IEEE 802.11b
Wireless LAN USB Dongle

User's Guide

Version 5.0

REGULATION INFORMATION

The WLAN USB Dongle must be installed and used in strict accordance with the manufacturer's instructions. This device complies with the following radio frequency and safety standards.

FCC (Federal Communications Commission)

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions:
1. This device may not cause harmful interference.
2. This device must accept any interference that may cause undesired operation.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
The 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 instruction, may cause harmful interference to radio communication. However, there is no grantee that interference will not occur in a particular installation. If this equipment dose 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.

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.

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.

Warning: When installing the WLAN USB Dongle, the ferrite shall be placed on the USB cable for compliance.

R&TTE Directive

This device complies with the specifications listed below:

- ETS 301-489 -1&-17 General EMC requirements for Radio equipment.
- ETS 300-328 Technical requirements for Radio equipment.
- EN60950 Safety Requirements for Radio equipment

Table of Contents

1 Introduction 5
2 Wireless LAN basics 6
3 Installation 7
3.1 Install Wireless LAN USB Dongle under Windows 98 9
3.2 Install Wireless LAN USB Dongle under Windows ME 18
3.3 Install Wireless LAN USB Dongle under Windows 2000 23
3.4 Install Wireless LAN USB Dongle under Windows XP 30
4 Configuration Utility 42
Configuration Utility under Windows 98/ME/2K/XP 42
5 Technical Specifications of WLAN USB Dongle 49
6 Troubleshooting 50
7 Glossary 52

1 Introduction

Thank you for purchasing Wireless Local Area Network (WLAN) USB Dongle. You are about to install a networking system that is not only fast and powerful, but also easy to set up and simple to maintain. In a short time you and those in your network will be able to share a local printer and files, access the Internet, and roam about the office wire-freely.

Using radio frequency (RF) technology, WLAN devices transmit and receive data over the air, minimizing the need for wired connections. Thus, WLANs combine data connectivity with user mobility, and, through simplified configuration, enable movable LANs.

This wireless networking solution has been designed for both large and small businesses, and it is scalable so that you can easily add more users and new network features as your business grows.

This user's guide will assist you in installing the WLAN USB Dongle.

2 Wireless LAN basics

Wireless LAN network defined by IEEE 802.11b standard committee could be configured as:

- **Peer-to-Peer wireless LAN,**

or

- **Access Point wireless LAN.**

Peer-to-Peer network is a group of notebooks with wireless LAN USB Dongles, called a BSS (Basic Service Set). These notebooks use their wireless LAN USB Dongles to communicate with each other directly.

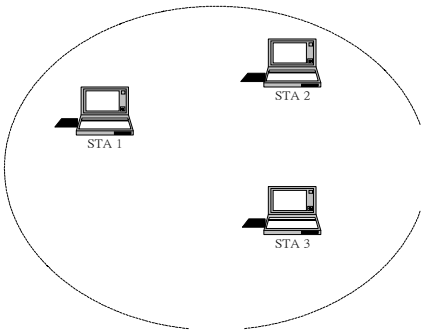


Figure 2-1 Peer-to- Peer wireless network

The most obvious differentiation between **Access Point** wireless network and **Peer-to-Peer** wireless network is that the notebooks in **Access Point** wireless network can make use of the resource in the Internet through **Access Point**.

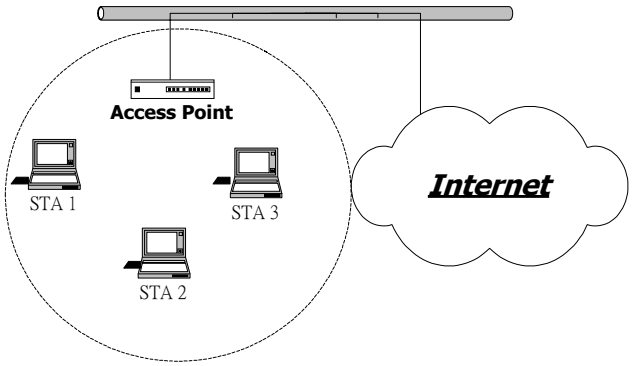


Figure 2-2 Access Point wireless network

To set up your notebook's network as the type of "**Peer-to-Peer**" or "**Access Point**" wireless network depends completely on your requirement. Generally, if your network environment has an **Access Point**, it's recommend that you set it as "**Access Point**" mode to connect to the **Internet**.

3 Installation

This section describes the procedures for installing the Wireless LAN USB Dongle under Windows 98, ME, 2000, and XP operating systems.

Before You Start

Before installation, please check your system in advance and ensure it meets the minimum requirements as described below.

- Processor: Intel Celeron / Pentium II /Pentium III / Pentium IV; AMD Duron / Athlon
- Operating System: Microsoft Windows 98 / ME / 2000 / XP/ Linux
- System memory: 32MB at least
- Hard Drive Free Space: 5MB

Note:To prevent potential problems during installation, please use the auto-run installation tool on the CD to finish the driver installation before you plug the WLAN USB Dongle into the computer.

To use the WLAN USB Dongle with a computing device, the device must be equipped with an available USB port. All drivers and supporting software for the WLAN USB Dongle must be installed and configured.

Ask your system administrator for the following information, which you may need during driver installation:

- Your Wireless LAN SSID.
- Your computer's unique client name and workgroup name
- For your network account, your user name and password.
- Your IP address, gateway address, and subnet mask, if you're not using a DHCP server.

Every computer on a network is identified by a unique network address. There are two methods to assign network addresses to computers on a TCP/IP network:

- Static IP addressing
- Dynamic IP addressing (DHCP)

In networks with **static IP** addressing, the network administrator manually assigns an IP address to each computer. Once a static IP address is assigned, a computer uses the same IP address every time it reboots and logs on to the network. You may manually change the IP address in the ***Network Properties dialog box***. Networks using static IP addresses are easy to set up and do not require additional network

management software.
In networks with **dynamic IP** addressing, a DHCP server in the network dynamically assigns IP addresses to all clients every time they log on to the network. Network using dynamic IP addresses require setting up and running a DHCP Server.

Installation Menu

After you insert the **Installation/Documentation CD**, the installation menu will appear.
Note: If the auto-run installation menu window doesn't appear automatically, you can utilize the Windows Explorer to browse CD content and run install.exe manually.

You can find four buttons in this menu:

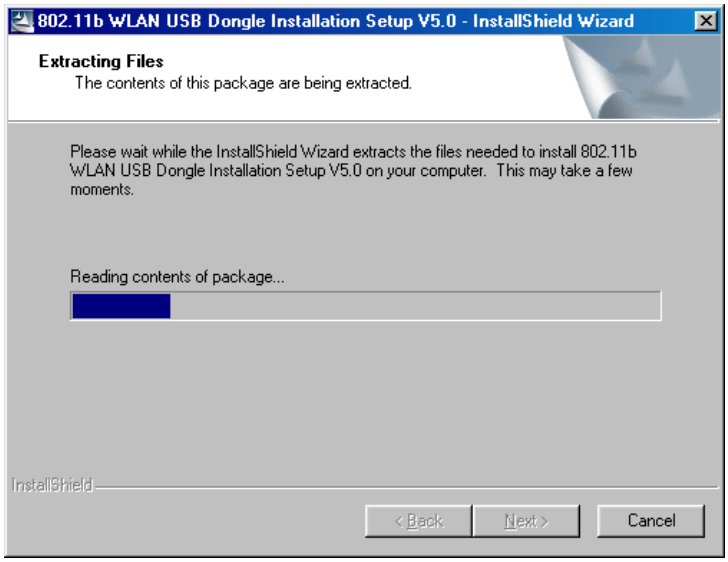
1. **Win2000 Driver** : The auto-run installation application will detect the Operating System you are using automatically. Please select this button to install the USB Driver and follow the instructions as the next sections.
2. **CD Browser** : Select this button to browse the contents of this **Installation/Documentation CD.**
3. **User's Guide** : To read the user's guide (in pdf format).If you don't have Acrobat program , please download it at first or you can press this button to link the website of the Acrobat to download it.
4. **Exit** : To exit the auto-run application.

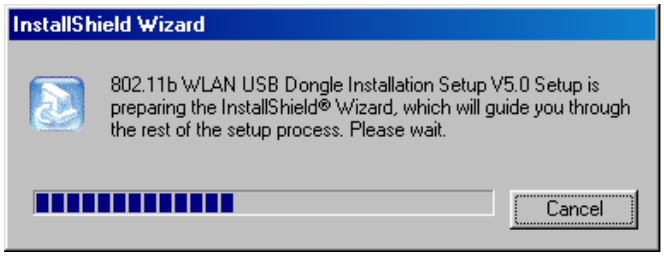
When you move the mouse on the buttons or pictures of Intersil or Prism, ***the auto-run installation menu window*** will show some information to help you getting some data about these icons. If you'd like to use the Linux operating system, please refer to the readme.txt file in the Linux driver package, which is in the **Linux** sub-folder under the **Driver** folder in the **Installation/Documentation CD.**

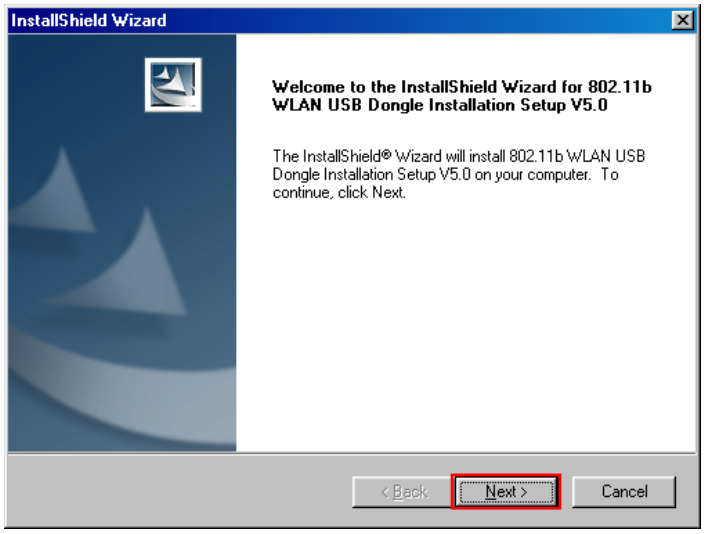
3.1 Install Wireless LAN USB Dongle under Windows 98

Step 1. Insert the **Installation/Documentation CD**, and the installation menu will appear. If the auto-run installation menu window doesn't appear automatically, you can utilize the Windows Explorer to browse CD content and run **install.exe** manually.

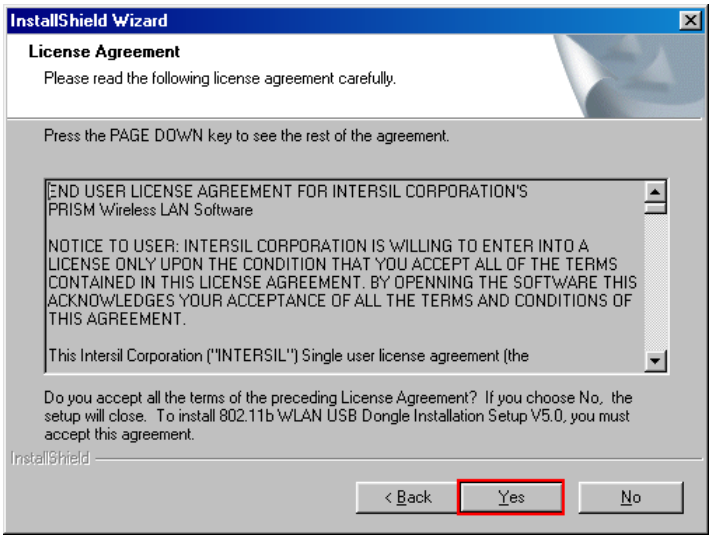
You can choose **Win98 Driver** to install the driver. It opens the **InstallShield Wizard** dialog box as shown below. Click **NEXT** to continue.



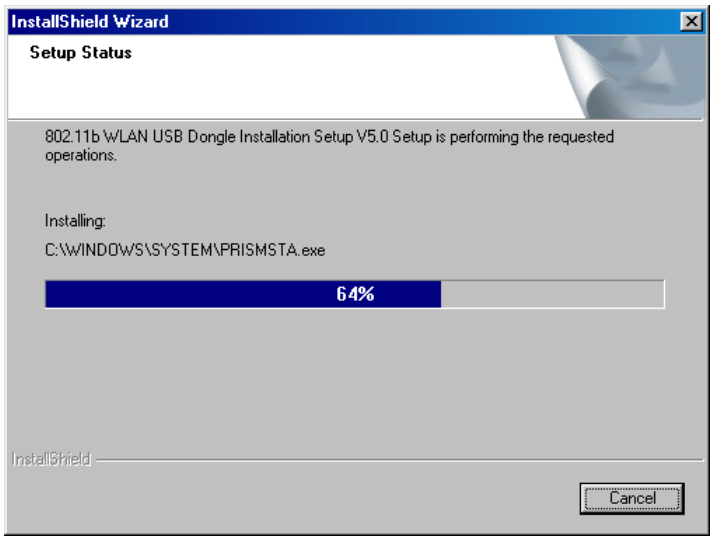




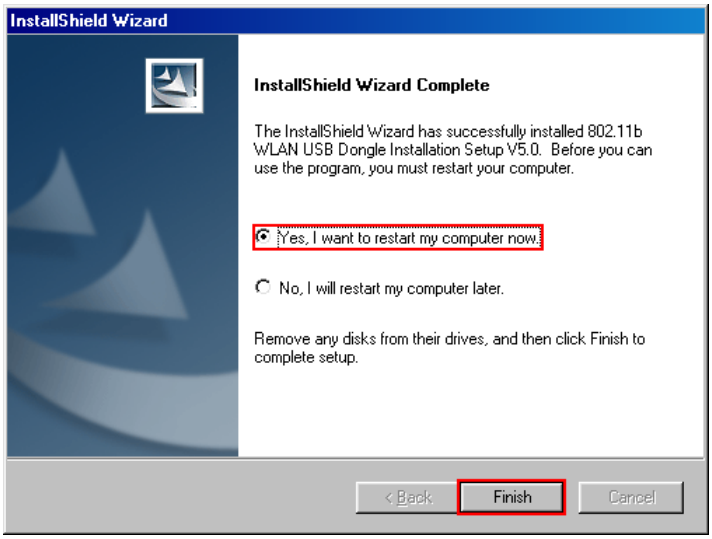
Step 2. Software License Agreement, click **Yes** to accept.



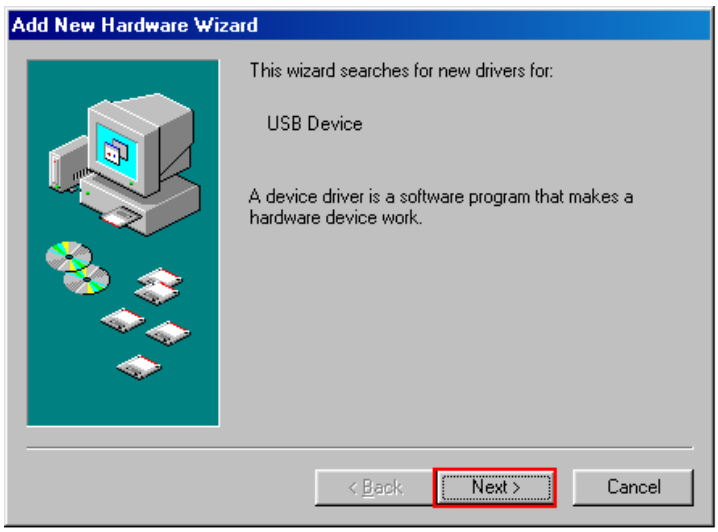
Step 3. Start copying files.



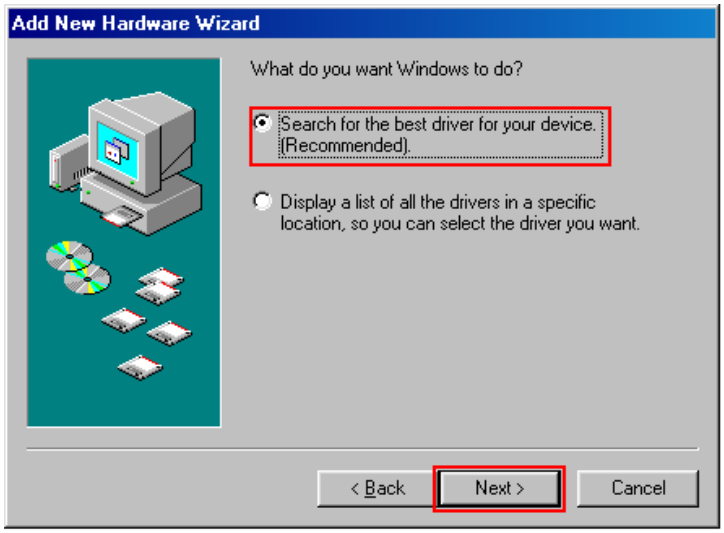
Step 4. Click **Finish** to complete Setup and then the PC will restart.



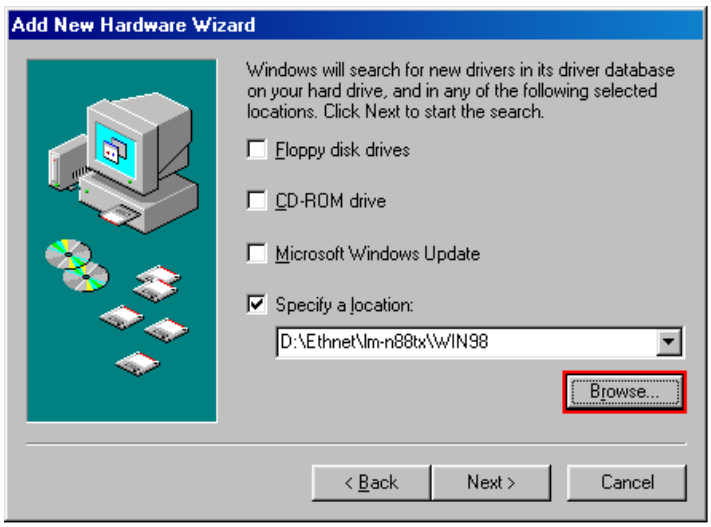
Step 5. After the computer restarts, just plug the USB cable into the USB port of your PC. **Windows 98** will automatically detect the USB Dongle, briefly opens a **New Hardware Found** window, and starts collecting information for a driver information database. When **Windows 98** is ready to configure the new hardware, it opens the **Add New Hardware Wizard** dialog box as shown below. Click **Next** to continue.

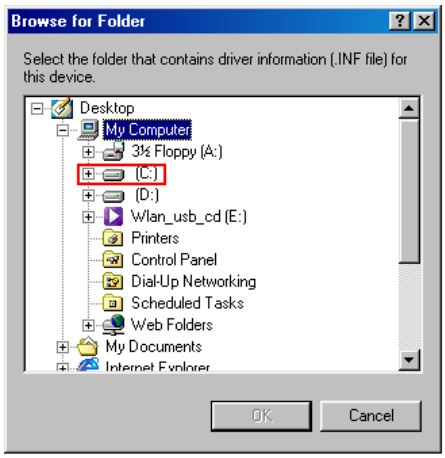


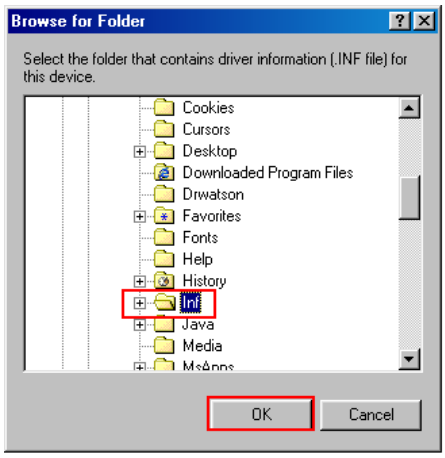
Step6. A dialog box appears asking what do you want Windows to do. Select **Search for the best driver for your device (Recommended)** and click **Next**.

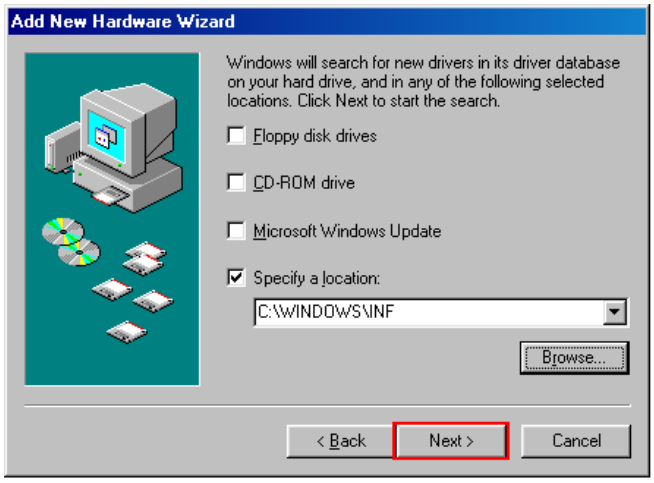


Step 7. Choose the **Specify a location**. Press the **Browse..** button. Then select the **C:→WINDOWS→INF**. Then press **OK** button.

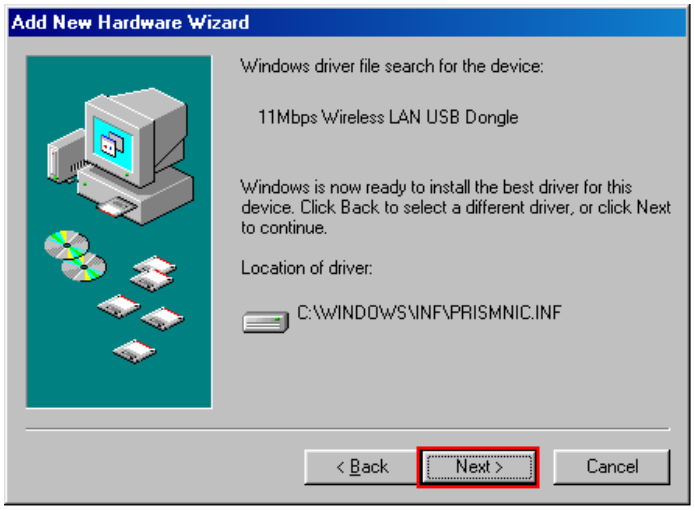

Add New Hardware Wizard
Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.
Floppy disk drives
CD-ROM drive
Microsoft Windows Update
Specify a location:
D:\Ethnet\lm-n88tx\WIN98
Browse...
< Back
Next >
Cancel


Browse for Folder
Select the folder that contains driver information (.INF file) for this device.
Desktop
My Computer
3½ Floppy (A:)
(C:)
(D:)
Wlan_usb_cd (E:)
Printers
Control Panel
Dial-Up Networking
Scheduled Tasks
Web Folders
My Documents
Internet Explorer
OK
Cancel

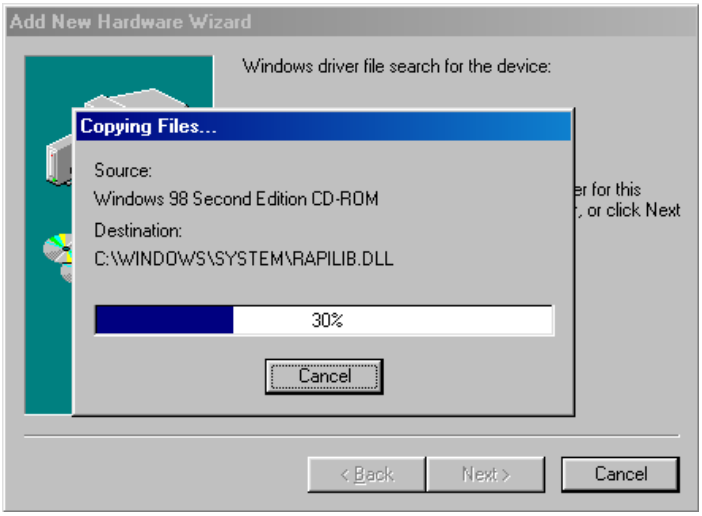

Browse for Folder
Select the folder that contains driver information (.INF file) for this device.
Cookies
Cursors
Desktop
Downloaded Program Files
Drwatson
Favorites
Fonts
Help
History
Inf
Java
Media
OK
Cancel



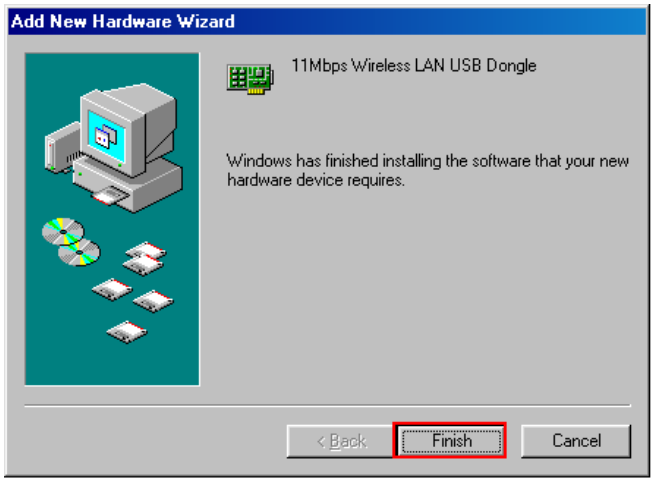
Step 8. After the hardware wizard finds the installation files in the windows, it displays the search results:" Windows driver file search for the device: "11Mbps Wireless LAN USB Dongle". Click **Next** to copy the required files.



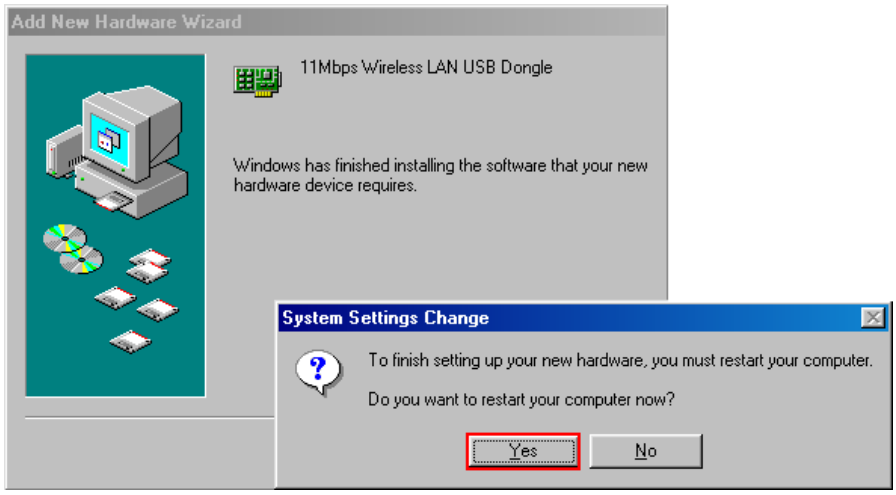
Step 9. Starting Copy.



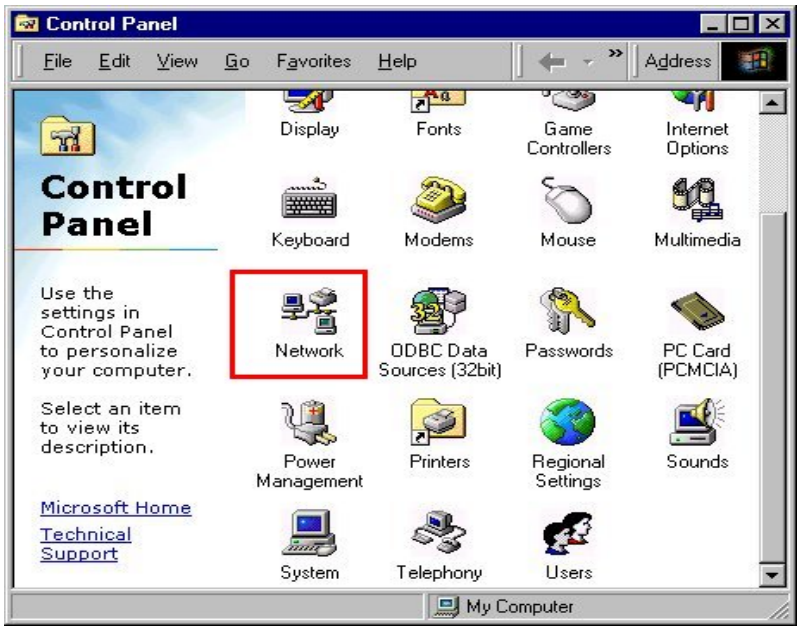
Step 10. The **Add New Hardware Wizard** window appears stating that Windows has finished installing the software that your new hardware device requires. Click **Finish**.



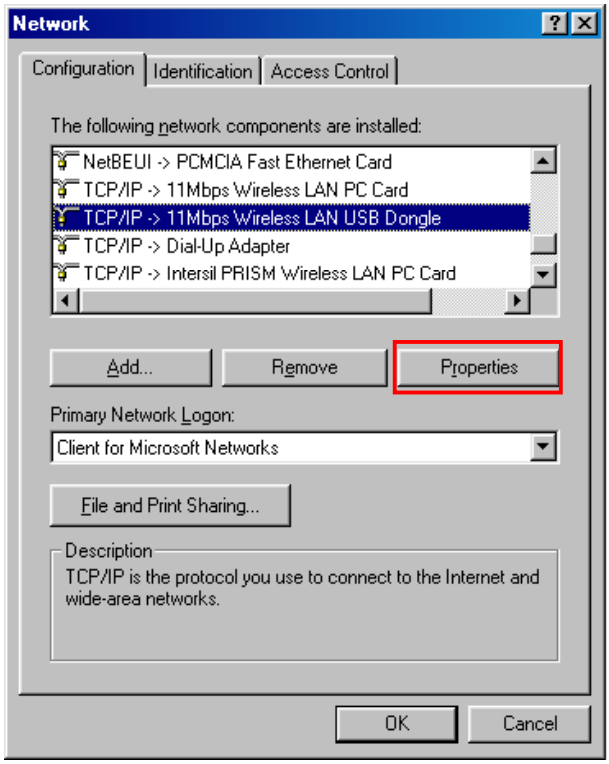
Step 11. The System Settings Change window states:" To finish setting up your new hardware, you must restart your computer. Do you want to restart your computer now?" Remove the software CD and click **Yes** to restart the computer.



Step 12. After the computer restarts, double click the **My Computer** icon on your desktop. In My Computer window, double click the **Control Panel** icon. In Control Panel window, double click the **Network** icon.

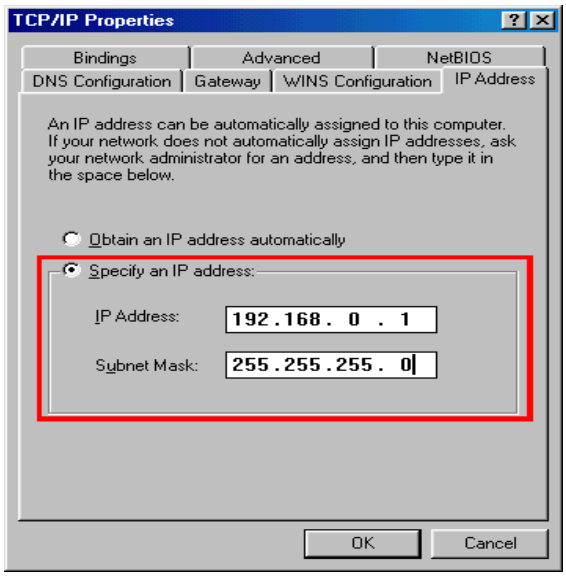


Step 13. Select the **TCP/IP->11Mbps Wireless LAN USB Dongle** for setting the IP address. Click **Properties**.

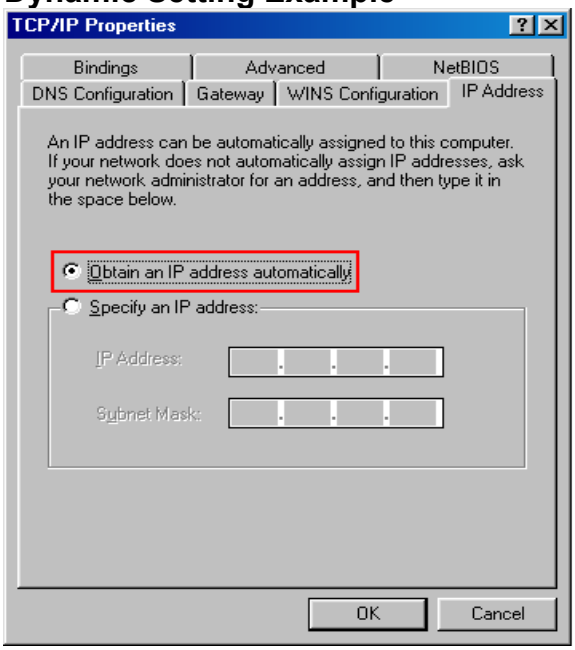


Step 14. Set **IP address** and **Subnet Mask**. You can select either **Static** or **Dynamic** setting. If you use the static IP setup, please enter the IP address and Subnet mask. You should ask your network administrator for an address, and then type it into the blank boxes as below. Then click **OK** to return to Step 13 ***Network*** dialog box. Then click **OK** button to set the value.

Static Setting Example



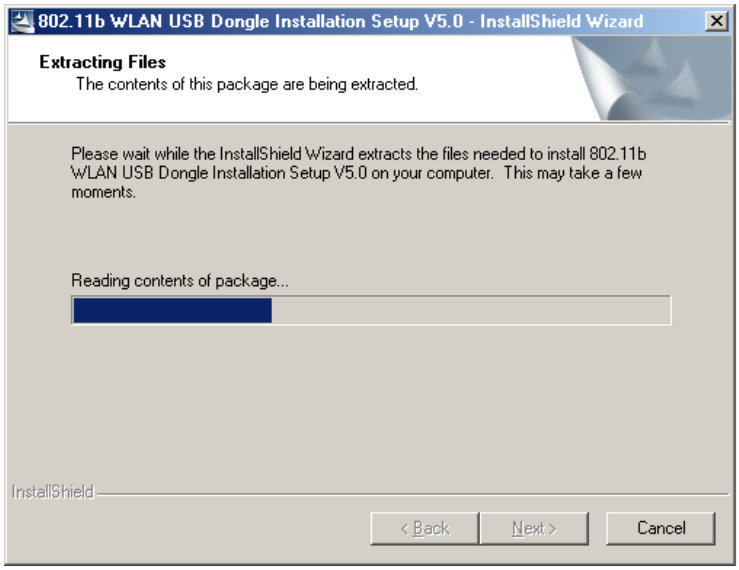
Dynamic Setting Example

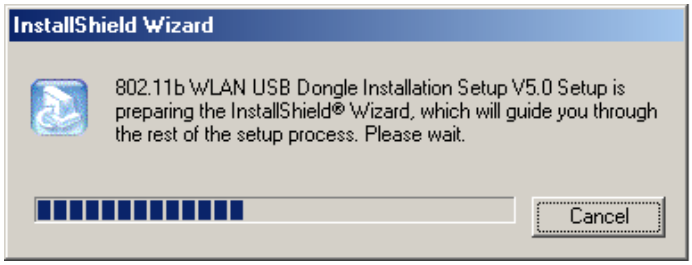


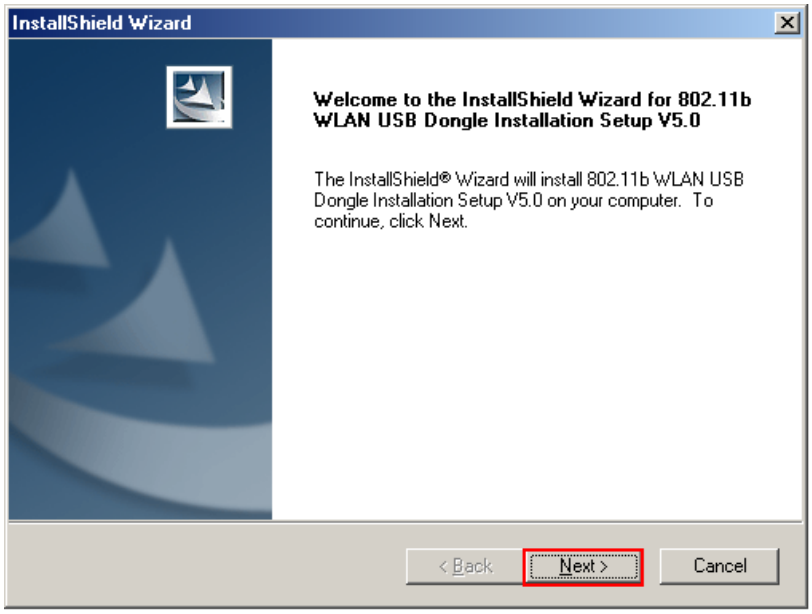
3.2 Install Wireless LAN USB Dongle under Windows ME

Step 1. Insert the **Installation/Documentation CD**, and the installation menu will appear. If the auto-run installation menu window doesn't appear automatically, you can utilize the Windows Explorer to browse CD content and run **install.exe** manually.

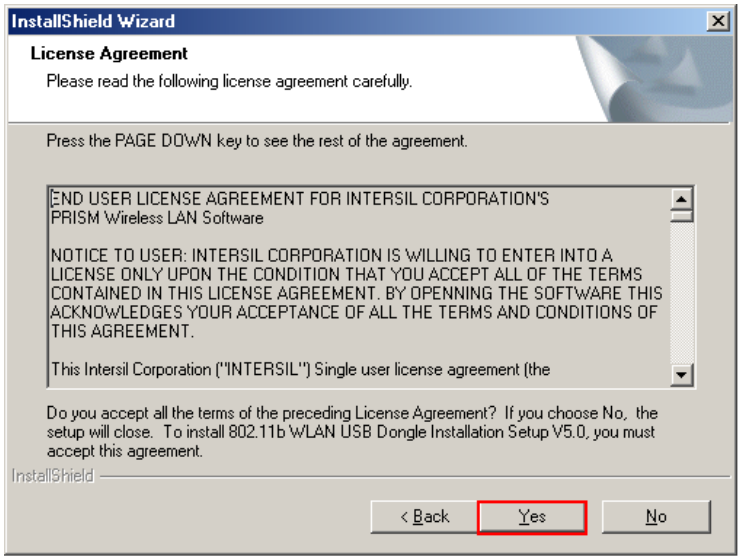
You can choose **WinME Driver** to install the driver. It opens the **InstallShield Wizard** dialog box as shown below. Click **NEXT** to continue.



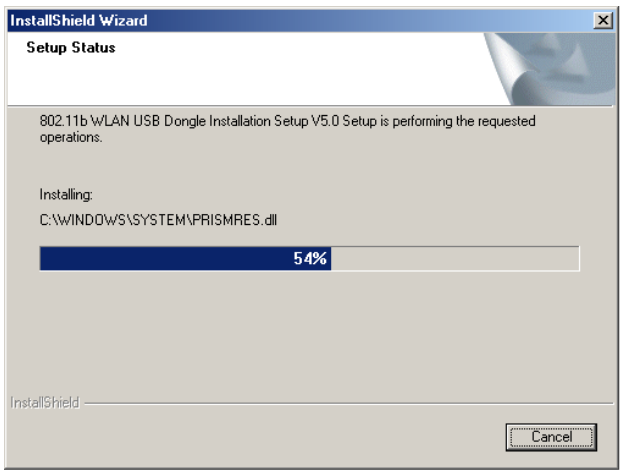




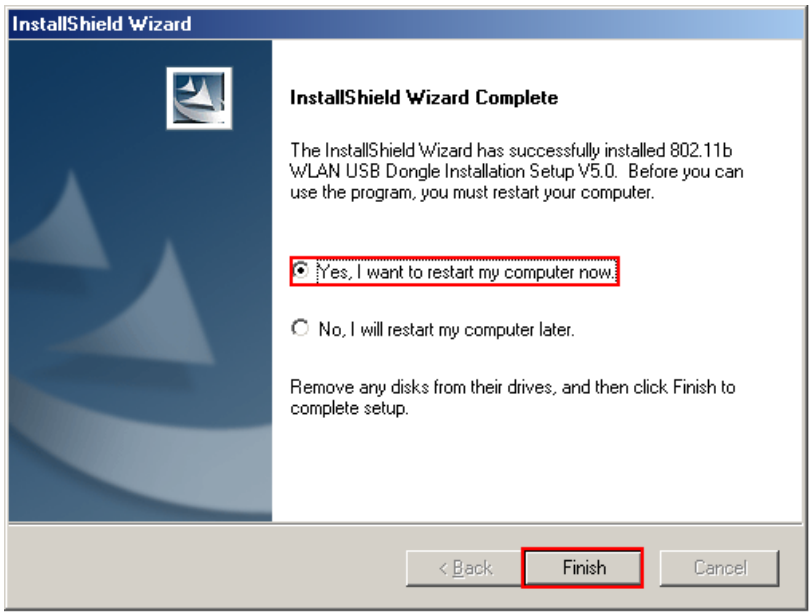
Step 2. Software License Agreement, click **Yes** to accept.



Setup Status window will pop up.



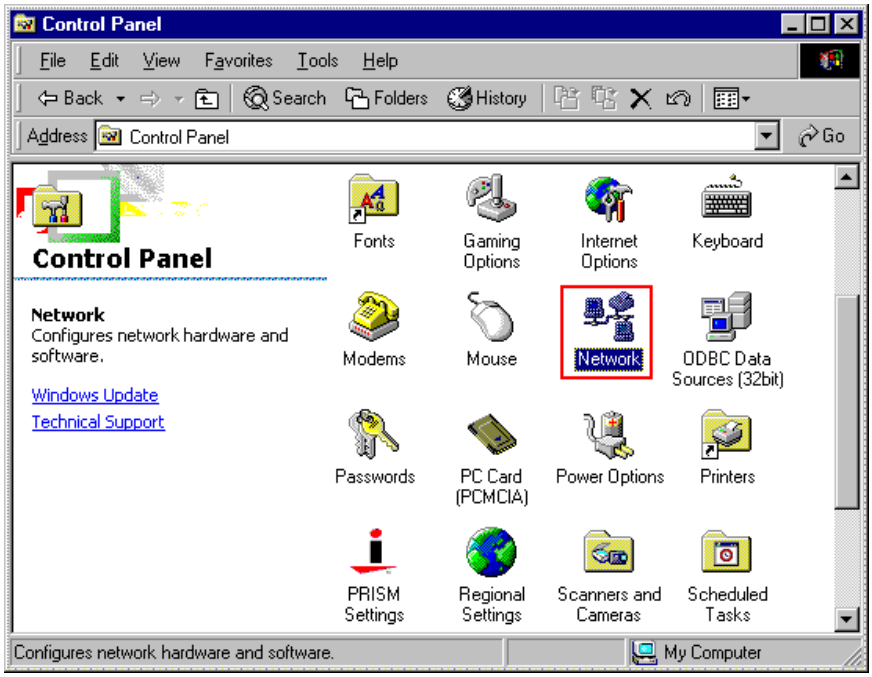
Step 3. Click **Finish** to complete Setup.



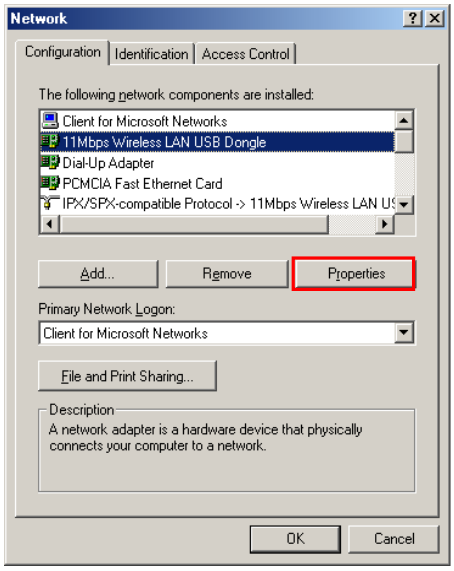
Step 4. After the computer restarts, just plug the USB cable into the USB port of your PC. **Windows ME** will automatically detect the USB Dongle, and opens a New Hardware Found window.

Then select **YES** to restart the computer.

Step 5. After the computer restarts, double click the **My Computer** icon on your desktop. In My Computer window, double click the **Control Panel** icon. In Control Panel window, double click the **Network** icon.

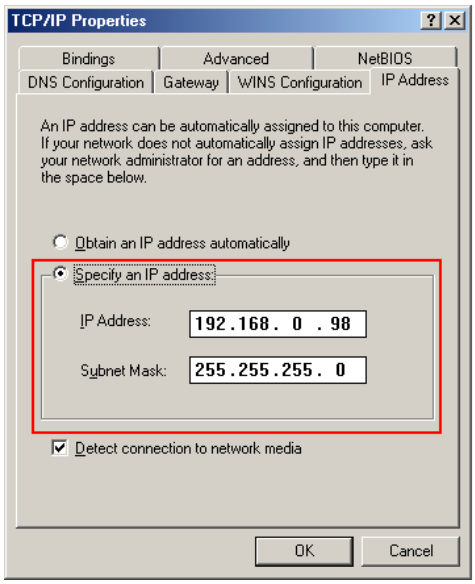


Step 6. Select the **TCP/IP->11Mbps Wireless USB Dongle** for setting the IP address. Click **Properties**.

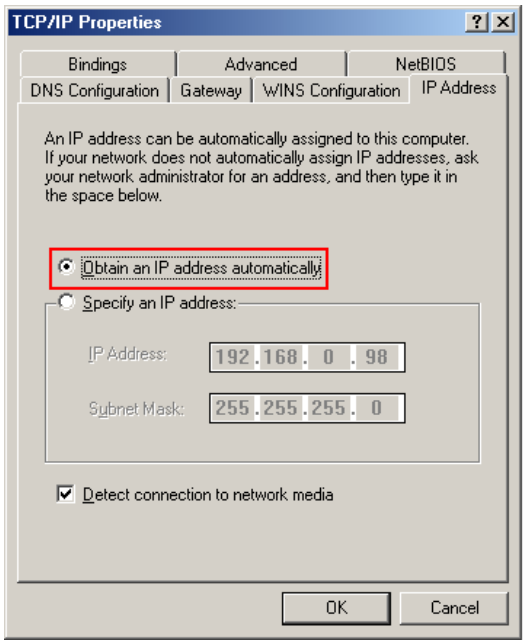


Step 7. Set **IP address** and **Subnet Mask**. You can select either **Static** or **Dynamic** setting. If you use the static IP setup then please enter the IP address and Subnet masking. You should ask your network administrator for an address, and then type it into the blank boxes as below. Then click **OK** to return to Step 6 ***Network*** dialog box. Then click **OK** button to set the value.

Static Setting Example



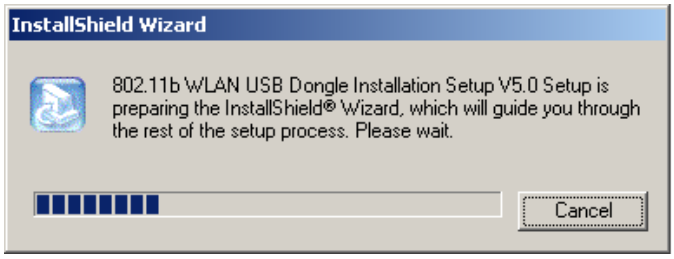
Dynamic Setting Example

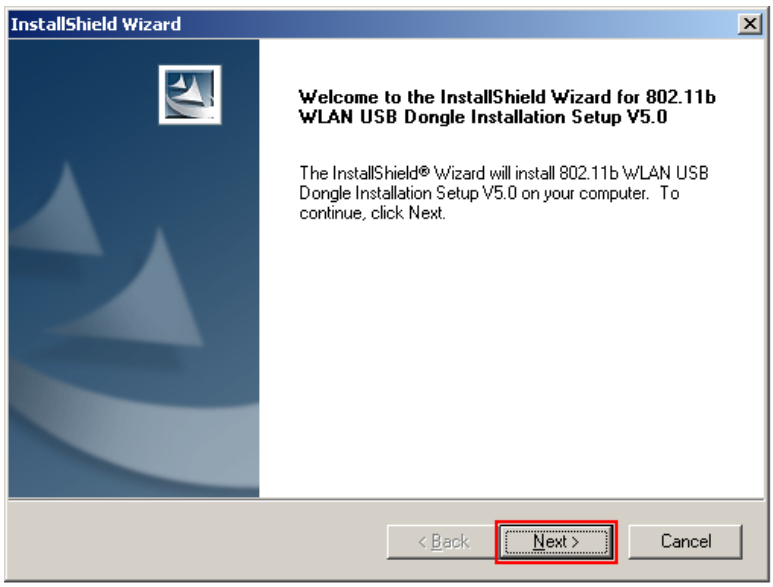


3.3 Install Wireless LAN USB Dongle under Windows 2000

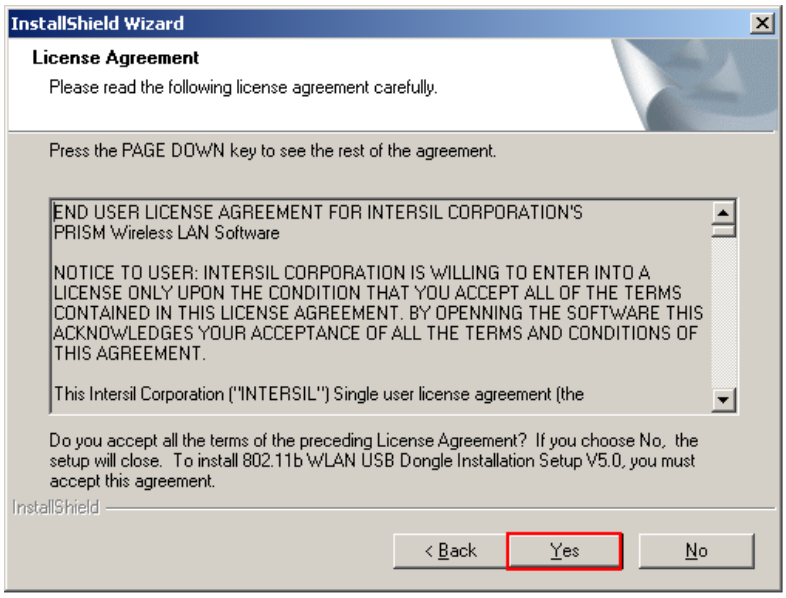
Step 1. Insert the **Installation/Documentation CD**, and the installation menu will appear. If the auto-run installation menu window doesn't appear automatically, you can utilize the Windows Explorer to browse CD content and run **install.exe** manually.

You can choose **Win2000 Driver** to install the driver. It opens the **InstallShield Wizard** dialog box as shown below. Click **NEXT** to continue.

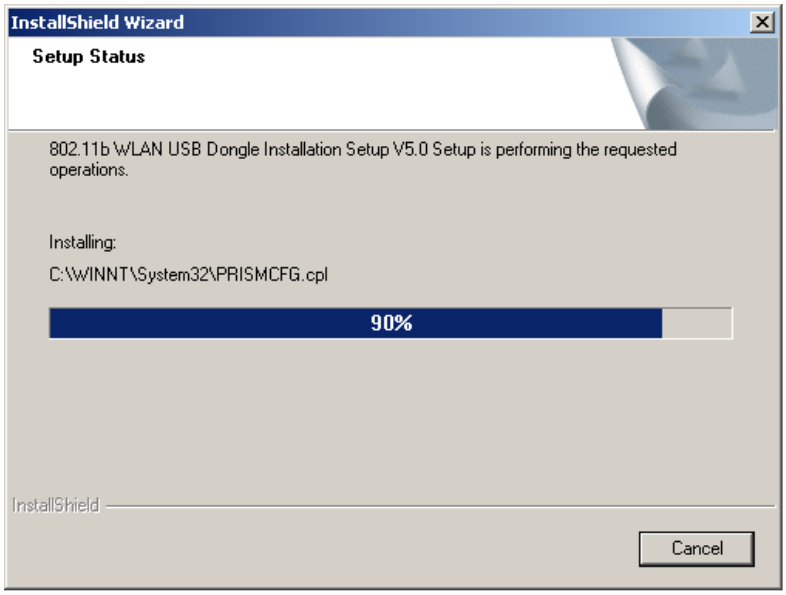




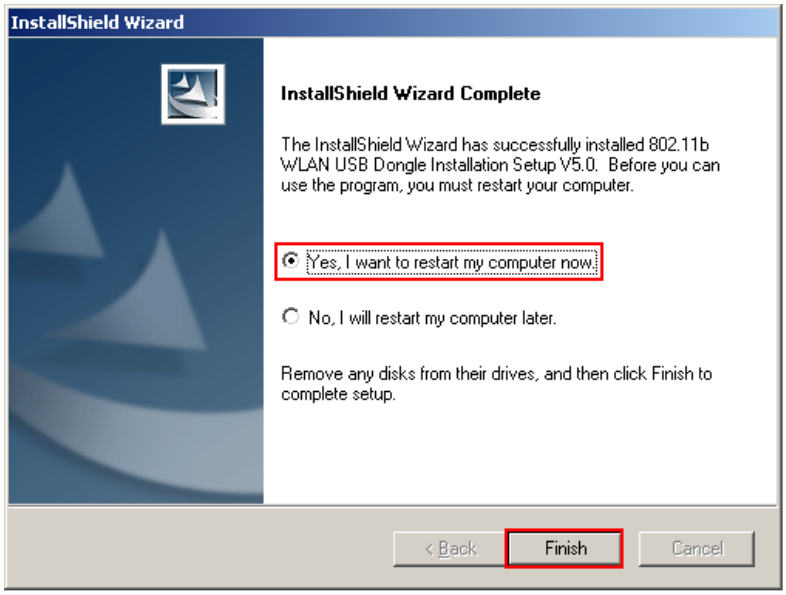
Step 2. Software License Agreement, click **Yes** to accept.



Setup Status window will pop up.

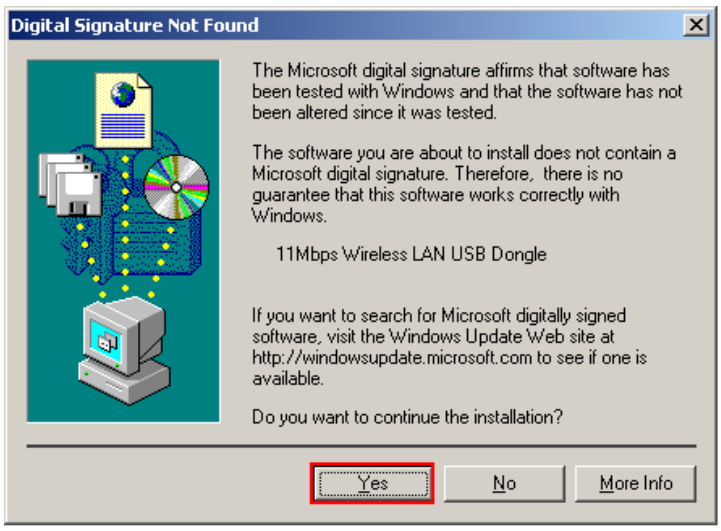


Step 3. Click **Finish** to complete Setup.

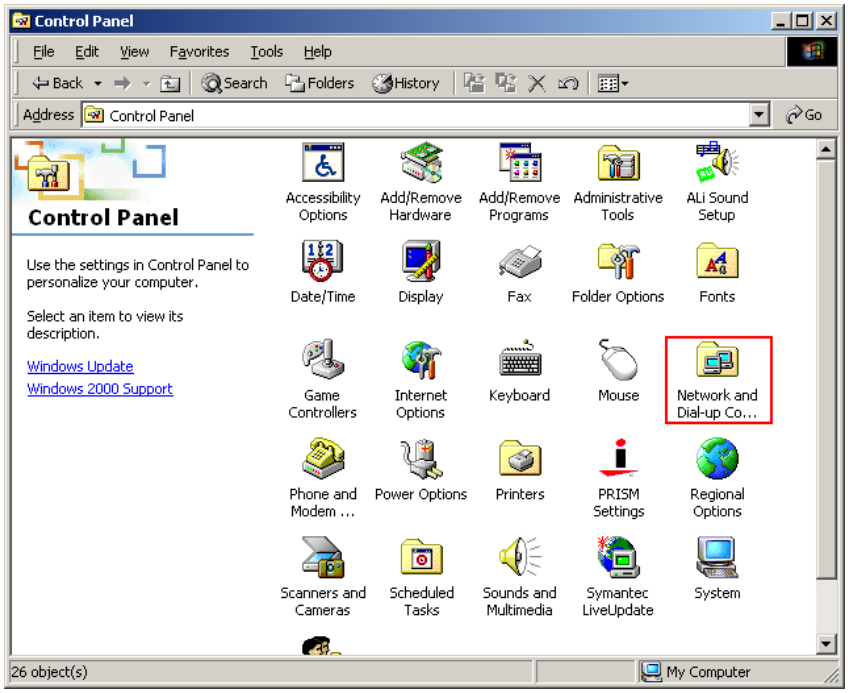


Step 4. After the computer restarts, just plug the USB cable into the USB port of your PC. **Windows 2000** will automatically detect the USB Dongle, opens a New Hardware Found window for a while.

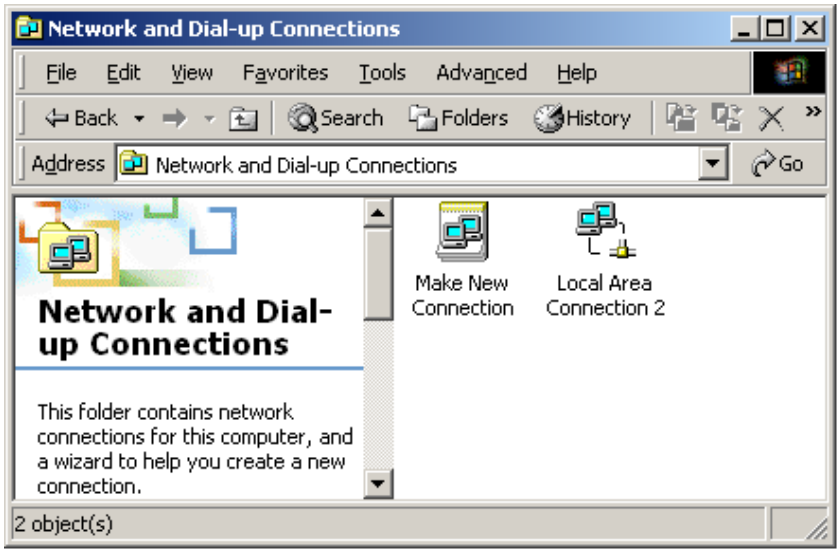
Click **Yes** in the Digital Signature dialog box.



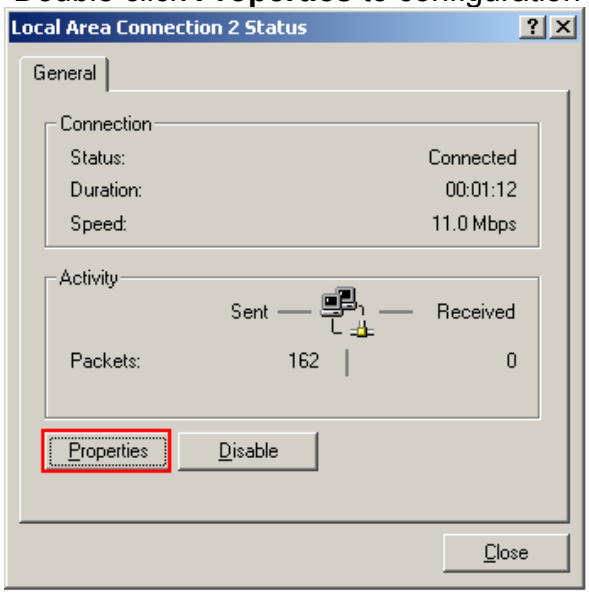
Step 5. Then click **Start** menu and select **Settings.** Choose the **Control Panel**. Double click the **Network and Dial-up Connections** icon in the **Control Panel**.



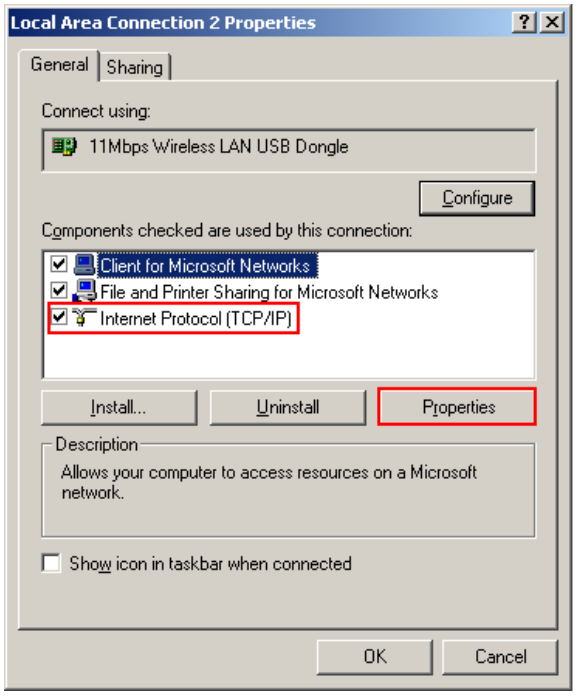
Step 6. Click the local area connection icon.



Step 7. Double click **Properties** to configuration network protocol.

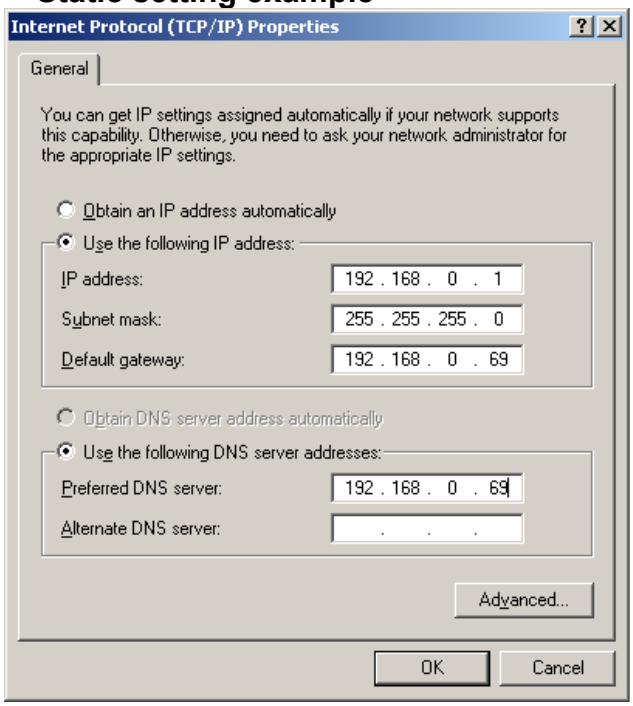


Step 8. Select **Internet Protocol (TCP/IP)** and click **Properties**

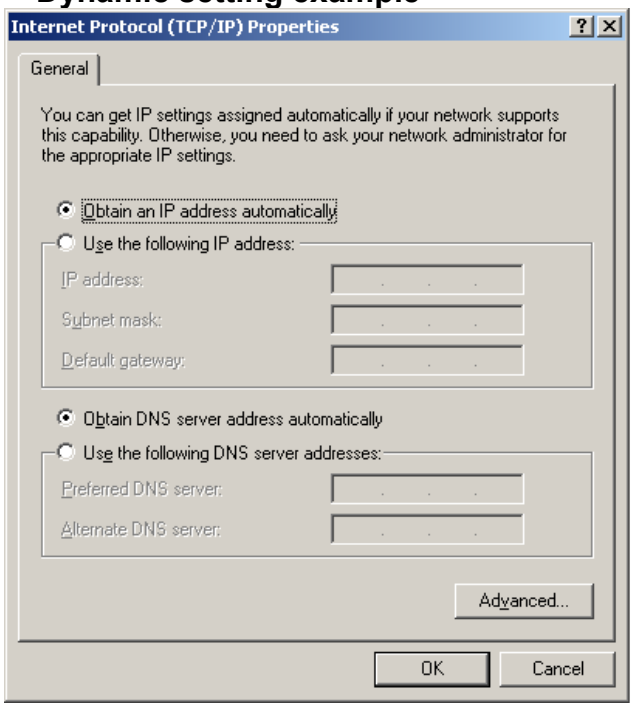


Step 9. Set **IP address** and **Subnet Mask**. You can select either **Static** or **DHCP** settings. If you use the static IP setup, please enter the IP address and subnet mask. You should ask your network administrator for an address, and then type it into the blank boxes as below. Then click **OK** to return to step 8. **Local Area Connection Properties** dialog box. Then click **OK** button to set the value.

Static setting example



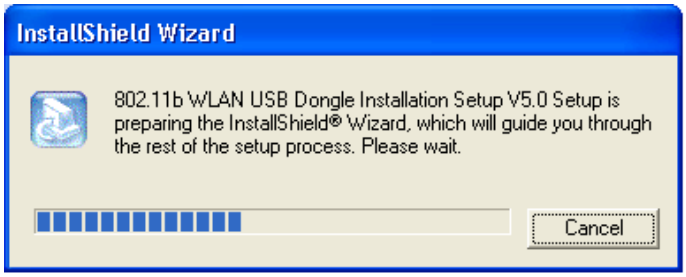
Dynamic setting example

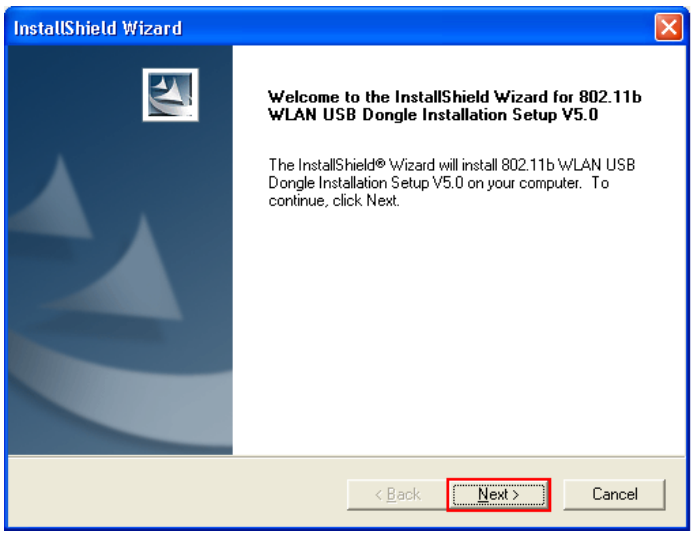


3.4 Install Wireless LAN USB Dongle under Windows XP

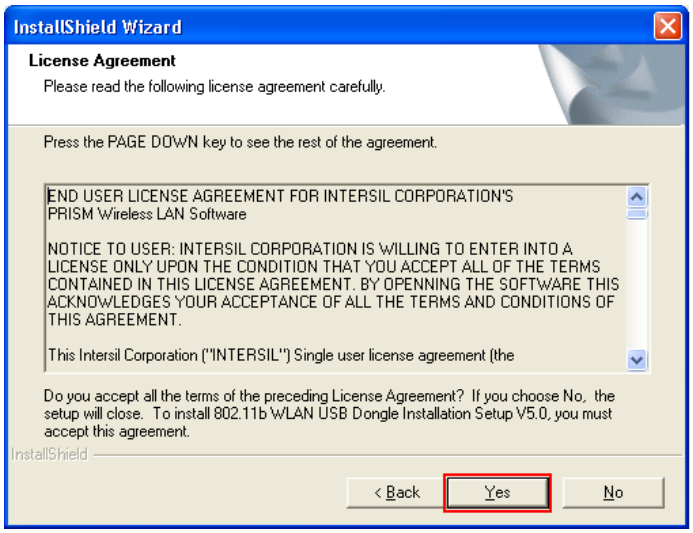
Step 1. Insert the **Installation/Documentation CD**, and the installation menu will appear. If the auto-run installation menu window doesn't appear automatically, you can utilize the Windows Explorer to browse CD content and run **install.exe** manually.

You can choose **WinXP Driver** to install the driver. It opens the **InstallShield Wizard** dialog box as shown below. Click **NEXT** to continue.

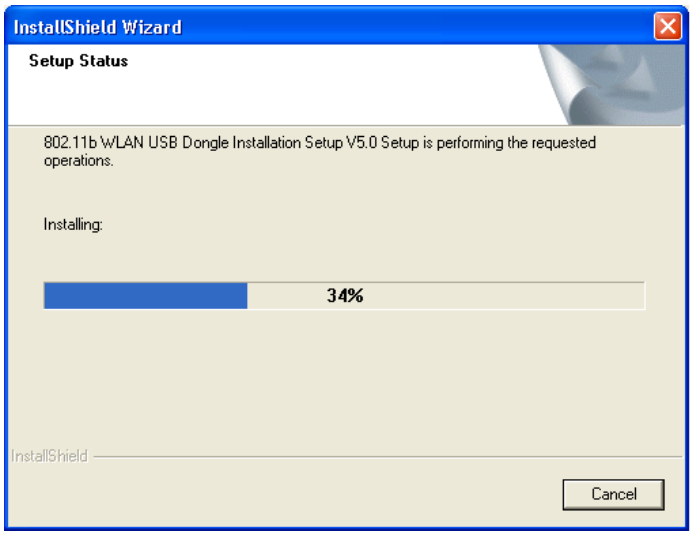




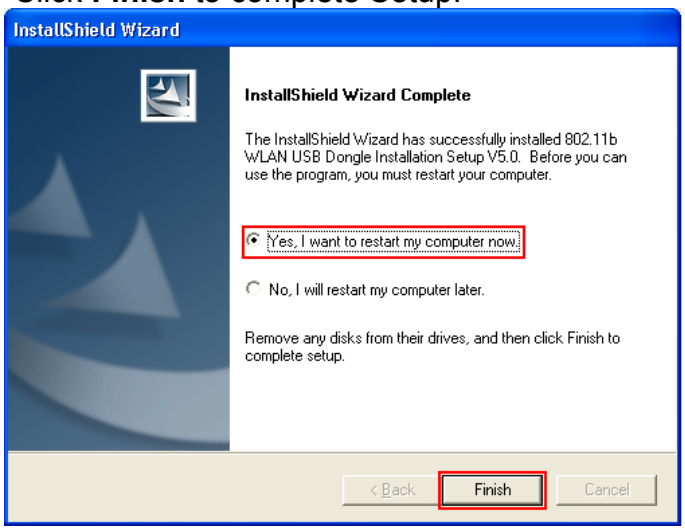
Step 2. Software License Agreement, click **Yes** to accept.



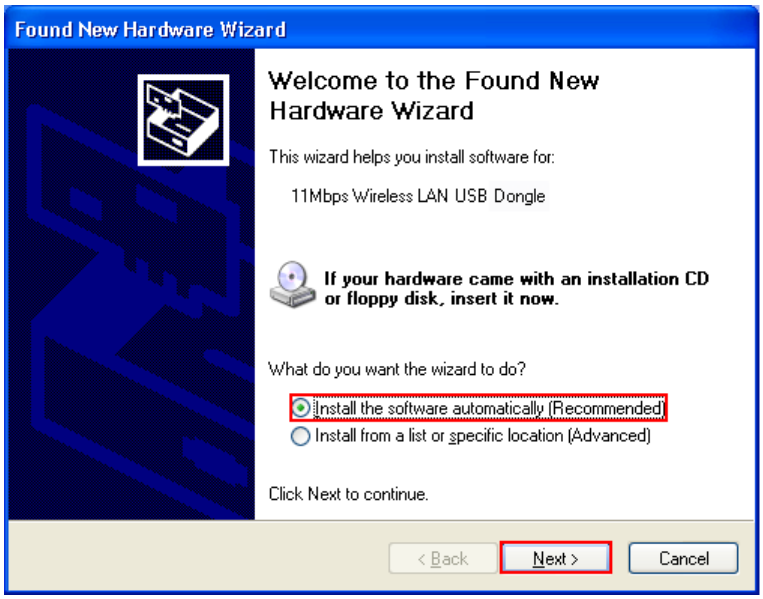
Setup Status window will pop up.



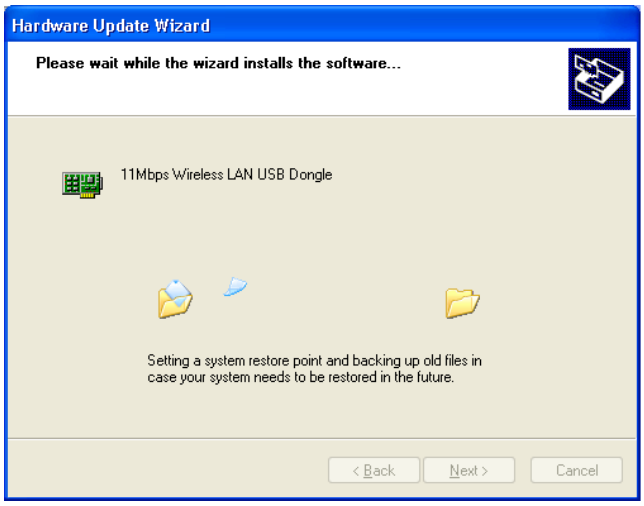
Step 3. Click **Finish** to complete Setup.



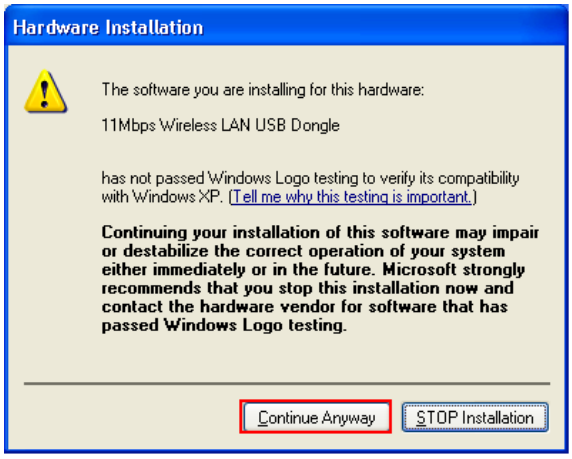
Step 4. After restarting the computer, hold the PC card with the logo facing up, and insert the card into the slot, applying just enough pressure to make sure it is fully seated. **Windows XP** will automatically detect the PC card, briefly opens a New Hardware Found window, and starts collecting information for a driver information database. When **Windows XP** is ready to configure the new hardware, it opens the **Found New Hardware Wizard** dialog box asking what do you want Windows to do. Select **Install the software automatically (Recommended),** and click **Next**.



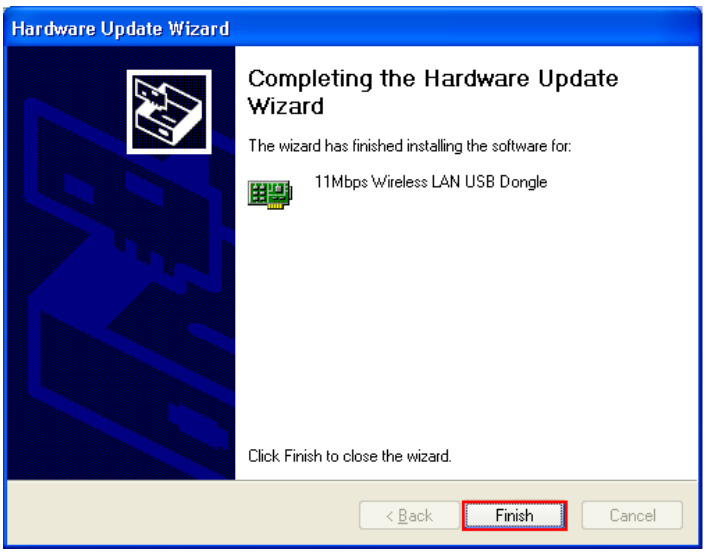
Starting to search the driver automatically.



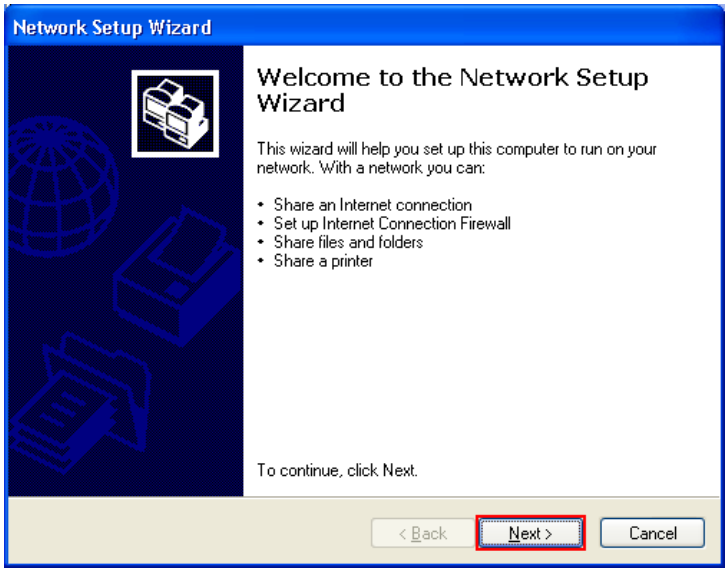
Step 5. Click **Continue Anyway.**



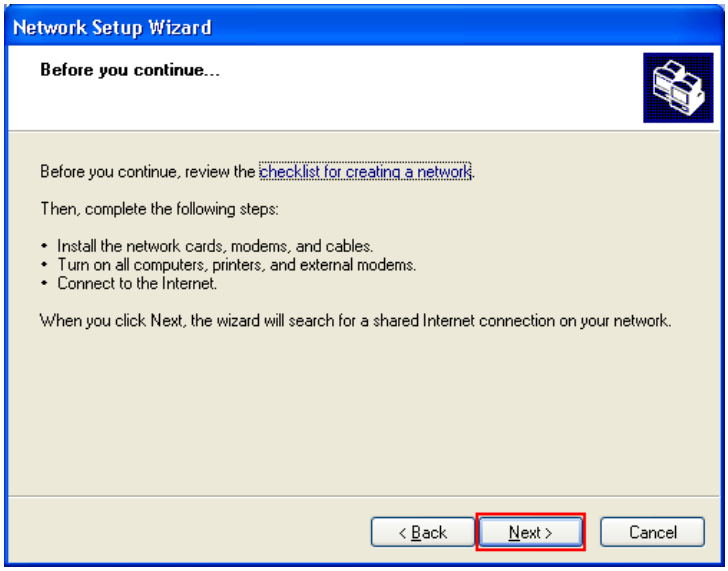
Step 6. The **Found New Hardware Wizard** window appears stating that Windows has finished installing the software that your new hardware device requires. Click **Finish**.



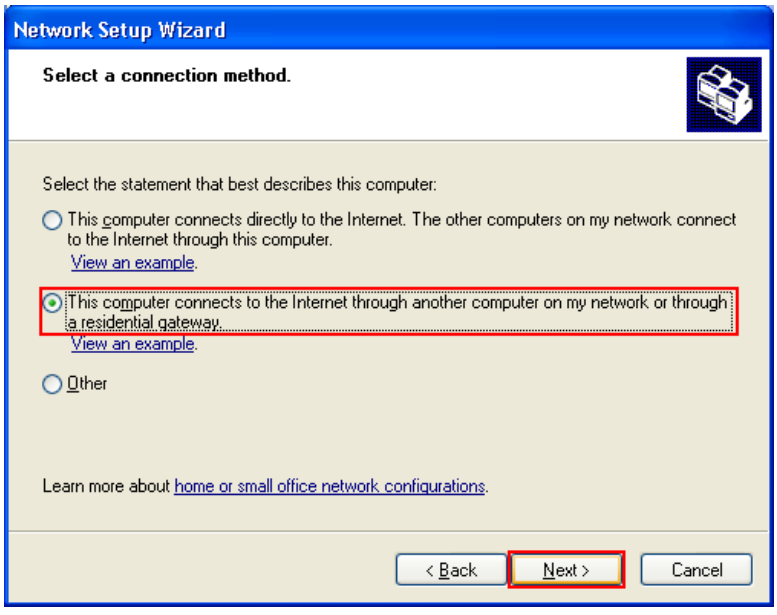
Step 7. After the computer restarts, the **Network Setup Wizard** appears. Click **Next**.



Step 8. Make sure that your computer connects to the internet, then click **Next**.

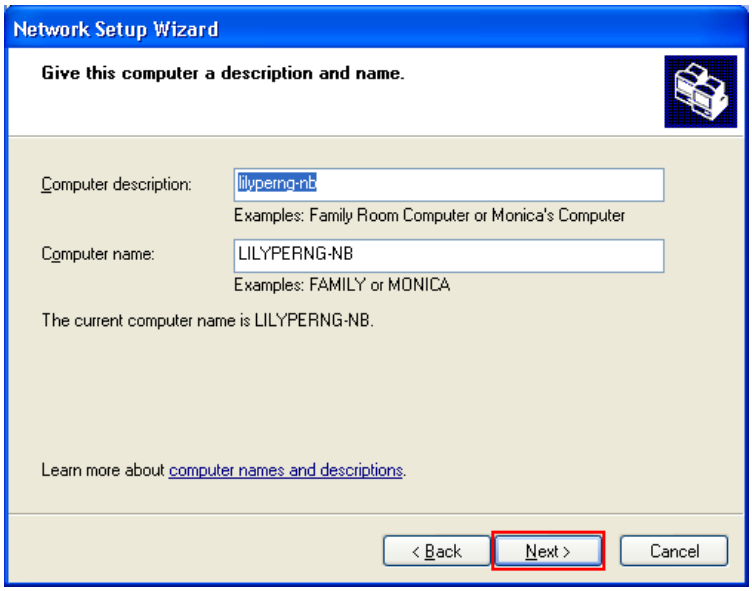


Step 9. If communication to and from the Internet to all the computers on your network are sent through this computer , you can choose **This computer connects directly to the Internet**. If this computer is part of a home or small office network that connects to the Internet through another computer on the network or using a residential gateway, you can choose **This computer connects to the Internet through another computer on my network or through a residential gateway** or other. In this case, choose **This computer connects to the Internet through another computer on my network or through a residential gateway.**

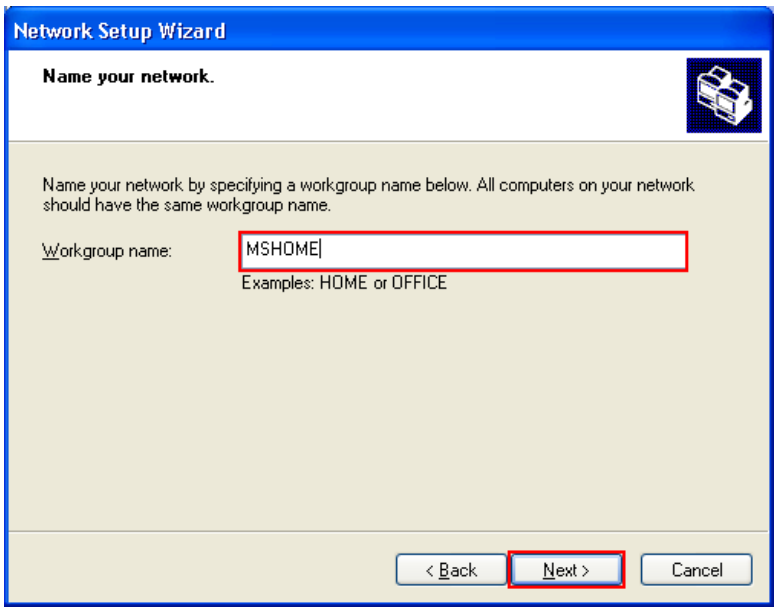


Step 10. A **computer name** identifies your computer on the network. Some Internet service providers(ISPs) require that you use a specific computer name. Check with your ISP to see if they require a specific computer name. The **computer description** is a short explanation of the computer. Type the

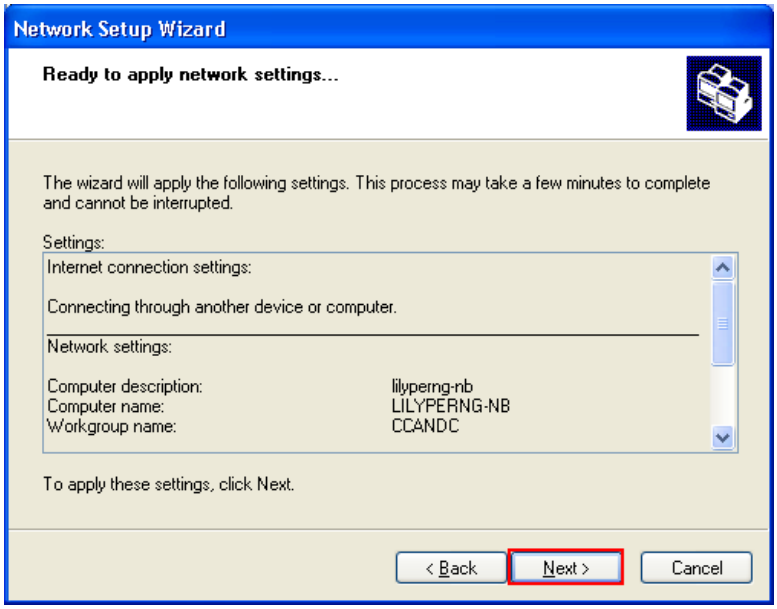
computer name and **computer description** then click **Next.**



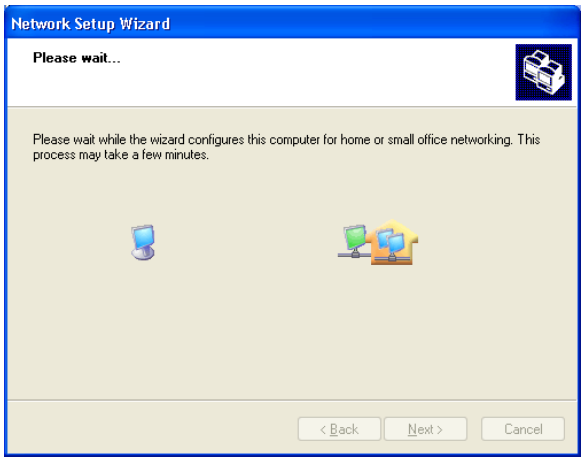
Step 11. Type the **Workgroup name** then click **Next**.



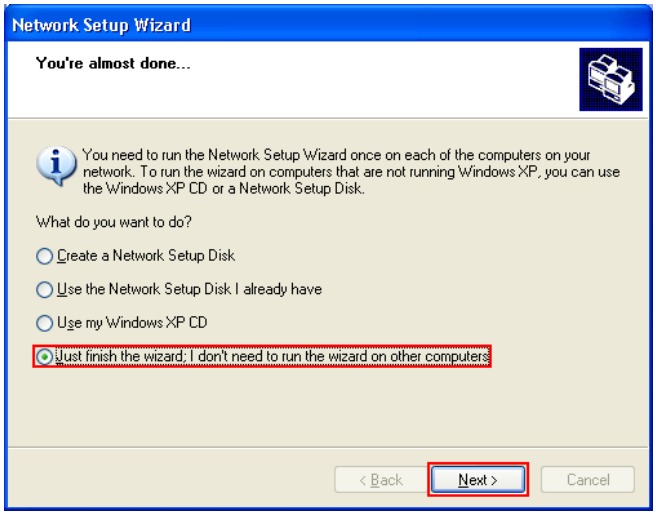
Step 12. Click **Next**.



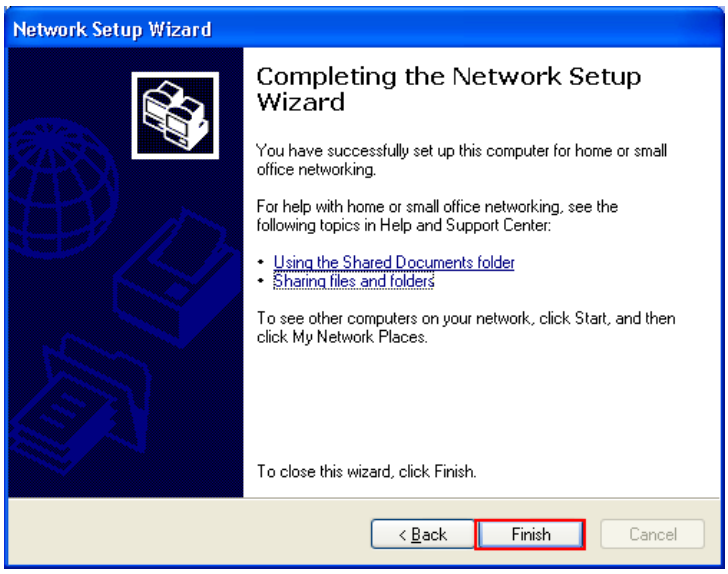
Then wait a few minutes.



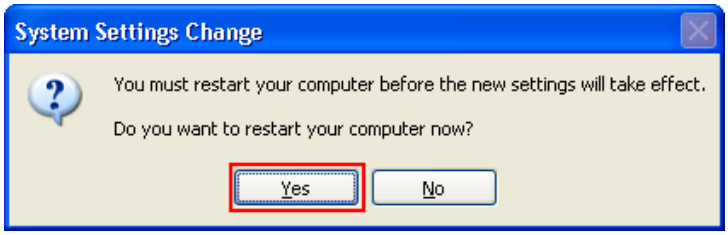
Step 13. Select the **Just finish the wizard** and click **Next**.



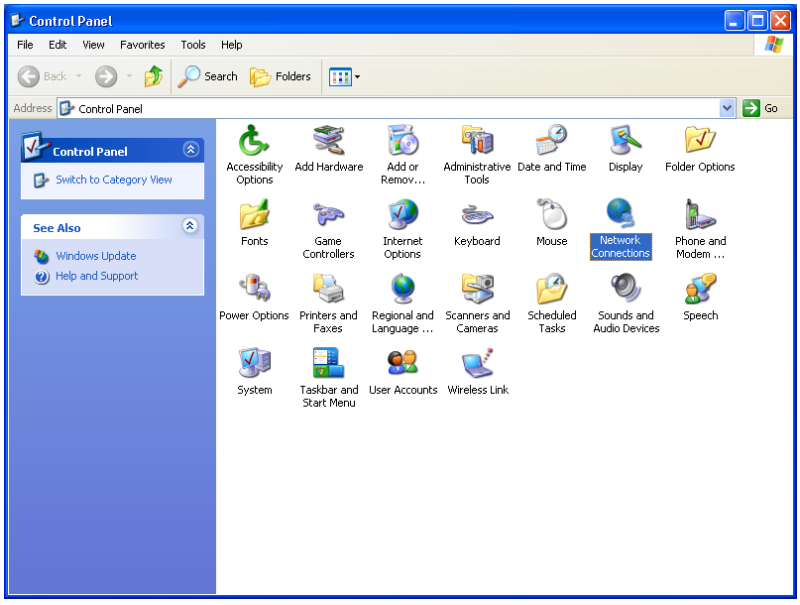
Step 14. Click **Finish**.



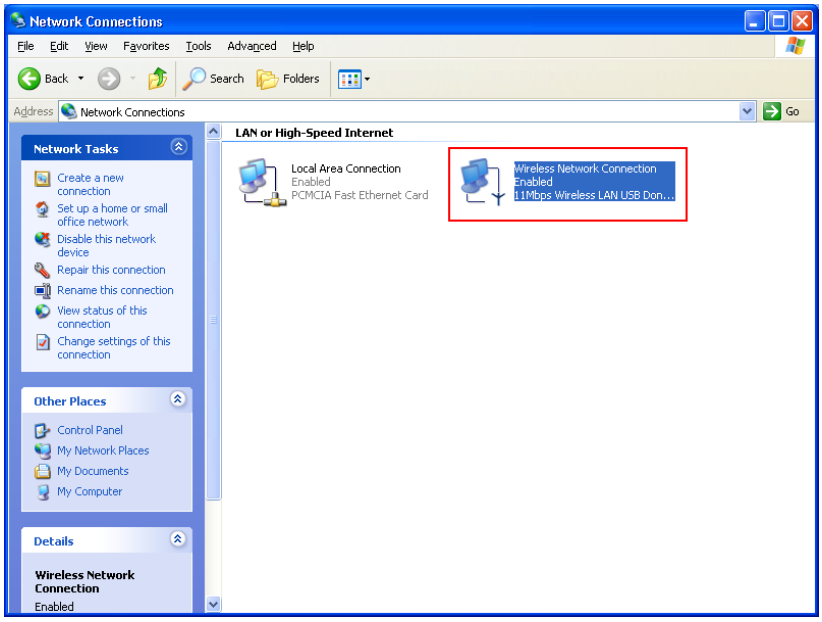
Step 15. Restart the computer.



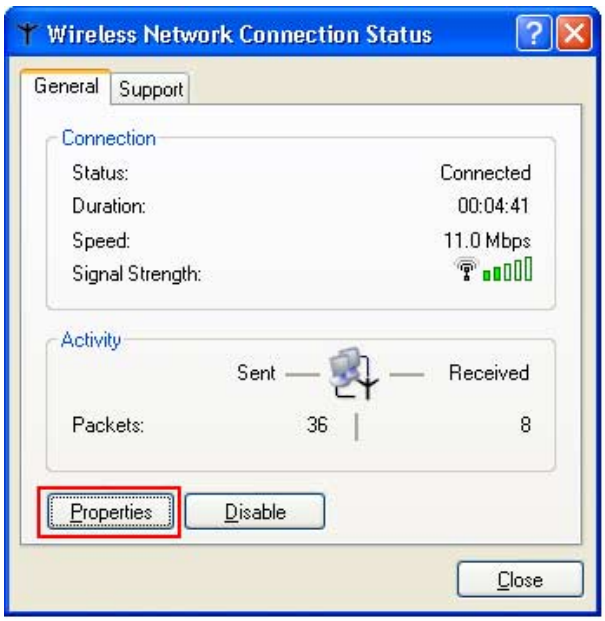
Step 16. After the computer restarts, click **Start** menu and select **Control Panel.** Double click the **Network Connections** icon in the **Control Panel**.



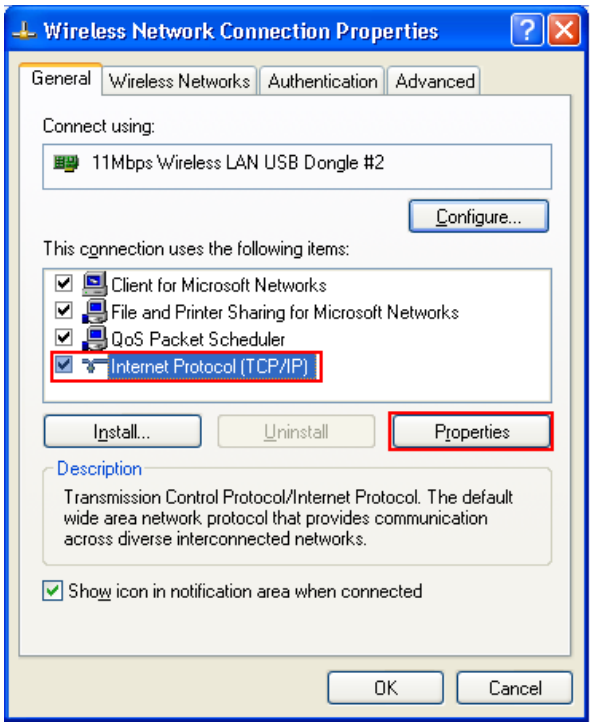
Step 17. Double click the **11Mbps Wireless LAN USB Dongle** local area connection icon.



Step 18. Double click **Properties** to configuration network protocol.

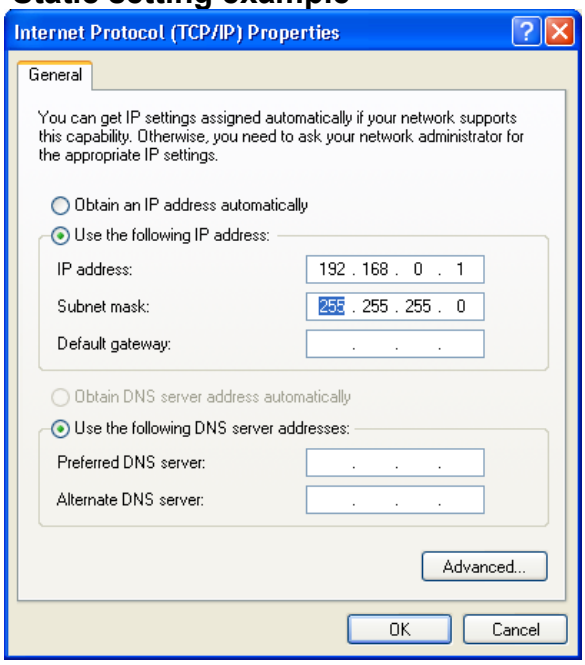


Step 19. Select **Internet Protocol (TCP/IP)** and click **Properties**

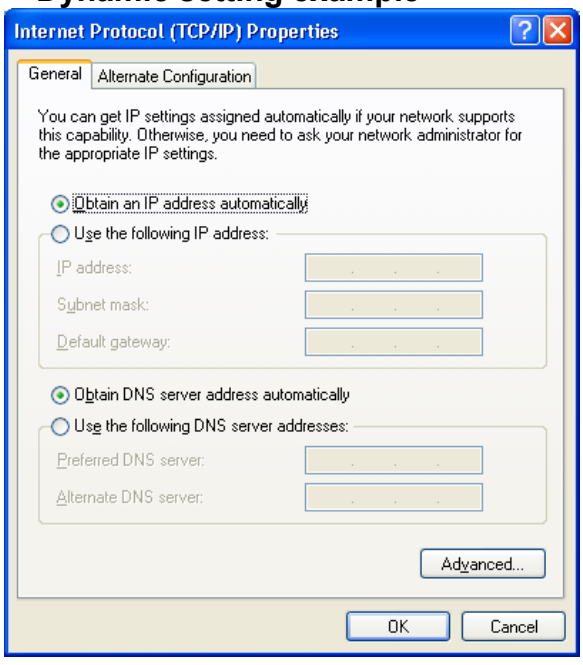


Step 20. Set **IP address** and **Subnet Mask**. You can select either **Static** or **DHCP** setting. If you use the static IP setup then please enter the IP address and Subnet masking. You should ask your network administrator for an address, and then type it into the blank boxes as below. Then click **OK** to return to Step 27. Then click **OK** button to set the value.

Static setting example

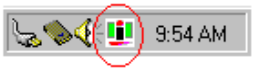


Dynamic setting example

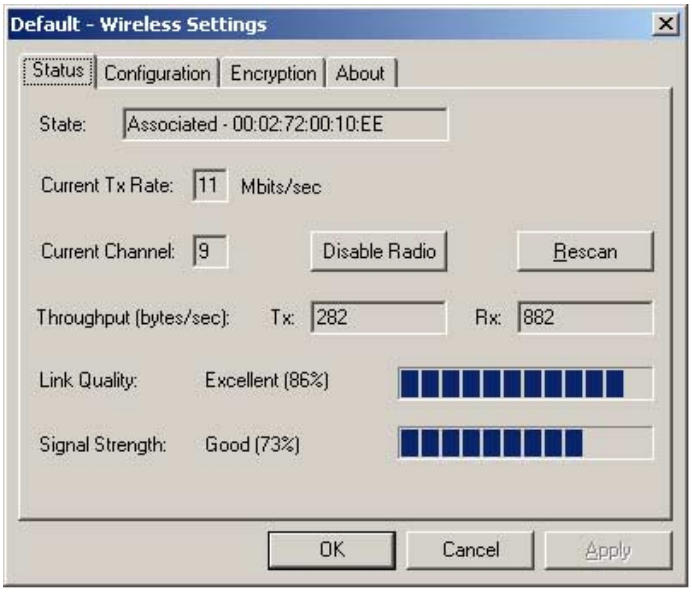


4 Configuration Utility

Configuration Utility under Windows 98/ME/2K/XP

WLAN USB Dongle uses its own management software. All functions controlled by users are provided by this application. When you insert the WLAN USB Dongle into the USB Dongle slot, a new icon, 

, should appear in the Windows System Tray automatically. If the icon is in red, it means that WLAN USB Dongle configuration is invalid or incomplete.
Double click that icon and the configuration window will pop up as shown below.



User can navigate through "tabs" by clicking or tapping them with a stylus.

Status Tab

State

The field shows the association state to available Access Point with BSSID--MAC address of the Access Point. When the state is "Associated" , it means normal operation in infrastructure mode and the USB Dongle is connected to the Access Point.

Disable Radio

The USB Dongle's RF radio function can be disabled by clicking this Disable Radio button.

Rescan

When the Rescan button is clicked, the USB Dongle will restart the process of finding an Access point.

Tx/Rx Rate Information

This displays the instantaneous wireless Receive and Transmit throughput in bytes per second. These values are updated every two seconds.

Link Quality / Signal Strength

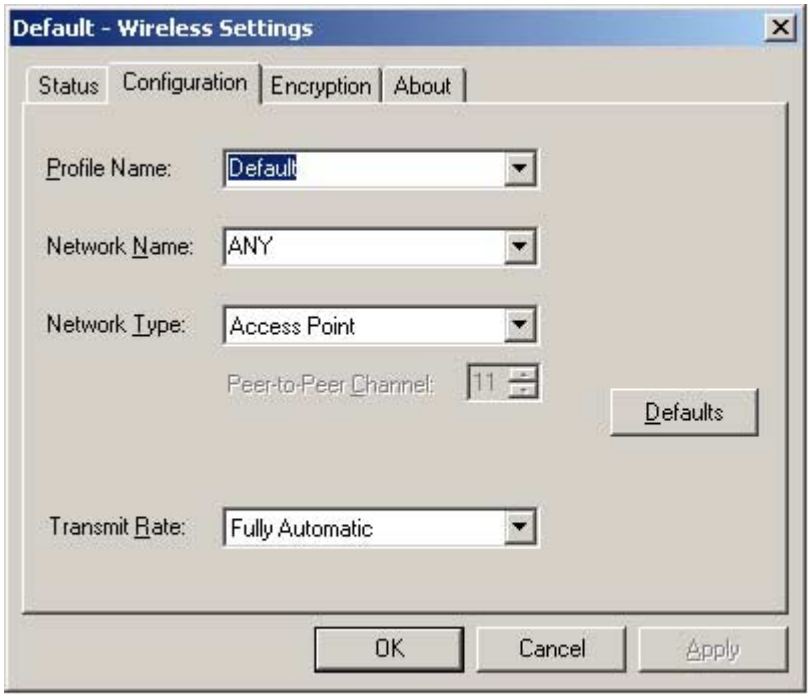
The Link Quality and Signal Strength bar graph is only active when the node is in Infrastructure Mode. The bar graph displays the quality and strength of the link between the node and its Access Point. A label summarizes the quality of the Link over the bar graph, which can take on one of the following values:

"Not Applicable"
"Poor"
"Fair"
"Good"
"Excellent"

The driver will start looking for a better Access Point if the Link Quality becomes "Poor". Link Quality is a measurement of receiving and transmitting errors over the radio.

Configuration Tab

The Configuration Tab contains several fields where operating parameters of the driver can be viewed or changed. Changes to any of the parameters in this panel can be applied to the driver without a need to restart the computer.



Profile Name

Each Profile represents specific settings of the USB Dongle. You can set the settings for each profile. Next time when you want to change the USB Dongle settings, you can just select the profile you want to use.

Network Name

Network Name is the group name (or SSID) that will be shared by every member of your wireless network. You will only be able to connect with an WLAN device that has the same Network Name.

Network Type

This field allows you to select from a list of supported Network Types. The types displayed have two values: "Access Point" and "Peer-to-Peer".

Access Point -

The infrastructure mode of operation requires the presence of an 802.11b Access Point. All communication is done via the Access Point, which relays packets to other wireless clients in the BSS as well as to nodes on a wired network such as Ethernet.

Peer-to-Peer -

This is the 802.11b Ad Hoc mode of operation. All communication is done from Client to Client without the use of an Access Point. 802.11 Ad Hoc network uses the same SSID for establishing the wireless connection. In this mode you have to set the Channel number you

want to use.

Peer-to-Peer Channel

When you choose Peer-to-Peer as the Network Type, you have to set the channel number you want to use.

Transmit Rate

The transmission rate at which client of AP transmits the data packets. You can set this to Auto 1 or 2Mb, 5.5Mb, 11Mb or Fully Automatic.

"***OK***" button

This button becomes active only when one of the fields has been modified. Pressing this button applies the changed values to the driver and saves them to the registry and is used the next time the computer boots up

Encryption Tab

You may want an additional measure of security on your wireless network, which can be achieved by using WEP (Wired Equivalent Privacy) encryption. WEP encrypts each frame transmitted from the radio using one of the Keys entered in this panel.

When an encrypted frame is received it will only be accepted if it decrypts correctly. This will only happen if the receiver has the same WEP Key used by the transmitter.

To be written to the driver and registry, each key must consist of hex digits, which means that only digit 0-9 and letter A-F are valid entries.

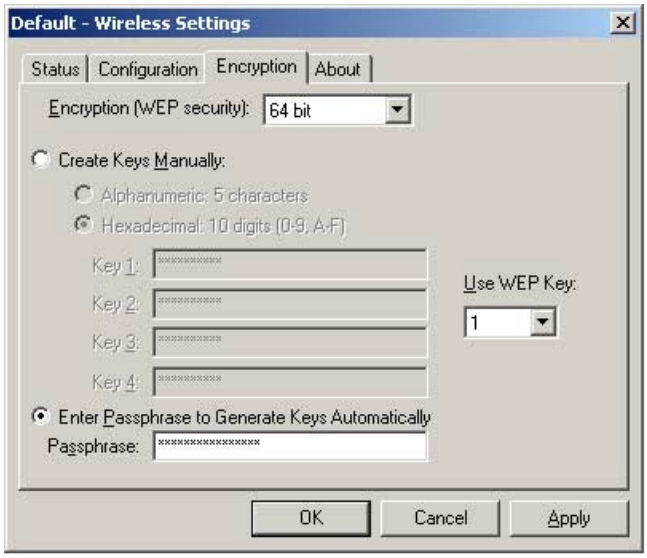
You can set this to disable, 64 bits or 128 bits.

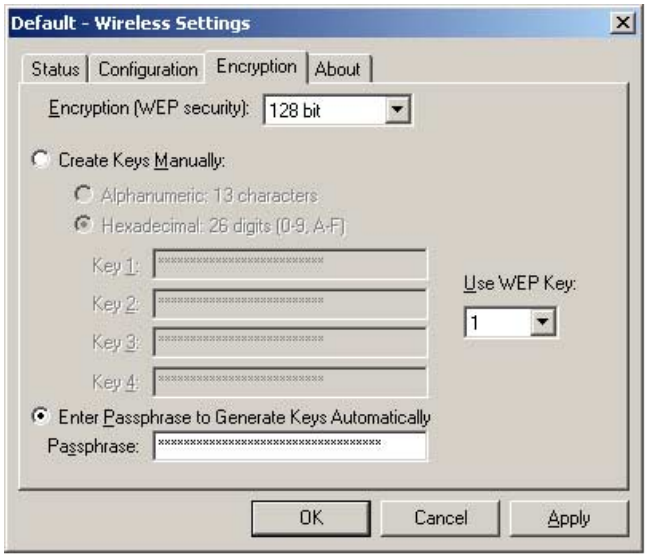
Encryption WEP – Disabled

The default is **Disabled .**

Enter Passphrase to Generate Keys Automatically– 64 bit/128bit

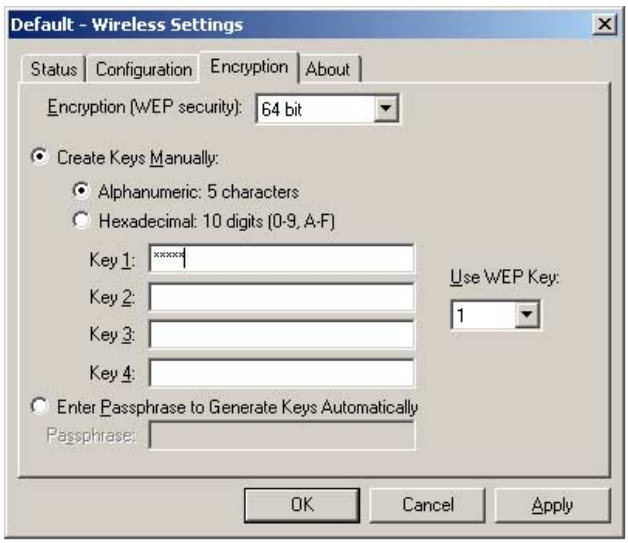
You can type a string that you can remember easily in the blank and the WEP Keys will be generated automatically. There are two options: 64 bit and 128 bit. You can choose any WEP Key from Key 1 to Key 4.

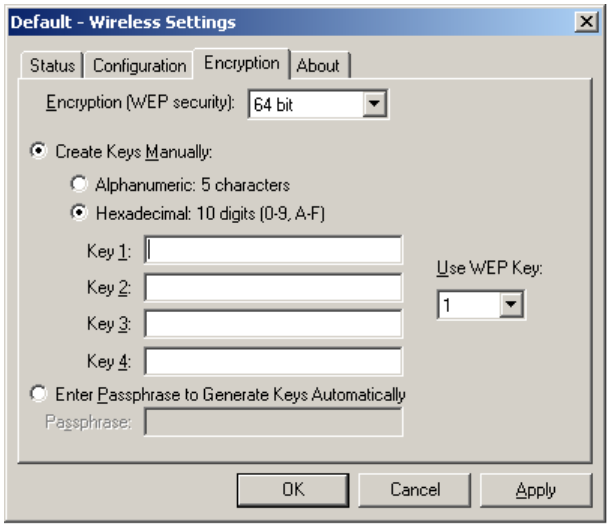


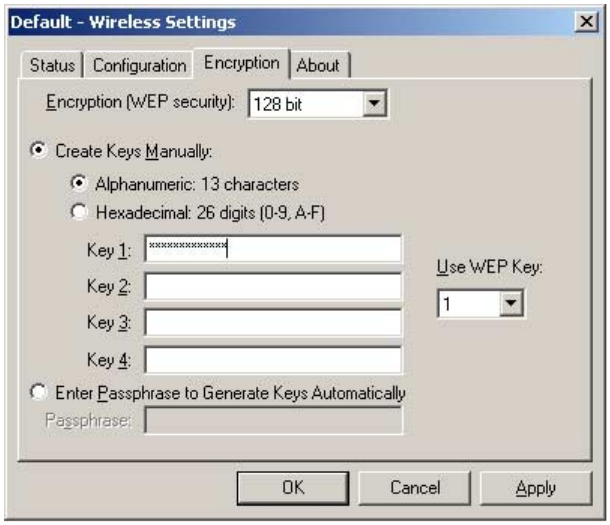


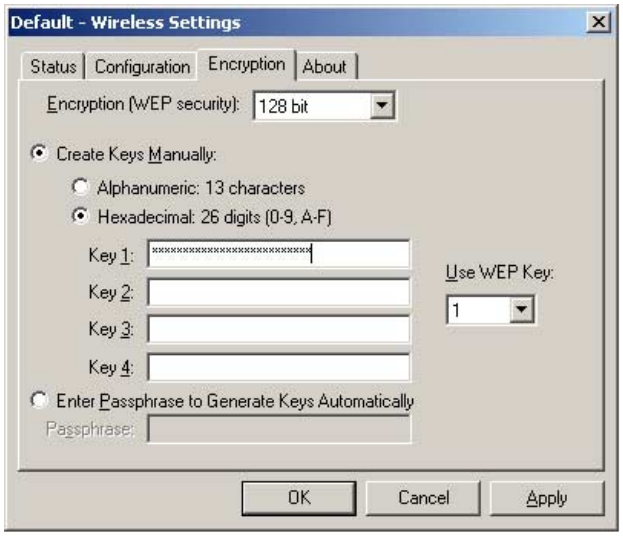
Create Keys Manually–64bit/128bit

When you want to entering Keys Manually, there are four fields can be used and user can choose to use **Alphanumeric** or **Hexadecimal**. In Alphanumeric, you can type the keys between A-Z and numbers arbitrarily. But in the Hexadecimal, you must type the Hexadecimal symbols. In 64 bit, the Alphanumeric has 5 characters and the Hexadecimal has 10 digits. And in the 128 bit, the Alphanumeric has 13 characters and the Hexadecimal has 26 digits. You can choose any WEP Key from Key 1 to Key 4.




Default - Wireless Settings
Status
Configuration
Encryption
About
Encryption (WEP security):
64 bit
Create Keys Manually:
Alphanumeric: 5 characters
Hexadecimal: 10 digits (0-9, A-F)
Key 1:
Key 2:
Key 3:
Key 4:
Use WEP Key:
1
Enter Passphrase to Generate Keys Automatically
Passphrase:
OK
Cancel
Apply


Default - Wireless Settings
Status
Configuration
Encryption
About
Encryption (WEP security):
128 bit
Create Keys Manually:
Alphanumeric: 13 characters
Hexadecimal: 26 digits (0-9, A-F)
Key 1:
Key 2:
Key 3:
Key 4:
Use WEP Key:
1
Enter Passphrase to Generate Keys Automatically
Passphrase:
OK
Cancel
Apply

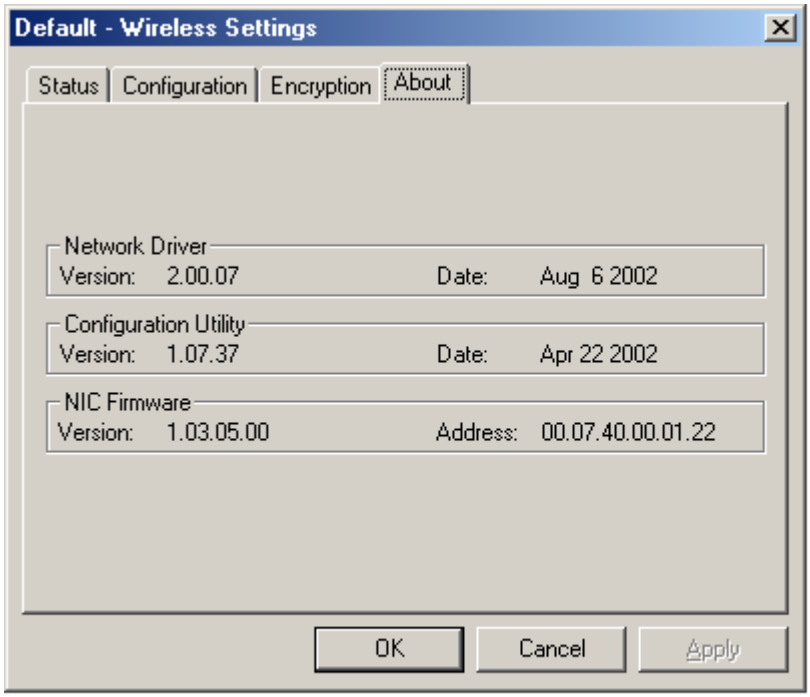

Default - Wireless Settings
Status
Configuration
Encryption
About
Encryption (WEP security):
128 bit
Create Keys Manually:
Alphanumeric: 13 characters
Hexadecimal: 26 digits (0-9, A-F)
Key 1:
Key 2:
Key 3:
Key 4:
Use WEP Key:
1
Enter Passphrase to Generate Keys Automatically
Passphrase:
OK
Cancel
Apply

Apply

This button updates the driver with the four keys displayed in Key field. The keys are also written to the registry for permanent storage.

About Tab

About Tab shows the product version including the detail of Driver, Configuration Utility, and NIC firmware version. Users must use this version number when reporting their problems for technical support.



5 Technical Specifications of WLAN USB Dongle

Product Name	WLAN USB Dongle
Standard	IEEE802.11b
Frequency Band	2.400GHz ~ 2.4835GHz unlicensed ISM band
Spread Spectrum	DSSS (Direct Sequence Spread Spectrum)
Modulation method	DQPSK/DBPSK/CCK
Data Rate	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Operation mode	Peer-to-Peer Access Point (need Access Points)
Antenna	External patch antenna
RF Output Power	8 dBm
Receive Sensitivity	Operating at 11Mbps: Better than 10^-5 BER @ –80dBm
Operating Range	Up to 300 m, depending on surrounding environment
Security	64-bit or 128-bit WEP (Wired Equivalent Privacy)
Operating system supported	Windows 98, Windows ME, Windows 2000, Windows XP, Linux
Management	Windows-based utility for configuration and status monitoring
Regulation	FCC part 15 for North America CE/ETSI for European
I/O Interface	USB port
LED	ACTIVE(ACT) , POWER(PWR)
Dimension	90(L) x 75(W) x 15(H) mm
Weight	43 g (approximate)
Input Power	5V DC
Operating Temperature	0 ~ 50℃ (operation)
Storage Temperature	-20 ~ 70℃
Humidity	5 ~ 90% (non-condensing)

6 Troubleshooting

Symptom:
The Power(PWR) LED or Active(ACT) LED is off.
Possible Remedy:
Make sure the USB Dongle is inserted properly. Otherwise contact your vendor.

Symptom:
The Active(ACT) LED is always on not blinking.
Possible Remedy:
Make sure that you have installed the driver from attached CD. Otherwise contact your vendor.

Symptom:
The Active(ACT) LED is blinking but the USB Dongle icon does not appear in your icon tray.
Possible Remedy:
Make sure that you have installed the Utility from attached CD.

Symptom:
The USB Dongle icon is red.
Possible Remedy:
It means there is no wireless link.

1. Make sure there is any 802.11b device in the servicing area.
2. Double click the icon to pop up the configuration window
    a. Make sure they are sharing the same SSID and channel. If the SSID is same, you could press the **Status** tab → **Re-Scan** to scan the channel to link.
    b. Make sure they are operating under same authentication type. WEP function has to be enabled, if Shared Key Authentication is the selection, and the secret Keys have to be same in the communicating group.
3. Make sure there is no metal objects, electron devices or cordless phone in the vicinity.

Symptom:
The USB Dongle icon is green, but can't access wired-LAN
Possible Remedy:
1. Make sure there is any 802.11b AP in your LAN.
2. Make sure the USB Dongle is configured as infrastructure mode.
3. Make sure the Network setting is proper. You could check and modify through **My Computer → Control Panel → Network → TCP/IP / NetBEUI → PRISM2 IEEE 802.11 USB Dongle Adaptor → Content**.

Symptom:
The USB Dongle icon is green, but can't share files with others.
Possible Remedy:
Make sure the **file and printer sharing** function is enabled. You could enable the function by checking the icon of **My Computer → Control Panel → Network → file and printer sharing → I want to be able to give others to access to my files**.

Symptom:
Slow or erratic performance
Possible Remedy:
Try change the channel of the communicating group or move your device closer to the communicating device.

7 Glossary

IEEE 802.11 Standard
The IEEE 802.11 Wireless LAN standards subcommittee, which is formulating a standard for the industry.

Access Point
An integrated wireless and wired LAN is called an Access Point configuration. Access Point is applicable to enterprise scale for wireless access to central database, or wireless application for mobile workers.

BSSID
A specific Peer-to-Peer LAN is called a Basic Service Set (BSS). Computers in a BSS must be configured with the same BSSID.

DHCP
Dynamic Host Configuration Protocol - a method in which IP addresses are assigned by server dynamically to clients on the network. DHCP is used for Dynamic IP Addressing and requires a dedicated DHCP server on the network.

Direct Sequence Spread Spectrum
This is the method the wireless cards use to transmit data over the frequency spectrum. The other method is frequency hopping. Direct sequence spreads the data over one frequency range (channel) while frequency hopping jumps from one narrow frequency band to another many times per second.

ESSID
An Infrastructure configuration could also support roaming capability for mobile workers. More than one BSS can be configured as an Extended Service Set (ESS). Users within an ESS could roam freely between BSSs while served as a continuous connection to the network wireless stations and Access Points within an ESS must be configured with the same ESSID and the same radio channel.

Ethernet
Ethernet is a 10/100Mbps network that runs over dedicated home/office wiring. Users must be wired to the network at all times to gain access.

Gateway
A gateway is a hardware and software device that connects two dissimilar systems, such as a LAN and a mainframe. In Internet terminology, a gateway is another name

for a router. Generally a gateway is used as a funnel for all traffic to the Internet.

IEEE
Institute of Electrical and Electronics Engineers

ISM Band
The FCC and their counterparts outside of the U.S. have set aside bandwidth for unlicensed use in the so-called ISM (Industrial, Scientific and Medical) band. Spectrum in the vicinity of 2.4 GHz, in particular, is being made available worldwide. This presents a truly revolutionary opportunity to place convenient high-speed wireless capabilities in the hands of users around the globe.

Local Area Network (LAN)
A LAN is a group of computers, each equipped with the appropriate network adapter card connected by cable/air, that share applications, data, and peripherals. All connections are made via cable or wireless media, but a LAN does not use telephone services. It typically spans a single building or campus.

Network
A network is a system of computers that is connected. Data, files, and messages can be transmitted over this network. Networks may be local or wide area networks.

PCMCIA
Personal Computer Memory Card International Association. Also a PCMCIA card is also referred to USB Dongle.

Peer-to-Peer
An Peer-to-Peer wireless LAN is a group of computers, each with a WLAN adapter, connected as an independent wireless LAN. Peer-to-Peer wireless LAN is applicable at a departmental scale for a branch or SOHO operation.

Protocol
A protocol is a standardized set of rules that specify how a conversation is to take place, including the format, timing, sequencing and/ or error checking.

Roaming
In an infrastructure network, this is when a wireless PC moves out of range of the previously connected access point and connects to a newly connected access point. Throughout the network environment where access point are deployed, PCs can always be connected regardless of where they are located or roam.

SSID
A Network ID unique to a network. Only clients and Access Points that share the same SSID are able to communicate with each other. This string is case-sensitive.

Simple Network Management Protocol (SNMP)
Simple Network Management Protocol is the network management protocol of TCP/IP. In SNMP, agents-which can be hardware as well as software-monitor the activity in the various devices on the network and report to the network console workstation. Control information about each device is maintained in a structure known as a management information block.

Static IP Addressing
A method of assigning IP addresses to clients on the network. In networks with Static IP address, the network administrator manually assigns an IP address to each computer. Once a Static IP address is assigned, a computer uses the same IP address every time it reboots and logs on to the network, unless it is manually changed.

Transmission Control Protocol / Internet Protocol (TCP/IP)
TCP/IP is the protocol suite developed by the Advanced Research Projects Agency (ARPA). It is widely used in corporate Internet works, because of its superior design for WANs. TCP governs how packet is sequenced for transmission the network. The term "TCP/IP" is often used generically to refer to the entire suite of related protocols.

Transmit / Receive
The wireless throughput in Bytes per second averaged over two seconds.

USB
The Universal Serial Bus allows complete Plug and Play connection of peripheral devices to a computer.

WEP
"Wired Equivalent Privacy" is based on the use of 64-bit keys and the popular RC4 encryption algorithm. Wireless devices without a valid WEP key will be excluded from network traffic.

Wide Area Network (WAN)
A WAN consists of multiple LANs that are tied together via telephone services and / or fiber optic cabling. WANs may span a city, a state, a country, or even the world.

Wireless LAN (WLAN)

A wireless LAN does not use cable to transmit signals, but rather uses radio or infrared to transmit packets through the air. Radio Frequency (RF) and infrared are the commonly used types of wireless transmission. Most wireless LANs use spread spectrum technology. It offers limited bandwidth, usually under 11Mbps, and users share the bandwidth with other devices in the spectrum; however, users can operate a spread spectrum device without licensing from the Federal Communications Commission (FCC)