘 Manual	Protocol N	lumber:			carefully, consulting you game's documentation a necessary. Up to 32 rule	n as
			TCP Por	t Manual Setu	- Specificatio		registered.	
		TCP/UDP	Port Num	ber:				
LAN Side IP	Address	192.168.11.2					Add/Edit Port Forwa	rding
LAN Side Po	ort	TCP/UDP Port	:				You can add new port	forwarding
Add							information and edit ex information.	kisting
_							Group	
Port Forwar	rding Registr	ration Inform	mation				You can give a name (to configured <u>Static N</u> , multiple <u>Static NATs</u> of and manage them tog	ATs and give one name
(2roup	rnet Side IP Ad I Side IP Addre		ocol Side Port	Customize			By giving names to gr can [Enable] or [Disab separately.	
	Port Forwarding	g has not beer	i set up yet				To add a <u>Static NAT</u> n existing group, select from the drop-down bo	the group
			(C)2000-	2010 BUFFALO	INC. All rights rea	served.	oboooo lAddi	

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

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

Setup	Internet/LAN	Wireless Config	Security	LAN Config	NAS	Admin Config	Diagnostic
Port For	warding DMZ	UPnP QoS Movi	e Engine				Logout
					DI	MZ Settings	Â
IP Addre	ss of DMZ				IP	Address of DMZ	=
(*) The IP Apply	Address of the cli	ent that is configurin	ig this AirStat	ion is[192.168.11.	nė co tra en	ecify the address of twork device to whic mmunication packet insferred. When an II tered for the DMZ, it ceible to pace the	h rejected is are to be P address is becomes
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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).

Setup	Internet/LAN	Wireless Config	Security	LAN Config	NAS	Admin Config	Diagnostic
Port For	warding DMZ	UPnP QoS Movi	e Engine				Logout
					UF	PnP Settings	A
UPnP Apply	Enable				Se fur su Th rec	tting up the internet inction of UPnP: On a pports UPnP (Windo e AirStation is auton cognized on the LAN	gateway a PC which wsXP, etc.), natically as an ▼
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Param	eter		Meanin	g			

QoS (Router Mode only)

Configure the priority of packets sent to the Internet.

Se	tup	Internet/LAN Wireless Conf	ig Sec	urity LAN C	Config	NA	S	Admin Config	Diagnosti	c
Port	Port Forwarding DMZ UPnP Qos Movie Engine Logout									
							QoS	Setting	Logot	Â
QoS	for trans	mission to the Internet VEnable					on the When	s a technology to use network more effectiv two or more packets	ely. arrive at the	
Uplo	ad band	vidth 1000 Kbps					is pro	time, the packet with cessed first. This can	be used to	Ш
No.	Enable	application name	protocol	destination port	priority		give priority to communications that require real time processing, such as VOIP.			
1		VoIP	UDP 👻		high	-		or transmission to th		
2		ssh	TCP 🔻	22	medium	•				
3		telnet	TCP 🔻	23	medium ▼ If checked, this gives priority to packets being transmitted to the Internet. When enabled, you will be able to add four level: of increased priority for specific					
4		ftp	TCP 🔻	21	low	 applications. By default, this is disabled. 				
5			TCP 🔻		low	•	Uplin	k Bandwidth		
6			TCP 🔻		low	-	Specify the bandwidth transferred from this unit to the Internet in kbps.			
7			TCP 🔻		low	•	The re entere	al uplink bandwidth sł d.	nould be	
8			TCP 🔻		low	•	line st	ndwidth value larger th beed is entered, the up	olink	
Appl	Apply Apply bandwidth will be limited by the line speed. If a smaller bandwidth value is entered, the maximum line speed cannot be used. Use a link speed measuring tool on the									
		(C)	2000-2010	BUFFALO INC. All ria	ihts reserved	1	17.56 0	interative interastinitie	in an inc	

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 alphanumerical characters, double or single tick marks ("'), quotation marks ("), and semicolons (;).
protocol	Select either TCP or UDP.
destination Port	Specify a destination port from 1 - 65535. If this field is empty, a random port is selected.

Parameter	Meaning
priority	Select high, medium or low. If packets do not qualify for classification as a type on the list, then their priority is treated as a level between medium and low.

Movie Engine (QoS)

Configure Movie Engine options.

Setup Int	ernet/L	AN Wireless Co	onfig	Security	LAN	Config	NA	S	Admin Config	Diagnostic
Port Forward	ling D	MZ UPnP QoS	Movi	e Engine						Logout
* This setting is enabled when the "Movie Engine" switch on the main unit is set to "ON". Movie Engine switch status ON Movie Engine switch status ON Mov										
Packet Con	trol Se	tting						dat: Mot	a processing in spe vie Engine switch is ition.	cific when 💦 🚽
IPv6 Pass Th	rough	✓ Use						Mo	vie Engine Status	
Multicast Rate	е	11 Mbps 💌						Dis Mor	play the status (ON vie Engine switch o	I/OFF) of the
		Snooping Function	🗹 Us	e				unit	. The Movie engine bled when the swit	feature is
Multicast Con	itrol	Aging Time	300	Secor	nds					
		Change Priority	VI (pr	riority) 🗸 🗸				Pa	cket Control Settin	ng
TCP Rwin Siz	o Limit	Size Limit	Lin	nit						-
TCP RWIN SIZ	e Limit	Maximum Rwin Size	65536	bytes				IΡv	6 Pass Through	
Apply Wireless Pr No. MAC Ac	Apply Enable IPv6 Pass Through when the Movie Engine switch is ON. The router transfers IPv6 packets between the Internet and LAN. The factory default setting is [Enabled]. Wireless Priority Control Rules * This function is only enabled when the AirStation is in Router mode.							ch is ON. A5 packets nd LAN. ing is enabled		
	Wireless	s priority control rules n	ot regis	stered.	, í				lticast Rate	
Editing	of Priorit	y Control Rules)					the	nfigure Multicast Co Movie Engine swito factory default set os].	h is ON.
								Mu	lticast Control	
Transmissi	on Rat	te Limit						Mo	ticast control settir /ie Engine switch is	ig when the ON.
Priority	Transm	ission Rate		Number o	f Retri	es			nooping Function nable the Multicast S	noopina
BackGround	No Lim	its	~	No Limits	*			fu C	inction. hecking Use when t	he Movie
BestEffort	No Lim	its	~	No Limits	*			M	ngine switch is ON v ulticast control. he factorv default se	
Voice	No Lim	its	~	No Limits	*				,	ung is (Use).
Video	No Limits 🔹 No Limits 💌					т	ging Time he Aging Time for M	ulticast		
Apply				(0)0000 000	0.01/55			n T	nooping feature. Th ange is 1-3600 seco he factory default se	nds.
				(C)2000-200	S DUFF	ALUTING, AI	mights	rese	veu.	

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

NAS

Disk management

View the status of and configure attached USB hard disks.

Setup Interne	et/LAN Wireless (Config Security LAN Confi	g NAS	S Admin Config D	liagnostic		
Disk Management Shared Folder User Management Shared Service Logout							
				Disk Management	Â		
USB Disk Inform	ation			Displays the status of attached USB disks and allows you to			
Device	Disk Assignment	Partition Information		manage these disks. Info for up to four connected U	JSB disks		
BUFFALO ClipDrive Remove	rive Disk1 (Automatic Assignment) Partition1 Format FAT Status Mounted Used/Available(%) 323,300 / 506,864 (6 Operate Format			are recognized. The possible operations are format			
Refresh	e-recognize USB device	25		and remove USB disk. Disk file checking is executed with a PC.			
[Advanced Settings]				Caution If several drives or one d multiple partition is conn drive might not be detect properly. Please connect	ected, the ed		
Automatic USB Dis	sk Assignment	Vse Use		with single partition.			
FAT format file na	me character code	North America (CP437) 🔻		Device			
HDD power-saving function		Use HDD stop time 10 Minutes	Display detecting USB disk identification.				
Apply				Caution The device information is from USB disk. It might b from product name.			
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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], then click [Apply].
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 on it.
Re-recognize USB devices	Click this to re-scan for connected USB disks.

Parameter	Meaning
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 character code for filenames in FAT formatted partitions.
HDD power-saving function	Click [Use] to enable power saving mode.
HDD stop time	Powers down the drive after this duration of time.

Shared Folder

Configure a USB hard disk for use with shared folders.

Setup In	ternet/LAN W	ireless (Config	Security	L/	AN Config	NAS	Admin Config	Diagnostic	
Disk Management Shared Folder User Management Shared Service Veb Access Media Server BitTorrent Logout								Logout		
						Shared Folder Settings				
Shared Folde	Shared Folder Settings Settings for using the whole USB							whole USB		
	Limits	•						disk as shared folder. folder name is set to o	diskX ptY(X:	
	Read/Write		Read-on	ly		No access		disk number Y: partition number The shared folder that can be us		
Access Limits	John Mike	←	Robin		-	guest		for Media Server is on	ly disk1_pt1.	
								Access Limits		
		\rightarrow			-	→		Sets the access perm user name. The defau Limits(Read/Write)". U	Jsers can be	
Web Access	Access Limits							set to "Read/Write", " and "No access."	'Read only"	
Apply								Web Access		
								The AirStation authori		
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Parameter	Meaning
Shared Folder Name*	Enter a name for the shared folder. Up to 18 alphanumeric characters, spaces, hyphens (-), and underscores (_) may be used.
Shared Folder Description*	Enter a description of the shared folder (optional). Up to 75 alphanumeric characters, spaces, 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.

Parameter	Meaning
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.

* This is not displayed when Automatic USB Disk Assignment (page 71) is used:

The following shared folder settings are used when Disk Management is activated:

- All folders: Access limits 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.

Setu	p Intern	et/LAN Wireless Config Security	LAN Config	NA	S Admin Config	Diagnostic	
Disk Management Shared Folder User Management Shared Service							
Web Access Media Server BitTorrent Logout							
					User Management		
Add User					User Name		
User Name				Set the user names that will have			
					access to shared folders. From 1 to 20 8-bit alphanumeric characters, "-", "_" and "." can be used. Symbols cannot be used as the first character. The maximum number of users that can be registered is 16.		
Password							
		(confirmation)					
User	Description						
Add					Password		
Auu					Set the password necessary to access shared folders. From 1 to 20 8-bit alphanumeric characters,		
Current Users					"-" and "_" can be used. "-" cannot be used as the first character. For		
Cun					Windows 98SE, 98 an 14 8-bit alphanumeric	characters	
No.	User Name	User Description	Operation		can be used. For Mac OS, up to eight 8-bit alphanumeric characters can be used. There is a possibility that shared folders will become inaccessible.		
	guest	Built-in account for guest access to the system					
1	John	office	Edit Delete				
2	Mike	home	Edit Delete		User Description		
3	Robin	guestroom	Edit Delete		Set user description. Up to 75 8-bit characters can be input.		
Characters from various countries, 8-bit spaces, and the symbols "-"							

Parameter	Meaning
Username	Enter the name of a user to be given access to the shared folder. Up to 20 alphanumeric characters, space, 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.

Setup Internet/LAN	Wireless Config	Security	LAN C	Config	NAS	Admin Co	nfig	Diagnost	ic
Disk Management Shared Folder User Management Shared Service Web Access Media Server BitTorrent Logout									
media Serv	BRIOTER					Shared Service	S	Logou	Â
Shared Folder	Enable					Shared Folder			Ξ
AirStation Name	AP0024A5C000D8					This option allows you to make a USB disk available on your local network. The default setting is			
AirStation Description						"Enabled."	ant oct	ung is	
Workgroup Name	WORKGROUP					You may specify folders as follows	access	s to shared	
Windows Client Language North America (CP437) Kindows Client Language North America (CP437) Kindows Client Language State AirClastics				ation)					
Apply (IP address of the AirStation) (AP00XXXXXXXXX (AirStation Name in 15 characters or less)									
						AirStation Name	e		
[Shared Service] Sets the AirStation Name. Same as [Admin Config] - [Name] -									
Shared Service Enabled [AirStation Name]. Becomes a host name that can be used as a shared service. Because host names are limited to 15						-			

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, space, and hyphens (-), may be used. The AirStation name is also used as the hostname that will be used with the shared service. The shared service may not be available if you use over 15 alphanumeric characters in your AirStation's name.
AirStation Description	Describe the AirStation (optional). Up to 48 alphanumeric characters, space, hyphens (-), and underscores (_) may be used.
Workgroup name	Enter your workgroup name. Up to 15 alphanumeric characters, space, 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 used with the shared service.

Web Access

The screen to configure Web Access.

Setup Internet/LAN	Wireless Config	Security	LAN Config	NAS	Admin Config	Diagnostic
Disk Management Shared I Web Access Media Server		ement Share	d Service			Logout
					Web Access	
Web Access	🗷 Enable				Web Access	E State State
Web Access Display Languag	e English 👻				Set whether or not to Access function. The setting is enabled. If	e default
HTTPS/SSL Encryption	Enable				disabled, then share not made public.	d folders are
Web Access External Port	Auto 👻				Web Access Displa	
Web Access External For	Port Number: 30854				Set the language us	ed to display
	Use BuffaloNAS.con	n registration fund	tion	-	the Web access fun default is "English."	ctions. The
DNS Service Host Name	BuffaloNAS.com name	buffalo_name			HTTPS/SSL Encryp	otion
Apply	BuffaloNAS.com key	buffalo_key			Set whether or not to encryption for safer t https instead of http setting is "Not used.	o use SSL transfers (Uses
					Web Access Extern	
[Web Access Status]					Configure the extern Web Access interface setting is [Auto] and	ce. The default
Web Access Enabled					9000.	
External Port Status Registere					Auto	
BuffaloNAS.com Registeri	ng				Configure port num Access automatica Router Mode ON, th	lly. Under
	(C)200	0-2010 BUFFALO	INC. All rights reserved	I	tor much olde tropet	or odmin a

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].
DNS Service Hostname	Sets the DNS Service Hostname when the Web access function is activated. Select [Use BuffaloNAS.com registration function] to use the Web access function easily. You'll have to configure a [BuffaloNAS.com name] and [BuffaloNAS.com key] to use BuffaloNAS.com. 3 - 0 alphanumeric characters, spaces, hyphens (-), underscores (_) and period (.), may be used in the BuffaloNAS. com name. 3 - 20 alphanumeric characters, spaces, 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.

Parameter	Meaning
Web Access	Displays the status of web access.
External Port Status	Displays the status of the external port.
BuffaloNAS.com	Displays the status of BuffaloNAS.com.

Media Server

Media Server settings.

Setup	Internet/LAN	Wireless Config	Security	LAN Config	NAS	Admin Config	Diagnosti	с
	Disk Management Shared Folder User Management Shared Service Logout							
					Me	edia Server		Î
Media S	erver 🛛 Enable				Me	edia Server		
Apply					Me	lects whether or not edia Server function. disabled.		III
[Status]					[S	tatus]		
Status	Enabled				St	atus		
Refresh	Update Data	base			lf t	splays the Media Se his cannot be used, atus of the USB disk	check the	Ŧ
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Parameter	Meaning
Media Server	Enable to use the media server.
Status	Displays the status of the media server.

BitTorrent

Configure the BitTorrent client.

Setup Internet/L	AN Wireless Config	Security L	AN Config	NAS	Admin Config	Diagnostic
Disk Management Sha Web Access Media Ser		gement Shared	Service			Logout
					BitTorrent	Â
BitTorrent Function	Enable				BitTorrent Function	
External Port Number	Allows you to enable/disable the BitTorrent function. The default					
[Advanced Settings]					Downloaded files are bittorrent folder on the	stored in e USB disk.
Bandwidth Restriction	Z Enable Maximum Download Speed Maximum Upload Speed 200				Automatic USB Disk is set to [Use] : disk1_pt1/bittorrent Automatic USB Disk is set to [Do not use] folder name/bittorrent	Assignment : shared
Apply					if you use BitTorrent, quality may be degra response of the confi screen may become	ded or the guration
Download Manager	Delete BitTorrent inf	ormation			Caution	
					Bit Torrent can be or XFS is used as a for drive	nly used when rmat on USB
[BitTorrent Status]						
BitTorrent Status	Not Available (specifie	ed disk's file system d	oes not support B	itTorrent.)	External Port Numb	
BitTorrent External Port S	Status Registered				Specify the external for BitTorrent. The de and the value is [900]	fault is [Auto]
					Auto	-
	(C)200	0-2010 BUFFALO INC	. All rights reserve			

Parameter	Meaning
BitTorrent Function	Enable to use the BitTorrent client. If the BitTorrent client is enabled, overall communication performance may decrease and settings screens may respond slower. If that happens, reformat the USB disk with XFS. That may help performance.
External Port Number	Select an external port number.

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

You can download the latest Windows BitTorrent client from www.bittorrent.com.

Admin Config

Name

Configure basic AirStation settings.

Setup Internet/LAN Wireless Config	Security	LAN Config	NAS	Admin Config	Diagnostic
Name Password Time/Date NTP ECO	Network-US	B Access Log	g Save	Restore	Logout
	_		4	irStation Name	
AirStation Name AP00037FBEF04D			4	irStation Name	
List Network Services V Enable			s	his can be used to as pecific descriptive nar virStation.	ssign a me for the
Apply			T 6	he AirStation name n 4 alphanumeric chara	nay be up to
(C)2000-:	2011 BUFFALO	INC. All rights reser	ved.		
Parameter	Meaning				

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

Password

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

Setup Internet/LAN	Wireless Config	g Security LA	N Config	NAS	Admin Config	Diagnostic			
Name Password Time/Date NTP ECO Network-USB Access Log Save/Restore Initialize/Restart Update Logout Logout Logout									
Administrator Name	root (fixed)				irStation Administra assword	ator			
Administrator Password		(Confi	m)	Т	Administrator Name This is the user name used to log into the AirStation's configuration				
Apply				s fr	creens. It cannot be c om 'root'.	hanged			
	(C)2000)-2011 BUFFALO INC. A	II rights rese		dministrator Passwo	ord			
Parameter		Meaning							
Administrator Name The name of the Admi				strator a	account is "root".				
Administrator Passwo	ord	The Administra	tor passw	ord ma	y contain up to 8	3 alphanumer			

characters and underscores (_).

Time/Date

Configure the AirStation's internal clock.

Setup Internet/LA	N Wireless Config	Security	LAN Config	NAS	Admin Config	Diagnostic		
Name Password Time/D Initialize/Restart Update	store		Logout					
					Time/Date	-		
NTP is enabled. Changes server when it syncs.	made to time and date	settings may b	e overwritten by	the NTP	Set the AirStation's internal clock. Set the internal clock manually.			
Local Date	2011 Year 1 Mo	nth 1 Day			Note:			
Local Time	0 Hour 10 Minu	te 46 Second	s		The AirStation's internal clock is reset to its default setting			
Time Zone	(GMT+00:00) Greenwich	Mean Time, Londo	on 👻		whenever power is lost because it doesn't have a battery. However, the AirStation may be			
DST(Daylight Saving Time)	EU type 1 For GMT +00:	00(From last Sund	lay in Mar to last Su	nday in Oct) 👻	configured to adjust automatically even	t its clock		
Apply Refresh Ge	by connecting it to a You may also reset manually.	NTP server.						
•				4	Local Date	-		
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Parameter	Meaning
Local Date	You may manually set the date of the AirStation's internal clock.
Local Time	You may manually set the time of the AirStation's internal clock.
Time Zone	Specify the time zone (offset of Greenwich Mean Time) of the AirStation's internal clock.
DST (Daylight Saving Time)	You may configure the AirStation to automatically use DST (Daylight Saving Time). If selected, the AirStation will automatically adjust the time at the beginning and end of DST.

NTP

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

Setup Internet	LAN Wi	reless Config	Security	LAN Config	NAS	Admin Config	Diagnostic	5			
Name Password Time/Date NTP ECO Network-USB Access Log Save/Restore Logout											
					N	ſP	[-			
NTP Functionality	🔽 Enable				If	an NTP server is cont	figured the	-			
NTP Server	time.nist.g	jov			Ai	Station will access t P server and adjust	he specified				
Update Interval	24	hours			clese	clock to conform with the NTP server's time. NTP is an acronym					
Apply					se	Network Time Protoc rver distributes accur twork devices.					
		(C)2000-2	011 BUFFALO	INC. All rights rese	rved.			*			

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

ECO

Configure Eco mode from this screen.

Setup Inte	ernet/LAN	Wireless Config	Security	LAN Conf	ig NAS	Admin Config	Diagnostic
		NTP ECO Netwo	ork-USB Acce	ss Log Sav	e/Restore		1 and 1
Initialize/Restart	Update						Logout
						ECO	
Schedule feature	Enable					0	. Fashling
Apply						Configure ECO Mod ECO Mode will put i	t in energy
						save operation acco Weekly schedule.	ruing to
						Schedule feature	
						Selecting "Enable" v	vill enable
Weekly schedule						ECO Mode and char operation mode acc	nge the ording to
00 02	04 06	08 10 12	14 16	18 20	22	Weekly schedule. The default is disabl	Ŭ
Sun		·····				Note:	
Mon		· · · · · · · · · · · ·				The Operational	
Tue						changed even o communicating	at the time set
Wed		· · · · · · · · ·				note that comm be disconnecte	unication may
Thu Fri						case. • AOSS does not	
Sat						 AOSS does not ECO mode if th Mode is not "no 	e Operational
our		1 1 1				 Pressing and h 	olding AOSS
Normal Slee	ep 🗾 User De	efine			=	button on the m the Operational Normal can ten	
					=	it to "Normal".	iporaniy recover
	Operational M	lode Normal 👻					
	Start time	0:00 -				Weekly schedule	
Register schedule	End time	0:30 🔻					
	The day of we	ek <mark>Sun</mark> Mon Tue	e Wed Thu I	Fri Sat		Register Weekly sc want to change the	Operational
						Mode you have regis overwrite a period of	time you want
Add						to change in the new Mode.	v Operational
						Register schedule	
						Operational Mode	
User Define Mode	e Settings					Select the Operatio The default value is	
	LED	Off 👻				Normal Does not perform	enerov savino
User Define Mode		ECO (Slow operation) 🛨			operation.	enorg, eaving
	Wireless LAN	Off 🝷				Sleep Perform following	the energy
Apply						saving operation. * Turn off LED	
					-	* Stop wired LAN * Stop wireless L4	N -
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Parameter	Meaning
Schedule feature	Enable to schedule Eco Mode. If Eco mode is enabled, AOSS will function only when the AirStation is in Normal operating mode.
Weekly schedule	Graphically displays the configured schedule.
Register schedule	Configure operational mode for time periods in the weekly schedule. If User Defined mode is chosen, configure it below.
User Defined Mode	Individual power saving elements may be configured for User Defined mode.

Network-USB

Configure Network-USB from this screen.

Setup	Internet/LAN	Wireless	Config	Security	LAN Config	NAS	Admin Config	Diagnost	tic	
Name Password Time/Date NTP ECO Network-USB Access Log Save/Restore Logout										
						Ne	etwork-USB			
Network	USB	Enable					Use multifunction printer is the			
Use mult	ifunction Printer	Enable				fur	nction using the mult nter which supports	ifunction		
Apply					St Un wa	orage Class as a privion supports orage Class as a privion of the second	nter. ckbox if you	Ŧ		
			(C)2000-2	2011 BUFFALO	INC. All rights rese	rved.				

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.

Setup	Internet/LAN Wireless Config	Security	LAN Con	fig N/	4S	Admin Config	Diagnostic	6		
	Password Time/Date NTP ECO /Restart Update	Network-US	B Access	Log S	ave	Restore	Logout			
					Ma	anagement Access		-		
Log Out	put 🔲 Enable	the	u may prohibit mana AirStation in specifi cumstances. Enablir	ič	E					
Enable	Management Access	Number of Pa	ckets		the	ese limitations will pr anges being made to	event			
	Prohibit configuration from wireless LAN		0		AirStation's settings from PCs that meet the listed limitation criteria. Note that checking all of these boxes at once will make it very					
	Prohibit configuration from wired LAN		0							
Internet	Side Remote Access Setting				dif	icult to make future of AirStation's setting	changes to			
Enable	Management Access				Lo	Log Output				
	Permit configuration from wired Internet		Ch	ecking this box will r	record					
Apply					to	anagement Access" a log. Logging is dis fault.				
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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.

Setup Inter	net/LAN	Wireless (Config	Security	LAN Config	NAS	Ad	min Config	Diagnos	tic	
Name Password Time/Date NTP ECO Network-USB Access Log Save/Restore Logout											
							Syslog	Setup		Â	
Log Transfer	🔲 Enable								0.11	Ξ	
Syslog Server							log infor	transfers the Ai mation to a sys	rStation's slog server.		
Transfer Logs	Firewall	ic DNS Server Is Client Changes	DH AO AU	P Client CP Client			Log Transfer Checking [Enable] will instruct the AirStation to transmit log information to a Syslog server. The default is disabled. Syslog Server Specify the name of your Syslog Server by host name, host name				
Apply Select	t All Cle	ear All					Alphanu	nain or <u>IP Addr</u> Imeric characte ot '.' may be us slog Server Nan end with a hypl	rs, hyphen sed	Ŧ	
		(C)2000-2	011 BUFFALC) INC. All rights reser	ved.					

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

Setup Internet/LAN Wireless	Config Security	LAN Config	NAS	Admin Config	Diagnostic
Name Password Time/Date NTP E Initialize/Restart Update	CO Network-USB Ac	cess Log Sa	ve/Restore		Logout
Save				Save/Restore AirSta Settings	ation
Save Current Settings	nfiguration file with a passwor	rd		Save Current Settin	gs
				Once you've got your set up the way you w may save the current	ant it, you configuration
Restore Configuration from Backup File	Backup file Restore	Brov		of the AirStation to a that you're using for c Note:	
	Enter password (C)2000-2011 BUFFALO II		ro d	The AirStation will no restore configuration save file in the follow	is from the

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.

Setup	Internet/LAN	Wireles	s Config	Security	LAN Conf	ig NA	S	Admin Config	Diagnostic
	ssword Time Restart Upda		TP ECO	Network-US	B Access	Log S	ave/	Restore	Logout
	This reboots your	AirStation					Init	ialize/Restart	
Restart	Restart Now						Res	start	E
								s reboots your AirSt	ation.
								ettings affected: testarting will reset th	e clock to
Initialize	This will restore y Initialize Now		n to the facto	ory default settir	igs.			efault time.	e clock to
							Init	iolizo	-
			(C)2000-2	2011 BUFFALO	INC. All rights re	eserved.			

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.

Setup	Internet/LA	Wireless	Config	Security	LAN Config	NAS	Admin Config	Diagnosti	ic
	ssword Time estart Upda		ECO N	letwork-USB	Access Log	Save/Re	store	Logou	Jt
							Firmware Update		Â
Firmware Version	WZR-HP	-G300NH2 Ver	1.79				Update the AirStation'	s firmware.	Ш
Update Me	ethod	fy Local File natic Update(O	n Line Vers	ion Up)			Current Firmware Displays the firmware	e version of	
Firmware File Name					Browse	ə	the AirStation. Update Method		
Update F	Firmware						Please select firmwa method.	re update	
*Get upda	ted firmware		ur websit oad Serv				Specify Local File Update the firmware stored on the local F		
							Automatic Update (Version Up) Connect to On Line site via Internet to up firmware.	Version Up	
							Firmware file name		
			(C)20 <u>0</u> 0	-2011 BUFF <u>ALO</u>	INC. All rights reser	ved.	Use the browse butto		Ŧ

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

Diagnostic

System Info

View system information for the AirStation.

ystem Info Logs Pa	ckermo chentika		Log
			System Information
			ojotom miorination
Nodel	WZR-HP-AG300H Ver.	1.72 (R1.07/B1.00)	Display the AirStation's main
AirStation Name	AP0024A5C000D8	settings.	
Node Switch Status	Automatic Mode		Model
Operational Mode	Router Mode ON		Displays the model name and firmware version of the AirStation
Novie Engine Status	OFF		AirStation Name
	Method of Acquiring IP Address	Auto Detect Mode - PPPoE	Displays the AirStation's host name.
	Name of Connection Connection Status	Easy Setup (Default Connection) Online	Status of the hardware mode switch Displays the status of the ROUTER switch.
	Operation	Stop	
nternet	IP Address	211.18.137.199	Operational Mode
	PPP Server IP	61.117.68.185	Displays the current mode of operation.
	DNS1(Primary) DNS2(Secondary)	210.196.3.183 (Auto) 210.141.112.163 (Auto)	Movie Engine Status
	MTU Size	1454	Displays the status of the Movie Engine switch.
	Wired Link MAC Address	100Base-TX (Full-duplex) 00:24:A5:C0:00:D8	Internet AirStation's <u>INTERNET port</u> side information.
AN	IP Address Subnet Mask	192.168.11.1 255.255.255.0	Method of Acquiring IP Address Acquiring a Internet IP address.
	DHCP Server MAC Address	Enabled 00:24:A5:C0:00:D8	■ Name of the Connection
	Wireless Status SSID	Enabled BUFFALO-C000D8_A	The name of the PPPoE connection specified in the configuration.
	Authentication Encryption	WPA/WPA2 mixedmode - PSK TKIP/AES mixedmode	Connection Status Displays the current Internet side status.
Vireless(802.11n/a)	Broadcast SSID	Enable	Operational Mode
	Privacy Separator	Disable	The Operational Mode will show
	Wireless Channel 300 Mbps Mode MAC Address	40 (Auto) 40 MHz (Extension Channel : 36) 00:24:A5:C0:00:D9	any DHCP or PPPoE configuration is active. If DHCP is in use, the following commands can be executed.
	Wireless Status	Enabled	 [Release]: Releases the IP address assigned by the DHCP Sever
	SSID Authentication Encryption	BUFFALO-C000D8_G WPA/WPA2 mixedmode - PSK TKIP/AES mixedmode	DHCP Server. • [Renew] : Renews the IP address from the DHCP Server.
Wireless(802.11n/g/b)	Broadcast SSID Privacy Separator	Enable Disable	The following commands can be executed when using PPPoE.
	Wireless Channel 300 Mbps Mode	1 (Auto) 20 MHz	 [Start] : Start connecting to a PPPoE Server from idle/stop.
	MAC Address	00:24:A5:C0:00:D8	 [Connect] : Connect to PPPol from an idle condition.
14.0	USB disk Shared Folder Functio		 [Disconnect] : Disconnect communication with a PPPol Server.
VAS	Web Access Media Server function		[Stop]: Stop idle condition.
ECO Mode	BitTorrent Function Status	Use Disable Schedule feature	IP Address The IP address assigned to the
.co mode	-10100	2.2.2.0.0 Constant foldure	AirStation.

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

Logs

The AirStation's logs are recorded here.

Setup Interne	et/LAN Wire	less Config	Security	LAN Config	NA	S Admin Config Diagnos	stic
System Info Lo	gs Packet In	fo Client M	onitor Ping	1		Log	out
						Logo	Jul
					=	Logs	
Display log info	 Address Tran Firewall Dynamic DN DHCP Serve Wireless Clief 	S ♥ P S ♥ D r ♥ A ent ♥ A	P Filter PP Client DHCP Client OSS uthentication			Display log information recorded in the AirStation. The oldest information is overwritten by new logs. Display log info	m
	Setting Chan	-	iystem Boot Vired Link			Select the types of information tha should be logged by the AirStation The default is All. The following items can be selected:	t .
Display Selec	t All Clear	A II				Address Translation	
Logs						IP Filter	
						 Firewall(Includes discarded IP Masquerade packets) 	
Save to file log	gfile.log.			Delete		 PPP Client(Internet side) 	
Date Time	Туре	Log Content	t			Dynamic DNS(Internet side)	
2010/01/01 01:39:3	5 NTP	ntp server add	Iress 192.43.24	44.18		DHCP Client (Internet side)	
2010/01/01 01:39:3	5 NTP	probe count=	0 hostname=tii	me.nist.gov cycle_tim	e:	 DHCP Server(LAN side) AOSS 	
2010/01/01 01:39:3	5 NTP	start ntpclient				Wireless Client(Start/stop and client connection) Authontication	Ŧ
		(C)2000-2	2010 BUFFALO	INC. All rights reserv	ed.	- Authontion	

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.

Sent Received Packet Traffic Information										
Interface	Normal	Errors	Normal	Errors						
Wired LAN	37442		31143			an	The total numbers of packets sent and received by the AirStation, as			
Wired Internet	12745	0	16608	0			well as the errors sending and receiving, are displayed. [Refresh] button Displayed packet information is renewed with current information			
PPPoE No.1: Easy Setup	50	0	55	0						
Wireless LAN (802.11n/a)	426	0	0	0						
Wireless LAN (802.11n/g/b)	1476	0	0	0			when this button is clicked.			
Refresh										

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

Client Monitor

This screen shows devices that are connected to the AirStation.

Setup Inter	net/LAN	Nireless C	onfig Securi	ty LAN Cor	nfig NA	S	Admin Config	Diagnostic	5
System Info Logs Packet Info Client Monitor Ping									
								Logout	
						С	lient Monitor	(Ē
MAC Address	Lease IP Address	Hostname	Communication Method	Wireless Authentication	802.11n		isplays the LAN side		
00:11:09:94:F5:B9	192.168.11.2	John-PC	Wired	-	-	(PCs) that are accessing the AirStation.			
Refresh							he following informations in the second s	on is	
		((C)2000-2010 BUFF	ALO INC. All rights	reserved.				•
Parameter Meaning									
Client Monitor Displays information (MAC address, lease IP address, hostnam communication method, wireless authentication and 802.11n devices that are connected to the AirStation.									

Ping

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

Setup In	ternet/LAN	Wireless Config	Security	LAN Config	g NA	S	Admin Config	Diagnost	ic
System Info	Logs Pac	ket Info Client Mo	onitor Ping					Logo	ut
						Pi	ng	Logo	Â
Destination Execute Result	Address					the you Air	Ping test can be per e AirStation. With a u can determine whe Station can commune ecific network device	ping test, other the nicate with a	Ξ
Destination	192.168.11.2						stination Address		
Result	64 bytes from	192.168.11.2: icmp_seq 192.168.11.2: icmp_seq 192.168.11.2: icmp_seq	=1 ttl=128 time	=0.3 ms		yoi 192	ter the network IP ac u want to ping; e.g. 2.168.11.3 or w.buffalotech.com.	dress that	
		(0)2000-2		INC. All rights re	havrae	Ex	ecute		-
		(0)2000 2	UND BOIT ALC	into. Air rights rea	501100				

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

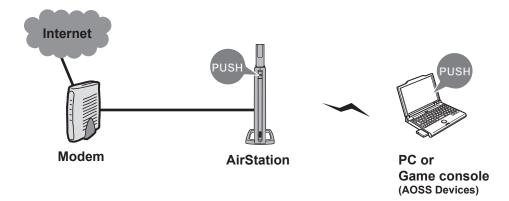
Chapter 5 - Connect to a Wireless Network

Automatic Secure Setup (AOSS/WPS)

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



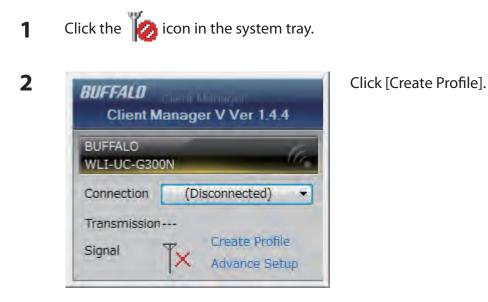
AOSS (AirStation One-Touch Secure System) was developed by Buffalo Technology. WPS was created by the Wi-Fi Alliance.



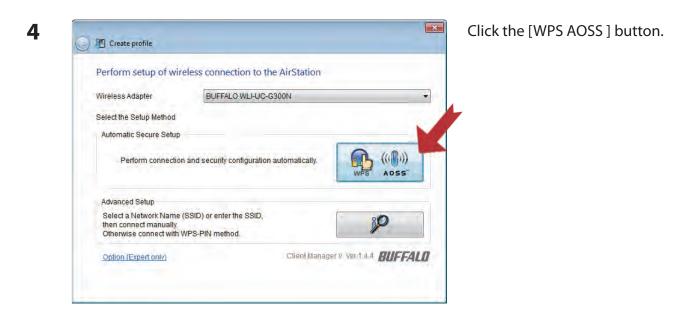
- Before using AOSS/WPS to connect to a Buffalo wireless client, install Client Manager software from the included AirNavigator CD. Consult your wireless client's documentation for more information.
- Buffalo's Client Manager software can be used with the wireless LAN devices built into most computers.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

Windows 7/Vista (Client Manager V)

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



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



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

Windows XP (Client Manager 3)

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

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



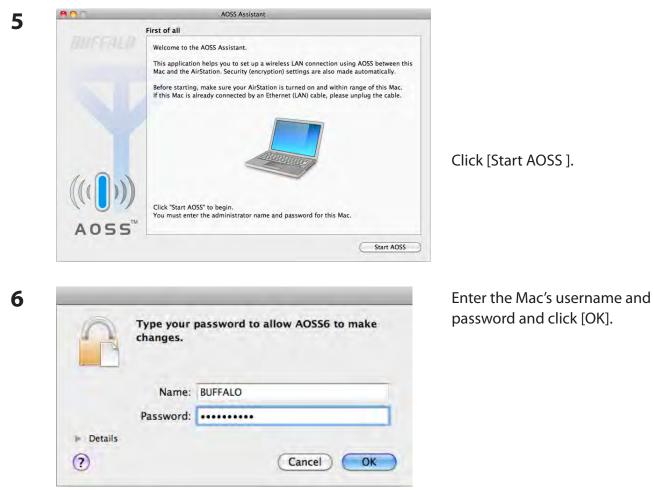
Click the [WPS AOSS] button.

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

Mac OS X (AOSS Assistant)

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

- 1 Load the AirNavigator CD in your Macintosh.
- **2** Double-click the Mac folder in the AirNavigator CD.
- **3** Double-click [AOSS Assistant].
- **4** The software license screen is displayed. Click [Agree] to proceed.



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

Other Devices (e.g. Game Console)

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

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

Manual Setup

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

- Note: If the AirNavigator CD is used to perform setup when making the initial settings of AirStation, the wireless connection settings for the AirStation are completed during the Setup process. As a result, you do not need to make the settings below. 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.

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.





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

WZR-HP-G300NH / WZR-HP-G300NH2 User Manual

Type the network security key Security key: Hide characters	Connect to a Netwo		Enter the
	Type the network	security key	
Hide characters	Security key:		
		Hide characters	
You can also connect by pushing the button on the router.			

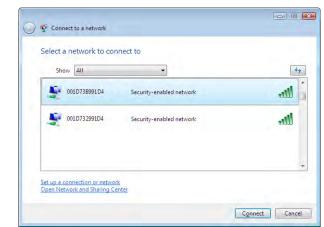
Enter the encryption key and click [OK].

Windows Vista (WLAN AutoConfig)

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

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

3



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

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

🚱 💇 Connect to a network	
Press the configuration button on your ac	cess point
Press the configuration button or access point before continuing.	the
I can't find the configuration button. I want to enter the network key or passphrase instead	Next Cancel

	- • ×
🕝 🖞 Connect to a network	
Enter the PIN for BUFFALO INC. WHR-G300N on 001D73B991D4	
You can find this PIN displayed on the BUFFALO INC. WHR -G300N.	
PIN:	
Display characters	
I don't have the PIN. I want to enter the network key or passphrase instead	
Entrance enter and inclusion neg or pospinious instance	
Next	Cancel

4	S 😨 Connect to a network	Enter the encryption key and click [Connect].
	Type the network security key or passphrase for 001D73B991D4 The person who setup the network can give you the key or passphrase.	
	Security key or passphrase:	
	Display characters	
	If you have a <u>USB flash drive</u> with network settings for 001D73B991D4, insert it now.	
	Connect Cancel	

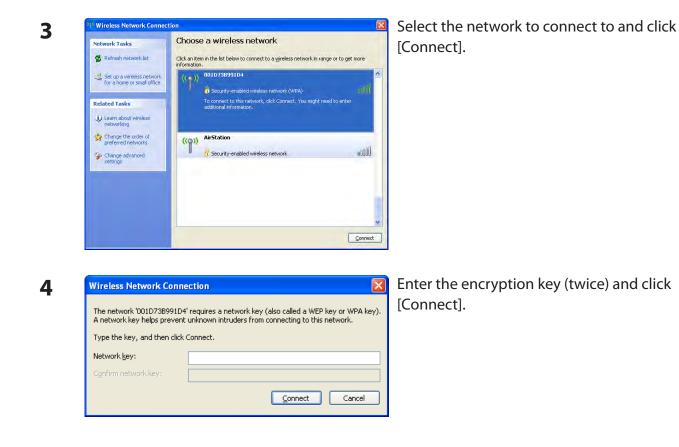
Step through the wizard to finish configuration.

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

Windows XP (Wireless Zero Configuration)

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

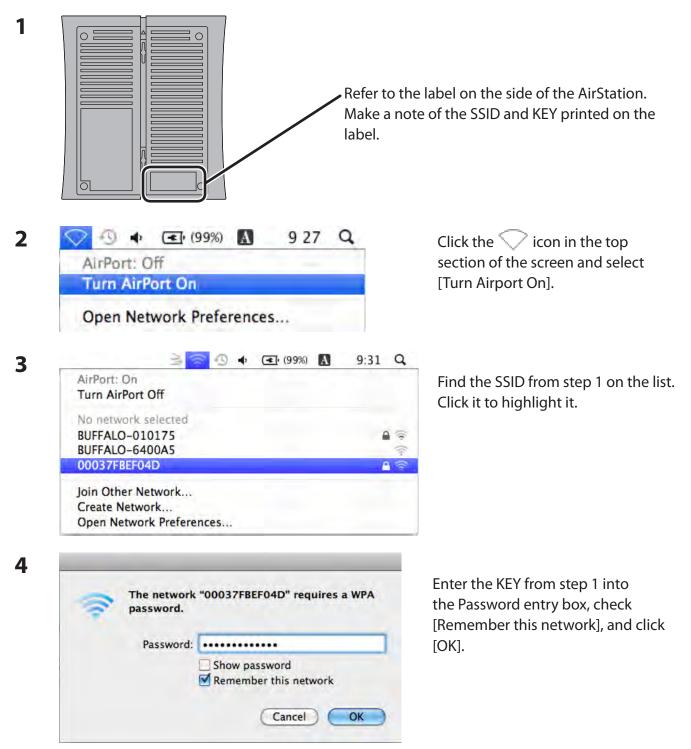
- Note: If Client Manager 3 is installed on your computer, Wireless Zero Config is disabled. Uninstall Client Manager 3 to use Wireless Zero Config, or just use Client Manager 3 to connect to the AirStation.
- 1 Right click on the 🕎 wireless network icon in the system tray.
- 2 Click [View Available Wireless Networks].



It will take several seconds for configuration to complete.

Mac OS X (AirPort)

Use AirPort on a Mac to connect to the AirStation.



It will take several seconds for configuration to complete.

Chapter 6 - Troubleshooting

Cannot connect to the Internet over wired connection.

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

Power	Green light is on
Router	Green light is on or off (depending on your environment)
Diag	off
LAN	Green light is on or flashing
Internet	Green light is on or flashing

- Make sure that your computer is configured to "obtain an IP address automatically from DHCP". (See chapter 10)
- Restart your AirStation.

Cannot access the web-based configuration Interface.

- See chapter 4 for instructions to open the AirStation's configuration interface.
- Enter the correct username and password to log in to the configuration interface. The factory defaults are "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 configured to "obtain an IP address automatically from DHCP". (See chapter 10)
- 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 -	The AirStation's MAC address (printed on the label)
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: Encryptio	n 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 -	The AirStation's MAC address (printed on the label)
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 130 Mbps).

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

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

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

Other Tips

Issue:

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

Answer:

Open your browser, enter 192.168.11.1 as the browser address, and hit Enter. You will be prompted to log in. Enter "root" for the username and leave the password box 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 interface. From the home page, go to the Internet Game/ Port Mapping section. Enter the port that needs to be forwarded and the IP address of the gaming console.

Issue:

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

Answer:

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

Issue:

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

Answer:

Log in to the configuration interface. Go to the Wireless Config tab and then select the Basic tab if necessary. Find the settings area for SSID. Select the [Use] radio button and enter the name you wish to use for your network in the text field provided. Click [Apply] to save the settings. Once the wireless router has rebooted, select the new network name for all wireless devices and re-enter your encryption key if necessary.

Issue:

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

Answer:

There are many environmental factors that may cause this. First, ensure the issue is not range related by moving the 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 - 13 may be selected. Try the Auto-Channel option if available. Otherwise, manually select an alternate channel and click [Apply].

Issue:

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

Answer:

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

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

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

Issue:

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

Answer:

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

Chapter 7 - Default Configuration Settings

Feature	Parameter	Default Setting	
Internet	Method of Acquiring IP Address	Perform Easy Setup (Internet Connection Wizard)	
(Router Mode only)	Default Gateway	none	
	Address of DNS Name Server	none	
	Internet MAC Address	Use Default MAC Address	
	MTU Size of Internet Port	1500 Bytes	
PPPoE	Default PPPoE Connection	No Active Session	
(Router Mode only)	IP Unnumbered PPPoE Connection	No Active Session	
	PPPoE Connection List	none	
	Preferred Connections	none	
DDNS	Dynamic DNS Service	Disabled	
(Router Mode only)	Current Dynamic DNS Information	none	
VPN Server	LAN Side IP Address	192.168.11.1 (255.255.255.0)	
(Router Mode only)	DHCP Server Function	Enabled	
	DHCP IP Address Pool	192.168.11.2 for up to 64 Address(es)	
	PPTP Server Function	Disabled	
	Authorization Type	MS-CHAPv2 (40/128-bit Encryption)	
	Server IP Address	Auto	
	Client IP Address	Auto	
	DNS Server IP Address	LAN IP address of the AirStation	
	WINS Server IP Address	none	
	MTU/MRU value	1396	
	PPTP User List	none	

Feature	Parameter	Default Setting
LAN	LAN Side IP Address	Router Mode (Router Switch AUTO/ON): 192.168.11.1 (255.255.255.0)
		Bridge Mode (Router Switch OFF): 192.168.11.100 (255.255.255.0)
		Bridge Mode (Router Switch AUTO): Obtain automatically from DHCP Server
	DHCP Server Function (Router Mode only)	Enabled
	DHCP IP Address Pool (Router Mode only)	192.168.11.2 for up to 64 Addresses
	LAN Side IP Address (For IP Unnumbered) (Router Mode only)	none
	Lease Period (Router Mode only)	48 Hours
	Default Gateway (Router Mode only)	AirStation's IP Address
	DNS Servers (Router Mode only)	AirStation's IP Address
	WINS Server (Router Mode only)	Do Not Specify
	Domain Name (Router Mode only)	Assigned Domain Name
	Default Gateway (Bridge Mode only)	none
	DNS Server Address (Bridge Mode only)	none
DHCP Lease (Router Mode only)	Current DHCP Client Information	none
NAT	Address Translation	Enabled
(Router Mode only)	Log Output of Deleted Packets	Disabled
Route	Routing Information	none

Feature	Parameter	Default Setting		
WPS	WPS	Enabled		
	External Registrar	Enabled		
	AirStation PIN	An 8-digit random value		
		(Printed on the label of the AirStation)		
	WPS Security Information	WPS status:configuredSSID:AirStation's MAC AddressSecurity:WPA/WPA2 mixedmode - PSK TKIP/AES mixedmode or noneEncryption key:Either a 13-digit random value or disabled. Printed on the label of the AirStation. Encryption is disabled by default settings on AirStation for Asia Pacific.		
AOSS	Encryption Type of Exclusive SSID for WEP	none		
	Encryption level expansion function	Enabled		
	Dedicated WEP SSID isolation	Disabled		
	Dedicated WEP for game consoles	Disabled		
	AOSS Button on the AirStation Unit	Enabled		
Basic	Wireless Radio	Enabled		
	Wireless Channel	Auto Channel		
	300 Mbps Mode	Band Width: 20 MHz Extension Channel: -		
	Broadcast SSID	Allow		
	Separate feature	not used		
	SSID	Use AirStation's MAC address		
	Wireless authentication	WPA/WPA2 mixedmode - PSK, or no authentication		
	Wireless encryption	TKIP/AES mixedmode, or no encryption		
	WPA-PSK (Pre-Shared Key)	A 13-digit random value or disabled (Printed on the label of the AirStation. Encryption is disabled in default settings on AirStation for Asia Pacific.)		
	Rekey interval	60 minutes		
Advanced	Multicast Rate	Auto		
	DTIM Period	1		
	Privacy Separator	Disabled		

Feature	Parameter	Default Setting			
WMM	WMM-EDCA Parameters		For AP	For STA	
	(Priority AC_BK (Low))	CWmin	15	15	
		CWmax	1023	1023	
		AIFSN	7	7	
		TXOP Limit	0	0	
		Admission Control		Disabled	
	WMM-EDCA Parameters		For AP	For STA	
	(Priority AC_BE (Normal))	CWmin	15	15	
		CWmax	63	1023	
		AIFSN	3	3	
		TXOP Limit	0	0	
		Admission Control		Disabled	
	WMM-EDCA Parameters		For AP	For STA	
	(Priority AC_VI (High))	CWmin	7	7	
		CWmax	15	15	
		AIFSN	1	2	
		TXOP Limit	94	94	
		Admission Control		Disabled	
	WMM-EDCA Parameters		For AP	For STA	
	(Priority AC_VO (Highest))	CWmin	3	3	
		CWmax	7	7	
		AIFSN	1	2	
		TXOP Limit	47	47	
		Admission Control		Disabled	
MAC Filter	Enforce MAC Filtering	Disabled	Disabled		
	Registration List	none			
Multicast	Snooping	Enabled	Enabled		
Control	Multicast Aging Time	300 Sec.			
WDS	WDS	Use			
	Specify Master/Slave	Master			
Firewall	Log Output	Disabled			
(Router Mode only)	Basic Rules	Prohibit NBT and Micro Reject IDENT Requests Block Ping from Intern	5	ng Disabled Enabled Enabled	

Feature	Parameter	Default Setting	
IP Filter	Log Output	Disabled	
(Router Mode only)	IP Filter Information	none	
VPN Pass	IPv6 Pass Through	Disabled	
Through	PPPoE Pass Through	Disabled	
(Router Mode only)	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	Used	
	Multicast Rate	11 Mbps	
	Multicast Control	Snooping FunctionUseAging Time Seconds300 SecondsChange PriorityVI (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	Automatic USB Disk Assignment	Used	
Management	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	Access Limits	
User Management	Current Users	guest	

Feature	Parameter	Default Setting	
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	
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	2011 Year 1 Month 1 Day	
	Local Time	0 Hour 0 Minute 0 Seconds	
	Time Zone	(GMT+00:00) Greenwich Mean Time,London	
	DST (Daylight Saving Time)	EU type 1 For GMT+00:00(From Last Sunday in Mar to last Sunday in Oct)	
NTP	NTP Functionality	Enabled	
	NTP Server	time.nist.gov	
	Update Interval	24 hours	

Feature	Parameter	Default Setting			
ECO	Schedule feature	Disabled			
	Register schedule	Operational Mode: Start time: End time: The day of week:	Normal 0:00 0:30 none		
	User Define Mode	LED: Wired LAN: Wireless LAN:	Off ECO (Slow operation) Off		
Network-USB	Network-USB	Enabled			
	Use multifunction Printer	Enabled	Enabled		
Access	Log Output	Disable	Disable		
	Limitation Item	Prohibit configuration	Prohibit configuration from wireless LANDisabledProhibit configuration from wired LANDisabledPermit configuration from wired InternetDisabled		
Log	Log Transfer	Disabled			
	Syslog Server	none	none		
	Transfer Logs	Dynamic DNS, DHC Wireless Client, Aut System Boot, NTP C Bridge Mode: IP Filter, DHCP Clier Authentication, Set	Address Translation, IP Filter, Firewall, PPP Client, Dynamic DNS, DHCP Client, DHCP Server, AOSS, Wireless Client, Authentication, Setting Changes, System Boot, NTP Client, and Wired Link		

Chapter 8 - 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.

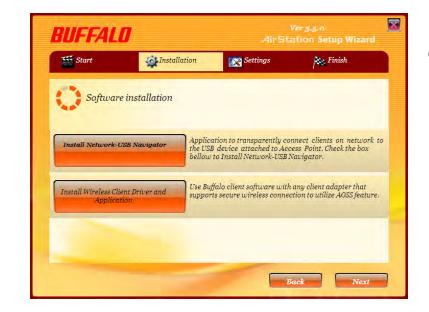
The setup wizard will launch automatically. If not, open the CD and click on "ASSetWiz.exe" in the "win" folder.

2



Click [Client setup].

J	
_	



Click [Install Network-USB Navigator].

×	
Welcome to the Network-USB Navigator Installer	Click [Ne
This wizard helps you install Network-USB Navigator on your PC.	
Before installation, please close any running programs. To begin installation, click (Next).	
< Back Next > Cancel	
	Welcome to the Network-USB Navigator Installer This wizard helps you install Network-USB Navigator on your PC. Before installation, please close any running programs.

4

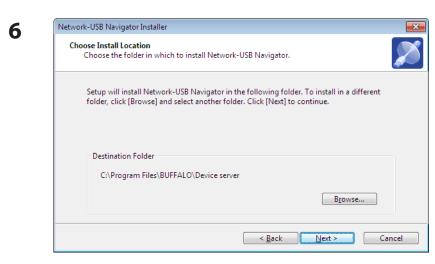
5



Click [Yes].

7

8





Select Start Menu Folder Select a folder to place the program's	shortcut.	
	rk-USB Navigator in the following Start Menu fold Ider, enter a new group name or select from the lis	
<u>G</u> roup Name		
BUFFALO\Network-USB		
Existing Groups		
CyberLink DVD Suite F-Secure Client Security		

 Network-USB Navigator Installer

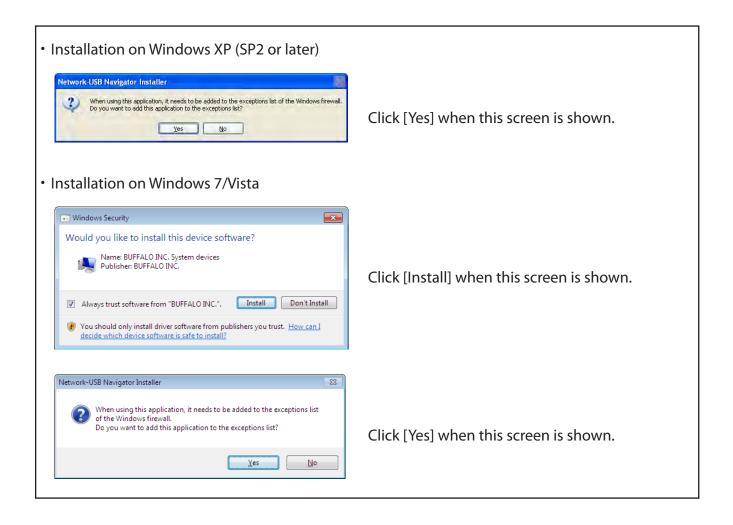
 Starting Installation

 Preparation for program installation is complete.

 Click on [Start] to begin installation.

 If you want to reset Network-USB Navigator to factory defaults, or want to make changes to this installation, click on [Back]. If you click [Cancel], the wizard will be closed.

Click [Start].





- 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.

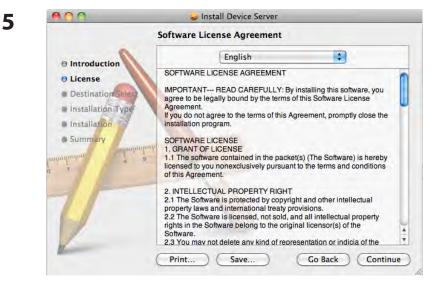
Network-USB Navigator installation is complete.

Initial Setup for Mac 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].



Click [Continue].



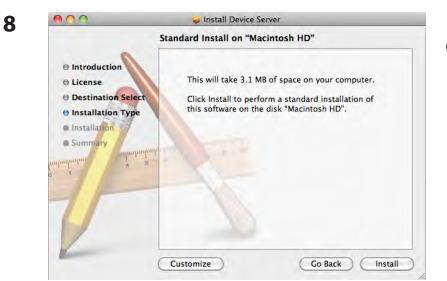
Click [Continue].

6	To continue installing the of the software license ag		to the terr
	Click Agree to continue or c and quit the Installer.	lick Disagree to cancel the	installation
	(Read License)	Disagree	Agree

Click [Agree].



Click [Continue].



Click [Install].

9		
	Type your password to allow Installer to make changes.	Input your name and password
	Name: BBS	
	Password: ••••••	
	⊯ Details	Click [OK].
	(?) Cancel OK	
	you want to install the software now? Cancel Continue Installation	
11	A C Server	
••	The installation was completed successfully.	Click [Restart].
	 Introduction License Destination Select Installation Type Installation Summary Summary The installation was successful. The software was installed. Click Restart to finish installing the software. 	
	Go Back Restart	

_	Network–USB Navigator
Ø	Select operation when the Network-USB unit detects USB devices. This settings can be changed after installation.
() c	utomatic Connection connecting detected USB device automatically. This setting is recommended if only one omputer uses Network–USB unit.
OF	Manual Connection ach computer chooses connecting USB devices when it is detected by Network–USB uni his setting is recommended when multiple computers want to share one USB device by letwork–USB unit.
	C

- 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 \bigotimes .
- 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	& Network-I	USB Navigator							
_		letwork-US	5B	¢	1753	? → Manual Page	Click	? - , then click [Manual	
	Name	Туре	Status	Host Name	Model Name	About Network-USB Navigator	Page].		

3 Network-USB User Manual will open.

How to use Network-USB

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

Chapter 9 - Checking Wireless Signal Quality

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

Windows 7/Vista

- Note: If Client Manager V is not already installed, install it from the AirNavigator CD. Click [Install Wireless Client Driver and Application] > [Options] > [Advanced Installation], and install Client Manager V.
 - · Client Manager V does not support Windows XP.



2



Click [Advanced Setup].

3



When the Client Manager V status screen is displayed, click

4	🖉 Wireless LAN Diagnoses 📃 🗉 💌
	<u>F</u> ile <u>V</u> iew
	Adapter BUFFALO WLI-UC-G300N Wireless LAN Adapter
	[dBm] [Mbps] [%] -20 300 -40 240 -60 144 -80 54 Rssi Level[dBm] Link Speed[Mbps] Signal Quality[%]
	2.4GHz 1 2 3 4 5 6 7 8 9 10 11 12 13 14
	W52 W53 34 36 38 40 42 44 46 48 52 56 60 64
	W56 100 104 108 112 116 120 124 128 132 136 140

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

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

Macintosh

- **1** Load the AirNavigator CD into your Macintosh.
- 2 Double-click the Mac folder in the AirNavigator CD.
- **3** Double-click [WLAN Monitor].

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

⊗ . <i>BUFFALD</i>	WLAN Monitor
Network Name (SSID)	
Status	Connected
IP Address	192.168.11.3
	WPA2 Personal
- Encryption	AES 130 Mb
Band	2:4 GHz (11n/g/b)
Channel	5
Link Speed	130 Mbps
Quality	77 %
Signal Level	-27 dBm

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

Chapter 10 - TCP/IP Settings

Windows 7

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

- 1 Click [Start] > [Control Panel] > [Network and Internet].
- 2 Click [Network and Sharing Center].
- **3** Click [Change Adapter Settings] on the left side menu.
- **4** Right-click on [Local Area Connection], then click [Properties].
- 5 If the User Account Control screen opens, click [Yes] or [Continue].
- **6** Select [Internet Protocol Version 4 (TCP/IPv4)] then click [Properties].
- **7** To have DHCP set your IP address settings automatically, check [Obtain an IP address automatically] and [Obtain DNS server address automatically].

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

 If the router's IP address is 192.168.11.1,

 IP address
 192.168.11.80

 Subnet mask
 255.255.255.0

 Default gateway
 192.168.11.1

 Preferred DNS server
 192.168.11.1

 Alternate DNS server
 blank

8 Click [OK].

Windows Vista

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

- 1 Click [Start] > [Settings] > [Control Panel].
- 2 Click [Network and Sharing Center].
- **3** Click [Manage network connections] on the left side menu.
- **4** Right-click on [Local Area Connection], then click [Properties].
- 5 If the User Account Control screen opens, click [Yes] or [Continue].
- **6** Select [Internet Protocol Version 4 (TCP/IPv4)], then click [Properties].
- **7** To have DHCP set your IP address settings automatically, check [Obtain an IP address automatically] and [Obtain DNS server address automatically].

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

If the router's IP address is	192.168.11.1,
IP address	192.168.11.80
Subnet mask	255.255.255.0
Default gateway	192.168.11.1
Preferred DNS server	192.168.11.1
Alternate DNS server	blank

8 Click [Close].

Windows XP

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

- 1 Click [Start] > [Settings] > [Control Panel].
- 2 Double-click [Network].
- **3** Right click on [Local Area Connection], then click [Properties].
- **4** Select [Internet Protocol (TCP/IP)], then click [Properties].
- **5** To have DHCP set your IP address settings automatically, check [Obtain an IP address automatically] and [Obtain DNS server address automatically].

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

If the router's IP address is	192.168.11.1,
IP address	192.168.11.80
Subnet mask	255.255.255.0
Default gateway	192.168.11.1
Preferred DNS server	192.168.11.1
Alternate DNS server	blank

6 Click [Close].

Mac OS X

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

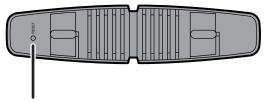
- 1 Click [Apple menu] > [System Preferences...].
- 2 Click [Network].
- **3** Click [Ethernet].
- **4** To have DHCP set your IP address settings automatically, select [Using DHCP] in the Configure IPv4 field.

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

If the router's IP address is	192.168.11.1,
IP Address	192.168.11.80
Subnet Mask	255.255.255.0
Router	192.168.11.1
DNS Server	192.168.11.1
Search Domains	blank

5 Click [Apply].

Chapter 11 - Restoring the Default Configuration



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

Chapter 12 - Shared Folders and the USB Port

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

- When using two-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 set attributes (hidden or read-only) for folders or files on the AirStation.
- 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, or 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 username 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 drive may be updated by the OS accessing the AirStation. File creation or access dates may not be maintained.

- If you view the size of a hard drives on the browser, it shows a bigger value than when you see it in Windows' drive properties. This is because the browser shows the size of the drive in gigabytes but Windows shows it in gibibytes.
- 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.
- Device types that can be connected to the AirStation's USB connector are USB hard drives, USB memory sticks, or USB card readers. 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 drive 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 drive.
- Available file systems for USB hard drives are FAT12, FAT16, FAT32, and XFS.

Appendix A - Specifications

Wireless LAN Interface	
Standard Compliance	IEEE802.11b / IEEE802.11g / IEEE802.11n
Transmission Method	Direct Sequence Spread Spectrum (DSSS), OFDM, MIMO
Frequency Range	2,412 - 2,462 MHz (Channels 1 - 11)
Transmission Rate	802.11b: 11, 5.5, 2, 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11n 20 MHz BW (Long Gl) 130, 117, 104, 78, 52, 39, 26, 13 Mbps (2 stream) 65, 58.5, 52, 39, 26, 19.5, 13, 6.5 Mbps (1 stream) (Short Gl) 130, 115.5, 86.6, 57.7, 43.3, 28.8, 14.4 Mbps (2 stream) 65, 72.2, 57.8, 43.3, 28.9, 21.7, 14.4, 6.5 Mbps (1 stream) 40 MHz BW (Long Gl) 270, 243, 216, 162, 108, 81, 54, 27 Mbps (2 stream) 135, 121.5, 108, 61, 54, 40.5, 27, 13.5 Mbps (1 stream) (Short Gl) 300, 270, 240, 180, 120, 90, 60, 30 Mbps (2 stream) 150, 135, 120, 90, 60, 45, 30, 15 Mbps (1 stream)
Access Mode	Infrastructure Mode
Security	AOSS, WPA2-PSK (TKIP/AES), WPA/WPA2 mixed PSK, WPA-PSK (TKIP/AES), 64- bit and 128-bit WEP, Mac Address Filter
Wired LAN Interface	
Standard Compliance	IEEE802.3ab (1000BASE-T), 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 Cording
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
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 14.0 W (Max)
Dimensions	165 mm x 158 mm x 30 mm (6.5 x 6.2 x 1.2 in.)
Weight	382 g (13.5 oz.) (not including the stand)
Operating Environment	0 - 40° C (32 - 104° F), 20 - 80% (non-condensing)

Appendix B - Regulatory Compliance Information

Federal Communication Commission Interference Statement

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

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

FCC Caution:

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Important Note - FCC Radiation Exposure Statement:

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

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

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

Industry Canada statement: Industrie Canada déclaration:

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes:

(1) le dispositif ne doit pas produire de brouillage préjudiciable, et

(2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

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

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

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

Europe – EU Declaration of Conformity

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

EN60950-1: 2006 +A11: 2009 Safety of Information Technology Equipment

EN50385 : (2002-08)

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

EN 300 328 V1.7.1: (2006-10)

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband Transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

EN 301 489-1 V1.8.1: (2008-04)

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

EN 301 489-17 V2.1.1 (2009-05)

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for Broadband Data Transmission Systems

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

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

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

€ 0560 ①

Česky [Czech]

Buffalo Technology Inc. tímto prohlašuje, že tento AirStation WZR-HP-G300NH/WZR-HP-G300NH2 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 WZR-HP-G300NH/WZR-HP-G300NH2 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 WZR-HP-G300NH/WZR-HP-G300NH2 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 WZR-HP-G300NH/WZR-HP-G300NH2 vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

English

Hereby, Buffalo Technology Inc. declares that this AirStation WZR-HP-G300NH/WZR-HP-G300NH2 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 WZR-HP-G300NH/WZR-HP-G300NH2 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 WZR-HP-G300NH/WZR-HP-G300NH2 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 WZR-HP-G300NH/WZR-HP-G300NH2 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 WZR-HP-G300NH/WZR-HP-G300NH2 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 WZR-HP-G300NH/WZR-HP-G300NH2 atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

Lietuvių [Lithuanian]

Šiuo Buffalo Technology Inc. deklaruoja, kad šis AirStation WZR-HP-G300NH/WZR-HP-G300NH2 atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Nederlands [Dutch]

Hierbij verklaart Buffalo Technology Inc. dat het toestel AirStation WZR-HP-G300NH/WZR-HP-G300NH2 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 WZR-HP-G300NH/WZR-HP-G300NH2 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 WZR-HP-G300NH/WZR-HP-G300NH2 megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.

Polski [Polish]

Niniejszym Buffalo Technology Inc. oświadcza, że AirStation WZR-HP-G300NH/WZR-HP-G300NH2 jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.

Português [Portuguese]

Buffalo Technology Inc. declara que este AirStation WZR-HP-G300NH/WZR-HP-G300NH2 está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Slovensko [Slovenian]

Buffalo Technology Inc. izjavlja, da je ta AirStation WZR-HP-G300NH/WZR-HP-G300NH2 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.

Slovensky [Slovak]

Buffalo Technology Inc. týmto vyhlasuje, že AirStation WZR-HP-G300NH/WZR-HP-G300NH2 spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

Suomi [Finnish]

Buffalo Technology Inc. vakuuttaa täten että AirStation WZR-HP-G300NH/WZR-HP-G300NH2 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 WZR-HP-G300NH/WZR-HP-G300NH2 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.

根據 NCC 低功率電波輻射性電機管制辦法:

第十二條:

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

第十四條:

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

기종별	사용자안내문
B 급 기기	이 기기는 가정용 (B 급) 전자파적합기기로서 주
(가정용 정보통신기기)	로 가정에서 사용하는 것을 목적으로 하며 , 모든
	지역에서 사용할 수 있습니다 .

Appendix C - Environmental Information

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



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

Appendix D - GPL Information

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

Appendix E - Warranty Information

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

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

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

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

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