



## ***11AC Intelligent Wireless Router***

# ***OPERATION INSTRUCTION***

## ***STATEMENT***

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# Contents

## *Chapter 1: Introduction*

1.1 Purpose and conventions-----4

## *Chapter 2: Hardware installation*

2.1 Description of panel indicator-----5  
2.2 System requirements-----7  
2.3 Installation environment-----8  
2.4 Installation environment-----8

## *Chapter 3: PC setup*

3.1 Set correct network environment-----8

## *Chapter 4: Quick setup guide----- 12*

## *Chapter 5: Operation mode----- 13*

## *Chapter 6: Wireless setup*

6.1 Basic setup-----16  
6.2 Basic setup-----17  
6.3 Security setup-----18  
6.4 Access control-----19  
6.5 WDS setup-----19  
6.6 WPS setup-----20  
6.7 Green wireless-----21

## *Chapter 7: Network setup*

7.1 LAN setup-----22  
7.2 WAN setup-----23

<i>Chapter 8: IPv6 setup</i> -----	<b>24</b>	
 <i>Chapter 9: Firewall setup</i>		
9.1 Port filtering-----	24	
9.2 IP address filtering-----	24	
9.3 MAC address filtering-----	25	
9.4 Port filtering-----	25	
9.5 URL filtering-----	26	
9.6 DMZ host-----	26	
9.7 VLAN-----	26	
 <i>Chapter 10: USB setup</i>		
10.1 User management-----	27	
10.2 Disk management-----	28	
10.3 File sharing-----	28	
10.4 FTP sharing-----	29	
10.5 Media sharing-----	30	
10.6 iTunes sharing-----	31	
10.7 Print sharing-----	31	
 <i>Chapter 11: QoS</i> -----		<b>40</b>
 <i>Chapter 12: Routing setup</i> -----		<b>42</b>
 <i>Chapter 13: System management</i> -----		<b>43</b>
 <i>Chapter 14: FAQ</i> -----		<b>48</b>
 <i>Chapter 15: Technical support</i> -----		<b>50</b>

## Chapter 1: Introduction

Thank for you to purchase JCG 11AC dual-frequency wireless broadband router. This product integrates the functions of a router, switch, wireless access point and firewall and adopts the most advanced 11AC wireless technology, so the wireless transmission rate is improved by about 3 times compared to old 802.11N standard. This product supports 64/128 bit WEP encryption and advanced encryption and security mechanism such as WPA and WPA2. This product provides WPS one-key encryption function and enables a user to easily establish a secure wireless network environment. A user can easily and quickly set up a router via the setup wizard and can access and manage a router via Internet at any time and place via remote management function. The JCG 11N wireless broadband router is a series of products with higher performance/price ratio which are specially designed to meet the wireless network access requirement of small-scale enterprises, homes and student dormitory and is the best choice for you to experience wireless Internet surfing and enjoy the wireless network access happiness.

It is easy to set up JCG 11AC dual-frequency wireless broadband router without guide of a profession. A user can easily install and setup a router according to the operation manual before you are ready to use this product, please carefully read this manual to better know and use all functions of this product.

### 1.1 Purpose and conventions

This manual can assist you to be familiar with and correctly use JCG wireless broadband router. To avoid confusion, we give the following conventions on the terms used in this manual.

Router: without special remark, it indicates the JCG wireless broadband router.

Modem: network service access device, including xDSL, Cable Modem, GPON and EPON.

Computer/host: It indicates single computer and portable PC and can also indicate all network clients.

Network adaptor: it indicates the wired or wireless network interface card (NIC) for network connection.

ISP: The network service supplier indicates a company or organization which provides network service.

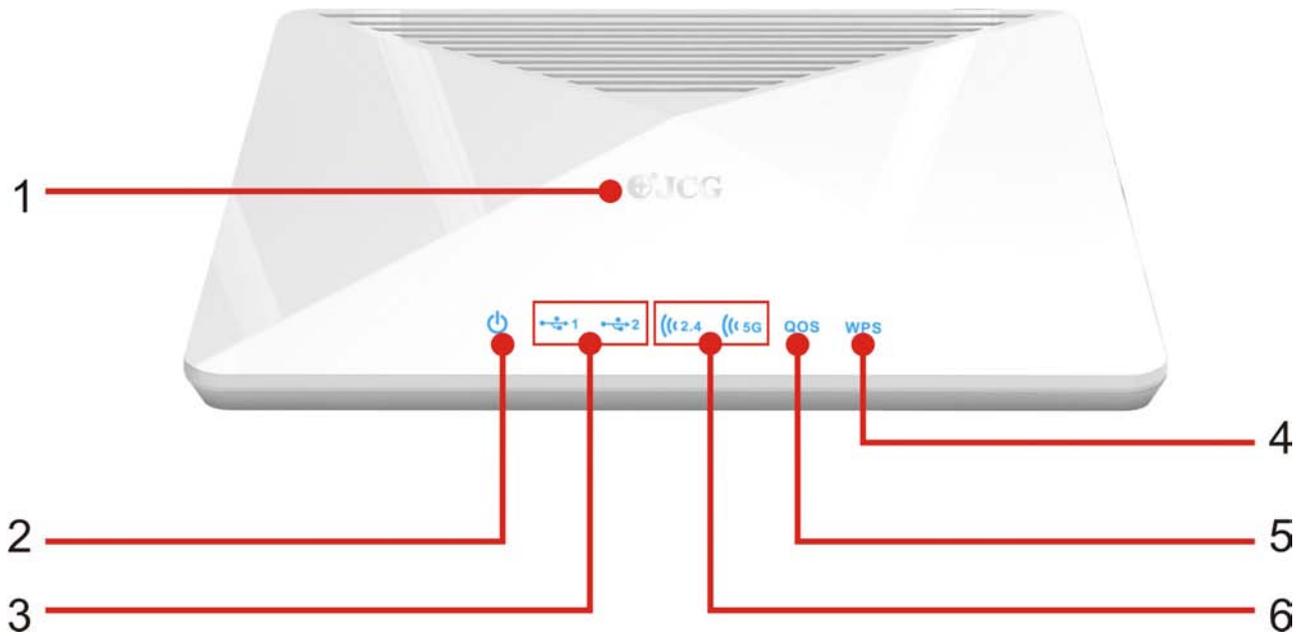
AP: wireless network access point, it can also indicate the wireless router which provides the wireless network access service.

STA: wireless network client, it indicates the wireless client such as portable PC, mobile phone and tablet PC.

Client: wireless or wired client, including, not limited to, computer, portable PC, mobile phone and tablet PC

## Chapter 2: Hardware Connection

### 2.1 Description of Panel Indicator:



#### 1. Touch sensing status indicator

To touch with a hand, an operator can turn on/off the status indicator.

#### 2. Power indicator

Off: power off

Keep on: power on

#### 3. USB status indicator

Off: USB port not connected

Off: USB port connected

#### 4. WPS

**Off:** the wireless network not encrypted

**Keep on:** the wireless network encrypted

#### 5. QoS

**Off:** QoS function not enabled

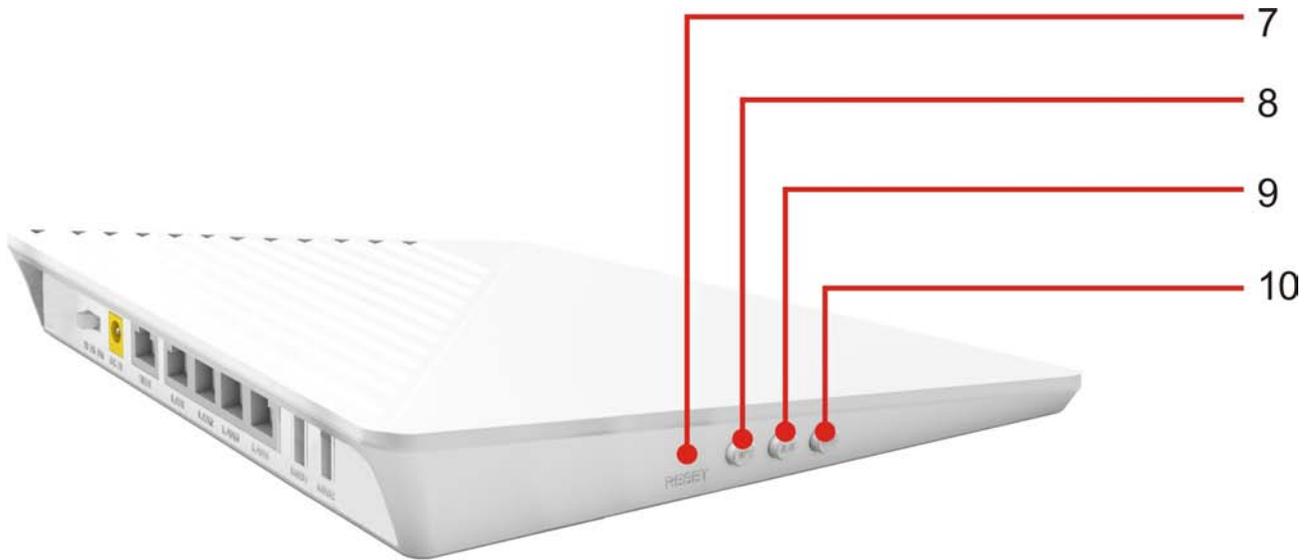
**Keep on:** QoS function enabled

#### 6.2. 4G/5G wireless status indicator

**Off:** wireless network not enabled

**Keep on:** wireless network enabled

**Flicker:** wireless network data in transmission



#### 7. RESET button

To hold this button for over 5s, the device restores to factory setting.

#### 8. WPS button

To click, 5G WPS process starts.

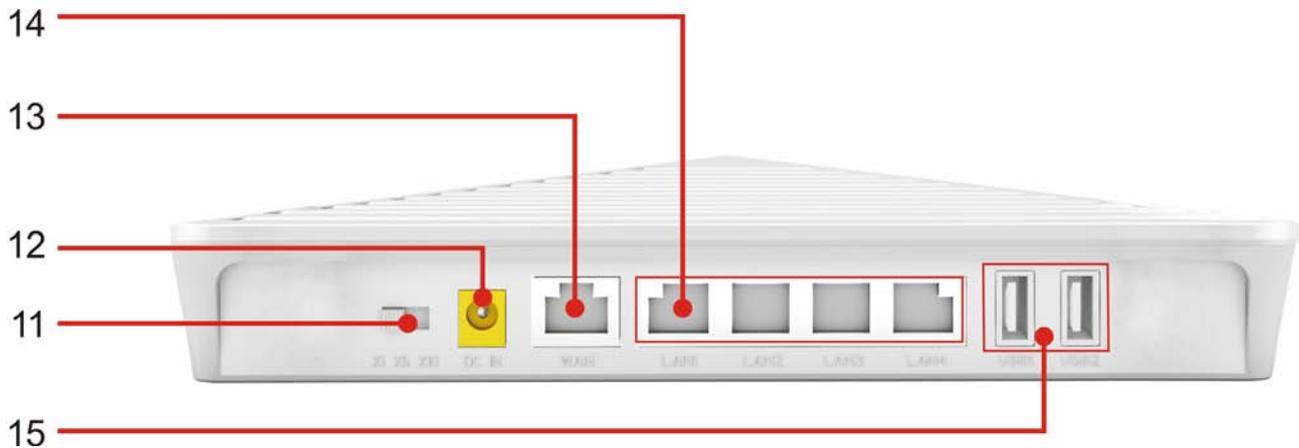
To hold for over 5s, 2.4G WPS process starts.

#### 9. WLAN button

To hold it for 1 s, an operator can turn on/off 5G wireless network. To hold it for over 5s, an operator can turn on/off 2.4G wireless network.

#### 10. QoS button

QoS function button. To click it, an operator can enable QoS function. To hold it for 5s, an operator can disable QoS function.



**11. Power adjustment button**

Radio power adjustment (x1.x5.x10)

**12. Power (DC IN) interface**

Power adaptor interface

**13. WAN (Internet) interface**

WAN connection interface

**14. LAN 1-4 network interface**

LAN connection interface

**15. USB 2.0 interface**

Connect USB device such as USB harddisk, USB flash memory or USB printer

**2.2 System requirements**

Browser: Internet Explorer 6.0+, Firefox 2.0+, Opera 10.0+ and Safari 5.0+

OS: Windows XP and higher, Linux 2.4+, Mac OS X, iOS 4.0+ and Android 2.0+.

Broadband service or broadband access point;

One network adaptor;

One standard network cable

## 2.3 Installation environment

- Place the router horizontally
- Adjust the antenna angle to a proper direction
- Do not make the router close to the heating device
- Do not place the router under a damp environment.

## 2.4 Hardware installation steps

- Connect the router power with the accompanied power adaptor.
- Connect the broadband interface and router WAN interface with a network cable.
- For wired connection, connect the computer with the router LAN interface with a network cable.
- For wireless connection, please check whether your wireless network adaptor is enabled and connect the wireless router according to the network name and password on the rear of the router.

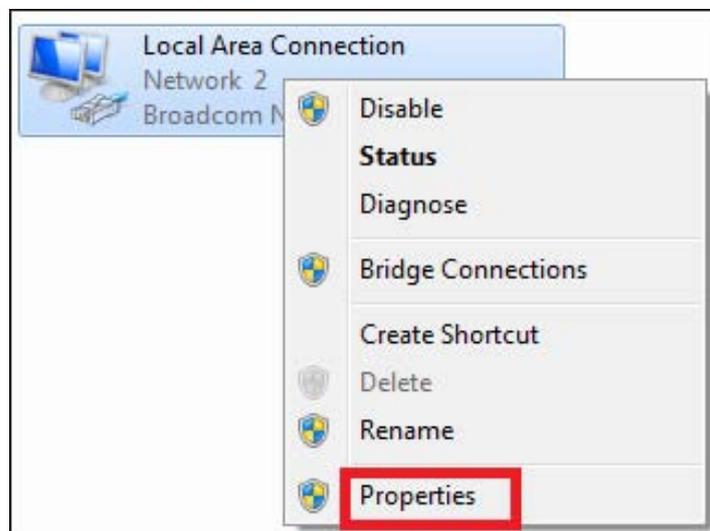
## Chapter 3: Computer setup

To normally use this router, you should correctly set up the router. The following part guides you how to check installation and set up the router.

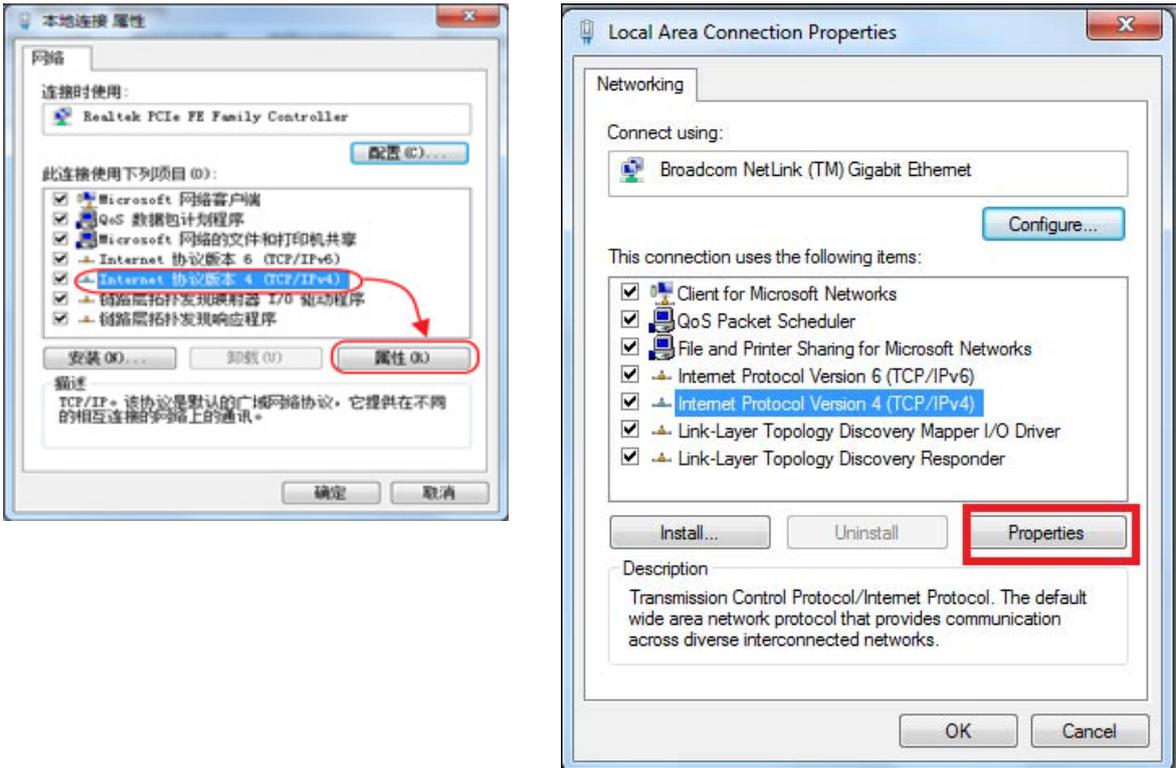
### 1. Set up correct network environment (with Windows 7 system as one example)

If your computer has no special setup, this step is skipped.

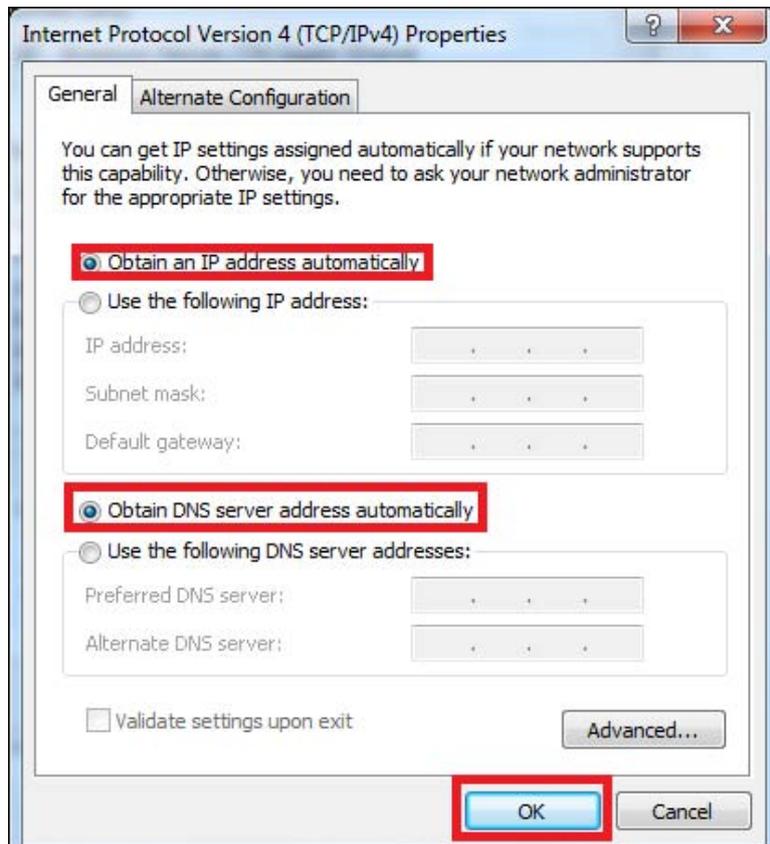
- 1) Click **[Start]—[Control panel]—[network and Internet]—[Network and sharing center]—[Change adaptor setup]—[Local connection]**”, select connected network adaptor, right click “Local connection” and select**[Property]**.



2) Select **[Internet protocol version4(TCP/IPv4)]** and click **[Property]**



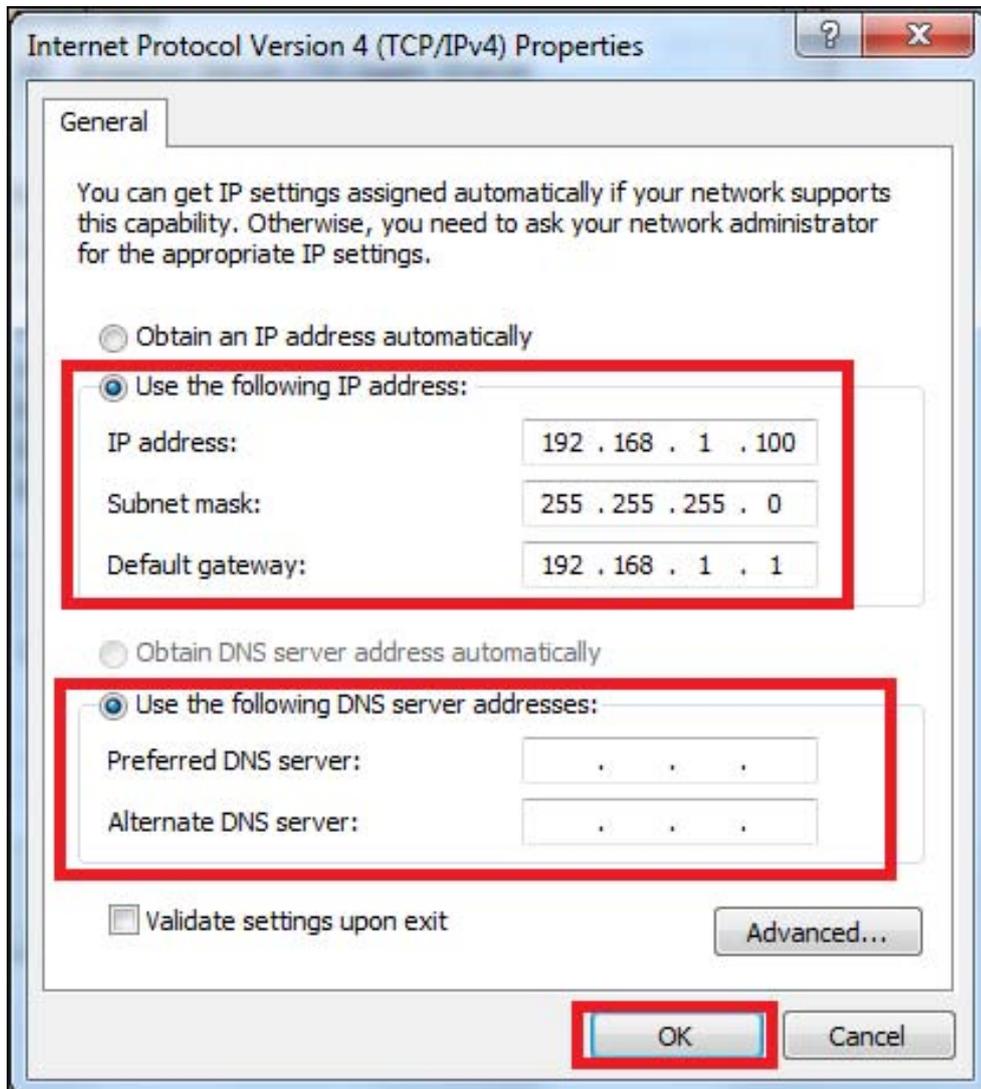
3) Select **[Automatically get IP address]** and **[Automatically get DNS server address]**, click **[OK]**, return to previous interface and click **[OK]**. The system will automatically get IP address and DNS.



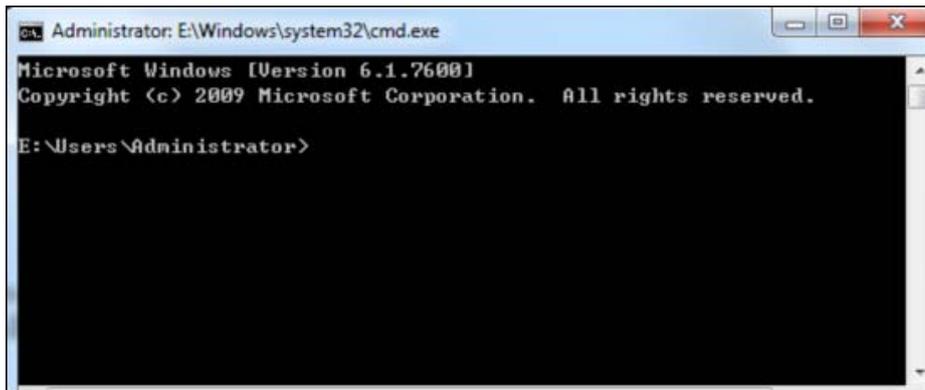
4) We recommend to set up your network to automatically get IP address. To connect the network with a fixed IP address, an operator can select **[Use the following IP address]** and input corresponding IP address, sub-network mask and default gateway. According to the requirement, a user can fill the corresponding DNS server at **[Preferential DNS server]** and **[Spare DNS server]**. For details, please consult your network supplier or customer service man.

**Note**

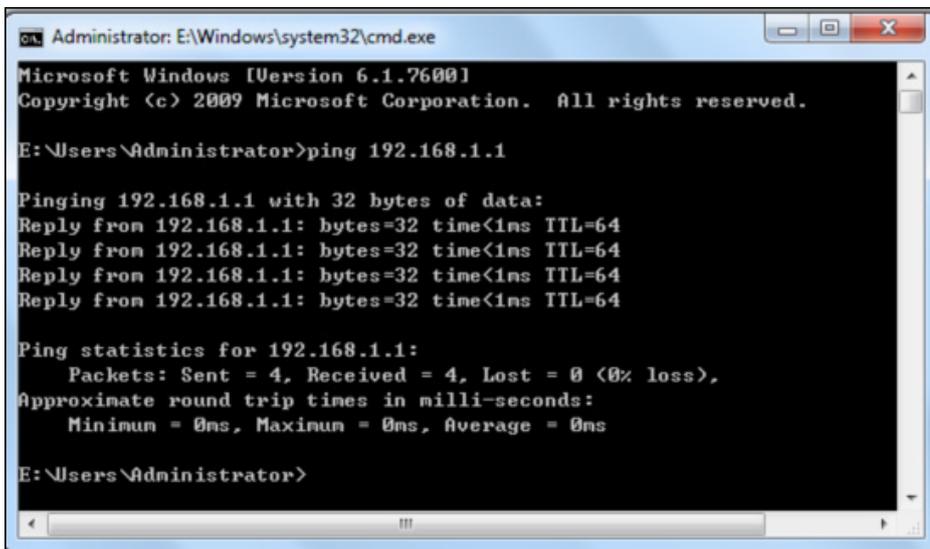
The default IP address is within 192.168.1.X  $2 \leq X \leq 254$ . The sub-network mask is 255.255.255.0. The default gateway is 192.168.1.1.



5) Check whether a computer is connected with the router with Ping command. To click **[Start]**, a user can input "cmd" command in the followed search box and click Enter, the following interface is shown.



Input command: Ping 192.168.1.1 and click Enter. If the following screen is shown, it indicates that the computer successfully connects the router.



If the following screen is shown, it indicates that the device is not ready, please recheck the above steps.



## Chapter 4: Quick Setup Wizard

1. Open the web browser

2. Input 192.168.1.1 at the browser address column and click Enter. Input a user name and password (the default is admin).



3. Enter the router interface.



#### 4. Quickly set up the network (default routing mode)

The screenshot shows the configuration page for the router. At the top, there are six radio buttons for network modes: Router (selected), Access Point, Repeater, Repeater WISP, Client, and Client WISP. Below this, there are three main sections:

- 5G Network Configuration:** Network Name (5G SSID) is set to "JCG-AC865-5G" and Key Value is "1234567890". A blue box highlights these fields with a "1" next to it.
- 2.4G Network Configuration:** Network Name (2.4G SSID) is set to "JCG-AC865-2.4G" and Key Value is "1234567890". A green box highlights these fields with a "2" next to it.
- WAN Connection Configuration:** Connection Type has three options: Fixed IP, Auto Config (DHCP) (selected), and PPPoE Dial-Up. A red box highlights these options and the Host Name field "JCG-AC865" with a "3" next to it. Below this, the MAC Address Clone field is set to "000000000000" with a "(AABBCCDDEEFF)" label. There are "Auto Check", "Auto Fill", and "Clear" buttons.

At the bottom, there are "Save/Apply" and "Cancel" buttons.

Set the wireless name and wireless password of the 5G wireless network at the position 1. Set the wireless name and wireless password of the 2.4G wireless network at the position 2. Set the network connection type of the WAN at the position 3 (the network connection mode is identified as follows:)

Method 1: if you connect the Internet with a fixed IP, please select “static IP address” and input the information supplied by the broadband service supplier.

Method 2: if your broadband service supplier does not provide any parameter, please select “Automatically get (DHCP)”.

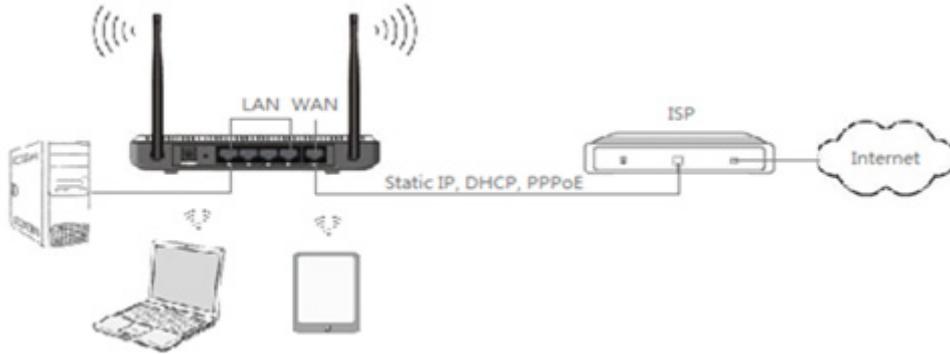
Method 3: if your broadband service supplier provides one account password, please select “PPPOE dialing” and input correct broadband account and password.

After setup, please click “Save/Apply” button.

### Chapter 5: Operation Mode

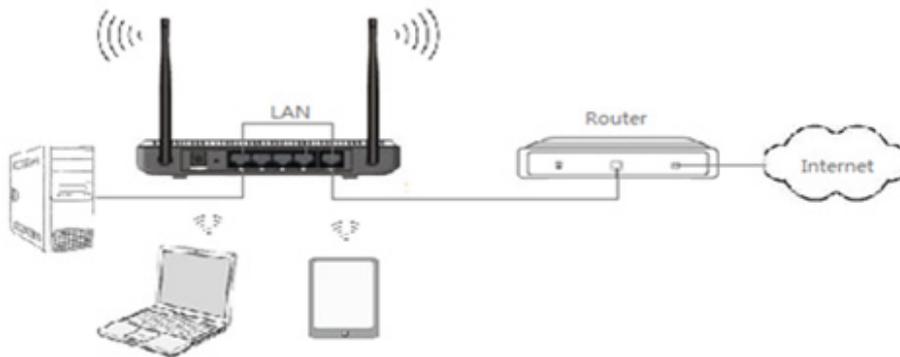


Gateway mode – (router) under this mode, the first Ethernet interface is used to connect WAN as the WAN interface. Other Ethernet interfaces and wireless network interfaces are



connected together via a bridge as the LAN interface.

Network bridge mode – (access point) under this mode, all Ethernet interfaces and wireless network interfaces are connected together via a bridge. They connect each other easily and access the superior network via the Ethernet interface. The network bridge mode is also called as AP mode.

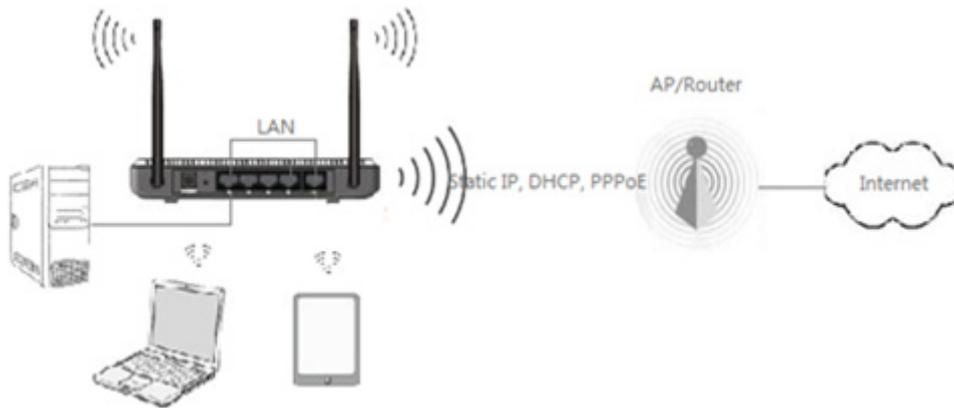


Relay mode—(Client Repeater+AP) under this mode, the wireless network driver will virtualize a wireless client interface to connect the remote AP. The basic wireless network interface and all Ethernet interfaces will be connected via bridge as the LAN interface. Under this mode, keep the working channel same as it of the upstream AP and set up necessary



**parameters for AP client.**

Wireless ISP mode—(relay WISP) under this mode, all Ethernet interfaces act as the LAN interface. The device connects the Internet via the wireless network interface. NAT is enabled. All LAN hosts access the Internet with same WAN IP addresses via the wireless network interface. You can select a wireless access point via scanning. Support multiple network connection modes such as static IP address, DHCP and PPPoE dialing. Under this mode, keep the working channel same as it of the upstream AP and set up necessary parameters for AP client and WAN.



AP client mode—(Client) under this mode, the wireless network driver will virtualize a wireless client interface to connect the remote AP. The basic wireless network interface and all Ethernet interfaces will be connected via bridge as the LAN interface. Under this mode, keep the working channel same as it of the upstream AP and set up necessary parameters for AP client and WAN.



## Chapter 6: Wireless Setup

To click the wireless setup main menu, the independent menu will display to set 5G and 2.4G wireless network parameters (WLAN1 represents 5G wireless network and WLAN2 represents 2.4G wireless network). The setup mode is basically same. Taking 2.4G wireless setup as one example:

### 6.1 Basic setup

**Basic setup:** a user mainly sets up the basic parameters of the wireless network such as wireless network mode, SSID, channel and frequency.

**Name of wireless network (SSID)-** wireless network identifier, which can distinguish different wireless networks.

**Hide SSID** – hide the name of a wireless network, but the client can still manual input SSID to connect the access point.

**Connected client-** to click the client, a user can know the information on the client connected via the current 2.4G wireless network (shown as the following figure).

Active Wireless Client Table (WLAN2)						
The table shows the MAC address, transmission, reception packet counters of each associated wireless client.						
MAC Address	Mode	Tx Packet	Rx Packet	Tx Rate(Mbps)	Power Saving	Expired Time(s)
00:e0:4c:81:76:03	11N	373762	1719	81	No	300

Refresh Close

**Generic relay** – the wireless network interface is used as the wireless network access point and wireless network client. The wireless network client interface can connect the superior router as the WAN interface (switch to wireless ISP mode and select correct WLAN wireless network interface).

**Extend wireless client interface SSID** – it is the network name of the superior wireless network access point which the wireless network client should connect.

**Configuration file** – wireless network configuration file, when the wireless network client is enabled, the authentication information of the access point for client connection can be stored to the configuration file. When the client connects the access point next time, it can easily connect the specified access point by selecting a configuration file without the need of inputting security information.

## 6.2 Advanced setup

A user can set the advanced parameters of a wireless network with advanced setup.

Wireless Advanced Settings (WLAN 2)		<a href="#">Help</a>
Fragment Threshold:	<input type="text" value="2346"/> (256-2346)	
RTS Threshold:	<input type="text" value="2347"/> (0-2347)	
Beacon Interval:	<input type="text" value="100"/> (20-1024 ms)	
Preamble Type:	<input checked="" type="radio"/> Long <input type="radio"/> Short	
IAPP (802.11f):	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
BG Protection:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
Packet Aggregation:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
Short GI:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
WLAN Partition:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
STBC:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
LDPC:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
20/40MHz Coexistence:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
Tx Beamforming:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled	
Multicast to Unicast:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
Tx Power:	<input checked="" type="radio"/> 100% <input type="radio"/> 70% <input type="radio"/> 50% <input type="radio"/> 35% <input type="radio"/> 15%	
<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>		

**Packet threshold**—the packet threshold decides the size of the data packet which will be divided (one data block is sent several times). When the communication environment is not good or the interference is severe, this threshold can be reduced. This threshold can improve your network performance.

**RTS threshold** – RTS (Request to Send) threshold decides the size of a data packet. When this size is reached, AP will send one RTS to clear the channel before sending data. A smaller RTS threshold is useful when the connected clients are plentiful, or the clients are

remote, or the clients are limited, even reach one.

**Beacon interval** --- beacon is the small data packets which are used by AP to synchronize wireless network. The beacon interval indicates the interval of two beacons sent by AP.

**Short collision slot** – it is used to shorten the communication time between AP and client.

**BG protection** – a self-adjustment mechanism, which acts as 802.11B standard and can allow the clients meeting different standard can collaboratively work.

**Data packet convergence** – multiple smaller data packets are converged and transmitted as one bigger data packet in order to reduce and control the occupied network bandwidth. When the network environment is not good or the interference is severe, it can reduce the network performance.

**Transmission power** – it can adjust the RF transmission power of the wireless network to increase or decrease the valid coverage distance and scope of a wireless network.

### 6.3 Security setup

Here a user can set the security mode and encryption type of a wireless network to prevent unauthorized clients from accessing your wireless network.

Wireless Security Settings (WLAN2) <span style="float: right;">Help</span>	
Select SSID:	Root AP - JCG-AC865-2.4G-151 <span style="float: right;">Save/Apply Cancel</span>
Auth. and Encryption:	WPA2 <span style="float: right;">Save/Apply Cancel</span>
Authentication Mode:	<input type="radio"/> Enterprise (RADIUS) <input checked="" type="radio"/> Personal (Pre-Shared Key)
WPA2 Cipher Suite:	<input type="checkbox"/> TKIP <input checked="" type="checkbox"/> AES
Pre-Shared Key Format:	Passphrase
Pre-Shared Key:	1234567890

Wireless Security Settings (WLAN2) <span style="float: right;">Help</span>	
Select SSID:	Root AP - JCG-AC865-2.4G-151 <span style="float: right;">Save/Apply Cancel</span>
Auth. and Encryption:	WEP <span style="float: right;">Save/Apply Cancel</span>
802.1x Authentication:	<input type="checkbox"/>
Authentication Mode:	<input type="radio"/> Open <input type="radio"/> Shared <input checked="" type="radio"/> Auto.
Key Length:	64-bit
Key Format:	Hex (10 characters)
Key Value:	*****

**Tip:** when the key length is 64 in WEP encryption, please input 10 hex characters or 5 ASCII characters. When the key length is 128, please input 26 hex characters or 13 ASCII characters.

This router provides wireless network password in the factory default setting, please refer to the label on the rear side of the shell.

## 6.4 Access control

Wireless Access Control (WLAN2)		Help
Select SSID:	Root AP - JCG-AC865-2.4G-151	
Access Control Mode:	Disable	
Client MAC Address:	<input type="text"/> (AABBCCDDEEFF)	
Comment:	<input type="text"/>	
		Save/Apply Cancel

Access Control List		
Client MAC Address	Comment	Select
		Delete Del All Cancel

Access control --- control connected client to forbid or allow them to connect and access your 2.4G wireless network.

Allow access – only allow the clients in the list to access 2.4G wireless network.

Forbid access – forbid the clients in the list to access 2.4G wireless network.

Tip:

1. If you are setting up the router with a wireless network connection, when the access strategy is changed as **[Allow]**, please add the MAC address of the current computer wireless network adaptor into the access list. Otherwise, you can not connect the wireless router.
2. The input format of the MAC address is AABBCCDDEEFF without any symbol in this address.

## 6.5 WDS setup

Wireless Distributed System (WDS) can extend a wireless network like Ethernet. With WDS, all access points should work in same channel and MAC addresses (BSSID) of the access points which should communicate with each other should be added to WDS list.

WDS Settings (WLAN 2)		Help
<input type="checkbox"/> Enable		
AP MAC Address:	<input type="text"/> (AABBCCDDEEFF)	
Data Rate:	Auto.	
Comment:	<input type="text"/>	
		Statistics Security Save/Apply Cancel

WDS AP List			
AP MAC Address	Data Rate(Mbps)	Comment	Select
			Delete Del All Cancel

**Tip**

1. Before WDS setup, select wireless network type as WDS or AP+WDS (AP+WDS is recommended) in wireless setup-basic setup, set the channel as it of the corresponding access point, click Apply and restart and further setup WDS.

Wireless Basic Settings (WLAN 2) <span style="float: right;">Help</span>	
<input type="checkbox"/> Disable Wireless LAN Interface	
Country Region:	CHILE
Wireless Band:	2.4 GHz (B+G+N)
Wireless Mode:	WDS
Multiple AP:	AP
Network Type:	AP+WDS
Network Name (SSID):	JCG-AC865-2.4G-151 <span style="float: right;">Add to Profile</span>
Channel Band:	40MHz
Control Side Band:	Upper
Channel:	13
Hidden SSID:	Disabled
WMM:	Enabled
Data Rate:	Auto.
Associated Clients:	Show Active Clients
<span>Save/Apply</span> <span>Cancel</span>	

## 6.6 WPS setup

**WPS (Wi-Fi protection setup)** can allow your wireless network client to easily establish a connection with the wireless network of the device within several seconds.

**PBC mode** – the client and access point can establish an connection by pressing WPS button within specified time (generally it is 2 min). It is also the simplest and most convenient mode.

**PIN mode** – the PIN code of the adder is inputted as a PIN of an added party. After validated by the added party, a connection is established. Generally PIN code is a 8-digit decimal number.

**Tip:** when the PBS mode is used for WPS encrypted connection, please notice WPS button of the router and difference when 2.4G and 5G wireless WPS are enabled. The WPS button of current JCG “Young” wireless router JYR-AC680 and JYR-AC580 are used as follows: to click this button, 5G WPS function is enabled. To hold this button for over 5s, 2.4G WPS function is enabled.

**WPS Settings** Help

Disable

---

**-AP-**

WPS Status:  Configured  Unconfigured

Auto-Lock-Down State: Unlocked

Self-PIN Number: 55434881

Push Button Configuration:

Stop WSC:

Client PIN Number:

---

**Current Key Info.**

Authentication	Encryption	Key
WPA2 PSK Mixed	AES	1234567890

---

**WPS Progress Status**

NOT\_USED-->NOT USED (IDLE)

## 6.7 Green wireless

A user can disable or enable wireless network within the specified time. Please correctly set up the system time or enable automatic NTP update function. Otherwise, the green wireless may operate abnormally.

Set up system time: router interface – system management – time zone setup

**Time Zone**

The system time may synchronize with a public time server over the Internet, so time-based features can work properly.

**Syn. My Host** - Synchronize the system time with current host, and the time will not change until next NTP update.

Current Time: Date 2013 - 11 - 8 Time 18 : 4 : 8

Time Zone Select: (GMT+08:00)Beijing, Chongqing, Hong Kong, Urumqi

Auto. Adjust Daylight Saving

NTP Auto. Update

NTP Server:  cn.pool.ntp.org - Asia Pacific   
 0.0.0.0 (Manual NTP Server)

Green wireless setup mode (taking the following demand as one example)

From Monday to Friday, 2.4G wireless network is only enabled in the period from 18:00 to 24:00 and 2.4G wireless network is disabled in other period to prevent the network from being used by others. No restriction is enabled on Saturday and Sunday.

Green AP				Help
<input checked="" type="checkbox"/> Enable				
Enable	Day	Start Time	End Time	
<input checked="" type="checkbox"/>	Sun	00 (hour) 00 (min)	00 (hour) 00 (min)	
<input checked="" type="checkbox"/>	Sun	00 (hour) 00 (min)	00 (hour) 00 (min)	
<input checked="" type="checkbox"/>	Sun	00 (hour) 00 (min)	00 (hour) 00 (min)	
<input checked="" type="checkbox"/>	Sun	00 (hour) 00 (min)	00 (hour) 00 (min)	
<input type="checkbox"/>	Sun	00 (hour) 00 (min)	00 (hour) 00 (min)	
<input type="checkbox"/>	Sun	00 (hour) 00 (min)	00 (hour) 00 (min)	
<input type="checkbox"/>	Sun	00 (hour) 00 (min)	00 (hour) 00 (min)	
<input type="checkbox"/>	Sun	00 (hour) 00 (min)	00 (hour) 00 (min)	
<input type="checkbox"/>	Sun	00 (hour) 00 (min)	00 (hour) 00 (min)	
<input type="checkbox"/>	Sun	00 (hour) 00 (min)	00 (hour) 00 (min)	
				Save/Apply    Cancel

## Chapter 7: Network Setup

### 7.1 LAN setup

Set LAN IP address of the wireless router and access this wireless router via this IP address.

LAN Settings		Help
IP Address:	<input type="text" value="192.168.18.1"/>	
Subnet Mask:	<input type="text" value="255.255.255.0"/>	
Default Gateway:	<input type="text" value="0.0.0.0"/>	
DHCP Type:	<input type="text" value="Server"/>	
DHCP Client Range:	<input type="text" value="192.168.18.100"/> - <input type="text" value="192.168.18.200"/> <input type="button" value="Show Client"/>	
DHCP Lease Time:	<input type="text" value="480"/> (1 ~ 10080 minutes)	
Static DHCP:	<input type="button" value="Set Static DHCP"/>	
DHCP Domain Name:	<input type="text" value="Home"/>	
802.1d Spanning Tree:	<input type="text" value="Disabled"/>	
MAC Address Clone:	<input type="text" value="000000000000"/> (AABBCCDDEEFF)	
		Save/Apply    Cancel

**Default gateway**—it is valid only when the device works under the bridge connection mode and the default gate is the IP address of the device under other working mode.

**DHCP type** – for the client, the LAN IP address will be obtained via other DHCP server in the network and need not be manually specified. For the server, it can allocate a IP address for the LAN;

**DHCP effect domain** – it specifies the effect domain of the IP address allocated by DHCP and generally it can be used by WINS service;

**802.1d span tree protocol**—it can detect and disconnect the network loop, avoid broadcasting storm and improve network stability

## 7.2 WAN setup

WAN Settings		Help
Connection Type:	Auto Config (DHCP) ▾	
Host Name:	JCG-AC865	
MTU Size:	1492 (1400-1500 bytes)	
DNS Type	<input checked="" type="radio"/> Attain DNS Automatically <input type="radio"/> Set DNS Manually	
DNS 1:	<input type="text"/>	
DNS 2:	<input type="text"/>	
DNS 3:	<input type="text"/>	
MAC Address Clone:	<input type="text" value="000000000000"/> (AABBCCDDEEFF) <input type="button" value="Auto Fill"/> <input type="button" value="Clear"/>	
<input type="checkbox"/> UPnP		
<input type="checkbox"/> IGMP Proxy		
<input type="checkbox"/> Enable Ping Access on WAN		
<input type="checkbox"/> Enable Web Page Access on WAN		
WAN Access Port:	<input type="text" value="8080"/>	
<input checked="" type="checkbox"/> Enable IPSec Pass Through on VPN Connection		
<input checked="" type="checkbox"/> Enable PPTP Pass Through on VPN Connection		
<input checked="" type="checkbox"/> Enable L2TP Pass Through on VPN Connection		
<input type="checkbox"/> Enable IPv6 Pass Through on VPN Connection		
		<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>

**Static IP address** – manually set network connection information such as IP address, gateway and DNS server. Consult ISP or network administrator;

**Automatic acquisition (DHCP)** – it is the simplest network connection mode, does not require complicated setting, only requires network environment or IPS support. Generally it is used inside the LAN.

**PPP dialing** – it is the frequent network connection mode of ISP. It requires the user name and password provided by ISP. A user can normally use the network after passing authentication. Consult ISP;

**MTU**—maximum transmission unit. For some networks or ISP, a proper MTU is required to normally connect the network.

**DNS server** – the DNS domain name is parsed into IP address. Otherwise, most network applications can not be used.

## Chapter 8: IPv6 Setup

To enable tunnel (6to4) setting, a user can quickly transfer the IPv6 data packets via the IPv4 network.

**Tunnel (6to4) Settings**

**6to4** - is an Internet transition mechanism for migrating from IPv4 to IPv6, a system that allows IPv6 packets to be transmitted over an IPv4 network (generally the IPv4 Internet) without the need to configure explicit tunnels.

Enable:

## Chapter 9: Firewall Setup

### 9.1 Port filtering

It can restrict the hosts in LAN to access the Internet services at the specified ports or within specific port range. You can add multiple ports to restrict more Internet services.

**Port Filtering** [Help](#)

Enable Port Filtering

IP Version:  IPv4  IPv6

Port Range:  -  (1-65535)

Protocol:

Comment:

---

**Filtering Table**

Port Range	Protocol	IP Version	Comment	Select
				<input type="button" value="Delete"/> <input type="button" value="Del All"/> <input type="button" value="Cancel"/>

### 9.2 IP address filtering

It can restrict some hosts in LAN with specific IP address to access Internet. You can add multiple IP addresses to restrict more hosts in the LAN to access the Internet.

IP Filtering		Help
<input type="checkbox"/> Enable		
IP Version:	<input checked="" type="radio"/> IPv4 <input type="radio"/> IPv6	
Local IPv4 Address:	<input type="text"/>	
Local IPv6 Address:	<input type="text"/>	
Protocol:	Both ▾	
Comment:	<input type="text"/>	
		<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>

Filtering Table			
Local IP Address	Protocol	Comment	Select
			<input type="button" value="Delete"/> <input type="button" value="Del.All"/> <input type="button" value="Cancel"/>

### 9.3 MAC address filtering

It can restrict some hosts in LAN with specific MAC address to access Internet. You can add multiple MAC addresses to restrict more hosts in the LAN to access the Internet.

MAC Filtering		Help
<input type="checkbox"/> Enable		
MAC Address:	<input type="text"/>	(AABBCCDDEEFF)
Comment:	<input type="text"/>	
		<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>

Filtering Table		
MAC Address	Comment	Select
		<input type="button" value="Delete"/> <input type="button" value="Del.All"/> <input type="button" value="Cancel"/>

### 9.4 Port forwarding

You can establish self-network services in the LAN such as Web server and FTP server by adding the ports of related services to the port forwarding list. The port forwarding is only open to the specified ports or port range.

Port Forwarding		Help
<input type="checkbox"/> Enable		
IP Address:	<input type="text"/>	
Protocol:	Both ▾	
Port Range:	<input type="text"/> - <input type="text"/>	(1-65535)
Comment:	<input type="text"/>	
		<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>

Forwarding Table				
IP Address	Protocol	Port Range	Comment	Select
				<input type="button" value="Delete"/> <input type="button" value="Del.All"/> <input type="button" value="Cancel"/>

E.g. when a monitoring server in the Intranet with the address 192.168.1.8 provides the port forwarding service to the PC in the extranet (the service port is 7000 and HTTP port is 8000), the setup steps are described as follows:

## 9.5 URL filtering

It can restrict some hosts in the LAN (such as children and employees) to access the specified URL addresses (web or website URL). You can add more URL addresses to restrict access to more URL.

The screenshot shows the 'URL Filtering' configuration window. At the top right is a 'Help' link. The main section has an 'Enable' checkbox which is checked. Below it are two input fields: 'URL Address:' and 'Comment:'. At the bottom right of this section are 'Save/Apply' and 'Cancel' buttons. Below this is a 'Filtering Table' with three columns: 'URL Address', 'Comment', and 'Select'. At the bottom right of the table are 'Delete', 'Del.All', and 'Cancel' buttons.

## 9.6 DMZ host

It is used to provide network services without security authorization and enables a wireless server to receive all connection requests from WAN

(it severely reduces the network security level and should be carefully used).

The screenshot shows the 'DMZ Host' configuration window. It starts with a title bar 'DMZ Host' and a 'Help' link. Below is a paragraph explaining DMZ: 'A Demilitarized Zone is used to provide Internet services without sacrificing unauthorized access to its local private network. Typically, the DMZ host contains devices accessible to Internet traffic, such as Web (HTTP) servers, FTP servers, SMTP (e-mail) servers and DNS servers.' Below this is an 'Enable' checkbox which is unchecked. Then there is a 'DMZ Host IP Address:' label followed by an input field, and 'Auto Fill' and 'Clear' buttons. At the bottom right are 'Save/Apply' and 'Cancel' buttons.

## 9.7 VLAN setup

It can provide network sectioning service. VLAN can divide the network scope and facilitate network security maintenance and management.

VLAN Settings								Help
<input checked="" type="checkbox"/> Enable								
Enable	Ethernet/Wireless	WAN/LAN	Forwarding Rule	Tag	VID (1~4090)	Priority	CFI	
<input type="checkbox"/>	Ethernet Port1	LAN	NAT	<input type="checkbox"/>	3022	0	<input type="checkbox"/>	
<input type="checkbox"/>	Ethernet Port2	LAN	NAT	<input type="checkbox"/>	3030	7	<input type="checkbox"/>	
<input type="checkbox"/>	Ethernet Port3	LAN	NAT	<input type="checkbox"/>	500	0	<input type="checkbox"/>	
<input type="checkbox"/>	Ethernet Port4	LAN	NAT	<input type="checkbox"/>	1	3	<input type="checkbox"/>	
<input type="checkbox"/>	Wireless 1 Primary AP	LAN	NAT	<input type="checkbox"/>	1	0	<input type="checkbox"/>	
<input type="checkbox"/>	Wireless 1 Virtual AP1	LAN	NAT	<input type="checkbox"/>	1	0	<input type="checkbox"/>	
<input type="checkbox"/>	Wireless 1 Virtual AP2	LAN	NAT	<input type="checkbox"/>	1	0	<input type="checkbox"/>	
<input type="checkbox"/>	Wireless 1 Virtual AP3	LAN	NAT	<input type="checkbox"/>	1	0	<input type="checkbox"/>	
<input type="checkbox"/>	Wireless 1 Virtual AP4	LAN	NAT	<input type="checkbox"/>	1	0	<input type="checkbox"/>	
<input type="checkbox"/>	Wireless 2 Primary AP	LAN	NAT	<input type="checkbox"/>	1	0	<input type="checkbox"/>	
<input type="checkbox"/>	Wireless 2 Virtual AP1	LAN	NAT	<input type="checkbox"/>	1	0	<input type="checkbox"/>	
<input type="checkbox"/>	Wireless 2 Virtual AP2	LAN	NAT	<input type="checkbox"/>	1	0	<input type="checkbox"/>	
<input type="checkbox"/>	Wireless 2 Virtual AP3	LAN	NAT	<input type="checkbox"/>	1	0	<input type="checkbox"/>	
<input type="checkbox"/>	Wireless 2 Virtual AP4	LAN	NAT	<input type="checkbox"/>	1	0	<input type="checkbox"/>	
<input type="checkbox"/>	Ethernet Port5	WAN	NAT	<input type="checkbox"/>	1	0	<input type="checkbox"/>	

Save/Apply Cancel

Tip:

- 1 When two or more VLAN VID is same, they will be consolidated into a VLAN automatically.
- 2 When the router works under the gateway mode, the final item (namely WAN port) must be checked. Otherwise, it will lead to network access failure.

## Chapter 10: USB Setup

### 10.1 User management

With this function, you can manage the file sharing and FTP sharing users. E.g. add/delete a user or delete all users one time.

User Management			Help
Guest User:	<input checked="" type="checkbox"/>		
		Save/Apply	Cancel

User Table		
User Name	Comment	Select
Guest User	Guest Access	-
<input type="button" value="Add User"/> <input type="button" value="Delete"/> <input type="button" value="Del All"/> <input type="button" value="Cancel"/>		

**Add user** – add file sharing and FTP sharing user.

**Anonymous user** – allow to access file sharing and FTP sharing service in an anonymous mode.

**Note:** when accessing the file sharing service in an anonymous manner, you must log in with [guest] as the sharing user name and the password must be empty.

## 10.2 Disk management

Disk management: it displays the information on USB disk such as partition information, file system and residual space.

Partition	File System	Total Size	Available	Used (%)
Kingston DataTraveler G2 (8015 MB)				
sda1 (C:)	FAT32	7.46 GB	7.39 GB	1%

**Load disk** – after the disk pops up, you can reload the disk partition.

**Eject disk** – the loaded disk partitions ejects. After it ejects, the file system can not be visited. Before USB disk is plugged off, you can eject the disk for safe removal.

**Warning:** after popup, all sharing functions are disabled!

## 10.3 File sharing

**File sharing:** it can assist you to easily share files or folders in the USB disk with other devices.

**Workgroup:** a user can better share files with Microsoft Windows OS by setting a workgroup.

**NetBIOS name:** it is the basic network input/output system and better interconnect the Microsoft Windows OS in the LAN by using WINS service.

**Add sharing folder:** Add sharing folder for users

**Note:** To access sharing files in an anonymous manner, a user should log in with [guest] as the sharing user name and the password is empty.

Samba Server		<a href="#">Help</a>
Enable:	<input checked="" type="checkbox"/>	
Server Name:	JHR-AC865-SAMBA	
WORKGROUP:	WORKGROUP	
NetBIOS:	JHR-AC865	
		<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>

Shared Folder				
Access User	Partition	Shared Folder	Shared Name	Select
guest	sda1 (C:)	//mp3	mp3	<input type="checkbox"/>
				<input type="button" value="Add Shared Folder"/> <input type="button" value="Delete"/> <input type="button" value="Del.All"/> <input type="button" value="Refresh"/>

After the file sharing is enabled, to click “Add sharing” at the sharing directory column, a user can set the privilege of the selected files on the disk.

Notice: to click “Save/Apply”, your setting will take effect!

If the files on the disk are shared, a user can view the sharing files as follows: **input WP address of LAN port of router** or press the combination button of “Windows+R”, **input WP address of LAN port of router** at the input column on the opened “Operate” dialog, a user can visit the sharing files of a corresponding user.

## 10.4 FTP sharing

**FTP sharing:** you can upload and download files or folders on USD disk via any FTP client.

**Server port:** it is the monitoring port of FTP server. The default port is 21.

**Maximum connection:** it indicates the maximal clients to connect. 0 indicates no restriction.

**Access via WAN:** it is allowed to access FTP sharing server via WAN. You can set DDNS on demand for easy access.

**Set sharing folder:** set FTP root directory of the sharing users.

FTP Server		<a href="#">Help</a>
Enable:	<input checked="" type="checkbox"/>	
Server Name:	JHR-AC865-FTP	
Server Port:	21 (1-65535)	
Max. Session:	0 (0-100, 0 means unlimited)	
WAN Access:	<input type="checkbox"/>	
		<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>

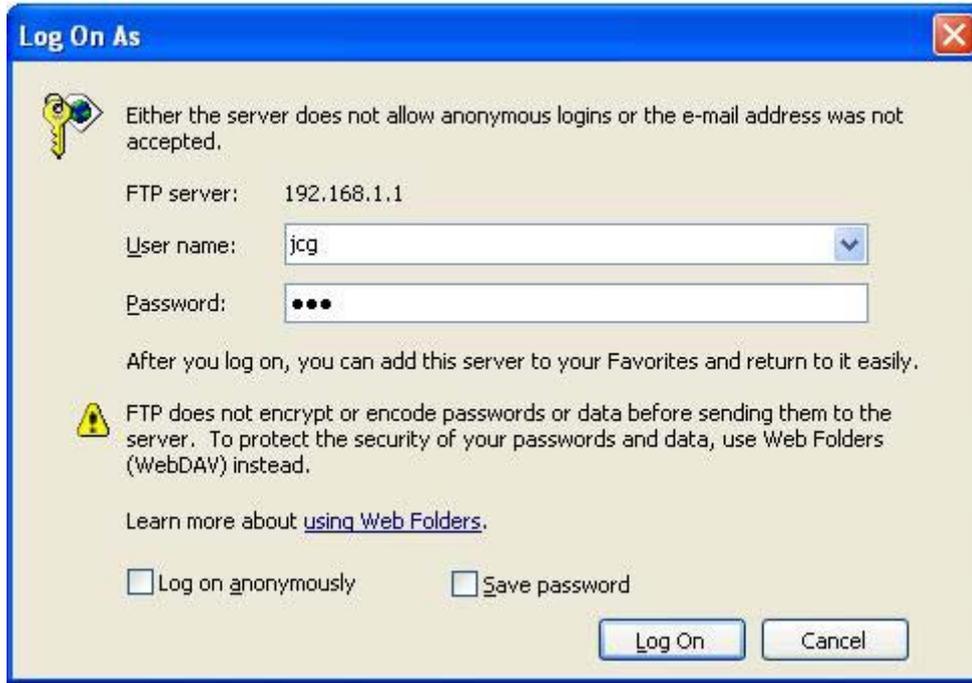
  

Shared Folder			
Access User	Partition	Shared Folder	Select
guest	sda1 (C:)	//mp3	<input type="checkbox"/>
			<input type="button" value="Set Shared Folder"/> <input type="button" value="Delete"/> <input type="button" value="Del.All"/> <input type="button" value="Refresh"/>

With FTP sharing setup, we can easily establish our FTP server and set related parameters and access privileges.

We upload and download related documents via FTP server to facilitate use of corresponding users in LAN.

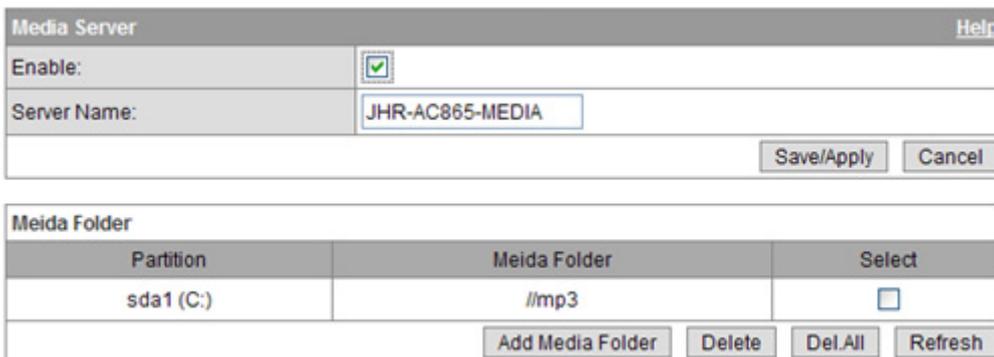
The operations are described as follows: to input **FTP://IP address of LAN port of router: FTP port** (E.g. FTP://192.168.1.1:21) on the IE browser or press “Windows + R” combination button and input **FTP:// IP address of LAN port of router: FTP port** at the input column on the opened “Operate” dialog, a user can access FTP server.



## 10.5 Media sharing

Media sharing: you can share music, images and videos on the USB disk with intelligent TV and intelligent mobile phone via UPnP/DLAN.

Add media folder: a user can add media library directory to share media files with the network player and intelligent terminal.



## 10.6 iTunes sharing

iTunes sharing: you can easily share music and video files on USB disk via itunes software on the PC.

iTunes Server	
Enable:	<input checked="" type="checkbox"/>
Server Name:	JHR-AC865-ITUNES
<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>	

iTunes Media Folder	
Partition	iTunes Media Folder
sda1 (C:)	//mp3
<input type="button" value="Set Shared Folder"/> <input type="button" value="Refresh"/>	

First enable iTunes sharing and click “Save/Apply”. and click “Set up sharing folder”, you can select the folders to share on the disk and click “Save/Apply”.

To open “iTunes” media player and click “JHR-N865R-ITUNES” file name under sharing, a user can view the sharing media files on U flash stick or mobile disk and click a file to play.



## 10.7 Print sharing

Print sharing: you can share the USB printer connected to this device with other hosts in the LAN.

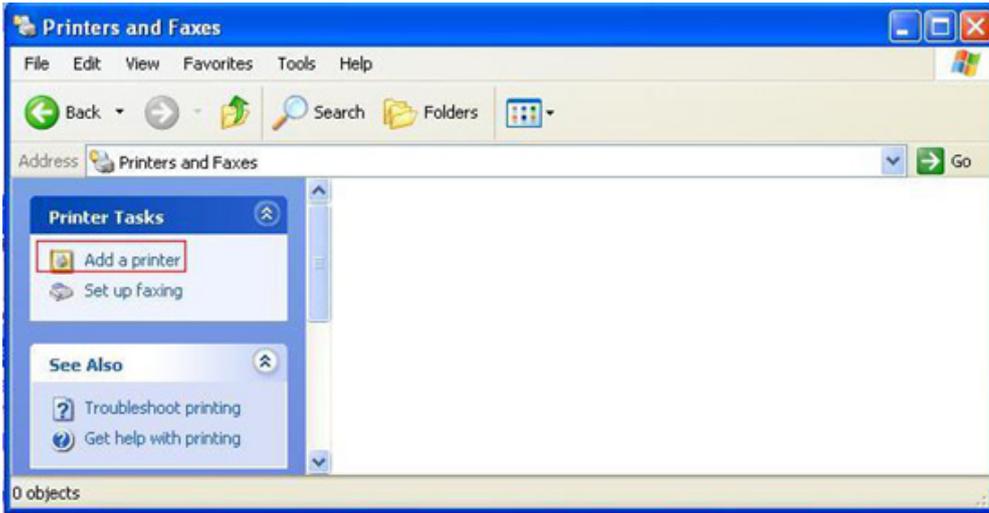
Printer Server	
No Printer is found, please check the USB printer connection!	
Enable:	<input checked="" type="checkbox"/>
<input type="button" value="Save/Apply"/> <input type="button" value="Refresh"/>	

After a printer and router are connected, if the router successfully detects a printer after several seconds, the corresponding interface of the printer will display information on printer.

Install (HP Laser Jet P1008) for printer.

**Take Window XP as one example**

- 1. “Start” —— “Control panel” —— “Printer and fax”
- 2. Click left “Add printer”



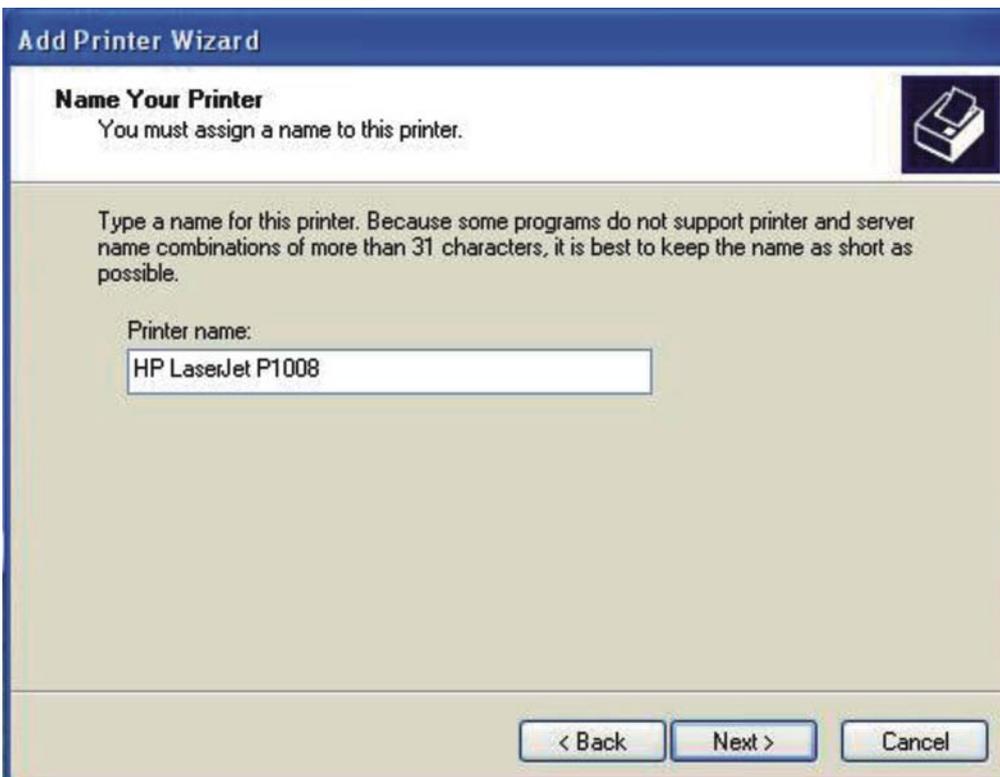
- 3. Open “Add printer” installation wizard and click “Next”.



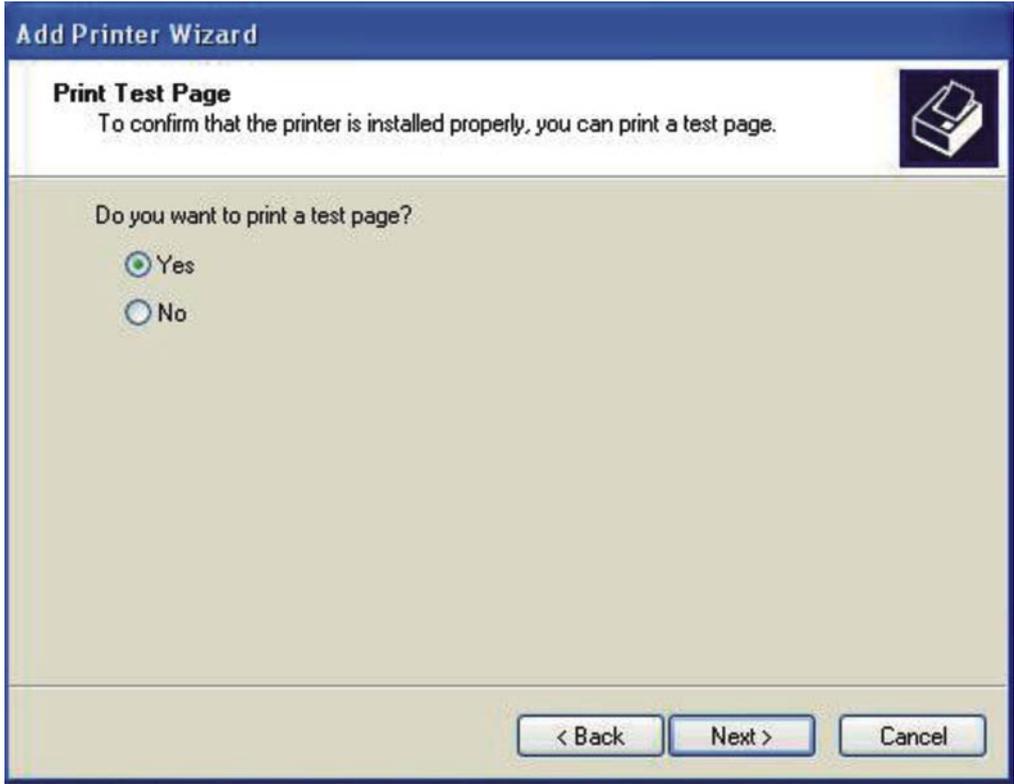
4. If the driver has been installed, select "Keep existing driver(recommended)" or "Replace existing driver" and click "Next"



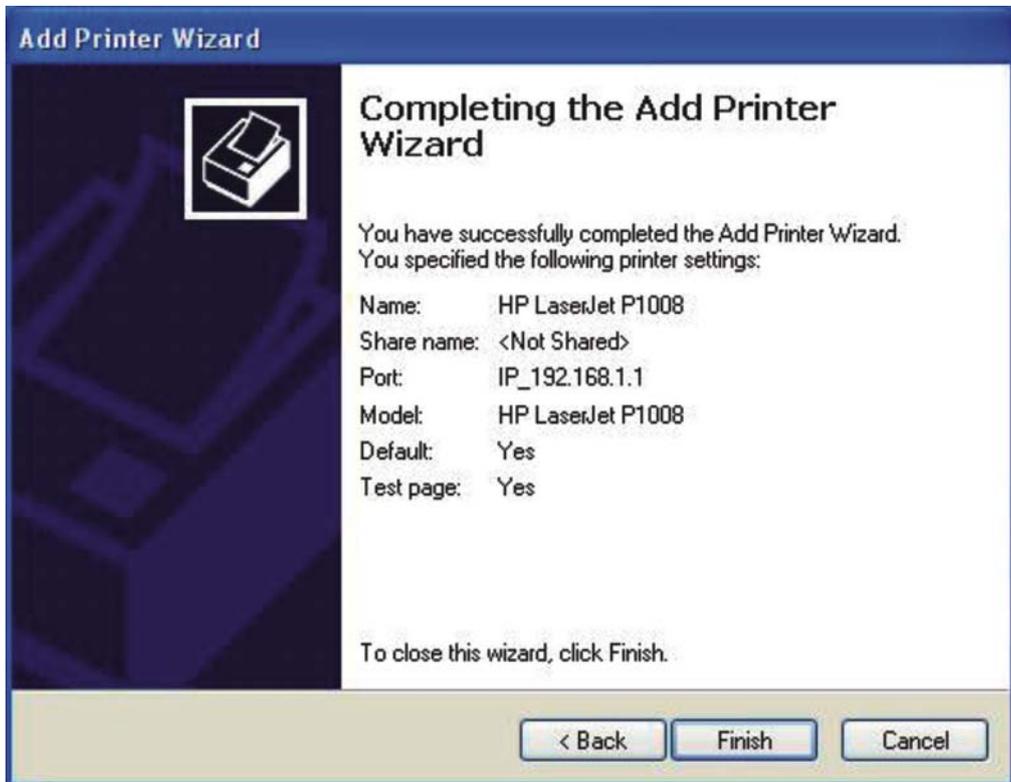
5. Enter printer name, click Next



6. Test the printer, click Next



7. Click Finish to complete printer installation.



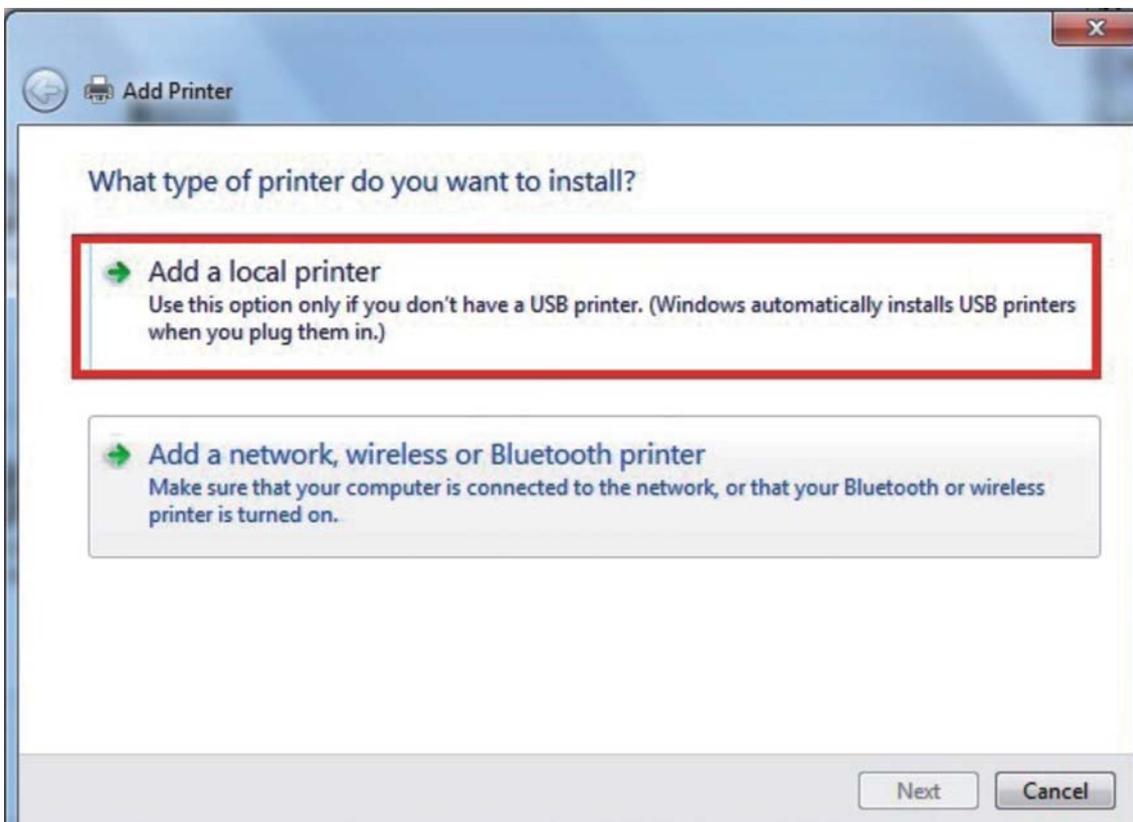
## 8. (Take windows 7 operating system as an example)

### 1. StartControl PanelDevices and Printers

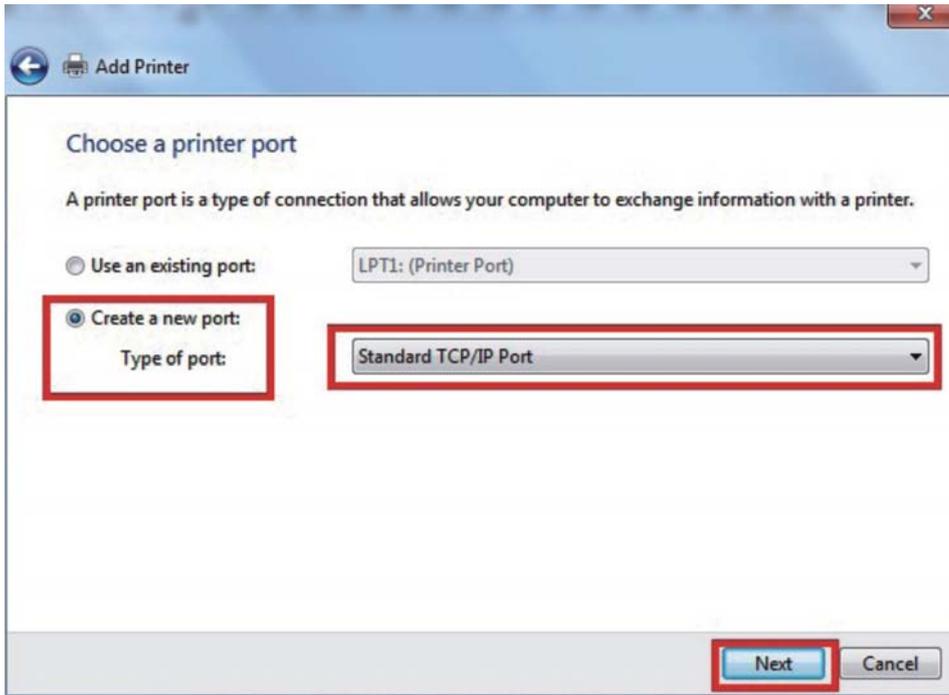


### 2. Right click to select Add a Printer

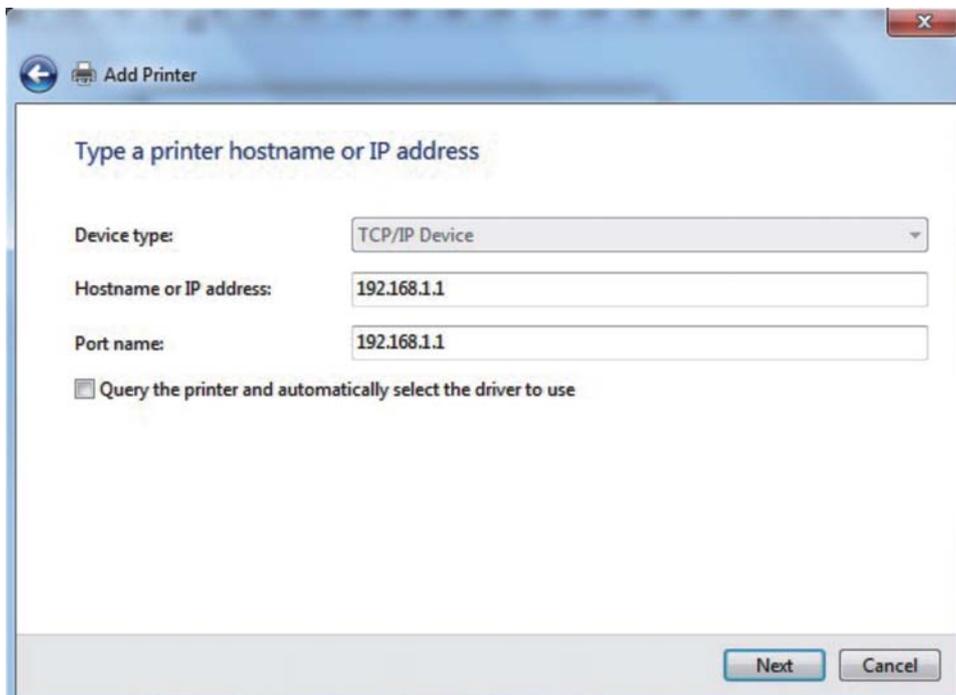
3. The Add printer wizard will appear as below figure, select “Add a local printer” and click Next



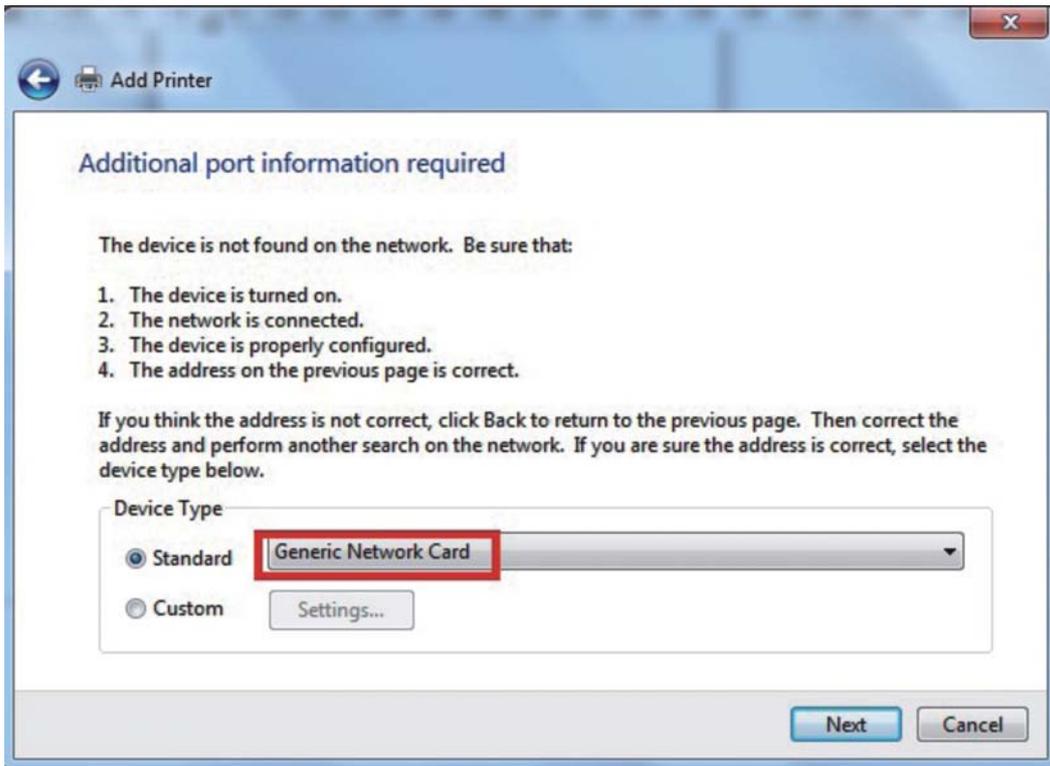
9. Select “Create a new port”, select “Standard TCP/IP Port” in “Type of port” and click Next



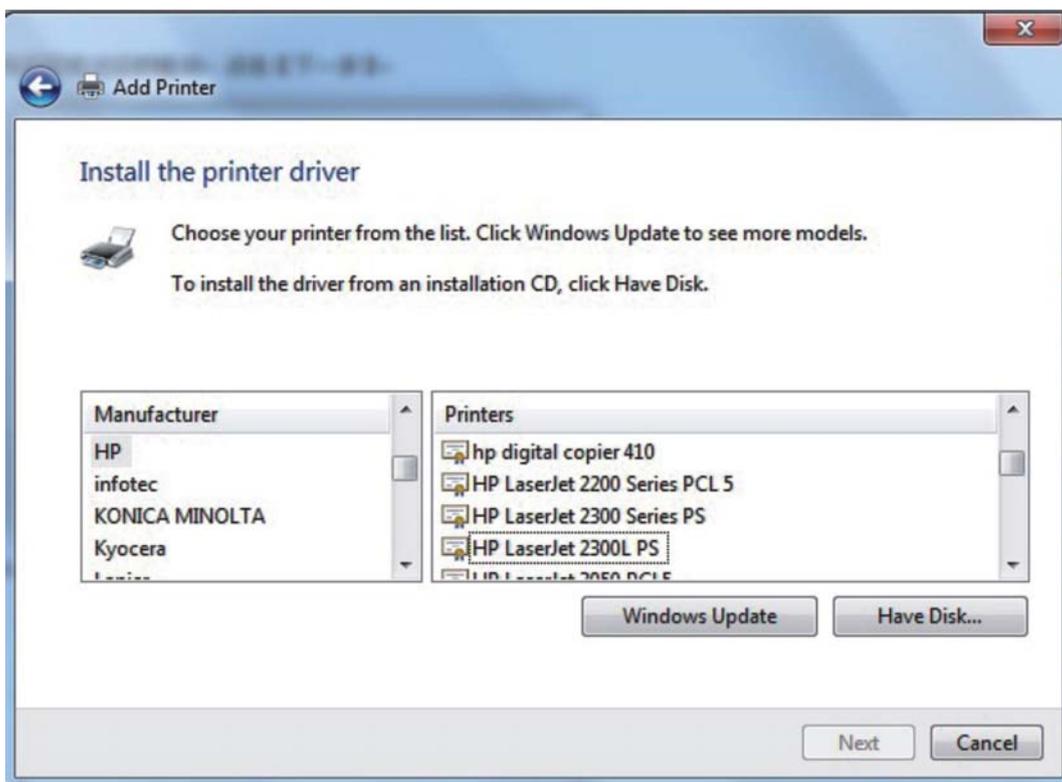
10. Enter IP address of the router in “Hostname or IP address” and click Next. Remember to uncheck “Query the printer and automatically select the driver to use”



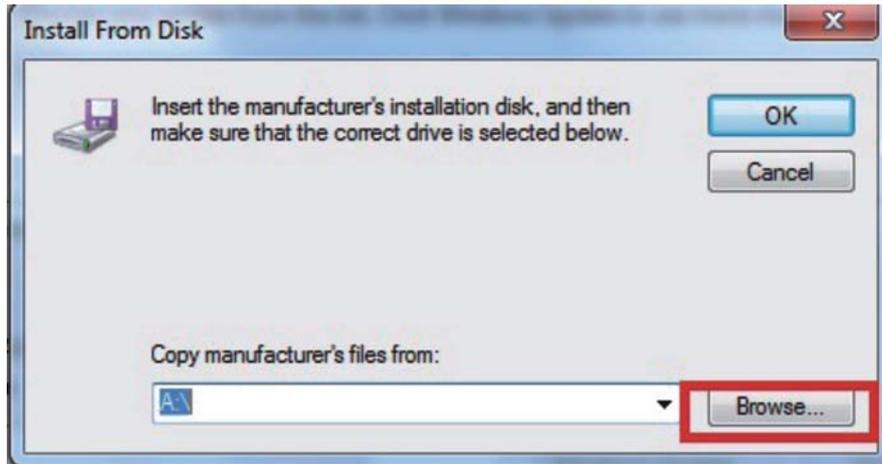
11. Select the standard in “Device Type”, select “Generic Network Card “and click Next.



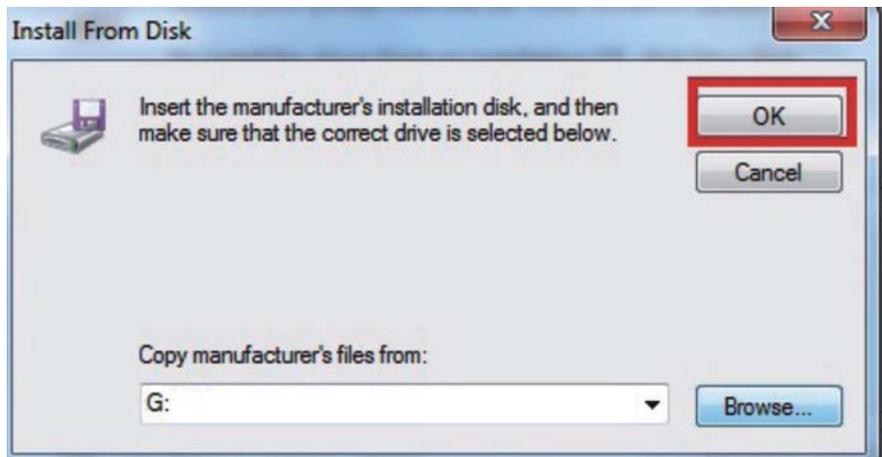
12. The following figure will appear after clicking. Select corresponding USB manufacturer and printer driver. We take HP LaserJet P1008 printer as an example. Please click “Have Disk....” if corresponding drivers are not found.



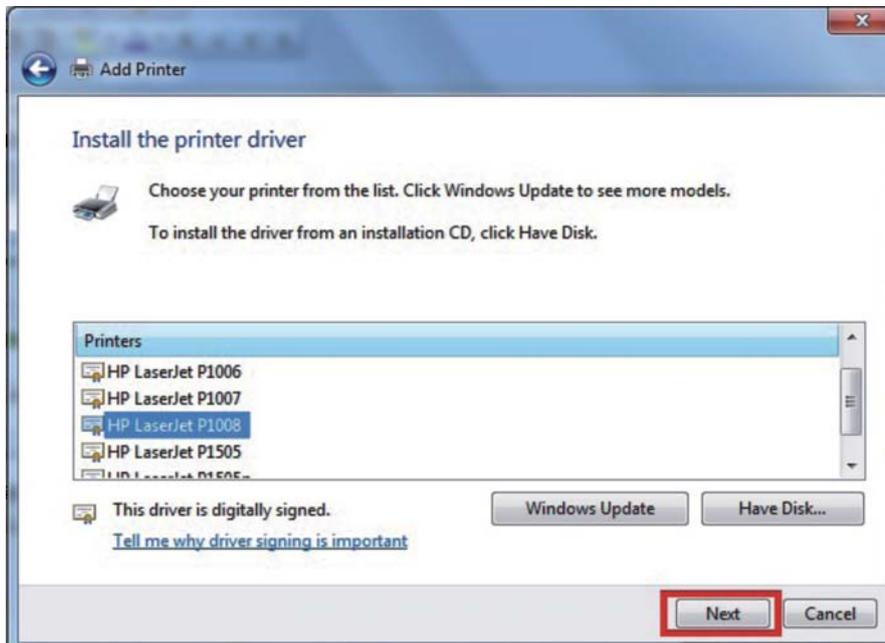
13. Click Browse...



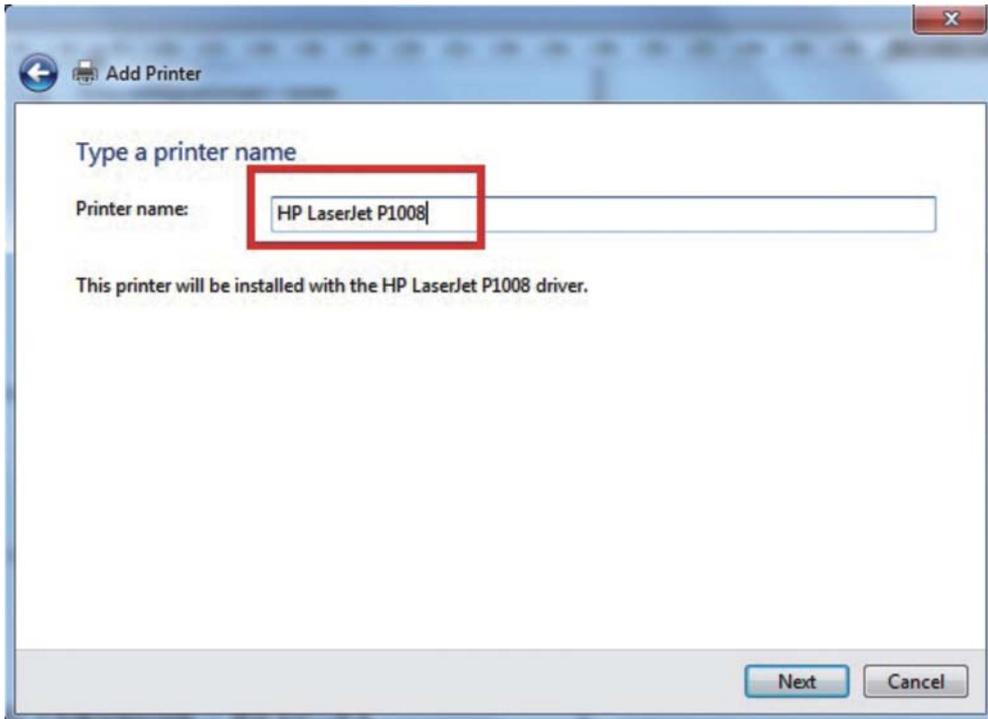
14. Find the directory storing printer driver files and click "OK"



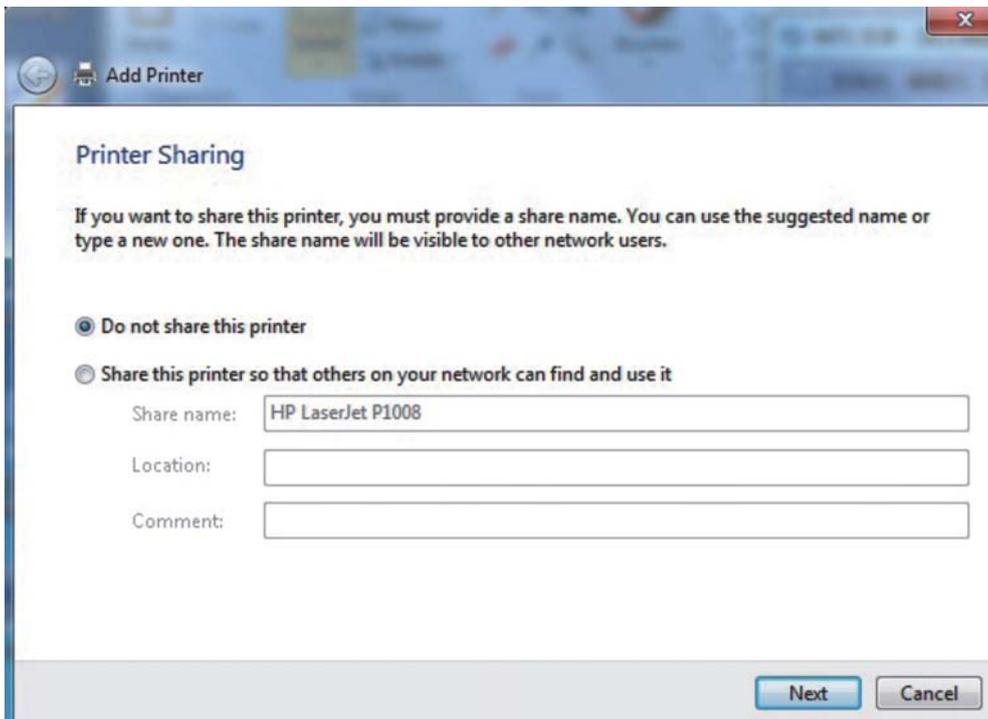
15. Find the driver corresponding to current printer in the list and click Next



**16. Enter a printer name and click Next**



**17. Select Do not share this printer or Share this printer so that others on your network can find and use it ” and click Next**



18. Click “Print a test page”. The added printer is available if printing test page is successful. Click Finish, otherwise please reset according to above steps.

## Chapter 11: QoS Setup

It can improve the experiences of the applications with higher priority such as online game by setting prioritized bandwidth to prevent some services from failure because too much system bandwidth is occupied by other network services (E.g. FTP or WEB).

**QoS (Quality of Service)** [Help](#)

Enable

Automatic Uplink Speed

Manual Uplink Speed:  (Kbps)

Automatic Downlink Speed

Manual Downlink Speed:  (Kbps)

**QoS Rule**

Address Type:  IPv4  MAC  IPv6

Local IPv4 Address:  -

Local IPv6 Address:

MAC Address:  (AABBCCDDEEFF)

QoS Mode: Guaranteed Minimum Bandwidth

Uplink Bandwidth:  (Kbps)

Downlink Bandwidth:  (Kbps)

Comment:

**Current QoS Rules**

IPv4 Address	IPv6 Address	MAC Address	Mode	Bandwidth		Comment	Select
				Uplink	Downlink		

E.g. the total extranet bandwidth includes 512Kbps for uploading and 8Mbps for downloading. Now it is required to restrict the maximum uploading bandwidth as 150 Kbps and maximum downloading bandwidth as 3000Kbps for the PC in the Intranet with IP address 192.168.1.8 and guarantee that minimum uploading bandwidth is 50 Kbps and minimum downloading bandwidth is 1000Kbps for another PC (MAC address is AABCC888888). The setup steps are described as follows:

QoS (Quality of Service) <span style="float: right;">Help</span>	
<input checked="" type="checkbox"/> Enable	
<input type="checkbox"/> Automatic Uplink Speed	
Manual Uplink Speed:	<input type="text" value="512"/> (Kbps)
<input type="checkbox"/> Automatic Downlink Speed	
Manual Downlink Speed:	<input type="text" value="8000"/> (Kbps)
QoS Rule	
Address Type:	<input checked="" type="radio"/> IPv4 <input type="radio"/> MAC <input type="radio"/> IPv6
Local IPv4 Address:	<input type="text" value="192.168.1.8"/> - <input type="text" value="192.168.1.8"/>
Local IPv6 Address:	<input type="text"/>
MAC Address:	<input type="text"/> (AABBCCDDEEFF)
QoS Mode:	Guaranteed Minimum Bandwidth <input type="button" value="v"/>
Uplink Bandwidth:	<input type="text" value="150"/> (Kbps)
Downlink Bandwidth:	<input type="text" value="3000"/> (Kbps)
Comment:	<input type="text"/>
<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>	

QoS (Quality of Service) <span style="float: right;">Help</span>	
<input checked="" type="checkbox"/> Enable	
<input type="checkbox"/> Automatic Uplink Speed	
Manual Uplink Speed:	<input type="text" value="512"/> (Kbps)
<input type="checkbox"/> Automatic Downlink Speed	
Manual Downlink Speed:	<input type="text" value="8000"/> (Kbps)
QoS Rule	
Address Type:	<input type="radio"/> IPv4 <input checked="" type="radio"/> MAC <input type="radio"/> IPv6
Local IPv4 Address:	<input type="text" value="192.168.1.8"/> - <input type="text" value="192.168.1.8"/>
Local IPv6 Address:	<input type="text"/>
MAC Address:	<input type="text" value="AABCC888888"/> (AABBCCDDEEFF)
QoS Mode:	Guaranteed Minimum Bandwidth <input type="button" value="v"/>
Uplink Bandwidth:	<input type="text" value="150"/> (Kbps)
Downlink Bandwidth:	<input type="text" value="3000"/> (Kbps)
Comment:	<input type="text"/>
<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>	

Current QoS Rules							
IPv4 Address	IPv6 Address	MAC Address	Mode	Bandwidth		Comment	Select
				Uplink	Downlink		
---	---	aabbcc888888	Guaranteed Min.	150	3000	-	<input type="checkbox"/>
				Delete	Del.All	Cancel	

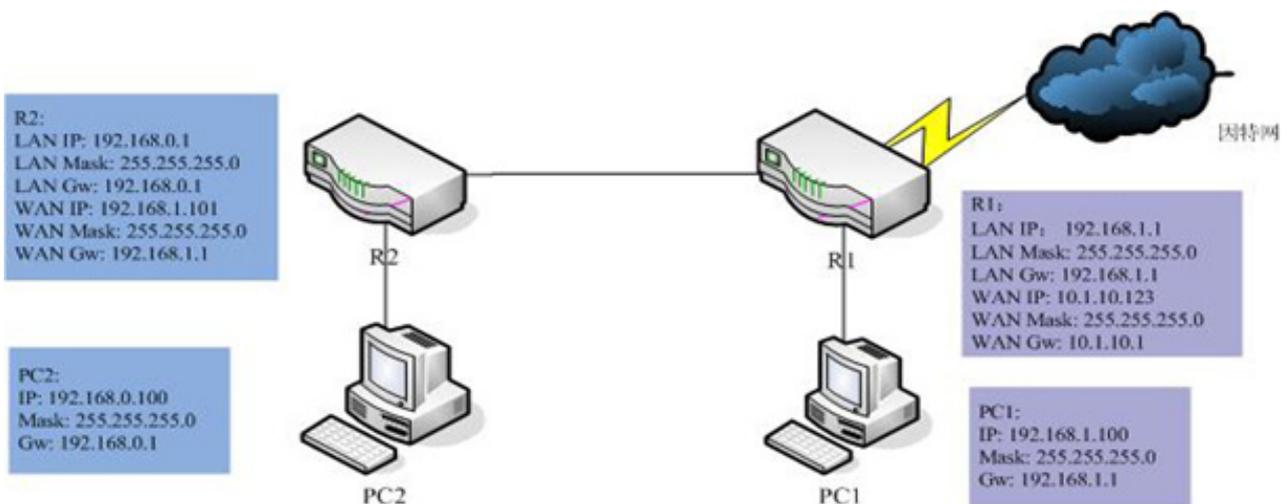
## Chapter 12: Routing Setup

The static routing allows you to forward routes for specific host or network, any access to this host or network will be forward by the default route. This case is applicable when another router R2 connects LAN port of this router R1.

E.g. set the static routing of LAN. Shown as the figure, the hosts inside the R2 LAN can access the hosts in the R1 LAN. If the hosts in the R1 LAN access the hosts in R2 LAN, the static routing is set as follows in R1:

- IP address: 192.168.0.1 (LAN address of R2)
- Sub-network mask: 255.255.255.0 (R2 network mask)
- Gateway: 192.168.1.101 (WAN IP address of R2)
- Hop number: 1
- Network interface: LAN

After setup, the hosts inside R1 can intercommunicate with the hosts inside R2.



**Dynamic Route** Help

Enable

NAT:  Enabled  Disabled

Transmit:  Disabled  RIP 1  RIP 2

Receive:  Disabled  RIP 1  RIP 2

**Static Route** Help

Enable

IP Address:

Subnet Mask:

Gateway:

Metric:  (1-15)

Interface:  ▼

**Static Routing Table**

IP Address	Subnet Mask	Gateway	Metric	Interface	Select

## Chapter 13: System Management

### 12.2 Data statistics

Display the statistics information on data received and transmitted at different network interfaces, including statistics data at the wireless network interface and Ethernet interface

Statistics		
The table shows the packet statistics of transmission and reception, including wireless interfaces and Ethernet interfaces.		
Interface	Packets Sent	Packets Received
Wireless 1 LAN	2930	29566
Wireless 2 LAN	5242	28743
Ethernet LAN	1016	1307
Ethernet WAN	1771	1972
<input type="button" value="Refresh"/>		

### 12.3 Dynamic domain

It can map the dynamic IP address to the specified domain names. With dynamic domain service, a user can directly access the service provided by the device via the domain name without the need of caring change of IP address.

Dynamic DNS	
The device may obtain an IP address dynamically, so the IP address may be changed after reboot.	
Dynamic DNS is a service, that provides a valid, unchanging, internet domain name (a URL) to go with the (possibly everchanging) IP address.	
<input type="checkbox"/> Enable	
Service Provider:	DynDNS.org
Domain Name:	host.dyndns.org
DDNS Type:	<input checked="" type="radio"/> Default <input type="radio"/> Dynamic <input type="radio"/> Custom <input type="radio"/> Static
User Name/Email:	<input type="text"/>
Password/Auth. Key:	<input type="text"/>
<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>	

## 12.4 Time zone setup

The system can be maintained and kept via NTP network time synchronization, so the time-based service and function can normally work.

Time Zone	
The system time may synchronize with a public time server over the Internet, so time-based features can work properly.	
Syn. My Host - Synchronize the system time with current host, and the time will not change until next NTP update.	
Current Time:	Date 2013 - 11 - 21 Time 18 : 12 : 43
<input type="button" value="Syn. My Host"/>	
Time Zone Select:	(GMT+08:00)Beijing, Chongqing, Hong Kong, Urumqi
<input type="checkbox"/> Auto. Adjust Daylight Saving	
<input checked="" type="checkbox"/> NTP Auto. Update	
NTP Server:	<input checked="" type="radio"/> cn.pool.ntp.org - Asia Pacific <input type="radio"/> 0.0.0.0 (Manual NTP Server)
<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/> <input type="button" value="Refresh"/>	

## 12.5 DOS protection

DoS is one frequent hacker attack means. It can attack the server by sending a large number of network connection requests and lead to no response to the normal user access requests and crash-down of the whole network service.

DoS protection: it can detect and restrict the frequency of the network connection requests to effectively avoid DoS attacks and protect your network.

**Tip:**

It is recommended to keep old status of this function under guidance of non-professional persons and without guidance of a professional person.

DoS Prevention		Help
<input type="checkbox"/> Enable		
<input type="checkbox"/> Whole System Flood: SYN	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Whole System Flood: FIN	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Whole System Flood: UDP	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Whole System Flood: ICMP	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Per-Source IP Flood: SYN	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Per-Source IP Flood: FIN	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Per-Source IP Flood: UDP	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> Per-Source IP Flood: ICMP	<input type="text" value="0"/>	Packets/Second
<input type="checkbox"/> TCP/UDP Port Scan	Low	Sensitivity
<input type="checkbox"/> ICMP Smurf		
<input type="checkbox"/> IP Land		
<input type="checkbox"/> IP Spoof		
<input type="checkbox"/> IP Tear Drop		
<input type="checkbox"/> Ping Of Death		
<input type="checkbox"/> TCP Scan		
<input type="checkbox"/> TCP SYN With Data		
<input type="checkbox"/> UDP Bomb		
<input type="checkbox"/> UDP Echo Chargen		
		<input type="button" value="Select All"/> <input type="button" value="Clear All"/>
<input type="checkbox"/> Enable Source IP Blocking	<input type="text" value="0"/>	Block time (sec)
		<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>

## 12.6 System log

It can assist you to know and track the device operation records and easily locate and solve the device problems. A user can select type of log, all logs, wireless network log and DOS logs on demand. A user can remotely access the log server.

System Log		Help
<input checked="" type="checkbox"/> Enable System Log		
<input type="checkbox"/> System All	<input type="checkbox"/> Wireless	
<input type="checkbox"/> DoS		
<input type="checkbox"/> Enable Remote Log	Log Server IP Address: <input type="text"/>	
		<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>

## 12.7 System diagnosis

A user can know operation conditions of a PC and network via PING and TRACE ROUTE command in system diagnosis and quickly track routing path for IP transmission.

The screenshot shows a web interface for system diagnosis. At the top, there is a 'Diagnostics' section with two radio buttons: 'PING' (selected) and 'TRACE ROUTE'. Below this is a 'Host (Domain):' label followed by an empty text input field. To the right of the input field is a 'Save/Apply' button. Below the input field is a large, empty rectangular area labeled 'Diagnostic Results'. At the bottom right of this area is a 'Refresh' button.

## 12.8 Firmware upgrade

Upgrading the firmware to a newer version can optimize device performance or solve operation problems.

The screenshot shows a web interface for firmware upgrade. It starts with a title 'Firmware Upgrade' and a paragraph: 'Upgrade the Firmware to a newer version may improve the performance of the device or fix the bugs of previous release.' Below this is a red warning message: 'WARNING: Please DO NOT power off or reboot the device during the upgrade, otherwise your device may be damaged.' Underneath is a table with the following information:

Model:	JHR-AC865
Firmware Version:	180.1.2.626 (v3.4.6)
Release Time:	2013-11-08 17:04
Select Firmware File:	<input type="text"/> 浏览...

At the bottom right of the form are two buttons: 'Upgrade' and 'Reset'.

**Tip:**

The new firmware version can be uploaded and downloaded from JCG website [www.jcgcn.com](http://www.jcgcn.com), can contact JCG customer service via the customer service hotline 4008-828-298 and is provided by the customer service persons.

## 12.9 Setup management

A user can back up, restore and recover the router setting via this interface.

Settings	
<b>Export</b> - Export current settings information into a file; <b>Import</b> - Import local settings file into the device and replace current settings; <b>Reset Default</b> - Reset the settings to factory default, all current settings will be lost.	
Export Settings to File:	<input type="button" value="Export"/>
Import Settings from File:	<input type="text"/>
Reset Settings to Default:	<input type="button" value="Reset Default"/>

## 12.10 Password setup

Set the user name and password of login web.

Password Settings	
Set user name and password for the web pages login authentication.	
<b>Note:</b> Empty user name and password will disable the login protection.	
User Name:	<input type="text" value="admin"/>
New Password:	<input type="password" value="*****"/>
Confirmed Password:	<input type="password" value="*****"/>
<input type="button" value="Save/Apply"/> <input type="button" value="Cancel"/>	

## 12.11 Other setup

This interface can set the displaying language of the wireless router interface and restart the router.



Language Settings  
Select and setup the language for web pages. The display language will be changed immediately.

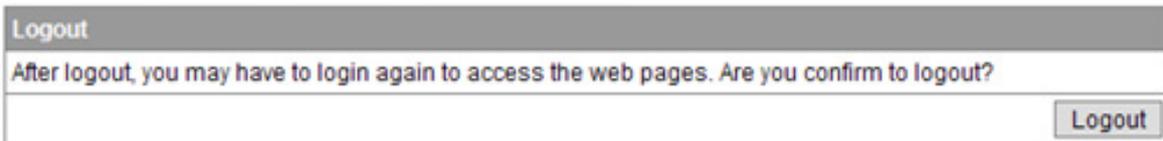
Select Language:



Reboot  
Reboot the device when settings is saved or the device is not working properly.

## Logout

After logout, a user can access setup page after login again.



Logout  
After logout, you may have to login again to access the web pages. Are you confirm to logout?

## Chapter 14: FAQ

### Question 1: why can I not log into the router setup interface?

1. Please check whether the router port connects the computer port correctly
2. Check whether the network cable of the router is connected well and check whether the LED indicator of the router is on. If it is on, it indicates that the network cable is good.
3. Check whether the computer is installed with the agency software such as WinGate and SyGate. If they are installed, please disable these software.
4. Change the dialing setting in “Tool- Internet connection option” as “Do not connect via dialing” on the computer IE browser. Uncheck three options ahead of “LAN setup”.
- 5 Confirm that the IP address 192.168.1.1 is not allocated to other PC in LAN.
- 6 Change the computer IP address as 192.168.1.2~254 and sub-network mask as 255.255.255.0 and set the gateway as 192.168.1.1 or DHCP IP address.
7. Try to log in via other computer.

8. If a user can not log into the router via the above operations, please restore the router to the factory setting and re-operate or contact our customer service support persons.

**Question 2: when the login user name and password of the JCG wireless router, how can I do?**

If a user forgets the login user name and password of a router, he can restore the router to factory setting. To find Reset button on the router panel, hold Reset button for over 5s and loosen it, the router will reset and restart.

After resetting, the default login IP of the router is 192.168.1.1 and the default user name and password is admin. For login, please guarantee that your computer IP is within 192.168.1.X (X is any integer from 2 to 254) network section.

**Question 3: why can my portable PC not search wireless signals?**

1. If your portable PC includes a wireless network adaptor, you should confirm that the wireless network adaptor is enabled.

2. Check whether the wireless network of the portable PC is enabled. The method is described as follows: right click "My PC" on the desktop and select "Manage". Select "Service and application" in computer management and view "Wireless Zero Configuration status" on the "Service" web.

If the status is disabled, please right click "Wireless Zero Configuration" and check "enable". If the start type is disabled, please right click to select property, change start type as automatic and change the status as enabled.

**Tip: some portable PC or mobile device may have independent wireless network switch, please confirm that the switch is on.**

3. Confirm whether the wireless network function of the router is enabled and the network name is hidden.

4. View whether the wireless network adaptor driver is successfully installed in device manager.

**Question 4: if IP address confliction occurs after the computer connecting the router starts, how can I solve it?**

1. Please confirm whether the LAN includes IP address of other device allocated by DHCP server is same as the IP address of the router allocated by DHCP server. If they are same, please change the default gate of the device or router to be in different network sections.
2. Confirm whether the LAN includes other DHCP server. If it is included, please shut down it.
3. Check the LAN computer and confirm whether another computer uses static IP address.

**Question 5: if the wireless encryption key of the wireless router is forgotten, how can I solve it?**

1. Restore the router to the factory setting and connect the wireless network with the key on the rear side of the router.
2. Connect the wireless router and computer in a wired manner and log into the router management interface to view wireless encryption key in the wireless security setting.

**Question 6: why can QQ be used and can the webpage not be browsed?**

If you can long into QQ, it indicates that the network connection is normal.

1. Guarantee that the browser is normal or access the network with another server.
2. Check whether your network configuration is configured with a correct DNS server address.
3. Confirm that the browser is set as never dial for connection and is not set with a proxy server.

**Question 7: which factor will affect the wireless network signals?**

1. Noises and interference the wireless LAN transmits data with microwave. The microwave oven, wireless telephone, Bluetooth device, same or adjacent wireless AP or router channel will have important influences on transmission rate.
2. Building structure after the wireless signals are reflected inside the building, they will reach the wireless device and lead to multi-path transmission and mutual interferences. In addition, when the wireless signals penetrate through the wall, it will lead to bigger loss.
3. Position of wireless router the wireless router should be placed at a higher position to avoid blockage of other objects.

4. Antenna type of wireless router. The antenna can be changed to enhance wireless signals.
5. External factors the weather will have bigger influence on the wireless signals. The grey weather and thunder storm will lead to severe attenuation of signals.
6. Channel interference. When one channel includes multiple wireless routers, it will lead to bigger channel interference, please try to switch to cleaner channels and get better wireless network environment.

## *Chapter 15: Technical support*

To consult more information on JCG products, please log into JCG official website or contact JCG customer service department.

**JCG official website: [www.jcgcom.com](http://www.jcgcom.com)**

**E-mail: [support@jcgcom.com](mailto:support@jcgcom.com)**

## FCC Information and Copyright

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 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.

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.

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.