



Wireless and Beyond  
[www.radiolabs.com](http://www.radiolabs.com)

## Bridging Instructions O2Breeze and/or O2Wind



## **PLEASE READ THESE INSTRUCTIONS BEFORE CONFIGURING OR DEPLOYING YOUR O2BREEZE OR O2WIND ROUTER(S)**

**Thank you for purchasing a RadioLabs Series Bridge. Using this device, you will be able to bridge LAN connections with wireless speeds up to/over 100 megabits/second (condition and distance dependent). The O2Breeze or O2Wind can act as a non-routing LAN extension or as a NAT-enabled gateway to link two locations via the IEEE 802.11N wireless protocol.**

**Connecting the Bullet High Speed Wireless Platform to your computer for configuration.**

*Connect a Category 5 Ethernet cable between your PC/MAC's ethernet port and one of the four LAN ports of the O2Breeze or the O2Wind.*

Before configuring your Repeater (s), you will need to disable your internal wireless card or Airport (if applicable) and set a static or "unchanging" IP address.

### **Windows**


***XP:** Open Start Menu and select Control Panel Select Network Connections (if unavailable, select show "Classic view")*

***Vista:** Select Start Menu/Windows Logo > Network > Network and Sharing Center > Manage Network Connections*

***Windows 7:** Select Start Menu/Windows Logo > Network > Network and Sharing Center > Change Adapter Settings*

**Once you can view your system's network connections, right click on "Wireless Network Connection" and select "Disable".**

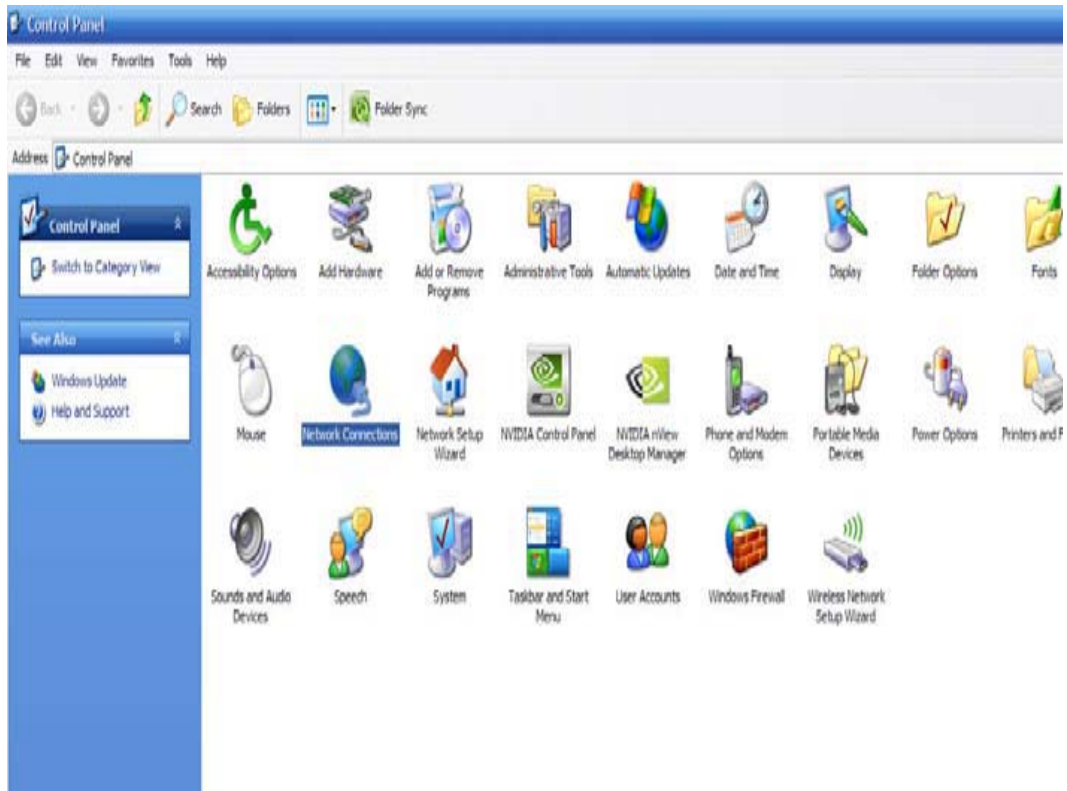
### **Macintosh OS X**

Select the Airport Status Icon  (upper right hand corner of screen) and select "Turn Airport Off"

When logging into the router to configure the unit, you will need to have a Static IP address on your PC/MAC's Ethernet Adapter.

## Windows

*XP: Open Start Menu and select Control Panel*



*Select Network Connections and right click "Local Area Connection"*

Network Connections

File Edit View Favorites Tools Advanced Help

Back Search Folders Folder Sync

Address Network Connections

Name	Type	Status	Device Name	Phone
<b>LAN or High-Speed Internet</b>				
1394 Connection	LAN or High-Speed Inter...	Connected, Firewall...	1394 Net Adapter	
Local Area Connection	LAN or High-Speed Inter...	Connected, Firewall...	Broadcom 570x Gigabit I...	
Wireless Network Connection	LAN or High-Speed Inter...	Not connected, Firewall...	Intel(R) PRO/Wireless 22...	
Wireless Network Connection 2	LAN or High-Speed Inter...	Connected, Firewall...	(ZD1211B)IEEE 802.11 b...	

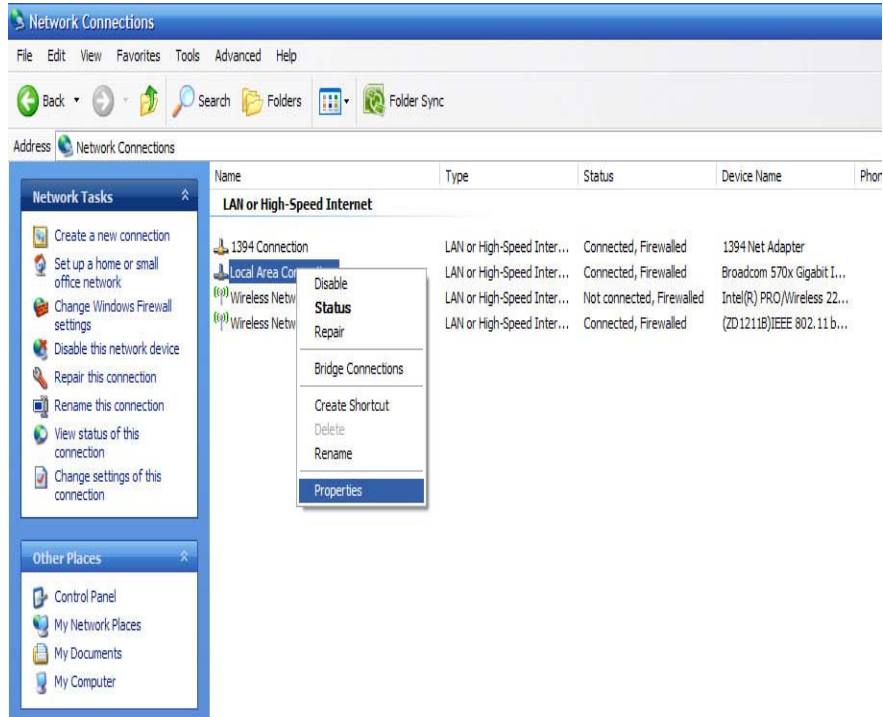
**Network Tasks**

- Create a new connection
- Set up a home or small office network
- Change Windows Firewall settings
- Disable this network device
- Repair this connection
- Rename this connection
- View status of this connection
- Change settings of this connection

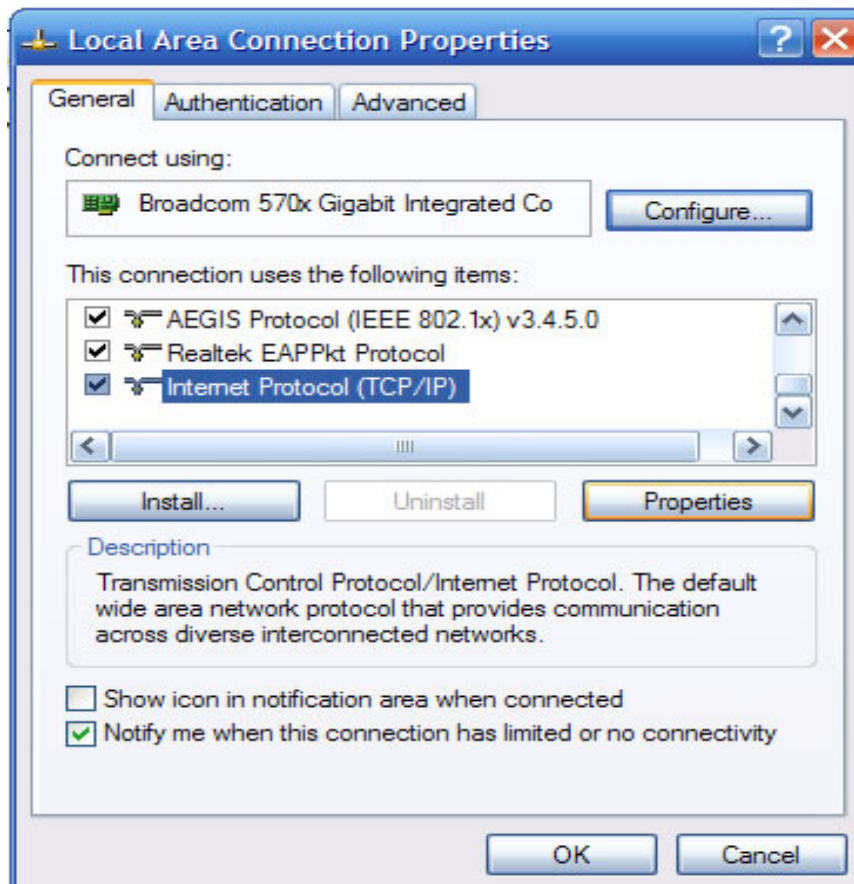
**Other Places**

- Control Panel
- My Network Places
- My Documents
- My Computer

## Select Properties



Select Internet Protocol (TCP/IP) or Internet Protocol (IPv4) and click Properties



Select "Use The Following IP Address" and Enter 192.168.1.10 into the IP Address field and 255.255.255.0

into the subnet mask field



Select “OK” and select “Close” on the Local Area Connection properties window.

*Vista:* Start Menu/Windows Logo > Control Panel > Network and Sharing Center > Manage Network Connections > right click “Local Area Connection” and follow instructions from page 5.

*Windows 7 :* Start Menu/Windows Logo > Control Panel > Network and Sharing Center > Change Adapter Settings > right click “Local Area Connection and follow instructions from page 5.

**Once you have configured your Repeater (s), you will need to follow these steps again and select “Obtain an IP address automatically”**

**Your PC/MAC is now ready to configure the O2Beeze or the O2Wind Bridge.**

**Only have one router powered up at this time. This will be your Primary Router.**

*To set up the Primary Router open a web browser (Internet Explorer, Mozilla Firefox, Safari, etc.) and enter 192.168.1.1 into the address bar and hit “Enter”.*

## Configuring the Primary Router:

Select "Wireless" > "Basic Settings"

**Wireless Basic Settings**

This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters.

Disable Wireless LAN Interface

Band: 2.4 GHz (B+G+N) Mode: WDS Network Type: Infrastructure SSID: RadioLabs Channel Width: 40MHz Control Sideband: Upper Channel Number: 11 Broadcast SSID: Enabled WMM: Enabled Data Rate: Auto Associated Clients: Show Active Clients

Enable Mac Clone (Single Ethernet Client)

Enable Universal Repeater Mode (Acting as AP and client simultaneously)

SSID of Extended Interface:

Apply Changes Reset

"Mode" will be "AP+WDS".

"SSID" Will be RadioLabs by default, you may erase this and rename it to what you would like your network to be called.

"Change channel to 11"

"Apply Changes" > "Reboot Now"

Every time you select "Reboot Now" the router will reboot and will take a minute or two to come back online.

On the left select "Management" > "Status"

**Access Point Status**

This page shows the current status and some basic settings of the device.

System	
Uptime	0day:0h:1m:54s
Firmware Version	v3.2
Build Time	Mon Sep 17 01:51:26 EDT 2012

Wireless Configuration	
Mode	WDS
Band	2.4 GHz (B+G+N)
SSID	
Channel Number	11
Encryption	Disabled
BSSID	00:c0:ca:6f:19:e3

TCP/IP Configuration	
Attain IP Protocol	Fixed IP
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
DHCP Server	Enabled
MAC Address	00:c0:ca:6f:19:e1

WAN Configuration	
Attain IP Protocol	Getting IP from DHCP server...
IP Address	0.0.0.0
Subnet Mask	0.0.0.0
Default Gateway	0.0.0.0
MAC Address	00:c0:ca:6f:19:e2

Write down the BSSID address and the MAC address under TCP/IP Configuration on a sheet of paper. These will both need to be input into the Secondary Router's WDS settings.

Next select " TCP/IP Settings" > "LAN Interface".

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Site contents:  
Setup Wizard  
Operation Mode  
Wireless  
Basic Settings  
Advanced Settings  
Security  
Access Control  
WDS settings  
Site Survey  
WPS  
Schedule  
TCP/IP Settings  
LAN Interface  
WAN Interface  
Firewall  
QoS  
Management

### LAN Interface Setup

This page is used to configure the parameters for local area network which connects to the LAN port of your Access Point. Here you may change the setting for IP address, subnet mask, DHCP, etc..

IP Address: 192.168.1.2  
Subnet Mask: 255.255.255.0  
Default Gateway: 0.0.0.0  
DHCP: Disabled  
DHCP Client Range: 192.168.1.100 - 192.168.1.200 Show Client  
DHCP Lease Time: 480 (1 ~ 10080 minutes)  
Static DHCP: Set Static DHCP  
Domain Name:  
802.1d Spanning Tree: Disabled  
Clone MAC Address: 000000000000

Apply Changes Reset

If the Primary router of the bridge is not connected directly to the Modem change the IP Address to " 192.168.1.2".

"DHCP" needs to be changed to "Disabled"

"Apply Changes" > "Reboot Now"

If the Primary router of the bridge is connected directly to the modem and if the modem is not a dual Modem/Router, do not make any changes here. "DHCP" should be on "Server" and the "IP Address" will stay the same.

Unplug the Primary router from the power now. Remove the Ethernet cable from the Primary router and connect it to the Secondary Router's LAN port. Power up the Secondary Router and type in the IP address of 192.168.1.1



## Configuring the Secondary Router:

On the left select "management" > "Status"

**Access Point Status**

This page shows the current status and some basic settings of the device.

System	
Uptime	0day:0h:1m:54s
Firmware Version	v3.2
Build Time	Mon Sep 17 01:51:26 EDT 2012

Wireless Configuration	
Mode	WDS
Band	2.4 GHz (B+G+N)
SSID	
Channel Number	11
Encryption	Disabled
BSSID	00:c0:ca:6f:19:e3

TCP/IP Configuration	
Attain IP Protocol	Fixed IP
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
DHCP Server	Enabled
MAC Address	00:c0:ca:6f:19:e1

WAN Configuration	
Attain IP Protocol	Getting IP from DHCP server...
IP Address	0.0.0.0
Subnet Mask	0.0.0.0
Default Gateway	0.0.0.0
MAC Address	00:c0:ca:6f:19:e2

Write down the BSSID address and the MAC address under TCP/IP Configuration on a sheet of paper. These will both need to be input into the primary router's WDS settings.

Select "Wireless" > "Basic Settings"

**Wireless Basic Settings**

This page is used to configure the parameters for wireless LAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters.

Disable Wireless LAN Interface

Band: 2.4 GHz (B+G+N)

Mode: WDS

Network Type: Infrastructure

SSID: Radiolabs

Channel Width: 40MHz

Control Sideband: Upper

Channel Number: 11

Broadcast SSID: Enabled

WMM: Enabled

Data Rate: Auto

Associated Clients:

Enable Mac Clone (Single Ethernet Client)

Enable Universal Repeater Mode (Acting as AP and client simultaneously)

SSID of Extended Interface:

"Mode" will be "AP+WDS".

"SSID" Will be RadioLabs by default, erase this and change it to what you would like your secondary router to be called , make sure it is 1 digit different from the first router, example – radiolabs1

“change channel to 11”

"Apply Changes" > "Reboot Now"

Next select " TCP/IP Settings" > "LAN Interface".

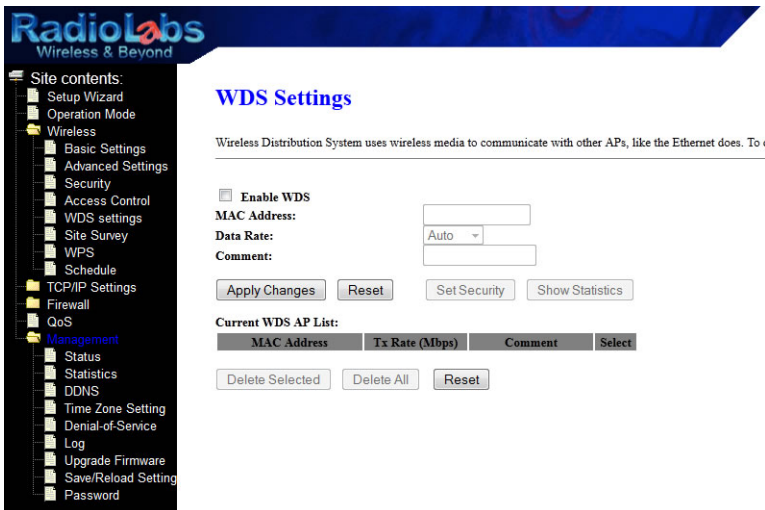


Change the "IP Address" to 192.168.1.3

Change "DHCP" to "Disabled"

Select "Apply Changes" > "Reboot Now"

On the left hand side select "Wireless" > "WDS Settings"



Make sure the "Enable WDS" is checked.

Input the "BSSID" from the Primary Router and select "Apply Changes"

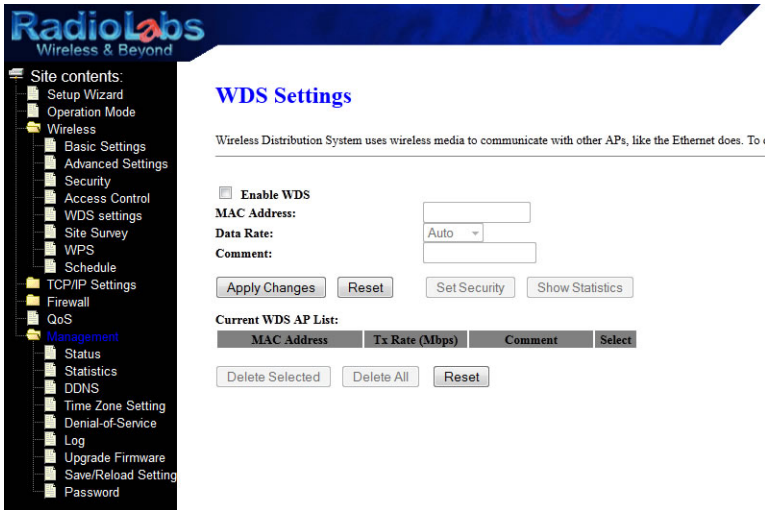
Input the "TCP/IP MAC Address" from the Primary Router and select "Apply Changes"

The Secondary Router is now configured.

Back to the Primary Router now.

At this time, power up the Primary Router, disconnect the ethernet cable from the secondary router and connect it to the Primary Router's LAN port. Leave the Secondary Router powered up. Type in the IP address 192.168.1.1 or if you changed it to 192.168.1.2 type that IP address instead.

On the left hand side select "Wireless" > "WDS Settings"



Make sure the "Enable WDS" is checked.

Input the "BSSID" from the Secondary Router and select "Apply Changes"

Input the "TCP/IP MAC Address" from the Secondary Router and select "Apply Changes"

Both routers are now configured as a bridge. To test if they are properly configured, while hardwired to the Primary Router open up a new tab in your web browser. If they are configured correctly, you should be able to type in the IP Address of the Secondary Router and access the interface in the new tab. If you can access both interfaces at the same time, everything is configured correctly.

Go back to page 5 and set your "Local Area Connection" to "Obtain an IP Address Automatically"

Wireless speeds are affected by many different environmental variables, including line-of-sight, frequency interference and ambient radio noise. The Radiolabs High Speed Universal Wireless Repeater supports speeds up to 100 megabits/second (true throughput), however, due to natural variance in signal and the automatic speed selection, this may vary.