Wireless 802.11b/g/n/a/ac USB Adapter

User Manual

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Chapter 1. Introduction

Thank you for purchasing the wireless 802.11b/g/n/a/ac USB adapter! This adapter is mini size design and you are able to plug it into the USB port. Excepting common wireless standards 802.11b/g/n, this wireless adapter is also 802.11ac compatible - data transfer rate is 150/433Mbps, and that's three times faster than 802.11g wireless network!

1.1 Product Features

Complies with IEEE 802.11ac , IEEE 802.11a, IEEE 802.11n, IEEE 802.11g and IEEE 802.11b standards Provides USB2.0 port Provides 150/433Mbps receiving rate and 150/433Mbps sending rate Supports 20MHz/40MHz/80MHz frequency width Auto-detects and changes the network transmission rate Provides two work modes: Infrastructure and Ad-Hoc Supports Soft AP to establish your wireless LAN networking Supports 64/128-bit WEP, WPA, WPA2 encryption methods and 802.1x security authentication standard Supports WPS (Wi-Fi Protected Setup) encryption method to free you from remembering long passwords Easy-to-install, plug and play Supports Windows XP/VISTA/Win7/ Win8/Linux/Macintosh

1.2 Package contents

The following contents should be found in your box:

One Wireless 802.11b/g/n/a/ac USB adapter

One CD (include driver/utility/user manual)

Note: If any of the listed contents are damaged or missing, please contact the retailer from whom you purchased the product for assistance.

1.3 Indicator Description

There is a LED indicator blinking when data communication is going on.

CHAPTER 2: Quick Installation Guide

This chapter is to assist you how to use the included CD-ROM which comprises the Driver and the Client Utility Interface.

2.1 Driver Installation

Please follow the following instructions to install your new wireless USB Adapter:

2.1.1

Insert the USB wireless network card into an empty USB 2.0 port of your computer when computer is switched on. Never use force to insert the card, if you feel it's stuck, flip the card over and try again.

2.1.2

The following message will appear on your computer, click (Cancel / Close).



Under Windows XP

Under Windows Vista and Windows 7

Driver Software Installation		*
Installing device driver so	oftware	
802.11 n WLAN	Waiting for user input	
		Close

2.1.3

Insert the driver CD into your CD-ROM. You can see autorun screen below. if not, you can double click '<u>autorun.exe</u>' on CD.



Click '<u>Install Driver</u>' to start the installation procedure 2.1.4

Installation descriptions shown. Click '<u>Next</u>' to continue



2.1.5

Once the installation is finished the computer will be asked to reboot. you can click '<u>Finish</u>' and reboot the computer to finish the installation of driver files.



2.1.6

A new icon will appear near the clock of system tray:



Left-click the icon will launch wireless network configuration utility, and you can right-click the icon to show the quick menu of configuration utility. This icon also uses different color to show the status of wireless connection:

лШ Wireless connection is established, good signal reception.

Wireless connection is established, weak signal reception.



Connection is not established yet.



Wireless network card is not detected.

For detailed instructions of wireless network configuration utility, please see next chapter.

2.2 Connect to Wireless Access Point

To use wireless network, you have to connect to a wireless access point first. You can either use Client utility (comes with network card driver), or Windows Zero Config utility (comes with Windows operating system).

2.2.1 Using Client Utility

Please follow the following instructions to use Client configuration utility to connect to wireless access point.

 Left-click the Client configuration utility icon located at lower-right corner of computer desktop, and configuration menu will appear:



2. Wireless utility will appear. Click '<u>Available Network</u>' menu to search for wireless access points nearby.

	ut(A)							
B WyComputer	General Profile Available Netwo Available Network(s)	rk Statu	s Statistics \	Wi-Fi Protect Setup				
	SSID	Channel	Encryption	Network Authentication	Signal	Туре	BSSID	Mode
	1 ⁹¹ ChinaNet-5s3k	1	AES	WPA Pre-Shared Key	100%	Infrastructure	48:28:2F:2F:88:96	N,G
	P-Link DIR-820L		TKIP/AES	WPA Pre-Shared Key/			C8:D3:A3:72:A5:55	N,G
	1º Tenda 43EDA0		AES	WPA Pre-Shared Key	48%	Infrastructure	C8:3A:35:43:ED:A0	
	I ⁹ 123		None	Unknown			F0:7D:68:43:7D:76	N.G
	1° TP-LINK 34A982		TKIP/AES	WPA2 Pre-Shared Key			BC:D1:77:34:A9:82	N,G
	1 ⁰ rd		TKIP/AES	WPA Pre-Shared Key/			00:E0:4C:00:00:43	N.G
	1°1CG-8C65C0		AES	WPA Pre-Shared Key			00:E0:48:8C:65:C0	N.G
	CURLINK HIGHPO		None	Unknown			00:E0:4C:19:F3:DA	N.G
	CORLINK HIGHPO		AES	WPA2 Pre-Shared Key			00:E0:4C:02:0C:BB	N,G
	In Tenda 3EBEC8							
	P-Link_DIR-820L		AES TKIP/AES	WPA Pre-Shared Key WPA Pre-Shared Key/			C8:3A:35:3E:BE:C8 C8:D3:A3:72:A5:57	
	A D-LIFK_DIK-02UL	- 30	TRIFTAES	WPA Pre-Snared Key/	100.99	annastructure	CB:D3:A3:72:A3:37	AC, N, A
	Refresh			Add to Profile				
				Add to Profile]			
	Note] [Add to Profile]			
		join/creat	te profile.	Add to Profile				
	Note	join/creat	te profile.	Add to Profile				
Show Tray Icon	Note Double click on item to	join/creat		Add to Profile]	Ĭ		

3. Please wait for a while, and all wireless access points which can be reached by this wireless network card will be displayed here.

🕱 REALTEK 11n USB W	ireless LAN Utility						
Refresh(E) Mode(M) Abou	r(A)						
Realtek RTL8811	General Profile Available Network Available Network(s)	Status Statistics V	vi-Fi Protect Setup				
		annel Encryption	Network Authentication	tional	Туре	BSSID	Mode
	ChinaNet-Ss3k	1 AES	WPA Pre-Shared Key	100%	Infrastructure	48:28:25:25:88:96	N/G
	I [®] D-Link_DIR-620L	1 TKIP/AES	WPA Pre-Shared Key/	100%		CR:D3:A3:72:A5:55	
	⁴⁰ Tenda_43EDA0	4 AES	WPA Pre-Shared Key	48%		CB:3A:35:43:ED:AD	
	1 ⁰ 123	6 None	Unknown	92%		F0:7D:68:43:7D:76	
	10 TP-LINK_34A982	6 TKIP/AES	WPA2 Pre-Shared Key	72%	Infrastructure	BC:D1:77:34:A9:82	N,G
	1 ⁹ rd	6 TKIP/AES	WPA Pre-Shared Key/	100%	Infrastructure	00:E0:4C:00:00:43	N,G
	1°30G-906500	11 AES	WPA Pre-Shared Key	48%	Infrastructure	00:E0:4B:8C:65:C0	N,G
	I [®] OURLINK HIGHPO	11 None	Unknown	100%		00:E0:4C:19:F3:DA	
	I [®] QA	11 AES	WPA2 Pre-Shared Key	68%		00:E0:4C:02:0C:BB	
	1 [®] Tenda_3EBECB	11 AES	WPA Pre-Shared Key	0%	Infrastructure	C8:3A:35:3E:8E:08	
	D-Link_DIR-820L	36 TKIP/AES	WPA Pre-Shared Key/	100%	Intrastructure	CB:D3:A3:72:A5:57	AC,N,A
< > >	Refresh Note Double dick on item to join	n/create profile.	Add to Profile				
Show Tray Icon		ible Adapter idows Zero Config					
	🛎 💿 🤭 " 🛄 REALTEK LIN L						

If the wireless access point you wish to connect does not appear here, you can click '**<u>Refresh</u>**' button to scan for wireless access points again; if the wireless access point you're looking for still not appear, try to move the computer closer.

When the access point you're looking for is on the list, left-click it and then double click it or click '<u>Add to Profile</u>'.

4. If a password (a.k.a. 'Network Key') is required to access the wireless access point, please input it in '<u>Network key</u>' (and input it again in '<u>Confirm network key</u>' for confirmation). Click '<u>OK</u>' when password is properly inputted.

NOTE: Network security type ('<u>Network Authentication</u>' and '<u>Data encryption</u>') will be selected automatically based on wireless access point's security setting. It's not required to change these settings by yourself.

Profile Name;	D-Link_DIR-020LW-5G	602.1x configure	
etwork Name(SSID):	Dece person of with	EAP TYPE :	
This is a computer-t	o computer (ad noc) network; wweless	GTC Tunnel (Privision Mode :
	36 (51094-e) ···	Username :	
Wreless network sec	the second se	January	
	s a key for the following: work Authentication: WPA2-PSK	Identity :	
- Martin	Data encryption: AES	Domain :	
LIASCE LIPAS	SPHIASE	Password :	
Key index (advanced): T =	Certificate :	
Network key:		101	
		PAC : Juito Selec	e Par
Confirm network key:			

All options in this page will be filled automatically according to the access point you wish to add to profile. However, you can still modify any of them to meet your requirement.

Profile name	You can give a name to this profile, so you
	can remember its purpose easily. It can be
	any phrase to help you remember.
Network Name (SSID)	The SSID (Service Set IDentifier, i.e. access point's name). This field will be filled as the access point you selected when SSID is not hidden and grayed out. If SSID is hidden, you have to input correct SSID you yourself.
This is a	Check this box if you wish to connect to
computer-to-computer	another computer / network device by ad
(ad hoc) network	hoc method. When not accessing to
	wireless access point, you have to check
	this box.
Channel	Select wireless channel for ad hoc
	connection. This option only appears when
	you're using ad hoc connection.
Network	Select the network authentication type
Authentication	from drop-down menu. This setting must
	be identical with the setting of wireless
	access point you with to connect.

Γ_	
Data encryption	Select the data encryption type from drop-down menu. This setting must be identical with the setting of wireless access point you with to connect.
ASCII / PASSPHRASE	When the encryption type is 'WEP', it's required to input a set of 'passphrase' to connect to wireless access point. Check 'ASCII' or 'PASSPHRASE' depends on the security setting of access point, and input it in the box; if you select 'PASSPHRASE' you also need to select the length of the key.
	The passphrase must be identical with the setting of wireless access point you with to connect.
Key index	Select WEP key index. For most of access points you can select '1', but please refer to the setting of the access point.
Network key / Confirm network key	When the encryption type is 'WPA' or 'WPA2-PSK', it's required to input a set of 'passphrase' to connect to wireless access point. Please input the same passphrase in two boxes for confirmation.
EAP TYPE / Tunnel / Provision Mode	When authentication type is any of 802.1X, you have to select EAP type, tunnel, and provision mode from dropdown menu. This setting must be identical with your 802.1x authentication server.
Username / Identity / Domain / Password	Please input 802.1x related authentication information here.
Certificate	If certification is required to authenticate with 802.1x authentication server, please select a local certificate from dropdown list.
PAC	Check this box and PAC (Privilege Access Certificate) will be automatically selected.

Please click 'OK' when ready.

5. Network card will attempt to connect to access point now, this may require few seconds to minutes, please be patient. When the '<u>Status</u>' become '<u>Associated</u>', your computer is connected to access point you selected. Click '<u>Close</u>' to close configuration menu.

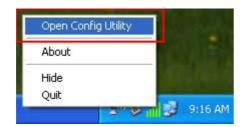
🙈 REALTEK 11n USB W	ireless LAN Utility
Refresh(R) Mode(M) Abou	t(<u>A</u>)
🖃 繴 MyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup
	Status: Associated
	Speed: Tx:433.5 Mbps Rx:433.5 Mbps
	Type: Infrastructure
	Encryption: AES
	SSID: D-Link_DIR-820LW-5G
	Signal Strength: 100%
	Link Quality:
	Network Address:
	MAC Address: 00:E0:4C:88:22:56 IP Address: 192.168.0.100
	Subnet Mask: 255.255.255.0
	Gateway: 192.168.0.1
	ReNew IP
< >	
Show Tray Icon	Disable Adapter
Radio Off	 Windows Zero Config
🐮 start 🛛 😘	📀 🗐 🍼 🙁 REALTEK 11n USB Wi 😑 友讯科技股份有限

NOTE: If you connected to an access point but the connection has been dropped soon, please check security settings and re-check password spelling.

2.2.2 Using Windows Zero Configuration

Windows XP and Vista has a built-in wireless network configuration utility, called as '**Windows Zero Configuration**' (WZC). You can also use WZC to configure your wireless network parameter:

 Right-click Client configuration utility icon, and click '<u>Open</u> <u>Config Utility</u>'.



2. Check '<u>Windows Zero Config</u>' box.

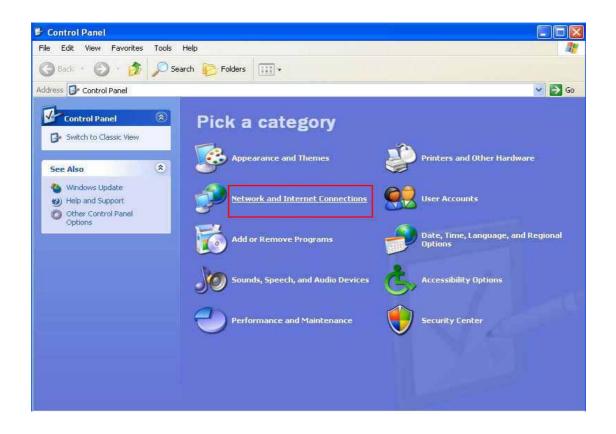
REALTEK 11n USB W	reless LAN Utility
Refresh(R) Mode(M) Abou	r(<u>A)</u>
MyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup
	Status: Associated
	Speed: Tx:433.5 Mbps Rx:433.5 Mbps
	Type: Infrastructure
	Encryption: AES
	SSID: D-Link_DIR-820LW-5G
	Signal Strength: 100%
	Link Quality: 100%
	Network Address:
	MAC Address: 00:E0:4C:88:22:56
	IP Address: 192.168.0.100 Subnet Mask: 255.255.255.0
	Gateway: 192.168.0.1
	ReNew IP
< ×	
Show Tray Icon	Disable Adapter
Radio Off	Windows Zero Config
📲 start 🔰 🍇 🕻	😧 🤨 🎽 🔭 REALTEK 11n USB W 🕘 发讯科社社的资料限

3. A message indicating that you've been switched to Windows Zero.

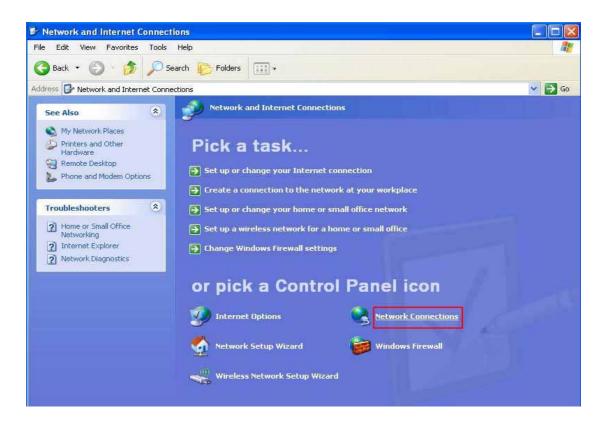
Window	s Zero Config	
(j)	You are in Windows Zero Config	g mode !!
	ОК	

NOTE: To return to use Client utility, uncheck 'Windows Zero Config' box.

 Click '<u>Start</u>' button (should be located at the bottom-left corner of windows desktop), click '<u>Control Panel</u>', then click '<u>Network</u> <u>and Internet Connections</u>' in Control Panel.

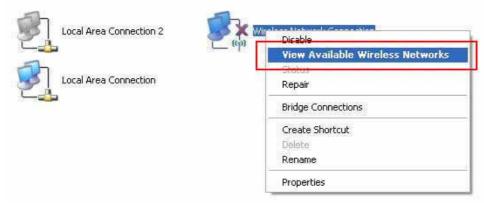


5. Double click '<u>Network Connections</u>'.

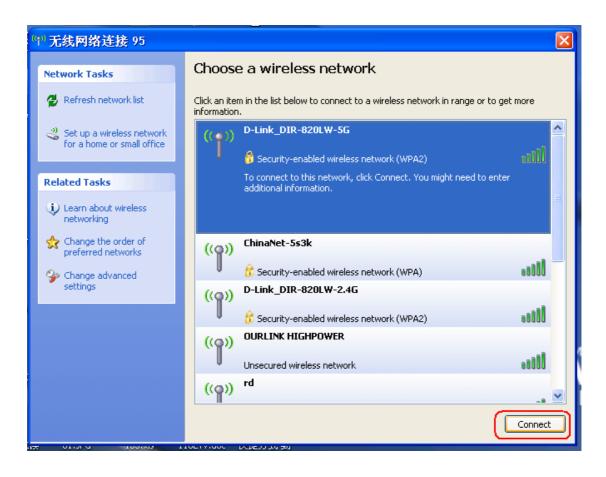


6. Right-click 'Wireless Network Connection' (it may have a

number as suffix if you have more than one wireless network card, please make sure you right-click the Wireless LAN 802.11ac USB Network Adapter), then select '<u>View Available Wireless</u> <u>Networks</u>'.



7. All wireless access points in proximity will be displayed here. If the access point you want to use is not displayed here, please try to move your computer closer to the access point, or you can click 'Refresh network list' to rescan access points. Click the access point you want to use if it's shown, then click '<u>Connect</u>'.

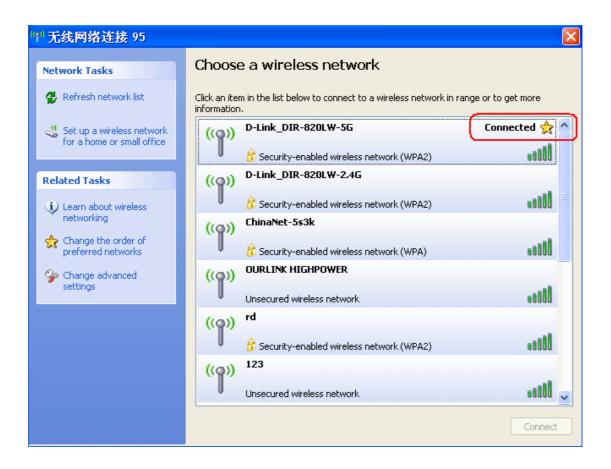


8. If the access point is protected by encryption, you have to input its security key or passphrase here. It must match the encryption

setting on the access point. If the access point you selected does not use encryption, you'll not be prompted for security key or passphrase.

Wireless Network Conne	ction 🔀
	LW-5G' requires a network key (also called a WEP key or WPA event unknown intruders from connecting to this network.
Type the key, and then click (Connect.
Network key:	•••••
Confirm network key:	••••••
	Connect Cancel

9. If you can see '<u>Connected</u>' message, the connection between your computer and wireless access point is successfully established.



CHAPTER 3: Client Utility

3.1 Connection Profile Management

If you need to connect to different wireless access points at different time, like of access point of your home, office, cybercafe, or public wireless service, you can store the connection parameters (encryption, passphrase, security etc, etc.) as a profile for every access point, so you don't have to input these parameters every time when you want to connect to a specific wireless access point.

To manage profiles, right-click the Client configuration utility icon located at lower-right corner of computer desktop, then click 'Open Config Utility'.



Click the 'Profile' menu.

Refresh(B) Mode(M) Abou	κ	
MyComputer	General Photile Available Network Status Statistics Wi-Fi Protect Setup Available Profile (s)	
		Add
	CD-Link_DIR-820LW-5G R	emove
		Edit
	D	plicate
	Set	: Default
	<u>x</u>	
Show Tray Icon Radio Off	 Disable Adapter Windows Zero Config 	Close

3.1.1 Add a new profile

By this function you can setup the connection parameters for a specific wireless access point in advance, without contacting it first.

If you want to create a new profile, click '**<u>Profile</u>**' menu, then click '<u>Add</u>' button.

CREALTEK 11n USB Wi Refresh(R) Mode(M) Abou		
MyComputer Realtek RTL8811	General Profile Available Network Status Statistics Wi-Fi Protect Setur	1
	Available Profile(s)	
	Profile Name S CD-Link DIR-820LW-5G	
	(PD-Link_DIR-820LW-5G D	Remove
		Edit
		Duplicate
		Set Default
]
Chau Trau Isan	Disable Adapter	
Show Tray Icon Radio Off	Uisable Adapter Windows Zero Config	Close

You'll be prompted to input connection parameters for the wireless access point you wish to connect:

Profile Name:		902.1x configure		
letwork Name(SSID):		EAP TYPE :		
		GTC		1.2
		Tunnel :	Privision Mode :	
This is a computer-to-computer(a access points are not used.	Thoc) network; wreass		·	20
Channel: 1 (2412994)	0. 19	Usemanie :		
Wireless network security				
This network requires a key for the	25780.335	Identity :		
Network Authenti	cation: Open System 🕑			
Data encry	notion: Disabiled 🛛 💌	Domáin :		
DASEL DRASSPHRASE		Password :		
wanted and the second of the		Cortificate :		
Key index (advanced):		Certification 1		
		PAC : Inc	to Select PAC	
Confirm network kny:			and and the second s	2

Required parameters are:

Profile name	You can give a name to this profile, so you
	can remember its purpose easily. It can be any phrase to help you remember.
Network Name (SSID)	The SSID (Service Set IDentifier, i.e. access
	point's name). This must be identical with
	the SSID of the access point you wish to
	connect.
This is a	Check this box if you wish to connect to
computer-to-computer	another computer / network device by ad
(ad hoc) network	hoc method. When not accessing to
	wireless access point, you have to check
	this box.
Channel	Select wireless channel for ad hoc
	connection. This option only appears when
	you're using ad hoc connection.
Network	Select the network authentication type
Authentication	from drop-down menu. This setting must
	be identical with the setting of wireless
	access point you with to connect.
Data encryption	Select the data encryption type from
	drop-down menu. This setting must be
	identical with the setting of wireless access
	point you with to connect.
ASCII / PASSPHRASE	When the encryption type is 'WEP', it's
	required to input a set of 'passphrase' to
	connect to wireless access point. Check
	'ASCII' or 'PASSPHRASE' depends on the
	security setting of access point, and input it
	in the box; if you select 'PASSPHRASE' you
	also need to select the length of the key.
	The passphrase must be identical with the
	setting of wireless access point you with to
	connect.
Key index	Select WEP key index. For most of access
	points you can select '1', but please refer to
	the setting of the access point.
Network key / Confirm	When the encryption type is 'WPA' or
network key	'WPA2-PSK', it's required to input a set of
	'passphrase' to connect to wireless access
	point. Please input the same passphrase in
	two boxes for confirmation.
EAP TYPE / Tunnel /	When authentication type is any of 802.1X,
Provision Mode	you have to select EAP type, tunnel, and
	provision mode from dropdown menu. This

	setting must be identical with your 802.1x
	authentication server.
Username / Identity /	Please input 802.1x related authentication
Domain / Password	information here.
Certificate	If certification is required to authenticate
	with 802.1x authentication server, please
	select a local certificate from dropdown list.
PAC	Check this box and PAC (Privilege Access
	Certificate) will be automatically selected.

When all required parameters are set, click 'OK' to create and save a new profile.

3.1.2 Remove an existing profile

When you no longer need an existing profile, you can remove it.

If you want to remove a profile, click '**Profile**' menu, then select an existing profile which you wish to remove, and then click '**Remove**' button.

REALTEK 11n USB Wi		
Refresh(R) Mode(M) Abou		
MyComputer Realtek RTL8811	General Profile Available Network Status Statistics Wi-Fi Protect Setup	
Kedicek Kilooii	Available Profile(s)	
	Profile Name c Add C Add C DL:nk_DIR-820LW-5G D	
	Remove	
	Edit	
	Dunkata	
	Duplicate	
	Set Default	
🔽 Show Tray Icon	Disable Adapter	Close
🔲 Radio Off	Windows Zero Config	

3.1.3 Edit an existing profile

If you have added a profile before, and you wish to change the content of the profile, you can use this function. Please select a profile from the list first, then click '<u>Edit</u>' button. You'll be provided with the contents of selected profile, and you can edit them. Click '<u>OK</u>' to save changes, or click '<u>Cancel</u>' to discard changes.

Profile Name: [D.CH.;00-000.9-53	B02.1x configure	
Network Name(SSID): D-Link_DIR-820LW-5G		
Interaction framework (Science)	EAP TYPE :	
	(grc	
15 The is a computer to computer lad hoc I network: weaters /	Tunnel : Privision Mode :	
access points are not used.	14 H	
Channel: (30.05100/4412 V	Usemame :	
Wreless network security		
This network requires a key for the following:	Identity :	
Network Authentication: WPA2-PSK:		
Data encryption: AES	Doman :	
CASCE CASSAMASE	Password :	
Key index (advanced):	Certificate :	
Network key:		
••••••	PAC : Auto family FAC;	
Confirm network key:		
procession in the second secon		

3.1.4 Make a copy of existing profile

If you need to make a copy of a specific profile, you can use this function. This function is very convenient when you need to build a new profile which parameters are similar to any existing profile.

To do this, select an existing profile, then click '**Duplicate**' button.

🙈 REALTEK 11n USB Wi	ireless LAN Utility	
Refresh(<u>R</u>) Mode(<u>M</u>) Abou	t(<u>A</u>)	
WyComputer Sealtek RTL8811	General Profile Available Network Status Statistics Wi-Fi Protect Setup Available Profile(s)	
	Profile Name S Add CD-Link_DIR-820LW-5G D	
	Remove	
	Edit	
	Set Default	
<		
Show Tray Icon Radio Off	Disable Adapter	Close

You'll be prompted to input a profile name, please use an identical name that does not exist in profile list.

3.1.5 Set as default profile

If you wish to use a specific profile as default connection, you can select a profile in the list, and click '<u>Set Default</u>'. Selected profile will become default selection and Client configuration utility will attempt to connect to selected access point.

🙈 REALTEK 11n USB Wi	ireless LAN Utility	
Refresh(<u>R</u>) Mode(<u>M</u>) Abou	it(<u>A</u>)	
WyComputer WyComputer Realtek RTL8811	General Profile Available Network Status Statistics Wi-Fi Protect Setup Available Profile(s)	
	Profile Name c Add	
	Remove	
	Edit	
	Duplicate	
	Set Default	
Show Tray Icon Radio Off	Disable Adapter Windows Zero Config	Close

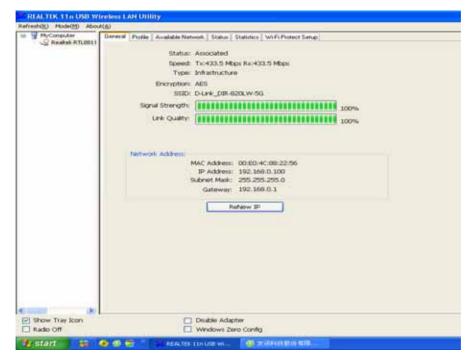
3.2 View Network Statistics, General Information,

and Status

The configuration utility provides information about network statistics and link status. If you want to know how your wireless network card works, you can use these functions to get detailed information about the wireless connection you're using.

3.2.1 General Information

If you want to know the general information of the access point you're connecting to, click '<u>General</u>' menu:

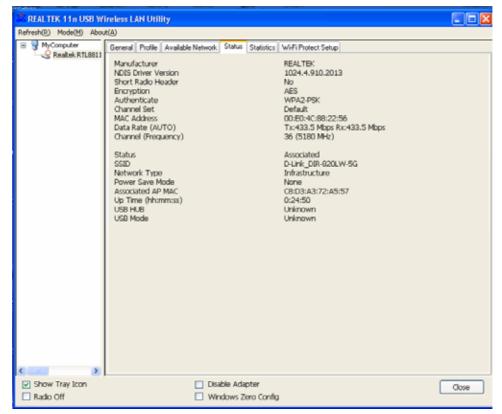


All general information like signal strength and link quality will be displayed here. These information are very useful when you encounter some problem on connecting to access point.

If you wish to get a new IP address from DHCP server, you can click '**<u>ReNew IP</u>**' button.

3.2.2 Status

If you want to know the status of your wireless network card, click '<u>Status</u>' menu:



3.2.3 View Network Statistics

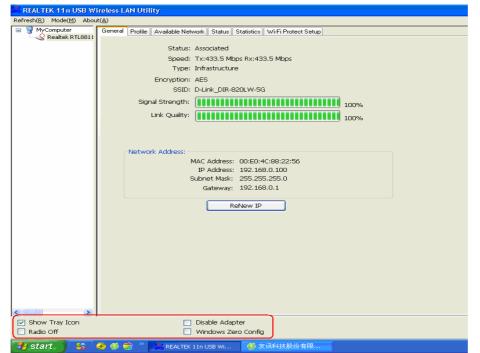
To view the statistical data of wireless network card, click '**<u>Statistics</u>**' menu, and the statistics of wireless connection will be displayed:

efresh(E) Mode(M) About(A)			
🗑 MyComputer Ger	eral Profile Available Network Status Statistics V	vi-Fi Protect Setup	
Reakek.RTL8811			
	Counter Name	Value	
	Tx OK	4042	
	Tx Error	0	
	Rx OK	3830	
	Rx Packet Count Rx Retry	3830 522	
	Rx ICV Error	0	
	FOLICY BHOM	0	
	Reset		
	hight.		
Show Tray Icon	Disable Adapter		Close
Radio Off	Windows Zero Config		

All connection-related statistics is displayed here. You can click '**<u>Reset</u>**' button, to reset the statistics of all items back to 0.

3.3 Miscellaneous Settings

There are few functions provided by Client configuration utility, you can access these functions from the bottom of configuration menu:



The descriptions of these function are listed as follow:

Show Tray Icon	Check this box to show an icon on system tray.
	E ⁰⁰ 2 111 2 136 AM
	HĚRE!
	Uncheck this box to hide it.
Radio Off	Switch wireless radio off. Wireless network
	functionalities are disabled.
Disable Adapter	Disable wireless network adapter. All
	functionalities of configration menu will disappear.
	To resume, unckeck 'Disable Adapter'.
Windows Zero	Use Windows Zero Configuration to manage
Config	wireless connections. See section 2.2.2.

3.4 Establish secure connection with AP by WPS

Wi-Fi Protected Setup (WPS) is the latest wireless network technology which makes wireless network setup become very simple. If you have WPS-enabled wireless access point, and you want to establish a secure connection to it, you don't have to configure the wireless access point and setup data encryption by yourself. All you have to do is to go to the WPS setup page of this wireless card, click a button, and then press a specific button or enter a set of 8-digit code on the wireless access point you wish to establish a secure connection - just three simple steps!

For older wireless access points, it's possible to perform a firmware upgrade to become a WPS-enabled access point. Since they may not have a hardware button to press for WPS setup, you can use an alternative WPS setup method - input the pin code. Every WPS-compatible wireless network card support pin code configuration method; you can just input the code to wireless access point, and the wireless access point and wireless network card will do the rest for you.

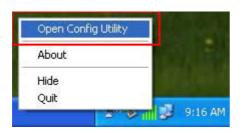
This wireless network card is compatible with WPS. To use this function, the wireless access point you wish to connect to must support WPS function too. Now, please follow the following instructions to establish secure connection between WPS-enabled wireless access point and your wireless network card.

This wireless network card supports 2 kinds of WPS: PIN code

and Push-Button.

Please follow the following instructions to setup WPS:

 Right-click Client configuration utility icon, and click '<u>Open</u> <u>Config Utility</u>'.



2. Click 'Wi-Fi Protect Setup' menu.

REALTEK 11n USB W	ireless LAN Utility
Refresh(<u>R</u>) Mode(<u>M</u>) Abou	t(Δ)
MyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup
Redicer R 10011	Status: Associated
	Speed: Tx:433.5 Mbps Rx:433.5 Mbps Type: Infrastructure
	Encryption: AES
	SSID: D-Link_DIR-820LW-5G
	Signal Strength: 100%
	Link Quality:
	Network Address:
	MAC Address: 00:E0:4C:88:22:56
	IP Address: 192.168.0.100
	Subnet Mask: 255.255.25
	Gateway: 192.168.0.1
	ReNew IP
Show Tray Icon	Disable Adapter
🔲 Radio Off	Windows Zero Config
🎒 start 🔰 😘	🤨 🦪 🌮 🔌 REALTEK 1 In USB WI 🧕 友讯科技股份有限

 You can use PIN code or Push-Button configuration, and WPS-compatible wireless access point must use the same type of WPS. For instructions on setup each type of WPS, see next 2 chapters for detailed instructions.

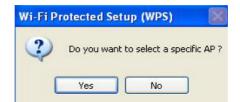
REALTEK 11n USB W		
Refresh(R) Mode(M) Abo	It(A) General Profile Available Network Status Statistics Wi-Fi Protect Setup Wi-Fi Protected Setup (WPS) An easy and secure setup solution for Wi-Fi network Pin Input Config (PIN) After pushing the PIN button.Please enter the PIN code into your AP. PIN Code : 35229414 Pin Input Config (PIN) Push Button After pushing the PBC button.Please push the physical button on your AP or visual button on the WPS config page.	
<	Push Button Config (PBC)	
Show Tray Icon Radio Off	Disable Adapter	Close

3.4.1 PIN Code

To use PIN Code, please click 'Pin Input Config (PIN)' button:

REALTEK 11n USB W	reless LAN Utility	
Refresh(R) Mode(M) Abou	t(A)	
P WyComputer Realtek RTL88	General Profile Available Network Status Statistics Wi-Fi Protect Setup Wi-Fi Protected Setup (WPS) An easy and secure setup solution for Wi-Fi network Pin Input Config (PIN) After pushing the PIN button.Please enter the PIN code into your AP. PIN Code : 35229414 Pin Input Config (PIN) Push Button After pushing the PBC button.Please push the physical button on your AP or visual button on the WPS config page.	
<	Push Button Config (PBC)	
✓ Show Tray Icon ■ Radio Off	Disable AdapterWindows Zero Config	Close

You'll be prompted to select an access point you wish to connect. If you know its SSID, click '<u>Yes</u>', otherwise click '<u>No</u>'.



If you select '<u>Yes</u>', a list of all WPS-compatible AP nearby will be displayed; you can click '<u>Refresh</u>' to rescan, then select an AP and click '<u>Select</u>' button.

WPS AP Name	WPS AP MAC
3GRouter HLY	00:0C:43:30:52:E8 00:E0:4C:81:96:C1
	Refresh

If you select '<u>No</u>', wireless network card will prompt you to enter 8-digit PIN code into your AP, without selecting an AP in advance.

After you select '<u>Yes</u>' or '<u>No</u>' in previous step, network card will attempt to connect to WPS-compatible AP, and an 8-digit number will appear. Please input this number to AP's configuration menu within 2 minutes, and network card will establish secure connection with AP automatically.

To stop this procedure before connection is established, click (**Cancel**'.

Wi-Fi Protecte	d Setup - PIN meti	ho d	
Wi-Fi Protect	ed Setup - PIN me	thod	
Please enter th	ne following PIN code	e into your AP .	
	PIN Code :	35229414	
Status : Ini	tial WPS		
(*******			
		ſ	Cancel

3.4.2 Push Button

To use Push-Button WPS configuration, please click '<u>Push</u> <u>Button Config (PBC)</u>' button. This is the easiest way to establish secure connection by WPS, but if there're more than one WPS-compatible AP using Push-Button config, please use PIN Code instead.

h(R) Mode(M) Abou		
MyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup	
Veartek VITOO	Wi-Fi Protected Setup (WPS)	
	An easy and secure setup solution for Wi-Fi network	
	Pin Input Config (PIN)	
	After pushing the PIN button. Please enter the PIN code into your AP.	
	and the Minister of the State	
	PIN Code : 35229414	
	Pin Input Config (PIN)	
	Push Button	
	After pushing the PBC button.Please push the physical button on your AP	
	or visual button on the WPS config page.	
	Push Button Config (PBC)	
>		
	Disable Adapter	
how Tray Icon adio Off	Windows Zero Confia	Clo

After you click "**Push Button Config(PBC)**", a message box will appear:

Wi-Fi Protected Setup - PBC method	×
Wi-Fi Protected Setup - PBC method	
If there is more than one AP on the PBC mode, there will be [Session Overlap].Please use PIN method or wait for a while and use PBC method again	i.
Status : AP Sitesurvey	
Complete :	
Push Button Config (PBC) Cancel	2

Please activate Push-Button function on wireless access point now, and wireless network card will establish secure connection with access point within one minute.

CHAPTER 4 Soft-AP Function

Excepting become a wireless client of other wireless access points, this wireless adapter can act as a wireless service provider also! You can switch this wireless adapter's operating mode to 'AP' mode to simulate the function of a real wireless access point by software, and all other computers and wireless devices can connect to your computer wirelessly, even share the internet connection you have!

Please follow the instructions in following chapters to use the AP function of your wireless card.

4.1 Switch to AP Mode and Station Mode

The operating mode of the wireless card is 'Station Mode' (becoming a client of other wireless access points) by default.

Please follow the following instructions to switch to AP mode:
Right-click Client configuration utility icon, and click '<u>Open</u>

Config Utility'.

Open Config	Utility	CLARKEN
About		AN AL
Hide		d Mar
Quit		

2. Select 'Mode', and then select 'Access Point'.

REAL	TE	K 11n U	SB Wire	le	ss L	AN Util	lit y
Refresh(F	0	Mode(M)	About(A))			
8 🖁 M	■ WyC ✓ Station Access Point			ar	eral	Profile	Availabl
	e l	ALLESS		v	Vi-l	Fi Pro	otecte

It requires few seconds to switch to AP mode, please be patient.

REALTEK 11n USB Wir	eless LAN Utility	
Refresh(R) Mode(M) About(A)	
B VyComputer	General Advanced Statistics ICS SSID: microsof-35426b_AP BSSID: 00:E0:4C:00:00:13 Association Table	
C III S	AID MAC Address Life Time	
Show Tray Icon	Disable Adapter	Close

After mode switch is complete, you'll see general information of software AP, which shows AP's SSID and connected wireless clients.

Refresh(R) Mode(M) Abou	1/A)	
E M DOVUINDUCER		
Realtek RTL88	General Advanced Statistics ICS	
	CCTD: Contract in the	
	SSID: microsof-35426b_AP	
	BSSID: 00:E0:4C:00:00:13	
	Association Table	
	AID MAC Address Life Time	1
	Config	
	Config	
Show Tray Icon	Disable Adapter	
Radio Off		Clos
Client mode Software Al	P icon:	
Software Al . 1 Configu	P icon: 9148 AM	
Software Al . 1 Configu	P icon:	
Software Al . 1 Configu To configure RealTek 110 USB With	P icon: ure SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility	
Software Al . 1 Configu To configure Refeat(R) Mode(M) About	P icon: ure SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A)	
Software Al . 1 Configu To configure Refeat(R) Mode(M) About	P icon: ure SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A) General Advanced Statistics ICS	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: ure SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A)	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A) General Advanced Statistics ICS	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A) General Advanced Statistics ICS SSID: microsof-35426b_AP	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A) General Advanced Statistics ICS SSID: microsof-35426b_AP BSID: 00:E0:4C:00:00:13	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A) General Advanced Statistics ICS SSID: microsof-35426b_AP BSSID: 00:E0:4C:00:00:13 Association Table	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A) General Advanced Statistics ICS SSID: microsof-35426b_AP BSSID: 00:E0:4C:00:00:13 Association Table	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A) General Advanced Statistics ICS SSID: microsof-35426b_AP BSSID: 00:E0:4C:00:00:13 Association Table	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A) General Advanced Statistics ICS SSID: microsof-35426b_AP BSSID: 00:E0:4C:00:00:13 Association Table	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A) General Advanced Statistics ICS SSID: microsof-35426b_AP BSSID: 00:E0:4C:00:00:13 Association Table	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A) General Advanced Statistics ICS SSID: microsof-35426b_AP BSSID: 00:E0:4C:00:00:13 Association Table	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel a software AP, click 'Config' button:	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel e software AP, click ' <u>Config</u> ' button: reless LAN Utility (A) General Advanced Statistics ICS SSID: microsof-35426b_AP BSSID: 00:E0:4C:00:00:13 Association Table	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel a software AP, click 'Config' button:	
Software Al .1 Configure To configure REALTEK 11n USB Wir Refresh(R) Mode(M) About MyComputer	P icon: are SSID and Channel a software AP, click 'Config' button:	

The 'Wireless Network Properties' is displayed.

Profile Name:	Access Point Mode
Network Name(SSID):	microsof-35426b_AP
	o-computer(ad hoc) network; wireless
access points are no Channel:	1 (2412MHz)
Wireless network secu	rity
	a key for the following:
Netv	vork Authentication: Open System 🛛 👻
	Data encryption: Disabled
	SPHRASE
Key index (advanced) Network key:): 1
Confirm network key:	

Please note that Ad-Hoc mode is not available when network card is in AP mode. The description of major setup items are listed below:

Network Name (SSID)	Please input the SSID (the name used to identify this wireless access point) here. Up to 32 numerical characters can be accepted here, excepting space.
Channel	Please select the wireless channel you wish to use, from 1 to 13.

To save changes, click '<u>OK</u>'; otherwise click '<u>Cancel</u>' to leave this menu and keep settings untouched.

4.1.2 Setup Soft AP Security

To setup security options for Soft-AP, configure 'Wireless Network Security' section as follow:

/ireless Network Properties:
Profile Name: Access Point Mode
Network Name(SSID): microsof-35426b_AP
This is a computer-to-computer(ad hoc) network; wireless access points are not used.
Channel: 1 (2412MHz) 💙
Wireless network security
This network requires a key for the following:
Network Authentication: Open System 🛛 👻
Data encryption: Disabled 🗸 🗸
Key index (advanced): 1
Confirm network key:
OK Cancel

The description of setup items about wireless security are listed below:

Network	Select network authentication mode from
Authentication	dropdown menu.
Data Encryption	Select data encryption method from dropdown
	menu.
ASCII /	If the encryption method is WEP, check either
PASSPHRASE	'ASCII' or 'PASSPHRASE' box and input it in the
	box as WEP passphrase.
Key Index	Select WEP key index (1-4). If you don't know
	which one you should use, select 1.
Network key /	IF network authentication mode is WPA, please
Confirm network	input WPA passphrase in both box.
key	

To save changes, click '<u>OK</u>'; otherwise click '<u>Cancel</u>' to leave this menu and keep settings untouched.

4.2 Advanced Settings

If you want to setup advanced settings of software access point, select '<u>Advanced</u>' menu. If you don't know the meaning and affects of these settings, keep them untouched.

REALTEK 11n USB W	ireless LAN Utility	
Refresh(R) Mode(M) Abou	Jt(A)	
🖃 😼 MyComputer	General Advanced Statistics ICS	
	General	
	Beacon Interval	
	100	
	DTIM Period:	
	3	
	Preamble Mode	
	Long	
	Set Defaults Apply	
< 100 S		
✓ Show Tray Icon ☐ Radio Off	, Disable Adapter	Close

The description of all setup items are listed below:

Beacon Interval	Please input wireless beacon time interval here.
DTIM Period	Please input DTIM (Delivery Traffic Indication Message) here.
Preamble Mode	Select wireless frame preamble mode (long or short) from dropdown menu.
Set Defaults	Reset all settings back to factory default value.
Apply	Save changes.

If you changed any setting here and cause problem on communicating with wireless clients, click '<u>Set Defaults</u>' to reset all settings back to default setting.

4.3 Wireless Statistics

Select '**<u>Statistics</u>**' menu and the data statistics about software access point will be displayed.

efresh(R) Mode(M) Abo	ut(A)		- 1
MyComputer	General Advanced Statistics ICS		
Realtek RTL88			
	Counter Name	Value	
	Tx OK	172	
	Tx Error	0	
	Rx OK	1960	
	Rx Packet Count	1960	
	Rx Retry	9	
	Rx ICV Error	0	
	10		
	Reset		
<u> </u>			
Show Tray Icon	🔲 Disable Adapter		Close
Radio Off			

Click 'Reset' to reset the value of every item back to '0'.

4.4 Internet Connection Sharing (ICS)

In this page, you can assign a network card on your computer as the path for all wireless clients to get connected to Internet.

If you have only one network card (except this software access point), you don't have to select network card here; if you have more than one network card, select the one you wish to be used as Internet gateway.

efresh(R) Mode(M) Abou	lt(A)
MyComputer	General Advanced Statistics ICS
Tage Realtek RTL88	Setting Internet Connection Sharing (ICS)
	ConnName Device Name
	Local Area Connection Realtek RTL8139 Family PCI Fast Ethernet NIC #2 Local Area Connecti Realtek RTL8139 Family PCI Fast Ethernet NIC
	Public Network
	Local Area Connection Realtek RTL8139 Family PCI Fast Ethernet NIC #2
	Apply
	Apply

Click '**Apply**' to save changes ('**Apply**' is grayed out when no changes are made in this page).

CHAPTER 5: Troubleshooting

If you encounter any problem when you're using this wireless network card, don't panic! Before you call your dealer of purchase for help, please check this troubleshooting table, the solution of your problem could be very simple, and you can solve the problem by yourself !

Scenario	Solution
I can't find any	1. Click ' Rescan ' for few more times and see if
wireless access	you can find any wireless access point or
point / wireless	wireless device.
device in ' <u>Site</u>	2. Please move closer to any known wireless
<u>Survey</u> ' function.	access point.
<u>Survey</u> function.	3. Ad hoc' function must be enabled for the
	wireless device you wish to establish a direct
	wireless link.
	4. Please adjust the position of network card
	(you may have to move your computer if
	you're using a notebook computer) and click
	'Rescan' button for few more times. If you
	can find the wireless access point or wireless
	device you want to connect by doing this, try
	to move closer to the place where the wireless
	access point or wireless device is located.
Nothing happens	1. Please make sure the wireless network card is
when I click	inserted into your computer's USB port.
'Open Config	2. Reboot the computer and try again.
<u>Utility</u> '	3. Remove the card and insert it into another
	USB port.
	4. Remove the driver and re-install.
	5. Contact the dealer of purchase for help.
I can not establish	1. Click 'Add to Profile' for few more times.
connection with a	2. If the SSID of access point you wish to
certain wireless	connect is hidden (nothing displayed in 'SSID'
access point	field in ' <u>Site Survey</u> ' function), you have to
	input correct SSID of the access point you
	wish to connect. Please contact the owner of
	access point to ask for correct SSID.
	3. You have to input correct passphrase /
	security key to connect an access point with
	encryption. Please contact the owner of
	access point to ask for correct passphrase /
	security key.

	4. The access point you wish to connect only allows network cards with specific MAC address to establish connection. Please go to
	' <u>Status</u> ' menu and write the value of 'MAC
	Address' down, then present this value to
	the owner of access point so he / she can add
	the MAC address of your network card to his /
	her access point's list.
The network is	1. Move closer to the place where access point is
slow / having	located.
problem when	2. There could be too much people using the
transferring large	same radio channel. Ask the owner of the
files	access point to change the channel number.
	Please try one or more solutions listed above.

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. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

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

-- Consult the dealer or an experienced radio/TV technician for help.

Indoor use only