

LINKSYS®

A Division of Cisco Systems, Inc.



2.4GHz
802.11g

Wireless-G

Access Point with SRX

User Guide

WIRELESS

Model No. **WAP54GX**

CISCO SYSTEMS



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WARNING: This product contains chemicals, including lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. ***Wash hands after handling.***

How to Use this User Guide

The user guide to the Wireless-G Access Point with SRX has been designed to make understanding networking with the Access Point easier than ever. Look for the following items when reading this User Guide:



This checkmark means there is a note of interest and is something you should pay special attention to while using the Access Point.



This exclamation point means there is a caution or warning and is something that could damage your property or the Access Point.



This question mark provides you with a reminder about something you might need to do while using the Access Point.

In addition to these symbols, there are definitions for technical terms that are presented like this:

word: definition.

Also, each figure (diagram, screenshot, or other image) is provided with a figure number and description, like this:

Figure 0-1: Sample Figure Description

Figure numbers and descriptions can also be found in the “List of Figures” section.

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Chapter 1: Introduction

Welcome

Thank you for choosing the Wireless-G Access Point with SRX. This Access Point will allow you to network wirelessly better than ever.

How does the Access Point do all of this? An access point allows for greater range and mobility within your wireless network while also allowing you to connect the wireless network to a wired environment. And with SRX, you have greater range and speed.

But what does all of this mean?

Networks are useful tools for sharing computer resources. You can access one printer from different computers and access data located on another computer's hard drive. Networks are even used for playing multiplayer video games. So, networks are not only useful in homes and offices, they can also be fun.

PCs on a wired network create a LAN, or Local Area Network. They are connected with Ethernet cables, which is why the network is called "wired".

PCs equipped with wireless cards and adapters can communicate without cumbersome cables. By sharing the same wireless settings, within their transmission radius, they form a wireless network. This is sometimes called a WLAN, or Wired Local Area Network. The Access Point bridges wireless networks of both 802.11g and 802.11b standards and wired networks.

Use the instructions in this Guide to help you connect the Access Point, set it up, and configure it to bridge your different networks. These instructions should be all you need to get the most out of the Access Point.

access point: a device that allows wireless-equipped computers and other devices to communicate with a wired network. Also used to expand the range of a wireless network.

network: a series of computers or devices connected together.

lan (local area network): the computers and networking products that make up your local network.

ethernet: network protocol that specifies how data is placed on and retrieved from a common transmission medium.

adapter: a device that adds network functionality to your PC.

802.11g: a wireless networking standard that specifies a maximum data transfer rate of 54Mbps, an operating frequency of 2.4GHz, and backward compatibility with 802.11b devices.

802.11b: a wireless networking standard that specifies a maximum data transfer rate of 11Mbps and an operating frequency of 2.4GHz.

SRX: an antenna technology that provides for up to 8X better performance and up to 3X longer range.

What's in this User Guide?

This user guide covers the steps for setting up and using the Wireless-G Access Point with SRX.

- **Chapter 1: Introduction**
This chapter describes the Access Point's applications and this User Guide.
- **Chapter 2: Planning your Wireless Network**
This chapter describes the basics of wireless networking.
- **Chapter 3: Getting to Know the Wireless-G Access Point with SRX**
This chapter describes the physical features of the Access Point.
- **Chapter 4: Connecting the Wireless-G Access Point with SRX**
This chapter instructs you on how to connect the Access Point to your network.
- **Chapter 5: Setting Up the Wireless-G Access Point with SRX**
This chapter explains how to use the Setup Wizard to configure the settings on the Access Point.
- **Chapter 6: Configuring the Wireless-G Access Point with SRX**
This chapter explains how to use the Access Point's Web-based Utility for advanced configuration.
- **Appendix A: Troubleshooting**
This appendix describes some frequently asked questions regarding installation and use of the Access Point.
- **Appendix B: Wireless Security**
This appendix explains the risks of wireless networking and some solutions to reduce the risks.
- **Appendix C: Upgrading Firmware**
This appendix instructs you on how to upgrade the Access Point's firmware.
- **Appendix D: Windows Help**
This appendix describes some of the ways Windows can help you with wireless networking.
- **Appendix E: Glossary**
This appendix gives a brief glossary of terms frequently used in networking.
- **Appendix F: Specifications**
This appendix provides the Access Point's technical specifications.
- **Appendix G: Warranty Information**
This appendix supplies the Access Point's warranty information.

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- **Appendix H: Regulatory Information**
This appendix supplies the Access Point's regulatory information.
- **Appendix I: Contact Information**
This appendix provides contact information for a variety of Linksys resources, including Technical Support.

Chapter 2: Planning Your Wireless Network

Network Topology

A wireless network is a group of computers, each equipped with one wireless adapter. Computers in a wireless network must be configured to share the same radio channel. Several PCs equipped with wireless cards or adapters can communicate with one another to form an ad-hoc network.

Linksys wireless adapters also provide users access to a wired network when using an access point, such as the Wireless-G Access Point with SRX, or wireless router. An integrated wireless and wired network is called an infrastructure network. Each wireless PC in an infrastructure network can talk to any computer in a wired network infrastructure via the access point or wireless router.

An infrastructure configuration extends the accessibility of a wireless PC to a wired network, and may double the effective wireless transmission range for two wireless adapter PCs. Since an access point is able to forward data within a network, the effective transmission range in an infrastructure network may be doubled.

Roaming

Infrastructure mode also supports roaming capabilities for mobile users. Roaming means that you can move your wireless PC within your network and the access points will pick up the wireless PC's signal, providing that they both share the same channel and SSID.

Before using the roaming capabilities, choose a feasible radio channel and optimum access point position. Proper access point positioning combined with a clear radio signal will greatly enhance performance.

ad-hoc: a group of wireless devices communicating directly with each other (peer-to-peer) without the use of an access point.

infrastructure: a wireless network that is bridged to a wired network via an access point.

roaming: the ability to take a wireless device from one access point's range to another without losing the connection.

ssid: your wireless network's name

Network Layout

The Wireless-G Access Point with SRX has been designed for use with 802.11g and 802.11b products. The Access Point is compatible with 802.11g and 802.11b adapters, such as the Notebook Adapters for your laptop computers, PCI Adapters for your desktop PCs, and USB Adapters for when you want to enjoy USB connectivity. These wireless products can also communicate with a 802.11g or 802.11b Wireless PrintServer.

To link your wired network with your wireless network, connect the Access Point's Ethernet network port to any switch or router.

With these, and many other, Linksys products, your networking options are limitless. Go to the Linksys website at www.linksys.com for more information about wireless products.

Chapter 3: Getting to Know the Wireless-G Access Point with SRX

The Front Panel

The Access Point's LEDs, which indicate activity and status information, are located on the front panel.



Figure 3-1: Front Panel

- Ethernet** Green. The **Link** LED lights up when the Access Point is successfully connected to a device through the Ethernet network port. The LED flashes when the Access Point is transmitting or receiving data through the Ethernet network port.
- Wireless** Green. The **Act** LED lights up when the Access Point is ready for wireless use. It flashes when the Access Point is transmitting or receiving data wirelessly.
- Power** Green. The **Power** LED lights up when the Access Point is powered on.

The Back Panel

The Access Point's Ethernet network and power ports, as well as the Reset button, are located on the back panel.



Figure 3-2: Back Panel

- Reset Button** There are two ways to reset the Access Point's factory defaults. Either press the **Reset** button, for approximately ten seconds, or use the *Administration - Factory Defaults* screen of the Access Point's Web-based Utility.
- Ethernet Port** The Ethernet network port connects to an Ethernet network device, such as a switch or router.
- Power Port** The Power port connects to the Access Point's power adapter.



IMPORTANT: Resetting the Access Point will erase all of your settings (including wireless security, IP address, and power output) and replace them with the factory defaults. Do not reset the Access Point if you want to retain these settings.

port: the connection point on a computer or networking device used for plugging in cables or adapters

Chapter 4: Connecting the Wireless-G Access Point with SRX

Overview

This chapter explains how to connect the Access Point for setup.

Connections for Setup

1. Connect your Ethernet network cable to your network router or switch. Then connect the other end of the network cable to the Access Point's Ethernet port.
2. Connect the included power adapter to the Access Point's Power port. Then plug the power adapter into an electrical outlet. The LEDs on the front panel will light up as soon as the Access Point powers on.

Proceed to “Chapter 5: Setting Up the Wireless-G Access Point with SRX.”



Figure 4-1: Connect the Ethernet Network Cable



Figure 4-2: Connect the Power

Chapter 5: Setting up the Wireless-G Access Point with SRX

Overview

Now that you've connected the Access Point to your wired network, you are ready to begin setting it up. This Setup Wizard will take you through all the steps necessary to configure the Access Point.

Using the Setup Wizard

1. Insert the Setup Wizard CD-ROM into your CD-ROM drive. The Setup Wizard should run automatically, and the *Welcome* screen should appear. If it does not, click the **Start** button and choose **Run**. In the field that appears, enter **D:\setup.exe** (if "D" is the letter of your CD-ROM drive).
2. On the *Welcome* screen, click the **Click Here to Start** button if this is the first time you are running the Setup Wizard. These are your other choices:

User Guide - Click the **User Guide** button to open the PDF file of this User Guide.

Exit - Click the **Exit** button to exit the Setup Wizard.



Figure 5-1: Welcome Screen

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3. Optimally, you should set up the Access Point using a PC on your wired network. Connect a network cable to your network router or switch. Then click the **Next** button.

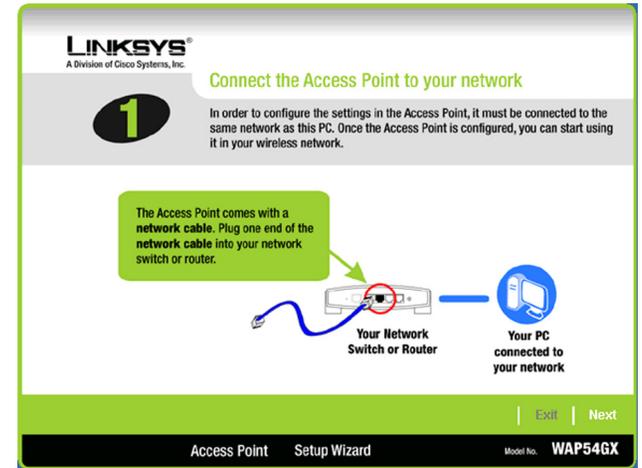


Figure 5-2: Connect the Network Cable to the Router or Switch Screen

4. The screen shows how the Access Point should be connected as you run the Setup Wizard. Connect the other end of the network cable to the Access Point's Ethernet network port. Then click the **Next** button.

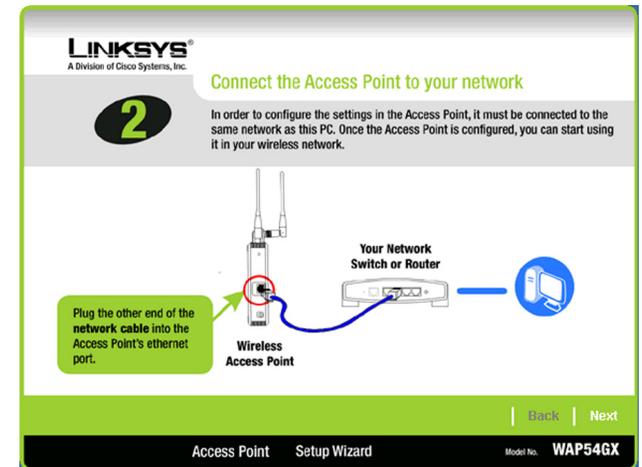


Figure 5-3: Connect the Network Cable to the Access Point Screen

5. Connect the power adapter to the Access Point and an electrical outlet. Then click the **Next** button.

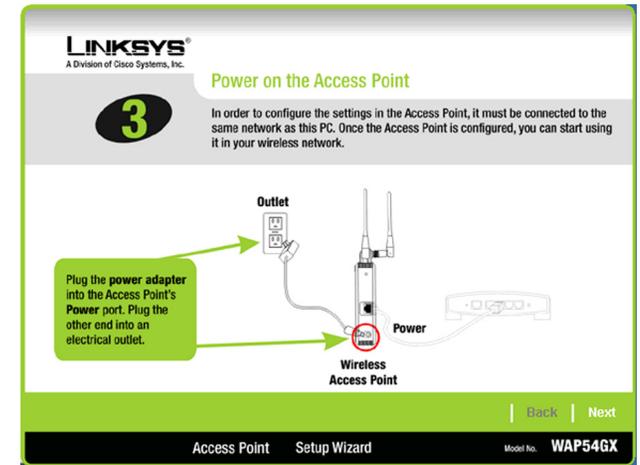


Figure 5-4: Power on the Access Point Screen

6. Make sure the Access Point's Ethernet, Wireless, and Power LEDs are lit on its front panel. If they are not, check your cable connections. Then click the **Next** button to continue.

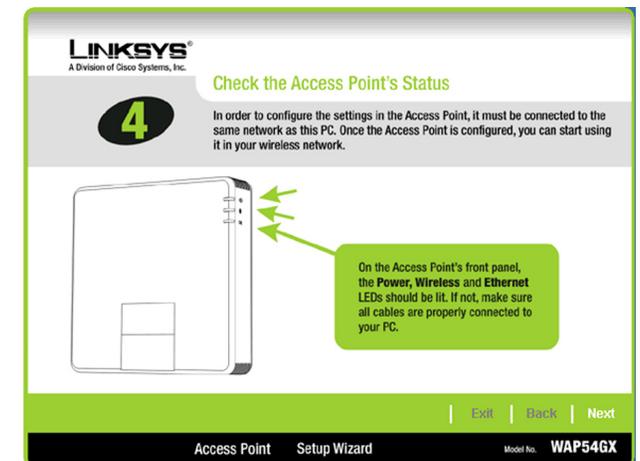


Figure 5-5: Check the Access Point's Status Screen

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- The Setup Wizard will run a search for the Access Point within your network and then display a list along with the status information for the selected access point. If this is the only access point on your network, it will be the only one displayed. If there are more than one displayed, select the Access Point by clicking on it. Click the **Yes** button to change any settings, or click the **No** button to keep these settings.

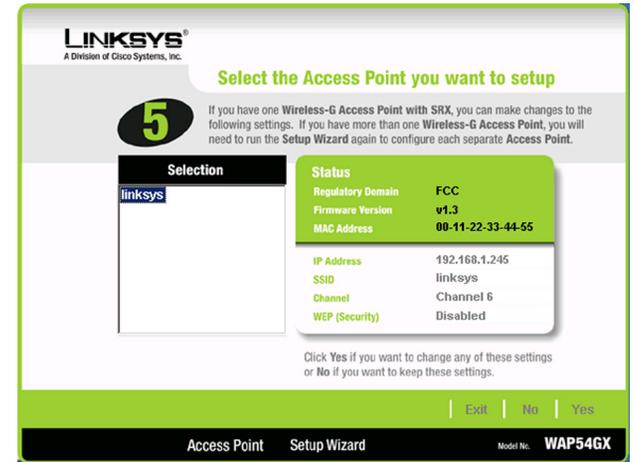


Figure 5-6: Select the Access Point Screen

- You will be asked to sign onto the Access Point you have selected. Enter the default password, **admin**. Then, click **Enter**. (This user name and password can be changed from the Web-based Utility's Administration - Management tab.)



Figure 5-7: Password Screen