LP-N24P b/g/n Wireless 150 Mbps PCI adapter. USER GUIDE.

LPN24P_UG_ENB01W



LP-N24P b/g/n Wireless 150 Mbps PCI adapter. USER GUIDE.



THE NATURAL CHOICE IN NETWORKING is the registered trademark of LanPro Inc. All the products and product names mentioned herein are the trademarks or registered trademarks of their respective holders. Copyright of the whole product as integration, including its accessories and software, belongs to LanPro Inc. Without the permission of LanPro Inc., any individual or party is not allowed to copy, plagiarize, reproduce, or translate it into other languages.

All the photos and product specifications mentioned in this guide are for references only. Upgrades of software and hardware may occur, and if there are changes, LanPro Inc. is not responsible for notifying in advance. If you would like to know more about our product information, please visit our website at www.lanpro.com.

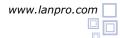


Table of Contents

1 Copyright Statement	
Chapter 1 Product Introduction	3
1.1 Package Contents	3
1.2 LED Indicator Description	3
1.3 Product Features	3
1.4 Product Usage	3
1.5 Before Installation	3
1.6 Disable other manufacturers' wireless network adapters	4
1.7 Product Maintenance	4
2 Chapter 2 Installation Guide PCI network adapter	5,6,7
3 Chapter 3 How to use the Windows Built-in Wireless Configurat	ion7
3.1 Wireless Network Connection under Windows XP	7,8,9
3.2 Wireless Network Connection under VISTA	9,10,11
3.3 Wireless Network Connection under Windows 7	
4 Chapter 4 LanPro Wireless Utility	
4.1 Station mode (Client Mode)	
4.1.1 Site Survey	
4.1.2 Link Information	15,16
4.1.3 Profile	16,17,18,19,20,21,22
4.1.4 About	22
4.2 AP mode	
4.2.1 Config AP	24
4.2.2 Advanced	24
4.2.3 Access Control List	25
4.2.4 Associate List	
4.2.5 AP Mode under Windows 7	
5 Appendix 1: Acronyms and Terms	26
6 Appendix 2: How to Set WPS	26,27,28,29,30,31,32
7 Appendix 3: FAQ	32,33,34
8 Appendix 4 :Regulatory Information	

Chapter 1 Product Introduction

Thank you for choosing this LanPro wireless adapter.

The LanPro wireless adapter supports IEEE wireless standards, and is able to quickly process file transfer, video, multimedia and other applications that require higher bandwidth.

This LanPro wireless adapter also integrates wireless configuration program, which makes it easy and quick to set up the wireless client. Besides, Soft AP is supported for fast wireless network establishment, and WPS encryption supported for you to quickly encrypt and secure your wireless network.

All in all, the LanPro wireless adapter is easy-to-use, and of robust signal, long transmitting distance.

1.1 Package Contents

- One Wireless network adapter.
- One Software CD (includes user guide and driver).

The above list is for your reference only, the actual contents may differ according to the product you purchase.

1.2 LED Indicator Description

There is one status LED indicator on the side of the wireless network adapter. It lights up and stays ON when working correctly, and flashes when transferring data.

1.3 Product Features

- Supports soft AP feature.
- Detects wireless network and adjusts transmitting rate automatically.
- Provides two working modes: Infrastructure and Ad-Hoc.
- Supports WEP data encryption and WPA-PSK/WPA2-PSK encryption methods.
- Supports WPS (Wi-Fi Protected Setup) encryption to secure your wireless network.
- Complies with Windows 7/XP/ 2000/Vista and Linux and MAC OS.

1.4 Product Usage

This LanPro Wireless Adapter offers a fast, reliable and extendable solution for wireless access. It is mostly used in the following circumstances:

- Enables staff members who require higher mobility, to have access to the wireless network anywhere inside their company.
- 2 Enables wireless communication for companies or places which are not suitable for wired LAN installation because of budget or building environment restrictions, such as historical buildings, rentals, or places for short-term usage.
- **3** Suitable for Enterprises or individuals requiring to regularly alter the networking topology Supports WEP data encryption and WPA-PSK/WPA2-PSK encryption methods.
- 4 Helps enterprises or individuals who would like to use wireless to establish wireless network quickly and frees them from the trouble of cable distribution.

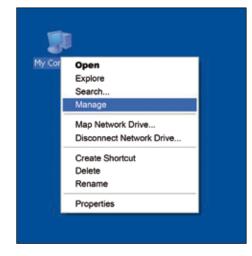
1.5 Before Installation

- 1 Please read through the whole user guide before you install and use this product.
- Please close or uninstall the configuration programs of other manufacturers' before you install the configuration programs of LanPro network adapters to avoid possible UI (user interface) conflict.
- **3** To avoid possible network conflicts between this LanPro network adapter and those of other manufacturers, we recommend that you first disable the network adapters of other manufacturers before installing the driver.

SLANPRO

1.6 Disable other manufacturers wireless network adapters

1 Right click "My Computer" and select "Manage".



On the Computer Management screen, select: "Device Manager" - "Network adapters", and right click the network adapter you want to disable and click "Disable".

and the second se			1-11
· File Action View Window H 아 - 50 표 같은 48 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			-191 8
Computer Management (Local) Computer Management (Local) System Tools Covert Verver Covert Ve	BITEST-1 Gomputer Gomputer Gomputer Display data controllers DVDkCD-ROM drives DV)apter (10(100)	

Click the "Yes" button on the dialogue box to disable the network adapter.



1.7 Product Maintenance

- 1 Please keep the product away from water and humid environment to guarantee its normal performance.
- 2 Protect it against hazardous substances (such as acids, alkalis etc).
- 3 Please don't directly expose the adapter to the sunlight or excessive heat.
- Please contact LanPro tech support if any problems occur, at http://www.lanpro.com.

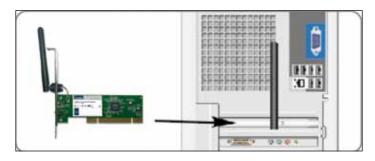
SLANPRO

Chapter 2 Installation Guide PCI network adapter

This chapter will guide you through the process of installing the network adapter software package, with the included software CD. The package integrates driver and configuration software. Thus, when you are installing the driver, the configuration software will be installed automatically as well.

The software installation steps and operating guide in this user guide are explained under Windows XP, Installation steps for other operating systems are similar.

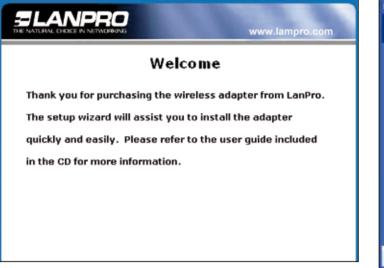
1 Insert the wireless adapter into the PCI slot of your computer when it is turned off and then start it (Please make sure the PCI adapter's "gold fingers" are clean. If the PCI adapter can't be identified after being inserted into the mainboard slot, or if the adapter can't scan signals after the driver being installed, please shut down your computer and clean the adapter, and then re-install it).



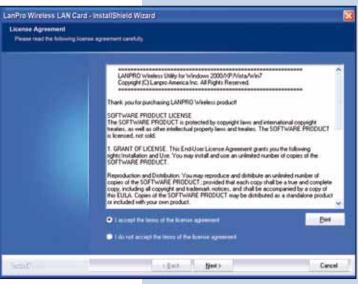
² When The "Found New Hardware Wizard" system dialogue pops-up, we recommend that you select "Cancel" and use the included Setup Wizard software CD for fast installation.



³ Put the included software CD into the CD drive of your computer, and the driver should run automatically, a Welcome screen should pop up, just click the "RUN" button. (Double click "LanPro.exe" in the software CD and manually install when it doesn't auto-run).



Select "I accept the terms of the license agreement" and click "Next".



5 Two set up types are provided: one is "Install driver only", the other is "Install driver and LanPro WLAN Config Tool".

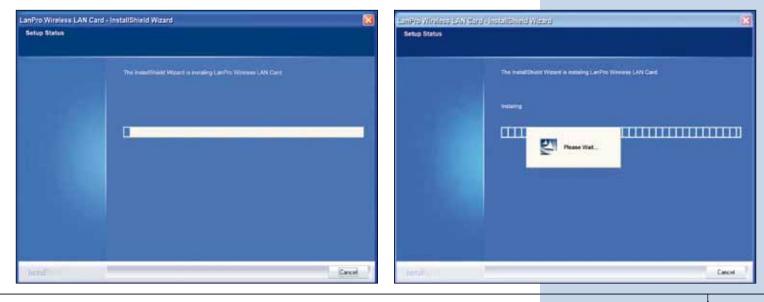
Channel in 11		
• ventor	we and Lanfillo WLAN UTBLY	
• estatut	een nattij	

NOTE: you may select the second method when you are accustomed to use the WINDOWS built-in wireless configuration program. However, this program doesn't support AP mode, WPS, and the WPS button on the wireless adapter. To use these advanced features, the first method is recommended.

6	Click	"Install"	to	begin	the	driver	installation.
---	-------	-----------	----	-------	-----	--------	---------------

Landro Windess LAN Card - J	mtallShield Wizard	×
Ready to install the Program The vicent is ready to begin insta	laden	
	Old head is paper the restablish. If you work to review or change any of your installation settings, shisk Back. Clot Carver to en- edged Now Store was sciencer program will block the install package. If the install package does not not properly, presestly to close the visit sciencer before you set the install package	
(feitiff et al.	c Back (Initial) Cars	- 1

Olick "Finish" to complete the installation.







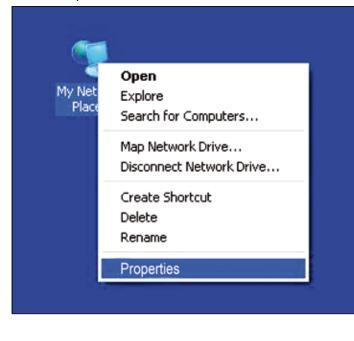
Chapter 3 How to use the Windows Built-in Wireless Configuration

This chapter explains to users who don't install LanPro configuration program how to use Windows Built-in Wireless Configuration to connect to the wireless network .

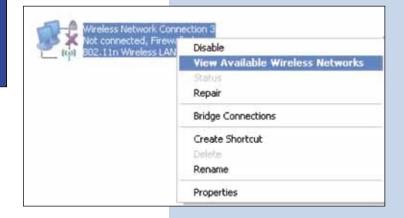
Use of the Windows Built-in Wireless Configuration requires enabling Windows Wireless Configuration service (the default is enabled).

3.1 Wireless Network Connection under Windows XP

 Right click "My Network Places" on the desktop and select "Properties".



2 Open the network connection. Right click "Wireless Network Connection" and select "View Available Wireless Networks" as shown below.



3 On the right of the screen displayed are the currently scanned wireless networks. If the one you want to connect has not been scanned, click "Refresh Network List" to update the network list.

Select the wireless network you want to connect, and click "Connect" or double click this wireless network. Input the key in the key dialogue box (the key input is case-sensitive) then click "Connect".

Setmork Taska	Choose a wirele	ss network		
S Refresh network list	Click an item in the list below information.	w to connect to a wireless network in range or to get more		
Set up a sameless network for a horse or small office	((1)) Landres LP-924			
Related Tasks	To connect to information.	this network, click Connect. You might need to enter additional		
Learn about weekers networking				
Change the order of preferred networks	Wireless Network Cor	mection 🔀		
Change advanced settings		24' requires a network key (also called a WEP key or WPA key). J Lunknown intruders from connecting to this network. ick Connect.		
	Network kery:			
	Confirm network key:	••••••		
		Connect Cancel		

NOTE: If the wireless device you are connecting to is not encrypted, the key dialogue box will not pop up.

• When it shows "Connected" as the picture below, then you can enjoy wireless access to Internet now.

Setwork Tasks	Choose a wireles	is network	
🕵 Refresh retwork lat	Click an item in the list below w/ormation.	to connect to a wireless network in rar	nge or to get more
Set up a weekes noticely. For a home or small office telated Tasks Usern dout version referention		died weeks teteck (WFAD) Is convected to the hetwork, To docur	Connected 🛔 (111) rest from the test-son,
Change the order of preferred interests	((Q)) UP-1522	abled winnless network (WPA)	atl
			Deconvect

5 You can modify wireless network key from "Change advanced settings".

Setwork Tasks	Choose a wireless network	
😴 Refresh network list	Click an item in the list below to connect to a wireless network i information.	n range or to get more
Set up a wireless network for a hose or small office	(()) Landya LP-N24	Connected 🔆
Related Fasks	You are currently connected to the network. To d disk Deconnect:	econnect from the network,
Change the order of preferred networks Change advanced settings	((O)) LP-1522 Security-enabled wireless network (WPA)	atl

6 Select "Wireless Networks" and choose the one you want to modify, and then click "Properties".

Wireless Network Connection 3 Properties ? X General Wireless Networks Advanced Use Windows to configure my wireless network settings Available networks: To connect to, disconnect from, or find out more information about wireless networks in range, click the button below. View Wireless Networks Preferred networks: Automatically connect to available networks in the order listed below: LanPro LP-N24 (Automatic) Move up Move down Properties Add... Remove Learn about setting up wireless network Advanced configuration, 0K Cancel

LanPro LP-N24 properti		
Association Authentication	IN CONTRACTOR OF	
Network name (SSID)	A set of the set of the set	
	etwork is not broadcasting	
Weekess redwork Lay	Annon in the broadcastry	
This network requires a lo	ey lot the following:	
Network Authentication:	WPA2-PSK	
Data encryption:	AES	~
Network key		
Commission and and	5+++++	
Kan Tarte Ladran (1918)		
To the Own (second la	Assessed.	
They is a temporal mean factorial powers has not up	addisona (and free Community or	
Comment of the second second		
	Or.	Can

Modify the key in the appearing dialogue box.

3.2 Wireless Network Connection under VISTA

1 Click the Wireless Connection icon in the lower right corner of your desktop and select "Connect to a network" as shown below.

2 Select the wireless network you wish to connect and click "Connect" or double click the wireless network to connect. Click the Refresh icon in the upper right corner to update the network list if you don't find the specified wireless network.

Not Connected
Wireless networks are available.
Connect to a network Network and Sharing Center
🛃 🧞 🙀 🕩 10:44 AM

Shew All	•	[
UP-1522	Security-enabled network	lir-
LenPro LP-N24	Security-enabled network	att.

3 If the wireless network that you are connecting has security mode enabled, you'll be prompted to enter the network key. Click "Connect" after you enter the correct key.

	- U 🗰
0	Connect to a network
	Type the network security key or passphrase for LanPro LP-N24
	The person who setup the network can give you the key or papphrase.
	Security key or passphrase:
	••••••
	Dipley characters
	If you have a USB flash drive with network settings for LanPro LP-N24, insert it now.
	Connect Cancel

4 The following screen will appear after successfully connected to the wireless network.network key. Click "Connect" after you enter the correct key.

V Connect to a network	00
Successfully connected to LanPro LP-N24	
Save this network Start this connection automatically	
	Close
	Successfully connected to LanPro LP-N24

5 If you want to change the wireless network key, just right click the wireless network's SSID and then select "Properties".

LanPro LP-N24 Connected Disconnect Status LP-1522 Security-enabled net Diagnose	Show All	*		
LP-1522 Security-enabled net Properties	LanPro LP-N24	Connected		-1
	👽 LP-1522	Security-enabled net	The second second	-1
				-

box

	LanPro LP-N24 Wireless Network properties
	Security type: WPA2-Personal Encryption type: AES Network security key
6 You can modify the key from the appearing dialogue x.	Show characters
	OK Cancel
3.3 Wireless Network Connection under Windows 2	7

Click the wireless connection in the lower right corner of the computer's desktop to view the available wireless networks. Select the wireless network you wish to connect to and click "Connect" or double click the wireless network to connect. If you don't find the specified one, please click the refresh icon in the upper right corner to update the list.

Not connected	43	Not connected	47
Connections are available		Connections are available	
Wireless Network Connection	^	Wireless Network Connection	^
LanPro LP-N24	lite.	LanPro LP-N24	lte.
LP-1522	I	Connect automatically	Connect
		LP-1522	.atl
Open Network and Sharing C	enter	Open Network and Sharing O	Center
	10:12 AM 5/8/2011	- R 🐗 😡	10:14 AM 5/8/2011

ELANPRO

2 If the wireless network you are connecting to is encrypted, you'll be prompted to enter the key. Click "Ok" after you enter the correct key.

Connect to a Net	work	P Connect to a Net	work
Type the netwo	ork security key	Type the netwo	ork security key
Security key:		Security key:	P@ssw0rd
	Hide characters		Hide characters
	OK Cancel		OK Cancel
	 ▲ 10:15 AM 5/8/2011 		► 🔀 🖆 🐿 10:16 AM 5/8/2011

3 It shows "Connected" after successfully connected. You can disconnect it, view its status or modify the wireless network properties by right click the wireless network.

Connect to a Network	E
Connecting to LanPro LP-N24	÷
	Cancel
	- 诸 🚽 🕼 10:16 AM

Currently conne LanPro L No Interr	
Wireless Networ	k Connection
LanPro LP-N24	2 Connected
	Disconnect
LP-1522	Name: LanPro LP-N24 2 Signal Strength: Excellent Security Type: WPA2-PSK Radio Type: 802.11n SSID: LanPro LP-N24
Open Netv	work and Sharing Center
-	• 🕞 📲 🌆 10:21 AM 5/8/2011

SLANPRO

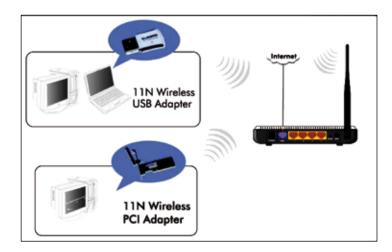
Chapter 4 LanPro Wireless Utility

When you are installing the driver, select "Install driver and LanPro WLAN Config Tool" and the adapter driver and client utility will be installed. All functions of this adapter can be configured via LanPro's utility interface (in the following text it is abbreviated as UI).

Select "Start"—"All Programs" — "LanPro Wireless"— LanPro Wireless Utility", or click the "LanPro Wireless Utility" shortcut on your PC's desktop to start the UI.

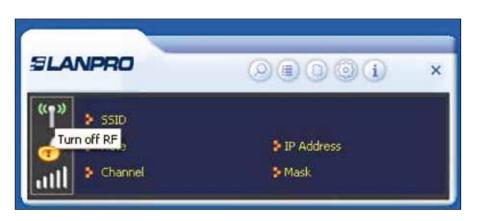
4.1 Station mode (Client Mode)

Station mode (Client Mode) Overview.



It is a common solution to use the wireless network adapter as a client to receive signals.

Main interface for station mode



The function buttons on the top (From L to R) are respectively Site Survey, Link Information, Profile, Advanced, About, Help, and MiniSize. While the left column displays Turn On/Off RF, Security /No security, and Signal status.

4.1.1 Site Survey

The "Site Survey" screen displays currently scanned wireless signals and you can click one to connect the signal. Select one and you may view the AP's MAC address, wireless mode (B/G/N), authentication type, and encryption type, or WPS authentication and signal strength.

Before you connect to a wireless network, please click the "Rescan" button to update the wireless network list and select the one you wish to connect, then click the "Connect" icon.

		r	Site	Survey			×
SLANPRO		LP-1522	24 <mark>1</mark> 2	1 🗘 🧐 1 🧐	(† () (†	100% 100%	
Turn off RF UR SSID	≱ IP Address ≱ Mask						
		AP Information SSID La MAC Address 0	anPro LP-N24 D-27-11-00-94-88	Authentication Encryption	WPA2-F	ляк 🕡	Ŋ

For the networks that are not encrypted, you can directly click "Connect". However, for the encrypted wireless networks, a "Profile" dialog will pop up and you must select the corresponding authentication type and encryption type, and then click the "Next" button to input the correct key. Please note that this type of connection will not create a profile, thus in the next time connect to this network you still need to select it manually.

= + +	Profile	×	= + +	Profile	×
Authentication Encryption	WPA2-PSK	-	WPA Preshared Key	****** *	
					C Show Password

The detailed explanations about the authentication and encryption are as follows:

WEP: Supports 10/26-bit Hex characters and 5/13-bit ASCII.
 WPA-PSK: Supports 8-63-bit ASCII and 8-64-bit Hex characters.
 WPA2-PSK: Supports 8-63-bit ASCII and 8-64-bit Hex characters.
 WPA-PSK/WPA2-PSK: Supports 8-63-bit ASCII and 8-64 -bit hex characters.
 MOTE:
 The Hex characters consist of numbers 0~9 and letters a-f.
 ASCII characters consist of any Arabic digitals/letters and characters.

4.1.2 Link Information

After successfully connected to one wireless network, you can view its detailed information by clicking the "Link Information" on the main interface.

1 "Link Status" screen displays the detailed information of the connected AP including its SSID, MAC address, authentication type, encryption type, network type and channel.

LANPRO	(2806	
SSID	LanPro LP-N24		
🔒 👂 Rate	150.0 Mbps	IP Address	192.168.0.100
attl > Channel	1 (2412 MHz)	Mask	255.255.255.0
■	Link Informa	tion	•
Status	LanPro LP-N24 <:	> 00-27-11-00-0	
Status	LanPro LP-N24 <: Link is Up [Tx Pow	> 00-27-11-00-0	
Status Extra Info	LanPro LP-N24 <: Link is Up [Tx Pow WPA2-PSK	> 00-27-11-00-0	
Status Extra Info Authentication Encryption	LanPro LP-N24 <: Link is Up [Tx Pow WPA2-PSK	> 00-27-11-00-0	

2 "Throughput" screen displays the signal strength of each of the wireless adapter's antennas and the link quality.

ANPRO			() ()
» ssid	LanPro LP-N24		
👂 Rate	150.0 Mbps	IP Addres	\$ 192,168.0.10
Channel	1 (2412 MHz)	Mask	255,255,255,
~ 1	Link Inform	nation	
Link Quality		nation	100 %
		Receive Link Speed	

3 "Statistics" screen is used to count the total Rx and Tx data packets, including transmitted, retransmitted and fail to receive ACK after all retries. You can click the "Reset Counter" button to clear the count.



4.1.3 Profile

Except the above common connection type, you can also connect to the wireless network by adding a profile on the "Profile" screen. The Profile screen is used to save the wireless network parameters. When the adapter is successfully connected to a network, the profile name of this network will automatically be added here, which helps the adapter to quickly connect to the wireless network next time. However, there's one exception when you have set the hidden SSID, namely the SSID, can not be scanned, then you must manually connect by adding the profile name. The main interface is as shown below.

Add: create a new profile
Delete : delete the existing profile
Edit: modify the existing profile
Import : import the previously configured profile.
Export: export the configured profile.
Add WPS Profile: WPS setting requires that the connecting wireless device support WPS function. WPS helps you to fulfill wireless encryption fast as well as secure your wireless network. For detailed setting steps, refer to appendix2.

((•))	NPRO		2806	
1″	👌 551D	LanPro LP-N24		
a	👂 Rate	150.0 Mbps	IP Address	192,168,0,100
ull	Channel	1 (2412 MHz)	Mask	255.255.255.0
		Profile Lis	t	,
¢ -	- [] 6		t	3
Profile	e Information		t	ر ا

There are two network types for your option when clicking the "Add" button to add wireless adapter connection: Infrastructure and Ad-Hoc.



Infrastructure is an application mode that integrates the wired and wireless LAN architectures. It is different from Ad-Hoc in that in this mode the computer installed with the wireless network adapter has to fulfill the wireless communication via AP or wireless router. It can be devided into two modes: "wireless AP + wireless network adapter" and "wireless router + wireless network adapter".

Ad-Hoc is a special wireless mobile network application mode. All nodes in the network are equal. It is usually used to share resources by connecting the opposing computer's wireless adapter.

1. Infrastructure Profile Management

When you are connecting the wireless adapter to an AP or a wireless router, please select the Infrastructure mode. Click the "Add"button and select the network type as "Infrastructure", and enter the profile name and SSID or you can find the SSID you wish to connect from the drop-down list.

» > SSID	LanPro LP-N24		
👂 Rate	150.0 Mbps	P Address	192.168.0.10
Channel	1 (2412 MHz)	Mask	255/255/255
* *	Profile		
🗢 🏟 Profile Name	Profile PROF1		
Profile Name SSID	1000000		
	PROF1	ture - Connect to	P

SLANPRO

Click the next button to select the authentication type and encryption type such as WPA - PSK2 and AES, and then input the key and click next.

SLA	NPRO	()(i) ×
"]" 🔒 1111	SSIDRateChannel	LanPro LP-N24 150:0 Mbps 1 (2412 MHz)		192.168.0.100 255.255.255.0
	• •	Profile		×
	-	PROF1		
	Profile Name SSID	LanPro LP-N2	4	







ELANPRO

After a profile is successfully added, the profile name can be seen on the profile list, you can edit, import or export the profile, click "Active" to finish the connection, now you can also view the detailed connection status on the "Link Information" screen.





NOTE:

If the SSID broadcast function of the wireless router or AP you wish to connect is disabled, then the wireless adapter can not scan the SSID, thus you need to connect by creating the corresponding profile.

2.Ad-Hoc Profile management

Using the Ad-hoc mode to establish a wireless network requires that each computer should be equipped with a wireless network adapter. By connecting these wireless adapters, computers are able to share the resources. The detailed setting steps are as follows:

Firstly you'll have to allocate a static IP to each wireless adapter to be connected in Ad-hoc mode.
 Right click "My Network Places" on your computer's desktop and select "Properties".



b. Right click "Wireless Network Connection", and select **c.** Select "Internet Protocol (TCP/IP)" and click "Properties". "Properties"

Wireless Netwo		ea Connection
🛫 ເຊັ່າ: 302.11n Wirel	Disable View Available Wireless Networks Status Repair	t-based PCI Ethern
	Bridge Connections	_
	Create Shortcut Delete Rename	
	Properties	

10190104	Wireless Networks	Advanced	
Connec	t using:		
-	02.11n Wireless LAN	V Card	Configure.
This co	nnection uses the fol	loving items:	-
N Y	QoS Packet Sched	the second second second	Properties
	iption		
wide	strission Control Prot area network protoc ss diverse interconne	ol that provides a	
	w icon in notification fy me when this conn		
			50

d. Please enter the IP address and subnet mask, and make sure this IP address is not used by other devices in the network.For example: if your wireless adapter's IP address is 192.168.0.1, then set other wireless adapters' IP addresses within the range of 192.168.0.2-192.168.0.254. Click "Ok" to save the settings.

2) Create a new Ad-hoc profile.

Click the "Add" button and enter the network name in the SSID field to identify the wireless network, and select Adhoc as the network type and then select the channel.

Internet Protocol (TCP/IP) Prope	rties 🔹 🛛 🔀
General	
You can get IP settings assigned auton this capability. Otherwise, you need to the appropriate IP settings.	
Obtain an IP address automatical	y
 Use the following IP address: 	
IP address:	192.168.0.2
Subnet mask:	255.255.255.0
Default gateway:	
Obtain DNS server address autor	natically
 Use the following DNS server address 	tresses:
Preferred DNS server:	
Alternate DNS server:	
	Advanced
	OK Cancel

SLA	NPRO	(9000)() ×
"†" 🙃 111	SSIDRateChannel	LanPro LP-N24 150.0 Mbps 1 (2412 MHz)	> IP Address > Mask	192.168.0.1 255.255.255.0
	Ð	Profile		×
	Profile Name	PROF3		
	SSID	Lanpro		-
1	Network Type	← Infrastruc	ture - Connect to	AP
		(Ad Hoc - C	Connect to other a	computers

SLANPRO

Click the "Next" button to select the authentication type and encryption type and then input the correct key and click "Next".

LANPRO	000)() ×	SLANPR		000)()	×
SSID SSID Rate Channel	LanPro LP-N24 150.0 Mbps > IP Address 1 (2412 MHz) > Mask	192.168.0.1 255.255.255.0	(1) (1) (1) (1) (1) (1) (1) (1)	e 150.0 Mbps	IP Address Mask	192.168.0.1 255.255.255.0	
• •	Profile	×	= + =	Profil	e		×
Authentication Encryption	WPA-NONE ABS	•	WPA Preshare	ed Key	•		
					I [—] Shi	ow Password	

After a profile is successfully added, the profile can be seen on the profile list, select it and click the "**Active**" icon on the lower right corner.



SLANPRO

Once that profile has been activated, search for that wireless network as seen from the other clients, and then double click the wireless network you have configured and you'll be prompted for the key. After entering the key, click "Connect". When the highlighted part shows "Connected", it indicates the connection is successful.

Wordens Hidtwork, Donne-	lipe 13 🗙	11" Wireless Network Connec	tien 13 🛛 🛛
Network Tasks	Choose a wireless network Wireless Network Connection	Network Tasks	Choose a wireless network Click an item in the list below to consect to a visuless network in range or to get more information.
3 bit up a verifies reduced for a home or used office	The network "Langro" requires a network key jalso called a WEP key or WPA key). A network key helps prevent unknown intruders from connecting to this network. Type the key, and then click Connect	Set up a nonless reduction for a home or shall office	LP-N24P Connected & * Unsecured computer to computer network all
Related Tasks	Confirm network key Confirm network key Connect Connect Connect Connect Connect	Related Tasks	((°)) LP-1522 Promoti 😭
Corrup shimond jutting	Security-enabled computer kincompater referent and the type the required function key.	Charge stravend wittings	
	Civit		L Const

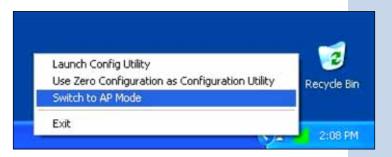
4.1.4 About

This screen mainly displays the version information of the UI's different programs as well as LanPro's copyright statement.

	Abo	out		
Version Utility	4.0.0.0	Date	2011-05-30	1
Driver	3.1.5.0	Date	2011-05-30	
SDK	1.0.6.0	Date	2010-06-14	
Firmware	0.26	EEPROM	0.1	
MAC Address	00-27-	11-00-00-01		ī
SLANPRO	(c) Copyri	ght 2011, Lanpro All rights reserv		

4.2 AP mode

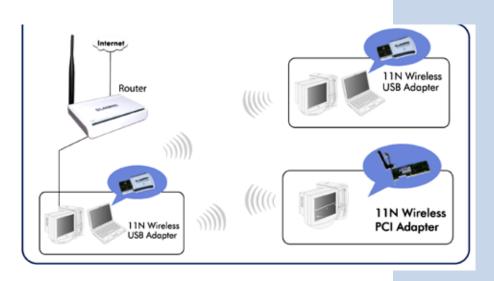
When you want to use the wireless adapter's AP function, please right click the UI icon on the taskbar of your computer desktop and select "Switch to AP Mode".



In this mode, the wireless adapter acts as an AP to transmit wireless signal and create a wireless network, while allowing other wireless clients to access this network.

As shown in the diagram below: The PC in the left has already accessed to the Internet by using a wired network adapter, meanwhile, you install a LanPro wireless adapter (take a USB wireless adapter as an example) and its UI on this computer, and set the adapter to AP mode.

By using the wireless adapters to scan the AP'S SSID to connect, the computers in the right can also access to the Internet after it is successfully connected.



In this mode, the client utility differs from that in station mode, and the main interface is as shown below.

SLANP	20	9) (B (i)	×
" 1" > 55	5ID	LanPro LP-N24P	-CE			
💣 🔭	ode	2.4GHz	8	IP	192.168.123.1	
님 이	nannel	1 (2412 MHz)	\$	Mask	255.255.255.0	

When it is switched to AP mode, the wireless adapter will automatically set its IP address as 192.168.123.1, and other clients that connected to this AP will automatically obtain the IP addresses of: 192.168.123.X(X is any integer from 2 to 254). The function buttons on the top (From L to R)are respectively Config AP, Advanced, Access Control List, Associate List, About and MiniSize, while the left column displays Turn On/Off RF, Security /No security, and AP mode icon.

4.2.1 Config AP

This screen is used to set the AP's general parameters including SSID, wireless mode, channel, authentication type and encryption type, as shown in the picture below.

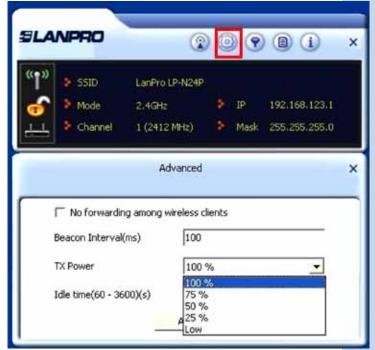
SLANPRO	G) @) 🤊	(B) (i)	×
	LanPro LP-N24P 2.4GHz 1 (2412 MHz)	. 9		192.168.123.1 255.255.255.0	
1.**	Config AP	e			×
SSID	LanPro LP-N24	P			
Wireless Mode	2.4GHz			•	

Here the authentication type is set as "Open" and the encryption type "Not Use".

🎽 👂 SSID	LanPro LP-N24P	-CE	
🛐 🔖 Mode	2.4GHz	₿ IP	192,168,123,1
🛓 👂 Channel	1 (2412 MHz)	Mask	255.255.255.0
* *	Config AP		
Authentication	Open		•
Encryption	Not Use		•

4.2.2 Advanced

This screen is used to set the advanced parameters of the wireless adapter when working in AP mode, such as No forwarding among wireless clients and TX power.

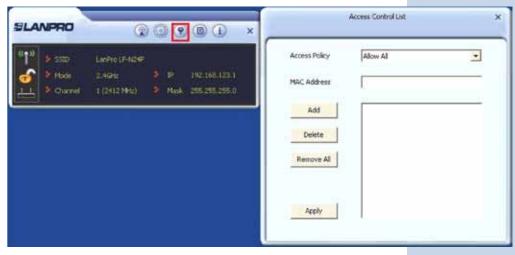


No forwarding among wireless clients: This feature isolates the communications among the wireless clients that are connected to the wireless adapter in AP mode.

TX power: To adjust the transmit power for the wireless adapter.

4.2.3 Access Control List

Access Control is based on the wireless adapter' MAC addresses to allow or reject a specified client's access to this wireless network.



Access Policy:

Disable: To disable the filter function.

Allow All: To permit all hosts whose wireless MAC addresses are included in the list to access the wireless network, other hosts whose wireless MAC addresses have not been added to the list will be prohibited by default.

Reject All: To prohibit all hosts whose wireless MAC addresses are included in the list from accessing the wireless network, other hosts whose wireless MAC addresses have not been added to the list will be permitted by default.

MAC Address: To input the client's wireless MAC address you want to filter in the physical address field.

Add: to add the entered wireless client MAC address to the list.

Delete: to delete an existing MAC address in the list.

Remove All: to delete all clients' wireless MAC addresses in the list.

Add the MAC address of the client's wireless network adapter to the list and select "All Allow" in the access policy drop-down list, computers whose wireless MAC addresses are not included in the list will be rejected by default. Select "All reject", and only the host computers whose wireless MAC addresses are included in the list can not access the AP wireless network.

4.2.4 Associate List

When there is a client connected to this AP and has successfully obtained the IP address, then the client's MAC address, AID and Status can be seen on the list.

	Assoc	Sate List	2	SLANPRO	Q	0.9		×
MAC Address	AID	Power S.,.		€ channe	LanPro LP-M24P 2240H2	¥ 11.	192,160,123,1	

4.2.5 AP Mode under Windows 7

1 Under Windows 7, wireless adapters are allowed to work in both STA and AP modes. Here, the wireless adapter acts not only as a client, but also an AP to send wireless signal, which equals to an amplifier. Right click the UI icon on the lower right corner of the computer desktop and select "Switch to STA Mode".

	Launch	Config	Utility	
	Switch t	o STA N	lode	
	Exit			
Cu	stomize			
	🗠 😼 d	1 🕼	11:22 AM 5/8/2011	

2 You can change the SSID on the Config AP screen and control the number of the connected clients by modifying the maximum number of peers. AP mode has only one encryption method which is WPA2-AES by default and cannot be modified.

Appendix 1: Acronyms and Terms

Appendix 1: Acronyms and Terms

WLAN Wireless Local Area Network

802.11 A family of specifications developed by the IEEE for WLAN technology.

802.11a An extension to 802.11 WLAN standards that provides up to 54 Mbps transmission in the 5 GHz UNI radio band.

802.11b An extension to 802.11 WLAN standard that provides up to 11 Mbps transmission in the 2.4 GHz ISM radio band.

802.11b uses DSSS modulation.

802.11g An extension to 802.11 WLAN standard that provides up to 54 Mbps transmission in the 2.4 GHz ISM radio band.

802.11b uses OFDM modulation and is backwards compatible with 802.11b.

802.11n higher transmission rate, supports Multi-Input Multi-Output (MIMO) technology.

WEP Wired Equivalent Privacy. A security protocol for WLANs defined in the IEEE 802.11 standard.

WPA Wireless Protected Access, adopts rotating keys.

RSN Robust Security Network, A substitute for WPA, and it adopts 802.1x standard and advanced encryption

ICS Microsoft Internet Connection Sharing enables multi-computer to share access to Internet via one PC.

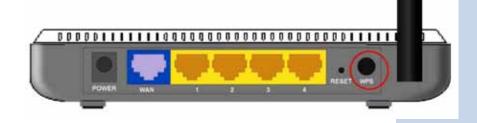


WPS setting supports two modes: PBC and PIN. The detailed setting steps are as follows:

1. Wireless Connection in PBC Mode

1.1 Enable the router's WPS-PBC feature

If your router provides WPS button, just press and hold it for about 1 second, then the WPS LED will be flashing for about 2 minutes, which indicates the router's WPS feature has been enabled. Otherwise, you can also log on to the router's webbased utility to enable the PBC mode in WPS settings screen (For detailed settings, please refer to your router's user guide).



1.2 Perform PBC connection on the UI of the wireless adapter

On the main interface of LanPro's UI, click "Profile"—"Add WPS Profile".

SLA	NPRO	-		00	(i) ×
"†" 😚 111	 SSID Rate Channel 	LanPro LP- 150,0 Mbp 1 (2412 MF	s 👂 IP Ad		192.168.0.101 255.255.255.0
	• 📝 😭	LanPr Add WF	file List PS Profile		× ۲
1.101633633	Information Name PRC)F1	Authentication	WPA2-	PSK ((2))

2 On the Profile screen, select "Push-Button Configuration"(PBC) and then click the "Next" button, select "Start PBC" two minutes after the router enables the WPS function. The connection is established when the negotiating process finishes.

U	e 1	anPro LP-N24 50.0 Mbps (2412 MHz)	≫ IP Address ≫ Mask	192.168.0.101 255.255.255.0
• •		Profile		×
WP5 AP Le	d (e Pus	sh-Button Config I / numeric code		T Auto

Start PBC:

SSID LanPro LP-N24 Rate 150.0 Mbps > IP Address 192.168.0.101 Channel 1 (2412 MHz) > Mask 255.255.255.0		NPRO	(9000)() ×
* *	<pre> « † »</pre>	👂 Rate	150.0 Mbps		
0 %	= +		And a contract of the second		
WPS status is not used				1	0%

Negotiating process:

SLANPRO		×
SSID	P Address	
Channel	≱ Mask	
	Profile	×
_	10 %	_
PBC -Scanning AP		
	Finish	

A profile forms automatically after the connection is successfully established.

LANP					×
" " 🔉 55	ID LanPro LP	-N24			
🔒 🕨 Ra	ate 54.0 Mbp	s 🔰 IP A	ddress	0.0.0.0	
ull a	nannel 1 (2412 M	iHz) 🔰 Mas	k.	0.0.0.0	
		ofile List			>
🕈 🗕 🎽 PROF1	EanPro LP-N			2.6	
	R O				
PROF1	LanPro LP-N	24		2 2 2 2 2	
PROF1 PROF2	LanPro LP-N: LP-1522 LanPro LP-N	24		2.2.2 0.000	
PROF1 PROF2	LanPro LP-N LP-1522 LanPro LP-N	24	WPA2	∎ Ý ∎ č	

1.3 Using the wireless adapter's WPS button to perform PBC connection

If your wireless adapter provides a WPS button, you may use the button to perform PBC connection.

- a) Run the adapter's UI and switch to STATION mode
- b) Two minutes after the router's WPS-PBC is enabled, press the adapter's WPS button to connect in PBC mode.
- c) You may view the PBC connection process on the UI's PBC screen.

2. Wireless Connections in PIN Mode

On the "Add WPS Profile" screen, select "PIN" as the WPS Method. You may select the wireless AP to be connected in WPS mode on the WPS AP drop-down List, or select "Auto" and then click the next button.

PRO)() ×
			192.168.0.100 255.255.255.0
•	Profile		×
		uration(PBC)	T Auto
۲	PIN / numeric code		
	Pate Channel	SSID LanPro LP-N24 Rate 150.0 Mbps Channel 1 (2412 MHz) Profile	SSID LanPro LP-N24 Rate 150.0 Mbps \$ IP Address Channel I (2412 MHz) \$ Mask Profile AP List LanPro LP-N24 Iethod (~ Push-Button Configuration(PBC)

2.1 Enrollee Mode

The PIN code field lists the adapter's current PIN code, when you select "Enrollee" as the Config Mode, you need to copy this PIN code and input it in the PIN code field of the router's WPS setting screen.



Here we take LanPro's LP-N24 as an example. First enter its WPS configuration screen, enable WPS settings and select PIN for WPS mode and then input 60103338 in the PIN code field, and then click the "Save" button. When the WPS indicator of the Router starts flashing, it indicates that WPS feature is enabled.

You could setup security Protected Setup	early by choosing F	IN or PBC method to do Wi-Fi
WPS Settings	ODurbie	· Endla
WPS mode	OPBC ⊙PBN	60103338
WPS Summary		
WPS Current Status:		1-Or
WPS Configured.		No
WPS SSID		LanPro LP-N24
WPS Auth Mode		WPA2-PSK
WPS Encryp Type:		AES
WPS Default Key Index		2
WPS Key(ASCII)		Fi@sew0sd
AP PDR		14720246

Click the next button on the Profile screen and click "Start PIN" to start the PIN code negotiation.

SLANPRO	(9000)() ×
	LanPro LP-N24 54.0 Mbps 1 (2412 MHz)		192.168.0.100 255.255.255.0
	Profile		×
		_	0%
WPS sta	tus is not used	_	
	Start PIN	1	

2.2 Registrar Mode

On the "Add WPS Profile" screen, select the SSID of the AP that need to negotiate in WPS mode instead of selecting"Auto". Then select "PIN" as the WPS method and click the next button to display the following screen:

Select "Registrar" as the config mode and enter the router's PIN code, such as 14720246 that displays on the router's WPS screen in section 2.1, in the PIN code field here.



ELANPRO

Now you can view the SSID, authentication type, and encrytion type that need to be negotiated by the WPS in registrar mode. These values can be modified but we recommend using the default. Here we use the defaut setting and then click the next buton.

You can view the negotiation key on the screen below, but you are not recommended to modify it, just click the next buton.

LANPRO	0)() ×	SLA	NPRO	(
1 SSID Rate Chann		≫ IP Address ≯ Mask	192.168.0.100 255.255.255.0	"†" 	 SSID Rate Channel 	LanPro LP-N24 54.0 Mbps 1 (2412 MHz)	≯IP Address ≯Mask	192.168.0.100 255.255.255.0
_	Profile		×			Profile		3
**					• ••			
SSID BSSID Authentication	ExRegNWCCA6CE 00-27-11-00-00-02 WPA2-PSK		-	WPA	Preshared Key		7886A69D70ABD	61FF5163C6

Then click "Start PIN" on the screen below to perform WPS connection.

NPRO	(2000	9 () >
SSID	LanPro LP-N24		
Rate	54.0 Mbps	IP Address	192,168.0,100
Channel	1 (2412 MHz)	Mask	255.255.255.0
			_
			0 %
WPS stat	tus is not used		
	Start PIM	c [
	9 Rate 9 Channel	SSID LanPro LP-N24 Rate 54.0 Mbps	SSID LanPro LP-N24 Rate 54.0 Mbps P Address Channel 1 (2412 MHz) Mask Profile

NOTE:

1. Under the WPS connection mode, when multiple routers simultaneously enable the WPS function, it may cause connection failure.

2. If the router connect to the adapter using the WPS, only one client can be connected at one time, and so if the router need to connect to multiple clients through WPS, you should repeat the WPS operation.

Appendix 3: FAQ

Q1: Microsoft ICS service is pending.

A1: If ICS service cannot be enabled after a long time, please re-switch from Station Mode to AP Mode, if not successful, please restart the computer.

Q2: ICS is already bound by another network device.

A2: Microsoft ICS service can only combine one group of WAN and LAN. This message indicates ICS may have been enabled by other network adapters. Please manually cancel ICS and re-switch to AP mode.

Network Counsections		
1. DR - Des Parader		
3- O 🐉	🔎 Search 🌔 Pulders 💷 •	
iterat 🔌 Network Connections		- 🔁 🔁
Network Tasks	LAN or High-Speed Internet	
Set up a horse or small affice network	Convected, Preseded Network cable unploged, Press.	
Change Windows Prevel settings	+ Local Area Connection Properties 7	
Estable this network device	Served Advanced	
Change settings of this		
convertion	Writtine Frend	
Other Places	Protect my computer and network by living m preventing access to this computer from For intervent	
Control Famel		
My Retwork Places	/ Internet Connection Straining	
Hy Documents	Allow other network uses to connect through the	
Mr Computer	compiliar's internet connection	
	FAllow after retwork uses to control to duable the	
Details	a travel internet connection	
Local Area Connectan	Learn gives about (conceptor) Settings.	
LAN or High-Speed Internet	2000 C	
Network cable unplugged,		
Fivewalled Intel 8255-based PCI Etherne		
Adightr (10/100)	If yok/te not sue how to set these properties, use the <u>Network Setup Wated</u> instruct	
	OK. Canol	

Manually enable or cancel ICS.

Q3: Failed to enable ICS.

A3: Microsoft ICS service can only combine one group of WAN and LAN. This message indicates ICS may have been enabled by other network adapters.

1. Please manually cancel or restart and cancel ICS, then re-switch to AP mode.

2. This dialogue box appears because virtual wi-fi miniport adapter can only be used by one wireless network adapter at a time. Please disable any other non-LanPro wireless network adapters and re-switch to AP mode.

Q4: Under Windows 7, when I switch from station mode to AP mode, the screen flashes "Disabling ICS, please wait....."and immediately return to station screen.

A4: This is because you have disabled "Microsoft Virtual WiFi Miniport Adapter", please re-enable it and then switch to AP mode.

Q5: Client cannot obtain IP when connected to soft AP of the wireless network adapter.

A5: Manually set an IP address at the same net segment as that of the AP and the gateway and DNS at the IP address of AP.Thus, communication can be achieved.

Q6: The SSID is not fully displayed on the wireless network list, what should I do?

A6: Keep the mouse on the displayed SSID for about 2 seconds, as the below picture shows, and you'll see the full SSID on the appearing box.

		Site	Survey				×
Wireless_	LanPro L	Ø	1	g	6)	100%	

Q7: Under Windows 2000 system, IP address can not be obtained when it is switched to AP Mode.

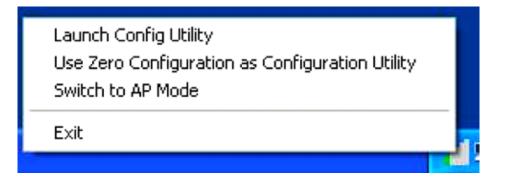
A7: Under Windows 2000 system, you have to manually configure sharing and then switch to AP. And an IP address of 192.168.0.1 will be obtained.

If you still have any problem, please contact our customer service or visit our website: www.lanpro.com

Q8: Sometimes the UI can not be moved by the mouse and also can not be minisized, why? **A8:** When you are performing some configurations or connections ,the UI only activates the currently operating window,other windows are locked and can not be operated, but it will restore to normal when you close or finish the current configuration and connection .

Q9: How to exit the UI?

A9: Right click the system tray icon and click "Exit" on the appearing dialog.



Q10: Now that the LanPro LP-N24P wireless adapter's driver can be installed without the Software CD, why it still provide the CD?

A10: Some functions are missing for the drive integrated in the LP-N24P adapter, and also the drive does not support the WPS button and AP mode, however, by installing the drive on the CD, the UI can be installed to fulfill these advanced features.

Q11: Why I can not normally use the Drive integrated in LP-N24P under MAC operating system? **A11:** LP-N24P can only integrates the drive under Windows system, to use LP-N24P under MAC system, please insert the LP-N24P to the computer with MAC OS; the system will identify the adapter as a CD, pop this CD out, and then install the MAC drive included in the CD.

Technical Support: support@LanPro.com

R Appendix 4 :Regulatory Information

Eu Declaration or Declaration of Conformity

Hereby, LANPRO INC, declares that this Wireless Adapter is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

FCC Statement

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 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.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example- use only shielded interface cables when connecting to computer or peripheral devices).

"The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter."

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with the minimum distance

of 20 cm. Operation is subject to the following two conditions:

1) This device may not cause interference and

2) This device must accept any interference, including interference that may cause undesired operation of the device.

Caution!

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.