ASRock WiFi-802.11g Module Operation Guide

1. Introduction

ASRock WiFi-802.11g module is an easy-to-use wireless local area network (WLAN) adapter to support WiFi+AP function. With ASRock WiFi-802.11g module, you can easily create a wireless environment and enjoy the convenience of wireless network connectivity. Therefore, from anywhere within the signal range, you will be able to play LAN games, connect to the internet, access and share printers, and make Internet phone calls easily. Please read this operation guide carefully before you start to set up ASRock WiFi-802.11g module.

Standard	- IEEE 802.11g
Data Rate	- 6, 9, 12, 18, 24, 36, 48, 54Mbps
Security	- Access Point mode (AP mode):
	WEP, WPA
Network Architecture Types	- Access Point mode (AP mode)
	- Station mode: Infrastructure mode and
	Ad-Hoc mode
Frequency Band	- 2.4~2.5GHz
Operating Range	- Indoor: 80ft (30m)
	- Outdoor: 200ft (60m)
	* The range varies in different
	environments
Number of Connected Devices	- up to 16 stations
(AP Mode)	
Antenna	- ASRock WiFi-802.11g
	omni-directional antenna
LED	- Green data transmission (AIR) LED
Support OS	- Windows [®] XP / XP 64-bit / Vista TM /
	Vista TM 64-bit
Compatibility	- Full compatible with IEEE 802.11g
	standard products
Software Support	- ASRock WiFi-802.11g Wizard

1.1 Specifications

1.2 LED Indicators and Antenna Port

ASRock WiFi-802.11g module has a green LED for transmission status mounted onboard, and an antenna port for connection to the external antenna.



LED Status	Indication	
On	Power on, no data activity	
Off	Power off, no wireless connection	
Fast Blinking	Transmitting / receiving data	
Slow Blinking	Site surveying	

1.3 Signal Range

The signal range of ASRock WiFi-802.11g module varies from the operating environment. Obstacles such as walls and metal barriers could reflect and absorb radio signals. Devices like microwave ovens may also interfere with the wireless network greatly.

Signal range: Indoor 80ft (30m), outdoor 200ft (60m)

By default, ASRock WiFi-802.11g module should automatically adjust the data rate. The closer the wireless stations are the better the signal and transmission speed they will receive.

2. Hardware & Software Installation

2.1 System Requirements

Before installing ASRock WiFi-802.11g module to your motherboard, please make sure your system satisfies the following requirements.

1. ASRock motherboard with a WiFi or WiFi/E header (black)

(Please refer to ASRock motherboard manual for the location of WiFi or WiFi/E header.)



- 2. A minimum of 64MB system memory
- 3. Operating system: Windows[®] XP / XP 64-bit / VistaTM / VistaTM 64-bit
- 4. An optical drive / CD-ROM for driver and utility installation

2.2 Installing ASRock WiFi-802.11g Module and Antenna

After you make sure your system satisfies the requirements above, please follow below steps for installing your ASRock WiFi-802.11g module. If the motherboard you purchase is equipped with ASRock WiFi-802.11g module, which is screwed next to the audio jack of the I/O panel, please skip step 2 to 6.

- 1. Shut off the PC before installing ASRock WiFi-802.11g module.
- 2. Move out your motherboard from the chassis.
- 3. Fasten the bracket to the proper position of the chassis with screws.
- 4. Plug ASRock WiFi-802.11g module with its connector-side to the WiFi or WiFi/E header* (black) on the motherboard. (The location of the WiFi or WiFi/E header may vary on motherboard models. Please refer to your motherboard manual for the motherboard layout.)



Connector-side

WIFI or WIFI/E Header

- * The WiFi header comes in WiFi (2 x 6 Pin) and WiFi/E (2 x 8 Pin) designs respectively, but to plug the ASRock WiFi-802.11g module on it, please align the module connector to the left hand side of the header.
- 5. Fasten ASRock WiFi-802.11g module to the motherboard with screws.
- 6. Place your motherboard to the chassis.
- 7. Connect the cable-end from the antenna to the antenna port on ASRock WiFi-802.11g module.



8. Place the antenna at an elevated location. A wide and open position will enhance the operating range.

2.3. Driver and Utility Installation

After you finish the hardware installation, you need to install WiFi driver and utility to your system. Please boot your system and follow below steps to install the WiFi driver and utility.

- 1. Insert ASRock motherboard support CD to the optical drive.
- The system will automatically display the driver menu. Click "ASRock WiFi-802.11g Driver and Utility" and follow screen instructions to finish the driver installation.

After above steps, the WiFi driver and utility are installed to your system simultaneously.

Note:

* Microsoft[®] had released a hotfix to improve the connectivity and performance of wireless network in Windows[®] Vista-based system. To download the hotfix, please go to: http://support.microsoft.com/kb/928152/en-us

* Microsoft[®] had also released three hotfix to improve the connectivity for transferring large file in Windows[®] Vista-based system. To download the three hotfix, please go to:

 "The connection has been lost" – this error message may occur when you try to copy a large file from one Windows[®] Vista-based computer to another Windows Vista-based computer, hotfix link: http://support.microsoft.com/kb/932045/en-us

- When you copy large files to or from earlier operating systems, the copy operation may be slower than expected on some Windows[®] Vista-based computers, hotfix link: <u>http://support.microsoft.com/kb/932170/en-us</u>
- The copy process may stop responding when you try to copy files from a server on a network to a Windows[®] Vista-based computer, hotfix link: <u>http://support.microsoft.com/kb/931770/en-us</u>

2.4. Utility Setup

After you have installed the driver and utility to your system, now you are ready to set up the utility in your network. ASRock WiFi-802.11g module supports two kinds of wireless network mode: Access Point Mode (AP Mode) and Station Mode. Please refer to below introduction and select the most appropriate mode when setting it up.

A. Access Point Mode (AP Mode)

If you want to share the Internet access with the wireless stations in your environment, such as PC, notebook and other devices, you can configure ASRock WiFi-802.11g module in an access point mode (AP mode). In this mode, ASRock WiFi-802.11g module becomes the wireless access point that provides local area network and Internet access for your wireless stations. The AP Mode feature is ideal for home/SOHO networks with several computers, a shared printer, and a shared Internet connection.



B. Station Mode

If you do not plan to use AP function with ASRock WiFi-802.11g module, but just

want to use the wireless function to connect the access point (AP), or connect with other stations in the wireless range instead, please set up ASRock WiFi-802.11g module in station mode. There are two choices provided in station mode: Infrastructure mode and Ad-hoc mode. Please read below introduction for the differences of these two modes.

B-1. Infrastructure Mode

If you have a present access point (AP) in your wireless network environment for this station to join, you can set up ASRock WiFi-802.11g module in Infrastructure mode. In this mode, ASRock WiFi-802.11g module acts as a wireless adapter. In other words, it is centered on an AP that provides Internet access and LAN communication for the wireless stations, such as PC, notebook and other devices.



B-2. Ad-hoc Mode

If you don't have a present access point in your wireless network environment, you can set up ASRock WiFi-802.11g module in Ad-hoc mode. The wireless network brings together workstations, PC, notebook and other devices for wireless communication.



3. General Setup with ASRock WiFi-802.11g Wizard

If you want to easily set up ASRock WiFi-802.11g for general use, please use ASRock WiFi-802.11g Wizard and follow below procedures according to the mode you choose.

Here we take Windows[®] VistaTM for example in the following pictures. Since the setup procedures are quite similar in different operating systems, please refer to below procedures when setting up ASRock WiFi-802.11g wizard under other operating systems.

3.1 Setting up the AP Mode

1. Move your mouse cursor to the right-click the icon.



2. Select ASRock WiFi-802.11g Wizard to launch the WiFi setup wizard.



3. Select Access Point and click Next.

WiFi-802.11g Wizard		<u>? ×</u>
		/ISRock
Please select one from the	following network types:	
Access Point	C Station	Ì
Choosing the access poin LAN to allow other wireless		ing to establish a wireless join it
	Next >	Cancel

icon on the $Windows^{\ensuremath{\smuremath{\ensuremath{\smuremath{\ensuremath{\ensuremath{\ensurema$

4. The system will automatically generate a SSID for the AP mode. You can rename the SSID if you want.

Network Name(SSID):	Station_AP		
An SSID contains up to 32 a network identification.	Iphanumeric charao	cters, which are case	sensitive for
Network Security:		OPEN	
Coloration mathematical aftering law	ss network security	with authentication and	d encryption

 Select a Network Security level for your AP mode. The configurable options are OPEN, SHARE WEP and WPA-PSK TKIP. Select an appropriate level and click Next.

WiFi-802.11g Wizard		<u>? ×</u>
		/ISRock
Network Name(SSID):	Station_AP	1
An SSID contains up to 32 a network identification.	Iphanumeric chara	acters, which are case sensitive for
Network Security:		OPEN •
Select the method of wireles	ss network security	OPEN WEP
		WPA-PSK TKIP
		INPACES INF

6. If you select SHARE WEP or WPA-PSK TKIP. You need to input a password. You can choose to configure the password in either ASCII or HEX mode. If you choose HEX mode, input 10 hex digits for 64-bit encryption, or 26 hex digits for 128-bit encryption. Then click Next to continue.

WiFi-802.11g Wizard		10	Rock
		/6	noch
2 1001			_
ASCII mode			
Input password with either 5 or 1	13 alphabatic char	acters	
HEX mode	1		ĩ
Input password with either 10 or	26 heydeciaml di	nital numbers (0~9 A	~F)
	Lo nonacciann ar	gildi Hombero(o, o, ri	
< Prev	Next>	Cancel	
FIEV	INGAL >	Gancer	

7. Select your Internet connection and click Next.

Connecto	
Connection	Device Name Realtek RTL8168B/8111B Family PCI-E Gigabit Et

Note:

* You need to have another LAN connector connected to your ADSL / cable modem, and already set it up for Internet access. Please refer to the manual from your ISP for detailed setup steps.

8. The AP mode configuration is complete. Record the setup information on your note and click **Finish** to quit ASRock WiFi-802.11g wizard.

	/ISR00
Network Name(SSID) : S	
Network Key : 123456789 The internet connection : Realtek RTL8168B/8111	0 B Family PCI-E Gigabit Ethernet NIC (NDI

3.2 Setting up the Station Mode

There are two choices provides in station mode: Infrastructure mode and Ad-hoc mode. Please read the following procedures according to the mode you choose. For the differences of Infrastructure mode and Ad-hoc mode, please refer to page 5 and 6 for details.

3.2.1 Setting up the Infrastructure Mode

1. Move your mouse cursor to the right-click the icon.

icon on the Windows[®] taskbar and



2. Select ASRock WiFi-802.11g Wizard to launch the WiFi setup wizard.



3. Select **Station** and click **Next**.

WiFi-802.11g Wizard		/ISRock
Please select one from the	following network types	E.
C Access Point	Statio	n
	present wireless LAN to :	omes a wirless network node; access internet. In next step.

4. Select the desired network type of the wireless station. Click **Infrastructure** and click **Next**.

WiFi-802.11g Wizard		<u>? ×</u>
		/ISRock
Please select one from the	following two network typ	es:
Infrastructure	C Ad-hoo	1
In infrastruction mode, ther wireless network environm		access point in your
< Prev	Next>	Cancel

5. Select one from the found sites as connection point. Click Next.

lser should select one access	point from the follow	ing list	
Network Name(SSID)	Security	channel	Signal 1
1 wireless	None	11	83% E
1 Bu	WEP	1	76%
Buffalo_WHR-G54S	WEP	10	69%
I v32AP	WEP	6	66% +
< [
Refresh			

 Select the Network Authentication for Infrastructure mode. The configurable options are Open System, Shared Key, WPA-PSK, WPA2-PSK, WPA 802.1X, WPA2 802.1X and WEP 802.1X.

Wireless No	etwork properti	es			? ×
Profile Name	mingus				
Network Name	(SSID) wirek	H95			
Infrastruct	ture				
O Ad Hoc					
	11 (2462MHz) + ork Security sett		802. 1x Confi	gure	
	rk requires a k		EAP Type	MDS	+
Network Au	uthentication	Open System	Tunnel	1	-
Data Encry	ption	Open System Shared Key	User Name	i i	
() ASCII	() Hex	WPA-PSK WPA2-PSK	Identity		
Key Length	648	WPA 802.1X WPA2 802.1X WEP 802.1x	Password		
Network ke	ry	ind were	Certificate	0.0	-
Comfirm Ne	etwork Key			Let al.	
Key Index	1	-			
(Finish	Cancel]		

Note:

* If your operating system is Windows[®] XP with Service Pack 2, it is required to install the Microsoft hotfix in order to support **WPA2-Personal** function. Please go to this link to download the necessary hotfix:

http://www.microsoft.com/downloads/details.aspx?familyid=662BB74D-E7C1-48D6-95EE-145923 4F4483&displaylang=en

7. Select the Data Encryption. The configurable options are **Disabled** and **WEP**.

Profile Name mingus Network Name(SSID) mineless Infrastructure		
and the second s		
Infrastructure		
C Ad Hoc		
Channel 11 (24629/Hz) = Wireless Network Security settings	802. 1x Configure	
This network requires a key for the following	EAP Type MDS	
Network Authentication Open System	Turnel	-
Data Encryption WEP	User Name	
ASCII O Hx WEI	Identity	=j)
Key Length 64 Bits	Password	T
Network key	Certificate	-
Comfirm Network Key	the state of the s	
Key Index		

8. Select the Key Length. The configurable options are **64 Bits** and **128 Bits**. (If you select **Disabled** in the previous option **Data Encryption**, you will not be able to choose the Key Length.)

rofile Name	mingus				
etwork Name(SS	ap) we	less			
Infrastructure Ad-Hoc					
	(2462MHz) k Security se		802.1x Conf	igure	
		y for the following	EAP Type	MD5	*
Network Auth	entication	Open System	• Tunnel	1	*]
Data Encrypti	on	WEP	User Name	1	
C ASCII	0.11	Passpl	vase Identity		
Key Length	64	Bits •	Password		
Network key		Bits	Certificate		
Comfirm Netw	_		Ceruitate		A
Key Index	1				

9. Key in the Network password and confirm.

Wireless Network propertie	5			?
Profile Name mingus				
Network Name(SSID) wirele	5	-1		
Infrastructure				
C Ad-Hoc	2			
Channel 11 (2462MHz) = Wireless Network Security setti		802. 1x Confi	gure	
This network requires a key	Contraction of the second	EAP Type	MDS	
Network Authentication	Open System •	Tunnel		Ŧ
Data Encryption	WEP	User Name		
🕐 ASCII 🔹 Hex	Passphrase	Identity		
Key Length 648	ts 🔻	Password		
Network		Certificate	n f	-
Comfirm Network Key			24	
Key Index	•			
Prist Z	Cancel			
<u>rnsn</u> 2 3	Concer			

10. Click Finish.

				/ISRe
TCP/IP Address				
Automatically obtia	an IP address:			
O Use the following I	P address:			
IP address:	1 Miles	57	323	
Subnet mask:	255 . 255	. 255	. 0	
Gateway:	1 52		222	
DNS				
Automatically obta	ain DNS server:			
O Use the fillowing D	NS server:			
Primary DNS:	+	æ);e1	
Other DNS:	4	42		

3.2.2 Setting up the Ad-hoc Mode

1. Move your mouse cursor to the icon on the Windows[®] taskbar and right-click the icon.



2. Select ASRock WiFi-802.11g Wizard to launch the WiFi setup wizard.



3. Select **Station** and click **Next**.

WiFi-802.11g Wizard		/ISRock
Please select one from the fo	llowing network types	5.
C Access Point	Static	on
Choosing the station configur and you should join other pre you have to choose ufurther r	sent wireless LAN to	comes a wirless network node; access internet In next step.
	Next>	Cancel

4. Select the desired network type of the wireless station. Click **Ad-hoc** and click **Next**.

	? ×
	/ISRock
g two network t	types:
Ad-h	loc
ork bring toget ther users on t	her workstations and he network.
	Ad-t ork bring toget

5. Select one IBSS from the list to join, click **Next**, and follow below steps to enter the required information of this station. You can also click **Create** to create a new IBSS, and follow below steps to enter the information of the IBSS you create.

		?
	/	ISRoc
IDCC from the following li	al or erecto o r	au IPCC-
	channel	63%
Create		
	Security None m	IBSS from the following list or create a n Security channel None 1

6. Select the Network Authentication for Ad-hoc mode. The configurable options are **Open System** and **WPA2-Personal**.

Wireless Network properties		<u>7</u> ×
twork Name(SSID)		
Infratructure		
AdHoc		
annel 1 (241299tz)	802.1x Configure	
This network requires a key for the forms	EAP Type HDS	*
Network Authentication Open System	Turnel	-1
Data Encrypton WPA2-Personal	User Name	
CASCE CHER CASCE	a Identity	
Key Length 64 Bits +	Password	
Network key	Certificate	
Confirm Network Key		-1
Key Index		
Finish Cancel	i la	

Note:

* If your operating system is Windows[®] XP with Service Pack 2, it is required to install the Microsoft hotfix in order to support **WPA2-Personal** function. Please go to this link to download the necessary hotfix:

http://www.microsoft.com/downloads/details.aspx?familyid=662BB74D-E7C1-48D6-95EE-145923 4F4483&displaylang=en

7. Select the Data Encryption. The configurable options are **Disabled** and **WEP**.

Wireless Network properties		<u>? ×</u>
activork Name(SSID) V32-VIC		
C bifustructure		
Ad Hoc		
Channel 1 (241299/2) -	802.1x Configure	
Wreless Network Security settings	FAD T-m	
This network requires a key for the rolwing	EAP Type [HD5	*
Network Authentication Open System	Tunel	
Data Encryption Disabled	User Name	
CASCE CHARTER	Identity	
KeyLangth 64 bits	Password	
Network key		
Confirm Network Key	Certificate	
Key Index		
Finish Cancel		
Carces		

8. Select the Key Length. The configurable options are **64 Bits** and **128 Bits**. (If you select **Disabled** in the previous option **Data Encryption**, you will not be able to choose the Key Length.)

Wireless Network proper	ties			<u>7 ×</u>
Network Name(SSID)	HAIC .			
Diffestructure				
Ad+Hoc				
Channel 1 (2412HHz) Wireless Network Security se		802. 1x Confi	gure	
This network requires a ke		EAP Type	MOS	
Network Authentication	Open System	• Turnel		-1
Data Encryption	WEP	User Name	0	1
🗑 ASCEL 💿 He	x O sep	Avase Identity		
	Bits ·	Password		
	5 Bits	Certificate	m	
Comfirm Network Key				
Key Index 1	•			
Frish	Cancel			
	And a second second			

9. Key in the Network password and confirm.

etwork Name(SSID)	V32-VIC				
Infrastructure AdHoc					
and the second second		a folking	802. 1x Confi EAP Type	gure (MDS	
Network Authentica	tion -	er System 🔻	Tunnel	(PDS	
Data Encryption	WB	• •	User Name	1	
ASCII	() Hex	Passphrase	Identity		
Key Length	04 6/6		Password		
Network key Comfirm Network K	ey		Certificate		
Key Index	-				

10. Click Finish.

802.11g Wizard				1SR0
			1	BRO
TCP/IP Address				
Automatically obtia	in IP address:			
O Use the following IF	address:			
IP address:	1 lü	8	328	
Subnet mask:	255 . 255	. 255	. 0	
Gateway:	1 2		-22	
DNS				
Automatically obta	in DNS server.			
O Use the fillowing D	NS server:			
Primary DNS:		÷)et]
Other DNS:	-	ан. П	20	
< Prev	Finish			

4. Advanced Setup in ASRock WiFi-802.11g Utility

If you want to set up ASRock WiFi-802.11g for advanced use, please use ASRock WiFi-802.11g utility and follow below procedures according to the mode you choose. For general users, it is unnecessary to read below advanced setup in ASRock WiFi-802.11g utility.

Here we take Windows[®] VistaTM for example in the following pictures. Since the setup procedures are quite similar in different operating systems, please refer to below procedures when setting up ASRock WiFi-802.11g utility under other operating systems.

4.1 Setting up the AP Mode



1. Double-click the utility shortcut

on the desktop or double-click the

icon on your Windows[®] taskbar to open the setup utility.



2. The setup utility contains six buttons - Status, Config, Survey, Statistics, Advanced and ICS in the left column. The survey button is greyed out in AP mode and the ICS button is disabled when in the station mode. Click **Config** button. Click the **AP/Station Mode** switch button - **To Access Point Mode**. Then ASRock WiFi-802.11g module is switched to AP mode in several seconds.

-	Network Monitor Profile M	snager		
Status	Status: Speed:		Throughput	
Config	Туре:			
9	Encryption: SSID:	N/A		
Survey	Signal Strength:			
Statistics	Network Address			
Advance	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	00:15:AF:3E:C3:E4		
Advance	IP Address: Subnet Mask:		Refresh	
	AP/Station Mode			
	To Access Pol	nt Mode		
				-

3. Click **ICS** button to configure the Internet connection which you wish to share. Select the correct connection and click **Apply**.

	Internet Connection Sharing (ICS)	(ter)		
Status Config	Internat Anneccon Sharing ConnName Local Area Reatek	Device	e Name Family PCI-E Gigabit Eth	>
Statistics	Selected Connection: Local Area Connection 2 F	Realtek RTL81688	/81118 Family PCI-E Gigabit E	
ICS		Apply		
Show Tray Icon	ļ	Radio Off	Disable Adapter	Close

Note:

* You need to have another LAN connector connected to your ADSL / cable modem, and already set it up for Internet access. Please refer to the manual from your ISP for detailed setup steps.

4. Click **Config** button and enter the **Network Monitor** tab. Click **Setup** button to enter the **Wireless Network Properties** page of the AP mode.

ASRock WiFi-802.11g	Network Monitor	
Config	Network Name Station_AP BSSID: 00:15:AF:3E:C3:E4 Channel: 1 Associate Table: Setup	
Survey Statistics Advance	AID MAC address Life Time	
īčs	AP/Station Mode]
Show Tray Icon	Radio Off Disable Adapter	Close

5. You are directed to the **Wireless Network Properties** page to set up the AP mode. The system will automatically generate a SSID for the AP mode. You can rename the SSID if you want.

twork Monito	иг [200410
Wireless	Network prope	rties _?
Profile Name	Access Poin	it Mode
Network Nar	ne(SSID) AS	Rock_AP
Infrastru	ucture	
🕐 Ad-Hoc		
Channel		- VITO_Channel
Wireless Ne	twork Security se	ettings
This netv	vork requires a ke	ey for the follwing
Network	Authentication	Open System
Data End	ryption	Disabled
🔿 ASCII	O He	ex 🔘 Passphrase
Key Leng	ith 6	4 Bits 👻
Network	key 🗌	
Comfirm	Network Key	
Key Inde	x 1	•
	Einish	Cancel

6. Select a Network Authentication for your AP mode. The configurable options are **Open System, Shared Key** and **WPA-PSK**. Select an appropriate one.

347-1	1.1		122.0		21
Wireless I	vetwork p	propertie	25		<u> </u>
Profile Name	Acces	s Point M	lode		
Network Nam	e(SSID)	ASRo	ck_AP		
Infrastru	cture	8			
O Ad-Hoc					
Channel	1 (2412	MHz) 🔻	V AU	TO_Channel	
Wireless Net	work Secu	rity setti	ings		
This netw	ork require	es a key	for the fol	llwing	
Network A	Authentica	tion	Open Sy	stem	
Data Encr	yption		Open Sy Shared K WPA-PS	ley)
🔿 ASCII		O Hex	-	O Passe	rase
Key Lengt	:h	64 B	its 🔻		
Network k	ey	[Mai -]
Comfirm N	letwork Ke	y			1
		6	- 1		
Key Index	•	1			

7. Select the Data Encryption. The configurable options are **Disabled** and **WEP**.

THICK SS	Network proper	rties <u>?</u>
Profile Name	Access Poin	t Mode
Network Nar	me(SSID) ASF	Rock_AP
Infrastru Ad-Hoc	ucture	
Channel	1 (2412MHz) twork Security se	
This net	vork requires a ke	ey for the follwing
Network	Authentication	Open System
Data End	ryption	Disabled
🔿 ASCII	CHe	Disabled WEP
Key Leng	ith 64	4 Bits
Network	key	
Comfirm	Network Key	

8. Select the Key Length. The configurable options are **64 Bits** and **128 Bits**. (If you select **Disabled** in the previous option **Data Encryption**, you will not be able to choose the Key Length.)

Wireless N	letwork prop	erties		? >
Profil <mark>e</mark> Name	Access Po	int Mode		
Network Name	e(SSID)	SRock_AP		
Infrastruc	ture			
C Ad-Hoc	-			
Channel	1 (2412MHz work Security	2	JTO_Channel	
This potes	ork requires a	kou for the f	ollusion	
	uthentication	Key for the fi	oliwing	
Network A	uthentication	Open S	iystem	•
Data Encry	yption	WEP		•
O ASCII	0	Hex	O Passphr	ase
Key Lengt	h	64 Bits		
Network k	ey	64 Bits 128 Bits		
Comfirm N	etwork Key			- F
	1	1 •		

9. Key in the Network password and confirm.

	letwork p	properti	es		? >
Profile Name	Acces	s Point N	lode		
Network Name	e(SSID)	ASRo	ck_AP		
 Infrastruc 	ture				
Ad-Hoc					
Channel	1 (2412	MHz)	AU NA	TO_Channel	In
Wireless Net	work Secu	rity set	tings		
This netwo	ork require	s a key	for the fo	Ilwing	
Network A	uthentica	tion	Open Sy	vstem	•
Data Encry	/ption		WEP		•
O ASCII		Hex		🔘 Passp	hrase
Key Lengt	n	645	lite 💌	1	
Network k	ey				
Comfirm N	etwork Ke	y			
Very Te days		1	•		
Key Index					

10. Click **Finish**. And the AP mode configuration is finished.

4.2 Setting up the Station Mode

There are two choices provides in station mode: Infrastructure mode and Ad-hoc mode. Please read the following procedures according to the mode you choose. For the differences of Infrastructure mode and Ad-hoc mode, please refer to page 5 and 6 for details.

4.2.1 Setting up the Infrastructure Mode



1. Double-click the utility shortcut

on the desktop or double-click the



icon on your Windows® taskbar to open the setup utility.



2. The setup utility contains six buttons - Status, Config, Survey, Statistics, Advanced and ICS in the left column. The survey button is greyed out in AP mode and the ICS button is disabled when in the station mode. Click **Config** button. Click the **AP/Station Mode** switch button - **To Station Mode**. Then ASRock WiFi-802.11g module is switched to Station mode in several seconds.

-	Network Monitor			_
Status	Network Name: ASRock_AP BSSID: 00:15:AF:30			
19	Channel: 11			
Config	Associate Table:		Setup	
	AID MAC address	Life Time		
Survey				
No.				
Statistics				
205				
Advance				
Advance				
Advance ICS				
0	AP/Station Mode			
0	AP/Station Mode	ie l		
0	AP/Station Mode	le		
0		de la		
0		ie		

3. Click **Survey** button. Select one from the found sites as connection point.

Status Available Networks: Status SSID Config Imingus2_AP Wreless 11 None Unknown Survey Isuffalo_WHR-G54S Survey Isuffalo_WHR-G54S Survey Isuffalo_WHR-G54S Survey Isuffalo_WHR-G54S Survey Isuffalo_WHR-G54S Survey Isu Isuffalo_WHR-G54S WEP Unknown 76% Isu IWEP Unknown 66% Isuffalo_WHR-G54S WEP Unknown 66% Isuffalo_WHR-G54S WEP Unknown 66% Isuffalo_WHR-G54S WEP Unknown 66% WEP Unknown Manue MEP WEP Unknown Manue MEP WEP Unknown Manue MEP Manue MEP Manue MEP Manue Men Manue Men Manue	Survey	Profile Manager				
SSID Channel Encryption Authentication Signal i mingus2_AP 1 WEP Unknown 92% i wireless 11 None Unknown 83% i Buffalo_WHR-G545 5 WEP Unknown 76% i V64-APeric 6 WEP Unknown 76% i v64-APeric 6 WEP Unknown 66% i DLink_DWL-700 6 WEP Unknown 66% i DLink_DWL-700 6 WEP Unknown 63% m MEP Unknown 63% Refresh Add to profile Note	Status Avail	able Networks:				
Config Survey Survey Latistics Config Survey Latistics Config Config Latistics Latistics Config Latistics Latistics Config Latistics Latistics Config Latistics Latistics Config Latistics Latistics Config Latistics Latistics Latistics Config Latistics Latist	and the second se	D	Channel	Encryption	Authentication	Signal
i Burtal WHEess An House Unknown 78% E i Burtal WHR-G545 5 WEP Unknown 78% E i Bu 1 WEP Unknown 78% i V64-APeric 6 WEP Unknown 66% i DLink_DVUL-700 6 WEP Unknown 66% i DLink_DVUL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% Refresh Add to profile Note		mingus2_AP	1	WEP	Unknown	92%
I Bu J WEP Unknown 76% I Bu J WEP Unknown 76% I v64-APeric 6 WEP Unknown 66% I DLink_DWL-700 6 WEP Unknown 66% I XPAP 1 WEP Unknown 63% COMMAN DD COMM 0 UNEP Unknown 63% Refresh Add to profile Note			11	None	Unknown	83%
i Bu 1 WEP Unknown 76% i v64-APeric 6 WEP Unknown 66% i DLnk_DWL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% c mm 2 WEP Unknown 63% Refresh Add to profile Note	1	Buffalo WHR-G545	5	WEP	Unknown	78%
i DLink_DWL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% C The Control of the C				WEP	Unknown	76%
I XPAP I WEP Unknown 63%	1 1	64-APeric	6	WEP	Unknown	66%
I XPAP 1 WEP Unknown 63%	1	DLink DWL-700	6	WEP	Unknown	66%
Refresh Add to profile Note			1	WEP	Unknown	63%
Refresh Add to profile				14100	11al-a	
Double click on item to join/create profile		te			Refresh	Add to profik
		ouble click on item	to join/cre	ate profile		

4. In Wireless Network Properties page, choose Infrastructure mode.

	Survey Profile Manager			
Wireless Network properti	6			2
Profile Name Bu				
Network Name(SSID)				
Infrastructure				
Adding	10			
Channel 1 (2412MHz) · Wreless Network Security sett		802.1x Confi	gure	
This network requires a key	for the follwing	EAP Type	MD5	÷
Network Authentication	Open System	Tunnel		
Data Encryption	WEP •	User Name		
ASCII OHex	Passphrase	Identity		
Key Length 648	its 🔹	Password		
Network key		Certificate	-	
Comfirm Network Key		Ceroncate		
Key Index	•			
Finish	Cancel			

 Select the Network Authentication for the Station mode. The configurable options are Open System, Shared Key, WPA-PSK, WPA2-PSK, WPA 802.1X, WPA2 802.1X and WEP 802.1X.

Wireless N	etwork properties	<u>? ×</u>
Profile Name	mingus2_AP	
Network Name		
O Ad-Hoc		
	ork Security settings	102. 1x Configure
This networ	rk requires a key for the follwing	AP Type MD5 +
Network Au	open system	une vi
Data Encry	Shareu Ney	Jser Name
ASCII	WPA-PSK WPA2-PSK WPA 802, 1X	dentity
Key Length		Password
Network ke		Certificate
Comfirm Ne	twork Key	9.0
Key Index	1 •	
[Finish Cancel	

Note:

* If your operating system is Windows[®] XP with Service Pack 2, it is required to install the Microsoft hotfix in order to support **WPA2-Personal** function. Please go to this link to download the necessary hotfix:

http://www.microsoft.com/downloads/details.aspx?familyid=662BB74D-E7C1-48D6-95EE-145923 4F4483&displaylang=en 6. Select the Data Encryption. The configurable options are **Disabled** and **WEP**.

ofie Name	mingus2_AP				
etwork Name(S	SSID) mingus	12_AP			
Infrastructu	re				
Ad-Hoc					
	(2412MHz) * ork Security settin		802. 1x Confi	gure	
	requires a key fr	S. Contraction of the second second	EAP Type	MD5	· +
Network Aut	hentication	open System	• Tunnel		+]
Data Encryp		WEP	User Name		
ASCII	Orx	Disabled WEP	Identity		
Key Length	641		Password		
Network key	6		Certificate	e F	
Comfirm Net	work Key				<i>\\</i>
Key Index	1	-			
1-	Finish	Cancel	1		

Select the Key Length. The configurable options are 64 Bits and 128 Bits. (If you select Disabled in the previous option Data Encryption, you will not be able to choose the Key Length.)

Wireless Network prop	arties			<u>?</u> ×
Profile Name mingus2_A	P			
Network Name(SSID)	ngus2_AP			
Infrastructure				
C Ad-Hoc				
Channel 1 (2412MHz) Wireless Network Security s		802. 1x Confi	gure	
This network requires a k	ey for the follwing	EAP Type	MD5	÷
Network Authentication	Open System	• Turnel		÷1.
Data Encryption	WEP	User Name		
I ASCII	ex Passphrase	Identity		
	i4 Bits 🔹	Password		1
	28 Bits	Certificate	en l'	
Comfirm Network Key				*]
Key Index				
Finish	Cancel			
-				

8. Key in the Network password and confirm.

Wireless Network pro	Report to per			?
rofile Name mingus2,	AP			
etwork Name(SSID)	mingus2_AP			
Infrastructure				
Ad-Hoc				
hannel [1 (2412MH		802. 1x Confi	gure	
Vireless Network Securit	Children and a state	EAP Type	MDS	
Network Authentication		• Tunnel	1	
Data Encryption	WEP	User Name		
I ASCII	Hex O Passphrase	Identity		1
Key Length	64 Bits	Password	0	
Network key		Certificate	m	
Comfirm Network Key			- Andrews	
Key Index	1 •			
Enish	Cancel			
Finish	2 Cancel			

9. Click Finish.

4.2.2 Setting up the Ad-hoc Mode



1. Double-click the utility shortcut

on the desktop or double-click the

icon on your Windows[®] taskbar to open the setup utility.



2. The setup utility contains six buttons - Status, Config, Survey, Statistics, Advanced and ICS in the left column. The survey button is greyed out in AP mode and the ICS button is disabled when in the station mode. Click **Config** button. Click the **AP/Station Mode** switch button - **To Station Mode**. Then ASRock WiFi-802.11g module is switched to Station mode in several seconds.

Status Config	Network Monitor Network Name: ASRock_AP BSSID: 00:15:AF:3E Channel: 11 Associate Table:	:C3:E4	Setup	
Statistics Advance	AID MAC address AP/Station Mode To Station Mode	Life Time		
Show Tray Icon		🛛 Radio Off 🛛 🔄 t	Disable Adapter	Close

3. Click **Survey** button. Double-click one IBSS from the found sites to join, move to step 5, and refer to the following steps to enter the required information of this station. If you wan to create a new IBSS, please click **Profile Manager** and move to step 4.

Available Networks: SSID Channel Encryption Authentication Signal i mingus2_AP 1 WEP Unknown 92% i wireless 11 None Unknown 83% i Buffalo_WHR-G545 5 WEP Unknown 76% i Bu 1 WEP Unknown 76% i V64-APeric 6 WEP Unknown 66% i DLink_DVUL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 66% i XPAP 1 WEP Unknown 63% 	SSID Channel Encryption Authentication Signal i mingus2_AP 1 WEP Unknown 92% i wireless 11 None Unknown 83% i Buffalo_WHR.G545 5 WEP Unknown 76% i Bu 1 WEP Unknown 76% i bu 1 WEP Unknown 66% i DLink_DWL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% i Refresh Add to profile Note	Survey	Profile Manager					
i mingus2_AP 1 WEP Unknown 92% i wireless 11 None Unknown 83% i Buffalo_WHR-6545 5 WEP Unknown 76% i Bu 1 WEP Unknown 76% i DLink_DWL-700 6 WEP Unknown 66% i DLink_DWL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% remum 0.0000 m 0 WEP Unknown 63% i Refresh Add to profile	i mingus2_AP 1 WEP Unknown 92% i wireless 11 None Unknown 83% i Buffalo_WHR-G545 5 WEP Unknown 78% i Bu 1 WEP Unknown 76% i v64-APeric 6 WEP Unknown 66% i DLink_DVL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% commun commun 1000 1000 1000 1000 1000 1000 1000 10	Avai	able Networks:					
i wireless 11 None Unknown 83% i Buffalo_WHR-6545 5 WEP Unknown 78% i Bu 1 WEP Unknown 78% i Bu 1 WEP Unknown 76% i V64-APeric 6 WEP Unknown 66% i DLink_DWL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% i XPAP 1 WEP WEP WEP Inknown i XPAP 1	i wireless 11 None Unknown 83% i Buffalo_WHR-6545 5 WEP Unknown 78% i Bu 1 WEP Unknown 78% i Bu 1 WEP Unknown 76% i V64-APeric 6 WEP Unknown 66% i DLink_DWL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% i XPAP 1 WEP WEP WEP Inknown i XPAP 1	55	ID	Channel	Encryption	Authentication	Signal	*
i Buffalo_WHR-G54S 5 WEP Unknown 78% i Bu 1 WEP Unknown 76% i v64-APeric 6 WEP Unknown 66% i DLink, DWL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% remain 9 Control 1 WEP Unknown 63% Refresh Add to profile Note	i Buffalo_WHR-G54S 5 WEP Unknown 78% i Bu 1 WEP Unknown 76% i v64-APeric 6 WEP Unknown 66% i DLink, DWL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% remain 9 Control 1 WEP Unknown 63% Refresh Add to profile Note	1	mingus2_AP	1	WEP	Unknown	92%	11
i Bullak_VML6245 5 VEP Unknown 76% i V64-APeric 6 WEP Unknown 66% i DLink_DWL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% i XPAP 1 WEP Unknown 63%	i Bullak_VML6245 5 VEP Unknown 76% i V64-APeric 6 WEP Unknown 66% i DLink_DWL-700 6 WEP Unknown 66% i XPAP 1 WEP Unknown 63% i XPAP 1 WEP Unknown 63%	1	wireless	11	None	Unknown	83%	
V64-APeric 6 WEP Unknown 66% L DLink, DVU-700 6 WEP Unknown 66% X XPAP 1 WEP Unknown 63% K Manuel 1 WEP Unknown 66% K Manuel 1 WEP Unknown	V64-APeric 6 WEP Unknown 66% L DLink, DVU-700 6 WEP Unknown 66% X XPAP 1 WEP Unknown 63% K Manuel 1 WEP Unknown 66% K Manuel 1 WEP Unknown	1	Buffalo_WHR-G54S	5	WEP	Unknown	78%	E
LDLnk_DWL-700 6 WEP Unknown 66% XPAP 1 WEP Unknown 63%	LDLnk_DWL-700 6 WEP Unknown 66% XPAP 1 WEP Unknown 63%	1	Bu	1	WEP	Unknown	76%	
I XPAP 1 WEP Unknown 63%	I XPAP 1 WEP Unknown 63%	1	v64-APeric	6	WEP	Unknown	66%	
Refresh Add to profile	Refresh Add to profile	1	DLink_DWL-700	6	WEP	Unknown	66%	
Refresh Add to profile	Refresh Add to profile	1	XPAP	1	WEP	Unknown	63%	1
Refresh Add to profile	Refresh Add to profile				14100	11alia a		1
The second s	The second s					Refresh	Add to pro	file
The second s	The second s	No	te			-		
bouble cick on item to join/creace prone	buble cick on item to join/create prone		When the second second second		ato profilo			
		1	Jouble click on item	to join/cre	ace prome			

4. In the **Profile Manager** page, click **Add** and follow below steps to enter the information of the IBSS you create.

	Profile Name	Network Name(Add	
Corfig			Nenere	
Survey			Edit	
Ratistics			Set Default	
idvance CS				
ics.				

5. In Wireless Network Properties page, choose Ad-hoc mode.

etwork Name(SSID)	ngus_SMC_AP	7		
a factority e				
Ad-Hoc				
hannel (2437MHz)		B02.1x Confi	gure	
Wreless Network Security se This network requires a ke	Alter who reasons to	EAP Type	MD5	÷
Network Authentication	Open System	Tunnel	0	ļ.
Data Encryption	WEP	User Name	-	
🖲 ASCII 💮 He	x O Passphrase	Identity		
Key Length 64	4Bits 🔻	Password		
Network key		Certificate	с. ст.С.	
Comfirm Network Key				
Key Index	•			

6. Select the Network Authentication for the Station mode. The configurable options are **Open System** and **WPA2-Personal**.

Wireless Network properties		<u>? ×</u>
etwork Name(SSID) Mingus_SMC_AP		
) Infrastructure AdHoc		
hannel 6 (2437MHz) Wreless Network Security settings	802.1x Configure	
This network requires a key for the roliwing	EAP Type MDS	*
Network Authentication Open System	Turnel	
Data Encryption WPA2-Personal	User Name	
ASCII O Hex O Passphrase	Identity	
Key Length 64 Bits 🔹	Password	
Network key	Certificate	*]
Comfirm Network Key		극
Key Index		

Note:

- * If your operating system is Windows[®] XP with Service Pack 2, it is required to install the Microsoft hotfix in order to support WPA2-Personal function. Please go to this link to download the necessary hotfix:
 <u>http://www.microsoft.com/downloads/details.aspx?familyid=662BB74D-E7C1-48D6-95EE-145923</u> <u>4F4483&displaylang=en</u>
- 7. Select the Data Encryption. The configurable options are **Disabled** and **WEP**.

Wireless Network properties				<u>? ×</u>
Network Name(SSID) Mingus_SM	C_AP			
Infrastructure AdHoc				
Channel 6 (2437MHz) Wireless Network Security settings		802. 1x Confi	gure	
This network requires a key for the	follwing	EAP Type	MDS	÷.
Network Authentication Oper	Suton	Tunnel	1	*
Data Encryption WEP		User Name		
@ ASCII C tex 105ab	led	lentity		
Key Length 64Bib		Password	1	
Network key		Certificate	mf	
Comfirm Network Key			- L	
Key Index				
Finish	Cancel			

8. Select the Key Length. The configurable options are **64 Bits** and **128 Bits**. (If you select **Disabled** in the previous option **Data Encryption**, you will not be able to choose the Key Length.)

- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10				
Infrastructure Ad-Hoc	0.6_5MC_AP			
eless Network Security set		802.1x Confi	gure	
This network requires a key	for the following	EAP Type	MD5	-
Vetwork Authentication	Open System	▼ Tunnel	3C	+1
Data Encryption	WEP	✓ User Name		
ASCII OH	O Passphrase	Identity	1	
Gey Length	ats -	Password		
letwork key 61	the state of the s			
Comfirm Network Key	DIS	Certificate		*
Sey Index	•			
Finish	Cancel			

9. Key in the Network password and confirm.

etwork Name(SSID)	pus_SMC_AP			
) Infrastructure				
AdHoc nannel 6 (2437MHz) Wreless Network Security set		802.1x Confi	gure	
This network requires a key	15.29/01/03/02/2	EAP Type	MDS	+]
Network Authentication	Open System ·	Tunnel	6	+
Data Encryption	WEP	User Name		
ASCII O Hex	Passphrase	Identity		ij
Key Jeanit	Bits 🔻	Password	1	
Network key		Certificate	m.C	
Comfirm Network Key		1996 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		
Key Index 1	•			
Finish	Cancel			

10. Click Finish.