

ZyAIR G-100

Wireless-g 54M PC Card

User's Guide

Version 3.06

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This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the radio interference regulations of Industry.

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This device complies with Part 15 of FCC rules. Operation is subject to the following two conditions:

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- This device must accept any interference received, including interference that may cause undesired operations.

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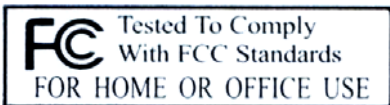
1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and the receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

Notice 1

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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Refer to the product page at www.zyxel.com.



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When contacting your Customer Support Representative, please have the following information ready:

- Product model and serial number.
- Warranty Information.
- Date you received your product.
- Brief description of the problem and the steps you took to solve it.

METHOD	E-MAIL SUPPORT/SALES	TELEPHONE/FAX	WEB SITE/ FTP SITE	REGULAR MAIL
LOCATION				
WORLDWIDE	support@zyxel.com.tw sales@zyxel.com.tw	+886-3-578-3942 +886-3-578-2439	www.zyxel.com www.europe.zyxel.com ftp.europe.zyxel.com	ZyXEL Communications Corp., 6 Innovation Road II, Science-Based Industrial Park, Hsinchu 300, Taiwan
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Table of contents

Copyright.....	iii
ZyXEL Limited Warranty	iv
Information for Canadian Users	v
Federal Communications Commission (FCC) Interference Statement	vi
Customer Support.....	vii
List of Figures.....	xi
List of Tables	xi
Preface.....	xii
Chapter 1 Getting to Know Your ZyAIR	1-1
1.1 About Your ZyAIR	1-1
1.2 Applications	1-1
1.2.1 Ad-hoc.....	1-1
1.2.2 Infrastructure.....	1-2
1.3 Benefits of a Wireless LAN	1-3
1.4 Notes on Wireless LAN Setup	1-3
1.5 ZyAIR Driver and Wireless Utility Installation	1-3
Chapter 2 Disable Windows XP Wireless LAN Configuration Tool.....	2-1
Chapter 3 Using the ZyAIR Wireless LAN Utility	3-1
3.1 Accessing the ZyAIR Utility.....	3-1
3.2 Viewing Current Configuration	3-1
3.2.1 Common Screen Command Buttons	3-3
3.3 Wireless LAN Parameters.....	3-3
3.3.1 Channel	3-3
3.3.2 SSID	3-3
3.3.3 Operation Mode	3-4
3.4 Roaming.....	3-5
3.5 Configuring the ZyAIR Wireless Parameters	3-6
3.6 Network Configuration Profile Setting	3-8
3.6.1 Resetting to Factory Default Values	3-8
3.6.2 Saving the Current Setting to a Profile.....	3-8
3.6.3 Using a Pre-configured Profile.....	3-8
3.6.4 Deleting a Profile	3-9
3.7 Site Survey	3-9
3.7.1 Connecting to a Network	3-10
Chapter 4 Wireless LAN Security	4-1
4.1 Introduction.....	4-1
4.2 Data Encryption with WEP	4-1
4.2.1 Configuring the WEP Encryption on the ZyAIR	4-1
4.3 The About Screen	4-4
Chapter 5 Removing the ZyAIR.....	5-1

Chapter 6 Troubleshooting.....6-1

6.1 Problems Starting the ZyAIR Utility Program6-1

6.2 Problems Communicating With Other Computers6-2

6.3 Problem with the Link Status.....6-2

Appendix A Product Specifications A

IndexB

List of Figures

Figure 1-1 Ad-hoc Application	1-2
Figure 1-2 Infrastructure Application Example	1-2
Figure 2-1 Windows XP: System Tray Icon	2-1
Figure 2-2 Windows XP: Wireless Network Connection Status	2-2
Figure 2-3 Windows XP: Connect to Wireless Network	2-2
Figure 2-4 Windows XP: Wireless Network Connection Properties	2-3
Figure 3-1 ZyAIR Utility: System Tray Icon	3-1
Figure 3-2 ZyAIR Utility: Link Info	3-2
Figure 3-3 Ad-hoc Network Example	3-4
Figure 3-4 BSS Example	3-5
Figure 3-5 Infrastructure Network Example	3-5
Figure 3-6 Roaming Example	3-6
Figure 3-7 ZyAIR Utility: Configuration	3-7
Figure 3-8 ZyAIR Utility: Site Survey	3-9
Figure 4-1 ZyAIR Utility: WEP Encryption	4-2
Figure 4-2 ZyAIR Utility: About	4-4

List of Tables

Table 3-1 ZyAIR Utility: System Tray Icon	3-1
Table 3-2 ZyAIR Utility: Link Info	3-2
Table 3-3 Common Screen Command Buttons	3-3
Table 3-4 ZyAIR Utility: Configuration	3-7
Table 3-5 ZyAIR Utility: Site Survey	3-10
Table 4-1 ZyAIR Utility: WEP Encryption	4-2
Table 4-2 ZyAIR Utility: About	4-4
Table 7-1 Troubleshooting Starting ZyAIR Utility Program	6-1
Table 7-2 Troubleshooting Communication Problems	6-2
Table 7-3 Troubleshooting Link Status	6-2

Preface

Congratulations on the purchase of your new ZyAIR G-100 Wireless-g 54M PC Card!

About This User's Guide

A practical and comprehensive tool, this guide provides information about the ZyAIR Wireless LAN Utility that you use to configure your ZyAIR G-100. Familiarize yourself with the *Syntax Conventions* listed below for better and faster understanding.

Related Documentation

➤ Support Disk

Refer to the included CD for support documents and device drivers.

➤ Quick Installation Guide

Our Quick Installation Guide is designed to help you get your ZyAIR up and running right away. It contains a detailed easy-to-follow connection diagram and information on installing your ZyAIR.

➤ ZyXEL Glossary and Web Site

Please refer to www.zyxel.com for an online glossary of networking terms and additional support documentation.

Syntax Conventions

- “Type” or “Enter” means for you to type one or more characters. "Select" or "Choose" means for you to use one of the predefined choices.
- Window and command choices are in **Bold Times New Roman** font. Predefined field choices are in **Bold Arial** font.
- The ZyXEL ZyAIR WLAN G-100 Wireless-g 54M PC Card is referred to as the ZyAIR in this guide.
- The ZyAIR Wireless LAN Utility may be referred to as the ZyAIR Utility in this guide.

User Guide Feedback

Help us help you! E-mail all User's Guide-related comments, questions or suggestions for improvement to techwriters@zyxel.com.tw or send regular mail to The Technical Writing Team, ZyXEL Communications Corp., 6 Innovation Road II, Science-Based Industrial Park, Hsinchu, 300, Taiwan. Thank you!

Chapter 1

Getting to Know Your ZyAIR

This chapter describes the key features and applications of your ZyAIR and introduces the basics of wireless LAN technology.

1.1 About Your ZyAIR

The ZyAIR is a IEEE 802.11g compliant wireless LAN PC card that fits into any 32-bit CardBus slot. With the ZyAIR, you can enjoy the wireless mobility within the coverage area. The IEEE 802.11g technology provides greater range and offers transmission rate at up to 54 Mbps.

The following lists the main features of your ZyAIR.

- Your ZyAIR can communicate with other IEEE 802.11b/Wi-Fi compliant wireless devices.
- Automatic rate selection.
- Data transmission rates up to 54 Mbps.
- Offers 64-bit and 128-bit WEP (Wired Equivalent Privacy) data encryption for network security.
- Low CPU utilization allowing more computer system resources for other programs.
- A built-in antenna
- Power and Link LEDs
- Driver support for Windows XP/2000/Me/98 SE

1.2 Applications

Unlike wired networks, you can set up wireless networks in two different modes: infrastructure and ad-hoc. Set up your wireless network depending on your network needs. The following sections describe each network mode.

1.2.1 Ad-hoc

An ad-hoc network consists of two or more computers communicating with one another through the wireless network. No access points (APs) or existing wired networks are needed. An access point acts as a bridge between the wireless and wired networks

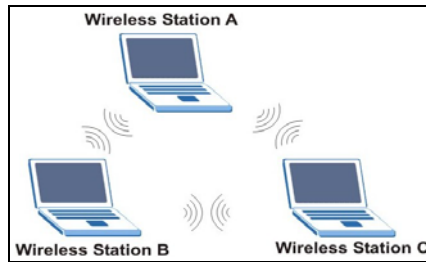


Figure 1-1 Ad-hoc Application

1.2.2 Infrastructure

When wireless stations wish to access and share resources on the wired network, they should use infrastructure mode. Wireless stations may move from one coverage area to another seamlessly without network interruption. This is called roaming.

The figure below depicts an infrastructure network example

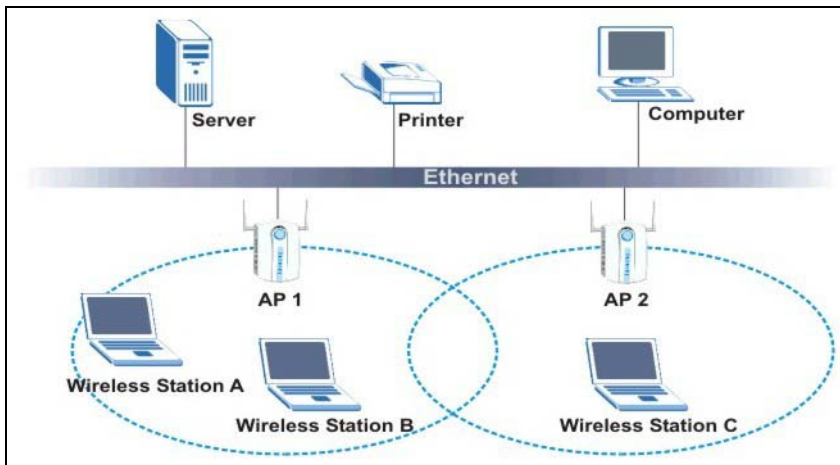


Figure 1-2 Infrastructure Application Example

An Infrastructure network has the following advantages over an ad-hoc network:

- Extended range: each wireless station within the range of an access point can communicate with other wireless station within range of the access point.
- Roaming: the access point enables a wireless station to move through a building and still be connected to the LAN.

- Wired to wireless LAN connectivity: the access point bridges the gap between wireless LANs and their wired counterparts.

1.3 Benefits of a Wireless LAN

Wireless Local Area Network (WLAN) systems offer a number of advantages over traditional wired systems. WLANs are flexible, easy to set up and manage. They are also more economical than wired LAN systems.

- Access to network services in areas otherwise hard or expensive to wire, such as historical buildings, buildings with asbestos materials and classrooms.
- Doctors and nurses can access a complete patient's profile on a handheld or notebook computer upon entering a patient's room.
- It allows flexible workgroups a lower total cost of ownership for networks that are frequently reconfigured.
- Conference room users can access the network as they move from meeting to meeting- accessing up-to-date information that facilitates the ability to communicate decisions "on the fly".
- It provides campus-wide networking coverage, allowing enterprises the roaming capability to set up easy-to-use wireless networks that transparently covers an entire campus.

1.4 Notes on Wireless LAN Setup

When setting up a wireless LAN, be sure to note the following points:

- Optimize the performance of the WLAN by ensuring that the distance between access points is not too far. In most buildings, most WLAN adapters operate within a range of 100 ~ 300 feet, depending on the thickness and structure of the walls.
- Radio waves can pass through walls and glass but not metal. If there is interference in transmitting through a wall, it may be that the wall has reinforcing metal in its structure. Install another access point to circumvent this problem.
- Floors usually have metal girders and metal reinforcing struts that interfere with WLAN transmission.

1.5 ZyAIR Driver and Wireless Utility Installation

Refer to the *Quick Installation Guide* to install the ZyAIR driver and wireless utility program.

Chapter 2

Disable Windows XP Wireless LAN Configuration Tool

By default, Windows XP uses a configuration tool to set up wireless networks. However, you should use the ZyAIR Utility in order to take full advantages of the ZyAIR features and functions.

DO NOT use the Windows XP configuration tool and the ZyAIR Utility at the same time. It is recommended you use the ZyAIR Utility to configure the ZyAIR.

Follow the steps below to disable the configuration tool in Windows XP after you install the ZyAIR Utility.

- Step 1.** Double-click on the network icon for the wireless connection in the system tray. If the icon is not present, proceed to *Step 2*. Otherwise skip to *Step 5*.



Figure 2-1 Windows XP: System Tray Icon

- Step 2.** If the icon for the wireless network connection is not in the system tray, click **Start, Control Panel** and double-click **Network Connections**.

Step 3. Double-click on the icon for wireless network connection to display a status window as shown next.

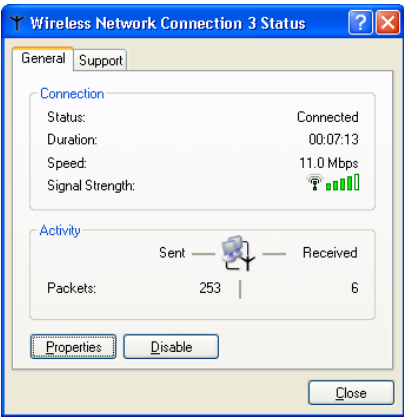


Figure 2-2 Windows XP: Wireless Network Connection Status

Step 4. Click **Properties** and click the **Wireless Networks** tab. Then skip to *Step 6*.

Step 5. When a **Connect to Wireless Network** window displays, click **Advanced...**



Figure 2-3 Windows XP: Connect to Wireless Network

Step 6. In the **Wireless Network Connection Properties** window, make sure the **Use Windows to configure my wireless network settings** check box is *not* selected. Click **OK**.

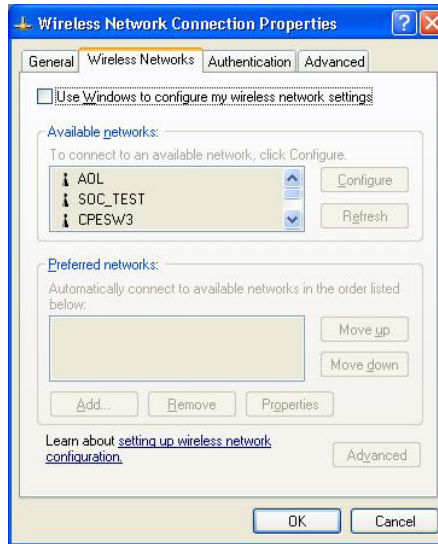


Figure 2-4 Windows XP: Wireless Network Connection Properties

Chapter 3

Using the ZyAIR Wireless LAN Utility

This chapter shows you basic ZyAIR configuration using the ZyAIR Utility.

Install the ZyAIR before you proceed. Refer to the *Quick Installation Guide*.

For Windows XP users: disable the Windows XP wireless configuration tool first before you proceed. Refer to *Chapter 2*.

Screen shots for Windows XP are shown unless otherwise specified.

3.1 Accessing the ZyAIR Utility

Follow the steps below to access the ZyAIR Utility

After you installed the ZyAIR Utility, an icon for the ZyAIR Utility appears in the system tray.

When the ZyAIR Utility system tray icon displays, the ZyAIR is installed properly.



Figure 3-1 ZyAIR Utility: System Tray Icon

The color of the ZyAIR Utility system tray icon indicates the status of the ZyAIR. Refer to the following table for details.

Table 3-1 ZyAIR Utility: System Tray Icon

COLOR	DESCRIPTION
Red	The ZyAIR is not connected to a wireless network or is searching for an available wireless network.
Green	The ZyAIR is connected to a wireless network.

Double-click on the icon in the system tray to open the ZyAIR Utility.

3.2 Viewing Current Configuration

When the ZyAIR Utility starts, the **Link Info** screen displays first, showing the current configuration of your ZyAIR.

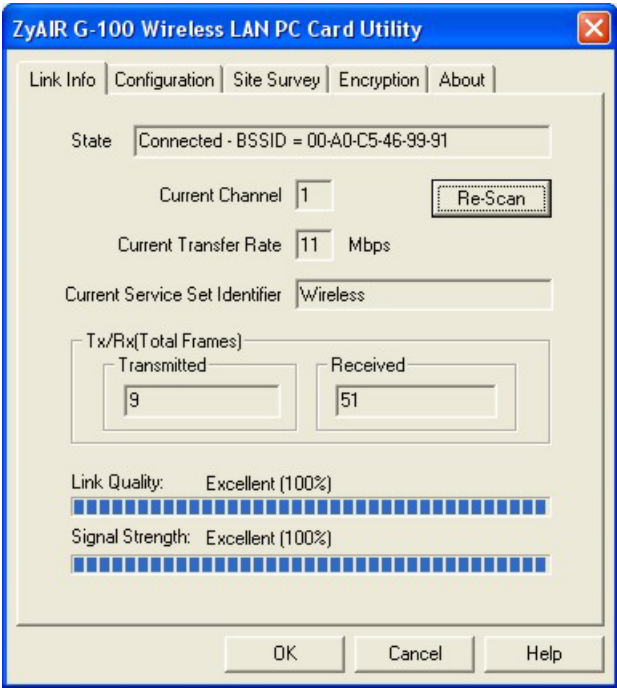


Figure 3-2 ZyAIR Utility: Link Info

The following table describes the fields in this screen.

Table 3-2 ZyAIR Utility: Link Info

LABEL	DESCRIPTION
State	This field displays the current connection status of the ZyAIR and the MAC address of the wireless device to which the ZyAIR is connected.
Re-Scan	Click Re-Scan to have the ZyAIR search for and connect to a wireless device with the best signal reception.
Current Channel	This field displays the radio channel the ZyAIR is currently using to connect to a wireless device.
Current Transfer Rate	This field displays the current transmission rate of the ZyAIR in megabits per second (Mbps).
Current Service Set Identifier	This field displays the name of the wireless device/network to which the ZyAIR is associated.
Tx/Rx (Total Frames)	

Table 3-2 ZyAIR Utility: Link Info

LABEL	DESCRIPTION
Transmitted	This field displays the number of data frames transmitted.
Received	This field displays the number of data frames received.
Link Quality	The status bar and the percentage number show the quality of the link.
Signal Strength	The status bar and the percentage number show the strength of the signal.

3.2.1 Common Screen Command Buttons

The following table describes common command buttons on all ZyAIR Utility screens.

Table 3-3 Common Screen Command Buttons

BUTTON	DESCRIPTION
OK	Click OK to save all changes and close the ZyAIR Utility.
Cancel	Click Cancel to discard changes and close the ZyAIR Utility.
Help	Click Help to display the on-line help window.

3.3 Wireless LAN Parameters

This section describes each wireless LAN parameter.

3.3.1 Channel

The range of radio frequencies used by IEEE 802.11 wireless devices is called a “channel”. The number of available channels depends on your geographical area. You may have a choice of channels (for your region) so adjacent APs (access points) should use different channels to reduce crosstalk. Crosstalk occurs when radio signals from different access points overlap causing interference and degrading performance.

Adjacent channels partially overlap however. To avoid interference due to overlap, the AP should be on a channel at least five channels away from a channel that an adjacent AP is using. For example, if your region has 11 channels and an adjacent AP is using channel 1, then you need to select a channel between 6 or 11.

3.3.2 SSID

The SSID (Service Set Identity) is a unique name shared among all wireless devices in a wireless network. Wireless devices must have the same SSID to communicate with each other.

3.3.3 Operation Mode

Wireless LAN works in either of the two modes: ad-hoc and infrastructure.

To connect to a wired network within a coverage area using Access Points (APs), set the ZyAIR operation mode to **Infrastructure**. An AP acts as a bridge between the wireless stations and the wired network. In case you do not wish to connect to a wired network, but prefer to set up a small independent wireless workgroup without an AP, use the **Ad-hoc** mode.

Ad-Hoc Mode

Ad-hoc mode does not require an AP or a wired network. Two or more wireless stations communicate directly to each other. An ad-hoc network may sometimes be referred to as an Independent Basic Service Set (IBSS).

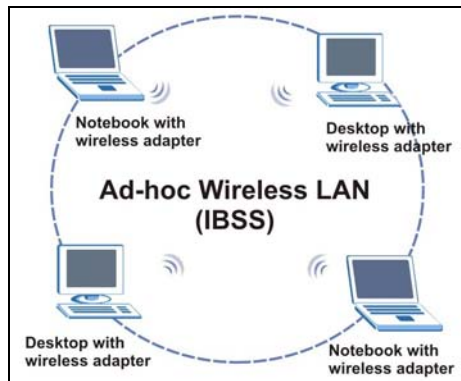


Figure 3-3 Ad-hoc Network Example

To set up an ad-hoc network, configure all wireless stations in ad-hoc network type and use the same SSID and channel.

Infrastructure Mode

When a number of wireless stations are connected using a single AP, you have a Basic Service Set (BSS).

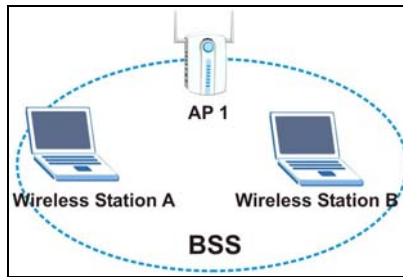


Figure 3-4 BSS Example

A series of overlapping BSS and a network medium, such as an Ethernet forms an Extended Service Set (ESS) or infrastructure network. All communication is done through the AP, which relays data packets to other wireless stations or devices connected to the wired network. Wireless stations can then access resource, such as the printer, on the wired network.

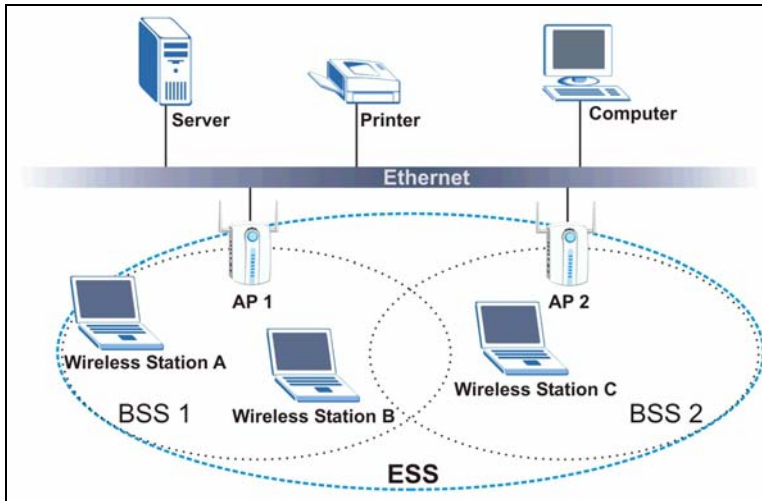


Figure 3-5 Infrastructure Network Example

3.4 Roaming

In an infrastructure network, wireless stations are able to switch from one AP to another as they move between the coverage areas. During this period, the wireless stations maintains uninterrupted connection to the network. This is roaming. As the wireless station moves from place to place, it is responsible for choosing the most appropriate AP depending on the signal strength, network utilization or other factors.

The following figure depicts a simple roaming example. When **Wireless Station B** moves to position **X**, the ZyAIR in **Wireless Station B** automatically switches the channel to the one used by **AP 2** in order to stay connected to the network.

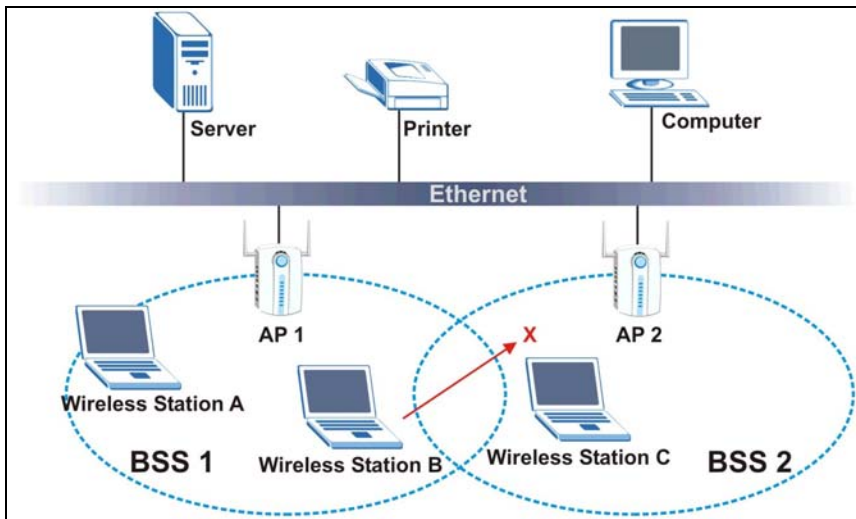


Figure 3-6 Roaming Example

3.5 Configuring the ZyAIR Wireless Parameters

Click the **Configuration** tab to display the screen as shown next.

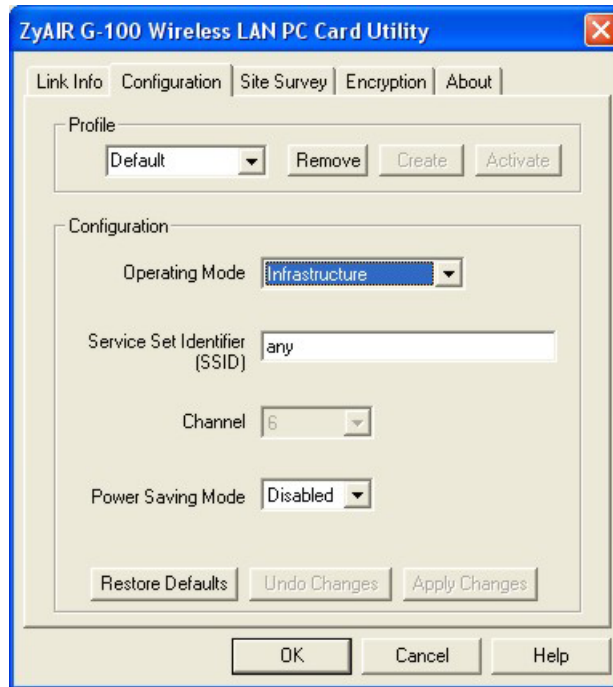


Figure 3-7 ZyAIR Utility: Configuration

Follow the instructions in the table below to configure the wireless LAN related fields. Refer to the next section for **Profile** field descriptions.

Table 3-4 ZyAIR Utility: Configuration

FIELD	DESCRIPTION
Configuration	
Operating Mode	<p>Select Infrastructure or Ad-Hoc from the drop-down list box.</p> <p>Select Infrastructure to associate to an AP.</p> <p>Select Ad-Hoc to associate to a peer ad-hoc computer.</p> <p>Refer to <i>Section 3.3.3</i> for more information.</p>
Service Set Identifier (SSID)	<p>Enter the SSID of the AP or the peer ad-hoc computer to which you want to associate in this field. To associate to an ad-hoc network, you must enter the same SSID as the peer ad-hoc computer.</p> <p>Enter any to associate to or roam between any infrastructure wireless networks.</p>

Table 3-4 ZyAIR Utility: Configuration

FIELD	DESCRIPTION
Channel	This field is activated if you select Ad-Hoc in the Operation Mode field. Select the channel number from the drop-down list box. To associate to a peer ad-hoc computer, you must use the same channel as the peer ad-hoc computer.
Power Saving Mode	This feature is available if you select Infrastructure in the Operation Mode field. Select Enabled from the drop-down list menu to save power consumption (especially for laptop computers). This forces the ZyAIR to go to sleep mode when it is not transmitting data. When you select Disabled , the ZyAIR will never go to sleep mode. This is the default setting.
Restore Default	Click Restore Default to reset all fields back to factory default values.
Undo Changes	Click Undo Changes to start configuring the fields again.
Apply Changes	Click Apply Changes to save the changes back to ZyAIR.

3.6 Network Configuration Profile Setting

The **Profile** function in the **Configuration** screen allows you to save the wireless network settings in the **Configuration** screen, use one of the pre-configured network profiles or reset the settings in the **Configuration** screen to the factory default values.

The configuration Profile includes the WEP key settings in the Encryption screen.

3.6.1 Resetting to Factory Default Values

To reset the fields in the **Configuration** screen back to factory default values, select **Default** from the drop-down list menu and click **Activate**.

3.6.2 Saving the Current Setting to a Profile

To save the current settings in the **Configuration** screen to a new profile, enter a descriptive name in the field provided and click **Create**.

3.6.3 Using a Pre-configured Profile

To use a previously saved network profile, select the profile file name from the drop-down list box and click **Activate**.

Once you activated a profile, the ZyAIR Utility will use that profile the next time it is started. If you do not activate a profile, the ZyAIR Utility reverts to use the default profile.

3.6.4 Deleting a Profile

To delete an existing wireless network configuration, select a profile from the drop-down list box and click **Remove**.

3.7 Site Survey

Use the **Site Survey** screen to scan for and connect to a wireless network.

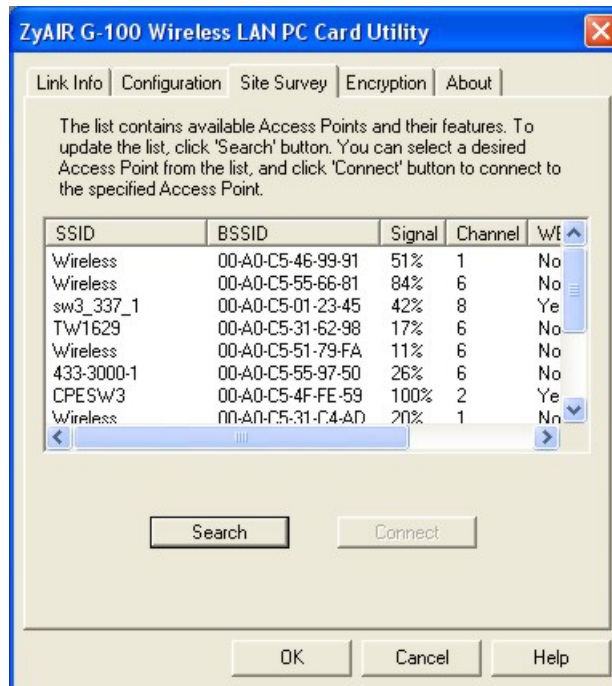


Figure 3-8 ZyAIR Utility: Site Survey

The following table describes the fields in this screen.

Table 3-5 ZyAIR Utility: Site Survey

FIELD	DESCRIPTION
SSID	This field displays the SSID (or name) of each wireless device.
BSSID	This field displays the MAC address of the wireless device.
Signal	This field displays the signal strength of each wireless device in percentage.
Channel	This field displays the channel number used by each wireless device.
WEP	This field shows whether the WEP data encryption is activated (Yes) or inactive (No).
BSS Type	This field displays the wireless network type (Infrastructure or Ad Hoc) of the wireless device.
Search	Click Search to scan for available wireless device(s) within transmission range.
Connect	Click Connect to associate to the selected wireless device.

3.7.1 Connecting to a Network

Follow the steps below to connect to a network using the **Site Survey** screen.

- Step 1.** Click **Search** to scan for all available wireless devices within range.
- Step 2.** To join a network, click an entry in the table to select a wireless device and click **Connect**.
- Step 3.** If the **WEP** field is **Yes** for the selected wireless network, you must then configure the WEP keys on the ZyAIR. Refer to *Chapter 4*.
- Step 4.** The **Link Info** screen displays. Verify that you have successfully connected to the selected network and check the network information.

Chapter 4

Wireless LAN Security

This chapter shows you how to set up the wireless LAN security available in the ZyAIR.

4.1 Introduction

Wireless LAN security is vital to your network to protect wireless communication between wireless stations and the wired network.

Configure the wireless LAN security using the **Encryption** screen. If you do not enable any wireless security on your ZyAIR, data transferred between the ZyAIR and the wired network is accessible to any network device.

4.2 Data Encryption with WEP

WEP (Wired Equivalent Privacy) data encryption scrambles the data transmitted between the ZyAIR and the AP or other wireless stations to keep network communications private. It encrypts unicast and multicast communications in a network. Both the wireless stations and the AP must use the same WEP key for data encryption and decryption.

There are two ways to create WEP keys in your ZyAIR.

- Automatic WEP key generation based on a password phrase or passphrase. The passphrase is case sensitive and should not be longer than 16 characters. You must use the same passphrase for all ZyAIR wireless devices with this feature in the same WLAN. If you have other non-ZyAIR wireless devices, you must enter the WEP keys manually.
- Enter the WEP keys manually.

Your ZyAIR allows you to configure up to four 64-bit or 128-bit WEP keys but only one key can be enabled at any one time.

4.2.1 Configuring the WEP Encryption on the ZyAIR

Click the **Encryption** tab to display the **Encryption** screen as shown next.

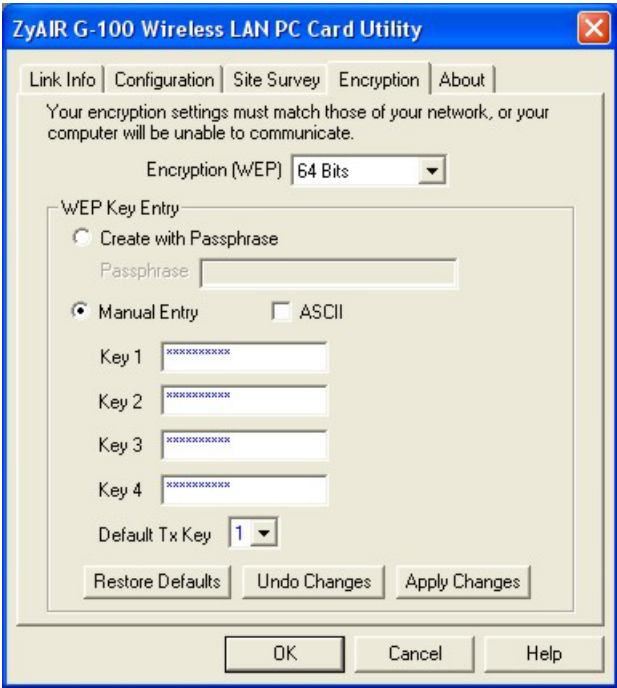


Figure 4-1 ZyAIR Utility: WEP Encryption

The following table describes the fields in this screen.

Table 4-1 ZyAIR Utility: WEP Encryption

FIELD	DESCRIPTION
Encryption (WEP)	Select either 64 Bits or 128 Bits from the drop-down list box to activate WEP encryption and then fill in the related fields. Select Disable to deactivate the WEP encryption.
WEP Key Entry The WEP keys are used to encrypt data before it is transmitted. The values for the keys must be set up exactly the same on the APs or other peer ad-hoc wireless computers as they are on the ZyAIR.	
Create with Passphrase	Select this option if you want the ZyAIR to automatically generate a WEP key based on the passphrase specified in the Passphrase field.

Table 4-1 ZyAIR Utility: WEP Encryption

FIELD	DESCRIPTION
Passphrase	<p>Enter the passphrase when you select the Create with Passphrase option.</p> <p>The passphrase is case-sensitive and should not be longer than 16 characters. You must use the same passphrase for all ZyAIR wireless devices with this feature in the same WLAN. If you have other non-ZyAIR wireless devices, you must enter the WEP keys manually.</p>
Manual Entry	Select this option if you want to manually enter the WEP keys.
ASCII	<p>Select this check box for ASCII WEP key type.</p> <p>Clear the check box for HEX WEP key type.</p>
Key 1 ... 4	<p>Enter the WEP keys in the fields provided.</p> <p>If you select 64 Bits in the Encryption field.</p> <ul style="list-style-type: none"> Enter either 10 hexadecimal digits in the range of "A-F", "a-f" and "0-9" (e.g. 11AA22BB33) for HEX key type <p>or</p> <ul style="list-style-type: none"> Enter 5 printable ASCII characters (case sensitive) ranging from "a-z", "A-Z" and "0-9" (e.g. MyKey) for ASCII key type. <p>If you select 128 Bits in the Encryption field,</p> <ul style="list-style-type: none"> Enter either 26 hexadecimal digits in the range of "A-F", "a-f" and "0-9" (for example, 00112233445566778899AABBCC) for HEX key type <p>or</p> <ul style="list-style-type: none"> Enter 13 printable ASCII characters (case sensitive) ranging from "a-z", "A-Z" and "0-9" (for example, MyKey12345678) for ASCII key type. <p style="text-align: center;">ASCII WEP key is case sensitive.</p>
Default TxKey	From the drop-down list menu, select a WEP key to use for data encryption.
Restore Default	Click Restore Default to reset all fields back to factory default values.
Undo Changes	Click Undo Changes to start configuring the fields again.
Apply Changes	Click Apply Changes to save the changes back to ZyAIR.

4.3 The About Screen

The **About** screen displays related version numbers of the ZyAIR.

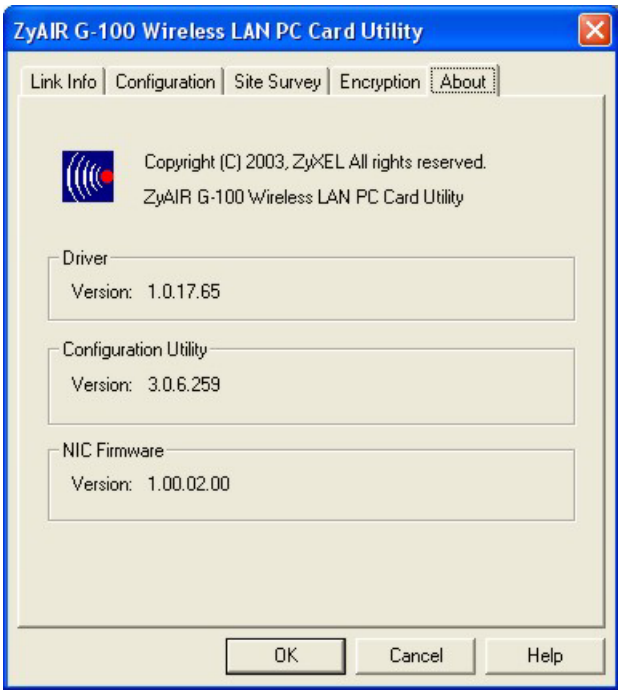


Figure 4-2 ZyAIR Utility: About

The following table describes the read-only fields in this screen.

Table 4-2 ZyAIR Utility: About

FIELD	DESCRIPTION
Driver Version	This field displays the version number of the ZyAIR Windows driver.
Configuration Utility Version	This field displays the version number of the ZyAIR Utility.
NIC Firmware Version	This field displays the version of the firmware of the ZyAIR card.

Chapter 5

Removing the ZyAIR

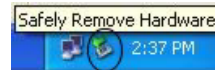
To avoid data lost, DO NOT remove the ZyAIR while data transmission is taking place.

After you exit from the ZyAIR Utility program, you may remove the ZyAIR from your computer. Most CardBus slots on the computer have an ejecting lever or button for ejecting the PC cards from the slots. Consult your computer manuals.

You do not have to turn off the computer before removing the ZyAIR. The ZyAIR is hot swappable – you can insert or remove the ZyAIR while the computer is turned on. However, it is recommended that you stop the operation of the card first.

Follow the steps below to disable the ZyAIR in Windows XP. Steps may vary depending on the version of Windows.

- Step 1.** Double-click the wireless device icon in the system tray.



Step 2. When a **Safely Remove Hardware** window displays, select the ZyAIR device in the **Hardware devices** list and click **Stop**.



Step 3. Click **OK** in the **Stop a Hardware device** window to stop the ZyAIR.



- Step 4.** After the following notice message displays in the system tray, you can safely remove the ZyAIR from your computer.



Chapter 6

Troubleshooting

This chapter covers potential problems and the possible remedies. After each problem description, some instructions are provided to help you to diagnose and to solve the problem.

6.1 Problems Starting the ZyAIR Utility Program

Table 6-1 Troubleshooting Starting ZyAIR Utility Program

Cannot start the ZyAIR Wireless LAN Utility	Make sure the ZyAIR is properly inserted and the LEDs are on. Refer to the <i>Quick Installation Guide</i> for the LED descriptions.
	Use the Device Manager to check for possible hardware conflicts. Click Start, Settings, Control Panel, System, Hardware and Device Manager . Verify the status of the ZyAIR under Network Adapter . (Steps may vary depending on the version of Windows).
	Install the ZyAIR in another computer.
	If the error persists, you may have a hardware problem. In this case, you should contact your local vendor.

6.2 Problems Communicating With Other Computers

Table 6-2 Troubleshooting Communication Problems

PROBLEM	CORRECTIVE ACTION
The ZyAIR computer cannot communicate with the other computer.	Make sure you are connected to the network.
A. Infrastructure	<p>Make sure that the AP and the associated computers are turned on and working properly.</p> <p>Make sure the ZyAIR and the associated AP use the same SSID.</p> <p>Configure the AP to use another radio channel if interference is high.</p> <p>Make sure that the computer and the AP share the same WEP key and authentication mode. Verify the settings in the Encryption and Advanced screens.</p>
B. Ad-Hoc	<p>Verify that the peer computer(s) is turned on.</p> <p>Make sure the ZyAIR and the peer computer(s) are using the same SSID and channel.</p> <p>Use another radio channel if interference is high.</p> <p>Make sure that the ZyAIR and the AP share the same WEP key and authentication mode. Verify the settings in the Encryption and Advanced screens.</p>

6.3 Problem with the Link Status

Table 6-3 Troubleshooting Link Status

PROBLEM	CORRECTIVE ACTION
The Link Quality is poor all the time.	<p>Move your computer closer to the AP or the peer computer(s) within the transmission range.</p> <p>There is too much radio interference (for example microwave or another AP using the same channel) around your wireless network. Relocate or reduce the radio interference.</p>

Table 6-3 Troubleshooting Link Status

PROBLEM	CORRECTIVE ACTION
The Signal Strength is poor all the time.	<p>Move your computer closer to the AP or peer computer(s) within the transmission range.</p> <p>There is too much radio interference (for example microwave or another AP using the same channel) around your wireless network. Relocate or reduce the radio interference.</p>
The Site Survey screen displays all entries with low signal.	<p>Move your computer closer to the AP or peer computer(s) within the transmission range.</p> <p>There is too much radio interference (for example metal structure, microwave or another AP using the same channel) around your wireless network. Relocate or reduce the radio interference.</p>

Appendix A

Product Specifications

Product Name	ZyAIR G-100 Wireless-g 54M PC Card
Type	3.3V 32-bit CardBus
Standards	IEEE 802.11b IEEE 802.11g draft
Network Architectures	Infrastructure Ad-Hoc
Operating Frequencies	2.412-2.497GHz
Operating Channels	802.11b: 11 Channels (North America) Draft 802.11g: 11 Channels (North America) 802.11b: 13 Channels (Europe) Draft 802.11g: 13 Channels (Europe)
Data Rate	802.11b: 11, 5.5, 2, 1Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps
Security	64/128-bit WEP
Operating Temperature	0 ~ 50 degrees Centigrade
Storage Temperature	-20~75 degrees Centigrade
Relative Humidity	5% to 95%

Index

A

About	4-4
Access Point	1-1
Accessing the ZyAIR Utility	3-1
AP	<i>See</i> Access Point
Applications	
Ad-hoc	1-1
Infrastructure	1-2
Automatic WEP key generation	4-1

B

Basic Service Set	<i>See</i> BSS
Benefits of a Wireless LAN	1-3
BSS	3-4

C

CardBus slot	1-1
Channel	3-3, 3-8
Common Screen Command Buttons	3-3
Communication Problem	6-2
Ad-hoc (IBSS)	6-2
Infrastructure	6-2
Connecting to a Network	3-10
Copyright	iii
Disclaimer	iii
Trademarks	iii
Create with Passphrase	4-2
Customer Support	vii

D

Data encryption	4-1
Disable Windows XP Wireless Support	2-1

E

ESS	3-5
-----------	-----

Extended Service Set	<i>See</i> ESS
----------------------------	----------------

F

Federal Communications Commission (FCC)	
Interference Statement	vi

I

IBSS	3-4
IEEE 802.11g	1-1
Independent Basic Service Set	<i>See</i> IBSS
Information for Canadian Users	v
Caution	v
Note	v

L

Link Info	3-1
-----------------	-----

M

Manual Entry	4-3
--------------------	-----

N

Network Configuration Profile	3-8
Deleting	3-9
Reset to factory defaults	3-8
Saving	3-8
Using a pre-configured profile	3-8
Network Type	3-4
Ad-Hoc	3-4
Infrastructure	3-4
Notes on WLAN Configuration	1-3

O

Online Registration	iv
Operating Mode	<i>See</i> Network Type

P

passphrase	4-1
Passphrase	4-3
Power Saving Mode	3-8
problem description	6-1
Product Specifications	A
Profile.....	3-8
Network Configuration	3-8

R

Related Documentation.....	xii
Remove the ZyAIR.....	5-1
Roaming.....	3-5
Example	3-6

S

Service Set Identity	<i>See</i> SSID
Site Survey	3-9
SSID	3-3, 3-7
Syntax Conventions	xii

T

Troubleshooting	6-1
Checking Hardware Conflict	6-1
Communication problems	6-2
Radio interference	6-2, 6-3
Starting ZyAIR Utility	6-1
Survey	6-3

V

Viewing Current Configuration	3-1
-------------------------------------	-----

W

Warranty	iv
Note.....	iv
WEP	4-1
WEP Data Encryption	
Configuring	4-1
WEP Data Encryption with.....	4-1
WEP Key	4-2
Windows XP Requirement.....	2-1
Wired Equivalent Privacy	<i>See</i> WEP
Wireless LAN	
benefits	1-3
Wireless LAN	
Applications	1-1
Benefits	1-3
Wireless LAN Parameters.....	3-3
Configuring	3-6
Network Type	3-4
SSID.....	3-3
Wireless LAN Security	4-1
Data Encryption with WEP	4-1

Z

ZyAIR Utility	
About.....	4-4
Link Info	3-2
Site Survey	3-9
System Tray Icon	3-1
WEP Encryption	4-2