Configuring Your Network's Security

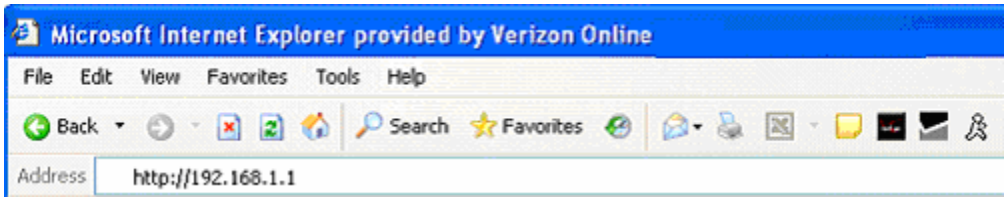
Security is an important issue when using a wireless home network. Because radio waves are used to transfer information between your networked computers, it's possible for hackers to intercept this information. Taking advantage of the security features built into your Actiontec router can make it more difficult for hackers to access your personal information.

Your Actiontec M1424WR router comes with an assigned ESSID and WEP encryption key to make installation easier and provide immediate protection for your home network. Review the type of data stored on your network computers to determine the level of protection you need. Regardless of the level of security protection you choose, it's very important to periodically change your security settings. It should be considered a normal maintenance task.

Note: The Actiontec security screens and prompts may vary slightly from the directions below, depending on when you purchased your Actiontec router and the version of the firmware loaded on it.

To update your Actiontec security settings to provide increased protection:

1. Open your Web browser and enter ***http://192.168.1.1*** in the **Address** field.

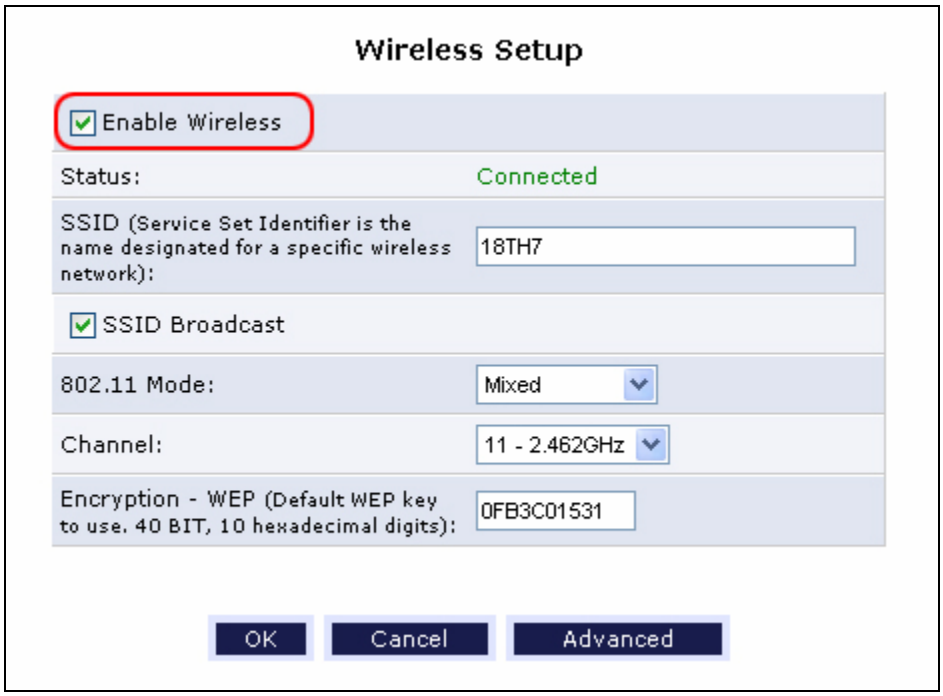


2. Enter your user name and password and click **Ok**.

- Enter the user name and password that were entered during the initial setup of your FiOS hardware.
- If you don't know the user name and password, you will need to reset your Actiontec router to the factory default values.

3. Click the **Wireless Setup** icon at the top of the screen.

4. Confirm that **Enable wireless** is selected.

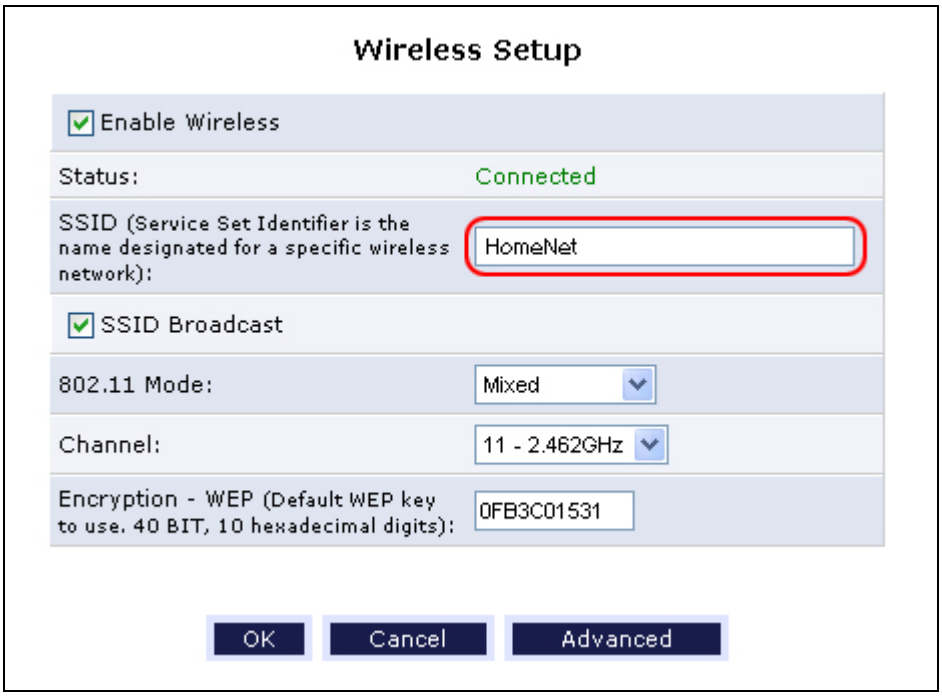


5. If you are creating a new home network, it's recommended that you use the default SSID assigned by Actiontec and displayed in the **SSID** field. This simplifies network installation and makes troubleshooting easier.

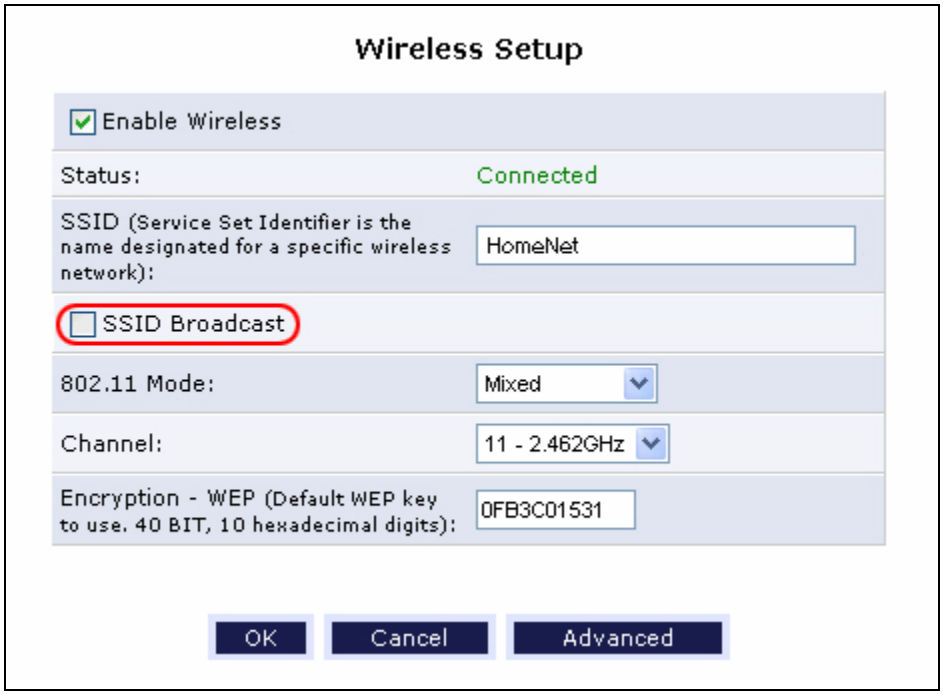
   - The default SSID is displayed on the label attached to the bottom of your router for easy reference.
   - All hardware attached to your home network must use the same SSID.

   If you're replacing the router on an established home network, you may want to change the default SSID to that of your previous network. This eliminates the need to change the SSID on all the wireless network adapters used to connect additional computers.

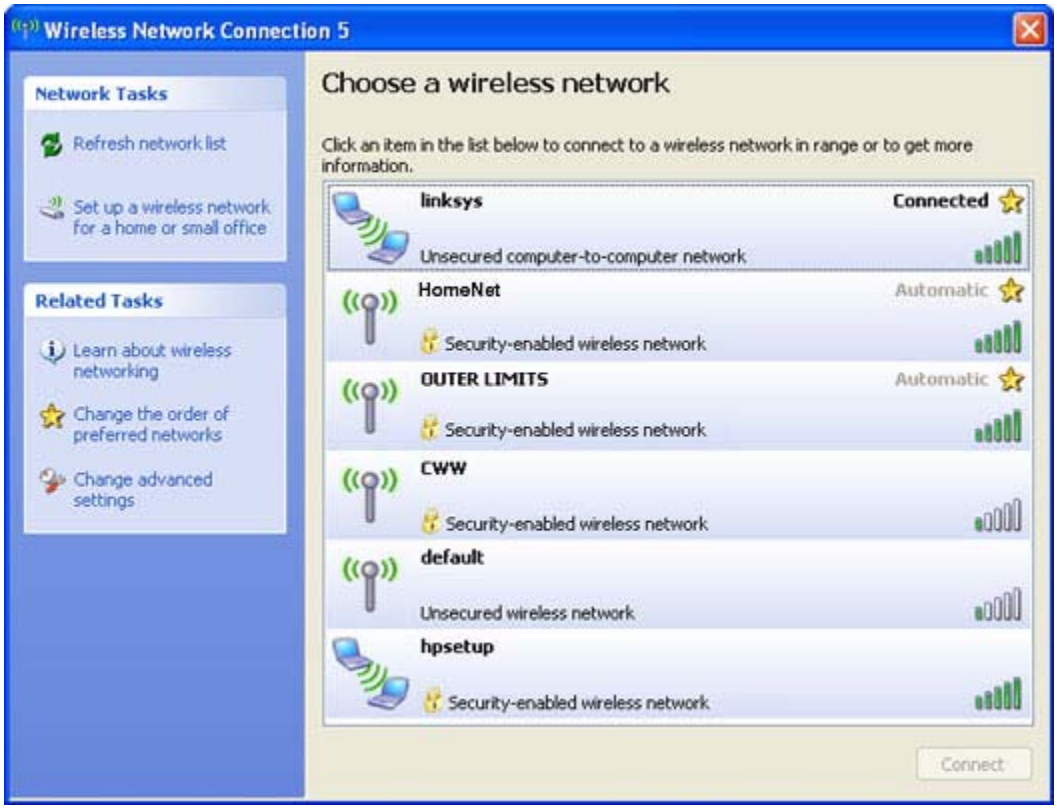
   - If you change the SSID, it's important that you write it down for future reference. All hardware connected to your home network must use the same SSID.



6. For greater security, make sure the **Broadcast SSID** box is *not* checked.

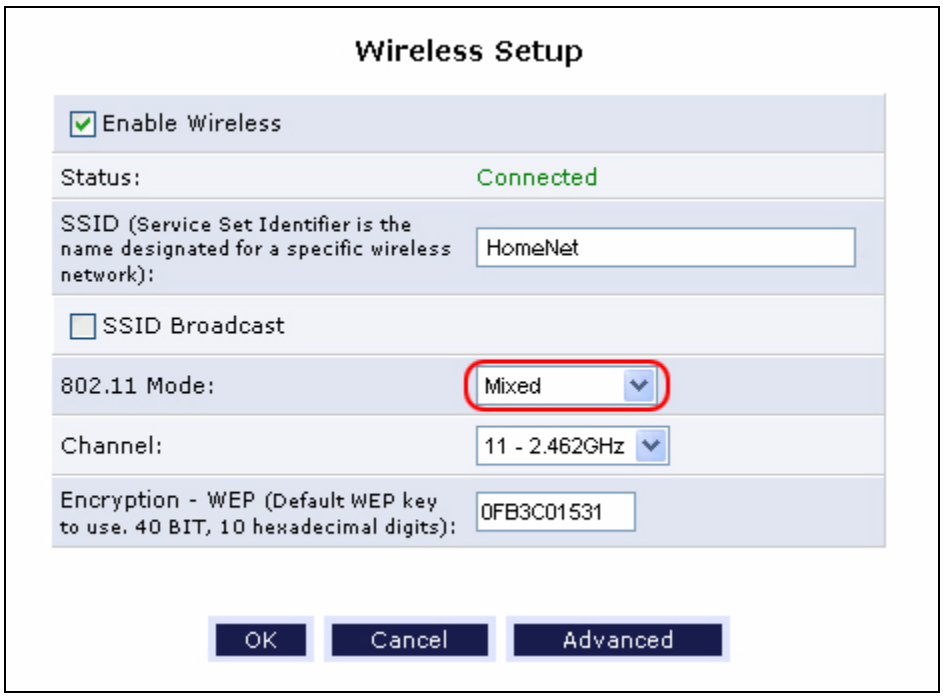


- If this box is selected, anyone within range of your network will be able to "see" your network in the list of available wireless networks.



- If it is not checked, your network is invisible to the casual user.

7. Select the appropriate mode from the **802.11 Mode** drop-down to indicate the type of hardware you're using.



- If all of your hardware is 802.11g, select 802.11g Only

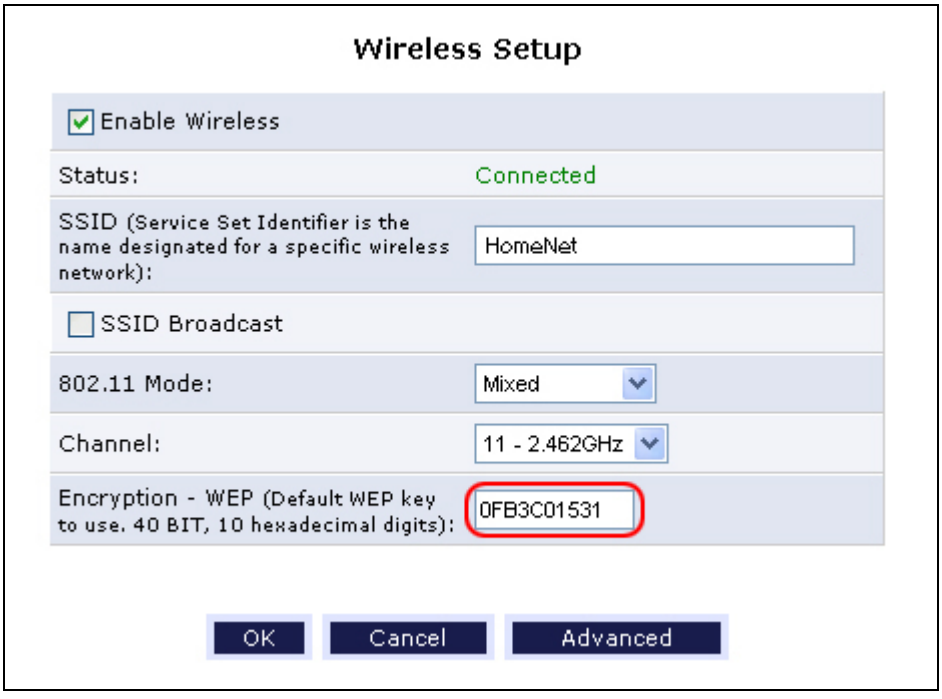
- If all of your hardware is 802.11b, select 802.11b Only
- If you have some hardware that is 802.11g and some that is 802.11b, select Mixed

8. Leave the Channel set to 11 - 2.462 GHz
9. If you are creating a new home network, it's recommended that you use the default WEP 64/40 bit encryption assigned by Actiontec and displayed in the **Encryption – WEP** field. This simplifies network installation and makes troubleshooting easier.

    - The default WEP encryption key is displayed on the label attached to the bottom of your router for easy reference.
    - All hardware attached to your home network must use the same WEP key.

    If you're replacing the router on an established home network, you may want to change the default WEP to that of your previous network. This eliminates the need to change the WEP key on all the wireless network adapters used to connect additional computers.

    - **Note**: The WEP encryption key should be entered with hexadecimal characters (0-9 and A-F). 40/64-bit WEP encryption requires that you enter 10 characters. For example, a WEP key in hexadecimal format could be 45B89CA71DF.
    - If you change the WEP key, it's important that you write it down for future reference. All hardware connected to your home network must use the same WEP key.



10. You can provide additional security for you network by clicking **Advanced** to access the advanced wireless settings.
11. If you aren't going to use the additional security features, you can continue with Step 5.

Supporting Documents

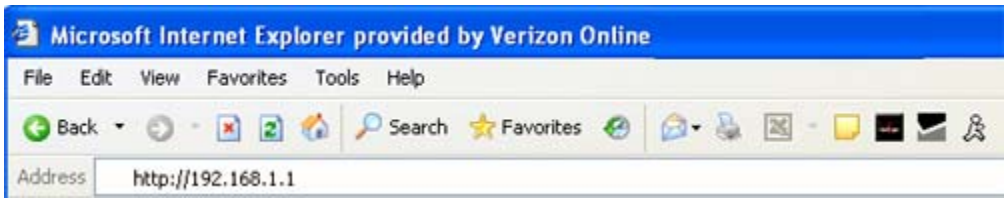
Resetting the user name and password to the default values

If you don't know the user name and password that were defined when your FiOS account was installed, you can reset them to the default values and then enter a new user name and password.

To reset your Actiontec router:

1. With the power on (Power LED on front panel should be lit green), use the pointed end of a paper clip to press and hold the Reset button for 10 seconds.

2. Release the Reset button. The Actiontec router will automatically reboot itself.
3. Wait 15 seconds before resuming setup.
4. Open your Web browser and enter ***http://192.168.1.1*** in the **Address** field.



5. Enter **admin** in the **User Name** field and **password** in the **Password** field. These are the default values. A new screen will display, and you will be required to enter a new user name and password.

6. Enter a new user name in the **User Name** field.
7. Enter a password that contains at least six characters. Your password must contain a combination of numbers and letters.

8. Enter your password a second time to confirm it was entered correctly.
9. Return to the login instructions.

Advanced Security Settings

Although disabling the SSID broadcast and setting up WEP encryption on the initial Wireless Setup screen provides some security for your network, you can add a second level of protection by using the advanced features of your Actiontec router.

- MAC filtering increases your network security as you create a list of computers that can access your network. All other computers are denied access.

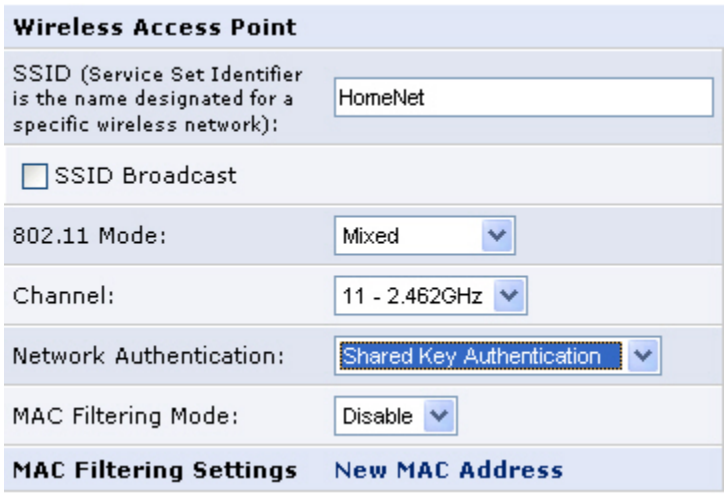
- Increasing the WEP encryption level to 128/104 bit encryption makes it harder for hackers to break into your home network.

Note: Change only the MAC filtering and WEP encryption settings on this page unless you are experienced in configuring networks.

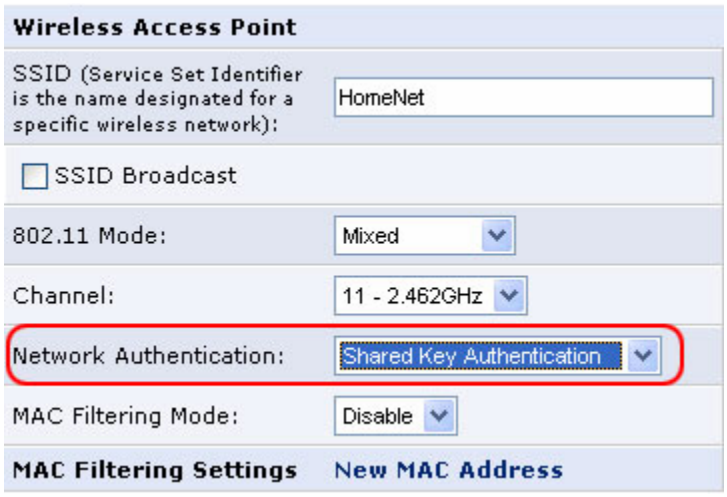
MAC Filtering

You can use MAC filtering to help control who can connect to your wireless network by specifying the computers that are allowed to connect to your network. You will enter the MAC Address (also called the Physical Address) of each computer you are permitting to connect to your home network. Computers that are not included in your list are denied access.

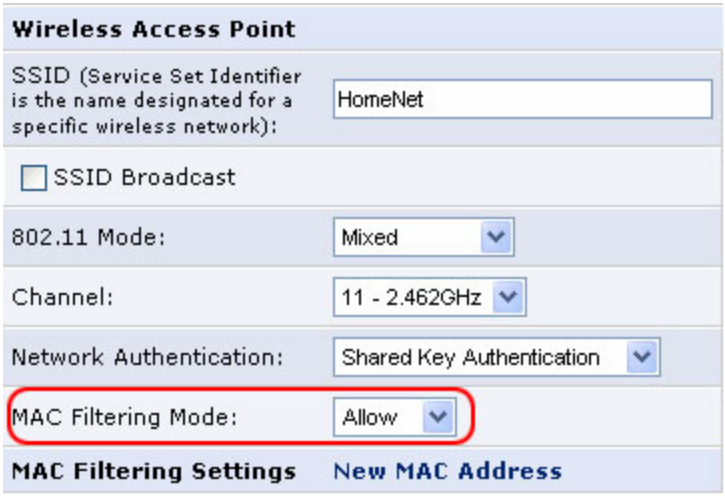
1. Go to the "Wireless Access Point" section of the screen.



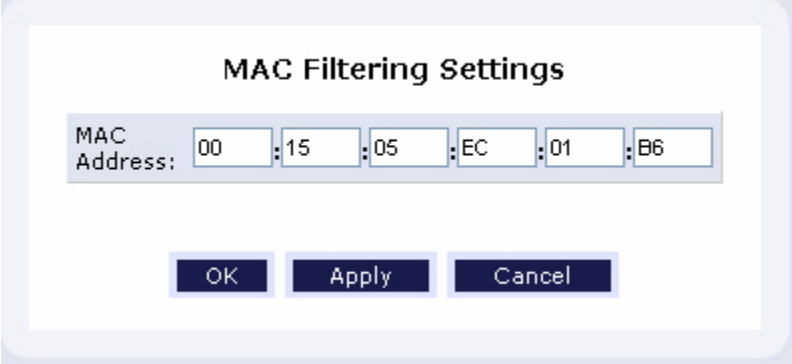
2. Verify that the settings you entered on the initial wireless settings page are displayed correctly.
   - The new SSID you entered is displayed in the **SSID** field.
   - The **SSID Broadcast** checkbox is not checked.
   - The correct mode is displayed in the **802.11 Mode** field.
   - The **Channel** field is set to **11 - 2.462 GHz.**
3. Change the **Network Authentication** field to **Shared Key Authentication**.



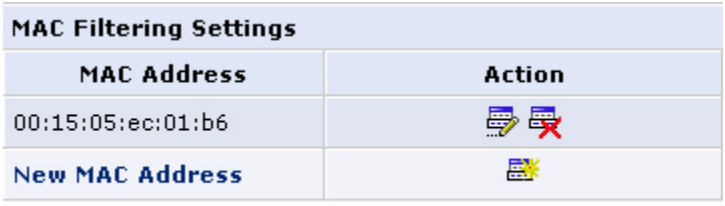
4. Change the **MAC filtering Mode** field to **Allow**. Only the computers that you specify will be allowed to connect to your home network.



5. Click **New MAC address** to access the MAC Filtering Settings screen.



6. Enter the MAC address of the first computer you are allowing to access your home network and click **OK**. Each time you enter a new MAC address, the new entry displays under "MAC Filtering Settings."



- If you don't know the MAC address of the computers on your home network, you can use the command prompt in your Windows operating system to find it.
    - Windows XP or 2000

7. Enter the MAC address of each computer you are allowing to access your network.

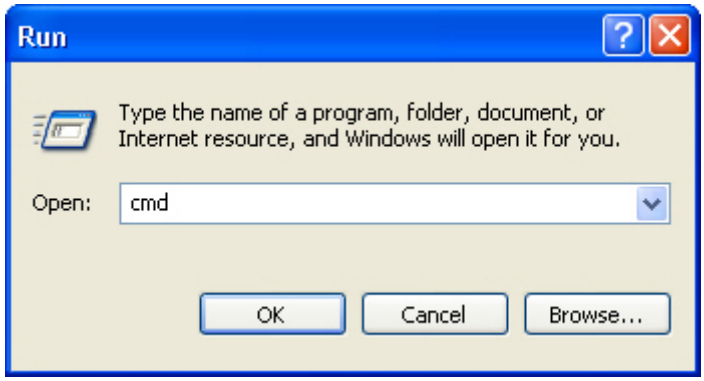
   Note: If you add computers to your home network at a later date, you must return to this

screen to add the MAC address of the new computers. Otherwise, they won't be able to access your home network.

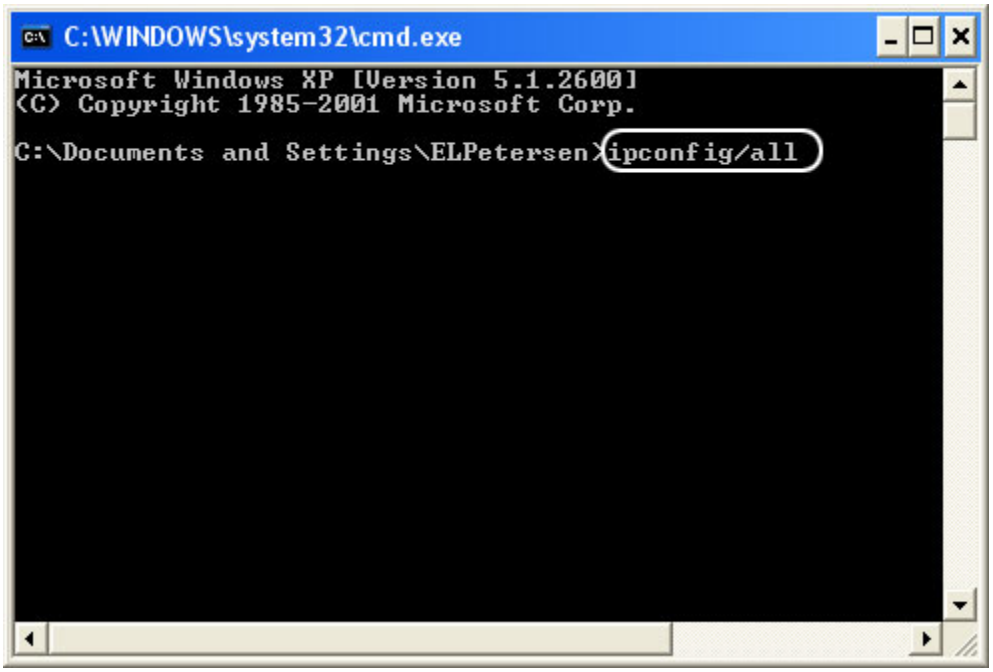
8. Return to the Advanced Security section.

Finding Your MAC Address in Windows 2000 or XP

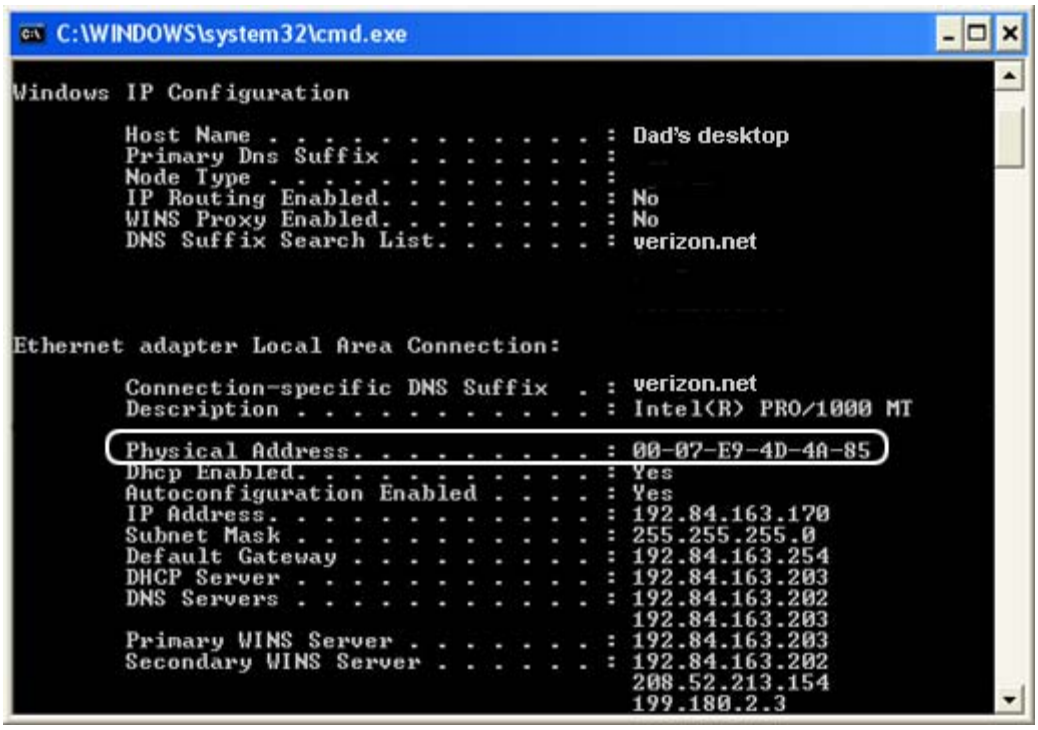
1. Click **Start** in the lower left taskbar.
2. Select **Run** from the Start menu.
3. Enter ***Cmd*** in the **Open** field of the Run window.



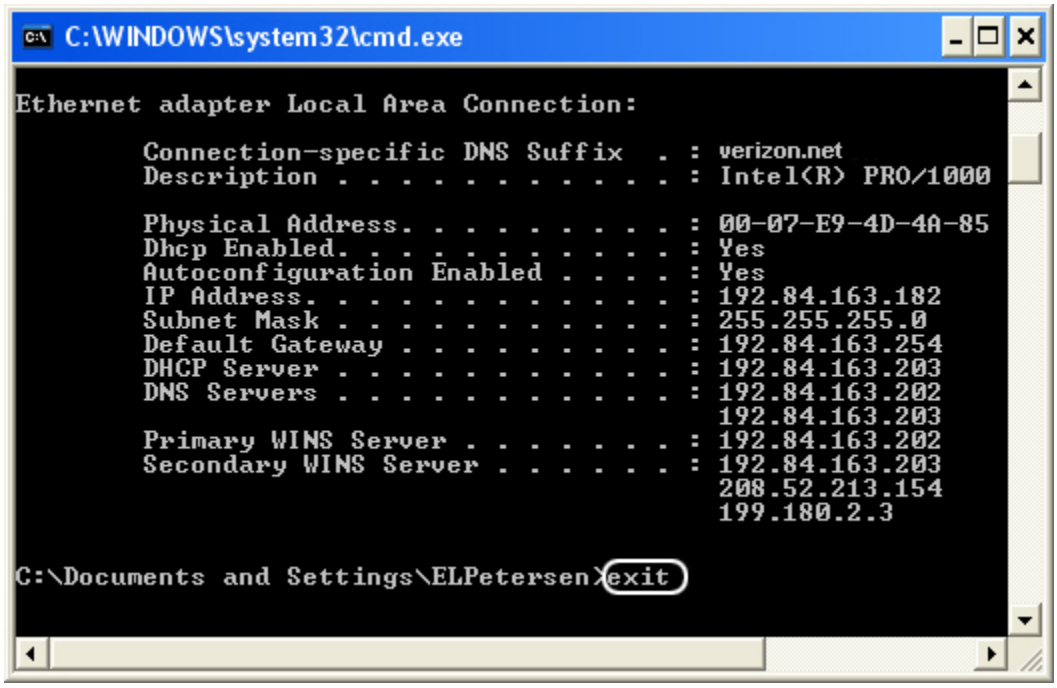
4. Enter ipconfig/all



5. Write down the Physical Address. This is another name for the MAC address. It should be 12 characters separated by hyphens. You will enter this MAC address without the hyphens when you set up the MAC address filtering.



6. Enter ***exit*** to close the Command window.



7. Return to MAC Filtering.

Increasing WEP Encryption

Although increasing the level of WEP encryption can slow network data transmission rates, you may want to increase your security by using 104/128-bit WEP encryption.

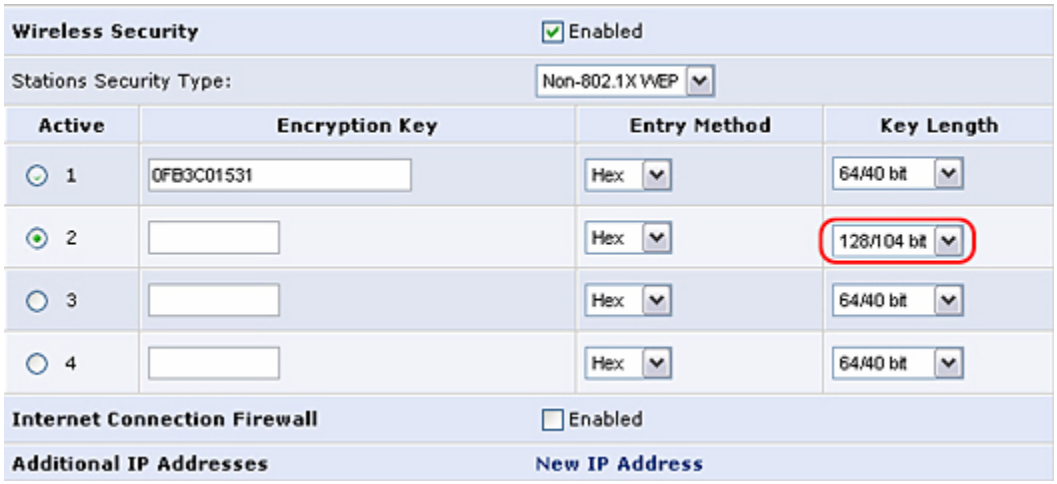
1. Confirm that the **Wireless Security Enabled** check box is selected.
2. Go to the "Wireless Security Section" at the bottom of the "Configure LAN Wireless 802.11g Access Point" screen.

3. Select the circle next to the "2" to activate key 2.

- **Note**: Entering the new WEP encryption information in key 2, makes it easy to return to the default WEP key, if you choose. All you have to do is select the circle by key 1 to return to the default.

4. Select **Hex** or **ASCII** in the "Entry Method" column to indicate what format you are using for the encryption key.

5. Select **128/104 bit** in "Key Length" column.



6. Enter the new WEP encryption key in the **Encryption Key** field of key 2.

- If you're entering the key in Hex format, the encryption key must have 24 characters. The characters can include the numbers 1-9 and the letters A-F.

- If you're entering the key in ASCII format, the encryption key must have 24 characters and is limited to numeric characters.

7. Return to the Advanced Security section.