ZyDAS WLAN Solution

ZDWlan_1211B-QF-F User Guide

Version 0.3

ZyDAS

ZyDAS Technology Corporation

ZDWlan_1211B-QF-F User Guide

1. How to Install ZD1211B-QF-F driver and ZDWlan Utility:

1.1 Install: Phase 1

1.1.1 Copy the driver package (ex: 1211USB_Install_4214.exe) to any directory of NoteBooK (or PC). The 1211USB_Install_4214.exe can be used at ZD1211B-QF-F Chip Set Only. It can be run on the Win98, WinME, Win2000 or WinXP OS.

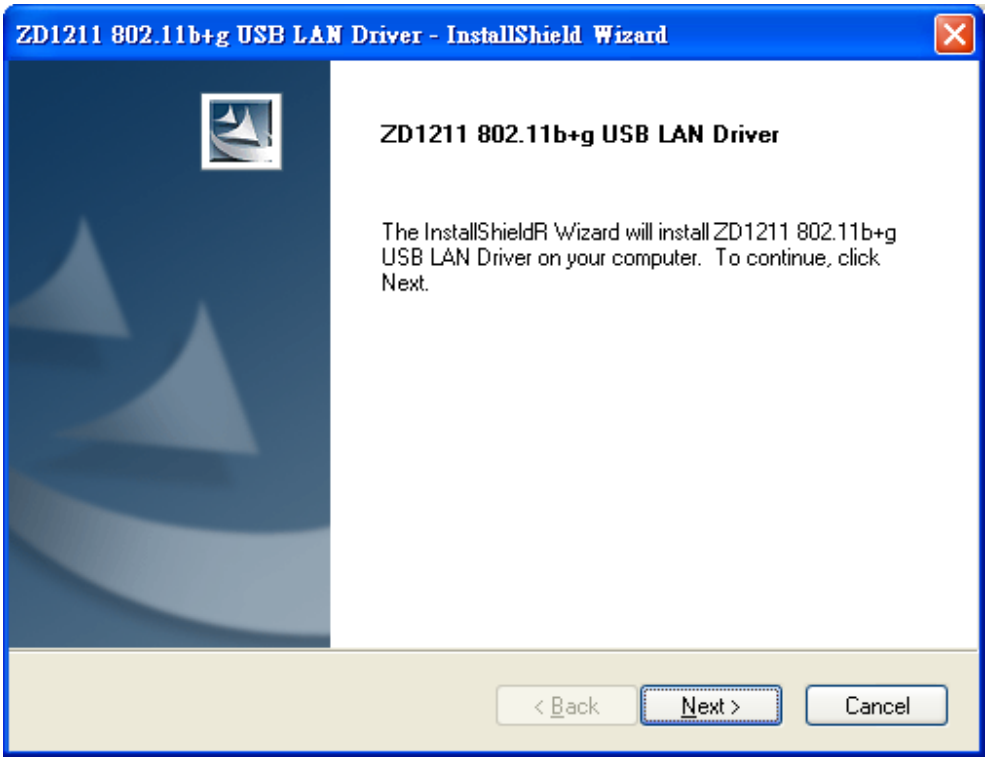

Figure 1-1

1.1.2 Click the package "1211USB_Install_4116.exe" then appear the installation page shown as "Figure 1-1".

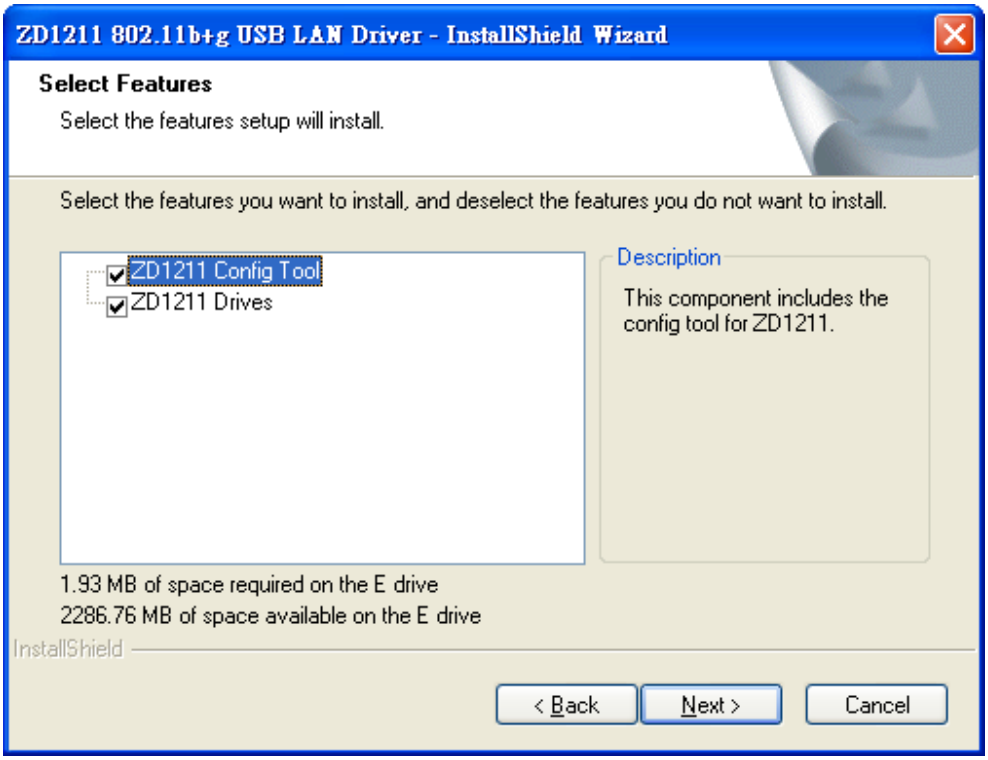

Figure 1-2

1.1.3 Press the "next" icon of Figure 1-1, then the page shown as "Figure 1-2". Select "ZD1211 Config Tool" or "ZD1211 Diver" or all of them to install by checking the items.

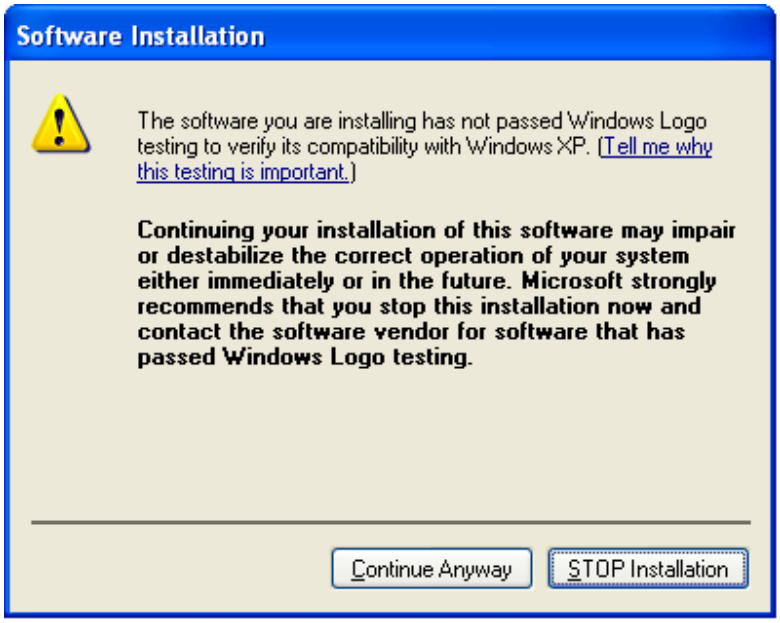

Figure 1-3

1.1.4 Press the "next " icon of Figure 1-2, then the page shown as "Figure 1-3". Press the "Continue Anyway " button of Figure 1-3, to finish the first phase installation.

1.1.5 After finishing the phase 1 installation of the driver, the NoteBooK (or PC) with Win98 or WinME OS shall be restarted, but Win2000 or WinXP OS doesn't need to be restarted.

1.2 Install: Phase 2

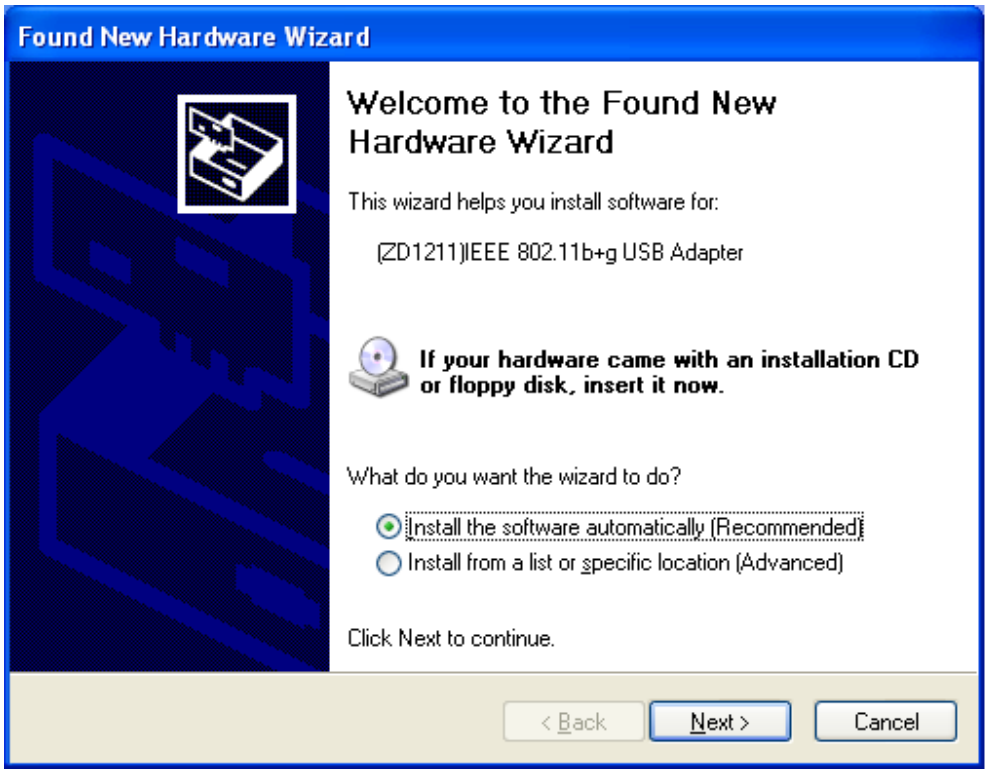

Figure 1-4

1.2.1 Insert the Wireless Card to slot of NB, then appear the installation page shown as “Figure 1-4”.
For installing the driver automatically, please check the automation item.

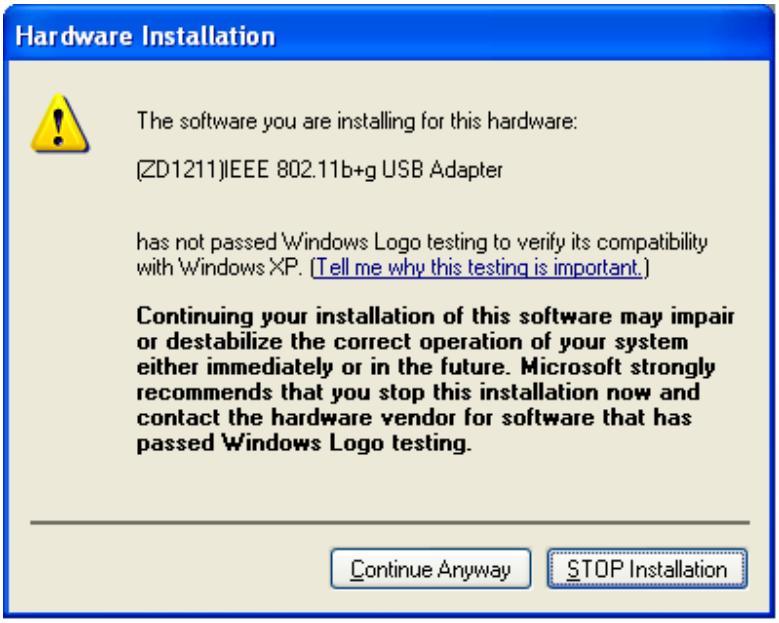

Figure 1-5

1.2.2 When the automation item of "Figure 1-4" is selected, press "Next" button of the page, then the "Hardware Installation" page shown as "Figure 1-5".

Figure 1-6

1.2.3 Press the "Continue Anyway " button of Figure 1-5, then the page "Found New Hardware Wizard" shown as "Figure 1-6".

- Press the "Finish" button of "Figure 1-6" to finish the package installation.

2. How to use the ZDWlan Utility: (Station)

2.1 If you use the WinXP OS , the "Zero Configuration" of WinXP will be disable first , then ZDWlan Utility can be used.

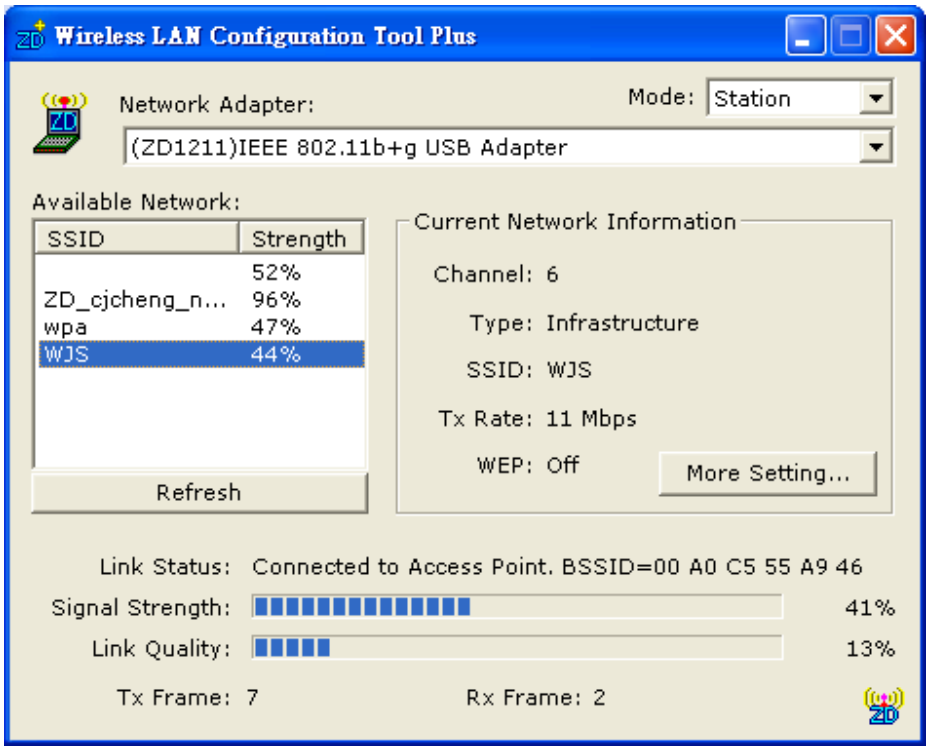

Figure 2-1

2.2 Open the ZDWlan Utility from " Start menu bar \Program List \ ZyDAS 1211 Tool ". The Window is shown as "Figure 2-1".

The adapter can be set at "Station" or "Access Point" Mode from the Mode drop down menu. Station mode is selected for the item.

- 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".

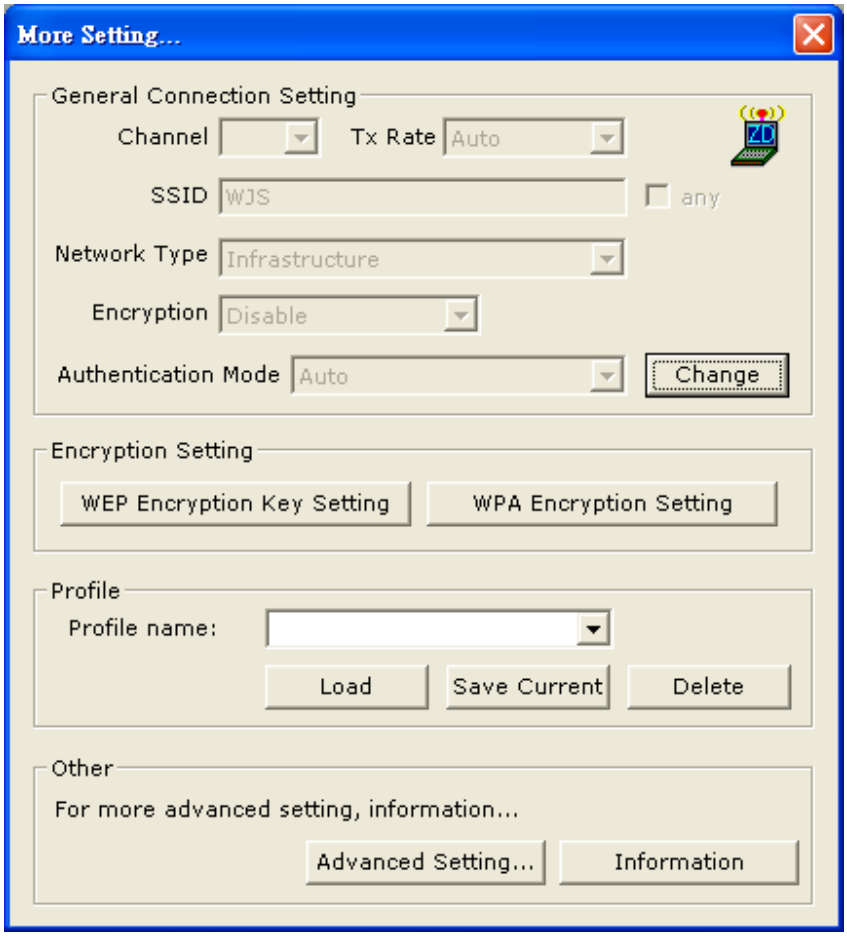

Figure 2-2

2.3 Click " More Setting " icon of Figure 2-1 to enter "More setting " window. The window is shown as " Figure 2-2 ".

2.3.1 "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 "Enable WEP" or "Disable WEP" by the "Encryption" drop down menu.
- Select the "Open System" , "Shared Key" mode or "Auto" from the "Authentication Mode" drop down menu.

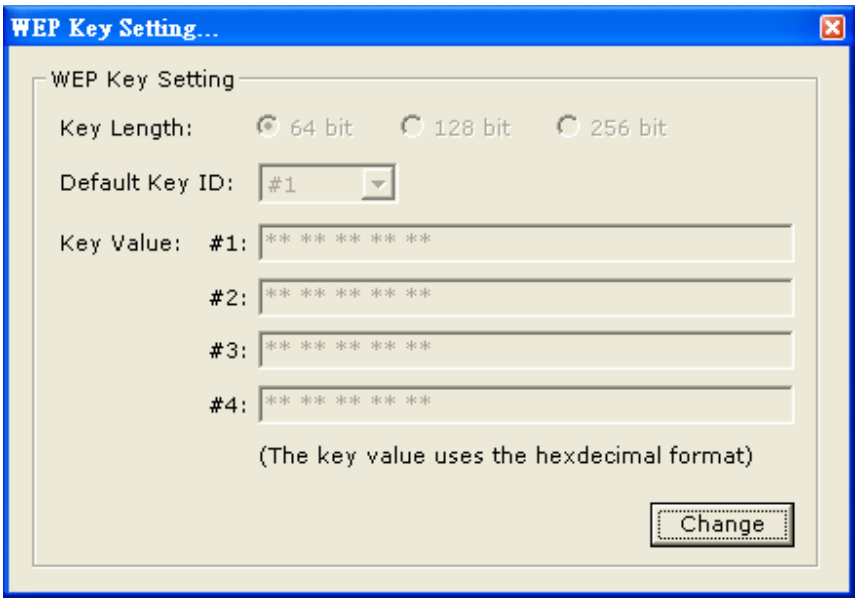

Figure 2-3

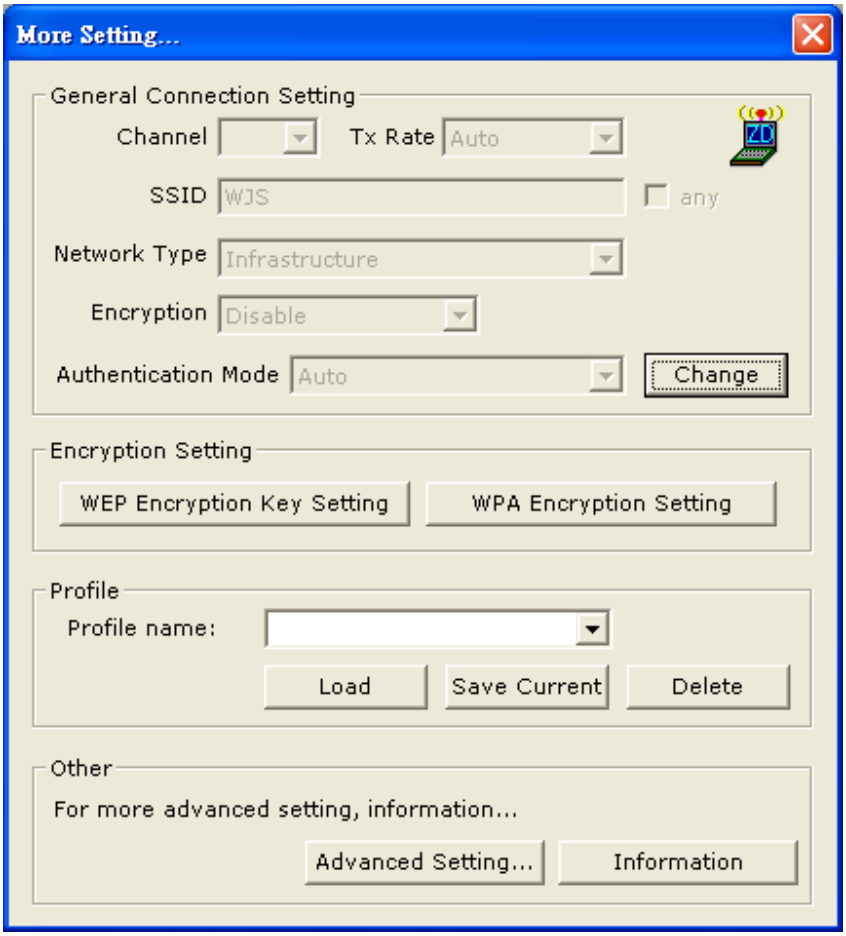

Figure 2-4

2.3.2 Encryption Setting :

2.3.2.1 Press "WEP Encryption Setting" to enter the "WEP Key Setting" page shown as Figure 2-3.

- Select the "Open System" , "Shared Key" mode or "Auto" from the "authentication Mode" drop down menu.
- 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.

- Select which key format “hexadecimal” or “ASCII” will be used from the “Key Format” .

2.3.2.2 Press “WPA Encryption Setting” to enter the “WPA Setting” page shown as Figure 2-4.

- You can select the WPA authentication protocol “TLS” , “PEAP” or “TTLS” from “Protocol” filed.
  - “TLS” Setting: you don’t fill out the User name and Password field, but the Certificate need to be used. When apply the setting, the “WPA Setting page” must be closed.
  - “PEAP” Setting: The User name, Password and Certificate are needed. When apply the setting, the “WPA Setting page” must be closed.
  -“ TTLS” Setting: The User name, Password and Certificate are needed, and you must select the phase 2 authentication type (PAP, CHAP, MSCHAP, MSCHAPv2) from the “ Phase2Auth” drop down menu. When apply the setting, the “WPA Setting page” must be closed.

- If you select “pre-share-key” protocol , you can write down your password on the filed of “Passphrase” , the password length can be selected from 8 bytes to 63 bytes (ASCII format) depend on user . When apply the setting, the “WPA Setting page” must be closed.

2.3.3 “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

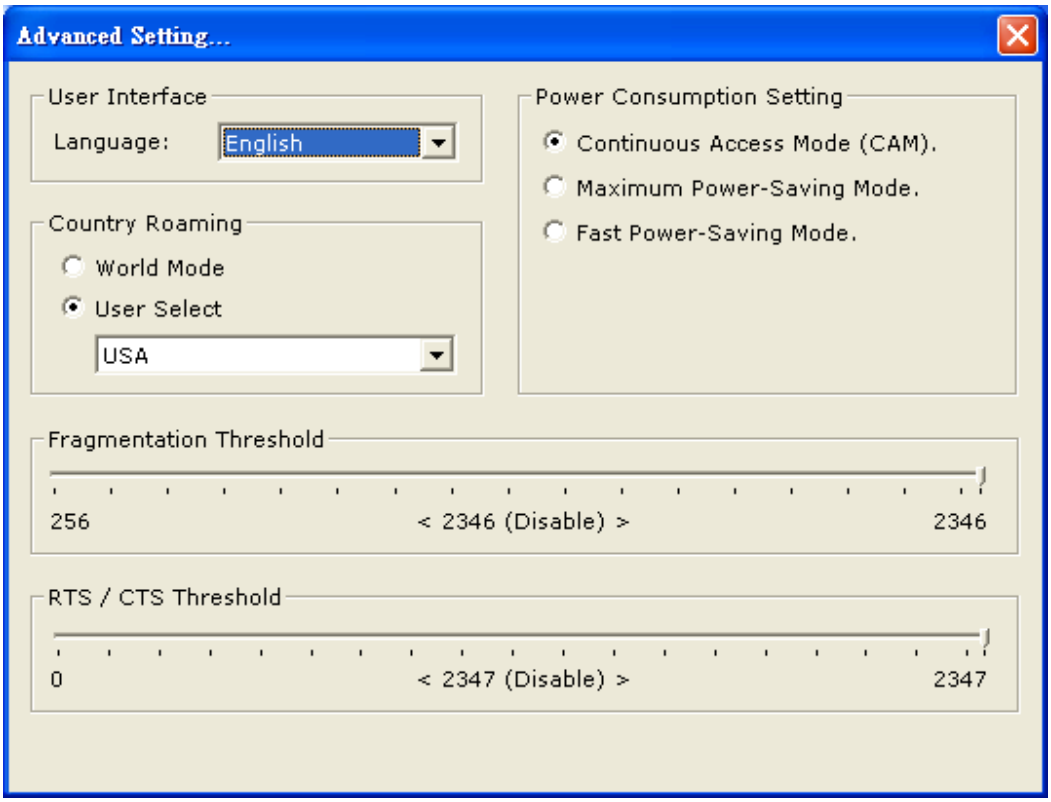

Figure 2-5

2.2.4 "Other" group:

Press the "Advanced Setting" button, then the Advanced Setting page is shown as Figure 2-5.

- 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, Maximum Power-Saving mode or Fast 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.

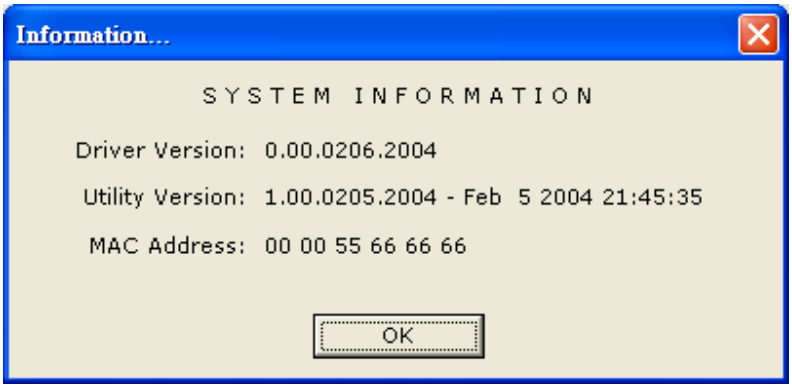

Figure 2-6

2.2.5 Press the "Information" button to enter the "Information" page shown as Figure 2-6. It includes the Driver version, Utility Version and MAC Address.

3. How to use the ZDWlan Utility: (Soft Access Point)

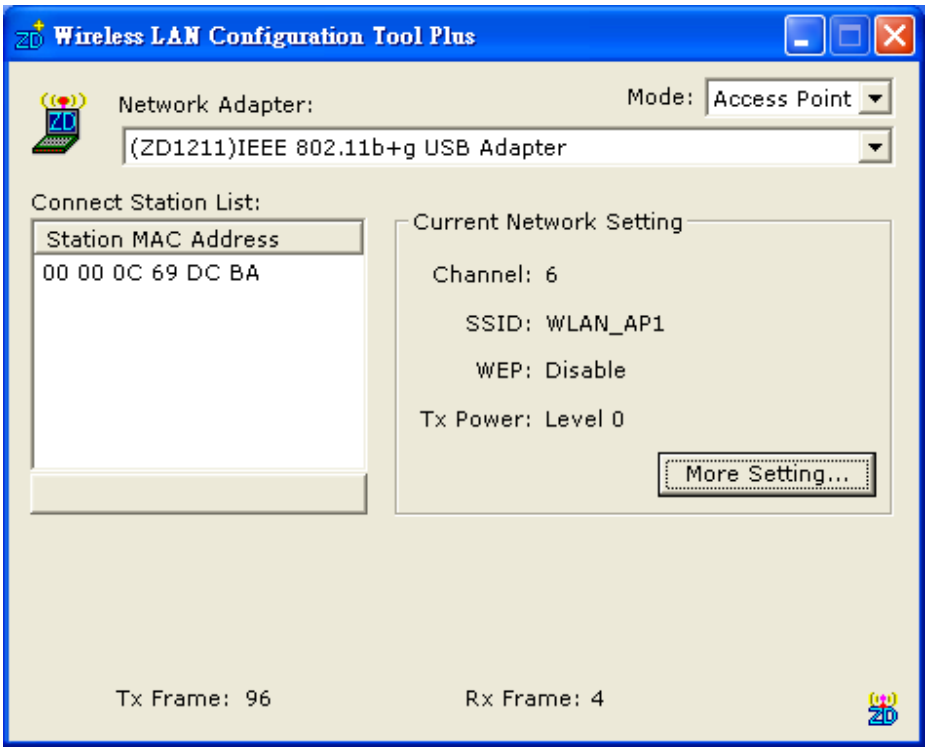

Figure 3-1

3-1 Open the ZDWlan Utility from " Start menu bar \Program List \ ZyDAS 1211 Tool ". The Window is shown as "Figure 2-1". For the soft AP, please option the " Access Point" from drop down menu Mode filed, and it is shown as Figure 3-1.

- "Network Adapter" shows the available WLAN card for soft AP.
- If the WLAN stations link to the Soft AP , their MAC address will be shown on the filed of the "Station MAC Address".
- The current status of the AP is shown on the "current Network Setting". It can show which Channel is used, and what is the AP's SSID. You can know if the WEP is disable or enable. The Tx power level is shown on it too (The is function not available now).
- The Tx Frame shows how many frames transmitted by the soft AP.
- The Rx Frame shows how many frames received by the soft AP.

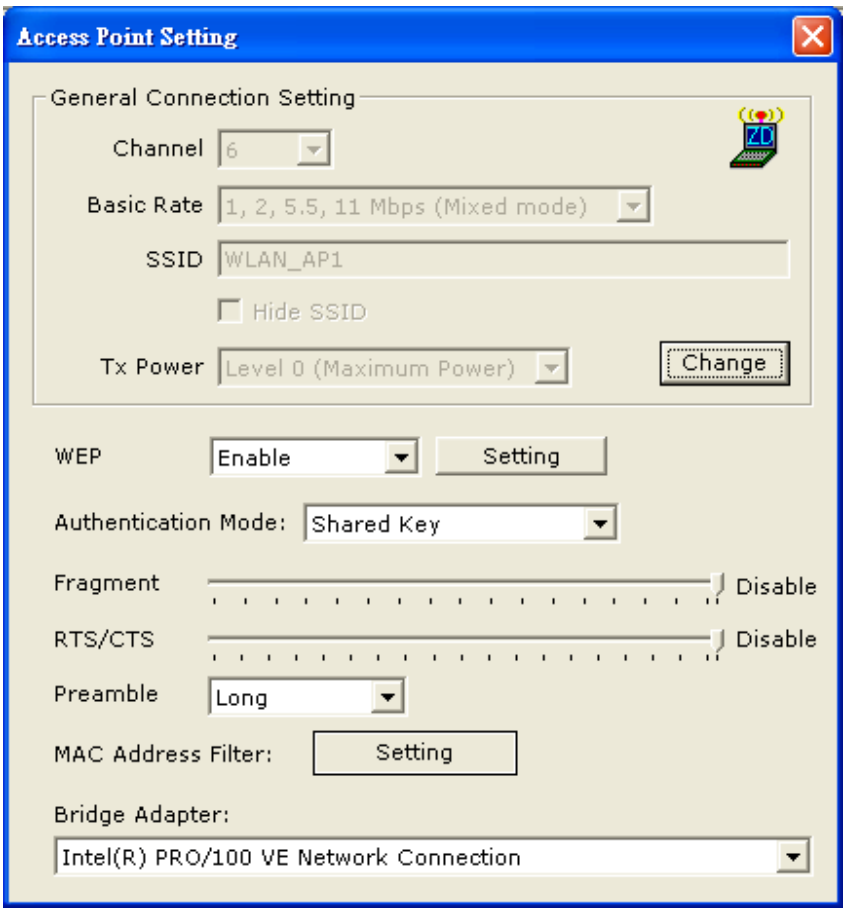

Figure 3-2

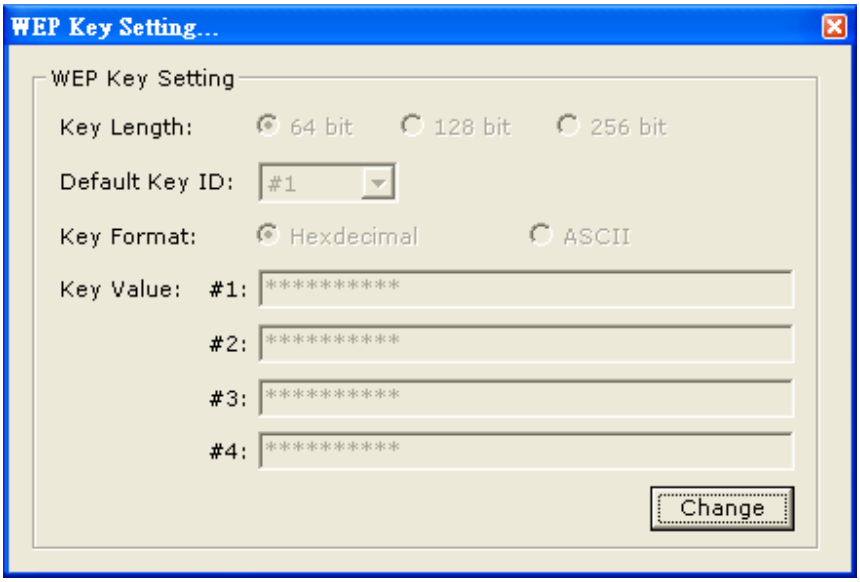

Figure 3-3

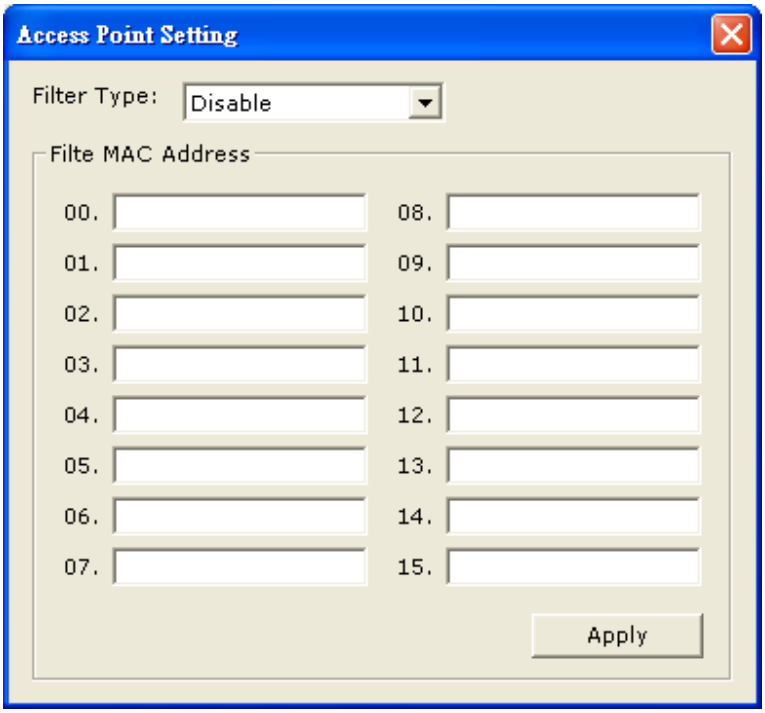

Figure 3-4

3-2 Click " More Setting " icon of Figure 3-1 to enter "More setting " window. The "Access Point Setting" page is shown as " Figure 3-2 ".

- Press the "Change" button to modify the "General Connecting Setting" , and press the "Apply" button , when the setting is finished. The button "Change" and "Apply" is alternately shown on the same position.
- Select the channel from the drop down menu " Channel".
- The drop down menu "Basic Rate", ACK rate, can select four sets of basic rates: set 1 {1, 2 Mbps (Mixed mode)}, set 2 {1, 2, 5.5, 11 Mbps (Mixed mode)} , set 3 {1, 2, 5.5, 11, 6, 12, 24 Mbps (802.11g only)}, and set 4{6, 12, 24 Mbps(802.11g only)}. A 802.11b station can connect to the AP only when the setting is set 1 or set 2. A 802.11g station is not limited.
- Modify the SSID name from the "SSID" filed.
- Check the "Hide SSID" to hide the SSID that means the WLAN station can't site survey the AP's SSID.
- There are 4 sets transmit power level can be selected on the "Tx power" filed.(The function is not available now.)
- Enable or Disable the WEP form the drop down menu "WEP".

- Press the "Setting" button to open the "WEP key setting" shown as Figure 3-3. 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. Select which key format "hexadecimal" or "ASCII" will be used from the "Key Format".
- Select the "Open System" or "Shared Key" mode from the "authentication Mode" drop down menu.
- At "Fragment" bar, drop and move cursor to set the fragmentation threshold point, the range is from 256 to 2346 (Disable) bytes.
- At "RTS / CTS" bar, drop and move the cursor to set the RTS/CTS threshold point, the range is from 0 to 2347(Disable) bytes.
- Select the Long preamble or Short preamble from the "Preamble" drop down menu.
- Press the "Setting" button of "MAC Address Filter" to fill the MAC addresses that will be accepted or filtered. It's shown as Figure 3-4. Select "Disable" or "Accept" or "Filter" from the filed of drop menu "Filter Type". There are 16 sets MAC addresses can be filled on the "Filter MAC Address". If all setting is finished, please press Apply to save it.
- Select the NIC card for bridge function from the filed of drop menu "Bridge Adapter". If the bridge function will be disable, please select the " No bridge" item from "Bridge Adapter".

FCC Warning

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 nstructions, 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.

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 RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

The available channels supported by the wireless products in various countries are different by firmware.

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. As long as conditions above is 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 (for example Access Point ,Router). The final end product must be labeled in a visible area with the following: “Contains TX FCC ID: TXG-ZD1211B-QF-F 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 end users 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”.

DGT Warning

低功率電波輻射性電機管理辦法

第十二條　經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條　低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。