DIAMOND
MULTIMEDIA

WR300N
Portable Wireless-N Repeater

Quick Start Guide

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About the Device

Diamond Multimedia WR300N Portable Wireless-N Repeater supports wireless 802.11b/g/n standards with one 10/100Base-T Ethernet port.

WR300N is designed with MIMO technology to extend the reach of any existing wireless router/AP to maximize the coverage in your home or office. It basically receives the signal from your wireless router/AP and repeats it to extend the range to farther locations that are previously unreachable.

Equipped with 64/128-bit WEP, WIFI Protected Access (WPA), and the latest WPA2 encryption with TKIP and AES algorithm to protect your wireless network from unauthorized access. MAC Address Filtering for wireless links provides an additional layer of security for your wireless network.

The device comes with 1 x 10/100M Auto MDI/MDIx Ethernet port that can be used to connect to an existing wired network to serve as a wireless AP or wireless bridge. It can also be used to configure the device via its web-based GUI, or upgrade the firmware when connected to the Network Interface Card of your PC.

Minimum System Requirements

Your computer must meet the following minimum requirements.

- Any operating system can be used

- Web Browser

- 233MHz processor

- Ethernet network adapter

- Or Wireless network adapter

Package Contents

Package contents are listed below.

- WR300N

- Ethernet cable

- Easy Start Guide

- Resource CD

Device Overview

Front Panel

LABEL	STATE	DESCRIPTION
POWER LED	On – Solid Green Off	Device is powered ON Device is powered OFF
ETHERNET LED	On – Solid Green On – Blinking Green Off	Ethernet device is connected Indicates LAN activity No Ethernet device connected
WIRELESS LED	On – Solid Green On – Blinking Green Off	Wireless interface is UP Indicates wireless activity Wireless interface is DOWN
WPS LED and BUTTON	On – Solid Green On – Blinking Green Off	WPS association is successful WPS authentication on going WPS disabled

Bottom Panel

LABEL	DESCRIPTION
RESET	Press the Reset button for 5 seconds to restore the device to default factory settings
ETHERNET PORT	Connect to computers/Ethernet devices

Tips for placing the Repeater

Before proceeding to configure your WR300N, it is often a good idea to identify the areas where you have good wireless reception and weak or no wireless signal at all. Based from this assessment you may place the wireless repeater in between a location where you have good wireless reception and where you have poor wireless coverage. This will serve as the *identified location* for the WR300N. The illustration below is an example of a network diagram.
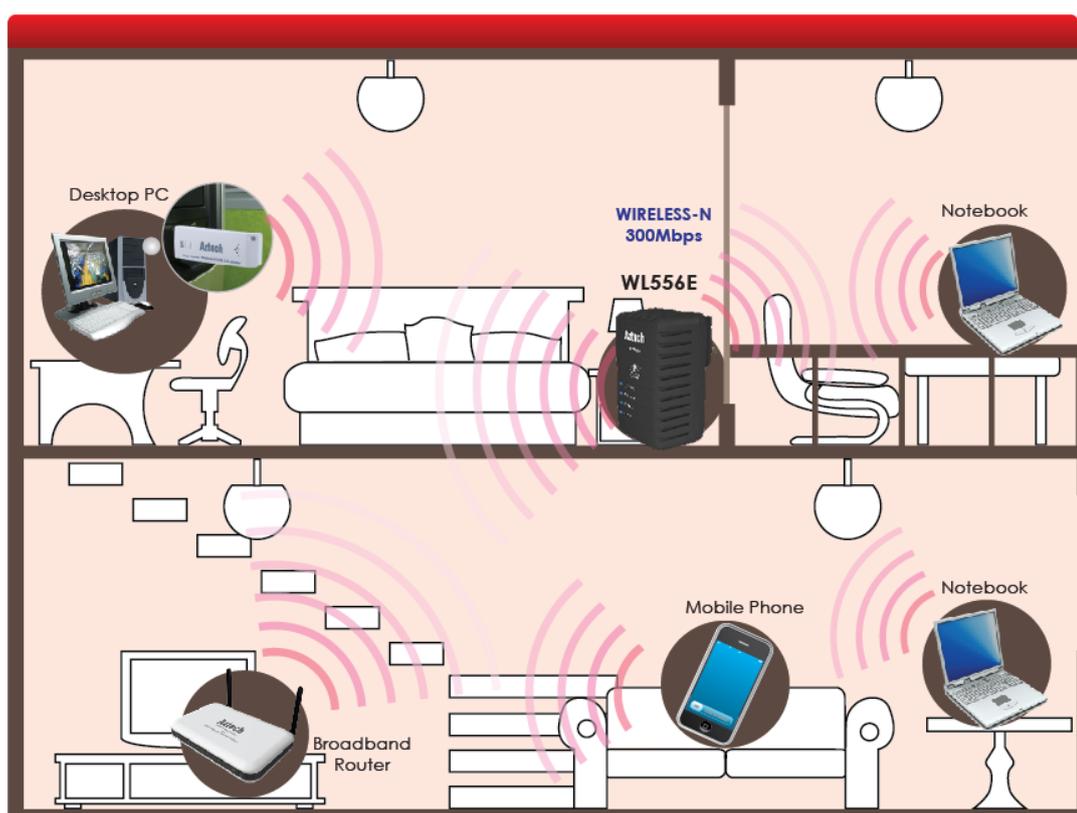
NOTE: Placement of the Wireless Repeater is crucial to get the best possible results for extending your existing wireless signal. It is ideal for the wireless repeater to be placed in a location where it can receive good wireless signal from the wireless router/Access Point (AP) so as to avoid disconnection and packet loss.

Configuring the Repeater

Setting up the device is easy. Follow the steps below to configure the device for your current wireless router/AP. Ensure to disable the wireless connection on the PC or laptop used for configuring the WR300N. Please note that the main router/AP and Wireless Repeater must be on the same wireless channel.

To configure your device via the Web GUI:

1. Connect the WR300N to a power outlet.
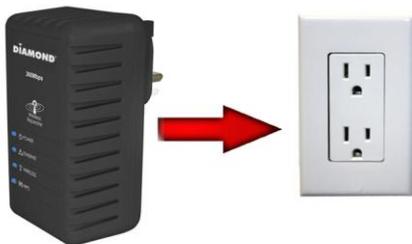
2. Connect an Ethernet cable from your PC's Ethernet port to the Ethernet port at the base of the WR300N.
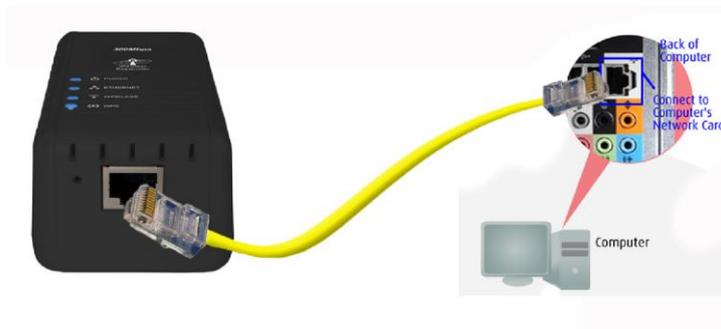
3. Once a connection to the WR300N is established, your PC/laptop will receive an IP address and you can start the configuration using the web graphical user interface.

4. To access the web GUI, Launch your web browser and input 10.0.10.254 on the address bar.
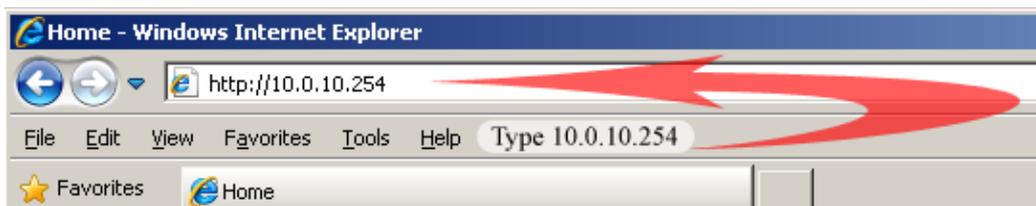
5. Input admin for username and input admin for password. Click the OK button.

6. Click on the Auto Setup button. This will show the available wireless networks that are in range of the WR300N.

NOTE: If you are connecting to a hidden wireless network, you need to go through the Manual Setup and key-in the information from your existing wireless router/AP manually. Also un-tick the Broadcast SSID option so your wireless network can remain hidden.

7. Click the **Connect** button located on the right side of the wireless network you want to connect to. Click Refresh if you don't see your wireless SSID on the list.

8. Input the current wireless network key/passphrase. Click the Apply button to commit the changes.

9. Close the web browser and power down the WR300N by unplugging the device from the wall plug.

10. Plug the WR300N to a power outlet at the identified location.

11. You may now use your wireless devices such as laptops, smart phones, etc. with the Repeater.

NOTE:

*You may need to reboot your laptop to connect to the WR300N.

**You may need to enable Enhanced Compatibility if you are using Windows 7 OS with certain brands of Wireless routers.

Use the Device as a Wireless Repeater

Once the wireless connection from the WR300N to the main AP/router is established you can connect your wireless devices like laptops and smart phones through the wireless repeater. These devices will obtain an IP address from the main AP/router and should be able to access the Internet from farther locations previously unreachable by your wireless signal.

Setup Diagram

Use the Device as a Wireless Bridge

Connect wired devices to your wireless network by connecting an Ethernet cable from a wired device, such as a Desktop PC, Game Console or Internet-ready LCD TV, to the Ethernet port of the WR300N.

Setup Diagram

Configure the WR300N as a Wireless AP

Use the WR300N as a Wireless Access Point to turn a regular modem-router into a wireless capable networking device to connect wireless-enabled devices such as laptops and smart phones.

To setup the device as a wireless AP:

1. Connect a PC/laptop to the Wireless Repeater. Plug an Ethernet cable to the Ethernet port at the base portion of the device.

2. Once a connection to the device is established, your PC/laptop will receive an IP address and you can start the configuration using the web graphical user interface.

3. To access the web GUI, Launch your web browser and input 10.0.10.254 on the address bar.

4. Input username as admin and password as admin. Click the OK button.

5. Click on the Manual Setup button and enter the SSID, security type, encryption type and WEP/passphrase for your Wireless Access Point, then click the Apply button.

6. After the settings are applied, unplug the Ethernet cable from your PC and connect it to an available Ethernet port in your modem-router to match the hardware setup illustrated below.

Setup Diagram

NOTE: To change any wireless settings on the WR300N, you would need to set a static IP address on your wireless network card to be able to access the web GUI before you can configure the settings. Please refer to the steps on how to set a static IP on your PC also included in this manual.

Changing the Wireless Settings

Modify the default Wireless Settings to suit your own preference.

To change the Wireless settings via the Web GUI:

1. Open your browser

2. Type 10.0.10.254 on the address bar

3. Input admin for both username and password fields and click on OK

4. On the top pane, click the Wireless button to show the menu

5. You can change the advanced wireless settings as preferred from this page

6. Click Apply to commit the changes

7. Ensure to recreate the wireless profile on your computer to match the new settings

Changing the Wireless Security Settings

Modify the default Wireless Security Settings to suit your own preference.

To change the Wireless security settings via the Web GUI:

1. Open your browser

2. Type 10.0.10.254 on the address bar

3. Input admin for both username and password fields and click on OK

4. Click the Wireless button, and click the Security menu. You can change the wireless security settings as preferred from this page
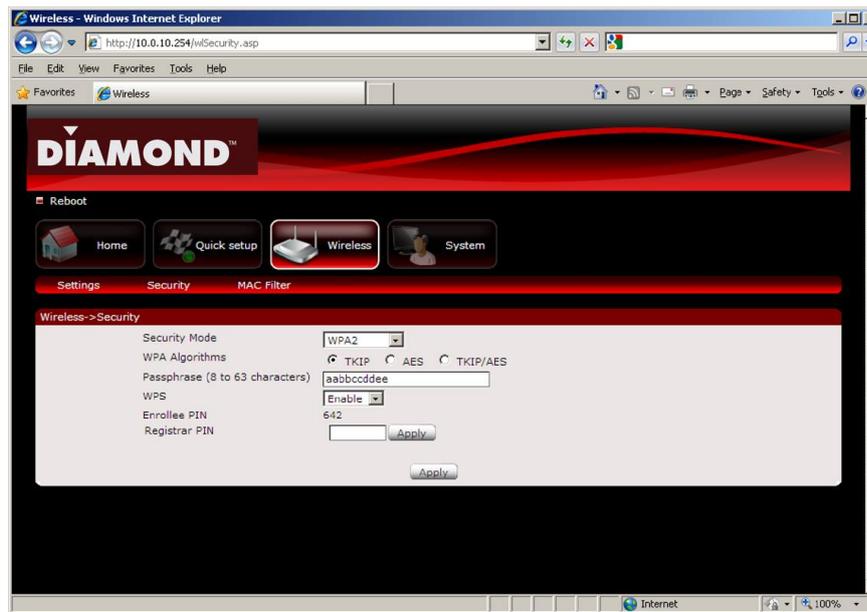
5. Click Apply to commit the changes

6. Ensure to recreate the wireless profile on your computer to match the new settings

WPS

WPS or Wifi Protected Setup makes it easy for wireless clients to connect to the wireless repeater. Simply press the WPS button on the repeater and press the WPS button on the wireless client within 2 minutes, and the wireless security authentication will be done automatically.

Press the WPS button for 5 seconds

Desktop PC

Press the WPS Button for 5 seconds

Configuring Wireless MAC Filtering

Wireless MAC Filtering allows you to select which wireless clients to allow or deny access to the Wireless Repeater.

To configure Wireless MAC Filtering via the Web GUI:

1. Open your browser

2. Type 10.0.10.254 on the address bar

3. Input admin for both username and password fields and click on OK

4. Click the Wireless button, and click MAC filter menu. You can select Allow or Deny from the Policy drop down box and enter the MAC address of the wireless client you wish to allow/deny access to the wireless repeater
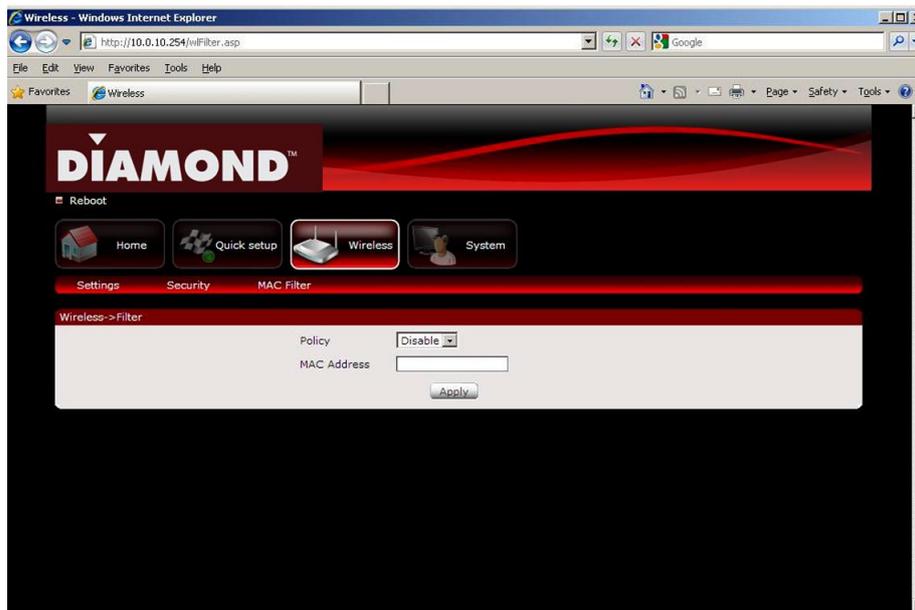
5. Click Apply to commit the settings

Viewing the Home Page

The Home Page will tell you information about your device.

To view the Home Page via the Web GUI:

1. Open your browser

2. Type 10.0.10.254 on the address bar

3. Input admin for both username and password fields and click on OK
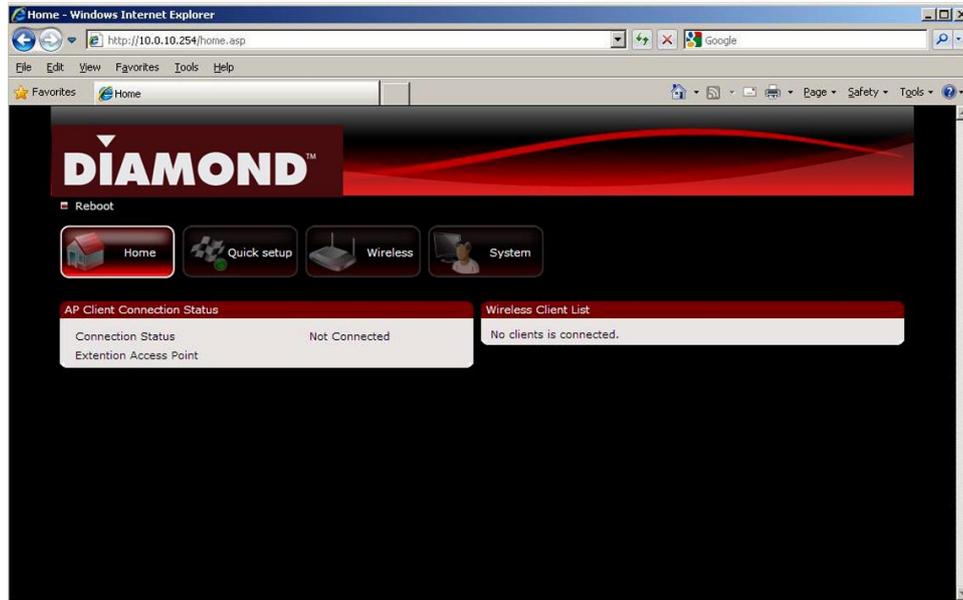
4. AP Client Connection Status displays the Connection status and SSID of the Access Point being extended.

5. Wireless Client List displays the current wireless clients connected to the repeater.

System Management

The System Management menu is used for device settings administration.

Accessing System Management

To access the Web User Interface:

1. Open your browser.

2. Type-in 10.0.10.254 on the address bar and then press Enter.

3. Input admin for both username and password fields and click on OK

What's on System Management

System Management includes the following options:

- Information

- Firmware

- Reboot

- Password

Information

This page shows the device information. Below is the list of information shown in this menu.
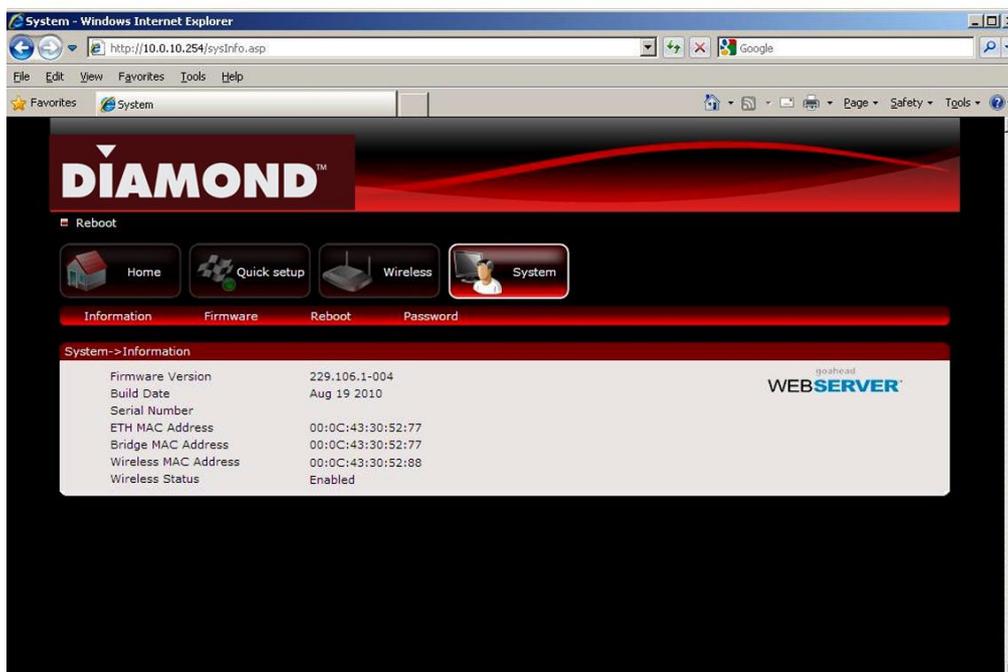
- **Firmware Version** – Shows the current firmware version of the device

- **Build Date** – Shows the firmware release date

- **Serial Number** – Shows the serial number of the device

- **ETH MAC Address** – Shows device's Ethernet interface MAC address

- **Wireless MAC Address** – Shows device's wireless interface MAC address

- **Wireless Status** – Shows the status of the wireless interface.

Firmware

Firmware menu allows you to see the current firmware version and build date as well as upgrade the firmware of the device.
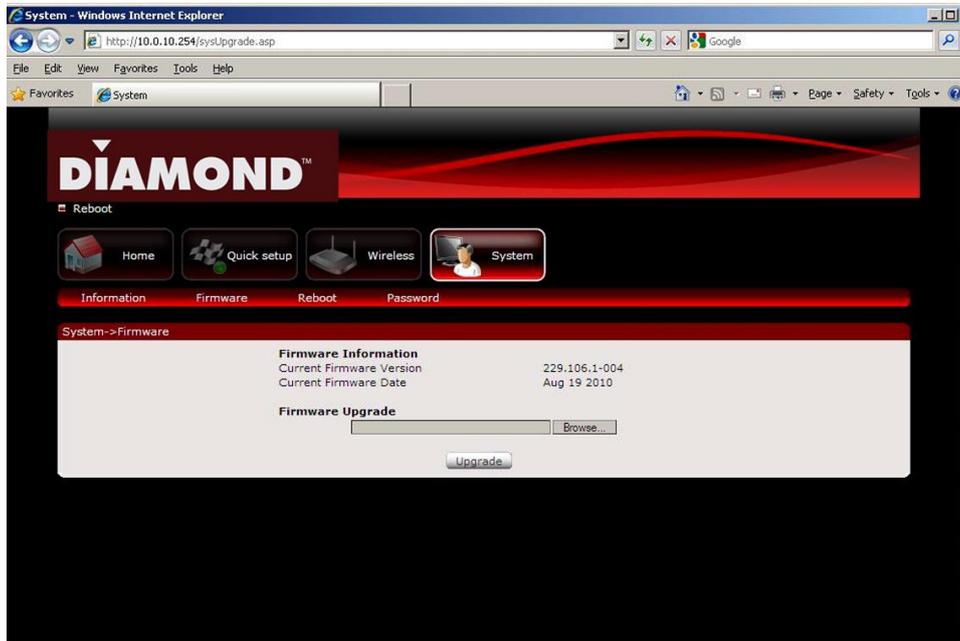
- Firmware Information – Shows the current firmware's version and build date

- Firmware Upgrade – Load a new firmware upgrade file to the device

NOTE: Make sure you connect to the device via Ethernet cable when upgrading the firmware to avoid corruption during the firmware upgrade procedure.

Reboot

Reboot allows you to reboot the device for new settings to take effect.
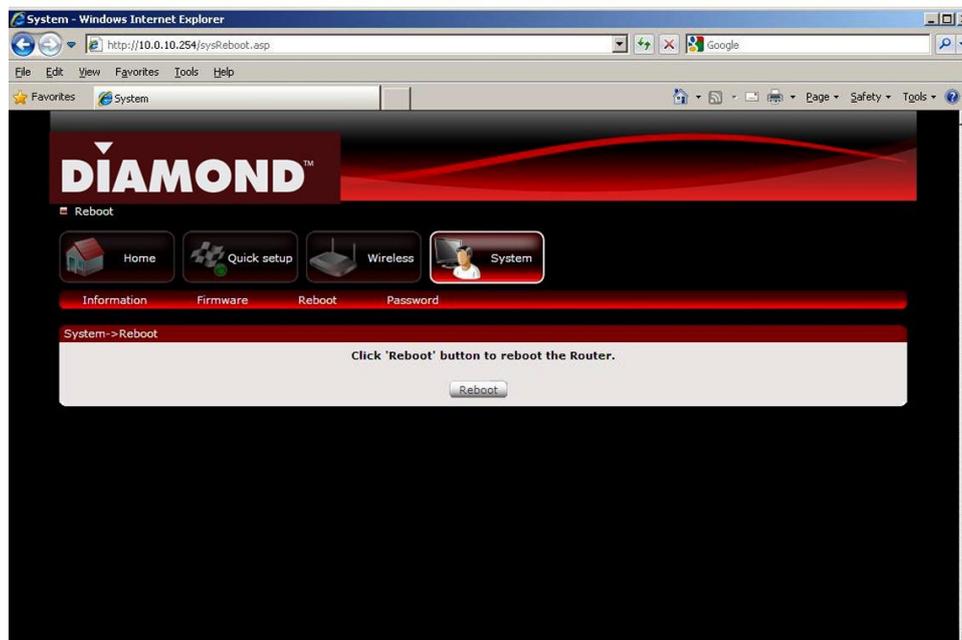
- **Reboot** — Allows you to reboot the device

Password

Password menu allows you to change the device's password to access the Graphical User Interface (GUI).
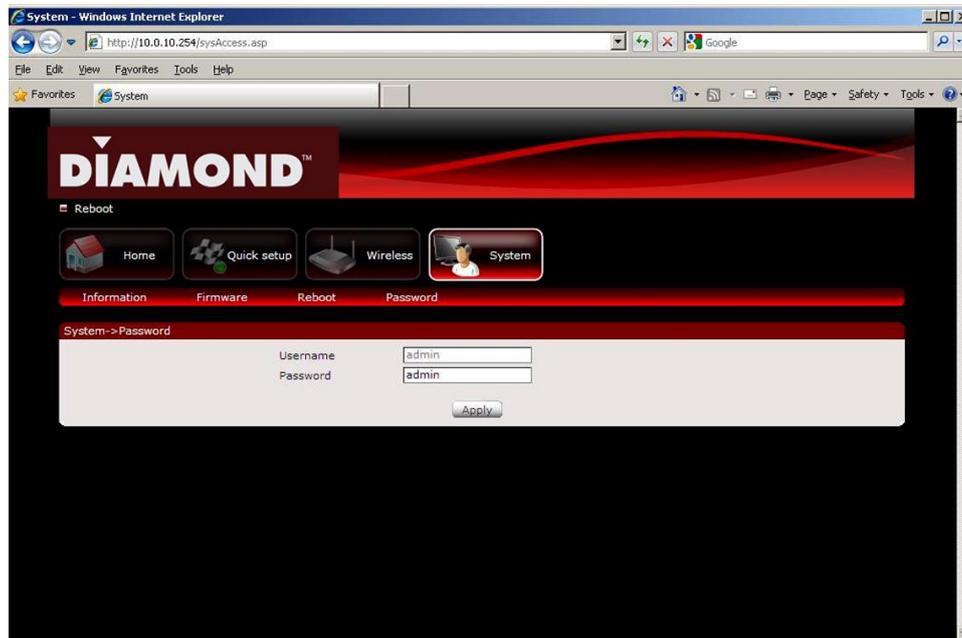
- ▪ Password — Allows you to change the router's password

Setting a Static IP on your PC

The WR300N Wireless N Repeater will only give an IP address to your PC upon initial installation. Once you have associated it with your Wireless Router/AP, you will no longer have access to the device's web GUI. If you wish to change any settings on the WR300N, you need to set a Static IP address on your PC. Just remember to set it back to "Obtain and IP address automatically" after you are done.

To set a static IP address on your PC using Windows XP:

1. Click Start > Control Panel
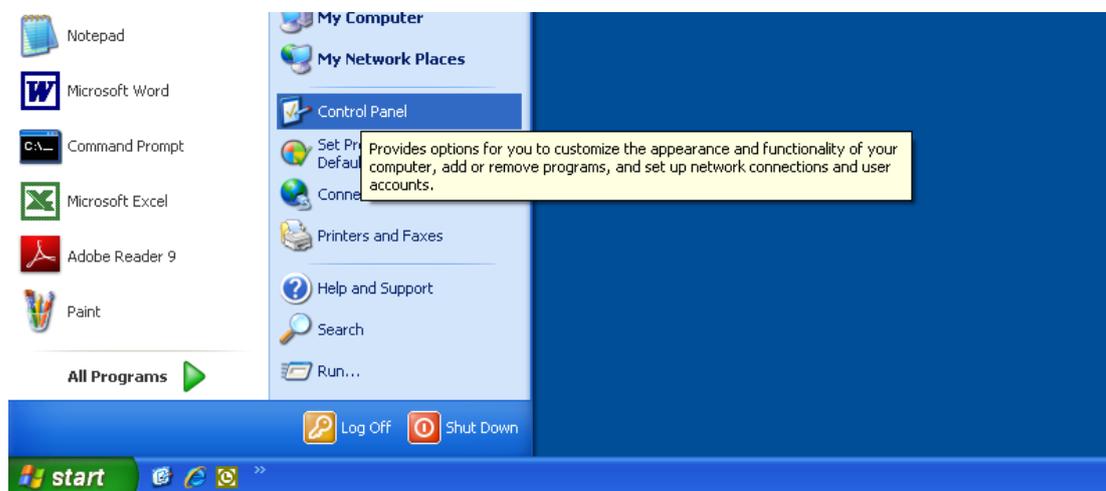
2. Click on Network and Internet Connections
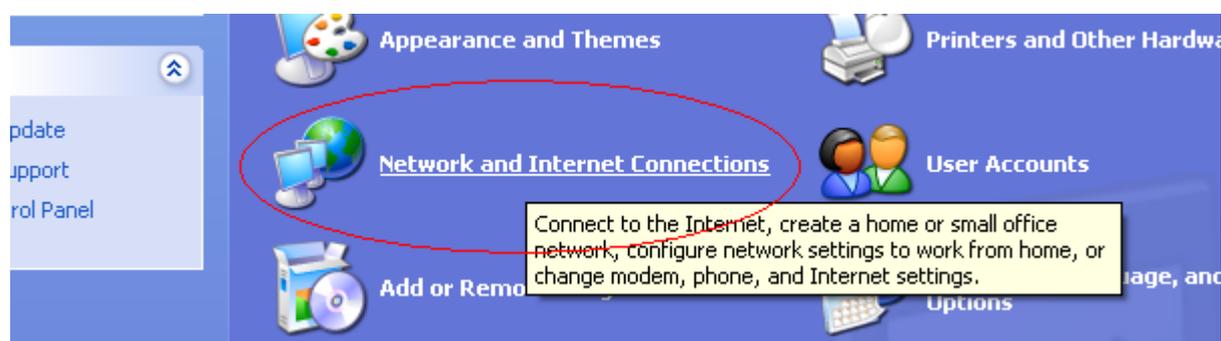
3. Click on Network Connections

4. Right-Click on the Network Adapter you will use to configure the wireless repeater and click Properties
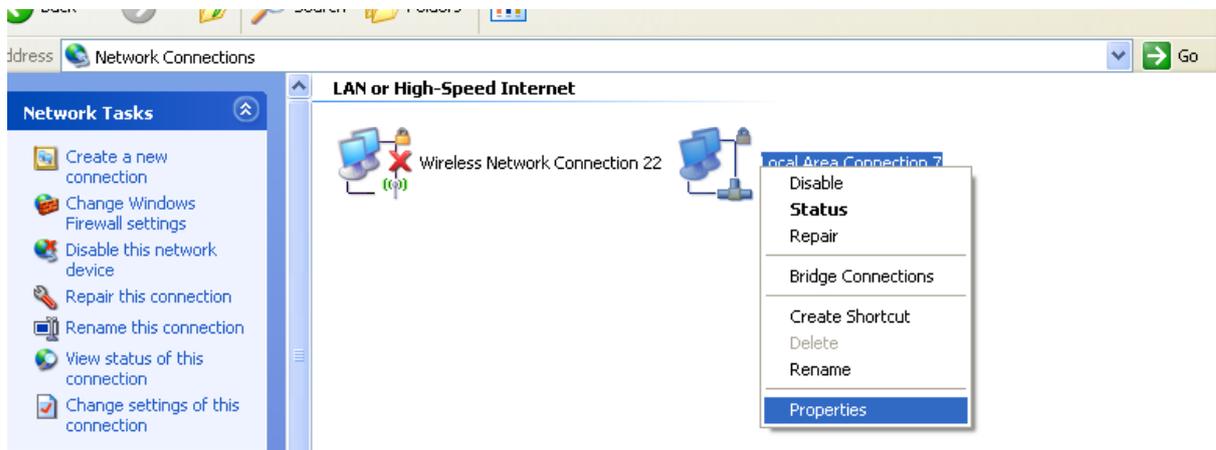
5. Click to select Internet Protocol (TCP/IP) and click Properties
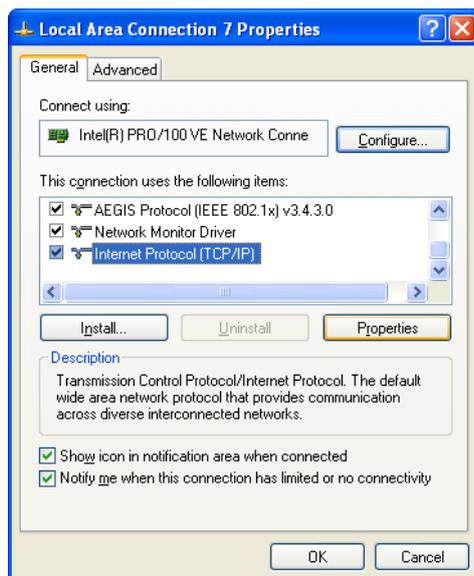
6. Select "Use the following IP address:" and key in 10.0.10.1 as the IP address and 255.255.255.0 for the Subnet mask. Leave the other fields blank.
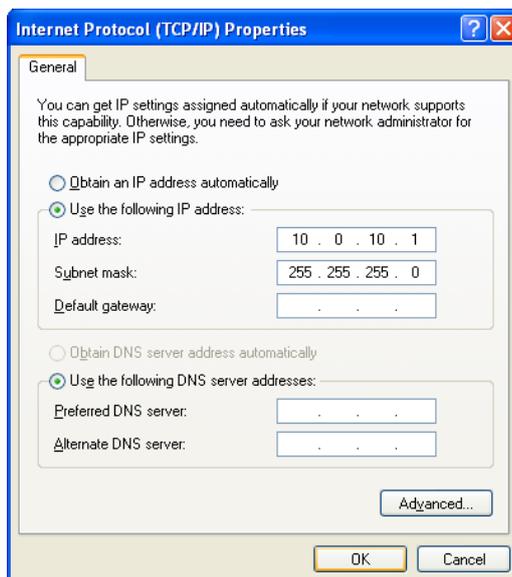
7. Click OK to commit the settings.

To set a static IP address on your PC using Windows Vista:

1. Click Start > Control Panel
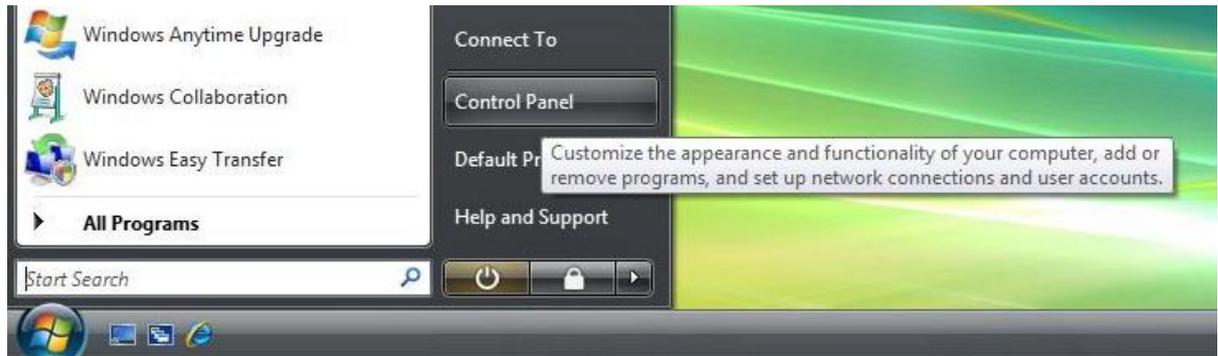
2. Double-Click Network and Sharing Center
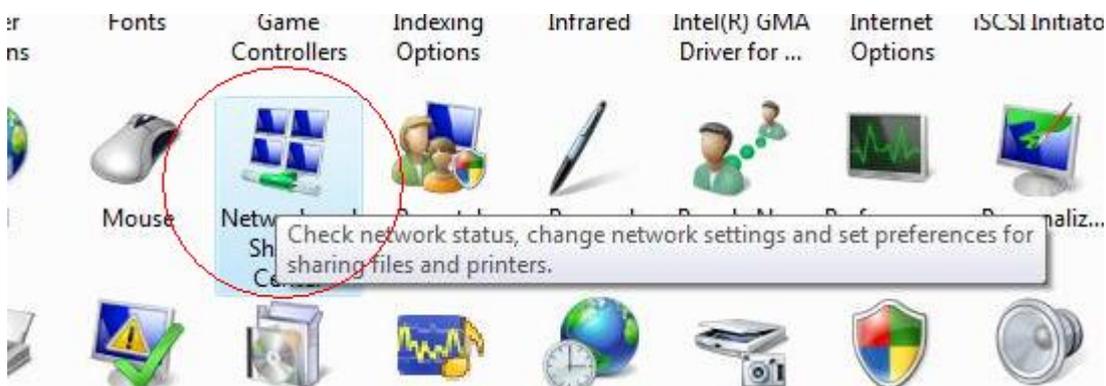
3. Click Manage network connections
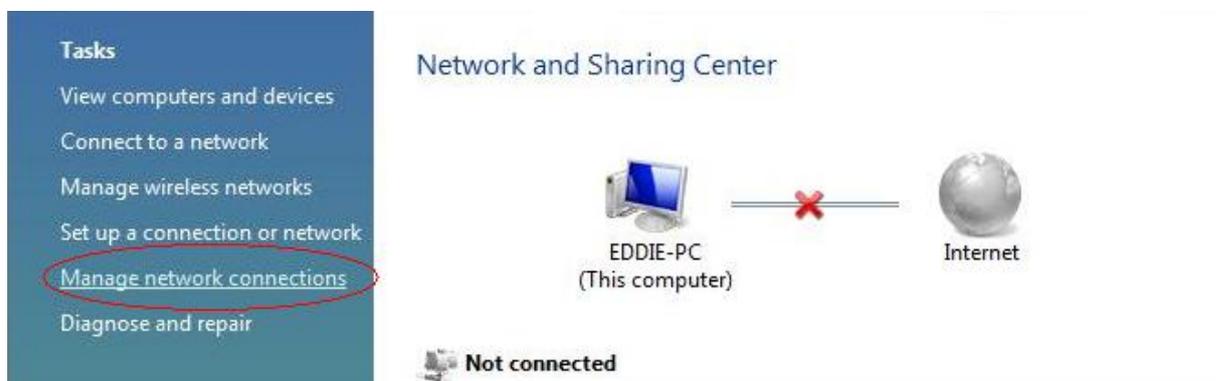
4. Right-Click on the Network Adapter you will use to configure the wireless repeater and click Properties
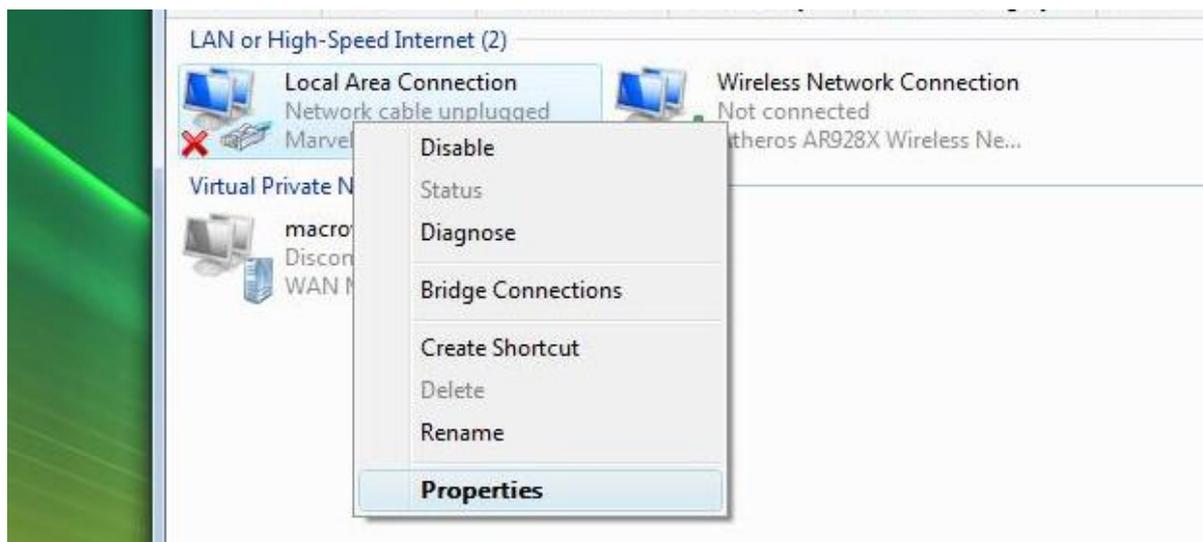
5. Click to select Internet Protocol Version 4 (TCP/Ipv4) and click Properties
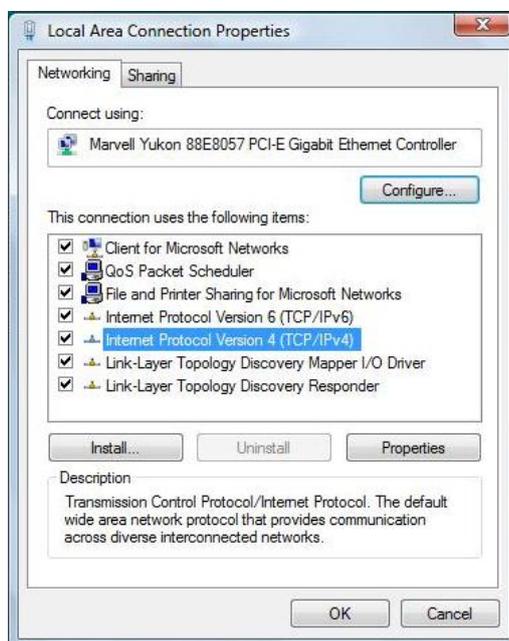
6. Select "Use the following IP address:" and key in 10.0.10.1 as the IP address and 255.255.255.0 for the Subnet mask. Leave the other fields blank.
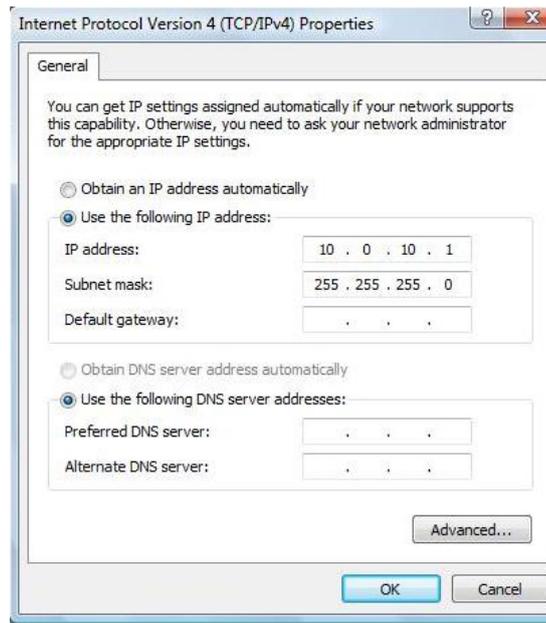
7. Click OK to commit the settings.

To set a static IP address on your PC using Windows 7:

1. Click Start > Control Panel
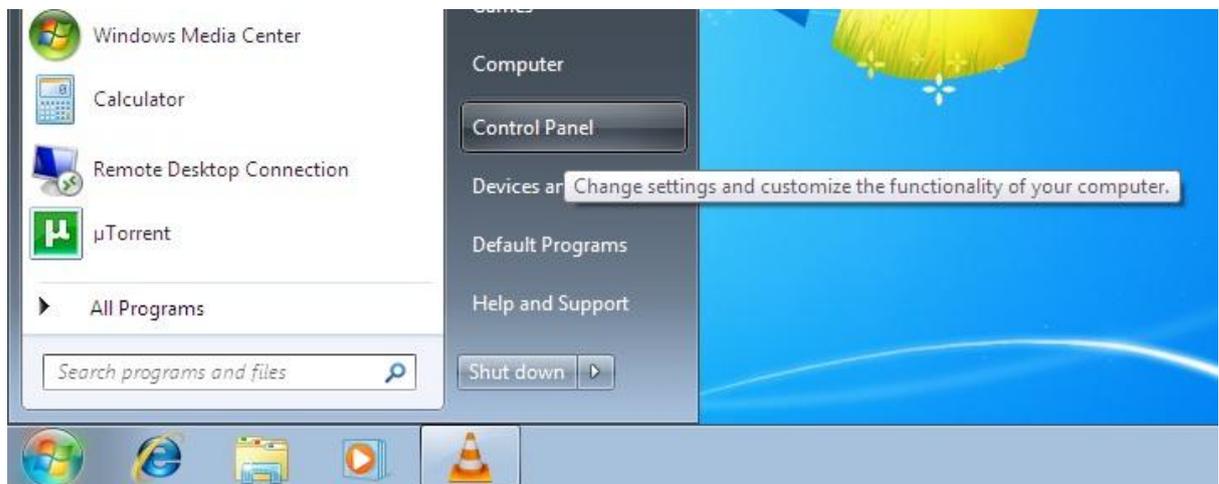
2. Click View network status and tasks
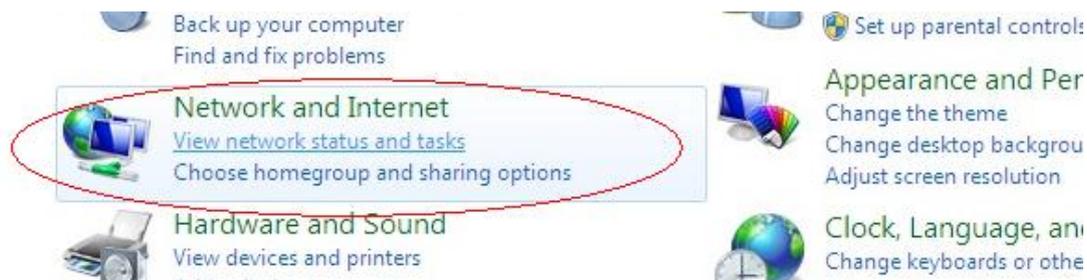
3. Click Change adapter settings
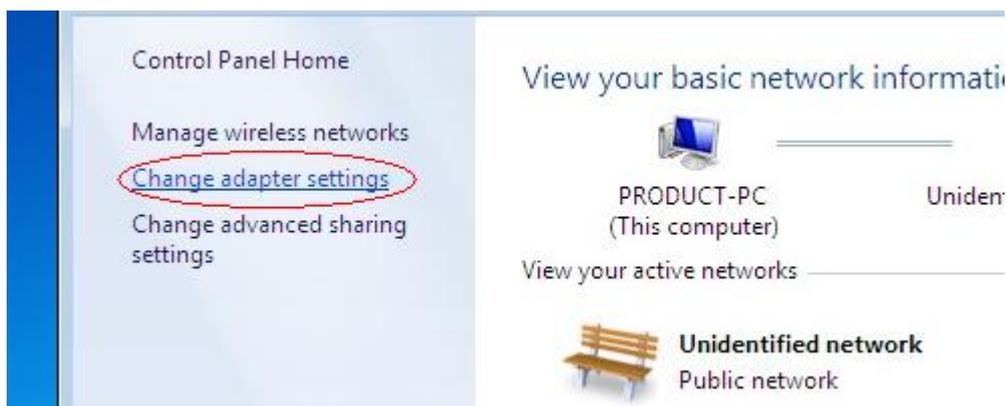
4. Right-Click on the Network Adapter you will use to configure the wireless repeater and click Properties
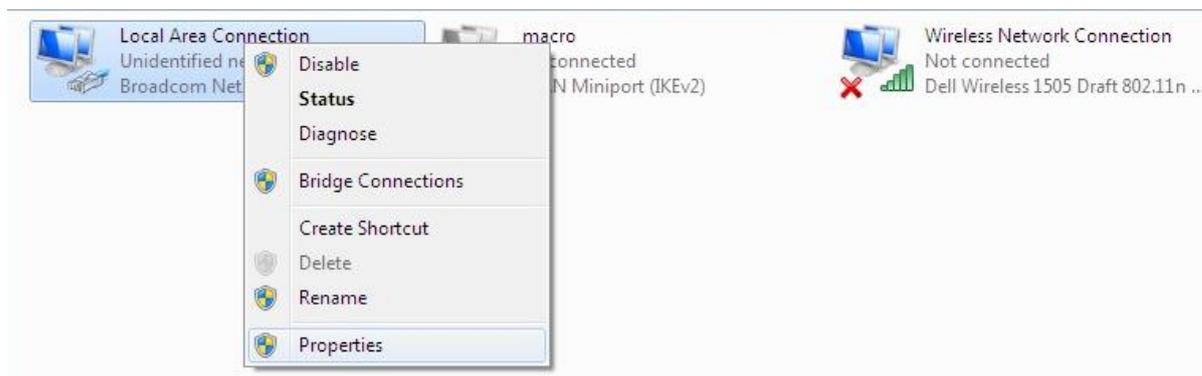
5. Click to select Internet Protocol Version 4 (TCP/Ipv4) and click Properties
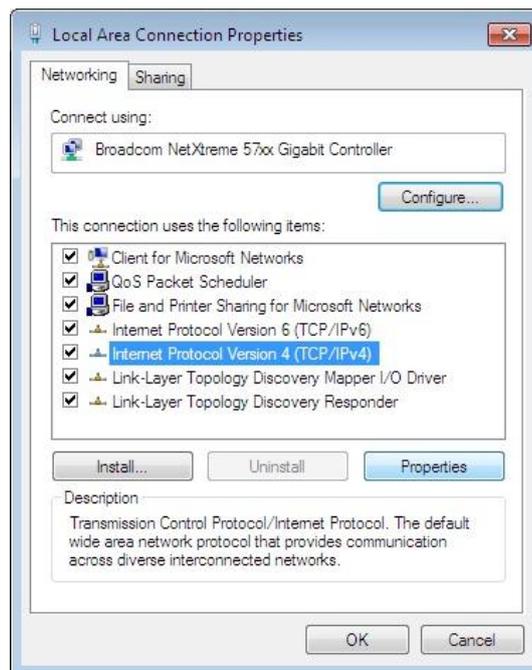
6. Select "Use the following IP address:" and key in 10.0.10.1 as the IP address and 255.255.255.0 for the Subnet mask. Leave the other fields blank.
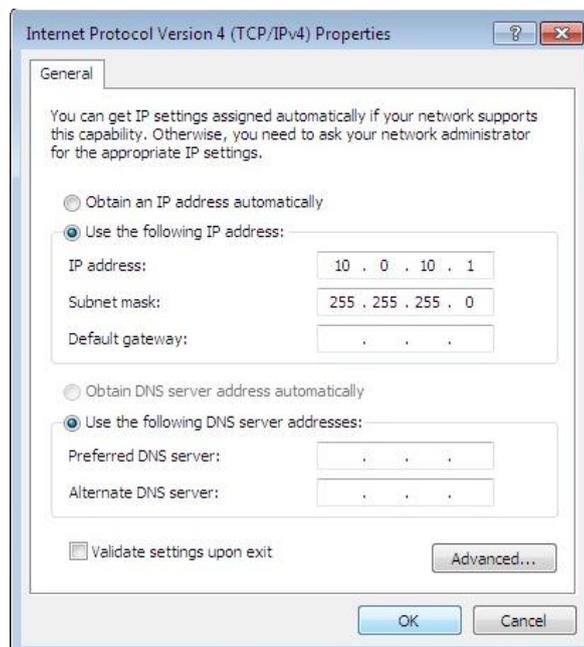
7. Click OK to commit the settings

⚠ Safety Precautions

- Do not open, service, or change any component.

- Only qualified technical specialists are allowed to service the equipment.

- Observe safety precautions to avoid electric shock

- Check voltage before connecting to the power supply. Connecting to the wrong voltage will damage the equipment.

Technical Support

Diamond Technical Support staff is here to help resolve any issues that you may be experiencing. Prior to contacting technical support please make sure you have the following information available.

1. Model #: (Printed on the bar code, located on the box)
2. Installation CD Version: (printed on the CD label)
3. The version of Windows that your system is running.
4. The manufacturer and model # of your computer.
5. CPU type and speed (example: Intel Pentium4 2.4GHZ)
6. A complete description of the problem that you are experiencing including any steps   that you have taken to try to resolve the issue.

Technical Support Options
Free Telephone Support

818-357-5165
(long distance rates may apply)
Mon - Fri, 8 - 4:30 PST
http://www.diamondmm.com

SHIPPING

Starting June 1st 2009 Diamond Multimedia will pay for shipping cost from Diamond back to US and Canadian customers provided the product is indeed under warranty and there is no damage caused by improper installation or modification of the merchandise. Customers located outside of the United States and Canada or using military addresses (APO,etc) will be required to pay for return shipping. Average shipping times range from 5 to 10 days, depending on actual shipment destination. Shipments made outside the US may take longer to deliver.

Diamond Multimedia reserves the right to claim for shipping fees along with service charges for any product that is returned incomplete or not under warranty. Return Authorization (RMA) is required for all warranty return products.

ONE YEAR LIMITED WARRANTY

The warranty described below is extended only to the original buyer and is not transferable.
Diamond warrants to the original purchaser of the hardware product, that the product is free from defects in materials or workmanship under normal use and service for a period of one (1) year from the date of purchase. All cables and accessories provided with a Diamond product are warranted to be free from defects in materials or workmanship under normal use and service for a period of for (90) ninety days from date of purchase.

Diamond's sole obligation under this warranty shall be, at Diamond's option, to: (I) repair the defective product or parts; (II) deliver to customer an equivalent product or part to replace the defective product. When a product or part is replaced or exchanged, that item becomes the customer's property and the replaced or exchanged item becomes Diamond's property. When a refund or replacement product is given, the defective product becomes Diamond's property. Replacement parts or products may be new or include serviceable used parts with at least the same functional equivalence to the original product. If, at the time of repair, a product is "out of warranty" or within the last ninety (90) days of the warranty period, Diamond warrants any repair for ninety (90) days. All software provided is subject to the terms of the associated software end-user license agreement.

WARRANTY EXCLUSIONS AND LIMITATIONS
TO BE ELIGIBLE FOR THIS WARRANTY, YOU NEED TO PROVIDE THE ORIGINAL SALES RECEIPT SHOWING THE DATE OF PURCHASE OF THE PRODUCT. DIAMOND MAY REQUEST THE ORIGINAL SALES RECEIPT OR A COPY AS PROOF OF THE DATE OF PURCHASE.

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OBTAINING WARRANTY SERVICE: Please review the "help" resources referred to in your products accompanying documentation before seeking warranty service. If the product is still not functioning properly after making use of these resources, please access the support page at http://www.diamondmm.com/support.php for warranty instructions and services. Some additional charges may apply for phone support.

FCC Notice

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 or more 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 or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Diamond Multimedia could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC rules.

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.

Exposure Information to Radio Frequency Energy

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

We reserve the right to revise this document at any time without the obligation to notify any person and/or entity. All other company or product names mentioned are used for identification purposes only and may be trademarks of their respective owners.

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