

SETTING UP YOUR WIRELESS NETWORK*

Galen Garretson

You did it! You went out and bought that new laptop computer with a built in wireless adapter. You've got it home, out of the box and there it sits, just waiting for you. Scratching your head you ask yourself, "Now what?"

Let's see if we can get you hooked up and running on a wireless network.

WHAT YOU NEED

- ✚ **An operating system that supports wireless networking**
The Windows 7 operating system fully supports wireless networking. If you are using Windows Vista it is best to have the Vista Service Pack 2 installed before setting up your wireless network. For XP users, Service Pack 3 is recommended. Use Windows Update to check whether you need the service pack and to install it. Click **Start/All Programs/Windows Update**, and then click **Check for Updates**. The service packs are not absolutely required for Vista and XP users, but will make setting up the wireless network easier.
- ✚ **A high speed internet connection (cable, DSL, satellite or other broadband connection)**
To set up a wireless network, you need a broadband or high-speed Internet connection (not a dial-up connection) provided by an Internet service provider (ISP), usually for a monthly fee. Two common broadband technologies are Digital Subscriber Line (DSL) and cable technology. These require a DSL modem or a cable modem (usually provided by your ISP).
- ✚ **A wireless router, a DSL modem, or a cable modem with built-in wireless networking support**
Your router converts the signals coming across your Internet connection into a wireless broadcast, sort of like a cordless phone base station. Some newer DSL and cable modems come with integrated wireless networking capability and are called *modem routers*. If the modem router you received or purchased from your ISP already has wireless capability built in, you do not need to purchase a separate wireless router. Just follow the instructions provided by your ISP for activating your wireless connection.

A few typical routers:



Dlink



Asus



Cisco



Linksys

If you do need to purchase a *wireless router*, be sure that you buy a *wireless router* and not a *wireless access point*.

- ✚ **A computer with built-in wireless networking support (your new laptop) or a wireless network adapter**
Almost all newer laptops have built-in wireless capabilities. If you have a desktop computer it probably does not have built-in wireless capability and you will need to purchase a wireless network adapter.

Typical wireless network adapters



- ✚ **A copy of your router setup instructions**
Before you begin setting up your wireless network, it's a good idea to make sure that you have the copy of the setup instructions provided by the router manufacturer or your ISP. If you do not have a copy, visit the manufacturer's website to get instructions on how to set up your router. All routers vary, and you may need to consult the instructions to set up your wireless network using your specific router.

FOUR STEPS TO SETTING UP YOUR WIRELESS NETWORK

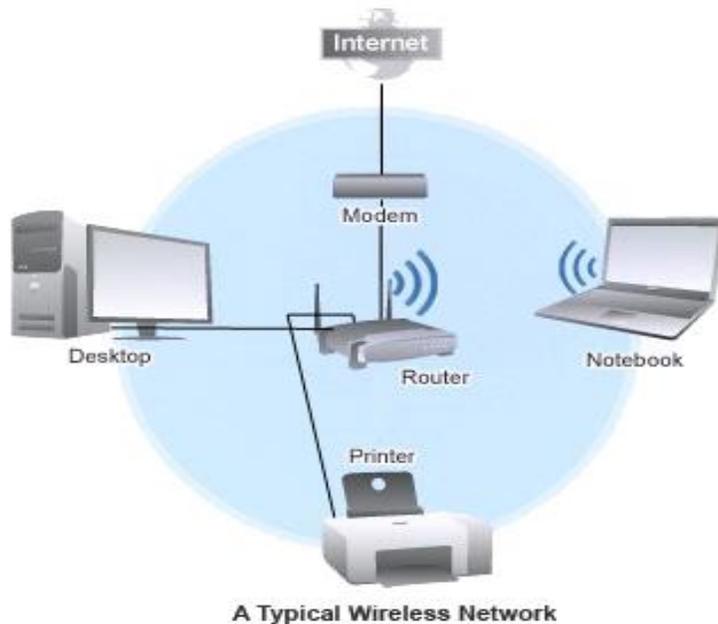
1. CONNECT TO THE INTERNET

Make sure that your Internet connection and your DSL or cable modem are working. Your wireless network depends on this connection.

2. CONNECT YOUR WIRELESS ROUTER

These are the steps for connecting a stand-alone wireless router to your DSL modem or cable modem. If you have a modem router, follow your ISP's instructions for connecting your network.

Your wireless network will look something like this when you are done:



First, locate your cable modem or DSL modem and unplug it to turn it off.

Your modem should stay connected directly to the Internet. Later, after you've hooked everything up, your computer will wirelessly connect to your router, and the router will send communications through your modem to the Internet.

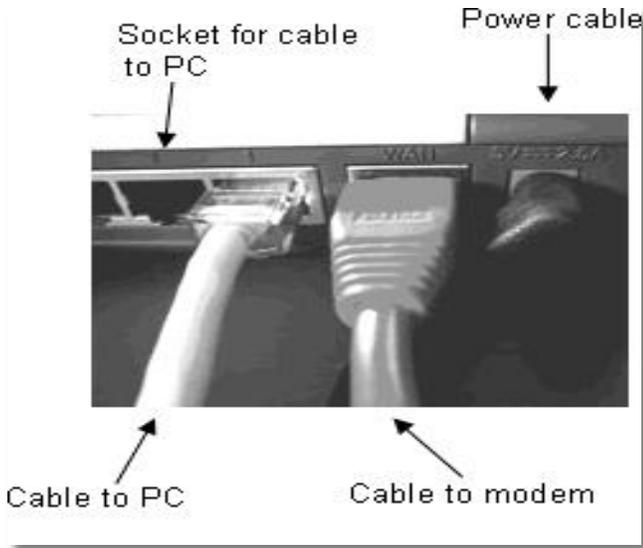
Now, connect your router to your modem:

Note: The instructions below are generic in nature. The ports on your router may be labeled differently, and the images may look different on your router. Check the documentation that came with your equipment or do a Google search on “[your manufacturer/model] wireless router setup” to find images and instructions.

- **If you currently have your laptop connected directly to your modem:** Unplug the network cable from the back of your computer, and plug it into the port labeled *Internet*, *WAN*, or *WLAN* on the back of your router.
- **If you do not currently have your laptop connected to the Internet:** Plug one end of a network cable (included with your router) into your modem, and plug the other end of the network cable into the Internet, WAN, or WLAN port on your wireless router.
- **If you currently have your laptop connected to a router:** Unplug the network cable connected to the Internet, WAN, or WLAN port from your current router, and plug this end of the cable into the Internet, WAN, or WLAN port on your wireless router. Then, unplug any other network cables, and plug them into the available ports on your wireless router. You no longer need your original router, because your new wireless router replaces it.

Next, plug in and turn on your cable or DSL modem. Wait a few minutes to give it time to connect to the Internet, and then plug in and turn on your wireless router. After a minute, the Internet, WAN, or WLAN light on your wireless router should light up, indicating that it has successfully connected to your modem.

3. CONFIGURE YOUR WIRELESS ROUTER



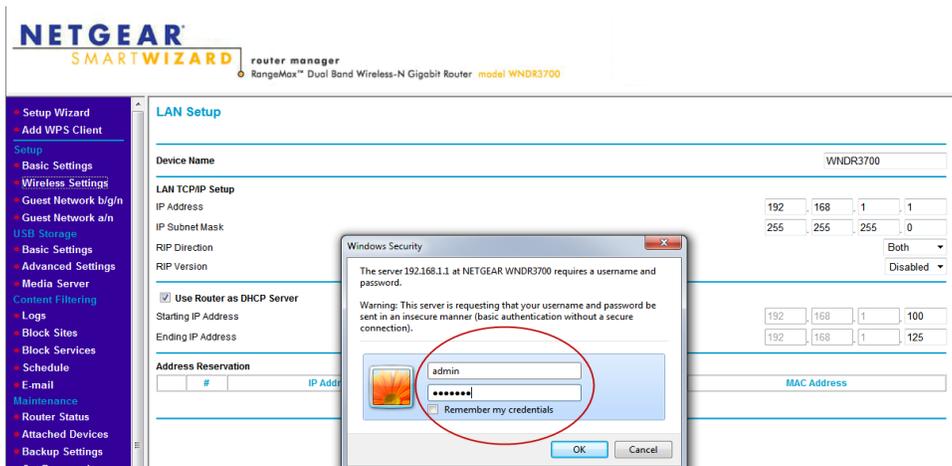
Using the network cable that came with your wireless router, you should temporarily connect your laptop to one of the open network ports on your wireless router (any port that isn't labeled *Internet*, *WAN*, or *WLAN*). If you need to, turn your laptop on. It should automatically connect to your router.

Next, open Internet Explorer and type in the URL or address to configure your router.

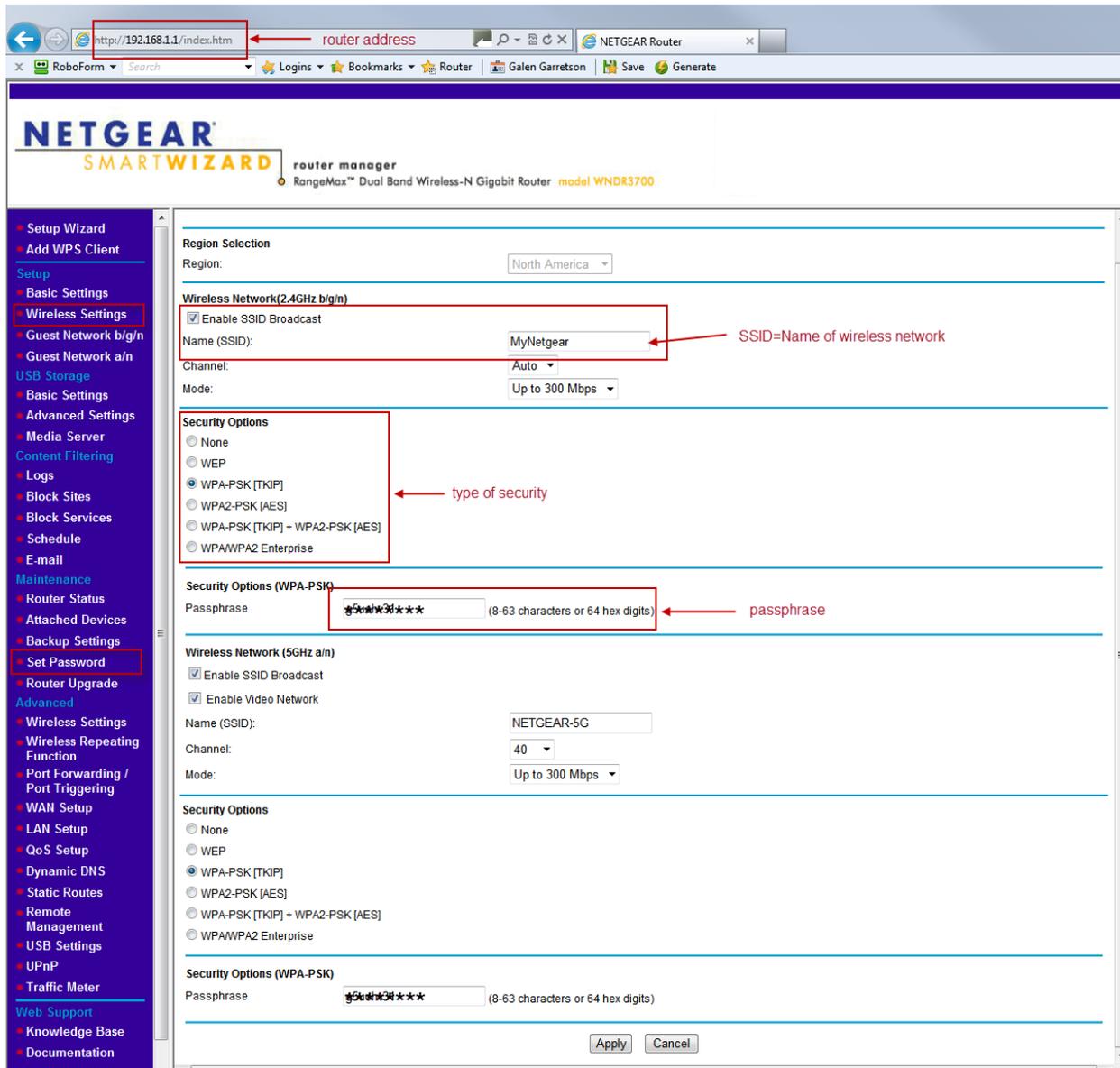
Below is a list of common routers and the associated default address, username and password for each.

Router	Address	Username	Password
3Com	http://192.168.1.1	admin	admin
D-Link	http://192.168.0.1	admin	admin
Linksys	http://192.168.1.1	admin	admin
Microsoft Broadband	http://192.168.2.1	admin	admin
Netgear	http://192.168.0.1	admin	password
Actiontec	http://192.168.0.1	username	password

On the router configuration page, you might be prompted for a username and password. The address, username and password vary depending on which router you have. See the table above or refer to your instruction booklet.



I typed 192.168.1.1 in the address bar of the Internet Explorer and then went to the Wireless Settings option. Here's a screenshot of the Wireless Settings for my router:



Using the various router screens you will be able to see your router's configuration pages, along with the modem IP address and other information. Most of the default settings should be fine, but you need to configure three things:

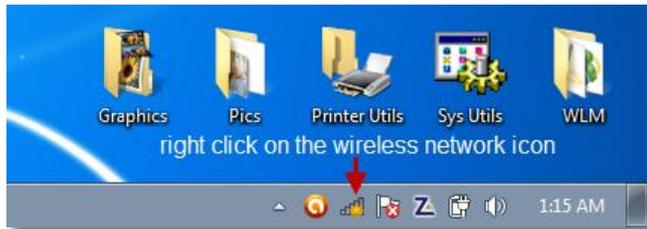
- **Your administrative password, which controls your wireless network.** Just like any other password, it should not be a word that you can find in the dictionary, and it should be a combination of letters, numbers, and symbols. Be sure to save a hard copy and a digital copy of this password, too, because you'll need it if you ever have to change your router's settings.
- **Your wireless network name, known as the SSID.** This name identifies your network, and it appears in a list of available wireless networks. You should change the default SSID and give your network a unique name that none of your neighbors are using. This helps you identify your network, and it can help keep your wireless network secure by preventing it from overlapping with other wireless networks that might be using the default SSID.
- **Wi-Fi Protected Access (WPA or WPA2), which can help protect your wireless network.** It's important to secure your wireless network by setting up a network security key, which turns on encryption. With encryption, people can't connect to your network without the security key, and all information sent across your network is encrypted so that only computers with the key to decrypt the information can read it. This can help prevent attempts to access your network and files without your permission. Wi Fi Protected Access (WPA or WPA2) is the recommended wireless network encryption method. Wireless encryption (WEP) is not as secure.

The exact steps you follow to configure these settings will vary depending on the type of router you have. After each configuration setting, be sure to click **Save Settings**, **Apply**, or **OK** to save your changes.

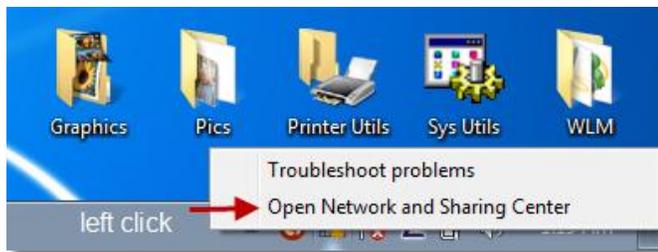
Now, once you've configured your router you can disconnect the cable that runs from your laptop or pc to the wireless router.

4. CONNECT YOUR LAPTOP TO THE WIRELESS NETWORK

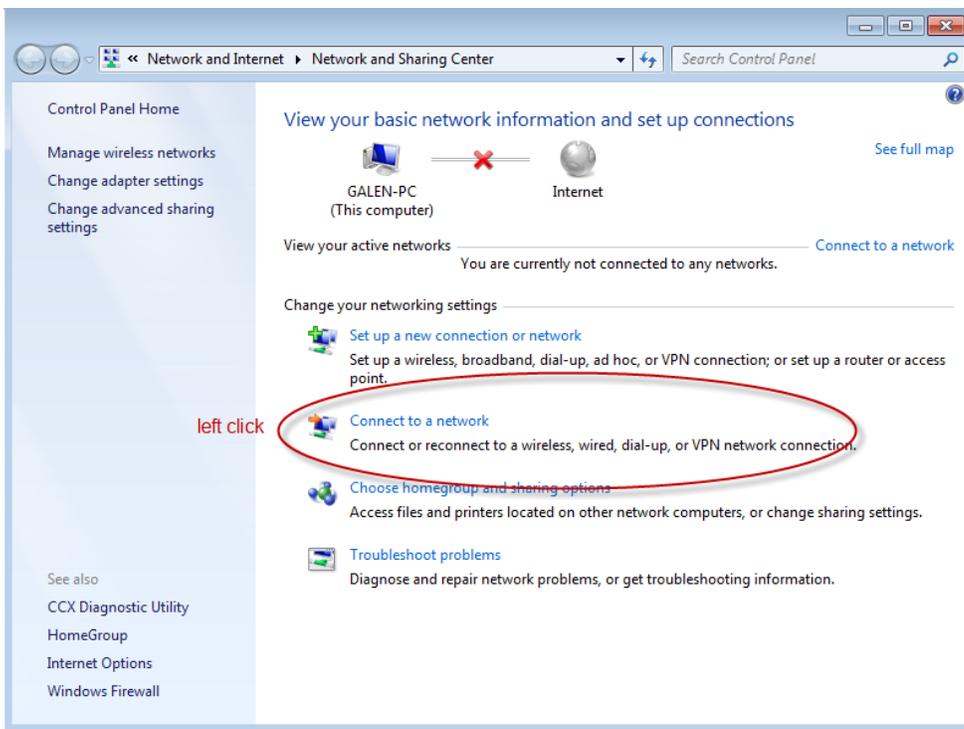
You can connect multiple computers, printers, etc. to your network. Before you connect laptop to the network, be sure the wireless adaptor is activated. Use the following steps for a Windows 7 operating system.



Right click on the wireless adapter icon that appears in the system tray.



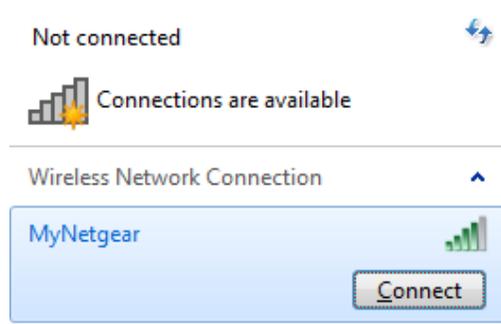
Left click on "Open Network and Sharing Center"



Left click on "Connect to a network"



A list of available wireless networks will appear. Left click on yours.



Now left click on the "Connect Button". After a brief moment you will be prompted to enter your "passphrase" or network key. Be sure to type it in correctly!!

That's it. You're ready to go!

Here are links for additional help for setting up networks and for adding printers.

[Windows 7 Instructions](#)

[Windows Vista Instructions](#)

[Windows XP Instructions](#)

*Some information used from the Microsoft at Home series.