

LR802UWG
USB Wireless Adapter
User Manual

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Revision History

Revision	Updated	Notes
1.00	08/15/2005	Initial Release
1.01	08/16/2005	Modify the LED status

Introduction

Thank you for purchasing the Wireless Adapter. This Wireless Adapter is easy to use and easy to setup. If you are tired of all those messy wires needed to connect a lap-top to your Home network, then take your networking to the next level with the Wireless Adapter. You will be able to share files, printers and even your High-Speed Internet access wirelessly.

Package Contents

Make sure the following items came in this package:

- Wireless Adapter
- Wireless Adapter Installation and User's Manual CD

Minimum System Requirements

- Microsoft Windows 98 Second Edition (SE), Windows ME, Windows XP, or Windows 2000 installed

Connecting the Wireless Adapter

1. Your computer can be on or off; it will not affect the installation process. Locate an available USB slot on your PC. If you are not sure where this may be, please consult your computer's User Manual.
2. Insert the Wireless Adapter into the appropriate USB slot. Your hardware is now installed.

Status LEDs

LED Status	MEANING WLAN card activity
LED1 on (Green)	Connect with Access Point
LED1 off	All other status
LED2 speed blink (Orange)	Data Transferred / Data Received
LED2 blink (Orange)	Scanning for the Access Point
LED2 off	All other status

Installing the Wireless Adapter

Windows XP:

Note: If you have installed the Wireless Adapter driver before, please uninstall the old version first.

1. After you have installed the Wireless Adapter your computer will display a **Found New Hardware Wizard** screen, click **Cancel** to continue.



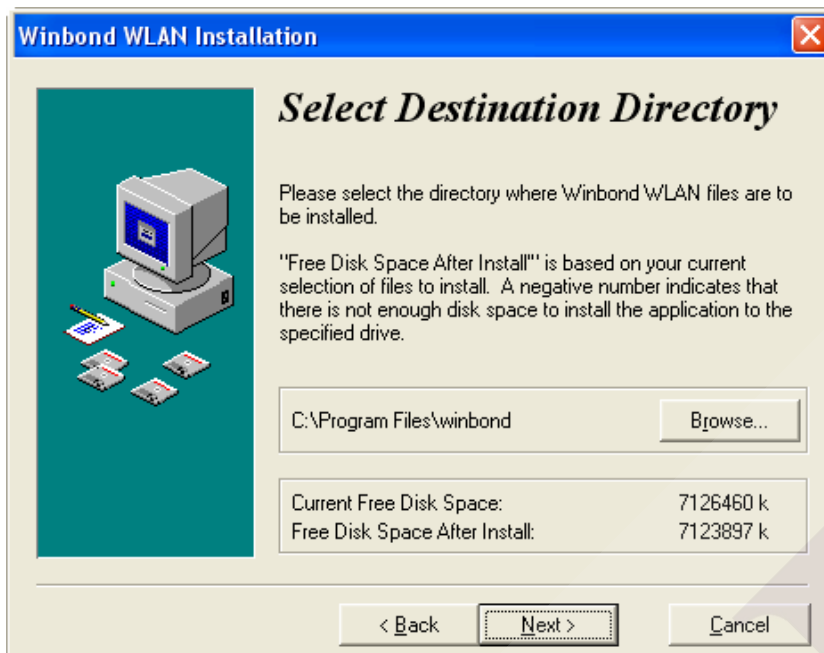
2. Insert **Wireless Adapter Installation and User's Manual** CD into your CD-ROM, then the installation will be activated automatically. Click the **Driver Install** icon to begin the installation.



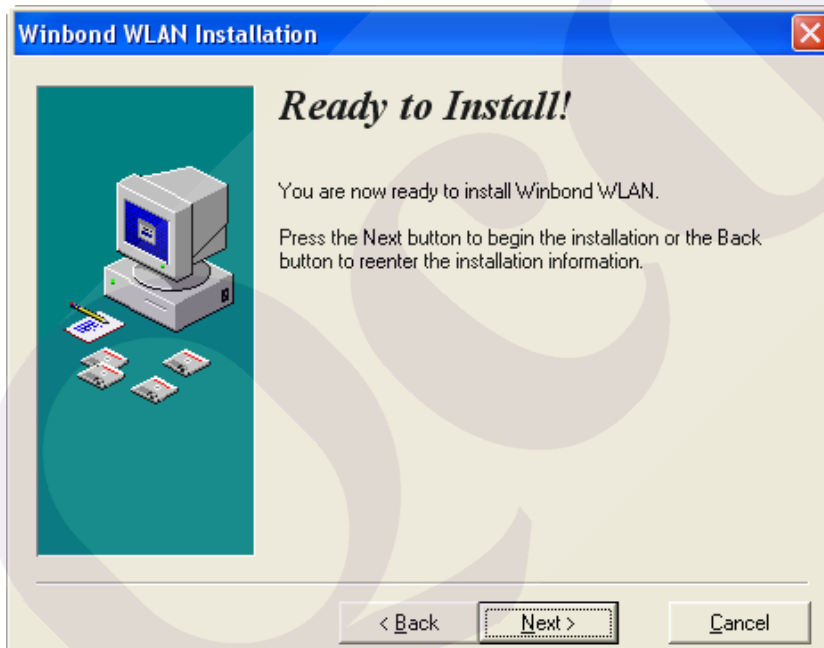
3. **Winbond Wireless Setup** will install the driver and utility on your system, click **Next** to continue.



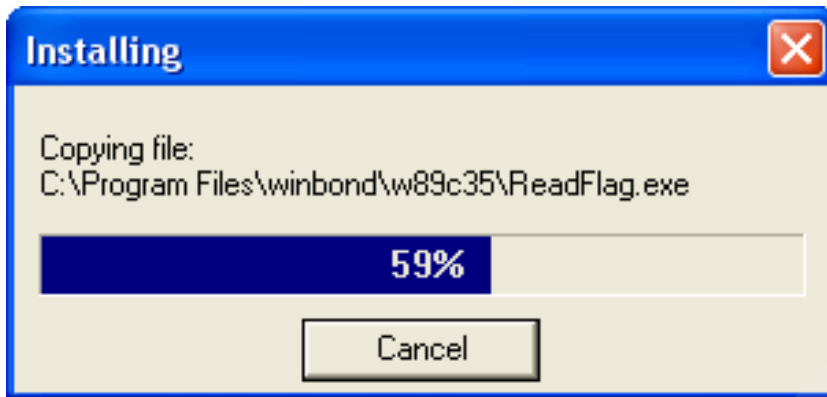
4. On the **Select Destination Directory** screen, click **Next** to accept the Destination Directory for driver installation.



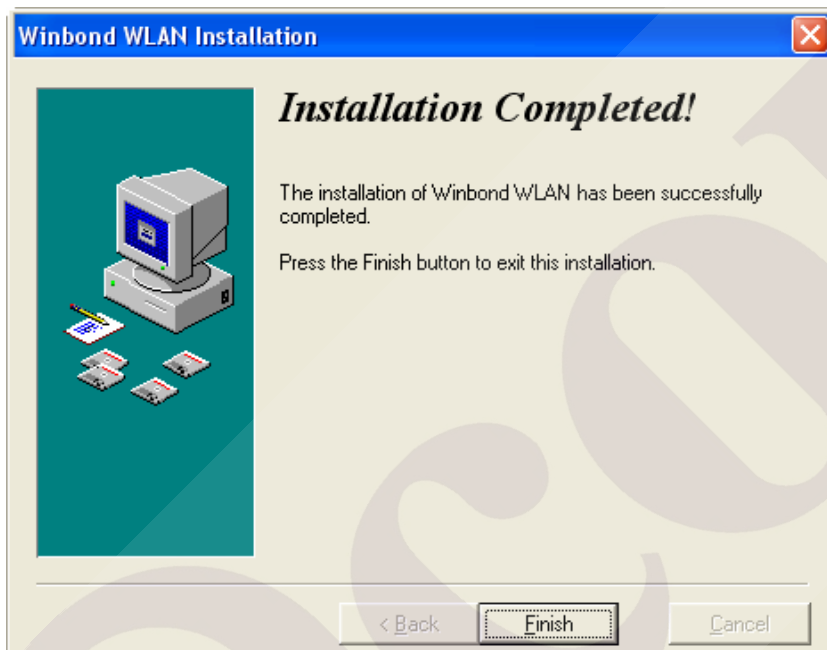
5. Press the **Next** button to begin the installation.



6. Wireless Adapter Driver and Utility are installing.



7. The installation is now complete, please click Finish.

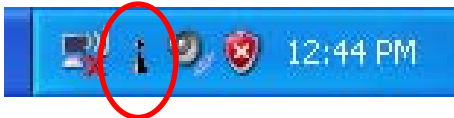


Note: When you complete the installation, the utility icon  will appear on the system tray. If not, it means that the installation failed. Please uninstall the driver and repeat the process.

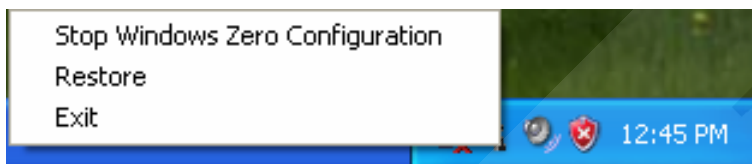
Configuring the Winbond Wireless Utility

Note: If you have installed the **Windows XP Service Pack 2**. You can use the **Windows Zero Configuration** for Wireless Configuring. Please see the **Windows XP User Guide**.

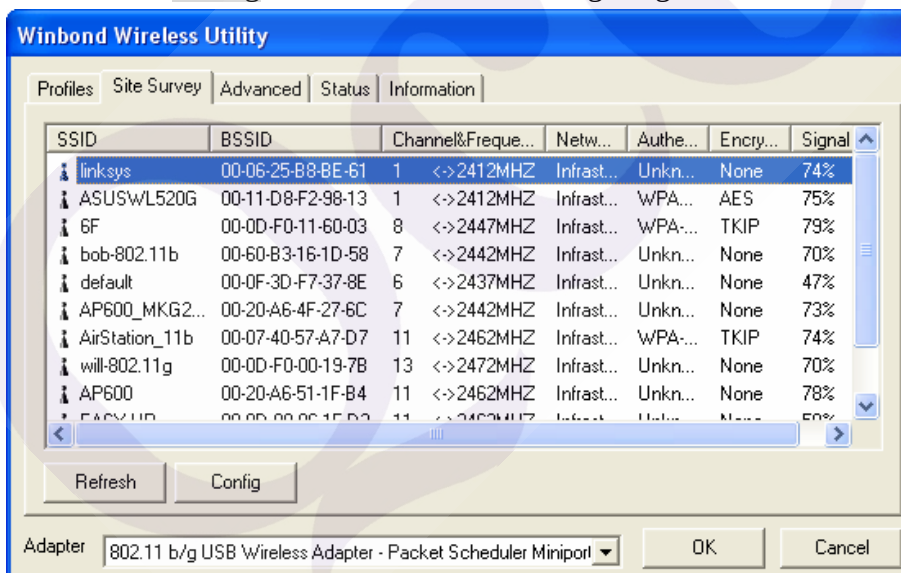
1. On the **Notification Area**, right-click the **Winbond Utility** icon.



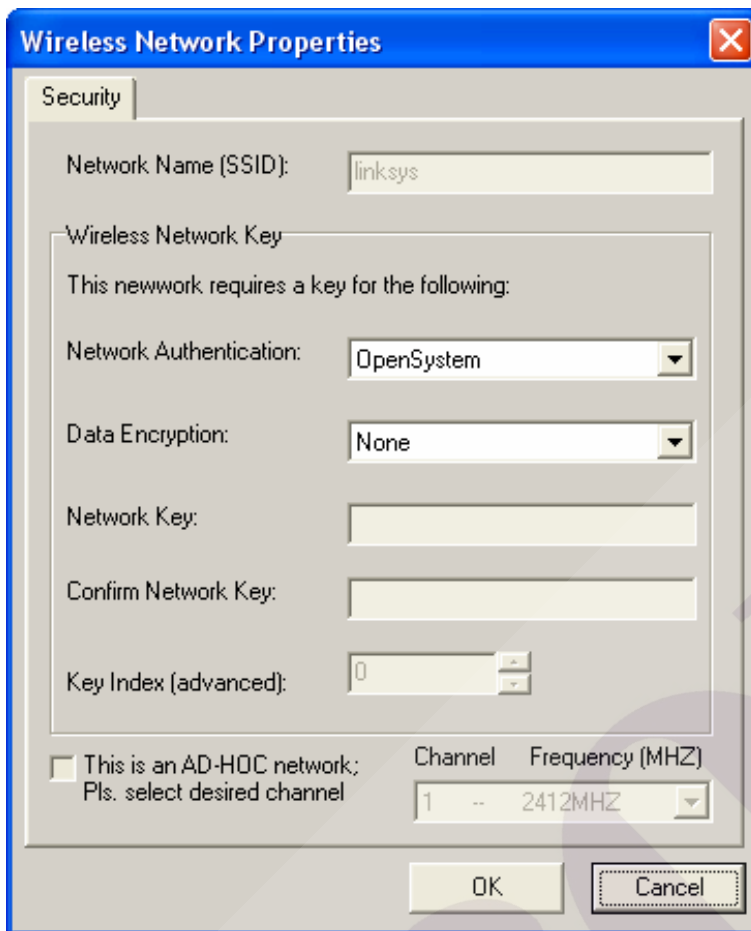
2. **Winbond Utility Selection** screen will be displayed, click **Stop Windows Zero Configuration**.



3. Double-click the utility icon  in your system tray to begin the utility configuration. Select **Site Survey Tab**, all available Access Points would be listed. Click on the desired Access Point, and click the **Config** button for Wireless configuring.



4. On the **Wireless Network Properties** screen, you may set Network Name (SSID), Wireless Network Security Key or AD-HOC network.



The 'Wireless Network Properties' dialog box is shown with the 'Security' tab selected. It contains fields for 'Network Name (SSID)' (linksys), 'Wireless Network Key' (with sub-fields for authentication, encryption, and key), and 'Key Index (advanced)' (0). There is also a checkbox for 'This is an AD-HOC network' and a 'Channel' dropdown set to 1.

Wireless Network Properties

Security

Network Name (SSID): linksys

Wireless Network Key

This network requires a key for the following:

Network Authentication: OpenSystem

Data Encryption: None

Network Key:

Confirm Network Key:

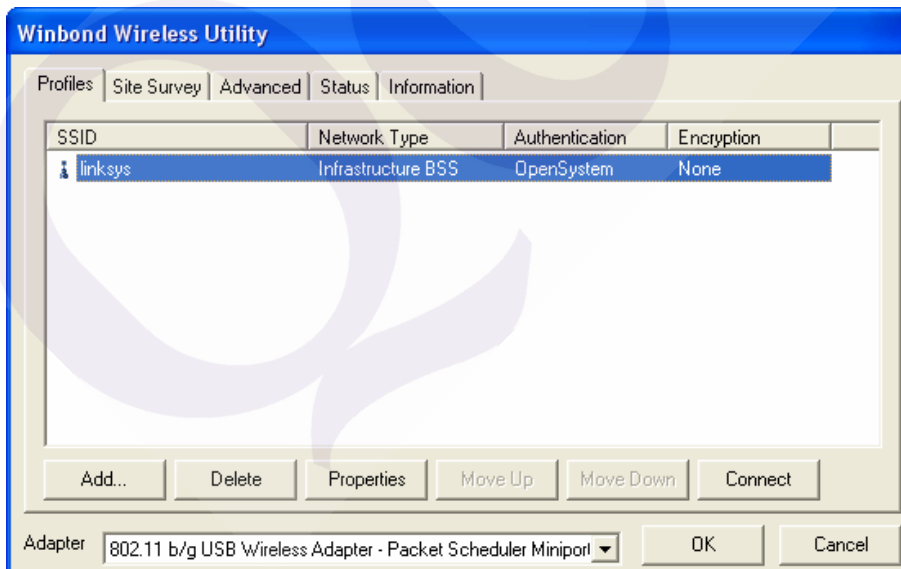
Key Index (advanced): 0

☐ This is an AD-HOC network;
Pls. select desired channel

Channel: 1 Frequency (MHZ): 2412MHZ

OK Cancel

5. Click on the desired profile, and click the **Connect** button to take effect.



The 'Winbond Wireless Utility' window shows a list of wireless profiles. The 'Profiles' tab is active, displaying a table with columns for SSID, Network Type, Authentication, and Encryption. The 'linksys' profile is selected. At the bottom, there are buttons for 'Add...', 'Delete', 'Properties', 'Move Up', 'Move Down', and 'Connect'. The 'Adapter' dropdown is set to '802.11 b/g USB Wireless Adapter - Packet Scheduler Miniport'.

Winbond Wireless Utility

Profiles Site Survey Advanced Status Information

SSID	Network Type	Authentication	Encryption
linksys	Infrastructure BSS	OpenSystem	None

Add... Delete Properties Move Up Move Down Connect

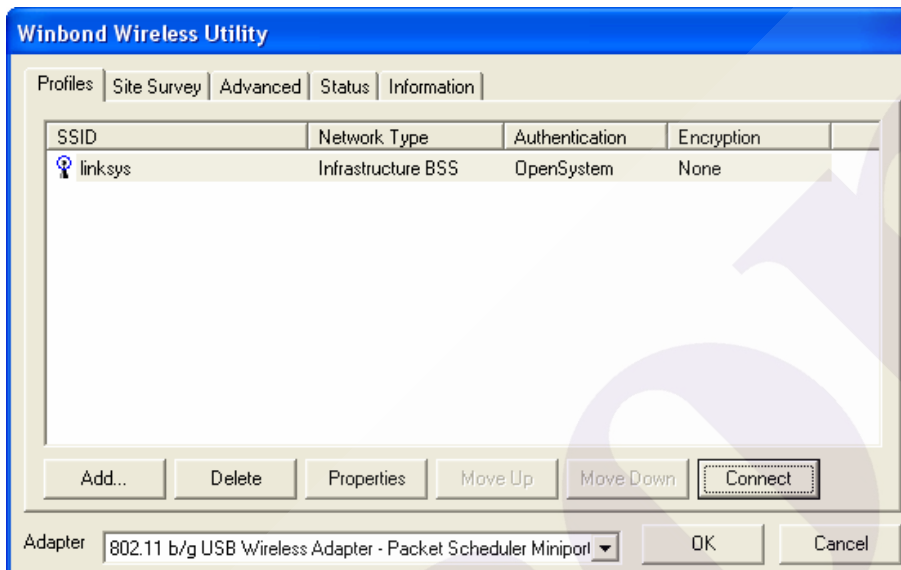
Adapter: 802.11 b/g USB Wireless Adapter - Packet Scheduler Miniport

OK Cancel

Configuration

- **Profile**

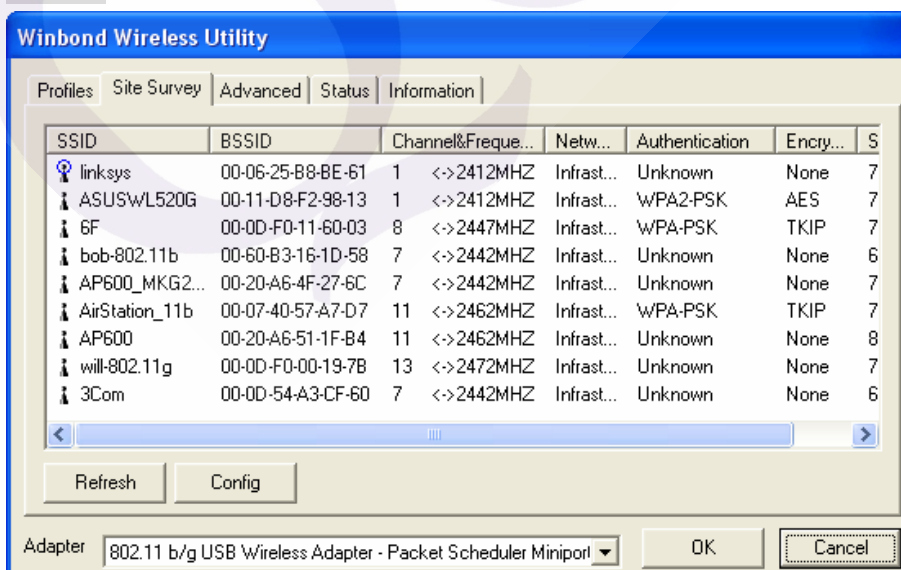
The **Profile Tab** allows you to set values for all parameters by selecting a previously defined profile. To create a profile, click **Add**, type a profile name and set the corresponding parameters. If one of the profiles is no longer used, you may remove it by clicking the **Delete** button. After changing parameters, click the **Connect** button to take effect. You can have multiple profiles and modify the profile at any time.



- **Site Survey**

Site Survey Tab lists the features of the available Access Points within range of the Wireless Adapter's signal.

Click on the desired Access Point, and click **Config** for Wireless Configuration. You may click **Refresh** to refresh the list.



- **Status**

Network Name

The field shows the association status to available Access Point with SSID of the Access Point.

Link Status

Shows the whether the link is Connect or Disconnected.

Current Channel

Shows the channel on which the connection is made.

Current Speed

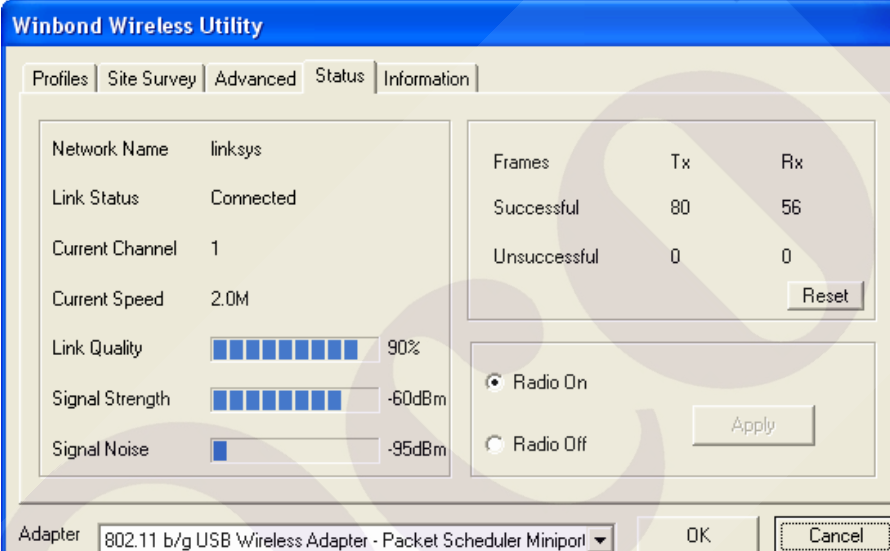
Shows the highest transmit rate of the current association.

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.

Singnal Noise

This displays the noise level of the link between the node and its Access Point.



The screenshot shows the 'Winbond Wireless Utility' window with the 'Status' tab selected. The window displays various connection metrics for a 'linksys' network. The 'Link Status' is 'Connected'. The 'Current Channel' is '1' and the 'Current Speed' is '2.0M'. The 'Link Quality' is shown as a bar graph at 90%. The 'Signal Strength' is shown as a bar graph at -60dBm. The 'Signal Noise' is shown as a bar graph at -95dBm. A table shows 'Frames' with 'Tx' and 'Rx' counts: 'Successful' (80, 56) and 'Unsuccessful' (0, 0). There are 'Reset', 'Radio On', 'Radio Off', and 'Apply' buttons. The 'Adapter' dropdown at the bottom shows '802.11 b/g USB Wireless Adapter - Packet Scheduler Miniport'.

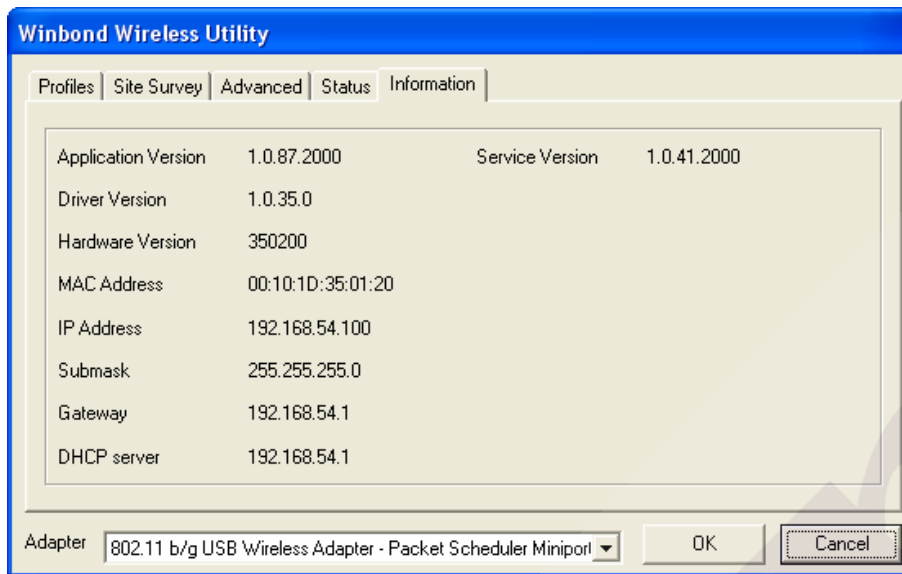
Network Name	linksys
Link Status	Connected
Current Channel	1
Current Speed	2.0M
Link Quality	90%
Signal Strength	-60dBm
Signal Noise	-95dBm

Frames	Tx	Rx
Successful	80	56
Unsuccessful	0	0

Adapter: 802.11 b/g USB Wireless Adapter - Packet Scheduler Miniport

- **Information**

About Tab shows the product version including the detail of Configuration Utility, Driver, and NIC MAC Address.

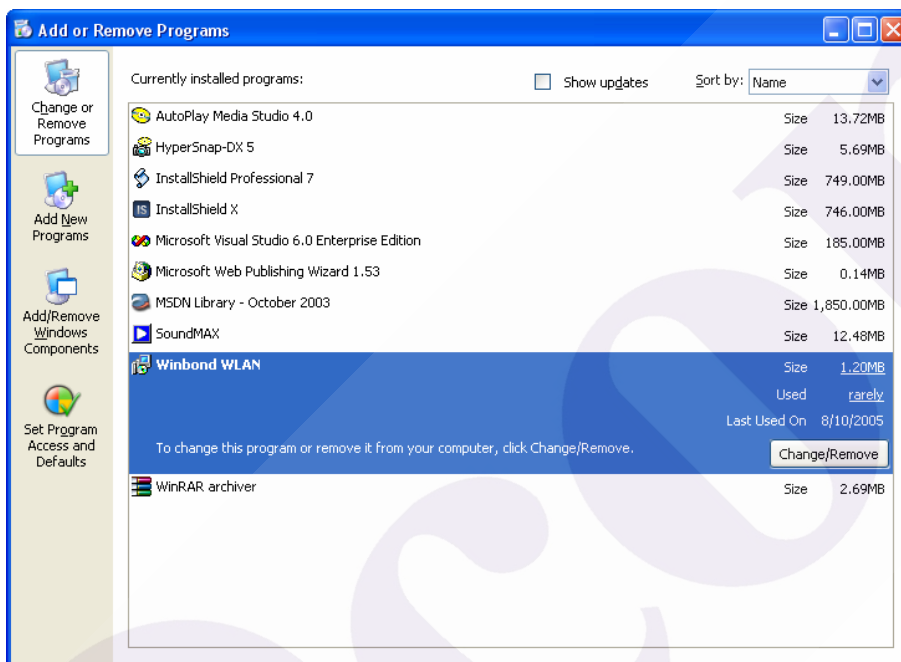


Uninstalling the Wireless Adapter Driver and Utility

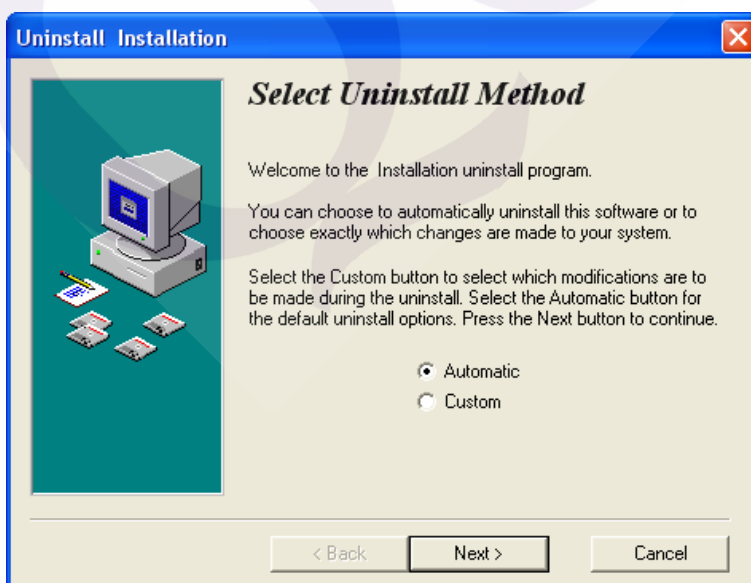
1. For uninstalling the Wireless Adapter, please go to:**Start->Settings->Control Panel->Add or Remove Programs->Winbond WLAN** under Windows environment. Then click **Remove**.



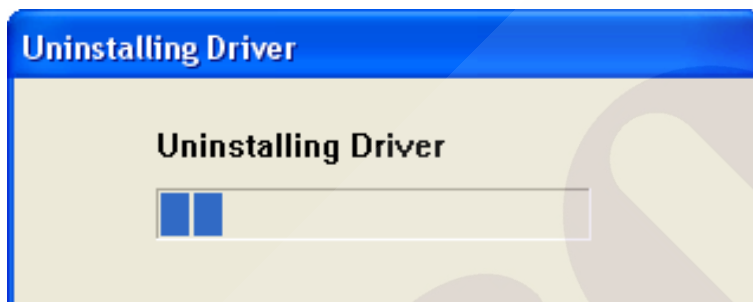
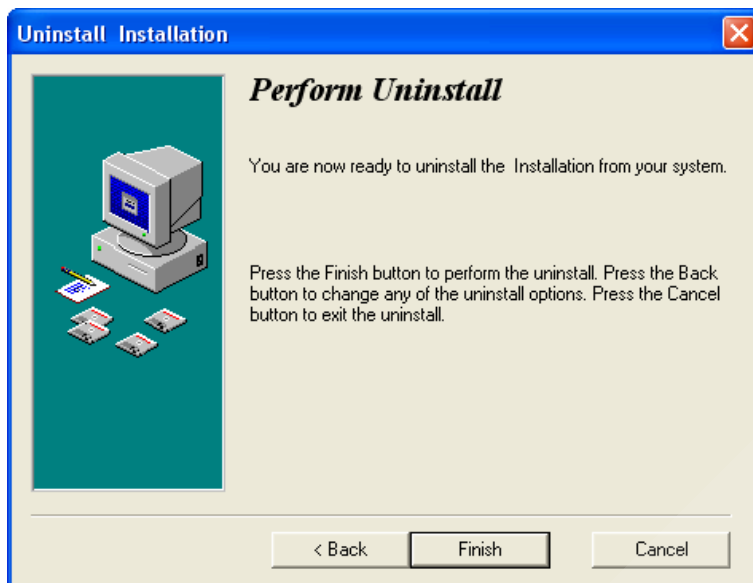
Add or
Remove
Programs



2. On the next screen, click **Next** button to accept automatically uninstall for Wireless LAN Driver.



3. Click **Finish** button.



4. The **USB Wireless Adapter** can now be safely removed from the system when the un-installation is done.

Windows 2000:

1. After you have installed the Wireless Adapter your computer will display a **Found New Hardware Wizard** screen, click **Cancel** to continue.



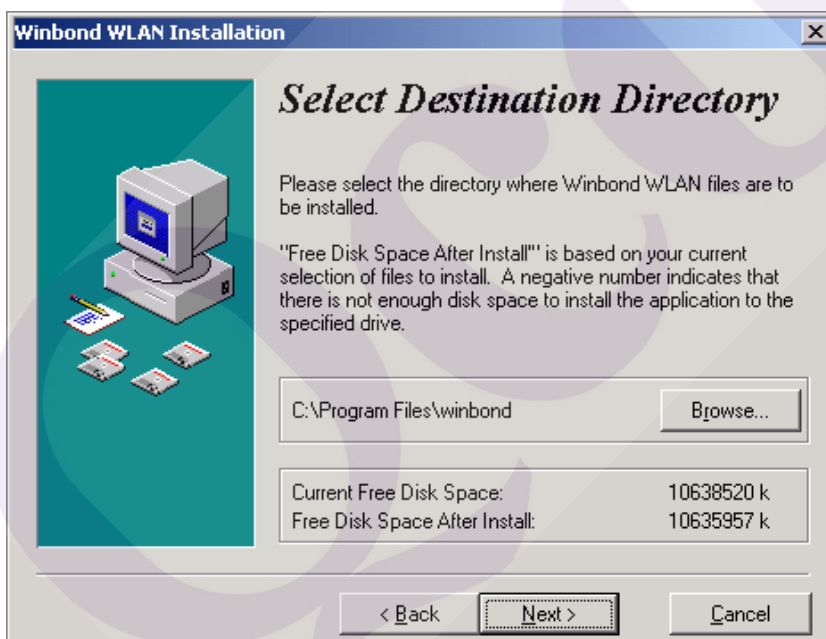
2. Insert **Wireless Adapter Installation and User's Manual** CD into your CD-ROM; then the installation will be activated automatically. Click the **Driver Install** icon to begin the installation.



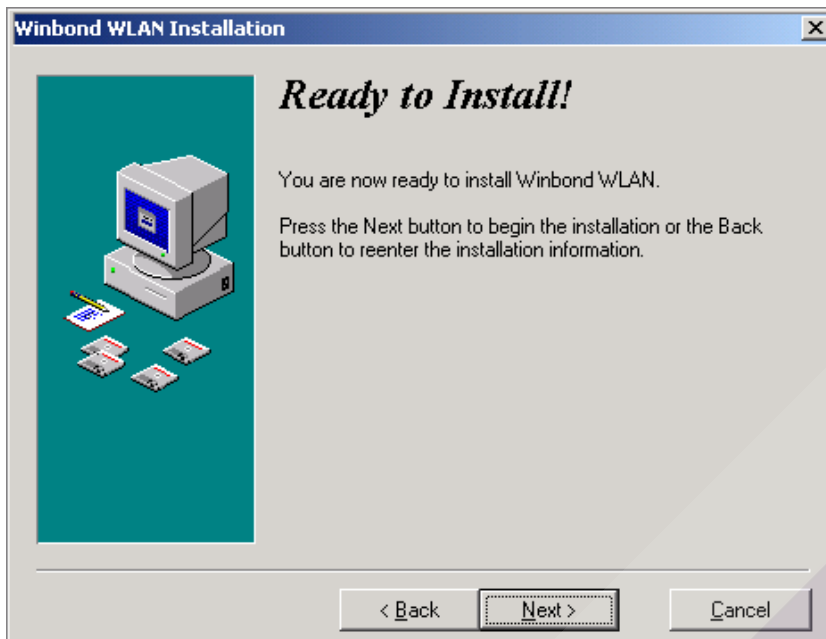
3. **Winbond Wireless Setup** will install the driver and utility on your system, click **Next** to continue.



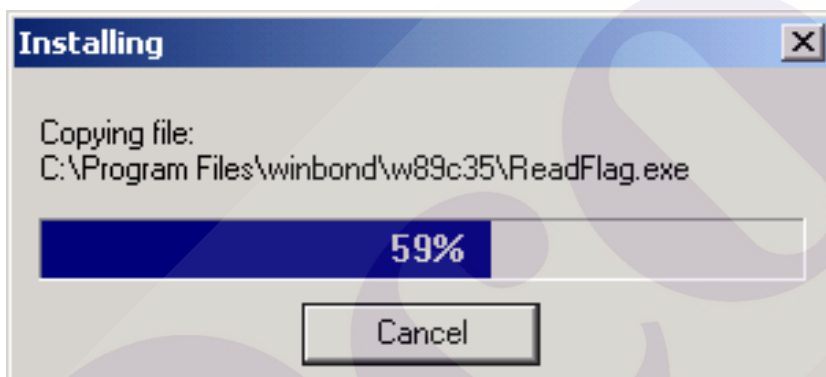
4. On the **Select Destination Directory** screen, click **Next** to accept the Destination Directory for driver installation..



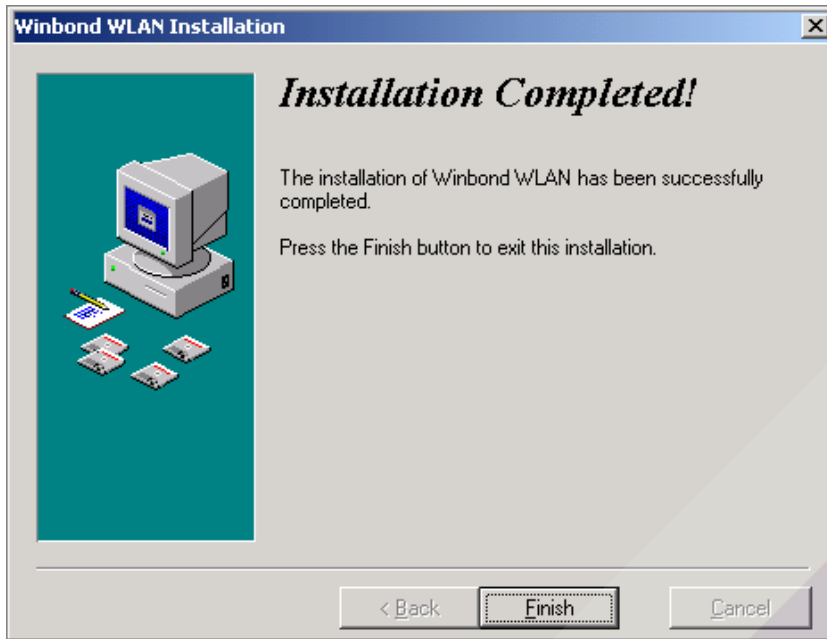
5. Press the **Next** button to begin the installation.



6. Wireless Adapter Driver and Utility are installing.

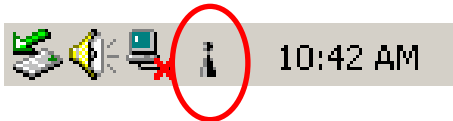


7. The installation is now complete, please click **Finish**.

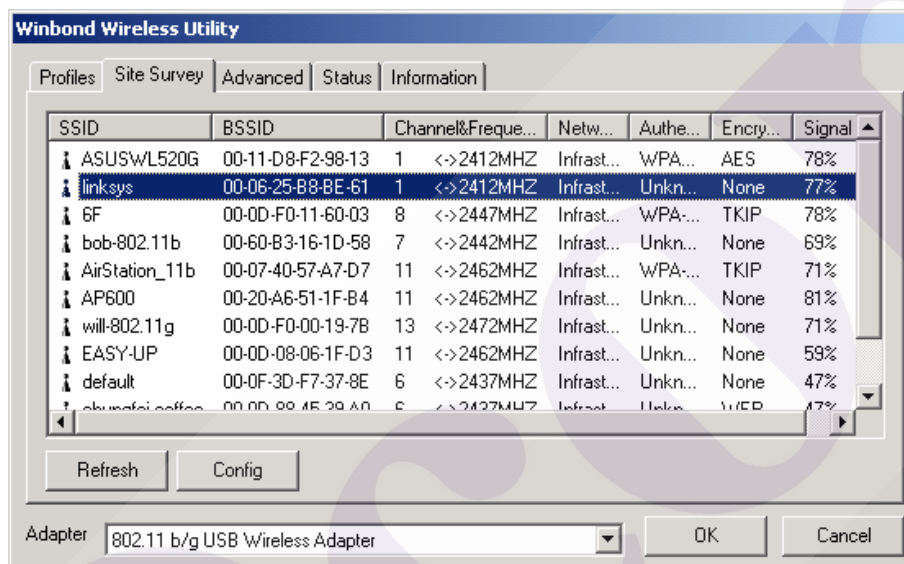


Configuring the Winbond Wireless Utility

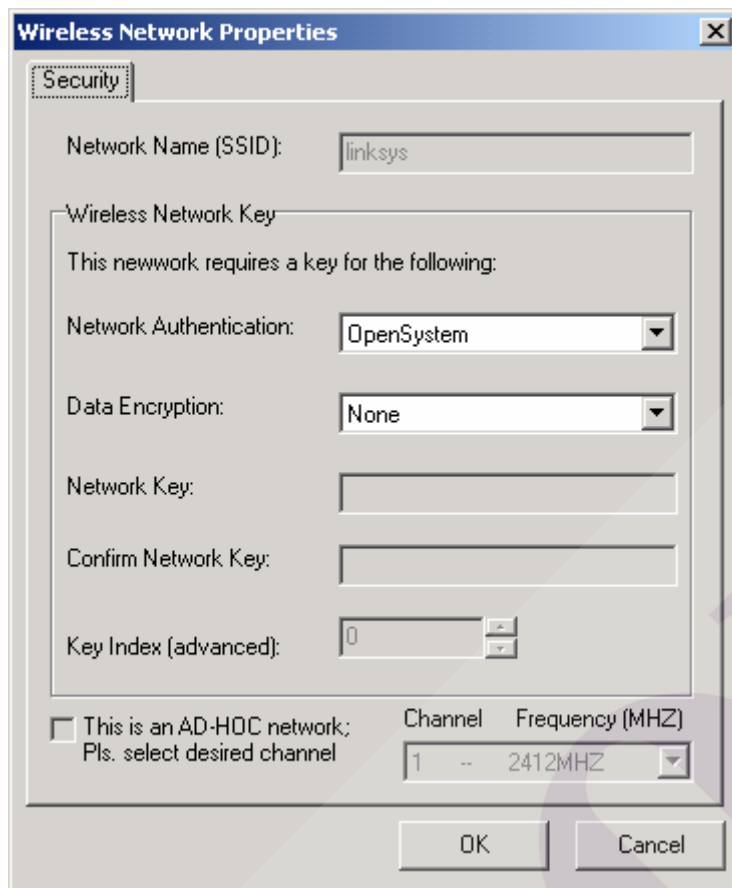
1. Double-click the utility icon  in your system tray to begin the utility configuration..



2. Select **Site Survey** Tab, all available Access Points would be listed. Click on the desired Access Point, and click **Config** button for Wireless configuring.

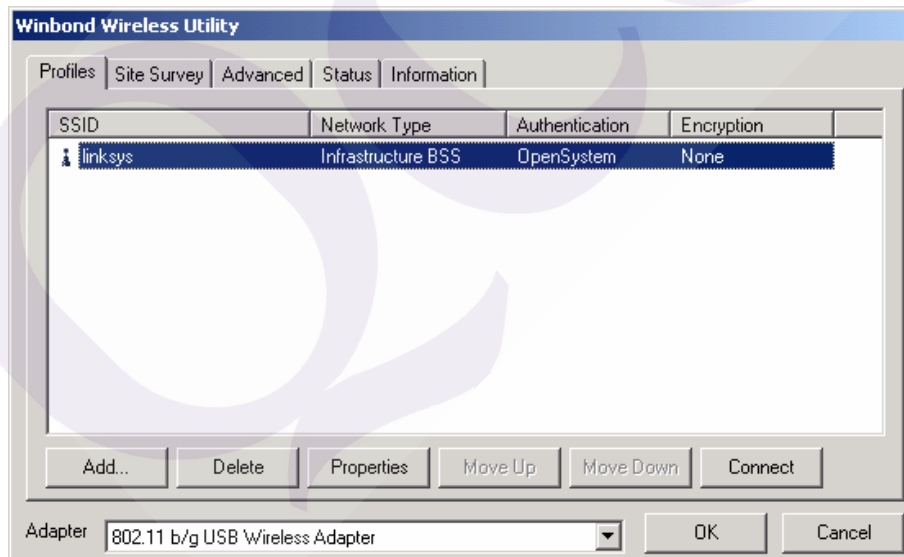


3. On the **Wireless Network Properties** screen, you may set Network Name (SSID), Wireless Network Security Key or AD-HOC network.



The **Wireless Network Properties** dialog box is shown with the **Security** tab selected. The **Network Name (SSID)** is set to **linksys**. The **Wireless Network Key** section indicates that the network requires a key. The **Network Authentication** is set to **OpenSystem** and **Data Encryption** is set to **None**. The **Network Key** and **Confirm Network Key** fields are empty. The **Key Index (advanced)** is set to **0**. At the bottom, there is a checkbox for **This is an AD-HOC network; Pls. select desired channel**, which is currently unchecked. To its right, the **Channel** is set to **1** and the **Frequency (MHZ)** is set to **2412MHZ**. **OK** and **Cancel** buttons are at the bottom.

4. Click on the desired profile, and click the **Connect** button to take effect.



The **Winbond Wireless Utility** window is shown with the **Profiles** tab selected. It displays a table of wireless profiles:

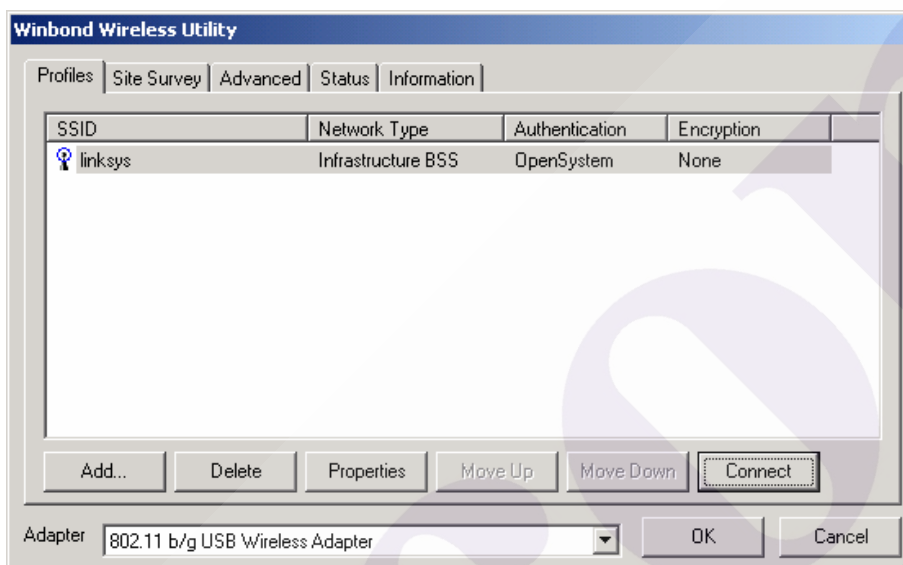
SSID	Network Type	Authentication	Encryption
linksys	Infrastructure BSS	OpenSystem	None

Below the table are buttons for **Add...**, **Delete**, **Properties**, **Move Up**, **Move Down**, and **Connect**. At the bottom, the **Adapter** is set to **802.11 b/g USB Wireless Adapter**, with **OK** and **Cancel** buttons.

Configuration

- **Profile**

The **Profile Tab** allows you to set values for all parameters by selecting a previously defined profile. To create a profile, click **Add**, type a profile name and set the corresponding parameters. If one of the profiles is no longer used, you may remove it by clicking the **Delete** button. After changing parameters, click the **Connect** button to take effect. You can have multiple profiles and modify the profile at any time.



- **Site Survey**

Site Survey Tab lists the features of the available Access Points within range of the Wireless Adapter's signal.

Click on the desired Access Point, and click **Config** for Wireless Configuration. You may click **Refresh** to refresh the list.

Winbond Wireless Utility

Profiles | Site Survey | Advanced | Status | Information

SSID	BSSID	Channel&Freque...	Netw...	Authe...	Encry...	Signal
ASUSWL520G	00-11-D8-F2-98-13	1 <->2412MHZ	Infrast...	WPA...	AES	78%
linksys	00-06-25-B8-BE-61	1 <->2412MHZ	Infrast...	Unkn...	None	77%
6F	00-0D-F0-11-60-03	8 <->2447MHZ	Infrast...	WPA...	TKIP	73%
bob-802.11b	00-60-B3-16-1D-58	7 <->2442MHZ	Infrast...	Unkn...	None	68%
AirStation_11b	00-07-40-57-A7-D7	11 <->2462MHZ	Infrast...	WPA...	TKIP	75%
AP600	00-20-A6-51-1F-B4	11 <->2462MHZ	Infrast...	Unkn...	None	80%
will-802.11g	00-0D-F0-00-19-7B	13 <->2472MHZ	Infrast...	Unkn...	None	72%
EASY-UP	00-0D-08-06-1F-D3	11 <->2462MHZ	Infrast...	Unkn...	None	59%
default	00-0F-3D-F7-37-8E	6 <->2437MHZ	Infrast...	Unkn...	None	47%
chunghwa-net	00-0D-08-4E-39-A0	6 <->2437MHZ	Infrast...	Unkn...	WEP	47%

Refresh Config

Adapter: 802.11 b/g USB Wireless Adapter OK Cancel

- **Status**

Network Name

The field shows the association status to available Access Point with SSID of the Access Point.

Link Status

Shows the whether the link is Connect or Disconnected.

Current Channel

Shows the channel on which the connection is made.

Current Speed

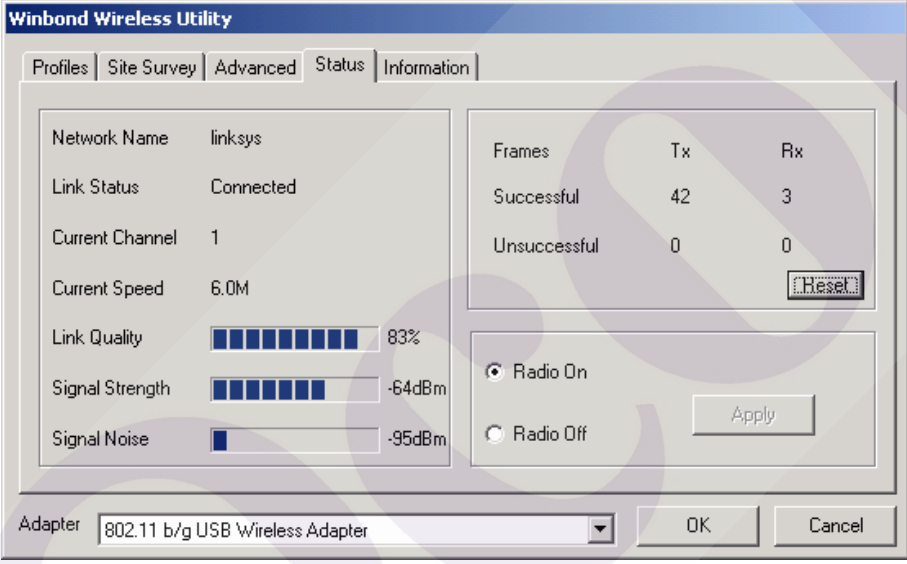
Shows the highest transmit rate of the current association.

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.

Singnal Noise

This displays the noise level of the link between the node and its Access Point.



The screenshot shows the 'Winbond Wireless Utility' window with the 'Status' tab selected. The window displays various connection metrics for a 'linksys' network. The 'Link Status' is 'Connected'. The 'Current Channel' is '1' and the 'Current Speed' is '6.0M'. The 'Link Quality' is shown as a bar graph at 83%. The 'Signal Strength' is shown as a bar graph at -64dBm. The 'Signal Noise' is shown as a bar graph at -95dBm. A table shows 'Frames' with 'Tx' and 'Rx' counts: 'Successful' (42 Tx, 3 Rx) and 'Unsuccessful' (0 Tx, 0 Rx). There is a 'Reset' button next to the table. At the bottom, there are radio buttons for 'Radio On' (selected) and 'Radio Off', an 'Apply' button, and a dropdown menu for the 'Adapter' set to '802.11 b/g USB Wireless Adapter'. 'OK' and 'Cancel' buttons are at the bottom right.

Network Name	linksys
Link Status	Connected
Current Channel	1
Current Speed	6.0M
Link Quality	83%
Signal Strength	-64dBm
Signal Noise	-95dBm

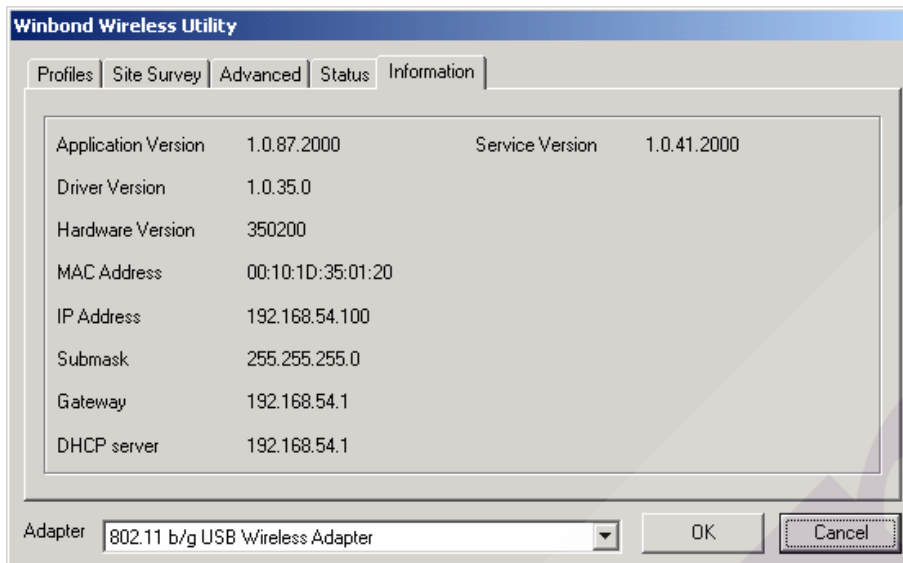
Frames	Tx	Rx
Successful	42	3
Unsuccessful	0	0

Radio On (selected) Radio Off

Adapter: 802.11 b/g USB Wireless Adapter

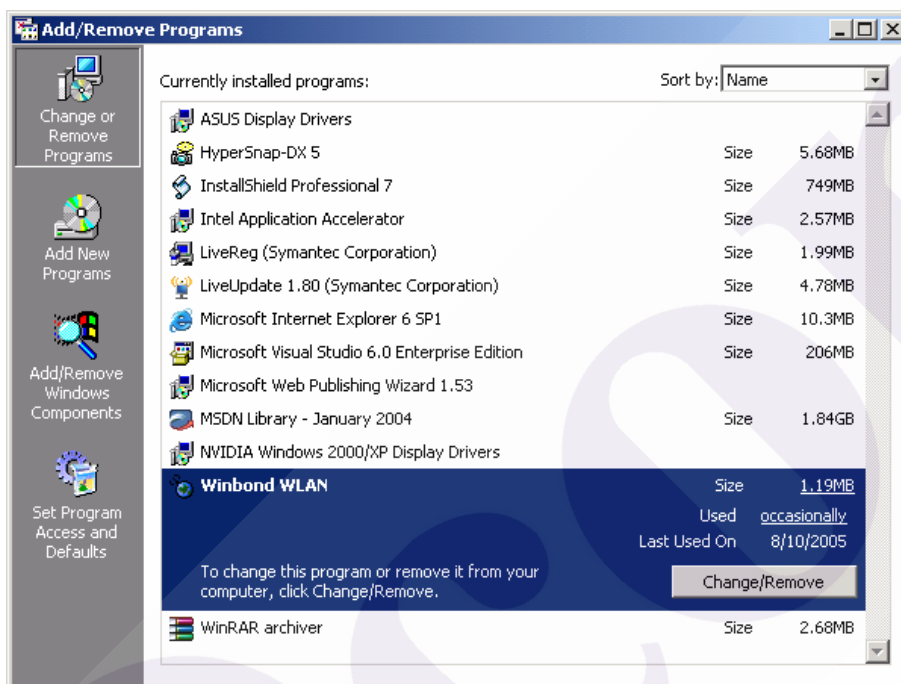
Information

About Tab shows the product version including the detail of Configuration Utility, Driver, and NIC MAC Address.

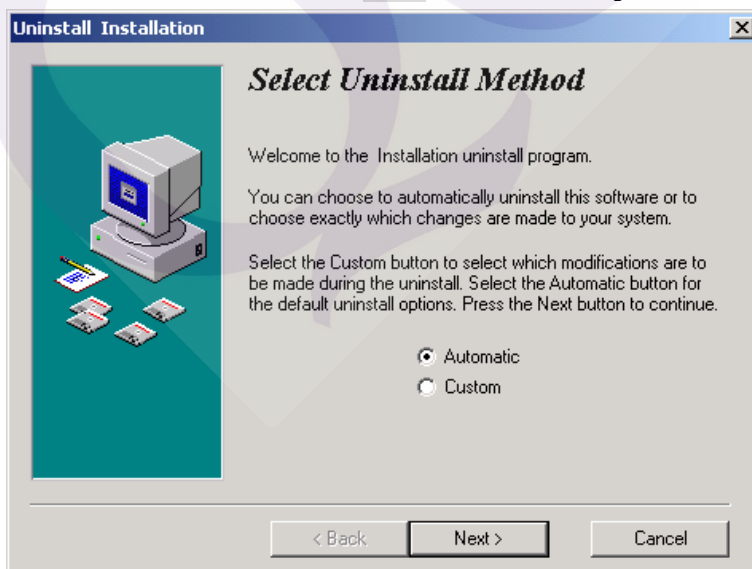


Uninstalling the Wireless Adapter Driver and Utility

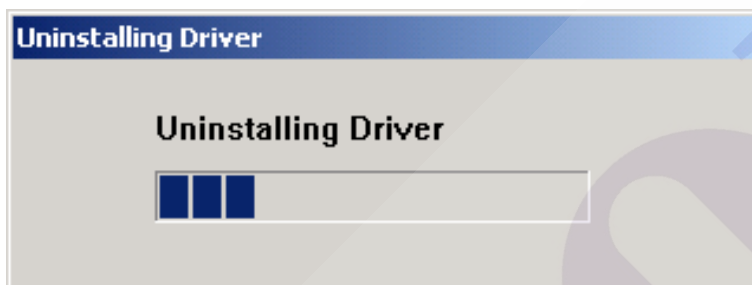
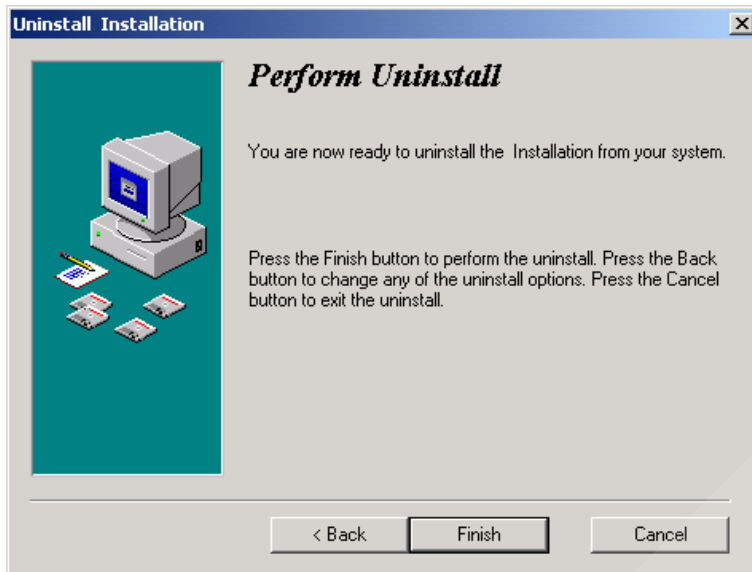
1. For uninstalling the Wireless Adapter, please go to: **Start->Settings->Control Panel->Add or Remove Programs->Winbond WLAN** under Windows environment. Then click **Remove**.



2. On the next screen, click **Next** button to accept automatically uninstall for Wireless LAN Driver.



3. Click **Finish** button.



4. The **USB Wireless Adapter** can now be safely removed from the system when the un-installation is done.

Trouble shooting

PING

This section discusses possible solutions using ping command to find your problem if you can't connect to the network.

1. Check if you have a valid IP address
2. Test if your TCP/IP works. Under MS-DOS (command prompt), type "ping localhost". If you didn't receive a reply, then you need to re-install your TCP/IP. Proceed to next step if you have received replies.
3. Using the same procedure, try to ping your Wireless Adapter's IP. If the Ping command fails, check the following:
 - Your WLAN is connected
 - Check that your driver is correctly installed.

Checking Valid IP Addresses

There are restrictions on which IP and addresses you can and cannot use. Some IP addresses are reserved for testing, multicasting and some IP are restricted by your ISP.

Following IP addresses **cannot** be used:

- **127.x.x.x** – this is a loop back address, used for testing
- **0.0.0.0** – this IP address represent the host address
- **255.255.255.255** – this is local broadcast address
- First portion of IP cannot exceed 224, that is, IP addresses which is in the range of 224~239.x.x.x is not valid. This range of IP is for multicasting. IP range from 240~255.x.x.x are reserved IP addresses and cannot be used.
- 0 or 255 in host ID portion of your IP are not valid. This represent local host or broadcast address for your class of IP

IP has five classes, namely class A, B, C, D and E. For each class, the host ID portion in the IP field is different for each of the classes. Figure below illustrate this.

Class A:	1 ~ 127	.	Host ID
Class B:	128 ~ 191	.	X . Host ID
Class C:	192 ~ 223	.	X . X . Host ID
Class D:	224 ~ 239	.	Used for Multicasting (no Host ID)
Class E:	240 ~ 255	.	Reserved IP address

Host ID cannot be all 0's or all 255's.

Note: X denote don't cares in the above example.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

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

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

To maintain compliance with FCC RF exposure compliance requirements, please avoid direct contact to the transmitting antenna during transmitting.

"Qcom declare that LR802UWG is limited in CH1~CH11 by specified firmware controlled in USA."

This device is intended only for OEM integrators under the following conditions:

- 1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
- 2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as 2 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT NOTE: In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users (for example: Notebook, Wireless Router...etc.). The final end product must be labeled in a visible area with the following:

"Contains TX FCC ID: RUJ-LR802UWG".

Manual Information That Must be Included

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the users manual of the end product which integrate this module.

The end users manual for OEM integrators must include the following information in a prominent location “ IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.