

AirStation

## **WHR-1166D**

## **User Manual**



[www.buffalotech.com](http://www.buffalotech.com)

35020xxx-01

# Chapter 1 - Product Overview

## Package Contents

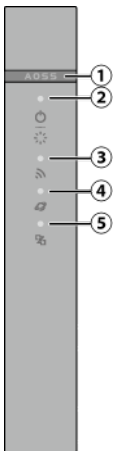
The following items are included in your AirStation package. If any of the items are missing, please contact your vender.

AirStation.....	1
AirStation Setup Card.....	1
AC adapter.....	1
Ethernet Cable.....	1
Quick Setup Guide.....	1
Warranty Statement.....	1

## Diagrams and Layout

### Front Panel

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- 1** AOSS Button  
To initiate AOSS, hold down this button until the wireless LED flashes (about 3 seconds). 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 / Diag LED (Green or Amber)

**On (Green):**

Power is on.

**Blinking (Green):**

Booting.

**Blinking (Amber):**

An error occurred.

**Off:**

Power is off.

## **3** Wireless LED (Green or Amber)

**On (Green):**

Wireless LAN and security settings are enabled.

**Double blinks (Green):**

AirStation is waiting for an AOSS or WPS security key.

**Continuously blinking (Green):**

AOSS/WPS error; failed to exchange security keys.

**On (Amber):**

Wireless LAN is enabled, security settings are disabled.

**Off:**

Wireless LAN is disabled.

## **4** Internet Access LED (Green)

**On:**

Router functionality is enabled and you can connect to the Internet.

**Blinking:**

Router functionality is enabled but you cannot connect to the Internet.

**Off:**

Router functionality is disabled (the AirStation is in the bridge mode).

## **5** Router LED (Green or Amber)

**On (Green):**

Mode switch is in the "Auto" position.

**On (Amber):**

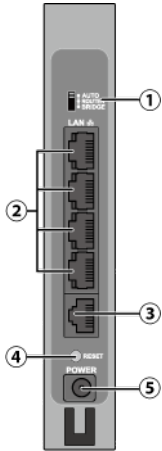
Mode switch is in the "Router" position.

**Off:**

Mode switch is in the "Bridge" position.

# Back Panel

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- 1** Mode Switch  
This switch changes between router mode and bridge (access point) mode. Auto mode will enable or disable router functionality automatically.
- 2** LAN Port  
Connect your computer, hub, or other Ethernet devices to these ports. This switching hub supports 10 Mbps and 100 Mbps connections.
- 3** Internet Port  
10 Mbps, 100 Mbps and 1000Mbps connections are supported.  
**Note:** In bridge (access point) mode, the Internet port becomes a regular LAN port, for a total of 5 usable LAN ports.
- 4** Reset Button  
To reset all settings, hold down this button until the power/diag LED turns red (about 3 seconds). The power must be on for this to work.
- 5** DC Connector  
Connect the included AC adapter here.

## Bottom

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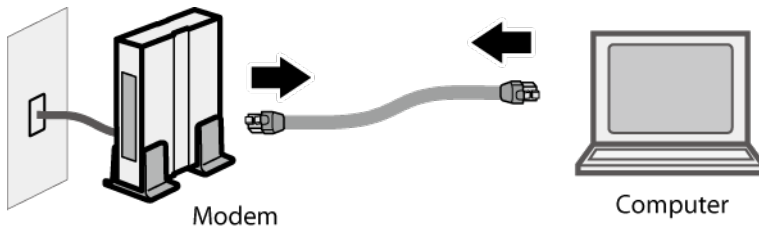
- 1** Setup Card Slot  
This is the slot where the AirStation setup card is stored. The initial settings for the username, password, SSID, and encryption type are provided on the card.

# Chapter 2 - Installation

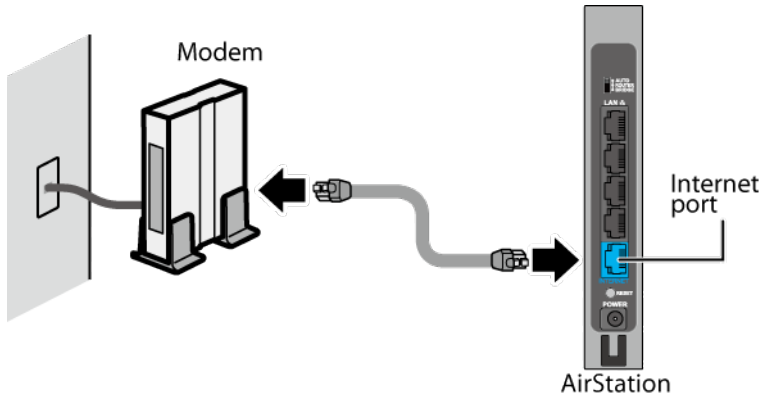
## Initial Setup

To configure your AirStation, follow the procedure below.

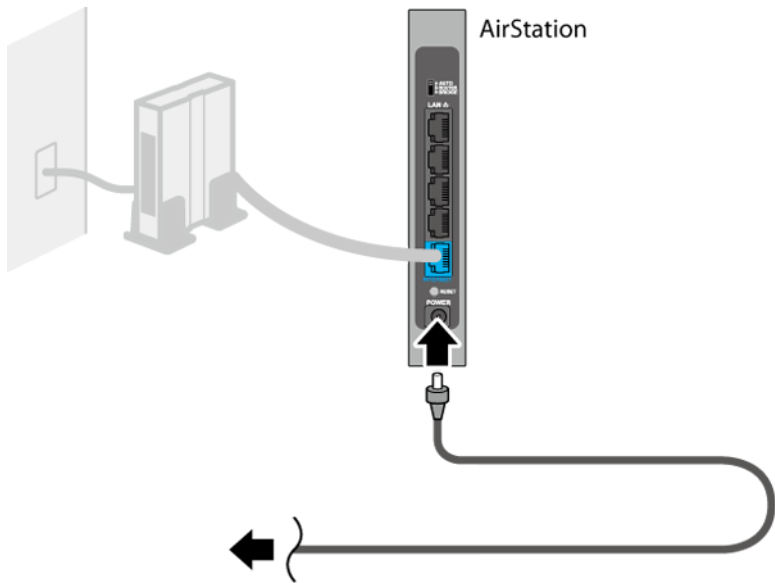
- 1** Verify that you can connect to the Internet without the AirStation, then turn off your modem and computer.
- 2** Unplug the LAN cable which connects your computer and modem.



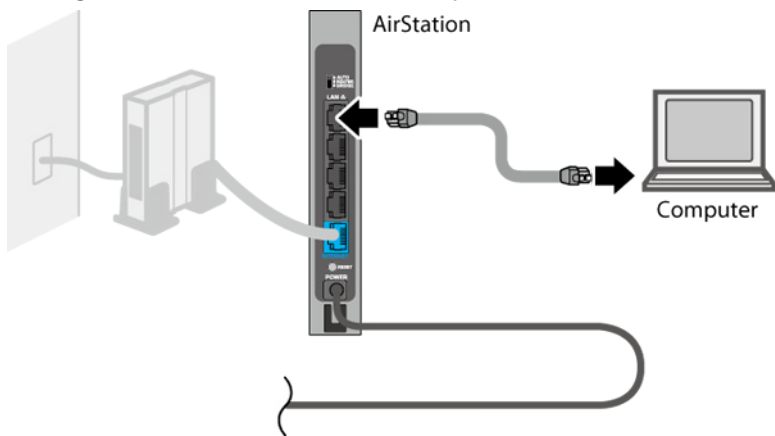
- 3** Confirm that the mode switch is in the "Auto" position. Plug one end of the LAN cable into your modem and the other end to the AirStation's Internet (WAN) port. Turn on the modem.



- 4** Turn on the AirStation and wait one minute.



- 5** If using a wired LAN, connect the AirStation LAN port and computer using a LAN cable. If using a wireless LAN, connect the computer to the wireless LAN as described in Chapter 4.



- 6** Once your computer has booted, the AirStation's LEDs should be lit as described below:  
Power/Diag: Green LED on.  
Wireless: Green LED on.  
Router: Amber LED on.  
For LED locations, refer to chapter 1.

**Note:** If the router LED is not lit, set the mode switch to "Router".

- 7** Launch a web browser. If the home screen is displayed, setup is complete. If username and password fields are displayed, enter "admin" for the username and "password" for the password, then click [OK]. Step through the wizard to complete setup.

You've completed the initial setup of your AirStation. Refer to Chapter 3 for advanced settings.

# Appendix A - Supplemental Information

## Technical Specifications

### WHR-1166D

Wireless LAN Interface	
Standard Compliance	IEEE 802.11ac (Draft) / IEEE 802.11n / IEEE 802.11a / IEEE 802.11g / IEEE 802.11b
Transmission Method	Direct sequence spread spectrum (DSSS), OFDM, MIMO
Frequency Range	Available frequencies depend on the country of purchase.
Transmission Rate 802.11ac (Draft)	<p><b>IEEE 802.11ac (Draft) 20 MHz BW &lt;Long GI&gt;:</b>            156/130/117/104/78/52/39/26/13 Mbps (2 streams)            78/65/58.5/52/39/26/19.5/13/6.5 Mbps (1 stream)</p> <p><b>IEEE 802.11ac (Draft) 20 MHz BW &lt;Short GI&gt;:</b>            173.3/144.4/130/115.6/86.7/57.8/43.3/28.9/14.4 Mbps (2 streams)            86.7/72.2/65/57.8/43.3/28.9/21.7/14.4/7.2 Mbps (1 stream)</p> <p><b>IEEE 802.11ac (Draft) 40 MHz BW &lt;Long GI&gt;:</b>            360/324/270/243/216/162/108/81/54/27 Mbps (2 streams)            180/162/135/121.5/108/81/54/40.5/27/13.5 Mbps (1 stream)</p> <p><b>IEEE 802.11ac (Draft) 40 MHz BW &lt;Short GI&gt;:</b>            400/360/300/270/240/180/120/90/60/30 Mbps (2 streams)            200/180/150/135/120/90/60/45/30/15 Mbps (1 stream)</p> <p><b>IEEE 802.11ac (Draft) 80 MHz BW &lt;Long GI&gt;:</b>            780/702/585/526.5/468/351/234/175.5/117/58.5 Mbps (2 streams)            390/351/292.5/263.3/234/175.5/117/87.8/58.5/29.3 Mbps (1 stream)</p> <p><b>IEEE 802.11ac (Draft) 80 MHz BW &lt;Short GI&gt;:</b>            866.7/780/650/585/520/390/260/195/130/65 Mbps (2 streams)            433.3/390/325/292.5/260/195/130/97.5/65/32.5 Mbps (1 stream)</p>



Transmission Rate 802.11 n/a/b/g	<p><b>IEEE 802.11n 20 MHz BW &lt;Long GI&gt;:</b> 130/117/104/78/52/39/26/13 Mbps (2 streams) 65/58.5/52/39/26/19.5/13/6.5 Mbps (1 stream)</p> <p><b>IEEE 802.11n 20 MHz BW &lt;Short GI&gt;:</b> 144.4/130/115.6/86.7/57.8/43.3/28.9/14.4 Mbps (2 streams) 72.2/65/57.8/43.3/28.9/21.7/14.4/7.2 Mbps (1 stream)</p> <p><b>IEEE 802.11n 40 MHz BW &lt;Long GI&gt;:</b> 270/243/216/162/108/81/54/27 Mbps (2 streams) 135/121.5/108/81/54/40.5/27/13.5 Mbps (1 stream)</p> <p><b>IEEE 802.11n 40 MHz BW &lt;Short GI&gt;:</b> 300/270/240/180/120/90/60/30 Mbps (2 streams) 150/135/120/90/60/45/30/15 Mbps (1 stream)</p> <p><b>IEEE 802.11g:</b> 54/48/36/24/18/12/9/6 Mbps</p> <p><b>IEEE 802.11b:</b> 11/5.5/2/1 Mbps</p>
Access Mode	Infrastructure Mode
Security	AOSS, WPA/WPA2 mixed PSK, WPA2-PSK (AES), WPA-PSK (AES), 64-bit or 128-bit WEP, MAC address filter
<b>Wired LAN Interface</b>	
Standard Compliance	<p><b>LAN:</b> IEEE 802.3u (100BASE-TX) / IEEE 802.3 (10BASE-T)</p> <p><b>WAN:</b> IEEE 802.3ab (1000BASE-T) / IEEE 802.3u (100BASE-TX) / IEEE 802.3 (10BASE-T)</p>
Transmission Rate	<p><b>LAN:</b> 10/100 Mbps</p> <p><b>WAN:</b> 10/100/1000 Mbps</p>
Transmission Encoding	<p><b>LAN:</b> 100BASE-TX 4B5B/MLT-3, 10BASE-T Manchester Coding</p> <p><b>WAN:</b> 1000BASE-T 4DPAM5, 100BASE-TX 4B5B/MLT-3, 10BASE-T Manchester Coding</p>
Access Method	CSMA/CD
Speed and Flow Control	<p><b>LAN:</b> 10 / 100 Mbps, Auto Sensing, Auto MDIX</p> <p><b>WAN:</b> 10 / 100 / 1000 Mbps, Auto Sensing, Auto MDIX</p>
Number of Ports	<p><b>LAN:</b> 4</p> <p><b>WAN:</b> 1</p>
<b>Other</b>	
Power Consumption	About TBD W (Max)
Dimensions	55 x 130.5 x 159 mm (2.17 x 5.14 x 6.26 in.)
Weight	TBD g (TBD oz.)
Operating Environment	0 - 40° C (32 - 104° F), 10 - 85% (non-condensing)

Power Supply Information	
Specification	External AC 100-240 V Universal, 50/60 Hz
AC Adapter Type	For EU/Middle East/India/Australia: WA-12M12R For USA/Canada/Mexico/Philippines/Taiwan/Japan: WA-12M12FU For Singapore/Hong Kong: WA-12M12FK For South Korea: WA-12M12FS For China: WA-12M12FC
Manufacturer	Asian Power Devices Inc.

### EU Area of Intended Using

AT	<del>BE</del>	DK	FI	CZ	MT	SI
<del>FR</del>	DE	GR	IE	EE	PL	BG
<del>IT</del>	LU	NL	PT	HU	LT	RO
ES	SE	GB	CY	LV	SK	

Note: Member states in EU with restrictive use for this device are crossed out. This device is also authorized for use in the following EFTA member states: **CH, IS, NO**

## 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.

## GPL Information

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