The background of the cover is a dynamic, high-speed photograph of water splashing upwards, creating multiple curved, overlapping arcs of water. In the foreground, several blue spheres of varying sizes are visible, some partially submerged in the water. The overall color palette is light blue and white, with the blue spheres providing a focal point.

USER MANUAL.

WLAN USB Adapter

XW501B 802.11g 54Mbps

VERSION 1.0

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CERTIFICATION NOTICE

Federal Communications Commission Compliance Notices

This device complies with 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.

To ensure continued compliance, use only shielded interface cables when connecting to the computer or peripheral devices.

Federal Communication Commission (FCC) Statement:

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/ TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

The manufacture is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

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INFORMATION TO USER

Introduction

Congratulations on purchasing this 802.11g WLAN USB Adapter. The XW501B USB Adapter 54 Mbps data rate provides an equivalent Ethernet speed to access corporate networks or the Internet in a wireless environment. And also provides easy plug & play Installation program on any computer with USB interface. When installed, the XW501B USB Adapter is able to communicate with any 802.11g-compliant product, allowing you to work anywhere in the coverage area, enjoying its convenience and mobility.

Package Contents

The shipment should contain the following items. Please check each item below and ensure that all items listed in below are included in the shipment. If any of the listed items are damaged or missing, please notify your local dealer.

XWAVE Series: XW501B WLAN USB Adapter should contain:

- ▶ 802.11g WLAN USB Adapter
- ▶ CD-ROM (containing Drivers and Manual)

System Requirements

Windows ME/ 2000/ XP



If any item is missing, please contact your product provider.

How to Install XW501B:

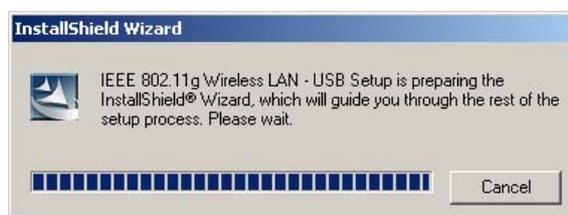
Phase I -Install XW501B Driver

1. Turn on the computer and insert the driver CD into the appropriate drive.
The installation & driver CD will automatically activate the Auto Run Installation program after you insert the disk into your CD drive.

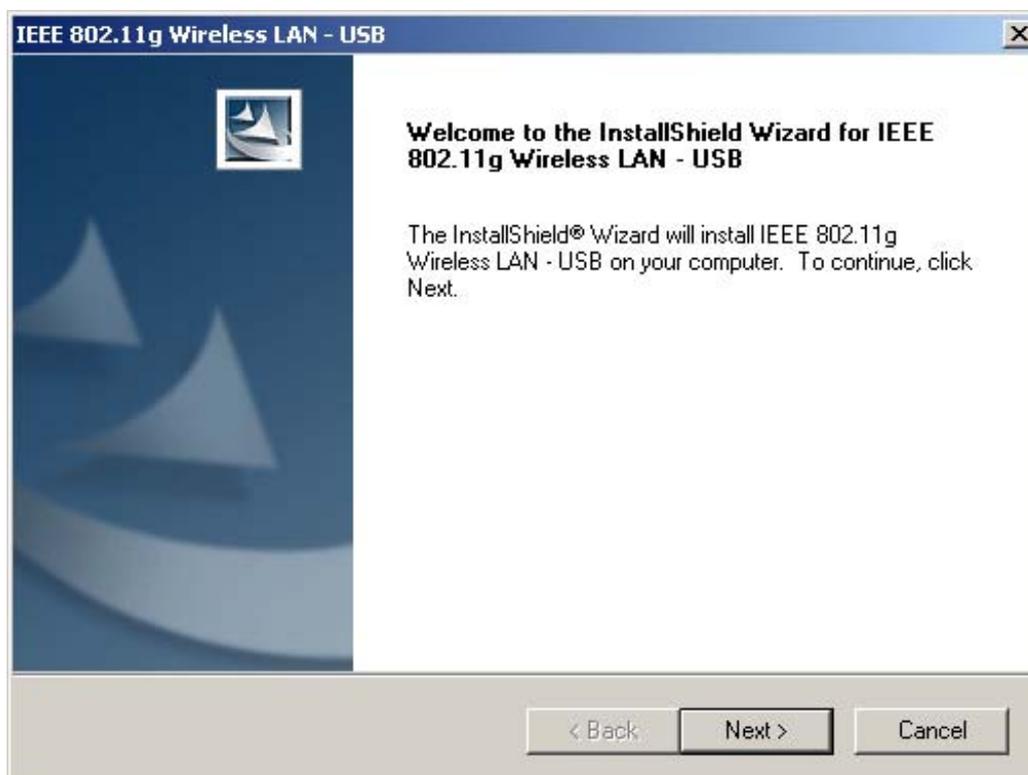


Do not insert your WLAN Adapter into the USB slot until you have finished the software installation.

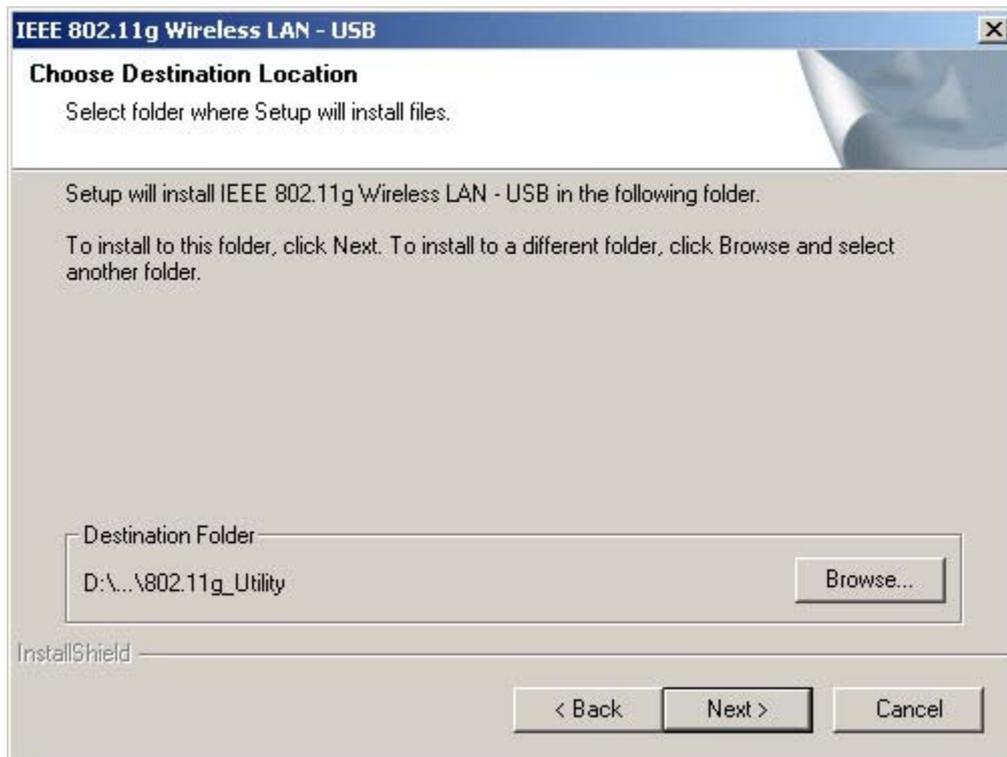
2. The install will automatically appear.



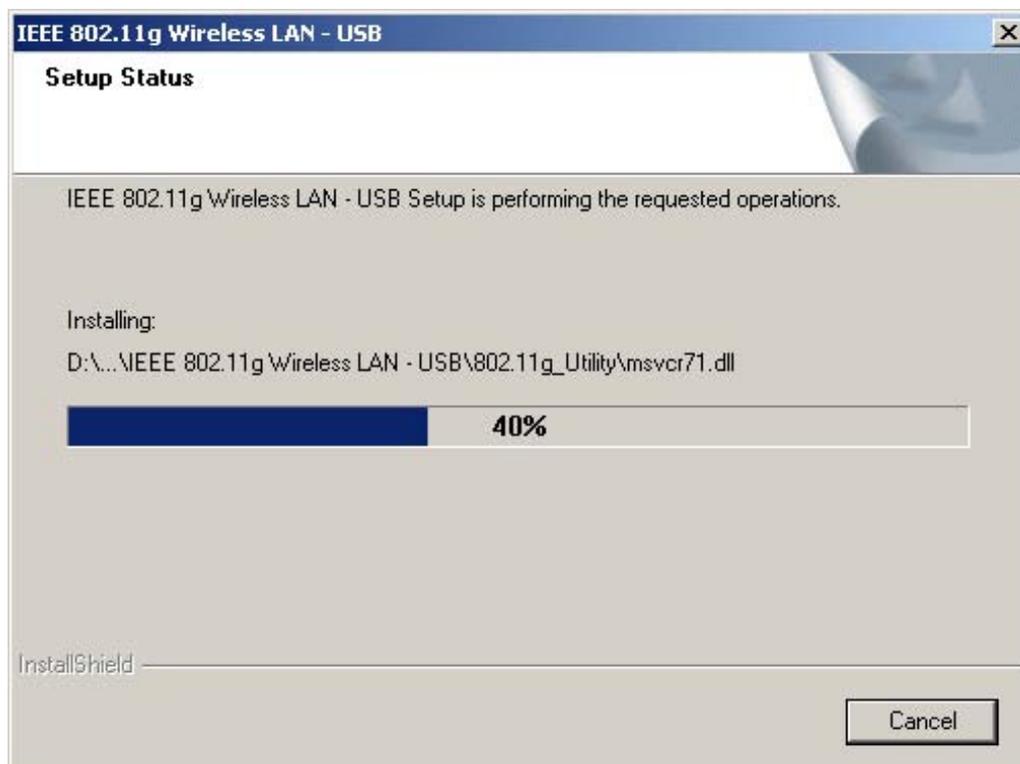
3. Click Next to continue.



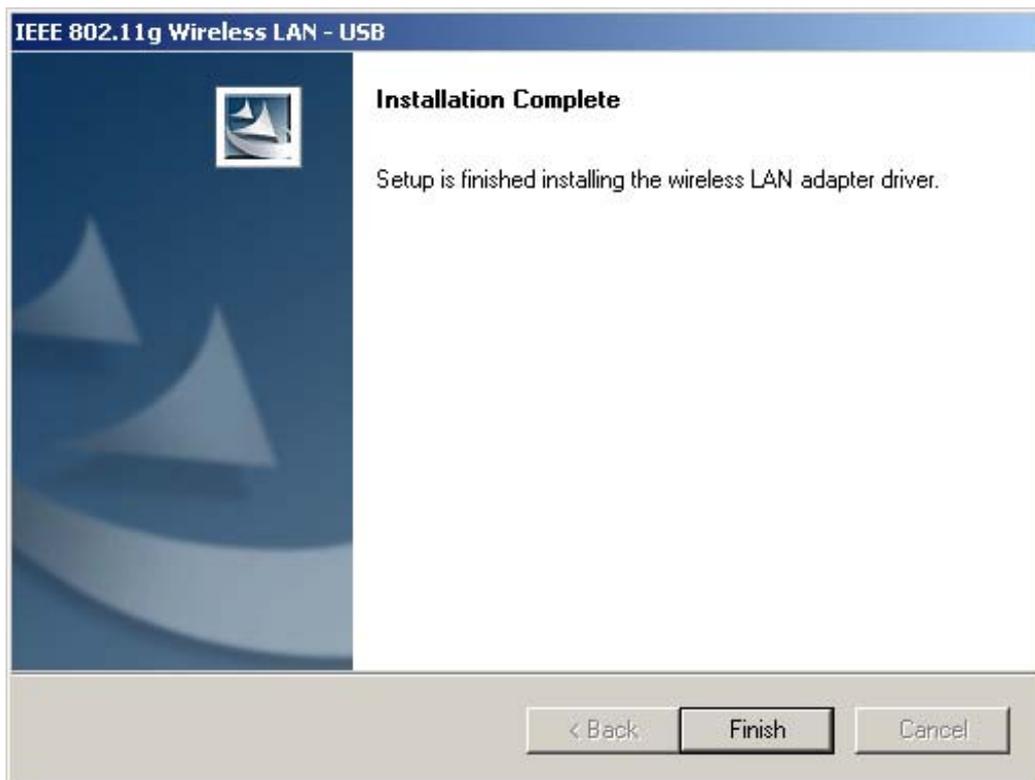
4. Click Next to install at the designated folder. Or, click "Browse" to select different folder.



5. Start copying files until it finish the installation.



6. Click Finish to complete installation.



If the AutoRun function on your computer does not automatically start, the select your CD-ROM driver and double-click the file, *SETUP.EXE* under the Windows directory.

Phase II -Install XW501B Hardware Winzard

1. Find the location of the USB slot on your desktop or laptop. And insert the 802.11g WLAN USB Adapter into the USB slot on your desktop or laptop.
2. After inserting the WLAN Adapter into your computer, Windows will automatically detect that new hardware has been installed. Depending on which operating system you are using, the steps and screens may differ slightly. Click **“Next”** to continue installing.



- For searching a suitable driver automatically, check the item as shown below.



- Select "CD-ROM drivers" for looking for suitable drivers for XW501B.



5. Press the “**Finish**” button to finish to finish the package installation.



After finishing the phase 1 installation of the driver, the NoteBook (or PC) with WinME OS shall be restarted, but Win2000 or WinXP OS doesn't need to be restarted.

Verifying XW501B USB Adapter for Windows:

This section provides the instructions that guide you to verify proper operation of the driver and utility of your 802.11g WLAN USB Adapter for the operating systems.

- **To verifying Driver Installation**

1. **Start** → Select “**Settings**” → click “**Control Panel**” and double-click the “**System**” icon.
2. *OR* Click on “**My Computer**” → select “**Properties**” from the Windows 2000 desktop.
3. Click on the “**Hardware**” folder tab and click the “**Device Manager**” button.
4. Click the “**Network adapters**”.
5. There should be no *yellow exclamation* or *red cross-sign* in the front of the 802.11g WLAN USB Adapter.
6. Double-click the 802.11g WLAN USB Adapter and the Device Status windows should indicate that the 802.11g WLAN USB Adapter is working properly.

- **To verifying Driver Installation**

To verify the utility of the 802.11g WLAN USB Adapter for properly

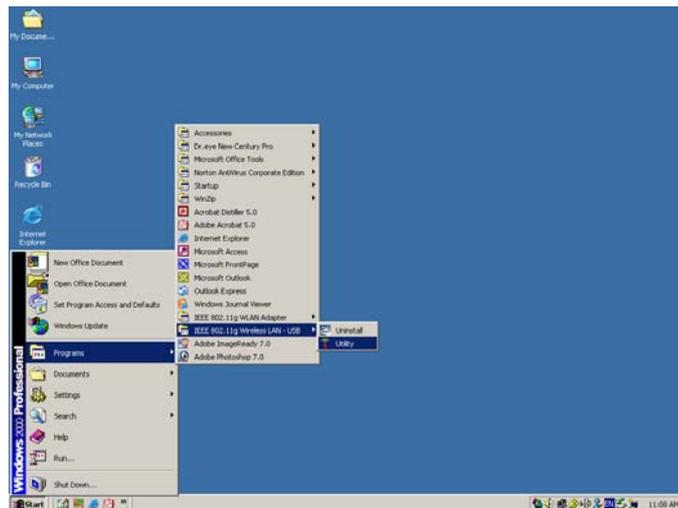
installation, be sure the Configuration & Monitor Utility icon  is loaded on the system tray of Windows task bar every time while the card is running. You can open it by double-clicking on this icon. While the station is in infrastructure mode and not associated to an Access Point, the color of the icon is yellow. As soon as the station associates itself to an Access Point, the icon color automatically turns to blue. In Ad-Hoc mode the color remains yellow too, except when the card is

resetting and initializing where it turns to red  during the reset and initialization procedure.

Use the XW501B Utility:

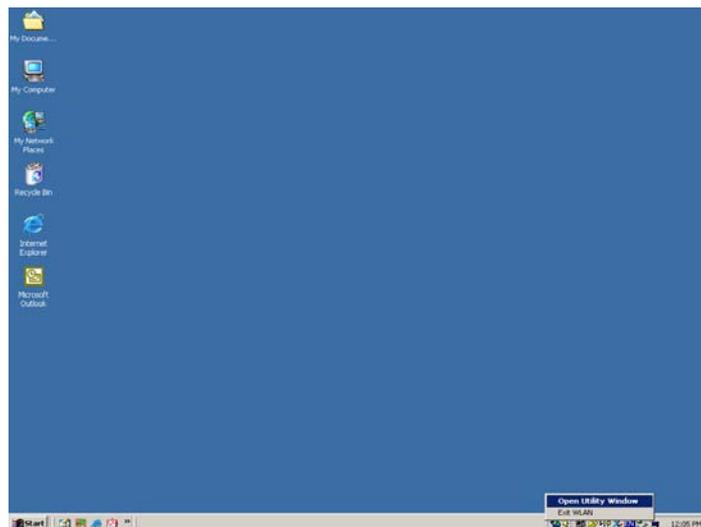
There are two different ways to open XW501B utility to configure you wireless setting, although we provide another choice, but in functional, both of them are similar. You can choose any one of them, which you more like or convenience to use.

- **Start** → Select **“Programs”** → click **“IEEE 802.11g Wireless LAN -USB”** and double-click the **“Utility”** icon.

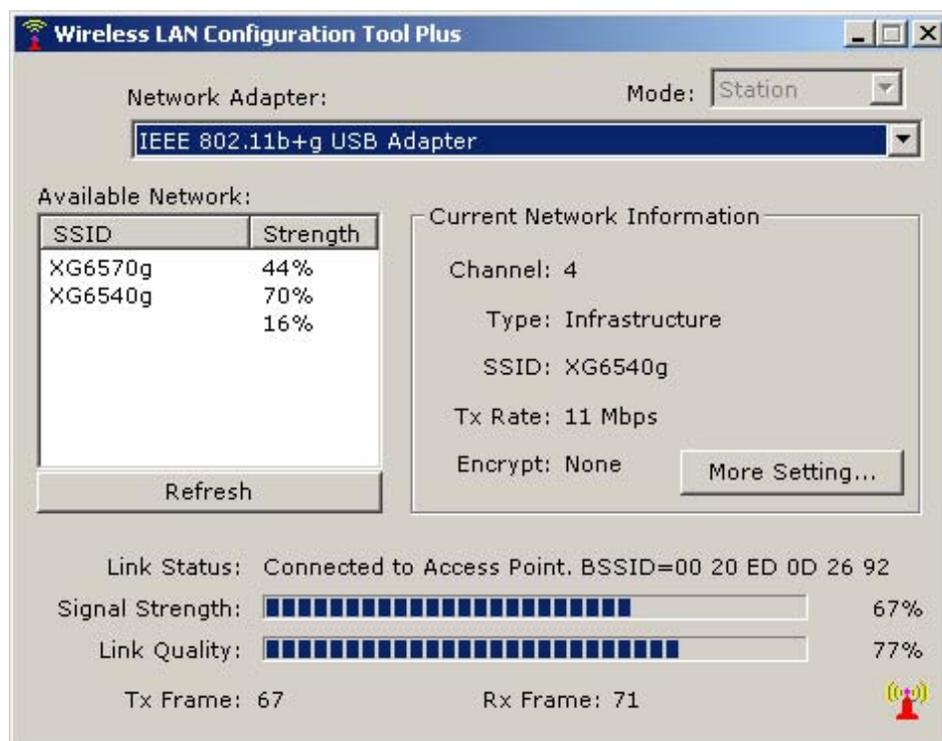


OR

- Select the icon on the system tray of Windows task bar, and double clicking to open the utility.



Open the XW501B Utility, you can see the “**Wireless LAN Configuration Tool Plus**” window.



The adapter can be set at “**Station**” or “**Access Point**” Mode from the Mode drop down menu. Station mode is selected for the document.

- You can site survey the neighboring SSID site by pressing the “**Refresh**”, then sites name and signals strength of available SSID sites are shown on the “**Available Network**” field.

- Double click the SSID site from “**Available Network**” field, and the SSID can be connected directly.

The information of the SSID is shown on the “**Current Network Information**”.

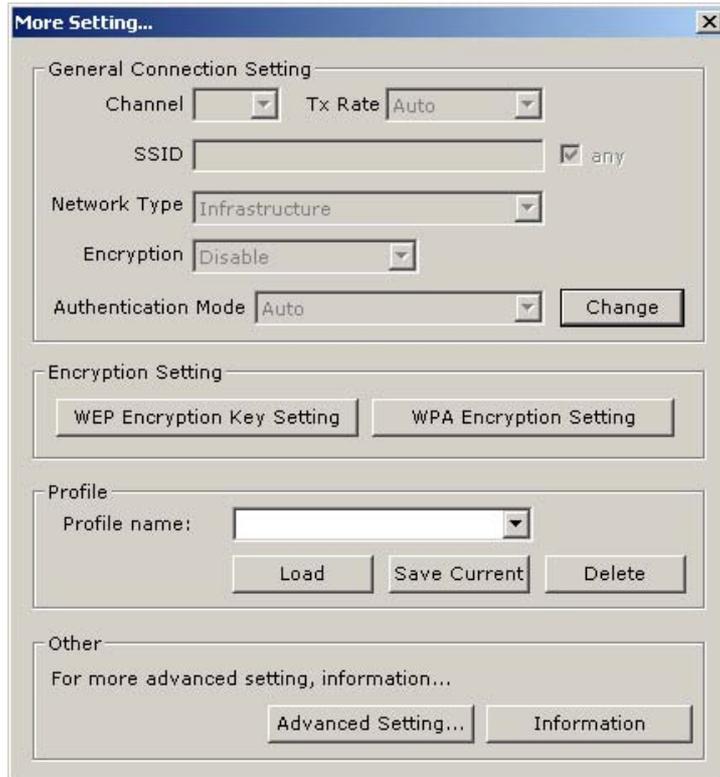
Show the BSSID of connecting AP on the “**Link Status**” filed.

“**Signal Strength**” and “**Link Quality**” shown on diagrammatic curve, and described with percentage.

Record the number of Tx frames on the filed of “**Tx Frame**”.

Record the number of Rx frames on the filed of “**Rx Frame**”.

Click “**More Setting**” icon to enter “**More setting**” window as shown follows.



“General Connection Setting” group:

- Read the current status from the group if the “Change” button is not pressed.
- Press “Change” button for modifying the status, when the modification is finished, press “Apply” to save it. The button “Change” and “Apply” is alternately shown on the same position.
- Modify the SSID name from the “SSID” field. When use the item, the “any” will be unchecked previously.
- Change the channel by drop down menu “Channel”. When use the item, the Ad_Hoc Mode will be set previously.
- Select the transmission rate by “Tx Rate” drop down menu.
- Select the “Ad_Hoc” or “Infrastructure” Mode by the “Network Type” drop down menu.
- Select the “Disable”, “WEP”, “TKIP” or “AES” by the “Encryption” drop down menu.
- Select the “Open System”, “Shared Key”, “Auto”, “WPA” or “WPA PSK” from the “Authentication Mode” drop down menu.

Encryption Setting – WEP

Press “WEP Encryption Key Setting” to enter the “WEP Key Setting” page shown as



- Press the “Change” button to modify the contents of “WEP Key setting”, when it is finished, press “Apply” to save it. The button “Change” and “Apply” is alternately shown on the same position.
 - Select which key length 64,128 or 256 bits will be modified or used by “Key Length” item.
 - Select which key set will be use by the field of “Default Key ID”
- Modify the 4 sets key depending on the selected key length on the field of “Key Value”. The key value is used the hexadecimal format.

Encryption Setting – WPA

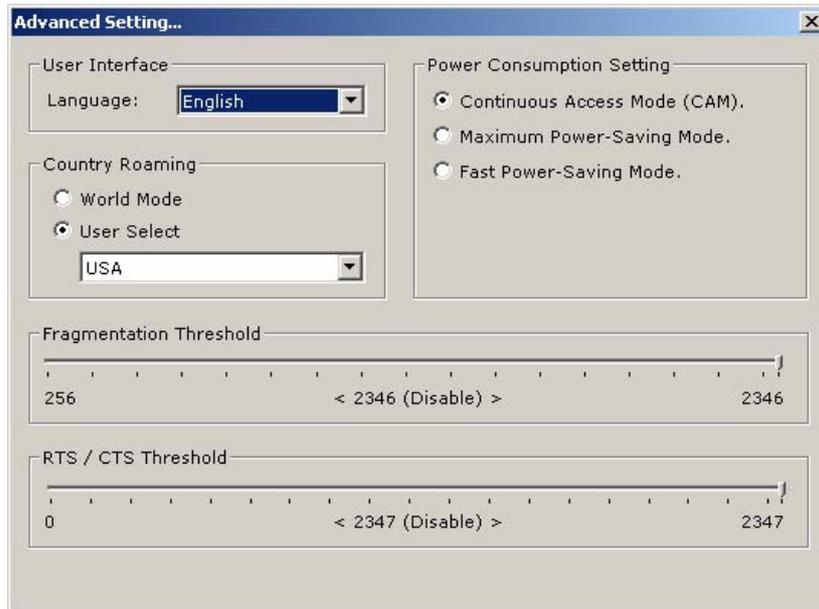
Press “WPA Encryption Setting” to enter the “WPA Setting” page shown as Figure

- Press the “Change” button to modify the contents of “WPA Setting”, when it is finished, press “Apply” to save it. The button “Change” and “Apply” is alternately shown on the same position.
 - Select TLS or PEAP protocol and add user name / password on the field of “Connect information”
 - Add passphrase and select the key format on the field of “Pre-shared Key”
 - Select the Certificate you want by the “Certificate” drop down menu
- “Profile” group:
- Select the profile that has been saved previously from the “Profile name” drop down menu, then press “Load” button to load the status to use.
 - Write the profile name on the field of “Profile name”, and press the “Save Current” button to save the current status on the profile.

- Select the profile name that wanted to delete from the “Profile name” drop down menu, and press “Delete” button to delete it

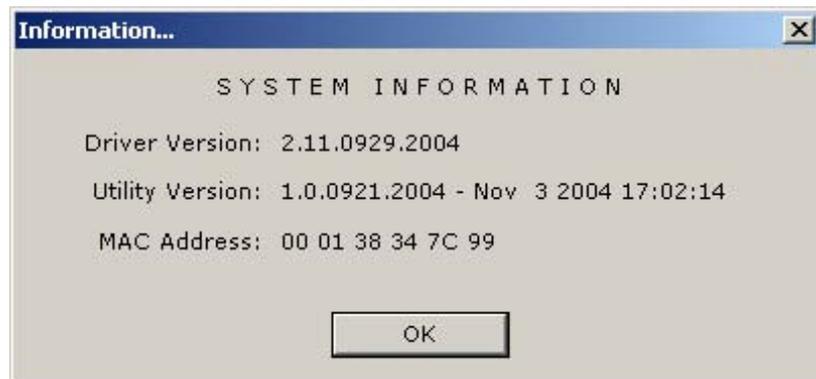
“Other” group:

Press the “Advanced Setting” button, then the Advanced Setting page is shown as



- Select the Window User Interface by the “Language” down drop menu. If the English item is selected, all functions of window are described with English. Select the Traditional Chinese item, and they are described with Traditional Chinese.
- At “Power consumption Setting” group, select which power save level want to be set by checking CAM Mode, Fast Power-Saving mode or Maximum Power-Saving mode. The default is CAM mode. If the most save mode want to use, select the Maximum Power-Saving mode, but it throughput is lower than CAM and Fast Power-Saving mode. The throughput of “Fast Power-Saving mode” is better than “Maximum Power-Saving mode”, but its power save is less than “Maximum Power-Saving mode”.
- At “Country Roaming” group, the default depends on the region of EEPROM. Select other region from “User Select” drop down menu, or check “World Mode” item to set it to the word mode. When the word mode is set, it depends on the behavior of AP. If the WLAN card is re-plug , the setting will return to default setting.
- At “Fragmentation Threshold” bar, drop and move cursor to set the fragmentation threshold point, the range is from 256 to 2346 bytes.
 - At “RTS / CTS Threshold” bar, drop and move the cursor to set the RTS threshold point, the range is from 0 to 2347 bytes.

Press the “**Information**” button to enter the “**Information**” page shown as follows. It includes the Driver version, Utility Version and MAC Address.



Troubleshooting

This chapter covers potential problems you may run into and the possible remedies. After each problem description, some instructions are provided to help you to diagnose and solve the problem.

Q: When you encounter problems, there are some preliminary checklists that can help you to dig out the problems before you take further actions?

A: - Try to isolate which part of the computer's network connection is causing the problem.

- Absence of, or conflict of the WLAN Card driver. Make sure that all device drivers are correctly installed (refer to chapter 3).

- Determine if the location of your WLAN Card is not conducive for wireless transmission (refer to chapter 2 "Site Selection").

If a problem persists after you follow the instructions in this chapter, contact an authorized dealer for help.

Q: When you encounter problems during Installation?

A: Don't insert your WLAN Card into the USB slot until you have finished the installation. If in case you should mistakenly insert your WLAN Card into your computer before installing the driver and utility, then perform the following to correct it:

Remove the WLAN Card from the USB slot.

Insert the driver CD into the CD-ROM drive and double-click the file

SETUP.EXE under the Windows directory. It would locate the already installed driver and utility and uninstall it.

Re-boot your system after uninstalling.

Refer to chapter 2 and follow the instructions to properly install the driver and utility before inserting the WLAN Card.

Re-insert the WLAN Card to the computer again.

Check if the I/O and IRQ for the WLAN Card have conflict problems with other devices connected to your computer.

For Windows 98SE / 2000 / Me operating system, make sure that the USB device driver is installed on your computer.

Q: During using Configuration & Monitor Utility, when you encountered the problem to connect?

A: - Use the **Monitor** utility of your **Configuration & Monitor Utility** to check the *Link Quality* of your WLAN Card with the AP it is associated with

(*Infrastructure* mode) or with other wireless station(s) (*Ad-Hoc* mode).

- Use the **Site Survey** utility of your **Configuration & Monitor Utility** to check if there is high interference around the environment.

Q: When you cannot connect with Access Point?

A: - Make sure that the Access Point that your WLAN Card is associated with is powered on and all the LEDs are working properly.

- Reconfigure and reset the Access Point.

- Use the Web Manager / Telnet of the Access Point to check whether it is connected to the network.

Q: When Infrastructure mode is configured, the WLAN card cannot communicate with the computer in the Ethernet?

A: - Make sure that the Access Point your WLAN Card is associated with is powered on.

- Use the **Site Survey** utility of the **Configuration & Monitor Utility** to verify if the operating radio *channel* is in good quality. Or, change the Access Point and all the wireless station(s) within the *BSSID* to another radio *channel*.

- Out-of-range situation, which prevents the WLAN Card from establishing a wireless connection with the network. Move the WLAN Card closer to the Access Point it is associated with.

- Make sure that your WLAN Card is configured with the same security option (encryption) to the Access Point.

- Make sure that the *BSSID* is the same as the Access Point for a roaming-disabled wireless station, or the *ESSID* is the same as the Access Point for a roaming-enabled wireless station.

Q: What should I do when I cannot access the network?

A: - Make sure that the necessary driver(s) was correctly installed.

- Make sure that the network configuration is appropriate.

- Make sure that the user name or password is correct.

- You have moved out of range of the network.

- Turn off power management.

Q: When the Configuration & Monitor Utility does not work correctly.

A: - Make sure that the Configuration & Monitor Utility is correctly installed (refer to chapter 5).

- If you are sure the operation has stop, reset the computer.