



11Mbps Wireless LAN Card

GW-NS11X

PLANEX COMMUNICATIONS INC.

About This Manual

This manual describes how to install and operate your Wireless LAN card. Please read this manual before you install the product.

This manual includes the following topics:

- Product description, features and specifications.
- Hardware installation procedure.
- Software installation procedure.
- Trouble shooting procedures

Technical Support

The firmware version of the GW-NS11X is displayed on the utility About window. Users could download the most recent software version from the supplier's web site or refer to the selling contact for the latest software information. If you have difficulty resolving the problem while installing or using the GW-NS11X, please contact the supplier for support.

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1. Introduction

Congratulations on your purchase of this GW-NS11X. This product is designed specifically for your 11Mbps wireless LAN environment needs. It is easy to configure and operate even for non-technical users. Instructions for installing and configuring this product are included in this manual. Before you install and use this product, please read the manual carefully so you may take full advantage of its functions.

2. About GW-NS11X

The GW-NS11X is a standard CardBus adapter that fits into any standard CardBus slot in a notebook computer. The GW-NS11X Features

Wireless Features

- 11Mbps solution in the 2.4GHz band, compliant with the IEEE 802.11b
- Wire-free access to networked resources from anywhere beyond the desktop
- Delivers data rate up to 11 Mbps
- Antenna is built in to the card with LEDs indicating Power and Link
- Ensures great security by providing the Wired Equivalent Privacy (WEP) defined in the IEEE 802.11 standard
- Lowest CPU utilization design that leaves system resources available for other functions
- Seamless Microsoft XP zero-config integration with advanced utilities and common GUI for legacy OSs
- Driver support Windows 98 / Me / 2000 / XP

3. Package Contents

GW-NS11X comes with the following items. Please go through each item below. If any of listed items appears to be damaged or missing, please contact your local dealer.

- One GW-NS11X
- One CD-ROM (GW-NS11X Driver and Utility Software)
- One User's Manual Installation Guide

4. Hardware Installation

This chapter describes the instructions that guide you through the proper installation of your GW-NS11X for the Windows 98/ME/2000/XP operating systems.

The complete installation of the GW-NS11X consists of the following steps

STEP 1: Insert your GW-NS11X into your notebook.

STEP 2: Install the corresponding driver and utility.

STEP 3: Set basic settings.

STEP 4: Finish Installation.

5-1 Before Installation

In addition to the items shipped with the client adapter, you will also need the following in order to install the adapter:

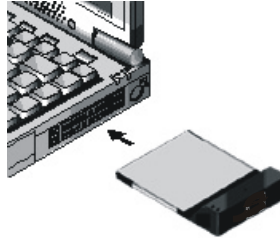
Note!

These instructions apply to most notebook computers. For detailed information on inserting PC cards into your notebook, consult the notebook manual.

5-2 Insert the GW-NS11X

Follow the procedure below to install the GW-NS11X Wireless LAN card.

1. With 68-pin connector of the card facing the CardBus slots on notebook, slide the card all the way into an empty slot.



2. Connect to a network.

Note!

For information on connecting your Card to the LAN, contact your system administrator.

To install the GW-NS11X, please do the following:

1. Find an available CardBus slot on your computer.
2. Insert the GW-NS11X, with its label facing up, into the CardBus slot on your computer.



CAUTION : Do not force the client adapter into the slot. Forcing it will damage both the client adapter and the slot. If the client adapter does not go in easily, remove the card and reinsert it

5. Install Driver for Windows

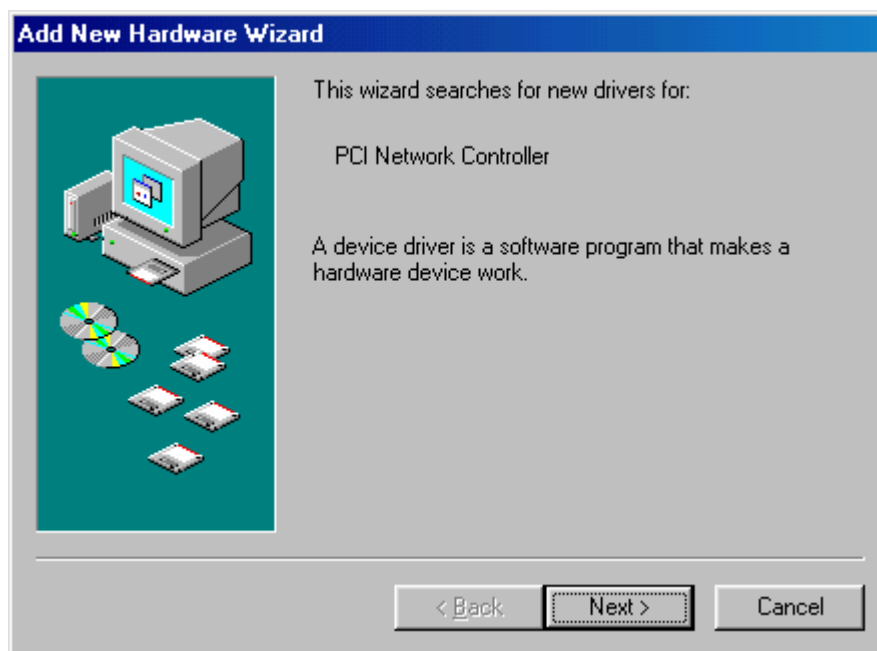
This section describes the installation of the GW-NS11X driver for the Windows 98/ME/2000 and Windows XP operating systems.



Note: Before you start the installation, you are advised to keep the Windows CD-ROM in case you might need certain system files.

6-1 Set up GW-NS11X for Windows 98/ ME

Step 1: After inserting the GW-NS11X into the CardBus slot on your computer, Windows will auto-detect new hardware and will display an “**Add New Hardware Wizard**” window. Click **Next** to continue.



Step 2: Select “Search for the best driver for your device (Recommended)” and click Next to proceed.



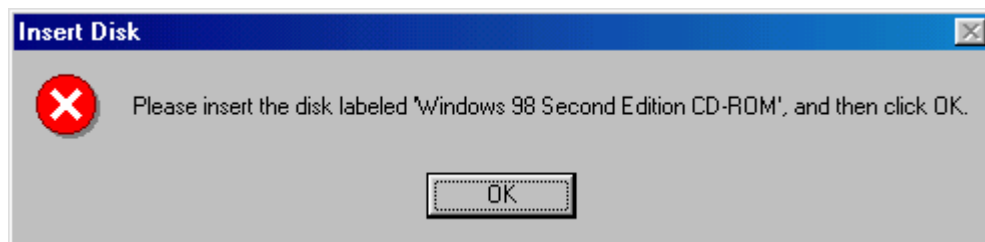
Step 3: Insert the Product CD-ROM into the CD-ROM drive. Select the “CD-ROM drive” check box and click on **Next** to install the driver.



Step 4: The Windows will find “**PLANEX GW-NS11X 11Mbps Wireless LAN Card**”. Click **Next** to continue.



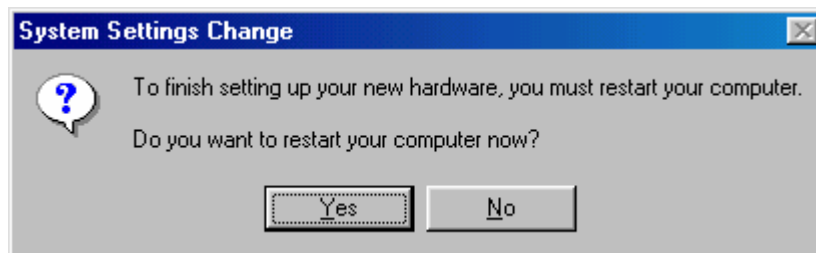
Step 5: Once the [Please insert the disk labeled “**Windows 98/ME CD-ROM**”, and then click **OK** window appears, enter the path corresponding to the appropriate drives and click **OK**. Usually these files can be found at C:\Windows or C:\Windows\system.



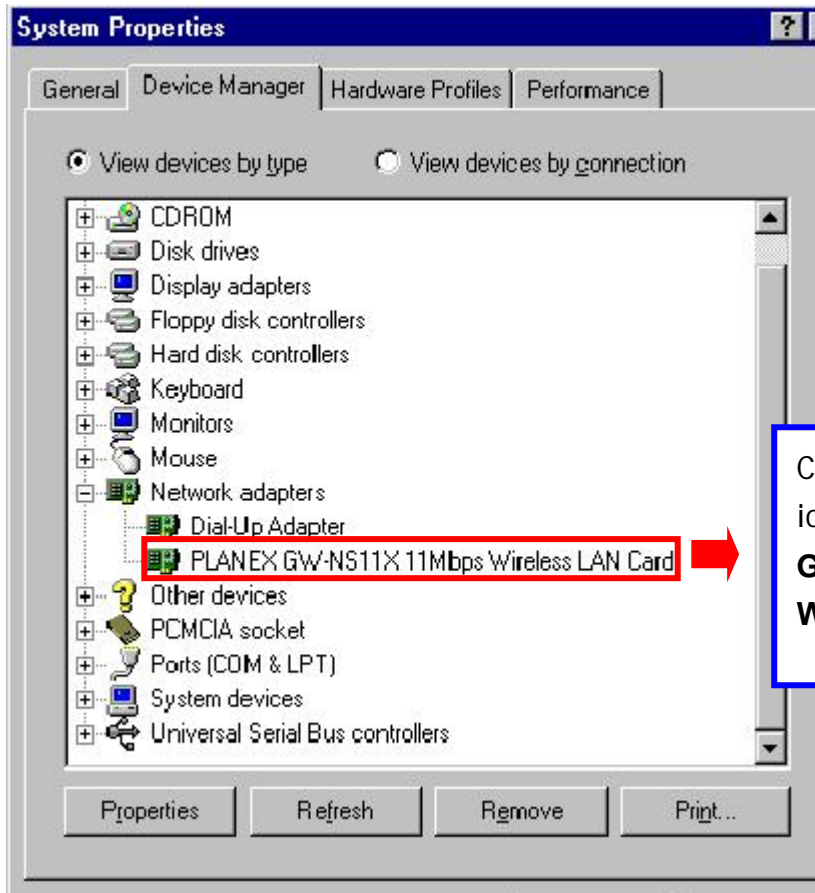
Step 6: Click **Finish** to complete the software installation.



Step 7: Restart the computer.



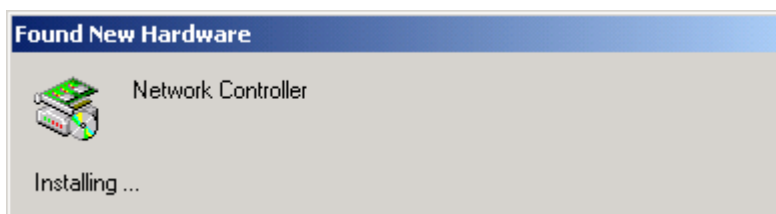
Step 8: Open Control Panel/System/Device Manager, and check Network Adapters to see if any error icon appears next to the PLANEX GW-NS11X 11Mbps Wireless LAN Card. If no, your GW-NS11X is working well.



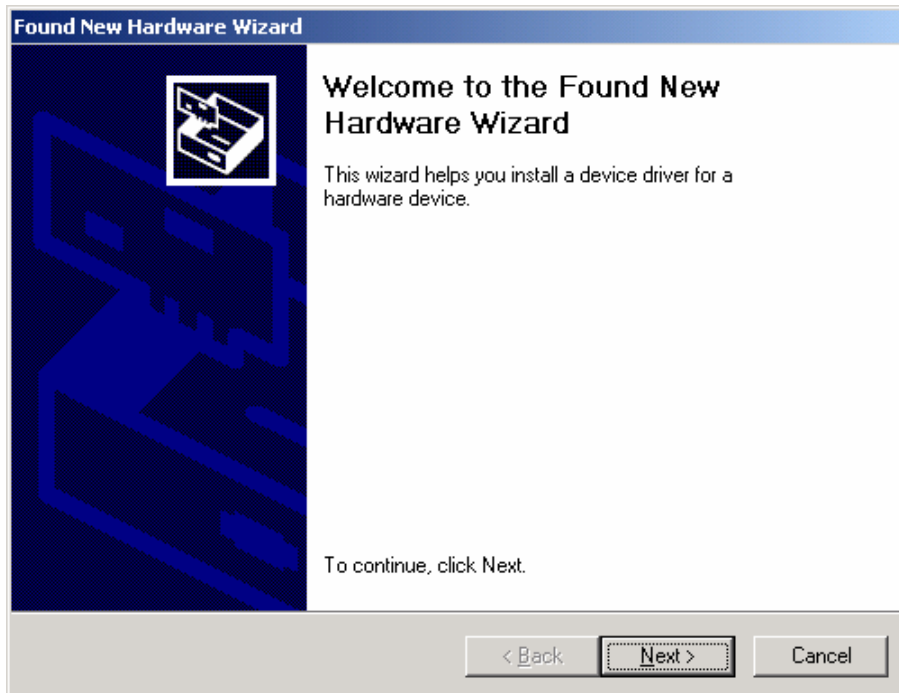
Check if there is any error icon next to the **PLANEX GW-NS11X 11Mbps Wireless LAN Card**

6-2 Set up GW-NS11X for Windows 2000

Step 1: After inserting the GW-NS11X into the CardBus slot on your computer, Windows will auto-detect the GW-NS11X.



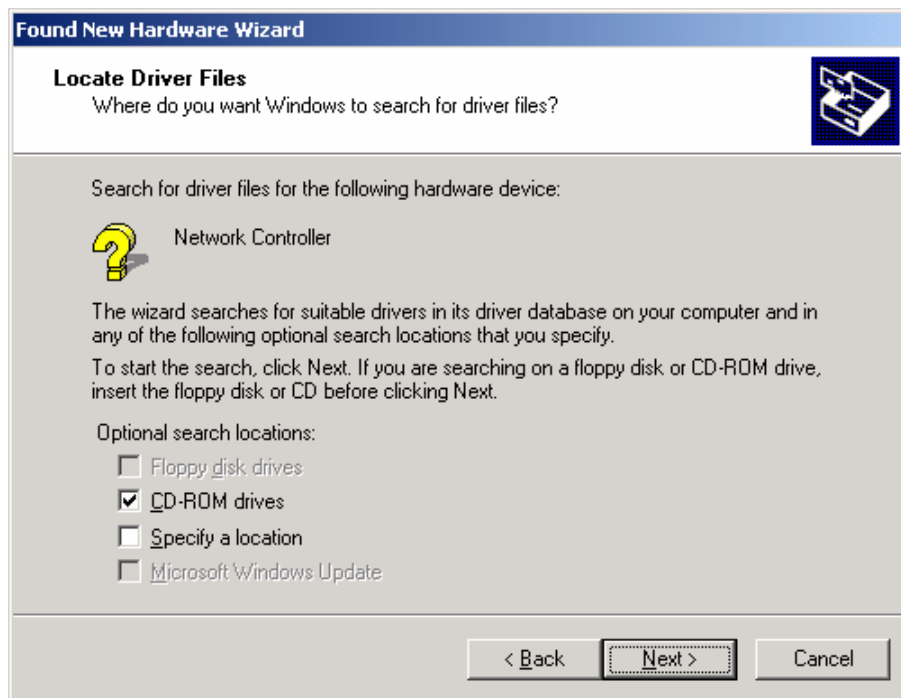
Step 2: A “Found New Hardware Wizard” window shows up. Click **Next** to proceed.



Step 3: Select “Search for a suitable driver for my device (recommended)”.



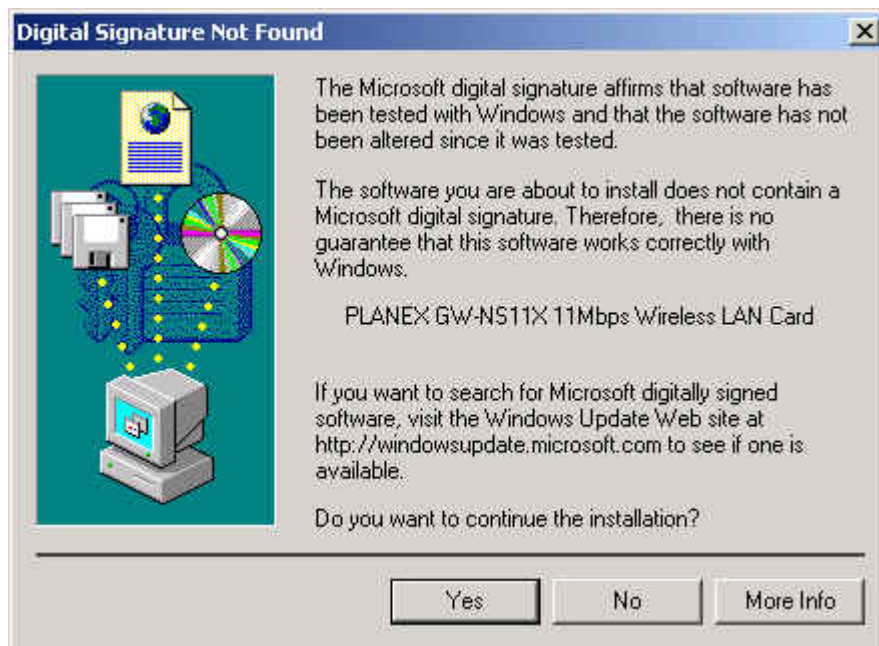
Step 4: Insert the Product CD-ROM into the CD-ROM drive. Specify the location where the driver is placed. Click on **Next** to install the driver.



Step 5: The windows will find “GW-NS11X”. Click on **Next** to continue.



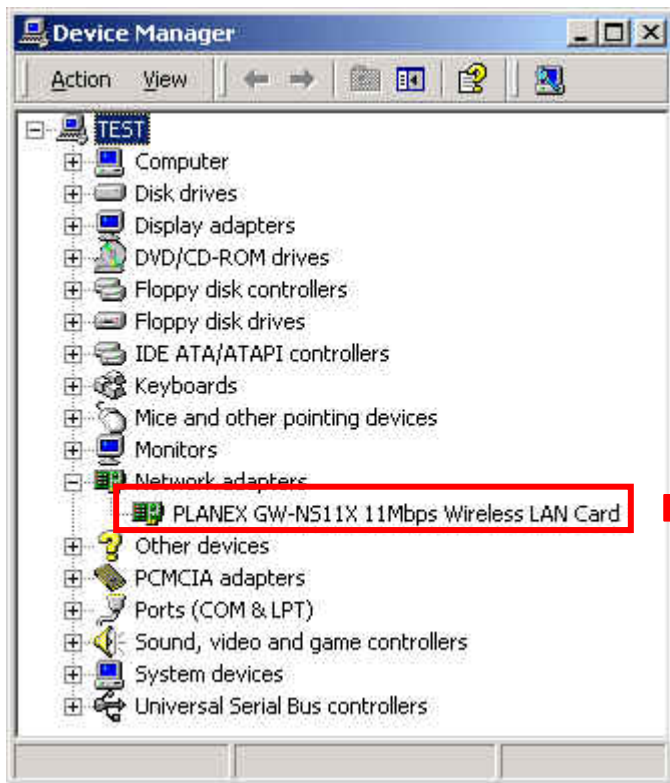
Step 6: Click on **Yes** to continue



Step 7: Click **Finish** to complete the installation.



Step 8: Open **Control Panel/System/Device Manager**, and check **Network Adapters** to see if any error icon appears. If no, your GW-NS11X is working well.



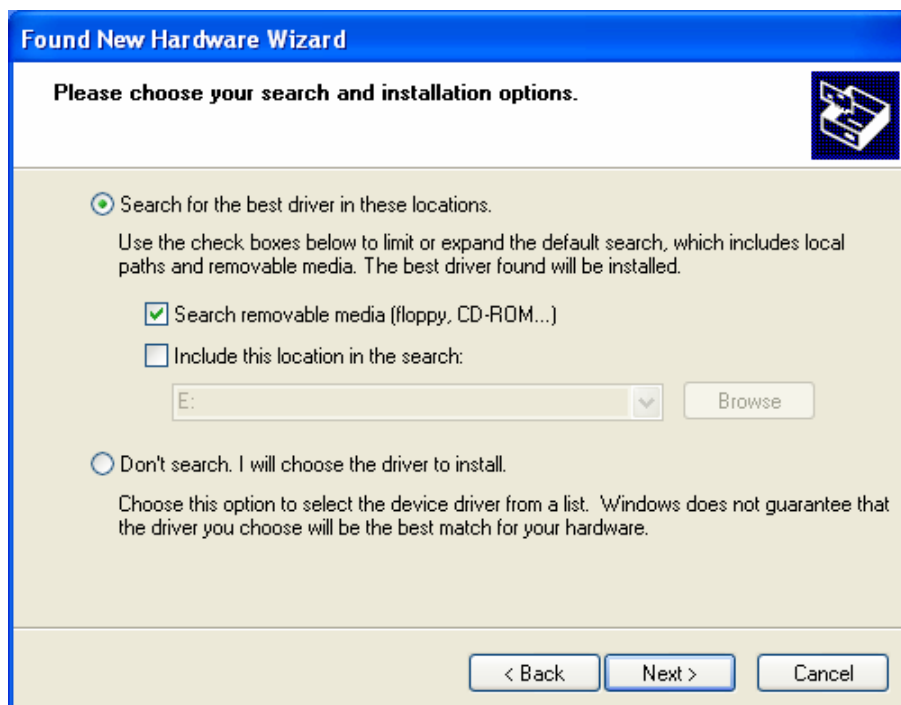
Check if there is any error icon next to the **PLANEX GW-NSX 11Mbps Wireless LAN Card**

6-3 Set up GW-NS11X for Windows XP

Step 1: After inserting the GW-NS11X into the CardBus slot on your notebook, the Windows will auto-detect the GW-NS11X and a “**Found New Hardware Wizard**” window will show up. Select “**Install from a list or specific (Advanced)**” to install the driver.



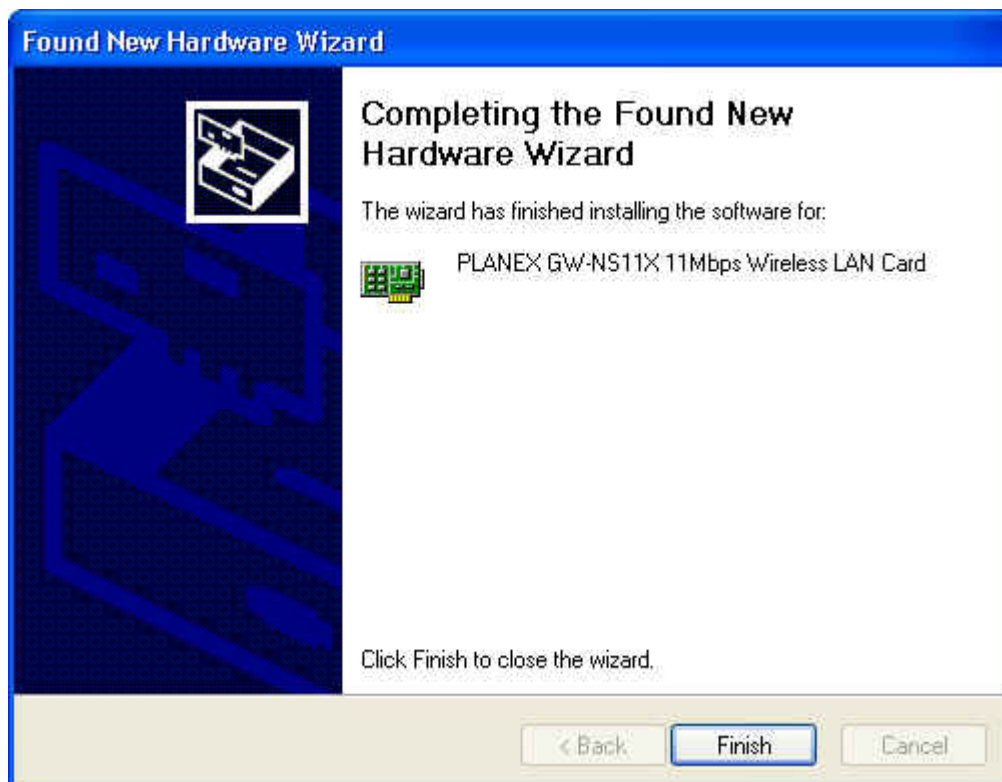
Step 2: Insert the Product CD-ROM into the CD-ROM drive. Check the “**Search removable media (floppy, CD-ROM...)**” check box and click on **Next** to install the driver.



Step 3: The windows will find “**PLANEX GW-NS11X 11Mbps Wireless LAN Card**” and start copying corresponding files into the system. Click on **Continue Anyway** to continue.

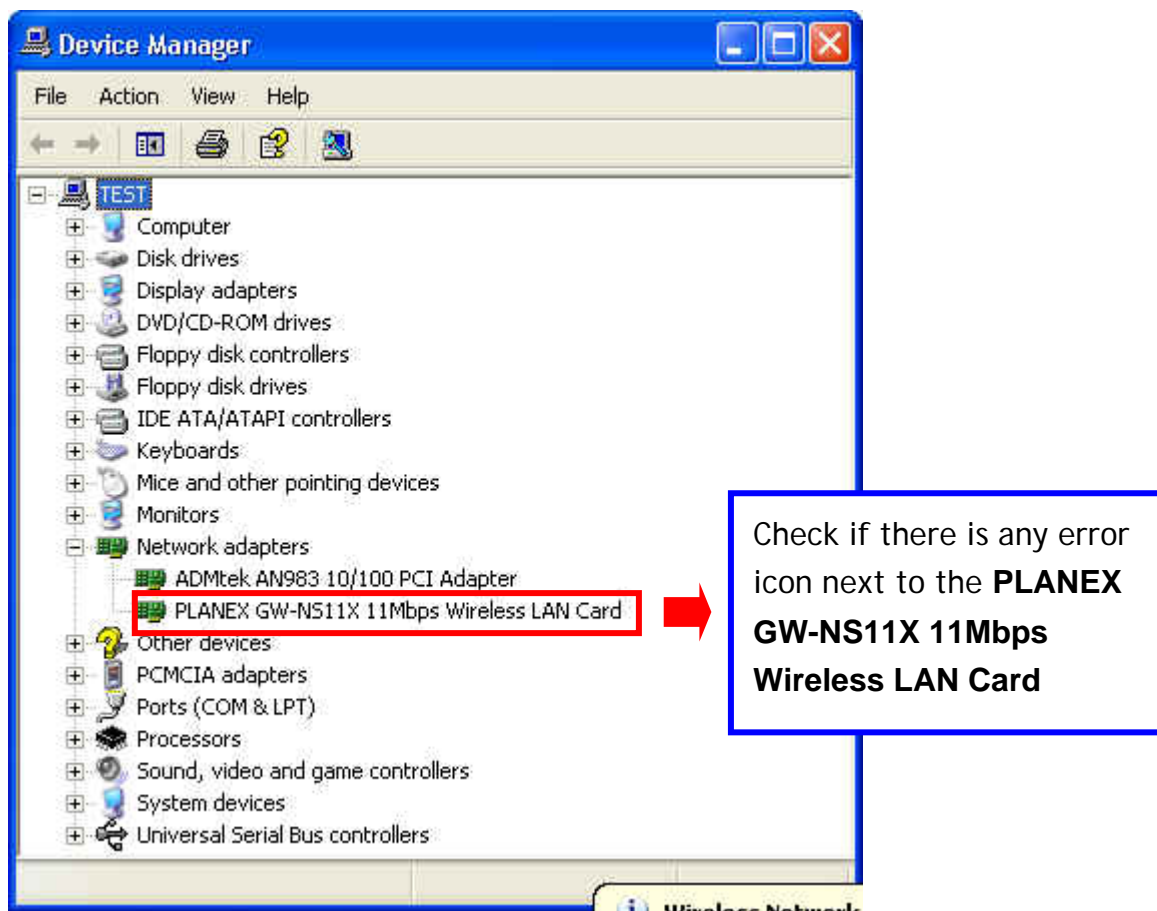


Step 4: Click **Finish** to complete the installation.

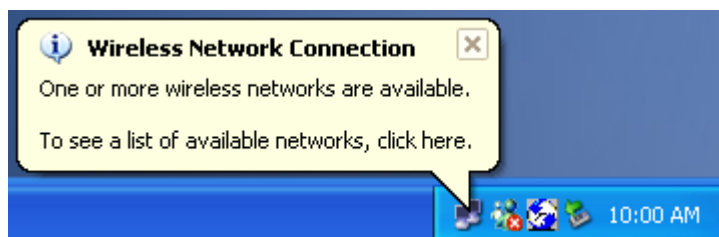


Step 5: Right click **“My Computer”** from **Start**, select **Properties**, go to the **Hardware** tab and click the **Device Manager** button to see if any error icon

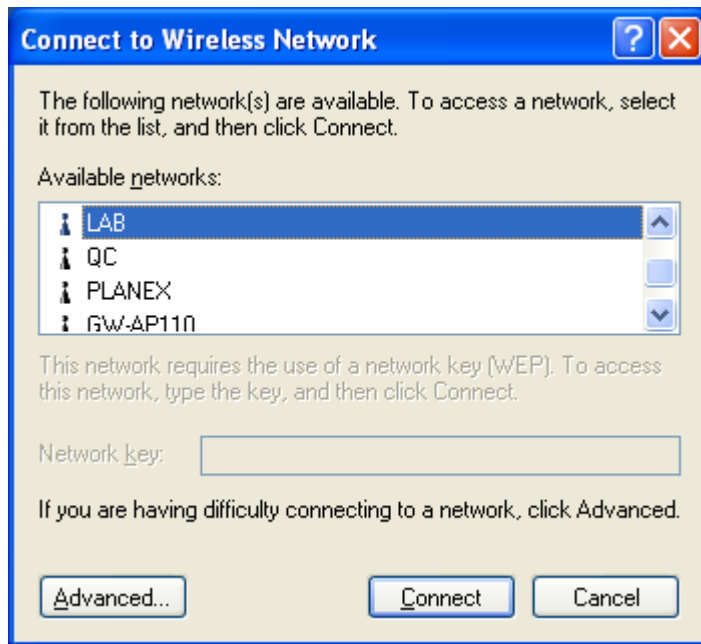
appears next to the **Network Adapter/GW-NS11X**. If no, your GW-NS11X is working well.



Step 5: After installing the GW-NS11X, the Windows XP will display a “Wireless Network Connection #” message.

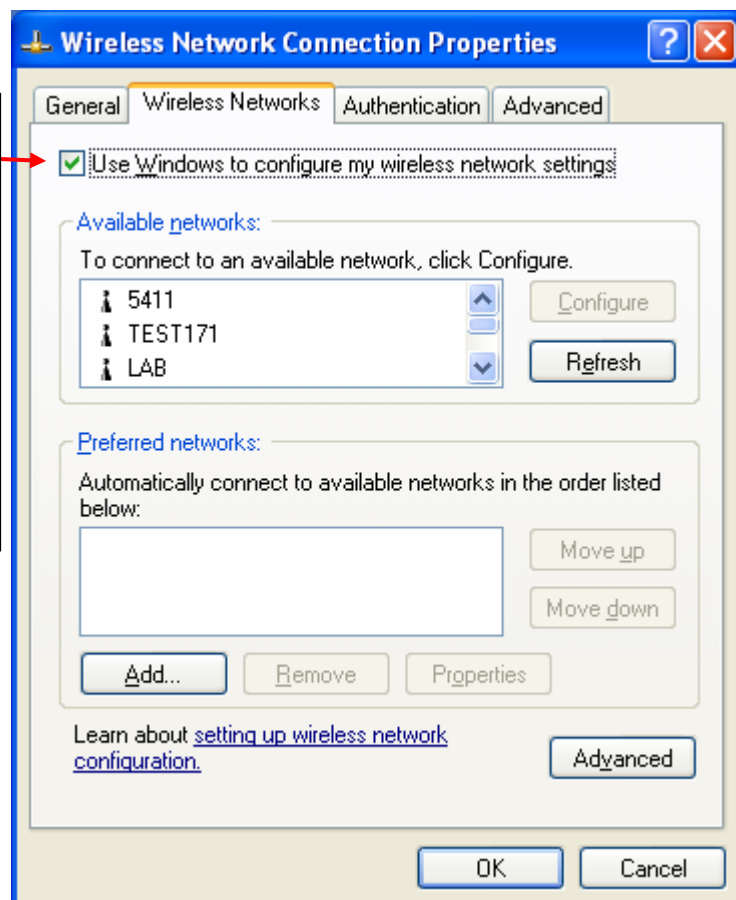


Click on the message and the “Automatic Wireless Network Configuration will then appear automatically and allow use to choose to connect a wireless infrastructure network (Access Point), shown as the below figure. You may click the Advanced button to make advanced configuration for the Wireless LAN Card, shown as below.



For more information on using the automatic wireless network configuration please refer to Windows XP Help file.

If you desire to use our WLAN Utility, you need to disable the Windows XP Automatic Wireless Network Configuration first by un-checking this check box.



However, the GW-NS11X Utility, which comes with the GW-NS11X, provides you more tools to configure the GW-NS11X and monitor the wireless connection. For more information on installing and using the GW-NS11X utility.



Note: To use the GW-NS11X utility under Windows XP, you need to disable the *Automatic Wireless Network Configuration* first. Steps are described as follows:

- Right click the **Network Connections** icon. Select **Properties**.
- Go to the **Wireless Networks** tab.
- Uncheck the “**Use Windows to configure my wireless network settings**” check box and click the **OK** button (see the above picture).

6. Using the GW-NS11X Utility

The following sections cover the GW-NS11X utility installation and usage.

Installation in Windows

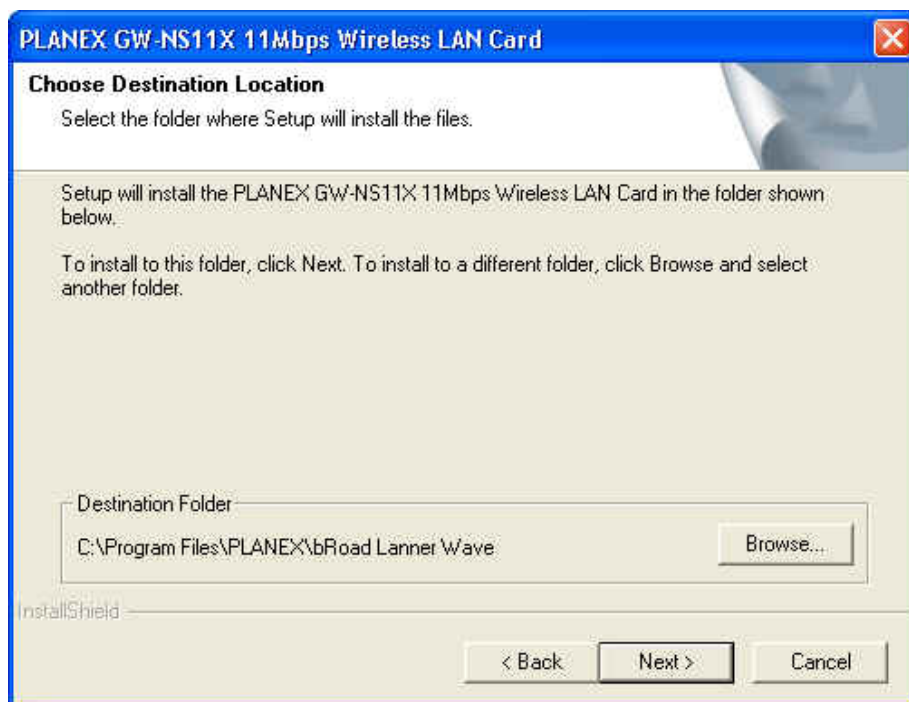
After you have installed the GW-NS11X driver and have rebooted the computer.

Please follow the steps below.

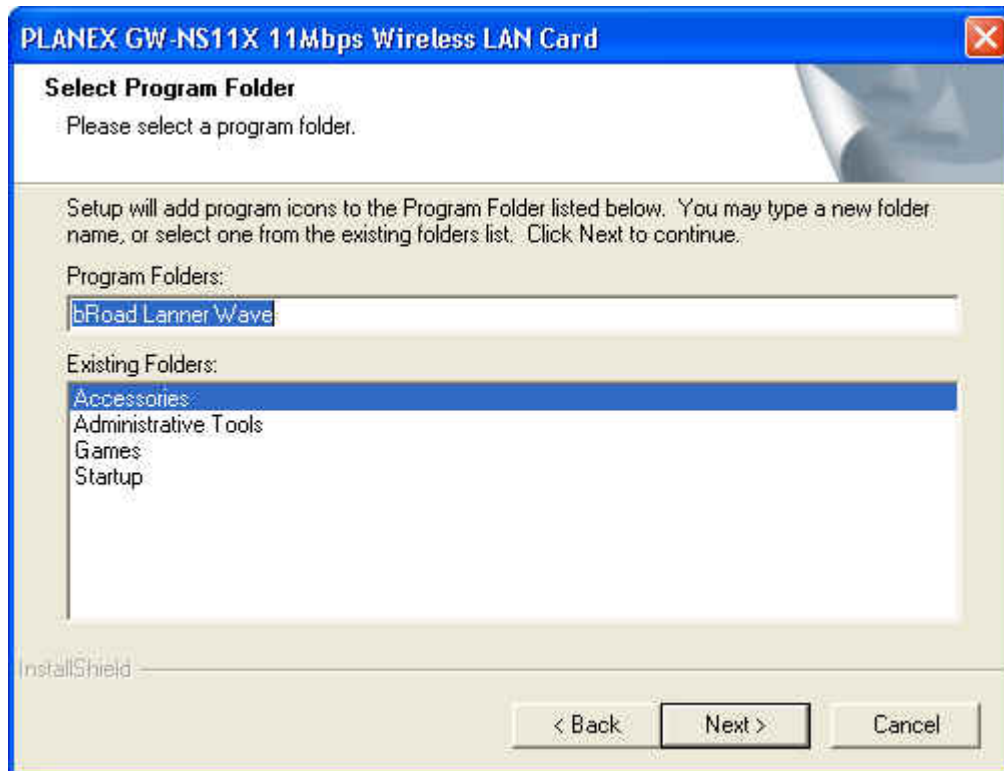
- 1) Execute **WLSetup.exe** in your CD-ROM drive.
- 2) The following screen appears:



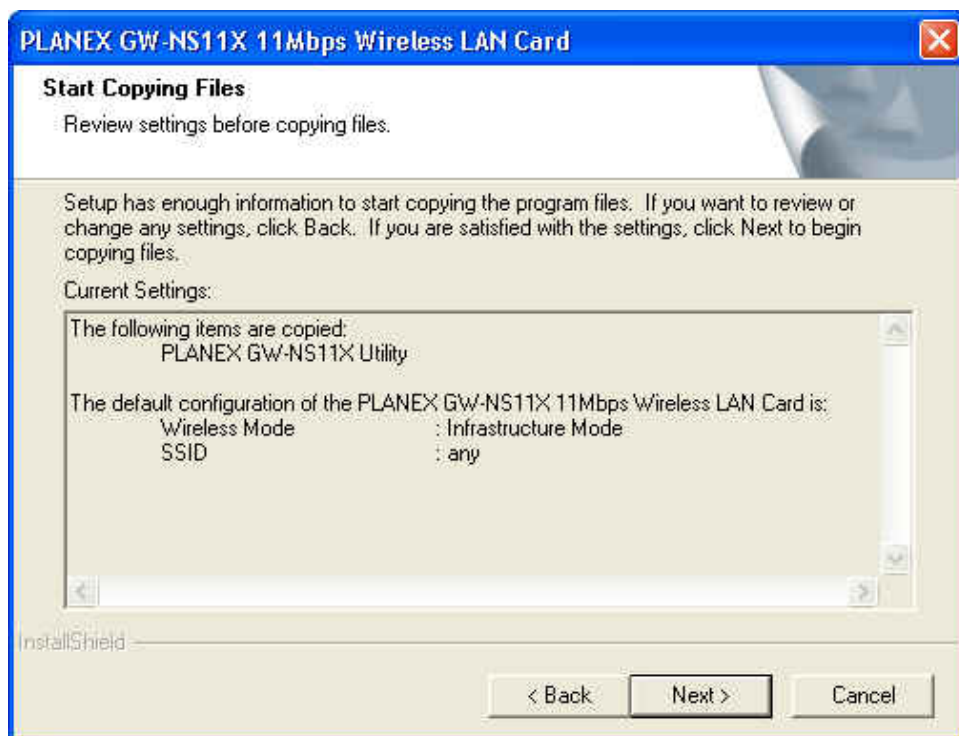
3) Click **Next** to continue.



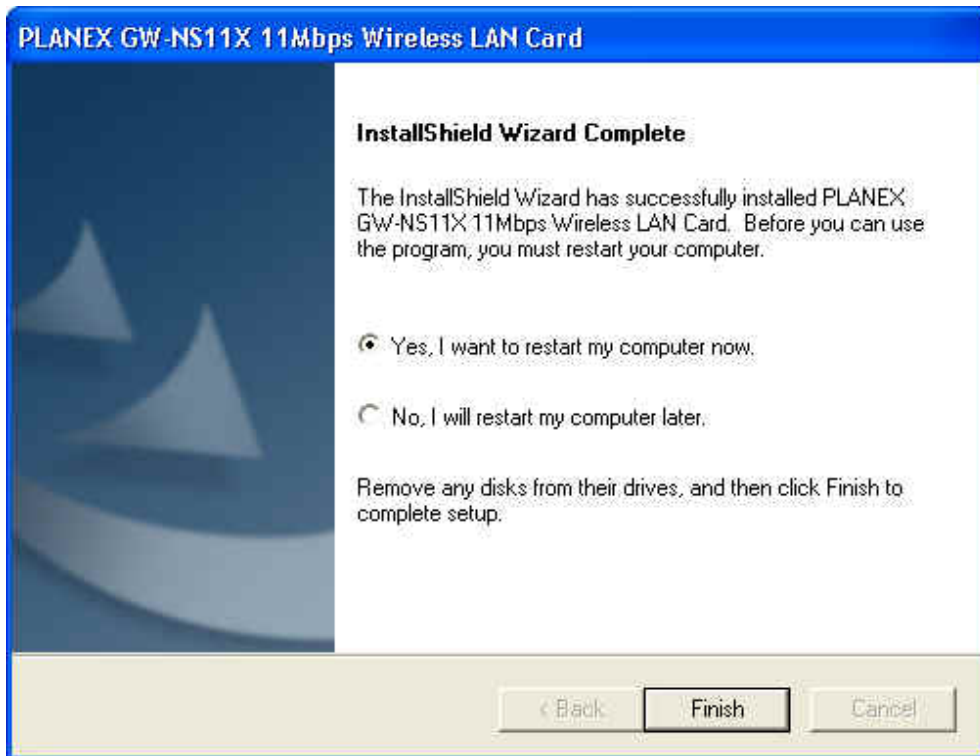
4) Select the default path for the wireless utility or browse to an alternate path. Then
5) click **Next**. The following screen appears:



- 6) Type in a Program Folder name or select the default name and click **Next**. Setup installs the software and the following screen appears:

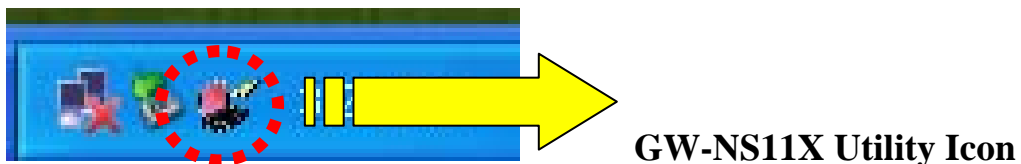


- 7) Click **Next** to continue.





8) Click **Finish** to restart your computer.

After you have installed the utility and have restarted your computer, you will see the wireless utility icon in the Windows taskbar:



Wireless Utility Icon

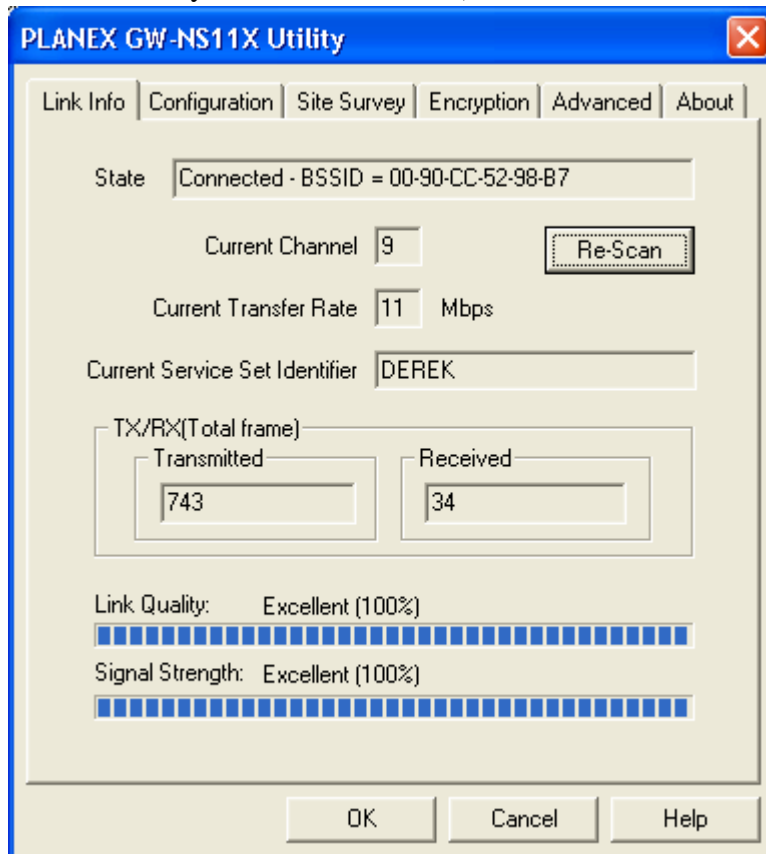
Icon	Meaning
	Green: indicates a connection is linked to a wireless network.
	Red: indicates that the wireless LAN card is looking for an available access point.

You can **double-click** the icon to open the wireless LAN card utility.

7. Configuring the WLAN Card

STEP 1 : Link Info

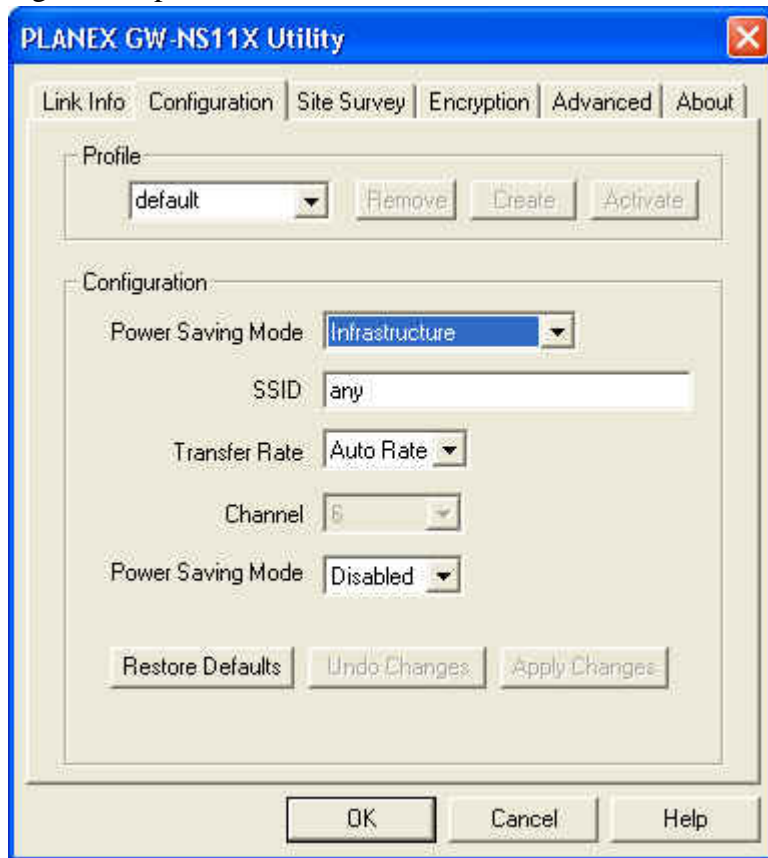
The **Link Info** screen shows you the status of your current connection. **Click Re-Scan** to search for wireless connection (the Card will search for the connection automatically when it is activated).



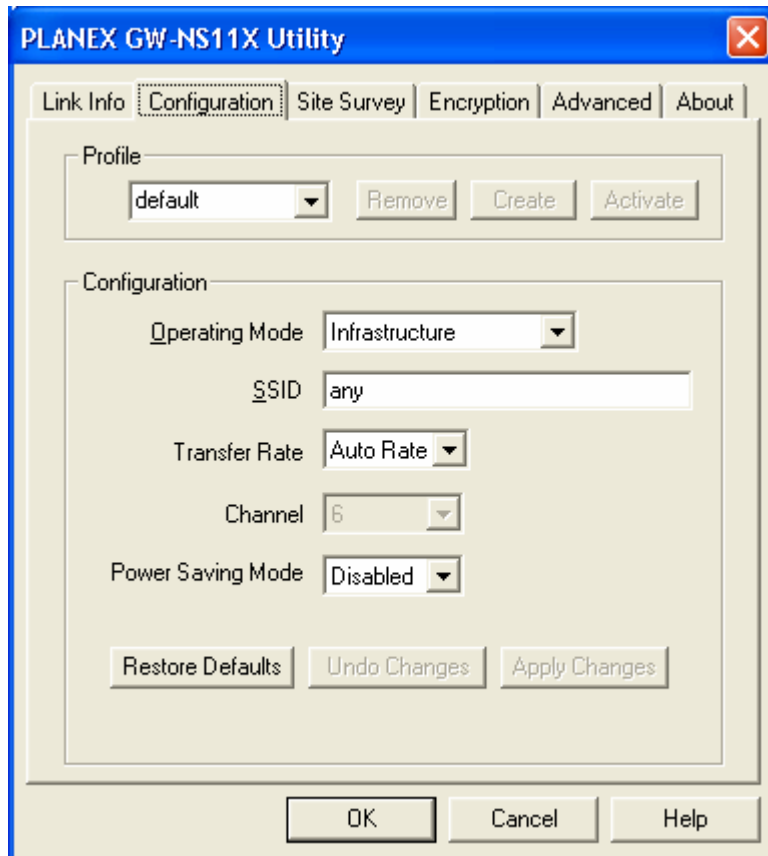
STEP 2 : Configuration

Select the “**Configuration**” tab. The **profile** setting allows you to save configurations in different profiles for different working environments. The default profile will contain the initial configuration setting when you install the Card. Under the **Operating Mode** drop-box, you may choose either **Infrastructure** or **Ad-Hoc**. The Infrastructure mode allows a wireless card to communicate with a wired network employing an Access Point, while the Ad-Hoc mode allows wireless-to-wireless, peer-to-peer communication. If you choose Infrastructure, the **SSID** should have the same name as the Access Point. Under **Power Saving Mode**, you can select **Enabled** to allow your adapter to go to sleep mode while the Card

doesn't proceed the data transmission. Or select **Disabled** to make the Card never go to sleep mode.

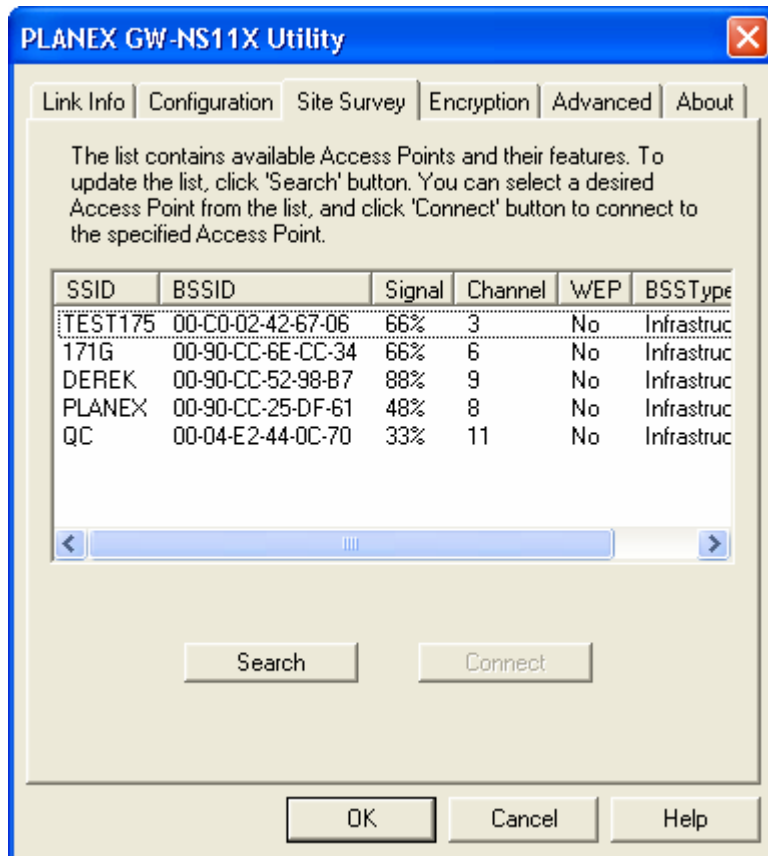


- If you choose **Ad-Hoc**, all clients should share the same **SSID** name and should use the same channel.. Click **Apply** to save the settings.



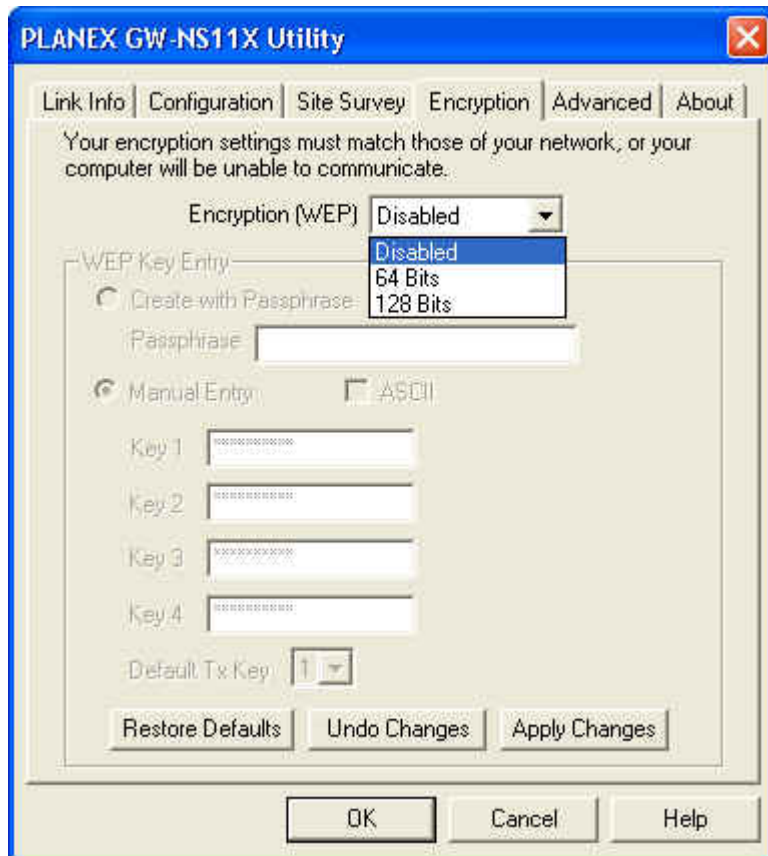
STEP 3 : Site Survey

Select the “**Site Survey**” tab. The list on the adjacent screen shows you available Access Points and their features. Click on the desired Access Point, then click **Connect** to connect or **Search** to search for more Access Points. Click **OK** when you are finished.



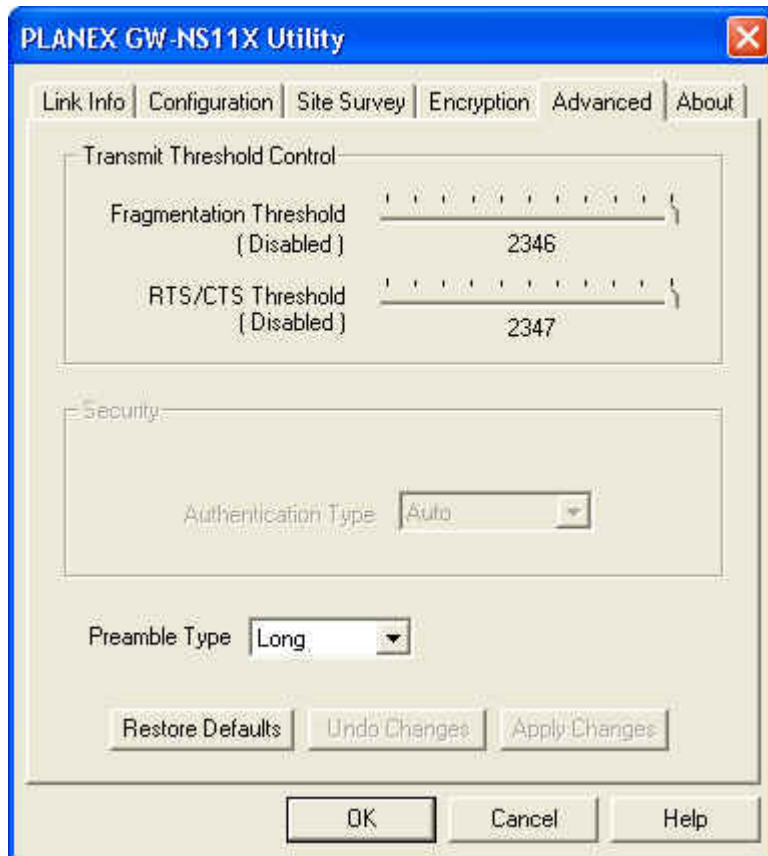
STEP 4 : Encryption

Click on the “**Encryption**” tab. Under the drop-box, you can choose to have WEP encryption **Disabled, 64-Bit, or 128-Bit**. Wired Equivalent Privacy (WEP) is an encryption scheme used to protect wireless data communication. The Disabled setting prevents the sharing of data with other computers on the WEP network. For data sharing to be enabled, select the level of encryption desired, either 64 or 128-bit.



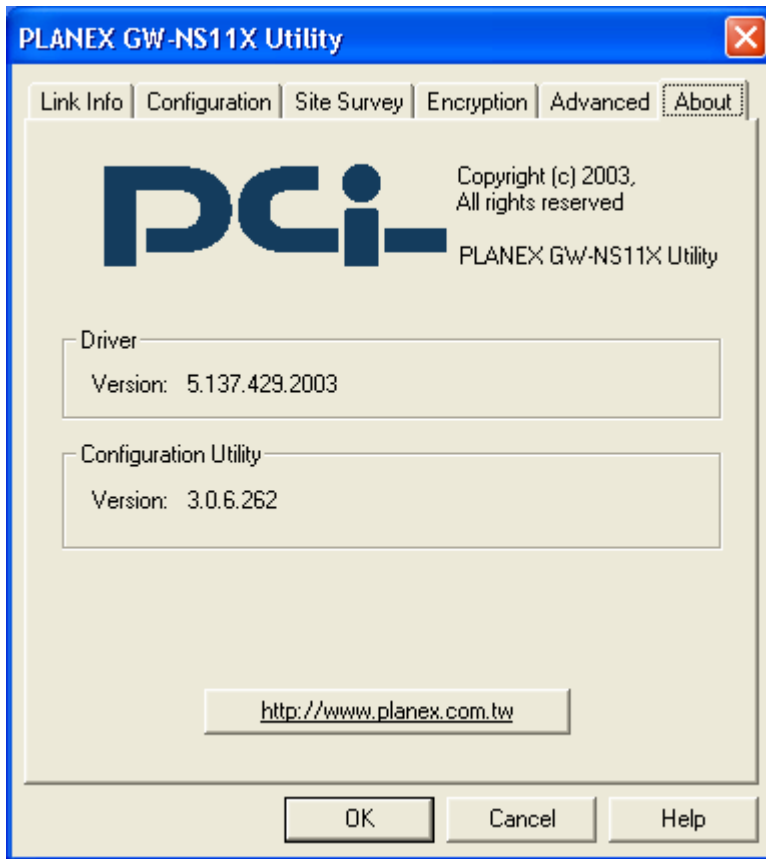
STEP 5 : Advanced

Select the “**Advanced**” tab. You can choose the **fragmentation threshold** to define the maximum data frame size your adapter will transmit. When the packet error rate is high, you may set the threshold value to transmit shorter frames. You may select **RTS/CTS threshold** to define when will your adapter send out RTS/CTS frames to reserve bandwidth for transmission. By using the RTS/CTS function, you may request bandwidth from AP to allow you have better chance to send out your data. For the **Security**, it’s only applicable while WEP is enabled. For the **Authentication Type**, the current supported algorithms are Open System, Shared Key, and Auto. The algorithm will be invoked when associated to Access Point. To associate to the desired Access Point you must set the same algorithm as the one of the desired Access Point. When select Auto mode, the driver can auto detect the Authentication Type of the Access Point you are going to associate. You can also select **Preamble Type**, which is for framing synchronization. The possible settings are Long and Short. The setting must be the same as the setting of the Access Point you are going to associate.



STEP 6 : About

The “**About**” tab shows you copyright and version information about the driver, the configuration utility, and the firmware. Click **OK** to complete the configuration.



Appendix A

Troubleshooting

Q&A

Problem: Windows can not recognize the card.

Solution: Please check if PC Card support is installed. Double-click the PC Card icon on Control Panel. If PC Card support is not activated, you should activate it now.

Problem: Ejecting the card from the CardBus socket hangs or reboots the computer.

Solution: To prevent this phenomenon from occurring, stop the card by using the PC Card tool in the Control Panel or the PC Card icon on the taskbar before you remove the card.

Problem: The card cannot be detected when reinserted.

Cause: This is caused by certain unstable CardBus status lines when the card is removed and reinserted. The Windows drivers may read an incorrect status during this period of signal instability, and fail to detect the correct status of the card.

Solution: The card can be detected by clicking Refresh in Device Manager.

Question: What is the Microsoft digital signature?

Answer: Drivers that pass Microsoft Windows XP/2K/ME certification receive a digital signature file from Microsoft. The GW-NS11X card does not have such a digital signature, however it is fully compatible with Windows XP/2K/ME.

Question: The Wireless Utility icon on system tray is always

red.

Answer: Please make sure that all clients & AP have the same SSID. The SSID is case sensitive. And make sure you are within range of an Access Point or client.

Question: Can not connect to one of the clients in the network.

Answer: First of all, make sure that all clients are up and running with a green Wireless Utility icon. And please check your TCP/IP setup is correct for your network.

Question: What is WEP?

Answer: As described in the IEEE 802.11 standard, WEP (Wired Equivalent Privacy) is a data privacy mechanism based on a 64-bit or 128-bit shared key algorithm.

Appendix B

Specifications

Product Name	PLANEX GW-NS11X11Mbps Wireless LAN Card
Type	3.3V 32-bit CardBus
Standards	IEEE802.11b standard
Network Architectures	Infrastructure and Ad-Hoc Mode
Operating Frequencies	2.4~2.4835GHz
Operating Channels	802.11b : 11 Channels (Canada America) 802.11b : 13 Channels (Europe) 802.11b : 14 Channels (Japan)
Data Rate	802.11b: 11, 5.5, 2, 1Mbps
Security	64/128-bit WEP
Operating Temperature	0 ~ 55°C
Storage Temperature	-25°C to 70°C
Relative humidity	10% to 90%