

Hot Spot Gateway

Quick Installation Guide

Version 1.00 October 2003



Table of Contents

1 Introducing the ZyAIR	2
1.1 Rear Panel Connections	2
1.2 The Front Panel LEDs	
1.3 Factory Defaults	
2 Setting Up Your Computer's IP Address	
2.1 Windows 2000/NT/XP	
2.2 Checking/Updating Your Computer's IP Address	
2.3 Testing the Connection to the ZyAIR	
3 Configuring Your ZyAIR	6
3.1 Accessing Your ZyAIR Via Web Configurator	6
3.2 Internet Connection Wizard	
3.3 Introducing the Web Configurator	
3.4 Resetting the ZyAIR	
3.5 Test Your Internet Connection	
4 Hardware Installation	
4.1 Desktop Installation	
4.2 Wall-mount Installation	
4.3 Attaching Antennas	
5 Troubleshooting	

1 Introducing the ZyAIR

The ZyAIR Hot Spot Gateway combines an 802.11b wireless access point, router, 4-port switch and service gateway in one box. An "exclusive printer" connects directly to the ZyAIR, allowing you to easily print subscriber statements. The ZyAIR is ideal for offices, coffee shops, libraries, hotels and airport terminals catering to subscribers that seek Internet access. You should have an Internet account already set up and have been given usernames, passwords etc. required for Internet access.

1.1 Rear Panel Connections

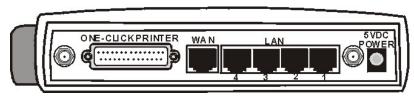


Figure 1 ZyAIR Rear Panel

Table 1 Rear Panel Connections

LABEL	DESCRIPTION
DEVICE PORT	Use the printer cable to connect the included printer ("exclusive printer") to this port.
WAN	Connect your broadband modem to this port with the Ethernet cable that came with your modem.
LAN 1-4	These ports are auto-crossover, ("auto MDI/MDI-X") which means you can use either a straight-through or crossover Ethernet cable to connect the ZyAIR to a computer or a hub.
Power	After you've made the above connections, connect the ZyAIR's included power adaptor to the ZyAIR's power socket. Use only the included power adaptor. The PWR LED turns on. The SYS LED blinks while performing system testing and then turns steady on if the testing is successful. A LAN LED turns on if a LAN port is properly connected. Refer to the following table for more detailed LED descriptions.

1.2 The Front Panel LEDs

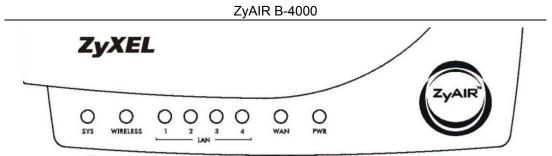


Figure 2 ZyAIR Front Panel

Table 2 Front Panel LEDs

LED	STATUS	DESCRIPTION
PWR	On (Green)	The ZyAIR is receiving power.
	Off	The ZyAIR is not receiving power.
WAN	On (Green)	The WAN port has a connection to your cable or DSL modem.
	Blinking (Green)	The WAN port is sending or receiving packets.
	Off	The WAN link is not ready, or has failed.
LAN (1-4)	On (Green)	The port is connected to a 10/100Mbps Ethernet device.
	Blinking (Green)	The port is receiving or sending data.
	Off	The port is not connected to a 10/100Mbps Ethernet device.
WIRELESS	On (Green)	The ZyAIR has established a wireless LAN connection.
	Blinking (Green)	The ZyAIR is sending/receiving data through the wireless LAN.
SYS	On (Green)	The ZyAIR is ready and running.
	Blinking (Green)	The ZyAIR is upgrading its firmware.
	Off	The ZyAIR is not ready or has failed.

1.3 Factory Defaults

Table 3 Factory Defaults

Username	"admin" (case sensitive)	WAN IP Address	DHCP Client (dynamic WAN IP)
Password	"1234"	LAN IP Address	192.168.1.1
		LAN DHCP	Server

2 Setting Up Your Computer's IP Address

Skip this section if your computer is already set up to accept a dynamic IP address. This is the default for most new computers.

The ZyAIR is already set up to assign your computer an IP address. Use this section to set up your computer to receive an IP address or assign it a static IP address in the 192.168.1.2 to 192.168.1.254 range with a subnet mask of 255.255.255.0. This is necessary to ensure that your computer can communicate with your ZyAIR.

Your computer must have an Ethernet card and TCP/IP installed. TCP/IP should already be installed on computers using Windows NT/2000/XP, Macintosh OS 7 and later operating systems.

2.1 Windows 2000/NT/XP

- 1. In Windows XP, click start, Control Panel. In Windows 2000/NT, click Start, Settings, Control Panel.
- 2. In Windows XP, click Network Connections.

In Windows 2000/NT, click Network and Dial-up Connections.

- 3. Right-click Local Area Connection and then click Properties.
- 4. Select Internet Protocol (TCP/IP) (under the General tab in Win XP) and click Properties.
- 5. The **Internet Protocol TCP/IP Properties** screen opens (the **General tab** in Windows XP).

- To have your computer assigned a dynamic IP address, click **Obtain an IP address automatically**.

If you know your DNS sever IP address(es), type them in the **Preferred DNS server** and/or **Alternate DNS server** fields.

-To configure a static IP address, click **Use the following IP Address** and fill in the **IP address** (choose one from192.168.1.2 to 192.168.1.254), **Subnet mask** (255.255.255.0), and **Default gateway** (192.168.1.1) fields.

Then enter your DNS server IP address(es) in the **Preferred DNS server** and/or **Alternate DNS server** fields.

If you have more than two DNS servers, click **Advanced**, the **DNS** tab and then configure them using **Add**.

neral	Alternate Configuration	
his cap		d automatically if your network supports eed to ask your network administrator for
⊙ O£	otain an IP address auton	natically
Us	e the following IP addres	15:
IP ac	ldress:	
Subr	iet mask:	
Defa	ult gateway:	
() OE	otain DNS server address	automatically
OUs	e the following DNS serv	ver addresses:
Prefe	rred DNS server:	
Alten	nate DNS server:	
		Advanced
		OK Cance

 Click Advanced. Remove any previously installed gateways in the IP Settings tab and click OK to go back to the Internet Protocol TCP/IP Properties screen.

Settings	DNS	WINS Opti	ons		
IP addre	sses				
IP ad	dress		S	ubnet mask	
DHCF	Enabled	ł			
		Add		E dit	Remove
Default	atewaus	e			
Gater			м	etric	
		Add		Edit	Remove
🗹 Autor	matic me	tric			
Interfac	e metric:				

- 7. Click OK to close the Internet Protocol (TCP/IP) Properties window.
- 8. Click OK to close the Local Area Connection Properties window.

2.2 Checking/Updating Your Computer's IP Address

- 1. In the computer, click Start, (All) Programs, Accessories and then Command Prompt.
- 2. In the **Command Prompt** window, type "ipconfig" and then press **ENTER** to verify that your computer's IP address is in the correct range (192.168.1.2 to 192.168.1.255) with subnet mask 255.255.255.0. This is necessary in order to communicate with the ZyAIR.

Refer to your *User's Guide* for detailed IP address configuration for other Windows and Macintosh computer operating systems.

2.3 Testing the Connection to the ZyAIR

- 1. Click Start, (All) Programs, Accessories and then Command Prompt.
- 2. In the **Command Prompt** window, type "ping" followed by a space and the IP address of the ZyAIR (192.168.1.1 is the default).

3. Press ENTER and the following screen displays.

Your computer can now communicate with the ZyAIR using a LAN port.

3 Configuring Your ZyAIR

This guide shows you how to use the web configurator for initial configuration. See your *User's Guide* for background information on all other ZyAIR features.

3.1 Accessing Your ZyAIR Via Web Configurator

1. Your web browser must have JavaScript support enabled. Launch your web browser. Enter "192.168.1.1" as the web site address.



Figure 3 Entering ZyAIR LAN IP Address in Internet Explorer

2. A login screen displays. Enter the user name ("admin" is the default), password ("1234" is the default) and click Getting Started. The user name is case sensitive, so enter "admin" exactly as shown. If you make an incorrect entry, refresh your browser and try again. Only one administrator can log in at one time. The ZyAIR logs you out after 20 minutes of no management using the web configurator, so you then have to log in again.

Wizard Setup	
	- "admin" and
Username: admin	"1234" are
Password:	the defaults.
Getting Started	

ZyAIR B-4000

Figure 4 Web Configurator: Login Screen

3.2 Internet Connection Wizard

The Wizard Setup screens appear by default after login only the first time you access the ZyAIR and run the wizard. After that, the Advanced Setup screens appear after login.

1. The first Wizard screen displays after your initial login. This first screen varies depending on the type of Internet connection you use.

Pleas	e set	up	you	r Ir	nte	rn	et	Cd	on	n	ec	tic	on			 	 					
Pleas		_	_	fror	n th	ie f	ollo	wi	ng	se	eleo	otic	ons									
			-																			
																		(N	B)X	t	>

Figure 5 Internet Connection: DHCP Client

Select **DHCP Client** if your ISP did not assign you a fixed IP address. Your ISP assigns the ZyAIR's WAN port a dynamic IP address. This is the default selection.

Click Next to continue.

Please set up your Internet Co Please choose one from the followin Static_IP	
IP Address: Subnet Mask: Gateway IP address:	0.0.0.0 255.255.255.0 0.0.0.0
Primary DNS Server:	
Secondary DNS Server:	Next

Figure 6 Internet Connection: Static_IP

Please set up your Internet Cor Please choose one from the following PPPoE	
Username:	
Password:	
PPP MTU Setting:	1492
TCP MSS Setting:	1452
Service Name:	
Connect on Demand	Max Idle Time: 10 Min.
O Keep alive	Redial Period: 30 Sec.
	Next>

Figure 7 Internet Connection: PPPoE

Select **Connect on Demand** when you don't want an "always-on" connection and specify an inactivity time limit (in minutes) in the **Max Idle Time** field.

Select **Keep Alive** if you want an "always-on" connection. The **Redial Period** is how long the ZyAIR waits before reconnecting in the event of a disconnect. Select **Static_IP** If the ISP assigned a fixed IP address.

Enter the WAN IP address, subnet mask, gateway IP address and DNS server address(s) that your ISP assigned you.

Click Next to continue.

Select **PPPoE** If the ISP uses PPPoE for your account (PPPoE simulates a dial-up connection).

Enter the user name and password *exactly* as your ISP assigned them.

A maximum transmission unit (MTU) is the largest size packet or frame, specified in octets (eight-bit bytes) that can be sent in a packet- or frame-based network. The Transmission Control Protocol (TCP) uses the MTU to determine the maximum size of each packet in any transmission. Too large an MTU size may mean retransmissions if the packet encounters a router that can't handle that large a packet. Too small an MTU size means relatively more header overhead and more acknowledgements that have to be sent and handled.

The maximum segment size (MSS) is the largest amount of data, specified in bytes, that a computer or communications device can handle in a single, unfragmented piece. For optimum communications, the number of bytes in the data segment and the header must add up to less than the number of bytes in the maximum transmission unit (MTU).

Enter the name of your PPPoE server, in the **Service Name** field if provided; otherwise leave it blank.

Click Next to continue.

Please choose one from the following PPTP	
My IP Address:	
My Subnet Mask:	
Gateway IP address:	
PPTP Server IP Address:	
Username:	
Password:	
PPP MTU Setting:	1460
TCP MSS Setting:	1400
Connection ID/Name:	
Connect on Demand	Max Idle Time: 10 Min.
C Keep alive	Redial Period: ³⁰ Sec.

Select **PPTP** if your service provider uses a DSL terminator with PPTP login. The ZyAIR must have a static IP address (**My IP Address**) in this case, and a subnet mask (**My IP Subnet Mask**) if provided by your ISP.

Enter the DSL terminator IP address (**PPTP Server IP Address**) and a username with an associated password.

See the PPPoE encapsulation screen for information on **PPP MTU**, **TCP MSS**, **Connect On Demand** and **Keep alive**.

If your ISP has provided a connection ID name, enter it in the **Connection ID/Name** field.

Click Next to continue.

Figure 8 Internet Connection: PPTP

2. Use the second wizard screen to set up the wireless LAN.

ESSID: Channel:	Wireless	
WEP Encryption:	O Disable	(Please Enter in 5 ASCII characters)
	C 64 Bit C 128 Bit	(Please Enter in 13 ASCII characters)
	O 256 Bit	(Please Enter in 29 ASCII characters)
< Back		Next>

Figure 9 Wireless Settings

ESSID is a unique name to identify the ZyAIR in the wireless LAN. Enter a descriptive name.

Select a channel (range of radio frequencies used by IEEE 802.11b wireless devices) from the drop-down list box.

WEP (Wired Equivalent Privacy) encrypts data frames before transmitting them over the wireless network.

Select **64 Bit**, **128 Bit or 256 Bit** from the **WEP Encryption** and enter a key of the appropriate length to activate WEP encryption. Select **Disable** to turn off WEP data encryption.

Click Next to continue.

3. Use the third wizard screen to configure a backup e-mail server in the event that the subscriber's e-mail server is unreachable from the ZyAIR.

De	o you provide E-mail server for SMTP redirect service ?
©	Yes , I allow guests to send e-mail as usual even if their configured mai server is unavailable or behind a corporate firewall Please enter E-mail (SMTP) server's IP address or Domain name
	No

Figure 10 E-mail Service Setup

Select **Yes** to enable the ZyAIR to redirect subscribers' e-mail to the designated SMTP server (must be reachable from the ZyAIR) in the event that the subscriber's own e-mail server is unreachable from the ZyAIR. E-mail recipients see messages as if they came from the subscriber's regular e-mail server not the "backup" e-mail server.

When you select **Yes**, enter the e-mail (SMTP) server's domain name (up to 50 characters) or IP address in the designated field.

Select **No** to disable e-mail redirect in the event that the subscriber's own e-mail server is unreachable from the ZyAIR.

Click Next to continue.

4. Use this screen to set whether or not the ZyAIR authenticates users before allowing them to access the Internet.



Select **Yes** to require the ZyAIR to authenticate subscribers before allowing Internet access. Set up accounts on the ZyAIR using the ZyAIR's web configurator or the Exclusive printer. Figure 12 to Figure 18 show you how to do this. Click **Next** to continue.

Select **No** to allow Internet access for all subscribers without authentication. Click **Next** to continue to Figure 19.

Figure 11 Authentication Service Setup

5. Use the next wizard screens to set up the ZyAIR to use either the "exclusive printer" to generate and print subscriber statements or generate them in the web configurator and print them from there. The "exclusive printer" is the printer that attaches directly to the ZyAIR. It can have the ZyAIR generate subscriber statements and then print them.



Figure 12 Printer Selection

6.

^p lease set	up your Account Generator		
Accounting	Setting for Exclusive Printer		
Printout	Number of copies to print: I		
Account	count Account Period Time: 30 minutes		
Charge	0.00 Number of decimals for amount: 2)		
< Back	Set up accounting on the ZyAIR		

Figure 13 Exclusive Printer Setup

Click **Customize printout text** to open the **Customize Printout Text** screen (see Figure 14) to tailor subscriber statements. Click **Set up accounting on the ZyAIR** to configure the **Web-based Account Generator Panel Settings** screen (Figure 16). Select **Yes** to have the "exclusive printer" generate and print subscriber statements. The **Accounting setting for Exclusive Printer** screen then appears after you click **Next** (Figure 13).

Select **No** to generate subscriber statements in the web configurator and print them from there. The **Web-based Account Generator Panel Settings** screen then appears **Next** (Figure 16).

Click Next to continue.

Set how many subscriber statement copies you want to print (1 is the default).

Subscribers are charged (enter the amount in the **Charge** field) per time unit. Specify the length and measurement unit (**minutes**, **hours**, or **days**) of a single time unit in the **Account Period Time** fields. Specify the cost, up to 999999, per time unit in the **Charge** field and define the number of decimal places allowed (up to 3) for the total amount charged that appears in the subscriber's statement. Define the currency to display in the statement in the **Customize Printout Text** screen (Figure 14).

Specify the number of hours (1 to 168) to wait before the ZyAIR deletes an inactive account in the "Un-used account..." field

Click **Next** to continue to Figure 16.

Title:	Welcome!	(Max.=23)	
Usemame:	Usemame:		
Password:	Password:		
Usage Time:	Usage Time:		
Price:	Total: Currency: NTD		
ESSID:	ESSID:		
WEP Encryption:	WEP:		
Time:	yyyy/mm/dd 💌 HH:mm:ss 💌 (HH:24h hh:12h tt:AM	/PM)	
Ending:	Thank you very much !	(Max.=23)	
Expiration time	yyyy/mm/dd 💌 HH:mm:ss 💌 (HH:24h hh:12h tt:AM	/PM)	
			Previ

Figure 14 Customize Printout Text

Enter a title (up to 24 characters) for the statement printout in the **Title** field. Type **Username** and **Password** labels that appear in the statement here.

Type a label name for the maximum time allowed for a subscriber to access the Internet via the ZyAIR in the **Usage Time** field.

Select the **Price** check box and type a label for the field displaying the total charge to the subscriber in the statement.

Type a currency prefix that displays before the total charge amount in the statement.

Type a label name for the field displaying the wireless LAN's Extended Service Set Identifier (**ESSID**). Type a label name for the field displaying the Wired Equivalent Privacy (**WEP Encryption**) key.

Select **Time** to display the time an account is created and then select date and time formats from the drop-down list boxes.

Select Ending and then type a message to appear at the end of the printout in the text box

Select **Expiration Time** to display (in the statement) the ending subscription validity date and time and then select a date and time format from the drop-down list boxes.

Click Preview to display a sample of the statement layout in a new window (Figure 15).

Click **Apply** to save the changes and return to Figure 13.

	Welcome!
Usemar	ne: x00000000
Passwo	rd: xooooox
Usage 1	îme: 30 minutes
Total: \$	1.00
Expirati	on Time: 2002 / 1 / 8 04:30:35
ESSID:	Wireless
WEP:	
	2002/1/7
	16:30:35
	Thank you very much !

Figure 15 Printout Example

This is how your custom statement printout will look. Close this window when you are finished viewing it.

7.

NO. Button name (Max. 12 characters)				Account Jsage time	Charge (Decimals: 2	
Button 1) minutes	30	minutes 🖵	0.00	
Button 2	1	hour	1	hours 🖵	0.00	
Button 3	2	hours	2	hours 💌	0.00	
Button 4	3	hours	3	hours 🖵	0.00	
Other setting Printout copy Customize print						
Printout co	ру					
Expiration time		Un-used accou	unt exp	ires after 12 h	ours	
lease set	you	r password for	web-k	ased accountin	Ig	
Username: ac		account				
Password: *******		-	Confirm:			

Figure 16 Web-based Accounting Setup

Use this screen to set up the user accounts.

Select **No** in Figure 12 or click **Set up accounting on the ZyAIR** in Figure 13 to display this screen.

Click **Preview/Operate** to open the **Account Generator Panel** (see Figure 17).

A button is a subscriber "profile" defining maximum Internet access time and charge per time unit. The button 1 settings also apply to the button on the "exclusive printer". The button numbers correspond to the buttons displayed in the **Account Generator Panel**.

Type up to 12 characters to specify the names that appear on the buttons.

Define each "profile's" maximum Internet access time in the **Account Usage time** field.

Define each "profile's" charge per time unit in the **Charge** field (0.00 default).

Define the number of decimal places allowed (up to 3) for the total amount charged that appears in the subscriber's statement in the **Decimals** field.

Select how many copies of subscriber statements you want to print (1 is the default).

Click **Customize printout text** to open the **Customize Printout Text** screen (see Figure 14) to tailor subscriber statements.

Specify the number of hours (1 to 168) to wait before the ZyAIR deletes an inactive account in the "Un-used account..." field.

Type a user name and password for the web-based accounting system manager. Retype the password for confirmation in the **Confirm** field.

Click Next to continue to Figure 19.



View Account List

Click the **View Account List** link in this screen to display another pop-up screen showing current account information (Figure 18). Close this pop-up screen when finished.

Click Preview/Operate in Figure 16

Each button is the subscriber "profile"

you defined. The button 1 settings

also apply to the button on the

"exclusive printer".1

to display this pop-up screen.

t existin	g account's info	rmation.					refres
NO.	Status	Usemame	Usage Time	Time Created	Login Time	Expiration Time	Delete
1	Un-used	9iv4cn32	30 minutes	2002/2/16 00:12:32		2002/2/16 12:12:32	
2	Un-used	izve2447	1 hours	2002/2/16 00:38:47		2002/2/16 12:38:47	
3	Un-used	td3fki57	2 hours	2002/2/16 00:38:57		2002/2/16 12:38:57	
4	Un-used	94d6ja32	3 hours	2002/2/16 00:39:01		2002/2/16 12:39:01	
	1			10 ⁻²		Delete	Delete A

Figure 18 Account List

Close this pop-up screen when you have finished viewing it.

Figure 17 Account Generator Panel

¹ The web-based account generator and the exclusive printer do not function together at the time of writing.

8. It is highly recommended you change the default user name and password.

Jsername:	admin	
Password:	***	Confirm:
System date	and time:	Get from my Computer
		Date: 2002/2/11 Time: 05:23:39
		Date: 2002/2/11 Time: 03.23.33

Figure 19 System Setting

Type your new user name and password in the **Username** and **Password** fields; type the password again in the **Confirm** field

Click **Get from my Computer** to have the ZyAIR retrieve the date and time from your computer.

Select **All** if you want to allow management of the ZyAIR from any IP address.

Select **Selected** and type the IP address of a "trusted" computer to allow access to the ZyAIR web configurator from that computer only. If the computer you are currently using is not the "trusted" computer, you will not be able to access the ZyAIR web configurator again from your current computer.

Click **Finish** to save your settings to the ZyAIR. Wait 30 seconds while the ZyAIR restarts.

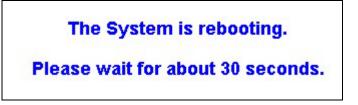


Figure 20 ZyAIR Restarts

3.3 Introducing the Web Configurator

Click a tab at the top of the screen to open that tab's list of sub-menus in the sub-menu panel on the left. After you run the wizard, you first see the **Advanced Setup** menus after login.

Advanced Setup			SI	ster	
System	System N	ame			e the navigation tabs. CED SETUP is selected.
<u>WAN / LAN</u> Server	Domain N	ame			
Server Authentication			Date: 2002 💌 /	2 • / 16 • (Y	ear/Month/Day)
Accounting Login Page Advertisement	Date/Ti m		ub-menu panel. ⁻ Setup tab sub-me		linute : Second)
<u>Walled Garden</u> Syslog			⊙ Any O Spe	ecify	
<u>Wireless</u>	Secure ad	Secure administrator IP			

Figure 21 Advanced Setup Menus

3.4 Resetting the ZyAIR

To reset the ZyAIR back to the factory defaults, click the **SYSTEM TOOLS** tab, and then the **Default Settings** sub-menu to display the screen as shown next.

Default Settings	
Do you want to reset the device back to factory defaults ?	
Clear all configuration C Keep subscriber profiles	
Abbia	

Figure 22 Default Settings

Select **Clear all configuration** to reset the system settings back to the factory defaults (*Table 3*) and erase all subscriber account information.

Select **Keep subscriber profiles** to set the system configuration back to the factory defaults but retain subscriber account information. All other custom configuration is erased.

Click **Apply** to reset the ZyAIR.

3.5 Test Your Internet Connection

Launch your web browser and navigate to <u>www.zyxel.com</u>. Internet access is just the beginning. Refer to the *User's Guide* for more detailed information on the complete range of ZyAIR features. If you cannot access the Internet, open the web configurator again to confirm that the Internet settings you configured in the Wizard Setup are correct.

4 Hardware Installation

The following sections describe the different installation options.

Leave adequate space on the rear and sides of the ZyAIR during hardware installation and do not block the ventilation holes.

4.1 Desktop Installation

- **1.** Make sure the ZyAIR is clean and dry. Set the ZyAIR on a smooth space strong enough to support the weight of the ZyAIR and the connected cables. Make sure there is a power outlet nearby.
- **2.** Make sure there is enough clearance around the ZyAIR to allow air circulation and the attachment of cables and the power cord.

4.2 Wall-mount Installation

Follow these steps to attach your ZyAIR to a wall.

- **1.** Locate a high position on the wall that is free of obstructions.
- 2. Install two screws in the wall 123mm apart. Use screws with $6mm \sim 8mm (0.24" \sim 0.31")$ wide heads. Do not screw the screws all the way in to the wall. Leave a small gap between the head of the screw and the wall. The gap must be big enough for the screw heads to slide into the screw slots and the connection cables to run down the back of the ZyAIR.

Make sure the screws are securely fixed to the wall and strong enough to hold the weight of the ZyAIR with the connection cables.

- **3.** Adjust the cables.
 - a. Run the connection cables down the back of the ZyAIR or
 - b. Run the connection cables upward and along the edge of the ceiling.
- **4.** Align the holes on the back of the ZyAIR with the screws on the wall. Hang the ZyAIR on the screws.

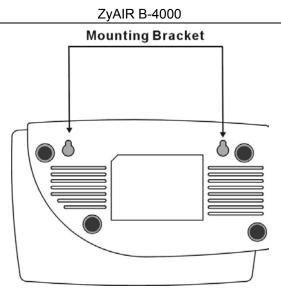


Figure 23 Wall-mount Brackets

4.3 Attaching Antennas

Follow the steps below to connect the supplied antennas.

- **1.** Locate the antenna connectors on the rear of your ZyAIR.
- **2.** Screw the antennas clockwise onto the antenna connectors. The antennas should be perpendicular to the ground and parallel to each other.

Make sure the antennas are securely screwed onto the antenna connectors.

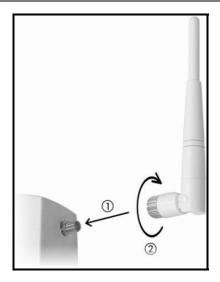


Figure 24 Attaching Antennas

5 Troubleshooting

Table 4 Troubleshooting

PROBLEM	CORRECTIVE ACTION
None of the LEDs turn on when you	Make sure that you have the correct power adaptor connected to the ZyAIR and plugged in to an appropriate power source. Check all cable connections.
turn on the ZyAIR.	If the LEDs still do not turn on, you may have a hardware problem. In this case, you should contact your local vendor.
Cannot access the ZyAIR from the LAN.	Check the cable connection between the ZyAIR and your computer or hub. Refer to section <i>1.1</i> for details.
	Ping the ZyAIR from a LAN computer. Make sure your computer's Ethernet adapter is installed and functioning properly.
	Make sure that the IP address and the subnet mask of the ZyAIR and your computer(s) are on the same subnet.

Table 4 Troubleshooting

PROBLEM	CORRECTIVE ACTION				
Cannot ping any computer on the	If the LAN LEDs are all off, check the cable connections between the ZyAIR and your LAN computers.				
LAN.	Verify that the IP address, subnet mask of the ZyAIR and the LAN computers are in the same IP address range.				
Cannot ping any computer on the	Make sure the wireless card is properly inserted in the ZyAIR and the WIRELESS LED is on.				
WLAN	Make sure the wireless card on the wireless client is working properly.				
	Check that both the ZyAIR and wireless client(s) are using the same ESSID, channel and WEP keys (if WEP encryption is activated).				
Cannot get a WAN	Check your Internet connection settings (refer to section 3.2).				
IP address from the ISP.	You need a user name and password if you're using PPPoE or PPPoA encapsulation. Make sure that you have entered the correct Service Name (PPPoE encapsulation only), User Name and Password (the username and password are case sensitive). Refer to section 3.2 for more information.				
Cannot access the	Check your Internet connection settings (refer to section 3.2).				
Internet.	Make sure you entered the correct user name and password.				
	For wireless clients, check that both the ZyAIR and wireless client(s) are using the same ESSID, channel and WEP keys (if WEP encryption is activated).				