AIN AWT2400G WIRELESS LAN AIR HUNTER 802.11G/B 54/MBPS

User Manual

Federal Communications Commission Statement

Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment. The manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, or the substitution of the connecting cables and equipment other than manufacturer specified. It is the responsibility of the user to correct any interference caused by such unauthorized modification, substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines.

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

. • This device may not cause harmful interference, and
. • This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the Federal Communications Commission (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.

SAR Exposure

This device has been tested for compliance with FCC RF Exposure (SAR) limits in typical flat configurations.

IMPORTANT NOTE FCC RF Radiation Exposure Statement: This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

European Notice

ProductswiththeCEMarkingcomply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.
Compliance with these directives implies conformity to the following European Norms:

- **EN 55022** (CISPR 22) radio Frequency Interference
- **EN 55024** (EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11, EN61000-3-2, EN61000-3-3) Generic Immunity Standard.
- **EN 60950** (IEC950) Product Standard.

Regulatory statement (R&TTE /WLAN IEEE802.11b & 802.11g)

European standards dictate maximum radiated transmit power of 100mW EIRP and frequency range 2.400-2.4835GHz; In France, the equipment must be restricted to the 2.4465-2.4835GHz frequency range and must be restricted to indoor use.

CE Declaration of Conformity

For the following equi pment: AIN AWT2400g Cardbus Wireless LAN Card

CE 0984 !

Is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (89/336/EEC), Low-voltage Directive (73/23/EEC) and the Amendment Directive (93/68/EEC), the procedures given in European Council Directive 99/5/EC and 89/3360EEC.

The equipment was passed. The test was performed according to the following European standards:

- EN 300 328-2 V.1.2.1 (2001-08)
- EN 301 489-1 V.1.4.1 (2002-04) / EN 301 489-17 V.1.2.1 (2002-04)
- EN 50371: 2002
- EN 60950: 2000

Content

1. Product Introduction

Thank you for using Air Hunter WLAN product. This installation guide will help you install Air Hunter WLAN Card and connect to the Internet quick & easy.

■ Package Contents

1. AIR HUNTER WLAN CARD
2. Quick Installation Guide
3. Driver CD Disc

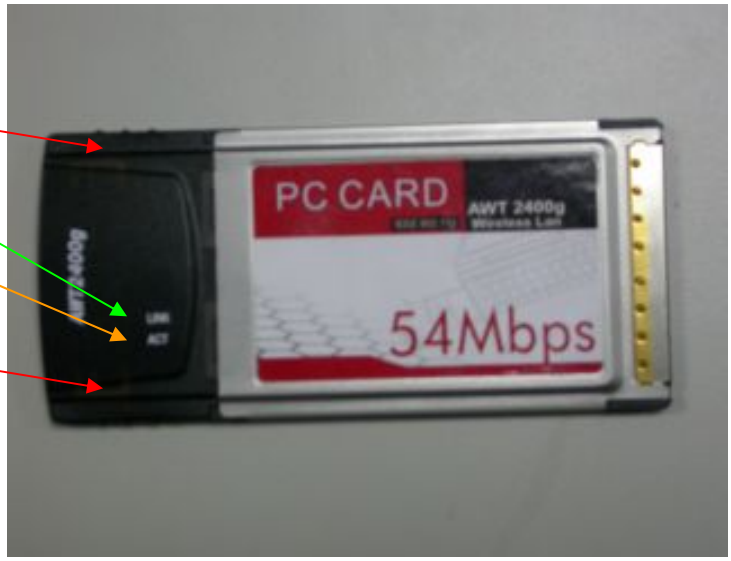
■ Form Factor

1- Internal High gain Antenna_1

2- Green color LED is “LINK”

3- Yellow color LED is “ACT”

4- Internal High gain Antenna_2



■ System Requirements

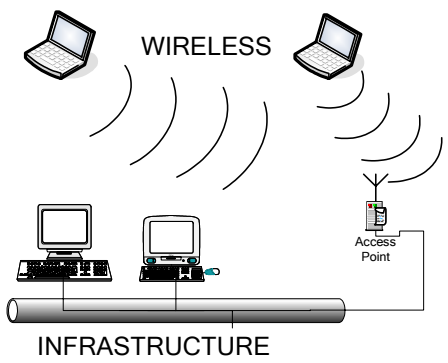
1. Laptop or Other with Cardbus（PCMCIA-II）port and CD-ROM driver
2. Operating System: Windows 98 SE / ME / 2000 / XP

■ Applied Environments

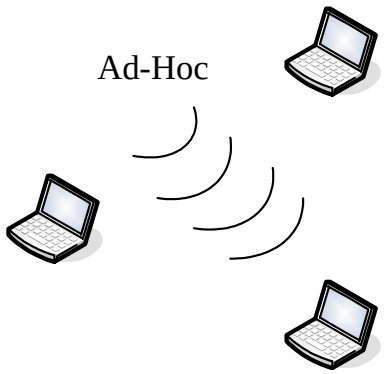
There are two application modes for this WLAN card, the “Ad-Hoc mode” and the “Infrastructure mode”. (For further explain, please refer to the “WLAN Application Modes” below) Different modes require different settings. Please check the environment first.

Infrastructure mode: Via “Access Point” (AP) to connect to the Internet. This mode further gives wireless access to Internet or data sharing under a previously wired environment.

Ad-Hoc mode: Connecting to other computer with WLAN card. This mode does not need AP to connect to each other.



Infrastructure mode



Ad-Hoc mode

■ WLAN Application Modes

Ad-Hoc Mode	Ad-Hoc mode is a Peer-to-Peer mode. Without an AP, computers can also connect to each other by Air Hunter WLAN card. With this mode, computers are able to share data or connect to the Internet if one of them is already connected to.
Infrastructure Mode	Infrastructure mode including an AP, unlike Ad-Hoc mode, enabling users to best utilizes the frequency bandwidth of the A.P. This mode enables users to integrate wired and wireless infrastructures. Through A.Ps, wireless users are able to access wired resources, for example: Internet, database, and printers.
Advantages	Comparing to Ad-Hoc mode, Infrastructure mode has the following advantages: ✓ **Longer distance:** Through AP, the wireless access distance is longer. ✓ **Roaming:** The wireless devices can move within the AP support area. ✓ **Integration of wired and wireless environment.**

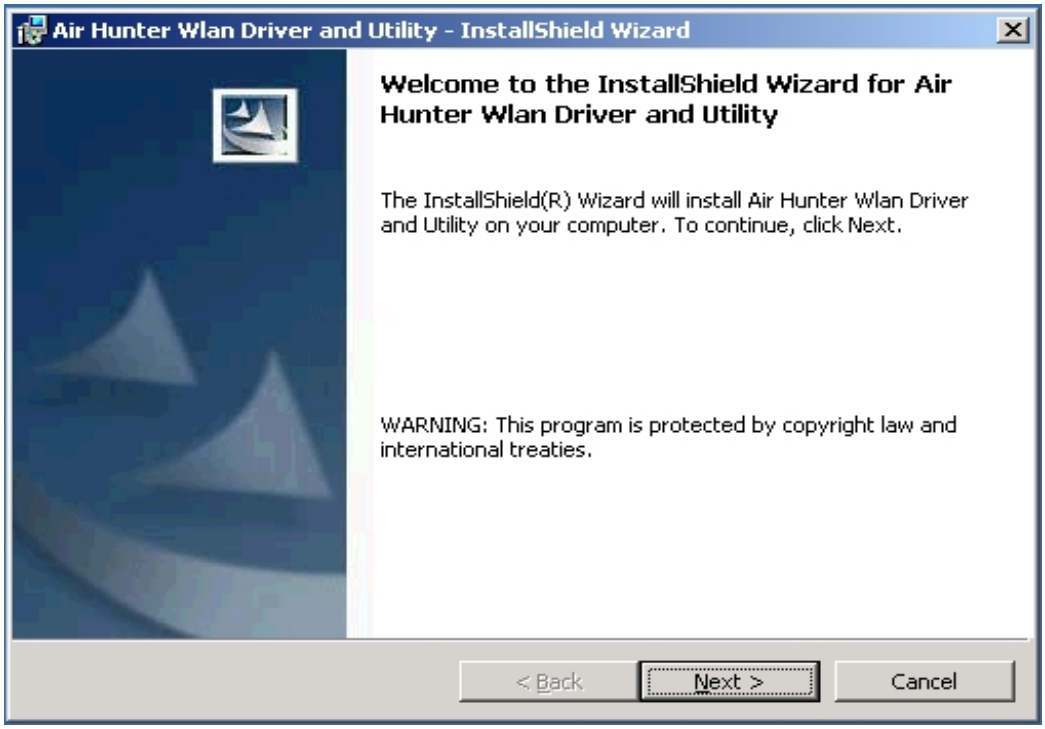
2. Air Hunter Wireless LAN card Installation

Note: The screens showed below are from Windows 2000. For other Windows system, the steps are the same, but the screens shown will be a little different.

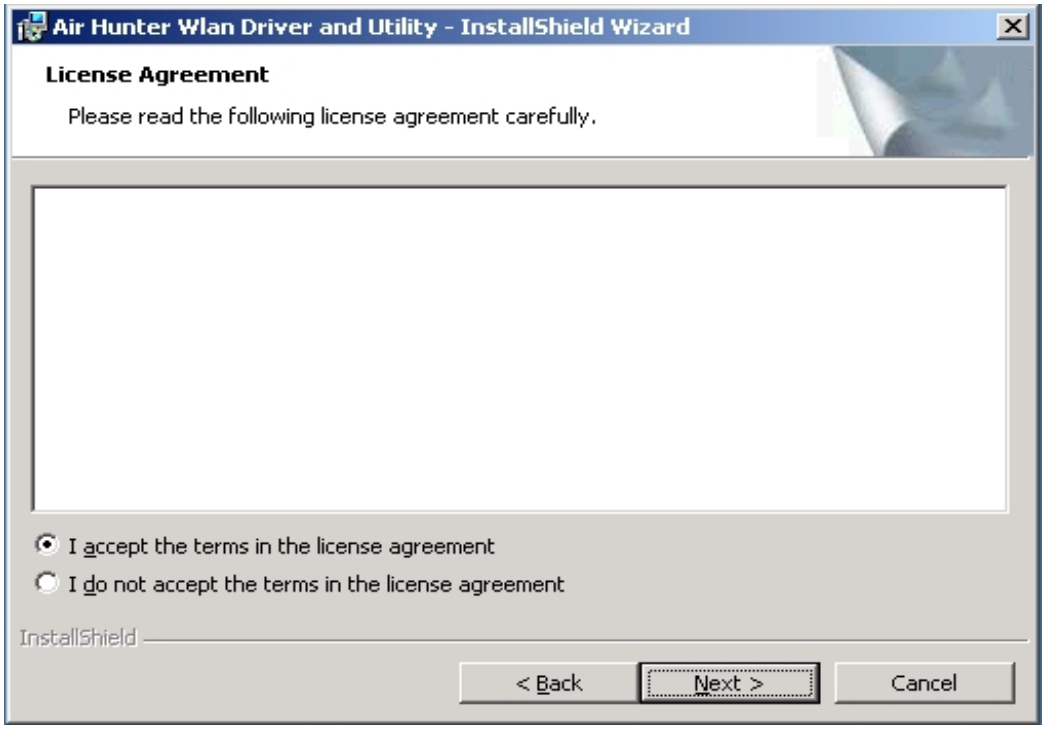
Please
Plugging your WLAN card first.

1. After plugging the LAN CARD into your PC, it will automatically find and alert a New PCMCIA UNKNOWN_MANUFACTURER Device. Click “Cancel” to continue.
2. Please Inserted we supply the Driver CD in to your CD-ROM, our CD will run the installation in an easily and simple procedure.
3. Please choose what is your need? Then press the button. We recommend you first press this “View Here First” button.

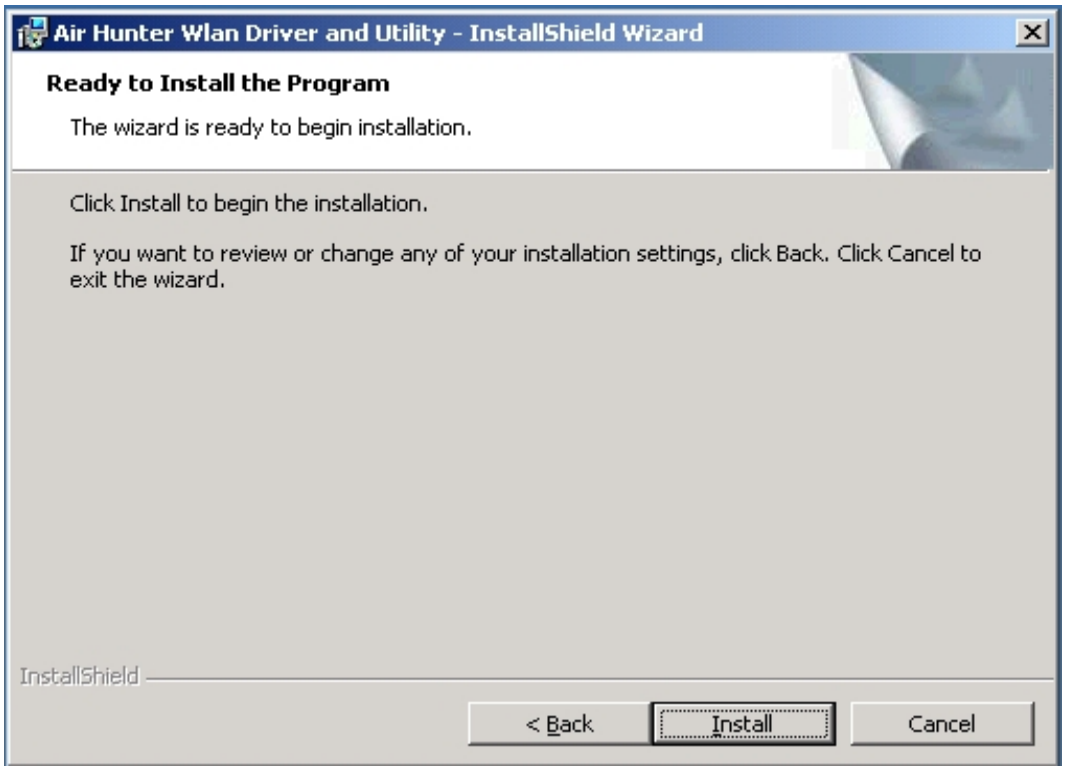
4. Press the “Install Card Driver” button, the program will Autoruning installation our Air Hunter Wireless LAN card driver.



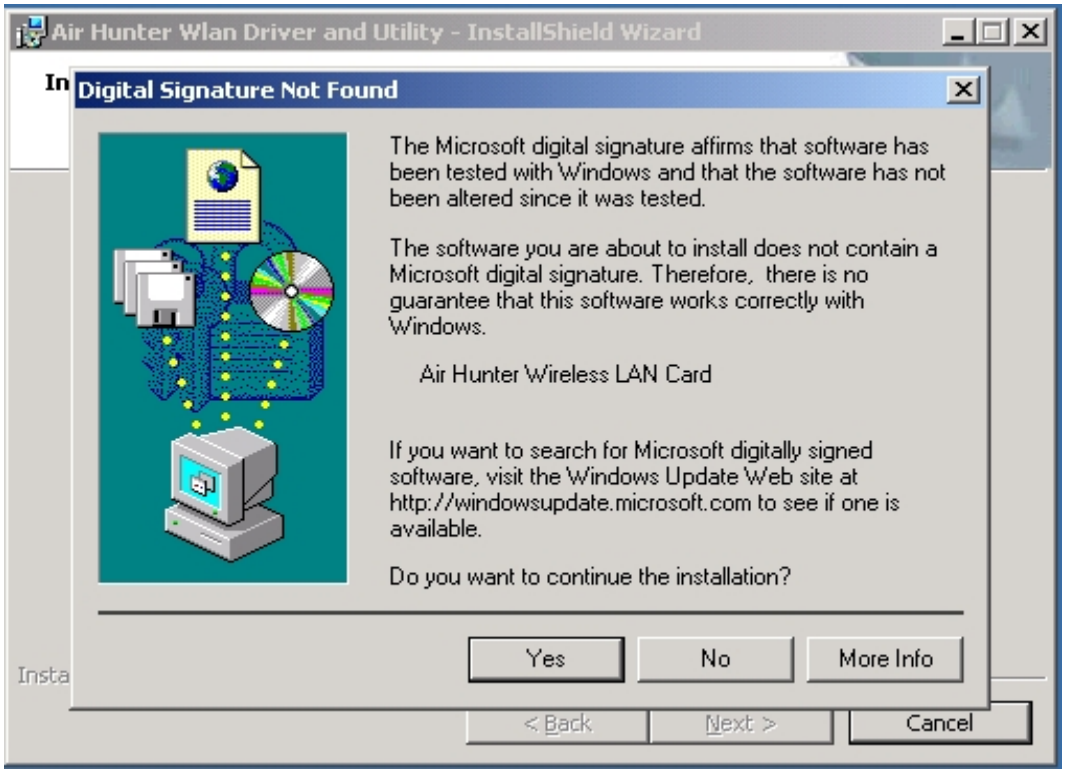
5. Press Next> button to continue.



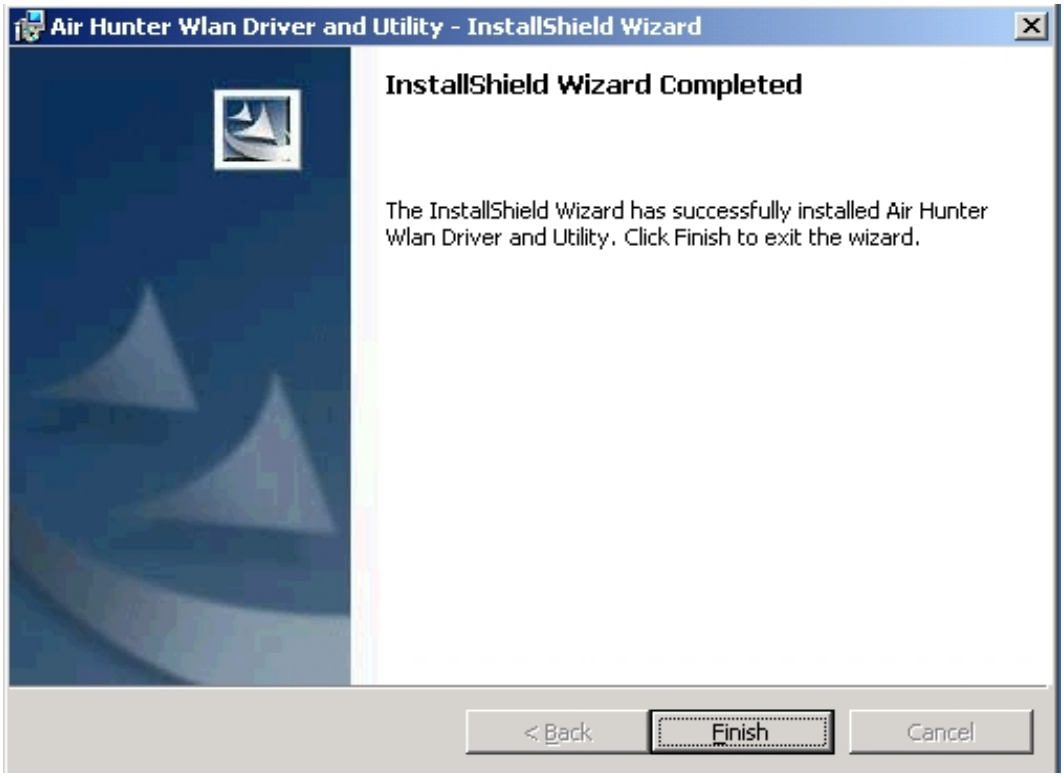
6. Choose I accept the terms in the license agreement, then Press Next> button to continue.



7. Press Install button, to next.

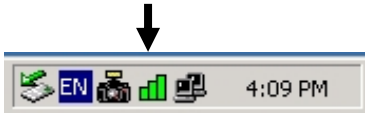


8. Press Yes button to next.



8. Press Finish button to next.

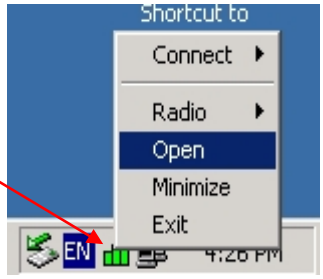
After successful installation, you'll see the new icon appear in the Icon Tray.



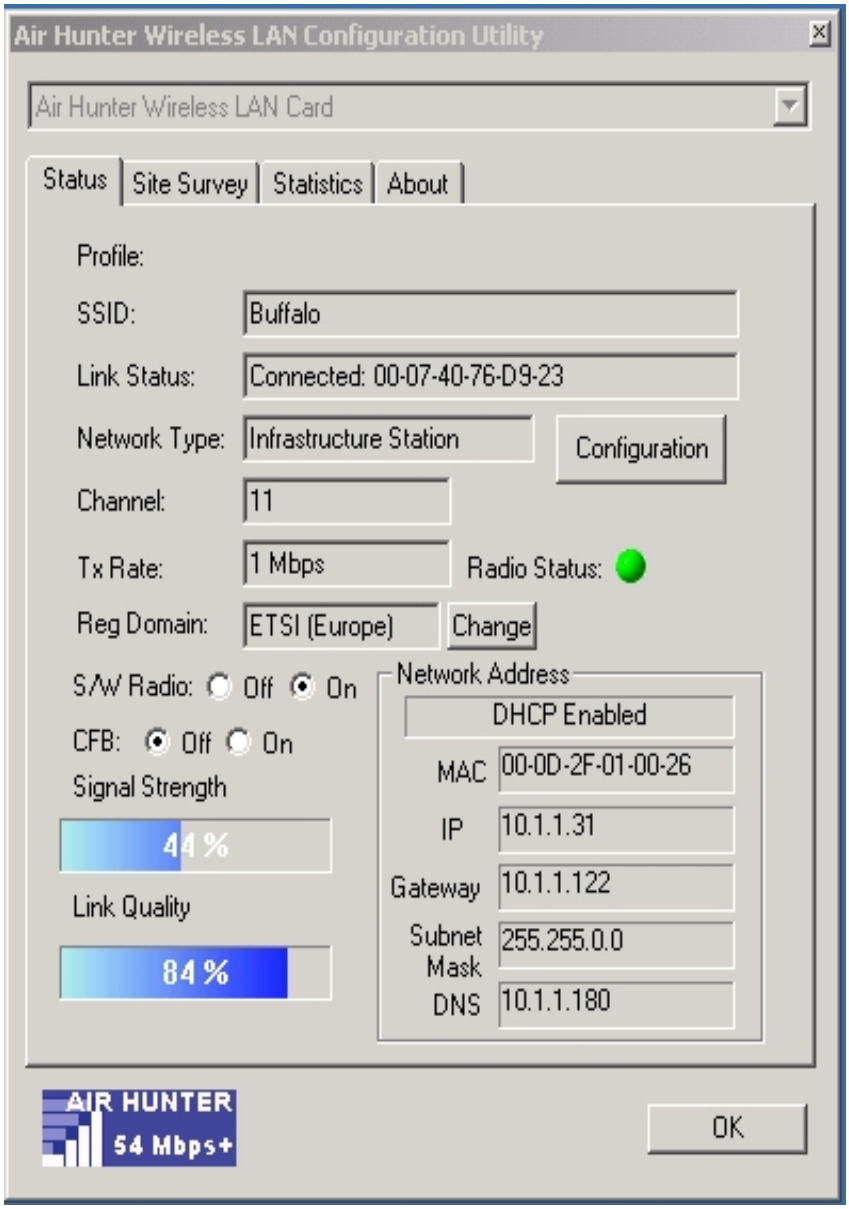
- The software will automatically search for available APs for connecting to the Internet.
- If the connecting fail, the Icon appeared is in yellow to white color.

Software Utility

1. Click the icon and the software utility window shows up.



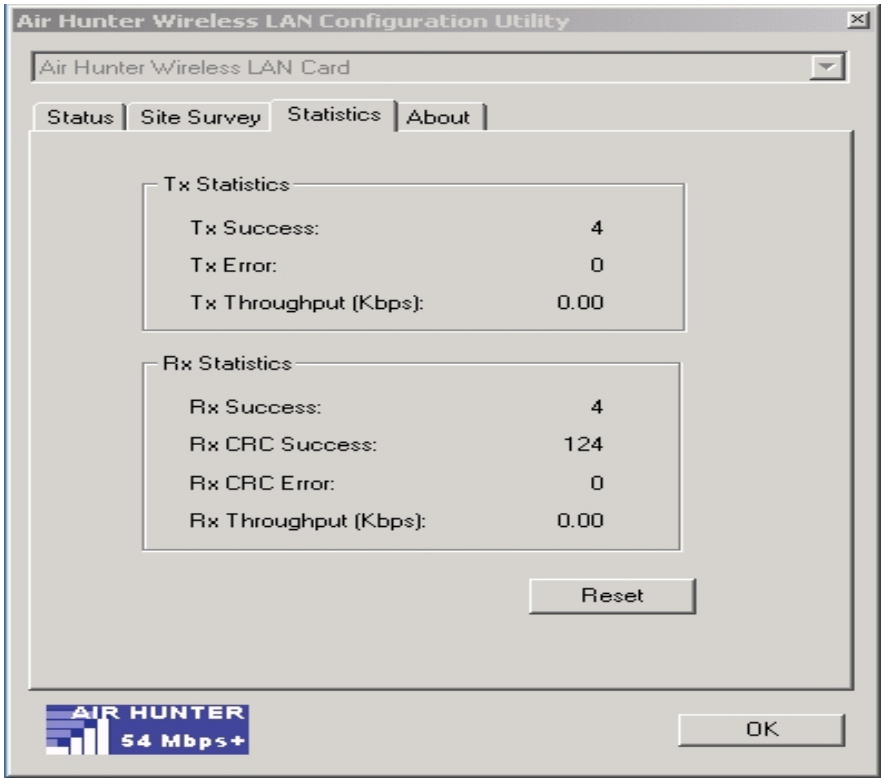
2. Status window allows you to change Operation Mode, Channel, SSID, Tx Rate, CFB mobe, and Radio….et It also shows the connecting signal and quality for you to adjust related infrastructures and configurations.



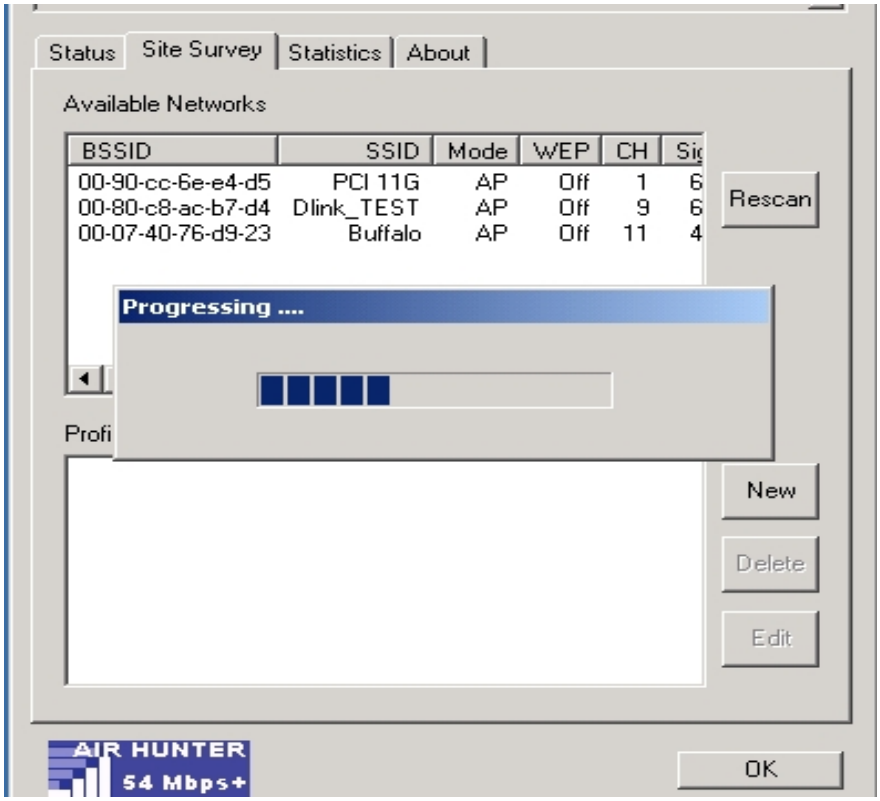
Remark:

The field of Reg Domain shown above exemplifies the application in the European market. It cannot be changed and it will be determined by the driver shipped with the product.

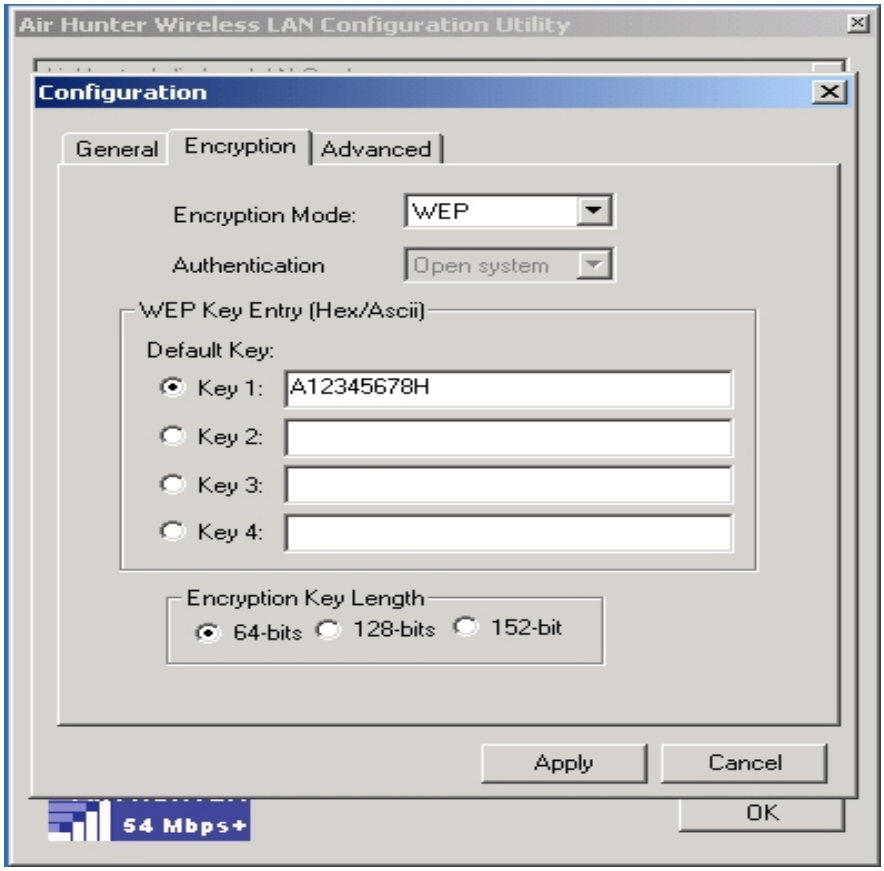
3. Statistics window: It shows the real time transmitting and receiving status.



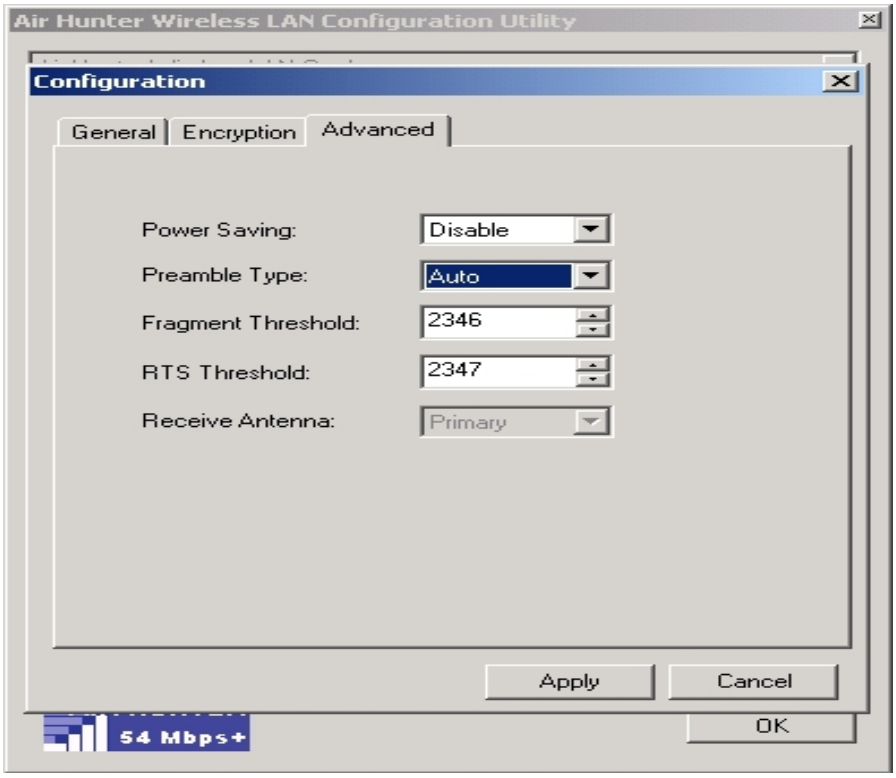
4. Site Survey window: Click "**Rescan**" to search all available WLAN devices and their status in current environment. Double click the device you want to connect.



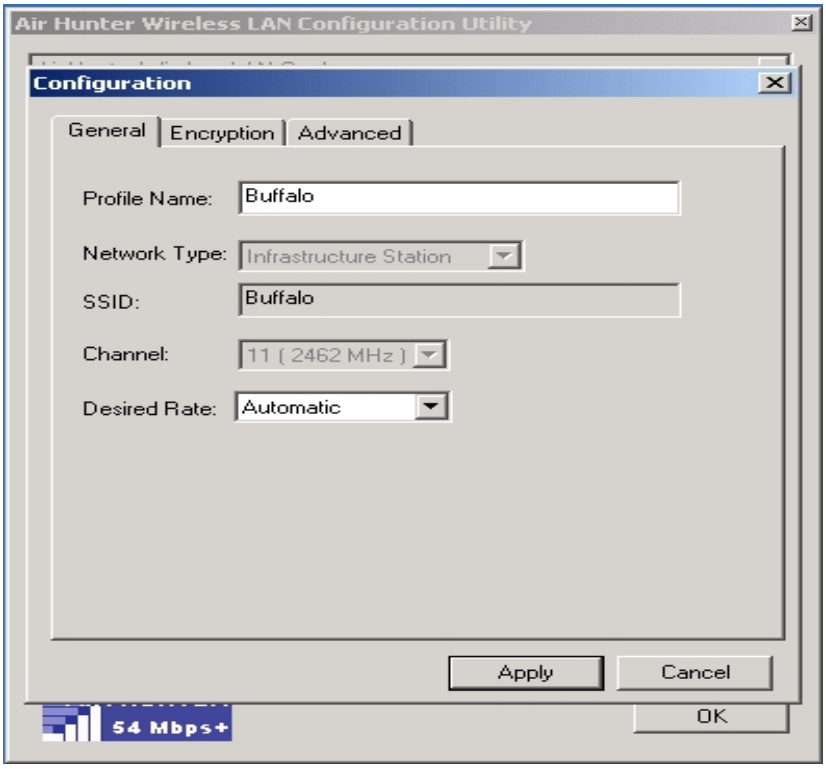
5. Encryption window: Air Hunter WLAN is able to provide 64/128/152Bit encryption.



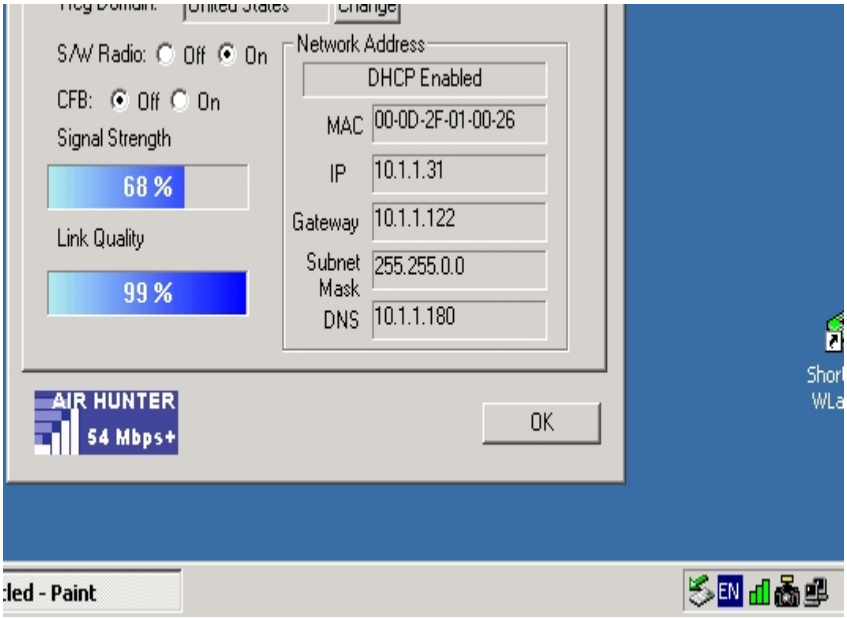
6. Advanced window: It provides you to adjust Power Saving, Preamble Type, Fragment Threshold, RTS Threshold, Receive Antenna.

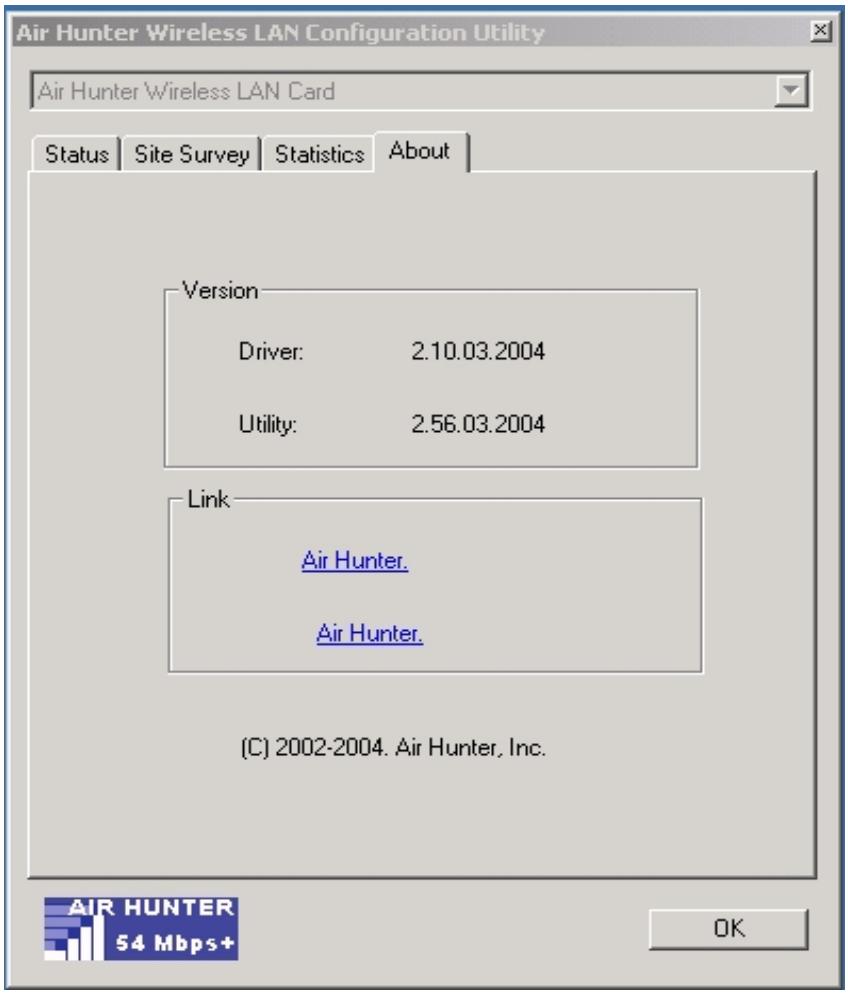


7. Profiles window: It provides customers to change settings and save them in the configuration file.



8. Info window: It shows the latest software version and MAC address.

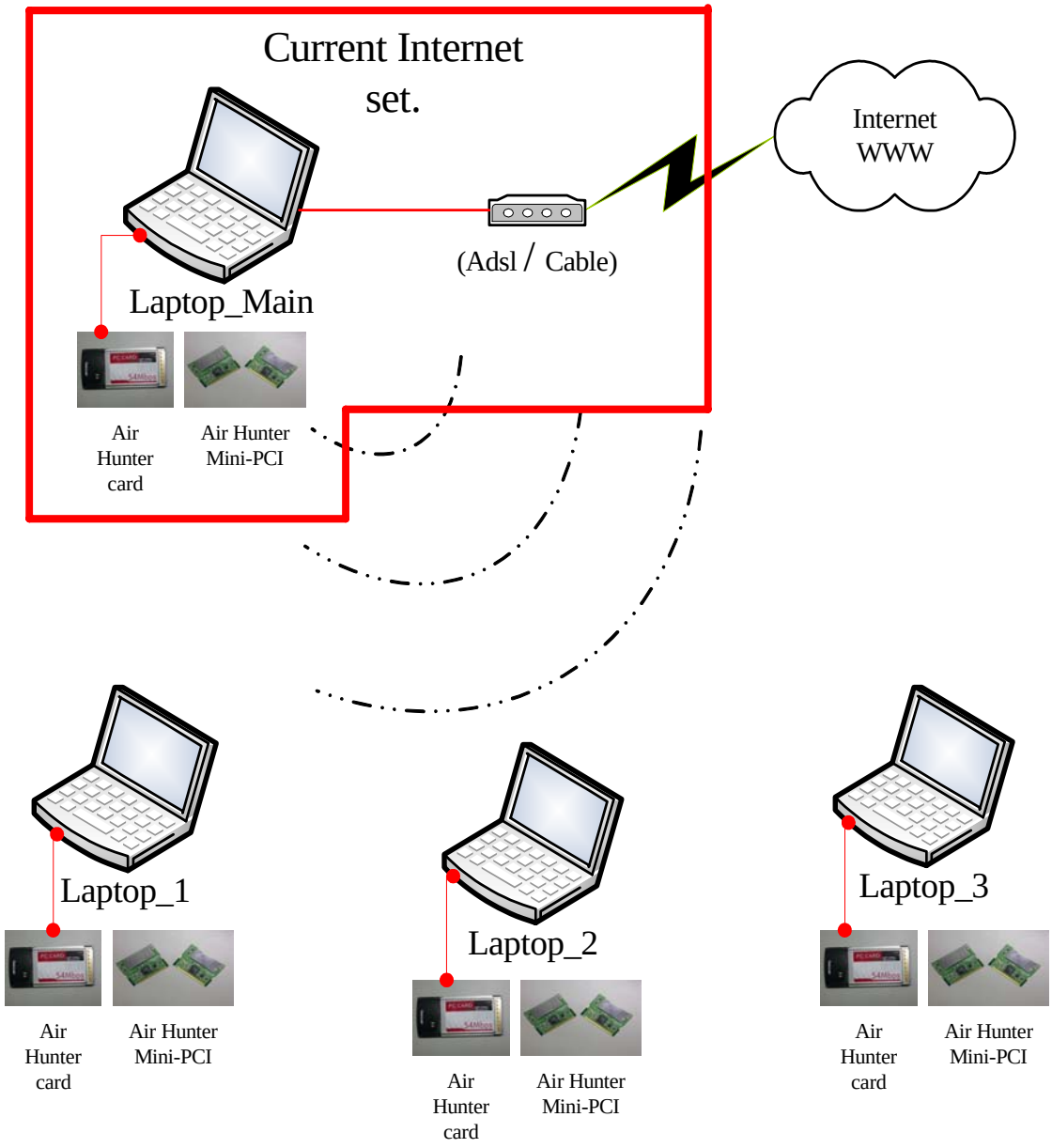



Air Hunter Wireless LAN Configuration Utility
Air Hunter Wireless LAN Card
Status
Site Survey
Statistics
About
Version
Driver: 2.10.03.2004
Utility: 2.56.03.2004
Link
Air Hunter.
Air Hunter.
(C) 2002-2004. Air Hunter, Inc.
AIR HUNTER
54 Mbps+
OK

3. Ad-Hoc (Peer to Peer) Mode Setup

❑ Application_1 ：Access the Internet without an AP

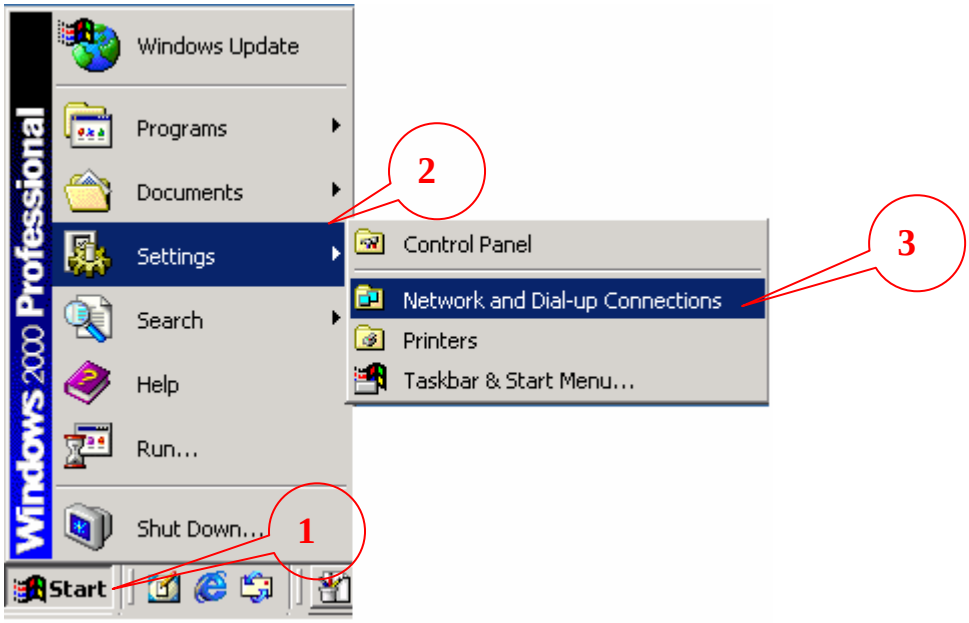
With existing Internet connection, another computer can access the Internet by using Peer to Peer mode of Air Hunter Wireless LAN Card.



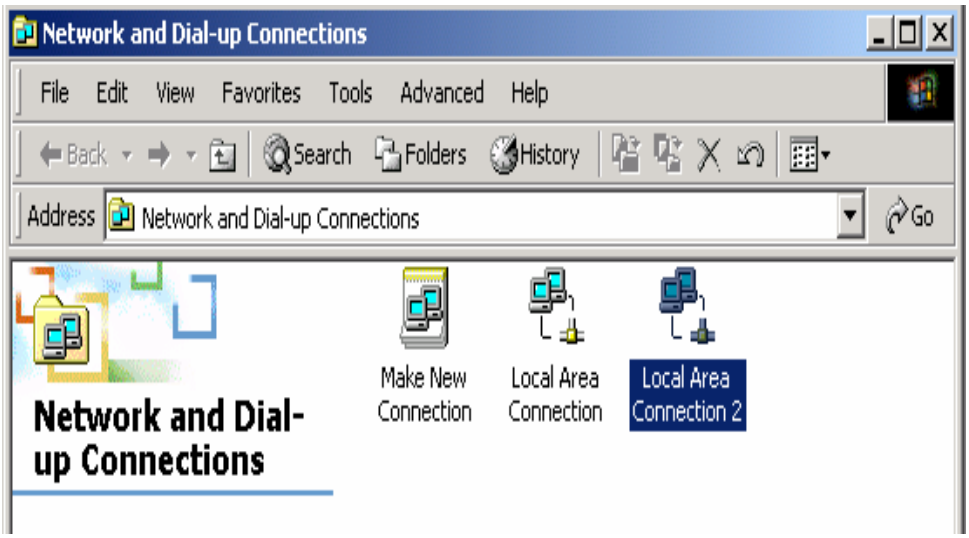
Setup Steps

1. Check the current environment and install WLAN cards
   A. Check whether “Laptop_Main” connects to the Internet.
   B. Install Air Hunter Wireless LAN Card in “Laptop_Main”, and “Laptop_2”….et.

2. “Laptop_Main” Setup
   A. Click “Start” (1) -> Settings (2) -> Click Network and Dial-up Connections (3)

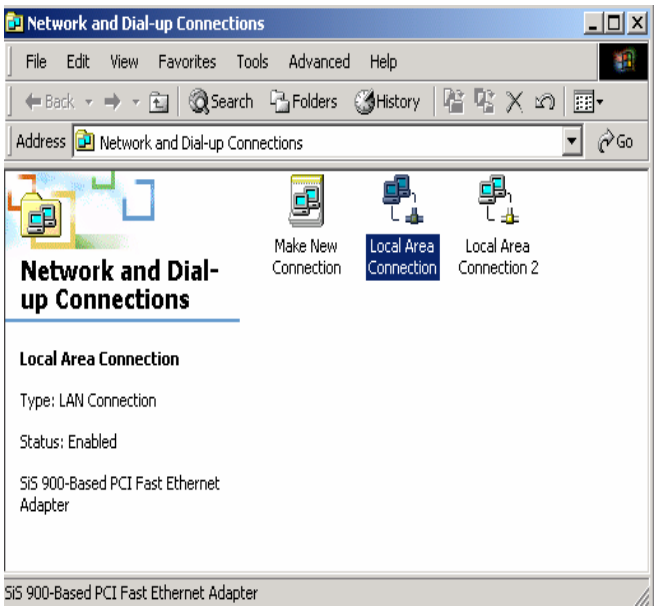


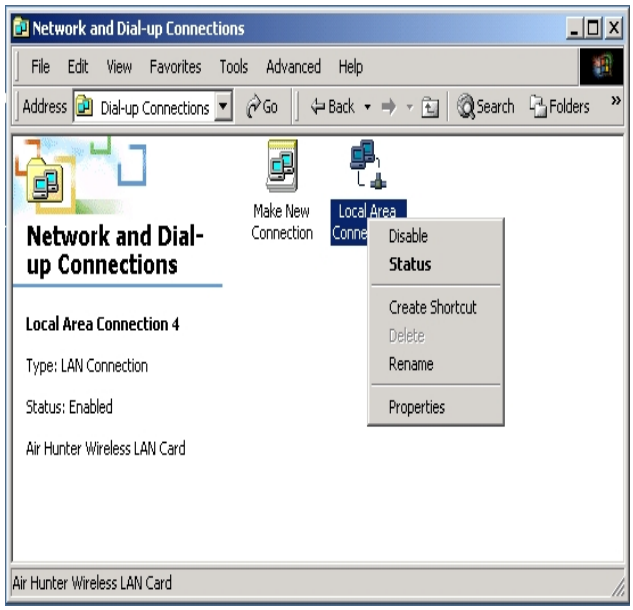
   B. Under Network and Dial-up Connections, there are two Connection icons; one is the original Ethernet card, another is the new Air Hunter WLAN card.



C. **Check the status of the Connection icon**. Click the Connection icon, and you can see the device name and status under Network Connections. The name of Air Hunter is **"Air Hunter Wireless LAN"**, and another one is the original connected device, "Ethernet card 1".

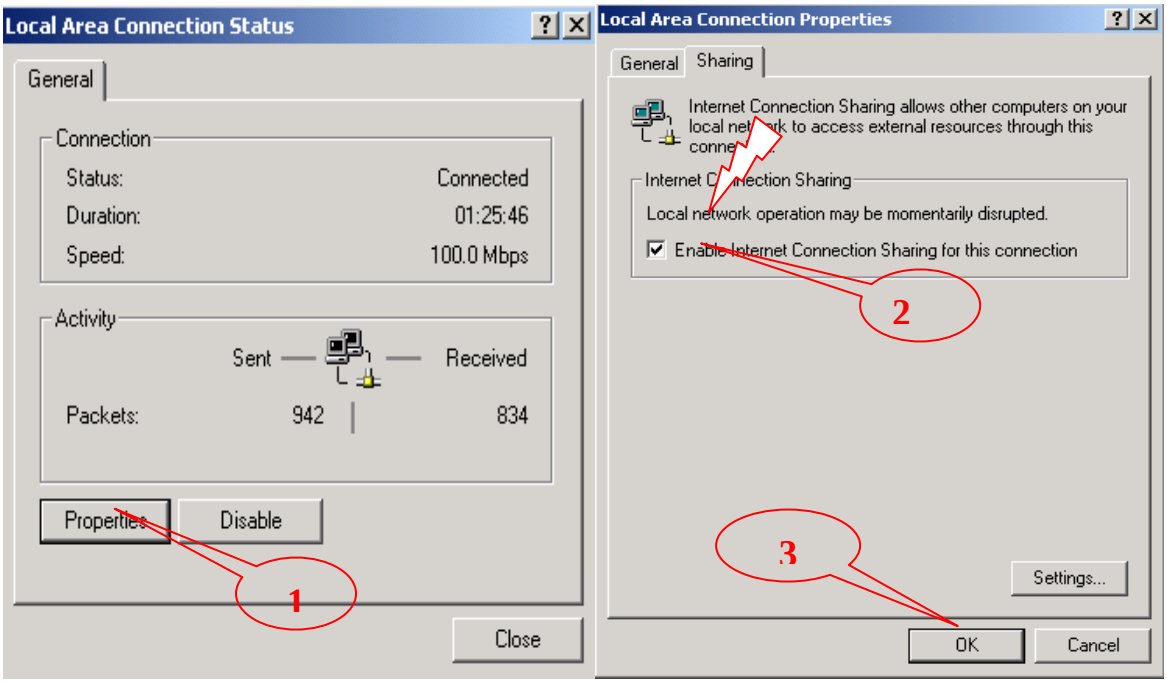
PS: (If you have more than 2 connecting devices, please un-plug the Ethernet line and the disappear Connection icon is the original connected device.)



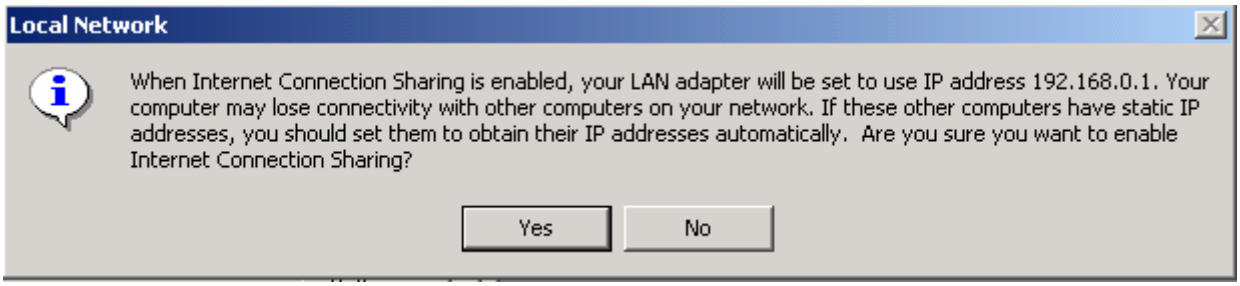


D. Double click the original connected device, and enter into the following window.

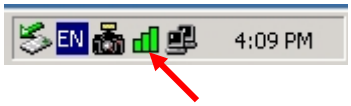
Click Properties (1) -> Sharing (2) -> Check "Enable Internet Connection Sharing for this connection" -> OK



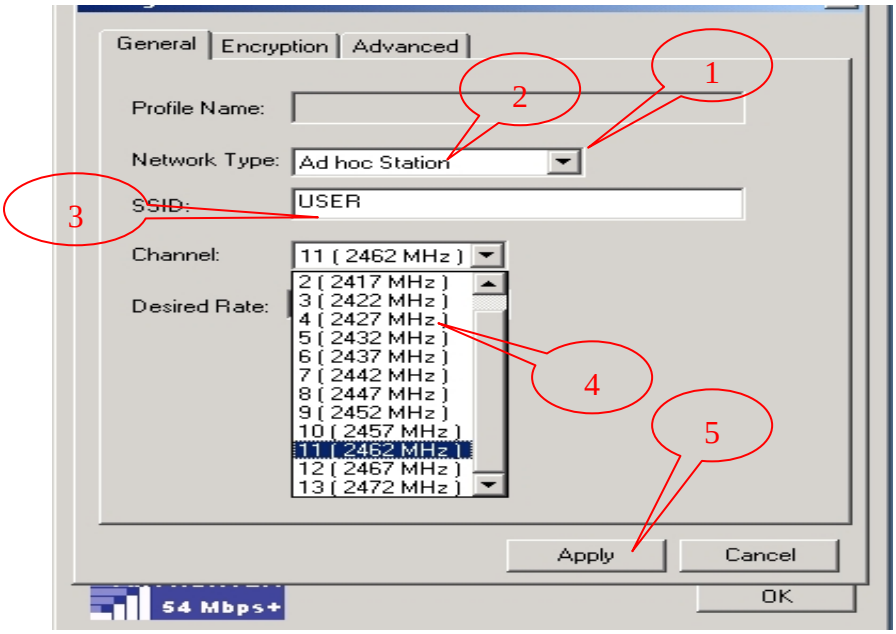
E. After finishing, the following window shows up. Please choose “Yes”, and the computer will set your IP address in 192.168.0.1.



F. Double click the Air Hunter icon in Icon Tray, and enter into the “Configuration windows”.



Configuration window:



Remarks:

The channel number shown in the above Configuration window exemplifies the application in the European market. Available channel number will depend on the driver shipped with the product. For application in USA, the available channel number up to 11 channels will be shown.

G. Change to the “Ad-Hoc Station” mode

I. Under “Configuration window”, click **“**Network Type**”** (1) to modify the Operation Mode to “Ad-hoc Station” mode (2).

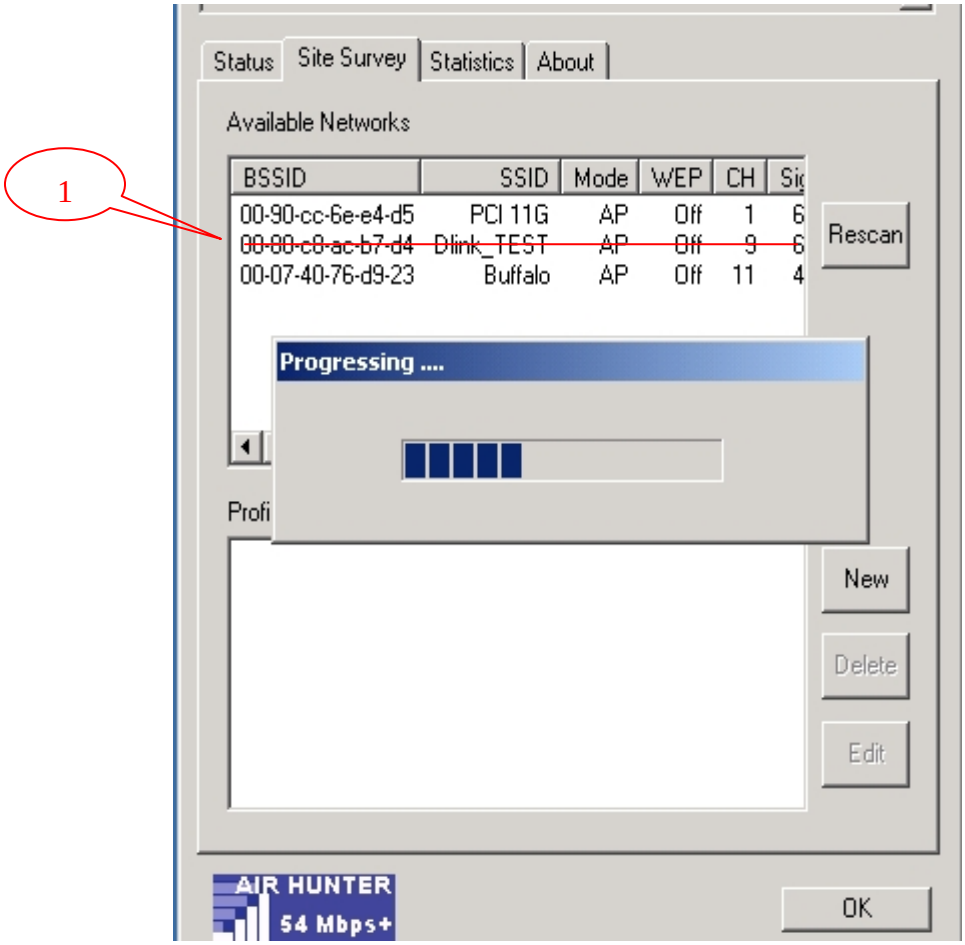
II. Change the SSID name to “USER” or “Dlink_TEST” or “Any” (3), and then click “Channel” setting to your want Channel (4), next click “Apply” to save this change(5), this WLAN card could be the Gateway for other WLAN devices.

III. Reset your computer.

"Laptop_2" Setup

A. Double click the Air Hunter icon in the Icon tray.

B. Under Site survey window, you will see all available connecting instruments. Double click the item (1) with SSID named "Dlink_TEST".

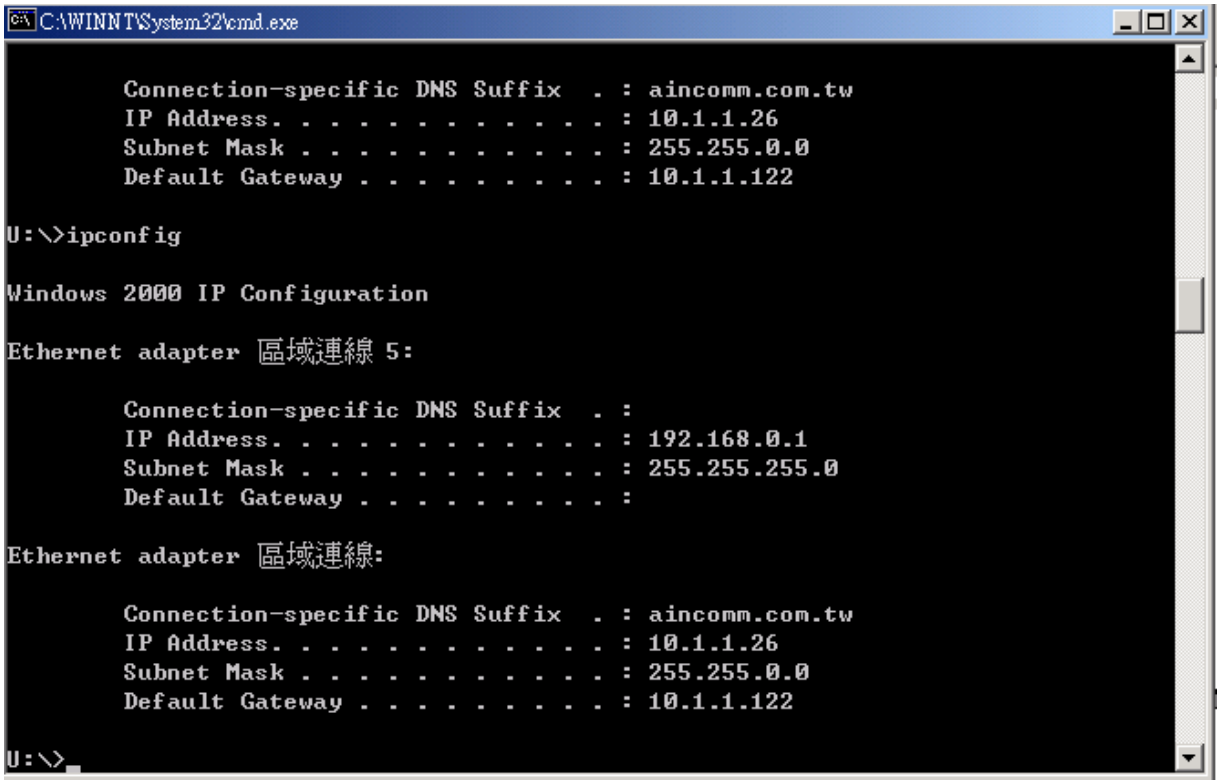


C. Rest Laptop_2.

Check whether the Setup is success

Computer 1:

1. Enter into DOS MODE, and type “IPCONFIG”.
   (Start -> Run -> Type cmd or command) (in Windows 98/me OS System)



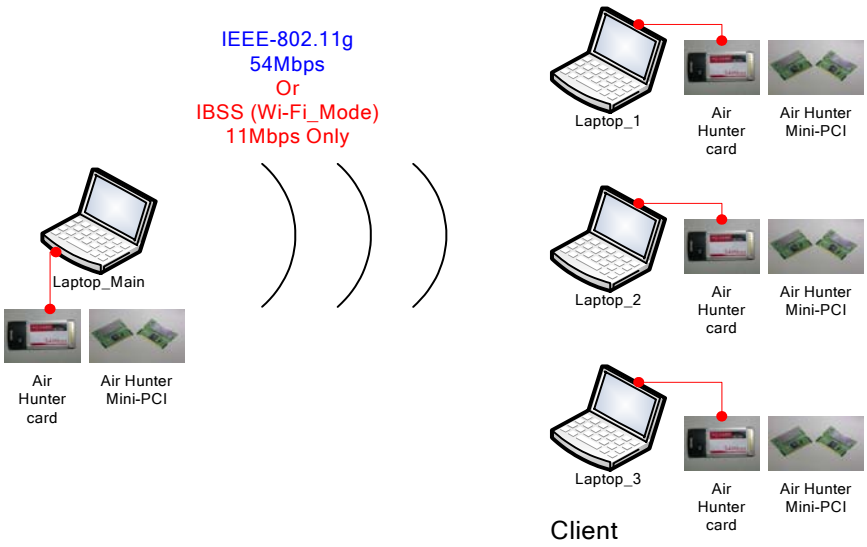
2. Check whether the IP address is 192.168.0.1, and the Subnet Mask is 255.255.255.0 (as shown above)

Laptop_2:

1. IP address does not need to setup. The DEFAULT GATEWAY is 192.168.0.1.
2. Please follow the steps of “Laptop_Main” to check whether the IP address is 192.168.0.1

❑ Application_2：Data sharing between computers

When user does not want to have Ethernet line or want to share resources (including data and printers), using WLAN is the lowest cost solution!



Setup Steps:

1. Check Laptop_Main & Laptop_1 already install Air Hunter WLAN Card。
2. In Laptop_Main:
   - ✓ Double click the Air Hunter icon in Icon Tray, and enter into the “Configuration” Button.
   - ✓ Under “Configuration window”, click **“Network Type”** to modify the Operation Mode to “Ad-hoc Station” mode.
   - ✓ Change the SSID name to “Dlink_TEST” or other Name, change to you want works Channel and then click “Apply” to save this change. After setting, this WLAN card could be the Gateway for other WLAN devices. Please reset the Laptop_Main.
3. In Laptop_1:
   - ✓ Double click the Air Hunter icon in the Icon tray.
   - ✓ Under Site survey window, you will see all available connecting instruments. Double click the item with SSID named “Dlink_TEST”.
   - ✓ Rest Laptop_1.
4. After setting, Laptop_Main are able to share data and resources with each other.
   (Data sharing method please refer to related OS system operating manual)

PS: *If you log in a Domain in Laptop_Main, please DO NOT long in that Domain when using Laptop_1. However, if you need to use the resources in “Laptop_Main” from “Laptop_1”, you need to know the password for log in that Domain in “Laptop_Main”.*

Appendix

1. *Operation Mode*:
   Air Hunter has two modes, '**Infrastructure**' and' **Ad-Hoc**'. The default setting is "Infrastructure". (Please refer to the Product Introduction)
2. *Channel*:
   The channel setting should follow the regulation of the local government. For '**Infrastructure**' mode, the channel does not need to be set. It will automatically change to the same channel as AP's. In 'Ad-Hoc' mode, users can change the channel to match the connected computer.
3. *SSID*:
   When STA (WLAN card) is in Ad-Hoc mode, all connecting STA should have the same SSID. When STA is in Infrastructure mode, the SSID will change to the same as AP's SSID.
   Important: Capital and non-capital are different words in SSID setting.
4. *Tx Rate*:
   It determines STA's transmitting rate. There are 5 rated to choose, 1, 2, 5.5, 11Mbps @ 802.11b, or 6, 9, 12, 18, 24, 36, 48, 54Mbps @802.11g and Auto. The default setting is "Auto All".
5. *Int. Roaming*: Its default setting is '**Disable**', and does not need to be adjusted.
6. *Radio*:
   The default setting is '**ON**'. It means to stop the STA's RF function. If your WLAN card is embedded, you can stop its function by turning the Radio "ON".
7. *Encryption*:
   Air Hunter provides 64/128/152bits encryption. Choose "disable", if you do not need this function. When using Encryption, there are two configurations to setting:
   - ■ Choose from encryption key 1~4 to encrypt.
     - ✓ For 64bits encryption:
       Using letters & numbers: 5 digits ("a-z","A-Z","0-9")
       Hexadecimal: 10 digits ("a-f","A-F","0-9")
     - ✓ For 128bits encryption:
       Using letters & numbers: 13 digits ("a-z","A-Z","0-9")
       Hexadecimal: 26 digits ("a-f","A-F","0-9")
     - ✓ For 152bits encryption:
       Using letters & numbers: 13 digits ("a-z","A-Z","0-9")
       Hexadecimal: 26 digits ("a-f","A-F","0-9")
   - ■ Choose the Authentication type from open system, share key, and auto type. The default setting is 'None'.

8. *PREAMBLE*:

   This function determines the PREAMBLE TYPE that physical layer's PLCP will use. There are three modes to choose: LONG, SHORT, and AUTO. The default setting is AUTO, and the system will automatically choose the optimized mode.

9. *Fragmentation Threshold*:

   This configuration determines whether needs to fragment the Frame during transmit. When fragment, if the transmit fell, computer only resent the fell frame instead of the whole file again. When the frequency band used is not clear, i.e. The S/N ratio is low, transmit is easier to fell. Under this situation, fragmentation is a good way to increase efficiency.

10. *RTS/CTS*:

    When frame smaller than the RTS Threshold value, the STA will automatically transmit the frame if the channel is available. If the channel is used, STA will follow the 802.11g/b regulation that would ask the receiving device whether to send the frame. This will take more time for devices to check with each other, but it also prevents the loss of frames.

11. *Power Saving*:

    Determine whether to use power saving mode. The default setting is '**Disable**'.

4. Technical support

The software version of Air Hunter is under the info window of “software and utility”. Users can get the latest software version from the reseller or Card Maker website at http://www.aincomm.com If you have any further problem, please contact with us.

AIN COMM. TECH. CO., LTD.
www.aincomm.com.tw
service@aincomm.com.tw
Tel: +886-3-493-8448
Fax: +886-3-493-8804
4F, No.76, Sec. 2, Min-Tzu Rd., JungLi, Taoyuan, Taiwan 320