POWERLINK

Wireless N USB Adapter

Installation Manual

Part#: PL-2814N
Model: Outdoor Plus

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Contents

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Chapter 1   Getting Start

Minimum System Requirements

- Pentium® 300 MHz or higher compatible processor
- At least one available USB 2.0 or 1.1 port
- 50Mbytes free hard disk space.
- Windows 2000, XP, XP professional, Vista, Windows 7, Windows 8

CAUTION   If you do not have a USB 2.0 port on your computer, the throughput of the USB adapter will be limited to the 14 Mbps of the USB 1.1 standard.

Windows XP users must install SP2 or above for the Hot fix which fixes the USB 2.0 Host controller driver.

Before you proceed with the installation, please read the following notes:

1. If you have installed the WLAN USB driver & utility before, please uninstall the old version first.
2. The following installation was operated under Windows XP. (Procedures are similar for Windows 98SE/Me/2000.)
3. The installation guide herein is operated under Windows system. For Linux or Mac driver installation guide, please refer to the instruction in README at directory the driver has stored in CD-Rom.

Optimize Wireless Performance

The speed and wireless coverage range of your connection can vary significantly based on the location of AP/router. You should choose a location for your AP/router that will maximize the network performance.

You can refer to the following methods to maximize AP/router performance.

Choose placement carefully for your AP/Router.

Place your AP/router at the center among your computers.

Place your AP/router at an elevated location.

Avoid obstacles to wireless signals.

Keep your wireless devices far away from metallic file cabinets, refrigerators, pipes, metal ceilings, reinforced concrete, and metal partitions.

Keep away from large amounts of water such as fish tanks and water coolers.

Reduce interference

Keep away from computers, cordless phones, cell phone, coping machine and fax machines.

Keep away from microwave oven.

Site survey nearby wireless devices to determine your operating channel.

1.1 Features

- Complies with IEEE 802.11g and IEEE 802.11b standards
- Compliant with USB 2.0 Standard
- Provides up to 300Mbps transmission rate and up to 300 meters transmission distance
- Auto-detects and changes the network transmission rate
- Provides two work modes: Infrastructure and Ad-Hoc
- Supports Soft AP to establish your wireless LAN networking
- supports PS3, PSP, Wii and Nintendo DS connecting with Internet and XLink Kai to enjoy on-line gaming
- Supports 64/128-bit WEP, WPA, WPA2 encryption methods and 802.1x security authentication standard
- Supports Wireless Roaming function
- WPS (Wi-Fi Protected Setup) simplify the security setup and management of Wi-Fi networks.
- Supports WMM for Multimedia Applications with Quality of Service in Wi-Fi® Networks
- Supports Windows 2000 / XP / Vista / 7 / 8, Macintosh, and Linux

1.2 Package Contents

Open the package carefully, and make sure that none of the items listed below are missing. Do not discard the packing materials, in case of return; the unit must be shipped in its original package.

- USB CPE set w/ 5M cable
- Driver/Manual CD
- Stand
- Hose Clamp

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Chapter 2   Installation Guide

2.1 Installing the Drivers for Windows

NOTE:

Snap-shot screens of the following installation procedure are based on Windows XP. Installation procedures will be similar for other windows operating systems.

1. Power on your PC, let the operating system boot up completely, and log in as needed.

2. Attach the external antenna to antenna port.

Then insert into a USB slot of your computer

3. Select Cancel when Found New Hardware window appears.

4. Insert Installation CD to your CD-ROM drive. Browse CD and double-click Setup.exe in Driver folder to execute it. The wizard will run and install all necessary files to your computer automatically.

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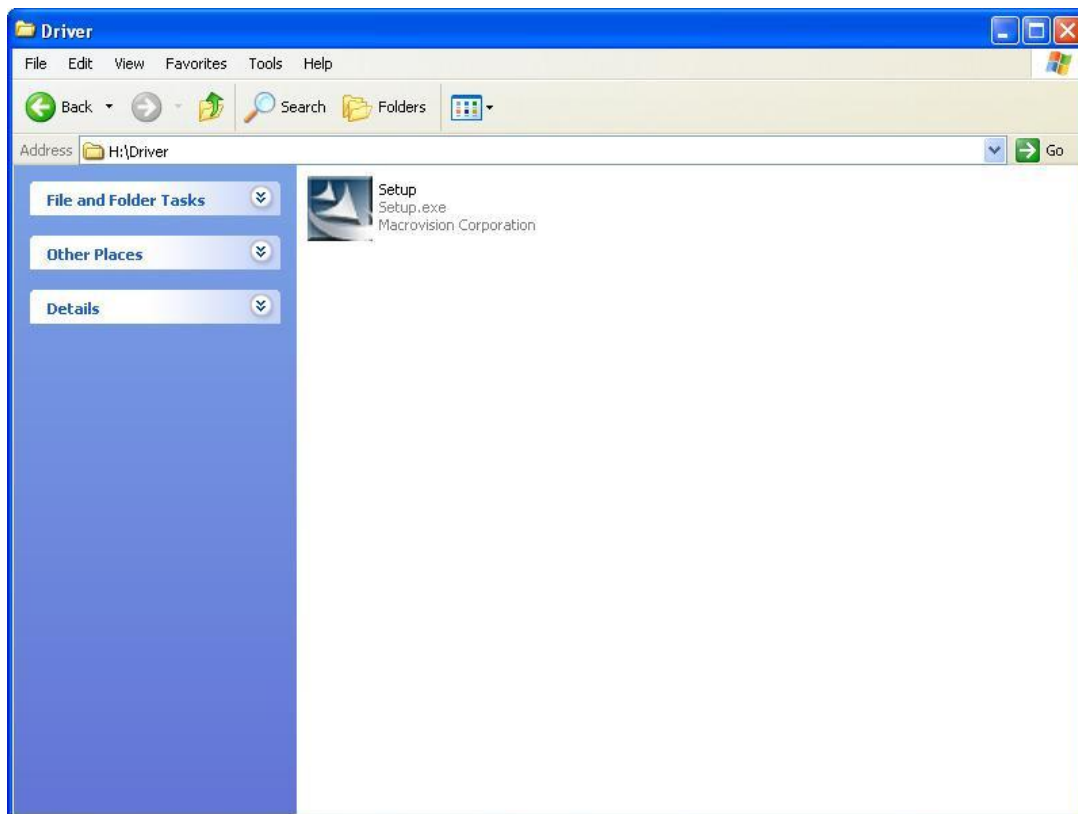
5. Click Next to accept the Agreement. Or click Cancel to cancel the installation.

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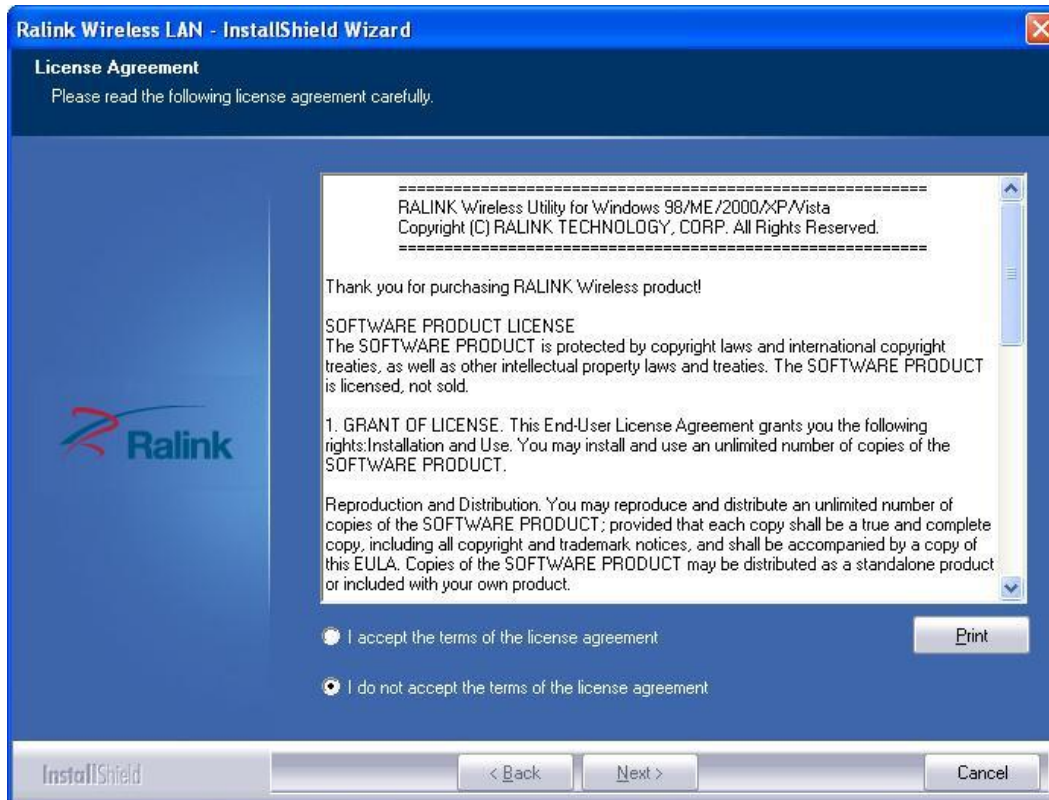
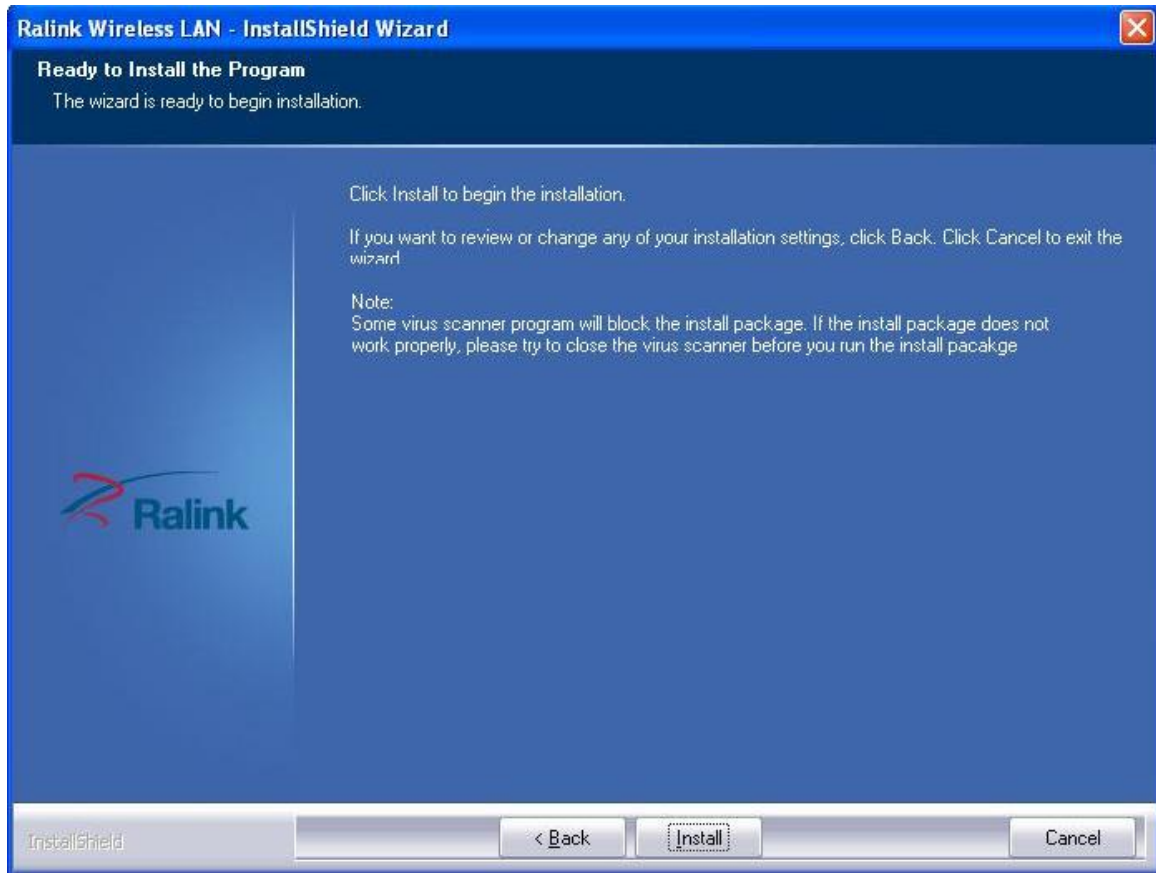6. Select Install driver and Ralink WLAN Utility or Install driver only then click Next.
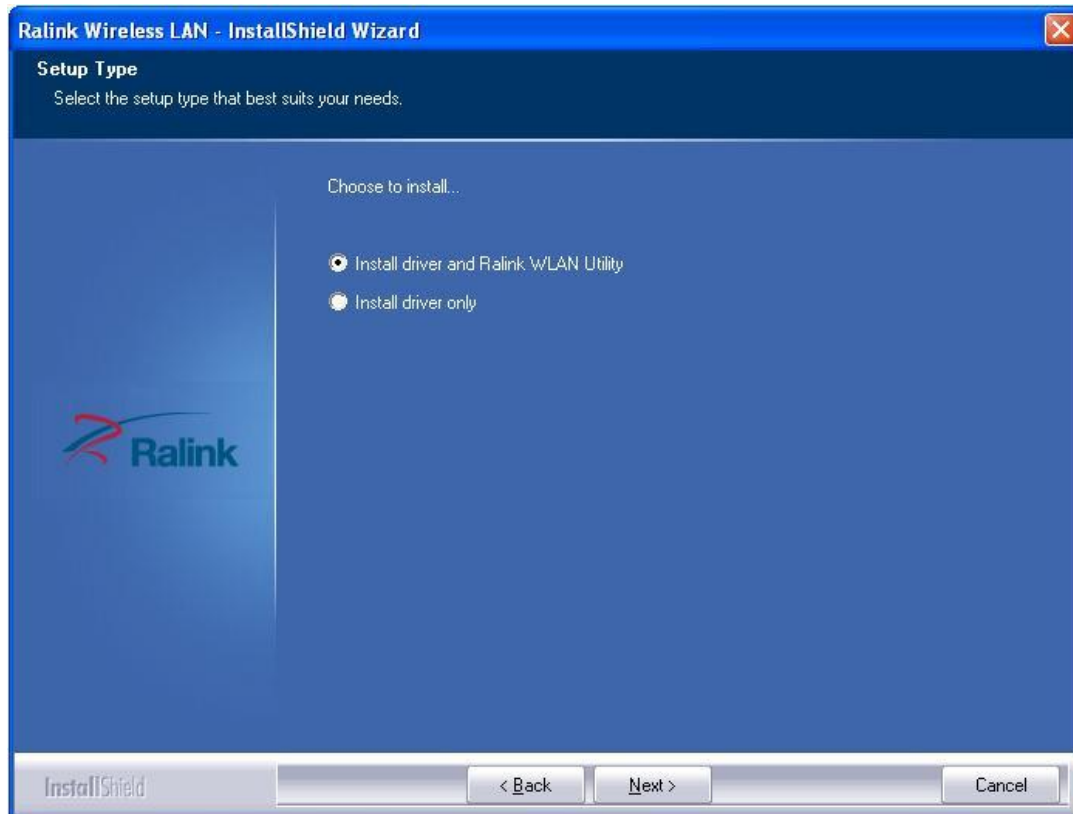
7. Select Ralink Configuration Tool or Microsoft Zero Configuration Tool then click Next.

a. It's recommended to select Ralink Configuration Tool, which provides fully access to all function of PL-2814N.
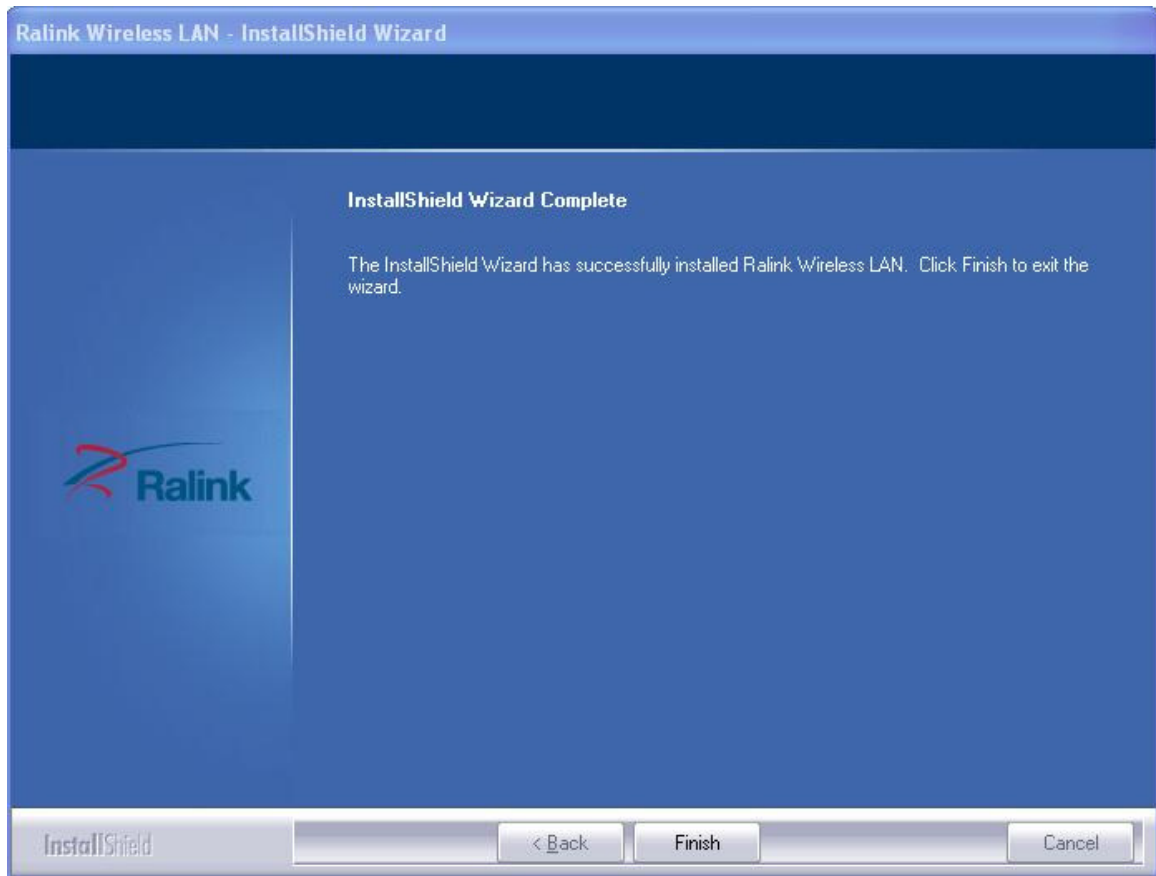
b. If you prefer to use the wireless configuration tool provided by Windows XP or Vista, please select Microsoft Zero Configuration Tool.

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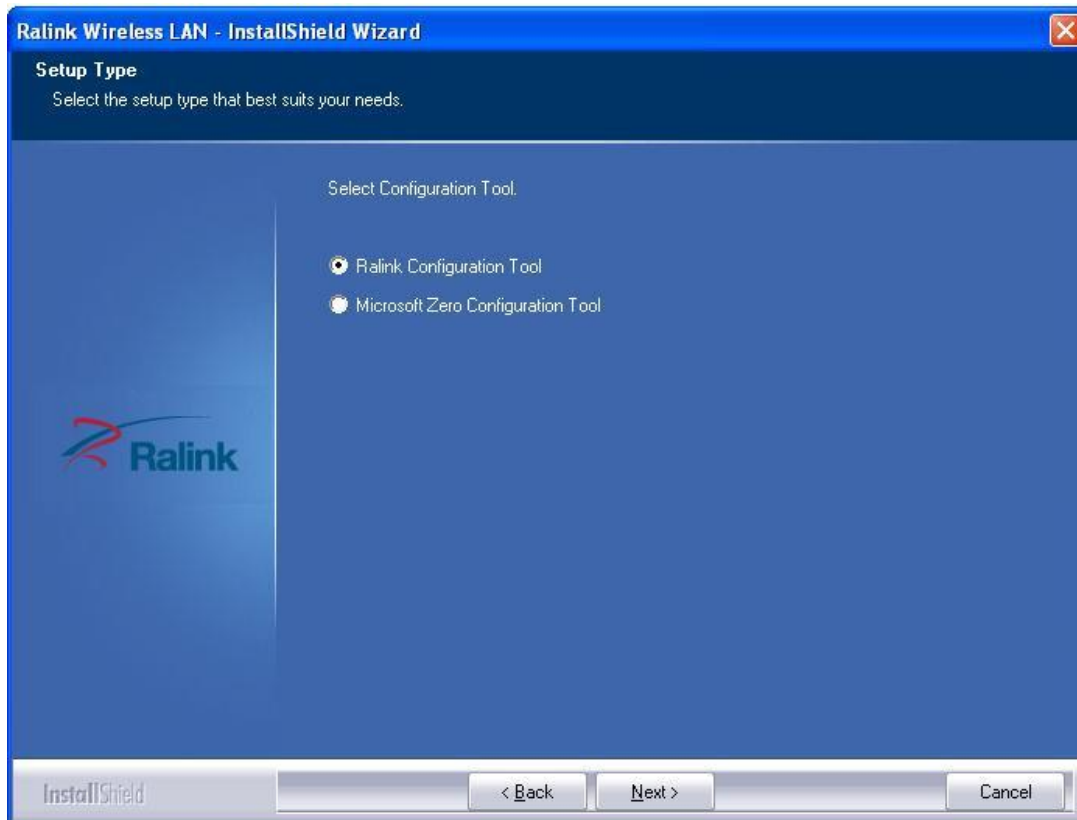
8. Click Install to start installation. Or click Cancel to cancel the installation.

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9. Click Finish to complete the software installation.

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Ralink Wireless LAN - InstallShield Wizard

InstallShield Wizard Complete

The InstallShield Wizard has successfully installed Ralink Wireless LAN. Click Finish to exit the wizard.

Ralink

InstallShield   < Back   Finish   Cancel

You will see a tray icon appear in your system tray at the bottom of the screen after the software and hardware installation completed successfully
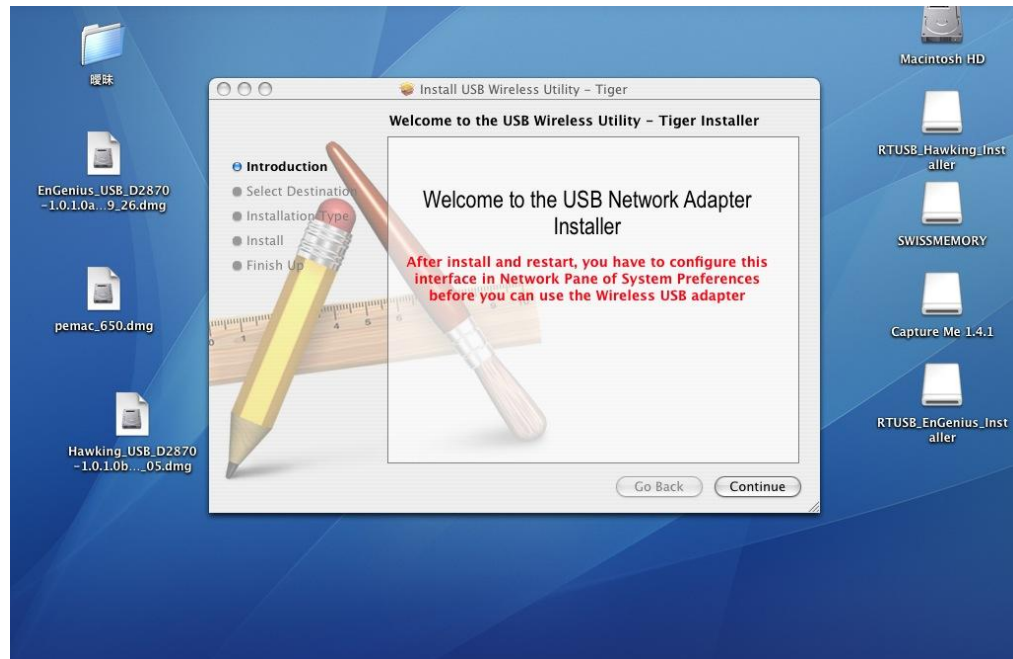
2.2 Installing the Drivers for Mac OS X

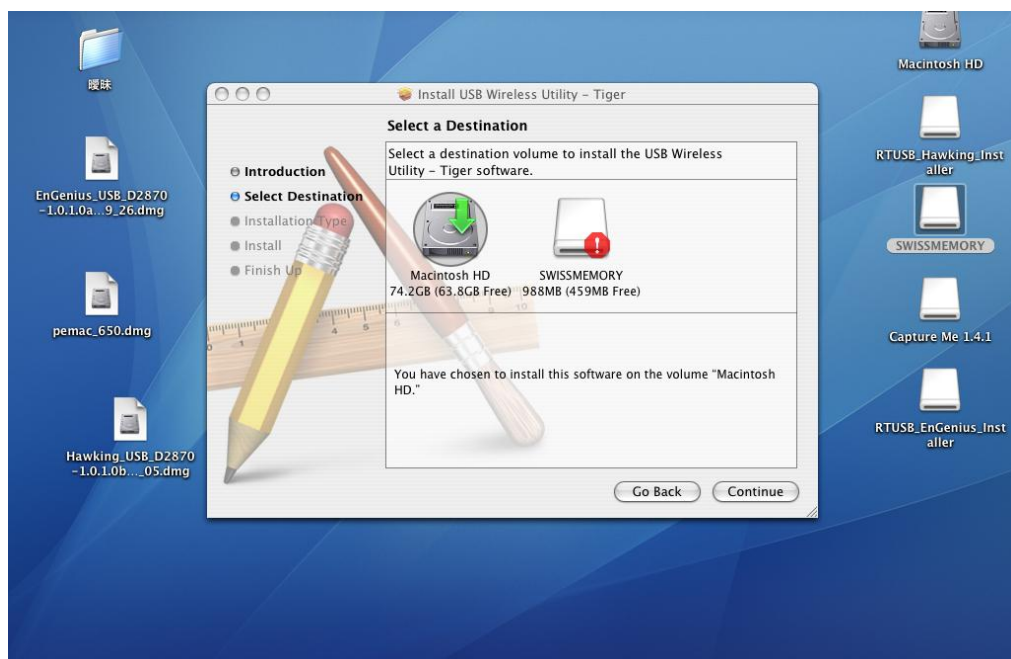Follow the steps below in order to install the USB adapter drivers:
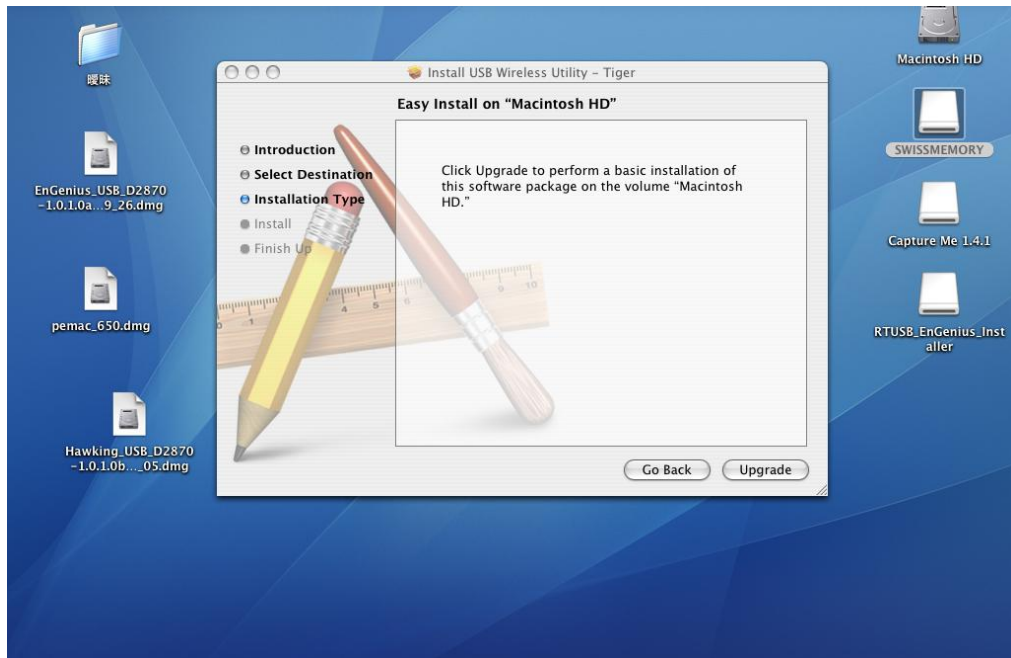
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1. Insert the CD-ROM that was provided to you in this package. The setup should run automatically. If the setup does not run automatically, then you must manually select the **Macintosh.dmg** file from the CD-ROM drive.
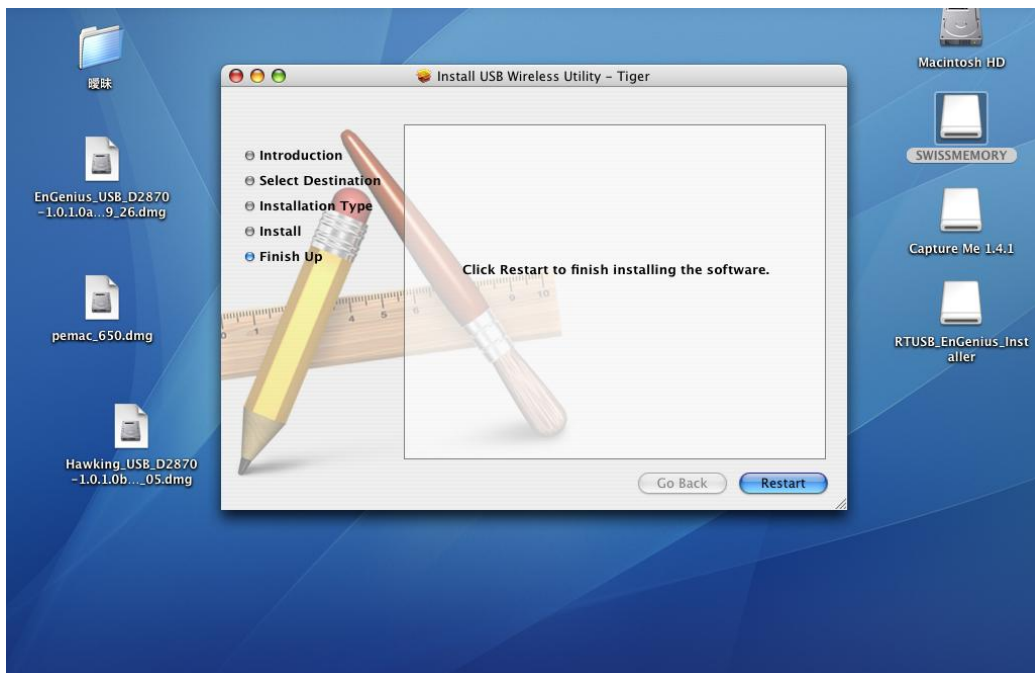

2. Click on the **Continue** button to configure the next step.

3. Select the **Macintosh HD** and then click on the **Continue** button.

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4. Click on the **Continue** button to configure the next step.

5. The installation is complete. Click on the **Restart** button.

6. Carefully insert the USB adapter into the USB port. MAC OS X will then detect and install the new hardware.

7. The Client Utility is installed in the **Applications** folder.

2.4 Uninstall the Drivers & Client Utility

If the USB client adapter installation is unsuccessful for any reason, the best way to solve the problem may be to completely uninstall the USB adapter and its utility and repeat the installation procedure again.

Follow the steps below in order to uninstall the client utility:

1. Click on **Start > Ralink Wireless > Uninstall – RT2870**

Figure 2-9

2. The un-installation process will then begin.

3. Click on the **Yes** button to confirm the un-installation process and then click on the **Next** button.

4. The un-installation process is complete. Select **Yes, I want to restart my computer now** radio button and then click on the Finish button. Then remove the USB adapter.
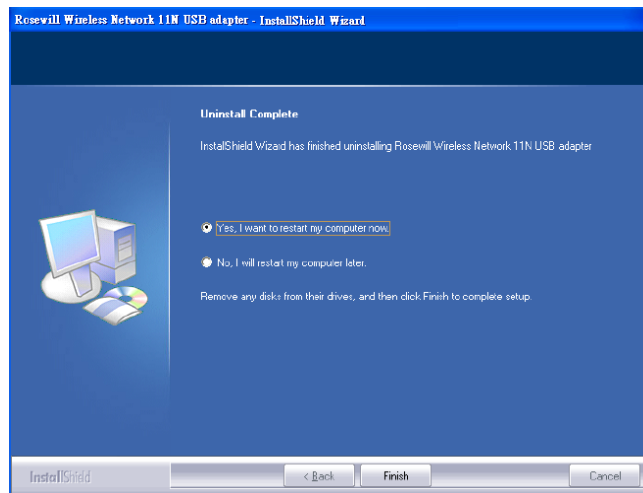

Figure 2-13

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3.1 Connecting through Ralink Utility

Clicking the Ralink icon ![R icon] on your desktop will bring up the utility main window. Users can find the surrounding AP signal in the list. You can use the advanced tab to configure other advanced features provided by Ralink's wireless NIC.

3.2 Steps to add wireless signal with Ralink Utility for one time use

This section will lead you to link your wireless signal with your PL-2814N. Please follow the **Figure 3-1** in adding the signal, and **Figure 3-2** to set up Authentication and Encryption

1. Click "**Rescan**" ![rescan icon] : Click on Rescan to search for all wireless signals near you.

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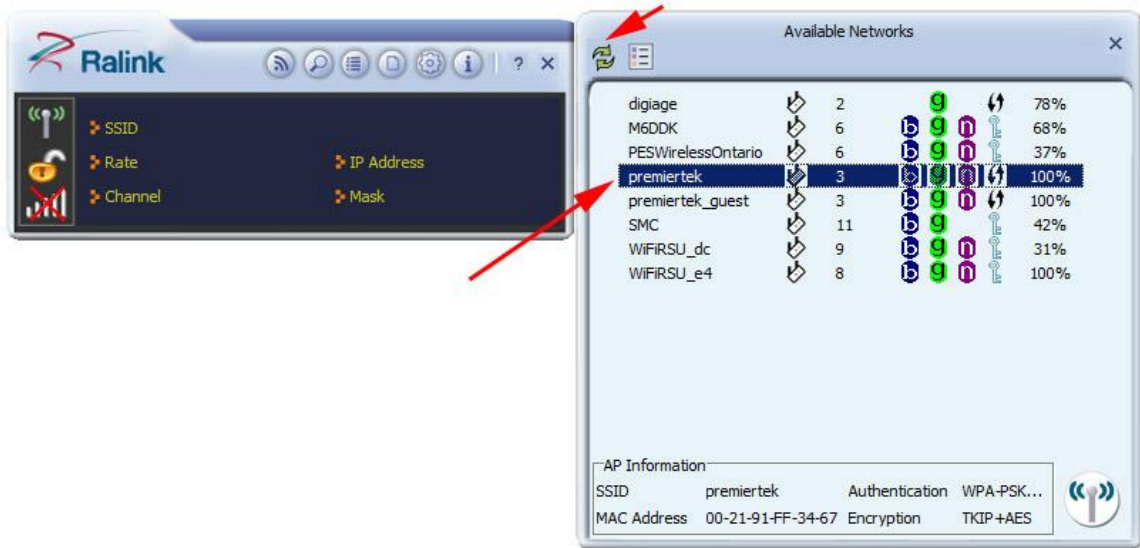
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Figure 3-1

2. Select your **desire SSID you want to connect**: Double Click the highlighted SSID to go to the Profit Settings. See **Figure 3-2** and **Figure 3-3**
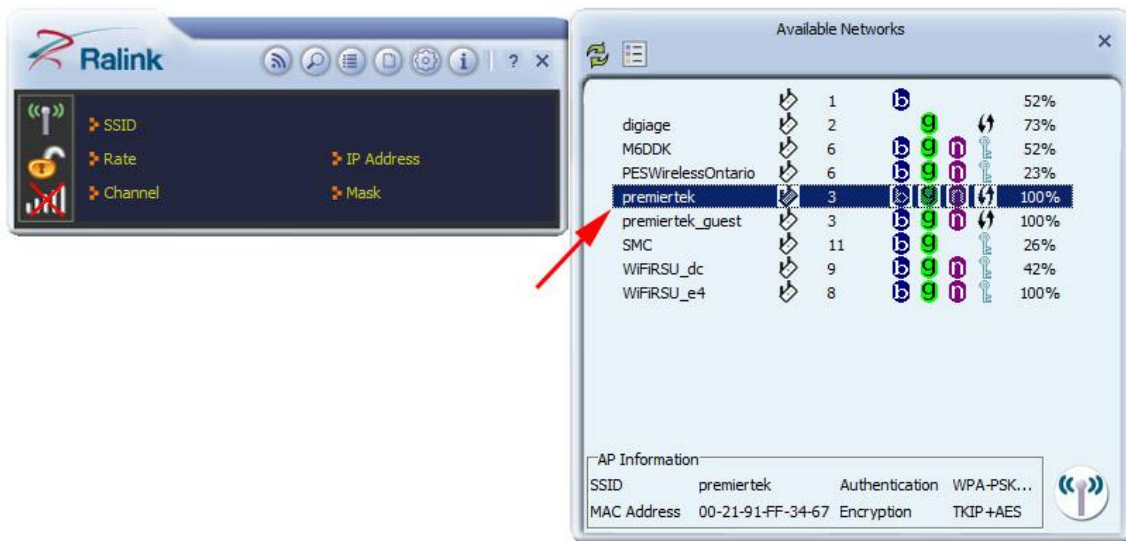

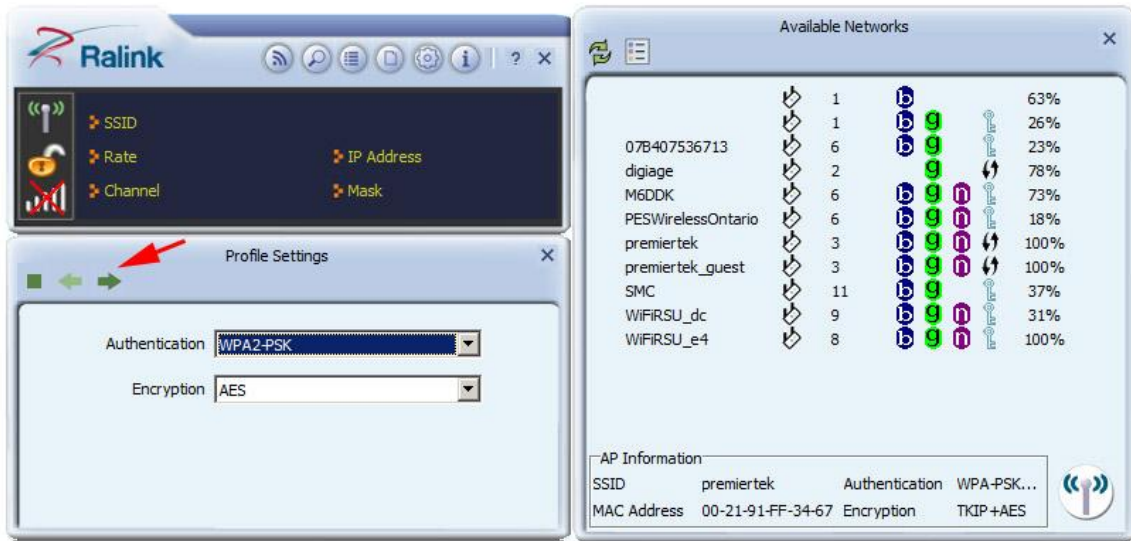**Figure 3-2**

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Figure 3-3

3. Under the Profile Settings, if there is password and security for SSID you chose, please following the steps to set up the Authentication and Encryption (You need to know the security type and password). See **Figure 3-4**
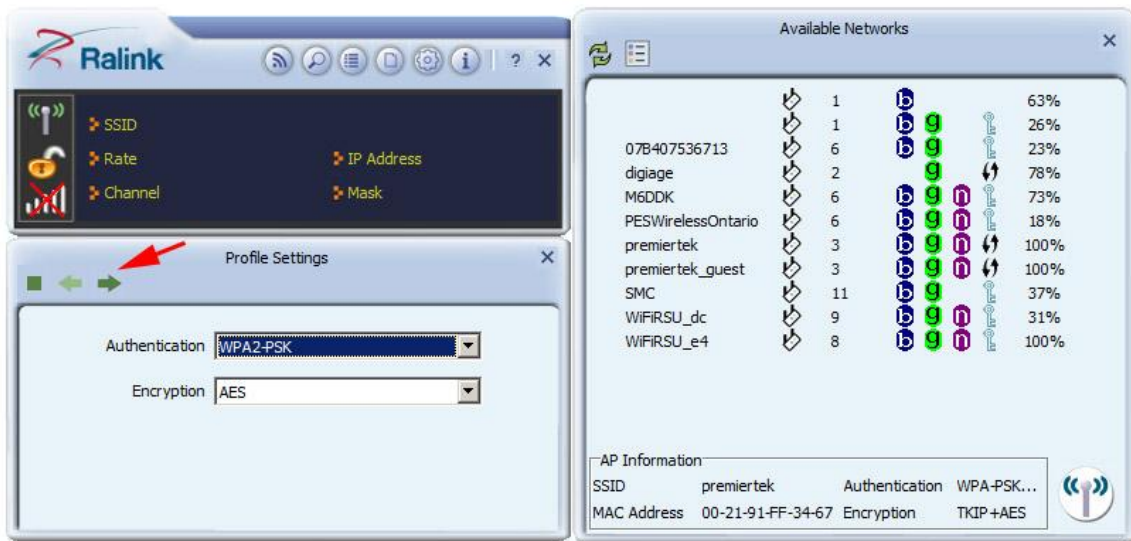

Figure 3-4

4. When you have input all correct info for security, it should appear like **Figure 3-5**.
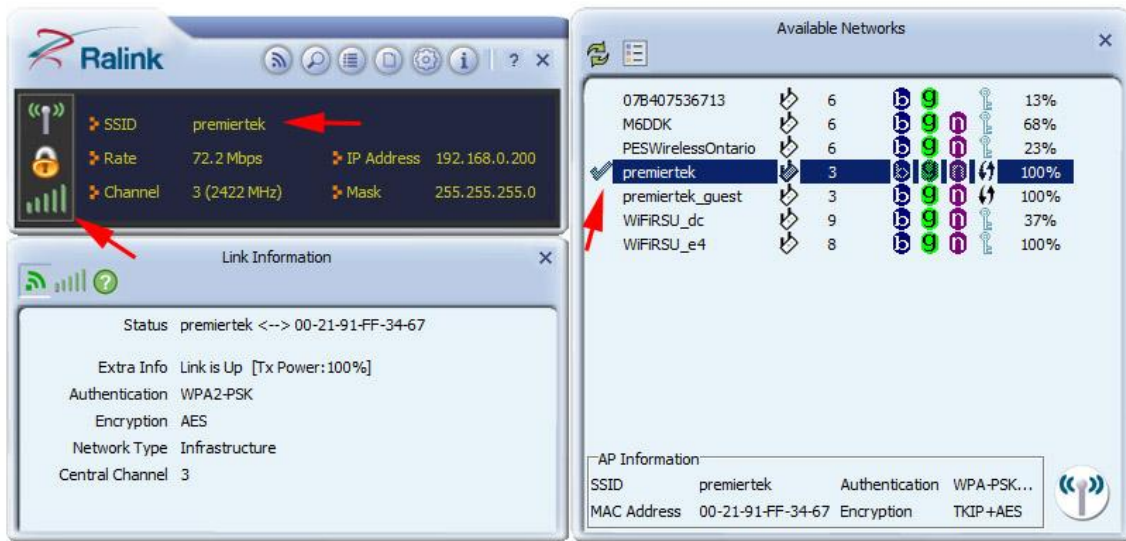
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Figure 3-5

3.3 Steps to add wireless signal with Ralink Utility for future use

1. Click "**Profit Setting"** and click **Add to Profile**   : This part will help your

wireless adapter memorize the signal and password for your future use. **See Figure 3-6, Figure 3-7 and Figure 3-8**
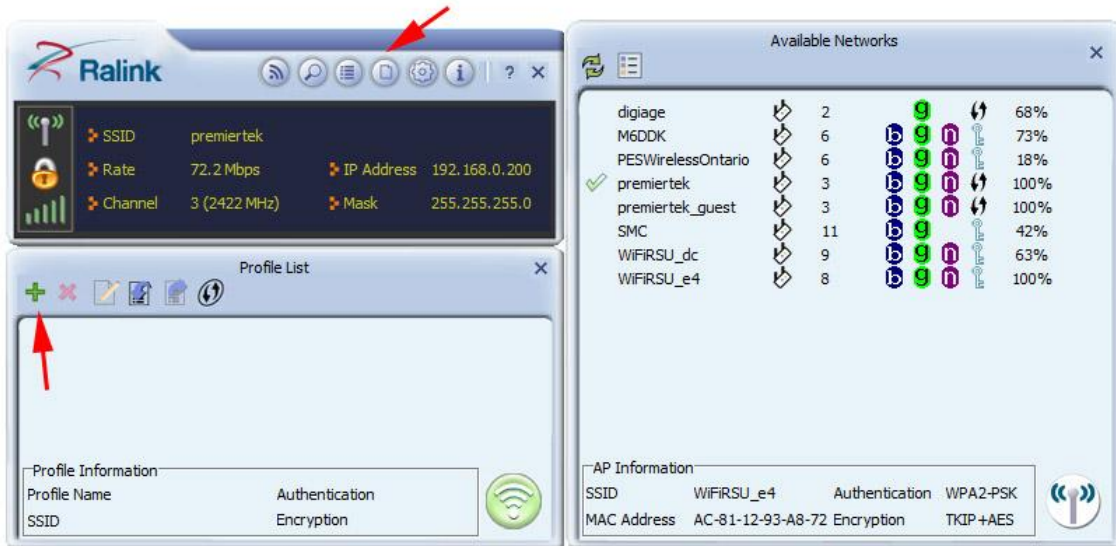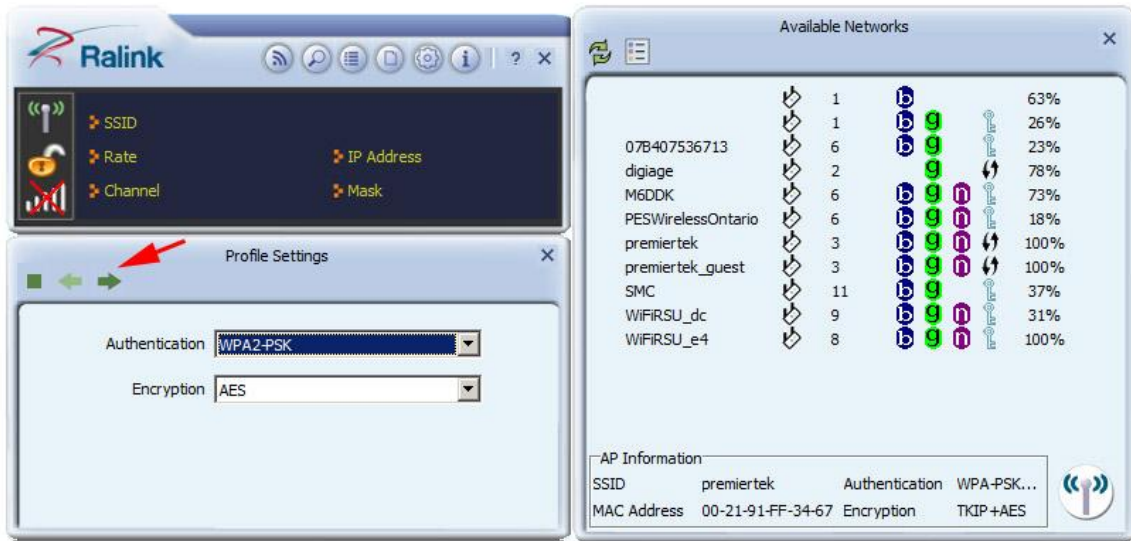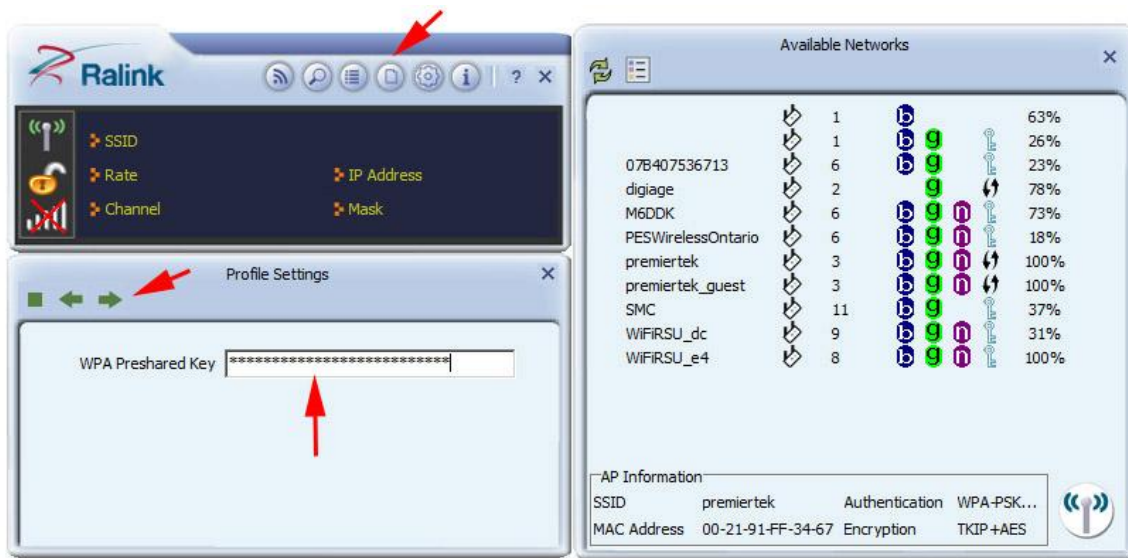

Figure 3-6

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Figure 3-7

Figure 3-8

3.4 Connecting with Microsoft Zero Configuration for Window XP (Window 7 is similiar)

1. After specifying the Microsoft **Zero Configuration tool** to configure your wireless

   network, right click on the icon [icon] on system tray as below. Select "**View**

   available wireless Networks" to specify your wireless network.

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Figure 3-6

2. The tool shows the available wireless networks. Select your network SSID to connect with like **Figure 3-7**.
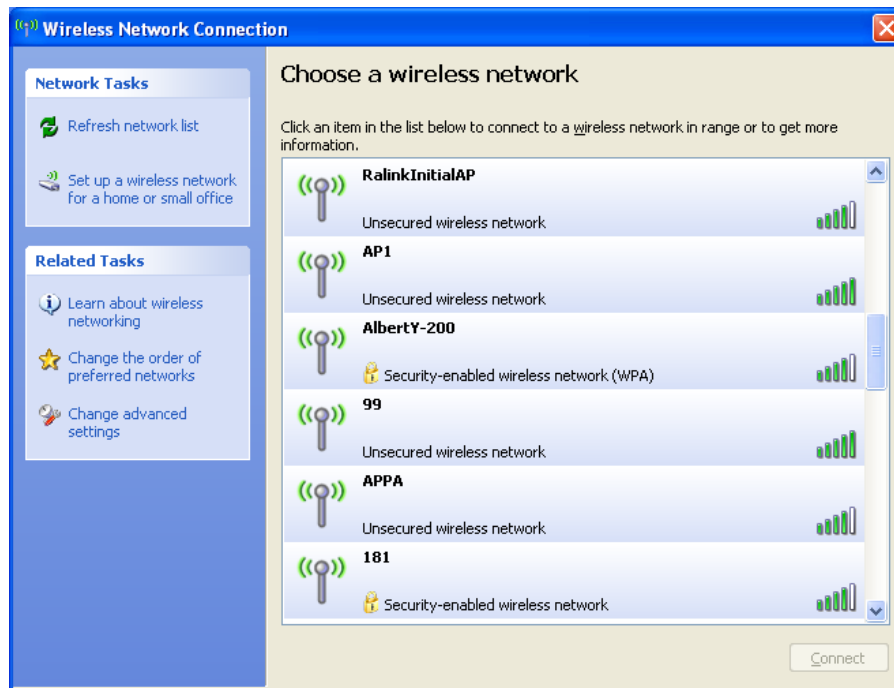
Figure3-7

3. If your wireless Network has encryption enable, you will be ask to enter the password like **Figure 3-8**. Please enter your wireless password at "**Network key**" section twice and click "**Connect**" to confirm.

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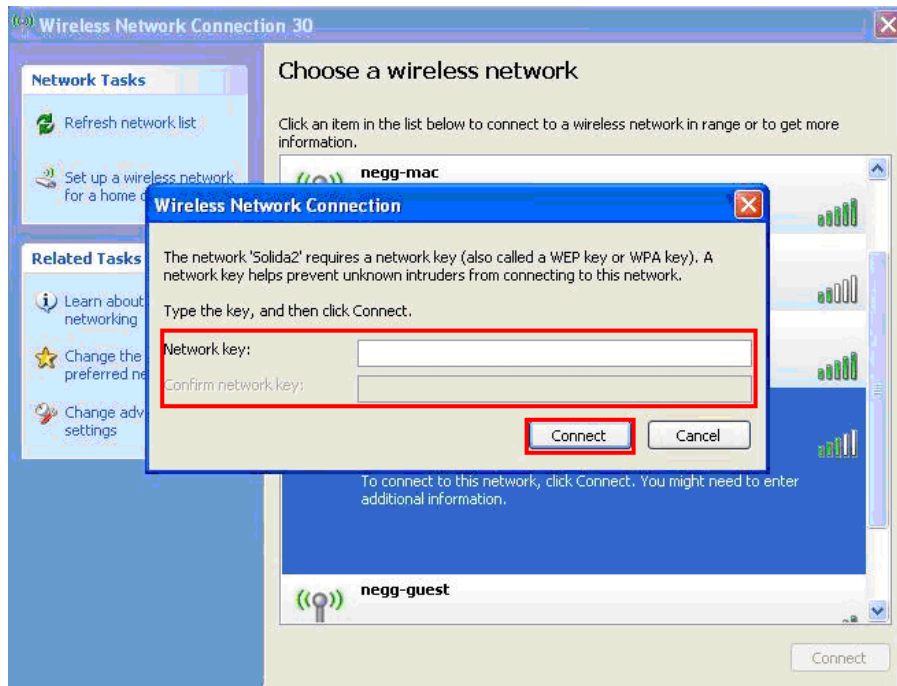
Figure 3-8

4. If your wireless Network does not contains encryption, select the intended access point and click "**Connect**". Then click "**Connect Anyway**" like Figure 3-9
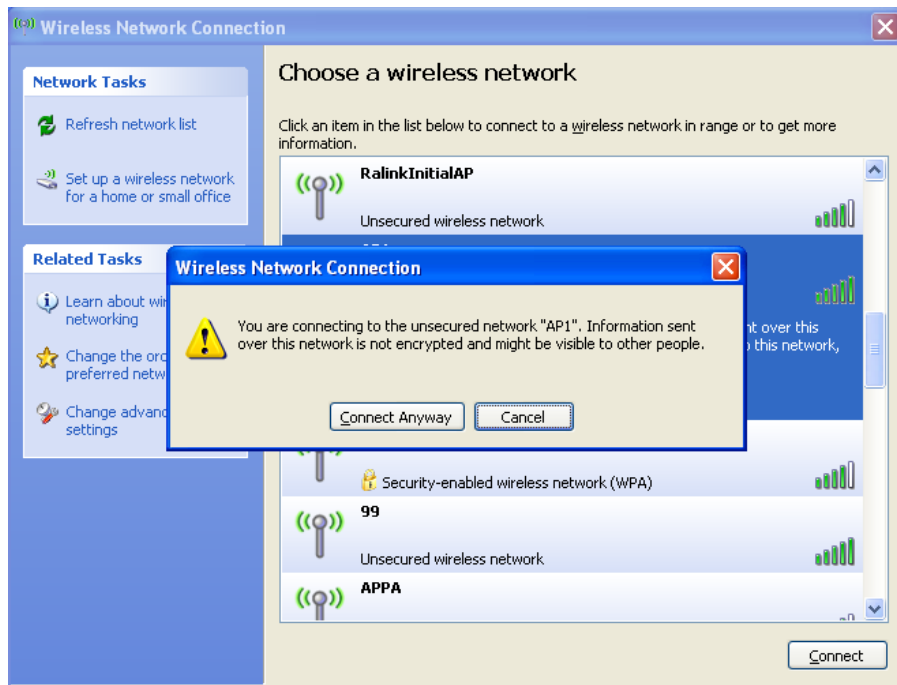
Figure 3-9

5. Once completed, you should see like **Figure 3-10** as your computer is now "**Connected**" with your wireless Network.

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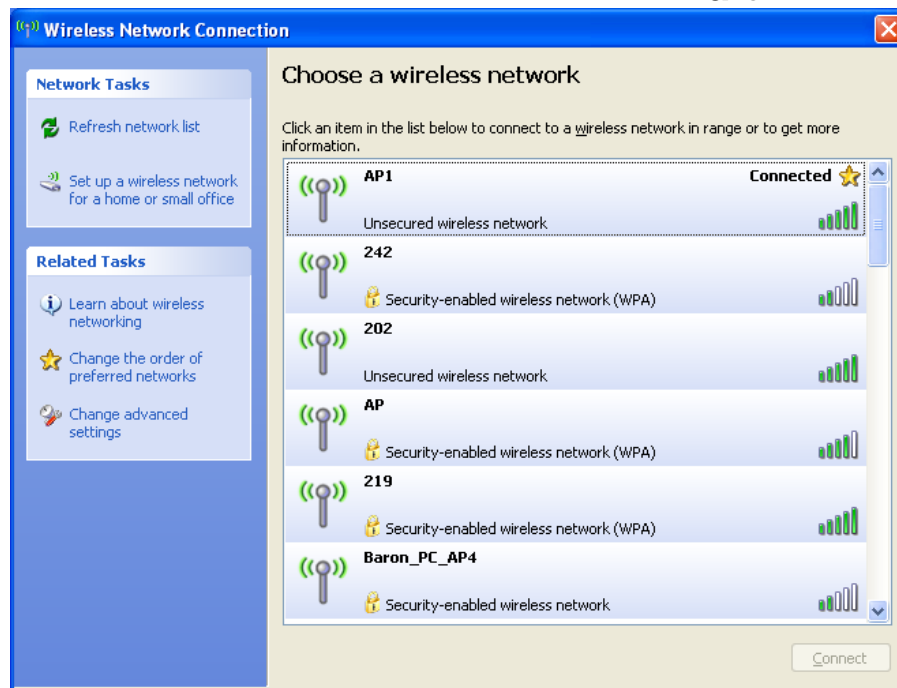
Figure 3-10

6. You should see the pop-up window on your low right hand corner indicate the connected status. As shown in **Figure 3-11**
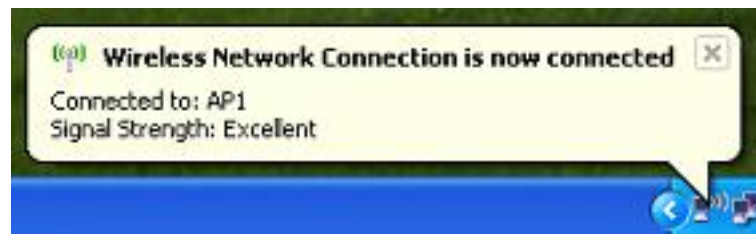
Figure 3-11

3.5 Connecting with Mac OS

The Connection Utility can also help you connect through Mac OS.

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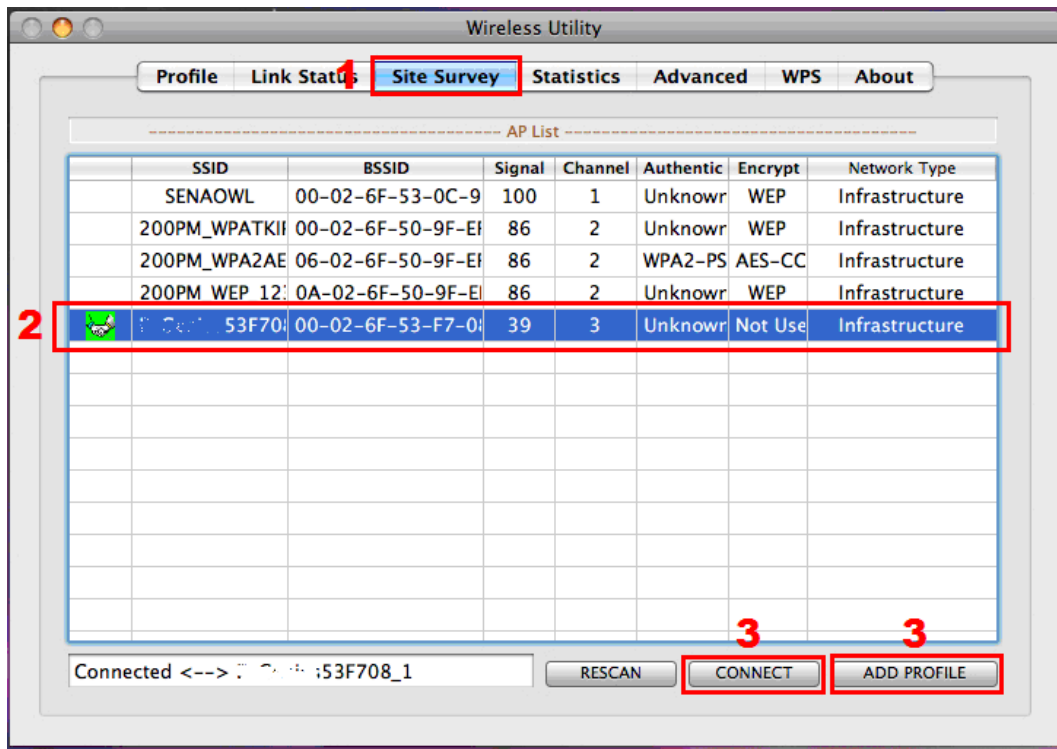
Figure 3-13

1. Upon opening the **Wireless Utility** program, first click open "**Site Survey**"

2. Select your desired AP signal under the AP List. You can further search the signal by clicking "**RESCAN**"

3. After selecting the AP signal, you can select either "**CONNECT**" or "**ADD PROFILE**"

   - CONNECT: This is for connecting only once which best use for places other than your regular use areas such as coffee shop, libraries, and etc.

   - ADD PROFILE: This is for adding the signal into your most common use list. Once wireless adapter plug-in, the utility will automatically connect to the profile.

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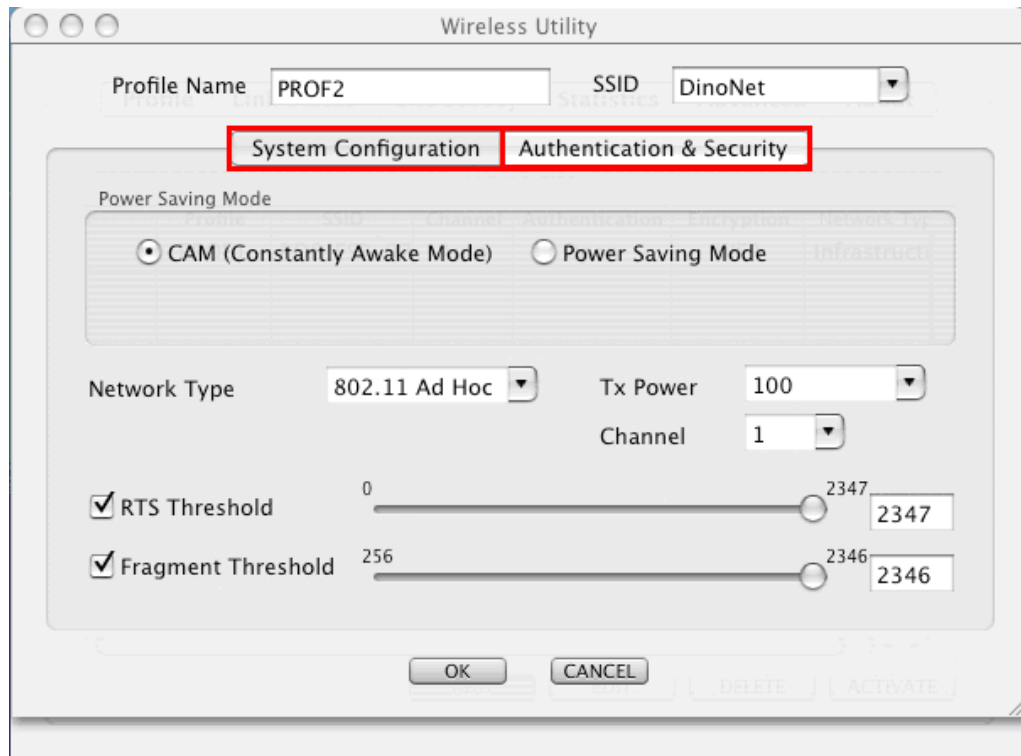
Figure 3-14

4. Once click Profile, you will be prompt to ask for your personal settings such as "**System Configuration**" and "**Authentication & Security**".
   ● You have the choice to select "**Authentication & Security**" and enter the password for connecting to the signal.

Please make sure that your settings for Authentication & Security are the same as your Wireless Router's setting

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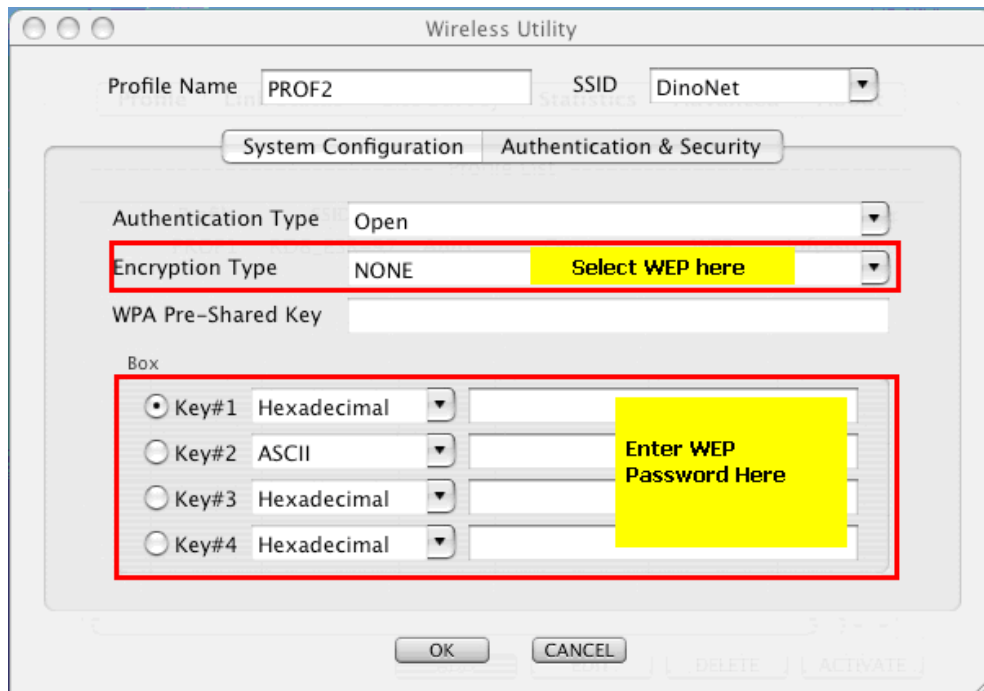
Figure 3-15

5. For **WEP**, Select **Open** or **Shared** from the **Authentication Type**'s
   drop-down list.

- Then select **WEP** from **Encryption**'s drop-down list.
- **WEP Key**: Type a character string into the field.
    - For 64-bit enter 5 alphanumeric or 10 hexadecimal characters.
    - For 128-bit enter 13 alphanumeric or 26 hexadecimal characters.
- Click on the OK button to save the changes.

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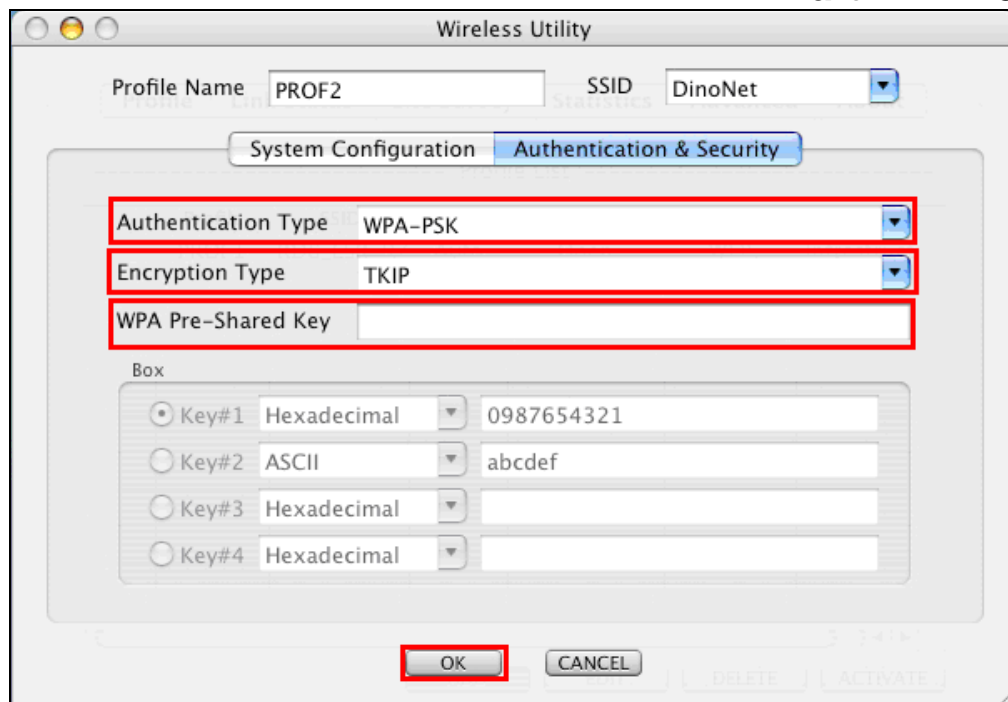
Figure 3-16

6. For **WPA** or **WPA2**, please select from **Authentication**'s drop-down list.

- Select **TKIP** or **AES** from **Encryption**'s drop-down list.

- **WPA Preshared key**: Enter a pass phrase which is between 8 and 32 characters long.

- Click on the **OK** button to save the changes.

- Show **Password** check box. If you want to make sure the accuracy of password you type, click the Show Password box to check it.

Chapter 4.   Trouble Shooting

This chapter provides solutions to problems that may occur during the installation and operation of PL-2814N. Read the descriptions below to solve your problems.

1. The PL-2814N does not work properly.
Reinsert PL-2814N into your PC's USB slot.
Right click on My Computer and select Properties. Select the device manager and click on the Network Adapter. You will find PL-2814N if it is installed successfully.
If you see the yellow exclamation mark, the resources are conflicting. You will see
the status of PL-2814N. If there is a yellow question mark, please check the

following:

Make sure that your PC has a free IRQ (Interrupt ReQuest, a hardware interrupt on a PC.)

Make sure that you have inserted the right adapter and installed the proper driver. If PL-2814N does not function after attempting the above steps, remove it and do the following:

Uninstall the driver software from your PC.

Restart your PC and repeat the hardware and software installation as specified in this User Guide.

2. I cannot communicate with the other computers linked via Ethernet in the Infrastructure configuration.

Make sure that the PC to which PL-2814N is associated is powered on.

Make sure that PL-2814N is configured on the same channel and with the same security options as with the other computers in the Infrastructure configuration.

3. What should I do when the computer with PL-2814N installed is unable to connect to the wireless network and/or the Internet?

Check that the LED indicators for the broadband modem are indicating normal activity. If not, there may be a problem with the broadband connection.

Check that the LED indicators on the wireless router are functioning properly. If not, check that the AC power and Ethernet cables are firmly connected.

Check that the IP address, subnet mask, gateway, and DNS settings are correctly entered for the network.

In Infrastructure mode, make sure the same Service Set Identifier (SSID) is specified on the settings for the wireless clients and access points.

In Ad-Hoc mode, both wireless clients will need to have the same SSID. Please note that it might be necessary to set up one client to establish a BSS (Basic Service Set) and wait briefly before setting up other clients. This prevents several clients from trying to establish a BSS at the same time, which can result in multiple singular BSSs being established, rather than a single BSS with multiple clients associated to it.

Check that the Network Connection for the wireless client is configured properly. If Security is enabled, make sure that the correct encryption keys are entered on both PL-2814N and the access point.

4. I can't find any wireless access point / wireless device in Network tab.

- Click Rescan for few more times and see if you can find any wireless access point or wireless device.
- Please move closer to any known wireless access point.

- Ad-hoc function must be enabled for the wireless device you wish to establish a direct wireless link.

- Please adjust the position of PL-2814N and click Rescan button for few more times. If you can find the wireless access point or wireless device you want to connect by doing this, try to move closer to the place where the wireless access point or wireless device is located.

5. Nothing happens when I click Launch configuration utilities

- Please make sure PL-2814N is inserted into your computer's USB port. If the Ralink configuration utility's icon is black, PL-2814N is not detected by your computer.
- Reboot the computer and try again.
- Remove PL-2814N and insert it into another USB port.
- Remove the driver and re-install.

6. I can not establish connection with a certain wireless access point

- Click Connect for few more times.
- If the SSID of access point you wish to connect is hidden (nothing displayed in SSID field in Network tab), you have to input correct SSID of the access point you wish to connect.
- You have to input correct pass phrase / security key to connect an access point with encryption.
- The access point you wish to connect only allows network cards with specific MAC address to establish connection. Please go to About tab and write the value of Physical Address down, then present this value to the owner of access point to add the MAC address of your PL-2814N to owner's access point's list.

7. The network is slow / having problem when transferring large files

- Move closer to the place where access point is located.
- Enable Wireless Protection in Advanced tab.
- Try a lower TX Rate in Advanced tab.
- Disable Tx Burst in Advanced tab.
- Enable WMM in WMM tab if you need to use multimedia / telephony related applications.
- Disable WMM – Power Save Enable in WMM tab.
- There could be too much people using the same radio channel. Ask the owner of the access point to change the channel number.

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For questions, please visit our website www.premiertek.com