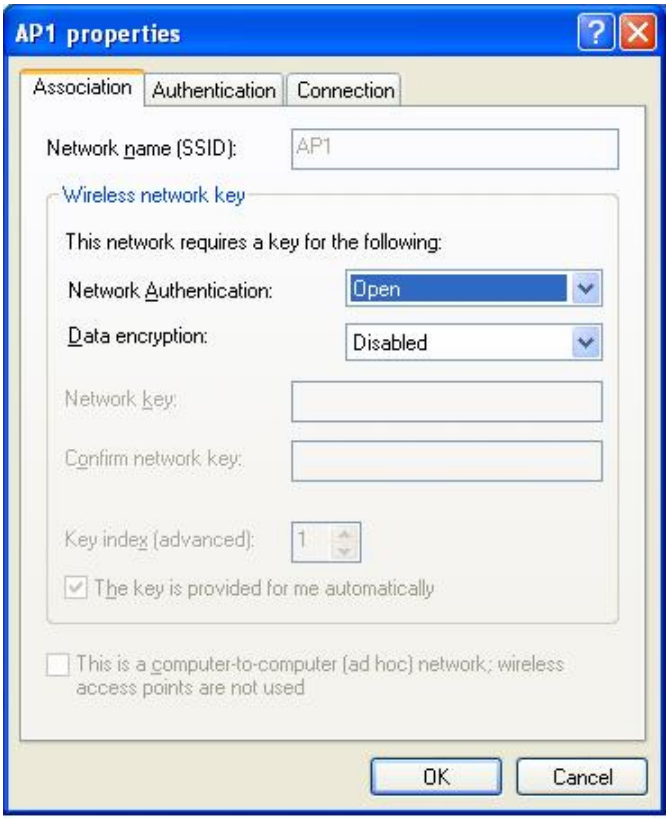
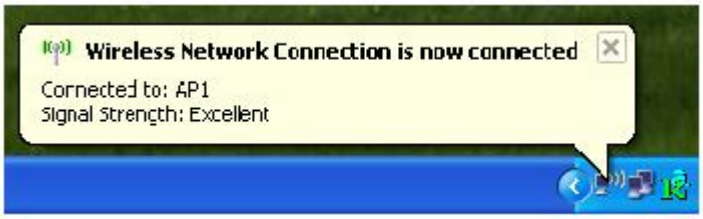
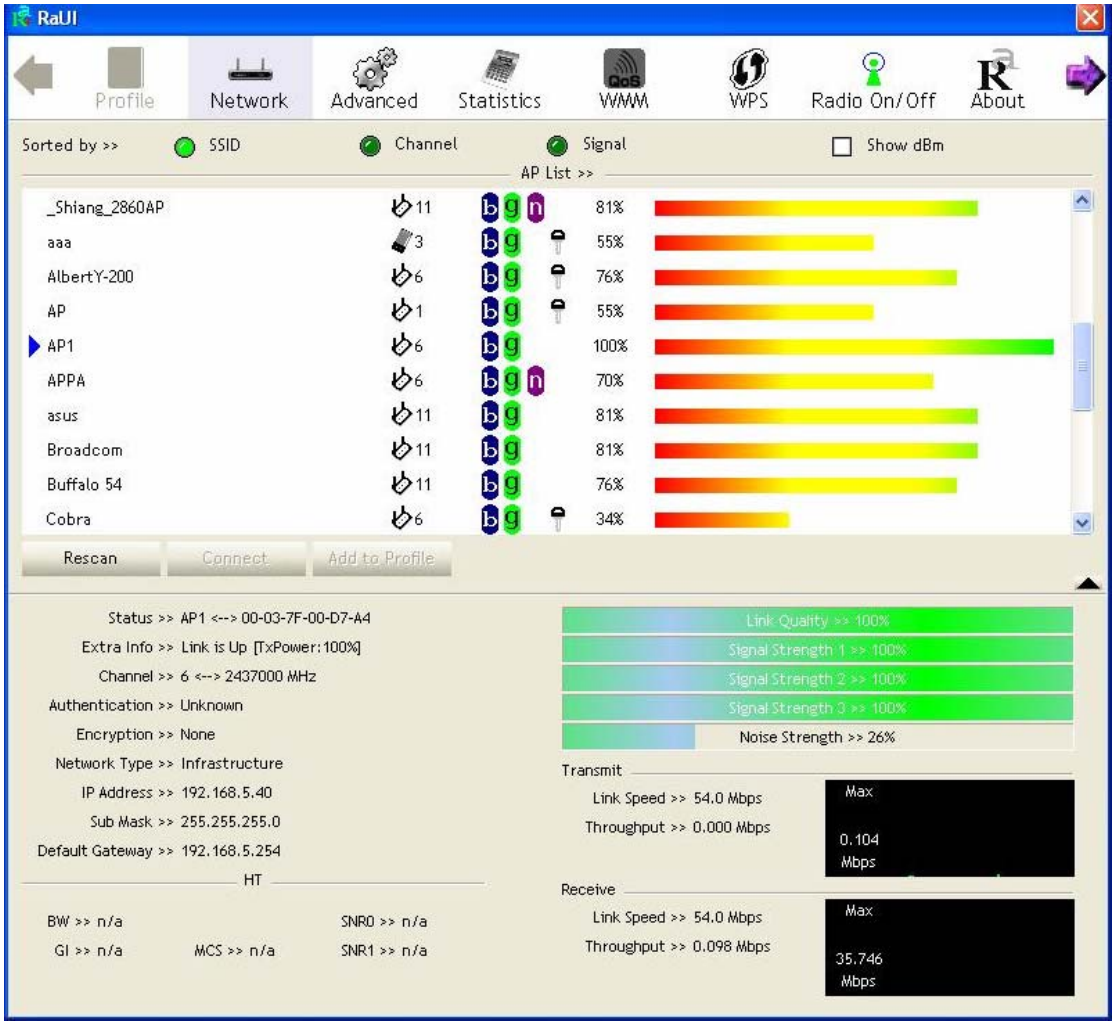
STEP8: Click "**Properties**" and then click "**OK**" button.



STEP9: After filling appropriate value, click "**OK**" button. And the status will prompt up as below.

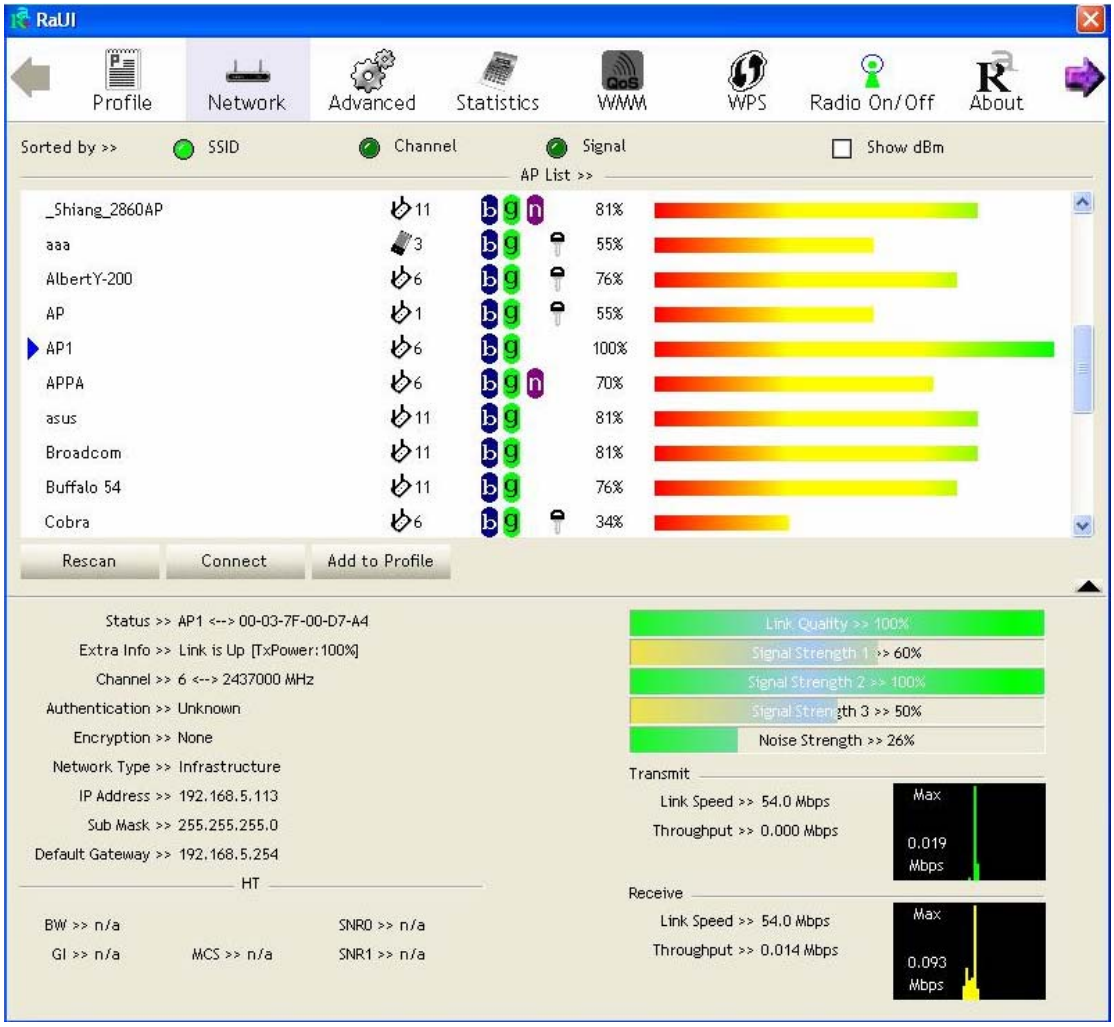


STEP10: Click the Ralink's icon will bring up RaUI main window. User can find the surrounding APs in the list. The current connected AP will also shown with the green icon indicated as below screen. User may user the available tab to configure more advanced features provided by Ralink's wireless NIC.



3.1.1 Start

When starting RaUI, system will connect to the AP with best signal strength without setting profile or matching profile setting. It will issue a scan command to wireless NIC. After two seconds, the AP list will updated with the result of BSS list scan. The AP list include most used fields, such as SSID, network type, channel used, wireless mode, security status and signal percentage. The arrow icon indicates the connected BSS or IBSS network.



There are three sections in RaUI. These sections are briefly described as below.

- **Button Section:** include Profile page, Network page, Advanced page, Statistics page, WMM page, WPS page, About button, Radio On/Off button and Help button.

➔ Button Section

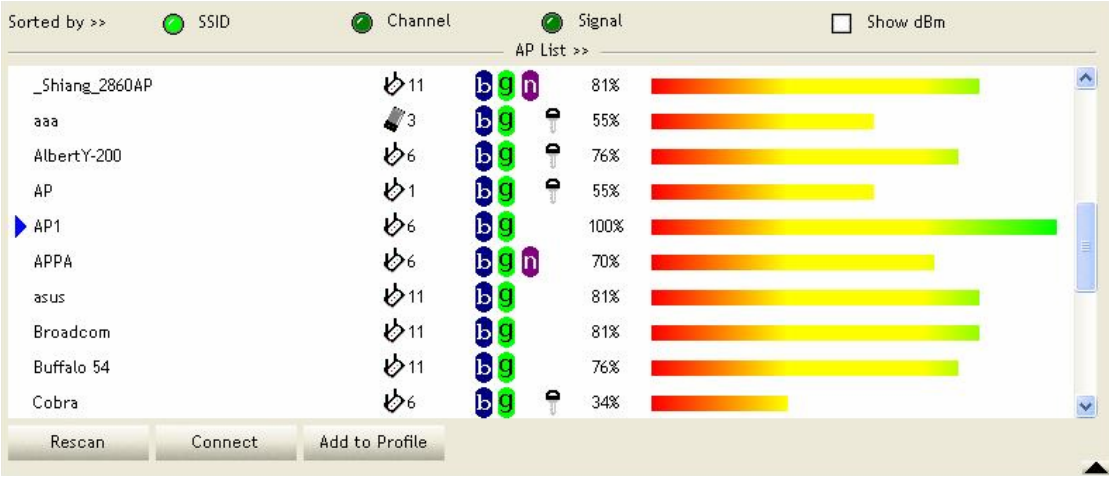
➔ Move to the Left

➔ Move to the Right

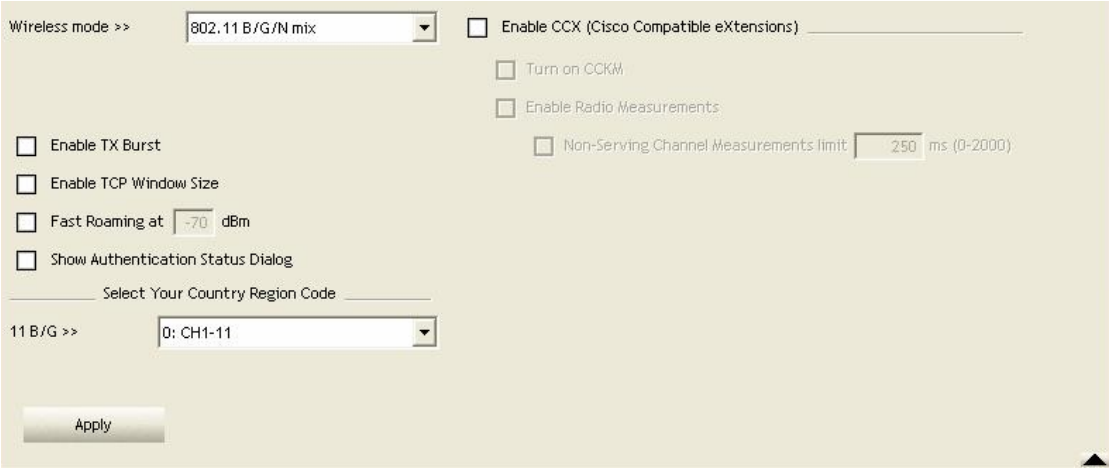
■ **Function Section:** Corresponding button

➔ Profile Page

➔ Network Page

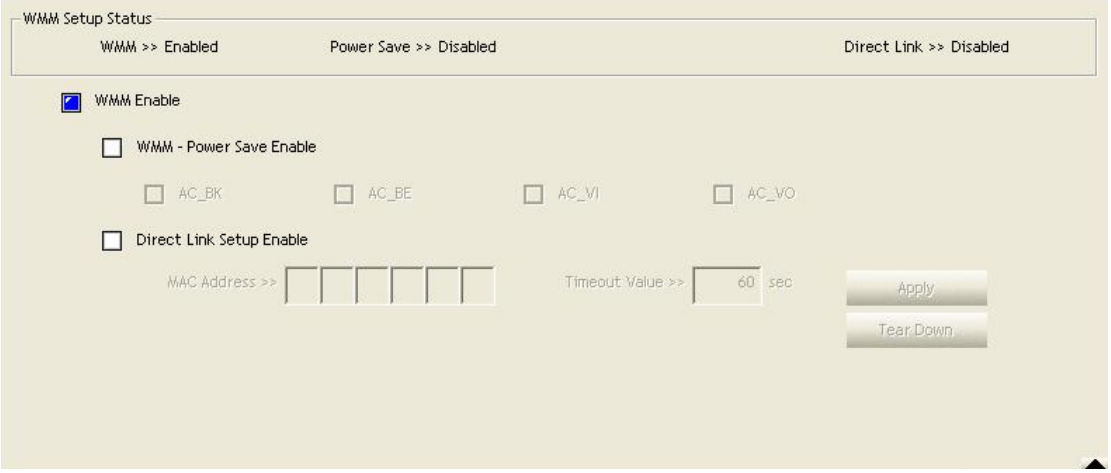


➔ Advanced Page



➔ Statistics Page

➔ WMM Page

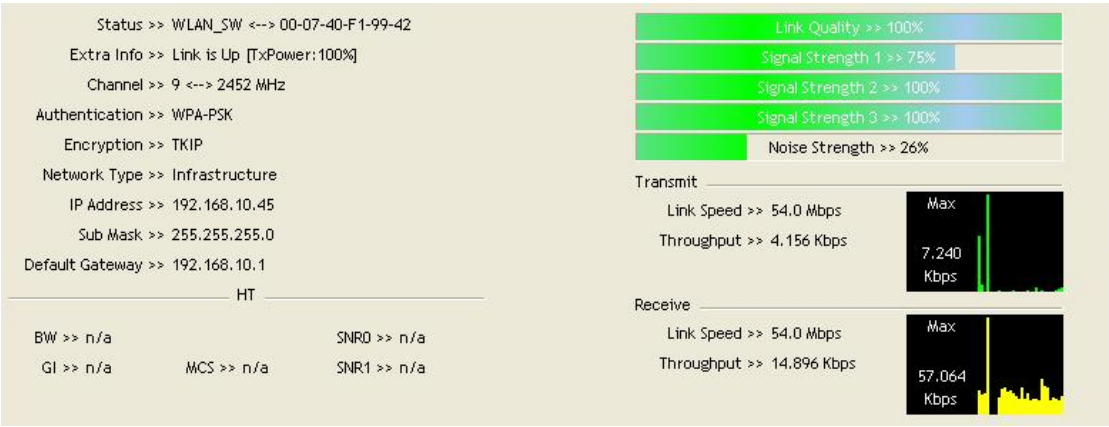


➔ WPS Page

➔ About Page

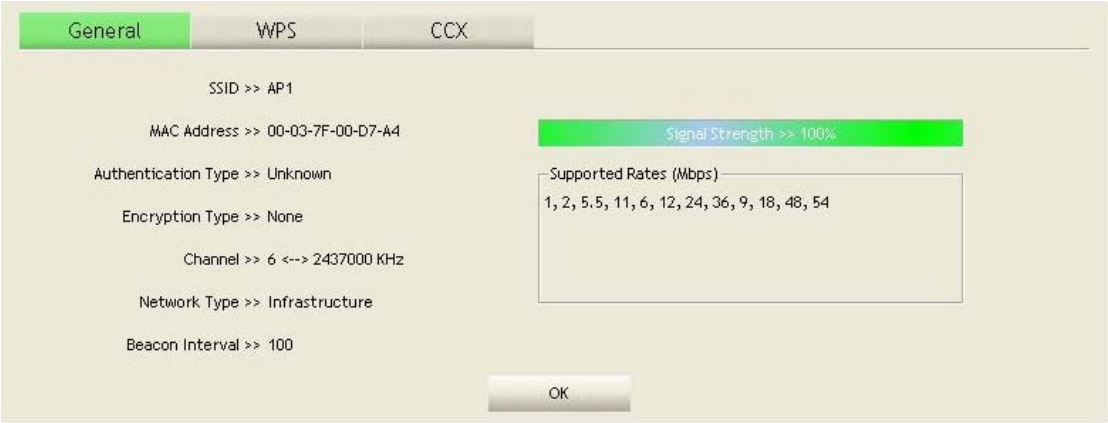
- **Status Section:** Include Link Status, Authentication Status, AP's information, Configuration and retrying the connection when authentication is failed.

➔ Link Status



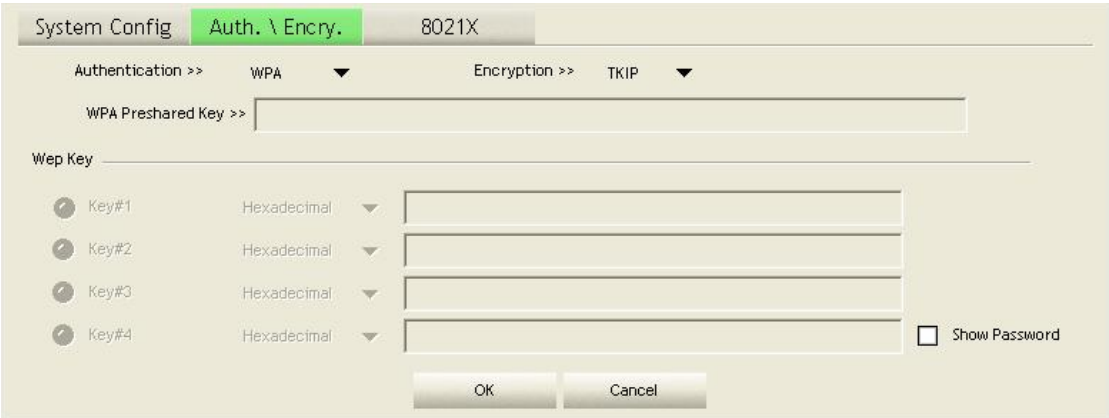
➔ Authentication Status

➔ AP's Information



➔ Retry the Connection

➔ Configuration



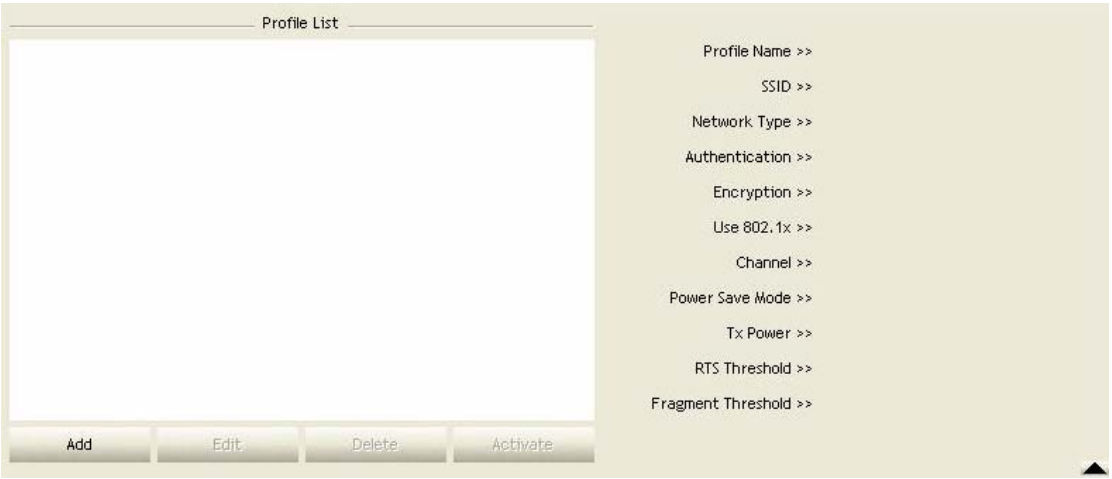
- At the mean time of starting RaUI, there is also a small Ralink icon appears within windows taskbar as below. You may double click it to bring up the main menu if you selected to close RaUI menu earlier. You may also use mouse;s right button to close RaUI utility.

 ➔➔ Ralink icon in system tray.

- Besides, the small icon will change color to reflect current wireless network connection status. The status indicates as follow:
  - ➔  -- indicate Connected and Signal Strength is Good.
  - ➔  -- indicate Connected and Signal Strength is Normal
  - ➔  -- indicate Wireless NIC is not connected yet
  - ➔  -- indicate Wireless NIC is not detected
  - ➔  -- indicate Connected and Signal Strength is Weak

3.1.2 Profile

Profile can book keeping your favorite wireless setting among your home, office, and other public hot-spot. You may save multiple profiles, and activate the correct one at your preference.



[Definition of each field]

Profile Name: Name of profile, preset to PROF＊ (＊ indicate 1,2,3,…)

SSID: AP or Ad-Hoc name

Network Type: Network's type, including infrastructure and Ad-Hoc.

Authentication: Authentication mode

Encryption: Encryption Type

Use 802.1x: Whether or not use 802.1x feature

Channel: channel in use for Ad-Hoc mode

Power Save Mode: Choose from CAM (Constantly Awake Mode) or Power Saving Mode.

Tx Power: Transmit power, the amount of power used by a radio transceiver to send the signal out.

RTS Threshold: User can adjust the RTS threshold number by sliding the bar or key in the value directly.

Fragment Threshold: User can adjust the Fragment threshold number by sliding the bar or

key in the value directly.

[Icons and buttons]

➔ indicate connection is successful on currently activated profile

➔ indicate connection is failed on currently activate profile

➔ indicate network type is infrastructure mode

➔ indicate network type is Ad-Hoc

➔ indicate security-enabled wireless network

Add ➔ Add a new profile

Edit ➔ Edit an existing profile

Delete ➔ Delete an existing profile

Activate ➔ Activate selected profile

➔ Show the information of Status Section

➔ Hide the information of Status Section

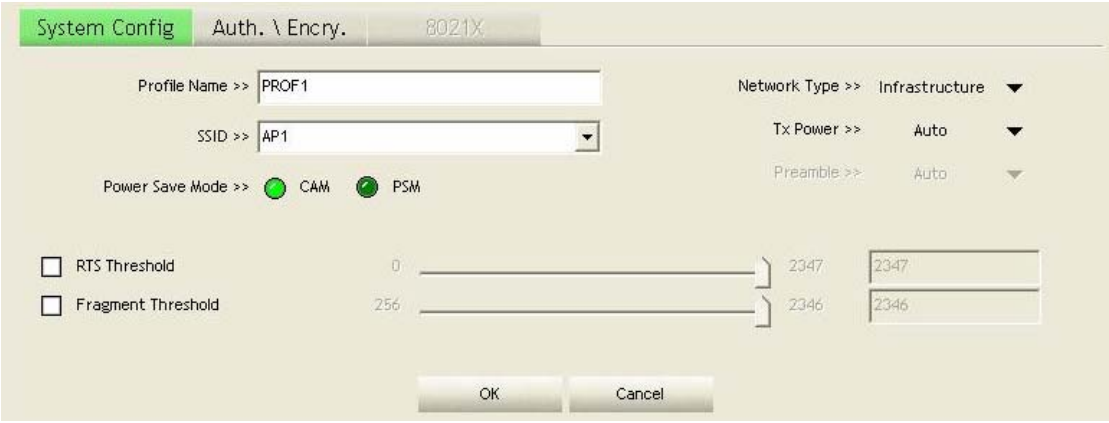
3.1.2.1 Add/Edit Profile

There are 3 methods to open Profile Editor form:

➔ You can open it from “Add to Profile” button in Site Survey function

➔ You can open it form “Add” button in Profile function

➔ You can open it from “Edit” button in Profile function



Profile Name: User can chose name for this profile, or use default name defined by system.

SSID: User can key in the intended SSID name or use pull down menu to select from available APs.

Power Save Mode: Choose from CAM [Constantly Awake Mode] or Power Saving Mode.

Network Type: There are two types, infrastructure and 802.11 Ad-Hoc mode. Under Ad-Hoc mode, user can also choose the preamble type, the available preamble type includes auto and long. In addition to that the channel field will be available for setup in Ad-Hoc mode.

RTS Threshold: User can adjust the RTS threshold number by sliding the bar or key in the value directly. The default value is 2347.

Fragment Threshold: User can adjust the Fragment threshold number by sliding the bar or key in the value directly. The default value is 2346.

Channel: Only available for setting under Ad-Hoc mode. User can choose the channel frequency to start their Ad-Hoc network.

Authentication Type: There are 7 type of authentication modes supported by RaUI. They are Open, Shared, LEAP, WPA, WPA-PSK, WPA2, WPA2-PSK.

Encryption Type: For open and shared authentication mode, the selection of encryption type are None and WEP. For WPA, WPA2, WPA-PSK and WPA2-PSK authentication mode, the encryption type supports both TKIP and AES.

802.1x Setting: It is an authentication for WPA and WPA2 certificate to server.

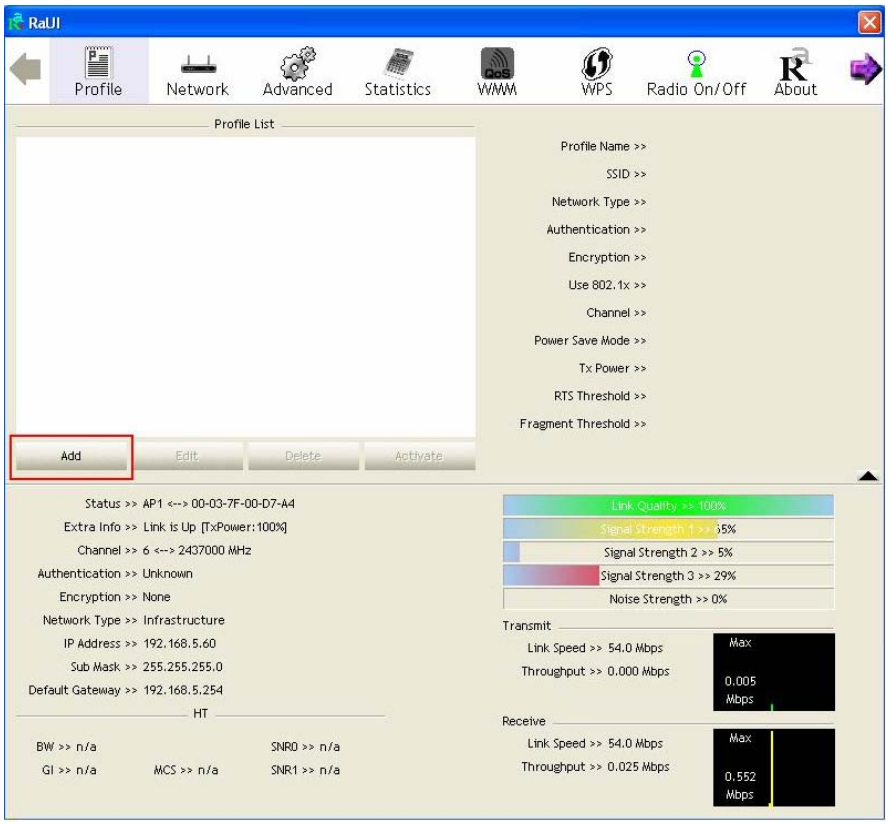
WPA Pre-Shared Key: This is the shared secret between AP and STA. For WPA-PSK and WPA2-PSK authentication mode, this field must be filled with character longer than 8 and less than 32 lengths.

WEP Key: Only valid when using WEP encryption algorithm. The key must matched AP's key. There are several formats to enter the keys:

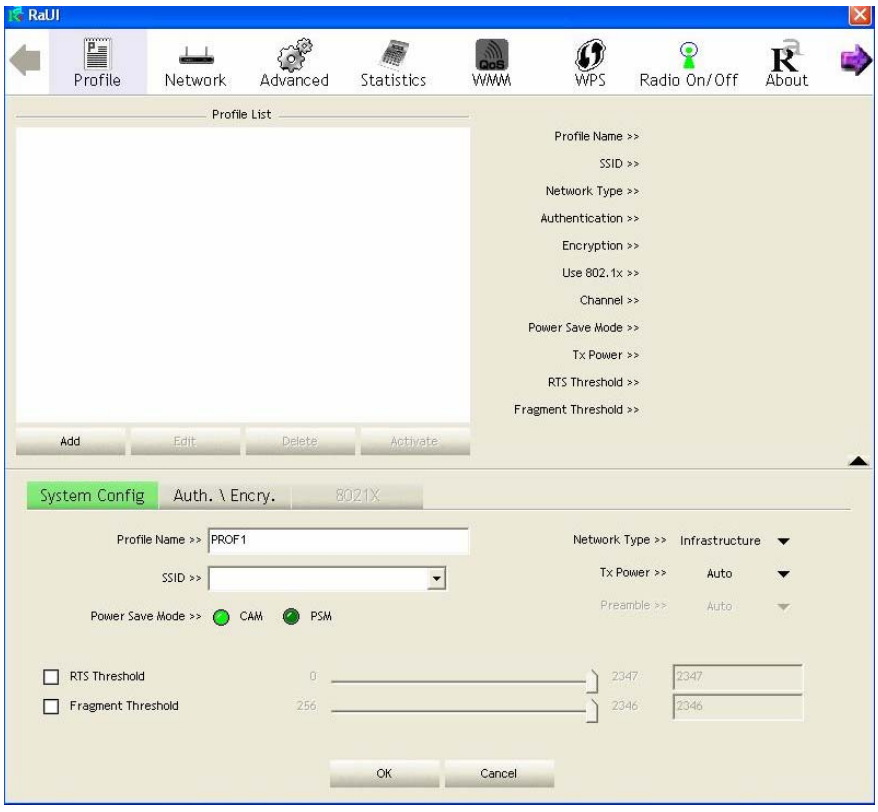
- ➔ Hexadecimal – 40bits: 10 Hex characters
- ➔ Hexadecimal – 128bits: 26 Hex characters.
- ➔ ASCII – 40bits: 5 ASCII characters
- ➔ ASCII – 128bits: 13 ASCII characters

3.1.2.2 Example to Add Profile in Profile

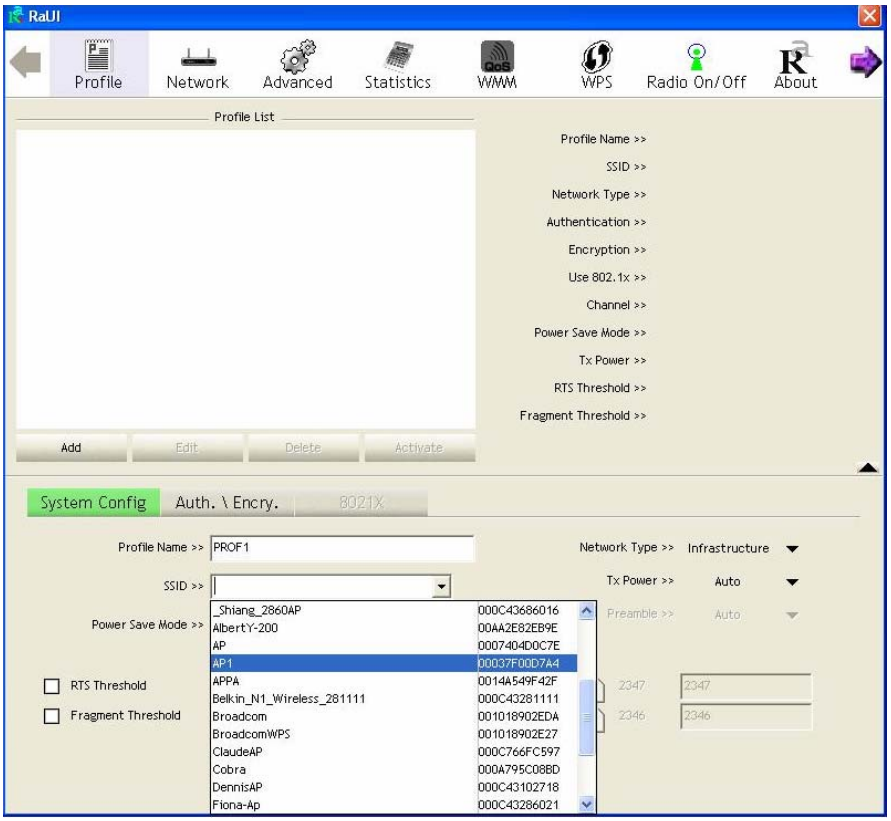
Step 1: Click **Add** in Profile function



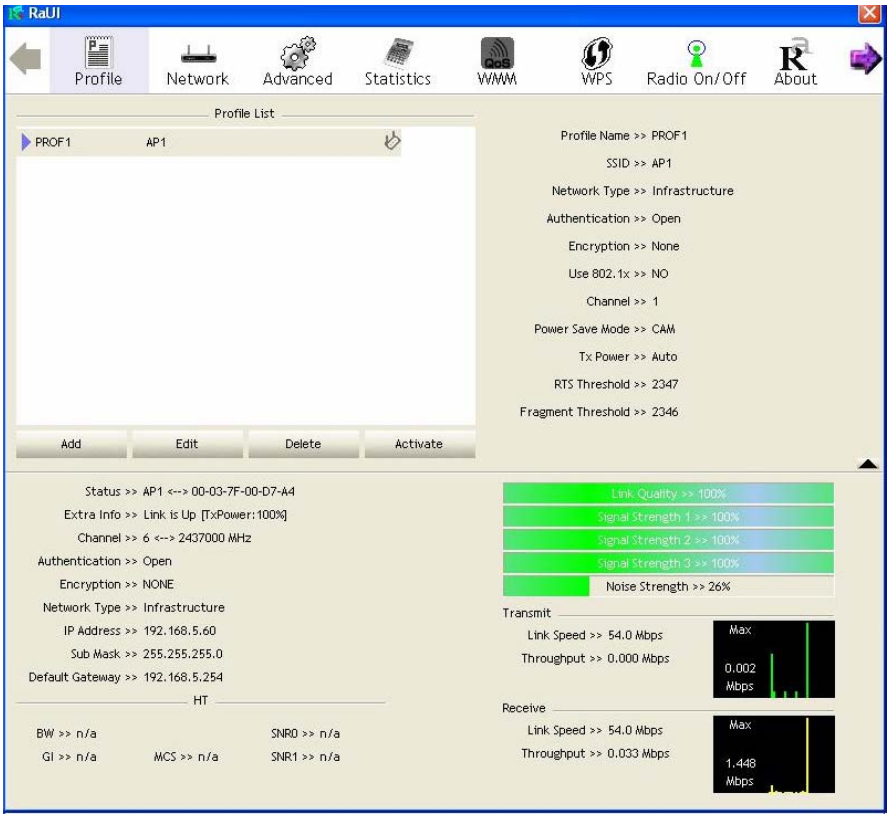
Step 2: **Add Profile** page will pop up.



Step 3: Change profile name to what you want to connect. Pull down the SSID and select one intended AP. The AP list is the result of last Network.



Step 4: Then, you can see the profile which you set appear in the profile list. Click "**Activate**" to activate the profile setting.



3.1.3 Network

Under the Network function, system will display the information of surrounding APs from last scan result. List information includes SSID, BSSID, Signal, Channel, Encryption algorithm, Authentication and Network type as below:

[Definition of each field]

SSID: Name of BSS or IBSS network

Network Type: Network type in use, infrastructure for BBS, Ad-Hoc for IBSS network

Channel: Channel in use.

Wireless Mode: AP support wireless mode. IT may support 802.11a, 802.11b, 802.11g or 802.11n wireless mode.

Security-Enable: Whether AP provides security-enabled wireless network

Signal: Receive signal strength of specified network

[Icons & Buttons]

➔ Indicate connection is successful.

➔ Indicate network type is infrastructure mode.

➔ Indicate network type is Ad-Hoc mode.

➔ Indicate security-enabled wireless network.

➔ Indicate 802.11a wireless mode

➔ Indicate 802.11b wireless mode.

➔ Indicate 802.11g wireless mode.

➔ Indicate 802.11n wireless mode.

➔ Indicate the AP lists are sorted by SSID, Channel, or Signal.

Connect ➔ Command to connect to the selected network.

Rescan ➔ Issue a rescan command to wireless NIC to update information on surrounding wireless network.

Add to Profile ➔ Add the selected AP to Profile setting. It will bring up profile page and save user's setting to a new profile.

[Connected Network]

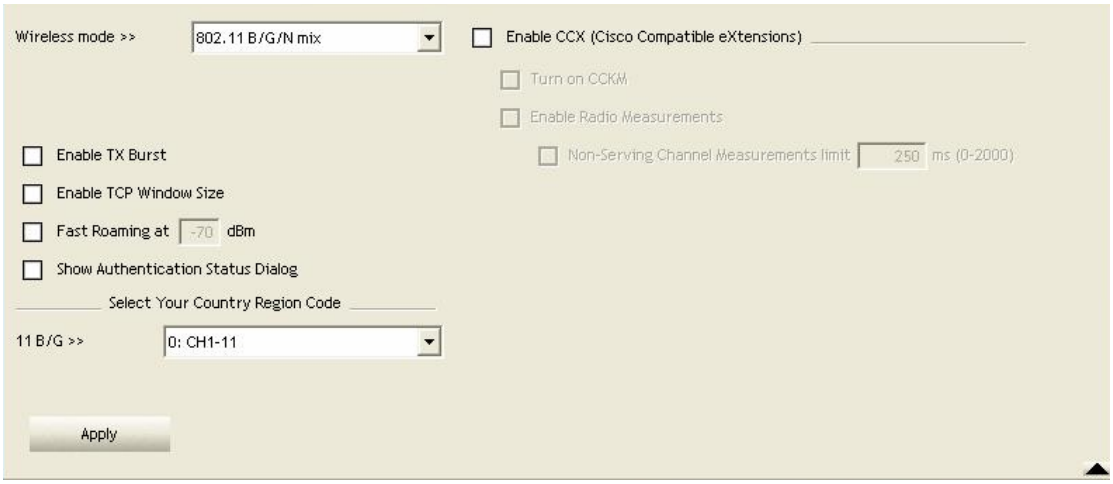
(1) When RaUI first ran, it will select the best AP to connect automatically.

(2) If user wants to connect to other AP, He can click "Connect: button for the intended AP to make connection.

(3) If the intended network has encryption other than "Not Use", RaUI will bring up the security page appropriate information to make the connection.

(4) When you double-click on the intended AP, you can see AP's detail information.

3.1.4 Advanced



Wireless Mode: Select wireless mode. 802.11B only, 802.11B/G mix, and 802.11B/G/N mix, modes are supported. (802.11 A/B/G mix selection item only exists for A/B/G adapter; 802.11B/G/N mix selection item only exists for B/G/N adapter; 802.11A/B/G/N mix selection item only exists for A/B/G/N adapter.)

Wireless Protection: User can choose from Auto, On, and Off (Only 802.11n adapter don't support)

➔ **Auto:** STA will dynamically change as AP announcement

➔ **ON:** Always send frame with protection.

➔ **Off:** Always send frame without protection.

TX Rate: Manually force the Transmit using selected rate. Default is auto. (802.11n wireless card doesn't support.)

Enable Tx Burst: Ralink's proprietary frame burst mode.

Enable TCP Windows Size: Enhance throughout.

Fast Roaming at: Fast to roaming, setup by transmit power.

Select your Country Region Code: 8 countries to choose.

Show Authentication Status Dialog: When you connect AP with authentication, choose whether show "**Authentication Status Dialog**" or not. Authentication Status Dialog display the process about 802.11x Authentication.

Enable CCX (Cisco Compatible eXtensions): support Cisco Compatible Extensions function.

➔ LEAP turn on CCKM

➔ Enable Radio Measurement: can channel measurement every 0~2000 milliseconds.

Apply: Save the save changes

➔ Show the information of Status Section

➔ Hide the information of Status Section

3.1.5 Statistics

Statistics page displays the detail counter information based on 802.11 MIB counters. This page translates the MIB counters into a format easier for user to understand.

[Transmit Statistics]

Frames Transmitted Successfully: Frames successfully sent.

Frames Fail To Receive ACK After All Retries: Frames failed transmit after hitting retry limit.

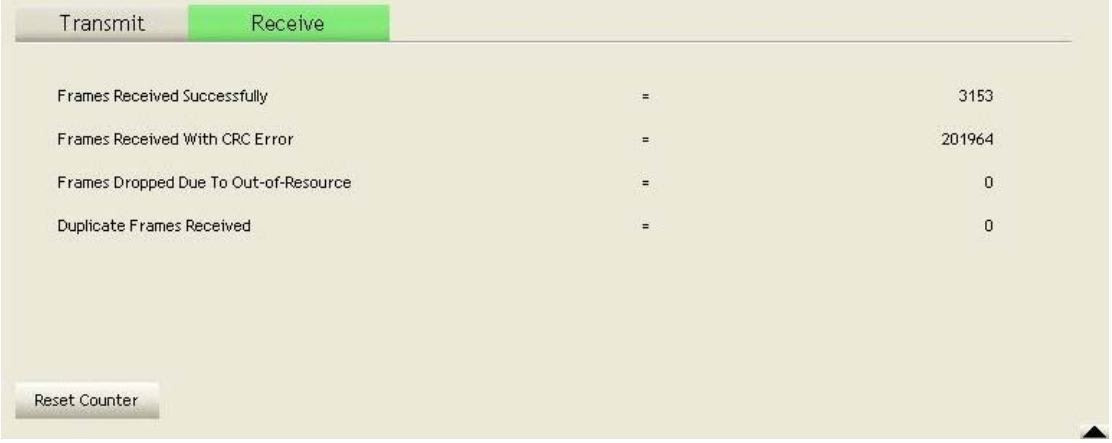
RTS Frames Successfully Receive CTS: Successfully receive CTS after sending RTS frame.

RTS Frames Fail to Receive CTS: Fail to receive CTS after sending RTS frame.

Frames Retransmitted Successfully: Successfully retransmitted frames numbers

Reset Counter: Reset counters to zero

[Receive Statistics]



Frames Received Successfully: Frames received successfully.

Frames Received With CRC Error: Frames receive with CRC error.

Frames Dropped Due To Out-Of-Resource: Frames dropped due to resource issue.

Duplicate Frames Received: Duplicate received frames.

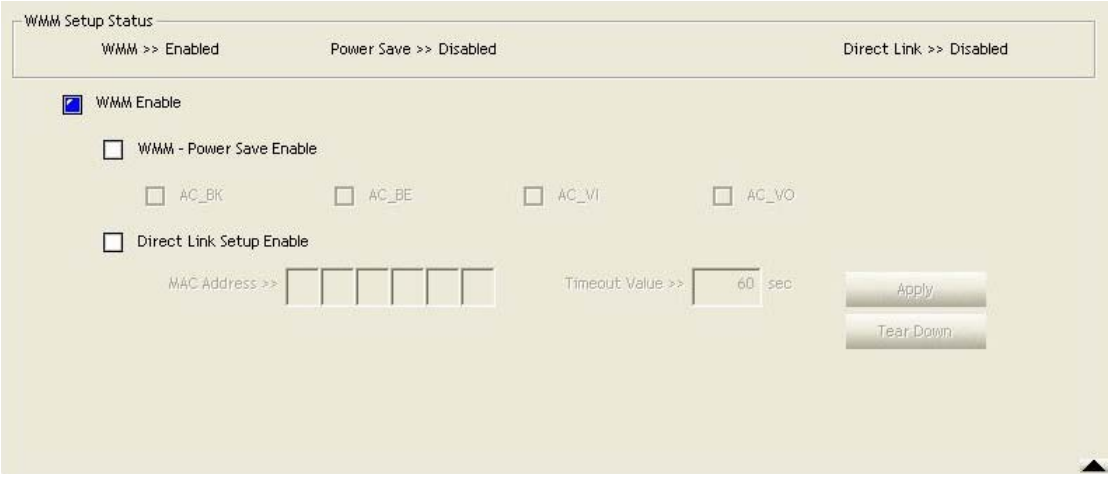
Reset Counter: Reset counters to zero

➔ Show the information of Status Section

➔ Hide the information of Status Section

3.1.6 WMM

WMM function involves "**WMM Enable**", "**WMM-Power Save Enable**" and "**DSL Setup**".



WMM Enable: Enabe Wi-Fi Multi-Media.

WMM-Power Save Enable: Enable WMM Power Save.

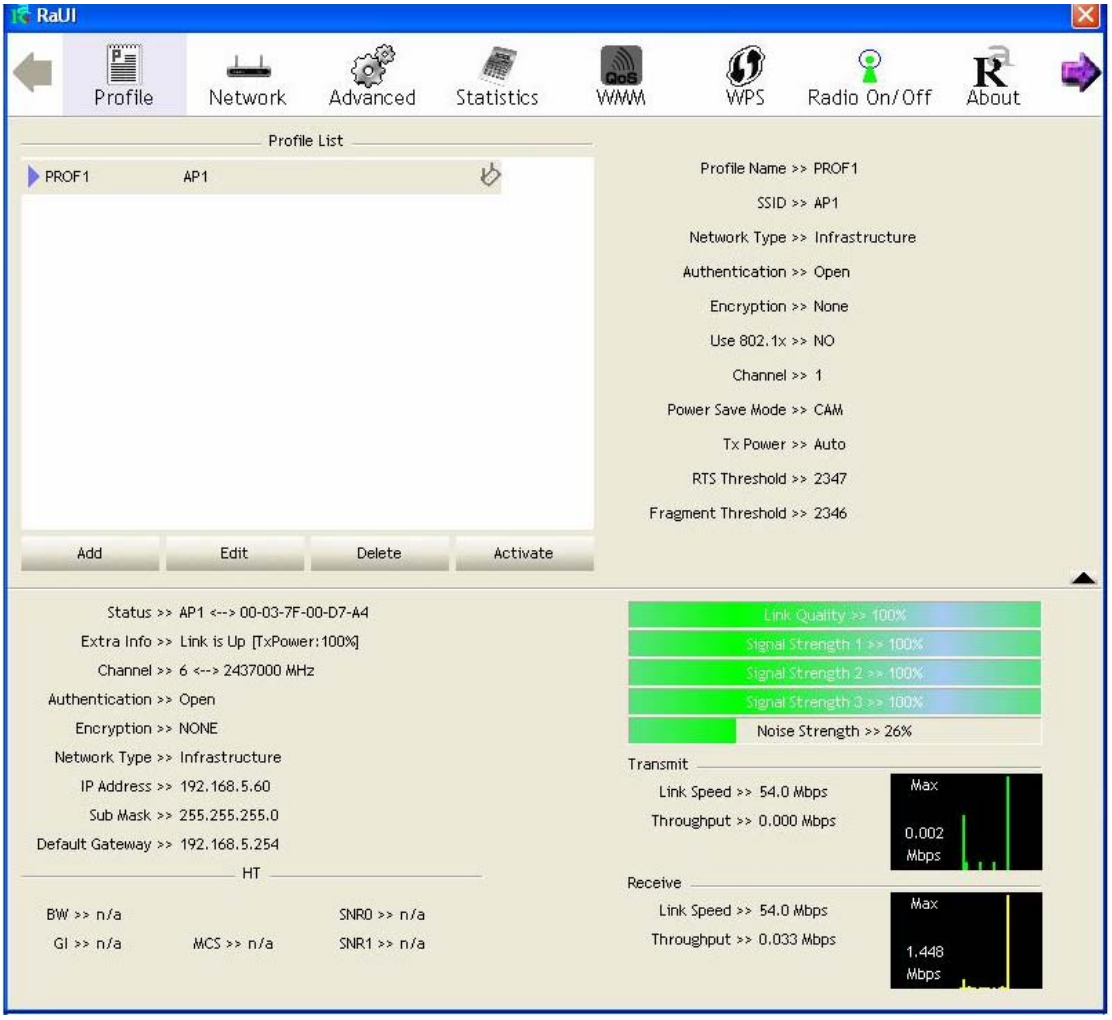
Direct Link Setup Enable: Enable DLS (direct Link Setup).

[WMM Enable – Enable Wi-Fi Multi-Media]

If you want to use “WMM-Power Save” or “Direct Link Setup” you must enable WMM. The setting methods of enabling WMM indicating as follow:

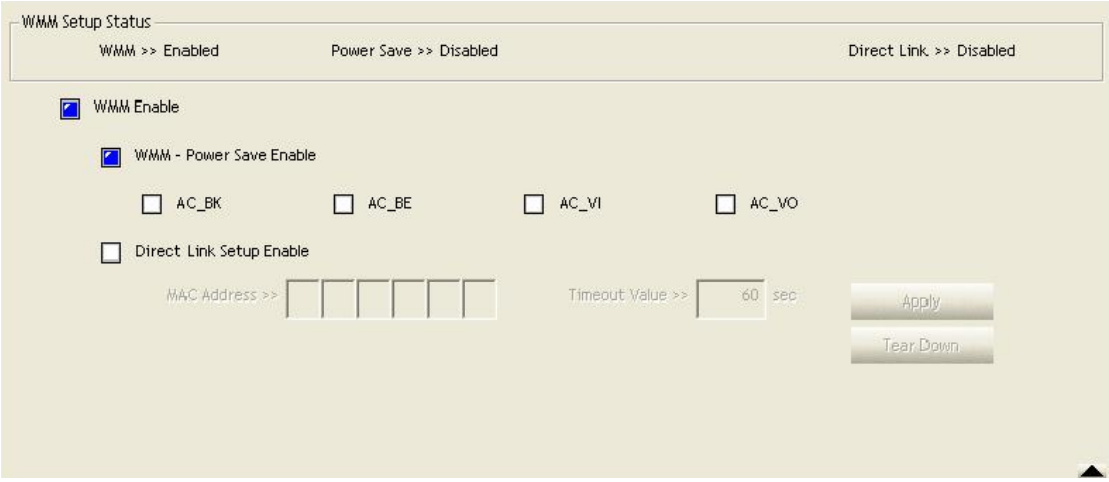
Step 1: Click “**WMM Enable**”

Step 2: Change to “**Network**” function. And add an AP that supports WMM features to a **Profile**. The result will look like the below figure in **Profile** page.

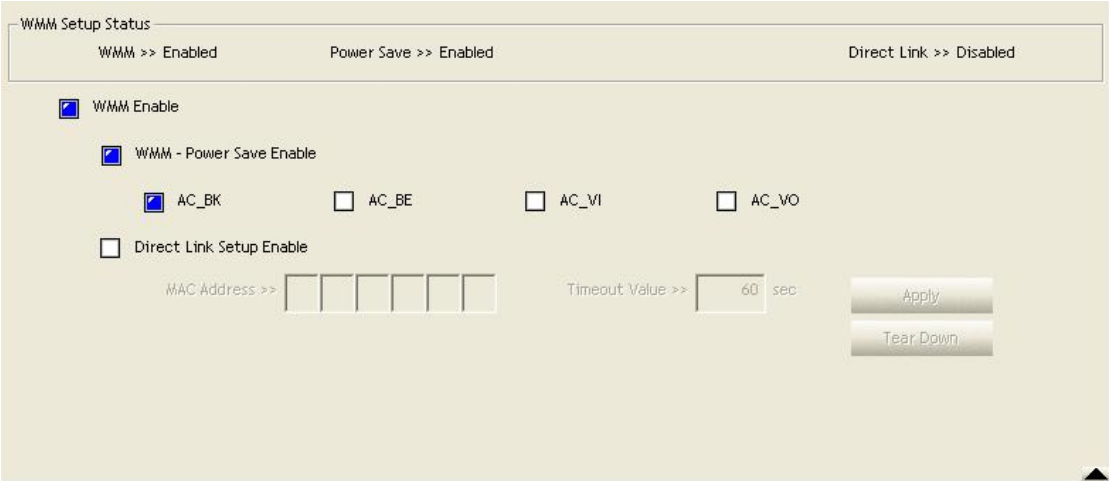


[WMM-Power Save Enable – Enable WMM Power Save]

Step 1: Click "**WMM-Power Save Enable**"

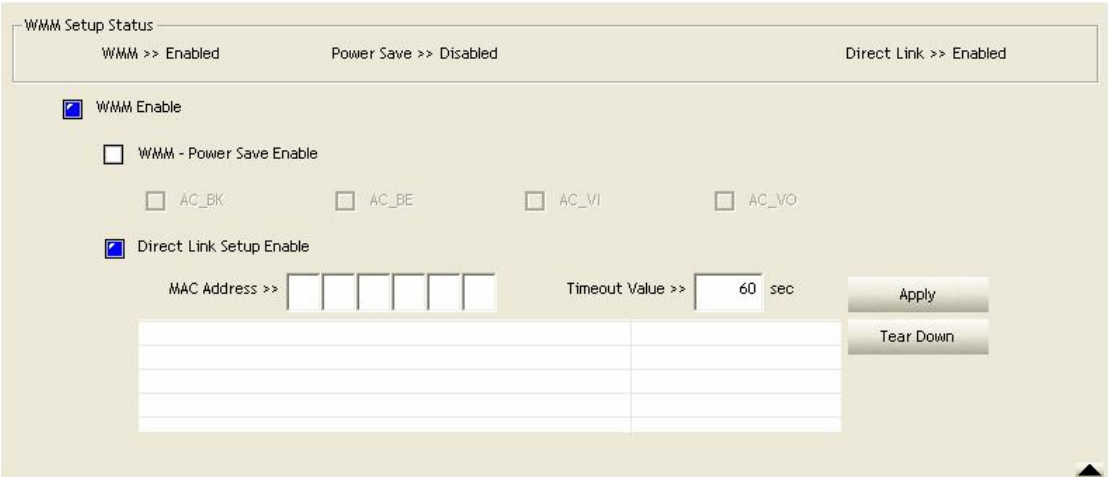


Step 2: Please select which ACs you want to enable. The setting of enabling WMM-Power Save is successfully.

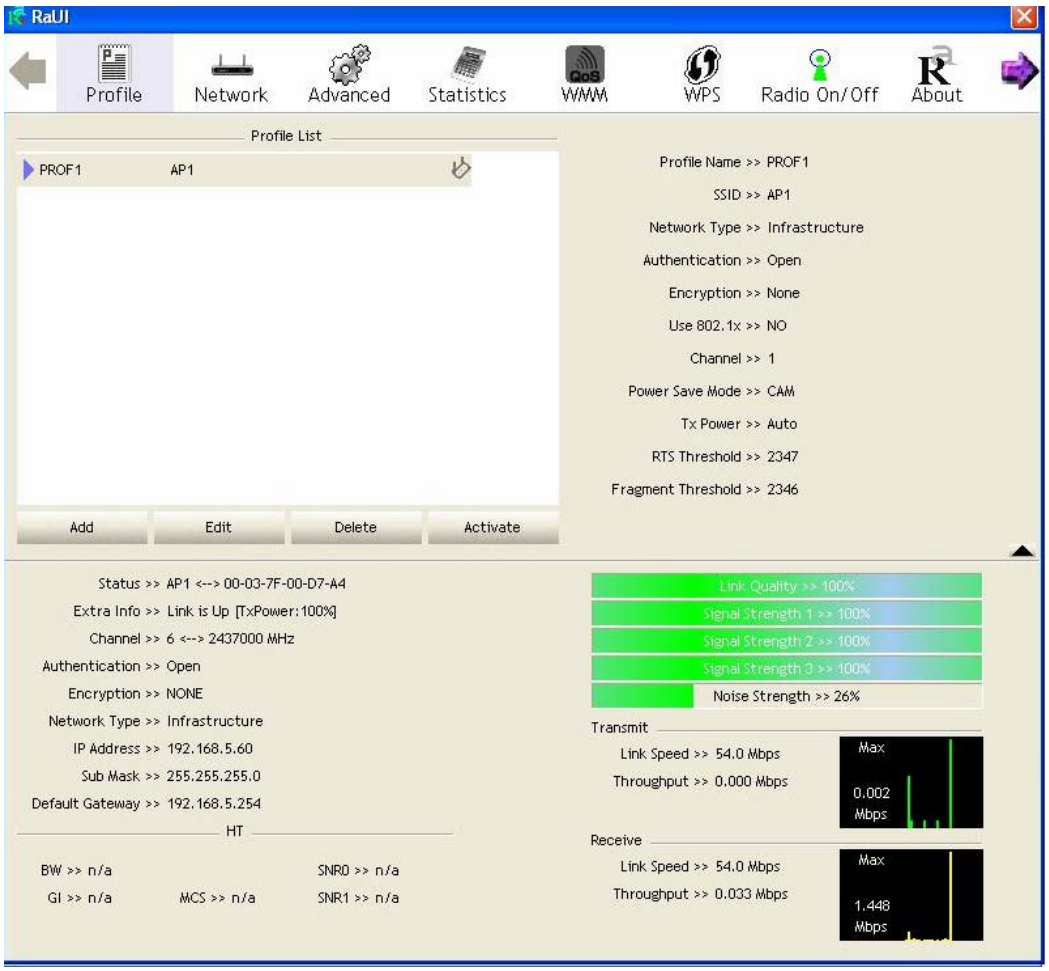


[Direct Link Setup Enable – Enable DLS (Direct Link Setup)]

Step 1: Click "**Direct Link Setup Enable**"



Step 2: Change to "**Network**" function. And add an AP that supports DLS features to a **Profile**. The result will look like the below figure in **Profile** page.

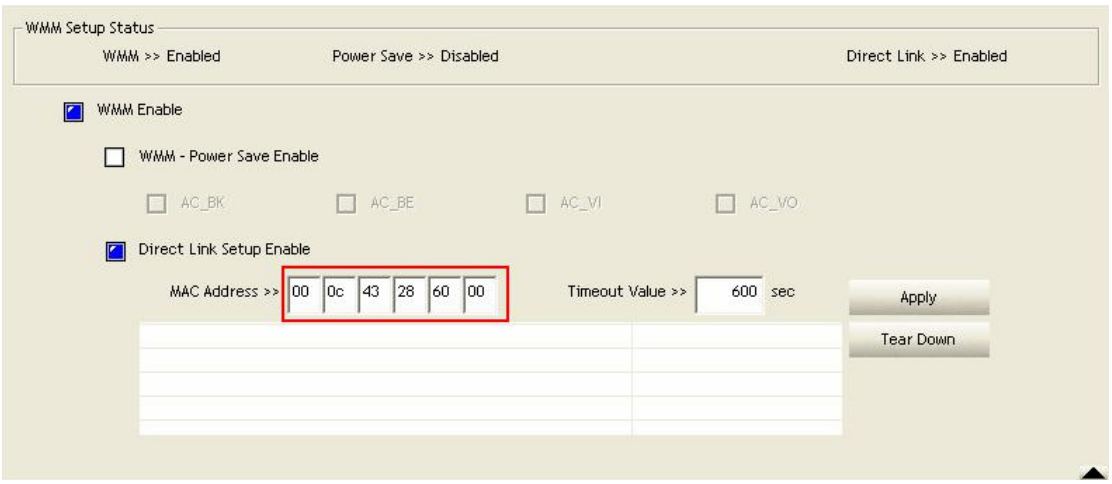


The Setting of DLS indicates as follow:

(1) Fill in the blanks of Direct Link with MAC address of STA. The STA must conform to 2 conditions as follow:

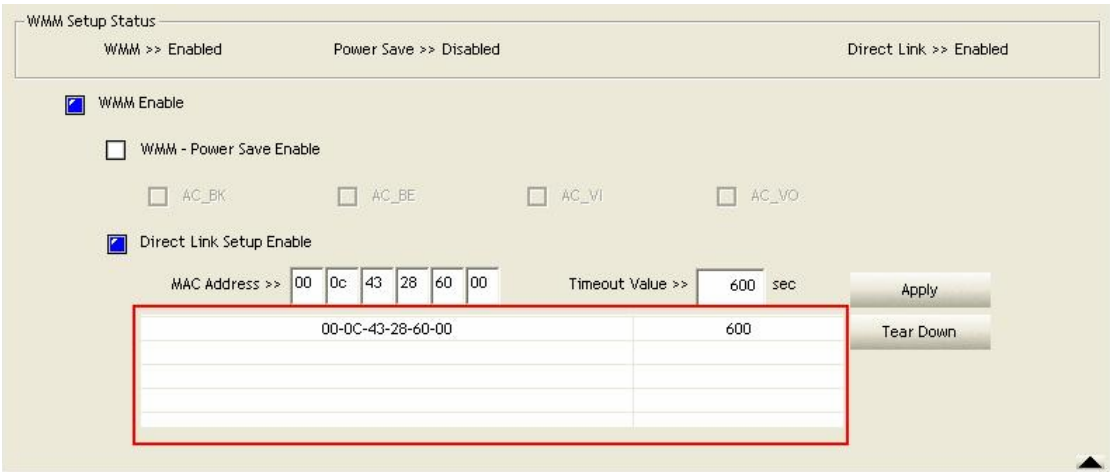
➔ Connect with the same AP that support DLS features.

➔ Have to enable DLS



(2) Timeout Value represent that it disconnect automatically after some seconds. The value is integer. The integer must be between 0~65535. It represents that it always connects if the value is zero. Default value of Timeout Value is 60 seconds.

(3) Click "**Apply"** button. The result will look like the below figure.

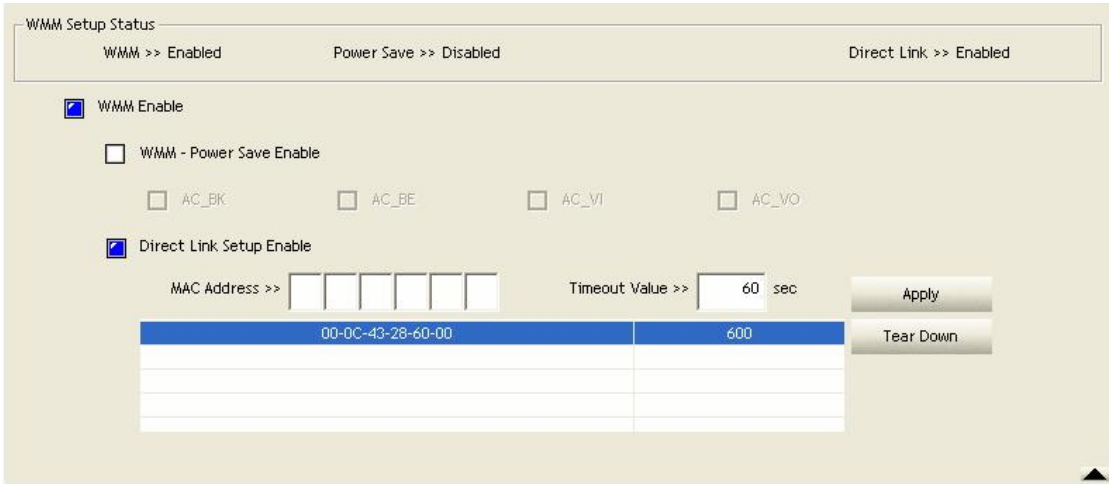


Describe "DLS Status" as follow:

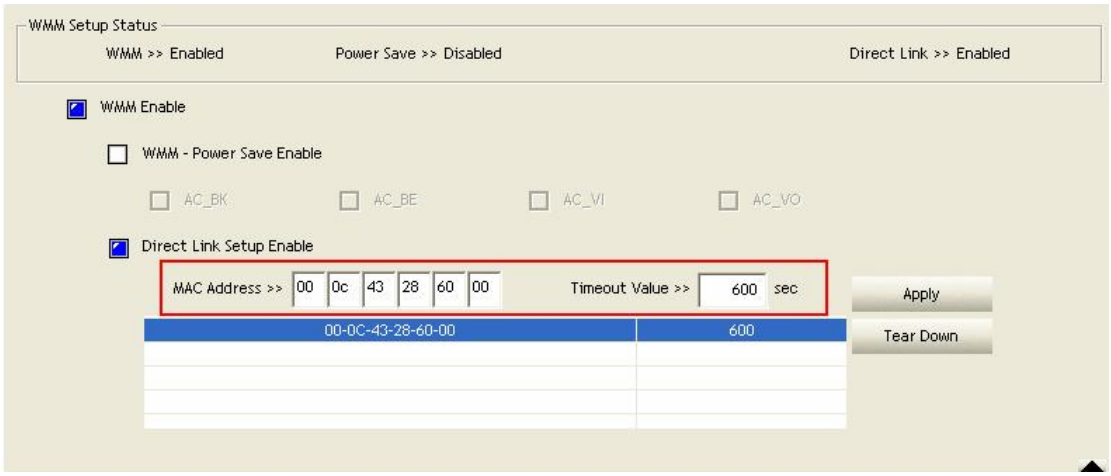
(1) As the up figure, after configuring DLS successfully, show MAC address of the opposite side and Timeout Value of setting in "**DLS Status**". In "**DLS Status**" of the opposite side, it shows MAC address of itself and Timeout Value of setting.

(2) Display the values of "**DLS Status**" to "**Direct Link Setup**" as follow:

Step 1: In "**DLS Status**", select a direct link STA what you want to show its values in "**Direct Link Setup**".

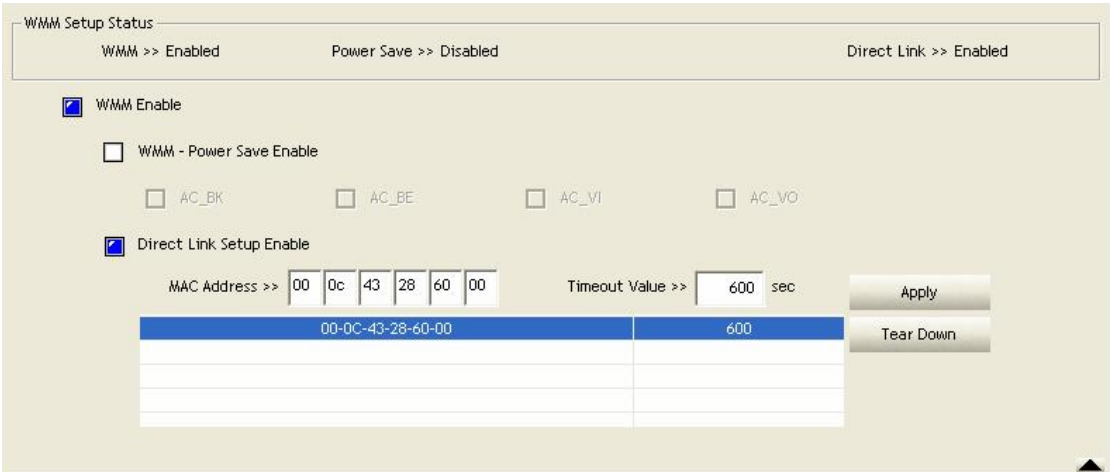


Step 2: Double-Click and the result will look like the below figure.



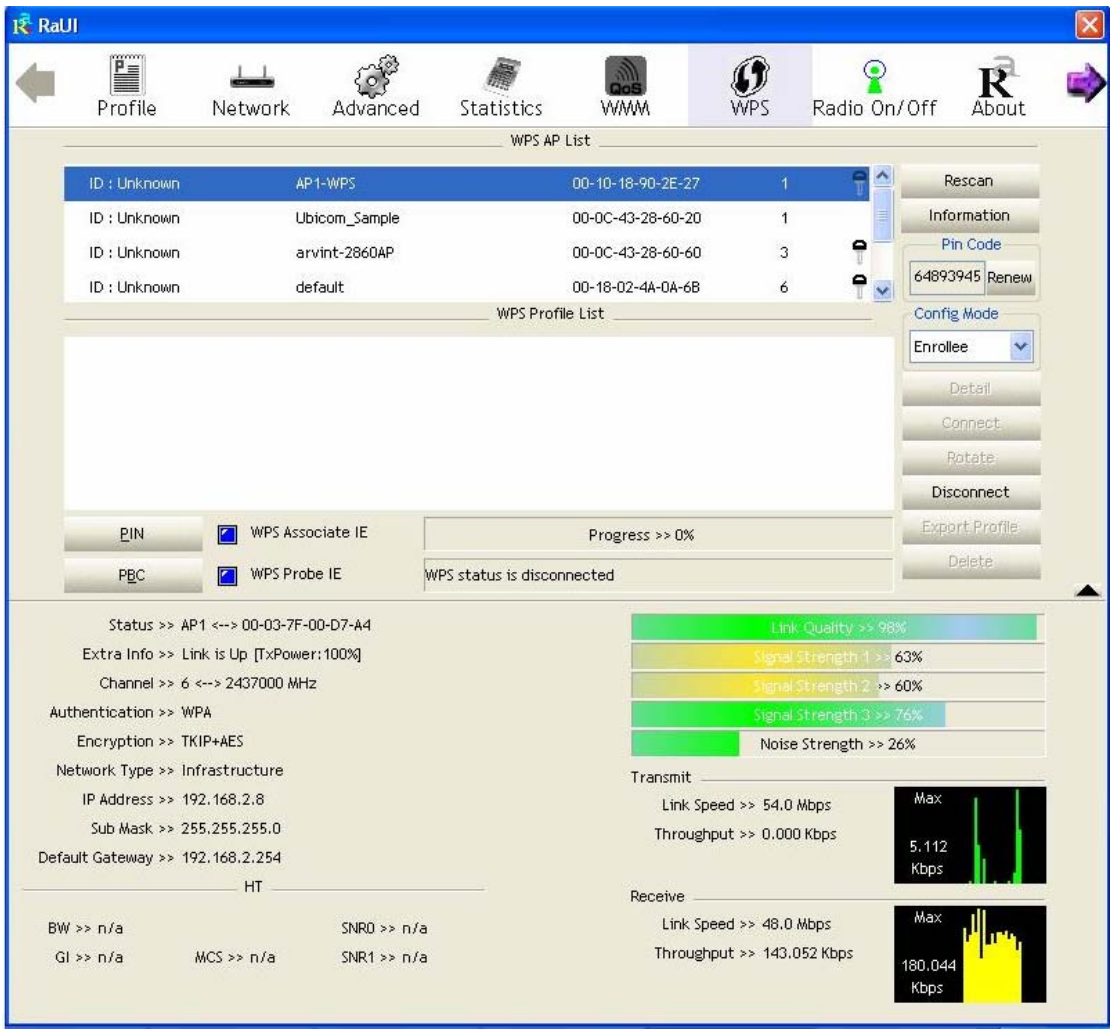
(3) Disconnect Direct Link Setup as follow:

Step 1: Select a direct link STA.



Step 2: Click "**Tear Down**" button. The result will look like the below figure.

3.1.7 WPS



WPS Configuration: The primary goal of Wi-Fi Protected Setup (Wi-Fi Simple Configuration) is to simply the security setup and management of Wi-Fi networks. Ralink STA as an Enrollee