

Realtek 8187L Win2000/XP

Realtek 8187L Vista/Win7

Realtek 8188CU

Realtek 8188SU/8191SU

For Realtek chipset products, please kindly refer to the following steps.

1. Installation/ Uninstallation

Warning! Do not cover or block the airflow to the adapter. The adapter will reach a high temperature during use.

1.1 Installation

Before you proceed with the installation, please notice the following descriptions.

Note1: The following installation was operated under Windows XP.

(Procedures are similar for Windows 98SE/Me/2000.)

Note2: If you have installed the WLAN USB driver & utility before, please uninstall the old version first.

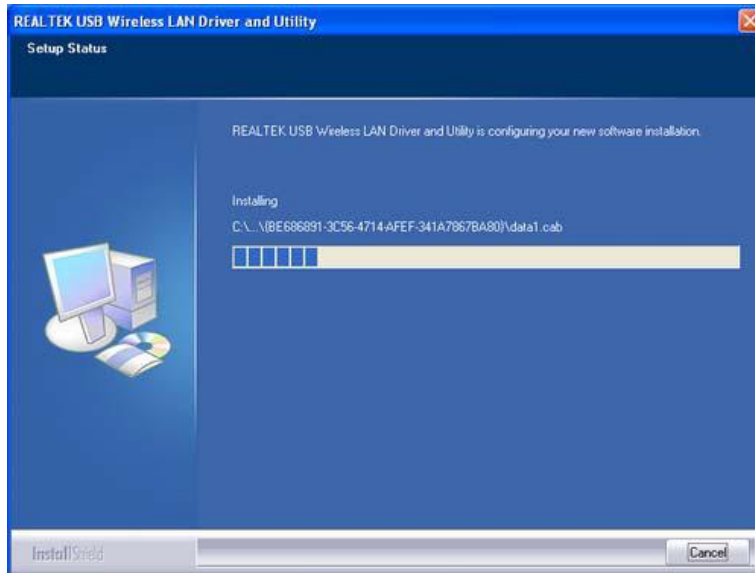
1. Do not plug the wireless LAN USB adapter into your computer USB port before installing the software program.

Insert the software program CD, then auto installation window pops up on following:

2. While the following screen pops out, click **Driver Installation**

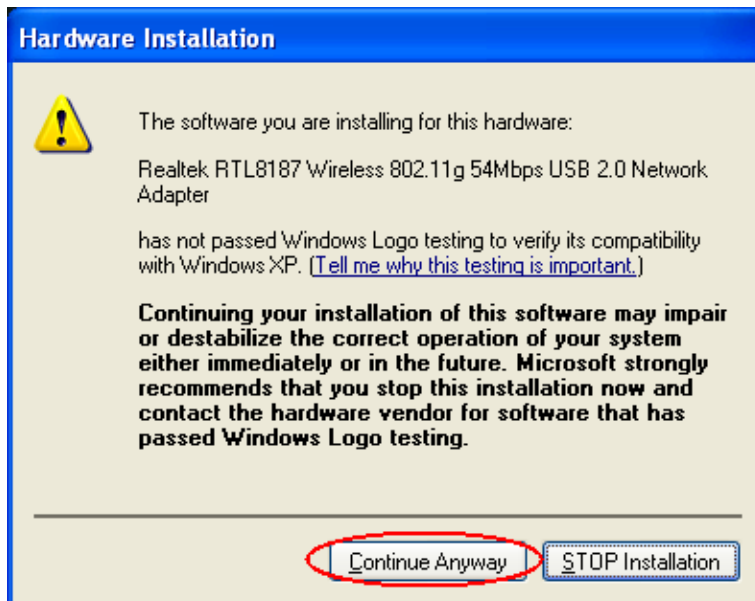
3. Choose a set up language. Click **Next** to process the installation

4. The system starts software installation of the WLAN USB adapter.

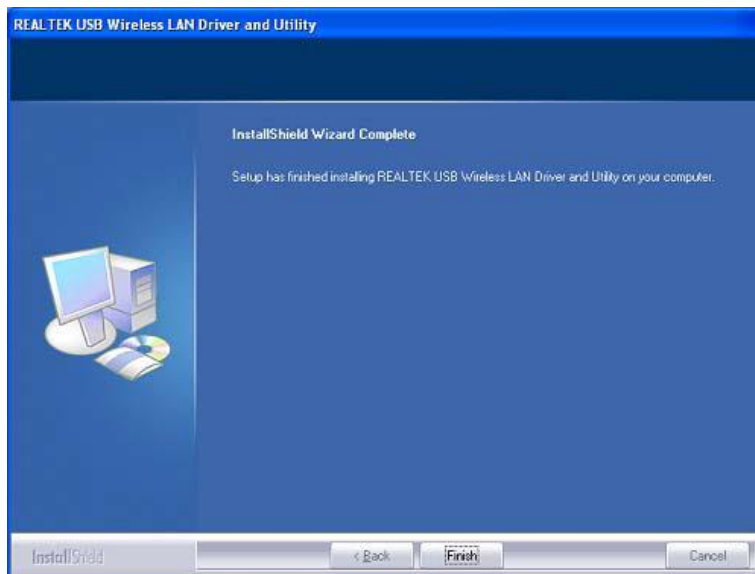


5. On Windows Logo Software Installation screen, click **Continue Anyway** to continue.

Note: Not all the drivers will have this message box.



6. Click **Finish** to complete the installation.



7. After click **Finish** to complete the installation, under Windows XP <ALL Programs> menu, REALTEK USB wireless LAN Utility program installed.



8. Insert the wireless LAN USB adapter into your computer USB port, the computer detected and active the wireless LAN USB adapter automatically

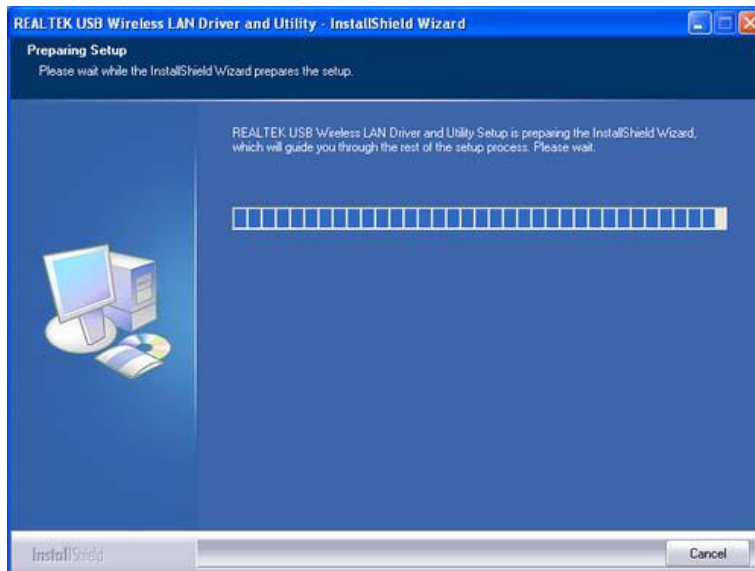
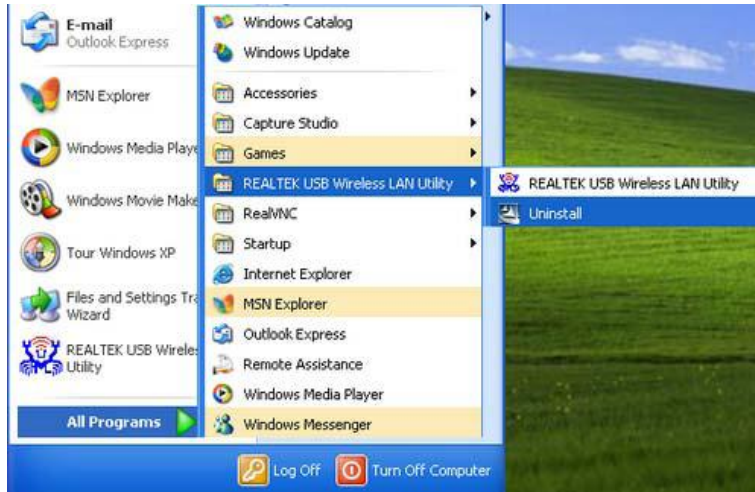
1.2 Uninstallation

From “Wireless Network Driver and Utility” or “Control Panel” ”Change or Remove Programs”.

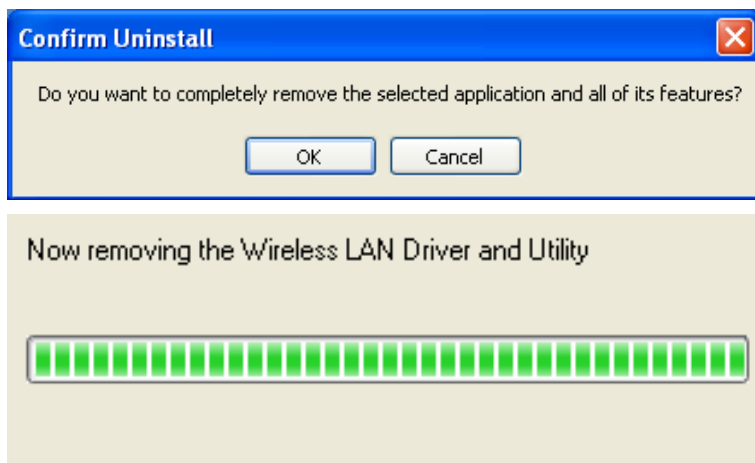
A. Uninstall the WLAN USB Adapter Driver from “Start” “All Programs”

Click “Uninstall” (or “Change/Remove”) to remove

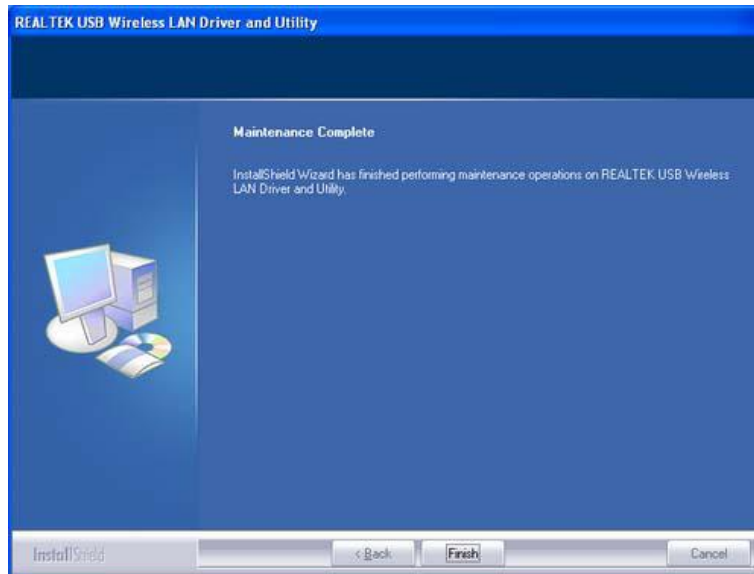
Wireless LAN USB Adapter driver.



B. Click “OK” if you want to remove Wireless LAN USB Adapter Driver



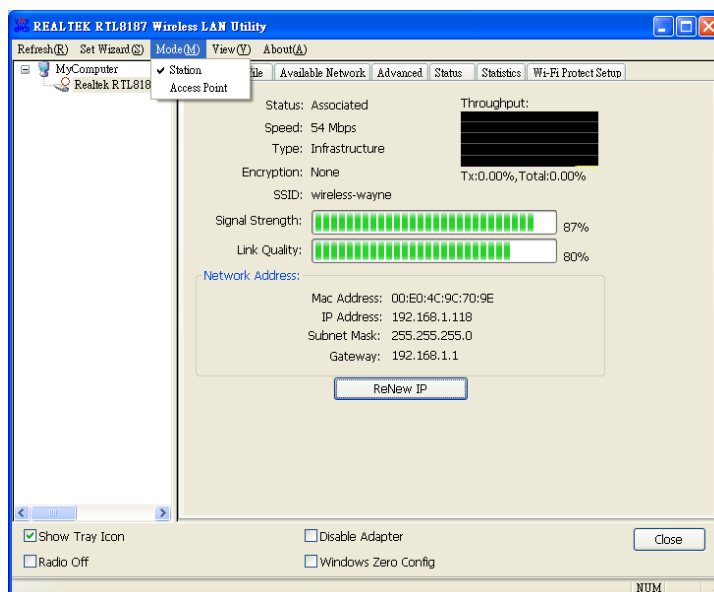
C. Click “Finish” to complete the uninstallation.



2. Wireless LAN Management GUI

2.1 Station Mode

The following explanations focus on the properties area.

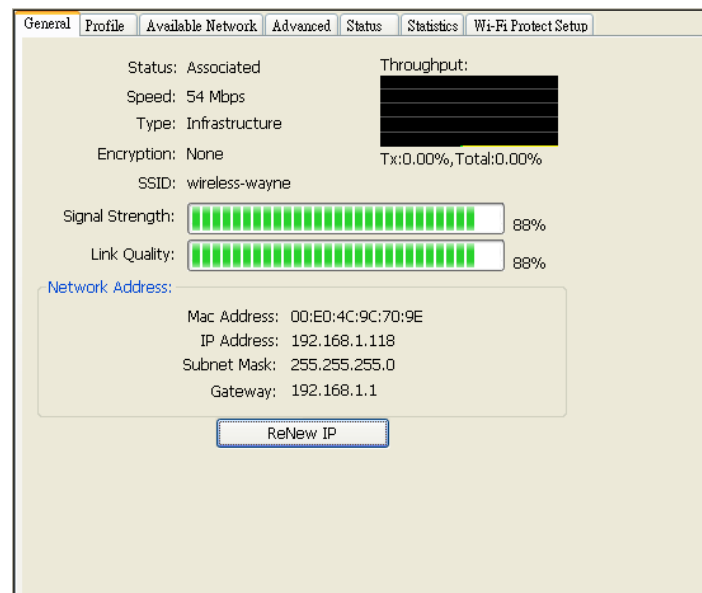


Infrastructure and Ad-Hoc

With both Infrastructure and Ad-Hoc types, the properties should look like the picture above. Six property pages present different information of current wireless network status. Please read the following explanations before you reviewing these pages, it could help you to well understand the wireless environment around the system. It is easy to use to switch property pages just by clicking left button of mouse on the title of each page. The following six sections describe detailed information of each page.

A. General Page

This page represents the general information of this adapter



1. Status

The status of station connection to AP.

2. Speed

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

3. Type

Current wireless LAN configuration type.

4. Encryption

Current encryption mode used.

5. SSID

Name of wireless network.

6. Signal Strength

The average signal quality of packets received from wireless network.

We recommend connecting AP with over 70% signal strength.

7. Throughput Diagram

Current throughput, including transmission (Tx) and total traffic (Total).

8. Network Address

Mac Address: six two-digital number of this Wireless LAN USB 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 255.255.255.0

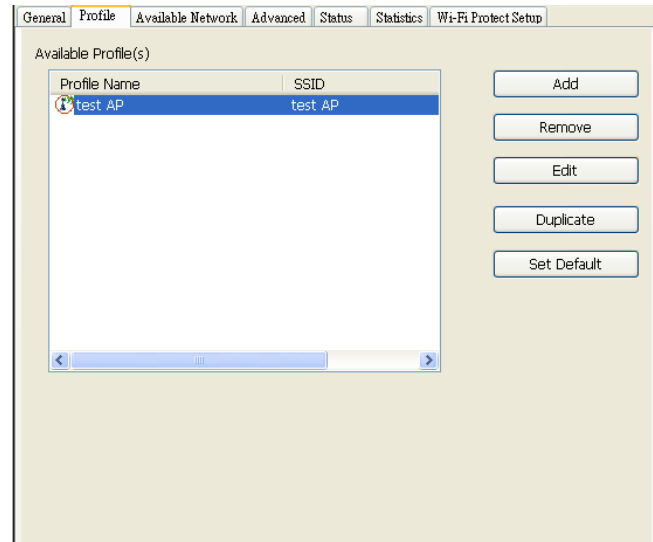
■ Gateway: It comes from connected AP. Your system can not connect internet with this field empty.

B. Profile Page

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

Available Profile(s)

The list box shows all the created profiles.



1. Add

Add a new profile for AP or IBSS (Ad-Hoc mode).

2. Remove

Remove the selected profile.

3. Edit

Edit contents of selected profile.

4. Duplicate

Make copy of selected profile.

5. Set Default

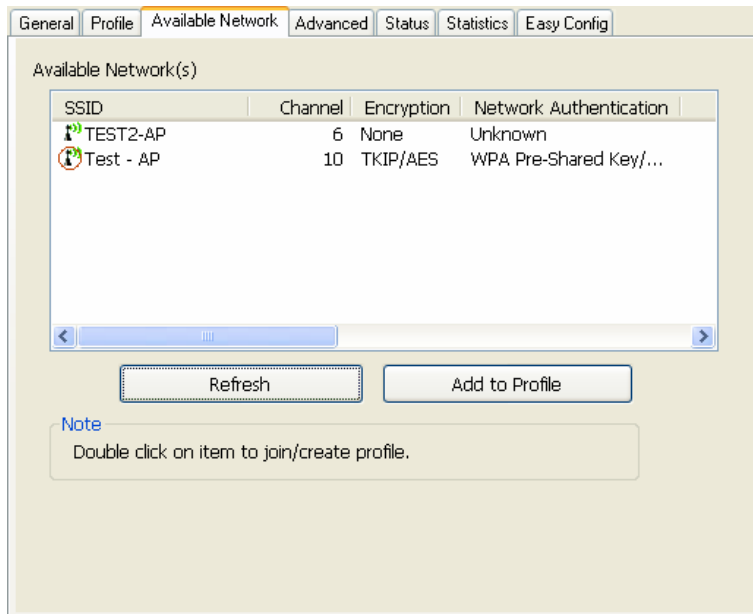
Set the selected profile as default selection.

6. Available Network Page

This page presents all BSS, including AP and IBSS, around this system. You can pick any one of these network connections.

C. Available Network(s)

Show network connection around this system



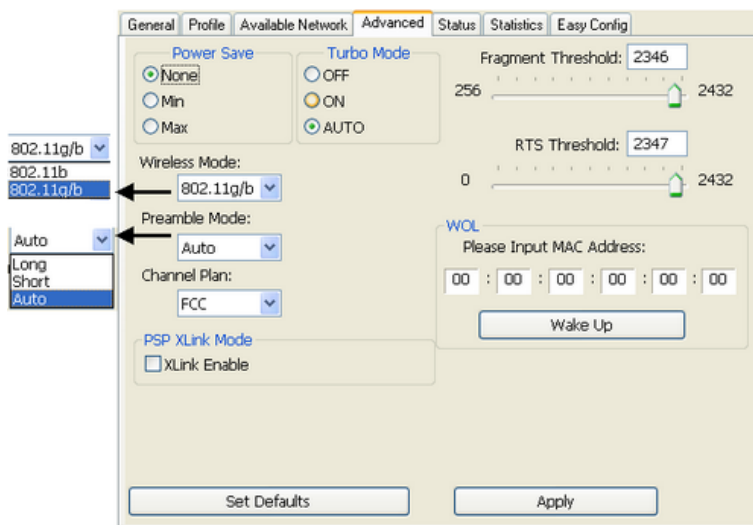
1. Refresh

Rescan network connection around this system.

2. Add to Profile

Create profile for selected network connection and add it to profile list.

D. Advanced Page



1. Power Save

None: without power save function.

Min: wake up more frequently to receive packets.

Max: wake up less frequently to receive packets.

2. Wireless Mode

802.11b

802.11g/b

3. 802.11b Preamble Mode

Long: higher quality but with lower performance than preamble short mode.

Short: Normal quality but with higher performance than preamble long mode.

Auto: use the preamble mode of current BSS.

4. Fragment Threshold

The threshold of fragment length. Higher threshold increase data transition performance with good signal quality. However, in a poor signal quality environment, data throughput might be worse on high fragment threshold than low fragment threshold.

5. RTS Threshold

Threshold of Request To Send mechanism. The RTS frame will not send out until the packet size over threshold.

6. WOL (Wake On LAN)

The wake-on-LAN is applied for remote control purpose. You could wake up a system through network packets. For Wireless LAN USB Adapter, only the same adapter on another system could wake it up.

Input MAC Address: the six two-digit numbers of Wireless LAN USB Adapter on target system.

Wake Up: click this button to wake it up .

7. Set Defaults

Restore the default value to be current settings.

8. Apply

Apply the current settings to GUI.

E. Status Page

General	Profile	Available Network	Advanced	Status	Statistics	Easy Config																																													
<table><tr><td>Manufacturer</td><td>=</td><td>Realtek</td></tr><tr><td>NDIS Driver Version</td><td>=</td><td>5.1293.518.2007</td></tr><tr><td>Short Radio Header</td><td>=</td><td>No</td></tr><tr><td>Encryption</td><td>=</td><td>AES</td></tr><tr><td>Authenticate</td><td>=</td><td>WPA2-PSK</td></tr><tr><td>Channel Set</td><td>=</td><td>FCC</td></tr><tr><td>MAC Address</td><td>=</td><td>00:00:CA:01:7A:7E</td></tr><tr><td>Data Rate (AUTO)</td><td>=</td><td>54 Mbps</td></tr><tr><td>Channel (Frequency)</td><td>=</td><td>10 (2457 MHz)</td></tr><tr><td>Status</td><td>=</td><td>Associated</td></tr><tr><td>SSID</td><td>=</td><td>Test - AP</td></tr><tr><td>Network Type</td><td>=</td><td>Infrastructure</td></tr><tr><td>Power Save Mode</td><td>=</td><td>None</td></tr><tr><td>Associated AP MAC</td><td>=</td><td>00:00:CA:81:86:21</td></tr><tr><td>Up Time (hh:mm:ss)</td><td>=</td><td>0:47:09</td></tr></table>							Manufacturer	=	Realtek	NDIS Driver Version	=	5.1293.518.2007	Short Radio Header	=	No	Encryption	=	AES	Authenticate	=	WPA2-PSK	Channel Set	=	FCC	MAC Address	=	00:00:CA:01:7A:7E	Data Rate (AUTO)	=	54 Mbps	Channel (Frequency)	=	10 (2457 MHz)	Status	=	Associated	SSID	=	Test - AP	Network Type	=	Infrastructure	Power Save Mode	=	None	Associated AP MAC	=	00:00:CA:81:86:21	Up Time (hh:mm:ss)	=	0:47:09
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Up Time (hh:mm:ss)	=	0:47:09																																																	

NDIS Driver Version: Driver version

Short Radio Header: No

Encryption: Current encryption mode.

Authenticate: Authentication state

Up Time: Total connection time

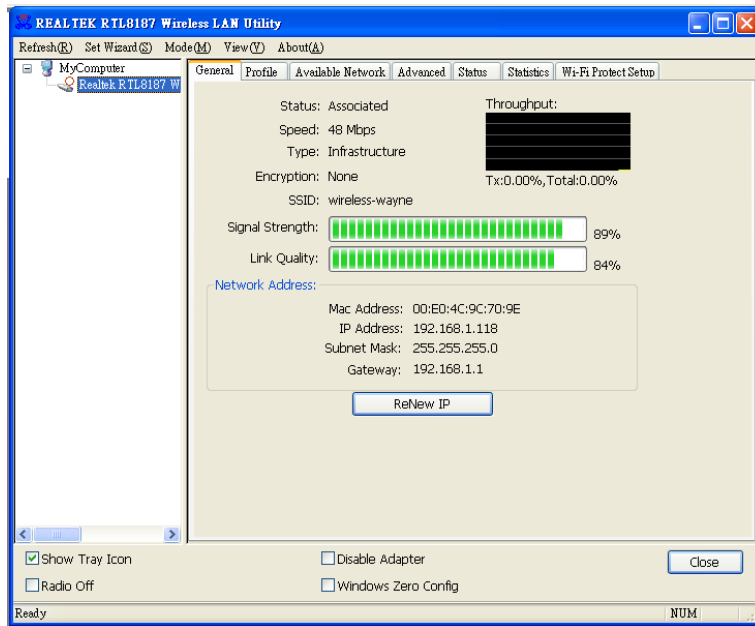
You could watch the Tx/Rx status of current wireless connection. This page shows a statistic analysis of packet transition.

General Profile Available Network Advanced Status **Statistics** Easy Config

Counter Name	Value
Tx OK	2892
Tx Error	0
Rx OK	81
Rx Packet Count	81
Rx Retry	11
Rx ICV Error	0

Reset

3. Introduction of Main Window



A. Main Menu

The main menu includes five submenus.

1.Refresh(R)

When clicking the refresh menu, you can update and re-enumerate the contents of adapter list area.

2. Set Wizard(S)

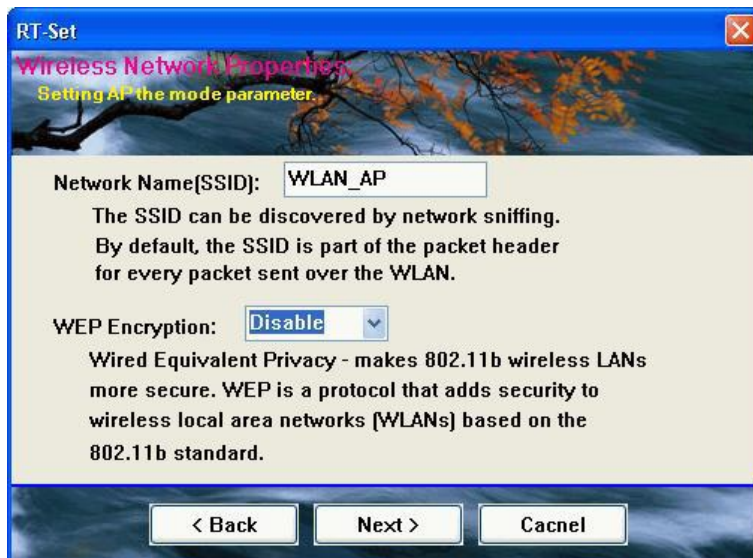
2.1 Wizard-1

Click **Set Wizard(S)** menu to enter operation wizard. Click **AP: Setup a wireless network**. To configure Access Point parameters. **Next** to continue. **Cancel** to leave wizard



2.2 Wizard-2

User defines wireless network Name [SSID](less than 32 characters). User may skip wireless security. Strongly recommend user to setup wireless security to avoid invalid users. **Back** to go previous. **Next** to continue. **Cancel** to close wizard.



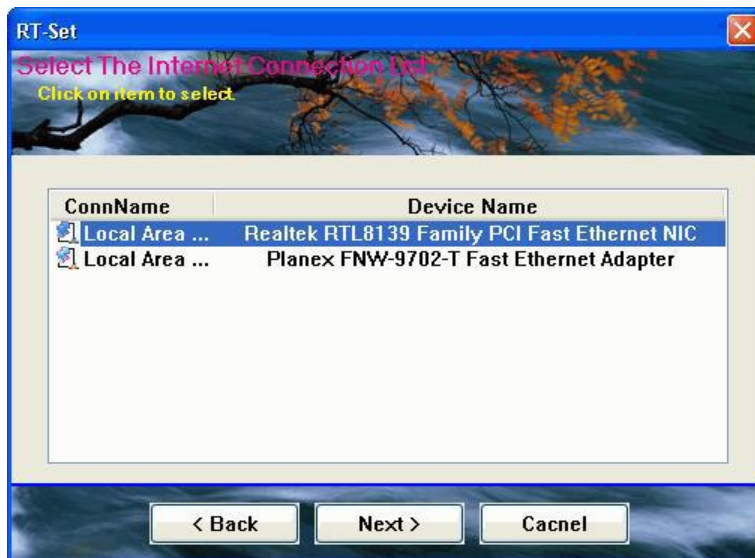
2.3 Wizard-3

This page shows SSID & Security settings **Back** to go previous **Next** to continue.
Cancel to close wizard.



2.4 Wizard-4

Select device that connects with internet. **Back** to go previous. **Next** to continue.
Cancel to close wizard.



2.5 Wizard-5

Show all settings under AP mode. Click **Finish** to complete wizard setup.



3.Mode (M)

Wireless configuration is quickly switched to be either [Station] or [AP].



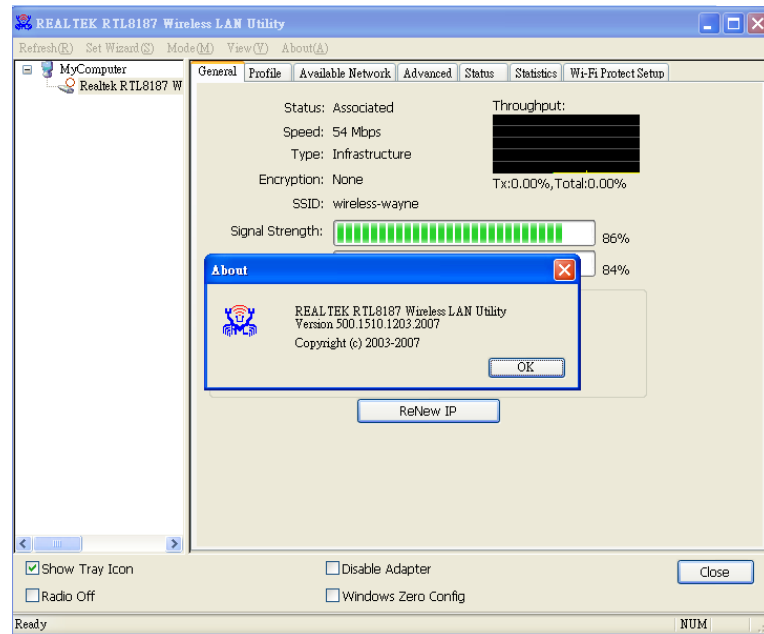
4.View (V)

Enable/disable the presence of **E. Status Bar**. Without the check mark (v) the **E. Status Bar** will be hidden.

5.About(A)

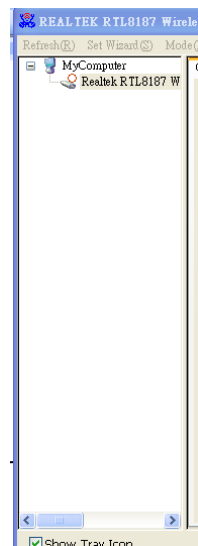
Click the “About” to show the about dialog. The application version and license information are

shown in the about dialog.



B. Adapter List Area

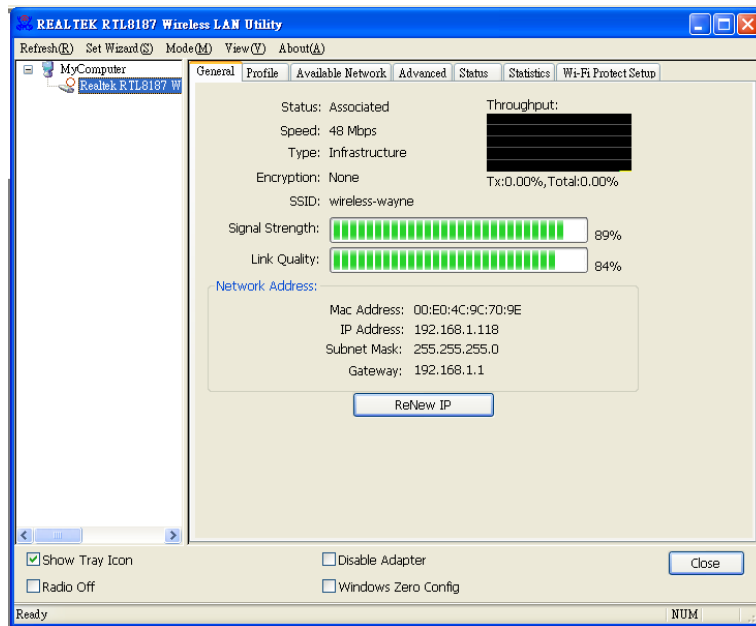
All connected adapters on this system with multiple adapter installations are displayed in this area. It is easy for users to change the selected adapter by one click. The contents of properties area are dependant on wireless configuration that the selected adapter is set up. If only single adapter is installed on the system, only one adapter is always selected.



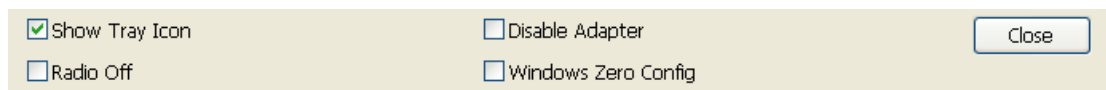
C. Properties Area

The contents of this area are dependent on current wireless configuration. The current configuration is determined on previous explanation of submenu “Mode”. The more detailed contents are

described in the following wireless configuration sections for both Station and AP mode.



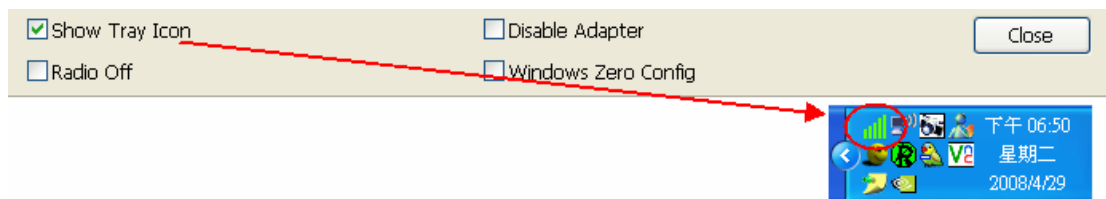
D. Global Control Bar



Each control item on this bar affects the adapter or management GUI directly.

Show Tray Icon

Checking "Show Tray Icon" and clicking "Close" button, the management GUI will be minimized and stay on the tray icon located at the right bottom corner of Windows. If not, management GUI will shut down while clicking "Close" button with unchecked condition.

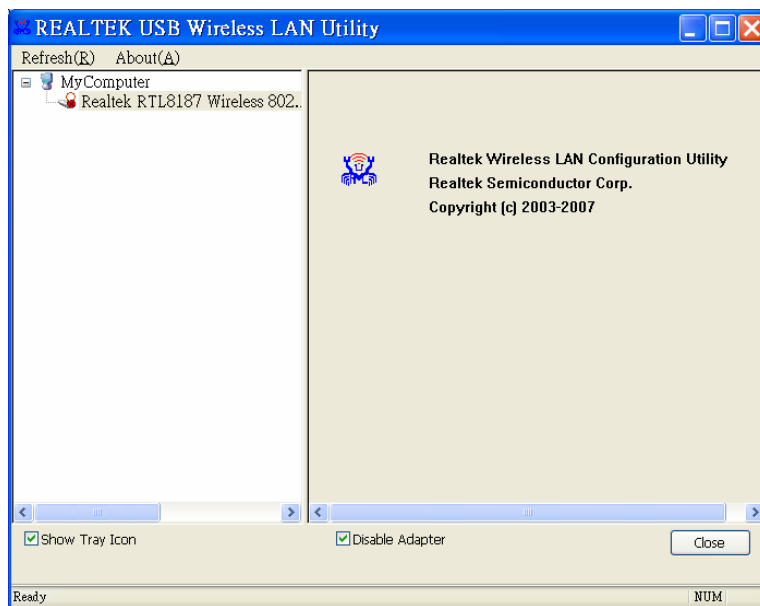


Radio Off

Turn off the radio to save power. While the radio is off, the links with other wireless network nodes are disconnected. User should be aware that while the wireless configuration is in AP mode. The radio off will cause the sub network belonging to the AP to be disconnected with internet/intranet.

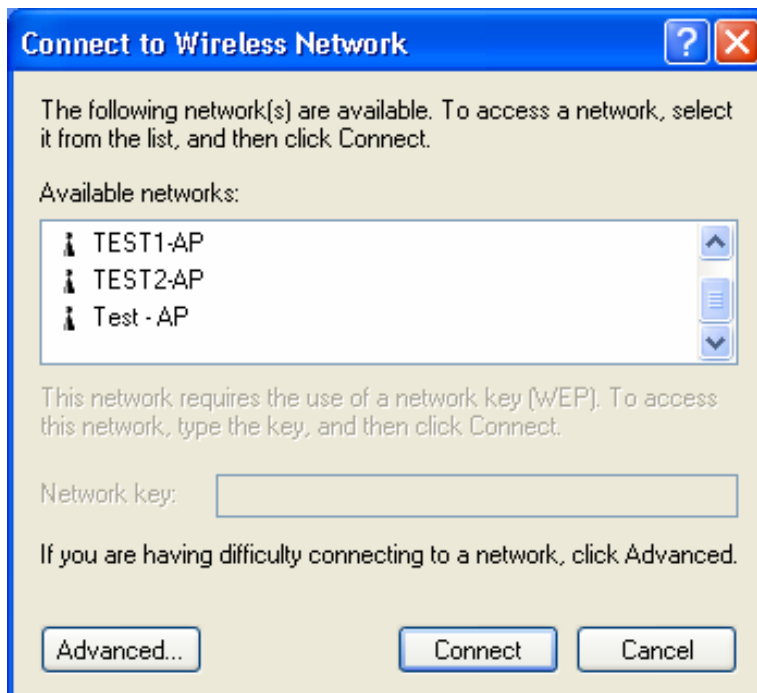
Disable Adapter

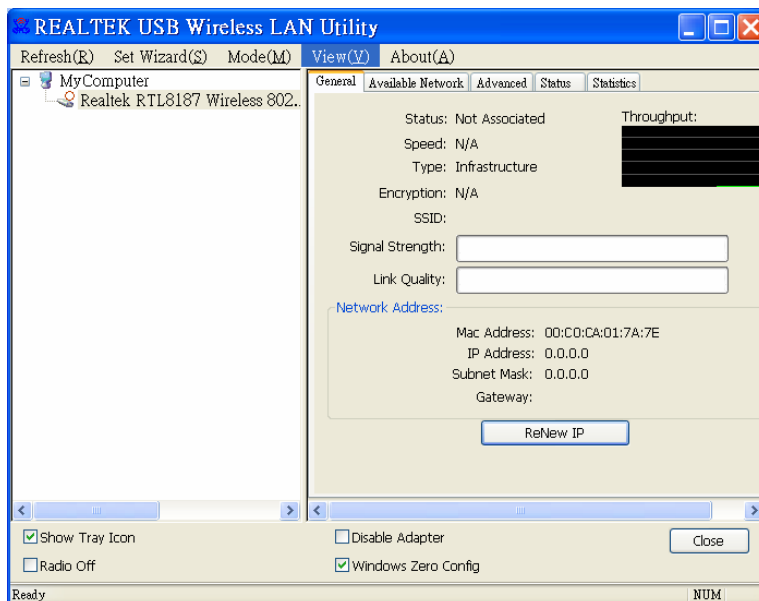
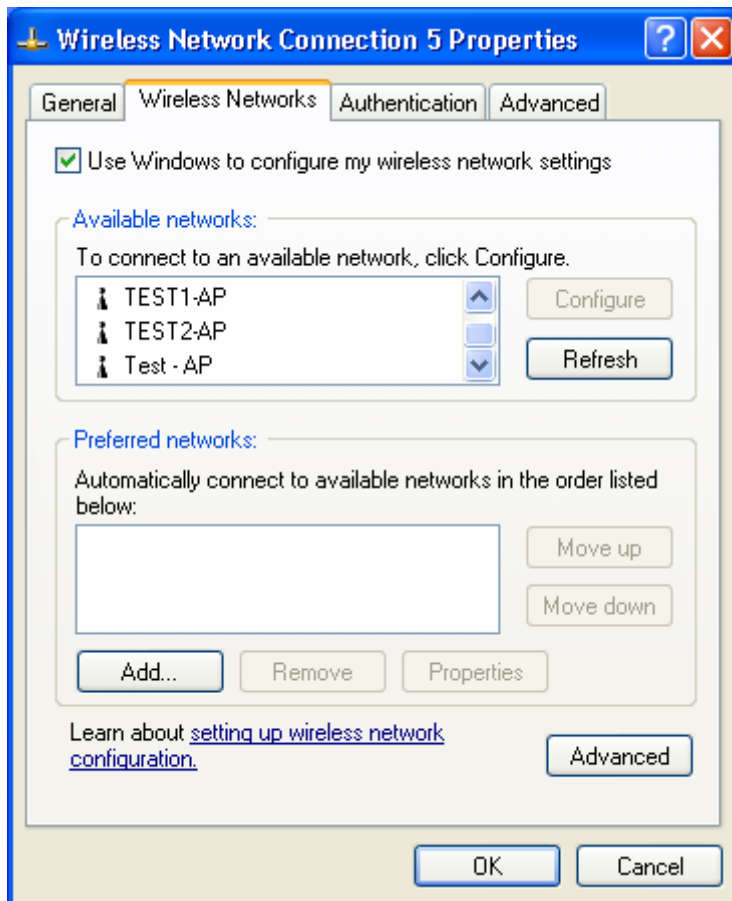
Stop wireless USB device.



Windows Zero Config

Switch utility to Windows XP default wireless setting tool.



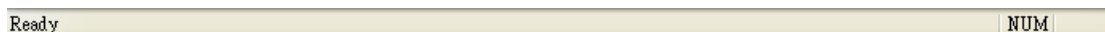


Close

Whether to check or uncheck "Show Tray Icon" is to shutdown or hide the management GUI.

E. Status Bar

The hints or status of the management GUI are presented in the status bar.



4. AP Mode

A. General Page

This page provides general information of this AP, including name, MAC address and list of joined stations.

The screenshot shows a web-based configuration interface for an Access Point (AP). At the top, there are four tabs: 'General' (selected), 'Advanced', 'Statistics', and 'ICS'. Below the tabs, the 'General' section displays the following information:

- SSID: english-jxlqb1r_AP
- BSSID: 00:C0:CA:01:7A:74

Below this information is an 'Association Table' section. To the right of the table is a 'Config' button. The table has three columns: 'AID', 'Mac Address', and 'Life Time'. The table is currently empty.

AID	Mac Address	Life Time
-----	-------------	-----------

1. SSID

The name of this AP.

2. BSSID

Six two-digit numbers of the MAC address of this AP.

3. Association Table

It is the list of joined stations to this AP.

4. AID (Association ID)

The AID field is a value assigned by an AP during association that represents 16-bit ID of a station. It is a unique value assigned by AP.

5. MAC address


It is the six two-digit numbers that assemble the MAC address of respected joined station.

6. Life Time

It is the timer that counts down from 10 minutes whenever the AP connects the station successfully. If an STA associated to SW AP does not have any interaction with the AP in 10 minutes, it will be disassociated from the Infra-structure BSS.

7. Config

A dialog of this AP is shown for configuration modification



Wireless Network Properties:

Profile Name: Access Point Mode

Network Name(SSID): english-jxlqb1r_AP

☐ This is a computer-to-computer(ad hoc) network; wireless access points are not used.

Channel: 1 (2412MHz) ☐ AUTO Channel

Wireless network security

This network requires a key for the following:

Network Authentication: Open System

Data encryption: Disabled

☐ ASCII ☐ PASSPHRASE

Key index (advanced): 1

Network key:

Confirm network key:

OK Cancel

7.1. Network Name (SSID)

Name of the AP searchable by other wireless nodes. The length of SSID should be shorter than 32 characters.

7.2. Channel

Select the wireless channel within current channel plan.

7.3. Network Authentication & Data Encryption

There are three types of authentication:

■ Open System

It is combined with data encryption type to be WEP or to be disabled.

Encryption ~ disabled: you decide to open this AP to every one without network authentication.

Encryption ~ WEP: you decide to setup the basic data encryption with a defined network key.

■ Shared Key + WEP

You decide to apply both authentication and data encryption to prevent unauthorized login.

■ WPA-PSK + TKIP & WPA2-PSK + TKIP

The most advanced authentication and data encryption that provide the best security protection.

7.4. ASCII/ PASSPHRASE

The most advanced authentication and data encryption that provide the best security protection.

■ ☐ ASCII: You should provide either 5 or 13 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-bit to be complied with data packets.

128 bits: The generated pass key is 128-bit to be complied with data packets.

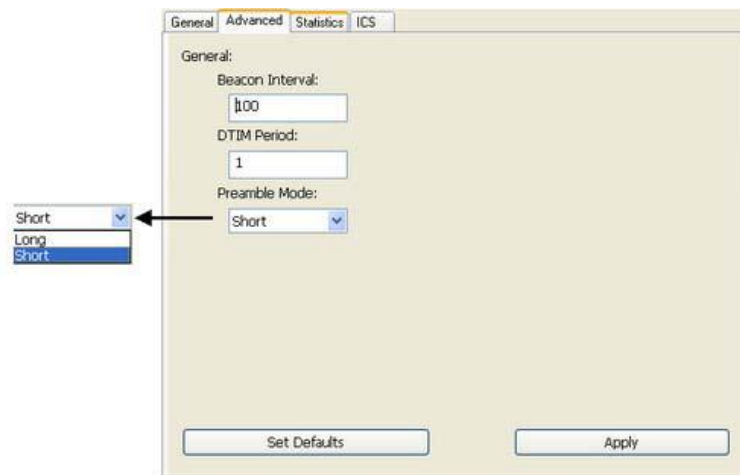
■ Hexadecimal: While both ASCII and PASSPHRASE are not checked, you should input hexadecimal number in the network key box. For example, 10 digits hex number for 64-bit WEP or 26 digits hex number for 128-bit WEP.

7.5. Key index (1 ~4)

At most four key index to represent the opposite network key.

B. Advanced Page

Users could setup the advanced characteristics of network packet for transmission on this page.



1. Beacon Interval

This field indicates the interval between each beacon that this AP sends out in unit of TU (1024 micro-seconds).

2. DTIM Period

The DTIM Period field is the number of Beacon intervals between successive DTIMs.

3. Preamble Mode

- Long: higher quality but with lower performance than preamble short mode.
- Short: Normal quality but with higher performance than preamble long mode.
- Auto: select the proper preamble mode by current signal frame information.

C. Statistics Page

The Tx/Rx status of current wireless connection is shown. A statistic analysis of packet transition is listed.

Counter Name	Value
Tx OK	92
Tx Error	0
Tx Retry	0
Tx Beacon OK	0
Tx Beacon Error	0
Rx OK	0
Rx Packet Count	
Rx Retry	
Rx CRC Error (0-500)	
Rx CRC Error (500-1000)	
Rx CRC Error (> 1000)	
Rx ICV Error	

Reset

D. ICS Page

Setting Internet Connection Sharing (ICS)

ConnName	Device Name
Local Area Connection	Marvell Yukon 88E8056 PCI-E Gigabit Ethernet Contr

Public Network:
Local Area Connection Marvell Yukon 88E8056 PCI-E Gigabit Ethernet Controller

Apply

1. ConnName List all network connections to this system. You can pick up one from the listed item(s) whose network domain you would want to connect to.

2. Select

Make the desired network connection to public network.

3. ICS

Internet Connection Sharing. It enables this AP to create the domain to share this internet/intranet network connection

4. Firewall

Any of a number of security schemes that prevents unauthorized users from gaining access to a computer network, or that monitors transfers of information to and from the network.

5. Apply

Execute the current settings.