Chapter 4: Setting Up and Connecting the Wireless-G PCI Adapter with SRX

The Wireless-G PCI Adapter is set up with the Setup Wizard that comes on the CD enclosed with the Adapter. This chapter will guide you through the setup procedure.

> ⚠️ **IMPORTANT:** Do not connect the Adapter until you are instructed to do so or the setup will not work.

Starting the Setup Wizard

To begin the setup process, 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).

On the *Welcome* screen, you have the following choices:

Click Here to Start - Click the **Click Here to Start** button to begin the software installation process.

User Guide - Click the **User Guide** button to open this User Guide.

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

1. To install the Adapter, click the **Click Here to Start** button on the *Welcome* screen.

2. After reading the License Agreement, click **Next** if you agree and want to continue the installation, or click **Cancel** to end the installation.

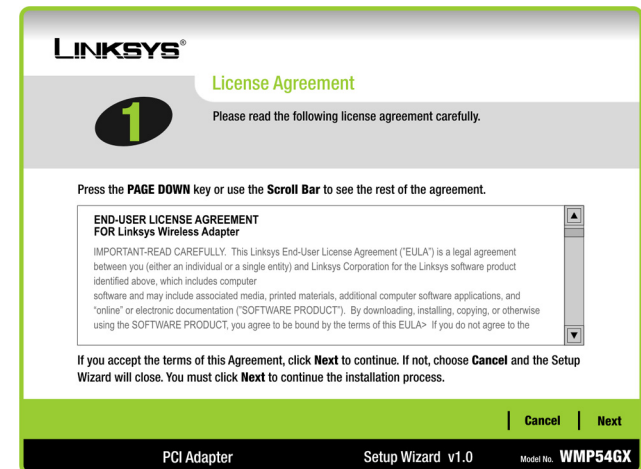**Figure 4-1: Setup Wizard's Welcome Screen**

Figure 4-2: Setup Wizard's License Agreement

3. Windows will begin copying the files onto your PC.

4. The Setup Wizard will now prompt you to install the Adapter into your PC. Click **Next** and power off your PC. After installing the Adapter, as shown below, and restarting your PC, the Setup Wizard will continue.

Installing the Adapter

1. If you haven't already done so, power off your desktop PC before installing the Adapter.

2. Open your PC case and locate an available PCI slot on the motherboard. Check with your computer manufacturer for instructions.

3. Slide the Adapter into the PCI slot. Make sure that all of its pins are touching the slot's contacts. You may have to apply a bit of pressure to slide the Adapter all the way in. After the Adapter is firmly in place, secure its fastening tab to your PC's chassis with a mounting screw. Then, close your PC.

4. Now you will connect the antenna stand's cables to the PCI card part of the Adapter. Plug the cable with the white connector into the ACT. port (also white). Then attach the remaining cables to the Adapter's ANT. ports.

NOTE: Only the cable with the white connector must plug into the white ACT. port. Then you can connect any of the other antenna cables to any of the Adapter's ANT. ports.

5. Attach the antennas to the connectors on the antenna stand.
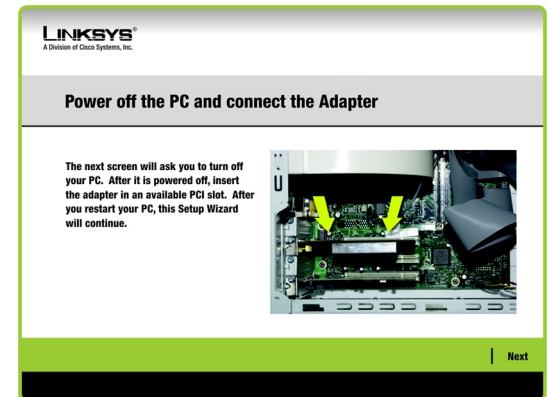
6. Power on your desktop PC.

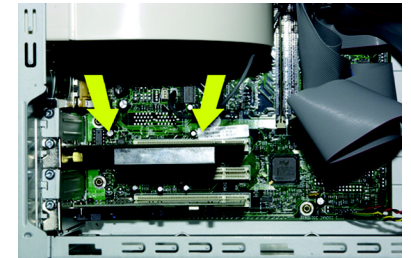**Figure 4-3: Connecting the Adapter Screen**
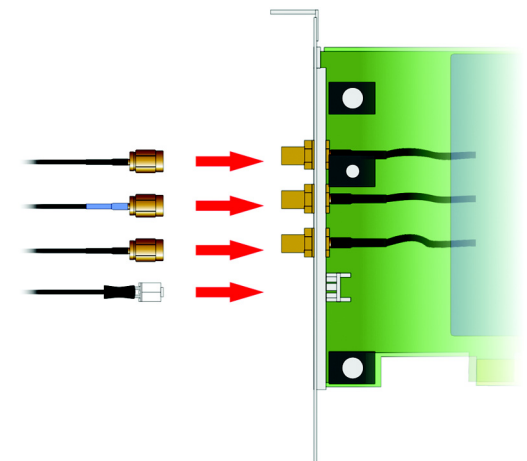

Figure 4-4: Installing the Adapter

Figure 4-5: Attaching the Antenna Cables

Setting Up the Adapter

When the Setup Wizard resumes, the next screen to appear will be the *Available Wireless Network* screen.

This screen provides two options for setting up the Adapter.

- **Available Wireless Network.** Most users should use this option. The networks available to this Adapter will be listed on this screen. You can choose one of these networks and click the **Connect** button to connect to it. Click the **Refresh** button to update the Available Wireless Network list.

- **Manual Setup.** To set up the Adapter manually, select **Manual Setup**.

The setup for each option is described, step by step, under the appropriate heading on the following pages.

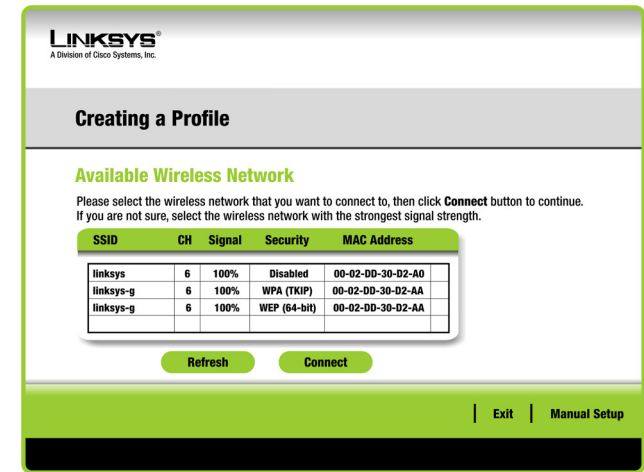Click **Exit** to close the Setup Wizard, if you wish to set up the Adapter later.

Figure 4-6: Available Wireless Network Screen

Setting Up the Adapter with an Available Network

The available networks are listed in the table on the center of the screen by SSID. Select the wireless network you wish to connect to and click the **Connect** button. (If you do not see your network listed, you can click the **Refresh** button to bring the list up again.) If the network utilizes wireless security, you will need to configure security on the Adapter. If not, you will be taken directly to the *Congratulations* screen.

1. If wireless security has been enabled on this network, you will see a wireless security screen. If your network uses WEP (Wired Equivalent Privacy) encryption, the *WEP Key Needed for Connection* screen will appear. If your network uses WPA Personal or WPA2 Personal security, a screen will appear for one of those encryption methods.

   WEP Key Needed for Connection

   Select the level of encryption you want to use, **64-bit** or **128-bit**.

   Then, enter a passphrase or WEP key.

   Passphrase - Enter a passphrase in the *Passphrase* field, so a WEP key is automatically generated. The passphrase is case-sensitive and should not be longer than 31 alphanumeric characters. It must match the passphrase of your other wireless network devices and is compatible with Linksys wireless products only. (If you have any non-Linksys wireless products, enter the WEP key manually on those products.)

   WEP Key 1 - The WEP key you enter must match the WEP key of your wireless network. For 64-bit encryption, enter exactly 10 hexadecimal characters. For 128-bit encryption, enter exactly 26 hexadecimal characters. Valid hexadecimal characters are "0" to "9" and "A" to "F".

   Then, click **Connect** and proceed to the *Congratulations* screen. To cancel the connection, click **Cancel**.
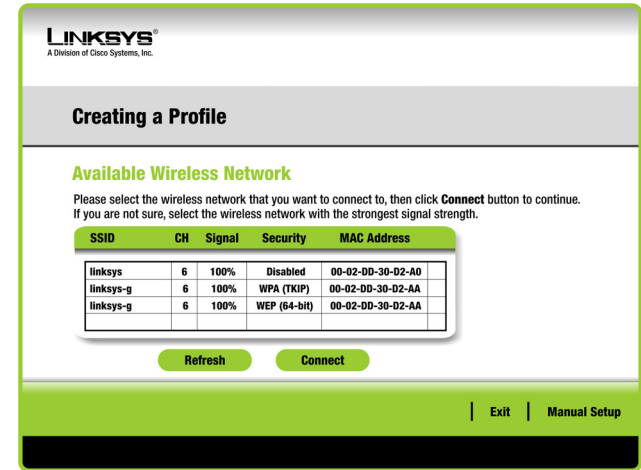

Figure 4-7: Available Wireless Network Screen

encryption: encoding data transmitted in a network.

wep (wired equivalent privacy): a method of encrypting network data transmitted on a wireless network for greater security.

wpa (wi-fi protected access): a wireless security protocol using TKIP (Temporal Key Integrity Protocol) encryption, which can be used in conjunction with a RADIUS server.
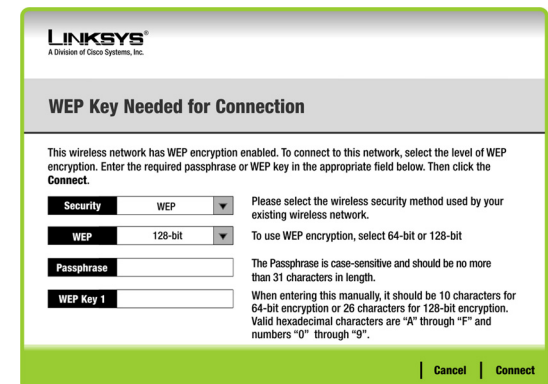

Figure 4-8: WEP Key Needed for Connection

WPA-Personal for Connection

WPA Personal offers two encryption methods, TKIP and AES, with dynamic encryption keys. Select one of these methods. Then enter a passphrase.

Encryption - Select the type of algorithm you want to use, **TKIP** or **AES**, from the *Encryption* drop-down menu.

Passphrase - Enter a Passphrase, also called a pre-shared key, of 8-63 characters in the *Passphrase* field. The longer and more complex your Passphrase is, the more secure your network will be.

Then, click **Connect** and proceed to the *Congratulations* screen. To cancel the connection, click **Cancel**.

Figure 4-9: WPA-Personal Needed for Connection

WPA2 - Personal Needed for Connection

AES is automatically used as the encryption method. Enter a passphrase on this screen.

Passphrase - Enter a Passphrase, also called a pre-shared key, of 8-63 characters in the *Passphrase* field. The longer and more complex your Passphrase is, the more secure your network will be.

Then, click **Connect** and proceed to the *Congratulations* screen. To cancel the connection, click **Cancel**.

Figure 4-10: WPA2-Personal Needed for Connection

2. After the Adapter has been configured for the network, the *Congratulations* screen will appear. Click **Connect to Network** to connect to your network.

Congratulations! Setup is complete.

To check the link information, search for available wireless networks, or make additional configuration changes, refer to "Chapter 5: Using the Wireless Network Monitor."
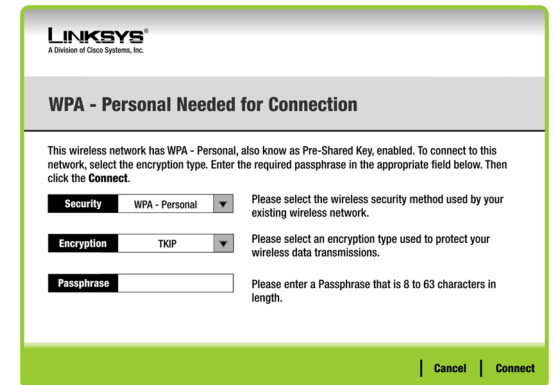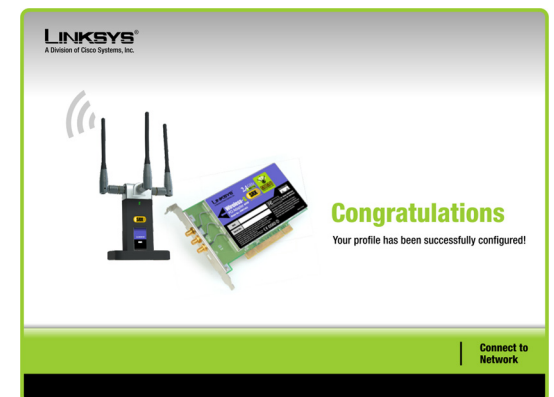

Figure 4-11: Congratulations Screen

Setting Up the Adapter with Manual Setup

Click **Manual Setup** on the *Available Wireless Network* screen to set up the Adapter manually.

1. After clicking Manual Setup, the *Network Settings* screen will appear. If your network has a router or other DHCP server, click the radio button next to **Obtain network settings automatically (DHCP)**.

   If your network does not have a DHCP server, click the radio button next to **Specify network settings**. Enter an IP Address, Subnet Mask, Default Gateway, and DNS addresses appropriate for your network. You must specify the IP Address and Subnet Mask on this screen. If you are unsure about the Default Gateway and DNS addresses, leave these fields empty.

   IP Address - This IP Address must be unique to your network.

   Subnet Mask - The Adapter's Subnet Mask must be the same as your wired network's Subnet Mask.

   Default Gateway - Enter the IP address of your network's Gateway here.

   DNS 1 and **DNS 2** - Enter the DNS address of your wired Ethernet network here.

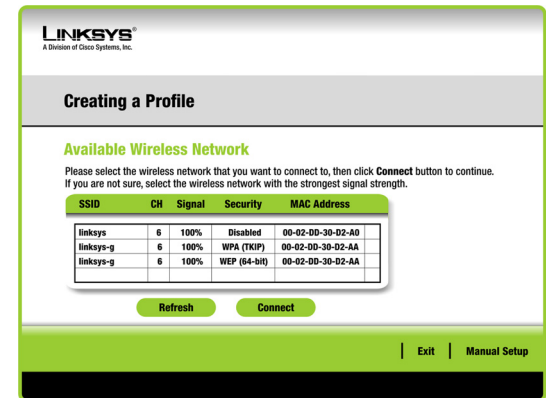   Click **Next** to continue, or click **Back** to return to the *Available Wireless Network* screen.

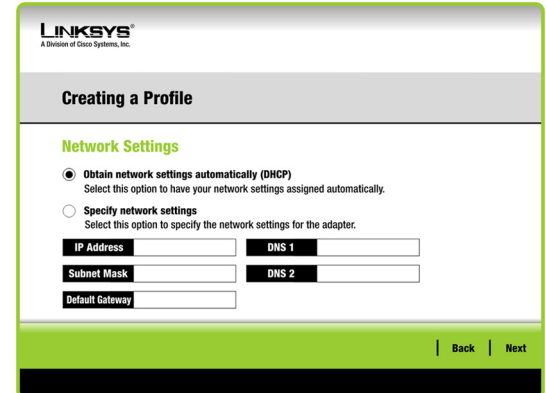**Figure 4-12: Available Wireless Network Screen**

Figure 4-13: Network Settings Screen

ip address: the address used to identify a computer or device on a network.

subnet mask: an address code that determines the size of a network.

default gateway: a device that forwards Internet traffic from your local area network.

dns (domain name server): the IP address of your ISP's server, which translates the names of websites into IP addresses.

2. The *Wireless Mode* screen shows a choice of two wireless modes. Click the **Infrastructure Mode** radio button if you want to connect to a wireless router or access point. Click the **Ad-Hoc Mode** radio button if you want to connect to another wireless device directly without using a wireless router or access point. Then, enter the SSID for your network.

    Infrastructure Mode - Use this mode if you want to connect to a wireless router or access point.

    Ad-Hoc Mode - Use this mode if you want to connect to another wireless device directly without using a wireless router or access point.

    SSID - This is the wireless network name that must be used for all the devices in your wireless network. It is case- sensitive and should be a unique name to help prevent others from entering your network.

    Click **Next** to continue or **Back** to return to the previous screen.

Figure 4-14: Wireless Mode Screen

3. If you chose **Infrastructure Mode**, go to Step 4 now. If you chose **Ad-Hoc Mode**, the *Ad-Hoc Mode Settings* screen will appear. Select your channel and network mode settings on this screen.

    Channel - Select the correct channel for your wireless network. The channel you choose should match the channel set on the other devices in your wireless network. If you are unsure about which channel to use, keep the default setting.

    Network Mode - Select the mode in which your wireless network will operate. Select **Mixed Mode** if you want both Wireless-B and Wireless-G devices operating on the network, though at a slower speed. Select **G-Only Mode** if you do not want any Wireless-B devices operating on the network.

    Click **Next** to continue or click **Back** to change any settings.
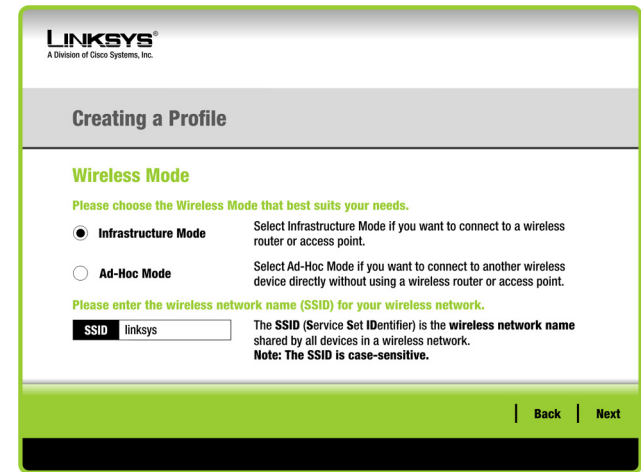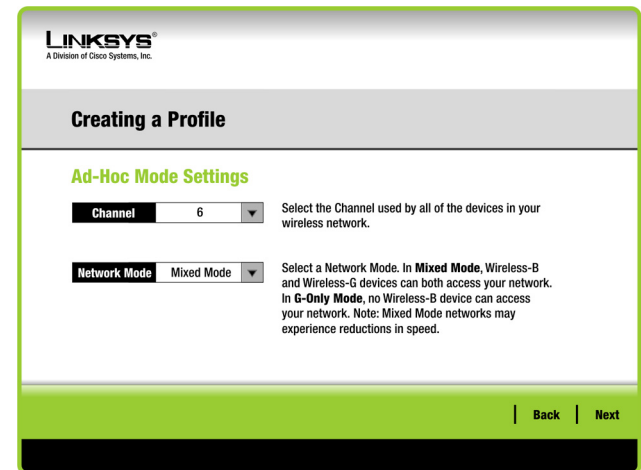

Figure 4-15: Ad-Hoc Mode Settings Screen

4. The *Wireless Security* screen will appear.

If your wireless network doesn't use wireless security, select **Disabled** and then click the **Next** button to continue. Proceed to Step 5.

From the *Security* drop-down menu, select the security method you want to use: **WEP**, **WPA Personal**, **WPA2 Personal**, **WPA Enterprise**, or **RADIUS**. WEP stands for Wired Equivalent Privacy, and WPA uses a security standard stronger than WEP encryption. RADIUS stands for Remote Authentication Dial-In User Service. Then proceed to the appropriate instructions for your security method.

WEP

Select a level of WEP encryption to use, and then enter a passphrase or WEP key.

WEP - To use WEP encryption, select **64-bit** or **128-bit** characters from the drop-down menu.

Passphrase - Instead of manually entering a WEP key, you can enter a passphrase in the *Passphrase* field, so a WEP key is automatically generated. This case-sensitive passphrase must match the passphrase of your other wireless network devices and is compatible with Linksys wireless products only. (If you have any non-Linksys wireless products, enter the WEP key manually on those products.)

WEP Key- The WEP key you enter must match the WEP key of your wireless network. If you are using 64-bit WEP encryption, then the key must consist of exactly 10 hexadecimal characters. If you are using 128-bit WEP encryption, then the key must consist of exactly 26 hexadecimal characters. Valid hexadecimal characters are "0" to "9" and "A" to "F".

Advanced Users:
TX Key - The default transmit key number is **1**. If your network's access point or wireless router uses transmit key number 2, 3, or 4, select the appropriate number from the *TX Key* drop-down box.

Authentication - The default is set to **Auto**, where it auto-detects for **Shared Key** or **Open** system. Shared Key is when both the sender and the recipient share a WEP key for authentication. Open key is when the sender and the recipient do not share a WEP key for authentication. All devices on your network must use the same authentication type.

Click the **Next** button to continue to the *Confirm New Settings* screen or the **Back** button to return to the previous screen.
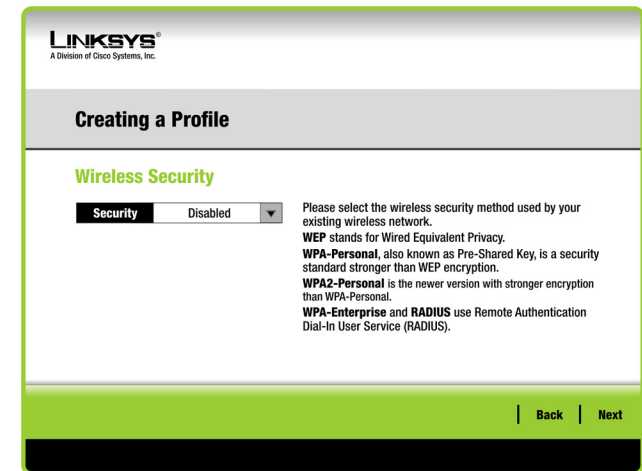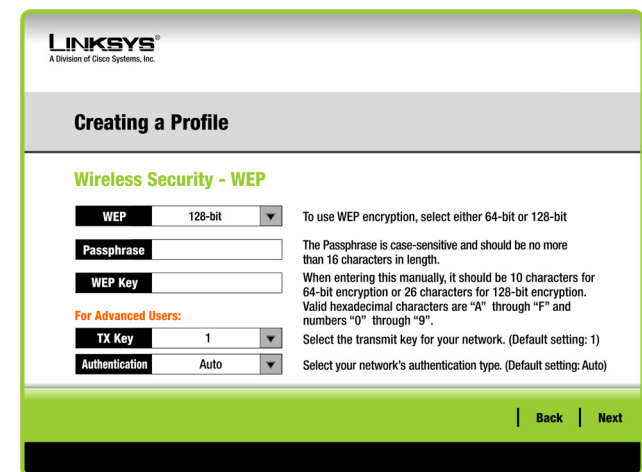

Figure 4-16: Wireless Security Screen

Figure 4-17: Wireless Security - WEP Screen