

BAD BOY Unleashed

Wi-Fi Broadcaster

Installation and Operation Guide

Models:

BB-U (Standard Power)

BB-UH (High Power)



IMPORTANT

Before You Install Your System

Serial Number: _____

Install Date: _____

Your serial number will be found under the bottom cover of your **Unleashed** and is located under the bar code. You may be asked to provide your serial number when requesting support assistance.

Your BAD BOY Wi-Fi system has been completely tested prior to shipment going through multiple individual and system verifications including Wi-Fi connectivity. Before cutting your cable or installing your system, take a few minutes to bench assemble your BAD BOY components. Using your computer:

1. verify system operation,
2. familiarize yourself with its behavior when operating, and
3. understand what to expect after installation.

Because a BAD BOY system can be installed in locations not easily accessible, do not proceed with installation until you have verified that your system is operating correctly. Contact us for assistance.

System failures after installation are usually caused by applying too much dielectric grease to the cable's connector or incorrect wiring of the Junction Box. Carefully check that the cable's colour coded wires match up correctly in your Junction Box. Your warranty may be affected.

Note: Failure to bench test will indicate your acceptance that your system was completely and fully operational prior to installation.

Declaration of Conformity

Bitstorm declares that this Bitstorm BAD BOY device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

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
2. This device must accept any interference received, including interference that may cause undesirable operation.

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Package Contents

Please check and ensure that you have all of the following items:

- ✓ One BAD BOY Unleashed Device
- ✓ One White Antenna
- ✓ One Slide On Holster Mount
- ✓ 2 Screws for Holster Mount
- ✓ Double Sided Tape Mounting Squares
- ✓ This Installation and Operation Guide
- ✓ Bitstorm Contact Info Cards

Note: Make sure that the box contains the above items. If any of the listed items are damages or missing, please contact your distributor.

Chapter 1 - Installation

- Check off items as completed.
- Ensure that you have a working BAD BOY Xtreme or Express (BAD BOY Wi-Fi Antenna). Refer to the appropriate product documents for installation and setup.
- With the power turned off**, remove the top cover from the Power Adapter. Move JP1 and JP2 from position 2-3 to 1-2. This enables power for Unleashed onto Port 2. **Caution: Do not plug Ethernet cable with PoE power into computer's ethernet port while jumpers are in position 1-2.**
- Remove the black protective cap from Unleashed's RP-SMA antenna connector and attach the antenna by screwing together. Finger tight is adequate. **Do not over tighten.**
- Slide off the cover from the bottom end of Unleashed. Using the patch cable end that connected to your computer and coming from the Power Injector, plug it into Unleashed's exposed ethernet connector.
- Apply power and verify that Unleashed's green Power and LAN LEDs illuminate. If they do not, refer to Appendix C - Troubleshooting.
- Ensure your computer's Wi-Fi device is turned on and try connecting. Refer to Chapter 2 - Operation.
- Surf the web to verify your BAD BOY Unleashed is operating correctly.



Proceed with remainder of installation only after correct operation has been determined.

- Disconnect power.
- Determine the best location for Unleashed. This can be any place convenient or suitable. It is recommended to install centrally in the area where coverage is to be provided. On a boat, near the nav station or by the mast post are often convenient choices. Unleashed is intended to be mounted in a protected and secure area, such as below deck on a boat. Double sided adhesive tape can be used to temporarily mount Unleashed to test a location.
- Mount the Unleashed such that the antenna will be vertical. Unleashed can be mounted in any position that allows the antenna to be vertical (can be pointing down or up). **Note: Do not use excessive force when pulling the cable through conduits, etc. Avoid pulling the cable's connector end through conduit. Do not make sharp bends in the cable. When changing direction, bends should never be sharper than the round edge of a standard screw driver handle. Avoid the use of a staple gun – if the insulation is pierced, the cable can be rendered useless. The cable transfers digital data, so there is no need to remove excess cable. Bitstorm recommends coiling and securing any extra cable.**



Chapter 2 - Operation

Refer to Chapter 1 - Installation for connecting and installing your Wi-Fi device.

Step 1

With power applied, verify that both Power and LAN LEDs illuminate. At this point, all of the Signal Strength LEDs could be off.



Step 2

Ensuring that Wi-Fi is turned on in your laptop, select the 'Bad Boy' hotspot access point and connect using **WPA** and enter the default Preshared Key '**password**' (case sensitive and without the quotes). You should now be connected. Verify that a connection exists by observing the Signal Strength LEDs illuminating on Unleashed or Unleashed HP.



Step 3

Verify operation by accessing several websites. Your Unleashed (or Unleashed HP) is now operational. **Congratulations, you are now connected.**

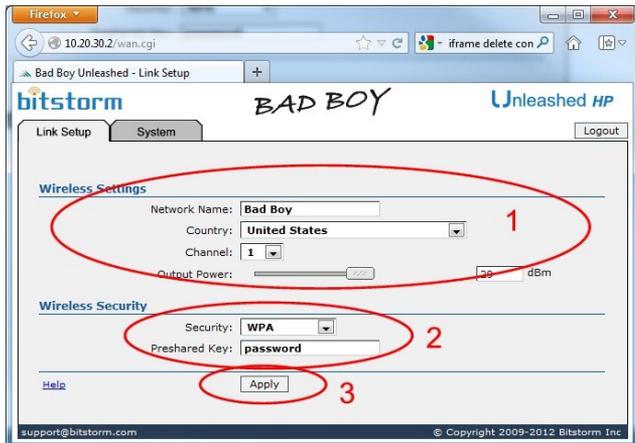
Continue with the following steps to change the default hotspot name and security settings to something unique for your installation.

Step 4

Open a browser and enter '**badboy.unleashed/**' in the address bar and press 'Enter'. Alternatively, you can enter '**unleashed.wifi/**' or '**10.20.30.2/**'. When the login screen appears, enter the default **User Name: 'badboy'** and **Password: 'badboy'** (case sensitive and without the quotes). If you wish, on the 'System' tab, you can change the login User Name and Password. We recommend that you write down your settings and save them in a safe place.

Step 5

Select the Link Setup tab. In the Network Name field, enter a new name for your hotspot (i.e. 'Aquaholic'). Next, select the country that you are in. Doing this helps to ensure that regulations regarding Wi-Fi use in that country are being followed. For channel selection, use only channels 1, 6 or 11. While included,



channel bandwidth overlapping prevents the use of all other channels. On the HP (Hi-Power) model, a power level slider is available to adjust the size of your coverage area. Experimentation will help you find the power levels that are right for you. Select the security type (i.e. WPA) and a password (i.e. 'waterdrinker'). Click the 'Apply' button to save and activate your new settings. A progress bar will display at the top of the page. **Note: The current wireless connection will be lost due to the new settings just activated. Your new hotspot will now appear in your computer's wireless list in place of 'Bad Boy'.**

Step 6

Log onto your new hotspot (i.e. 'Aquaholic') by selecting your newly created hotspot name from your computer's wireless list and when prompted, entering your new security credentials (i.e. 'waterdrinker'). You should now be connected. Verify operation by accessing several websites.

Congratulations, you have now completed setup. For more information on this BAD BOY's operation and features, refer to the BAD BOY Unleashed User Guide at www.bitstorm.com in the Support section.

Appendix A - Specifications

Output Power (Unleashed):	26 dBm (400mW) EIRP max
Wireless Range (Unleashed):	150' to 300' (50m to 100m)
Output Power (Unleashed HP):	36dBm (4W) EIRP max
Wireless Range (Unleashed HP):	1 to 2 miles (~1.5km to 3km)
6 dBi Antenna Size (Unleashed HP):	7.5" x 0.5" (193mm x 10.3mm)
Operating Temperature:	-4°F to +158°F (-20°C to +70°C)
Operating Humidity:	5 to 95% Condensing
Weatherproof:	IP65
Outdoor Installation:	Yes
Voltage Rating:	10-20 Vdc typical
Power Method:	PoE (pairs 4 & 5: +V, 7 & 8: return)
Typical / Max Power Consumption:	1.5W (~125mA) / 8W (~700mA)
Unleashed / Unleashed HP Size:	5.4" x 1.6" x .8" (13.6cm x 4cm x 2cm)
RoHS:	Compliant
Shock and Vibration:	ETSI300-019-1.4
Wireless Approvals:	FCC Part 15.247, IC RS210
Controlled via:	Web Browser (no software installation needed)
Mount:	Integrated, wall mount holster included
PCB Conformal Coating:	None
Security:	WPA, WPA2
Upgradeable:	Yes - Firmware
Operating System:	All - Windows / Mac / Linux / etc.
Wireless Modes:	Wireless Modes B and G

Appendix B - Unleashed LEDs

Signal Strength:

Displays the signal strength of any computer connected with it.

LAN:

Illuminates when a communications link is established via the cable. May blink with LAN activity. Refer to Appendix C - Troubleshooting for possible failures associated with this indicator.

Power:

Indicates that power is being applied. Does not provide any other indications of device operation.



Appendix C - Troubleshooting

LAN LED Not Illuminating

1. Also no Power LED. Ensure that power is being applied. Check Power Injector.
2. Cable seating. Check that both ends of the cable are fully inserted into Power Injector, Unleashed and your BAD BOY Wi-Fi Antenna.
3. Connector pin float. Too much dielectric on the connector. Clean away excess.
4. Junction Box incorrectly wired. Ensure all wire colours are matched.
5. M-POE-DUO-NS - Dirty start. Arching in a power switch or power socket can cause Unleashed to sense numerous rapid power up and power down sequences and can cause lock up. Replace switches and sockets as required.

My Browser Reports An Error When I Open It

1. BAD BOY Wi-Fi Antenna is powered off. Ensure that power is being applied. If M-POE-DUO-NS is used, check internal fuse if green Port #1 LED is not lit.
2. Cable not connected between Unleashed and BAD BOY Wi-Fi Antenna. Refer to 'LAN LED Not Illuminating'.
3. No internet connection. Your BAD BOY Wi-Fi Antenna has a built in web server that delivers its management application to your laptop through your browser. Disregard error and enter your BAD BOY Wi-Fi Antenna's URL address into the browser's address bar. Refer to Xtreme or Express manual.
4. Multiple Wi-Fi devices. Remove all other Wi-Fi devices from your computer.
5. Incorrect Unleashed URL address entered. Ensure that you type 'badboy.unleashed' or 'unleashed.wifi' or 'http://10.20.30.2'.

Unable To Connect To Unleashed Management Application

1. No power. Refer to 'LAN LED Not Illuminating'.
2. Cable not connected. Refer to 'LAN LED Not Illuminating'.
3. Can't find server. Computer's built-in Wi-Fi must be on when using Unleashed.
4. Incorrect Unleashed URL address entered. Ensure that you type 'badboy.unleashed' or 'unleashed.wifi' into the browser's address bar.
5. Incorrect network access key entered. Check that the network access key (sometimes called a network password) you are using is correct. **Default Network Name (SSID) is 'Bad Boy' and its access key is 'password'.**

Settings Are Not Being Retained

1. Low voltage. Ensure that the power being supplied to Unleashed is at least 10Vdc at the Unleashed.
2. Not clicking 'Apply'. Ensure that when a new hotspot is selected or setting changes are made, that you click the 'Apply' button.

I Added a Networking Switch And BAD BOY No Longer Operates

1. Passive PoE puts the power onto the unused wires of an ethernet cable. Networking devices such as routers or network switches generally do not pass PoE through them.

Note: The Reset button on the bottom of Unleashed next to the connector is a multi-function button and should never be used except under the direction of support staff. Improper use of this button could render your device inoperative. If this occurs, you may be required to return your Unleashed to Bitstorm for repair. The result of improper use of the reset button is not covered under warranty.

Record your hotspot settings and management application login credentials:

Network Name: _____ Access Key: _____
Username: _____ Password: _____

Warranty

1. All Bitstorm products are warranted against defects in material and workmanship for a period of one year from date of purchase under normal use. **Warranty does not cover damage caused as a result of improper installation or operation.**
2. The customer is responsible for delivering the defective product to the designated RMA address for repair or replacement.
3. At its discretion, Bitstorm will repair or replace a product that was found to be defective by Bitstorm during the warranty period.
4. This warranty does not cover labor cost for removing and reinstalling the device for repair nor for any expendable parts that are readily replaced in normal use.
5. The sole responsibility of Bitstorm under this warranty shall be limited to repair of this product, or replacement thereof, at the sole discretion of Bitstorm.
6. All RMA items shipped to Bitstorm must be freight prepaid. Bitstorm will pay the return freight via a service of Bitstorm's choice. Customer is responsible for payment of any shipping upgrades.

Limitation of Warranty

This warranty does not apply if product:

- a. has been opened and/or altered, except by Bitstorm technical personnel,
- b. has been painted in way shape or form,
- c. **has been damaged due to errors or defects in customer provided cabling,**
- d. has been subjected to abnormal physical or electrical stress, including lightening strike, misuse, negligence or accident,
- e. **has been improperly installed, including wiring errors or damage to cable during installation,**
- f. failure to apply supplied dielectric corrosion inhibitor to device connector,
- g. has had removal of MAC address label (if one was affixed),
- h. has been loaded with incorrect firmware or attempted to have incorrect firmware loaded or
- i. is inoperable due to improper use of the Reset button.

What information will be required?

1. Customer name, contact information, and shipping information.
2. Date and location of purchase (we may request a copy of the invoice as proof of purchase in certain, limited circumstance).
3. Problem description.
4. MAC address of each unit (if available).
5. Troubleshooting actions taken so far.

***** International Customers *****

1. Customer to use their own shipping account when sending products back to Bitstorm.

Contact Us

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support@bitstorm.com

Hours: Monday to Friday, 9am to 5pm EST

IMPORTANT: If you are experiencing difficulties, please contact us first with any issues before returning this product to the retailer.