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Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter

OEM installation manual

Rev: 0.96

0.95   First version

0.96   Update with correction by Azure Wave

Remove 2.4.4 Bridge feature

Change EZ-Setup to be Wi-Set

Add Wi-Set user guide

Add GUI user guide

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TRADEMARKS

USING THIS DOCUMENT

This document provides detailed user guidelines to provide Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter operation and setting-up. Though every effort has been made to assure that this document is current and accurate, more information may have become available subsequent to the production of this guide. In that event, please contact your Azure Wave representative for additional information that may help in the development process.

Contents

Notice

Safety statements

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

About this guide

The user guide contains the information you need to install and configure your Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter.

Guide organization

This guide contains the following chapters:

- Chapter 1: Product Information
  This chapter describes the general functionality, features and configuration modes of Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter.

- Chapter 2: Installation
  It is recommended that users should read this chapter before installing both Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter hardware and software. This chapter presents the systematic installation of Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter and antenna, utilities and driver on the support CD.

- Chapter 3: W-Set Wizard
  This chapter shows you the setup of wireless network in your office or home. Follow The step-by-step direction, provided by Wi-Set wizard, you can have your own wireless local area network up and running very quickly.

- Chapter 4: Management GUI
  This chapter teaches you the proper operations of selected mode from W-Set Wizard. The GUI display network status, connection profiles and network traffic to help you monitor and manage the network configuration.

Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter

specification summary

Host system connections

Interface	Fully complies with USB 2.0 or 1.1
USB date transfer rate	USB high speed (480Mbps), and full speed (12Mbps)

Wireless LAN (WLAN) environment connections

WLAN Interface	Multimode features Fully complies with IEEE 802.11 b/g specifications
WLAN transfer rate	802.11 b: DQPSK with data scrambling capability to provide data rate of 1, 2, 5.5, and 11Mbps 802.11 g: A high-speed Fast Fourier Transform(OFDM)/Inverse Fast Fourier Transform (OFDM) provide data rate of 6, 9, 12, 18, 24, 36, 48 and 54Mbps
WLAN Frequency band	2.4 ~ 2.4835 GHz ((Industrial Scientific Medical Band)
Operation Channel	Channel 1 ~ 11 (FOR FCC)
Compatibility	Fully compatible to IEEE 802.11 b/g devices
Security	Hardware-based IEEE 802.11 encryption/decryption engine, including 64-bit/128-bit WEP, TKIP, and AES
Antenna	Detachable dipolar antenna
LED present	On: link is on
(Green/Red light)	Off: link is off
Wake on WLAN	Quick blinking: data transition Slow blinking with 5 times: scan wireless nodes Wake up system by wireless LAN (AP mode)

Chapter 2

Product Information

This chapter describes the fundamental features of

Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter.

2.1 Product overview

Thank you for choosing Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter.

The Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter is an easy-to-use wireless local area network (WLAN) adapter which is designed for home or office use. Direct Sequence Spread Spectrum (DSSS), Complementary Code Keying (CCK), and Orthogonal Frequency Division Multiplexing (OFDM) base band processing are implemented to support all IEEE 802.11b, and 802.11g data rates. Differential phase shift keying modulation schemes, DBPSK and DQPSK with data scrambling capability, are available, along with complementary code keying to provide data rates of 1, 2, 5.5, and 11Mbps, with long or short preamble. A high-speed Fast Fourier Transform /Inverse Fast Fourier Transform combined with BPSK, QPSK, 16QAM and 64QAM modulation of the individual sub-carriers provides data rates of 6, 9, 12, 18, 24, 36, 48 and 54Mbps, with rate-compatible punctured convolution coding with a coding rate of 1/2, 2/3, and 3/4.

The Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter also supports Wake-On-LAN (WOL) function and remote wake-up giving you the convenience to remote log in from other places to this system.

To provide efficient security to your wireless communication, the hardware-based IEEE 802.11i encryption/decryption engine, including 64-bit/128-bit WEP, TKIP, and AES, supports Wi-Fi alliance WPA and WPA2 security.

With these features and many more, Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter is ready to connect you to the world of wireless communication.

2.2 Features

System requirements

The Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter is an on-board component on ASUS motherboard requiring manual installation. Make sure that your system meets the following requirements.

- ASUS motherboard with Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter on-board solution
- Minimum 64MB system memory
- Operating system
  Station mode : Windows® 2000/XP/Server 2003
  AP/wireless bridge mode : Windows® XP/Server 2003
- Optical drive for utilities and driver installation

Easy hardware installation

Because the Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter comes embedded in your ASUS motherboard, no hardware installation is necessary. Just connect the antenna, install the driver and utilities from the motherboard support CD and start wireless communication immediately.

54Mbps speed wireless travel

The Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter provides up to five times more data transmission than IEEE 802.11b standards, and breaks the wireless transmission barrier to speed up the internet connection.

Wi-Set Wizard

Easy-use wireless LAN setup wizard helps you to connect with present wireless network. The step-by-step wizard provides a convenient way to facilitate the complex wireless LAN setup process.

Automatic wireless establishment

The utility application of Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter automatically searches and reports the hot spots around it and the wireless signal quality and WEP capability associated with each hot spot. Then you could connect to the most suitable wireless node

2.3 LED and antenna port

The Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter comes with a red LED and an antenna port located at the rear of the adapter.
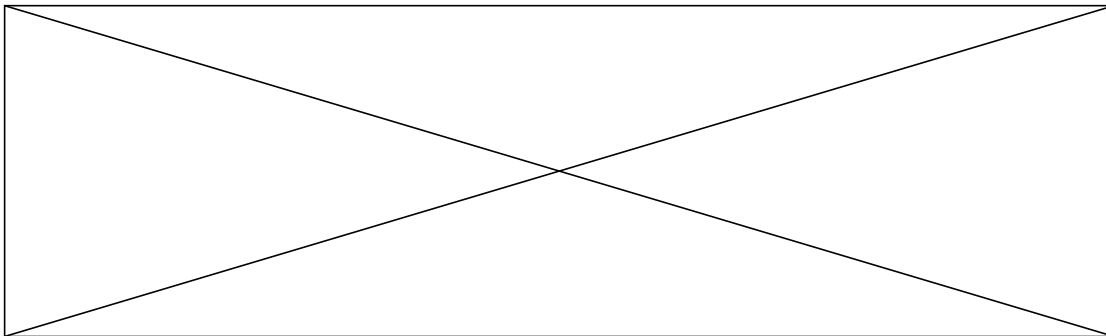

2.4 Supported network setup

You can use Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter in various wireless network configurations. We recommend you to select the most appropriate configuration for your home or office network before setting it up.

2.4.1 Ad-Hoc mode

Ad-Hoc wireless networks bring together workstations and computers to act as servers to all other users on the network without complex infrastructure, setup or administration. Users on the network can share files, printers and access the internet with a shared modem. When in ad hoc mode, the Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter connects to another wireless device within its effective range and communicates with each other in the same LAN workgroup. Select this configuration when no access point is present in your wireless network.
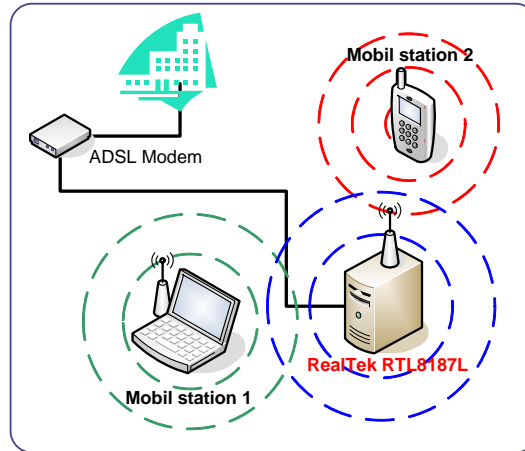
2.4.2 Infrastructure mode

The biggest difference between infrastructure mode and ad-hoc mode is that it includes an access point. In infrastructure mode, an access point establishes the network that provides wireless links in the validating range for clients to communicate with each other or with a wired network to the internet. On an infrastructure network, the access point may manage the bandwidth to maximize utilization. Infrastructure networking has the following advantages over ad-hoc networking:
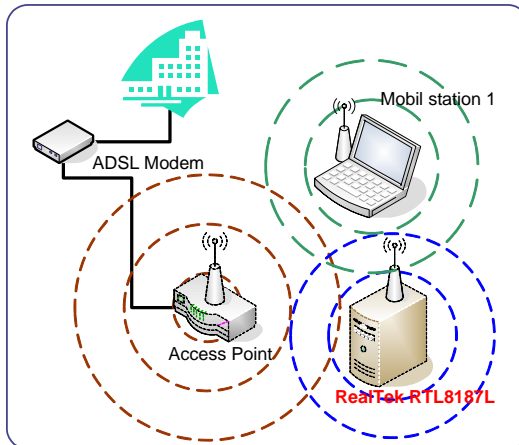
- Range Extension
  Each wireless LAN enabled computer within the range of the access point can communicate with other wireless LAN enabled computers within the valid range of signal from the access point.
- Roaming
  A wireless LAN enabled computer can physically move from the operating range of one access point to another without losing connection to the LAN. A quick association "hand-shake" is made between the new access point and the wireless device as the computer traverses from the coverage of one access point to another.

- Wired to wireless LAN connectivity
  Access point establishes the bridge between wireless LAN and other wired counterparts.

2.4.3 Software access point (Soft AP)

You could configure Azure Wave
AW-GA800 Wireless LAN USB 2.0 Adapter
as a software access point (soft AP). In this
mode, the Azure Wave AW-GA800 Wireless
LAN USB 2.0 Adapter acts as the access
point that provides wireless links in the
validating range to client stations to the
internet.
Your system should satisfy the following
two requirements to apply this mode:

- The system you use already connects
  to the internet or intranet through another one Ethernet adapter.
- You are using Windows® XP or Server2003 operation system
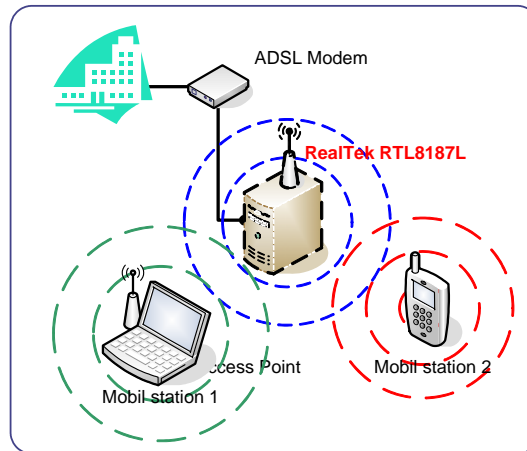
Chapter 3

Installation

This chapter describes the fundamental features of
Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter.

3.1 System requirements

Before installing the Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter, driver and utilities, make sure your system satisfy the following requirements
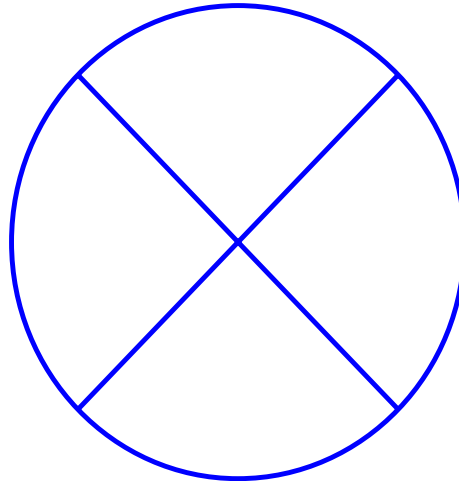
- ASUS motherboard with Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter specific slot
- Intel® Pentium™ 4
- Minimum 64MB system memory
- Windows® Operation System
  Ad-Hoc and infrastructure mode:　　　Windows® 2000, XP and Server 2003
  Software AP and Wireless Bridge:　　　Windows® XP and Server 2003
- Optical drive for driver and utilities installation

3.2 Hardware Installation

To complete the hardware installation of Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter, you only need to install the moveable dipolar antenna at the rear of motherboard.

Installing the antenna:

1. Locate the wireless LAN antenna port on the motherboard rear panel.

2. Connect the antenna twist-on connector (female) to the wireless LAN antenna port (male)

3. Place the antenna at an elevated location to enhance your wireless LAN valid coverage.
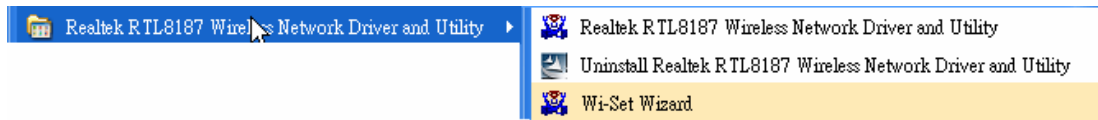
3.3 Driver and utilities installation

To install the Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter driver and utilities:

1. Place the motherboard support CD in the optical drive

2. The CD automatically displays the ??? menu if Autorun is enabled in your computer. Click the ??? option.

3. Click ???

4. Follow screen instructions to install the Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter driver and utilizes.

5. After the installation is finished, Wi-Set Wizard will help you with setting up a wireless network. Please refer to Chapter 3: Setting up to complete it.
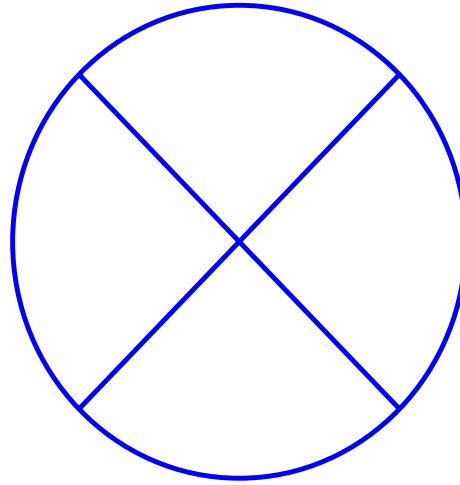
The setup program creates program folder and items under of management GUI and Wi-Set Wizard upon the Windows Program menu.

|	
Realtek RTL8187 Wireless Network Driver and Utility ▶	Realtek RTL8187 Wireless Network Driver and Utility
	Uninstall Realtek RTL8187 Wireless Network Driver and Utility
	Wi-Set Wizard

Chapter 4

Setting up

4.1 Launch Wi-Set Wizard

In this section, you will obtain detail instruction in setting wireless configuration by following Wi-Set Wizard. Please refer to Chapter 1.4 to understand the network types the Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter supports.

In the first time installation, Wi-Set Wizard is executed immediately after installation to help you set the proper wireless configuration.

In addition, you could launch it from either program menu
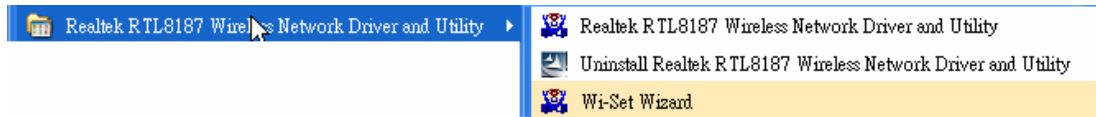
or Wireless LAN Management GUI.
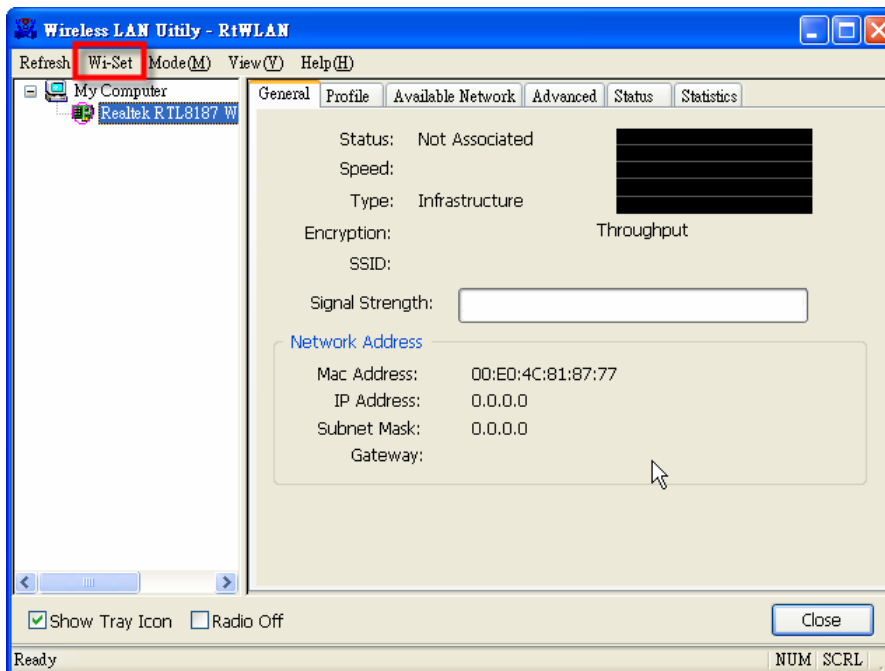
In the following sections, we represent the steps, the convenient and easy wireless set up, in Wi-Set Wizard.

4.2 Wi-Setup Wizard Steps

Whatever which wireless configuration you would set up, the first scene of Wi-Set Wizard is **"Select Operation Mode"** dialog that shows as right picture. You could select either station or AP mode from the first step.

For Ad-hoc and infrastructure type configuration, you should select Station mode. The software access point configuration could be archived by select AP mode.

- **Station**
  Set the operation mode to be "Station". Follow steps in section 4.3.

- **AP**
  Set the operation mode to be "Access Point". Follow steps in section 4.4.

- **Next**
  Go to next step of selected mode.

- **Cancel**
  Give up Wi-Set Wizard. The default wireless configuration will be automatically applied as "Infrastructure" type of Station mode if user won't set it up here.

4.3 Station Mode Configuration

Two types, infrastructure and ad-hoc types, of station mode are provided here.
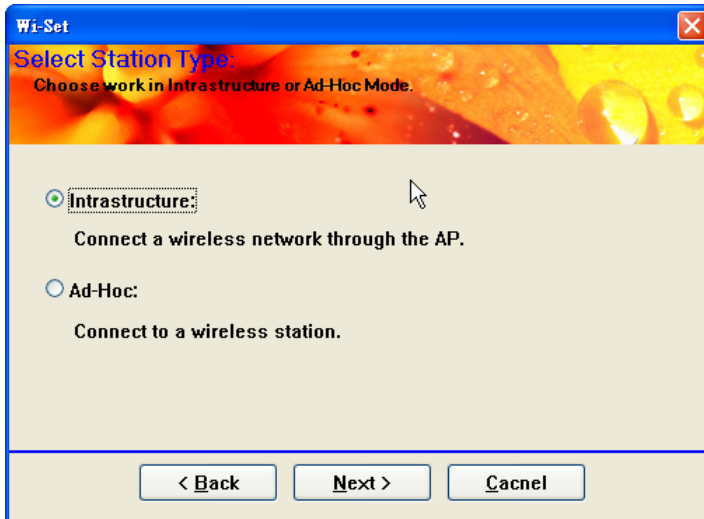
- **Infrastructure**
  Configure the wireless as infrastructure type network. Follow steps in 4.3.1 Build Infrastructure type network.

- **Ad-Hoc**
  Configure the wireless as Ad-Hoc type network. Follow steps in 4.3.2 Build Ad-Hoc networking mode network

- **Back**
  Go back to previous step – Select Operation Mode.

- **Next**
  Go to next steps of selected type.

- **Cancel**
  Give up Wi-Set Wizard and keep the last configuration.

4.3.1 Configure Infrastructure type network

It is easy to build up infrastructure type network with Wi-Set Wizard. The next step after select infrastructure type network is to select the desired connection.

Select the IBSS connection list
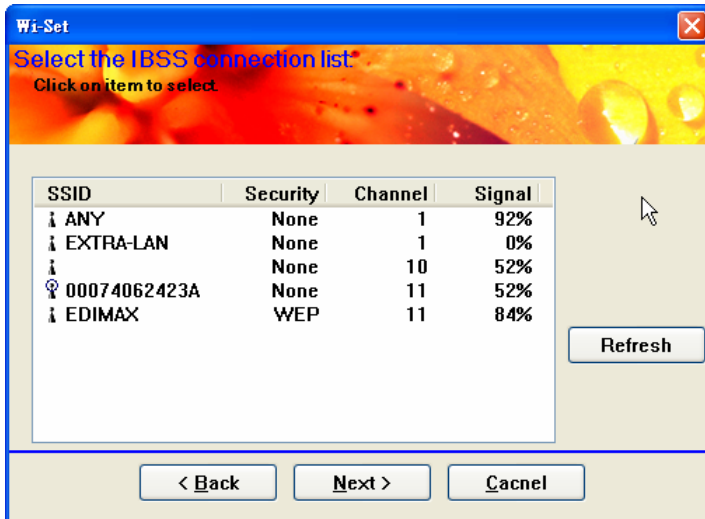
Select valid wireless IBSS, Infrastructure Basic Service Set, connection nearby your system for connecting. The listed IBSS are touchable access point around you. You have to pick one from the list and go to next.

- **SSID list box**

  Four fields are shown in the list box to provide access point status.

  - SSID: the name of access point
  - Security: the security status of access point. None means security/password is not necessary. WEP means the access point acquire security/password to log in.
  - Channel: the channel this access point applies.
  - Signal: The signal strength; higher mean better.

- **Refresh**

  Rescan the IBSS list.

- **Back**

  Go back to previous step ~ Select Station Type.

- **Next**

  Go to next step of infrastructure type configuration. It is relative the security status of selected access point.

  - None: Setup TCP/IP.
  - WEP: A WEP dialog is pope dup before Setup TCP/IP as below picture. You have to input the password/network key to join this access point before setup TCP/IP. The password/network key is defined by the administrator of access point. The invalid network key will stop going to next step.

■
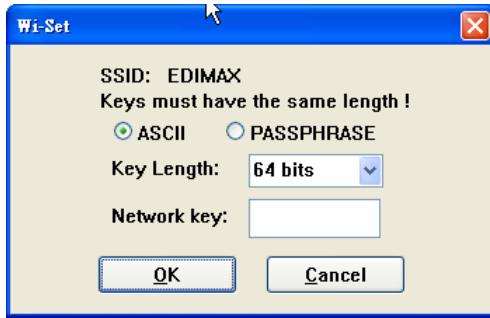
- **Cancel**

  Give up Wi-Set Wizard and keep the last configuration.

Setup TCP/IP

You have to setup the TCP/IP by following the configuration of connect access point. The following setting should match the configuration of access point you join. Please check the setting of it.

- **Back**

  Go back to previous step ~ Select the IBSS connection list

- **Finish**

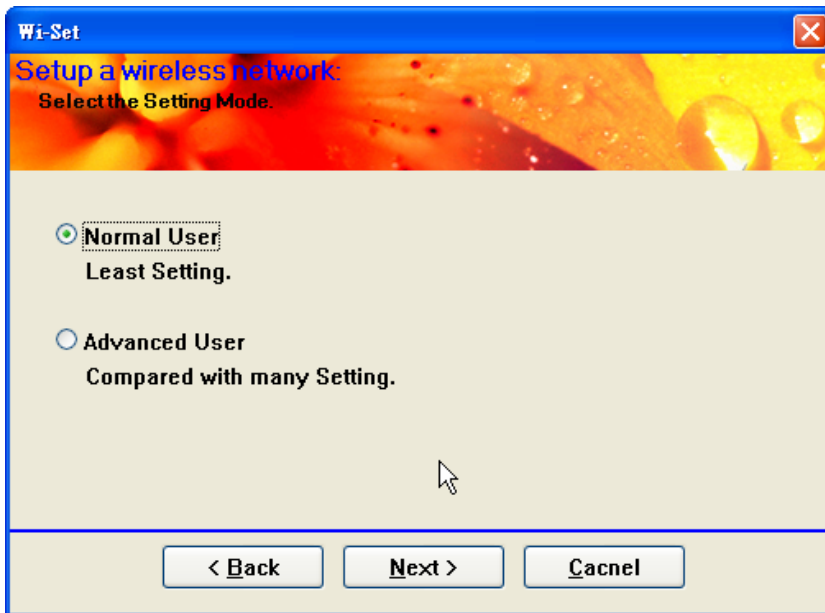 All settings of infrastructure are finished.
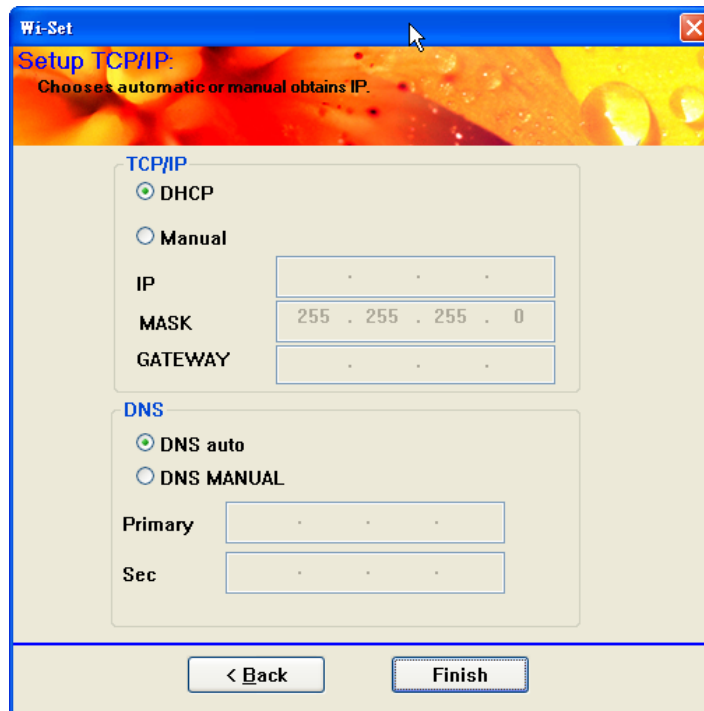
4.3.2 Build Ad-Hoc networking mode network

Absent in this version

4.4 Build Soft AP network

Setup a Wireless Network

The setting of Soft AP could settle done by either convenient "**Normal User**" or complex "**Advanced User**" operation.


- **Normal User**

  Only basic settings are included in following steps. Less-experience users could apply this kind setup to archive access point setup. Fundamental security setting is included.

- **Advanced User**

  You need more security knowledge on wireless network to help you go through following steps. Experienced user could select this kind setup. Advanced security settings are included.

- **Back**

  Go back to previous step ~ Select Operation Mode

- **Next**

  The next step is dependant on the option user select:

  - Normal User: Please follow steps in 4.4.1 Normal User
  - Advanced User: Please follow steps in 4.4.2 Advanced User

- **Cancel**

  Give up current Wi-Set Wizard setup and roll back to previous configuration.

4.4.1 Normal User

For normal user mode, the basic security function only request two types network/password key to provide WEP encryption.
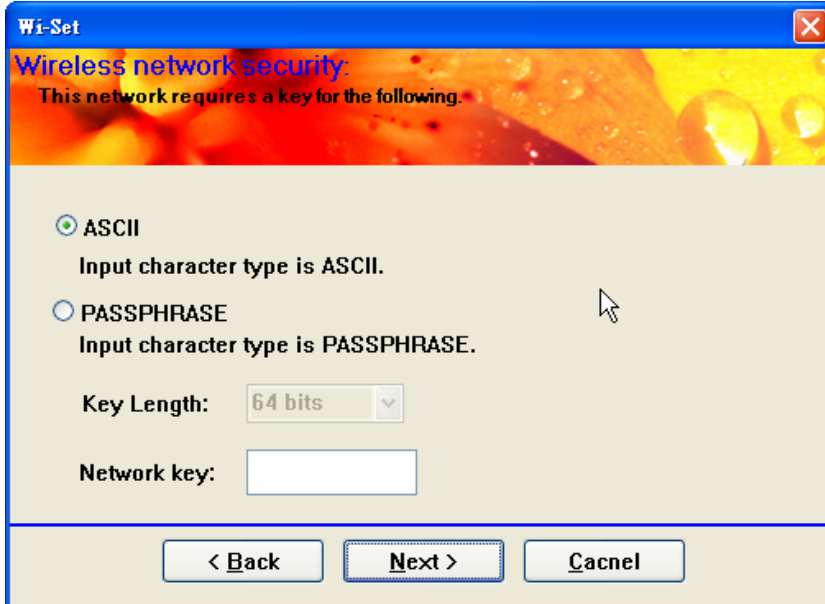
Wireless Network Properties
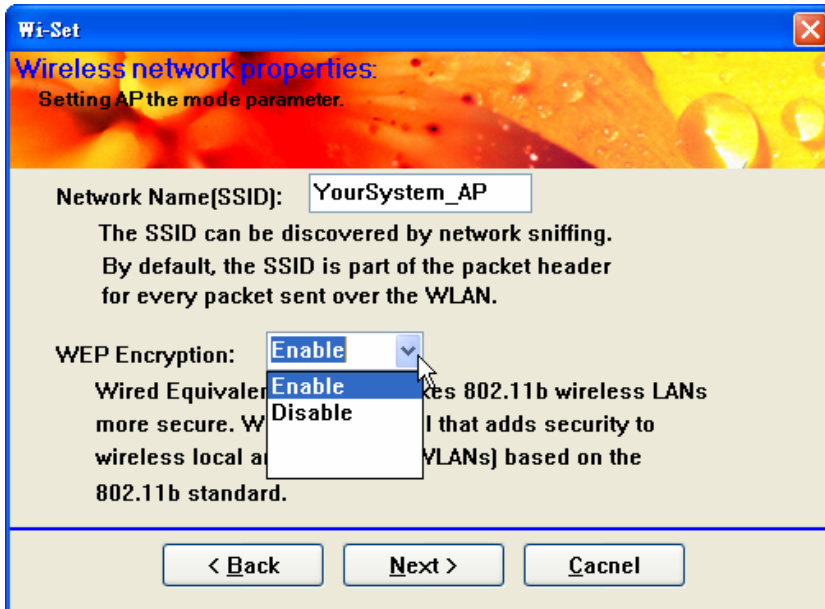
- **Network Name (SSID)**
  The service serve identify of this access point. The length of the self-naming does not exceed 32 characters.

- **WEP Encryption**
  - Enable: The joined wireless station should have same network/password key with this access point.
  - Disable: no network/password key is required for joined wireless station.

- **Back**
  Back to previous step ~ Setup a Wireless Network

- **Next**
  The next step is dependant on the decision of WEP to be either Enable or Disable.

  - WEP Enable: You should prepare network/password key for WEP. Go to Wireless Network Security.
  - WEP Disable: The access point is set as an opened hot-spot. Anyone could join this access point and connect to internet.

● **Cancel**

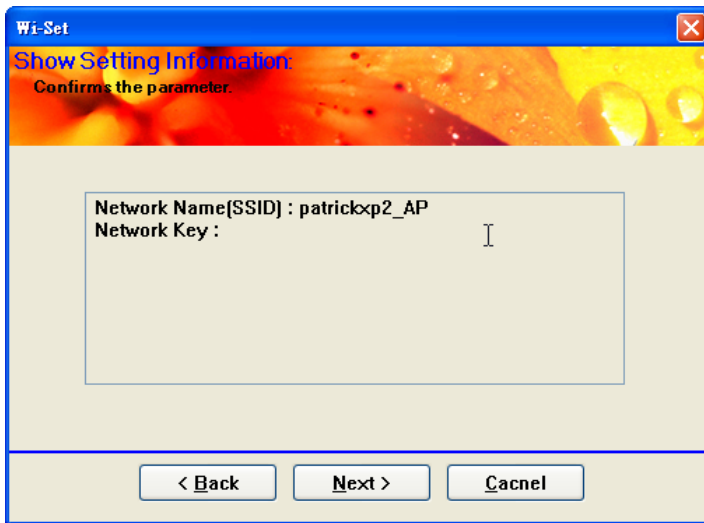Give up current Wi-Set Wizard setup and roll back to previous configuration.

Wireless Network Security

Two types pass key, ASCII and Passphrase, perform security with different level.

● **ASCII**

You should provide either 5 or 8 ASCII characters on **Network key** edit box.

● **PASSPHRASE**

You could input words on **Network Key** edit box.

■ 64 bits: The generated pass key is 64-bits to be company with data packets.

■ 128 bits: The generated pass key is 128-bits to be company with data packets.

● **Back**

Go back to previous step ~ Wireless Network Properties

● **Next**

Go to next step ~ Show Setting Information

● **Cancel**

Give up current Wi-Set Wizard setup and roll back to previous configuration.
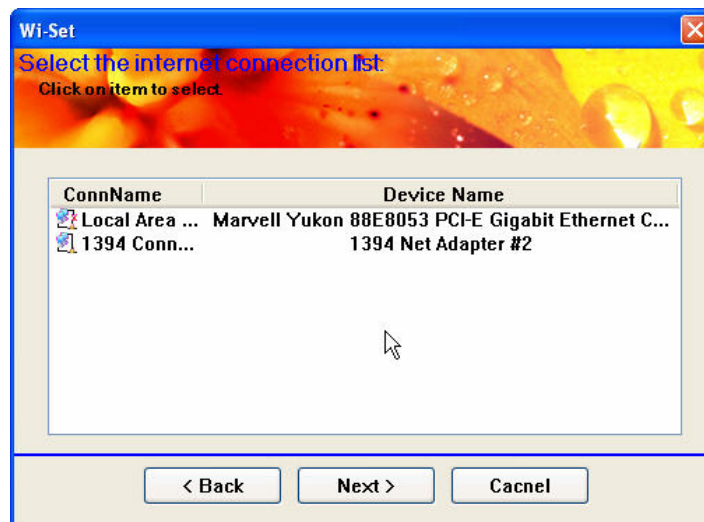
Show Setting Information

- **Back**
  If you do not satisfy with current setting, you could go back to previous step ~ Wireless Network Security

- **Next**
  Confirm the current setting and go to next step ~ Finish.

- **Cancel**
  Give up current Wi-Set Wizard setup and roll back to previous configuration.

Select the Internet Connection List

This step only shows with multiple network connection system. If there is only one internet connection available, this step is discarded. In this step, you have to select one network connection from the list box. This network connection should be configured to connect internet.
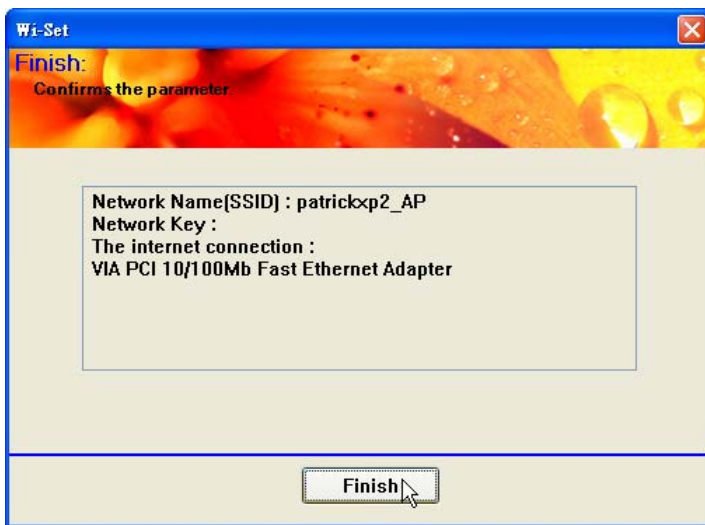
- **Network List Box**

4-10

In the list box, you could see all network connection this system provides. You have to pick one from the list.

- **Back**
  Go back to previous step ~ Show Setting Information.

- **Next**
  Go to next step, Finish, while the internet connection is selected.

- **Cancel**
  Give up current Wi-Set Wizard setup and roll back to previous configuration.

Finish

- Finish
  Press finish button to close Wi-Set wizard. The wireless configuration is going to be applied within few seconds.
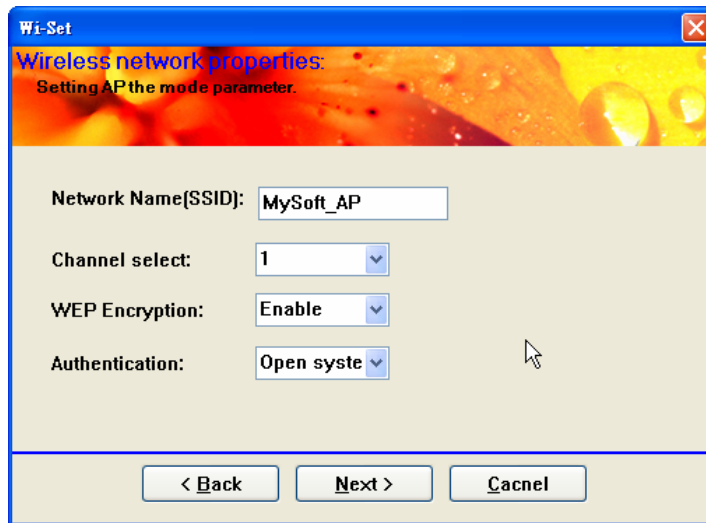
4.4.2 Advanced User

The steps of advanced user provide more detail configuration including channel and authentication

Wireless Network Properties

In this step, you could assign the channel number and authentication mode for the access point.

If the setting of WEP to be "Disable" and Authentication to be "Open system", then this access point is opened for free join.

- **Network Name (SSID)**
  The service serve identify of this access point. The length of the self-naming does not exceed 32 characters.

- **Channel select**
  You could pick one channel from 1 to 11.

- **WEP Encryption**
  An encryption system prevents eavesdropping on wireless network traffic.

  - Enable: The joined wireless station should have same network/password key with this access point.
  - Disable: no network/password key is required for joined wireless station.

- **Authentication**
  The next generation of Wi-Fi security, Wi-Fi Protected Access, or WPA, will use authentication to verify whether users have access to a particular wireless network.

  - Open system: This access point is without authentication protection with user.
  - Share key: Any station would join this access point should pass with key same as the setting on access point.

- **Back**
  Go back to previous step ~ Setup a Wireless Network.

- **Next**
  Go to next step. It depends on the setting of WEP and Authentication.

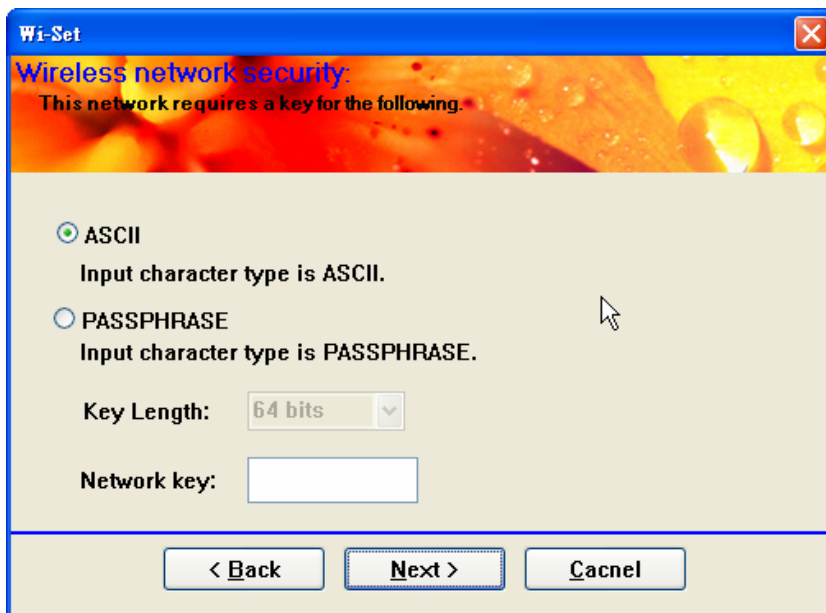| Authentication(Open system)	Authentication(Shared key)

WEP(Enable)	Wireless Network Security	Wireless Network Security
WEP(Disable)	Show Setting Information	Wireless Network Security

● **Cancel**

Give up current Wi-Set Wizard setup and roll back to previous configuration.

Wireless Network Security

Two types pass key, ASCII and Passphrase, perform security with different level.

● **ASCII**

You should provide either 5 or 8 ASCII characters on **Network key** edit box.

● **PASSPHRASE**
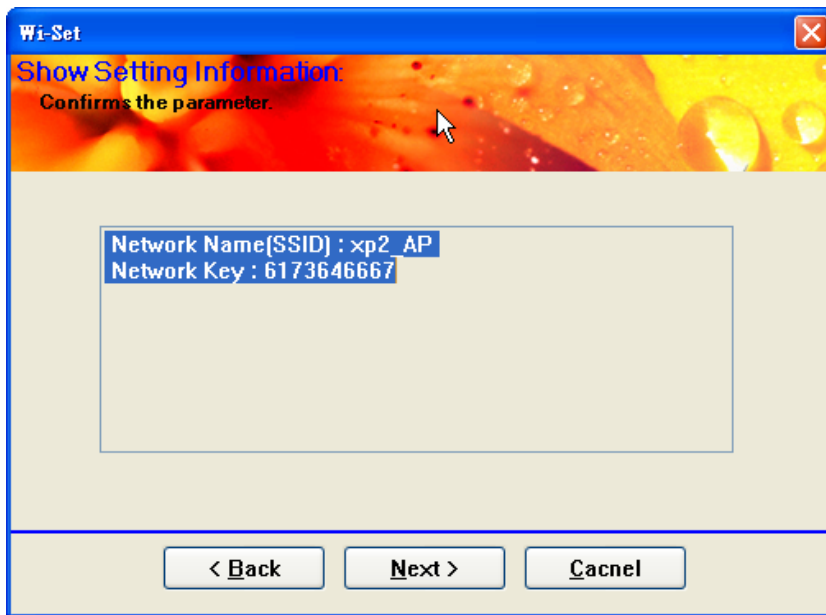
You could input words on **Network Key** edit box.

■ 64 bits: The generated pass key is 64-bits to be company with data packets.

■ 128 bits: The generated pass key is 128-bits to be company with data packets.

● **Back**

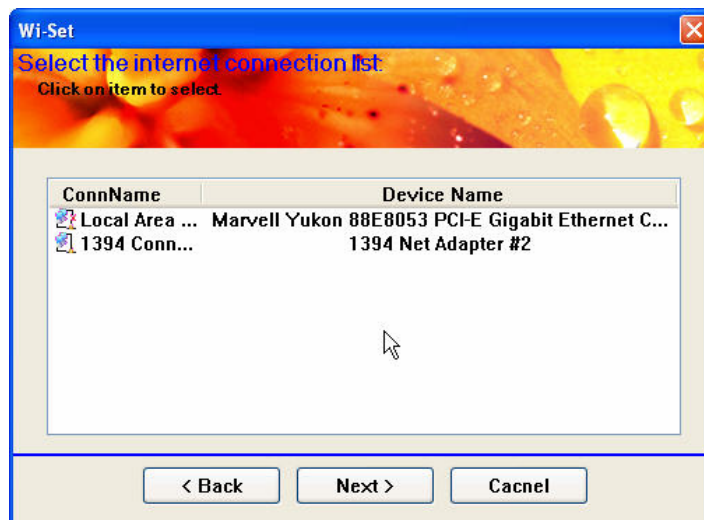Go back to previous step ~ Wireless Network Properties

4-13

● **Next**

Go to next step ~ Show Setting Information

● **Cancel**

Give up current Wi-Set Wizard setup and roll back to previous configuration.

Show Setting Information

● **Back**

If you do not satisfy with current setting, you could go back to previous step ~ Wireless Network Security

● **Next**

Confirm the current setting and go to next step ~ Finish.

● **Cancel**

Give up current Wi-Set Wizard setup and roll back to previous configuration.

Select the Internet

Connection List

This step only shows with multiple network connection system. If there is only one internet connection available, this step is discarded. In this step, you have to select one network connection from the list box. This network connection should be configured to connect internet.

- **Network List Box**
  In the list box, you could see all network connection this system provides. You have to pick one from the list.

- **Back**
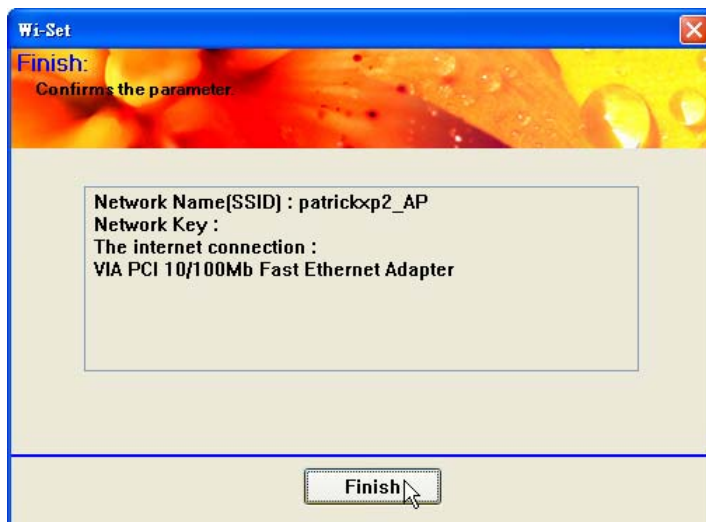 Go back to previous step ~ Show Setting Information.

- **Next**
  Go to next step, Finish, while the internet connection is selected.

- **Cancel**
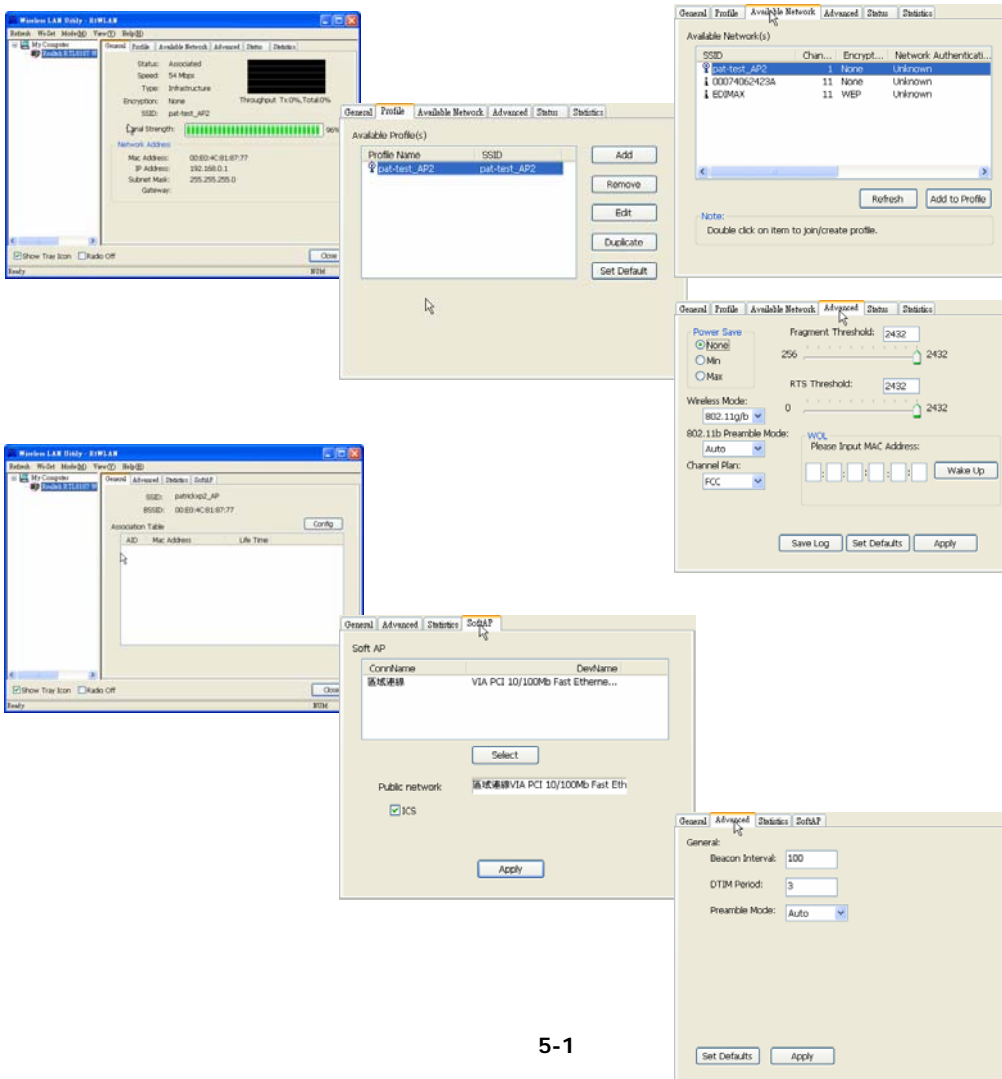 Give up current Wi-Set Wizard setup and roll back to previous configuration.

Finish

- Finish
  Press finish button to close Wi-Set wizard. The wireless configuration is going to be applied within few seconds.

Chapter 5

Azure Wave WLAN: Wireless LAN

Management GUI

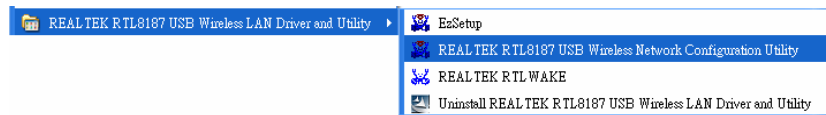# 5.1 How to Launch Azure Wave WLAN

You could launch **Azure Wave WLAN** from either Windows® Program Menu or tray icon. The tray icon is an optional quick launch to be enabled by user.
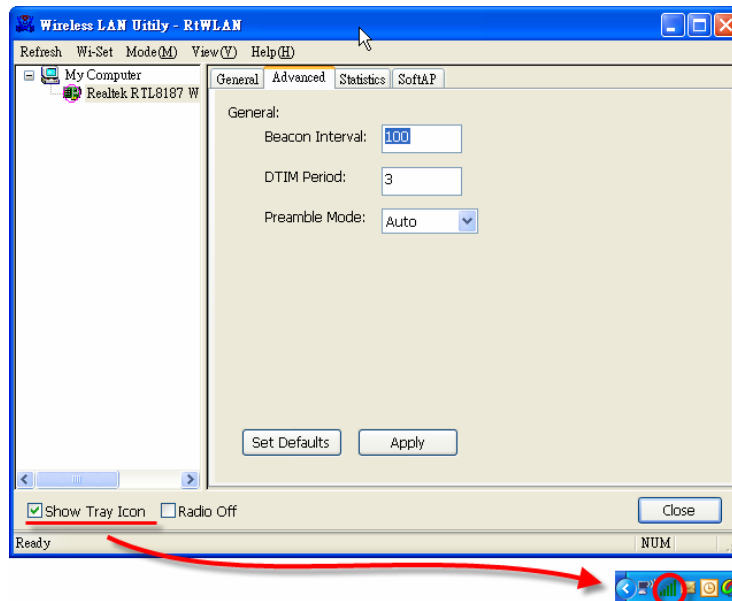
Windows®

Program Menu

It is the absolute
way to launch

Azure Wave WLAN from program folder.

Tray Icon

The tray icon will not be
show until you enable the
"Show Tray Icon" from
RtWLAN as the right picture.
As the Azure Wave WLAN
icon shown on system tray,
you could double click the
icon with mouse button to
launch it.

# 5.2 Introduction of Main Window

The main window is assembled with five parts, main menu, adapter list area, properties area, global control bar and status bar. Please read the explanations below before operating the Azure Wave **WLAN**.
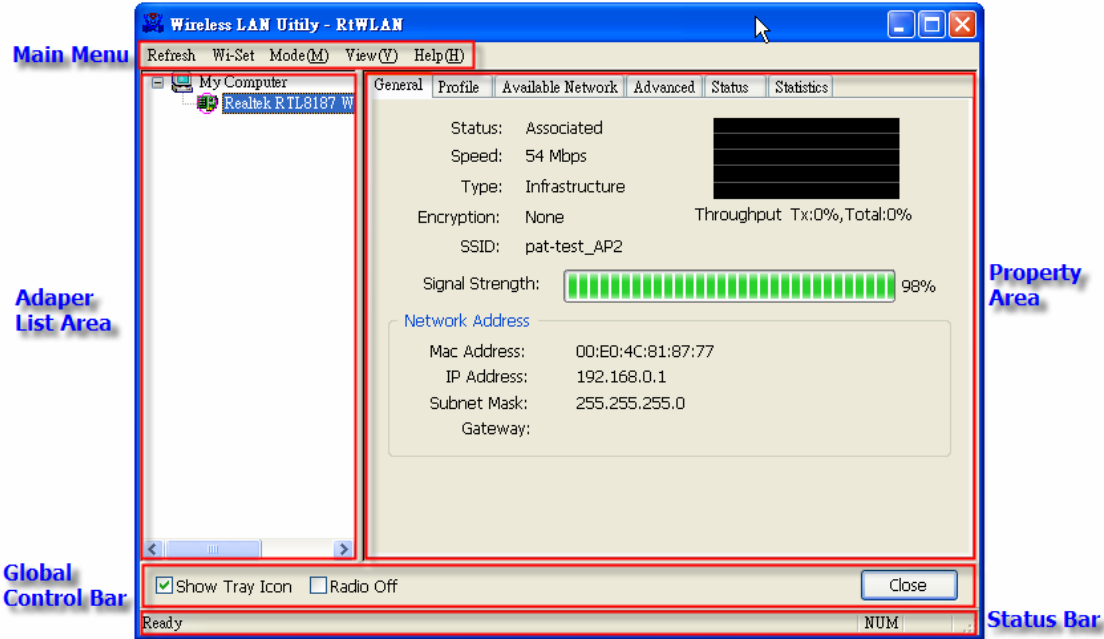
Main Menu

The main menu includes five submenus.

- **Refresh**

  As clicking the refresh menu, the contents of adapter list area are re-enumerated and updated.

- **Wi-Set**

  Quickly launching the Wi-Set Wizard. The convenient quick launching helps you to reprogram the wireless configuration as need.
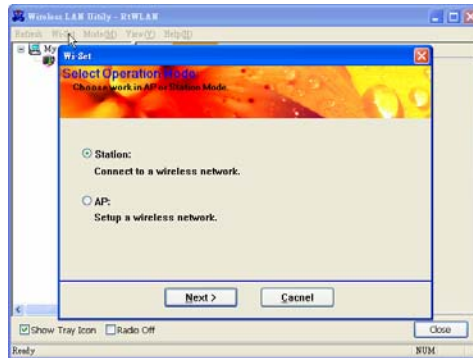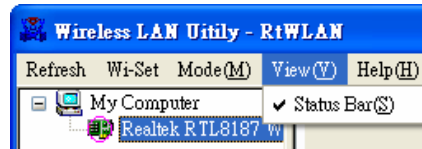
- **Mode**
  Quickly switching wireless configuration to be either [Station] or [Access Point]. The item with check mark in front is the current wireless configuration.
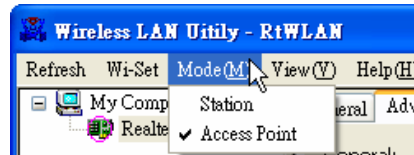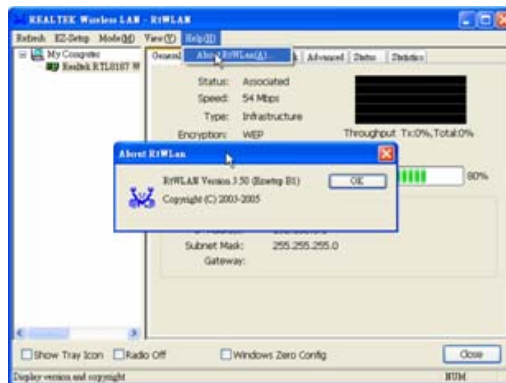

- **View**
  Enable/disable the present of status bar. With check mark in front will make the status bar showing up. Otherwise the status bar is hidden.


- **Help**
  Click the menu item **"About Azure Wave WLan"** to show the about dialog. The about dialog shows you the application version and license information.


- **Adapter List Area**
  This area displays all connected adapters on this system for mutiple adatper installations. The easy switch helps user to change the selected adapter by one click. The contents of properties area are dependant on wireless configuration that the selected adapter was set up. For single adatper installed system, the only one adapter is always selected.
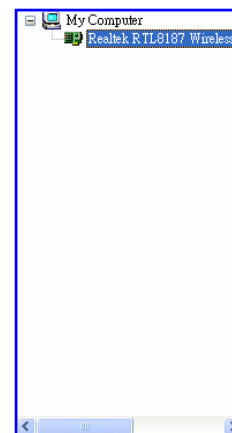
- **Properties Area**

  The contents of this area are dependant
  on current wireless configuration. You
  could know the current configuration
  through previous explanation of submenu
  "Mode". The detail contents are described
  in following wireless configuration sections
  for both Station and AP mode.
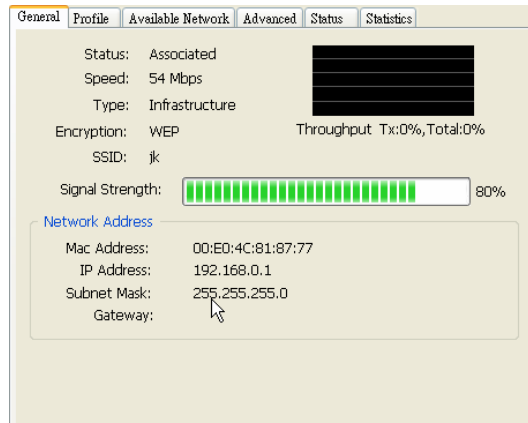
- **Global Control Bar**

  Each control items on
  this bar affects the adapter or management GUI directly.
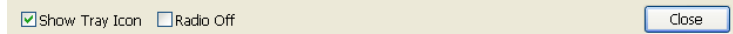
  - Show Tray Icon

    Making this item to be checked, the management GUI will minimize and stay on the
    tray icon located at the right down corner of Windows while pressing "Close" button.
    In other word, management GUI will shut down while pressing "Close" button with
    unchecked condition.

  - Radio Off

    Turn off the radio for saving power. While the radio being off, the links with other
    wireless network nodes are disconnected. User should be care of it while the wireless
    configuration is in AP mode. The radio off will cause the sub network belong to the AP
    to disconnect with internet/intranet.

  - Close

    Shutdown or hide the management GUI. The behavior depends on the check box of
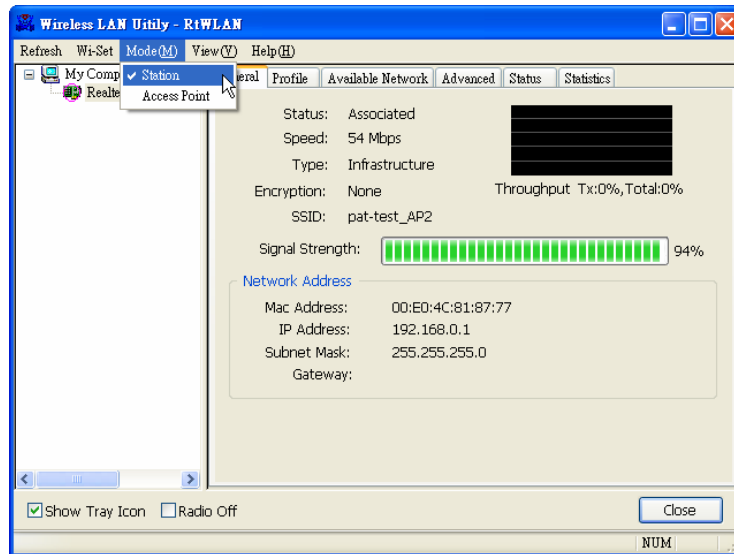   **"Show Tray Icon"**.

- **Status Bar**

  The status bar presents the hints or status of the management GUI.

5.3 Station mode

Two types, Ad-Hoc and infrastructure in station mode could be configured through Wi-Set Wizard. The following two sections explain the operation of management GUI for each type. The following explanations focus on the properties area.

5.3.1 Infrastructure

With Infrastructure type, the properties should looks like the picture beside. Six property pages present different information of current wireless network status.

Reading the following explanations before you reviewing these pages, it could help you to well know the wireless environment around the system.

It is easy use to switch property pages just by left button clicking of mouse the title of each page The following six sections describes detail information of the opposite page.
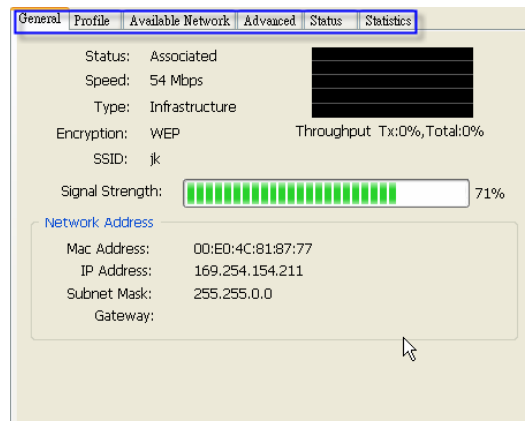
General page

This page represents the general information of this adapter.

- **Status**
  The connection status with access point this station has.

- **Speed**
  Current transition speed in Mbps.(Mega-Bits-Per-Second)

- **Type**
  Current wireless LAN configuration type

- **Encryption**
  Current encryption with joined access point

- **SSID**
  Network name of the joined access point

- **Signal Strength**
  The average quality of signal with joined access point. We recommend connecting access point with over 70% signal strength.

- **Throughput diagram**
  Transition (Tx) performance with connected access point.

- **Network Address** group
  - Mac Address: six two-digital number of this adapter
  - IP Address: assigned network address by DHCP server or self-definition in four three-digital number format
  - Subnet Mask: the only valid value is 2555.255.255.0
  - Gateway: It comes from connected access point. Your system can not connect internet with this field empty.
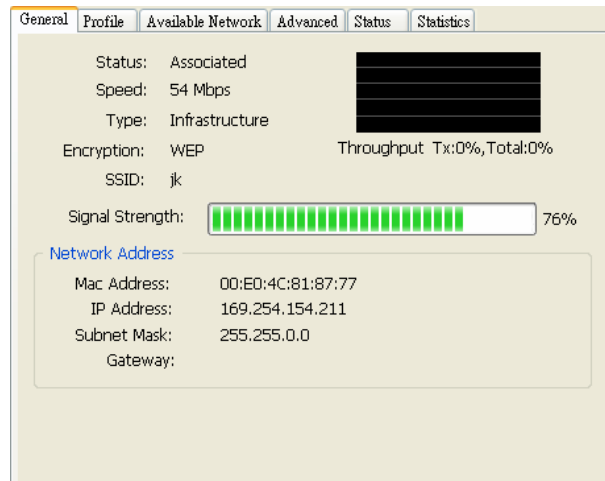
Profile page

This page provides profiles management like add, remove, edit and duplicate just by pressing the button.

● **Available Profile(s)**
  The list box shows all the created profiles.

● **Add**
  Add a new access point profile by manual input.

● **Remove**
  Remove the selected profile

● **Edit**
  Edit contents of selected profile

● **Duplicate**
  Make copy of selected profile.

● **Set Default**
  Set the selected profile as default selection.
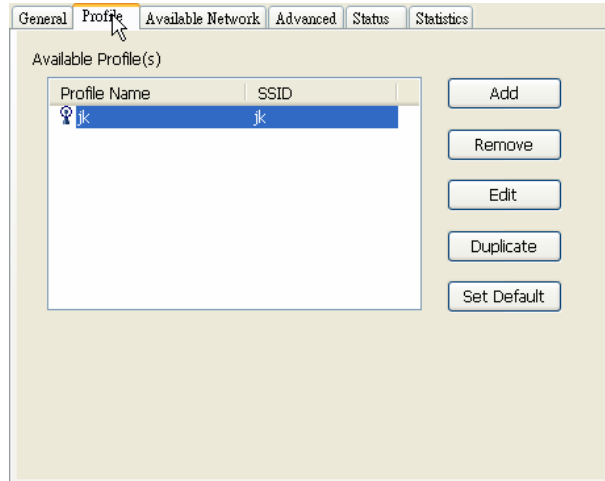
Available Network page

This page presents all access points around this system. And you could pick one of these network connections.

● **Available Network(s)**
  Present network connection around this system

● **Refresh**
  Rescan network connection around this system

● **Add to Profile**
  Create profile for selected network connection in profile list and add it in to profile list.
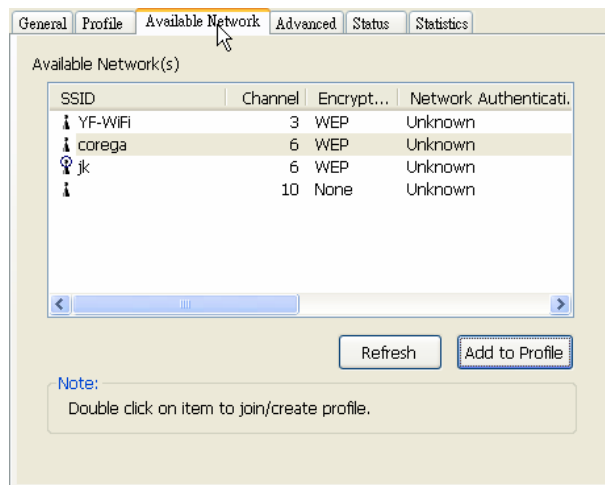
Advanced page

● **Power Save**
  ■ None: without power save mode
  ■ Min: wake up every two time interval to receive packets
  ■ Max: wake up every ten time interval to receive packets

● **Wireless Mode**
  ■ 802.11b
  ■ 802.11g/b

● **802.11b Preamble Mode**
  ■ Long: higher quality but with lower performance than preamble short mode
  ■ Short: Normal quality but with higher performance then preamble long mode.
  ■ Auto: select the proper preamble mode by current signal frame information.

● **Channel Plan**
  Each country defines their channels of wireless LAN. The detail mapping between country and channel plan is put in Appendix.

  ■ FCC: USA, channel 1 ~ 11
  ■ IC: Canada, channel 1 ~ 11
  ■ ETSI: Europe, channel 1 ~ 13
  ■ Spain: channel 10, 11
  ■ France: channel 10 ~ 13
  ■ MKK: channel 14
  ■ MKK1: channel 1 ~ 14
  ■ Israel
  ■ TELEC

● **Fragment Threshold**
  The threshold of fragment length. Higher threshold increase data transition performance with good signal quality. Pool signal quality results more worst data throughput on high fragment threshold.

● **RTS Threshold**
  Request to send threshold. The request will not send out until the accumulated data over threshold.
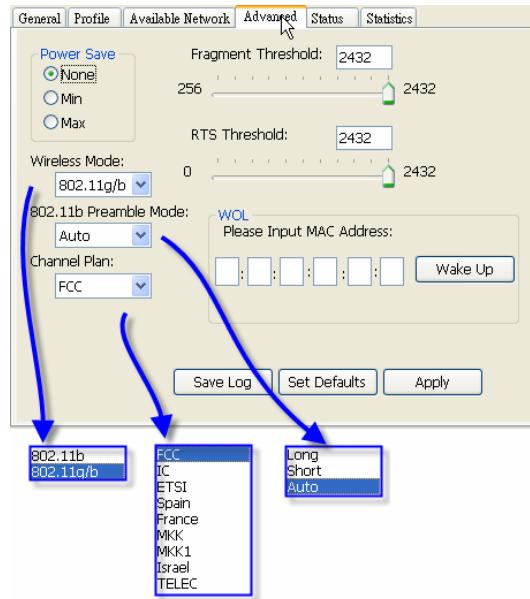
- **WOL（Wake On LAN)**
  The wake-on-LAN is applied for remote control purpose. You could wake up a system through network packets. For Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter, only the same adapter on another system could wake it up.

  - Input MAC Address: the six two-digit numbers of Azure Wave AW-GA800 Wireless LAN USB 2.0 Adapter on target system.
  - Wake Up: press this button to wake it up

- **Set Defaults**
  Restore the default value to be current setting
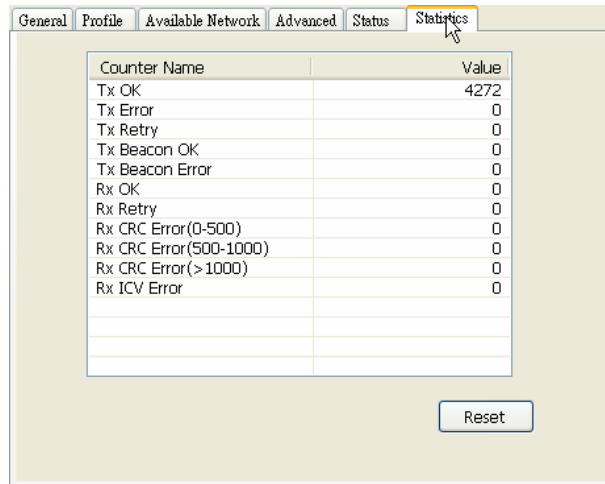
- **Apply**
  Apply the current setting to GUI

Status page

- Manufacturer: It always is Azure Wave
- NDIS Driver Version:
- Short Radio Header
- Encryption: Current encryption mode.
- Authenticate: authentication state
- Channel Set: selected channel plan
- MAC Address: MAC address of this adapter.
- Data Rate: wireless LAN transition speed
- Channel(Frequency): current channel number
- Status: wireless network status
- SSID: name of connecting access point
- Network Type: indicate current network configuration type
- Power Save Mode: current setting power save mode
- Associated AP MAC: MAC address of connecting access point
- Associated AP IP: IP address of connecting access point
- Up Time: total connection time

Statistics page

You could watch the Tx/Rx status of current wireless connection. It provides a statistic analysis of packet transition.

5.3.2 Ad-Hoc

Not Available in this version.

5.4 AP mode

Not available in this version.

Appendix

Mapping of country and channel plan

Not available in this version.

Federal Communication Commission Interference 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 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.

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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:
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 minimum distance 20cm between the radiator & your body.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

IEEE 802.11b or 802.11g operation of this product in the U.S.A. is firmware-limited to channels 1 through 11.

This device is intended only for OEM integrators under the following conditions:

The antenna must be installed such that 20 cm is maintained between the antenna and users, and

The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains TX FCC ID: TLZ-GA800".

Manual Information That Must be Included

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the users manual of the end product which integrate this module.

The users manual for OEM integrators must include the following information in a prominent location " IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.