



## Point-to-Point Bridge Installation and Pointing Instructions Only for UltraWAP-G based Links

Your Point-to-Point Bridge equipment is shipped as a Point-Plug-Play system. That is all you need to do is:

- Point the two antennas at each other.
- Plug the provided power supplies into the Power-over-Ethernet (POE) cables at each end. Plug the RJ45 (LAN) connectors at each end into your network equipment – e.g. LAN switches.
- Play! The two sides of the network are now connected into one virtual LAN.

The main focus of this document is to help point the antennas.

### 1. Antenna Pointing Methods

#### 1.1 *Method 1 - By Eye*

If the two end points are close and there is clear line of sight between them, just point the two antennas by eye. This is usually sufficient and the link will work well. If required, you can continue with the instructions below and maximise the signal.

In all cases, please read the last section entitled – **Turning Off AP Mode.**

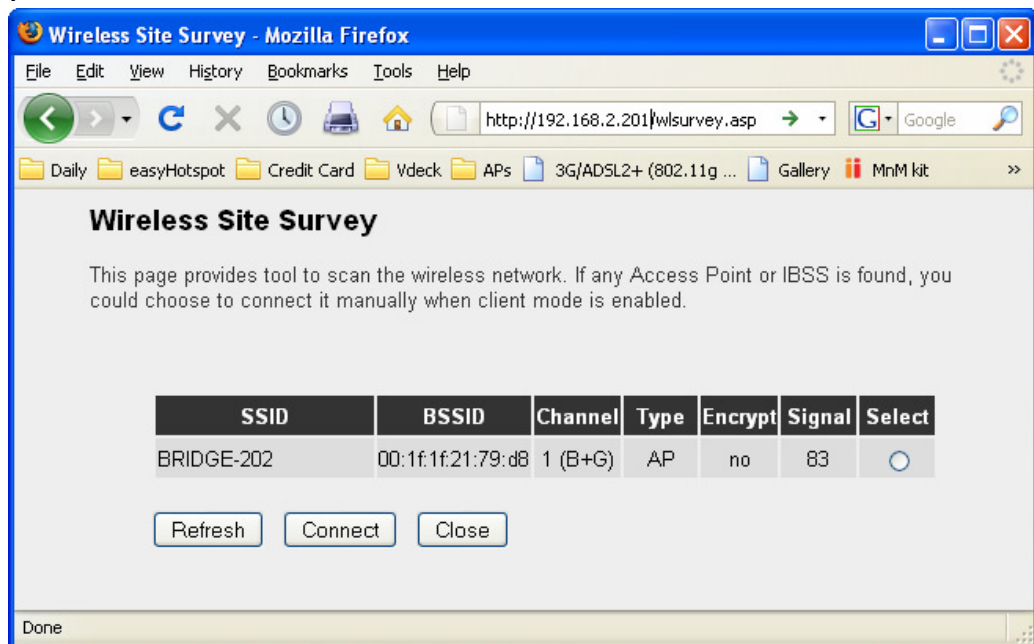
#### 1.2 *Method 2 – By Maximum Received Signal*

In cases where you can not easily see the far antenna, the best way to point the antennas is by measuring the signal level and moving the antennas to get a maximum reading.

As shipped, the UltraWAP WiFi units installed in each antenna are set to **AP Bridge-WDS** mode. In this mode, the units are simultaneously in BRIDGE and Access Point (AP) modes. The BRIDGE component is used to connect the two units wirelessly, and the AP component is used to transmit a signal which can be measured at the other end.

## Step By Step Instructions

1. Mount the antennas and point them as best as you can by eye.
2. Run the POE cable to a dry area and connect the power supplies to the POE cables. You should now have both units powered up. You may even have a working wireless link between the units if you have pointed accurately enough.
3. Setup a laptop with a static IP address of 192.168.2.10 (Subnet mask 255.255.255.0) on its CAT5/LAN port. Information on how to do this is found in the manuals shipped with the PtP Bridge units.  
802.11g Bridges: See Manual section **3.1 Getting Started**.  
802.11n Bridges: See Manual section **2-2 Connecting to wireless access point by web browser**.
4. As shipped, the units have different IP addresses which are normally 192.168.2.201 and 192.168.2.202.  
Identify the unit with IP address 192.168.2.201. Connect the LAN connector on its POE cable to the laptop. On the laptop, browse to this URL:  
Wireless-G Bridge: <http://192.168.2.201/wlsurvey.asp>
5. You will now see a window like this



You should see one line with the SSID of BRIDGE-202<sup>1</sup>. The **Signal** value shows the level of received signal from the distant bridge unit.

<sup>1</sup> The unit with IP address 192.168.2.201 has an SSID of BRIDGE-201.  
The unit with IP address 192.168.2.202 has an SSID of BRIDGE-202.

6. Repeatedly click the [ Refresh ] button to update the display while adjusting the pointing direction of your local bridge antenna until you get a maximum Signal value.
7. Disconnect the laptop and move to the location with the other bridge unit. Repeat from step (4), but this time browse to URL:

Wireless-G Bridge: <http://192.168.2.202/wlsurvey.asp>

and maximise the signal for SSID BRIDGE-201

## 2. Tuning Off AP Mode

The Bridge units are shipped in WDS (Bridge + AP) mode. The Bridge component is required for the link to function. The AP component is only required while pointing the antennas. So, after the antennas have been accurately pointed, we recommend turning off the AP component to enhance security.<sup>2</sup>

### Step By Step Instructions

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802.11g Bridges: See Manual section **3.1 Getting Started**.  
802.11n Bridges: See Manual section **2-2 Connecting to wireless access point by web browser**.
2. Connect to bridge unit 192.168.2.201 and browse to `http://192.168.2.201`
3. Click on **Basic Setting**
4. Change Mode to **AP Bridge-Point to Point**
5. Click [ **Apply** ]
6. Click [ **Apply** ] again and wait until the unit reboots.
7. Repeat from step (2), except replace 192.168.2.201 with 192.168.2.202.

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<sup>2</sup> We also enable encryption with a secret password on the AP signal to prevent unauthorised access while the antennas are being aligned. If you want to access the unit wirelessly, change the passwords using the web interface.

## 3. Troubleshooting

### 3.1 Too much Power?

If you have a Signal Strength of 90 or higher and the link data rate is poor, you may have too much signal, and reflection problems. Try setting each end to 25% power (Advanced Menu) and see if it improves.

### 3.2 Channel Interference?

Nearby WiFi networks on the same or close channels can degrade performance. Check the Site Survey screens at:

Wireless-G Bridge: <http://192.168.2.201/wlsurvey.asp>

and

Wireless-G Bridge: <http://192.168.2.202/wlsurvey.asp>

and look for other WiFi networks on the same or nearby channels. Try changing channels on **BOTH** Bridge units to a different channel.