NETGEAR 54 Mbps Wireless USB 2.0 Adapter WG111v3 User Manual

NETGEAR®

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Technical Support

Please refer to the support information card that shipped with your product. By registering your product at *http://www.netgear.com/register*, we can provide you with faster expert technical support and timely notices of product and software upgrades.

NETGEAR, INC. Support Information

Phone: 1-888-NETGEAR, for US & Canada only. For other countries, see your Support information card.

E-mail: support@netgear.com

North American NETGEAR website: *http://www.netgear.com/support*

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Statement of Conditions

In the interest of improving internal design, operational function, and/or reliability, NETGEAR reserves the right to make changes to the products described in this document without notice.

NETGEAR does not assume any liability that may occur due to the use or application of the product(s) or circuit layout(s) described herein.

Maximum Wireless Signal Rate Derived from IEEE Standard 802.11 Specifications

Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate.

Safety and Regulatory Notices

FCC Statement

The WG111v3 has been tested and complies with the specifications for a Class B digital device, pursuant to 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.

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 according to 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 is found 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 or devices

- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

FCC Caution: Any change or modification to the product not expressly approved by Netgear could void the user's authority to operate the device.

FCC RF Radiation Exposure and SAR Statements

SAR Statement

The Netgear WG111v3 has been tested for body-worn Specific Absorption Rate (SAR) compliance. The FCC has established detailed SAR requirements and has established that these requirements have been met while installed in host notebook computer.

RF Exposure Information

The radio module has been evaluated under FCC Bulletin OET 65C (01-01) and found to be compliant to the requirements as set forth in CFR 47 Sections, 2.1093, and 15.247 (b) (4) addressing RF Exposure from radio frequency devices. This model meets the applicable government requirements for exposure to radio frequency waves. The highest SAR level measured for this device was 1.3 W/kg.

Canadian Department of Communications Industry Canada (IC) Notice

This Class B digital apparatus complies with Canadian ICES-003 and RSS-210. Cet appareil numérique de la classe B est conforme à la norme NMB-003 et CNR-210 du Canada.

"To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing."

"Pour empêcher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit être utilisé à l'intérieur et devrait être placé loin des fenêtres afin de fournir un écran de blindage maximal. Si le matériel (ou son antenne d'émission) est installé à l'extérieur, il doit faire l'objet d'une licence."

Europe - EU Declaration of Conformity with Regard to R&TTE Directive 1999/5/EC

A printed copy of the EU Declaration of Conformity certificate for this product is provided in the WG111v3 product package.

Èesky [Czech]	NETGEAR, Inc. tímto prohlašuje, že tento NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 je ve shodì se základními požadavky a dalšími pøíslušnými ustanoveními smìrnice 1999/5/ES.
Dansk [Danish]	Undertegnede NETGEAR, Inc. erklærer herved, at følgende udstyr NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]	Hiermit erklärt NETGEAR, Inc., dass sich das Gerät NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.

Eesti [Estonian]	Käesolevaga kinnitab NETGEAR, Inc. seadme NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
English	Hereby, NETGEAR, Inc., declares that this NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]	Por medio de la presente NETGEAR, Inc. declara que el NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ NETGEAR, Inc. ΔΗΛΩΝΕΙ ΟΤΙ NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
Français [French]	Par la présente NETGEAR, Inc. déclare que l'appareil NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]	Con la presente NETGEAR, Inc. dichiara che questo NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo NETGEAR, Inc. deklarç, ka NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 atbilst Direktîvas 1999/5/EK bûtiskajâm prasîbâm un citiem ar to saistîtajiem noteikumiem.
Lietuviø [Lithuanian]	Šiuo NETGEAR, Inc. deklaruoja, kad šis NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]	Hierbij verklaart NETGEAR, Inc. dat het toestel NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]	Hawnhekk, NETGEAR, Inc., jiddikjara li dan NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 jikkonforma mal-tiijiet essenzjali u ma provvedimenti orajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
Magyar [Hungarian]	Alulírott, NETGEAR, Inc. nyilatkozom, hogy a NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
Polski [Polish]	Niniejszym NETGEAR, Inc. oœwiadcza, ¿e NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 jest zgodny z zasadniczymi wymogami oraz pozosta³ymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português [Portuguese]	NETGEAR, Inc. declara que este NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]	NETGEAR, Inc. izjavlja, da je ta NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 v skladu z bistvenimi zahtevami in ostalimi relevantnimi doloèili direktive 1999/5/ES.

Slovensky [Slovak]	NETGEAR, Inc. týmto vyhlasuje, že NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 spåòa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]	NETGEAR, Inc. vakuuttaa täten että NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]	Härmed intygar NETGEAR, Inc. att denna NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Product and Publication Details

Model Number:	WG111v3
Publication Date:	March 2008
Product Family:	Wireless Adapter
Product Name:	NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3
Home or Business Product:	Home
Language:	English
Publication Part Number:	202-10240-02

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About This Manual

The *NETGEAR® 54 Mbps Wireless USB2.0 Adapter WG111v3* describes how to install, configure and troubleshoot the NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3. The information in this manual is intended for readers with intermediate computer and Internet skills.

Conventions, Formats, and Scope

The conventions, formats, and scope of this manual are described in the following paragraphs:

- **Typographical Conventions**. This manual uses the following typographical conventions:

Italic	Emphasis, books, CDs, file and server names, extensions
Bold	User input, IP addresses, GUI screen text
Fixed	Command prompt, CLI text, code
italic	URL links

- **Formats**. This manual uses the following formats to highlight special messages:

> **Note:** This format is used to highlight information of importance or special interest.

> **Tip:** This format is used to highlight a procedure that will save time or resources.

- **Scope**. This manual is written for the Wireless Adapter according to these specifications:

Product Version	NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3
Manual Publication Date	March 2008

For more information about network, Internet, firewall, and VPN technologies, see the links to the NETGEAR website in Appendix B, "Related Documents."

> **Note:** Product updates are available on the NETGEAR, Inc. website at *http://www.netgear.com/support*.

How to Use This Manual

The HTML version of this manual includes the following:

- Buttons, [>] and [<], for browsing forward or backward through the manual one page at a time.

- A [≡] button that displays the table of contents and a [⊟⊟] button that displays an index. Double-click a link in the table of contents or index to navigate directly to where the topic is described in the manual.

- A [⚒] button to access the full NETGEAR, Inc. online knowledge base for the product model.

- Links to PDF versions of the full manual and individual chapters.

How to Print This Manual

To print this manual, you can choose one of the following options, according to your needs.

- **Printing a page from HTML**. Each page in the HTML version of the manual is dedicated to a major topic. Select File > Print from the browser menu to print the page contents.

- **Printing from PDF**. Your computer must have the free Adobe Acrobat reader installed in order to view and print PDF files. The Acrobat reader is available on the Adobe website at *http://www.adobe.com*.

  - **Printing a PDF chapter.** Use the **PDF of This Chapter** link at the top left corner of any page.

    - Click the **PDF of This Chapter** link at the top left corner of any page in the chapter you want to print. The PDF version of the chapter you were viewing opens in a browser window.

    - Click the print icon in the upper left of your browser window.

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– **Printing a PDF version of the complete manual**. Use the **Complete PDF Manual** link at the top left corner of any page.

- Click the **Complete PDF Manual** link at the top left corner of any page in the manual. The PDF version of the complete manual opens in a browser window.

- Click the print icon in the upper left corner of your browser window.

> **Tip:** If your printer supports printing two pages on a single sheet of paper, you can save paper and printer ink by selecting this feature.

Revision History

Part Number	Version Number	Date	Description
202-10240-02	1.0	March 2008	Product update: WPS feature added.

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Chapter 1 Basic Setup

The NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 lets you connect a PC computer to wireless networks. It is designed for PC computers running Microsoft Windows. For information about product features and compatible NETGEAR products, see the NETGEAR website at *http://www.netgear.com/support*.

This chapter describes how to install your wireless adapter and set up basic wireless connectivity on your Wireless Local Area Network (WLAN). Advanced wireless network set up is covered in "Network Connections and Wireless Security" on page 2-1.

What You Need Before You Begin

You must verify that your computer meets the minimum system requirements and identify the wireless network settings of the wireless network where you will connect before you can set up your wireless adapter and connect.

Verify System Requirements

Before installing the Wireless Adapter, make sure that these minimum requirements have been met. You must have a computer with:

- A Pentium 300 MHz or higher compatible processor with an available USB port.

- A CD drive.

- 10 MB of free hard disk space.

- Windows 2000, XP, or Vista.

Observe Wireless Location and Range Guidelines

Computers can connect over wireless networks indoors at a range which vary significantly based on the location of the computer with the Wireless Adapter. For best results, avoid potential sources of interference, such as:

- Large metal surfaces
- Microwave ovens
- 2.4 GHz Cordless phones

In general, wireless devices can communicate through walls. However, if the walls are constructed with concrete, or have metal, or metal mesh, the effective range will decrease if such materials are between the devices.

What Is in the Box

The product package should contain the following items:

- NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3

- Installation Guide

- Plastic cradle and fasteners to hold the WG111v3

- *Resource CD*, including:

  - The Smart Wizard Installation Assistant

  - This manual

- Warranty and Support information card

If any of the parts are incorrect, missing, or damaged, contact your NETGEAR dealer. Keep the carton, including the original packing materials, in case you need to return the product.

Default Wireless Settings

If this is a new wireless network installation, use the factory default settings to set up the network and verify wireless connectivity. If this is an addition to an existing wireless network, you need the wireless network and wireless security settings that are already defined.

Your Wireless Adapter factory default basic settings are:

- Network Name Service Set Identification (SSID): **ANY**

> **Note:** In order for the Wireless Adapter to communicate with a wireless access point or wireless adapter, all devices must be set up to use the same wireless network name (SSID).

- Network Mode (Infrastructure or Ad-hoc): **Infrastructure**

- Data security WEP, WPA2-PSK, or WPA-PSK encryption: **Disabled**

The section below provides instructions for setting up the Wireless Adapter for basic wireless connectivity to an access point.

Installation

The instructions in this chapter are for an Access Point (Infrastructure) installation. Wireless security, advanced settings, and Computer-to-Computer (Ad Hoc) instructions are covered in "Network Connections and Wireless Security" on page 2-1.

To complete this installation you must:

1. Install the WG111v3 software.

2. When prompted, insert the wireless adapter and follow the onscreen instructions.

3. Set up the wireless adapter to connect to your wireless network.

Installing the WG111v3 Software

> **Note:** Do not connect the wireless adapter until you are prompted to do so.

1. Insert the *Resource CD*. If the CD main page does not appear, brows the CD and double-click Autorun.exe.

2. Click **Install the Software**.The Software Update Check screen displays:

Figure 1-1

3. If you are connected to the Internet, click **Check for Updates**. If not, you can choose to install from the CD.

4. When the Installation Complete message appears, click **Next**.

Connecting the Wireless Adapter

After you have installed the NETGEAR Smart Wizard, the following screen displays:

Figure 1-2

1. Locate an available USB port on your computer.

> **Note:** If you do not have a USB 2.0 port on your computer, the data rate of the WG111v3 will be limited to the 14 Mbps of the USB 1.1 standard.

2. Insert the wireless adapter in a USB port on your computer.

To use the USB cable, connect it to the wireless adapter and a USB port. See "Placing the USB Adapter Cradle" on page 1-10.

3. Click **Next**, and confirm the country where you are located.

The wireless adapter is automatically added with the installed driver.

Using the Smart Wizard to Set up Your Wireless Adapter

You can set up the wireless adapter with the NETGEAR Smart Wizard (recommended) or the Windows configuration utilities.

• **NETGEAR Smart Wizard:** Reveals more information about each network and makes it easier to troubleshoot network connection problems. See "Smart Wizard Status Bar" on page 1-8 and "Statistics Tab" on page 2-20.

• **Windows Zero Configuration Utility:** See the Windows documentation or see the link to "Windows XP and Vista Wireless Configuration Utilities" on page B-1.

After you have connected the wireless adapter, the following screen displays:

Figure 1-3

To use the Smart Wizard to configure the wireless adapter:

1. Click **Next** to accept the Smart Wizard.

   You will be prompted to let the wizard help you connect to a network (recommended).

2. Click **Next** to accept.

3. Depending on whether or not a wireless access point or router in the network supports a Wi-Fi Protected System (WPS), there are two possibilities:

   • If a wireless access point or router in the network supports WPS, a WPS screen displays. See "Using WPS to Connect to a Wireless Network" on page 2-5.

   > **Note:** The NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 only supports WPS on Windows 2000, XP, XP x64 and Vista (32/64 bits).

• If no wireless access points or routers in the network support WPS, the following screen displays:
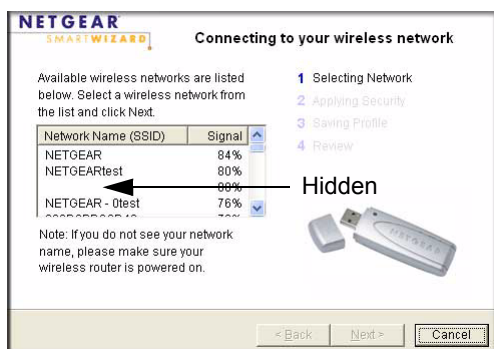

Figure 1-4

> **Note:** Hidden networks do not broadcast the Network Name (SSID). These networks are in the drop-down list, but the Network Name (SSID) is blank.

4. Select the wireless network from the drop-down list, and then click **Next**. The wizard records your choice. If the network uses security, then the Smart Wizard detects it. Follow the Wizard steps for security (if used) and for saving a profile.

5. The WG111v3 icon appears in the system tray and on the desktop. The wizard initiates your wireless connection. It could take up to a minute to establish your wireless connection. The Smart Wizard Settings screen displays.
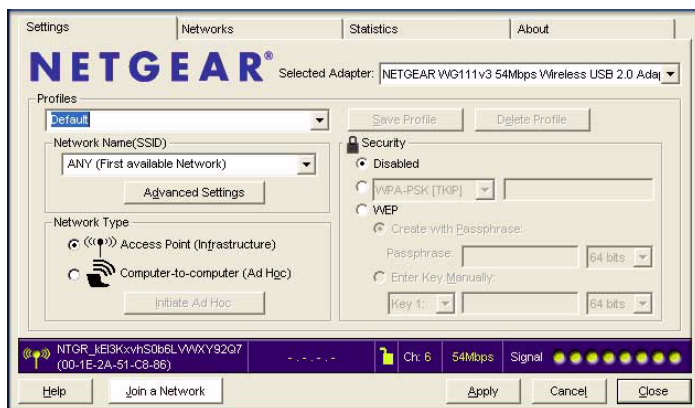

Figure 1-5

6. Use the status bar to verify your wireless connectivity. For more information about connecting, see "Connecting to Wireless Networks and the Internet" on page 1-8.

> **Note:** For information about using Wi-Fi Multimedia (WMM), see "Advanced Settings" on page 2-19.

Connecting to Wireless Networks and the Internet

The wireless adapter has indicators that show the status of your connection to a wireless network and to the Internet:

•   **Icon:** After you install the software, this icon appears on the desktop and in the lower right of the Windows task bar. It is color coded to show the status of the connection. See the following section, "Smart Wizard Status Bar.

• **Smart Wizard Status Bar:** Clicking on the system tray icon opens the Smart Wizard. The status bar at the bottom of the screen shows details about your wireless and Internet connection.

Smart Wizard Status Bar

Click the 🔲 icon to open the Smart Wizard so that you can view the status bar. The Smart Wizard Settings tab displays. The status bar is located at the bottom of the Settings tab.
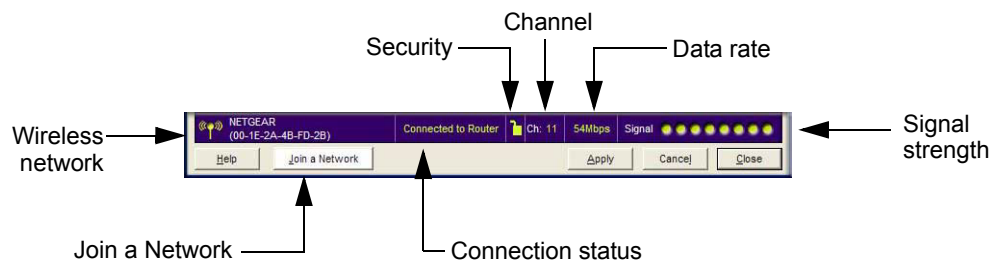

Figure 1-6

The following table describes how to interpret the Smart Wizard status bar.

Understanding the Status Bar	
Wireless network	Identifies which wireless network you have joined.
Security	• A closed lock indicates that security is enabled. • An open lock indicates an open network without wireless security.
Channel	The wireless channel used by the network. If many wireless networks in your area use the same channel, they can interfere with one another.
Data rate	If your computer has a USB v1.1 port, the wireless adapter is limited to that port's maximum speed, which is 14 Mbps.
Signal strength	More dots indicates a stronger signal.

Understanding the Status Bar (continued)	
Join a Network	Click **Join a Network** to open the Connection Wizard.
Connection status	The status of your network connection. • **Connected to Internet**. The wireless Internet connection is OK. • **Connected to Router**. The wireless connection to the router is OK, but the router is not connected to the Internet. **169.254.x.x or ___.___.___.___** . The wireless connection to the router is OK, but there is a problem with the router. See the online help or Chapter 3, "Troubleshooting.

If you right-click the System Tray icon, you can disable the Internet notification feature by clearing the check mark on this line. If you do so, then only the IP address is shown.
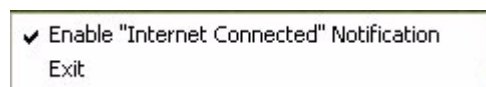
✔ Enable "Internet Connected" Notification

Exit

Figure 1-7

If you selected Europe during the WG111v3 installation, you will not see the "Enable Internet Connected Notification" option.

Icon Colors

The icon is on the desktop and in the Windows System Tray. The System Tray resides on one end of the taskbar in the Microsoft Windows desktop.

Color	Condition	Description
Red	The wireless adapter has no connection to any other wireless node.	The Wireless Adapter can not link to any other wireless node or the link is lost. Check your configuration or try moving to a location where the wireless signal quality is better.
Yellow	The wireless adapter has a connection with another wireless node.	The wireless link is weak. You may need to move to a better spot, such as closer to the wireless access point. Also, look for possible interference such as a 2.4 GHz cordless phone or large metal surface.
Green	The wireless adapter has a connection with another wireless node.	The wireless adapter has established good communication with an access point and the signal quality is strong.

Placing the USB Adapter Cradle

You can attach the wireless adapter directly to a USB port on your computer, or use the USB cable to extend the range and obtain better wireless reception.

To use the USB cable, plastic cradle, and loop-and-hook fastener for better USB adapter placement on a computer monitor:

1. The wireless adapter comes with three black fasteners. Locate the one with a prickly side, and attach it to the plastic cradle on the middle of the outside rear.
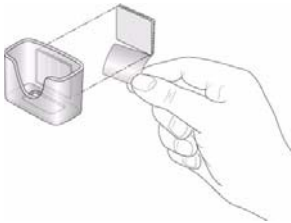

Figure 1-8

2. Insert the wireless adapter in the plastic cradle, and connect the USB cable.

Figure 1-9

4. Place one of the other pieces of loop-and-hook fastener on the side or back of your monitor near the top for better reception. Then join the pieces of the fastener to attach the USB adapter in the plastic cradle to the monitor.
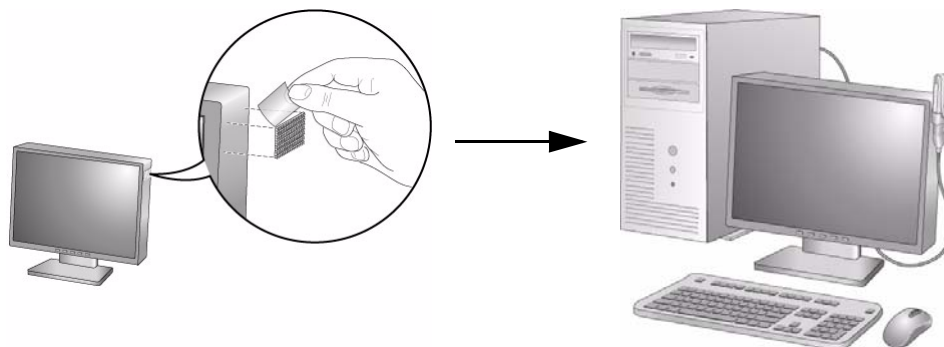

Figure 1-10

Removing the Software

You can remove the wireless adapter software in these two ways:

- Navigate the Windows Start menu to the NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 program group, select the uninstall option, and follow the screen prompts.

- Navigate the Windows Start menu to the Control Panel Add or Remove Program item, select the NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 option, and follow the screen prompts.

Upgrading the Wireless Adapter Software

Upgrades may be available at the NETGEAR website. To install an upgrade, follow these steps.

1. Go to *http://www.netgear.com/support.*

2. Click the latest version of upgrade.

3. Examine the Release Note. Make sure to read any warnings and Known Problems.

4. Download the upgrade using the link in the Release Note.

5. Follow the Release Note installation instructions.

Chapter 2 Network Connections and Wireless Security

This chapter explains how to use your Wireless Adapter to connect to your Wireless Local Area Network (WLAN) and how to set up wireless security for the Wireless Adapter so that it matches the wireless security settings for your network.

If you chose the Windows XP Zero configuration during installation, and now you want to use the Smart Wizard, then you need to disable the Windows utility. If you are working with the Vista configuration utility, see the online document:
http://documentation.netgear.com/reference/enu/winzerocfg/index.htm

Disabling the Windows XP Zero Configuration Utility

To disable the Windows Zero Configuration utility:

1. Insert the wireless adapter into an Express card slot in your computer.

2. Go to Windows Start menu and select Network Connections.

3. On the Network connections screen, select the Wireless Network Connection and right-click to choose the Properties option.
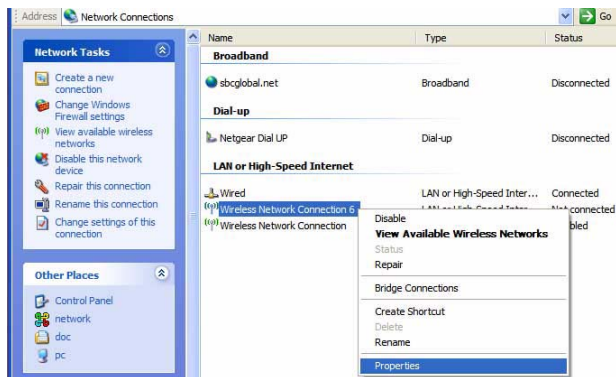

Figure 2-1

4. Click the Wireless Networks tab. Then clear the **Use Windows to configure my wireless settings** check box.

Understanding the Smart Wizard

These instructions explain how to use the NETGEAR WG111v3 Smart Wizard to change the Wireless Adapter wireless settings.

When you have installed the software from the *Resource CD*, the ⬛ icon appears on your desktop and in the Windows System Tray. The Windows System Tray is located on the Windows taskbar. You can either double-click this icon on the desktop, or click it in the System Tray at any time, to use the Smart Wizard. This software automatically restarts when you reboot your computer.

The Smart Wizard provides a complete and easy to use set of tools to:

- View details about wireless networks in your area.
- Choose the network that you want to use.
- Configure wireless settings for your wireless connection.
- Save your wireless network settings in profiles.
- Remove or reinstall the wireless adapter software.

The following sections in this chapter explain how to use the Smart Wizard.

Viewing Wireless Networks in Your Area

You can use the Networks tab to view all available wireless networks in your area. You can also scan to search for wireless networks and refresh the screen.

To view information about wireless networks:

1. Use the ⬛ icon to open the Smart Wizard. The Settings tab displays.

2. Click the Networks tab to view the following screen:

You can click a column heading to sort.

If many networks use the same channel they can interfere with each other.

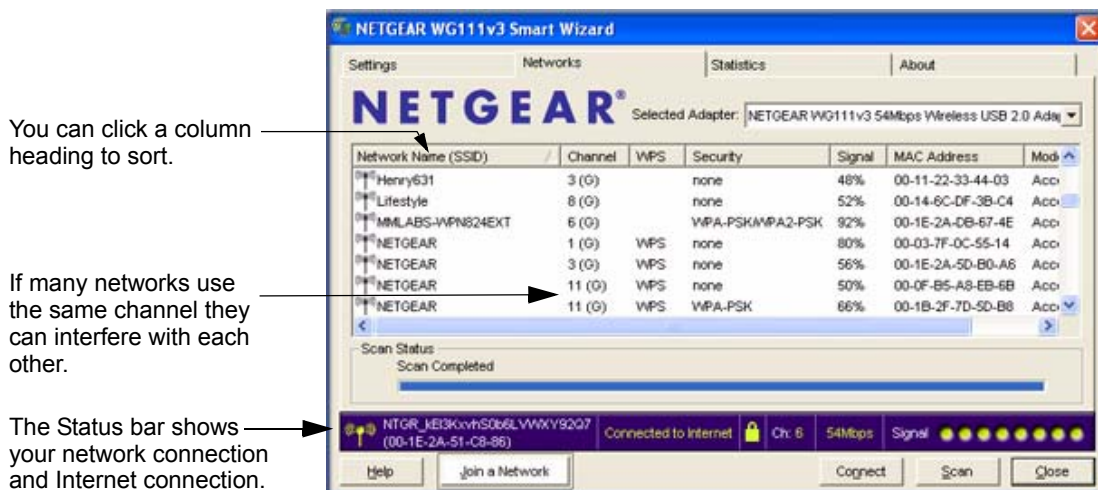The Status bar shows your network connection and Internet connection.

Figure 2-2

The screen shows the following information for each network scanned:

- **Network Name (SSID):** The name assigned to a wireless network. This is the same as the SSID or ESSID configuration parameter. Note that as a security measure, some wireless access points do not broadcast their SSID. In such cases, the SSID field will be blank even though the rest of the information will still be displayed.

- **Channel:** The channel determines which operating frequency will be used, and identifies which wireless mode (G, N) is supported.

- **WPS**. The access point supports WPS.

- **Security:** Identifies whether the wireless network uses security settings such as WEP, WPA2-PSK, or WPA-PSK.

- **Signal:** Identifies the signal strength of the communications.

- **MAC Address:** Identifies the hardware address (MAC Address) of the wireless device broadcasting this information.

- **Mode:** Identifies the type of wireless network — Access Point (Infrastructure) or Computer-to-Computer (Ad Hoc)

The buttons located at the bottom of the Networks tab are:

- **Help:** Display online help.

- **Join a Network:** Join a network. See "Joining a Network" on page 2-4.

- **Connect:** Connect to the network that you selected.
- **Scan:** Check for wireless networks. Clicking Scan refreshes the screen.
- **Close:** Close the window of the Wizard.

Joining a Network

During installation, the wireless adapter either connects to a wireless access point or router, or lists the available networks to let you select a network. After installation you can use the **Join a Network** button or the Networks tab at any time to connect to another access point or router or to view the available networks and select one:

- If none of the wireless access points or routers in the network support WPS, or if you prefer to manually select a network, see "Selecting a Network."
- If a wireless access point or router in the network supports Wi-Fi Protected Setup (WPS), see "Using WPS to Connect to a Wireless Network.

Selecting a Network

During installation, the wireless adapter connects to a wireless access point or router, or lists the available networks to let you select a network. After installation you can use the Join a Network button or the Networks tab at any time to either connect to another access point or router or to view the available networks and select one:

> **Note:** Unless you are using WPS, make sure that you know the security settings for the network that you want to use. For example, if WEP is used then you need to know the WEP key. If you use secure networks frequently, set up profiles for each network with the wireless network and security settings.

Depending on whether or not a wireless access point or router in the network supports Wi-Fi Protected Setup (WPS), the Smart Wizard presents different screens.

To join a network:

1. Use the icon to open the Smart Wizard. On the status bar, click **Join a Network**.

2. If the Smart Wizard detects an access point or router with WPS, it displays the WPS screen. To connect manually (not using WPS), select **No**, and click **Next**.

3. Select a network from the drop-down list. If you select a hidden network then you must enter the SSID. Click **Next**.
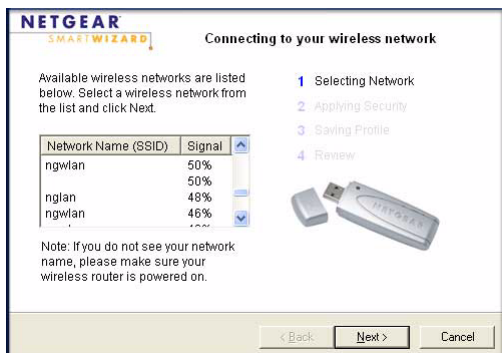

Figure 2-3

4. Follow the steps of the wizard to specify the wireless security key (if used), and to create a profile.

5. Review your settings, and click **Finish**.

6. You can use the Status Bar to verify your network connection. For more information, see "Smart Wizard Status Bar" on page 1-8. Click Close to exit the Smart Wizard.

Using WPS to Connect to a Wireless Network

If an access point or router in the wireless network that you are trying to connect to supports WPS, you can use WPS to set up the wireless settings of your wireless adapter and connect securely to the access point or router.

> **Note:** The NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3 only supports WPS on Windows 2000, XP, XP x64 and Vista (32/64 bits).

An access point or router that supports WPS has a WPS symbol. Some NETGEAR products include NETGEAR's Push 'N' Connect feature. This feature is based on the Wi-Fi Protected Setup (WPS) standard (for more information, see *http://www.wi-fi.org*). WPS automatically configures the network name (SSID) and wireless security for the access point or router and the wireless adapter. Note that WPS is not a new security feature—it makes existing security features easier to configure.

2-5

To connect the wireless adapter to an access point or router that supports WPS, do one of the following:

- Connect during initial installation. See "Using the Smart Wizard to Set up Your Wireless Adapter" on page 1-4.

- Click the Join a Network button on the Smart Wizard Settings screen. See Figure 1-5 on page 1-6. The wireless adapter detects all access points or routers in your neighborhood that support WPS, and guides you through connecting, as described in this section.

- Click an access point or router that supports WPS in the Networks tab (see "Viewing Wireless Networks in Your Area" on page 2-2).

There are two methods to connect using WPS:

- **Push Button Configuration (PBC)**. To enable WPS, press a push button or push dome on the access point or router, or click an onscreen button in the software. This is a fairly new technology, so not all access points and routers provide a PBC.

- **PIN entry**. To enable WPS, use the NETGEAR Smart Wizard to generate a Personal Identification number (PIN) that is associated with the access point or router.

Using a WPS Button to Connect to a Wireless Access Point or Router

To join a network using a PBC:

1. Use the ![icon] icon to open the Smart Wizard. On the status bar, click **Join a Network**. The adapter detects a network with WPS:
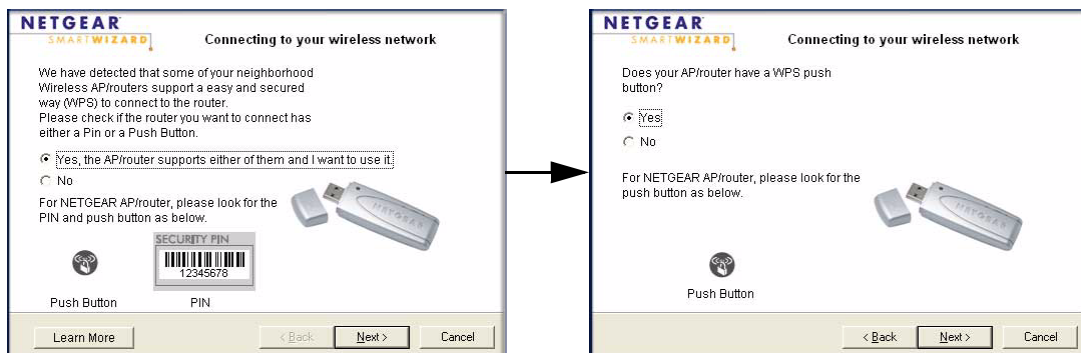

Figure 2-4

2. Select **Yes** to use WPS, and then click **Next**.

3. Select **Yes** (to use a push button), and then click **Next**.

2-6

4. On the access point or router that you have selected, open its Smart Wizard or configuration utility.

5. Select Add WPS Client. On the Add WPS Client screen, select Push Button.

6. To start the WPS process, either press the push button on the access point or router, or click the icon on the Add WPS Client screen.

7. Within 2 minutes, return to the WG111v3 Smart Wizard screen, and click . The Smart Wizard initiates your wireless connection.

8. You can use the Status Bar to verify your network connection. For more information, see "Smart Wizard Status Bar" on page 1-8. Click **Close** to exit the Smart Wizard.

9. Close the Smart Wizard or configuration utility for the access point or router.

Generating a PIN to Connect to a Wireless Access Point or Router

The wireless adapter can generate a PIN to connect to the router.

To generate a PIN and connect to a WPS wireless router or access point:

1. Use the icon to open the Smart Wizard. On the status bar, click **Join a Network** (or click the Networks tab and select the network). The wireless adapter detects a network with WPS.
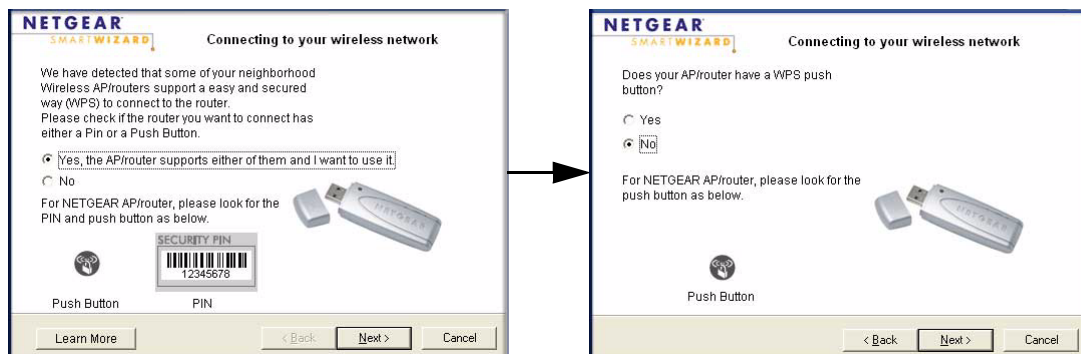

Figure 2-5

2. Select **Yes** to use WPS, and then click **Next**.

3. To use a PIN, select **No**, and then click **Next**.

Figure 2-6

4. Write down (or copy) the PIN.

5. On the access point or router that you have selected, open its Smart Wizard or configuration utility.

6. Select Add WPS Client. On the Add WPS Client screen, select PIN.

7. Within 4 minutes, enter the PIN in the Client's PIN field on the router Add WPS Client screen, and then click Next. The Smart Wizard initiates your wireless connection.

8. You can use the Status Bar to verify your network connection. For more information, see "Smart Wizard Status Bar" on page 1-8. Click Close to exit the Smart Wizard.

9. Close the Smart Wizard for the access point or router.

Profiles

The WG111v3 Smart Wizard uses profiles to store all the settings for a particular wireless network. There are two special profile names: Default and Profile.

• **Default:** The Profile named Default automatically scans for any available network. You cannot change this profile name.

• **Profile:** If you do not enter a name in the Profile Name box, then the name Profile is used to save your settings. If you do this more than once then you will be asked if you want to replace the previous settings stored in Profile.

Adding Profiles

You can store multiple profiles and recall the one which matches the network you want to join.

If you use your computer to connect to different wireless networks, you can create a profile for each wireless network. Then, you can easily load the profile that has all the settings that you need to join the network you are using at the time.

There are two types of wireless network profiles that you can set up:

* **Access Point (Infrastructure) –** Connect to an access point or router with the 802.11 infrastructure mode. For example, this mode is used when computers in a house connect to an access point that is attached to a router, which lets multiple computers share a single cable or DSL broadband Internet connection.
* **Computer-to-Computer (Ad Hoc) –** Connect directly to another computer with the 802.11 ad hoc mode. For example, Ad Hoc mode is used when two Windows computers are configured with file and print sharing enabled and you want to exchange files directly between them.

For more information on 802.11 wireless network modes, see the wireless reference document at: *http://documentation.netgear.com/reference/enu/wireless/index.htm.*

Setting up a Profile to Connect to an Access Point or Router

To set up the wireless adapter to connect to a wireless access point or router:

1. Use the icon to open the Smart Wizard. The Settings screen displays.
2. Enter the network settings.

   a. In the Network Type section of the screen, be sure that the **Access Point (Infrastructure)** radio button is selected.

   b. In the **Profile** field, type the name of the profile.

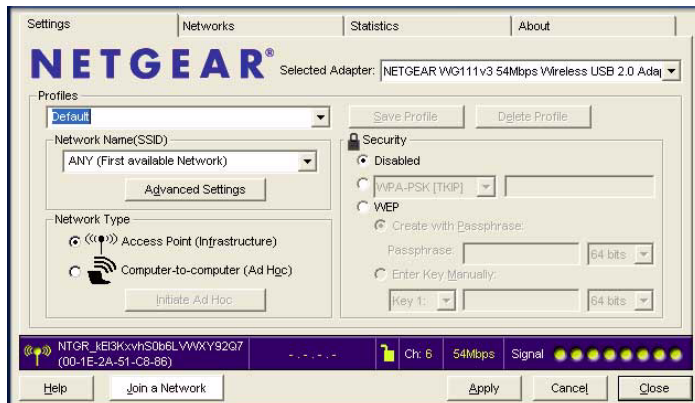**c.** In the **Network Name (SSID)** field, select a network or enter the SSID.

Figure 2-7

> → **Note:** You will not get a wireless network connection unless the network SSID matches exactly the SSID used by the access point.

3. Save your settings in a profile.

a. Click **Save Profile**.

All the configuration settings are saved in this profile.

b. Click **Apply**.

c. Click **Close** to exit the wizard, or **Cancel** to return to the previous settings.

4. Check to make sure that you can connect to your network and to the Internet. For example, use your browser to connect to the Internet, or check for file and printer access on your network.

If you cannot connect, check the Status bar in the Smart Wizard. See "Smart Wizard Status Bar" on page 1-8. For problems with accessing network resources, the Windows Client and File and Print Sharing software might not be installed and configured properly on your computers. See the link to "Internet Networking and TCP/IP Addressing" on page B-1.

Setting up a Computer-to-Computer (Ad Hoc) Profile

The Computer-to-Computer setting uses Ad Hoc mode. Ad Hoc mode is an 802.11 networking framework in which devices or computers communicate directly with each other, without the use of an access point. For example, this mode is used when two Windows computers are configured with file and print sharing enabled and you want to exchange files directly between them.

> **Note:** Ad Hoc mode will not work using DHCP settings. Ad Hoc mode requires either static IP addresses (such as **192.168.0.1**) or the IPX protocol. For instructions on setting up static IP addresses on a Windows PC, refer to the PC Networking Tutorial included on the *Resource CD*.

To create an Ad Hoc mode profile:

1. Use the ![icon] icon to open the Smart Wizard. The Settings screen displays:

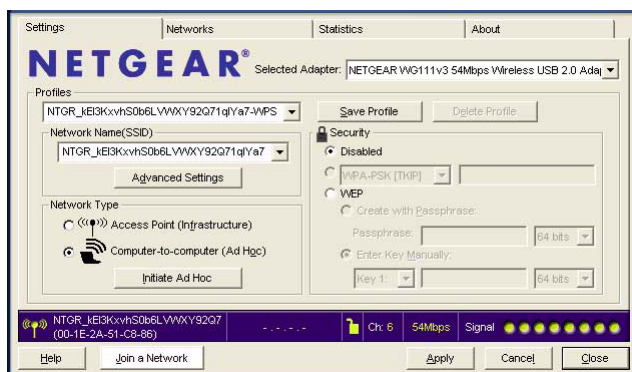**Figure 2-8**

2. Enter the network settings.

   a. Select **Computer-to-Computer (Ad Hoc)** for the Network Type.

   b. Select or enter the Network Name (SSID) for the Ad Hoc network.

   c. In the **Profile** field type the name of the profile, and then click **Apply.**

3. Click **Save Profile** to save the configuration settings, and then click **Apply**.

4. Configure the PC network settings.

   a. Configure each PC with either a static IP address or with the IPX protocol.

   b. Restart the PCs.

5. Verify wireless connectivity between your peer devices.

    a. On the Windows taskbar click Start, and then click Run.

    b. Assuming the target PC is configured with 192.168.0.1 as its IP address, type `ping -t 192.168.0.1` and then click OK.
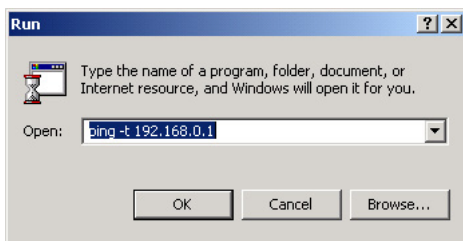

Figure 2-9

    c. This sends a continuous ping to the device with the 192.168.0.1 static IP address. The ping response should change to "reply."

Figure 2-10

At this point the connection is established.

For more information about using ping, see *http://kbserver.netgear.com/kb_web_files/ N101453.asp*. If you cannot access network resources, the Windows Client and File and Print Sharing software might not be installed and configured correctly. See "Internet Networking and TCP/IP Addressing" on page B-1

Starting a Computer-to-Computer (Ad Hoc) Network Connection

1. On the Settings tab, select or type the Network Name (SSID).

2. Select the **Computer-to-Computer (Ad Hoc)** network type.

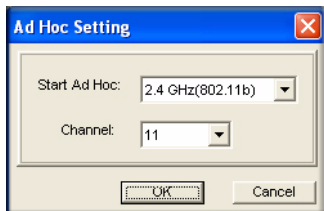**3.** Click **Initiate Ad Hoc**. The Ad Hoc Setting screen displays:

Figure 2-11

4. In the **Start Ad Hoc** field, choose the wireless standard (802.11b, or 802.11g) for your Ad Hoc computer-to-computer network.

5. In the **Channel** field, Automatic should work.

> **Note:** If there is interference from another nearby wireless device, use the Networks tab to see which channels are in use in your area. Then use a different channel. For example, if your neighbors use Channel 6 and the signal strength is strong, then channels 4-8 would probably be poor choices for you.

6. Click **OK**. The wireless adapter automatically selects the highest connection speed.

Wireless Security

Many networks use wireless security to encrypt wireless data communications. If you try to connect to a network with wireless security the Smart Wizard detects it. Before you can use that network you must set up the Wireless Adapter with exactly the same kind of wireless security settings. The wireless adapter supports the following types of wireless security:

- Wi-Fi Protected Access 2 Pre-Shared Key (WPA2-PSK)
- Wi-Fi Protected Access Pre-Shared Key (WPA-PSK)
- Wired Equivalent Privacy (WEP)

For more information about wireless security, see the wireless reference document at: *http://documentation.netgear.com/reference/enu/wireless/index.htm.* In addition to the wireless security features, networks should use LAN network security features such as requiring a user name and password to access the shared resources in the network.

Wireless Network Name (SSID) and Security Settings

Print this form, fill in the configuration parameters and put it in a safe place for possible future reference. For an existing wireless network, the person who set up the network will have this information.

- **Network Name (SSID):** The Service Set Identification (SSID) identifies the wireless local area network. **Any** (**First available network)** is the default WG111v3 wireless network name (SSID). You may customize it using up to 32 alphanumeric characters. Write your customized wireless network name (SSID) on the line below.

> **Note:** The SSID in the wireless access point is the SSID you configure in the wireless adapter. For the access point and wireless nodes to communicate with each other, all must be configured with the same SSID.

Wireless network name (SSID): _____

- **If WEP Authentication is Used.**

  – **WEP Encryption key size**. Identify one: **64-bit** or **128-bit**. The encryption key size must the wireless network settings.

  – **Data Encryption (WEP) Keys**. There are two methods for creating WEP data encryption keys. Whichever method you use, record the key values in the spaces below.

    - **Passphrase method**. _____ These characters *are* case sensitive. Enter a word or group of printable characters and click the Generate Keys button. Not all wireless devices support the passphrase method.

    - **Manual method**. These values *are not* case sensitive. For 64-bit WEP, enter 10 hex digits (any combination of 0-9 or a-f). For 128-bit WEP, enter 26 hex digits.

    Key 1: _____ Key 2: _____

    Key 3: _____ Key 4: _____

- **If WPA2-PSK or WPA-PSK Authentication is Used.**

  – **Passphrase**: _____ These characters *are* case sensitive. Enter a word or group of printable characters. When you use WPA-PSK, the other devices in the network will not connect unless they are set to WPA-PSK as well and are configured with the correct Passphrase.

Use the procedures below to set up basic security settings in the WG111v3.

Setting up WEP Encryption Security

Follow the steps below to configure WEP Encryption Security.

1. Run the WG111v3 Smart Wizard.

   a. Make sure that the software is installed and your wireless adapter is in the USB port in your computer.

   b. Use the [icon] icon to open the Smart Wizard. The Settings screen displays.

Figure 2-12

2. Configure the security settings.

   a. In the **Profile** field, select the profile or type in a profile name.

   b. In the **Network Name (SSID)** field select the network, or enter the SSID.

   > **Note:** You will not get a wireless network connection unless the network SSID matches exactly what is configured in the access point.

   c. In the Security section of the screen, select **WEP**.

3. Select the WEP encryption strength you will use.

2-15

The choices are:

- 64-bit WEP data encryption
- 128-bit WEP data encryption

> **Note:** The 128-bit encryption keys require more processing, and slow performance slightly.

4. Select Create with Passphrase and enter the passphrase. The configuration utility will automatically generate the WEP keys.

> **Note:** The characters are case sensitive. Be sure to use the same passphrase for all the wireless devices in the network.

If the passphrase method is not available in the other devices, you must manually enter the keys to match exactly what is in the access point and other 802.11b wireless devices.

5. Save your settings in a profile.

    a. Click **Save Profile**. All the configuration settings are saved in this profile.

    b. Click **Apply**.

    c. Click **Close** to exit the configuration utility.

Setting up WPA2-PSK Security

Follow the steps below to configure WPA2-PSK Security.

1. Run the WG111v3 Smart Wizard.

    a. Make sure that the software is installed and your wireless adapter is fully inserted in a USB port in your computer.

b. Use the [icon] icon to open the Smart Wizard. The Settings screen displays.
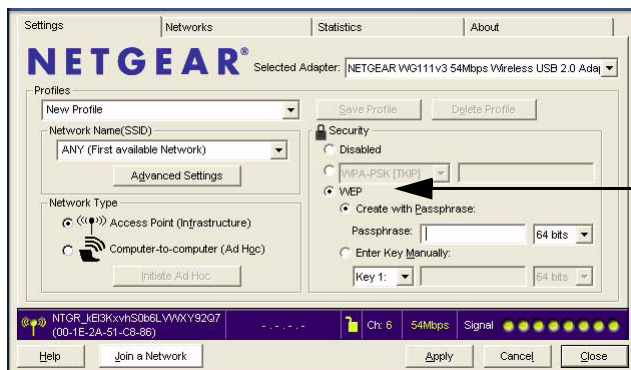

Figure 2-13

2. Configure the security settings.

    a. In the **Profile** field, select the profile or type in a profile name.

    b. In the **Network Name (SSID)** field select the network, or enter the SSID.

> **Note:** You will not get a wireless network connection unless the network SSID matches exactly what is configured in the access point.

    c. In the Security section of the screen, select **WPA2-PSK [AES]**.

    For more information about WPA2-PSK security, see the Web link to "Wireless Communications" on page B-1.

3. Save your settings in a profile.

    a. Click the **Save Profile** button. All the configuration settings are saved in this profile.

    b. Click **Apply**.

    c. Click **Close** to exit the Smart Wizard.

Setting up WPA-PSK Security

Follow the steps below to configure WPA-PSK Security.

1. Run the wireless adapter Smart Wizard.

    a. Make sure that the software is installed and the wireless adapter is fully inserted in a USB port in your computer.

b. Use the ![icon] icon to open the Smart Wizard. The Settings tab displays.
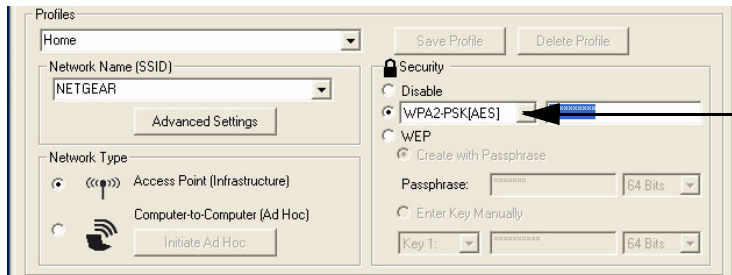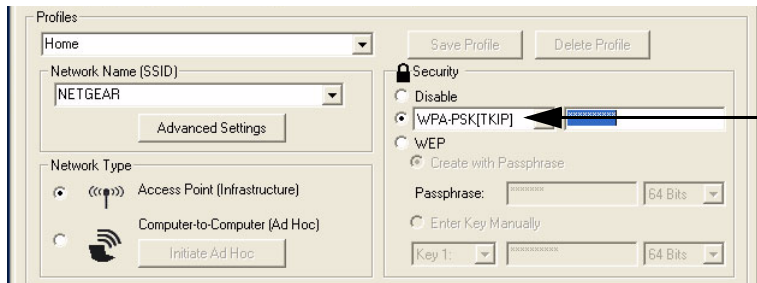

Figure 2-14

2. Configure the security settings.

    a. In the **Profile** field, select the profile or type in a profile name.

    b. In the **Network Name (SSID)** field select the network, or enter the SSID.

> **Note:** You will not get a wireless network connection unless the network SSID matches exactly what is configured in the access point.

    c. In the Security section of the screen, select **WPA-PSK [TKIP]**.

        For more information about WPA security, see the Web link to "Wireless Communications" on page B-1.

3. Save your settings in a profile.

    a. Click **Save Profile**. All the configuration settings are saved in this profile.

    b. Click **Apply**.

    c. Click **Close** to exit the Smart Wizard.

Advanced Settings

On the Settings tab, click **Advanced Settings** to view the Advanced Settings screen. Most people do not need to change these settings. You may need to adjust settings if you cannot connect without making changes, or if your Internet Service Provider (ISP) or network administrator recommend changes. You can click the Help button for more information about advanced settings.
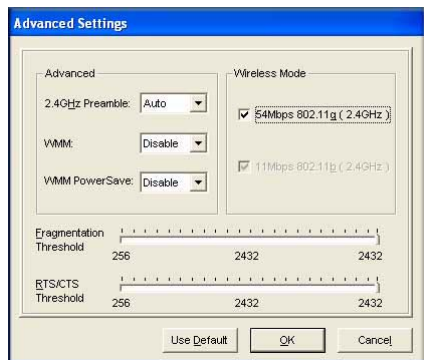
Figure 2-15

Wi-Fi Multimedia (WMM) is a Quality of Service (QoS) feature that prioritizes wireless data packets based on four access categories: voice, video, best effort, and background. Applications without WMM and applications that do not require QoS, are assigned to the best-effort category, which receives a lower priority than voice and video.

To receive the benefits of WMM QoS:

- The application must support WMM.
- You must enable WMM in your wireless adapter.
- You must enable WMM in your wireless access point or router.

2-19

Statistics Tab

The Statistics tab provides real time and historical trend information on the data traffic and performance of your wireless adapter.
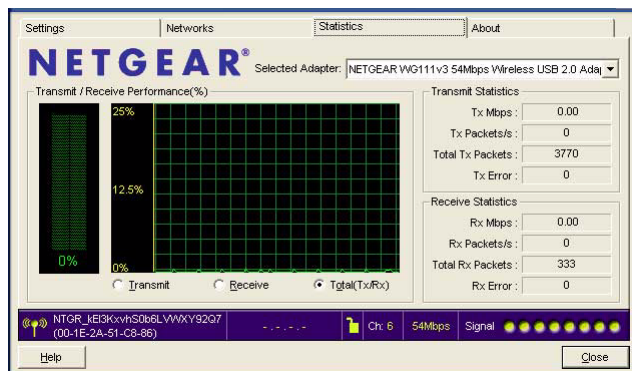
Figure 2-16

- **Transmit/Receive Performance (%):** A real time graph identifying the total, receive, and transmit utilization as a percentage the total possible.

- **Transmit, Receive, and Total (Tx/Rx):** Radio buttons let you select whether to display the transmit performance, the receive performance, or both in the same graph.

- **Transmit Statistics:** Identifies transmit megabits per second (Mbps), transmit packets per second (Tx Packets/s), total transmitted packets, and transmit errors.

- **Receive Statistics:** Identifies receive megabits per second (Mbps), receive packets per second (Rx Packets/s), total received packets, and reception errors.

About Tab

The About tab displays the current software version information.

Figure 2-17

The following information is displayed in the About tab:

*   **Regional Domain:** This is the region setting for the wireless adapter. The approved channels for the region are automatically scanned. Governments regulate the channels used for wireless transmission. Operating the wireless adapter in a different region may violate local laws.

*   **Driver Version:** The wireless adapter driver version.

*   **Driver Date:** The wireless adapter driver date.

*   **MAC Address:** The MAC address of the adapter. The Media Access Control address is a unique 48-bit hardware address assigned to every network interface card. Some wireless networks will restrict access based on a list of known MAC addresses. If you are communicating with such a network, you would have to provide the address shown here to the network administrator before you would be allowed to connect. Restricting access by MAC address adds an obstacle against unwanted access to your network. However, if the only wireless security that your network uses is MAC addressing, your data is easy for hackers to read.

*   **IP Address:** The IP address assigned to this adapter.

*   **Smart Wireless Utility:** The version and date of the Smart Wizard.

Chapter 3 Troubleshooting

This chapter provides information about troubleshooting your wireless adapter. For information about connecting to wireless networks and the Internet, see "Connecting to Wireless Networks and the Internet" on page 1-8.

Troubleshooting Tips

Use the information below to solve common problems you may encounter. Also, refer to the knowledge base on the NETGEAR website at *http://www.netgear.com/support*.

Table 3-1. Troubleshooting Tips

Problem	Action
The LED is not lit	The wireless adapter is not connected to the USB port properly or the WG111v3 software is not loaded. • Remove and reinsert the wireless adapter. • Check the Windows device manager to see if the wireless adapter is recognized and enabled. Reload the WG111v3 software, if necessary. • Try to install the wireless adapter in a different USB slot on your system if one is available.
The LED blinks but the wireless adapter is not connected to an access point.	The wireless adapter is trying to connect to an access point, but cannot connect. • The access point may not be powered on. • Or, the access point and the wireless adapter are not configured with the same wireless parameters. Check the SSID and wireless security settings.
I cannot connect to an access point. The access point is available and there is good signal strength.	• If the access point is WPA-PSK protected, you need the correct WPA-PSK passphrase. Otherwise, the wireless adapter will still be connected to the previous access point and you will not be able to change to the WPA-PSK access point. • If the access point is WEP protected (either 64 or 128 bit encryption), you will be prompted to enter the WEP encryption security information.

Table 3-1. Troubleshooting Tips (continued)

Problem	Action
The Smart Wizard keeps asking me to save settings.	If you change the settings the Smart Wizard offers you the chance to save the changes. To avoid this prompt, simply click **Apply** before you close the Smart Wizard.
Two WG111v3 icons are in the system tray.	You have an older software version installed on your system and it needs to be removed. See "Removing the Software" on page 1-11, or "Upgrading the Wireless Adapter Software" on page 1-11.
I can connect to the access point, but not the other computers on the network or to the Internet.	This could be a physical layer problem or a network configuration problem. 1. Check to make sure that the access point is physically connected to the Ethernet network. 2. Make sure that the IP addresses and the Windows networking parameters are all configured correctly. See the link to "Internet Networking and TCP/IP Addressing" on page B-1. 3. Restart the cable or DSL modem, router, access point, and computer.
Viewing the IP address.	To view the wireless adapter IP address, click the WG111v3 icon to open the Smart Wizard. Then check the IP address in the About tab.
No IP address is assigned to the Wireless Adapter.	This may occur if you upgraded your wireless adapter software and did not reboot your system. • Either restart your computer, or connect to a different access point. • It does not usually help to shut down the Smart Wizard or disable/enable the card.

Ad Hoc Mode is Not Working Correctly

You must click the **Initiate Ad Hoc** button before you click **Apply**.

To start an Ad Hoc network:

> **Note:** Be sure that all computers in your Ad Hoc network are configured with static IP addresses in the same subnet.

1. On the Settings tab, fill in the **Network Name (SSID)** field.

2. Select the **Computer-to-Computer (Ad Hoc)** Network Type.

3. Click **Initiate Ad Hoc**.

4. Accept the default settings or make your changes, click **OK**, and then click **Apply**.

Appendix A Default Configuration Settings and Technical Specifications

Default Configuration Settings

The following table lists the default settings of your Wireless Adapter.

Feature	Description
Smart Wizard	Enabled
Wireless	
Wireless Communication	Enabled
Wireless Network Name (SSID)	Any (first available network)
Security	Disabled
Network Type	Infrastructure
Transmission Speed	Auto[a]
Country/Region	United States (varies by region)
Operating Mode	g and b, up to 54 Mbps
Data Rate	up to 54 Mbps
WMM	Disabled
WMM Power Save	Disabled

a. Maximum wireless signal rate (IEEE Standard 802.11n draft specification). Actual throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate.

Technical Specifications

This table below describes technical specifications for the NETGEAR 54 Mbps Wireless USB2.0 Adapter WG111v3.

Antennas	Printed internal antenna
Standards	802.11g, 802.11b
Radio Data Rate	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, and 54 Mbps (Auto Rate Sensing)
Frequency	2.4GHz to 2.5GHz CCK and OFDM Modulations
LED	Single LED -- sold indicates connected to network -- blinking indicates attempting to connect to network
Power	5V bus powered
Emissions	FCC Part 15 Class B, CE
Bus interface	USB 2.0
Provided drivers	Microsoft Windows 98SE, ME, 2000, XP, XP x64 and Vista (32/64 bits) **Note**: The WPS feature is only supported on Windows 2000, XP, XP x64 and Vista (32/64 bits)
Operating Environment	Operating temperature: 0 to 40 degrees C
Encryption	40-bit (also called 64-bit) and 128-bit WEP data encryption, WPA2-PSK, and WPA-PSK
Warranty	Limited 1-year warranty

Appendix B Related Documents

This appendix provides links to reference documents you can use to gain a more complete understanding of the technologies used in your NETGEAR product.

Document	Link
Windows XP and Vista Wireless Configuration Utilities	*http://documentation.netgear.com/reference/enu/winzerocfg/index.htm*
Internet Networking and TCP/IP Addressing	*http://documentation.netgear.com/reference/enu/tcpip/index.htm*
Wireless Communications	*http://documentation.netgear.com/reference/enu/wireless/index.htm*
Preparing a Computer for Network Access	*http://documentation.netgear.com/reference/enu/wsdhcp/index.htm*
Virtual Private Networking (VPN)	*http://documentation.netgear.com/reference/enu/vpn/index.htm*
Glossary	*http://documentation.netgear.com/reference/enu/glossary/index.htm*