Wireless-G Notebook Network Card

User Manual (GWP512)

. IDGEAR

Welcome

Thank you for choosing IOGEAR® to serve your wireless needs. Soon, you will be sharing files or surfing the Internet wirelessly. We hope you will have as much fun using your IOGEAR® Wireless-G Notebook Network Card, as we had designing it.

Rest assured, your IOGEAR[®] Wireless-G Notebook Network Card is built rock-solid to ensure maximum uptime for you to stay up-and-running. If for any reason you have a problem, we stand behind our products with an industry-leading 3 year factory warranty, so you can have peace-of-mind with your current and future IOGEAR[®] purchases.

We want you to be happy with your purchase, so we have made every effort to ensure product quality, reliability, and ease-of-use.

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Package Contents

This package contains:

- IOGEAR® Wireless 802.11g PC Card
 CD ROM containing Driver, Configuration Utility, Odyssey Client for Marvel (client for WPA application) and User's Manual
 Quick Start Guide
 Acrobat Reader 6.0

Overview

IOGEAR®s Wireless-G Notebook Network Card is a sleek and versatile device for both small and home office users. With IOGEAR®, you can surf the Internet, share files, chat with your friends, and....Wirelessly!

Our simple, easy-to-use, setup wizard will have you up-and-running in minutes. Moreover, our turn-key Firewall and Wireless Security packages keep you safe on the 'net.

Remember, IOGEAR[®]'s Wireless-G Notebook Network Card gives you the wireless connectivity all in a small, cost-effective, and reliable setup. Go with IOGEAR[®], and go Wireless!

Features

- 54 Mbps wireless connection speed up to five times faster than previous 802.11b technology
- Sleek, compact antenna is designed for maximum agility
- Simple user setup & diagnostics utilities
- Odyssey security client (from Funk Software) included, for strong WLAN securities (supporting EAP-TTLS, EAP-PEAP, EAP-TLS, and LEAP).
- Compliant with FCC Part 15.247 for US, EN 300-328 for Europe, and RCR STD-33A and ARIB STD-T66 for Japan
- Backward compatible with 802.11b wireless networks, access points, hot spots and other devices
- Solid 3-year manufacturer warranty built to last!

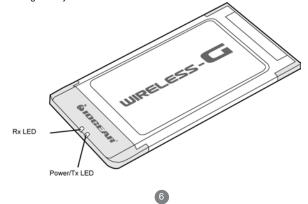
System Requirements

• Pentium® class notebook computers with one available CardBus slot

• Microsoft® Windows® 98SE, ME, 2000, XP

- CD-ROM drive
- Using Odyssey Client for Marvell, your computer must be running Microsoft Internet Explorer 5.5 or later.
- Using WPA function, make sure there is a WPA-enabled Access Points in the network environment.

When the adapter card is not associated with any wireless network devices, the Power/Tx LED will stay solid green; Rx LED will be off. When both LEDs are blinking green, the adapter card is scanning/connecting to an wireless network. When the adapter card is associated, Power/Tx LED indicates transmitting activity; Rx LED indicates receiving activity.



Ejecting the Network Adapter

Please always disable the network adapter prior removing the adapter from the PCMCIA slot. The network adapter supports hot-swappable feature so you don't have to power off the notebook to remove the adapter.

1. Double click the **Unplug or Eject Hardware Icon** resides on the Windows system tray and click **Stop** from the Unplug or Eject Hardware dialog box.

Unplug or Eject Hardware		21
Select the device you want to Windows notifies you that it is computer.		
Hardware devices:		
USB Mass Storage Device UGEAR GWP512 Network Adept		
10GEAH GWP512 Network Adapt		
IDGEAR GWP512 Network Adapter at	CardBue Slot 4	
IDGEAR GWP512 Network Adapter at	CardBus Stot 4	žiop
IDGEAR GWP512 Network Adapter at		Stop
IDGEAR GWP512 Network Adapter at		žiop

2. Click **OK** to confirm that you are going to stop the adapter.

Stop a Hardware devi	ce	<u>? ×</u>
Confirm devices to be stopp	ped, Choose OK to continue.	
Windows will attempt to sto stopped they may be remov	p the following devices. After the	he devices are
IDGEAR GWP512 Ne	(work Adapter	

3. The following screen prompts that you can remove the adapter. Click **OK** button to close the dialog box.



4. Push the lever of your notebook PCMCIA slot to eject the adapter now.

Note: Don't eject the network adapter when data transmission is taking place.

Driver Installations

If you have connected the notebook adapter to your computer, please remove it first.

- 1. Insert the Driver and Utility CD into CD Drive.
- 2. A series of introduction screens will show up. It runs on Macromedia Flash. If your computer doesn't have the Flash player installed, please visit <u>www.macromedia.com</u> to download the plug-in
- 3. Next, a Read Me screen will be brought up. Please read it through carefully, then click **Next**.



4. Click the button of "I accept the terms in the license agreement". Click **Next**



 A Main Installation Menu will show. Click the button of IOGEAR GWP512 Driver Installation.

	IDGEAR GWPS12 Daves Installation
	0WP512 Configuration Unity_Odycarey for Marvell
	Adobe Acrobal Fleader
	User Manual
2	Duck Start Guide
•	6

6. When it completed, an information window will pop up. Please click **OK**, then it will return to main menu.



Note: The following procedures are operated in Windows 2000. The steps and screen shots are similar for the other supported OS (such as Win 98SE, ME and XP).

Installing the Network Adapter Driver

- 1. Insert the Network Adapter into the PC card slot. Align the card properly.
- 2. When Windows 2000 recognizes the adapter, the **Found New Hardware Wizard** dialog box appears. Click **Next**.



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3. Select the "Search for a suitable driver for my device." and click" Next".



4. Select the "Specify a location" checkbox. Click Next.



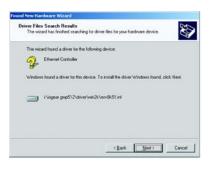
5. Click "Browse", browse to the X:\IOGEAR GWP512\Driver\Win2k directory and click OK.

Note: X is the drive letter for user's CD-ROM drive.

Inset the manufacture's installation disk into the drive selected, and then click DK.	OK.
	Cancel
Copy manufacturer's files from:	
L'VOGEAR GWP512\Driver\Win2K	Browse

Note:

Windows 98SE users, please specify to IOGEAR GWP512\Driver\Win98 directory. Windows ME users, please specify to IOGEAR GWP512\Driver\WinME directory. Windows XP users, please specify to IOGEAR GWP512\Driver\WinXP directory. 6. The wizard will display the location of the driver. Click on the **Next** button.



 The Microsoft Digital Signature Not Found dialog box could appear at this point. A Microsoft digital signature is not required for the driver installation. Click "Yes" to continue.

		_
3	The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been aftered since it was tested.	
	The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.	
	IDGEAR GWP512 Network Adapter	
	If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.	
~	Do you want to continue the installation?	

8. After a while, the wizard will report that the hardware installation is complete. Click **Finish**.



Configuration Utility and Odyssey for Marvell Utility Installations

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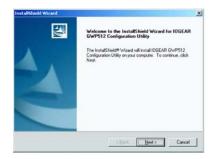
The Odyssey For Marvell Utility will be installed after the completion of Configuration Utility.

The Odyssey Client helps the user to configure the WPA function. WPA is an implementation based on a subset of the 802.11i standard and provides enhanced security for wireless networks when used with the Temporal Key Integrity Protocol (TKIP) and the Michael message integrity check (MIC) algorithms. Be sure there is an access point supports WPA in the network environment for using the Odyssey for Marvell utility.

1. Click on the button of **GWP512 Configuration Utility** and **Odyssey Client for Mavell** from Main Installation Menu.

	10GEAR GWP512 Deves Installation
	DWPS12 Configuration Unity , Odyssey for Marvell
	Adobe Accobal Reader
	User Manual 🥥
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5	

2. The InstallShield Wizard is preparing to install the configuration utility. Click **Next**.

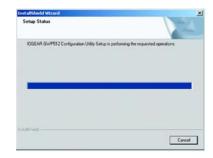


3. In the *Destination Folder* screen, you are asked to confirm the *Destination Folder* for the application software. If you would like, you may change the destination folder to another location. Click **Next**.



- 4. Select a program folder and click Next.
- 5. The InstallShield Wizard is installing utility.

itart Copying Files				100
Review settings before o	opying Nes.			60 m
Setup has enough inform change any settings, clic copying files.	ation to start copyin k Back. If you are	g the program files satisfied with the se	If you want to re- tings, click Next 1	view or o begin
Curient Settings				
				č
ditional				-



6. Click Finish to compete the Utility installation.



7. The InstallShield Wizard continues to install the Odyssey Client Manager for Marvell. The Odyssey Client Installation Wizard window appears. Click Next. If you don't want to install the Odyssey for Marvell Utility, you can click Cancel to close the installation.



8. Select "I accept the terms in the license agreement". Click Next.



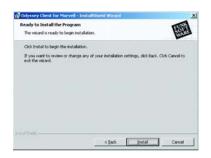
9. Enter a User Name and Organization in the Customer Information window. Click **Next**.



10. Select the button of Complete. Click Next



11. Click Install to install the program.



12. The InstallShield Wizard starts copying files to your PC.



13. When the installation is completed, the Wizard Completed window appears. Click **Finish.**





14. The Configuration Wizard window appears. Click Next.

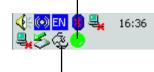




15. Click Finish to complete the configuration Wizard.

16. The Odyssey for Marvell Utility icon will appear in **Verifying Driver Installation** the system tray automatically. If the network adapter plugged and connected with a wireless network, the Configuration Utility will launch automatically, and showing green icon in the system try. If it does not launch and you cannot get wireless connection, please open the Configuration Utility from Windows Start > Programs > IOGEAR GWP512 > IOGEAR GWP512 Configuration Utility.

Configuration Utility Icon



Odyssey for Marvell Utility Icon

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1. Right-click mouse button on the My Computer icon on your Windows desktop, and select Properties from the pop-up menu.



2. The System Properties screen will pop-up. Under Hardware tab, click Device Manager.

eres I re	ework identication 114	rdware User Profiles Advanced
Hardwar	e Wizard	
1	The Hardware wizard he unplug, eject, and config	ibs you install, uninstall, repair, gure your hardware.
		Hardware Wizard
Device	Hanagei	
-		ts all the hardware devices installed he Device Manager to change the
	Driver Signing	Device Managet
Hardwar	e Pioßes	
Ð	Hardware profiles provid different hardware config	e a way for you to set up and store purations.
		Hardware Probles

3. After clicking **Device Manager**, the following screen will be shown.

Billion Theorem

Click on the + symbol in front of "Network adapters" and see if an item labeled IOGEAR GWP512 Network Adapter is visible. If you don't see the item below the network adapter icon but a"?" or "!" symbol is displayed, it means that the driver installation was unsuccessful. Highlight "IOGEAR GWP512 Network Adapter", right-click mouse button and select "Properties".

 Click the General tab, if the Device Status field reports that "This device is working properly", it means that the driver has been installed successfully.

in and	Driver Resource	-1
	Daves Hesonic	se j
٤	IOGEAR GWP5	12 Network Adapter
	Device type:	Network adapters
	Manufacturer.	Marvell
	Location:	CardBus Slot 4 (PC) bus 2, device 0, function
200	e status	
Devic	e manin	
This	device is working	
This I	device is working	ms with this device, click Troubleshooter to
This i If you start !	device is working <i>i</i> are having proble the troubleshooter usage:	ms with this device, click Troubleshooter to
This i If you start !	device is working are having proble the troubleshooter	ms with this device, click Troubleshooter to

TCP/IP Setup Procedure

After the network adapter driver and configuration utility are installed, the TCP/IP address for the network adapter must be set up in order to communicate with other wireless LAN access points and clients, and to have Internet access.

1. Right-click on **My Network Places** and select **Properties** from the pop-up menu.



2. Find the "Local Area Connection" that is associated with the Network Adapter. Right-click on the connection and select **Properties**.

ddress 😥 Network and Disfus Con	and the second second	Carrier's	THE TAL A V	1 22	20
Network and Dial-	Plake New Connection	Ekwitooth Network	BuetoothCo	Local Area Connection	
ocal Area Connection 3 Type: LAN Connection Ratus: Enabled	Local Area Connection 3	IOGEAR GHP	112 Network Ada	pter	
OGEAR GWP512 Network Adapter					

3. Select"Internet Protocol (TCP/IP)" and click Properties.



4. Select "Obtain an IP address automatically", if the network adapter will be linked to a Wireless AP providing DHCP service. Or, please click "Use the following IP address" and input an IP address and subnet mask. IP configuration information (DHCP or assigned IP address, Gateway and DNS server IP addresses) is usually obtained from the corporate IT staff.

Note: The IP Address you assign to all computers must be in the same IP Address range, and the Subnet Mask must be the same for all computers on your network.

For example:

If the first computer is assigned an IP Address of 10.35.1.3 with a Subnet Mask of 255.255.255.0, then the second computer can be assigned an IP Address of 10.35.1.4 with a Subnet Mask of 255.255.255.0,.. etc.

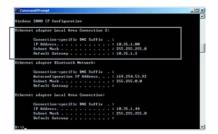
appropriate IP settings.	ed to ask your network administrator for
Obtain an IP address autor	natically
Ise the following IP addres	и:
P address;	10 . 35 . 1 . 80
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	10 . 35 . 1 . 2
Obtain DNS server addres	- Andrewski - Martin
 Use the following DNS ser 	
Preferred DNS server:	10 . 35 . 1 . 6
Alternate DNS server:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

- After completing IP configuration information, click OK to both "Internet Protocol (TCP/IP) Properties" and "Local Area Connection Properties" to complete the IP configuration.
- Choose Start > Programs > Accessories > Command Prompt to open the DOS command prompt window.

		G	Accessories	•	83	Command Prompt
		6	Internet Explorer		¥	Paint
0		- 03	Outlook Express		٩	Windows Explorer
G		0	My Bluetooth Places			¥
100	Windows Update	8	Adobe Illustrator 9.0	1		
~		C 🖻	Microsoft Office Tools	٠		
	WinZip		Microsoft Access			
õ.	My Bluetooth Places		Microsoft Excel			
2	Phy bidecouch Places		Microsoft FrontPage			
	Open Office Document	3	Microsoft Outlook			
<u> </u>			Microsoft PowerPoint			
60 A	Add Office Document	W	Microsoft Word			
-		6	Wireless Cardbus	٠		
- -	Programs	·	¥			
	Documents	•				
EL	Settings					

30

7. Type "**ipconfig**" at the **D:\>** prompt to determine if the TCP/IP configuration has taken effect.



Uninstallation

Uninstalling the Network Adapter Driver

- 1. To remove the driver from the OS, go to Start>Settings>Control Panel.
- 2. Double-click System.

*	Windows Update			
،	Set Program Access and Defaults			
e 💼	Programs	•		
§ 🚞	Documents	•		
ë 🔈	Settings	•	2	Control Panel
<u>)</u>	Search	,		Network and Dial-up Connections Printers
3	Help			Taskbar & Start Menu
ē 🖅	Run			
	Shut Down			



Uninstallation

 Under Hardware tab, click Device Manager. Double-click Network adapters. Right-click mouse button on "IOGEAR GWP512 Network Adapter", and choose Uninstall. Click OK to uninstall the device.

Device Manager	AND THE OWNER OF THE OWNER	×101×
Action year or op fill 📰	C C 3 6 8	
Al AT1511 Al AT1511 Constant Dub data Dub data		- Wegot
 B) 500241 (Weight Astrony B) 54C EZ Card 36(100 (SMC B) 54C EZ Card 36(100 (SMC 	Disable Creekful	Megot
PCMCIA adapters Posts (COM & LPT)	Scan for hardware changes	
a 3 Sound, video and game contra	Properties	
Storage volumes System devices		

4. Click **OK** to confirm that you are going to uninstall the driver.



Uninstallation

Uninstalling the Network Adapter Configuration Utility

1. The user can uninstall the Configuration Utility from Windows Start menu -> Programs -> IOGEAR GWP512-> Uninstall to remove the configuration utility.

8	Windows Lipdate Mina Bluetouth-platser			
6	Programs	Accessories	•	
0	Documents	Systemet Explorer Collock Express		
勘	Settings	Windows Media Player		
9	Search	• O Mrus Elustouth-plateer		
	Help	E 1002AR OWPS12		GEAR GWP512 Configuration utility
P	Run			
•	Shut Down			
Start	1 6 3 8 3	0		
	LILINOGEAR GWP512	Mitcp2.texp - Pant		

Network Adapter Configuration Utility

The Configuration Utility can be launched from Windows Start -> Programs -> IOGEAR GWP512 -> IOGEAR GWP512 Configuration Utility.

After launched, the utility icon will reside on the Windows system tray and provides at-a-glance feedback about the device's status by changing appearance.

Status 1:

The wireless network adapter is not plugged in.



Status 2:

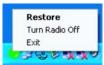
The wireless network adapter is trying to associate with other network devices in service range.



Status 3:

The wireless network adapter is associated with a network device.

Right-click mouse button on the icon, there will be a shortcut menu.



- **Restore:** Select this option and the Utility Main screen will appear on the top of all Windows applications you have opened.
- Turn Radio off: Click the Turn Radio Off will power off the network adapter.
- Exit: Close the utility and the icon will exit from the system tray, too.

Utility Main Window

work Status Pro	die Manager Ste Survey	Statiatics Advanced Signal Strength	Admin About
Wireless G		Sgra seerge	
nik Information Retur	Connected	DHCP Option:	Enable
Network SSID	Wireless G	IF Address	192.168.1.3
Network: Type:	Infrastructure	Subnet Mark:	255.255.255.0
ketwork BSSID	00 DC 76 6F 8F 18	Default Gateway	192.168.1.254
lecurty:	Security Off		
Link Speed:	54 Mbps		
	Channel 7	(2.442 GHL)	
Curren	Tx Rate: 0 bps	Current	Rx Rate: 0 bps
1.9 Kbps		37.8 Kbps	
5.9 Kbps		12.9 Kbos	
		Ober 140	

The Configuration utility is separated into seven categories:

- Network Status: Display the status of the network you are connecting to.
- Profile Manager: Display the current profile and allows you to create, modify and delete profiles.
- Site Survey: List all available network devices in range.
- Statistics: You can view the information of wireless receiving and transmitting data.
- Advanced: Allows you to perform advanced configuration.
- Admin: Allows you to import or export profiles.
- About: Shows the firmware and utility versions and MAC address of the network adapter.

Configuration Utility – Network Status Tab

	ofile Manager Site Survey	Statistics Advanced	Admin About
elect Profile		Signal Strength	
Wireless G	~		6
rik Information		Internet Protocol (1	CP/IP)
Status	Connected	DHCP Option:	finable
Network SSID	Wireless G		192 168 1 3
Network Type:	Infrastructure		255 255 255 0
Network BSSID:	00 DC 76 6F 8F 18		192 168 1 254
Security:	Security Off		
Link Speed:	54 Mbpe		
	Channel 7	(2.442 GHL)	
Curren	t Tx Rate: 0 bps	Current	Rx Rate: 0 bps
31.9 Kbps		37.8 Kbps	
15.9 Kbps		18.9 Kbos	
Obes 1995		Ober 144	

Select Profile

Displaying the name of the profile in use. Click the down-arrow button to select profiles you have created previously. You may modify, create and delete profiles through the **Profile Manager** tab.

-Se	elect F	Profile -			
			 	 	_
	<defai< td=""><td>ulb</td><td></td><td></td><td>•</td></defai<>	ulb			•

Link Information

Contains information of current connection.

Status:

- **Connected:** Indicates the adapter is connected with a wireless network.
- Card Unplugged: Card not plugged in, or plugged in but not recognized.
- No Connection: Card plugged in but can't find a wireless network.
- No Radio: Card plugged in but the radio is turned off.
- Network SSID: Indicates the SSID of the connected wireless device.
- Network Type: Indicating the current network type the adapter uses. It could be Ad hoc or Infrastructure.

- Network BSSID: Shows the associated device's MAC address in the form of hex digits.
- Security: Indicates whether the connected device has the WEP function enabled or not.
- Security OFF: It means that the connected device isn't using enable WEP function.
- WEP: It means that the connected device uses the WEP function.
- Link Speed: Current link speed.

Link Information	
Status:	Connected
Network SSID:	AP-600
Network Type:	Infrastructure
Network BSSID:	00 20 A6 4F 45 5C
Security:	Security Off
Link Speed:	1 Mbps

Internet Protocol

Display information of Internet protocol.

DHCP Option:	Enable
IP Address:	169.254.128.148
Subnet Mask:	255.255.0.0
Default Gateway:	

Signal Strenth

The green color bar indicates the signal is weak or strong. The longer the color bar, the better connection.



Channel

Radio Off

Display the channel in use and the dynamic diagram Click the checkbox and the adapter will be turned off. shows the Transmit (TX) and Receiving (RX) rate being monitored.

Chann	wl 7 (2.442 GHz)
Current Tx Rate: 0 bps	Current Rx Rate: 0 bps
31.9 Kbps	37.8 Kbps
15.9 Kbps	18.9 Kbps
Obes house and double	O bos



Configuration Utility – Profile Manager Tab

The profile manager tab allows you to modify, create or delete profiles.

IOGEAR Network Card	
Y default ATENNIH P ROSAGS P linking P c'befault	Peter Sense Network Mo Security Petersol Pedie Name: SSD defa.th Network SSD defa.th Metersol Network Type Metersol Metersol Associate with hidden SSD SSD
Apply Profile Move Up Move Down	Dide Cede. Save

Profile List Window

List all available profiles. If the Default box is checked, it means the profile is used in auto-configuration mode when the connection is lost. If unchecked, the profile will be excluded in auto-configuration.

- Apply Profile: Apply the selected profile. The buttons below are used to control the window.
- Move Up/Down: Move the selected profile up or down.
- Delete: Delete a profile.
- Create: Create a new profile. Click the Create button and follow on-screen description to create a new profile.
- Save: Save changes you have made to a selected profile.

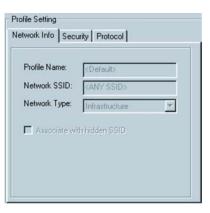
Profile Setting

The profile setting displays information of the selected profile. It is divided into three sub-tabs.

Network Info:

• Profile Name: name of the selected profile.

• Network SSID: the connected network SSID. You can type a specific Network SSID in this field to limit the link to an access point or other computer equipped with a wireless LAN adapter. If you leave this field blank, the wireless LAN adapter will try to build the link with any wireless device that has better signal and link quality.



 Network Type: the type of network environment to which you are connected. It could be infrastructure or ad-hoc. Infrastructure – This type of network connection needs an access point in range. All communication is done through this access point.
 Ad hoc – A peer-to-peer mode of operation. This type of link is established from client to client without any access point.

Security Tab:

The Security tab provides WEP (Wired Equivalent Privacy) function to ensure a securer networking communication and prevent unauthorized access to your wireless network. The WEP keys configured for your wireless device must be same as those configured for the access point or wireless LAN adapter it associates with.

- Encryption Method: Click the down-arrow button to select Security Off or WEP.
- Authentication Mode: Click the down-arrow button to select one. The authentication type should be same among those connected devices.
- **Open system:** With this setting, any station in the Wireless LAN can link with the Access Point.

- **Shared Key:** only stations using a shared key encryption identified by the Access Point are allowed to associate.
- WPA Wi-Fi Protected Access. Please Refer to Page.67 for WPA function configuration.
- WEP Key Setting: The WEP key setting is available only when the WEP is activated. Click Configure WEP Keys button to configure the WEP settings.
- Key Format: This utility supports both Hexadecimal and ASCII key formats. Click the down-arrow button to choose one format. Only digits 0-9 and letters A-F are valid entries if you select hexadecimal format.
- **Key Size**: Click the down-arrow button to select 40-bit or 104-bit key size.

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Profile Setting

Network Info Security Protocol

Key 1 is not set

O Key 2 is not set

Key 3 is not set Key 4 is not set

Encryption Method:

WEP Key Setting

Authentication Mode: Open System

Shared Key WPA

Configure WEP Keys

• Transmit Key 1-4: These four fields allow you to set four different 40-bit or 104-bit keys for encryption. This item is a very convenient and useful function when you want to match the WEP keys with different APs. After setting the WEP keys for specific AP or wireless LAN card, instead of entering the WEP key every time, you can just click the button in front of WEP key to enable the association.

Key Format.	ASOI Characters	~
Key Size	40.68 (5 chas)	
Transmit Key	Key Value	
Division		
14/2		
1.663		
O feel		

Protocol:

• Do not change settings:

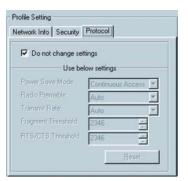
If the box is checked, then, all settings on this tab can't be change.

Use below settings: Bower Save Mode: This

- Power Save Mode: This field provides two options of power management: Continuous Access and Max Power Save. Click the pull-down menu to select the mode you desire.

- **Preamble (802.11b)**: Select Auto or Long. The default setting is Auto.
- **Transmit Rate**: This field provides options for selecting data-transmitting rate of the wireless LAN adapter. You can click the down-arrow button to select one option. By default, the data rate is set to **Auto** allowing Tx rate to the highest possible rate. It's recommended that you select the Auto option.

- > Fragment Threshold: This field is to define the maximum data frame size this wireless LAN adapter will transmit and to improve the efficiency of data transmitting.
- RTS/CTS Threshold: This field is to set the packet size at which the AP issues a Request-To-Send (or Clear-To-Send) frame before sending the packet. Type the value in this field and the effective range is from 0 to 2347.
- > Rest Button: Click Reset button returns the protocol settings to their default values.



Site Survey Tab:

be displayed.

Click the Site Survey tab and the following screen will DGEAR Wireless-G Network Adapter Configuration Utility WRELESS-C Vetwork Status | Photile Manager | Site Survey | Statistics | Advanced | Admin | About | Access Point File Display Peer To-Peer stations Display 802.11g Access Points Display 802.11b Access Points Connected 802.11g Network SSID PgATE_Router Tb WING
 MAC Address
 Security
 CH.
 Signal

 0000C 5500 CS 46
 Enable
 1
 443

 000550 AA-D1-EE
 Disable
 1
 525
 N In In access point Icon 802.11b Access point Icon < > Eiter Befesh Astociate Radio Off Ok Cancel 47

From the Site Survey page, you can search all access points and network adapters that are within the service range of the network adapter. Click **Refresh** button, and the network adapter will start to search access points and WLAN adapters and show the result on the list.

The list includes information about the Network SSID and MAC address of the access point and WALN adapter, the signal strength, the channel where the access point and WLAN adapter operates, and whether or not WEP encryption is used. You can highlight the access point or WLAN adapter you want to associate and click **Associate** or double click on your choice to connect that device.

In the figure, you can see there are one 802.11b access point and one 802.11g access point within the service range of the network adapter. You may click the **Refresh** button to update this list and use the scroll bar to see more information.

Access Point Filter

This option lets you customize which sites will be displayed in the site survey list. Check the checkbox to enable individual wireless mode.

Access Point Filter	
Display Peer-To-Peer stations	Display 802.11g Access Points
🗖 Display 802.11a Access Points	Display 802.11b Access Points

Advanced Filter

Click the **Filter** button and the **Advanced Filter** dialog box will be brought up. It helps you take more control of searching AP or network adapter in range.

Network SSID:

- Any SSID: If selected, any SSID will be used.
- Find network with this SSID: The utility will search the specific SSID.

Network BSSID:

- Any BSSID: If selected, any BSSID is used.
- Find network with this BSSID: The utility will search the specific BSSID.
- Select Channel: You can check individual channel, all channels or clear all channels.

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Advanced Filter

Γ

Any SSID

C Find netw

Select Channel

F 11 E 12 E 13 E 14

ork with this SSID

Network BSSID

Any BSSID

with this BSSID:

00 00 00 00 00 00

Check All Clear All

QK Gancel

C Find ne

0 T 1 T 2 T 3 T 4 T 5 T 6 T 7 T 8 T 9 T 10

Statistics Tab:

Click the **Statistics tab** and the following screen will be displayed.

work Status Profil	e Manager Site S	urvey Statistics Advanced	d Admin About
Signal Strength			
ay to see up.			*
Transmit			
Benert	Data	Ferrent	Data
Total Packet	1304	Faled Court	0
Unicast Packet	1304	RTS Success	ō.
Auticast Packet	0	RTS Falure	0
Single Retries	12	ACK Error	0
Multiple Retries	3		
Receive			
Bement	Data	Benent	Data
Total Packet	50592	Duplicate Frame	0
Unicast Packet	50592		
Auticast Packet			

The statistics window is divided into two parts – **transmit** and **receive**. From the window, you can view the instantaneous wireless receive and transmit data information.

AdvancedTab:

Click the **Advanced** tab and the following screen will be displayed.

arveit Wireland Card					
00544 69/7933	termit Ampro				
otacol					
Power Save Mode	Contractor Acc		Transmit Rate:	Auto	*
Preamble (902.11b)		~	Fragment Threshold	2346	10
sanomit Antenna:	Arterios 2		RTS/CTS Threshold	2346	10
Receive Antenna:	Diversity On	~			
			Asely Dianges	Relat	
hen there is link to	-				

The tab provides more advanced protocol control of the wireless network adapter

Wireless Card

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Display the current network adapter.

Marvell Wireless Card	
DGEAB GWP512 Network Adapter	

Protocol

- Power Save Mode: Click the down-arrow button to select one option.
- Radio Preamble: Click the down-arrow button to select Auto or long.
- Transmit Antenna: Click the down-arrow button to set the transmit antenna mode, either Antenna 1, antenna2 or diversity.
- Receive Antenna: Click the down-arrow button to set the receive antenna mode, either diversity On or diversity Off.
- Transmit Rate: the range of the data rate depends on the type of AP the card is connected to.The default value is Auto.

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• **Fragment Threshold**: Set the fragmentation threshold and the default value is 2346.

• RTS/CTS Threshold: Set the packet size at which the AP issues a Request To Send (or Clear-To-Send) frame before sending the packet.

Don't forget to click **Apply Changes** to make your configuration take effect.

Power Save Mode:	Continuous Acces	~	Transmit Rate:	Auto	4
Preamble (802.11b)	Auto	~	Fragment Threshold:	2346	:
Transmit Antenna:	Antonica Z		RTS/CTS Threshold	2346	
Receive Antenna:	Diversity On	4			-

Link loss or no connection

Check the item, whenever a link loss or no connection, the auto-configuration feature will try to build a connection according to the checked profiles in the Profile Manager.

When there is link loss or no connection	
Do auto connection according to checked profiles in Profile Manager	

Admin Tab:

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Click the **Admin** tab and the following screen will be displayed.



You can import or export profiles through this tab.

- To import a profile: Click the **Import Profiles** button. Select the path and file name of the profile. Click **Open**.

LOOK IN	DATA ():1	🕑 🔮 😰 🛄 •
01[000 CD temple doris Drivers Ewin985E EwinME	New Folder	2512 Cotemp

- To export a profile: Click the **Export Profiles** button. Select the path and file name of the profile. Click **Save**.

	My Documents Exchange Folder	00	100	
Fax My Music My Picture				
File game:	1			Save

About Tab:

Click the **About** tab and the following screen will be displayed.



From the **About** tab, you can view the product version including the driver version, utility version and firmware version. The MAC address of the wireless LAN adapter and the regulatory domain are also shown on this page.

After you have properly installed the wireless network adapter driver, you may...

1. Right-click mouse button on the network connection icon residing on the system tray, and click "View Available Wireless Networks".

Open Network Connections	
•	
View Available Wireless Networks	

2. The following **Connect to Wireless Network** dialog box will be displayed. You can click **Connect** to start the wireless connection or click **Advanced** button to do further configuration.

it from the list, Available netw	and then click Connect. wrks:
1 Winson	
I WING	
	equires the use of a network key (WEP). To access
this network, t	upe the key, and then click Connect
Network key	

3. Click the **Advanced** button and the Local Area Connection Properties dialog box will be displayed. Click the **Wireless Networks tab** from the **Wireless Network Connection Properties** dialog box. Select the box of "**Use Windows to configure my wireless network settings**" to enable automatic wireless network configuration.

Note: If you want to use the configuration utility we
provide, you have to clear the check of "Use Windows
to configure my wireless network settings" item.

Uts Windows to configure my wireless network settings Available network: To connect to an available network, click Configure. i Winson i Marvel&P21JS Doiss Doiss	
i Winson i MarvelAP21JS	
MarvelAP21JS	
	ae .
Se Dons	
Doris Move o	æ
Move do	nim.
Add. Remove Properties Learn about setting up wireless network Advar	

Infrastructure Mode Setup Procedure

- 1. From the **Wireless Network tab**, click **Refresh** button to update all the available network devices in range.
- Click the network name under the "Available networks" and click Configure. The Wireless Network Properties dialog box will be displayed.

Wireless Network Pro	operties 🛛 🛛 🔀
Network name (SSID):	Winson
Wireless network key (V	VEP)
This network requires a	key for the following:
Data encryption (V	VEP enabled)
Network Authentic	cation (Shared mode)
Network key:	
Key format:	ASCII characters 💌
Key length:	104 bits (13 characters) 🐱
Key index (advanced):	0
The key is provided	for me automatically
This is a computer-to-c access points are not a	omputer (ad hoc) network; wireless used
	OK Cancel

- 3. If the network you select requires WEP key, then the "Data encryption (WEP enabled)" check box is selected by default. Select the "The key is provided for me automatically" check box if the WEP key is automatically provided for you. The driver will then use the Default Encryption key. If not, you have to clear the check and manually enter the network key. In this example, you have to type the WEP keys. After you enter the WEP keys, you can click OK to close the Wireless Network Properties dialog box and the system will take you back to Wireless Network Connection Properties dialog box.
- Click OK to save your configuration and the Wireless Network Connection Properties will be closed.

5. When the network connection you have configured is available, the following bubble message will be shown on the system tray.



6. Right-click on the network icon and select "View Available Wireless Network". Click Advanced button from the Connect to Wireless Network dialog box and you can find that there is a blue circle on the ESSID: Winson you have configured in Wireless Network Connection Properties dialog box. It means that you have successfully built the connection. You may refer to the section of how to do TCP/IP setup to configure your wireless LAN adapter. After the TCP/CP configuration is done, you can access the Internet through the wireless connection you have built.

neral Wireless Networks Authe	entication Advanced
Use Windows to configure my w	ireless network settings
Available networks:	
To connect to an available netwo	rk, click Configure.
1 WING	Configure
Winson	Refresh
Preferred networks: Automatically connect to available below.	
Automatically connect to available	e networks in the order listed
Automatically connect to available below:	Move up
Automatically connect to available below:	Move up Move down Properties

7. Furthermore, you can highlight a network connection and click Move up or Move down to change the order of the wireless networks in the Preferred networks. For Windows XP, it will always choose the first one in the Preferred networks to connect. To remove a wireless network from the list of preferred networks, select the wireless network that you want to remove, and then click Remove.

Ad-hoc Mode Setup Procedure

- Click **Refresh** button to update all available devices in range from Wireless Network Connection.
- 2. Select the ad hoc network name under "Available networks" in the Wireless Networks tab, and click Configure.

WinXP Zero Configuration Utility



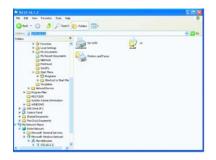
- In the Wireless Network Properties dialog box, the "This is a computer-to-computer (ad hoc) network; wireless access points are not used" check box is selected by default.
- 4. If the network adapter you want to connect has enabled the WEP function and then the "Data encryption (WEP enabled)" check box is checked. You can select the "The key is provided for me automatically" check box if the WEP key is automatically provided for you. The driver will then use the Default Encryption key. If not, you have to clear the check and manually enter the network key. In this example, you have to type the WEP keys. After you enter the WEP keys, you can click OK to close the Wireless Network Properties dialog box and will go back to Wireless Network Connection Properties dialog box.

ireless Network Pro	opernes
Network name (SSID):	Manual
Wireless network key (V	VEP)
This network requires a	key for the following:
Data encryption (VEP enabled)
Network Authenti	cation (Shared mode)
Network key:	
Key format:	ASCII characters
Key length:	104 bite (13 characters) 🗸
Key index (advanced)	0 0
The key is provided	for me automatically

5. Click **OK** to save your configuration and close the Local Area Connection Properties dialog box. Rightclick mouse button on the network icon on the system tray and open the Connect to Wireless Network dialog box again. Click **Advanced** button, and you can see that there is a blue circle on the wireless network adapter icon.

-	Windows to configur	e my wireless nel	work settings	
	onnect to an available	e network, click D	Configure.	
	MarvellAP21-JS Wireless	^	Configu	re
Prefe Autor belov	Manual metworks: matically connect to a	vailable network:		ted
Prefe Autor belov	Manual metworks: matically connect to a	vailable network:	s in the order lis	ted
Prefe Autor belov	Manual metworks: matically connect to a	vailable network:	s in the order lis	ted
Prefe	Manual metworks: matically connect to a		s in the order lis	ted

- 6. You may refer to the section of how to do TCP/IP setup to configure your wireless LAN adapter in Windows XP. After the TCP/CP configuration is done, you can share data between these wireless devices.
- 7. Open Windows Explorer and type the connected wireless network adapter IP address in the **Address** field. The folder that the associated computer shares will be displayed. Now , you can share data with it,



Network Operating Mode Selection

 Click "Advanced" button from the Local Area Connection dialog box, and you can select network operating mode you want to use.

	Authentication	Advanced
Use Windows to config	ze my wireless net	work settings
Available network t		
To connect to an availab	le netvork, click C	onlique.
I MarvelAP21JS		Configure
& Wireless		
Se Manual	~	Reliesh
Automatically connect to	available network:	in the order listed
Automatically connect to below.	available network:	t in the order listed
below.	available network:	
Selow Manual	available network	Move up Move doorn
Selow Manual	ove Prope	Move up Move doorn
elow.	available network:	

2. If you want to connect to an ad hoc network only, you can click the button of "Computer-to-computer (ad hoc) networks only". Click the button of "Access point (infrastructure) networks only", and only the available access points in range will be displayed in the available networks box. You can click the button of "Any available network (access point preferred)", and then both access points and wireless network adapters will be displayed in the available networks box.

WinXP Zero Configuration Utility



WPA Configuration

There are two configuration utilities to setup wireless connectivity with an AP that supports WPA – Windows XP: Zero Configuration Utility and Odyssey For Marvell Utility.

For Windows XP operating system, use the Windows built-in Zero Configuration Utility when associating with a WPA-enabled AP. The user must ensure Service Pack #2 and WPA Hotfix Q815485 is installed. (Please see note.)

For Windows 2000, 98SE and ME operating system, please use the Odyssey For Marvell utility when associating with a WPA-enabled AP. The Odyssey For Marvell Utility provides two ways of WPA operations:

- connect with a RASIUS server.

- connect with a WPA-pre-shared key (WPA_PSK) configuration.

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Note:

The WPA client for Windows XP can be found in the Microsoft Knowledge Base Article 815485 (http:// support.microsoft.com/default.aspx?scid=kb;en-us;815485) or downloaded directly from Microsoft http://www.microsoft.com/downloads/ details.aspx?FamilyID=009d8425-ce2b-47a4-abec-274845dc9e91&displaylang=en

After installed, the Windows WPA Client will update the wireless network configuration dialog boxes to support new WPA options.

Click Connect To>Wireless Network
 Connection to bring up the dialogue window
 of Wireless Network Connection Status.
 Click the Properties box to bring up next
 dialogue window.

. D		Texas Land.	arrent de
		Take	Country .
112001		Sand Spectropy:	Al Maria
C Marriel			Q - new
	An and the second to a second	Paint 1	
inesting .	3	Parte Date)
Contrast line of	Stree Country	1	
1 million	()-tenertees		
Description from	Contractions	Par l'americo	
Same		and acceptors	
The second second	a here		
-	Cite-		

2. In the Wireless Network Connection Properties window, under Wireless Networks tab, please check the box of "Use Windows to configure my wireless network settings" to turn on the Wireless Zero Configuration service. Select the wireless access point you want to associate to, then click Configure box at the right side to bring up next dialogue window.

Wireless Network Extres	ction & Properti	es 🛛
Sermal Wesley Networks	huced	
Use brindees to configure m		
Available retracks		
To connect to an available re-		
1 searc deal.	- [Cirigue
Vieler G	20	Nahadi
A COLOR		
Palaradistantia		
Automatically convect to avail before:	die networks in the	odekided
¥ #05405		Movelup
T Wieless G		
All_ Parent	Popeler	
Learn about setting up weeks scribauteise.	Lothesk	Advantat
	COX.	Cancel

3. Set up your WPA configuration by selecting the **Network Authentication** mode and **Data encryption**, and input same **Network key** as you input at the Wireless-G Broadband Gateway. Then, you are served by a more secured wireless network.

Authentication		
Network name (SSID):	Wireless-G	
Wireless network key		
This network requires a k	ey for the following:	
Network Authentication:	WPA-PSK	~
Data encryption:	TKIP	~
Network key:	•••••	
Confirm network key.	•••••	
Key index (advanced)		
The key is provided to	or me automatically	
This is a computer-to-co access points are not u	mputer (ad hoc) network; wi red	Cancel

Odyssey for Marvell Configuration Utility

The Odyssey for Marvell configuration utility can be launched from the Windows Start menu > Programs > Marvell > Odyssey Client for Marvell > Odyssey Client Manager for Marvell. The main screen will show up.

You can click the **Help** menu and select **HelpTopics** to browse more information regarding the operation of the Odyssey for Marvell Utility. The following section describes how to configure the WPA through RADIUS server and WPA-PSK.

1. Uncheck the Connect to network box.



2. Click Scan.

- 3. Select an AP to be associated with in the **Network** Connection Properties box.
- 4. Configure the WPA in the Network Properties box.

WPA-PSK

To connect with an AP using the Pre-shared key configuration (WPA-PSK), uncheck items in Authentication box. In the Passphrase box, enter the configuration key. The key should match the one set in AP.

	PRD-APT		Contraction of the
Corvect to any av		wak.	Scar.
Description (optional):			
Network type:	Access	point (inhastructure mode)	
		data di traval	
Association mode		WPA	
Encryption method		TRUP	٠
Authentication			
Automicate using	prolite:		
C Star of the press		all all the later process	
Pre-chared kay (NFA)			-
Enightabe	-		
C Umak	-		-

WPA

To connect with an AP through RADIUS server, click the items in **Authentication** box.

Network name (55)	DE ROAPH	
Connect to any		Scan
Description Jaption		- Robi
Network type:	Access point Snhastruchu	e model
Cherry	difad they	
Association mode:	WPA	
Encryption method	TKIP	
The shared key (w)	verated automatically for data pr PAJ	Macy
F (Press)		

1. Click OK.

2. RADIUS Server Client Manager, click the **Profile** box.

ettings Commands M	eb Help	
Connection	Profiles The following profiles are configured:	
Profiles	delault Initial Profile	Add
Networks	LINES FRIEND	Bemove
Trusted Servers		Properties
Adapters		
-		

3. Click **Properties**. In the Edit Properties screen. Click the User Info tab. Uncheck the Permit login using password box. Check **Permit login using my** certificate.

dit Profile Prog	entira -	
Profile name:	Initial Profile	
	entication ITLS Settings EE	P Setting
Login name	RD-WPA01	
Password		
F Femiliop	n using password	
 C point to C specifies to 		
F lipsek		
Certificate		
Pemil logi	in using my gentificate:	
		owite
Г	OK Cancel	-

- Click the Authentication tab. Uncheck the box of Validate server certificate. Choose authentication protocol from inside the box.
- 5. Click Add and choose EAP/TLS from the list. Click OK.

Aglie name:	Initial Profile	_
User Into Au	eternication ITLS Settings PEAP Set	ings
Authentication	n protocols, in grider of preference:	
EAP / TLS	2	2
	666	_
1	Ben	ove
-	erver certificate	
1 Yaldate p		
1 Yakdale s		
1 Yesdare s		
1 Yandare o		
1 Yandare o		

6. In the Client Manager main screen, choose **Connection**.



- 7. Check the Connect to network box.
- 8. The network adapter now connects to the WPAenabled AP through the RDAIUS server.

Specification

Specification		
	Specification	
RF Technology	Direct Sequence Spread Spectrum	
Operating Frequency	2400-2497MHz ISM band	
Modulation Schemes	DQPSK, DBPSK and CCK	
Channel Numbers	IEEE 802.11b/g compliant	
	11 channels for United States	
	13 channels for Europe	
	14 channels for Japan	
Data Rate	11Mbps(CCK) with fall back rates of 5.5, 2, and 1Mbps	
	54Mbps with fall back rates of 48/36/24/18/12/9 Mbps	
	(OFDM)	
Media Access Protocol	CSMA/CA with ACK	
Transmitter Output Power	18 dBm typically	
Receiver Sensitivity	Typical -68dBm for 54Mbps @ 10% PER (Packet Error Rate)	
	Typical -86dBm for 2Mbps @ 8% PER (Packet Error Rate)	
Range Coverage	Indoor: 35 - 100 meters (depends on environment)	
	Outdoor: 100 - 300 meters (depends on environment)	
LED Indicator	Power & Link status	
Antenna Type	Printed-on-board antenna	
Operating Voltage	5V DC +- 10% (3.3V option)	
Current Consumption	250mA at transmit mode typically	
	200mA at receive mode typically	
	5mA at sleep mode typically	
Form Factor and Interface	PC Card Type II	
Temperature	0 ~ 55 °C in operating	
	-20~75 °C in storage	
Humidity	10% ~ 90% Non-condensing	
Dimension	115mm x 54mm x 5mm	

Technical Support

If you need technical support, please check out our IOGEAR Tech Info Library (T.I.L.) at **www.iogear.com/support** for the latest tips, tricks, and troubleshooting. The IOGEAR T.I.L. was designed to provide you with the latest technical information about our products. Most of the answers to your questions can be found here, so please try it out before contacting technical support.

Technical support is available Monday through Friday from 7:30 am to 5:30 pm PST and can be reached at (949) 453-8782 or by email **support@iogear.com**.

Radio & TV Interference Statement

WARNING!!! This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Limited Warranty

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK OR ITS DOCUMENTATION EXCEED THE PRICE PAID FOR THE PRODUCT.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and especially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or updates. For further inquires please contact your direct vendor.

Regulatory Compliance FCC Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential linearlation. interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment. 1). This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

