

# **OvisLink WL-1120USB**

## **User's Guide**

# REGULATORY STATEMENTS

## FCC Certification

The United States Federal Communication Commission (FCC) and the Canadian Department of Communications have established certain rules governing the use of electronic equipment.

### Part15, Class B

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

- 1) This device may not cause harmful interface, and
- 2) This device must accept any interface received, including interface 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 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 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 distance between the equipment and receiver.

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

### CAUTION:

- 1) To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.
- 2) This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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# INTRODUCTION

A wireless LAN links network users to LAN services without the hassle of cabling or wiring, which significantly brings mobile workers the freedom of staying connected to the network while roaming around a building or multiple buildings maintaining access to the Internet, e-mail, networked applications, and print services.

This device is the perfect solution for your wireless network applications based on the IEEE 802.11b standard that offers a data rate up to 11Mbps in a wireless LAN environment. It is a high-speed wireless network card that plugs into your notebook or desktop PC and accesses to the LAN or peer-to-peer networking easily without wires or cables. Whether you're at your desk or in the boardroom, it allows you to share printers, files, and other network resources.

The USB adapter is designed for a USB type A port of a laptop or desktop computer for creating a wireless workstation.

## Features

- Compliant with IEEE802.11b standard for 2.4GHz Wireless LAN
- USB 1.1 compliant
- USB Plug & Play
- Interoperable with existing network infrastructure
- Secure information transmission
- Freedom to roam while staying connected
- Compatible with specialty wireless products and services
- Up to 11Mbps data rate
- External Antenna is built in the card with LEDs indication
- Supports Window 98SE/2000/ME/XP

- Low power consumption
- Easy to install and configure

## LED Indicators

**Rx** (receive): Green, on

**Tx** (transmit): Green, on

**Power:** Green, on

# INSTALLATION

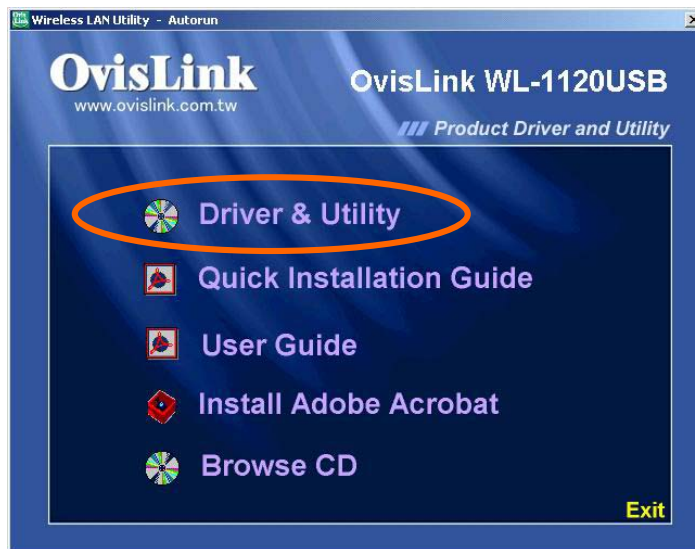
**Caution:** Do not insert the **Wireless USB Adaptor** into your computer until the procedures in “**Install the Driver & Utility**” has been performed.

## Install the Driver & Utility

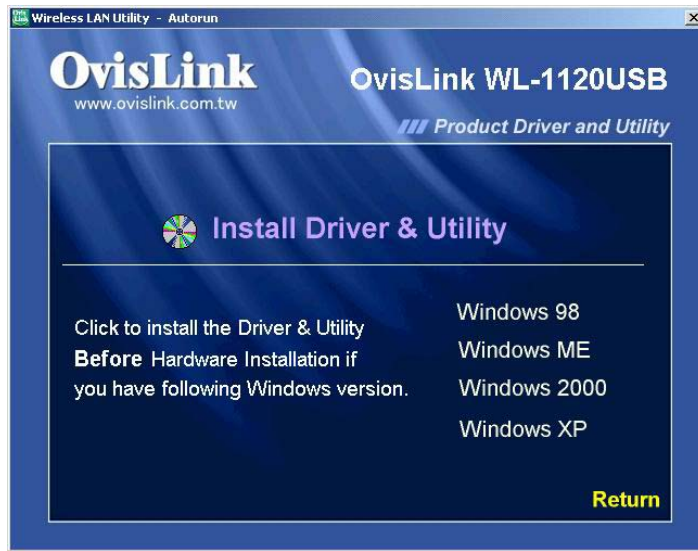
1. Exit all Windows programs. Insert the CD-ROM into the CD-ROM drive of your computer.

If the CD-ROM is not launched automatically, go to your CD-ROM drive (e.g. drive D) and double-click on **Setup.exe**.

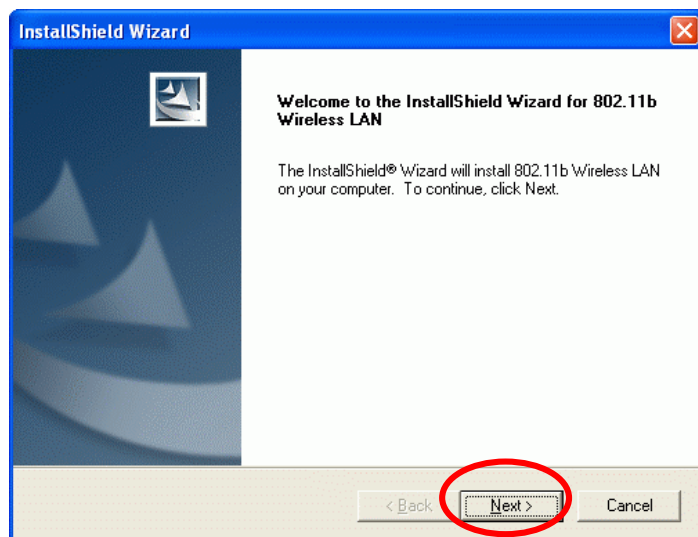
2. The main screen of the CD-ROM opens. Click **Driver & Utility** to start the installation.



3. Click the **Windows Version** to install the **Driver & Utility**. (There are some slight differences in the installation process between the different Windows operating systems.)

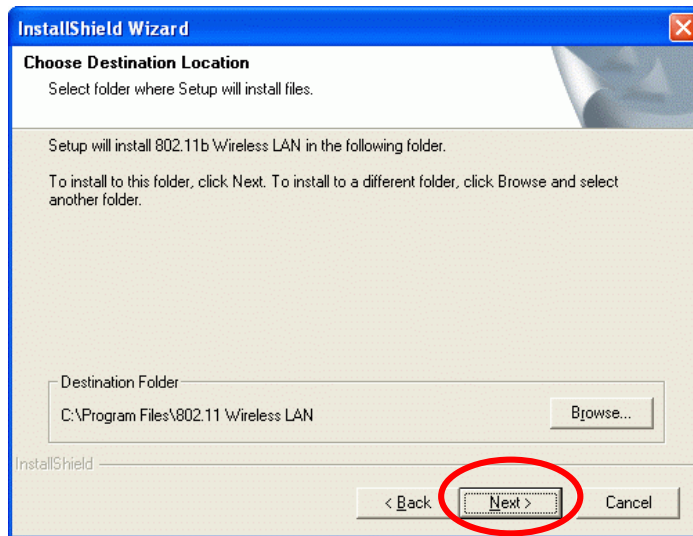


4. When the Welcome screen appears, click **Next** to continue.

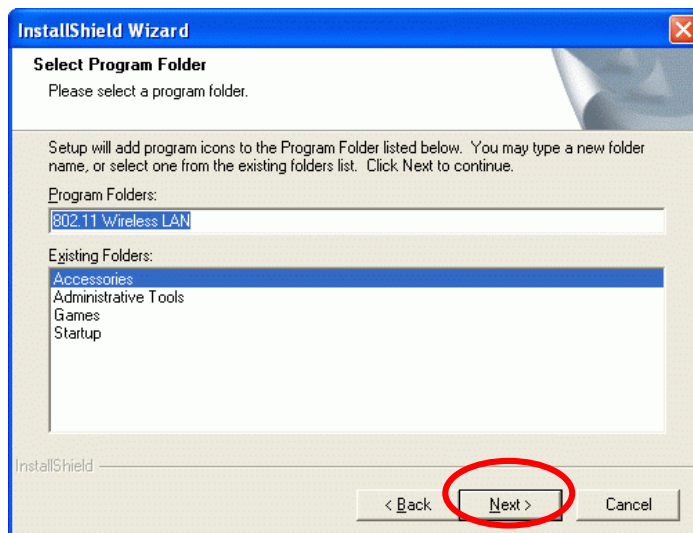


5. The **Choose Destination Location** screen will show you the default destination chosen by the utility. Click **Next** to continue.

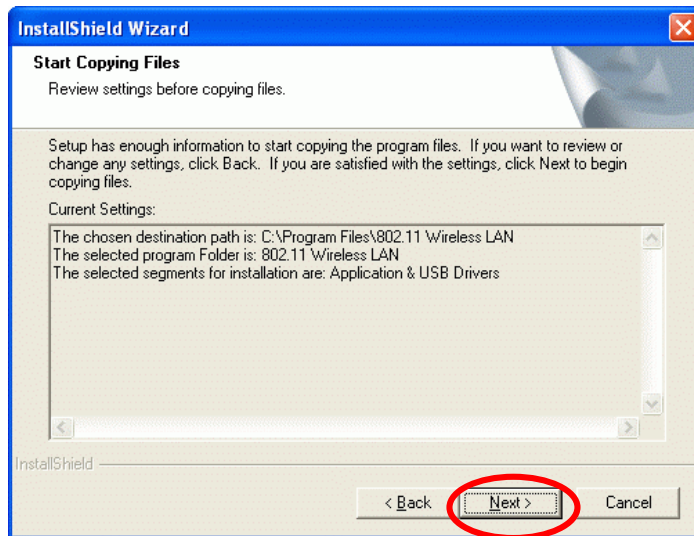




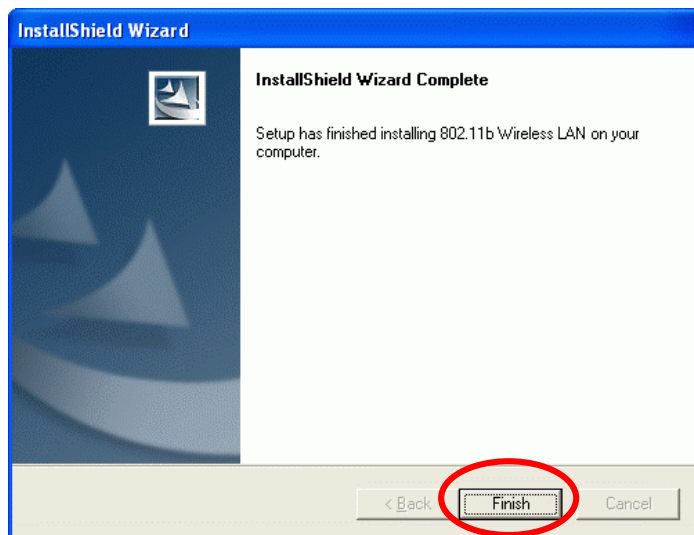
6. In **Select Program Folder**, click **Next** to continue.



7. In **Start Copying Files**, click **Next** to continue.



8. After the Configuration Utility has been successfully installed, click **Finish**.



## Install the Device

1. Plug the square end (**Type B**) of USB cable into the adapter's USB port.
2. Plug the rectangle end (**Type A**) of USB cable into the PC's USB port.

## In Windows 98SE

**For Windows 98SE users:** As you perform the installation, have your system operating CD-ROM at hand. You may be asked to insert the OS CD-ROM for the system to download a specific driver.

1. Insert **Windows 98SE** CD-ROM, and then click **OK**.



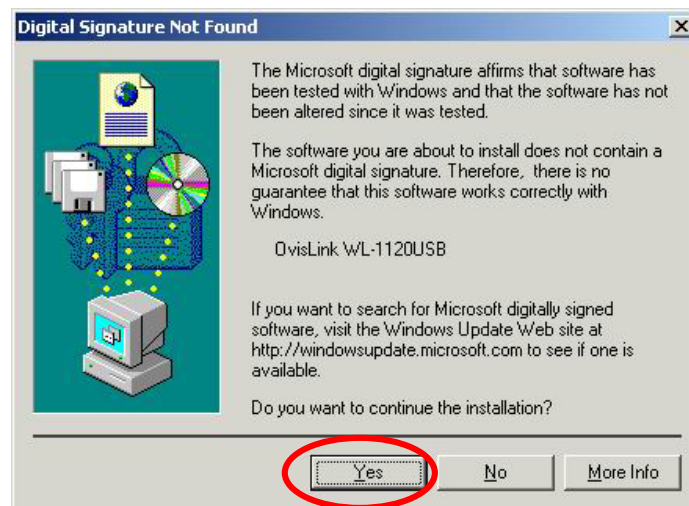
2. Click **Finish** to complete the installation.



## In Windows 2000

During the installation, when the **Digital Signature Not Found** message appears, click **Yes** to continue.

1. When Windows prompts you to restart your computer, click **Yes**.
2. In **Digital Signature Not Found** window, click **Yes** to continue.



3. Click **Finish** to complete the installation.



4. Restart your computer.

## In Windows XP

1. Select **Install the software automatically (Recommended)** and click **Next**.



2. Click **Continue Anyway** to proceed.



3. Click **Finish** to continue the installation.

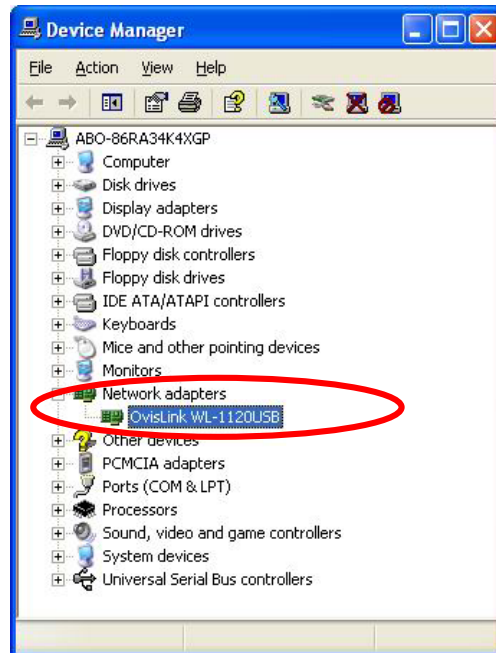


### For Linux Driver Users:

This device supports Linux to install the Linux Driver. Please refer to [readme.txt](#) in Linux Folder.

### Verify

To verify if the device exists in your computer and is enabled, go to **Start → Settings → Control Panel → System (→ Hardware) → Device Manager**. Expand the **Network adapters** category. If the **OvisLink WL -1120USB** is listed here, it means that your device is properly installed and enabled.

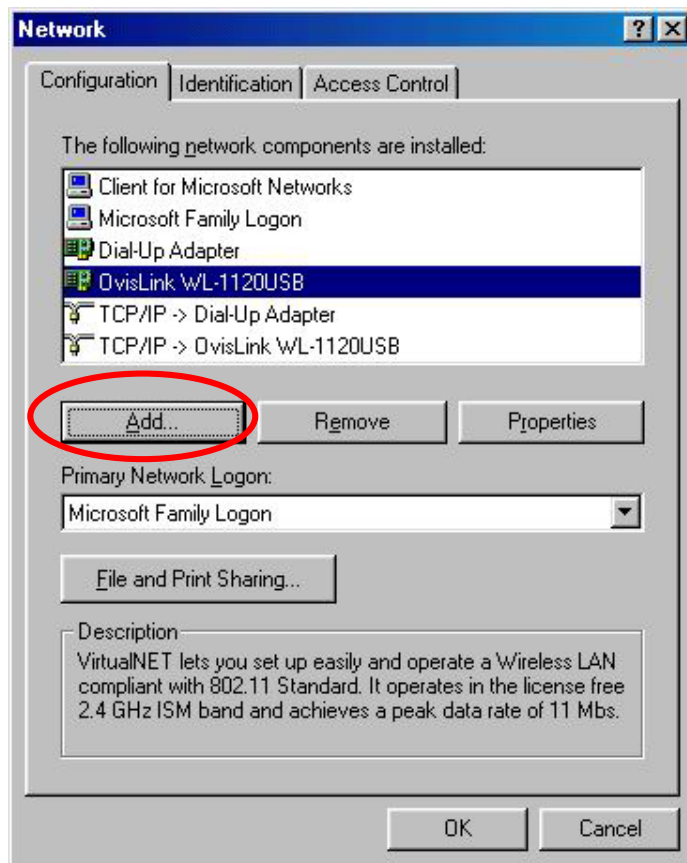


# NETWORK CONNECTION

Once the driver has been installed, you must make some changes to your network settings.

## In Windows 98SE/ME

1. Go to Start → Settings → Control Panel → Network.
2. Make sure that you have all the following components installed.

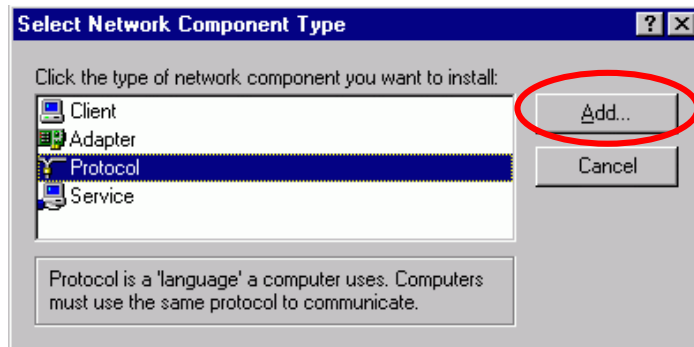


- **OvisLink WL -1120USB**
- **IPX/SPX-compatible Protocol**
- **NetBEUI**
- **TCP/IP**

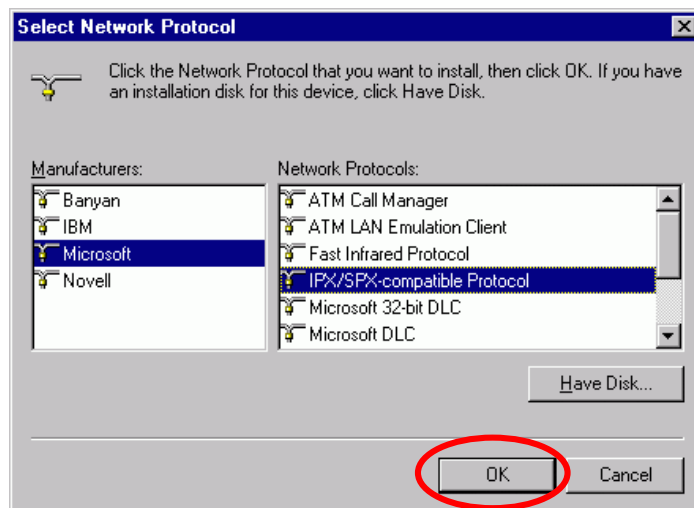


If any components are missing, click on the **Add** button to add them in. All the protocols and clients required listed above are provided by Microsoft.

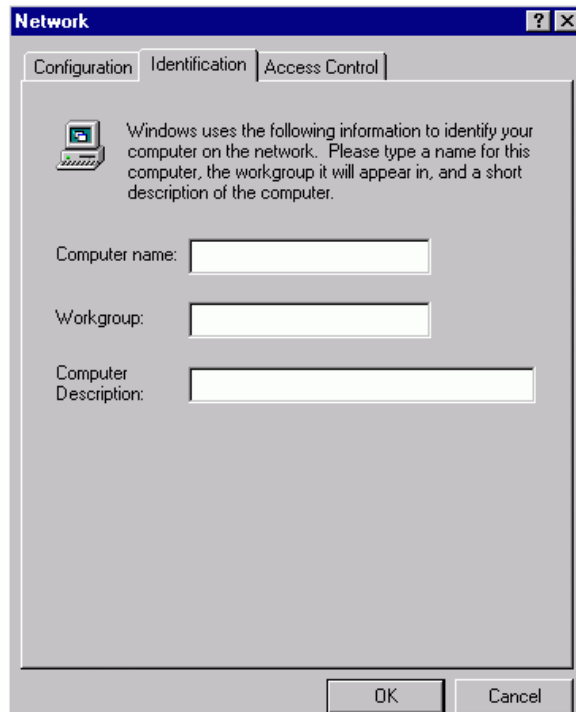
3. After clicking **Add**, highlight the component you need, click **Add**.



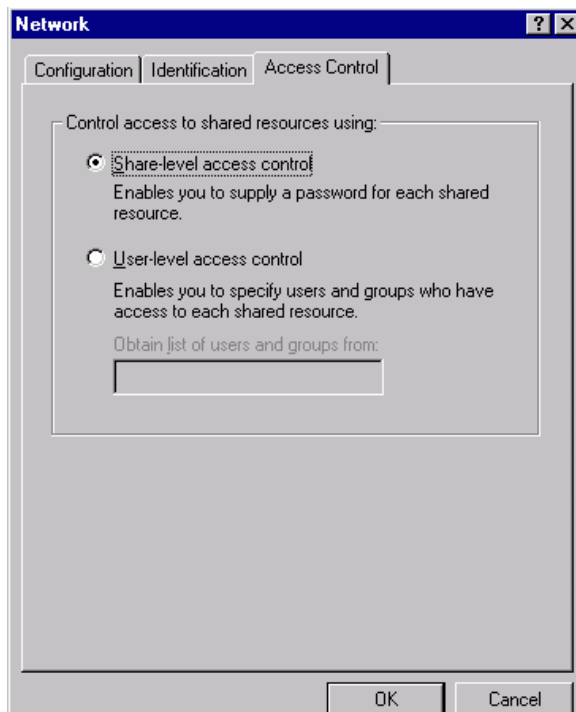
4. Highlight **Microsoft**, and then double click on the item you want to add. Click **OK**.



5. For making your computer visible on the network, enable the **File and Print Sharing**.
6. Click the **Identification** tab. Make up a name that is unique from the other computers' names on the network. Type the name of your workgroup, which should be the same used by all of the other PCs on the network.



7. Click the **Access Control** tab. Make sure that “**Shared-level access control**” is selected. If connecting to a Netware server, share level can be set to “**User-level access control.**”



8. When finished, reboot your computer to activate the new device.
9. Once the computer has restarted and Windows has booted up, a **Logon** window will appear and require you to enter a username and password. Make up a username and password and click **OK**. Do not click the **Cancel** button, or you won't be able to log onto the network.
10. Double-click the **Network Neighborhood** icon on the Windows desktop, and you should see the names of the other PCs on the network.

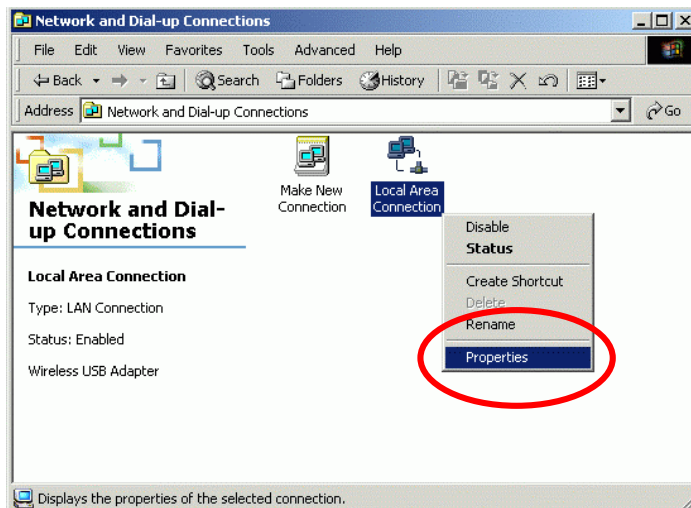
## In Windows 2000/XP

1. (In **Windows 2000**)

Go to **Start → Settings → Control Panel → Network and Dial-up Connections → Local Area Connection → Properties**.

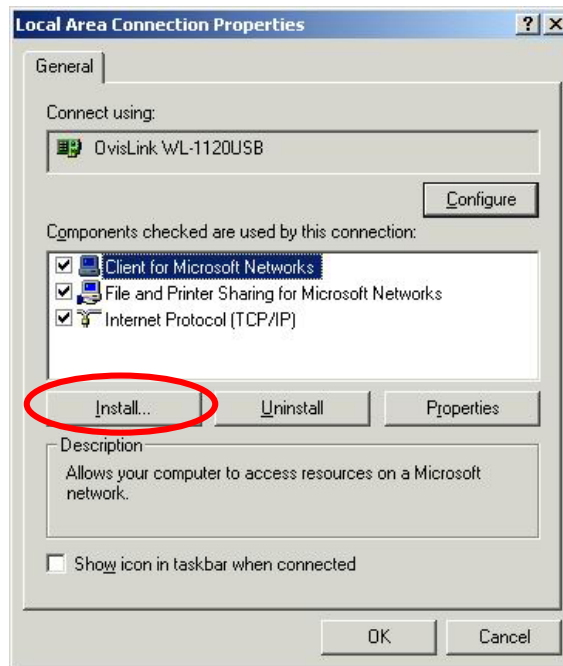
(In **Windows XP**)

Go to **Start → Control Panel → Network Connections → Wireless Network Connection Enabled OvisLink WL -1120USB → Properties**.

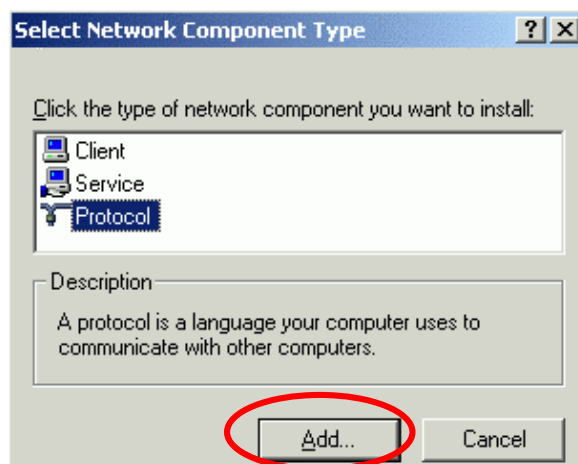


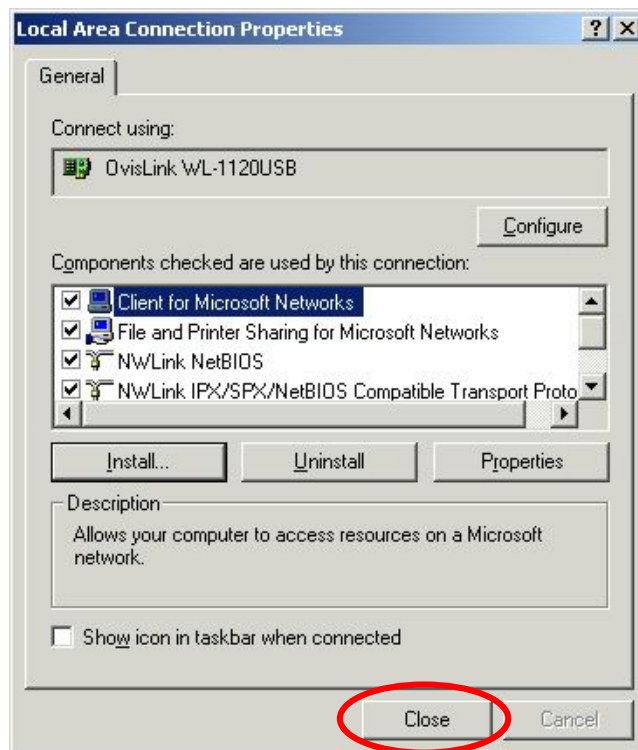
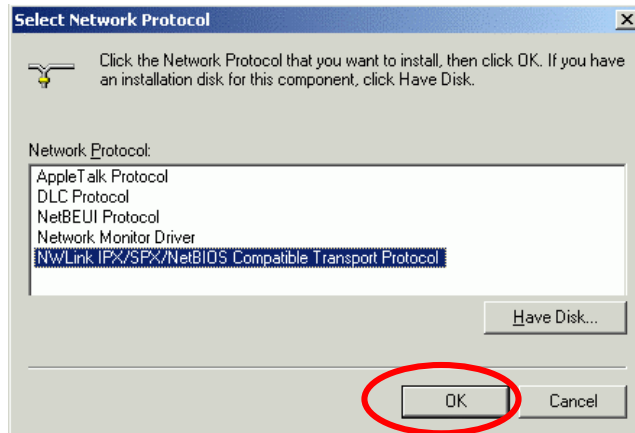
2. Make sure that you have all the following components installed.

- **Client for Microsoft Networks**
- **NWLink NetBIOS**
- **NWLink IPX/SPX/NetBIOS Compatible Transport Protocol**
- **Internet Protocol (TCP/IP)**



3. If any components are missing, click on the **Install...** button to select the **Client/Service/Protocol** required. After selecting the component you need, click **Add...** to add it in





4. For making your computer visible on the network, make sure you have installed **File and Printer Sharing for Microsoft Networks**.
5. When finished, you must restart your computer to complete installation.

# CONFIGURATION

**Note:** For Windows XP users, you have an option of using one of two Configuration Utilities.

## 1) Use Windows XP Configuration Utility. (the default setting)

Please refer to [Use Windows XP Configuration Utility](#) section to use the configuration.

## 2) Use Manufacturer's Configuration Utility

If you want to use the Configuration Utility that came with the supplied CD-ROM, you need to disable the Windows XP's wireless configuration.

1. Double-click the network status icon. (see Fig. 1)
2. Click **Advanced**. (see Fig. 2)
3. Uncheck **Use Windows to configure my wireless network settings** then click **OK**. (see Fig. 3)

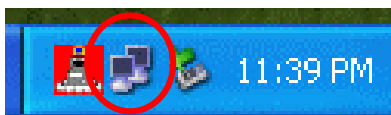


Fig. 1



Fig. 2

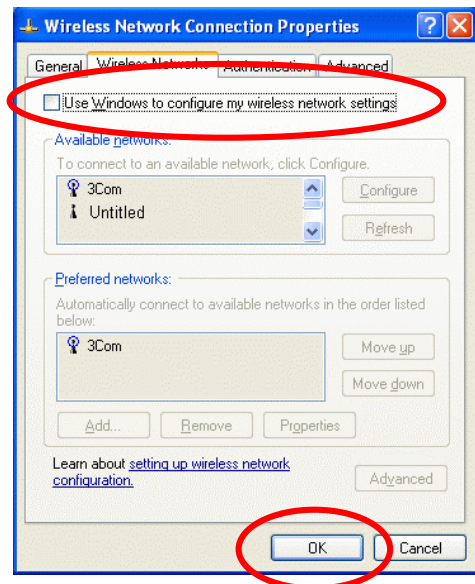
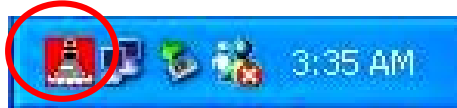






Fig. 3

## Use Manufacturer's Configuration Utility

After successful installation of the Wireless PC Card's driver and utility, the Configuration Utility icon will appear in the taskbar. You will be able to access the Configuration Utility through the Configuration icon.



### Icon Status

Mode	Icon	Link Status
Access Point mode		<b>Red.</b> The station is not associated to an Access Point.
		<b>Blue.</b> The station associates itself to an Access Point.
Peer-to-Peer mode		<b>Red.</b> The color is red only when the card is during resetting and initialization procedure.
		<b>Blue.</b> Peer-to-Peer mode is activated.

All settings are categorized into 7 tabs:

**Monitor Tab**

**Statistics Tab**

**Site Survey Tab**

**Encryption Tab**

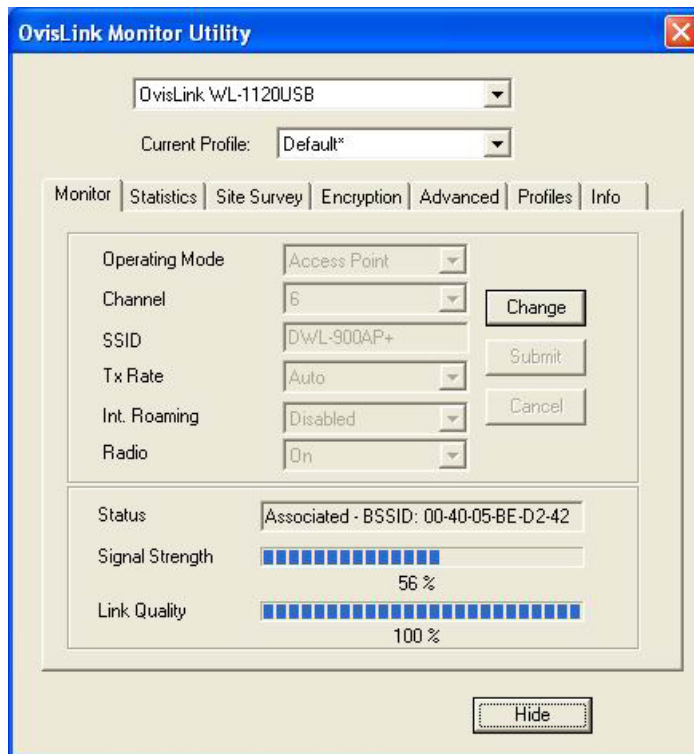
**Advanced Tab**

**Profiles Tab**

**Info Tab**

## Monitor Tab

The **Monitor** tab displays the current status of the Wireless USB Adapter.



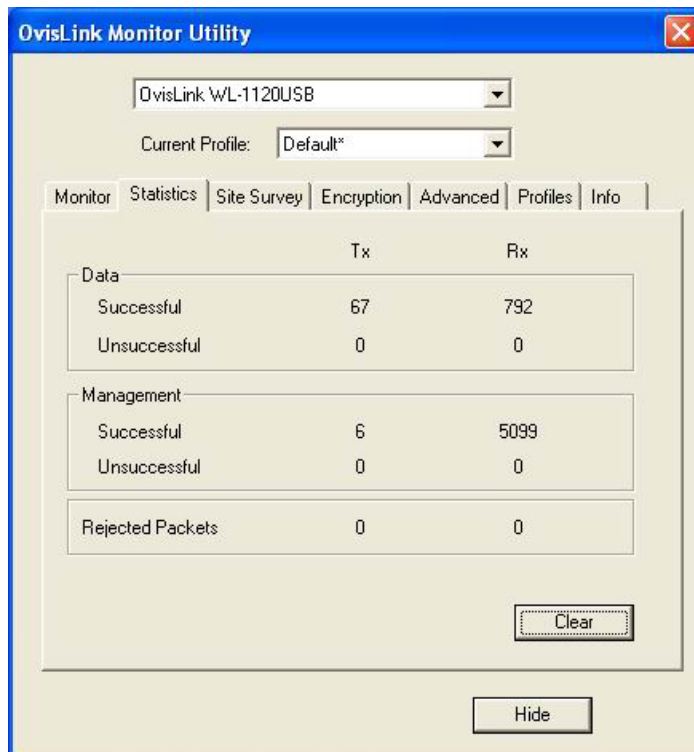
Item	Description
<b>Operating Mode</b>	Displays the current operating mode. ( <b>Access Point</b> or <b>Peer-to -Peer</b> ).
<b>Channel</b>	Shows the selected channel that is currently in use. (There are 14 channels available, depending on the country.)
<b>SSID</b>	<p>The <b>SSID</b> is the unique name shared among all points in your wireless network. The name must be identical for all devices and points attempting to connect to the same network.</p> <p>It shows the current SSID setting of the Wireless USB Adapter.</p>



<b>Item</b>	<b>Description</b>
<b>Tx Rate</b>	Shows the current transfer rate. ( <b>Fixed 1 Mbps, Fixed 2 Mbps, Fixed 5.5 Mbps, Fixed 11Mbps</b> or <b>Auto</b> )
<b>Int. Roaming</b>	Displays the current roaming status. ( <b>Disabled</b> or <b>Enabled</b> )
<b>Radio</b>	Displays the current status of the Radio Module function of the Wireless USB Adapter. ( <b>On</b> or <b>Off</b> )
<b>Status</b>	Displays the information about the status of the communication (the BSSID of the Access Point to which the card is associated).
<b>Signal Strength</b>	Displays the signal strength of the connection between the Wireless USB Adapter and the Access Point it connects.
<b>Link Quality</b>	Displays the link quality of the connection between the Wireless USB Adapter and the Access Point it connects.
<b>Change</b>	Click <b>Change</b> to change the configuration parameters such as <b>Operating Mode</b> , <b>SSID</b> and <b>Tx Rate</b> . (In Peer-to-Peer mode, <b>Channel</b> button is enabled; In Access Point mode, <b>Int. Roaming</b> button is enabled).
<b>Submit</b>	Click <b>Submit</b> to save the changes.
<b>Cancel</b>	Click <b>Cancel</b> to ignore the previous setting.
<b>Hide</b>	Click <b>Hide</b> to exit the application.

## Statistics Tab

The **Statistics** Tab displays the available statistic information including **Data packets**, **Management Packets** and **Rejected packets**. Press the **Clear** button to renew or update this list of statistics.



The screenshot shows the 'OvisLink Monitor Utility' window with the 'Statistics' tab selected. At the top, there are two dropdown menus: 'OvisLink WL-1120USB' and 'Current Profile: Default\*'. Below these are several tabs: 'Monitor', 'Statistics', 'Site Survey', 'Encryption', 'Advanced', 'Profiles', and 'Info'. The 'Statistics' tab is active, displaying three tables of data. The first table is for 'Data' packets, showing 'Successful' (Tx: 67, Rx: 792) and 'Unsuccessful' (Tx: 0, Rx: 0). The second table is for 'Management' packets, showing 'Successful' (Tx: 6, Rx: 5099) and 'Unsuccessful' (Tx: 0, Rx: 0). The third table is for 'Rejected Packets', showing '0' for both Tx and Rx. At the bottom right of the statistics area is a 'Clear' button, and at the very bottom of the window is a 'Hide' button.

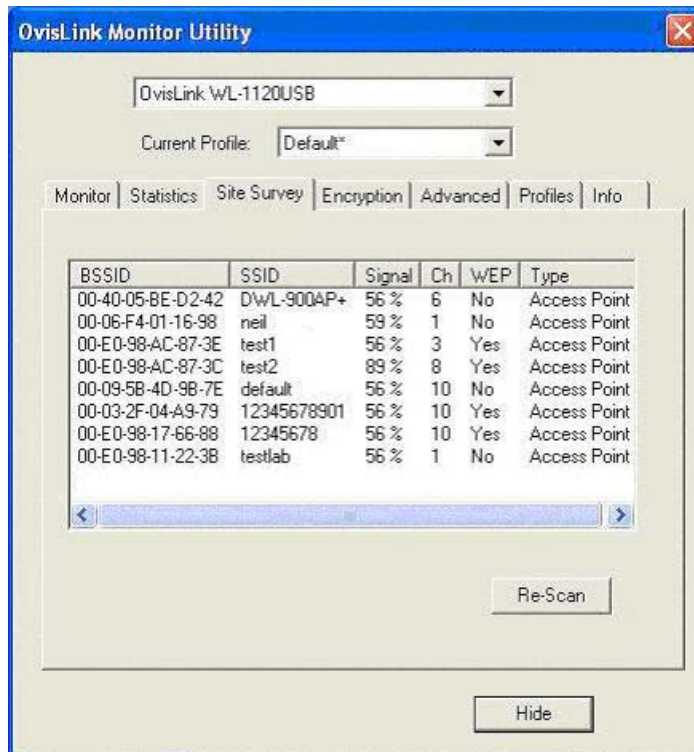
	Tx	Rx
<b>Data</b>		
Successful	67	792
Unsuccessful	0	0
<b>Management</b>		
Successful	6	5099
Unsuccessful	0	0
Rejected Packets	0	0

Clear

Hide

## Site Survey Tab

The **Site Survey** tab shows all the available Access Points or Peer-to-Peer types and their features.



Item	Description
<b>BSSID</b>	A set of wireless stations is referred to as a Basic Service Set (BSS). Computers in a BSS must be configured with the same BSS ID.
<b>SSID</b>	<p>The <b>SSID</b> is the unique name shared among all points in your wireless network.</p> <p>The name must be identical for all devices and points attempting to connect to the same network.</p>
<b>Signal</b>	Displays the signal strength of the connection between the Wireless USB Adapter and the

<b>Item</b>	<b>Description</b>
	Access Point it connects to.
<b>Channel</b>	Shows the selected channel that is currently used.
<b>Encryption</b>	Displays the status of WEP Encryption.
<b>BSS</b>	<p>Displays the type of Basic Service Set.</p> <p><b>Access Point:</b> allows the Adapter to communicate with a wired network which employing an Access Point.</p> <p><b>Peer-to-Peer:</b> allows PC-to-PC, station-to-station communication without employing an Access Point.</p>
<b>Re-Scan</b>	Searches for all available networks. Clicking on the button, the device will start to rescan and list all available sites.
<b>Hide</b>	Click <b>Hide</b> to exit the application.

## Encryption Tab

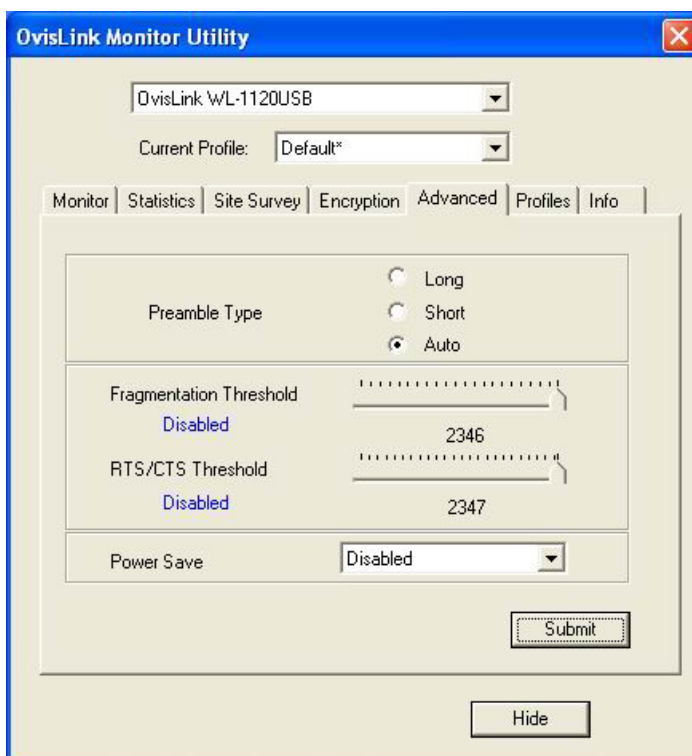
Use the **Encryption** Tab to configure your WEP settings. **WEP (Wired Equivalent Privacy)** encryption can be used to ensure the security of your wireless network.

Item	Description
<b>Encryption</b>	<b>WEP</b> is a data privacy mechanism based on a 64-bit/128-bit shared key algorithm. Under the drop-down box, you can choose to have WEP encryption <b>Disabled</b> , <b>64 Bit</b> , or <b>128 Bit</b> .
<b>Key #1/Key #2/ Key #3/Key #4</b>	This setting is the configuration key used in accessing the wireless network via WEP encryption. A key of 10 hexadecimal characters (0-9, A-F) is required if a <b>64-bit Key Length</b> was selected. A key of 26 hexadecimal characters (0-9, A-F) is required if a <b>128-bit Key Length</b> was selected.

Item	Description
<b>Default Key</b>	<p>You can specify up to 4 different keys to <i>decrypt</i> wireless data. Select the Default key setting from the drop-down menu.</p> <p><b>Note:</b> You must use the same <b>Default Key</b> and <b>Default Key settings</b> for the both sides of the wireless network to connect to).</p>
<b>Authentication Type</b>	<p>The authentication type defines configuration options for the sharing of wireless networks to verify identity and access privileges of roaming wireless network cards.</p> <p>You may choose between <b>Open System</b>, <b>Shared Key</b>, and <b>Auto</b>.</p> <p><b>Open System:</b> If the Access Point is using "Open System" authentication, then the wireless adapter will need to be set to the same authentication type.</p> <p><b>Shared Key:</b> <b>Shared Key</b> is when both the sender and the recipient share a secret key.</p> <p><b>Auto:</b> Select <b>Auto</b> for the USB adapter to select the Authentication type automatically depending on the Access Point Authentication type.</p>
<b>Submit</b>	Click <b>Submit</b> to save the changes.
<b>Hide</b>	Click <b>Hide</b> to exit the application.

## Advanced Tab

The **Advanced** tab allows you to change advanced configuration, such as **Preamble Type**, **Fragmentation Threshold**, **RTS/CTS Threshold** and **Power Save**.



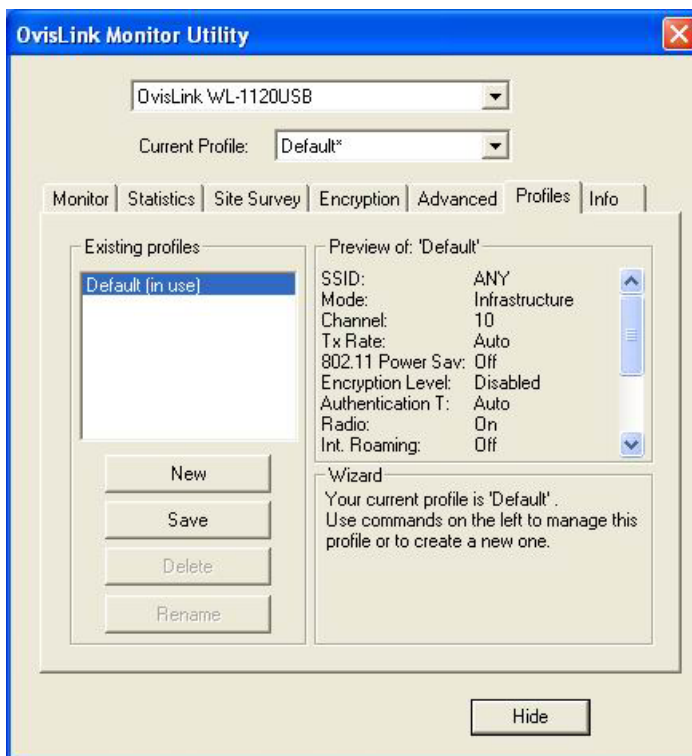
Item	Description
<b>Preamble Type</b>	A preamble is a signal used in wireless environment to synchronize the transmitting timing including Synchronization and Start frame delimiter. (Note: Please check the setting of AP first.)
<input checked="" type="radio"/> <b>Auto</b>	Select <b>Auto</b> for the USB adapter to select the Preamble type automatically depending on the Access Point Preamble type.

Ⓒ <b>Long</b>	In a "noisy" network environment, the Preamble Type should be set to <b>Long Preamble</b> .
Ⓒ <b>Short</b>	The <b>Short Preamble</b> is intended for applications where minimum overhead and maximum performance is desired. In a "noisy" network environment, the performance would be decreased.
<b>Fragmentation Threshold</b>	To fragment MSDU or MMPDU into small sizes of frames for increasing the reliability of frame (The maximum value of 2346 means no fragmentation is needed) transmission. The performance will be decreased as well, thus a noisy environment is recommended.
<b>RTS/CTS Threshold</b>	This value should remain at its default setting of <b>2347</b> . Should you encounter inconsistent data flow, only minor modifications of this value are recommended.
<b>Power Save</b>	<p>① <b>802.11 Power Save</b> allows the Adapter to go to sleep mode, during which data communication could be interrupted.</p> <p>② <b>Smart Power Save</b> is a new power save mode and it is designed to be performance oriented.</p>
<b>Submit</b>	Click <b>Submit</b> to save the changes.
<b>Hide</b>	Click <b>Hide</b> to exit the application.



## Profiles Tab

You can create frequently used setting as a profile. Then, you can select the saved Profile from the pull-down list of the **Current Profile**.



Item	Description
<b>New</b>	Click <b>New</b> to create a new profile.
<b>Create</b>	Click <b>Create</b> to type the name of the new profile.
<b>Cancel</b>	Click <b>Cancel</b> to ignore creating new profile.
<b>Save</b>	Once you have changed the setting of the current profile, click <b>Save</b> to save the changes.
<b>Delete</b>	Click <b>Delete</b> to delete the current profile.
<b>Rename</b>	Click <b>Rename</b> to rename the current profile.
<b>Hide</b>	Click <b>Hide</b> to exit the application.

## How to create a new Profile:

1. Select an AP or Station that is frequently used.
2. Follow below steps. (Please refer to Fig.1 ~ Fig.3)

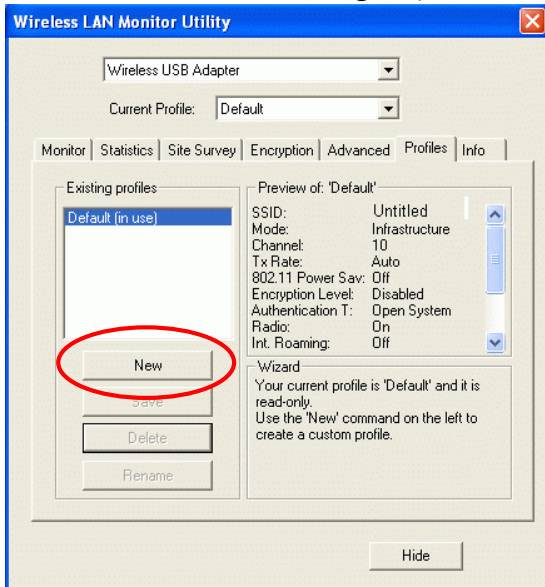


Fig.1

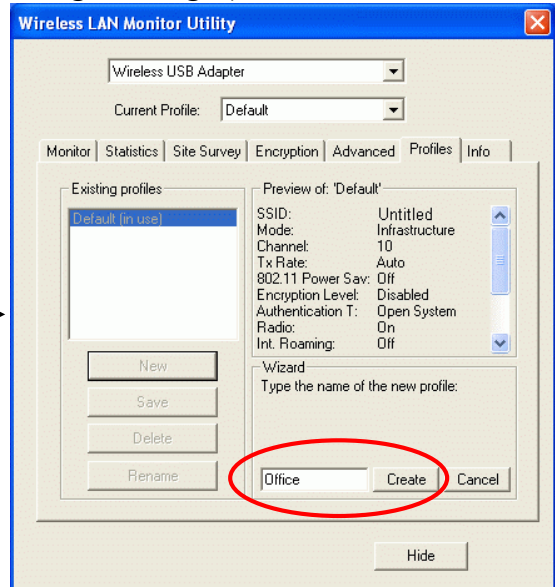


Fig.2

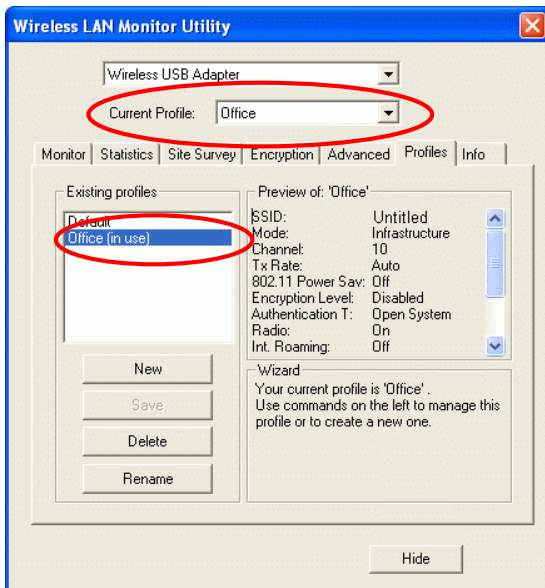


Fig.3

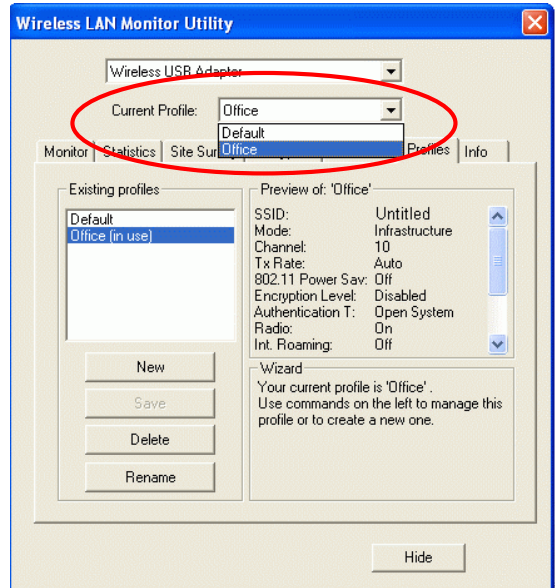
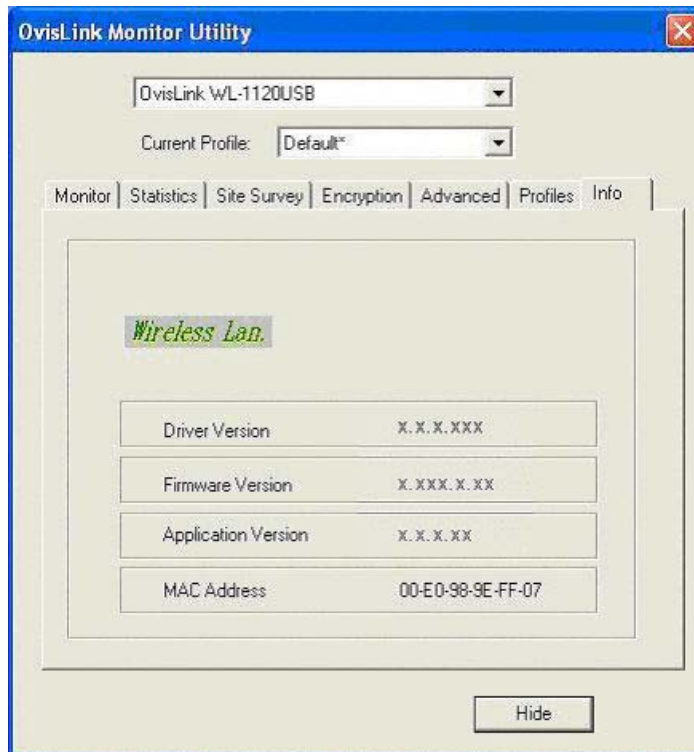


Fig.4

3. The new profile will be added in the pull-down list of **Current Profile**. (Please refer to Fig.4)

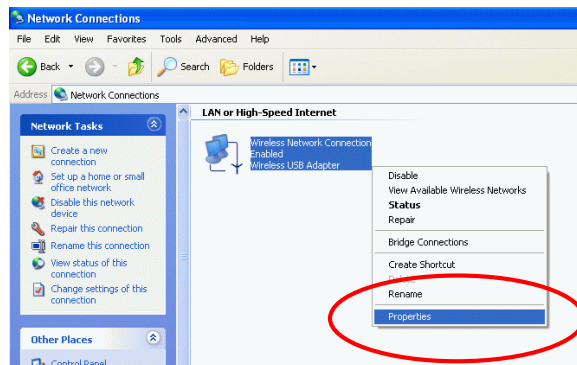
## Info Tab

Click on the Info Tab to view basic information about the Utility like the **Driver**, **Firmware** and **Application** Version. Use the **Hide** button to exit the application.

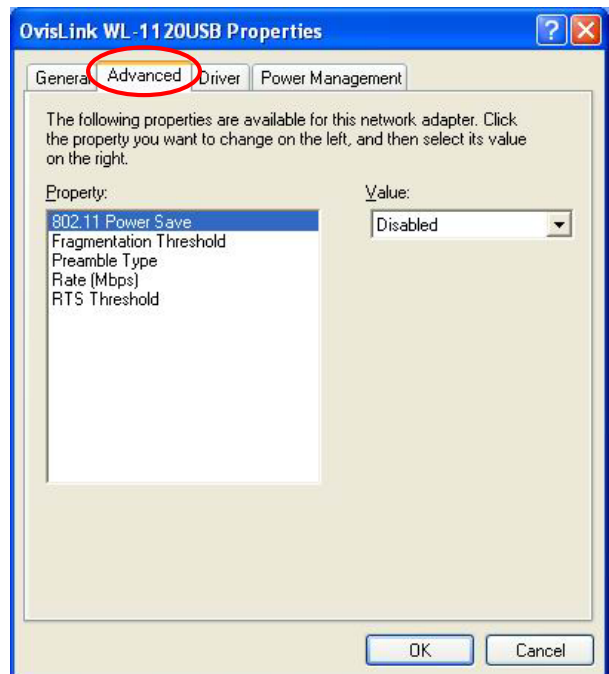
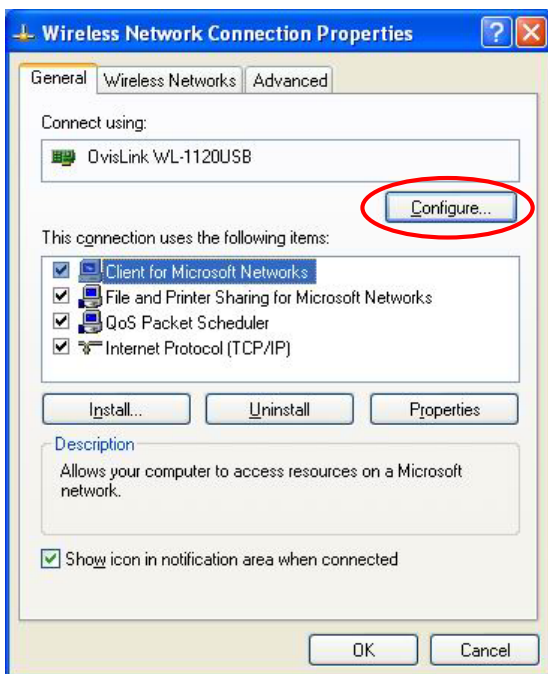


## Use Windows XP Configuration Utility

1. Go to **Start → Control Panel → Network and Internet Connections → Network Connections**.
2. In **Network Connections** window, right-click the **Wireless Network Connection Enabled OvisLink WL -1120USB** icon, and select **Properties**.

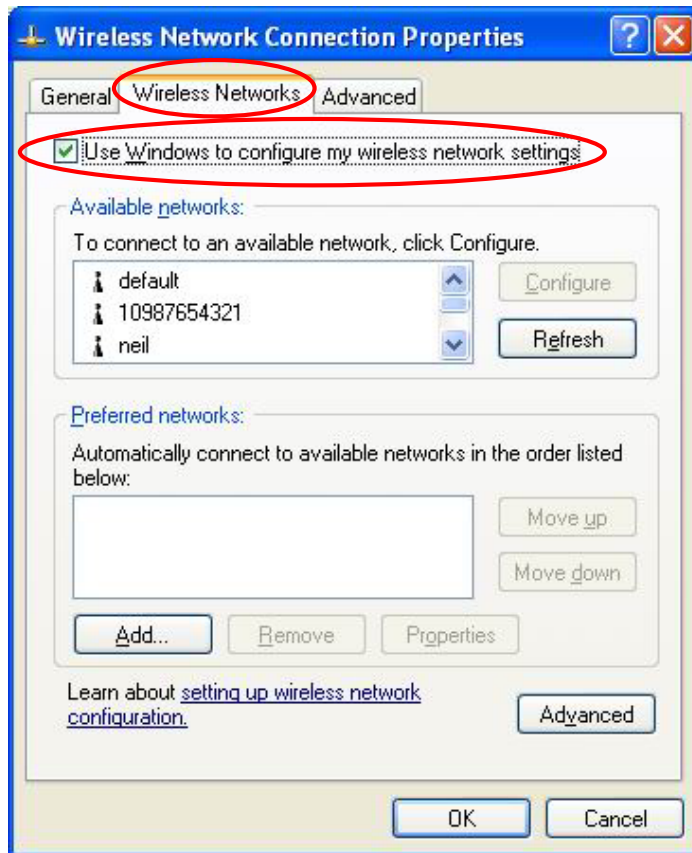


3. In **Wireless Network Connection Properties** window, select the **General** tab. Click **Configure** to enable Windows configuration.



Property	Description
<b>802.11 Power Save</b>	Enable the function to allow the Adapter to go to sleep mode, during which data communication could be interrupted. ( <b>Disabled</b> or <b>Enabled</b> )
<b>Fragmentation Threshold</b>	To fragment MSDU or MMPDU into small sizes of frames for increasing the reliability of frame (The maximum value of 2346 means no fragmentation is needed) transmission. The performance will be decreased as well, thus a noisy environment is recommended.
<b>Preamble Type</b>  <input type="radio"/> <b>Long</b>  <input type="radio"/> <b>Short</b>  <input type="radio"/> <b>Auto</b>	<p>A preamble is a signal used in wireless environment to synchronize the transmitting timing including Synchronization and Start frame delimiter. (Note: Please check the setting of AP first.)</p> <p>In a "noisy" network environment, the Preamble Type should be set to <b>Long Preamble</b>.</p> <p>The <b>Short Preamble</b> is intended for applications where minimum overhead and maximum performance is desired. In a "noisy" network environment, the performance would be decreased.</p> <p>Select <b>Auto</b> for the USB adapter to select the Preamble type automatically depending on the Access Point Preamble type.</p>
<b>Rate (Mbps)</b>	It shows the current transfer rate. ( <b>1, 2, 5.5, or 11Mbps</b> or <b>Auto</b> )
<b>RTS Threshold</b>	This value should remain at its default setting of <b>2347</b> . Should you encounter inconsistent data flow, only minor modifications of this value are recommended.

4. In **Wireless Network Connection Properties** window, select the **Wireless Networks** tab.



### ☐ Use Windows to configure...

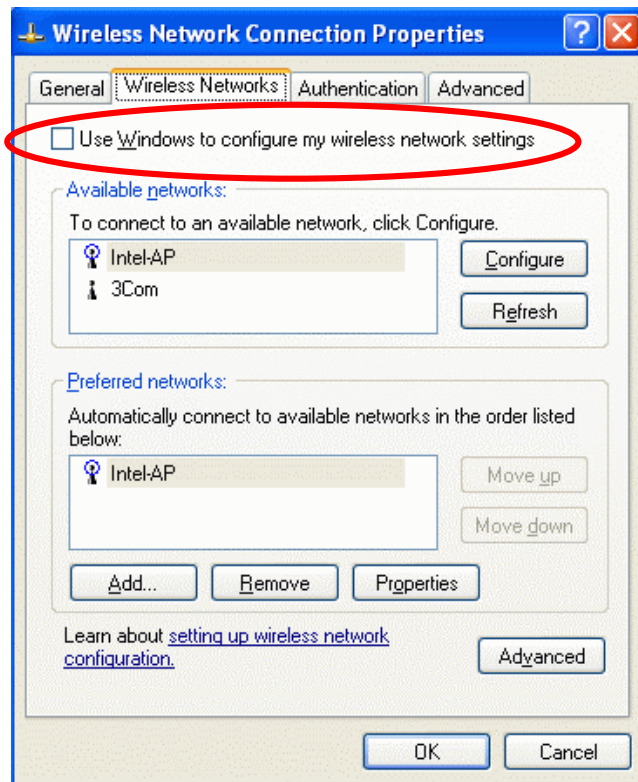
Check the box to enable Windows configuration.

### **\* Use Windows to configure**

**Note:** Once you enable windows configuration, you can use Windows XP's Wireless Configuration Utility to configure the wireless settings.

### **\* Use Manufacturer's Configuration Utility**

**Note:** If you want to use Manufacturer's Configuration Utility to configure the wireless settings, make sure the check box is **not** checked then click the Network Status icon in the taskbar. (Please refer to below figure)



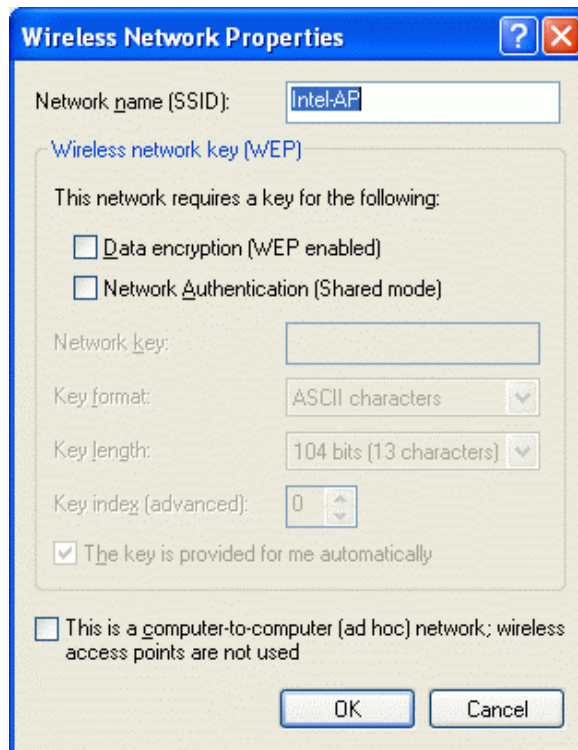
## **Available networks**

Displays all available networks.

## **Configure**

Click the button to set up a new network or WEP configuration as illustrated as below.





## **Refresh**

Click the button to refresh and search for all available networks.

## **Preferred networks**

From available network(s) listed above, you can select preferred one(s) in an order that you can arrange.

The marked one is the currently used network.

## **Move up**

Move the selected network forward one position.

## **Move down**

Move the selected network back one position



### **Add...**

Click the button and the **Wireless Network Properties** window will appear. In the **Network name** field, enter your desired network name listed in the above **Available networks** box, and click **OK**.

**Note:** The new settings will be active only after you click on **OK** in the **Wireless Network Connection Properties** window.

### **Remove**

Highlight the unwanted network listed in the **Preferred networks** box, and click the button to remove it.

### **Properties**

Highlight the network listed in the above **Preferred networks** box, and click the button to display its properties.

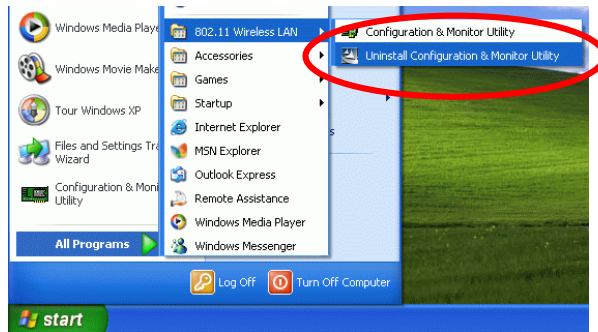
Once network configuration is done, make sure to click **OK**. The new parameters will be saved and active only after doing so.

# UNINSTALLATION

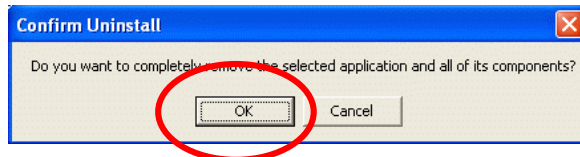
In case you need to uninstall the Manufacturer's Configuration Utility or the Driver, please refer to below section.

## Uninstall the Manufacturer's Configuration Utility

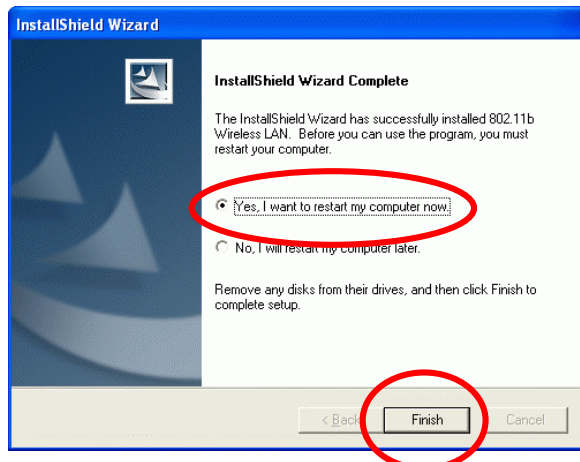
1. Go to **Start → Programs → 802.11 Wireless LAN → Uninstall Configuration & Monitor Utility**.



2. Click **OK** to continue.

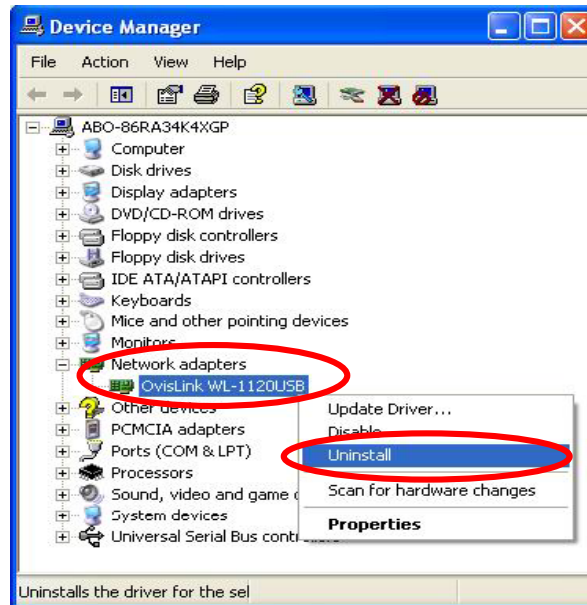


3. Select **Yes, I want to start my computer now**. Click **Finish** to complete the uninstalled procedure.



## Uninstall the driver

1. Right-click **My Computer** → **Properties** → **Hardware** → **Device Manager**.
2. Right-click **OvisLink WL -1120USB** then click **Uninstall** (or **Remove**).



3. Click **OK** to uninstall the device.



4. The system may prompt you to restart your computer. Click **Yes**.

## SPECIFICATIONS

<b>Standards</b>	IEEE 802.11b, Wi-Fi compliant
<b>Host Interface</b>	USB 1.1
<b>Physical</b>	Weight: 50 g Dimension: 110(L) x 60 (W) x 2.5(H) mm
<b>Antenna</b>	External Antenna, rotating angle 0° to 90°
<b>LED Indicators</b>	Power: Green, ON Rx (Receive): Green, ON Tx (Transmit): Green, ON
<b>Power Requirement</b>	Operating Voltage: 5V DC TX consumption: 450mA (Max) RX consumption: 300mA (Max)
<b>Frequency Range</b>	2.412GHz ~ 2.4835GHz
<b>Number of Selectable Channels</b>	USA, Canada: 11 channels Japan: 14 channels Europe: 13 channels
<b>Modulation Technique</b>	Direct Sequence Spread Spectrum (CCK, DQPSK, DBPSK)
<b>Security</b>	0/64/128 bit WEP
<b>Spreading</b>	11 chip Barker sequence
<b>Bit Error rate</b>	Better than $10^{-5}$
<b>Media Access Protocol</b>	CSMA/CA (Collision Avoidance) with ACK
<b>Supported OS</b>	Windows 98SE/ ME/ 2000/ XP
<b>EMC Certification</b>	FCC Part 15 in US EN300328 and EN300826 (301489-17) in Europe