# *CWR-935M*
# *Wireless-N Mobile Router*

## *User Manual*

Version 1.0
(Jun, 2009)

# Table of Contents

# Preface

## About This Manual

Thank you for purchasing the CWR-935M Mini 3.5G Plus Wireless-N Server Router.
This User's Manual is intended for audience with basic networking knowledge and is the primary reference for configuring and maintaining the device. This manual includes description of the management interface and detailed instruction in its use.

## Conventions Used

- Notes, warnings or cautions are in bold with shaded background.
- In this manual, the CWR-935M Mini 3.5G Plus Wireless-N Server Router is referred to as "the wireless router".

# Chapter 1. Introduction

## 1.1 About CWR-935M

CWR-935M is a compact 3.5G wireless router providing fast, reliable and easy Internet access for every occasion. For Internet access, the router supports both 3.5G mobile standards as well as Cable/DSL Internet connections. Mobile users can access and share their 3.5G connection anywhere their 3.5G service is available.

A new exciting feature is the addition of a mini-USB port that can be used for external battery packs powering the router up. Users will no longer be bound to locations with AC power, that means Internet access on-the-go.

The built-in 802.11-N access point provides faster speeds and enhanced reach to wireless clients. Easy wireless setup is possible through WPS and wireless security is achieved through WEP. WPA and WPA2 standards.

CWR-935M is a multi-function device that offers many services like print, webcam, FTP and Samba servers making it an ideal home/office/mobile Internet gateway.

## 1.2 Main Features

The following lists the main features of the wireless router.

- 3.5G Internet connection
- Provide a mini-USB port for alternative battery pack portable
- Support WPS for easy wireless connection setup
- Slide switch for 3 modes selection,Router, AP, Wi-Fi AP mode
- Advanced wireless security, WEP/WPA/WPA2/WPA2 Mixed
- Complies with IEEE 802.11b/g and IEEE 802.11n Draft 2.0
- Multi languages support
- Support Webcam Server, Printer Server, FTP Server

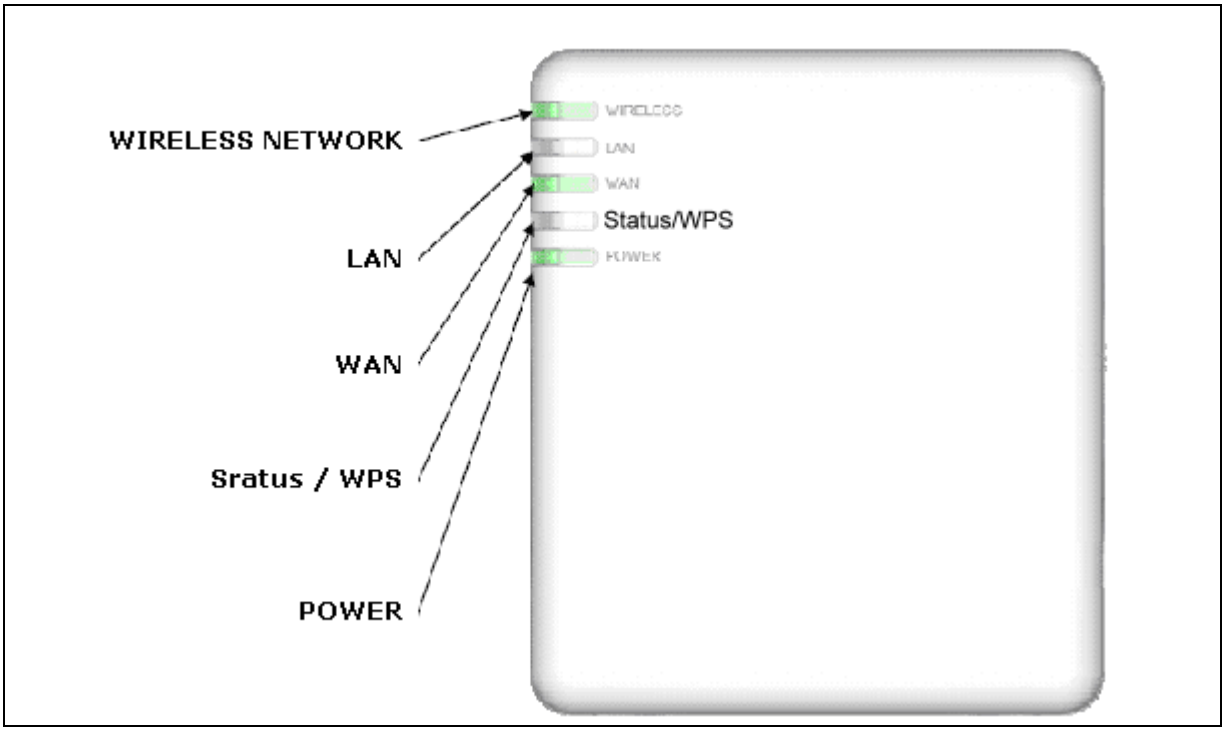
## 1.3 System Requirements

- Internet connection, provided by xDSL or cable modem with a RJ-45 Ethernet port.
- Computer or network devices with wired or wireless network interface card.
- Web browser (*Microsoft Internet Explorer 4.0 or above, Netscape Navigator 4.7 or above, Opera*

*web browser, or Safari web browser).*

- An available AC power socket.

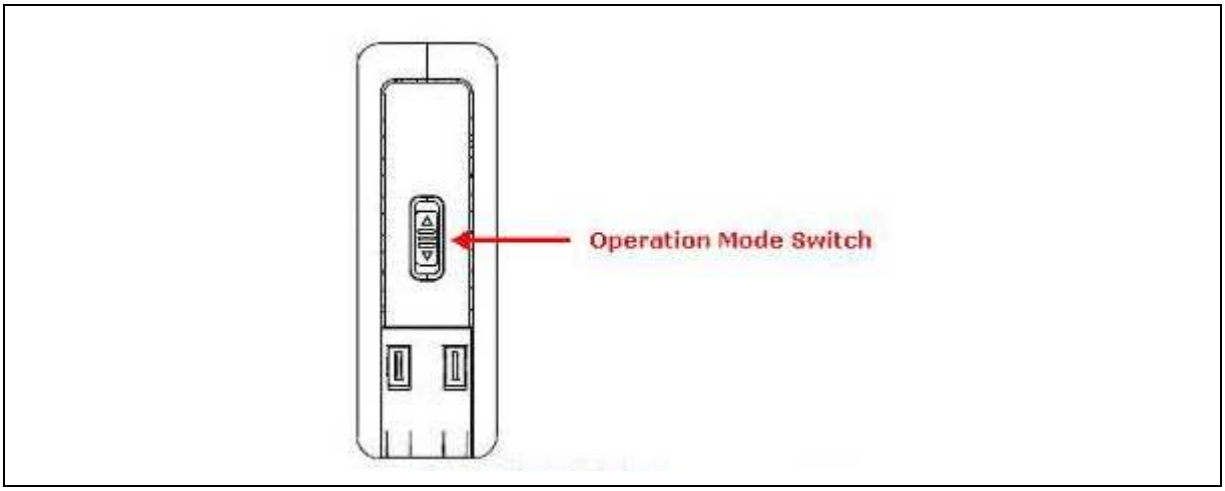
## 1.4 Getting to Know CWR-935M




### 1.4.1 LED indication

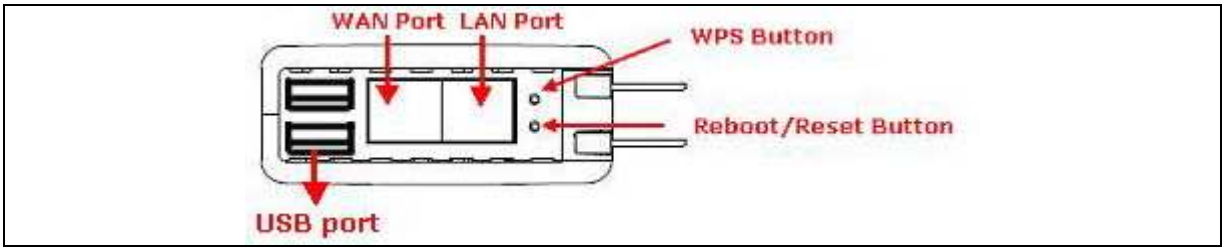
| LED Name | Light Status | Color | Description |
|---|---|---|---|
| WIRELESS | ON | Green | Wireless LAN active |
| | Blinking | | Wireless LAN activity (Transferring or receiving data) |
| LAN | ON | Green | LAN port is connected |
| | OFF | | LAN port is not connected |
| | Blinking | | LAN port activity (transferring or receiving data). |
| WAN | ON | Green | WAN port is connected. |
| | OFF | | WAN port is not connected. |
| | Blinking | | WAN activity (transferring or receiving data). |
| STATUS/WPS | Blinking | Green | Reset / Firmware updates in progress |
| | Blinking | Orange | WPS function start |
| POWER | ON | Green | Power is being applied to this product |

### 1.4.2 The Right Side




| Item | Description |
|---|---|
| Operation Mode | Operation mode switch, user can select Router, AP, Wi-Fi AP mode |

### 1.4.3 The Bottom Side




| Item | Description |
|---|---|
| USB Port | User can connect 3.5G USB dongle, USB hard driver, USB printer or Web |
| WAN Port | Wide Area Network (WAN / Internet) Port |
| LAN Port | Local Area Network (LAN) Port |
| WPS button | Start WPS function |
| Reset button | Reset the router to factory default settings (clear all settings) or reboot device. Press this button and hold over 5 seconds to restore all settings to factory defaults, and press this button for 1 seconds to reboot device |

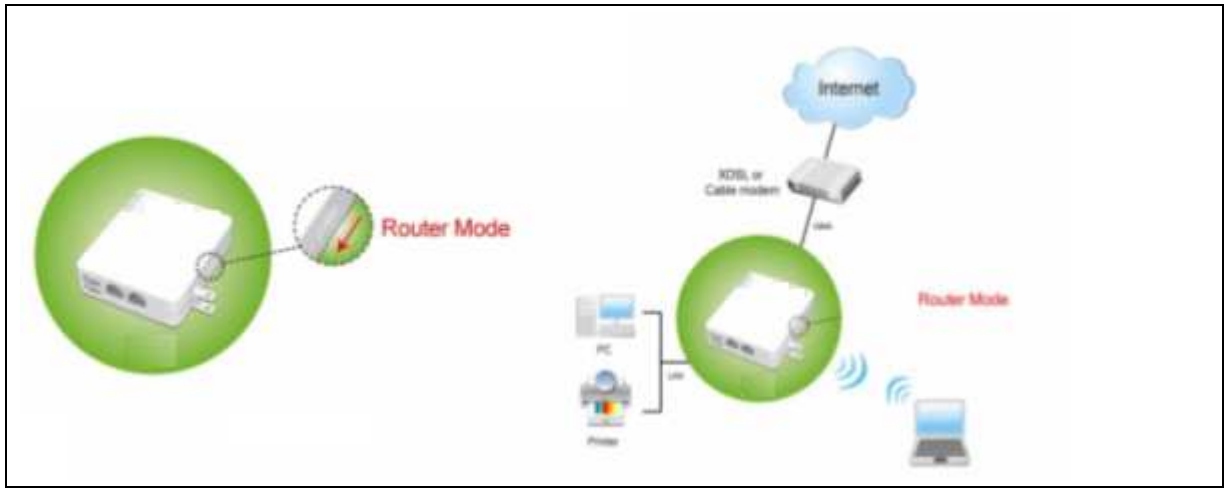
# Chapter 2. System and Network Setup

The CWR-935M is an easy to carry and wireless device for business men. It can be used in conference room, hotel, even at hotspots. CWR-935M is small and light, with various functions; use switch to change mode between Router, AP, and Wi-Fi AP mode. CWR-935M also supports USB devices like webcam, USB thumb drive, printer, and 3.5G adapter.

Note：Please turn off and wait 5 seconds to switch to other operation mode, then power on.

## 2.1 Build network connection for Router Mode

In router mode, administrator can manage the settings for WAN, LAN, Wireless network, NTP, password, USB drives, user accounts, firewall, QoS, FTP server, webcam, printer server, and SAMBA, etc.




## 2.2 Build network connection for AP Mode

In AP mode, CWR-935M becomes a bridge; users can use wired way to connect to CWR-935M. Administrator can config LAN, Wireless network, NTP, password, USB drives, user accounts, FTP server, webcam, printer server, and SAMBA, etc.


## 2.3 Build network connection for Wi-Fi AP Mode

In Wi-Fi AP mode, CWR-935M becomes a bridge; users can use wireless way to connect to CWR-935M. Administrator can config LAN, Wireless network, NTP, password, USB drives, user accounts, FTP server, webcam, printer server, and SAMBA, etc.


## 2.4 Connecting to CWR-935 by web browser

After the network connection is built, the next step you should do is setup the router with proper network parameters, so it can work properly in your network environment.

Before you can connect to the router and start configuration procedures, your computer must be able to get an IP address automatically (use dynamic IP address). If it's set to use static IP address, or you're unsure, please follow the following instructions to configure your computer to use dynamic IP address:

***If the operating system of your computer is….***

**Windows 95/98/ME - please go to section 2-4-1**

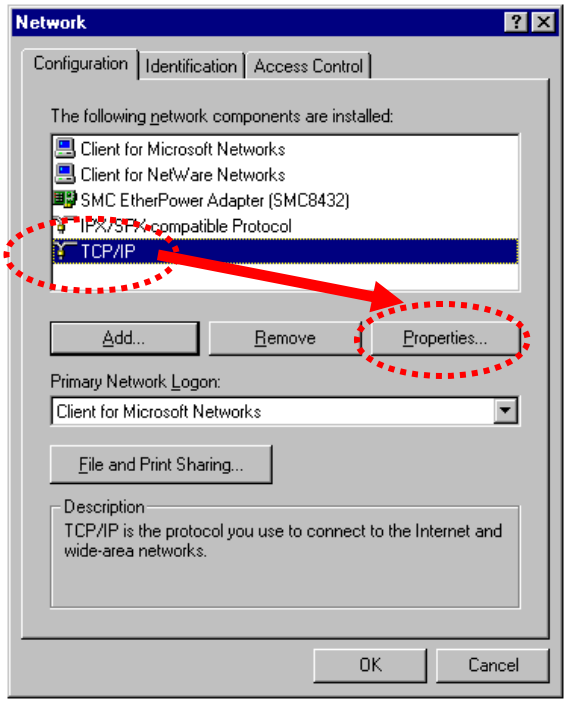
**Windows 2000 - please go to section 2-4-2**

**Windows XP - please go to section 2-4-3**

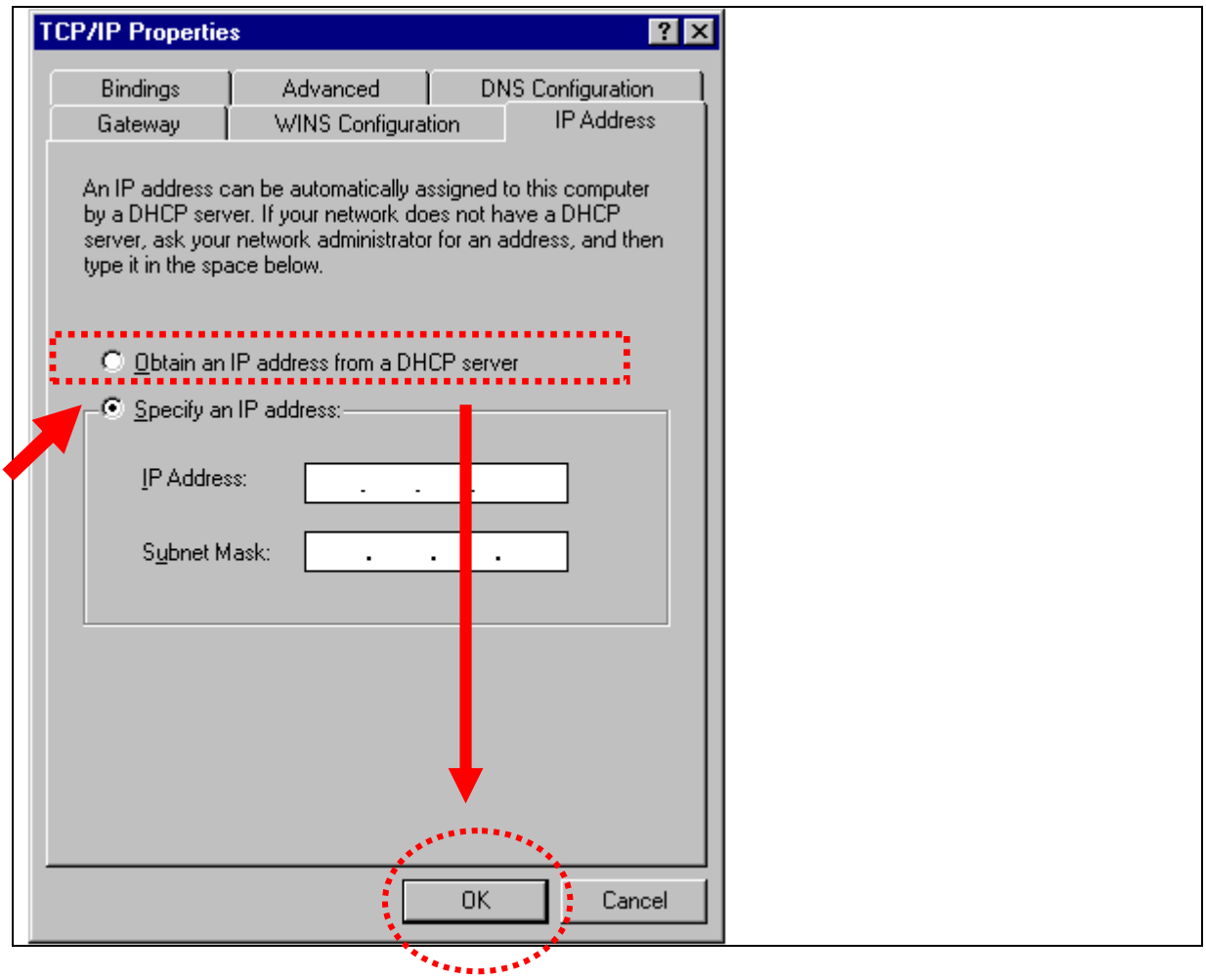
**Windows Vista - please go to section 2-4-4**

### 2.4.1 Windows 95/98/ME IP address setup:

1. Click 'Start' button (it should be located at lower-left corner of your computer), then click control panel. Double-click ***Network*** icon, and ***Network*** window will appear. Select 'TCP/IP', then click 'Properties'.

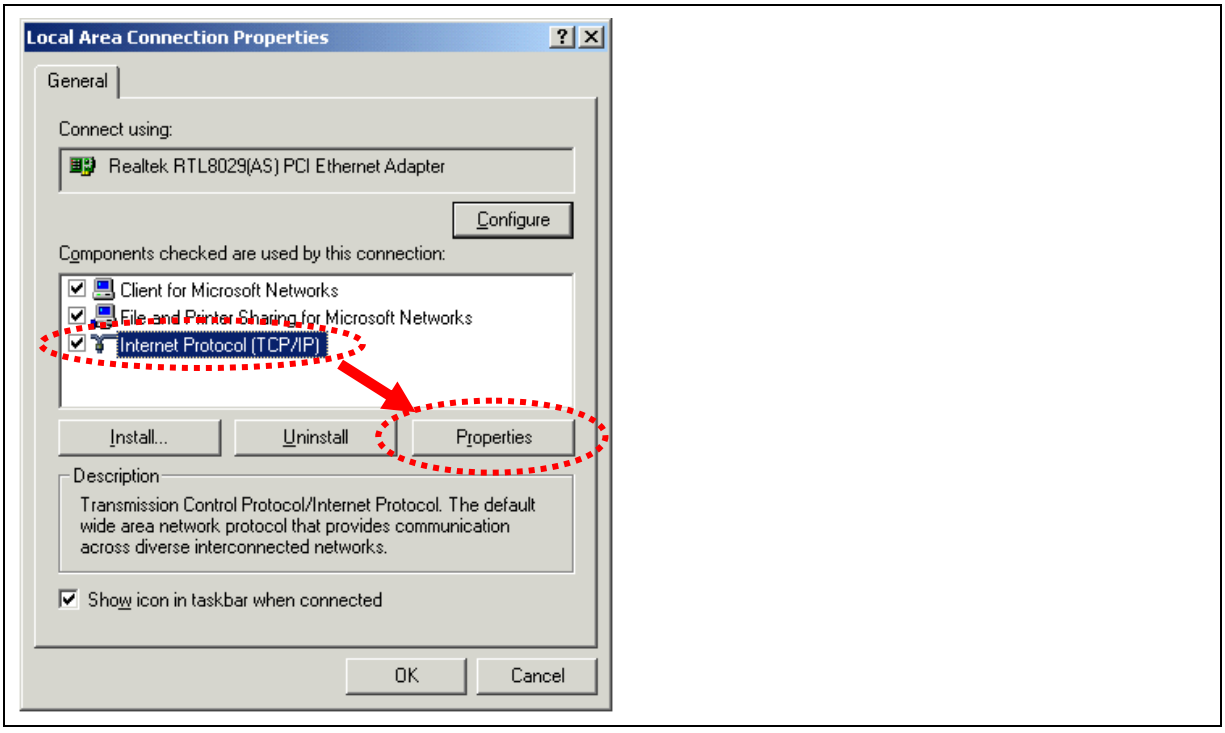


2. Select ‘Obtain an IP address from a DHCP server’, then click ‘OK’.

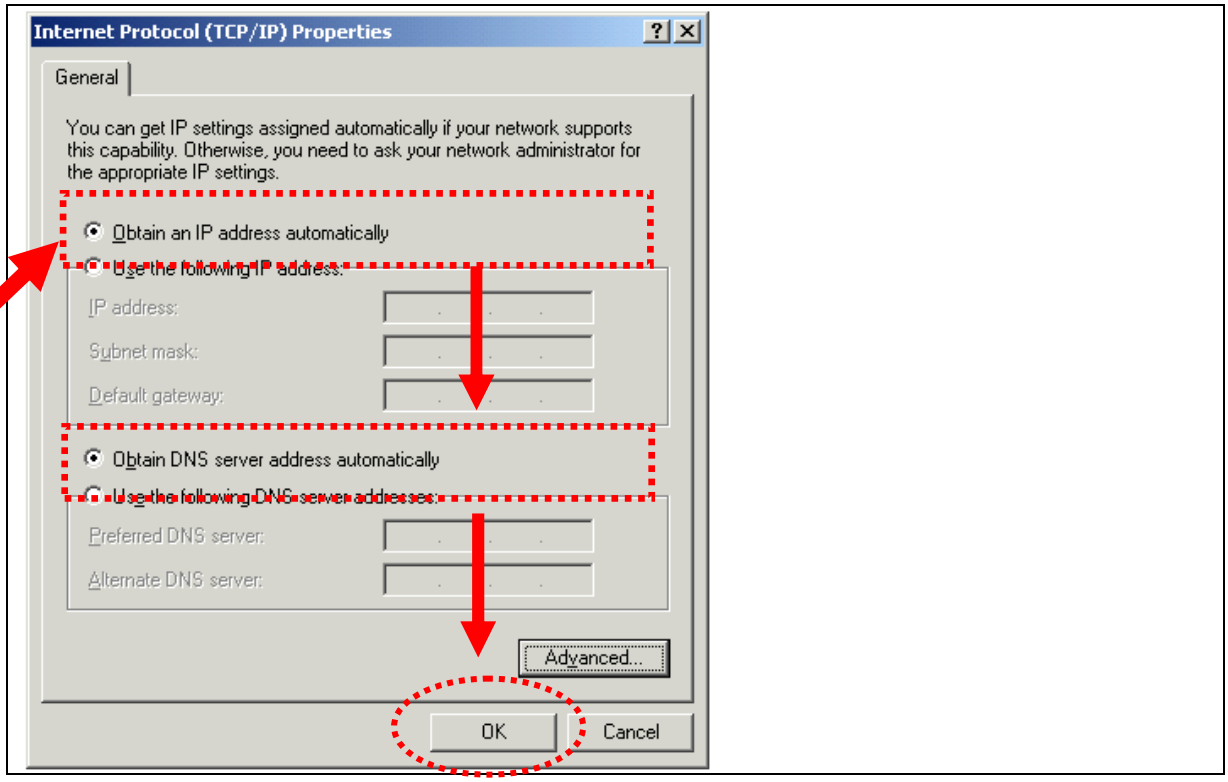



### 2.4.2 Windows 2000 IP address setup:

1. Click ‘Start’ button (it should be located at lower-left corner of your computer), then click control panel. Double-click ***Network and Dial-up Connections*** icon, double click ***Local Area Connection,*** and ***Local Area Connection Properties*** window will appear. Select ‘Internet Protocol (TCP/IP)’, then click ‘Properties’




2. Select ‘Obtain an IP address automatically’ and ‘Obtain DNS server address automatically’, then click ‘OK’.

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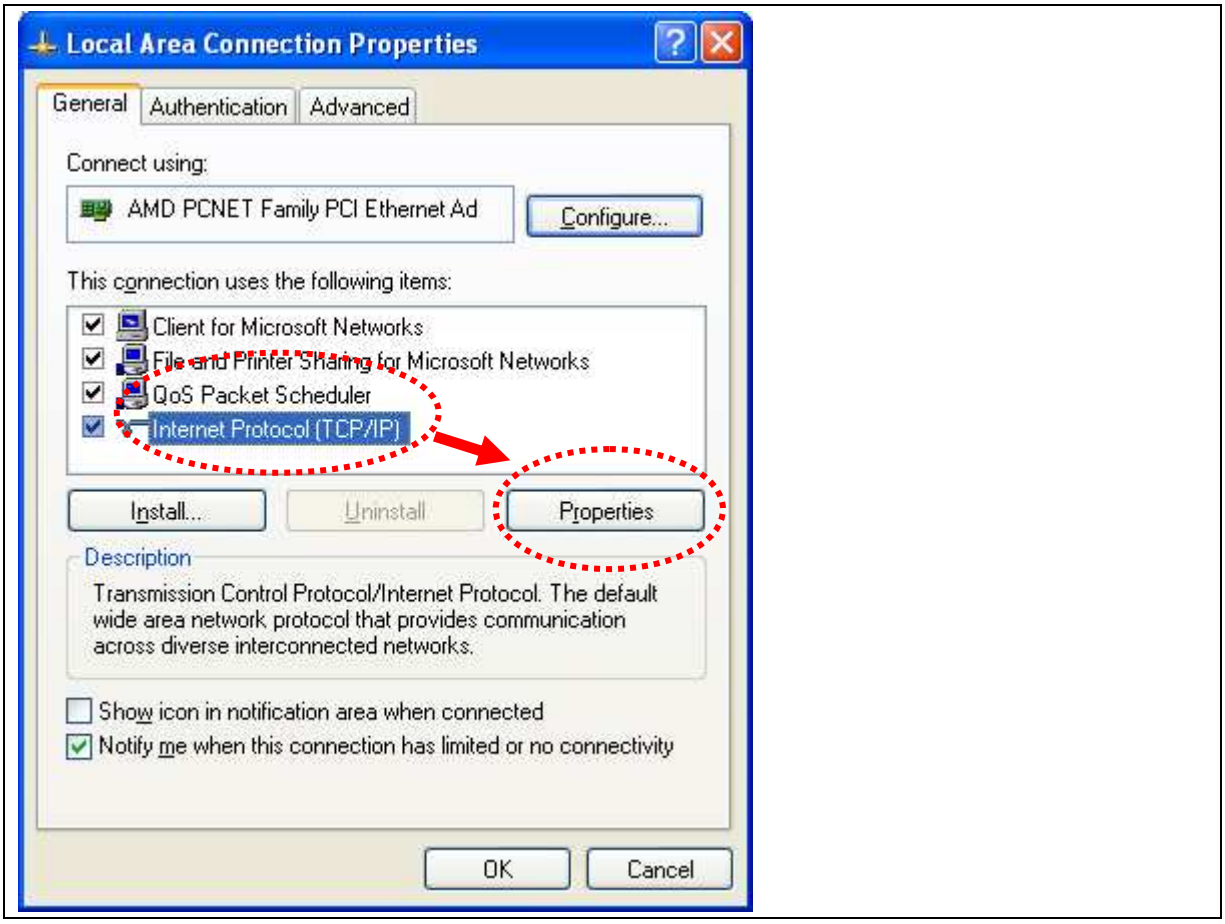
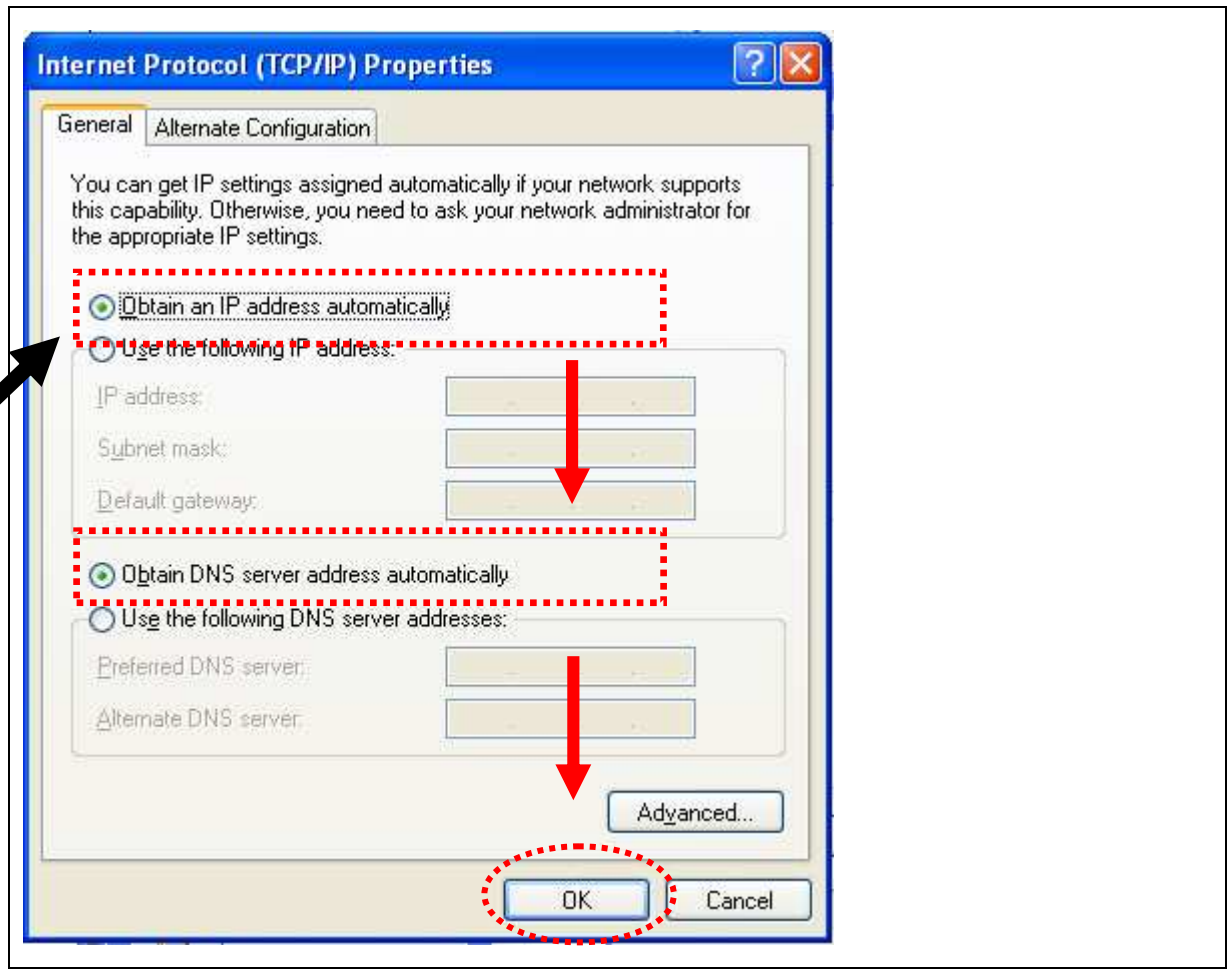
### 2.4.3 Windows XP IP address setup:

1. Click ‘Start’ button (it should be located at lower-left corner of your computer), then click control panel. Double-click ***Network and Internet Connections*** icon, click ***Network Connections,*** then double-click ***Local Area Connection, Local Area Connection Status*** window will appear, and then click ‘Properties’

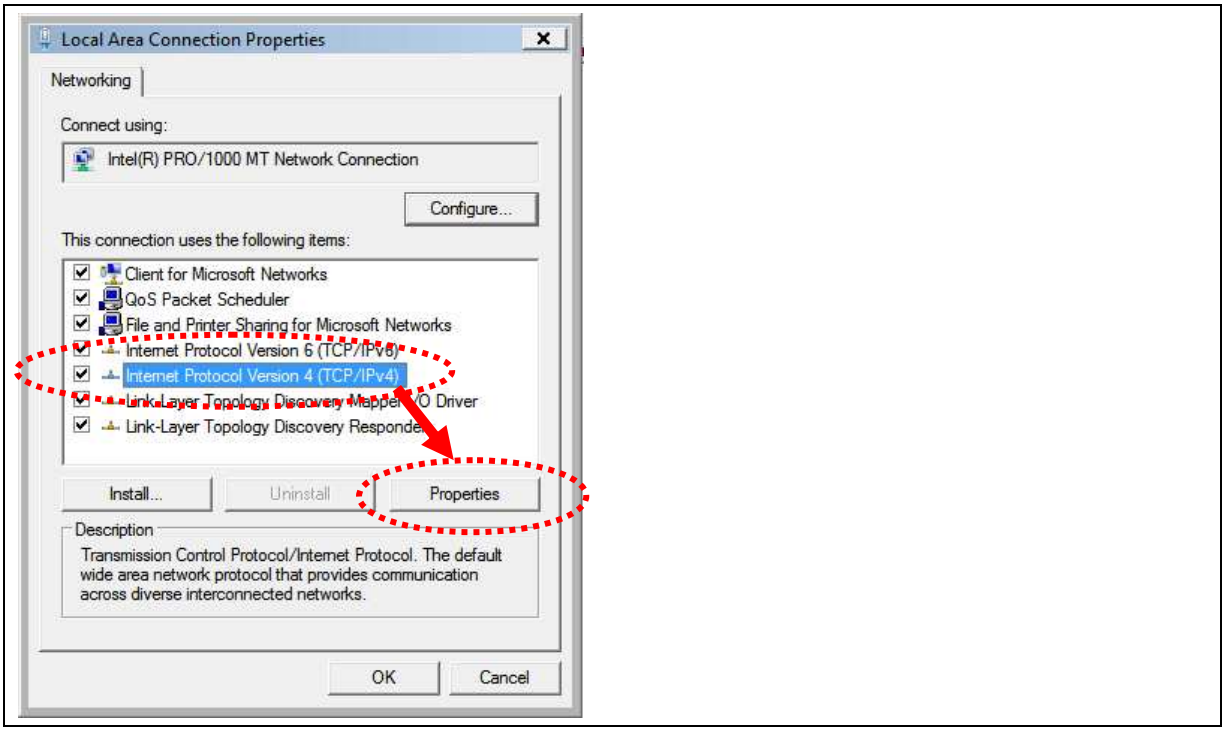


2. Select ‘Obtain an IP address automatically’ and ‘Obtain DNS server address automatically’, then click ‘OK’.

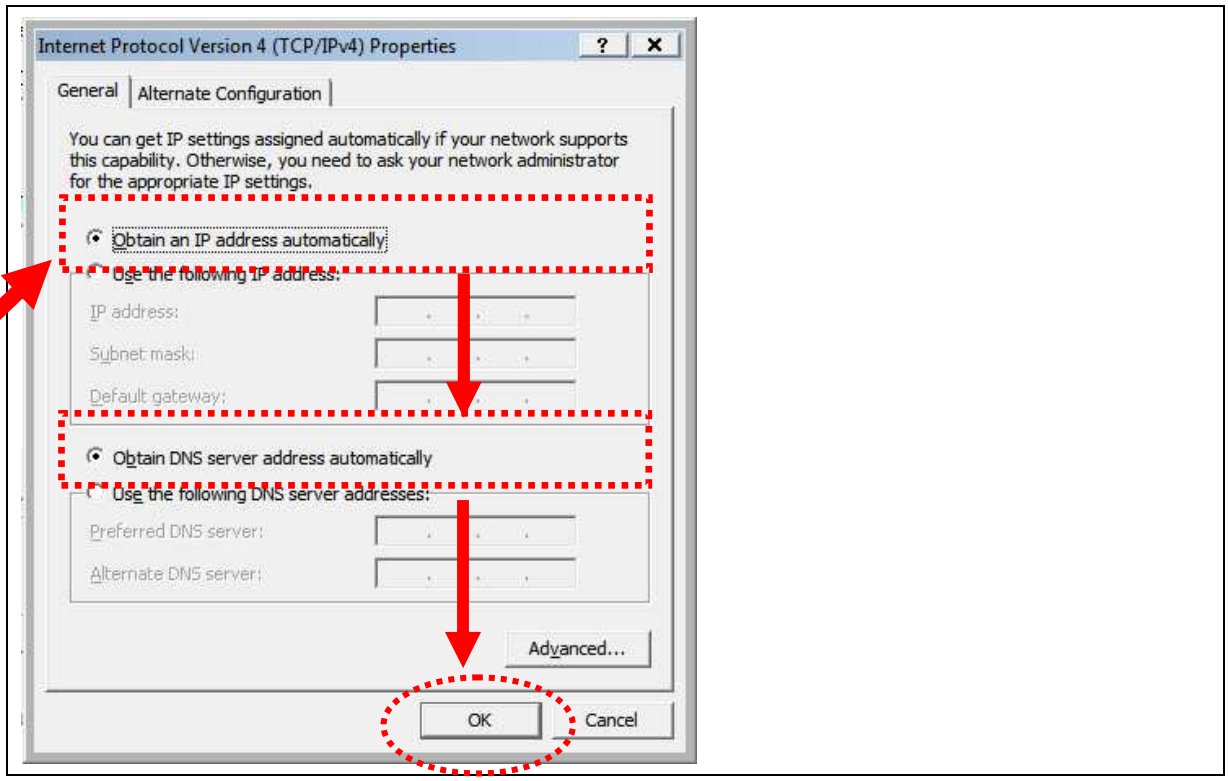



### 2.4.4 Windows Vista IP address setup:

1. Click ‘Start’ button (it should be located at lower-left corner of your computer), then click control panel. Click ***View Network Status and Tasks***, then click ***Manage Network Connections..***Right-click ***Local Area Netwrok, then select ‘Properties’. Local Area Connection Properties*** window will appear, select ‘Internet Protocol Version 4 (TCP / IPv4), and then click ‘Properties’

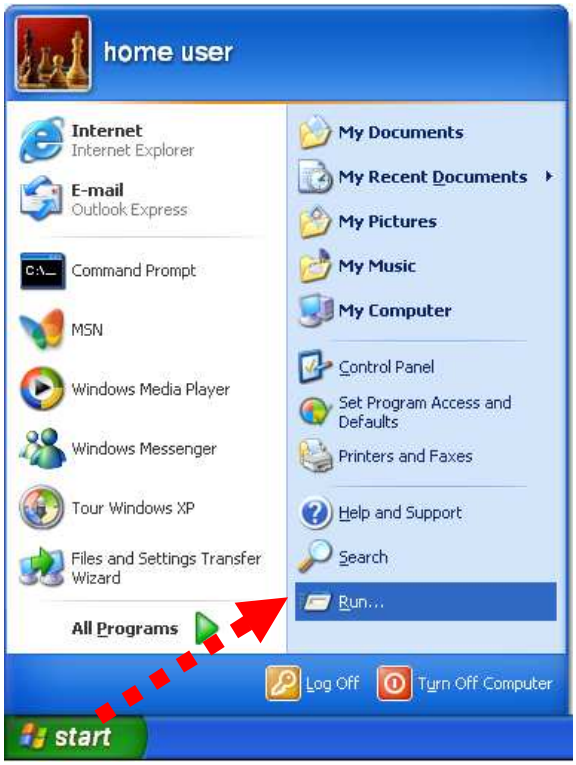



2. Select ‘Obtain an IP address automatically’ and ‘Obtain DNS server address automatically’, then click ‘OK’.

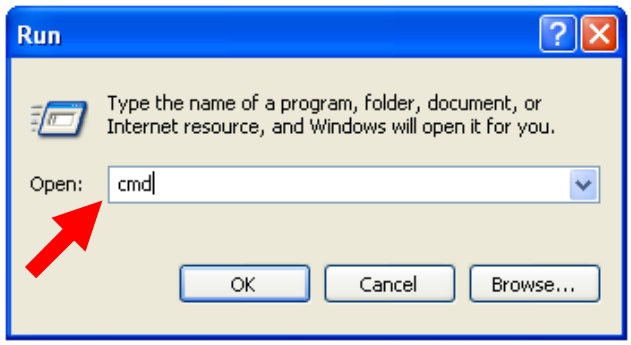


### 2.4.5 Router IP address lookup

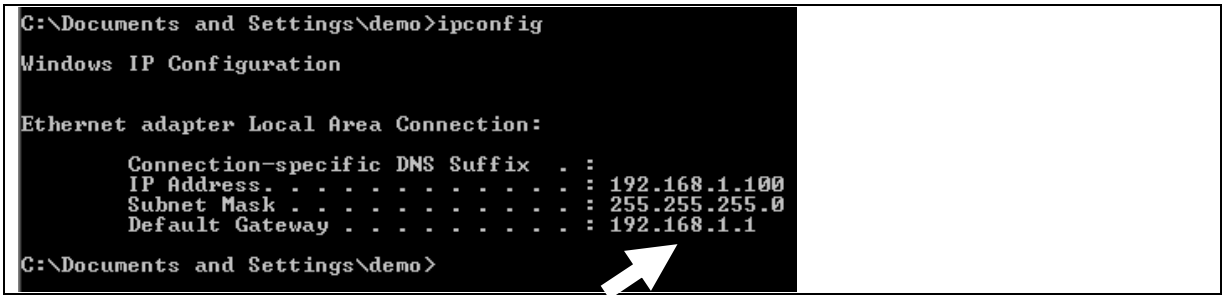
After the IP address setup is complete, please click ‘start’ -> ‘run’ at the **bottom-lower corner of your desktop:**




Input ‘cmd’, then click ‘OK’



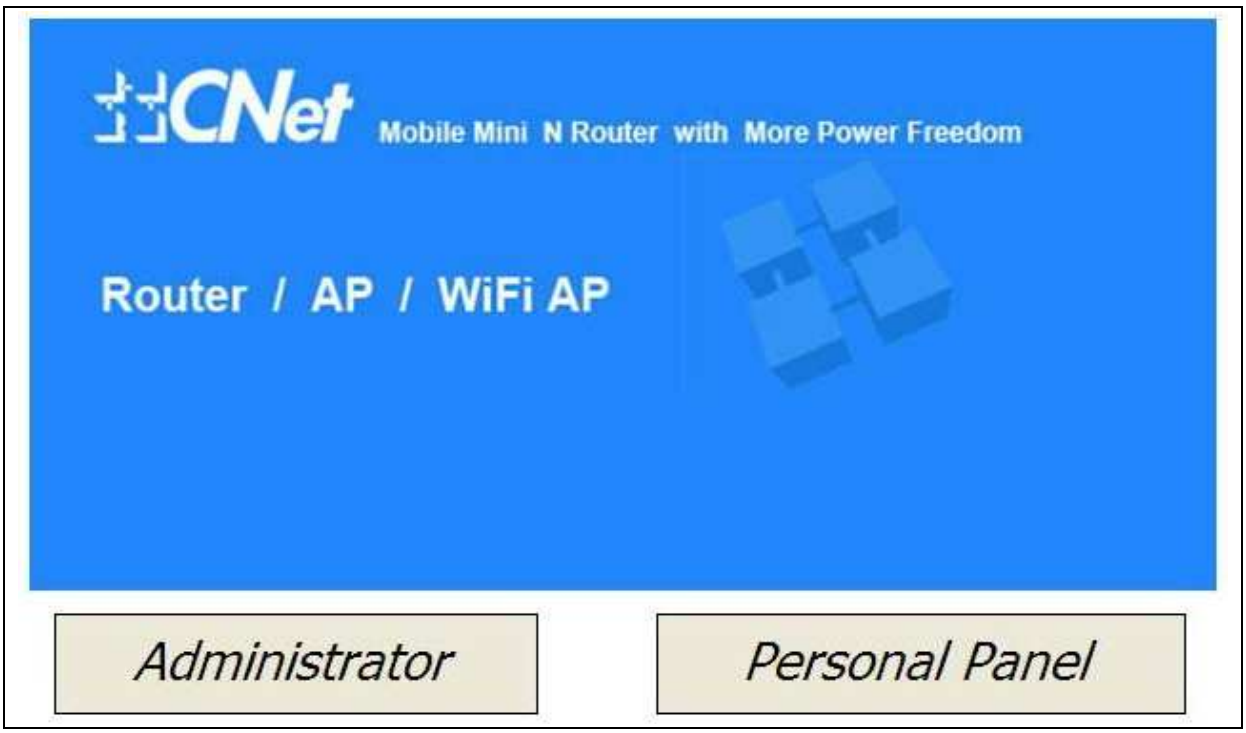
Input ‘IP config’, then press ‘Enter’ key. Please check the IP address followed by ‘Default Gateway’ (In this example, the IP address of router is 192.168.1.1)




**NOTE: If the IP address of Gateway is not displayed, or the address followed by ‘IP Address’ begins with ‘169’, please recheck network connection between your computer and router, and / or go to the beginning of this chapter, to recheck every step of network setup procedure.**

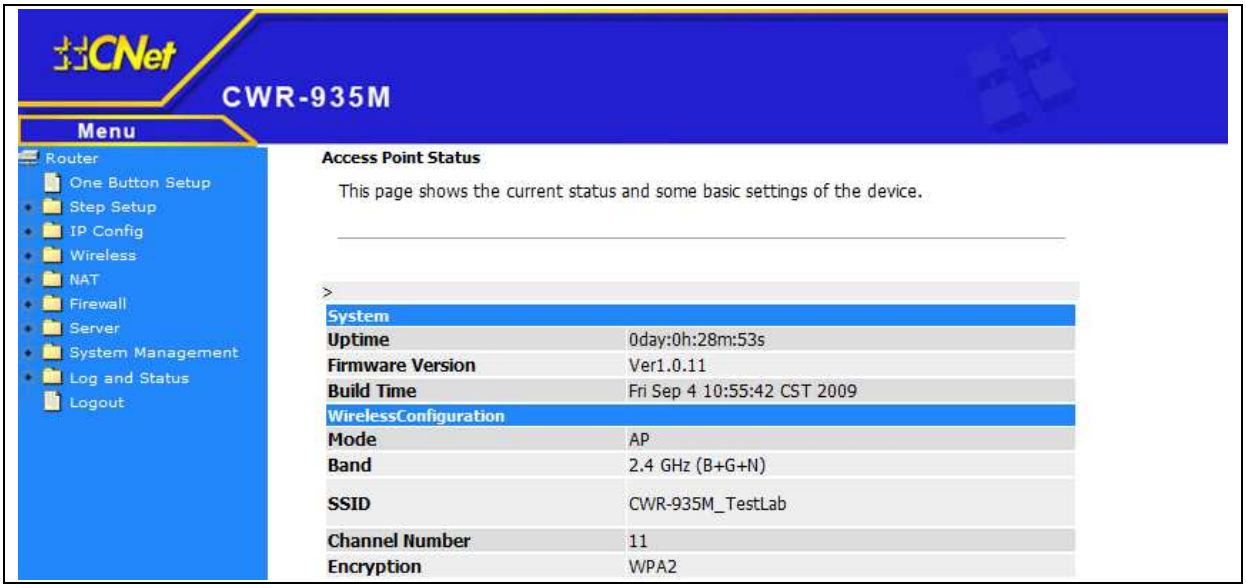
3. Connect the router’s management interface by web browser

After your computer obtained an IP address from router, please start your web browser, and input the IP address of router in address bar. The following message should be shown:



Please click “Administrator” to login the CWR-935M

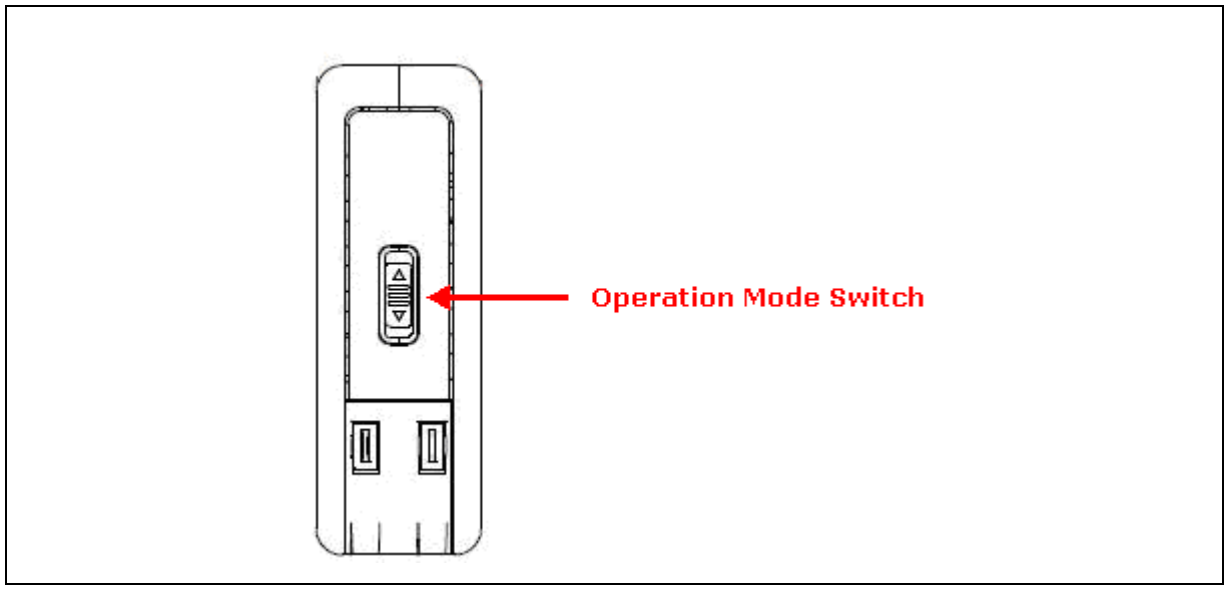

Please input user name and password in the field respectively, default user name is ‘**admin**’, and default password is ‘**admin**’, then press ‘**Login**’ button, and you can see the web management interface of this router:




**NOTE: If you can’t see the web management interface, and you’re being prompted to input user name and password again, it means you didn’t input username and password correctly. Please retype user name and password again. If you’re certain about the user name and password you type are correct, please go to ‘Troubleshooting’ to perform a factory reset, to set the password back to default value.**

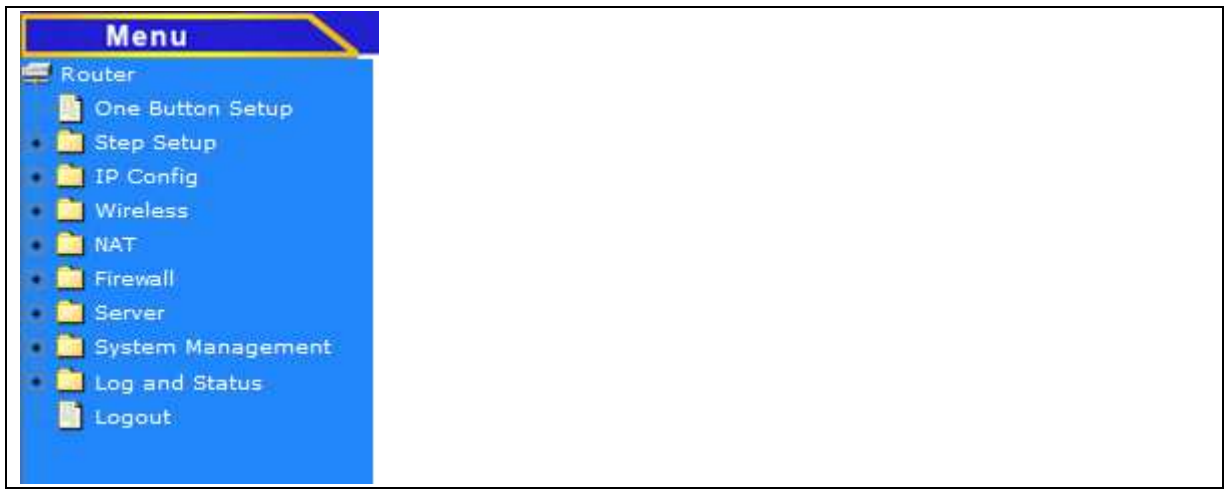
# Chapter 3. One Button Setup Configuration

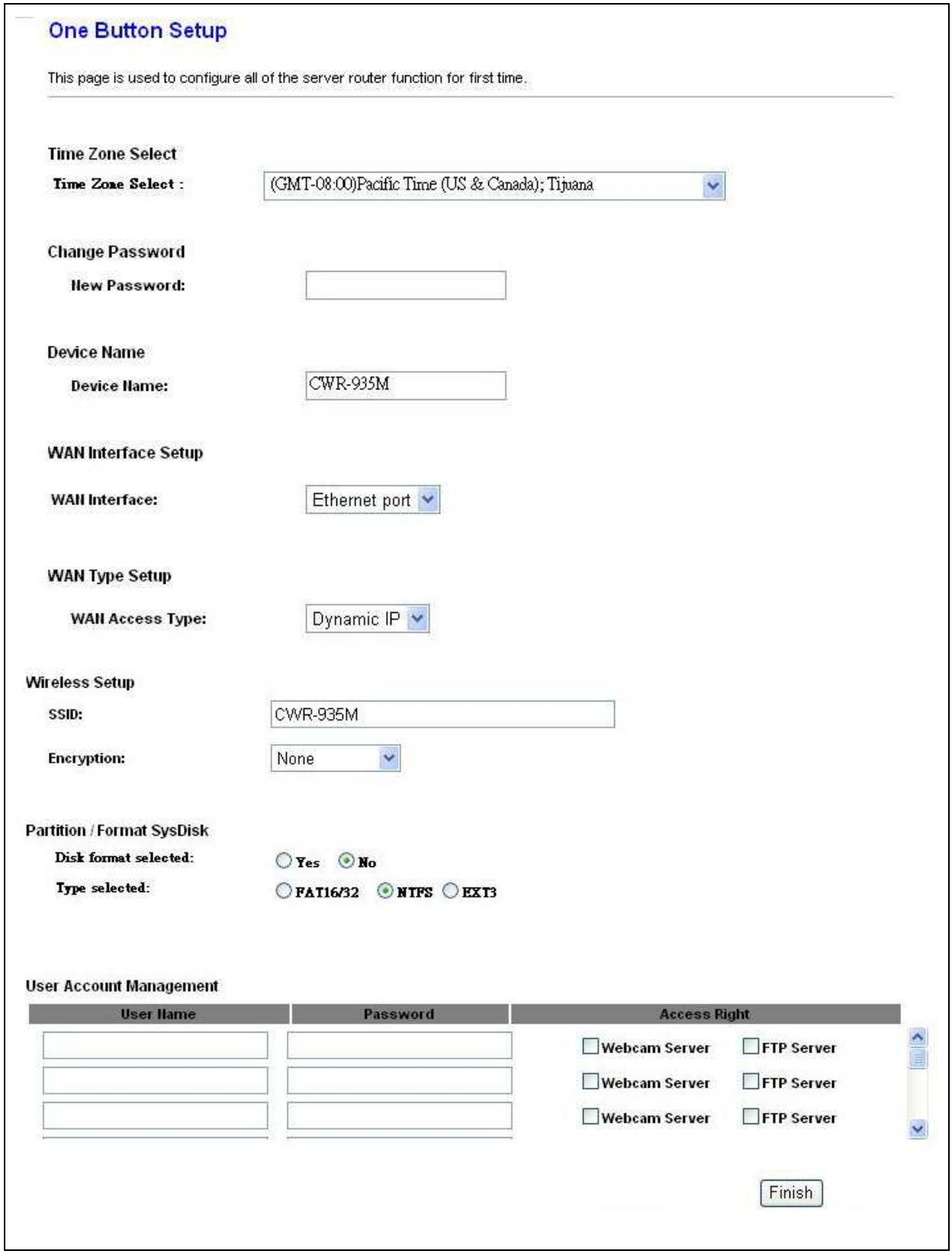
CWR-935M provides '**One Button Setup'** function, users can finish settings in a single page. After users switch modes and reboot the machine, they will enter this page to finish configurations.




## 3.1 One Button Setup for Router Mode

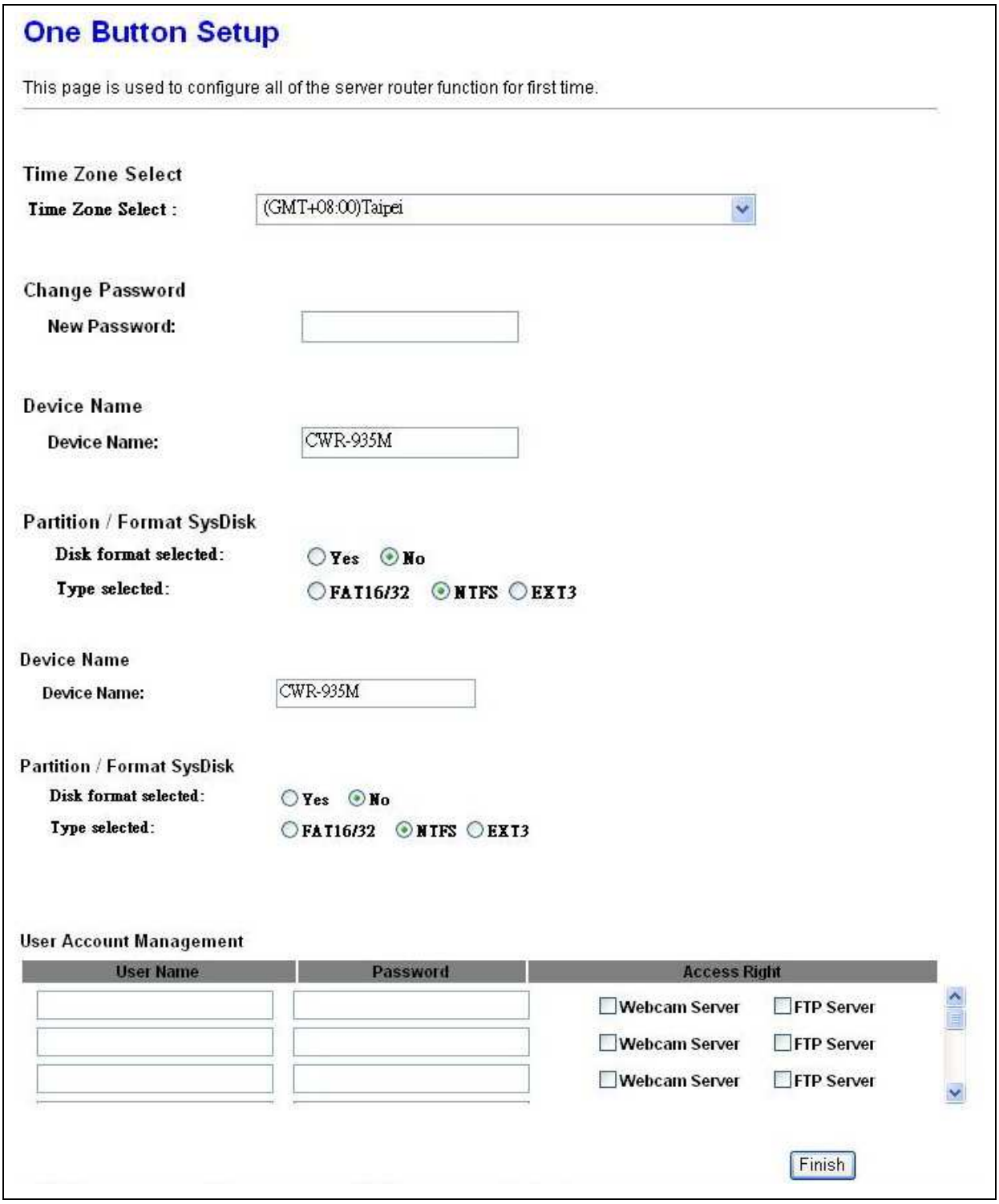
Please click "**One Button Setup"** function, users can finish settings in a single page. After users switch modes and reboot the machine, they will enter this page to finish configurations.




One Button Setup
This page is used to configure all of the server router function for first time.
Time Zone Select
Time Zone Select :
(GMT-08:00)Pacific Time (US & Canada); Tijuana
Change Password
New Password:
Device Name
Device Name:
CWR-935M
WAN Interface Setup
WAN Interface:
Ethernet port
WAN Type Setup
WAN Access Type:
Dynamic IP
Wireless Setup
SSID:
CWR-935M
Encryption:
None
Partition / Format SysDisk
Disk format selected:
Yes
No
Type selected:
FAT16/32
NTFS
EXT3
User Account Management
User Name
Password
Access Right
Webcam Server
FTP Server
Webcam Server
FTP Server
Webcam Server
FTP Server
Finish

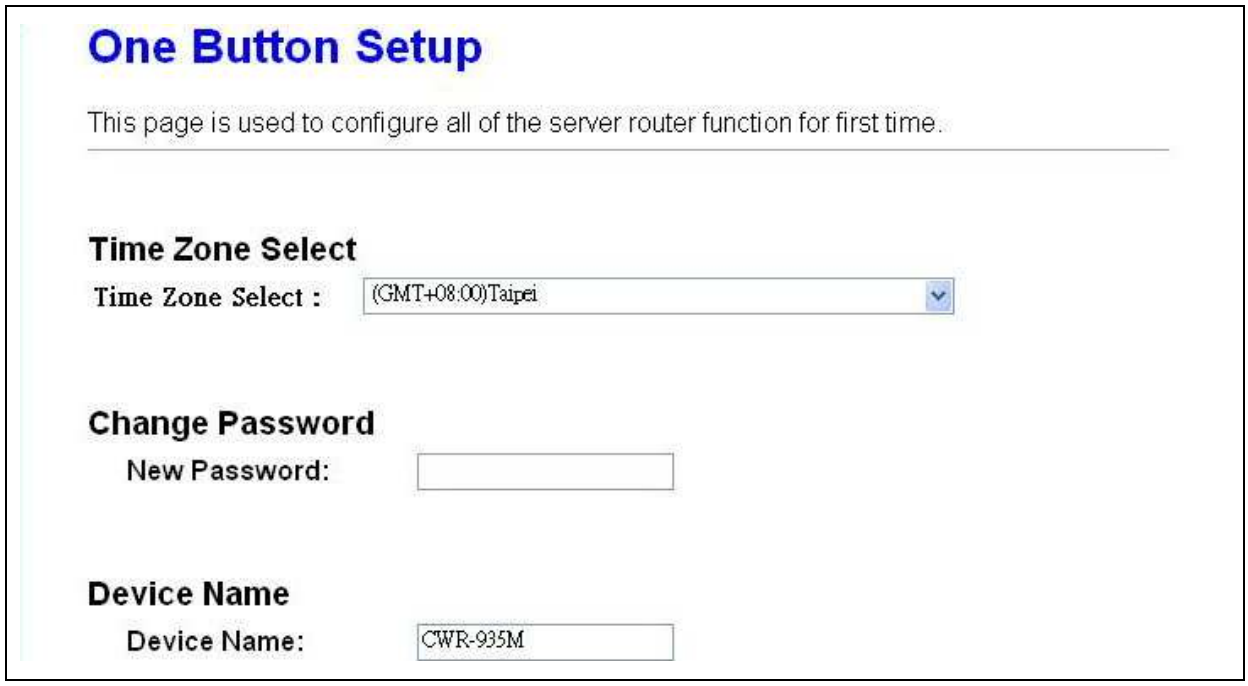
| Item | Description |
|---|---|
| Time Zone Select | Please press  button, a drop-down list will be shown, and you can choose a time zone of the location you live. |
| Change Password | Please input new password here |
| Device Name | Please input new device name here |
| WAN Interface Setup | Please choose the broadband interface you are using |
| WAN Type Setup | Please choose the broadband type you are using |
| Wireless Setup | You can configure Wireless SSID and Security |
| Partition / Format SysDisk | You can format or partition your USB Disk |
| User Account Management | You can create user account and their privilege |
| Finished | Please click finish button to complete the setting |

## 3.2 One Button Setup for AP Mode



| Item | Description |
|---|---|
| Time Zone Select | Please press button, a drop-down list will be shown, and you can choose a time zone of the location you live. |
| Change Password | Please input new password here |
| Device Name | Please input new device name here |
| Wireless Setup | You can configure Wireless SSID and Security |
| Partition / Format SysDisk | You can format or partition your USB Disk |
| User Account Management | You can create user account and their privilege |
| Finished | Please click finish button to complete the setting |

### 3.3 One Button Setup for Wi-Fi AP Mode



## Wireless Site Survey Setting

| SSID | BSSID | Channel | Type | Encrypt | Signal | Select |
|---|---|---|---|---|---|---|
| jeffrey_DDWRT | 00:1d:73:74:86:1c | 6 (B+G+N) | AP | WEP | 59 | ○ |
| jeffrey | 00:d0:41:b9:e1:df | 11 (B+G+N) | AP | WEP | 51 | ○ |
| CWR-854(K) | 00:1a:ef:05:b7:41 | 6 (B+G) | AP | WEP | 47 | ○ |
| CWR-935 | 00:d0:41:b9:e2:83 | 11 (B+G+N) | AP | no | 45 | ○ |
| FAE-Belkin_N1 | 00:17:3f:41:3b:2a | 6 (B+G+N) | AP | WPA-PSK/WPA2-PSK | 41 | ○ |
| CWR-935_CNet | 00:d0:41:b9:e1:cf | 11 (B+G+N) | AP | WPA2-PSK | 37 | ○ |
| lancer MIMO | 00:0c:43:26:61:00 | 1 (B+G) | AP | WEP | 31 | ○ |
| SALES | 00:08:a1:b5:b5:6a | 11 (B+G+N) | AP | no | 31 | ○ |
| promise | 00:23:f8:25:90:2a | 6 (B+G+N) | AP | WEP | 21 | ○ |
| CNET4A | 00:08:a1:7c:bd:37 | 6 (B+G) | AP | WEP | 19 | ○ |

Refresh

Encryption: None

## Extended Wireless Setup

Extended SSID: ESSID_CWR-935M

Encryption: None

## Partition / Format SysDisk

Disk format selected: ○ Yes ◉ No

TYPE: ○ FAT16/32 ◉ NTFS ○ EXT3

| User Name | Password | Access Right |
|---|---|---|
| | | ☐ Webcam Server ☐ FTP Server |
| | | ☐ Webcam Server ☐ FTP Server |
| | | ☐ Webcam Server ☐ FTP Server |

Finish

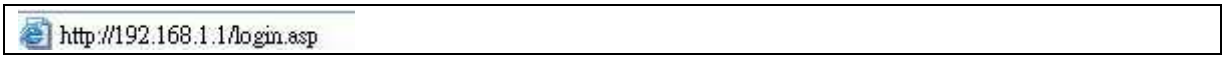
| Item | Description |
|---|---|
| Time Zone Select | Please press button, a drop-down list will be shown, and you can choose a time zone of the location you live. |
| Change Password | Please input new password here |
| Device Name | Please input new device name here |
| Wireless Site Survey Setting | Please select wireless network you want to connect and the encryption type. |
| Extended Wireless Setup | You can assign the SSID and Encryption type |
| User Account Management | You can create user account and their privilege |
| Finished | Please click finish button to complete the setting |

# Chapter 4. Quick Setup One Button Setup Configuration

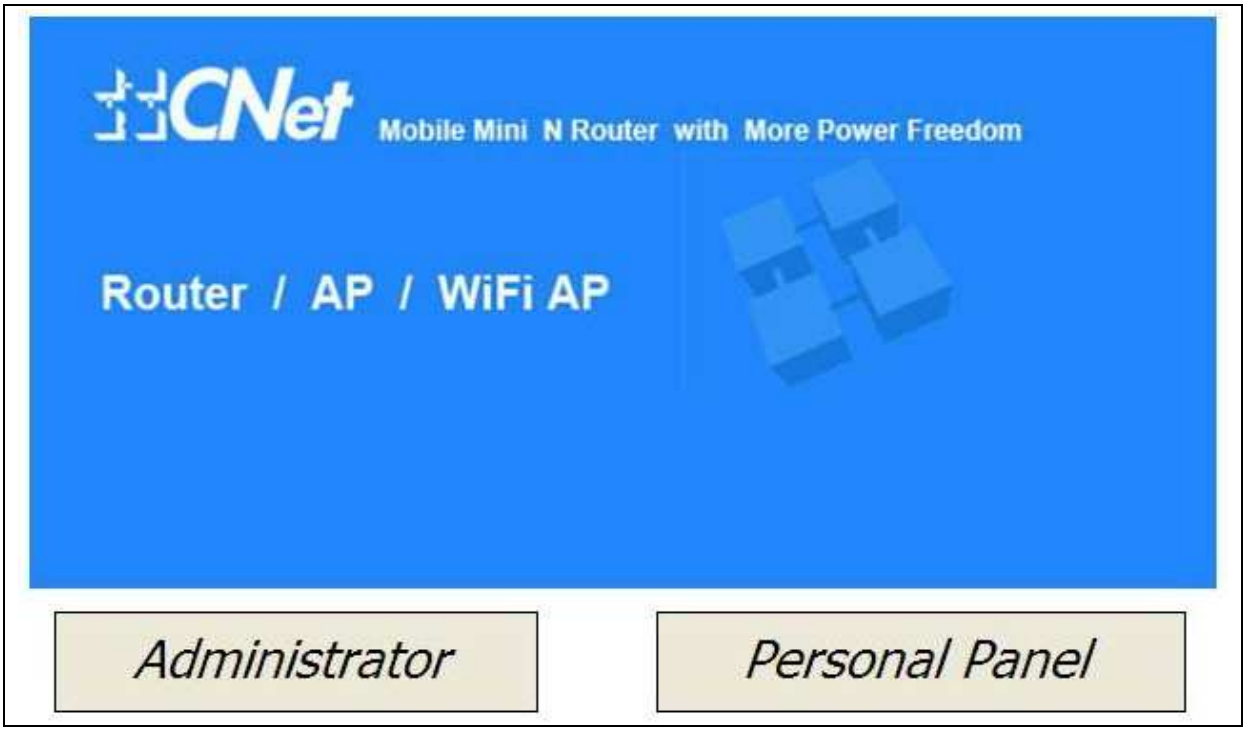
There are two way to connect to CWR-935M setup page.

A. Use Internet browser to connect to CWR-935M

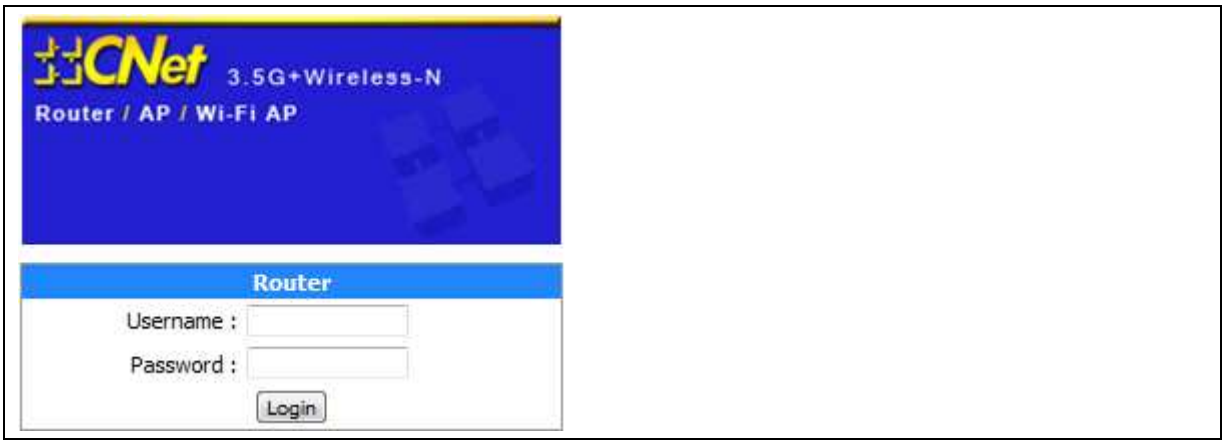
1. Please open your Internet browser, like IE, and input the CWR-935M IP address, http://192.168.1.1




2. Click "**Administrator**"




3. Login page will shown as below, and enter username and password. The username is “**admin**”, the password is “**admin**”, then click “**Login**” to enter CWR-935N main page.

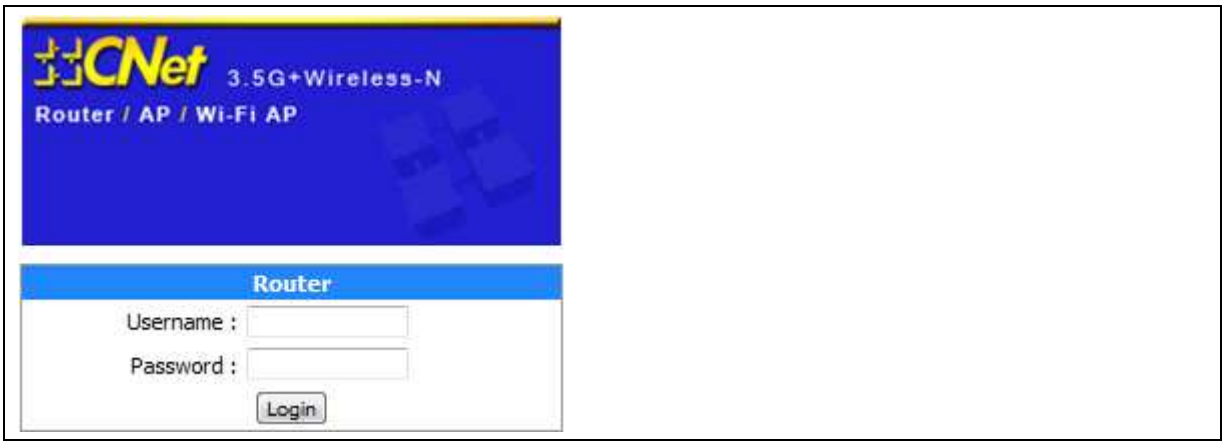



B. Use UPnP to connect to CWR-935M

1. CWR-935M default enable UPnP function, you can find the icon in the right down corner, when you connect to CWR-935M.

You also can find the CWR-935M icon in the “**My Network Places**”


2. Click “**Internet Gateway Device**” to open login page




## 4.1 Router Mode configuration

**NOTE: Please click the “Finish” button to save all configuration data.**

CWR-935M supports wire or wireless connecting type with ISP. It also has NAT and DHCP functions to let multiple computers using network at the same time. Wireless WAN supports Site Survey.

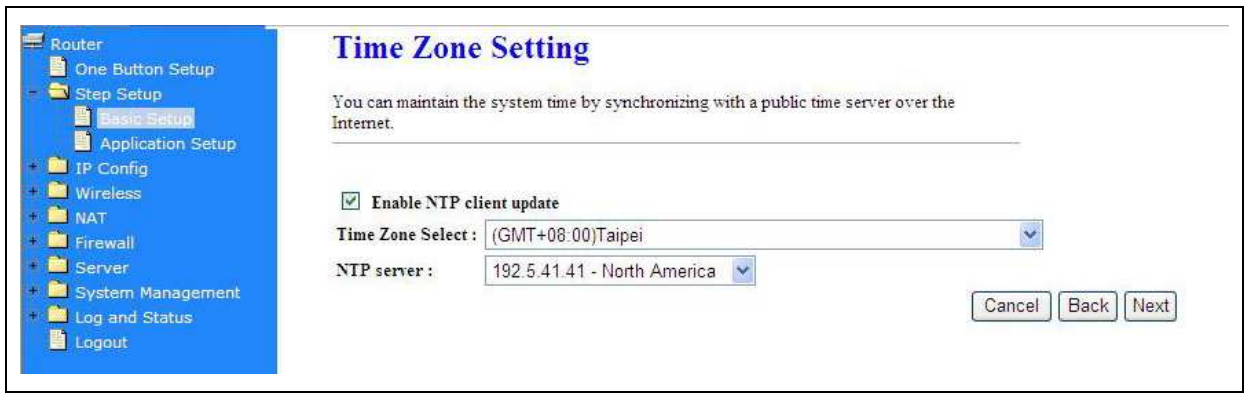
### 4.1.1 Switch to Router Mode

CWR-935M has an operation switch; it can let users switch between router, AP, and Wi-Fi AP mode. Users must unplug the CWR-935M from the power outlet and make sure that the power is off. Switch to Router mode, and plug it back in power outlet.

## 4.2 Quick Setup for Router Mode

Click on Step Setup in the left screen of the main menu. Then you'll see the **"Basic Setup"** and **"Application Setup".** Please click **"Basic Setup"** then click **"Next>>"** to start configure your CWR-935M.

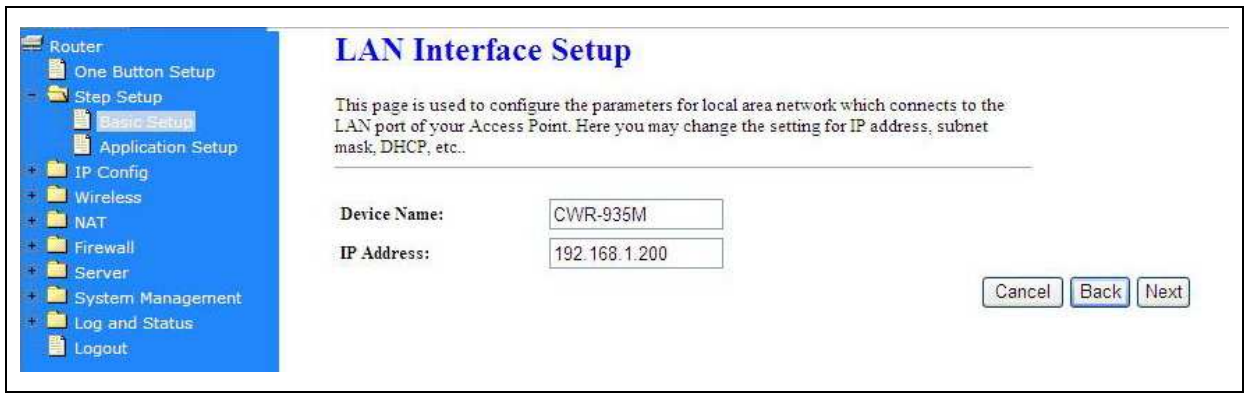

### 4.2.1 Time Zone Setup




| Item | Description |
|---|---|
| Enable NTP Client update | Device will auto synchronize with NTP server |
| Time Zone Select | Please press button, a drop-down list will be shown, and you can choose a time zone of the location you live. |
| NTP Server | Please press button, a drop-down list will be shown, and you can choose a NTP server which you want to use |

After you finish all setting, please click **"Next>>"** button.

### 4.2.2 LAN Interface Setup

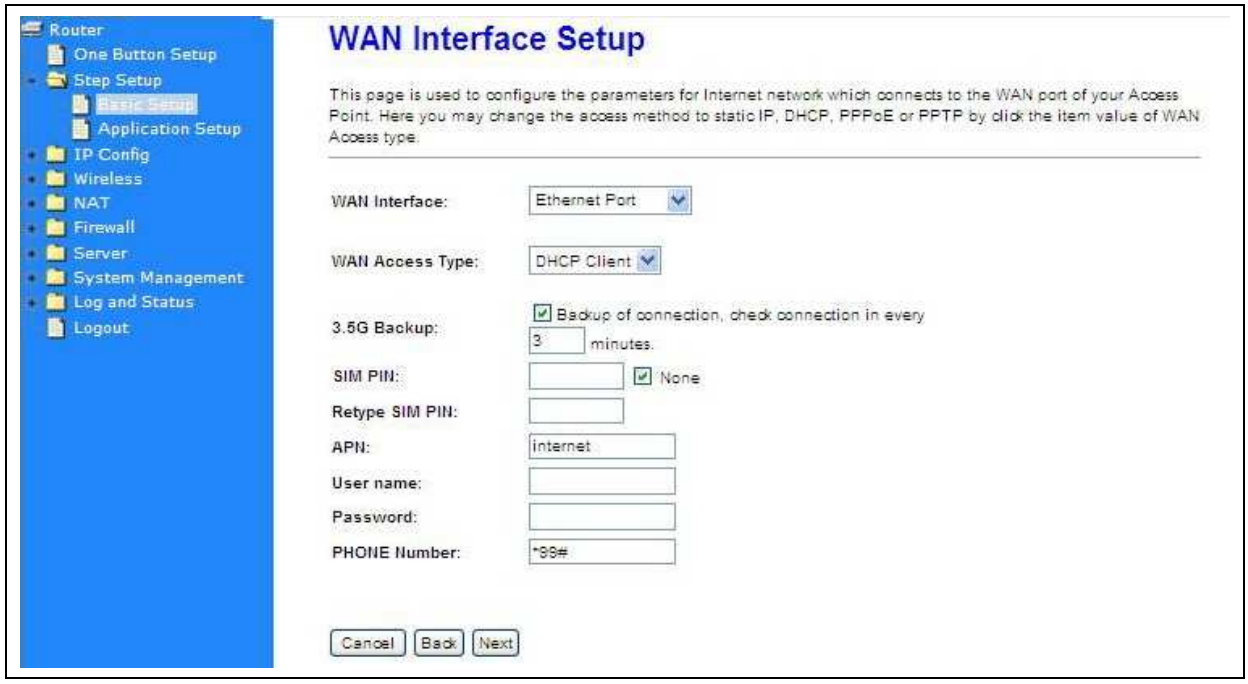



| Item | Description |
|---|---|
| Device Name | Device name, you can change CWR-935M's name |
| IP Address | Device IP address, you can change CWR-935M IP Address |

After you finish all setting, please click **"Next>>"** button.

### 4.2.3 WAN Setup

CWR-935M supports three WAN interface and four WAN access type, After you finish all setting, please click **"Next>>"** button.

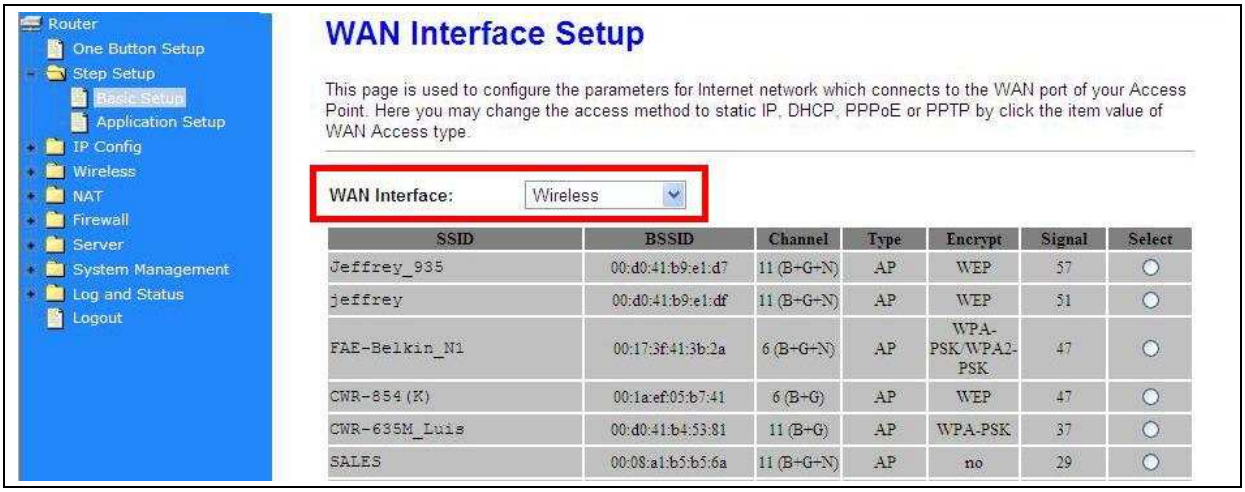


#### 4.2.3.1 WAN Interface – Ethernet Port

If CWR-935M connects to the Internet through Ethernet cable, please select **Ethernet port**.


#### 4.2.3.2 WAN Interface – Wireless

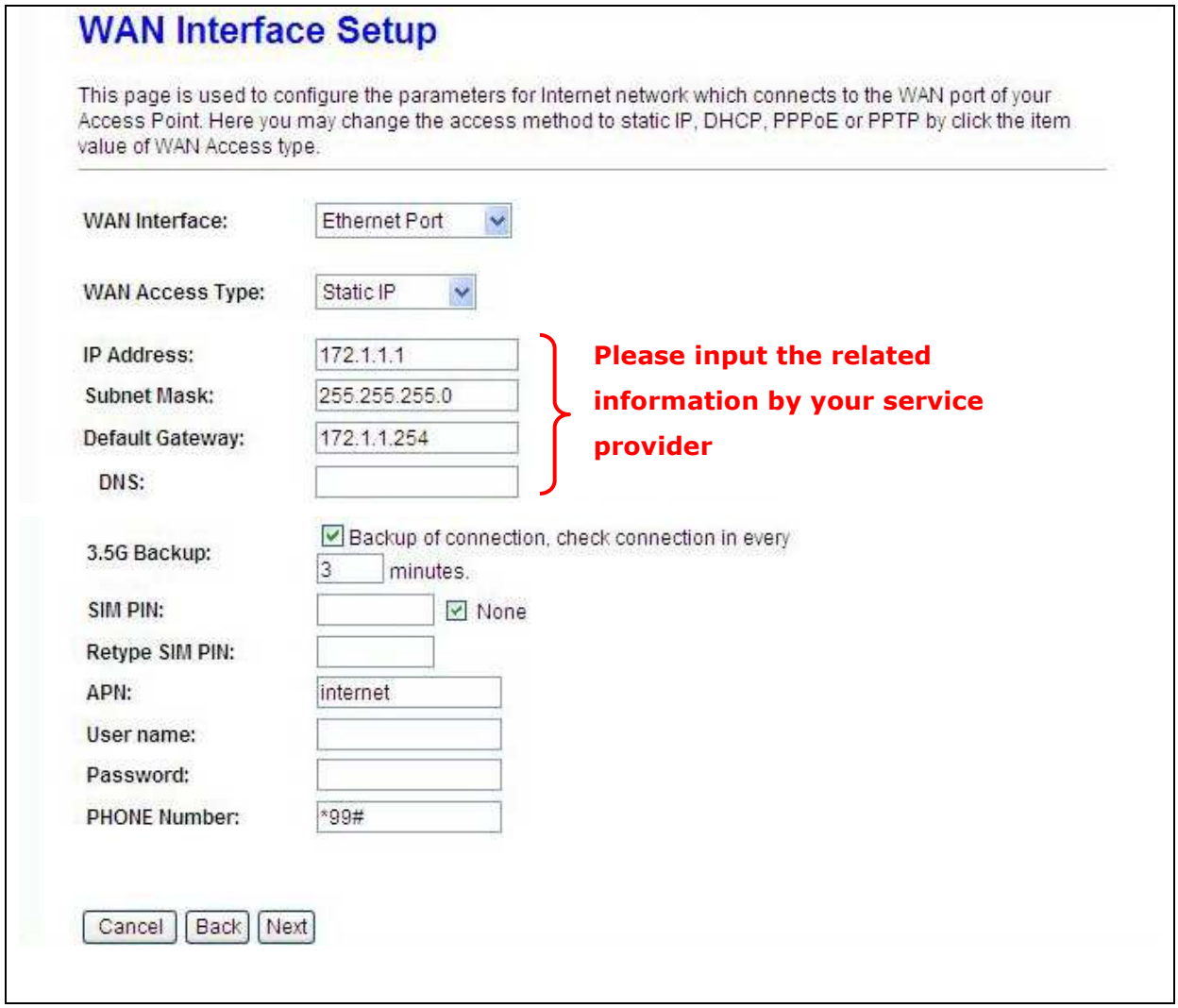
If CWR-935M connects to the Internet through wireless, please select **Wireless**.




The Wireless network which searched by CWR-935M will display on this page. Please select the wireless network and Encryption type to connect.

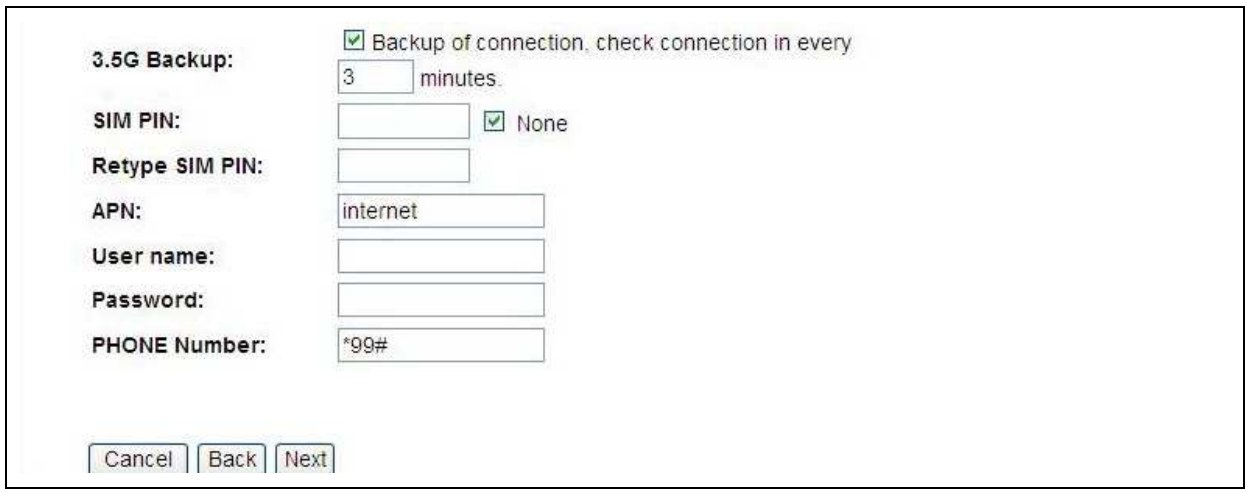
#### 4.2.3.3 WAN Access Type – Static IP

If your ISP provides static IP, and you do not need to enter username and password, please select **"Static IP"**. Enter the information which ISP provides then click **"Next"**. You can also use the "**3.5G Backup**" for redundancy.



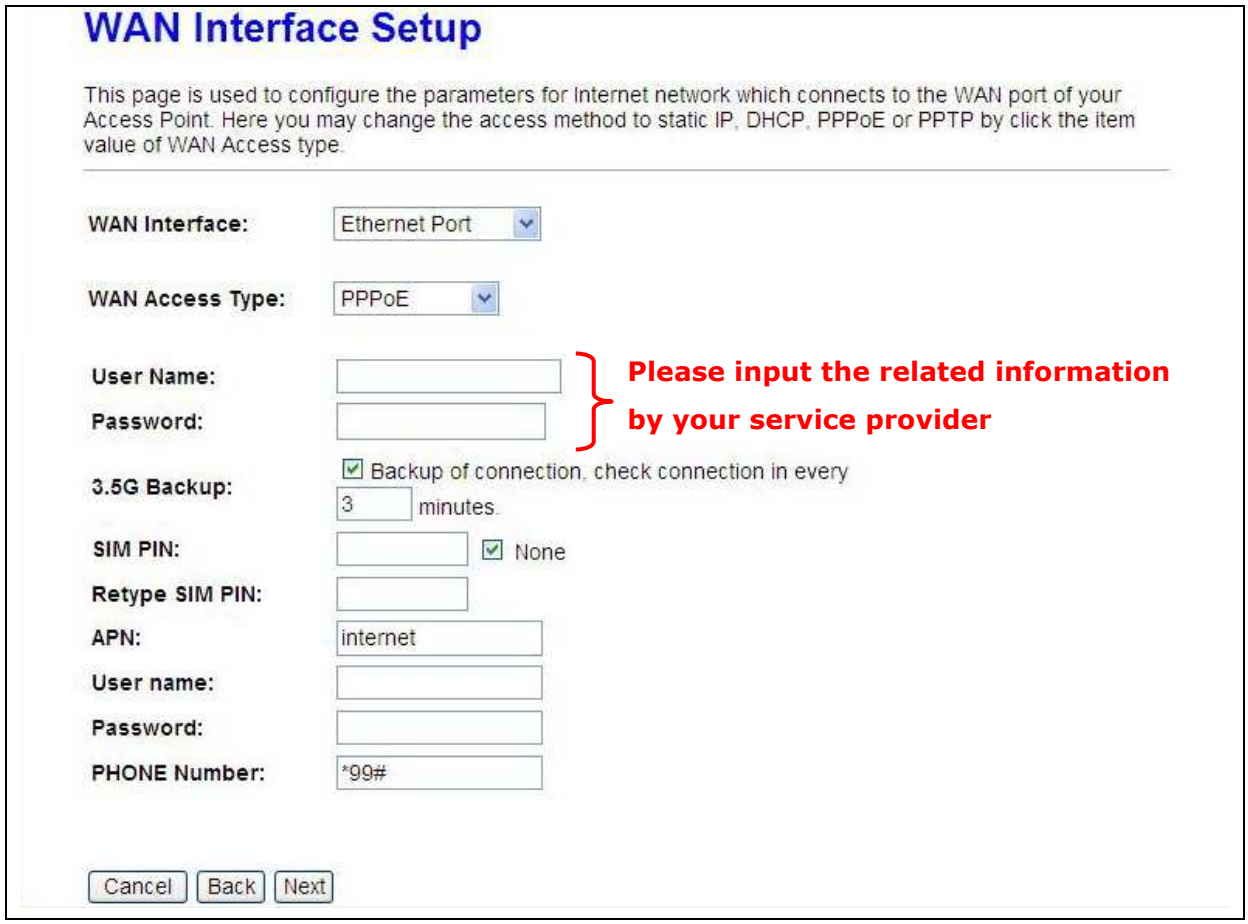

#### 4.2.3.4 WAN Access Type – DHCP Client

Please select **"Dynamic I"P** to obtain IP address automatically from your ISP. You can use the **"3.5G Backup"** for redundancy.



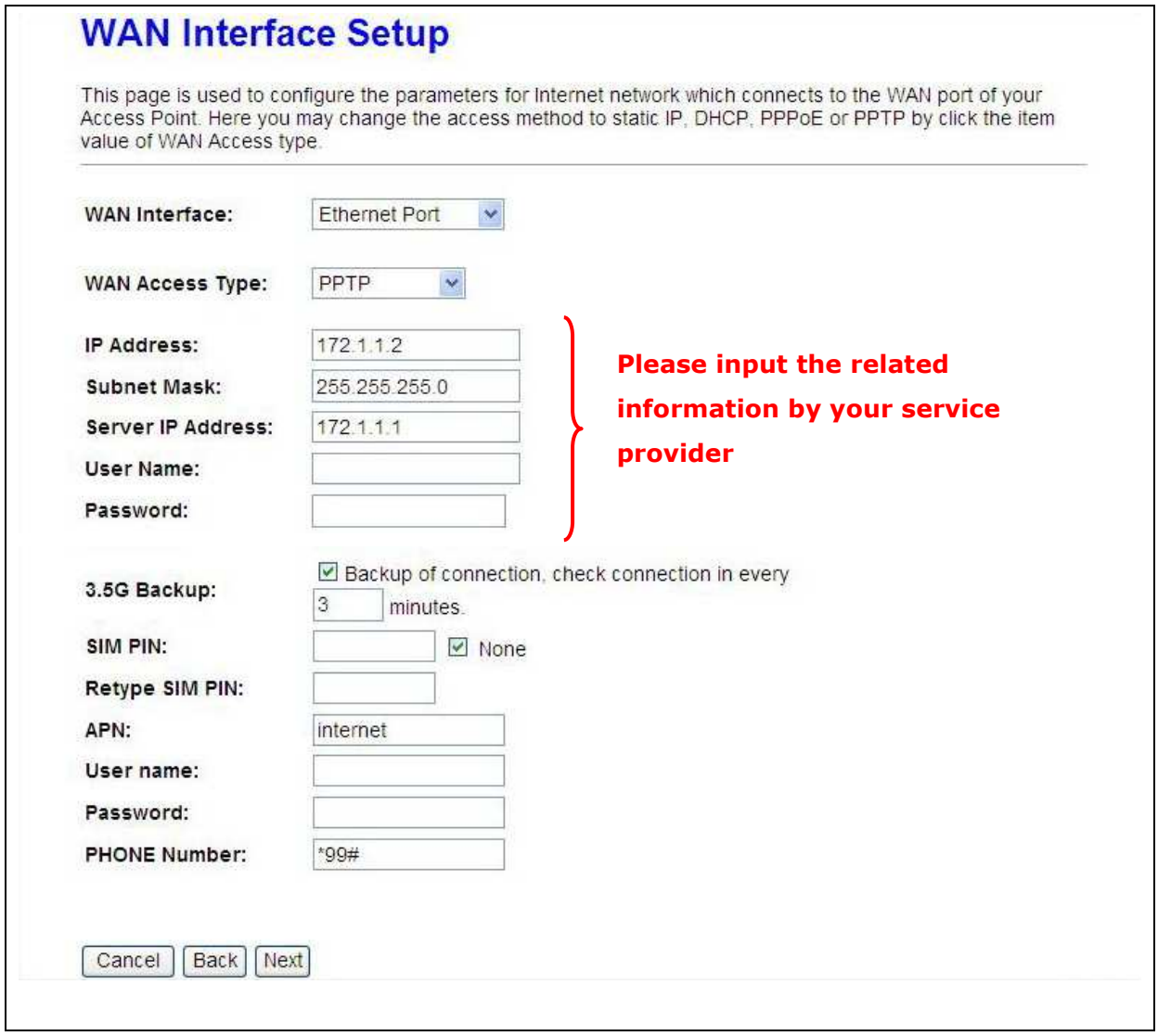

#### 4.2.3.5 WAN Access Type – PPPoE

Please select **"PPPoE "** and input the username and password by your Internet Service Provider. You can use the **"3.5G Backup"** for redundancy.



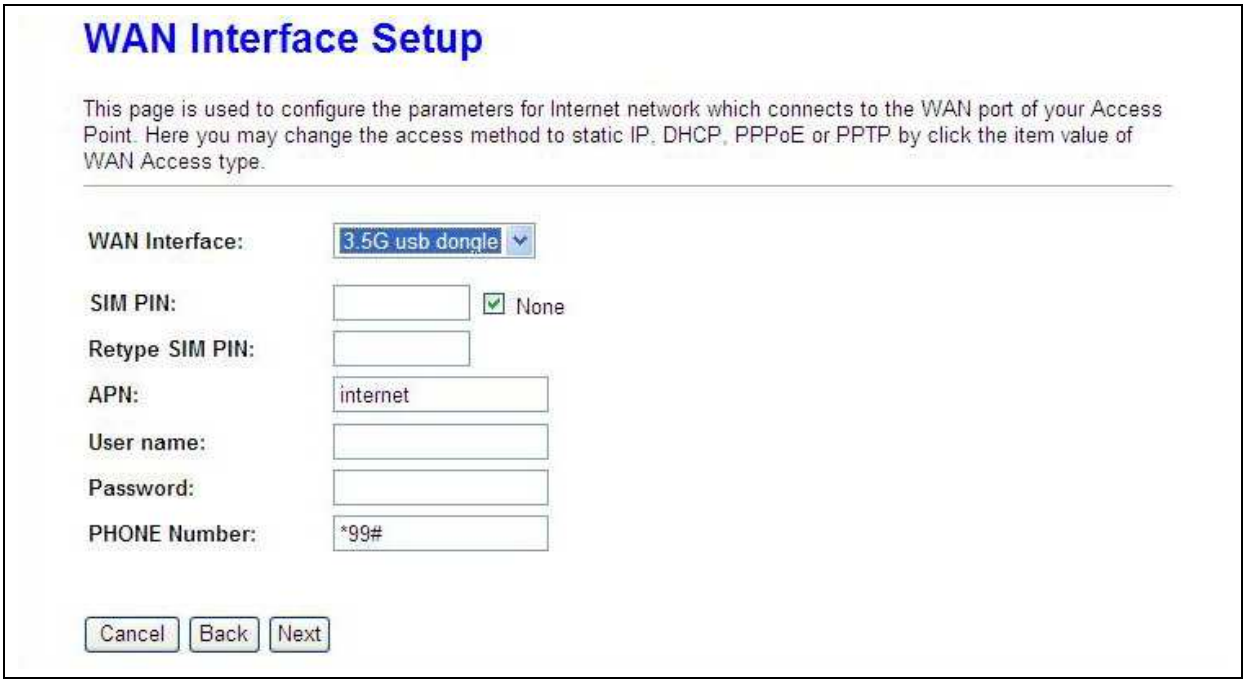
#### 4.2.3.6 WAN Access Type – PPTP

Please select **"PPPTP "** and input the related information by your Internet Service Provider. You can use the **"3.5G Backup"** for redundancy.



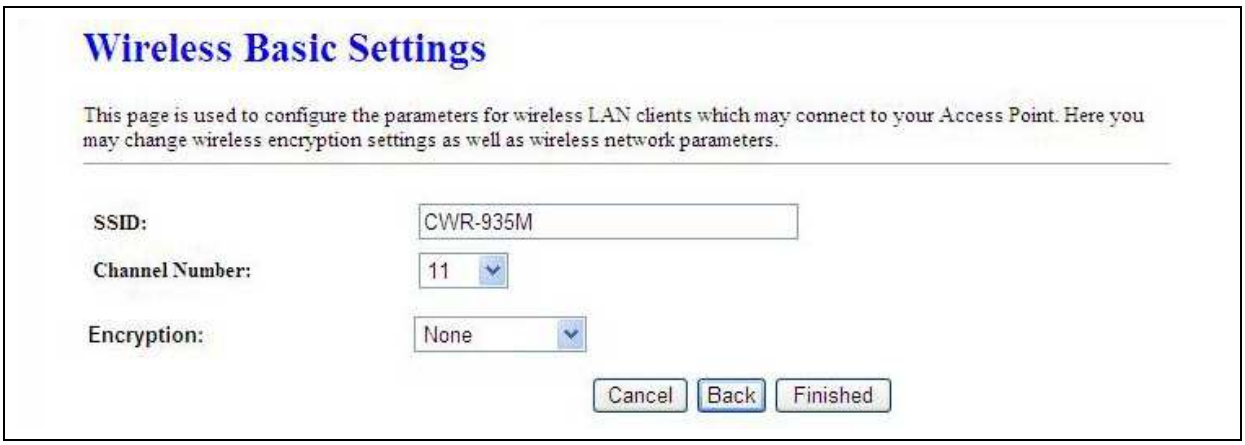
### 4.2.4 3.5G Setup

If you use 3.5G connect to Internet, please choose **"3.5G usb dongle"**. 3.5G connection (Connection Mode) means that users use 3.5G connect to network. The Backup of Connection is not available at this time. If the device can not detect 3.5G signal, it will search 3 / 2.75 / 2.5G signal, until there is no signal.




### 4.2.5 Wireless Setup

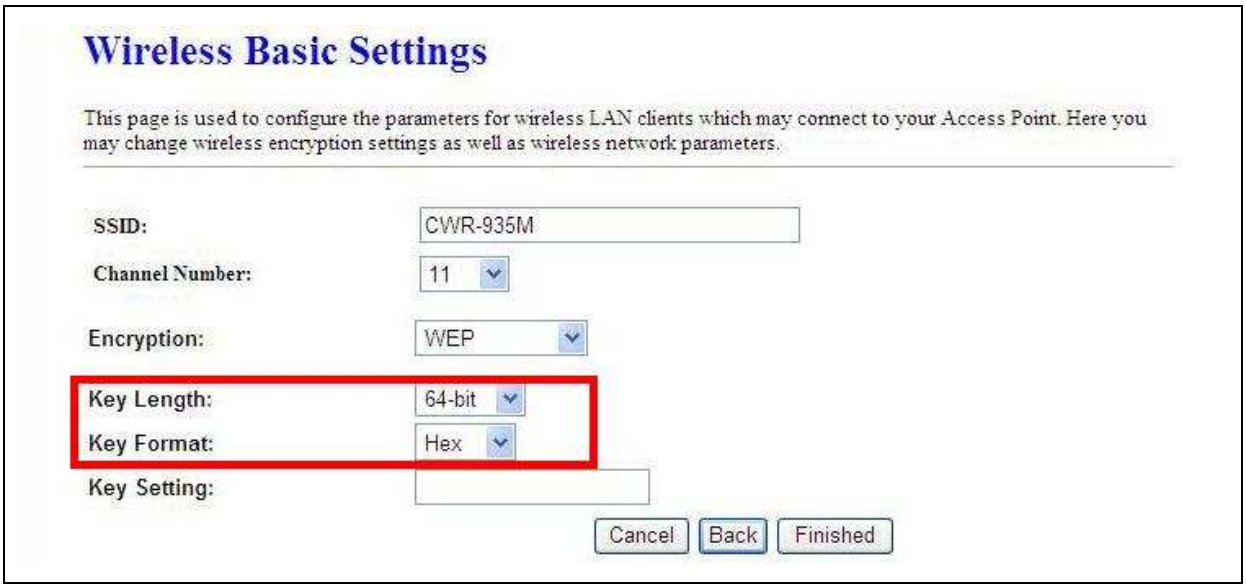
The first step to setup wireless interface is to assign SSID, the default name is **CWR-935M.** Please follow the instructions to setup.



### 4.2.6 Wireless Security Setup

**It's very important to set wireless security settings properly!** If you don't, hackers and malicious users can reach your network and valuable data without your consent and this will cause serious security problem.

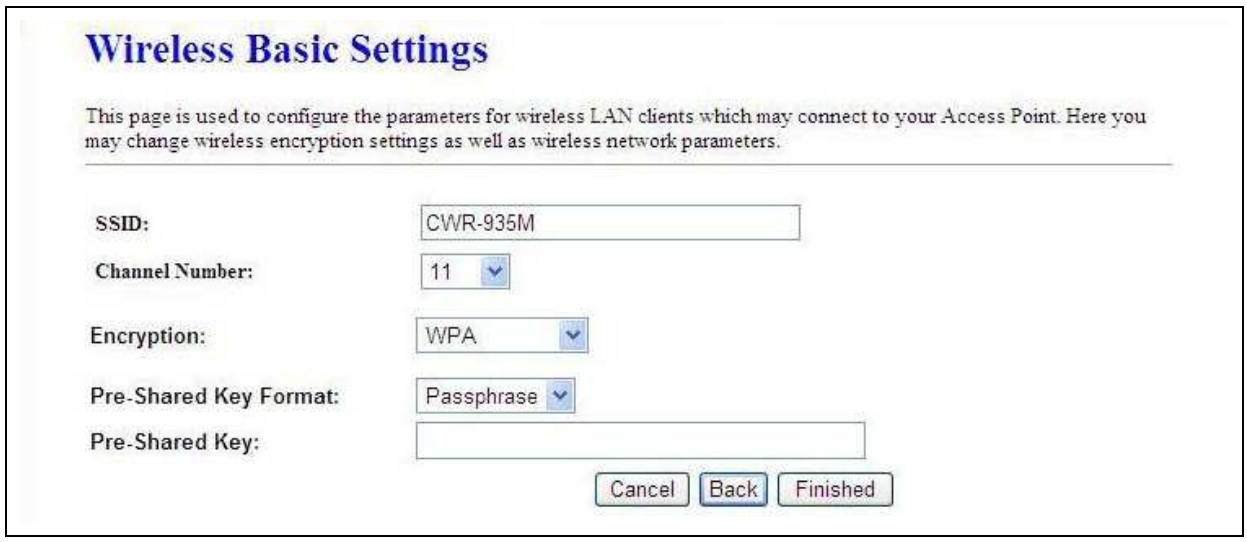
a. Encryption -- WEP




| Item | Description |
|---|---|
| Key Length | There are two types of WEP key length: 64-bit and 128-bit. Using '128-bit' is safer than '64-bit', but will reduce some data transfer performance. |
| Key Format | There are two types of key format: ASCII and Hex. When you select a key format, the number of characters of key will be displayed. For example, if you select '64-bit' as key length, and 'Hex' as key format, you'll see the message at the right of 'Key Format' is 'Hex (10 characters), which means the length of WEP key is 10 characters. |

b. Encryption – WPA (WPA, WPA2, WPA2 Mixed)

WPA (Wi-Fi Protected Access) is a system to protect wireless network security. To prevent hackers, WPA uses TKIP or AES to change key frequently.

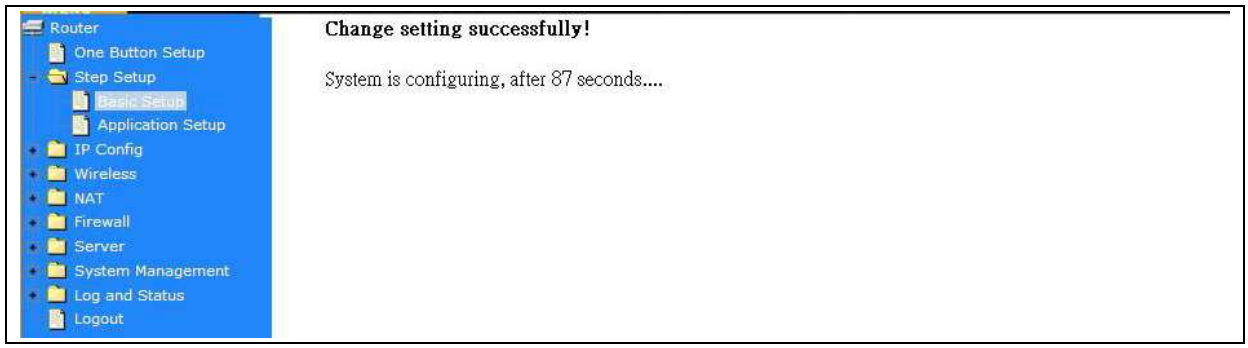



| Item | Description |
|---|---|
| Pre-Shared Key Format | Passphrase: The Pre-Shared Key format is ASCII Code, and the length is 8-63 bytes(at least 8 bytes)。<br>Hex: Users can input 64 Hex bytes(0~9, a~f, or A~F)。 |

Please click **"Finished>>"** to finish setup.

### 4.2.7 Quick Setup Complete

When you see this screen, the quick setup is completed.

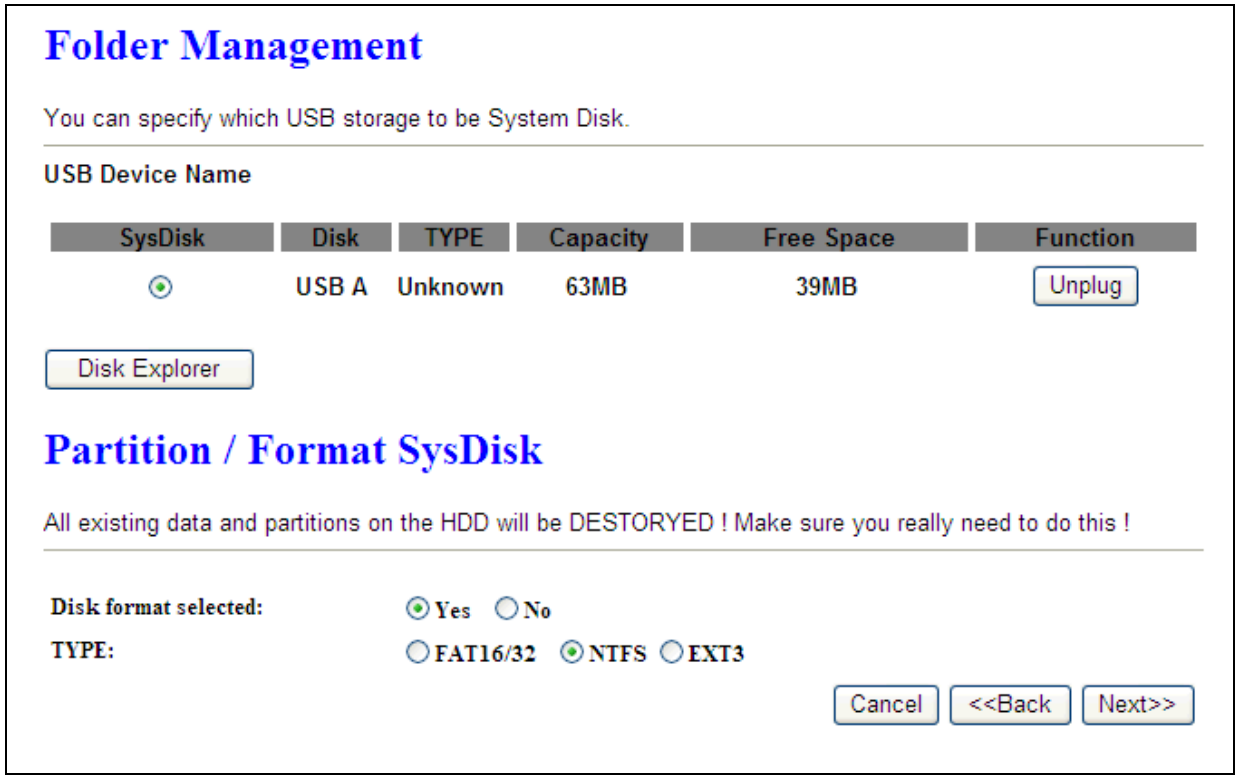



### 4.2.8 Application Setup

Click **"Application Setup"** bottom to begin setup including Folder Management Setup, User Account Management Setup, FTP Server Setup, Printer Server Setup, Web Camera Setup and Samba Server Setup.

### 4.2.9 Folder Management

Easy to check all the USB storage devices connected to your CWR-935M, view the entire data folder inside each storage devices, and you can do the disk formatting via click on the button in this page.

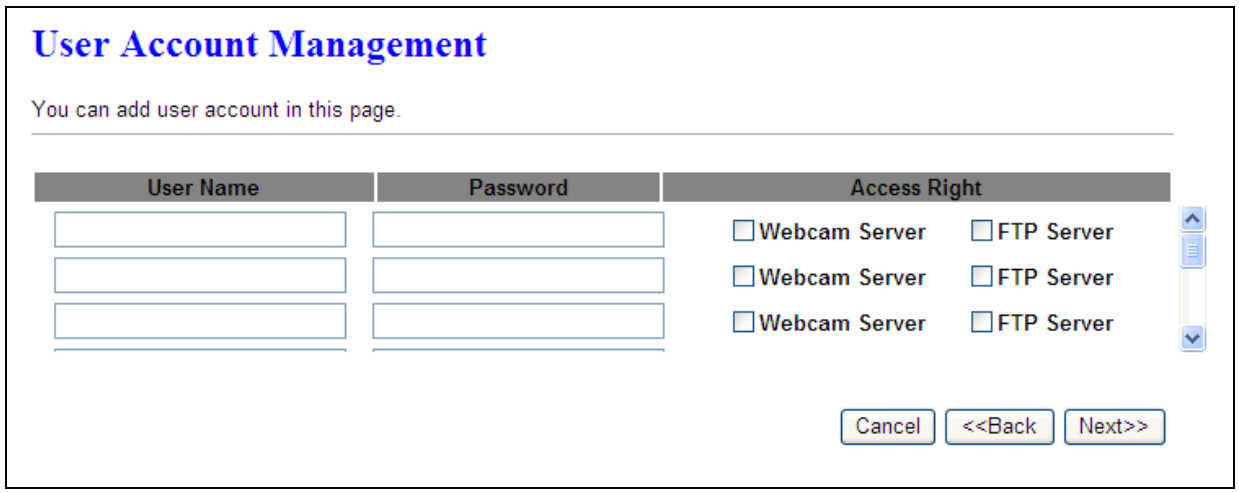



### 4.2.10 Partition / Format SysDisk

Select the USB Disk and click on "**OK**" button for refresh all disks before you do disk partition, and the "**Unplug**" button will appear. To partition/format the disk, please select the disk and click on "**Format**" button. Moreover, if you want to view the data inside the disk, please go to "4.2.11 FTP Sever Setup" to enable FTP server and then click on "**Disk Explorer**" to view all disks folder inside the device.

### 4.2.11 User Account Management

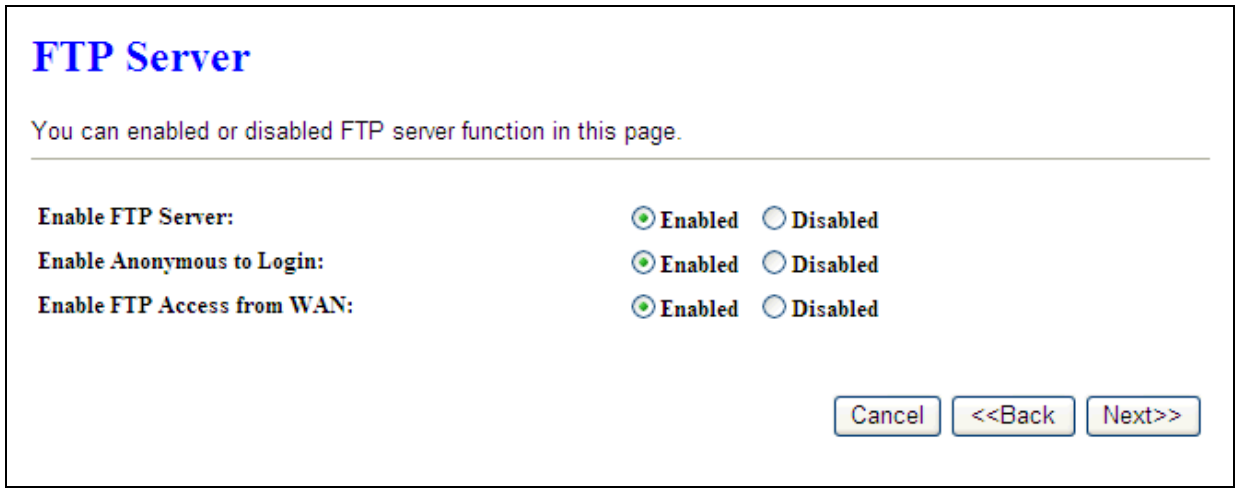
Personal users can use each individual application such as My Status, My Webcam and My Document. This section is to set the user's right. Also, all the users right will be showed in User Account List.




Please click **"Next>>"** to continue setup

### 4.2.12 FTP Server

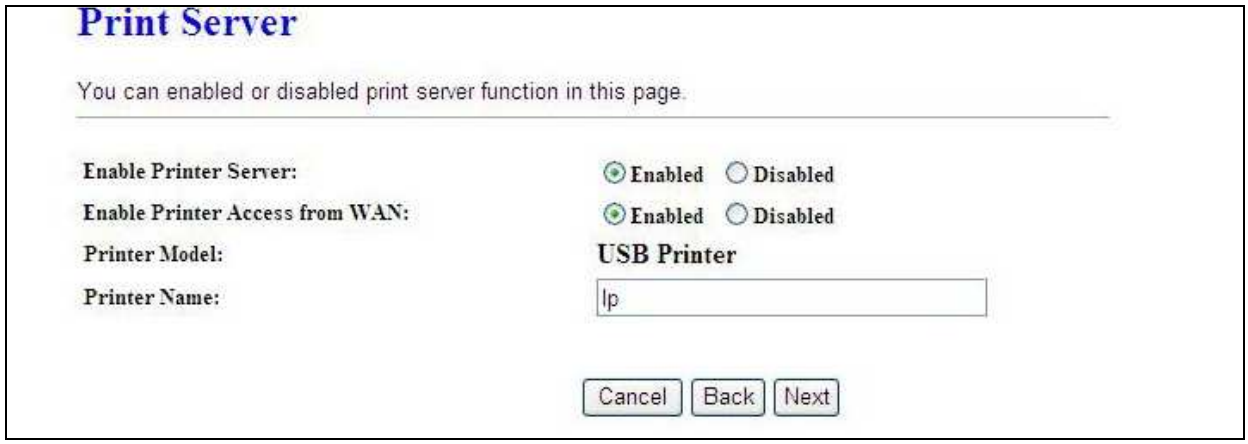
CWR-935M can be the FTP Server provides users to transmit files, also for the guest can download the files from assign website. Moreover, by connecting USB HDD, USB Flash to the router, user can easily set up a FTP Server to share or download files for local or remote users.




Please click **"Next>>"** to continue setup

### 4.2.13 Printer Setup

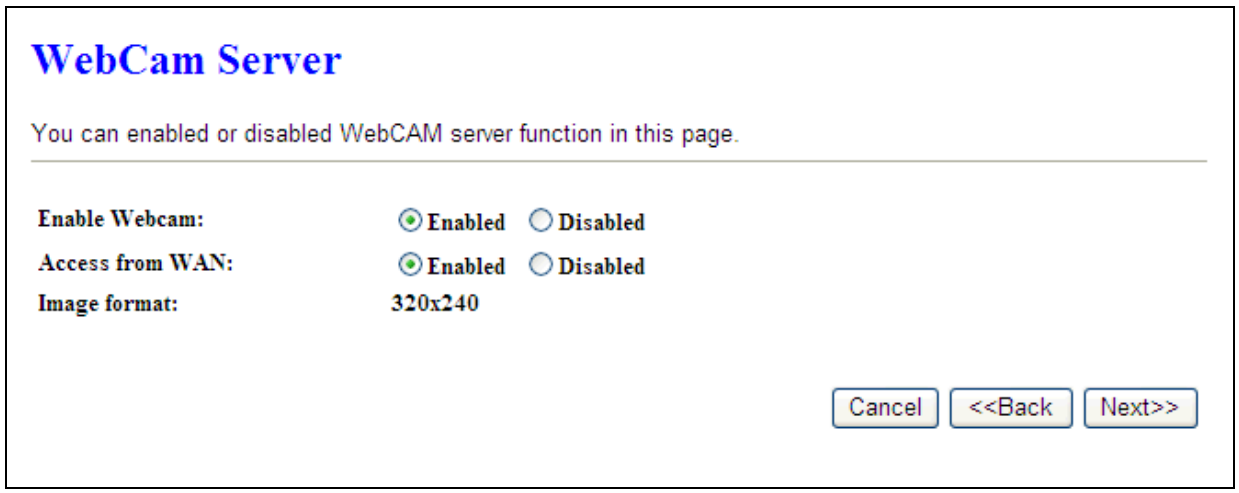
CWR-935M supports printers. Printer Server will be shown as Enable, therefore you can use Printer features from LAN. This function is disabled if there is no printer connecting to CWR-935M.




Please click **"Next>>"** to continue setup

### 4.2.14 Webcam Server

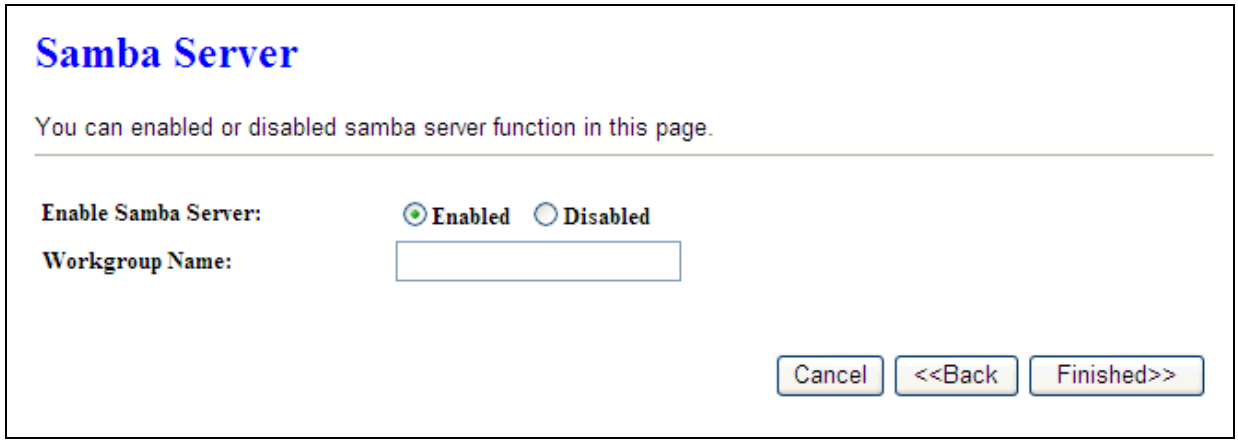
If you plan to use the CWR-935M as a Web Camera site, connect a supported USB Web Camera to the USB port. Enable the webcam server and access from WAN as demand, and the Image format is set to 320X240.




Please click **"Next>>"** to continue setup

### 4.2.15 Samba Server

CWR-935M support file sharing, you can share your file via network neighbor.




Please click **"Finished>>"** to finish setup procedure.

## 4.3 AP Mode Configuration

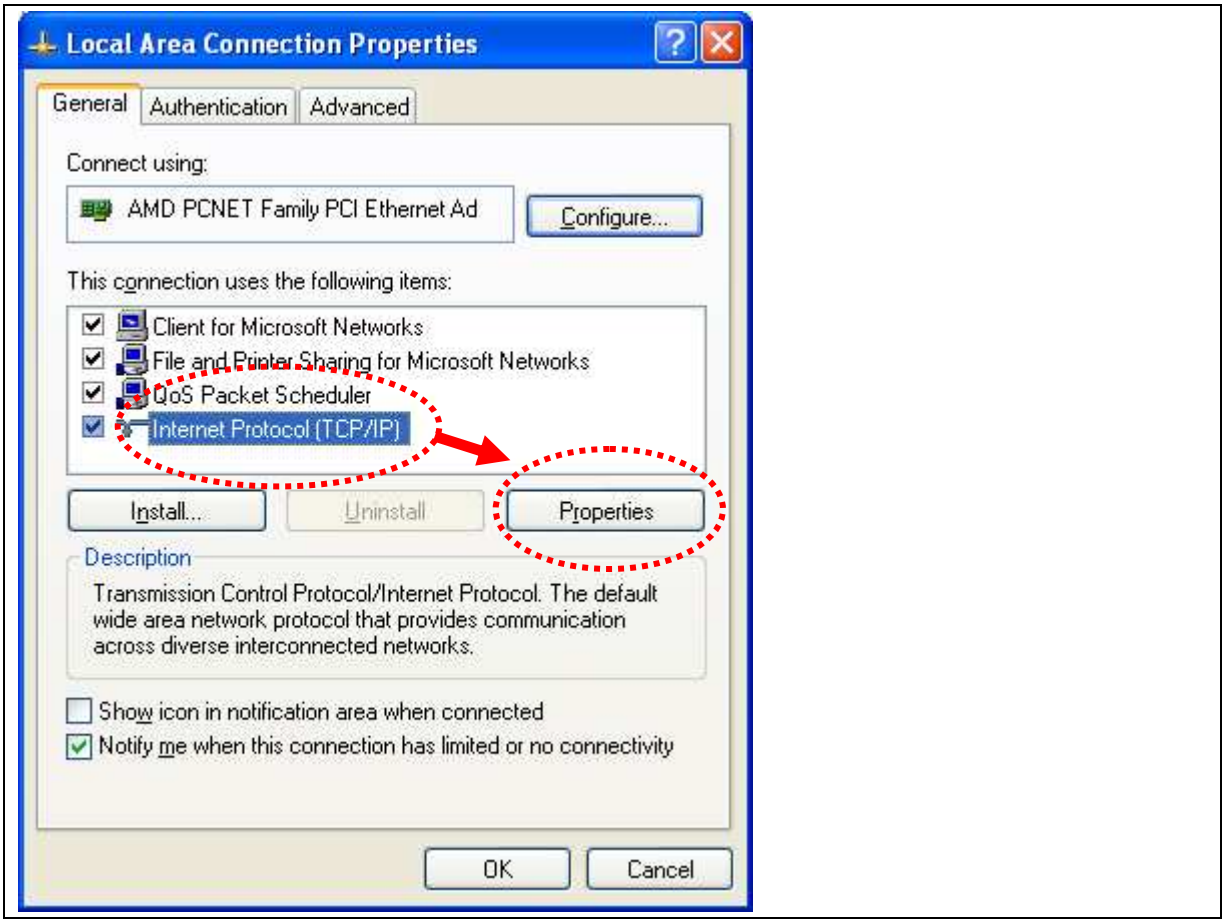
Connect to AP or wired Internet, and then provides wired and wireless internet bridge service for bottom level users. The AP mode doesn't support NAT. The CWR-935M is simply using Ethernet port to connect to the upper level device and receive the IP address from it. The CWR-935M will use the default IP address or is defined by users if the upper level device does not give one.

### 4.3.1 Switch to AP Mode

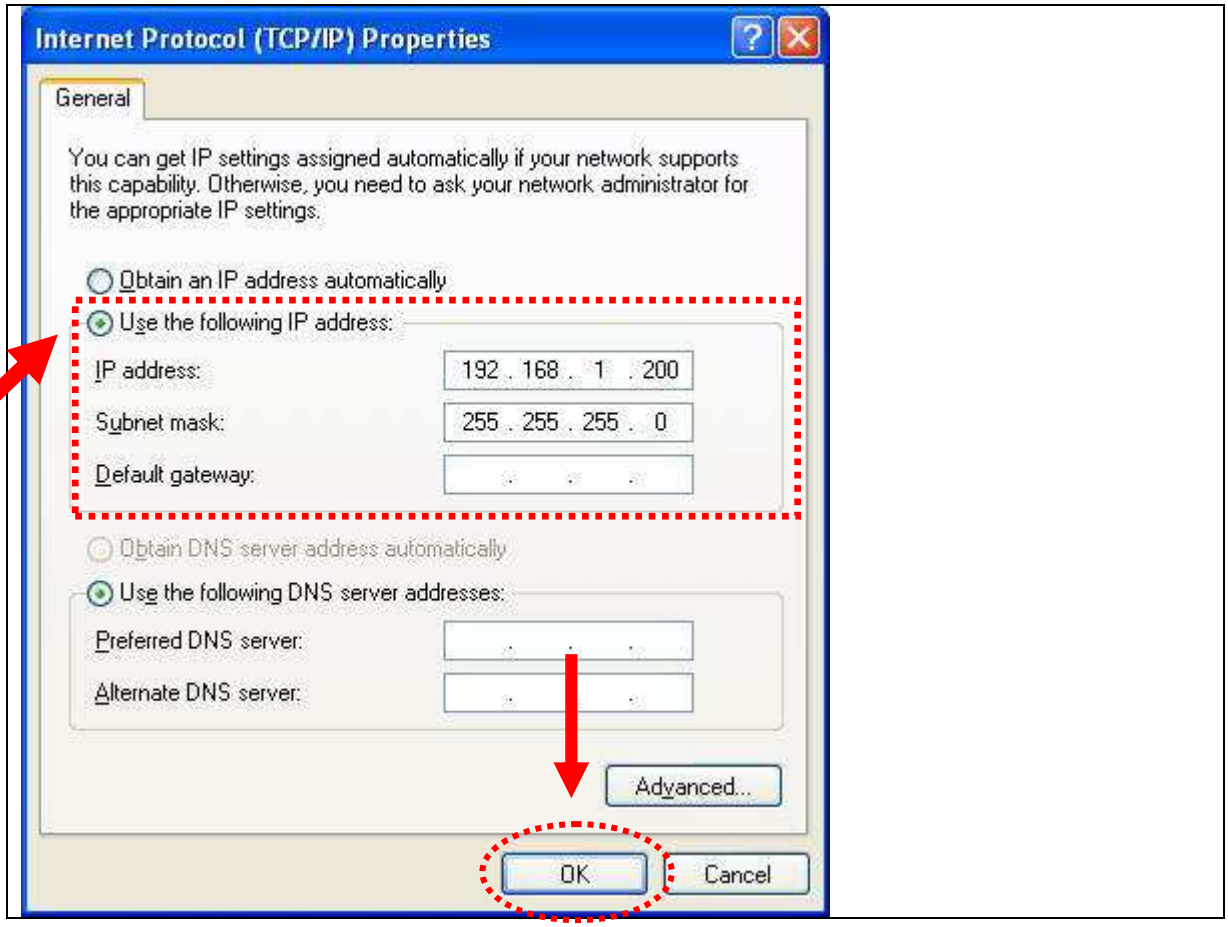
CWR-935M has an operation switch; it can let users switch between router, AP, and Wi-Fi AP mode. Users must unplug the CWR-935M from the power outlet and make sure that the power is off. Switch to AP mode, and plug it back in power outlet.

**Note:**
The DHCP is disabled in AP mode. Please setup the static IP address in you PC as below.

1. Click 'Start' button (it should be located at lower-left corner of your computer), then click control panel. Double-click ***Network and Internet Connections*** icon, click ***Network Connections,*** then double-click ***Local Area Connection, Local Area Connection Status*** window will appear, and then click 'Properties'

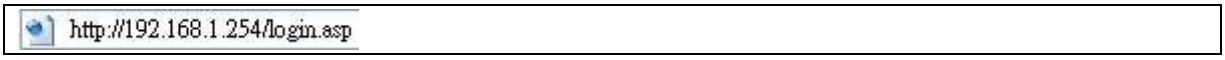



2. Select ‘Use the following IP address’ and fill the IP address and Subnet mask, then click ‘OK’.

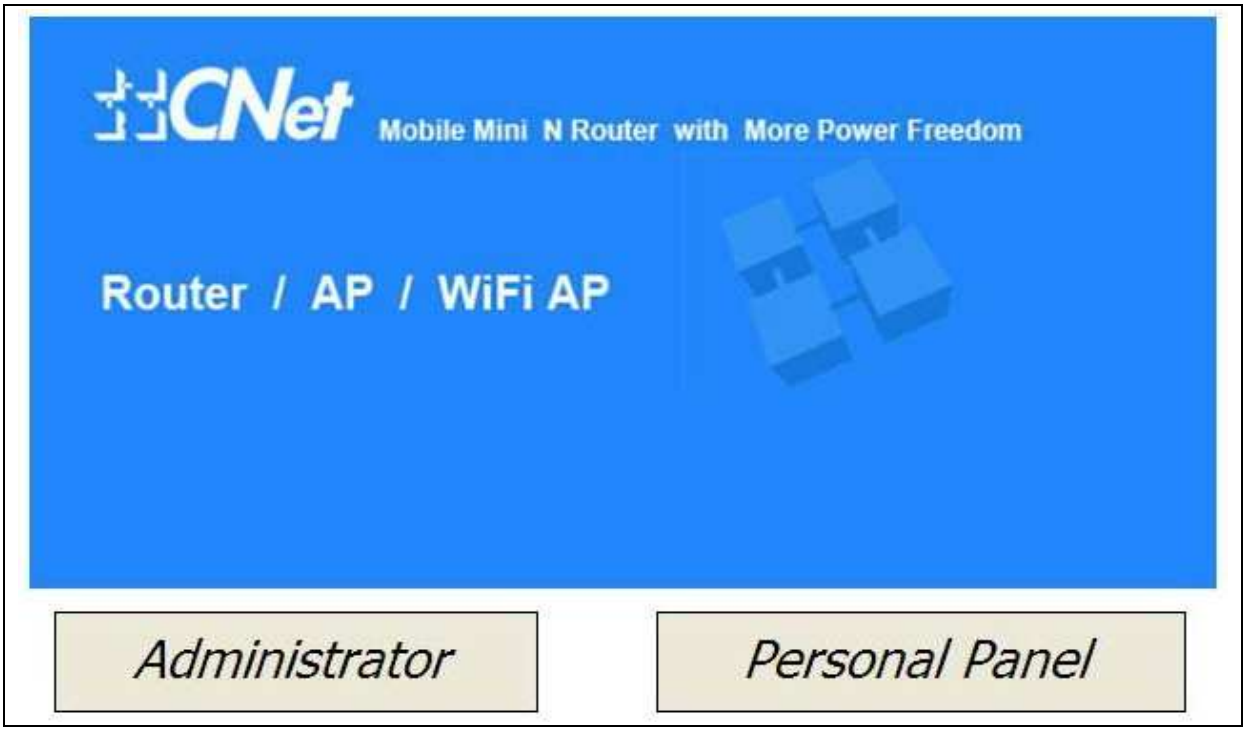



## 4.4 Quick Setup for AP Mode

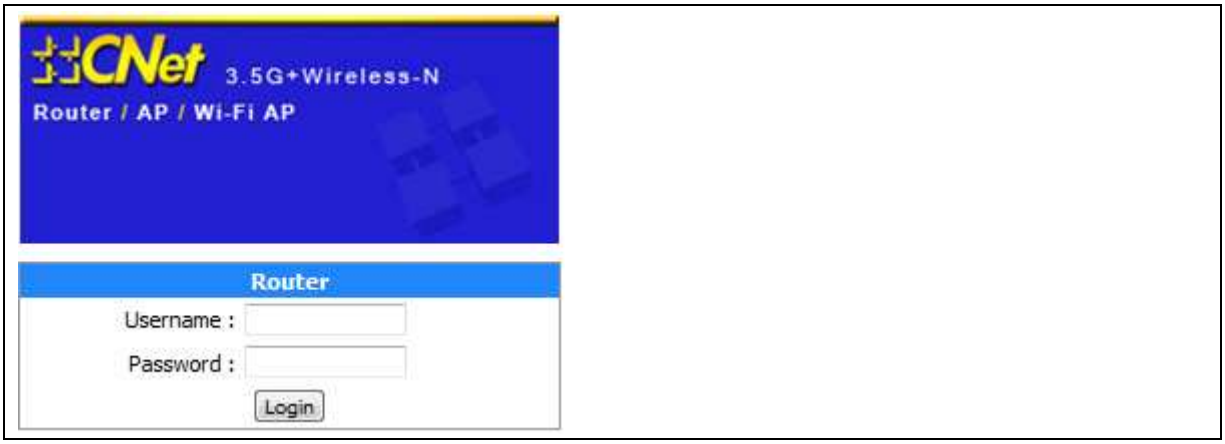
1. Open your Internet Browser and enter http://192.168.1.254.




2. Please click **"Administrator"** to login the CWR-935M




3. Enter the username and password, the username is **admin**, password is **admin**



4. Click on Step Setup in the left screen of the main menu. Then you'll see the **"Basic Setup"** and **"Application Setup".** Please click **"Basic Setup"** then click **"Next>>"** to start configure your CWR-935M.

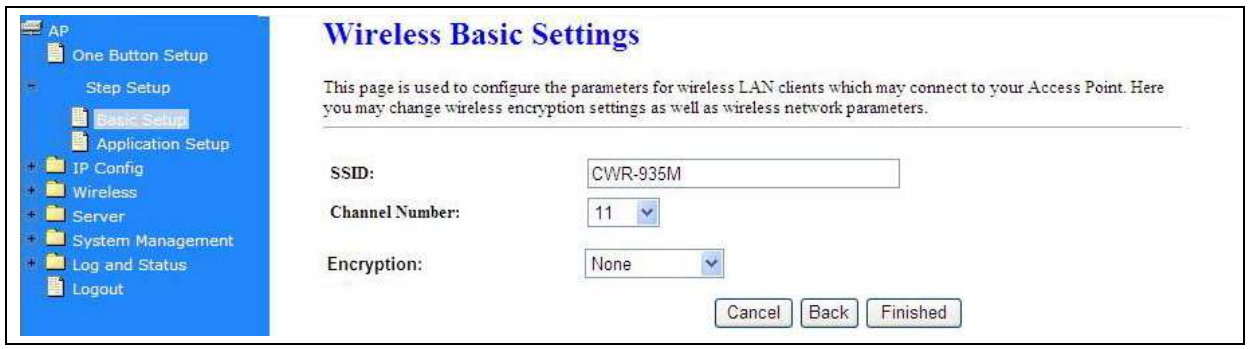

### 4.4.1 Time Zone Setup


| Item | Description |
|---|---|
| Enable NTP Client update | Device will auto synchronize with NTP server |
| Time Zone Select | Please press button, a drop-down list will be shown, and you can choose a time zone of the location you live. |
| NTP Server | Please press button, a drop-down list will be shown, and you can choose a NTP server which you want to use |

After you finish all setting, please click **"Next>>"** button.

### 4.4.2 Wireless Setup

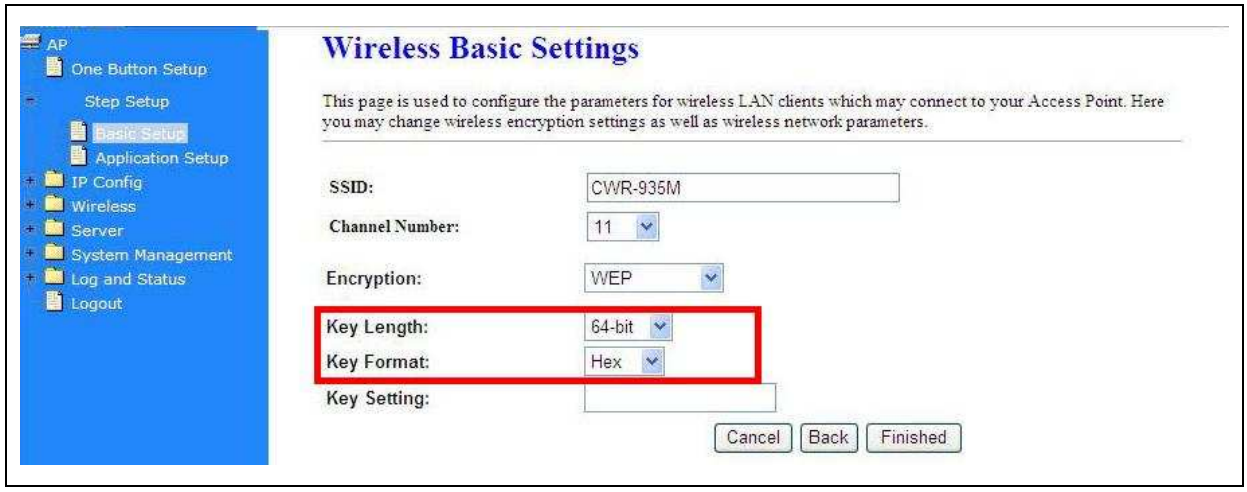
The first step to setup wireless interface is to assign SSID, the default name is **3.5G_Server_Router**. Please follow the instructions to setup.




### 4.4.3 Wireless Security Setup

**It's very important to set wireless security settings properly!** If you don't, hackers and malicious users can reach your network and valuable data without your consent and this will cause serious security problem.

a. Encryption -- WEP

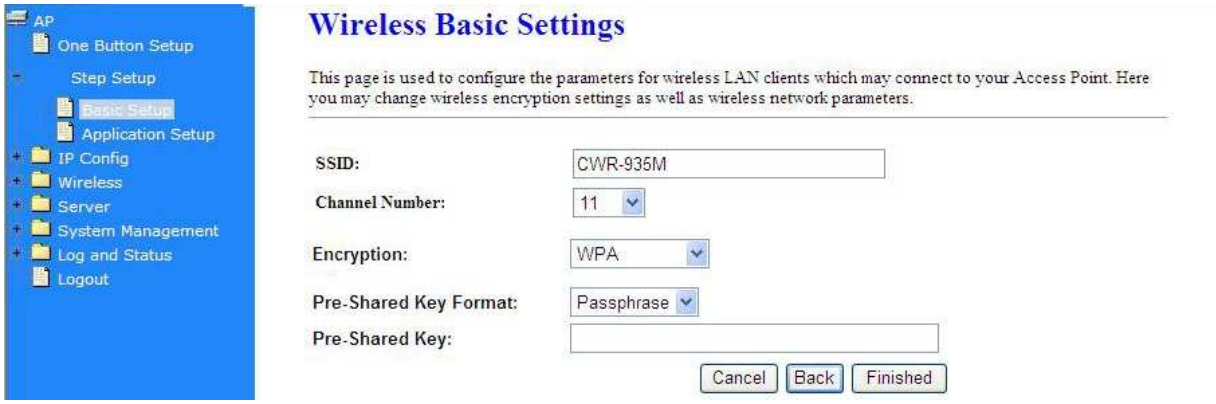



| Item | Description |
|---|---|
| Key Length | There are two types of WEP key length: 64-bit and 128-bit. Using '128-bit' is safer than '64-bit', but will reduce some data transfer performance. |
| Key Format | There are two types of key format: ASCII and Hex. When you select a key format, the number of characters of key will be displayed. For example, if you select '64-bit' as key length, and 'Hex' as key |

| | |
|---|---|
| | format, you'll see the message at the right of 'Key Format' is 'Hex (10 characters), which means the length of WEP key is 10 characters. |

b. Encryption – WPA (WPA, WPA2, WPA2 Mixed)

WPA (Wi-Fi Protected Access) is a system to protect wireless network security. To prevent hackers, WPA uses TKIP or AES to change key frequently.

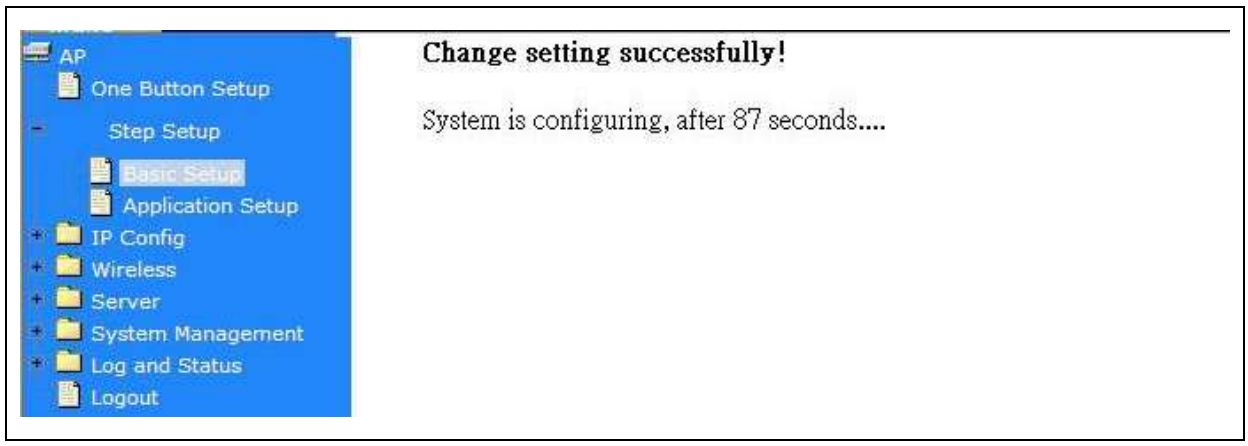



| Item | Description |
|---|---|
| Pre-Shared Key Format | Passphrase: The Pre-Shared Key format is ASCII Code, and the length is 8-63 bytes(at least 8 bytes)。<br>Hex: Users can input 64 Hex bytes(0~9, a~f, or A~F)。 |

Please click **"Finished>>"** to finish setup.

### 4.4.4 Quick Setup Complete

When you see this screen, the quick setup is completed.

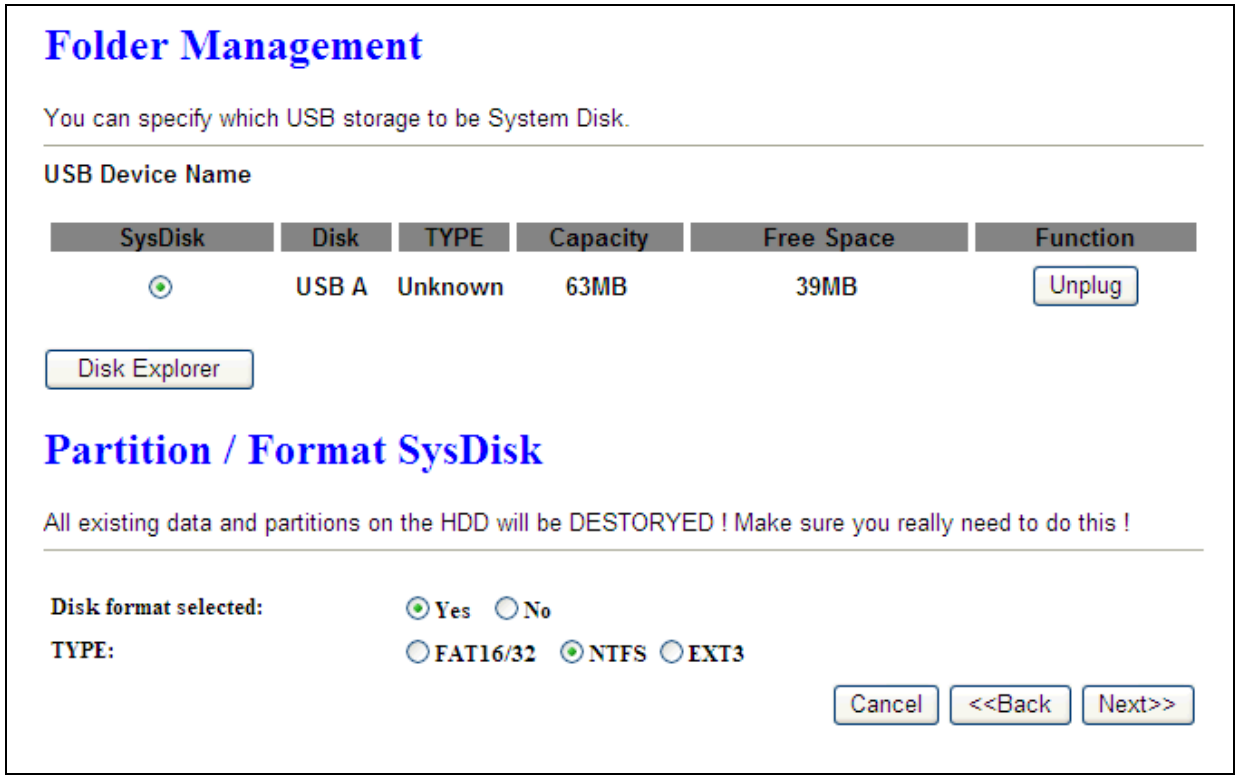



### 4.4.5 Application Setup

Click **"Application Setup"** bottom to begin setup including Folder Management Setup, User Account Management Setup, FTP Server Setup, Printer Server Setup, Web Camera Setup and Samba Server Setup.

### 4.4.6 Folder Management

Easy to check all the USB storage devices connected to your CWR-935M, view the entire data folder inside each storage devices, and you can do the disk formatting via click on the button in this page.

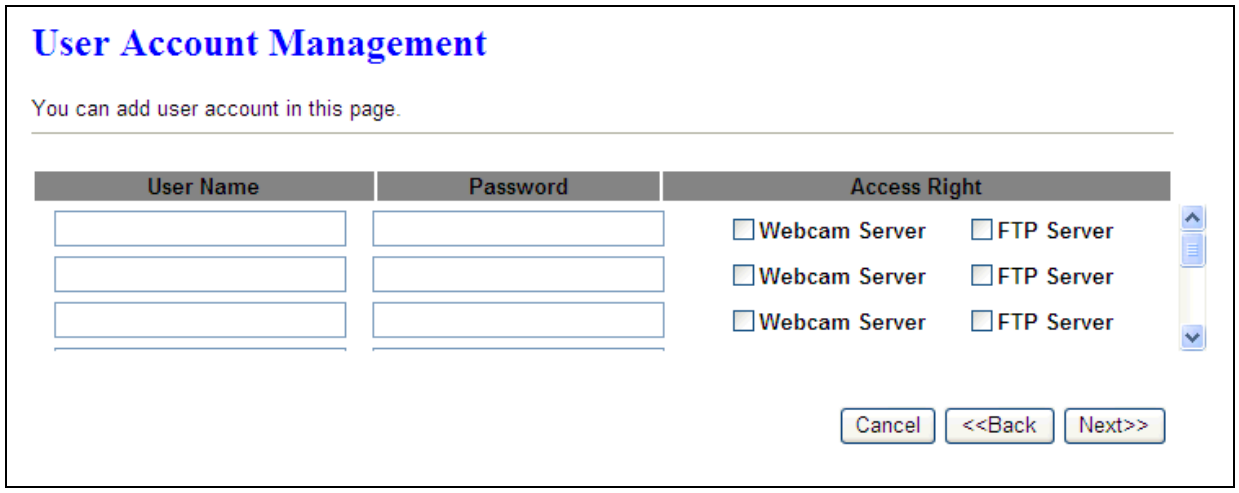


### 4.4.7 Partition / Format SysDisk

Select the USB Disk and click on "**OK**" button for refresh all disks before you do disk partition, and the "**Unplug**" button will appear. To partition/format the disk, please select the disk and click on "**Format**" button. Moreover, if you want to view the data inside the disk, please go to "4.2.11 FTP Sever Setup" to enable FTP server and then click on "**Disk Explorer**" to view all disks folder inside the device.

### 4.4.8 User Account Management

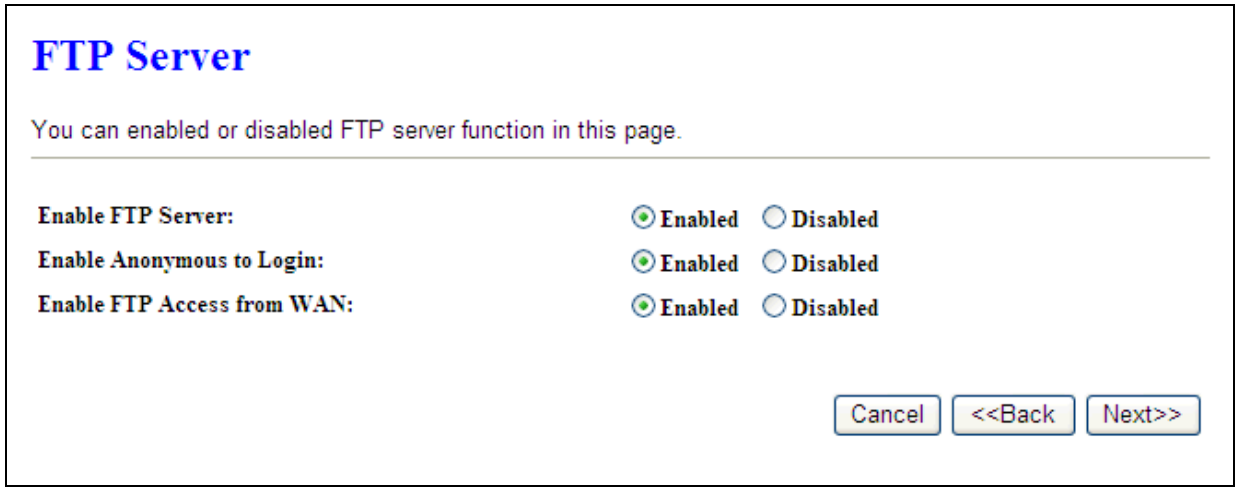
Personal users can use each individual application such as My Status, My Webcam and My Document. This section is to set the user's right. Also, all the users right will be showed in User Account List.




Please click **"Next>>"** to continue setup

### 4.4.9 FTP Server

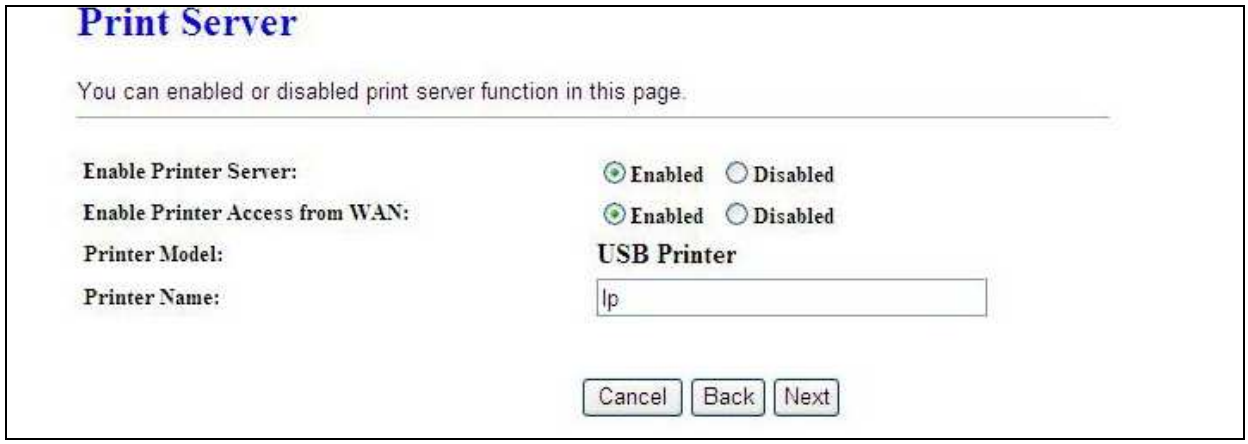
CWR-935M can be the FTP Server provides users to transmit files, also for the guest can download the files from assign website. Moreover, by connecting USB HDD, USB Flash to the router, user can easily set up a FTP Server to share or download files for local or remote users.




Please click **"Next>>"** to continue setup

### 4.4.10 Printer Setup

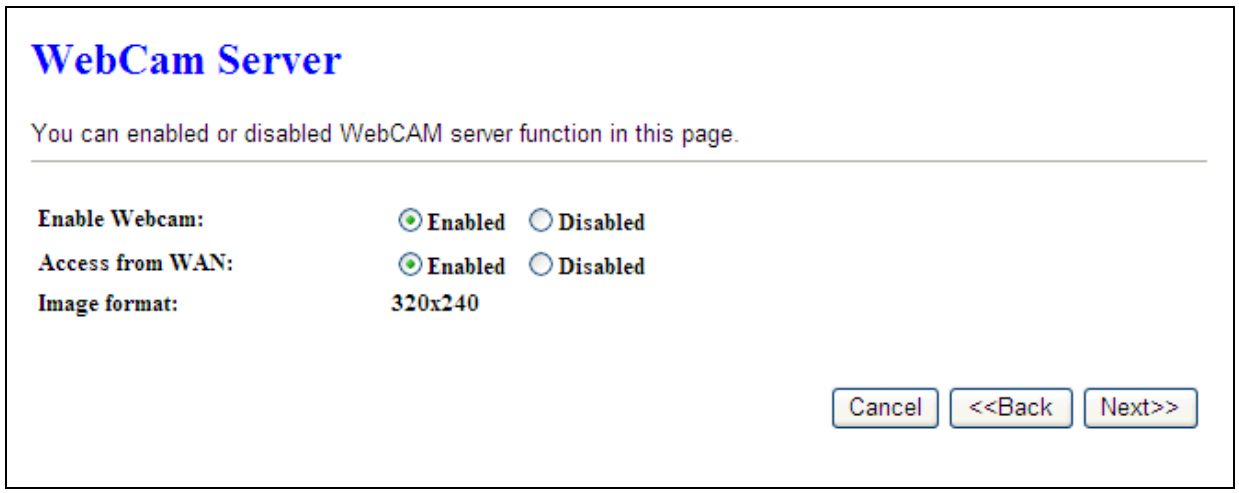
CWR-935M supports printers. Printer Server will be shown as Enable, therefore you can use Printer features from LAN. This function is disabled if there is no printer connecting to CWR-935M.




Please click **"Next>>"** to continue setup

### 4.4.11 Webcam Server

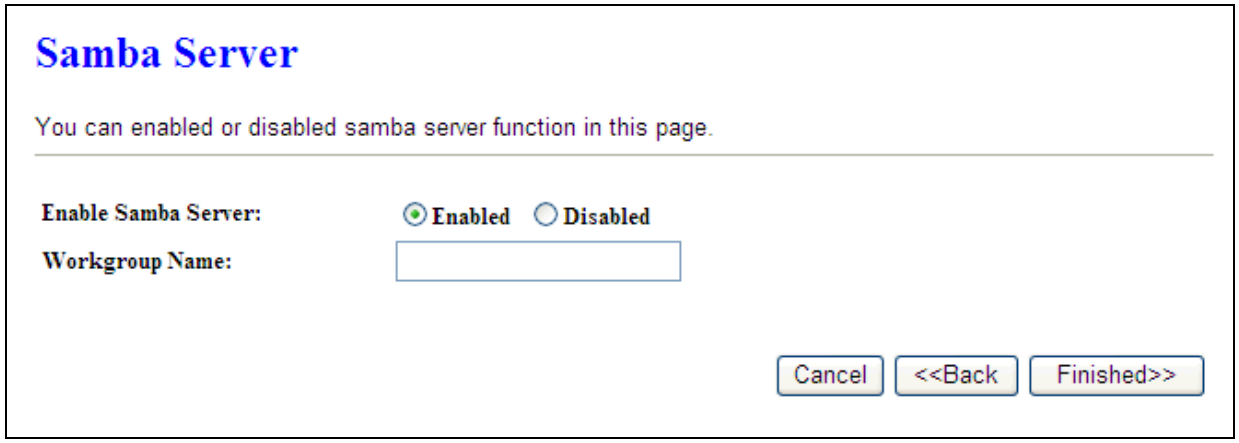
If you plan to use the CWR-935M as a Web Camera site, connect a supported USB Web Camera to the USB port. Enable the webcam server and access from WAN as demand, and the Image format is set to 320X240.




Please click **"Next>>"** to continue setup

### 4.4.12 Samba Server

CWR-935M support file sharing, you can share your file via network neighbor.




Please click **"Finished>>"** to finish setup procedure.

## 4.5 Quick Setup for Wi-Fi AP Mode

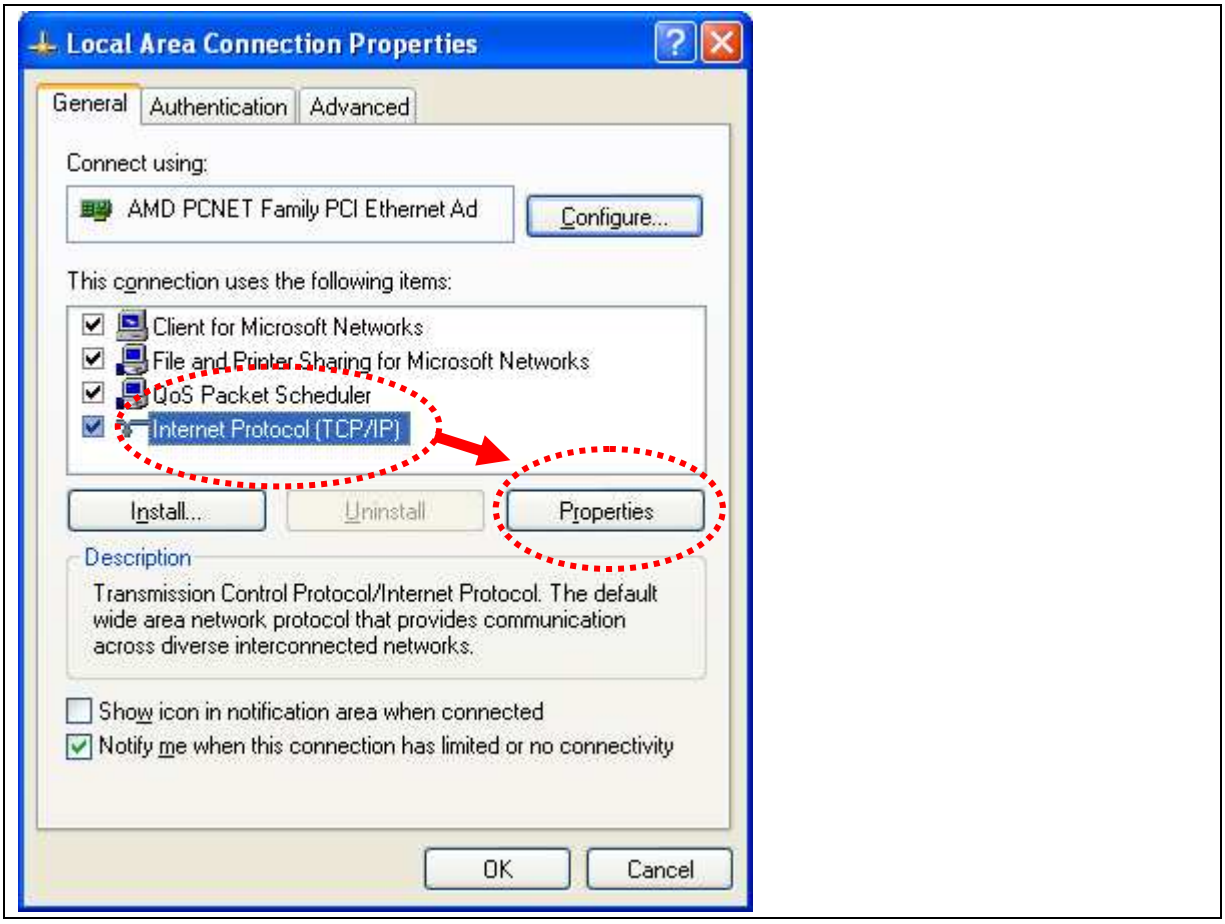
Connect to AP or wired Internet, and then provides wired and wireless internet bridge service for you. The AP mode doesn't support NAT. The CWR-935M is simply using Ethernet port to connect to the upper level device and receive the IP address from it. The CWR-935M will use the default IP address or is defined by users if there is no DHCP server in your network.

### 4.5.1 Switch to Wi-Fi AP Mode

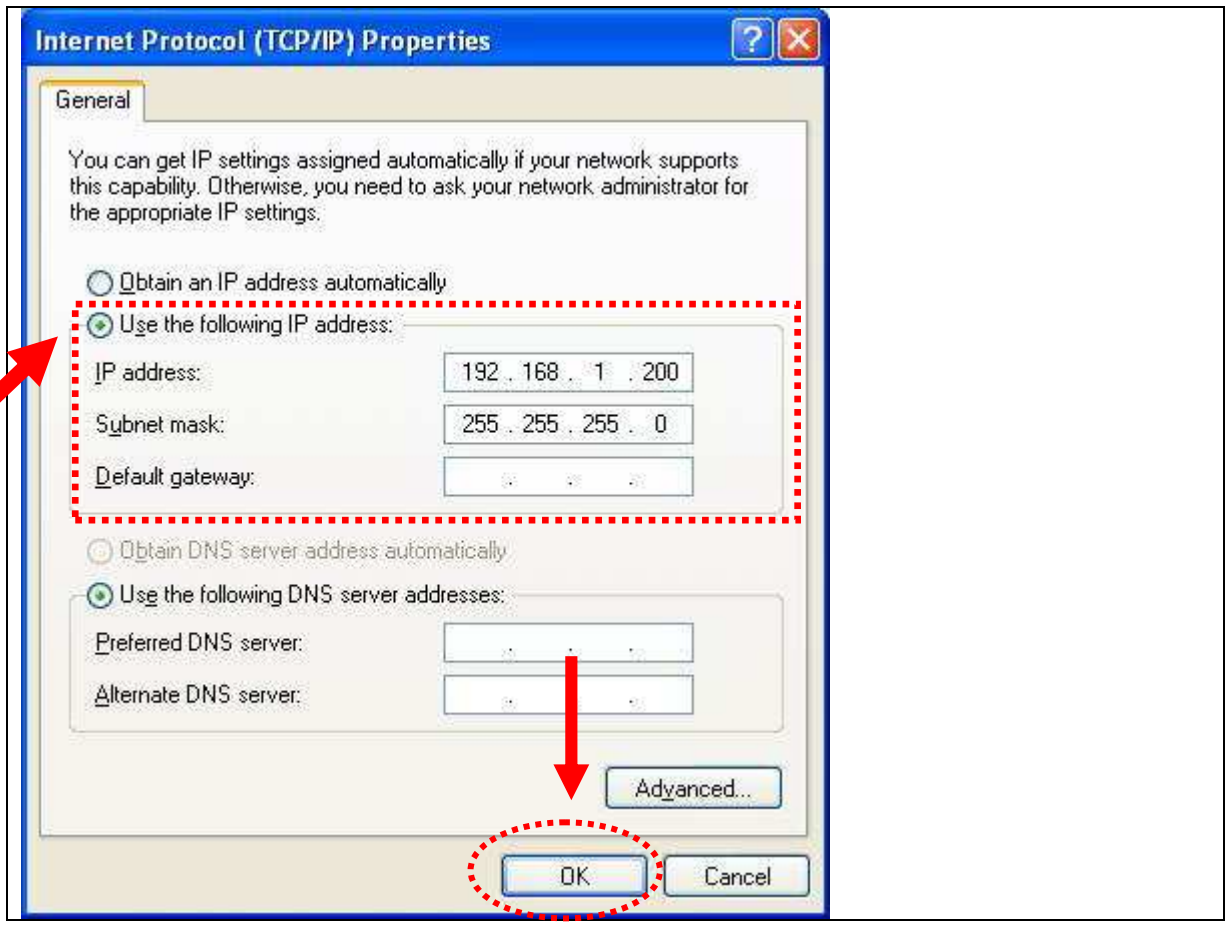
CWR-935M has an operation switch; it can let users switch between router, AP, and Wi-Fi AP mode. Users must unplug the CWR-935M from the power outlet and make sure that the power is off. Switch to Wi-Fi AP mode, and plug it back in power outlet.

**Note:**
The DHCP is disabled in AP mode. Please setup the static IP address in you PC as below.

1. Click 'Start' button (it should be located at lower-left corner of your computer), then click control panel. Double-click ***Network and Internet Connections*** icon, click ***Network Connections,*** then double-click ***Local Area Connection, Local Area Connection Status*** window will appear, and then click 'Properties'

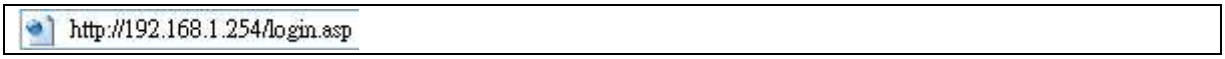

Local Area Connection Properties
General
Authentication
Advanced
Connect using:
AMD PCNET Family PCI Ethernet Ad
Configure...
This connection uses the following items:
Client for Microsoft Networks
File and Printer Sharing for Microsoft Networks
QoS Packet Scheduler
Internet Protocol (TCP/IP)
Install...
Uninstall
Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
Show icon in notification area when connected
Notify me when this connection has limited or no connectivity
OK
Cancel

2. Select ‘Use the following IP address’ and fill the IP address and Subnet mask, then click ‘OK’.

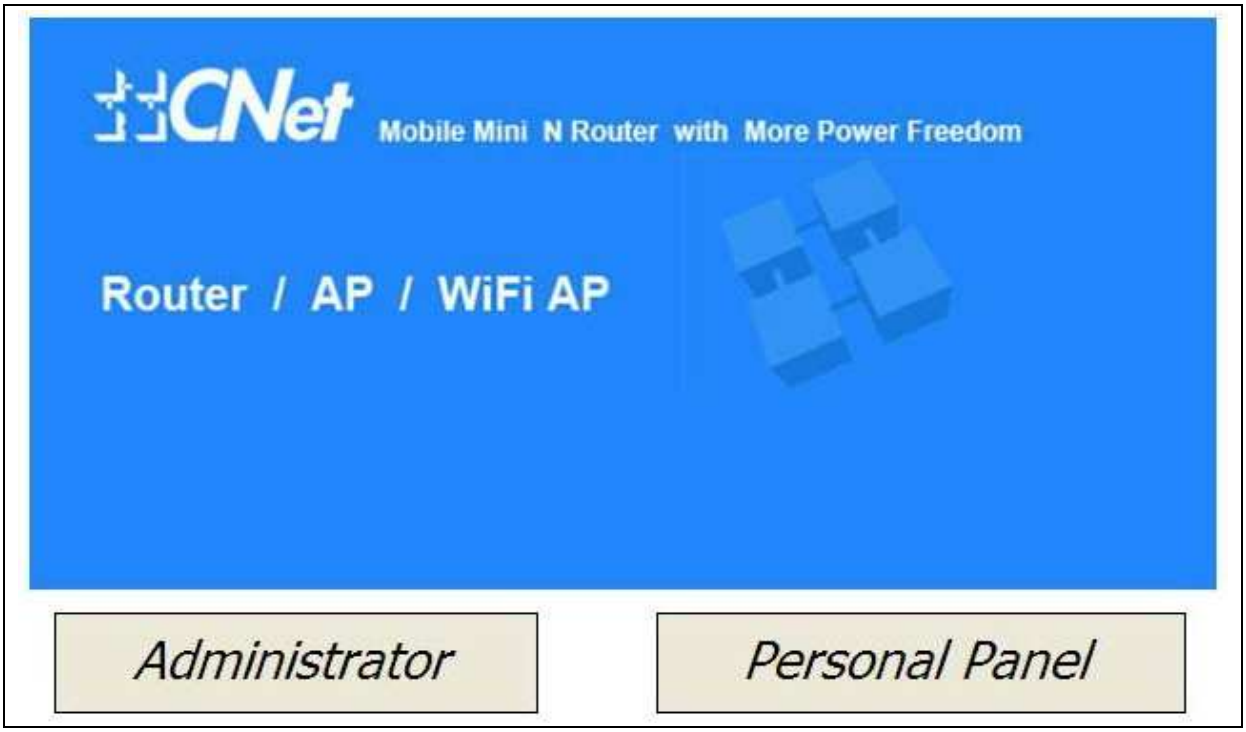


## 4.6 Quick Setup for Wi-Fi AP Mode

5. Open your Internet Browser and enter http://192.168.1.254.

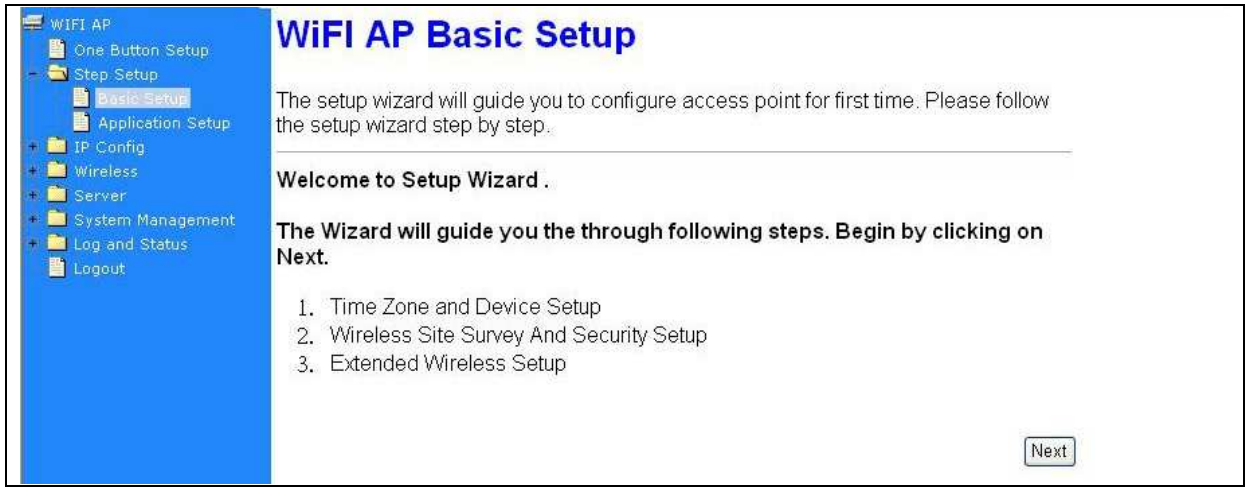



6. Please click **"Administrator"** to login the CWR-935M



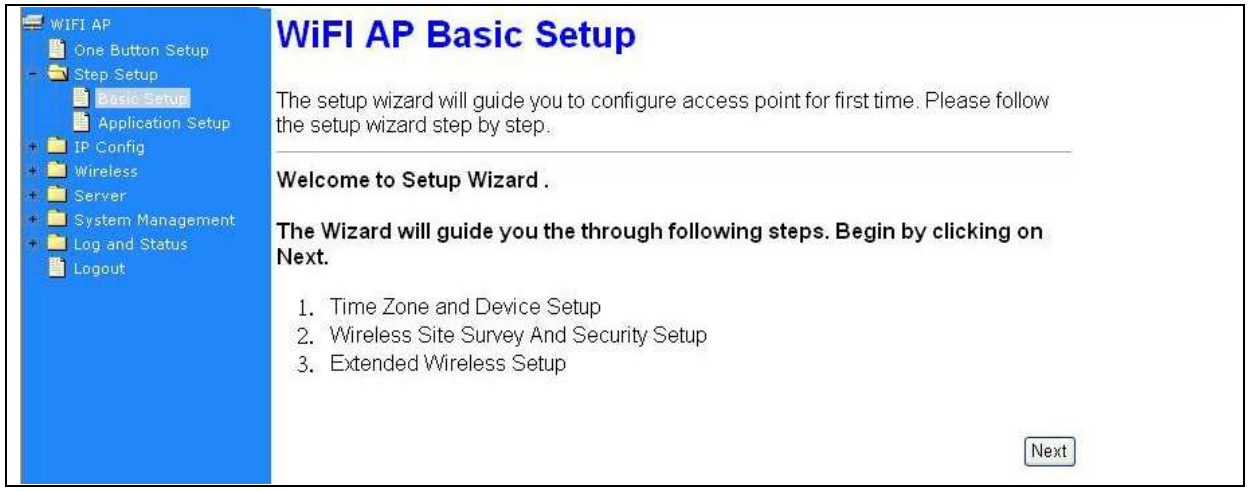

7. Enter the username and password, the username is **admin**, password is **admin**

8. Click on Step Setup in the left screen of the main menu. Then you'll see the **"Basic Setup"** and **"Application Setup".** Please click **"Basic Setup"** then click **"Next>>"** to start configure your CWR-935M.

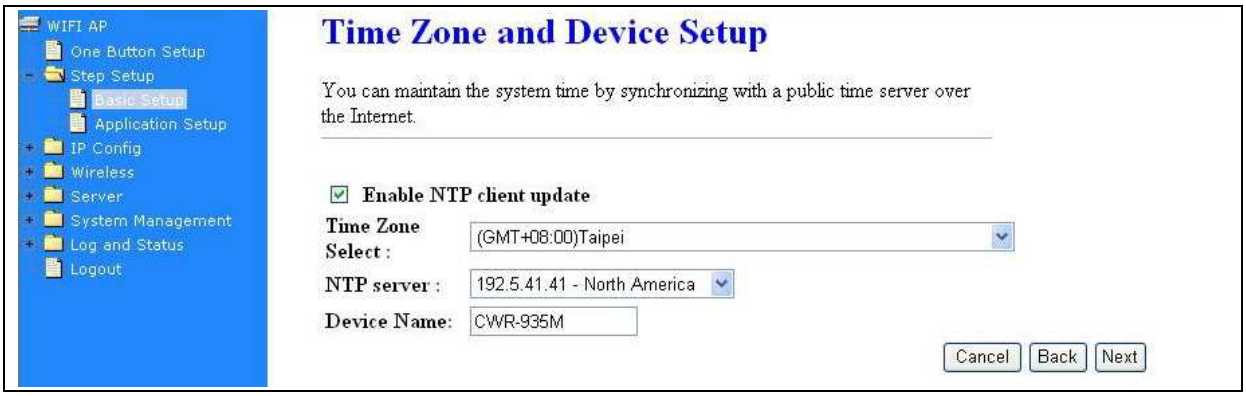



## 4.7 Quick Setup for Wi-Fi AP Mode

Click on Step Setup in the left screen of the main menu. Then you'll see the **"Basic Setup"** and **"Application Setup".** Please click **"Basic Setup"** then click **"Next>>"** to start configure your CWR-935M.



### 4.7.1 Time Zone Setup

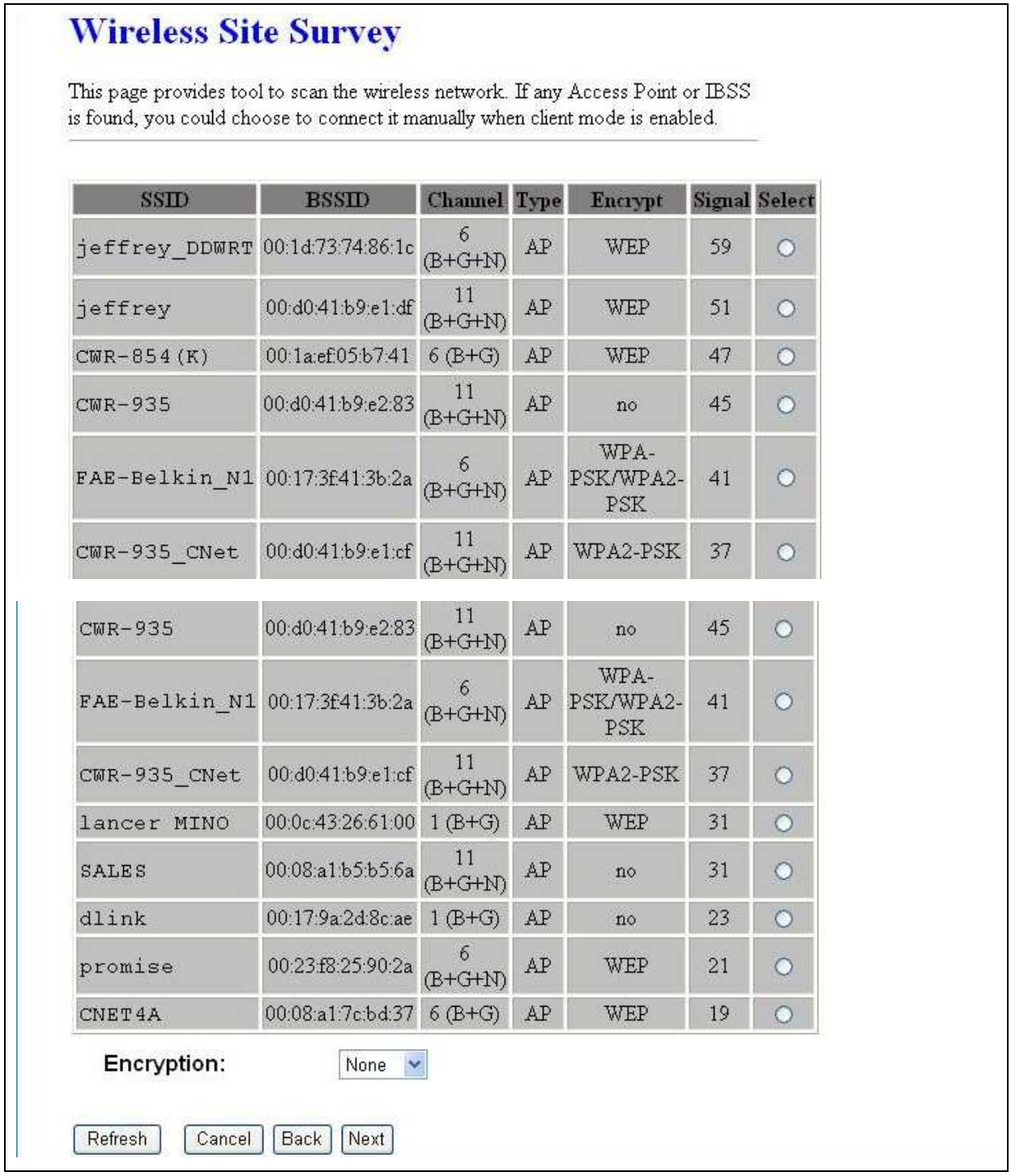



| Item | Description |
|---|---|
| Enable NTP Client update | Device will auto synchronize with NTP server |
| Time Zone Select | Please press button, a drop-down list will be shown, and you can choose a time zone of the location you live. |
| NTP Server | Please press button, a drop-down list will be shown, and you can choose a NTP server which you want to use |

After you finish all setting, please click **"Next>>"** button.

### 4.7.2 Wireless Site Survey and Security Setup

This function provides users to search the existing wireless network, AP, or Wireless AP from ISP. You can select the service manually. After selecting the designed AP, the device name will appear on **Wireless Basic Setup** page. Please follow the instructions.

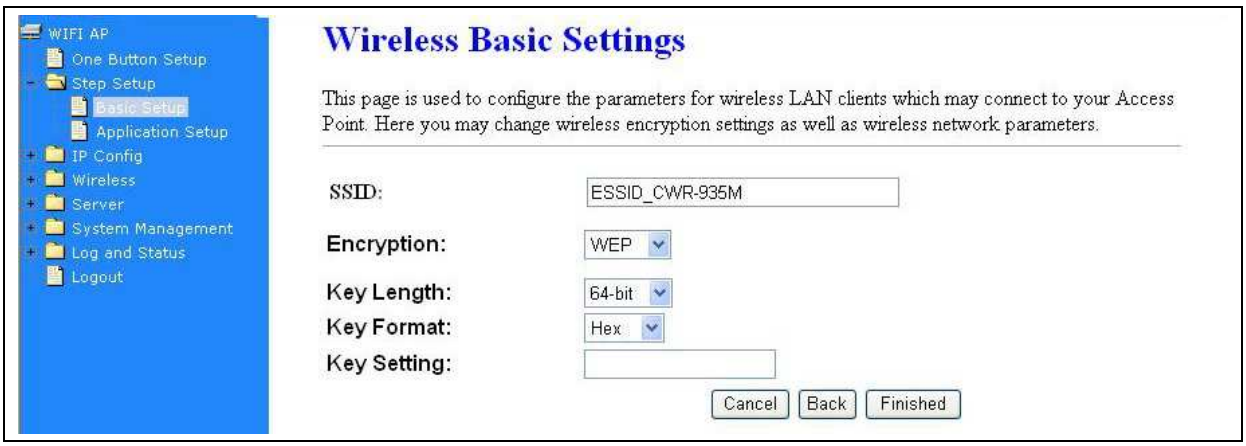



You can select the desired AP to connect and data encryption type. Click the **Refresh** button will refresh the list.

### 4.7.3 Wireless Security Setup

**It's very important to set wireless security settings properly!** If you don't, hackers and malicious users can reach your network and valuable data without your consent and this will cause serious security problem.

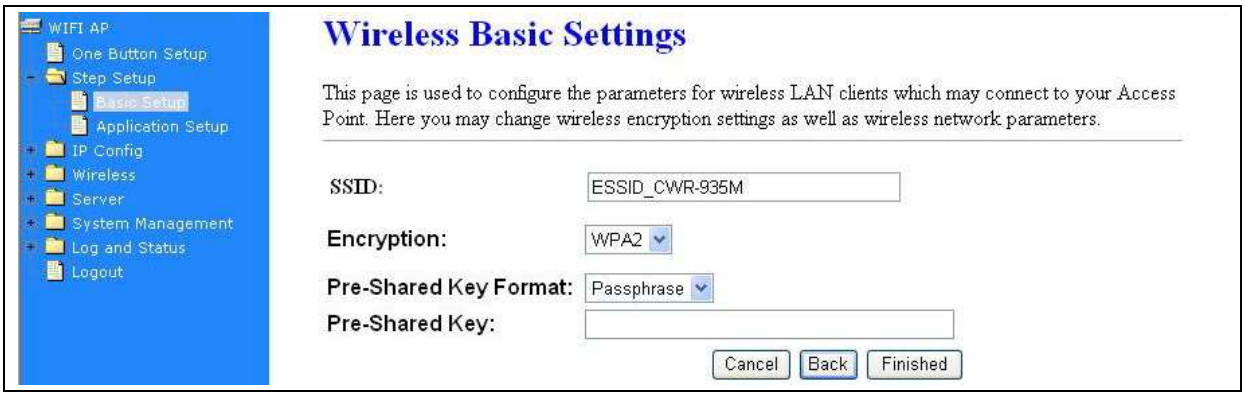

a. Encryption -- WEP




| Item | Description |
|---|---|
| Key Length | There are two types of WEP key length: 64-bit and 128-bit. Using '128-bit' is safer than '64-bit', but will reduce some data transfer performance. |
| Key Format | There are two types of key format: ASCII and Hex. When you select a key format, the number of characters of key will be displayed. For example, if you select '64-bit' as key length, and 'Hex' as key format, you'll see the message at the right of 'Key Format' is 'Hex (10 characters), which means the length of WEP key is 10 characters. |

b. Encryption – WPA (WPA, WPA2, WPA2 Mixed)

WPA (Wi-Fi Protected Access) is a system to protect wireless network security. To prevent hackers, WPA uses TKIP or AES to change key frequently.

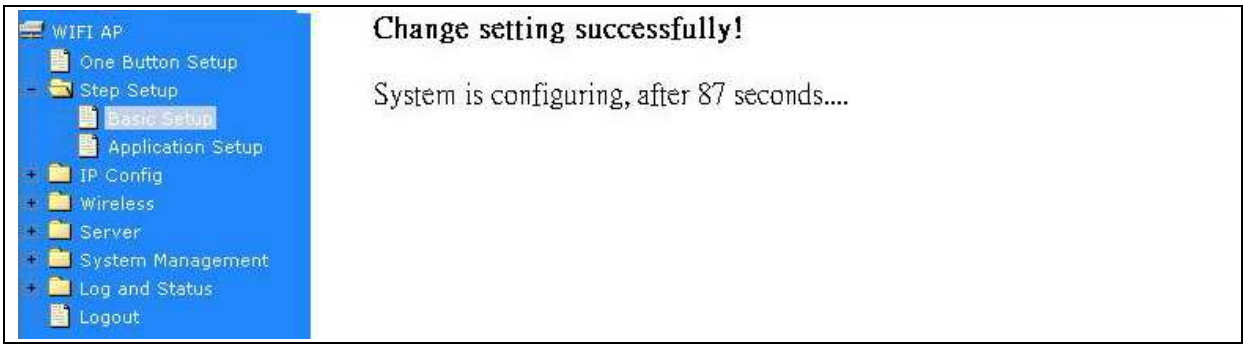



| Item | Description |
|---|---|
| Pre-Shared Key Format | Passphrase: The Pre-Shared Key format is ASCII Code, and the length is 8-63 bytes(at least 8 bytes)。<br>Hex: Users can input 64 Hex bytes(0~9, a~f, or A~F)。 |

Please click **"Finished>>"** to finish setup.

### 4.7.4 Quick Setup Complete

When you see this screen, the quick setup is completed.

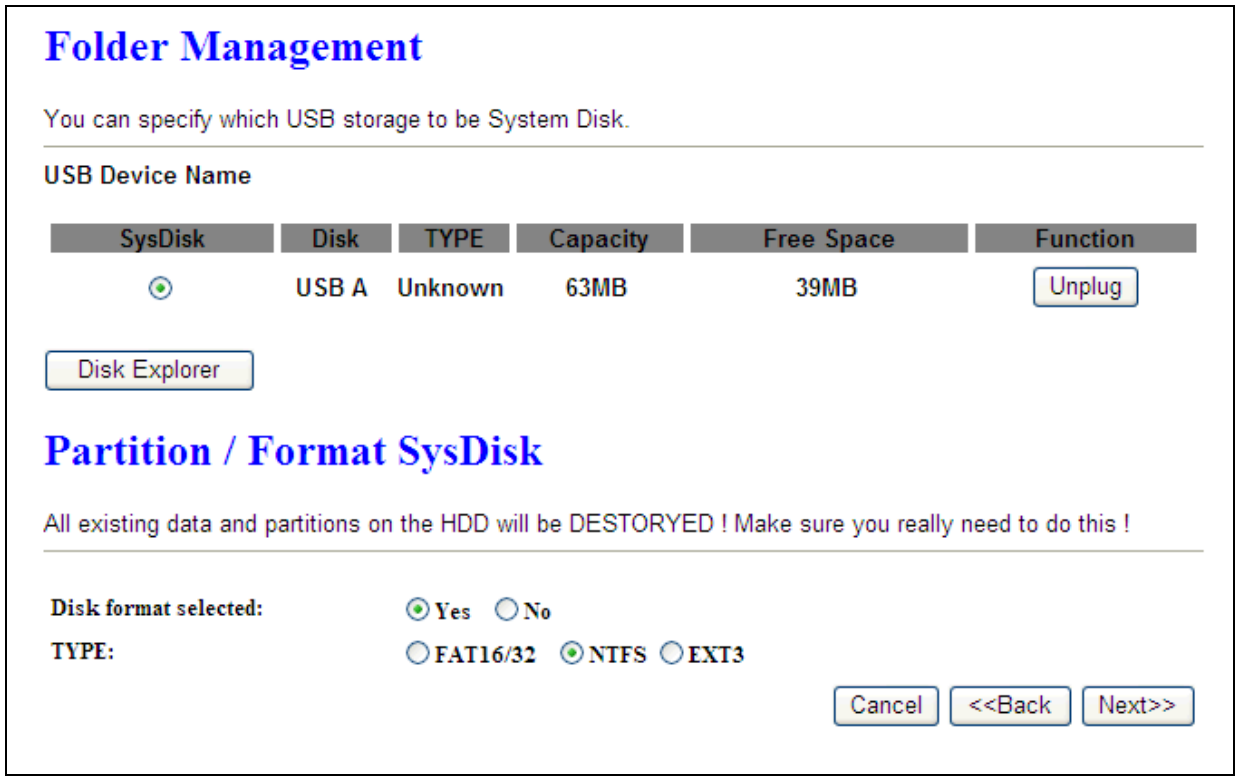



### 4.7.5 Application Setup

Click **"Application Setup"** bottom to begin setup including Folder Management Setup, User Account Management Setup, FTP Server Setup, Printer Server Setup, Web Camera Setup and Samba Server Setup.

### 4.7.6 Folder Management

Easy to check all the USB storage devices connected to your CWR-935M, view the entire data folder inside each storage devices, and you can do the disk formatting via click on the button in this page.

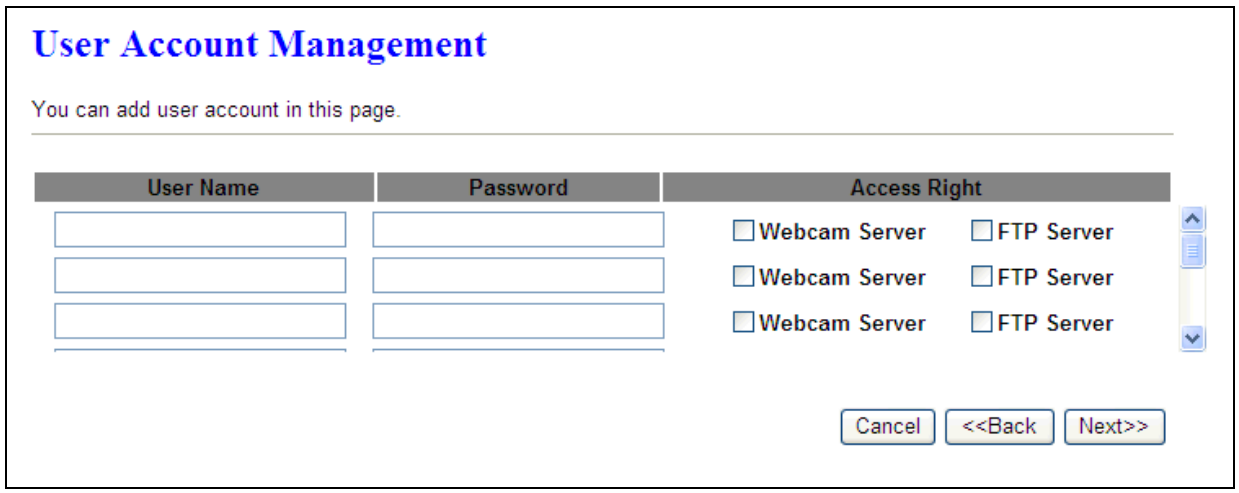



### 4.7.7 Partition / Format SysDisk

Select the USB Disk and click on "**OK**" button for refresh all disks before you do disk partition, and the "**Unplug**" button will appear. To partition/format the disk, please select the disk and click on "**Format**" button. Moreover, if you want to view the data inside the disk, please go to "4.2.11 FTP Sever Setup" to enable FTP server and then click on "**Disk Explorer**" to view all disks folder inside the device.

### 4.7.8 User Account Management

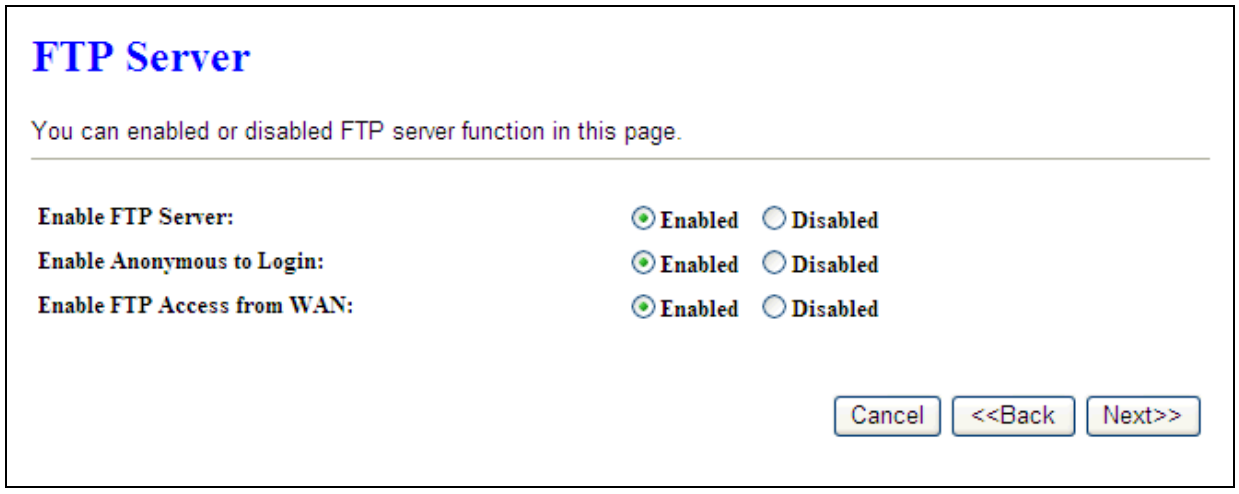
Personal users can use each individual application such as My Status, My Webcam and My Document. This section is to set the user's right. Also, all the users right will be showed in User Account List.




Please click **"Next>>"** to continue setup

### 4.7.9 FTP Server

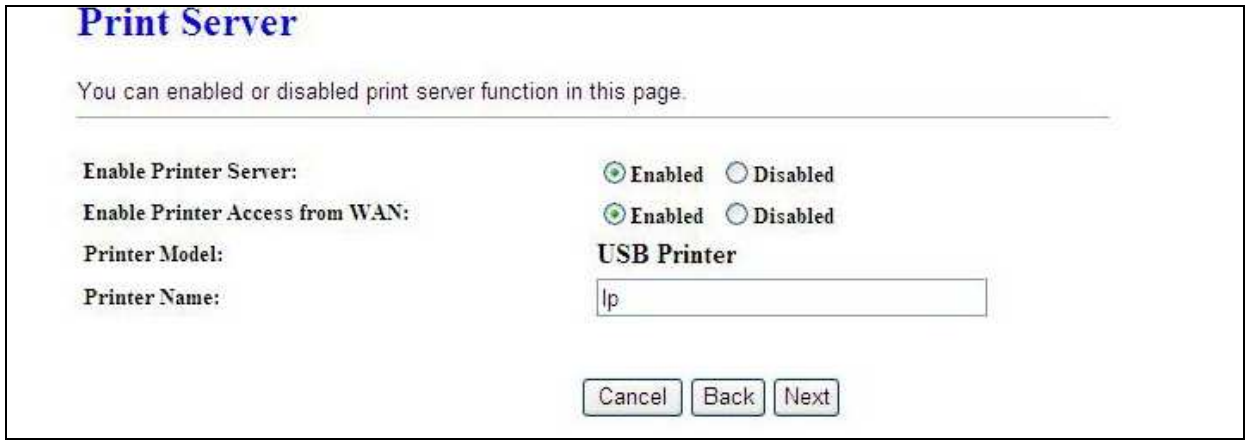
CWR-935M can be the FTP Server provides users to transmit files, also for the guest can download the files from assign website. Moreover, by connecting USB HDD, USB Flash to the router, user can easily set up a FTP Server to share or download files for local or remote users.




Please click **"Next>>"** to continue setup

### 4.7.10 Printer Setup

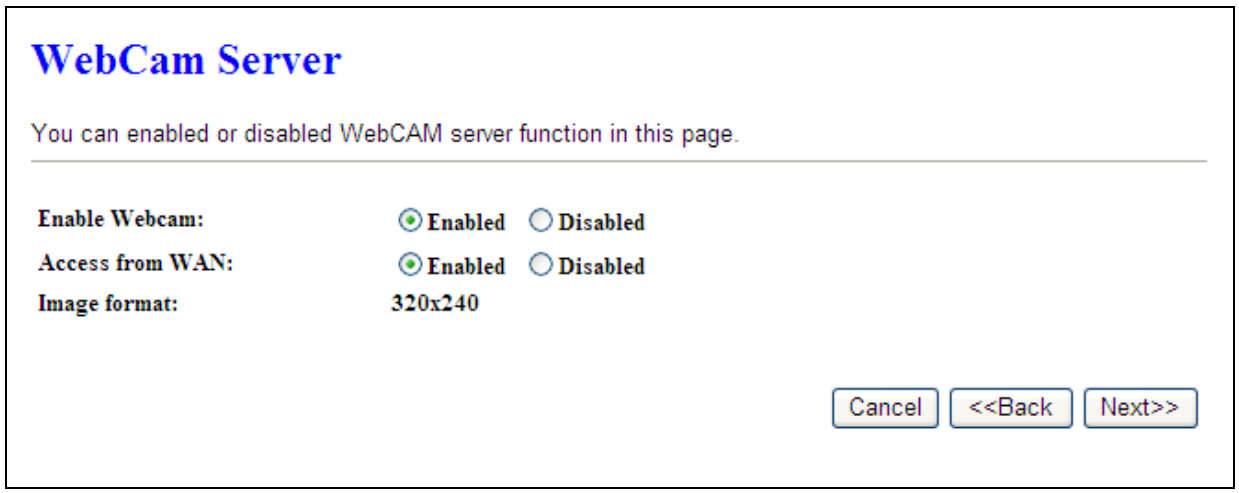
CWR-935M supports printers. Printer Server will be shown as Enable, therefore you can use Printer features from LAN. This function is disabled if there is no printer connecting to CWR-935M.




Please click **"Next>>"** to continue setup

### 4.7.11 Webcam Server

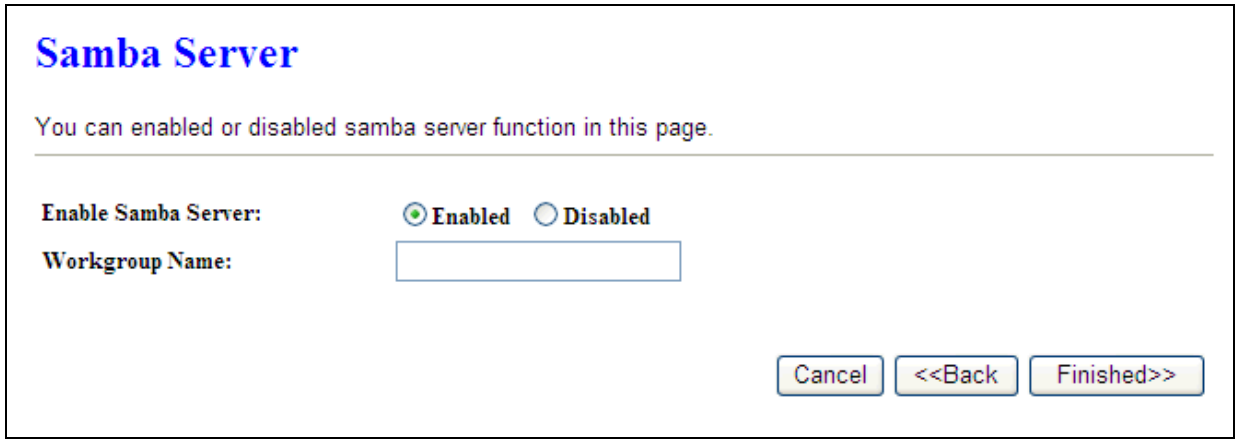
If you plan to use the CWR-935M as a Web Camera site, connect a supported USB Web Camera to the USB port. Enable the webcam server and access from WAN as demand, and the Image format is set to 320X240.




Please click **"Next>>"** to continue setup

### 4.7.12 Samba Server

CWR-935M support file sharing, you can share your file via network neighbor.



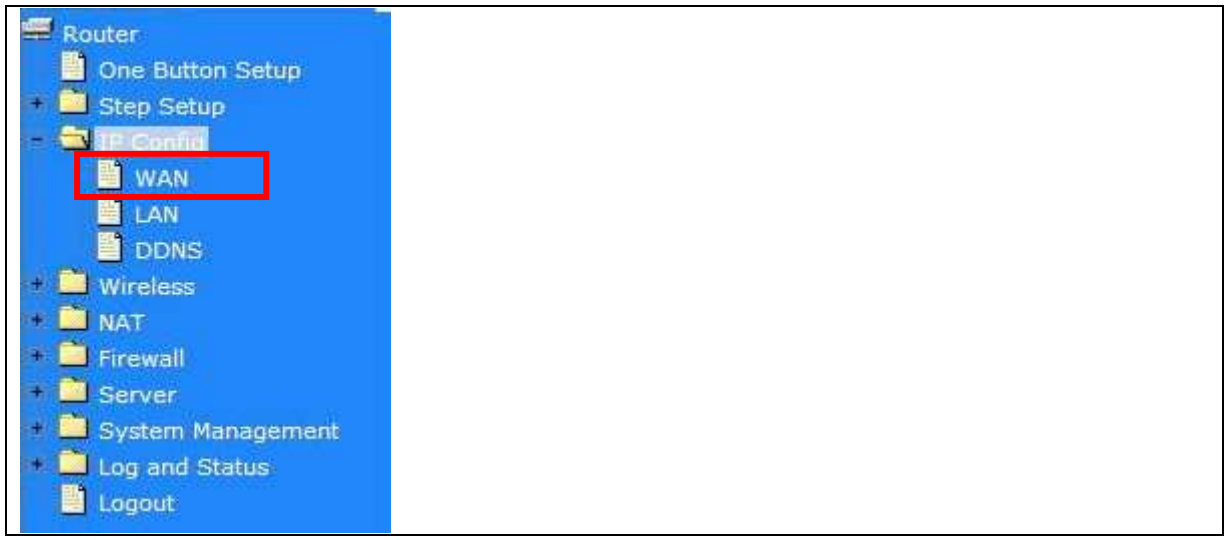

Please click **"Finished>>"** to finish setup procedure.

# Chapter 5. Advanced Configuration for Router Mode

## 5.1 IP Config

This section can let users add route rules of CWR-935M, it includes configuration of WAN, LAN, and DDNS.

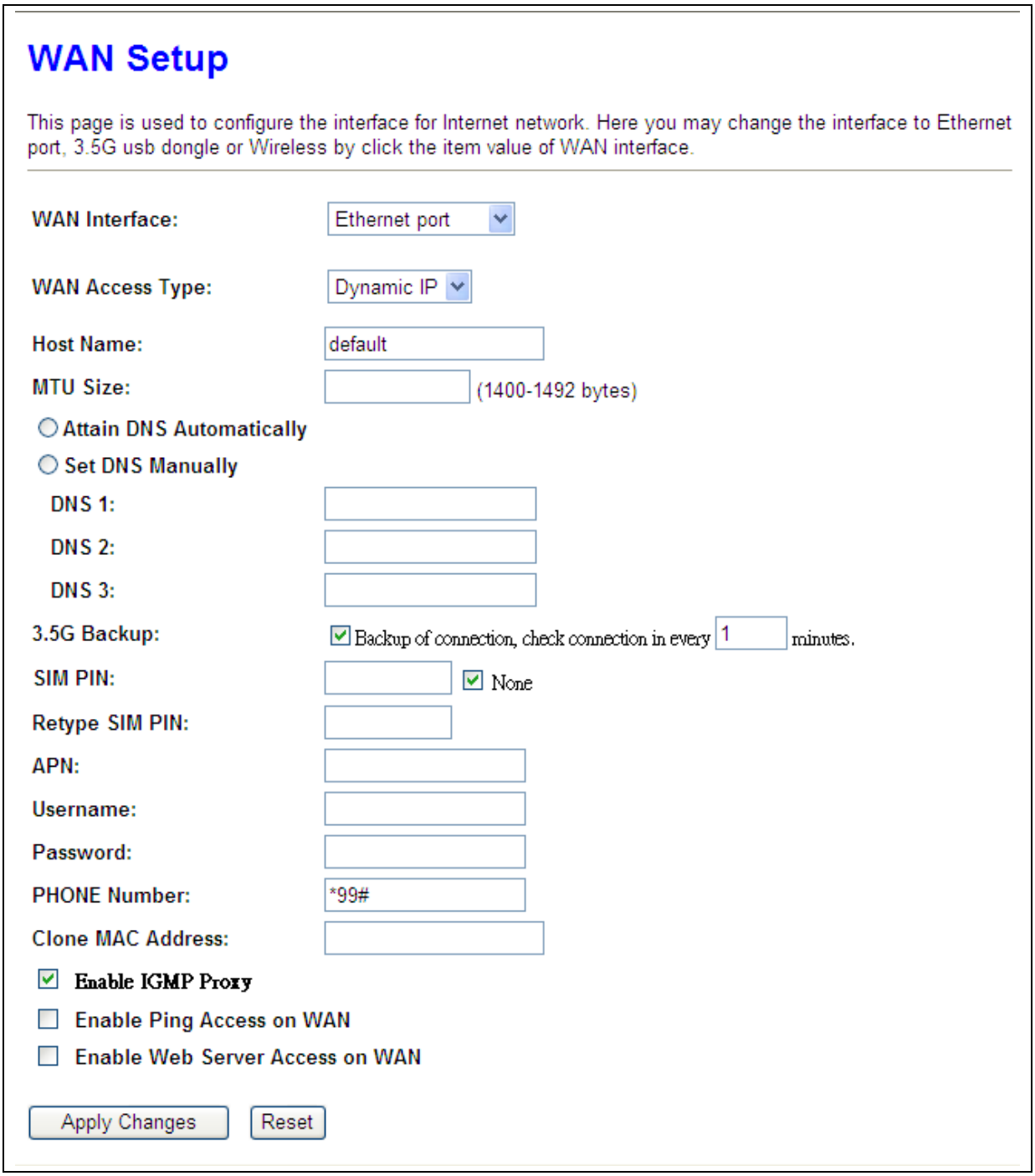
### 5.1.1 WAN Interface Setup



Please select WAN Interface to configure, it includes 3 interface selections (Ethernet and Wireless, 3.5G USB Dongle) and 4 access types (Static IP, Dynamic IP, PPPoE, and PPTP); please follow the instructions to configure.

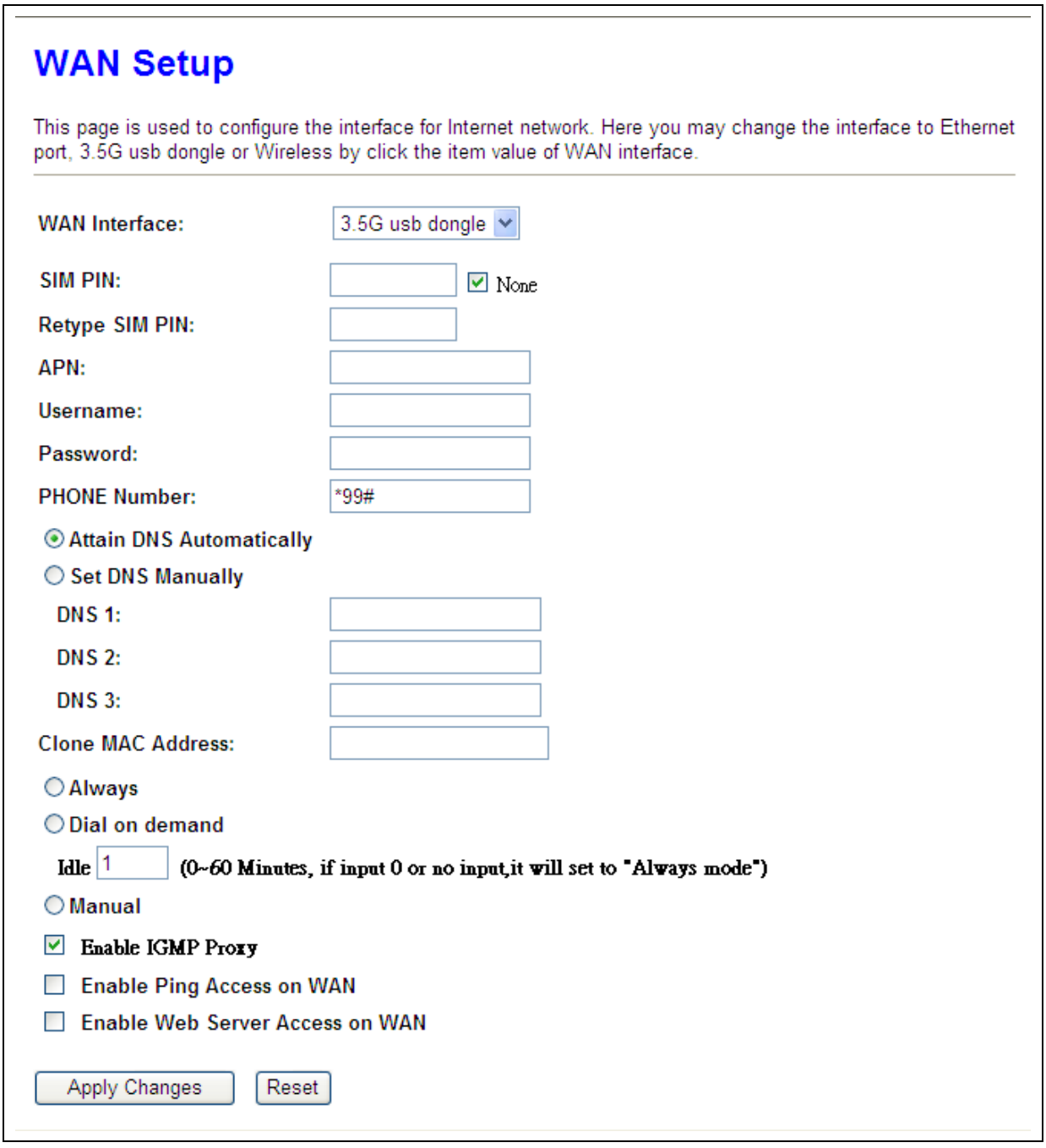
#### 5.1.1.1 WAN Interface – Ethernet Port

If CWR-935M is connecting to the Internet through the Ethernet cable, please select **Ethernet port** interface.



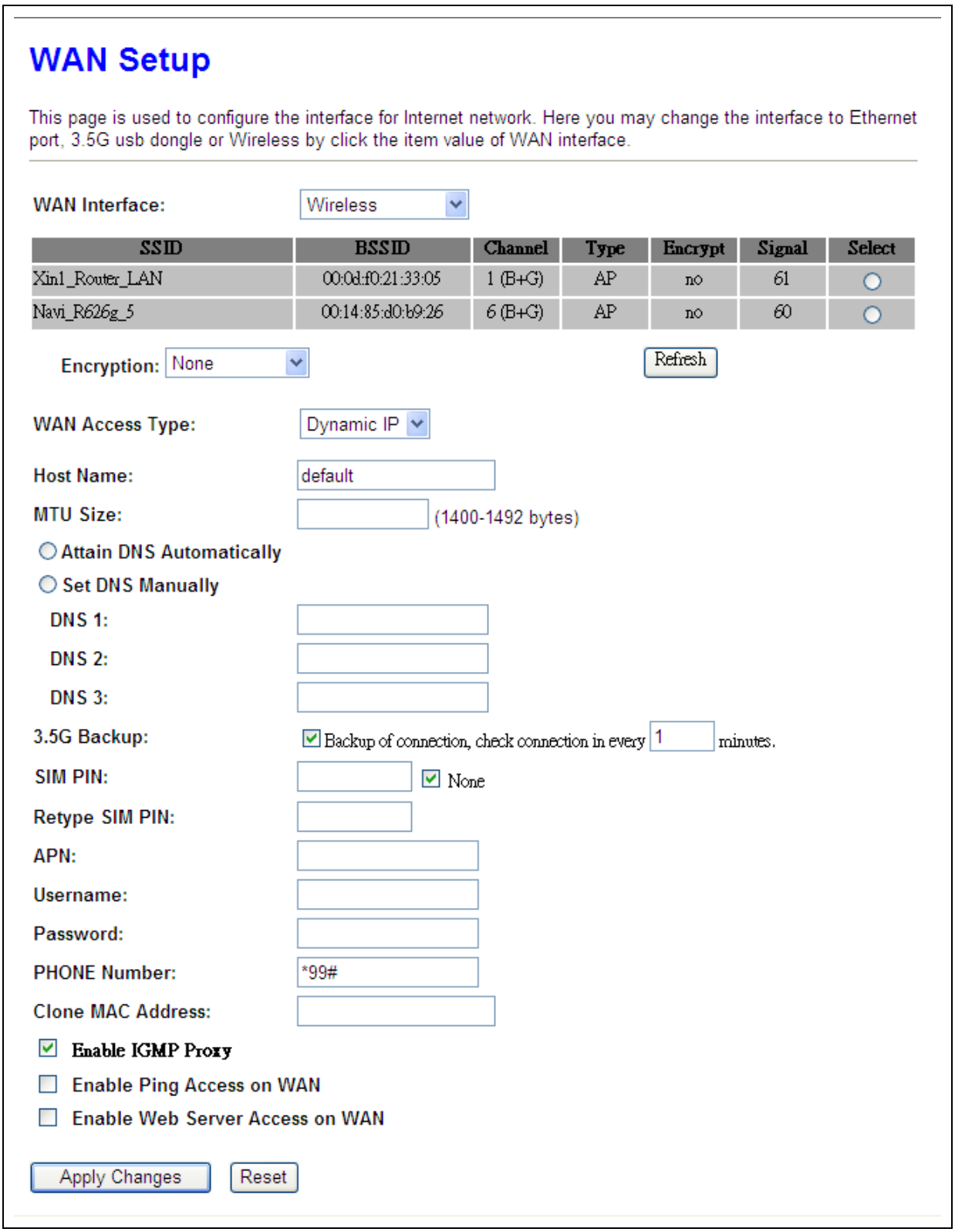
#### 5.1.1.2 WAN Interface – 3.5G USB Dongle

If you use 3.5G connect to Internet, please choose "**3.5G usb dongle**". 3.5G connection (Connection Mode) means that users use 3.5G connect to network. The Backup of Connection is not available at this time. If the device can not detect 3.5G signal, it will search 3 / 2.75 / 2.5G signal, until there is no signal.



#### 5.1.1.3 WAN Interface – Wireless

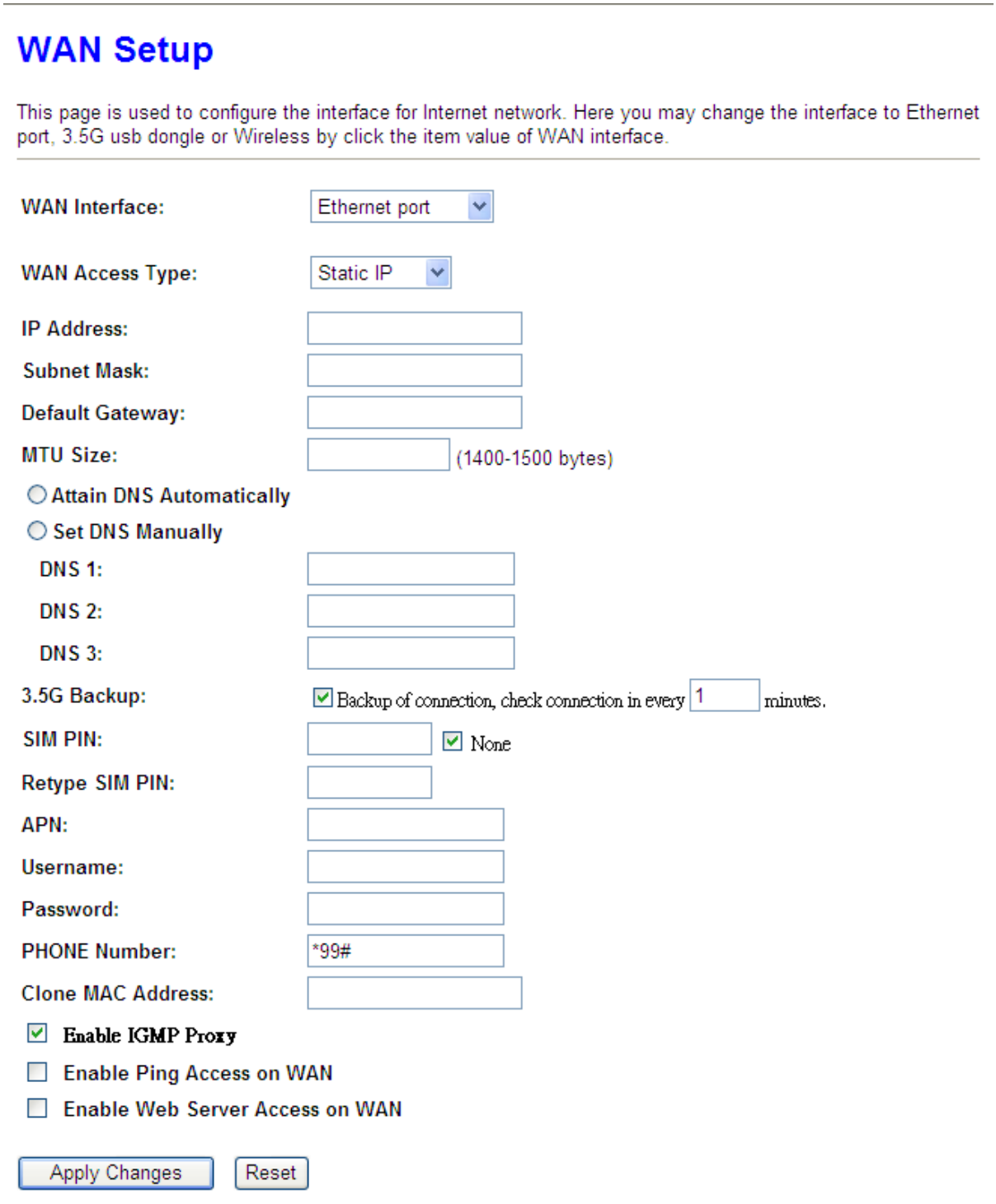
If CWR-935M is connecting to the Internet through wireless, please select **Wireless** interface.



The Wireless network which searched by CWR-935M will display on this page. Users can select the desired wireless network and Encryption type to connect.

#### 5.1.1.4 WAN Access Type – Static IP

If your WAN access type is Static IP, please complete the settings as following instructions.

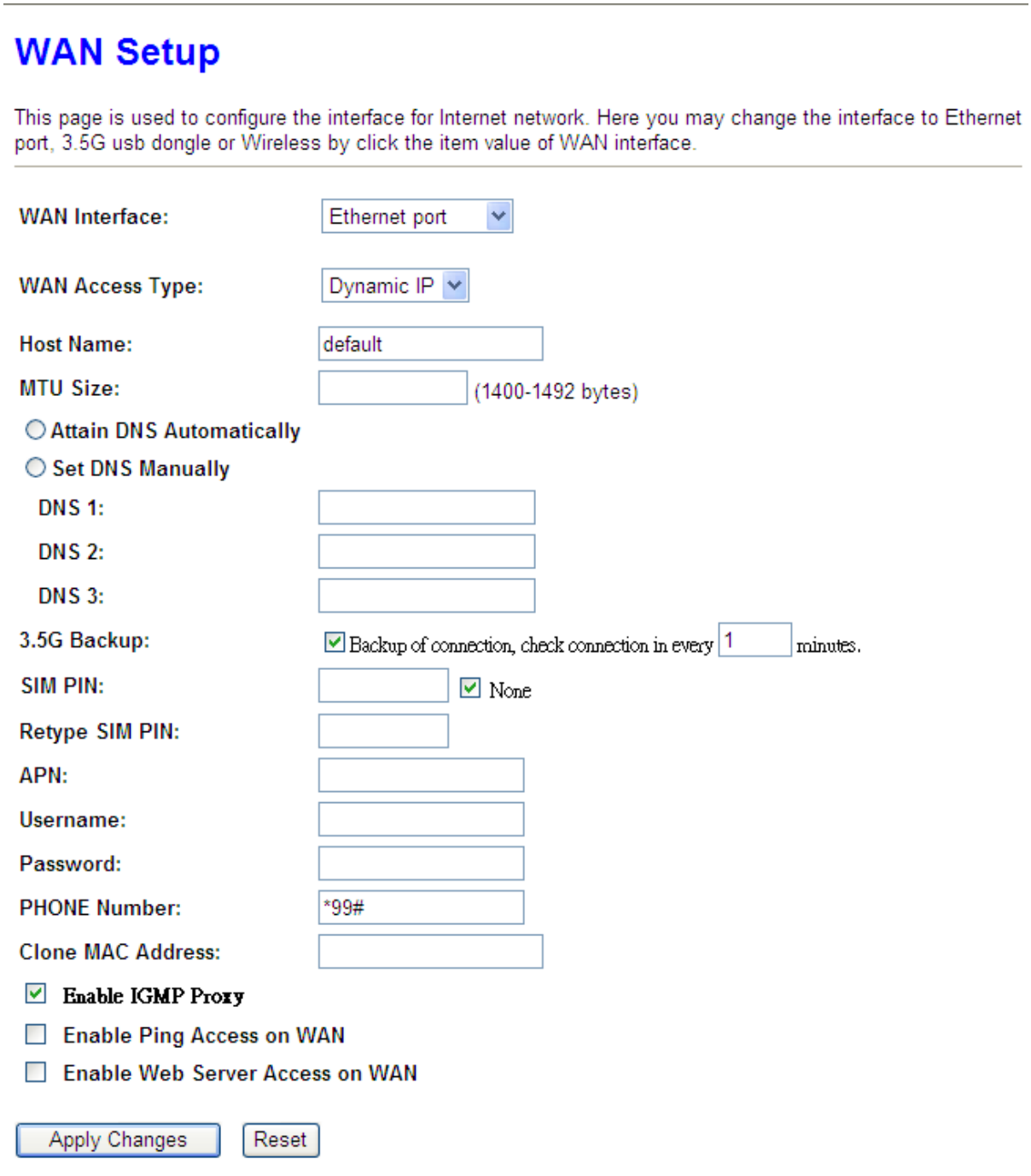


| Item | Description |
|---|---|
| IP Address | Please enter your IP address. If you don't know the address, please contact your ISP. |
| Subnet Mask | Please enter the Subnet Mask address; it should be 255.255.255.0 for the most time. |
| Default Gateway | Please enter the Default Gateway address. If you don't know the address, please contact your ISP. |
| MTU Size | The term **Maximum transmission unit** refers to the size (in bytes) of the largest PDU that a given layer of a communications protocol can pass onwards. Users can improve network efficiency by adjusting the value of MTU. Most of OS will give users a default value which is fit for most of users. Users can modify this value also. Please enter value, max number is 1500 bytes. |
| DNS | If ISP provides DNS information, please select **Attain DNS automatically**. Or you should select **Set DNS Manually**, and then input the DNS address. |
| 3.5G Backup | Connection backup. If your WAN disconnects, it will connect to Internet by 3.5G. The system will check the connection once for every 30 seconds. Users can setup the time for detecting. The range is 1-60 mins, and the default is 3 mins. When system detects disconnection, CWR-935M will automatically connect by using 3.5G. If the signal of 3.5G is not detected, it will search for 3/2.75/2.5G signals. Users will turn off 3.5G connection manually after the original connection is restored. |
| Clone MAC Address | If your ISP asks you to enter a specific MAC Address, please input the correct info at the column. |
| Enable IGMP Proxy | The **Internet Group Management Protocol** (**IGMP**) is a communication protocol used to manage the membership of Internet Protocol multicast groups. IGMP is used by IP hosts and adjacent multicast routers to establish multicast group memberships. You can choose to enable **IGMP Proxy** to provide service. |
| Enable Ping on WAN | When users enable **Enable Ping Access on WAN**, it will make WAN IP address response to any ping request from Internet users. It is a common way for hacker to ping public WAN IP address, to see is there any WAN IP address available. |
| Enable Web Server Access on WAN | This option is to enable Web Server Access function on WAN. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on |

| | |
|---|---|
| | **Reset** to clear all the input data. |

#### 5.1.1.5 WAN Access Type – Dynamic IP

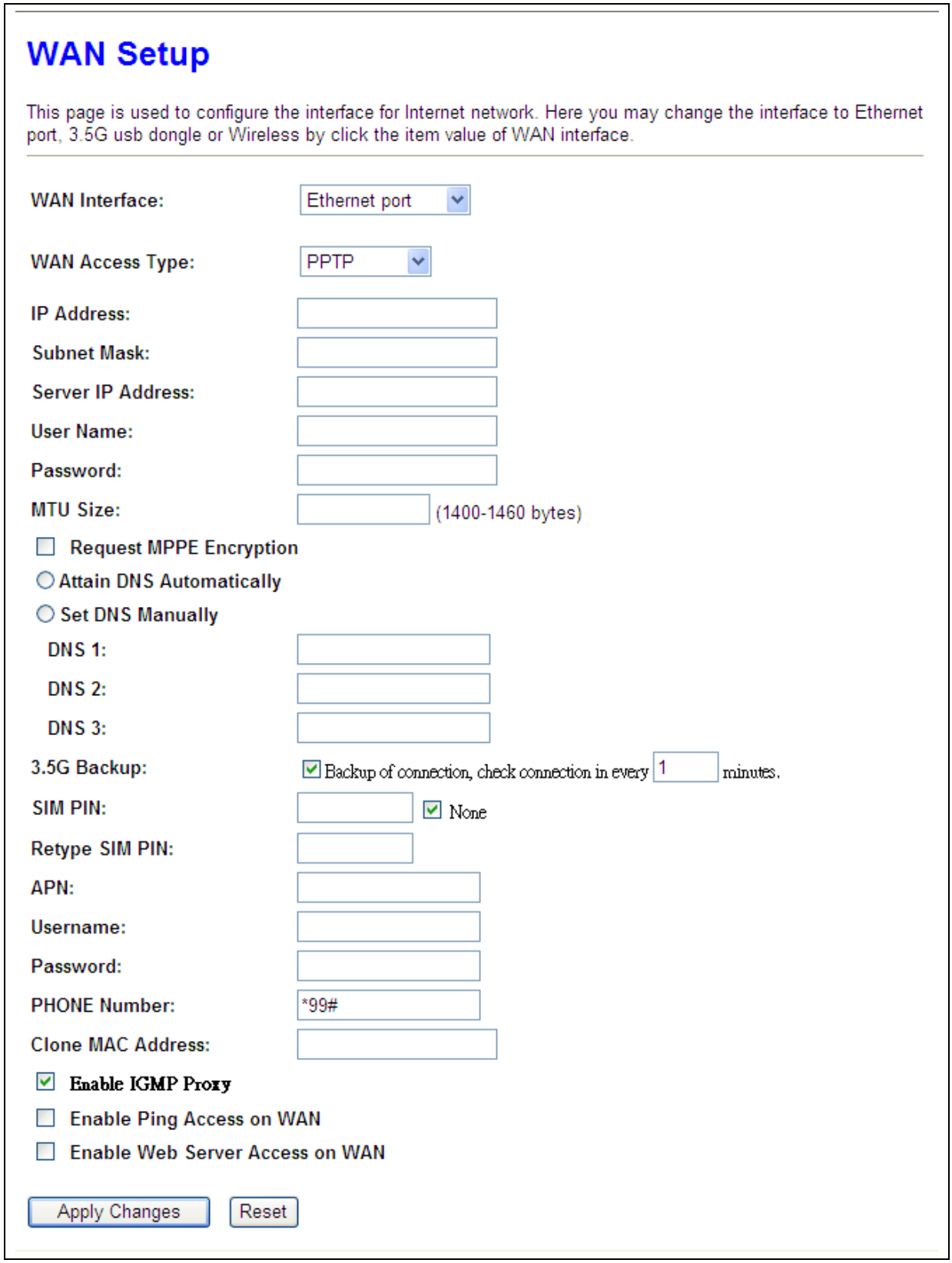
If your WAN access type is Static IP, please complete the settings as following instructions.



| Item | Description |
|---|---|
| Host name | |
| MTU Size | The term **Maximum transmission unit** refers to the size (in bytes) of the largest PDU that a given layer of a communications protocol can pass onwards. Users can improve network efficiency by adjusting the value of MTU. Most of OS will give users a default value which is fit for most of users. Users can modify this value also. Please enter value, max number is 1500 bytes. |
| DNS | If ISP provides DNS information, please select **Attain DNS automatically**. Or you should select **Set DNS Manually**, and then input the DNS address. |
| 3.5G Backup | Connection backup. If your WAN disconnects, it will connect to Internet by 3.5G. The system will check the connection once for every 30 seconds. Users can setup the time for detecting. The range is 1-60 mins, and the default is 3 mins. When system detects disconnection, CWR-935M will automatically connect by using 3.5G. If the signal of 3.5G is not detected, it will search for 3/2.75/2.5G signals. Users will turn off 3.5G connection manually after the original connection is restored. |
| Clone MAC Address | If your ISP asks you to enter a specific MAC Address, please input the correct info at the column. |
| Enable IGMP Proxy | The **Internet Group Management Protocol** (**IGMP**) is a communication protocol used to manage the membership of Internet Protocol multicast groups. IGMP is used by IP hosts and adjacent multicast routers to establish multicast group memberships. You can choose to enable **IGMP Proxy** to provide service. |
| Enable Ping on WAN | When users enable **Enable Ping Access on WAN**, it will make WAN IP address response to any ping request from Internet users. It is a common way for hacker to ping public WAN IP address, to see is there any WAN IP address available. |
| Enable Web Server Access on WAN | This option is to enable Web Server Access function on WAN. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

#### 5.1.1.6 WAN Access Type – PPTP

If your WAN access type is PPTP, please complete the settings as following instructions.

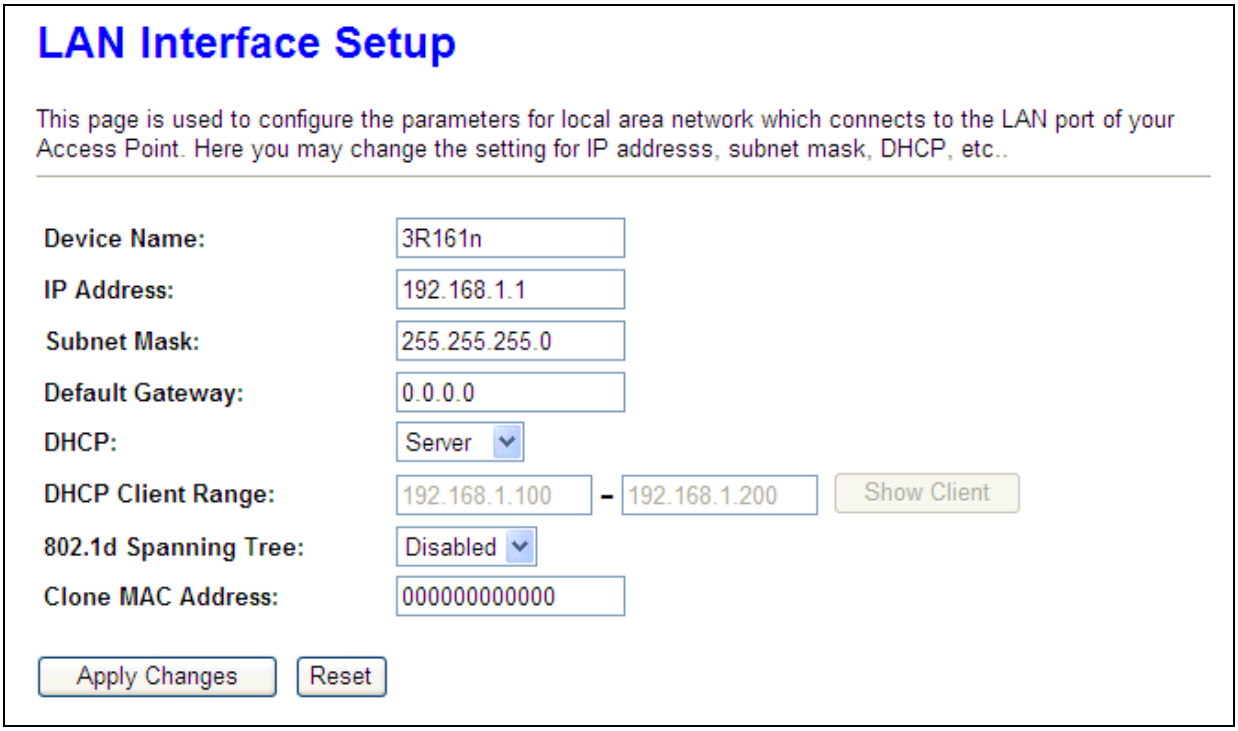


| Item | Description |
|---|---|
| IP Address | Please enter the username provided by your ISP. If you don't have it, please contact your ISP. |
| Subnet Mask | Please enter the Subnet Mask address; it should be 255.255.255.0 for the most time. |
| Server IP Address | Please enter the server IP address. If you don't know the address, please contact your ISP. |
| User Name | Please enter the username provided by your ISP. If you don't have it, please contact your ISP. |
| Password | Please enter the password provided by your ISP. If you don't have it, please contact your ISP. |
| MTU Size | The term **Maximum transmission unit** refers to the size (in bytes) of the largest PDU that a given layer of a communications protocol can pass onwards. Users can improve network efficiency by adjusting the value of MTU. Most of OS will give users a default value which is fit for most of users. Users can modify this value also. Please enter value, max number is 1500 bytes. |
| Request MPPE Encryption | MPPE uses the RSA RC4 algorithm to provide data confidentiality. The length of the session key to be used for initializing encryption tables can be negotiated. MPPE currently supports 40-bit, 56-bit, and 128-bit session keys. It can be changed frequently to protect network security. This function is optional. |
| DNS | If ISP provides DNS information, please select **Attain DNS automatically**. Or you should select **Set DNS Manually**, and then input the DNS address. |
| 3.5G Backup | Connection backup. If your WAN disconnects, it will connect to Internet by 3.5G. The system will check the connection once for every 30 seconds. Users can setup the time for detecting. The range is 1-60 mins, and the default is 3 mins. When system detects disconnection, CWR-935M will automatically connect by using 3.5G. If the signal of 3.5G is not detected, it will search for 3/2.75/2.5G signals. Users will turn off 3.5G connection manually after the original connection is restored. |
| Clone MAC | If your ISP asks you to enter a specific MAC Address, please input the correct info at the column. |
| Enable IGMP Proxy | The **Internet Group Management Protocol** (**IGMP**) is a communication protocol used to manage the membership of Internet |

| | |
|---|---|
| | Protocol multicast groups. IGMP is used by IP hosts and adjacent multicast routers to establish multicast group memberships. You can choose to enable **IGMP Proxy** to provide service. |
| Enable Ping Access on WAN | When users enable **Enable Ping Access on WAN**, it will make WAN IP address response to any ping request from Internet users. It is a common way for hacker to ping public WAN IP address, to see is there any WAN IP address available. |
| Enable Web Server Access on WAN | This option is to enable Web Server Access function on WAN. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

### 5.1.2 LAN Interface Setup

This page is used to configure for local area network which connects to the LAN port of your Access Point. Here users may change the setting for IP address, Subnet Mask, DHCP, etc.

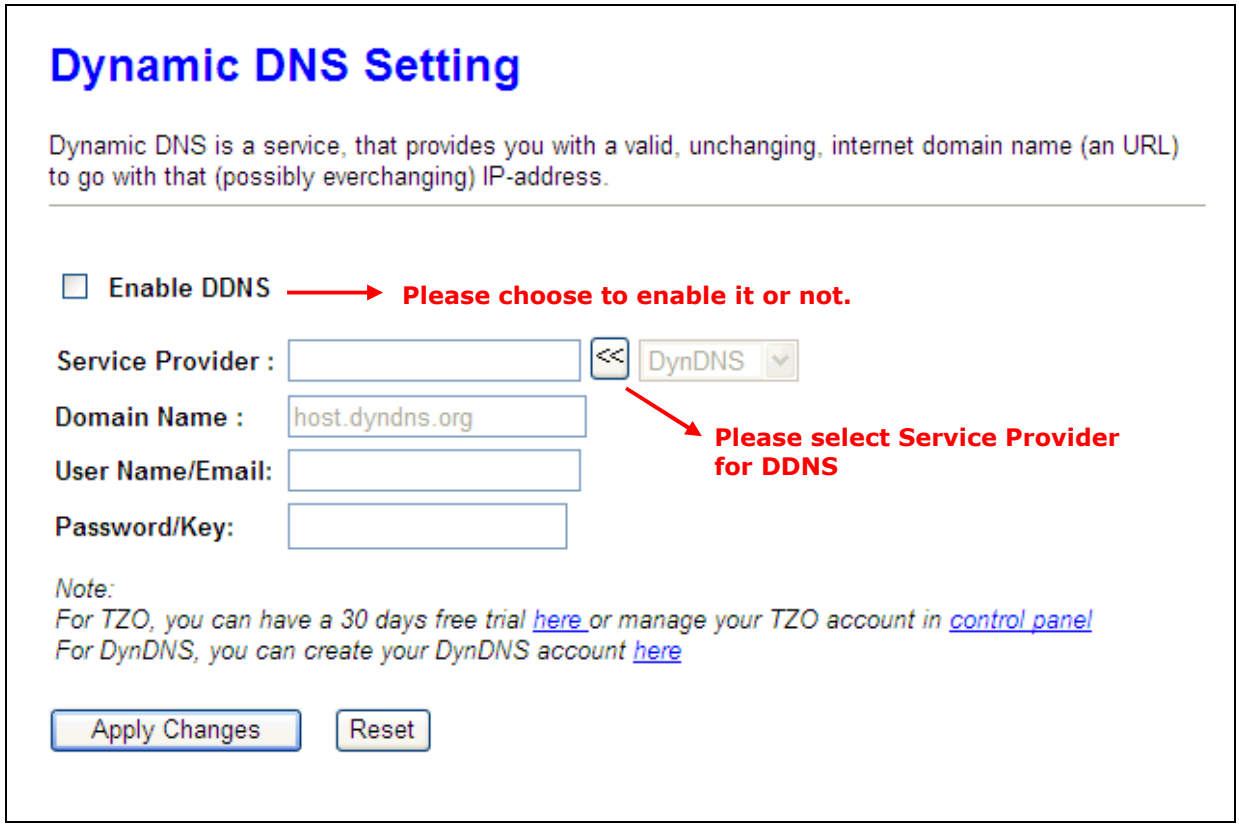



| Item | Description |
|---|---|
| IP Address | The default IP address is **192.168.1.1** (recommend). |
| Subnet Mask | Please enter the Subnet Mask address; it should be **255.255.255.0** for the most time. |

| | |
|---|---|
| Default Gateway | Please enter the Default Gateway address. If you don't know the address, please contact your ISP. |
| DHCP | Users can choose to enable DHCP service or not. The DHCP server will give an unused IP address to a computer which is requesting for one. That computer must be a DHCP client, and then it can obtain an IP address automatically. |
| DHCP Client Range | The default value is 192.168.1.100 - 192.168.1.200. The DHCP server will assign an IP to a computer from this range. The **Show Client** will display every assigned IP address, MAC address, and expired time. |
| 802.1d Spanning Tree | IEEE 802.1d **Spanning Tree Protocol** (**STP**) is a link layer network protocol that ensures a loop-free topology for any bridged LAN, This function is optional. |
| Clone MAC Address | If your ISP asks you to enter a specific MAC Address, please input the correct info at the column. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

### 5.1.3 Dynamic DNS Setting

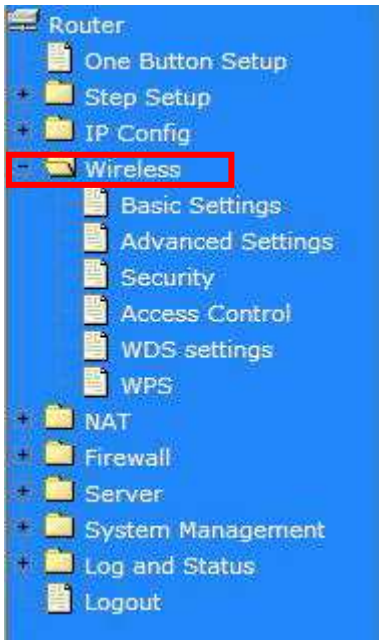
Dynamic DNS provides users with DNS service that automates the discovery and registration of client's public IP addresses. The DDNS Providers in 3.5G server router are DynDNS (http://www.dyndns.com), TZO (http://www.dyndns.org), ChangeIP, Eurodns, OVH, NO-IP, ODS, Regfish.




Please enter **Domain Name**, **User Name/Email**, and **Password/Key**. After entering, click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

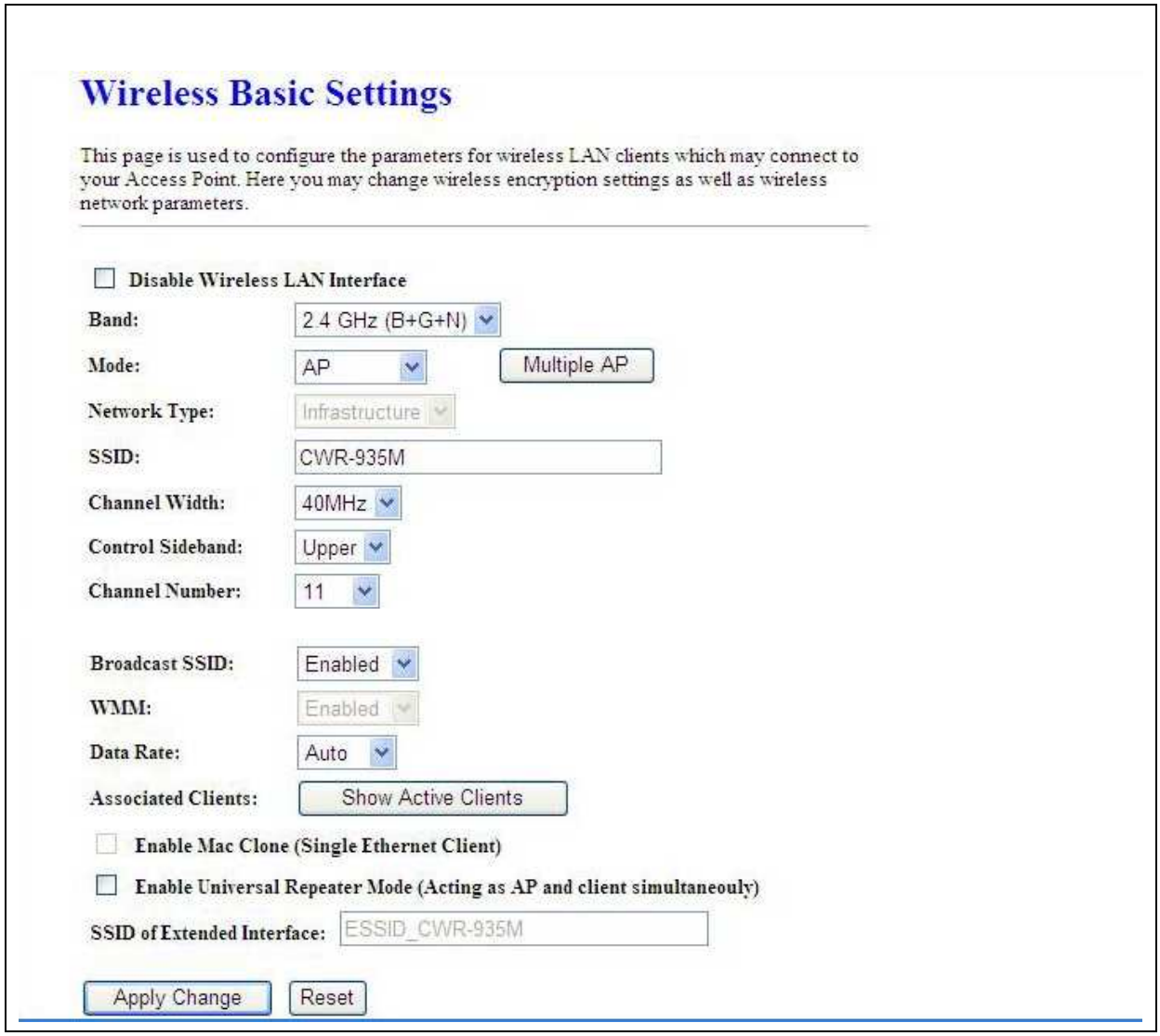
## 5.2 Wireless Setup

The category includes **Basic Settings**, **Advanced Settings**, **Security**, **Access Control**, **WDS settings**, and **WPS**. Please read below for the setting instruction.



### 5.2.1 Wireless Basic Settings

The basic settings related to the wireless are specified as following.

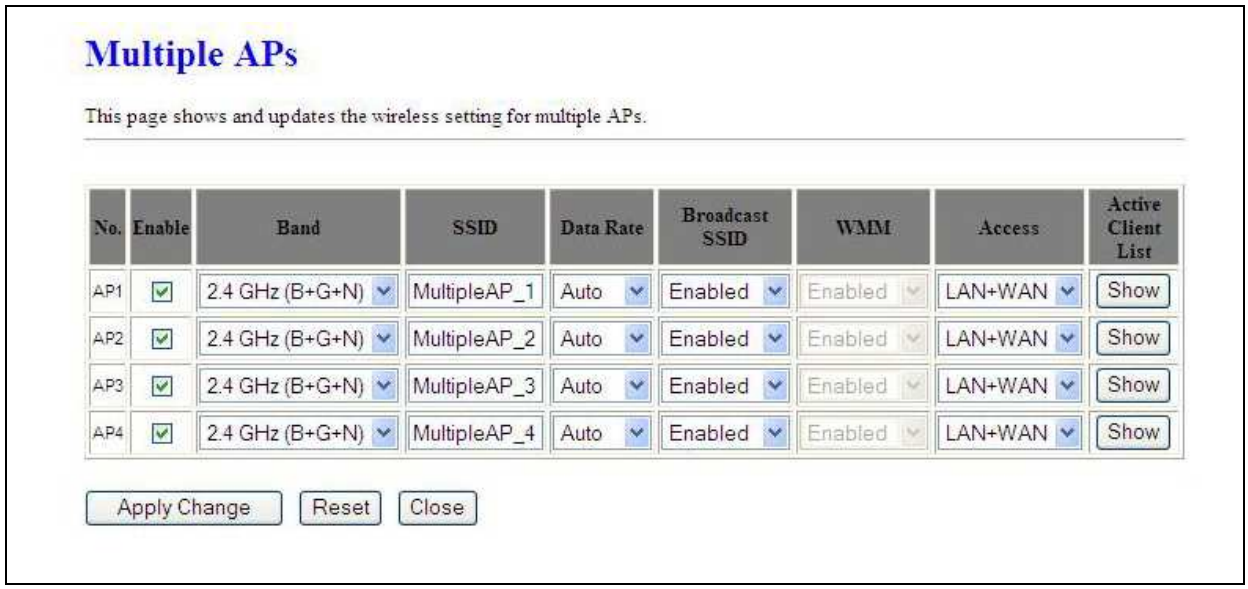



| Item | Description |
|---|---|
| Disable Wireless LAN Interface | Turn off the wireless function. |
| Band | Please select the frequency. It has 6 options: 2.4 GHz (B/G/N/B+G/G+N/B+G+N). |
| Mode | Please select the mode. It has 3 modes to select:(AP, Client, WDS, AP+WDS).<br>**Multiple APs** can provide users another 4 different SSID for connection. Users can add or limit the properties for each connection. |

| | |
|---|---|
| | Please check Section 5.2.1.1 |
| SSID | Service Set identifier, the default SSID is **CWR-935M**, users can define to any. |
| Channel Width | Please select the channel width, it has 2 options: 20MHZ, and 40MHZ. |
| Control Sideband | Enable this function will control your router use lower or upper channel. |
| Channel Number | Please select the channel; it has Auto, 1, 2~11 or 13 options. |
| Broadband SSID | User may choose to enable **Broadcast SSID** or not. |
| Data Rate | Please select the data transmission rate. |
| Associate Clients | Check the AP connectors and the Wireless connecting status. |
| Enable MAC Clone (Single Ethernet Client) | Clone the MAC address for ISP to identify. |
| Enable Universal Repeater Mode (Acting as AP and Client simultaneously) | Allow to equip with the wireless way conjunction upper level, provide the bottom layer user link in wireless and wired way in the meantime. (The IP that bottom layer obtains is from upper level.) Please check Section 5.2.1.2 |
| SSID of Extended Interface | While linking the upper level device in wireless way, you can set SSID to give the bottom layer user search. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

#### 5.2.1.1 Multiple APs

**Multiple APs** can provide users another 4 different SSID for connection. Users can add or limit the properties for each connection.

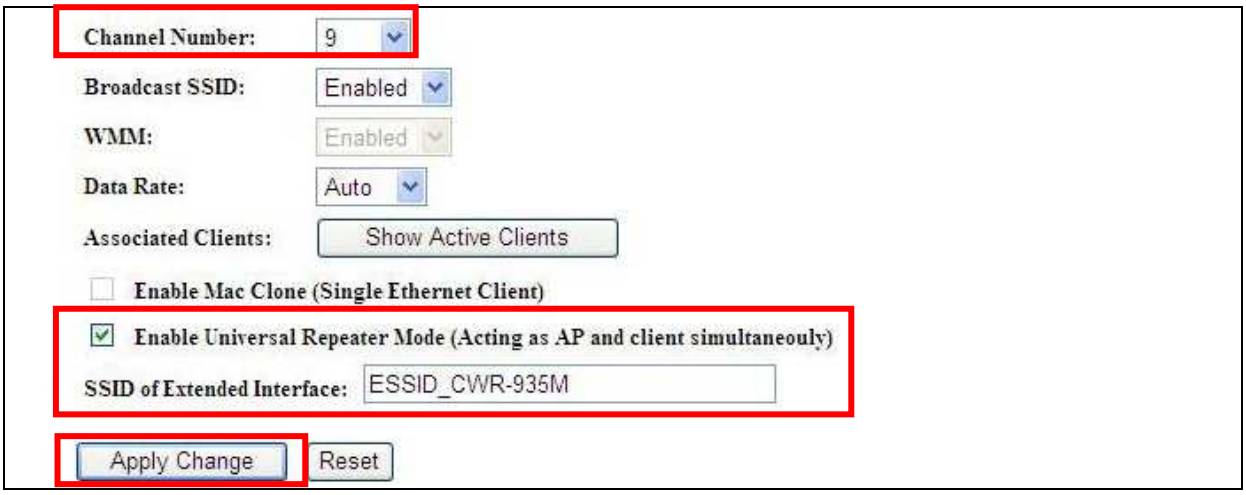


| Item | Description |
|---|---|
| Enable | Please choose to enable it ot not |
| Band | Please select the frequency. |
| SSID | Please enter the SSID. |
| Data Rate | Please select the data transmission rate. |
| Access | Enable this function can let clients use two access types: a. LAN+WAN: the client can access to the Internet and connect to 3.5G server router's GUI to setup. b. WAN: the client can only access to the Internet. |
| Active Client List | Display the properties of the client which is connecting successfully. |
| Apply Changes | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

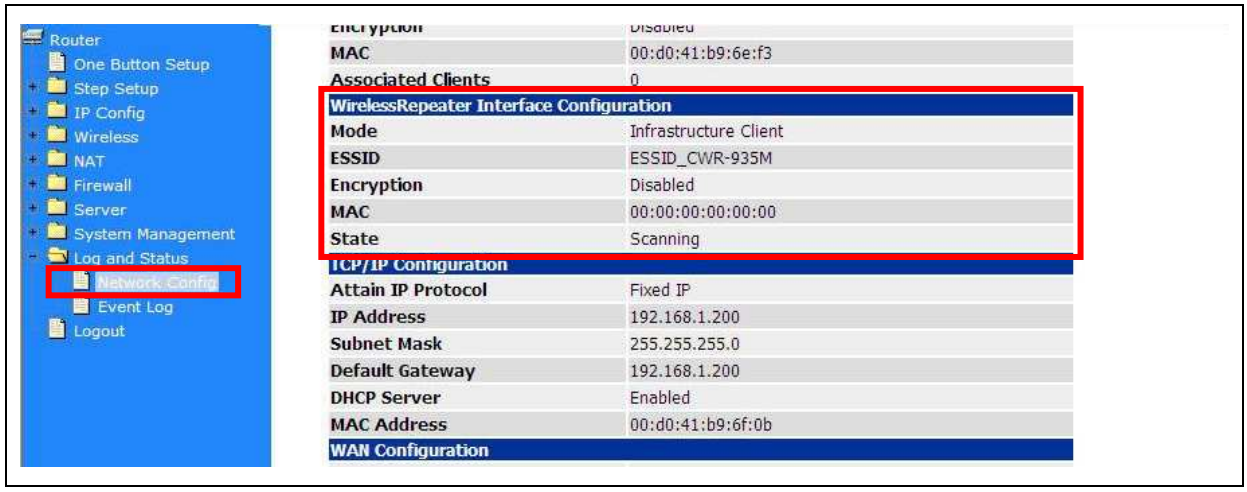
### 5.2.1.2 Enable Universal Repeater Mode (Acting as AP Client simultaneously)

Allow to equip with the wireless way conjunction upper level, provide the bottom layer user link in wireless and wired way in the meantime. (The IP that bottom layer obtains is from upper level.)

**Example:** When users enable the Universal Repeater to connect to the upper level device, please input the channel and SSID of the upper level device on router's GUI. Click on **Apply Changes** to save the settings. (The DHCP in IP config needs to be disabled.)



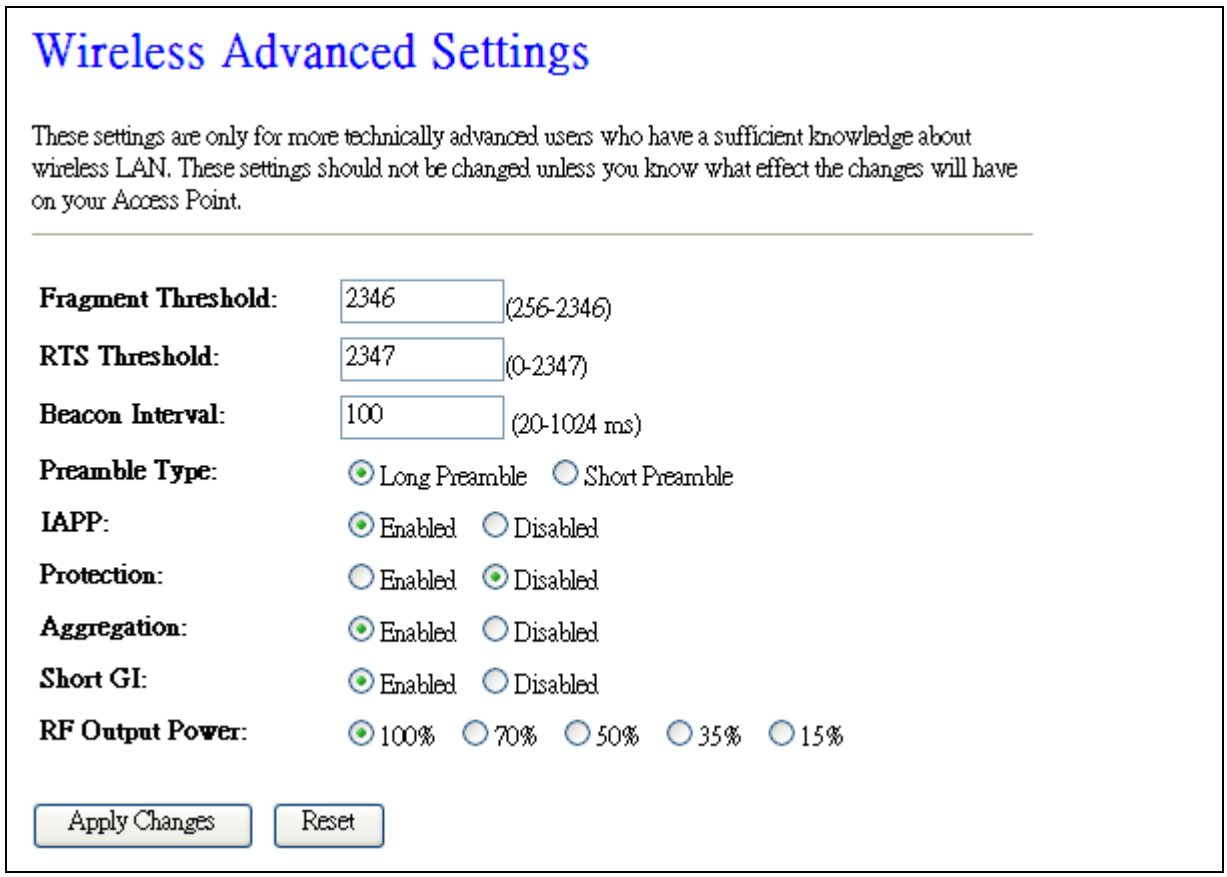
Users can go to the network Config section and check the information of upper level in Wireless Repeater Interface Configuration.




If the bottom layer device is trying to make a connection, users must input the SSID of this router as a relay station. The IP that the bottom layer device gets is from the upper level device.

### 5.2.2 Wireless Advanced Settings

Please complete the wireless advanced settings as following instructions.



| Item | Description |
|---|---|
| Fragment Threshold | To identify the maxima length of packet, the over length packet will be fragmentized. The allowed range is 256-2346, and default length is 2346 |
| RTS Threshold | This value should remain at its default setting of 2347. The range is 0~2347. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the present RTS threshold size, the RTS/CTS mechanism will not be enabled. The router sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission. Fill the range from 0 to 2347 into this blank. |
| Beacon Interval | Beacons are packets sent by an access point to synchronize a wireless network. Specify a beacon interval value. The allowed setting range is 20-1024 ms. |
| Preamble Type | PLCP is Physical layer convergence protocol and PPDU is PLCP protocol data unit during transmission, the PSDU shall be appended to a PLCP preamble and header to create the PPDU. It has 2 options: Long Preamble and Short Preamble. |
| IAPP | Inter-Access Point Protocol is a recommendation that describes an optional extension to IEEE 802.11 that provides wireless access-point communications among multivendor systems. |
| Protection | Please select to enable wireless protection or not. |
| Aggregation | Enable this function will combine several packets to one and transmit it. It can reduce the problem when mass packets are transmitting. |
| Short GI | Users can get better wireless transmission efficiency when they enable this function. |
| RF Output Power | Users can adjust RF output power to get the best wireless network environment. Users can choose from 100%, 70%, 50%, 35%, and 15%. |
| Apply Changes & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

### 5.2.3 Wireless Security Setup

CWR-935M provides four encryption types; you can select here, please follow below instructions for the setting.


1. Encryption -- WEP Key

1.1 Set WEP Key: This section provides 64bit and 128bit WEP encryptions for wireless network. Users can also choose ASCII and Hex shared Key format to protect data.


802.1x Authentication: It is a safety system by using authentication to protect your wireless network. Please choose between WEP 64bits and WEP 128bits

2. Encryption – WPA (WPA, WPA2, and WPA2 Mixed), WPA Authentication Mode

Enterprise (RADIUS): Please input the RADIUS server Port, IP Address, and Password


Personal (Pre-Shared Key)

Pre-Shared Key type is ASCII Code; the length is between 8 to 63 characters. If the key type is Hex, the key length is 64 characters


3. Apply Change & Reset : Click on **'Apply Changes'** to save setting data. Or click **'Reset'** to clear all the input data.

### 5.2.4 Wireless Access Control

The function of access control is to allow or deny users to access 3.5G server router by according MAC address, it is optional. If you select **Allowed Listed**, then only those clients whose MAC address is listed on access control can connect to your base station. If you select **Deny Listed**, those clients whose MAC address is listed on access control can't connect to your base station.


Take the wireless card as the example.

(1) We will use **Deny Listed** as an example. Please select **Deny Listed** in **Wireless Access Control Mode** first, and then input the MAC address of wireless card in MAC Address field. Click **Apply Changes** to save the setting data.


(2) You will find out that the MAC address appears on **Current Access Control List**, it means the initiation is completed.

(3) Please open wireless card UI and try to connect to this router. You will find out that the connection request will be denied.


### 5.2.5 WDS Settings

Wireless basic settings must enable WDS first. This function can communicate with other APs by adding MAC address into the same channel.

# WDS Settings

Wireless Distribution System uses wireless media to communicate with other APs, like the Ethernet does. To do this, you must set these APs in the same channel and set MAC address of other APs which you want to communicate with in the table and then enable the WDS.

☐ **Enable WDS**

**MAC Address:**

**Data Rate:** Auto

**Comment:**

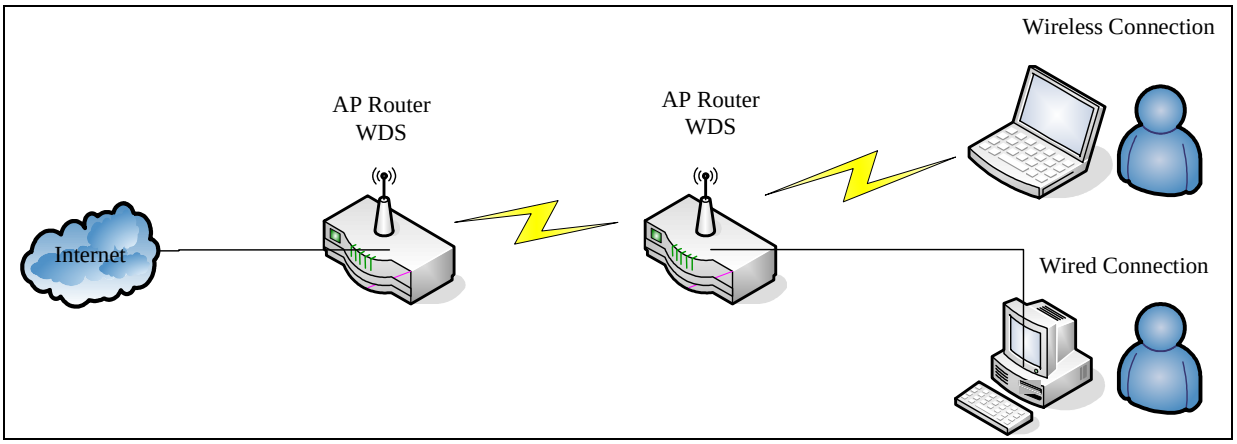
Apply Changes | Reset | Set Security | Show Statistics

**Current WDS AP List:**

| MAC Address | Tx Rate (Mbps) | Comment | Select |
|---|---|---|---|

Delete Selected | Delete All | Reset

*The following figure is the explanation.

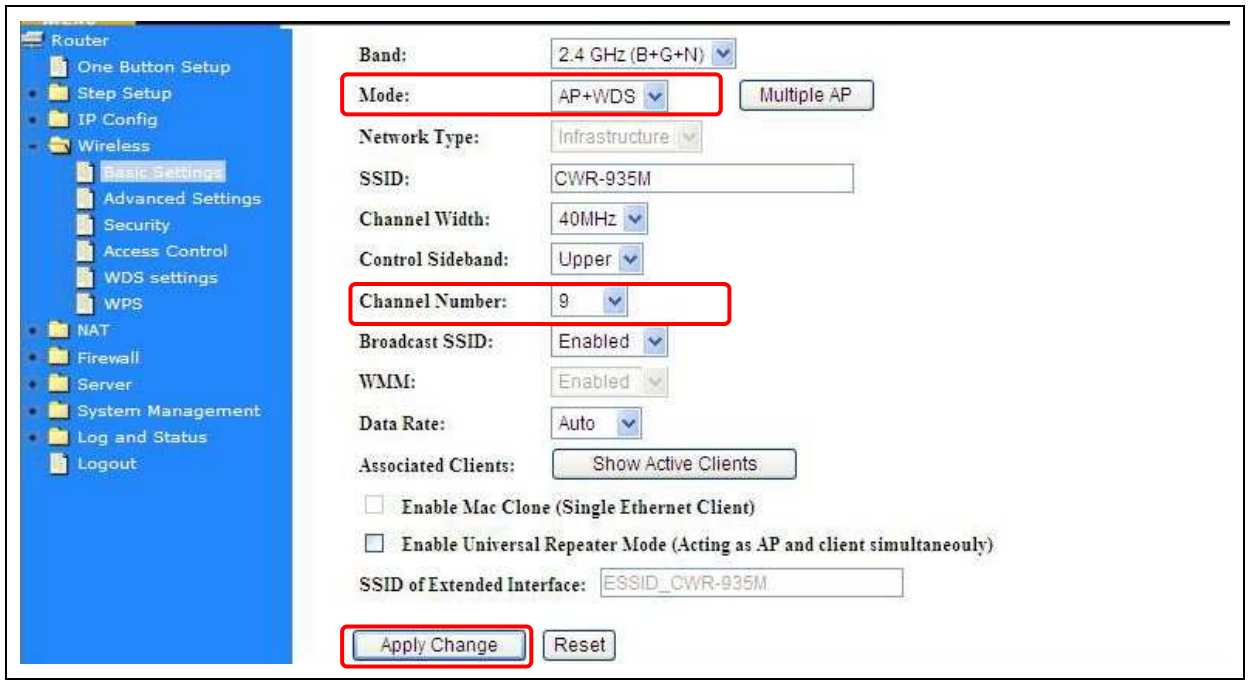


*Please follow the instructions to setup the connection.

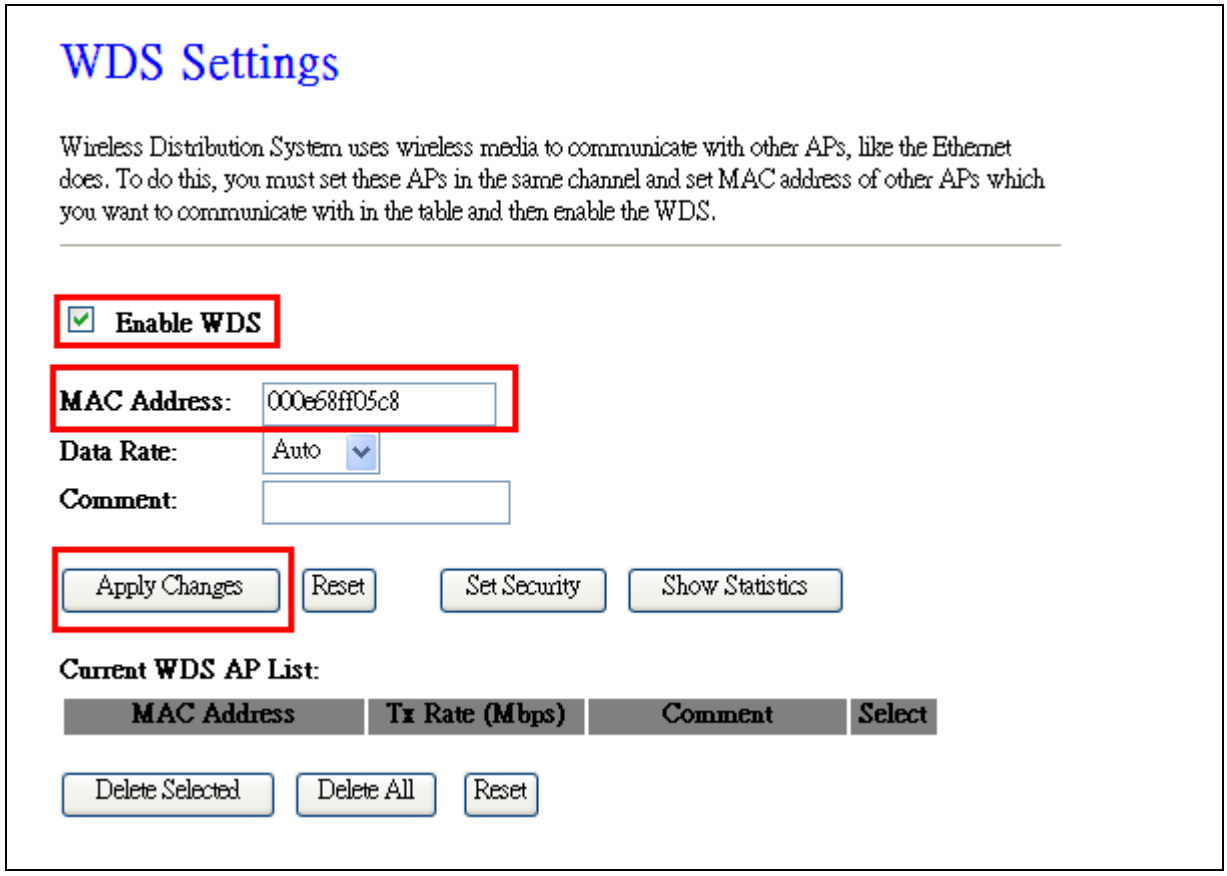
(1) Please check the MAC address and Channel number of the upper level device.

| WirelessConfiguration | |
|---|---|
| Mode | AP |
| Band | 2.4 GHz (B+G+N) |
| SSID | CWR-935M |
| Channel Number | 9 |
| Encryption | Disabled |
| MAC | 00:d0:41:b9:6e:f3 |
| Associated Clients | 0 |
| **TCP/IP Configuration** | |
| Attain IP Protocol | Fixed IP |
| IP Address | 192.168.1.200 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 192.168.1.200 |
| DHCP Server | Enabled |
| MAC Address | 00:d0:41:b9:6f:0b |

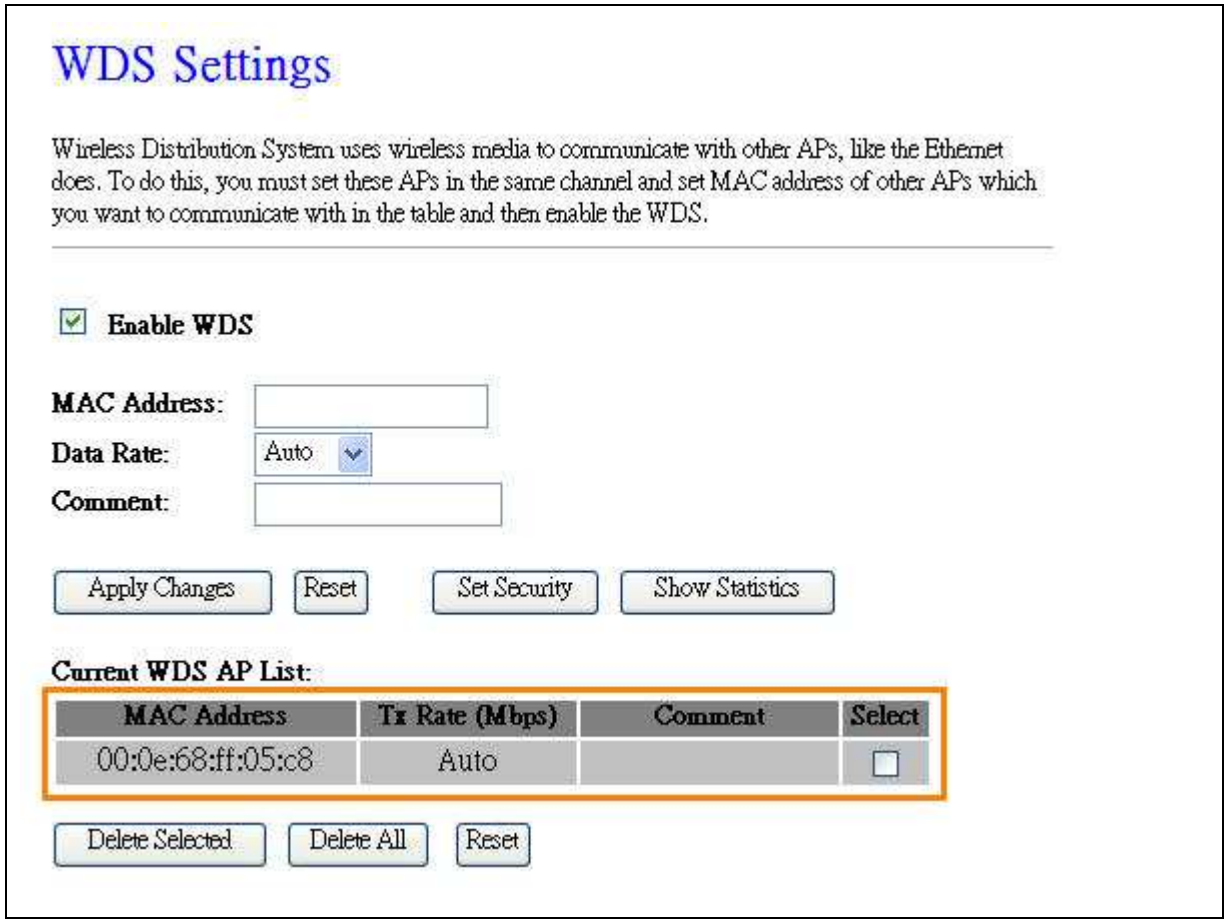
(2) Enter the **Wireless Basic Settings** page, select **AP+WDS** mode, and then select the **Channel Number**. Click **Apply Changes** to save the setting data.



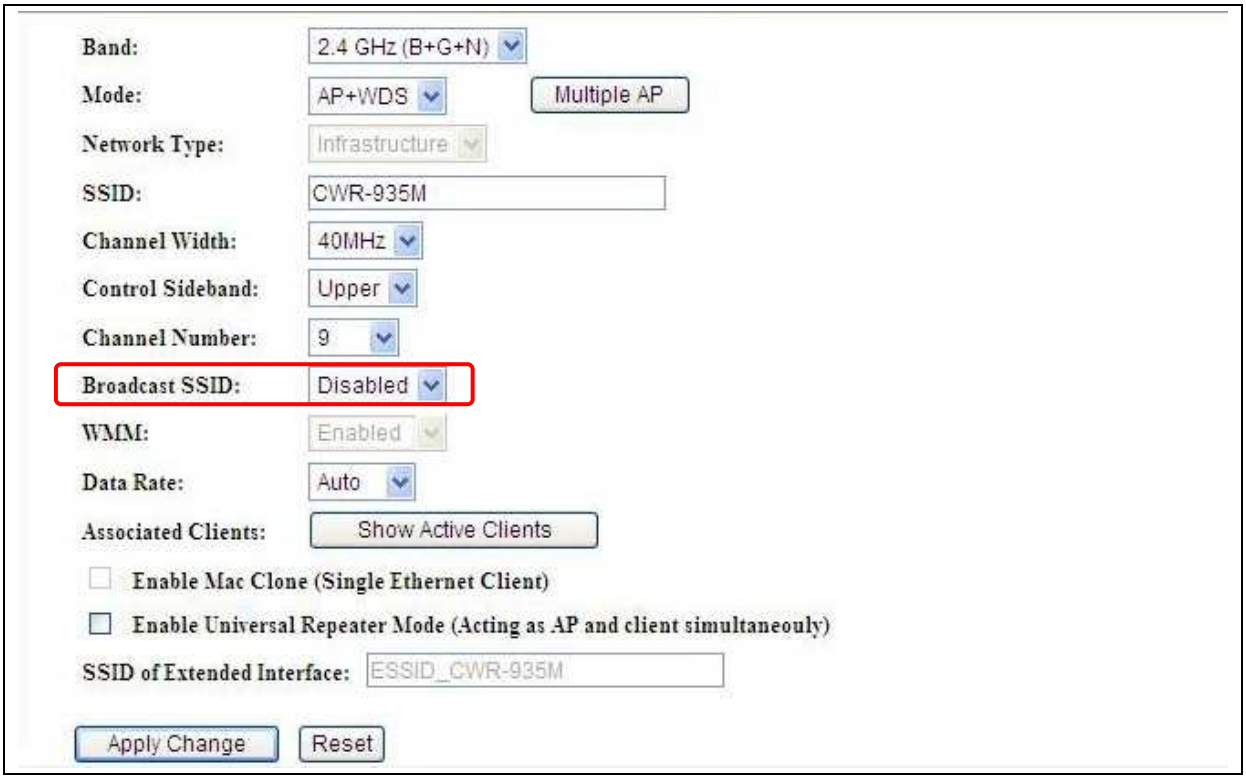
(3) Enter the **WDS Settings** page, select **Enable WDS**, and then input the MAC address of the upper level device. Click **Apply Changes** to save the setting data.



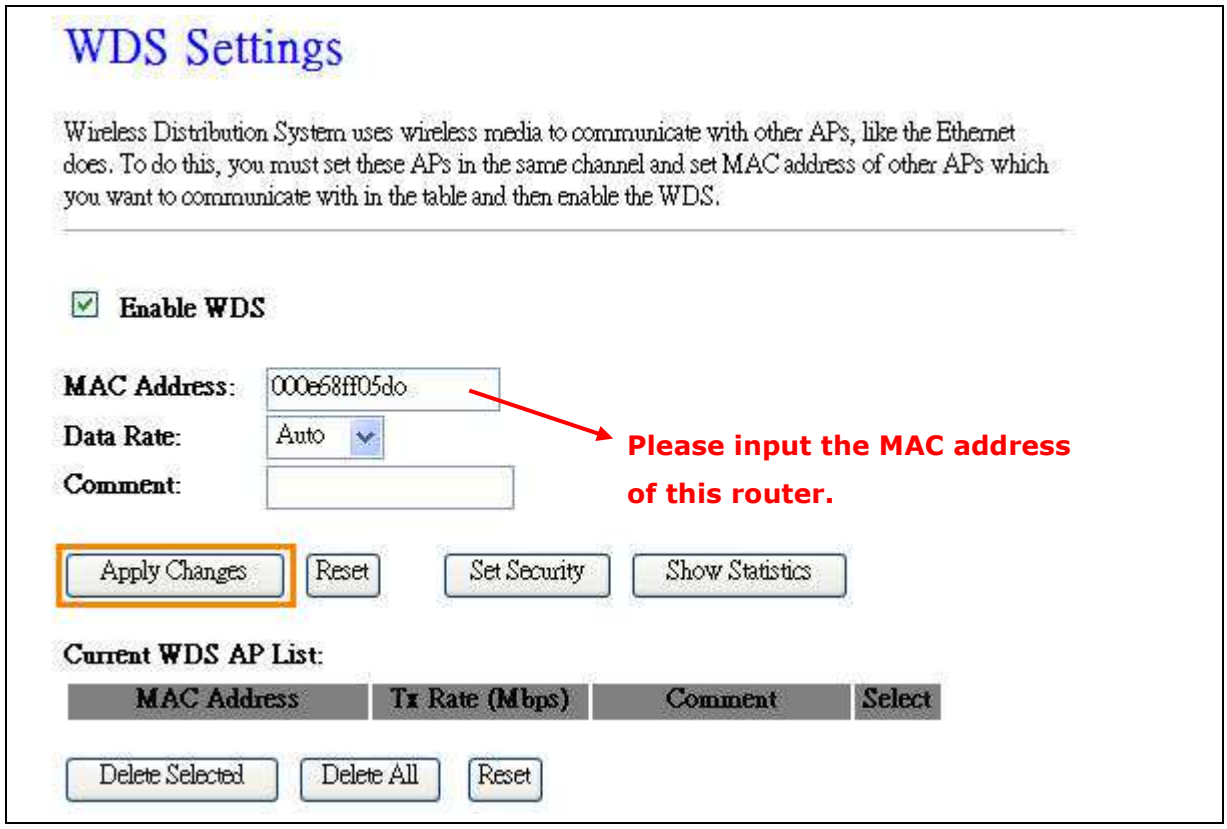
(4) When the time counts down to 0, you will see the MAC address of the upper level device displaying on **Current WDS AP List**.



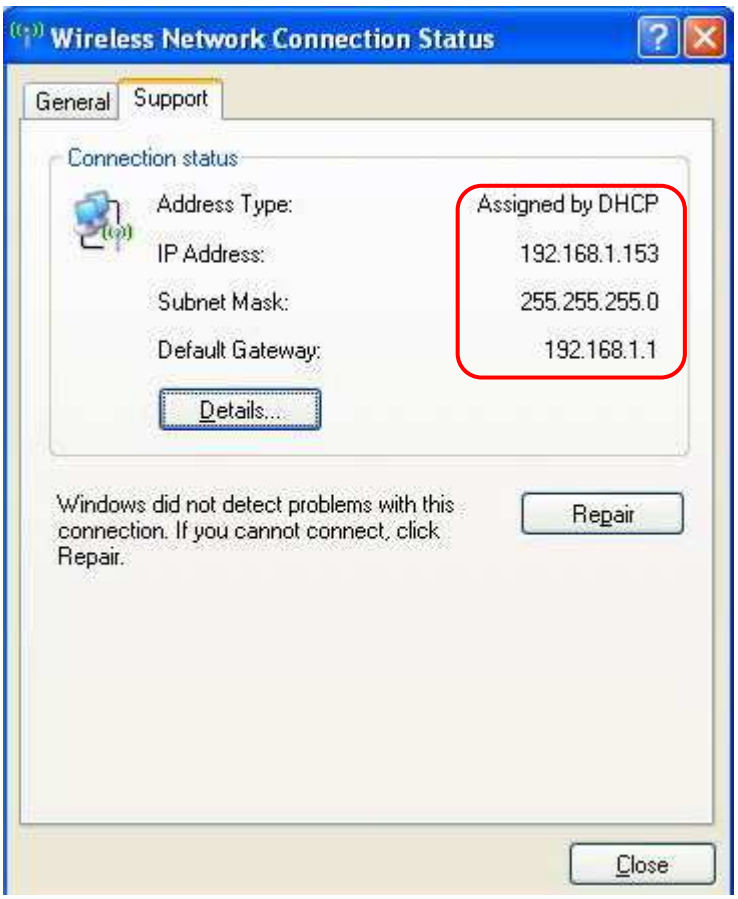
(5) Head back to **LAN Interface**, disable **DHCP** option, and then click **Apply Changes** to save the setting data.



(6) The MAC address of the upper level device is going to setup like the MAC address of the router. Enter the upper level device's **WDS settings** page, and input router's MAC address. Click **Apply Changes** to save the setting data.



(7) After initiating the upper level device, please check Local Area Connections. Click Supports to check out the IP address which is assigned by upper level device.




(8) You can input http://192.168.1.1 in IE browser to enter the GUI page of upper level device and make sure the connection.

### 5.2.6 WPS

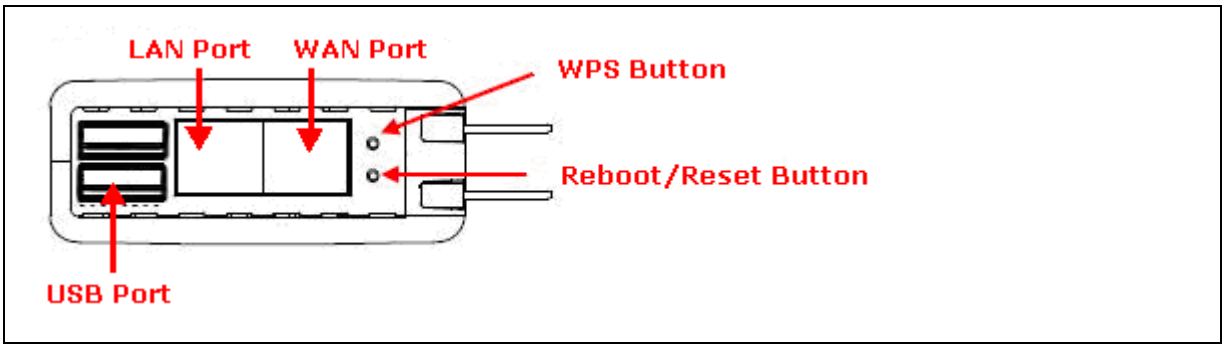
Wi-Fi Protected Setup, it can simplify the procedures of wireless encryption between CWR-935M and wireless network card. If the wireless network card also supports WPS function, users can activate WPS auto-encryption to speed up the procedures.

WPS supports 2 models: PIN (Personal Information Number) and PBC (Push Button Configuration). These models are approved by the Wi-Fi Alliance.

**PIN model**, in which a PIN has to be taken either from a sticker label or from the web interface of the WPS device. This PIN will then be entered in the AP or client WPS device to connect.

**PBC model**, in which the user simply has to push a button, either an actual or a virtual one, on both WPS devices to connect.

*The following figure is the display of the front of CWR-935M.




When users select a specific model on wireless base station, the clients can connect to the base by selecting the same model.

The connection procedures of PIN and PBC are almost the same. The small difference between those two is:

Users input the PIN of wireless card in the base station first; it will limit the range of the clients. It is faster to establish a connection on PIN model.

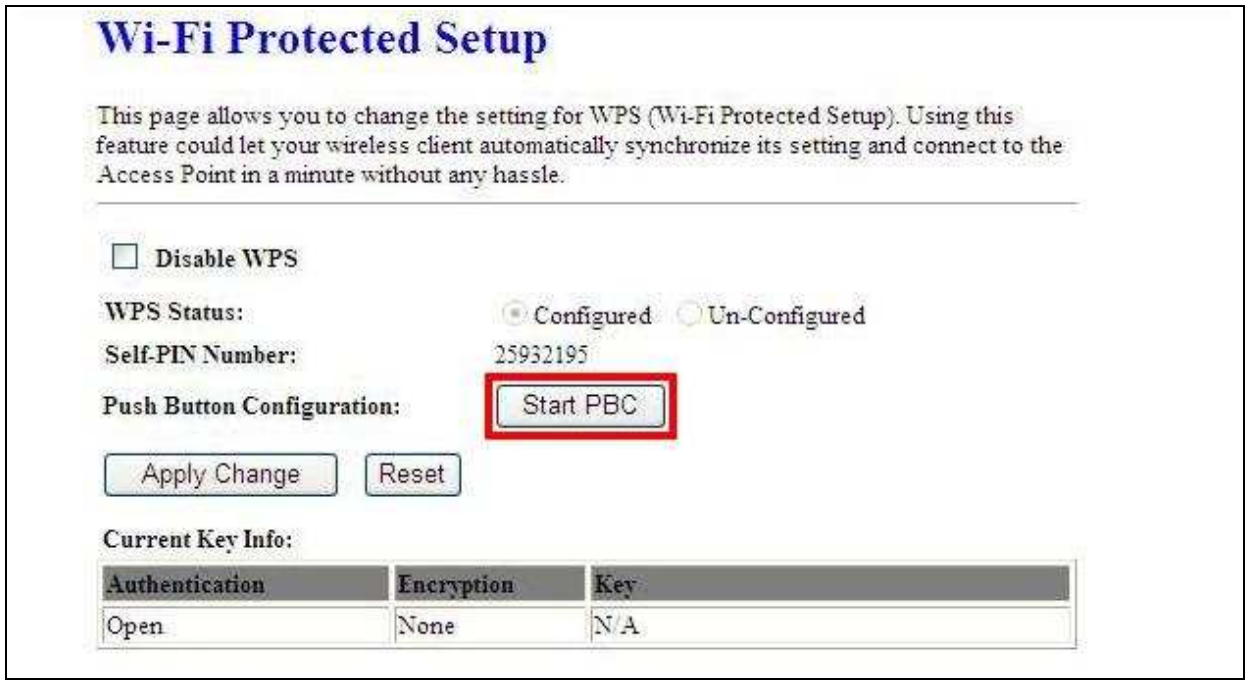
On PBC model, users push the WPS button to activate the function, and then the wireless client must push the WPS button in 2 mins to enter the network. The client will search to see if there is any wireless base station which supports WPS is activating. If the client finds a matching base, the connection will be established. The speed of establishing a connection is slower than the PIN model because of this extra step.

On the other hand, users need to input the information of the wireless card into the register interface. It might lead to the failure of connection, if users make mistakes on inputting. On PBC model, users only need to click the WPS button on both sides to make a connection. It is easier to operate.

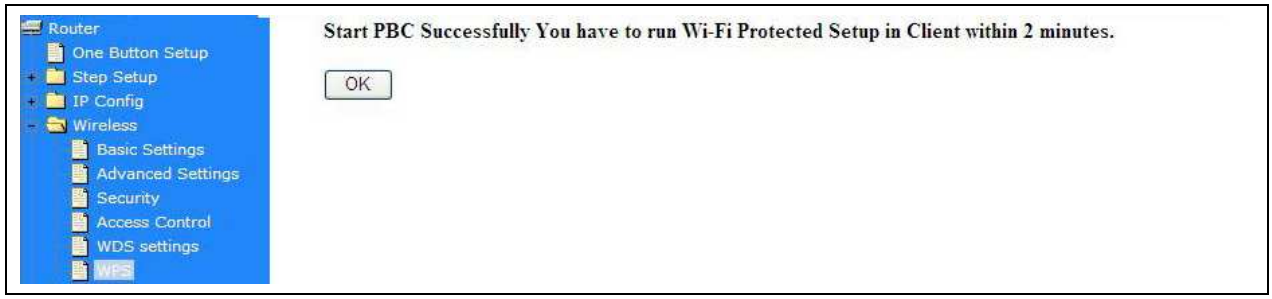
This page supports **Start PBC** and **Start PIN**; please follow the instructions to operate.

* Start PBC:

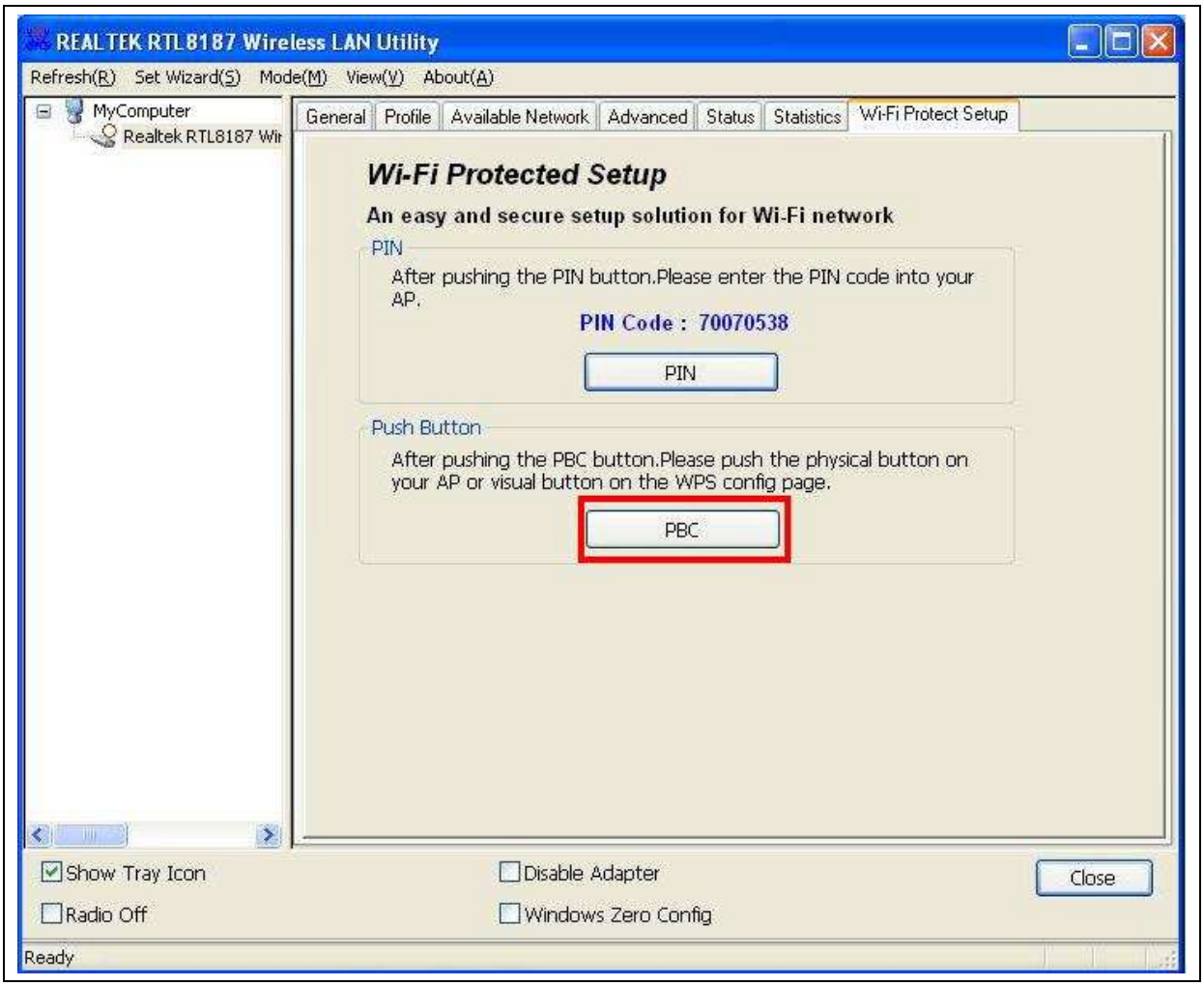
(1) Please click **Start PBC** to connect to the wireless network card.



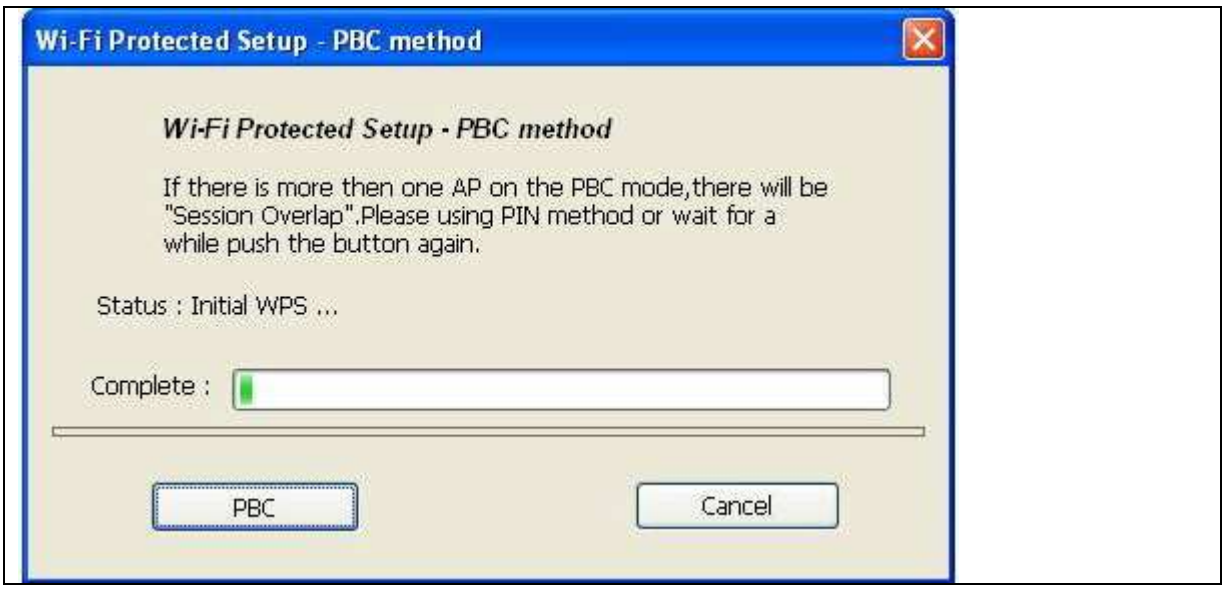

(2) Please click **OK** to start WPS process..



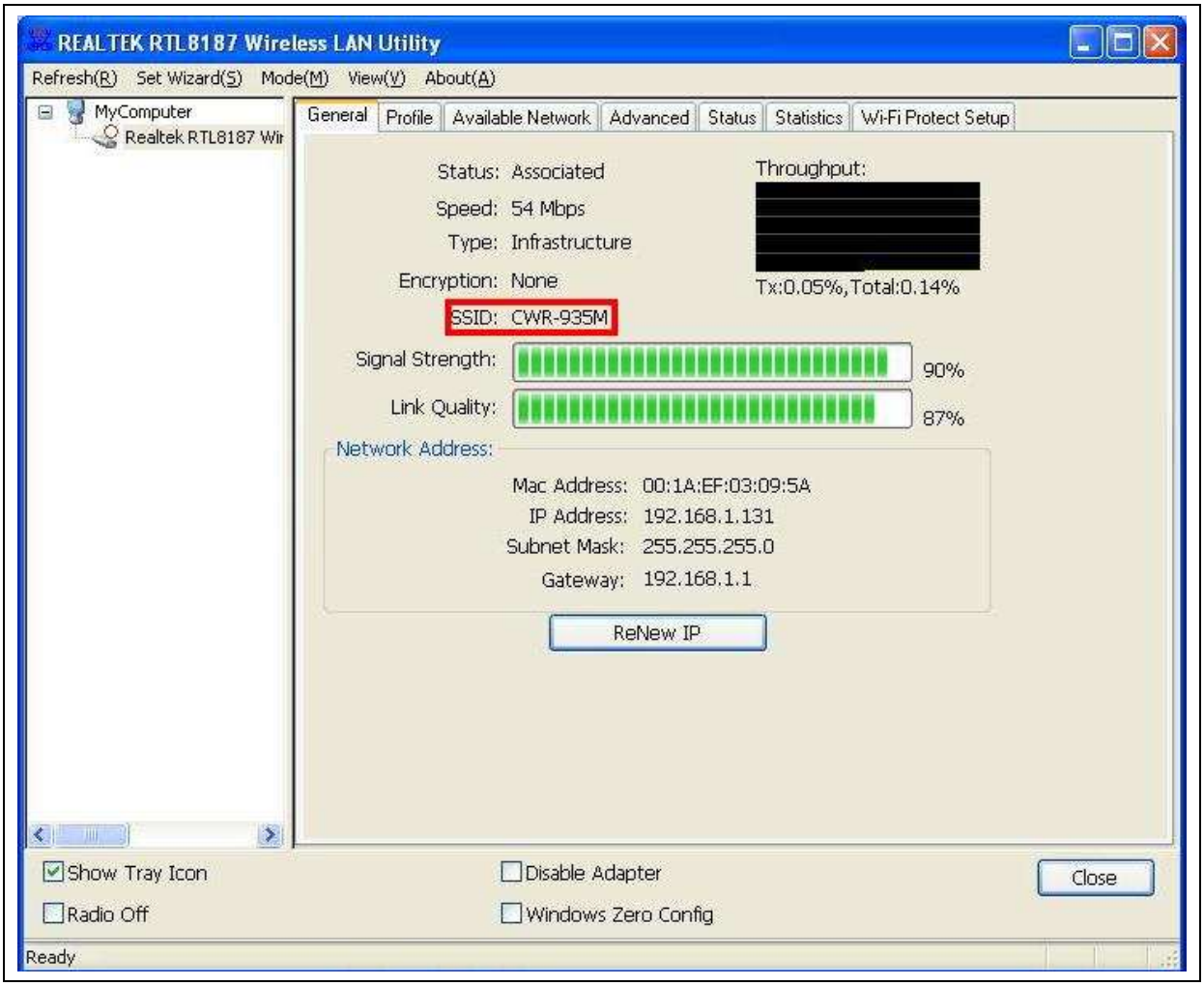
(3) Open the configuration page of the wireless card which supports WPS. Click the **Wi-Fi Protect Setup**, and then click **PBC** to make a WPS connection with AP from the WPS AP list (PBC-Scanning AP).



(3) Dongle starts WPS process.

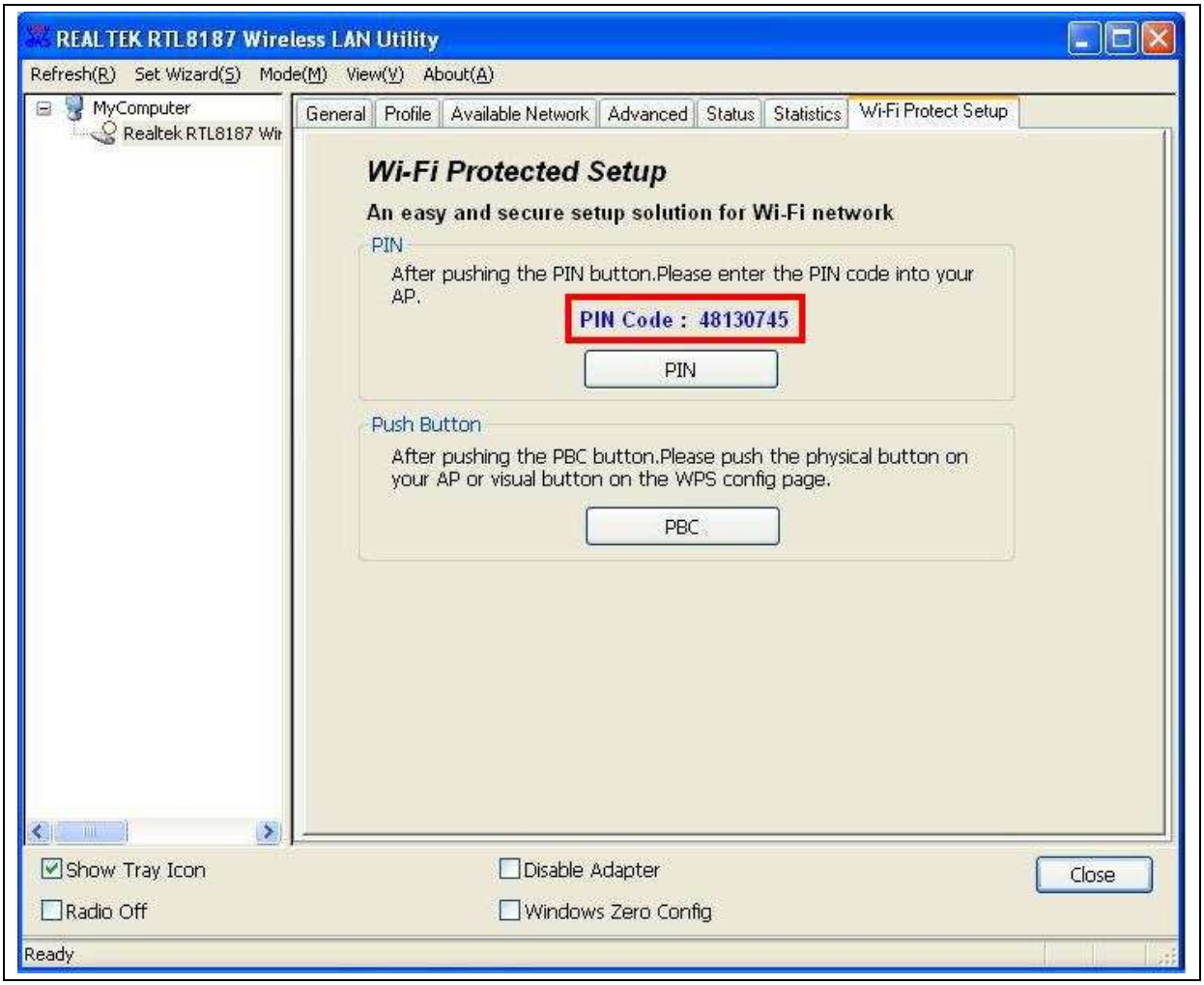



(3) After finish WPS configure successful, Wireless USB Dongle will get network information from CWR-935M. It means the WPS connection between wireless card and CWR-935M is established.

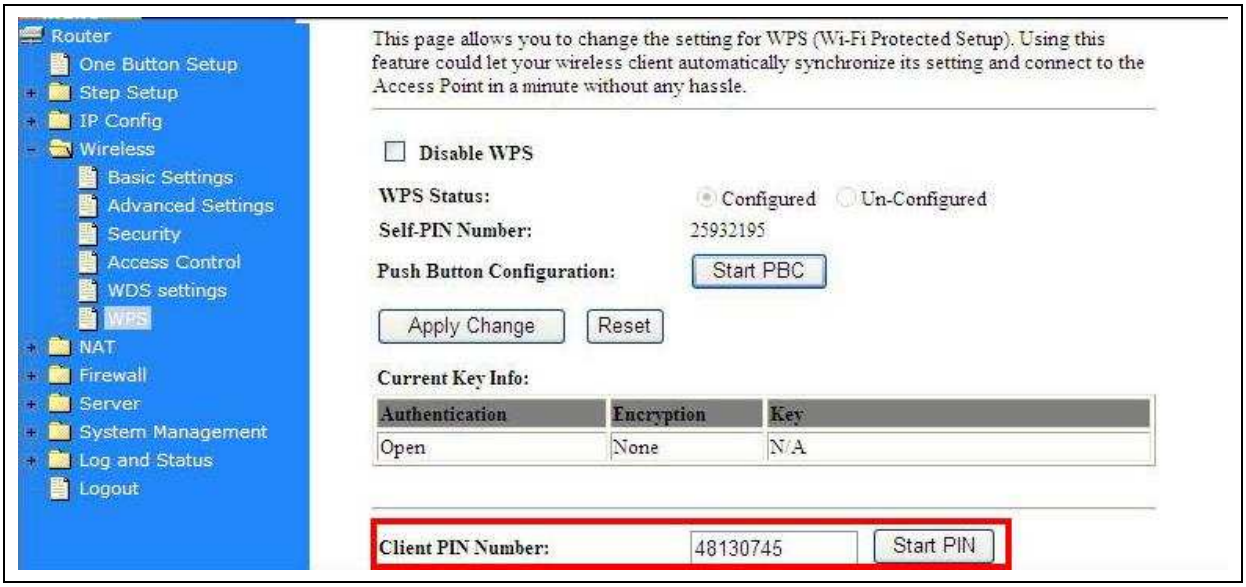


* Start PIN:

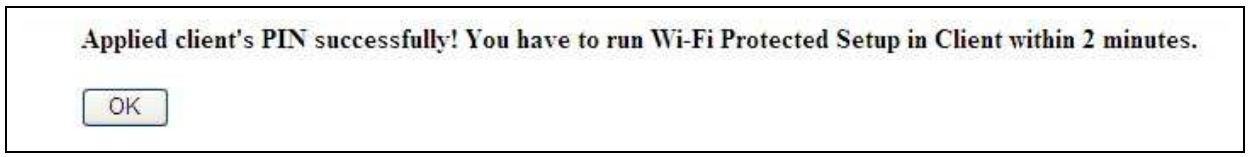
(1.) Please open the configuration page of the wireless card to get a PIN number, and write it down.



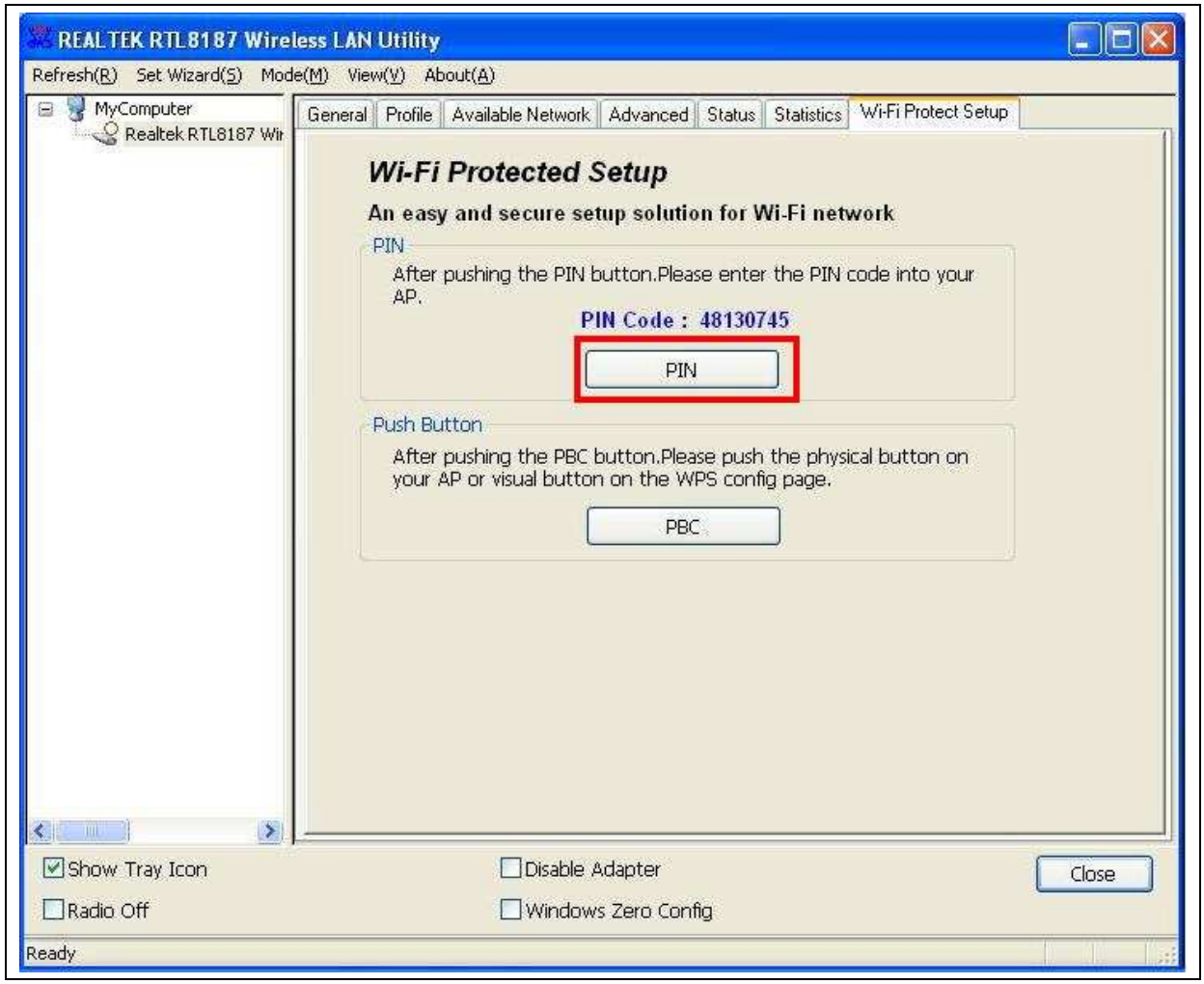

(2) Open the Wi-Fi Protected Setup configuration page of CWR-935M, input the PIN number from the Wireless card then click **Start PIN**.



(3) Click **OK** to starts process.



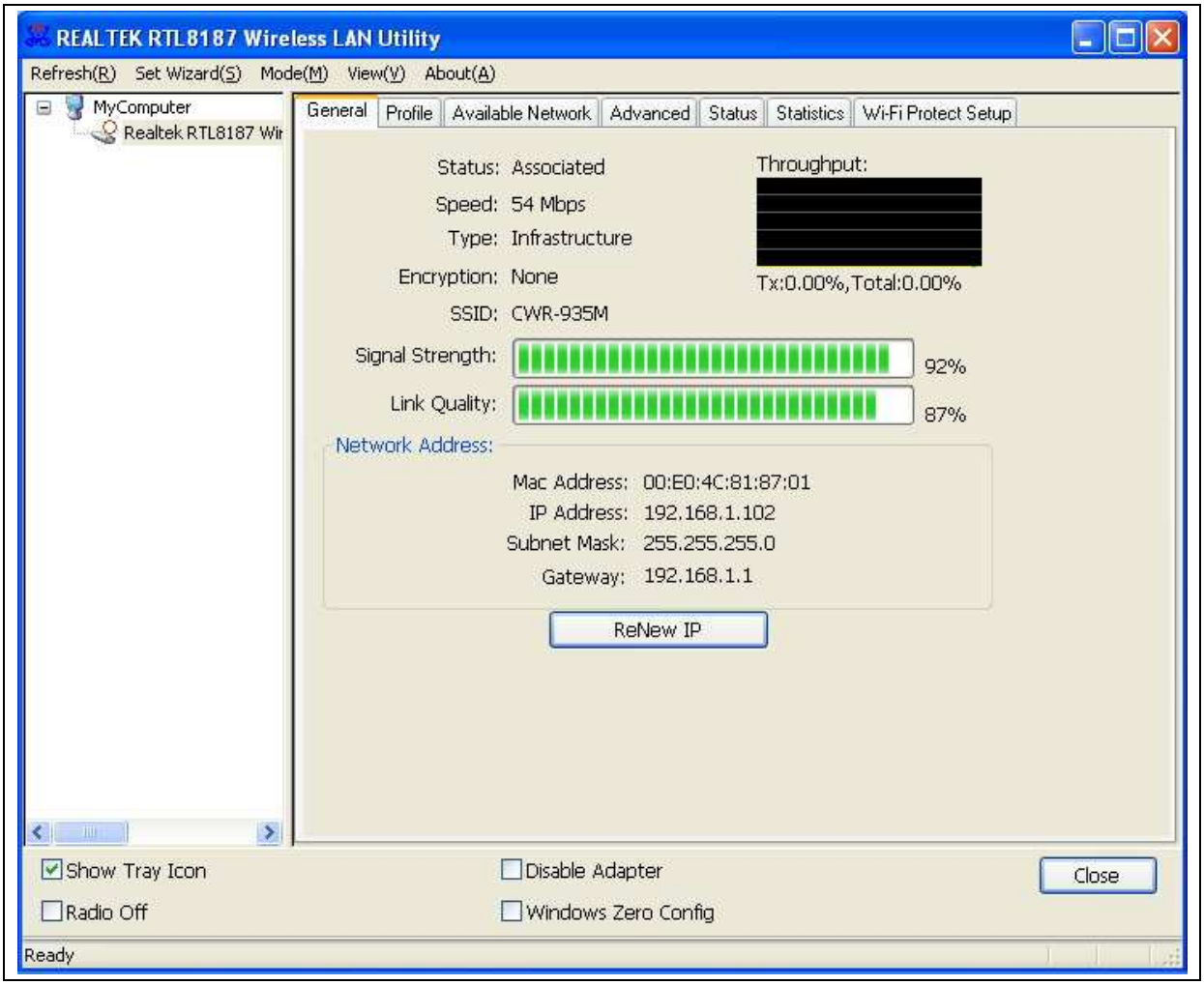

(4) Open the configuration page of the wireless card which supports WPS. Click the **PIN** to make a WPS connection with AP from the WPS AP list (PIN-Begin associating to WPS AP).



(5) Click **No,** then USB Dongle starts WPS Process.


(5) WPS process. .

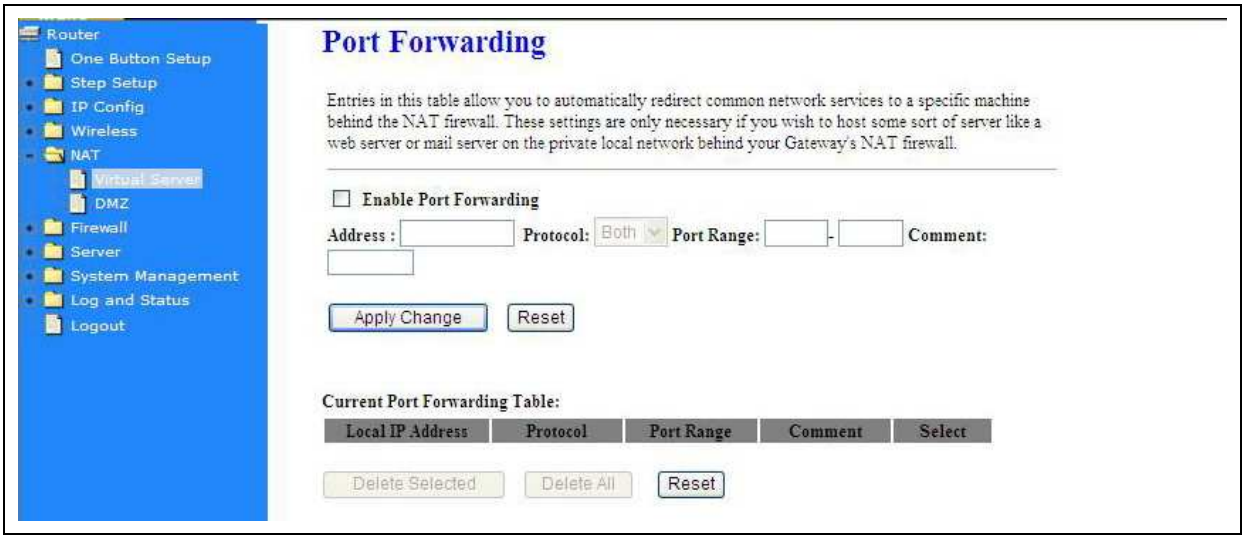

(6) When you see the following page, USB Dongle already connect to CWR-935M via WPS function.




## 5.3 NAT

### 5.3.1 Visual Server

Port forwarding service is to transfer packets from specific ports to corresponding IP address on local area network.



| Item | Description |
|---|---|
| Enable Port Forwarding | Please select to enable Port Forwarding service or not. |
| IP Address | Please specify the IP address which receives the incoming packets. |
| Protocol | Please select the protocol type. |
| Port Range | Please enter the port number, for example 80-80 or 20-22 |
| Comment | You can add comments for this port forwarding rule. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |
| Current Port Forwarding Table | It will display all port forwarding regulation you made. |
| Delete Selected & Delete All | Click **Delete Selected** will delete the selected item. Click **Delete All** will delete all items in this table. |
| Reset | You can click **Reset** to cancel. |

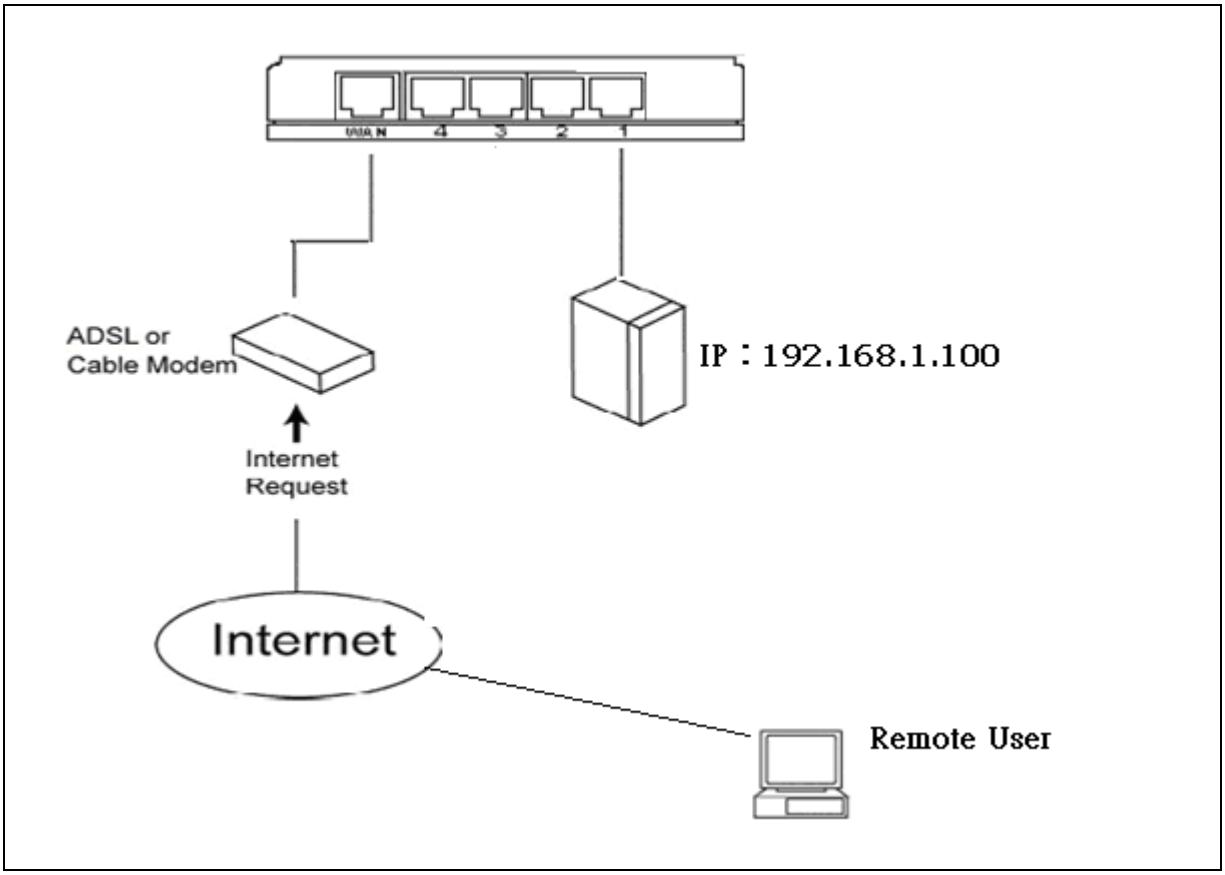
*The following figure shows the IP forwarding configuration of your web on a local area network. The web server is located on 192.168.1.100, forwarding port is 80, and type is TCP+UDP.

Configuration:

Private IP: 192.168.1.100

Port: 80 - 80

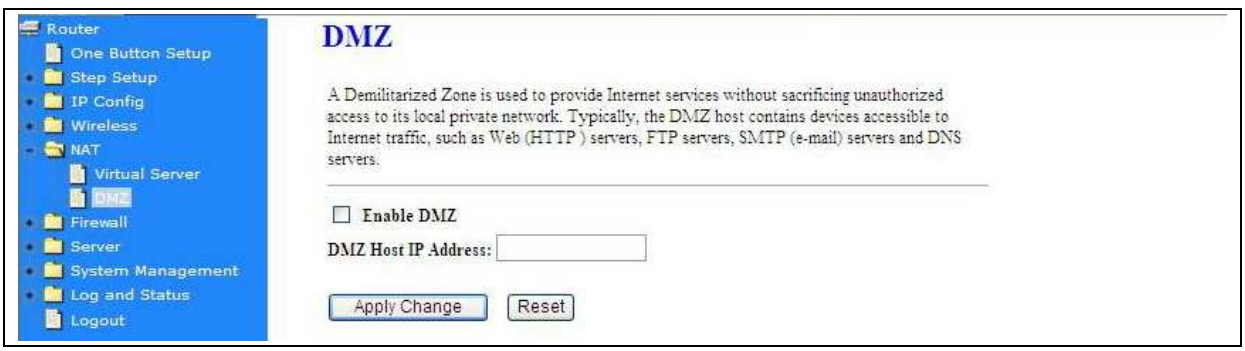
Type: TCP+UDP




### 5.3.2 Visual DMZ

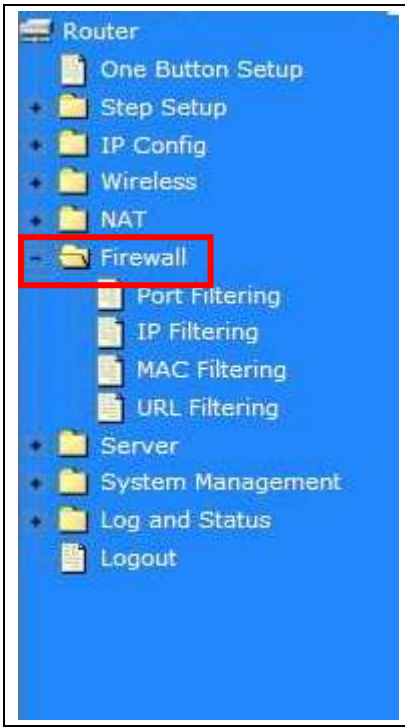
It will expose the computer which users enable the DMZ settings. All packets from the Internet will be forwarding to this computer. It is useful for specific applications, but please be careful to establish it.

DMZ (Demilitarized Zone) Host is a zone that is not limited by the firewall service. DMZ allows you to redirect the packets from specific IP address to WAN IP address. An external attacker only has access to equipment in the DMZ, rather than the whole of the network, and internal users can access to this equipment.



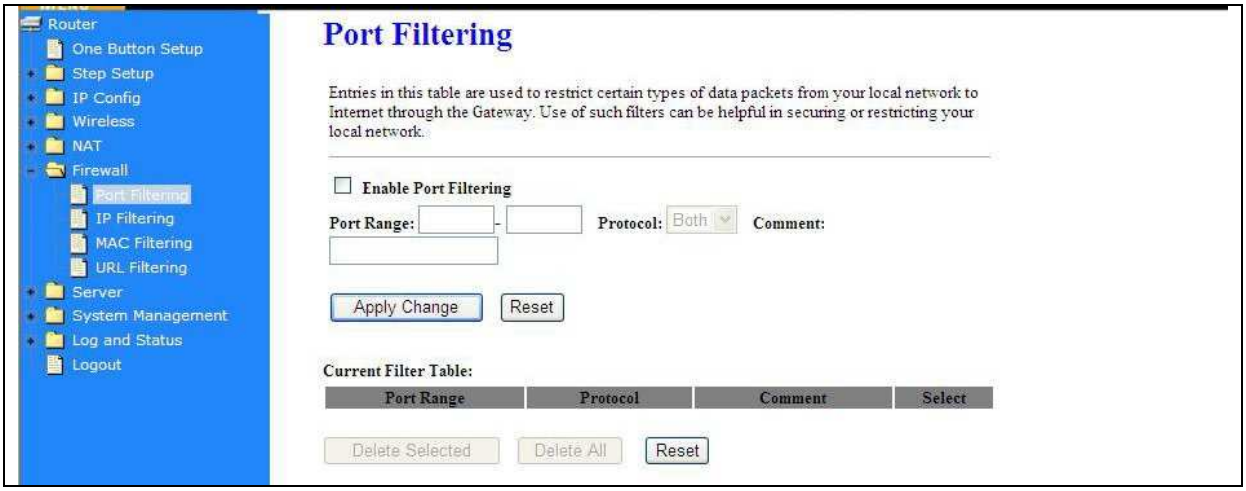
| Item | Description |
|---|---|
| Enable DMZ | It will enable the DMZ service if you select it. |
| DMZ Host IP Address | Please enter the specific IP address for DMZ host. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

## 5.4 Firewall



### 5.4.1 Port Filtering

This function allows users to filter and manage specific ports; to limit the use of certain applications to transmit through a specific port. Port filtering helps users to improve the security of your network.

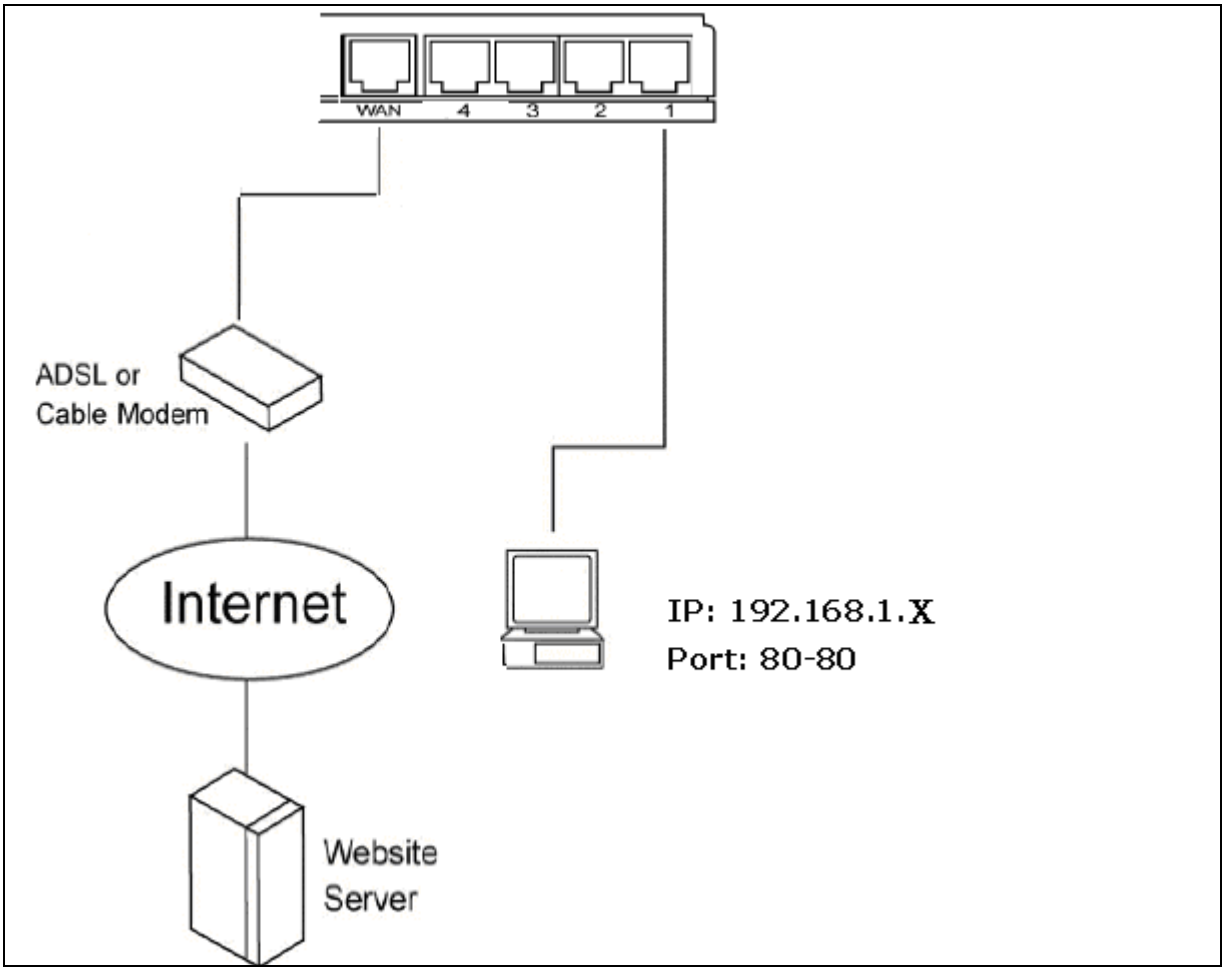



| Item | Description |
|---|---|
| Enable Port Filtering | Please select **Enable Port Filtering** to filter ports. |
| Port Range | Please enter the port number that needs to be filtered. |
| Protocol | Please select the protocol type of the port. |
| Comment | You can add comments for this regulation. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |
| Current Filter Table | It will display all ports that are filtering now. |
| Delete Selected & Delete All | Click **Delete Selected** will delete the selected item. Click **Delete All** will delete all items in this table. |
| Rest | You can click **Reset** to cancel. |

* The following figure shows a user limits some applications to use the 80 port.

IP: 192.168.1.X

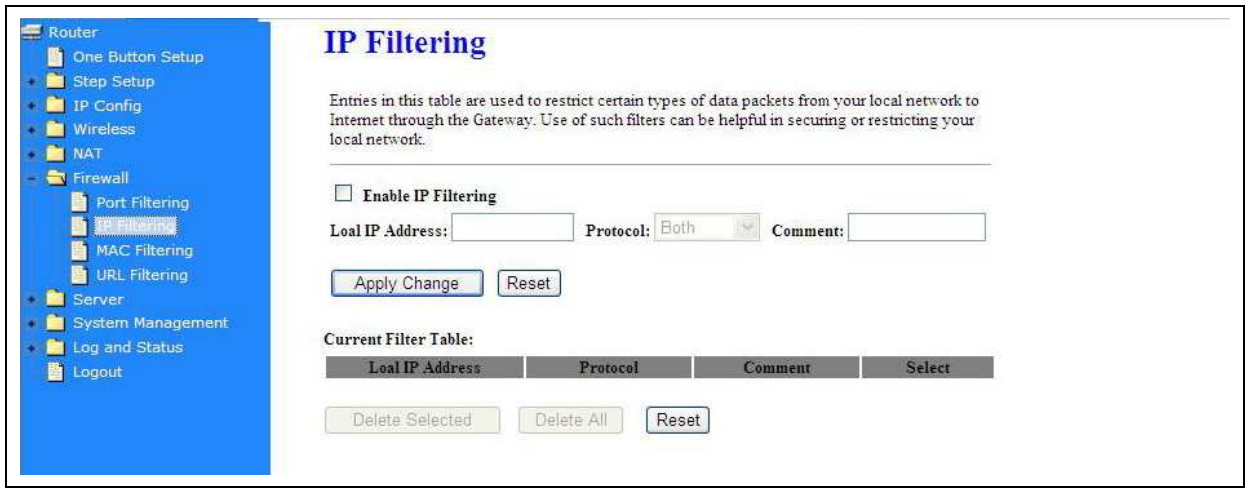
Port: 80-80




*All clients inside the local area network can't open the 80 port through this router.

### 5.4.2 IP Filtering

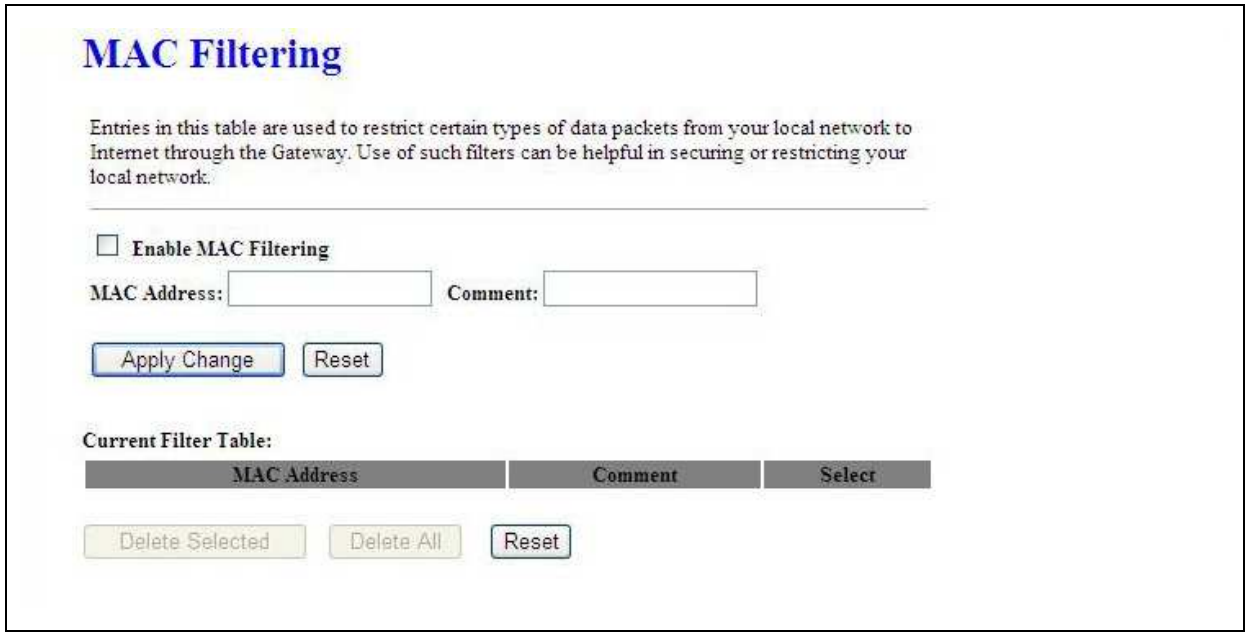
This function can limit a specific IP address to access the Internet. The computer, whose IP address is listed on filter table, will be denied the access request by router. This protocol is made base on Internet Protocol and Transmission Control Protocol.



| Item | Description |
|---|---|
| Enable IP Filtering | Please select **Enable IP Filtering** to filter IP addresses. |
| Local IP Address | Please enter the IP address that needs to be filtered. |
| Protocol | Please select the protocol type of the IP address. |
| Comment | You can add comments for this regulation. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |
| Current Filter Table | It will display all ports that are filtering now. |
| Delete Selected & Delete All | Click **Delete Selected** will delete the selected item. Click **Delete All** will delete all items in this table. |
| Rest | You can click **Reset** to cancel. |

### 5.4.3 MAC Filtering

This function can limit a specific MAC address to access the Internet. The network card, whose MAC address is listed on filter table, will be denied the access request by router.

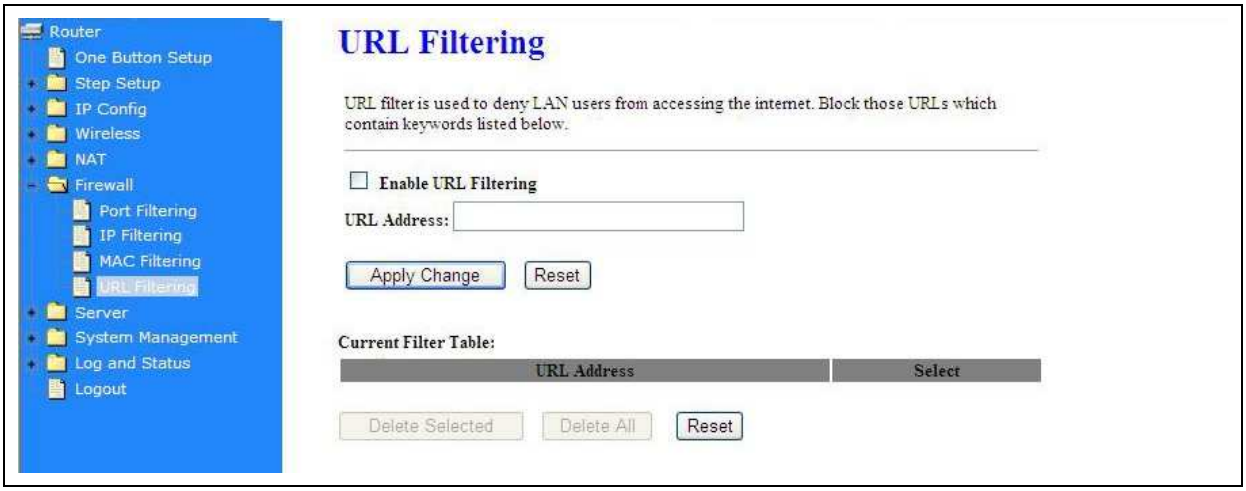



| Item | Description |
|---|---|
| Enable MAC Filtering | Please select **Enable MAC Filtering** to filter MAC addresses |
| MAC Address | Please enter the MAC address that needs to be filtered. |
| Comment | You can add comments for this regulation. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on |

| | |
|---|---|
| | **Reset** to clear all the input data. |
| Current Filter Table | It will display all ports that are filtering now. |
| Delete Selected & Delete All | Click **Delete Selected** will delete the selected item. Click **Delete All** will delete all items in this table. |
| Rest | You can click **Reset** to cancel. |

### 5.4.4 URL Filtering

This function is used to block users trying to access some webs with specific key words. Please enter the URL of the web in **URL Address** field.




| Item | Description |
|---|---|
| Enable URL Filtering | Please select **Enable MAC Filtering** to filter MAC addresses |
| URL Address | Please enter the MAC address that needs to be filtered. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |
| Current Filter Table | It will display all ports that are filtering now. |
| Delete Selected & Delete All | Click **Delete Selected** will delete the selected item. Click **Delete All** will delete all items in this table. |
| Rest | You can click **Reset** to cancel. |

Caution: This function is not in effect when the Visual Server is enabled. Please disable Visual Server before activate filter.

## 5.5 Server

CWR-935M provides Samba Server, FTP Server, Web Camera Server, and Printer Server Application.

### 5.5.1 Samba Server

Support NetBIOS Protocol, the consumer sharing file or printer which provides as the "**My Network Places**". Please make sure storage devices and printers are connecting to USB ports on the router and already mounting.

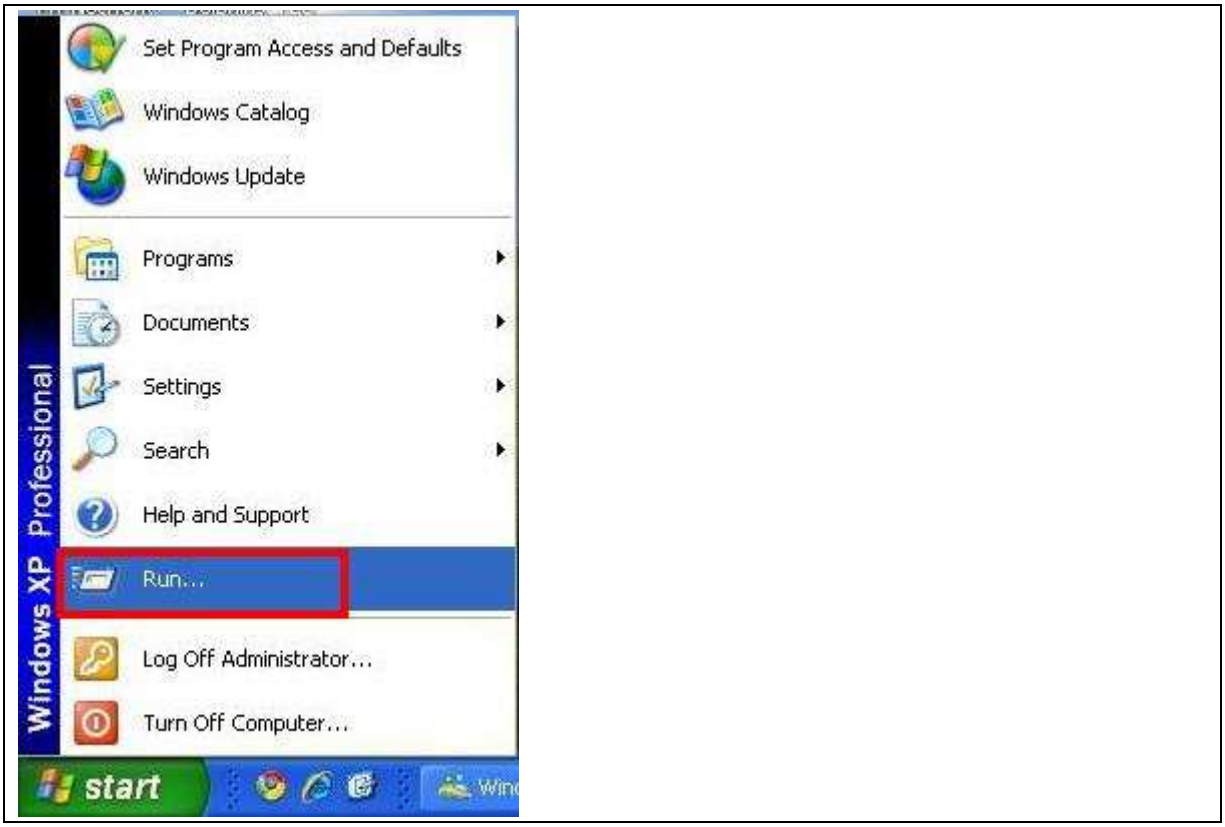

| Item | Description |
|---|---|
| Enable Samba Server | Enable or disable this function. |
| Workgroup Name | Input the workgroup name, default is "**Workgroup**". |
| Server Name | Input the server name, default is "**CWR-935M**". |
| Server Description | You can input description of the server. |
| Apply Changes & Reset | Click on **Apply** button to finish setting. Click on **Reset** button to clean the setting on this page. |

#### 5.5.1.1 How to enter the sharing folder

Please follow below steps.

Step 1:

Please click the “**start**”, and select “**Run**”.

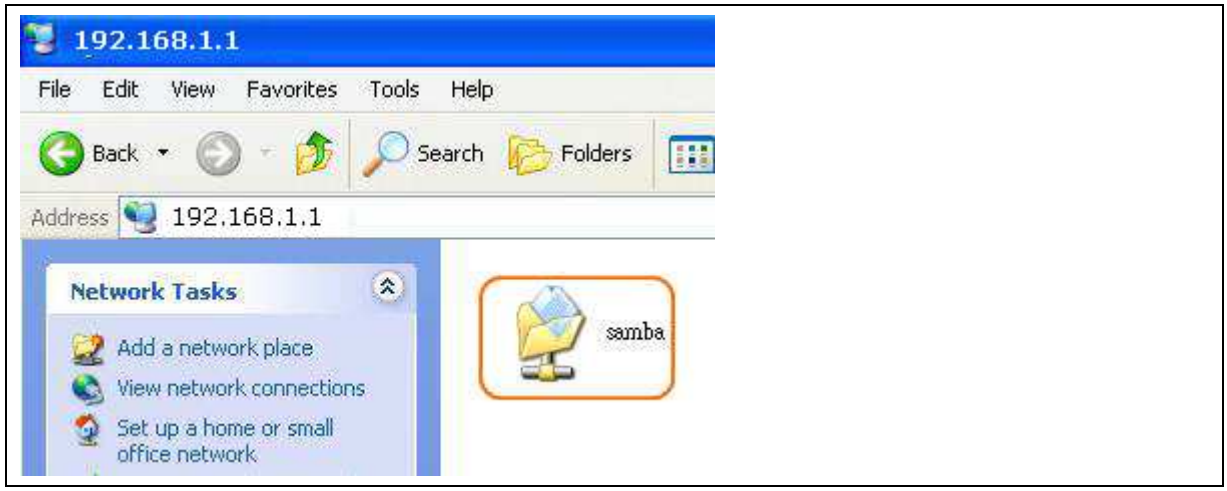



Step 2:

In the Address blank input the IP address: \\192.168.1.1.

Step 3:

Appear following menu, can open following to share internal data.

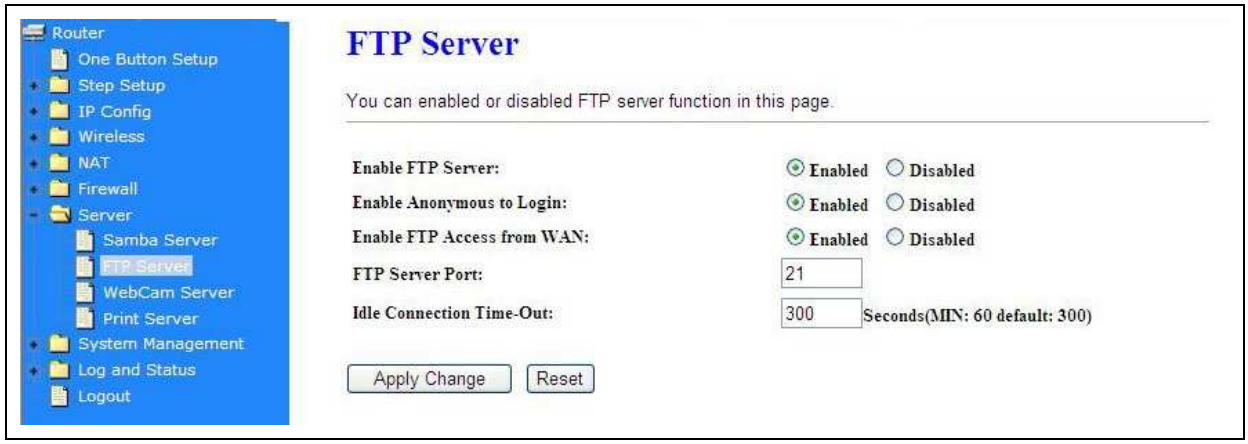



Note：

1. If connected USB flash or HDD, and then enable samba server function, it will appear a samba folder.
2. If connected USB printer, and then enable printer server function, it will appear a printer icon.

### 5.5.2 FTP Server

FTP Server utility allows both local and remote users to upload or download files, pictures or MP3 music form the same storage device. Before configure FTP Server, please make sure the storage device is properly plug into any USB port on the router and make sure this USB storage device is detected by the router.



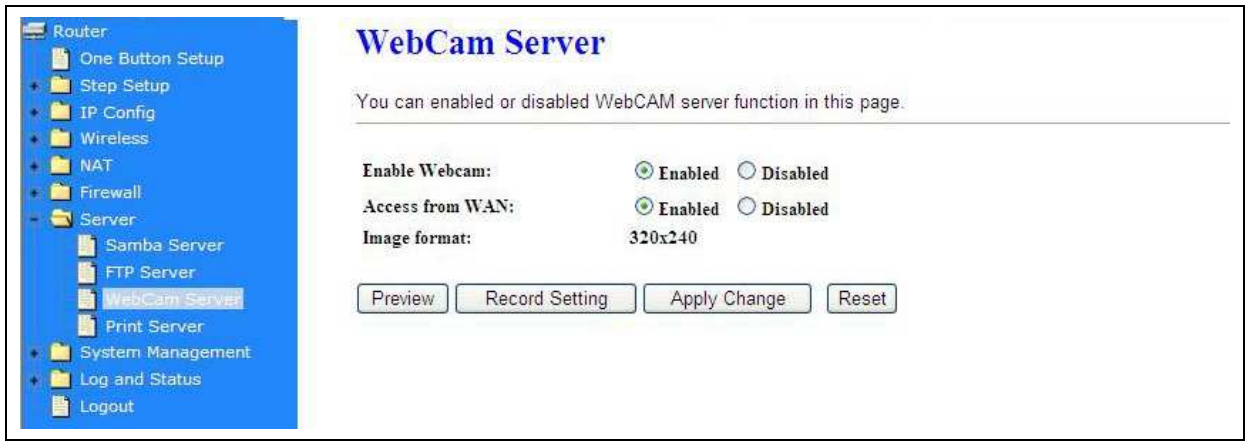
| Item | Description |
|---|---|
| Enable FTP Server | Select to “**Enable**” or “**Disable**” FTP server. |
| Enable Anonymous to Login | Allow anonymous to login after check on Enable. |
| Enable FTP Access from WAN | Allow FTP access from WAN side by checking on Enable for this item. |
| FTP Server Port | The default is 21. Define the FTP command transfer service port. If you want to change this port number, remember to change the service port setting of your FTP client, also. |
| Idle Connection Time-Out | When a specific time value is added, FTP Server will be de-activated if it has no activity within the time limit. The default is 300 seconds; the minimum is 60 seconds. |
| Apply & Cancel | Click on **Apply** button to finish setting. Click on **Reset** button to clean the setting on this page. |
| User Account List | User Name, Status, and Opened Directory/File can be shown on the list. |

Note：
1. FTP server is compatible with FAT32 or EXT3 format USB storage device. In case you need to format your USB storage device. Please always make sure the device is formatted with FAT32 or EXT3 standard.
2. CWR-935M support USB storage up to 1TB with NTFS format and 250GB with EXT3

### 5.5.3 Webcam Server

By connecting web camera to the router, it allows user to monitor their home or office from remote locations.

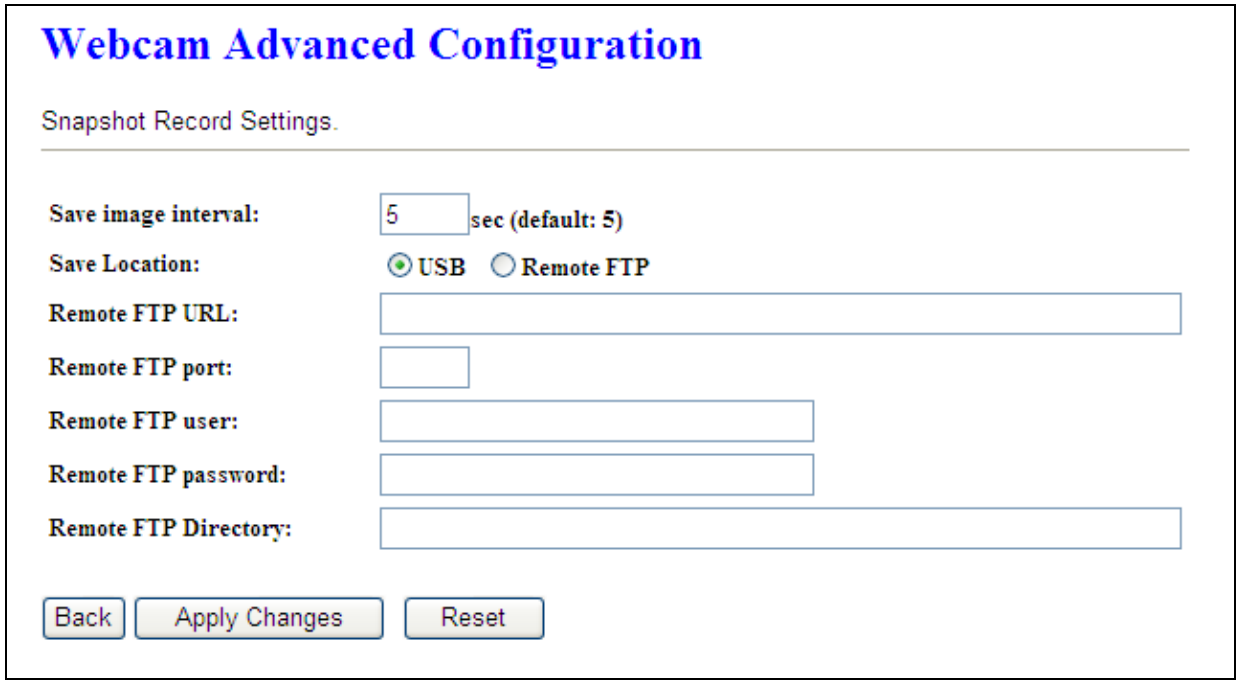
#### 5.5.3.1 Webcam Server Basic Setting



| Item | Description |
|---|---|
| Enable Webcam Server | Select to “**Enable**” or “**Disable**” webcam server. |
| Access from WAN | Allow webcam can access from WAN side by checking on Enable for this item |
| Image format | The format is 320 x 240 pixels |
| Preview | Click on this button, you can preview the image from webcam. |
| Record Setting | Please see the detail advance setting in “**5.5.3.2 Webcam Advanced Configuration**”. |
| Apply & Cancel | Click on **Apply** button to finish setting. Click on **Reset** button to clean the setting on this page. |

#### 5.5.3.2 Webcam Server Advanced Setting

Click on “**Record Setting**” button, and the screen will appear as below.




| Item | Description |
|---|---|
| Save image interval | For saving image, you can set the save interval time, the default value is 5 seconds. |
| Save Location | Set the save location for webcam image, you may save into **USB HDD** or **Remote FTP**; if select save to **Remote FTP**, please continue following remote FTP setting. |

| | |
|---|---|
| Remote FTP URL | Input the FTP URL for saving webcam image. |
| Remote FTP port | Input the FTP port number under URL to save image. |
| Remote FTP user | Input the users name you like and it will be used to save the webcam image into the FTP server. |
| Remote FTP password | Input the remote password. |
| Remote FTP Directory | To provide option of which folder should be used for saving webcam image. |
| Back | Click on **Back** button for returning to Webcam Basic Setting screen. |
| Apply & Cancel | Click on **Apply** button to finish setting. Click on **Reset** button to clean the setting on this page. |

### 5.5.3.3 Application of Web Camera

#### 5.5.3.3.1 Application of Web Camera

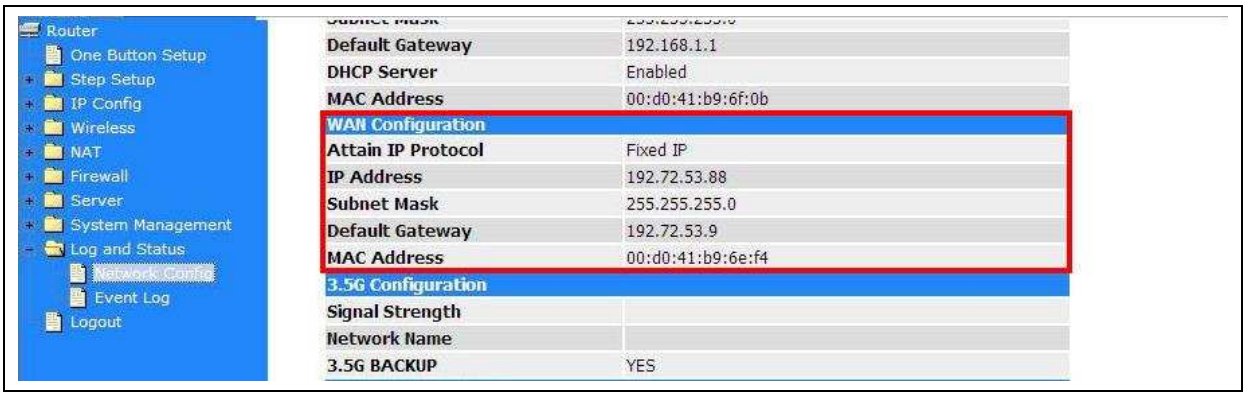
Monitor your home with a Webcam via CWR-935M. Take pictures via CWR-935M, also can do the monitoring or recording all images into the USB HDD for reviewing. Often marketed as surveillance tools for home or office security, network Webcams are now being employed by early adopters for more personal matters, such as watching kids and monitoring pets. The Webcam can be remotely accessed and controlled via a browser. Besides, to record and monitor live action with USB webcam, also can view the image through Internet browsers.

##### 5.5.3.3.1.1 Web Camera Monitoring via WAN connection

For viewing the image via webcam from WAN connecting, below is the diagram.

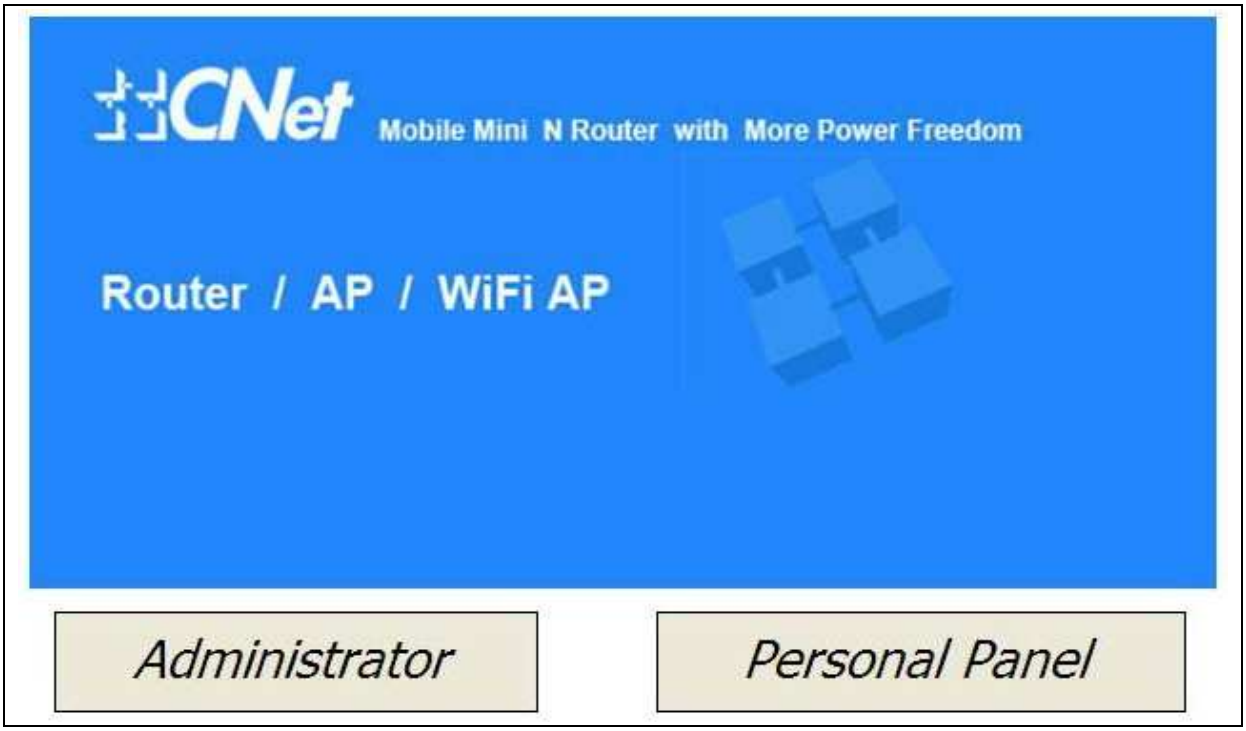
- **How to check your WAN IP address**

To monitor the image via webcam from outside door, you need to know the WAN IP address. Select "**Network Configuration**" under **Log & Status** in main Menu after connection, and you will see the WAN IP Address which used to connect to webcam screen. Here use 192.72.53.88 as example.



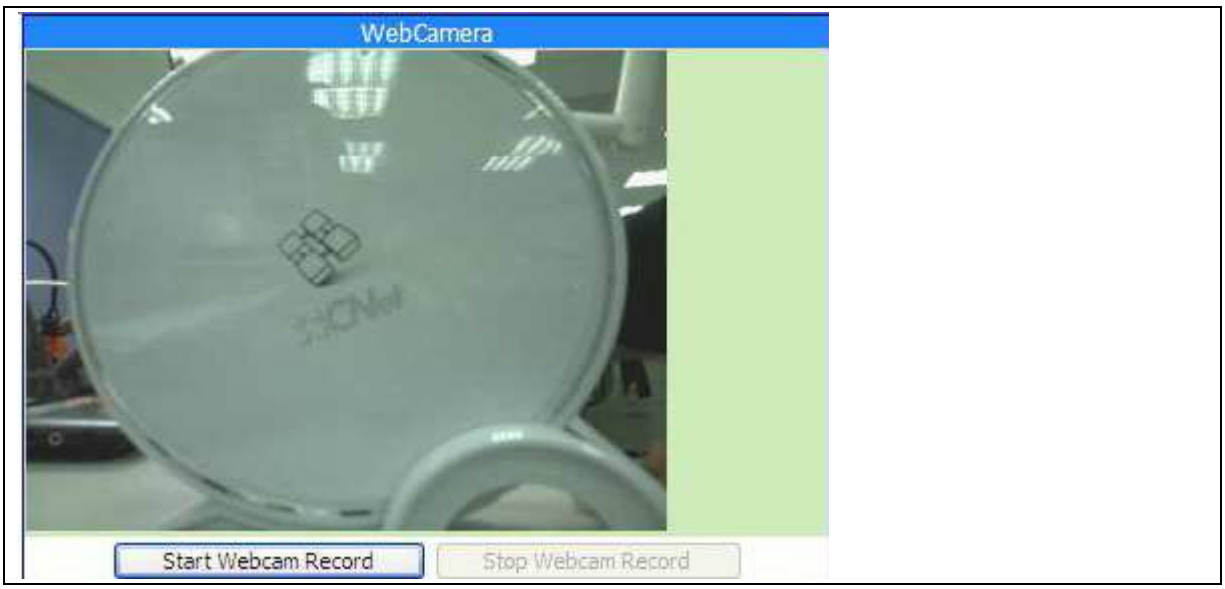
- **Monitor the image via webcam from WAN**

Input the WAN IP Address (as you see in above screen) into browser blanks, and you will see the personal account login screen appear then input your own user account and password. After login by **personal**, your will see the personal control panel screen as below, please click on "**My Webcam**".




Click on Personal Panel to enter.

There will be a pop-up screen showing the image from web camera as below example.

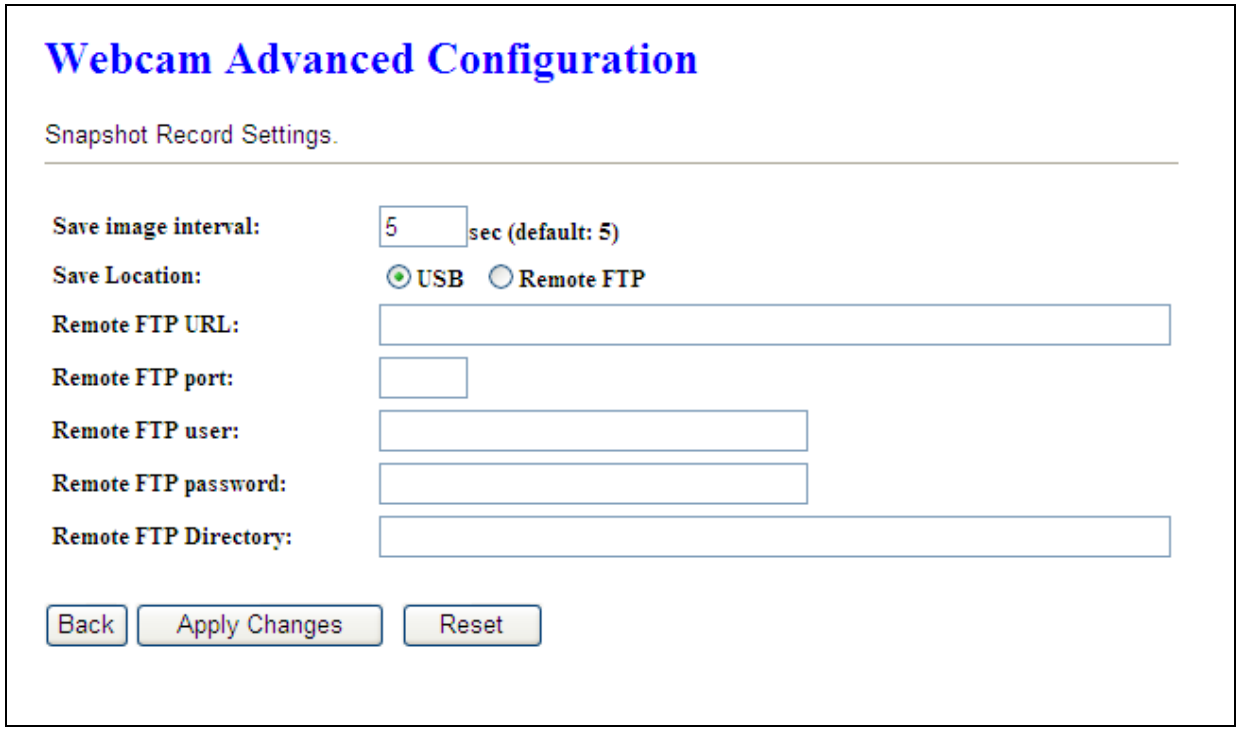



#### 5.5.3.3.2 Web Camera Recording

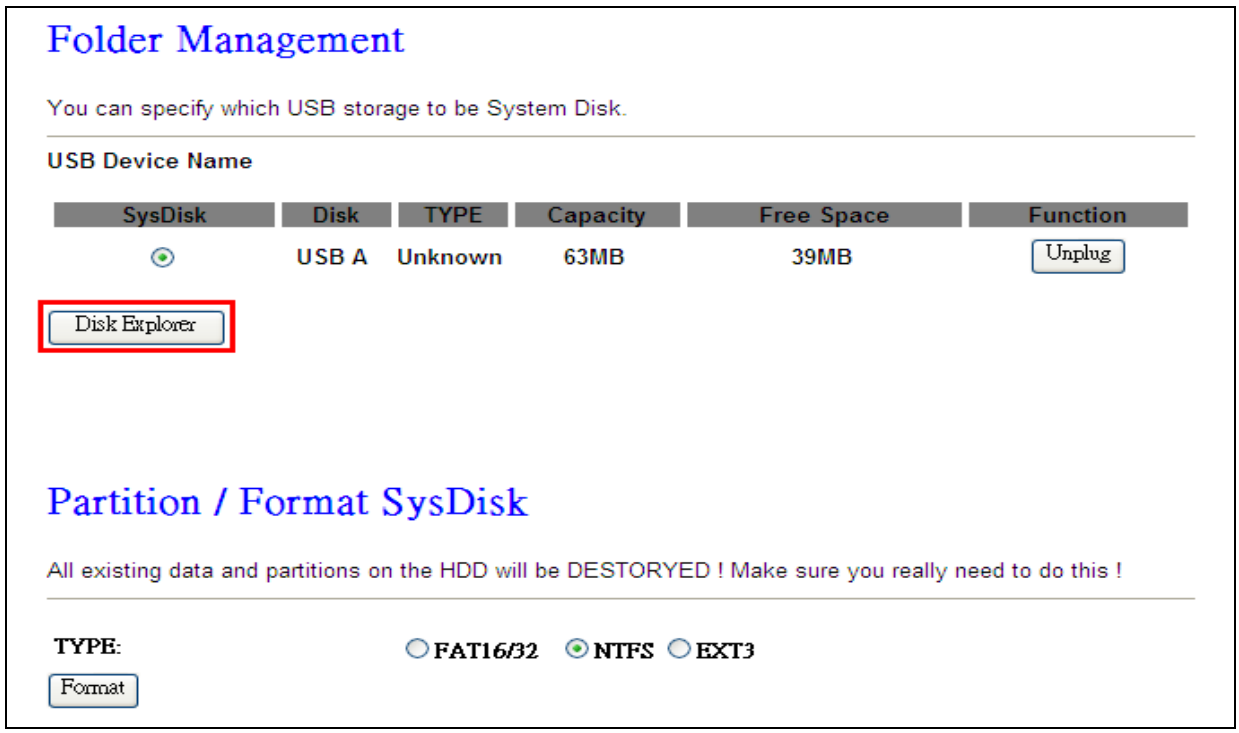
##### 5.5.3.3.2.1 Administrator

CWR-935M also can record the pictures from Webcam; only Administrator can do the settings. Select **Web Camera Server** from main Menu and Enable this function, click on **Record** setting button for further setting.

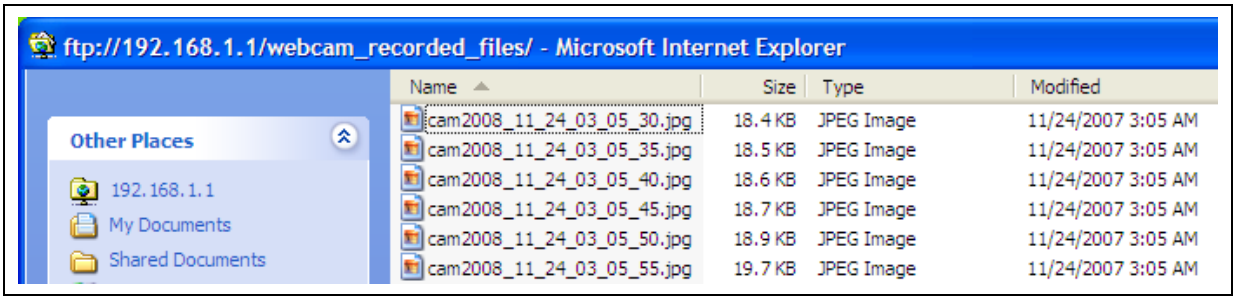
To setup the Webcam Advanced Configuration for each blank and the image from webcam will be recorded into your USB HDD or Remote FTP.




For administrator, you may view all the images from webcam recording, please select **Folder Management** and click on **Disk Explorer** to view entire folder inside the disk including webcam record files.



After click on **Disk Explorer**, you will see the folder screen appear including all the folders.


**5.5.3.3.2.2 Personal Application**

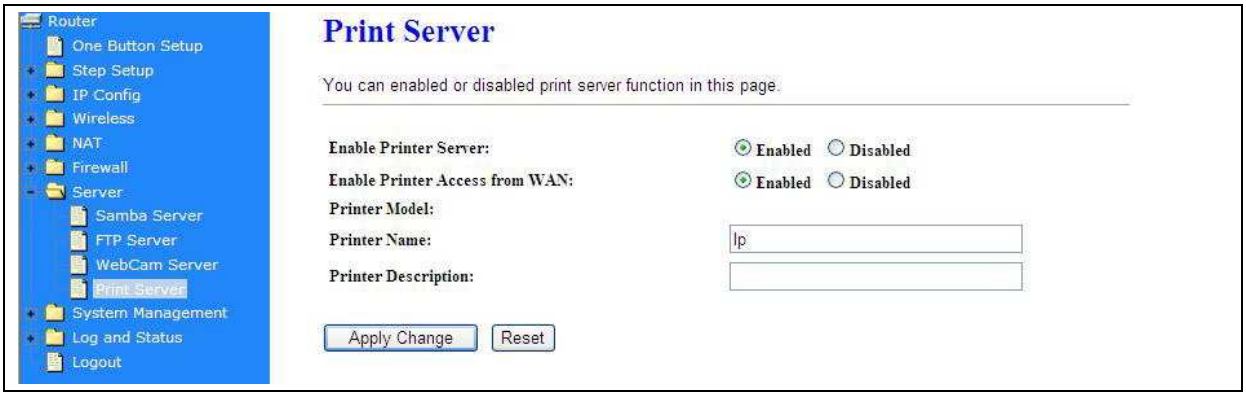
All the users under administrator's setting can view entire webcam recording images from **My Document**. Please login by your own personal account. For viewing your own folder, please click on "**My Document**".


After click on "**My Document**", you will see below folder screen appeared. You can save files here.

Note：If you can't open the folder inside the FTP server, please check with administrator to setup your FTP & Webcam's privileges.

### 5.5.4 Printer Server

The two USB ports on CWR-935M are for connection with printers to be shared on the local area network. Follow the below steps to setup your PC to connect to a Printer server.




| Item | Description |
|---|---|
| Enable Printer Server | Check **Enable** for applying printer server. |
| Enable Printer Access from WAN | Allow printer can access from WAN side by checking on **Enable** for this item. |
| Printer Model | The printer model will be shown when plug the USB printer. |
| Printer Name | Input the name of printer you like. |
| Printer Description | Input the description of printer as your demand. |
| Apply & Channel | Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page. |

Besides above setting finished, the printer setting on PC also needs to be set as follows.

#### 5.5.4.1 Printer Setting on PC

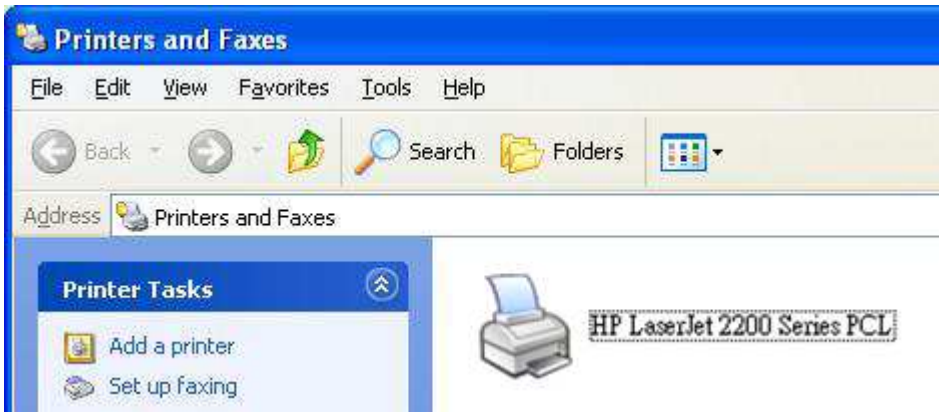
After Enable Printer Server in Quick Setup and Printer Server Configuration, please follow below steps to set the detail **LPR** settings in your PC. (Below example is for Windows XP platform.)

Step 1:

Please go to **Start** > **Printers and Faxes** to add a printer.


Step 2:

Click "**Add a printer**".

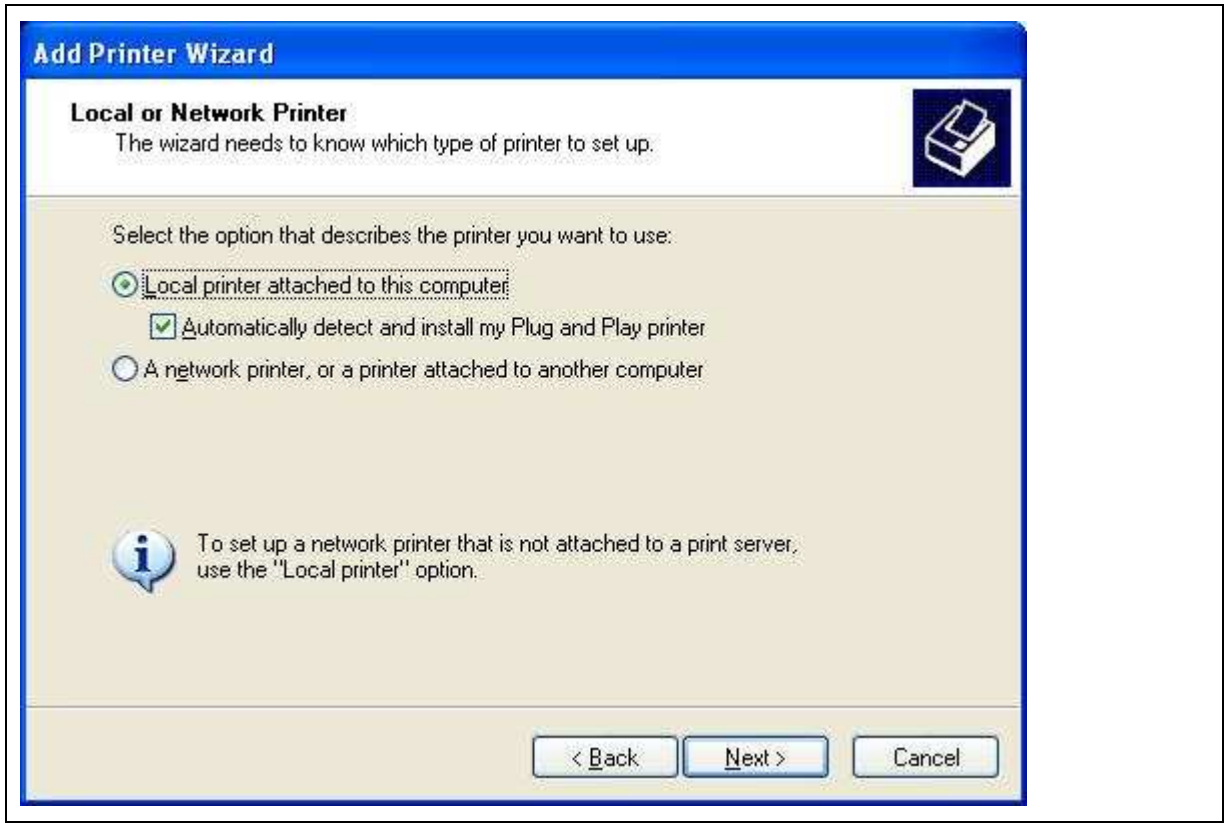


Step 3:

Click “**Next**”.

Step 4:

Click the “**Local printer attached to this computer**”, and then click “**Next**”.



Step 5:

Click the “**Create a new port**” and select the “**Standard TCP/IP Port**”, and then click “**Next**”.


Step 6:

Click “**Next**”.


Step 7:

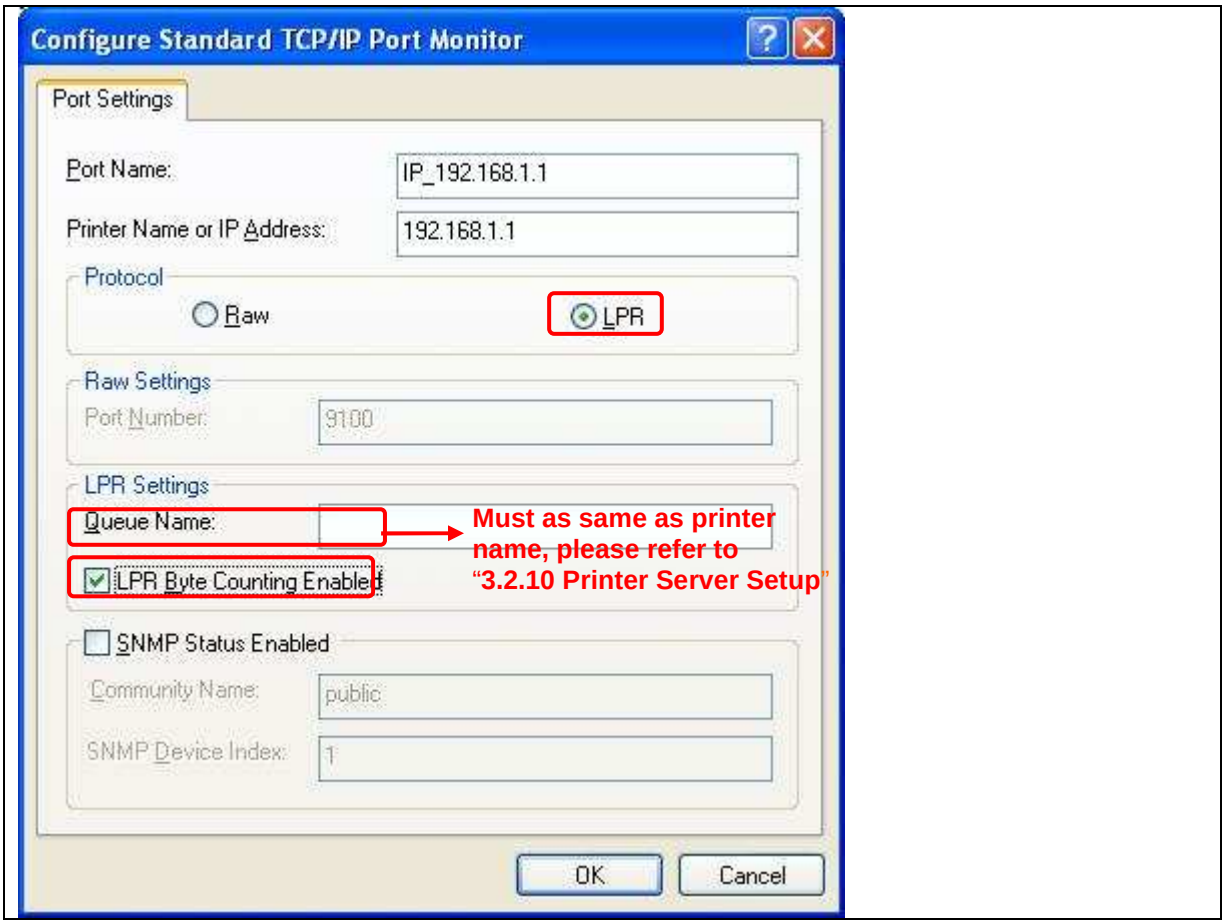
Input the IP address of CWR-935M: **192.168.1.1** (Router Mode), and then click "**Next**".

Step 8:

Select the “**Custom**” and click the “**Settings**”, and then click “**Next**”.

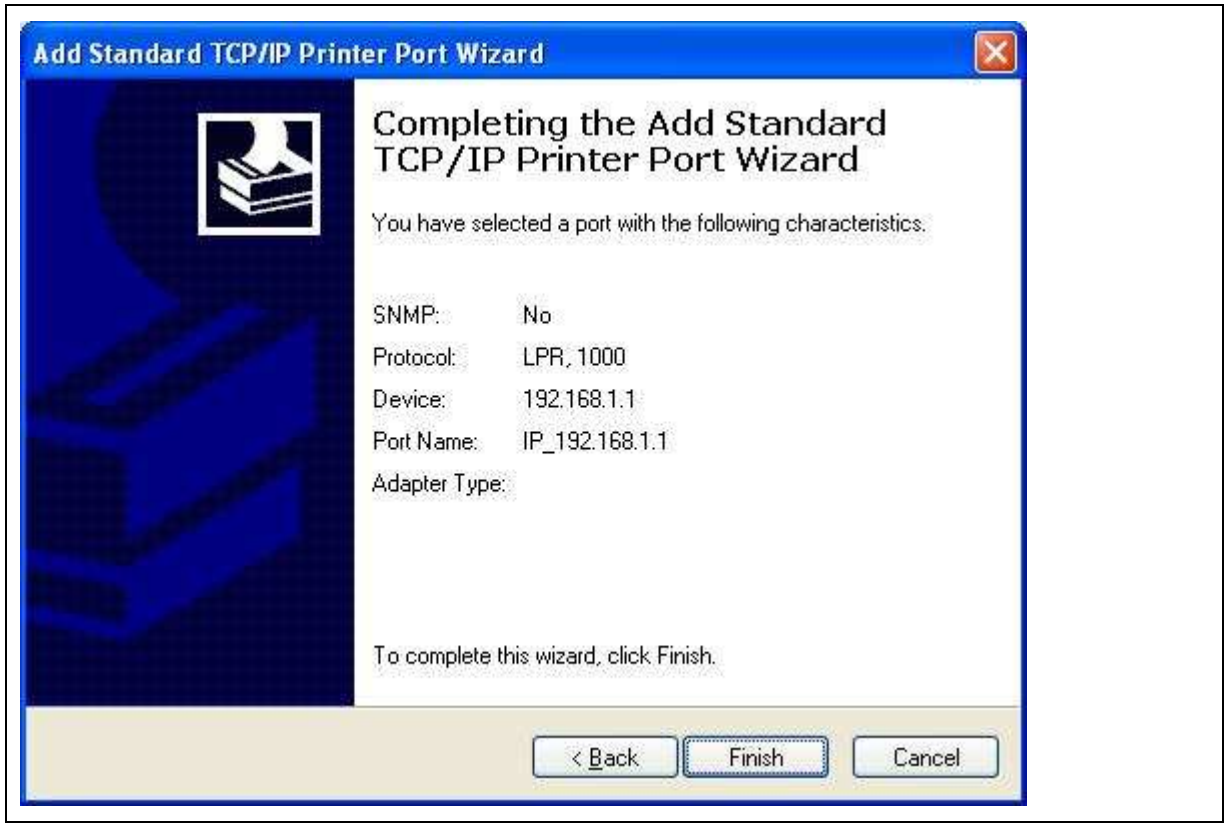
Step 9:

Select “**LPR**” and give it the same “**Queue Name**” as USB Printer Name as shown, and mark “**LPR Byte Counting Enabled**”. Finally, click on “**OK**” button.



Step 10:

Click the “**Finish**”.




Step 11:

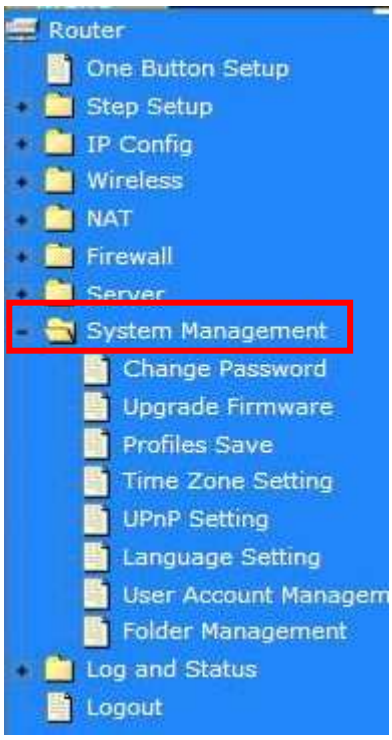
Select the “**Manufacturer**” and “**Printers**”. If your printer doesn’t listed in the table, please install its driver CD and then click on “**Have Disk…**” button for installation. Or click on “**Next**” button to finish the setting.


Step 12:

Click on **Finish** button and all steps of setting printer server are completely.

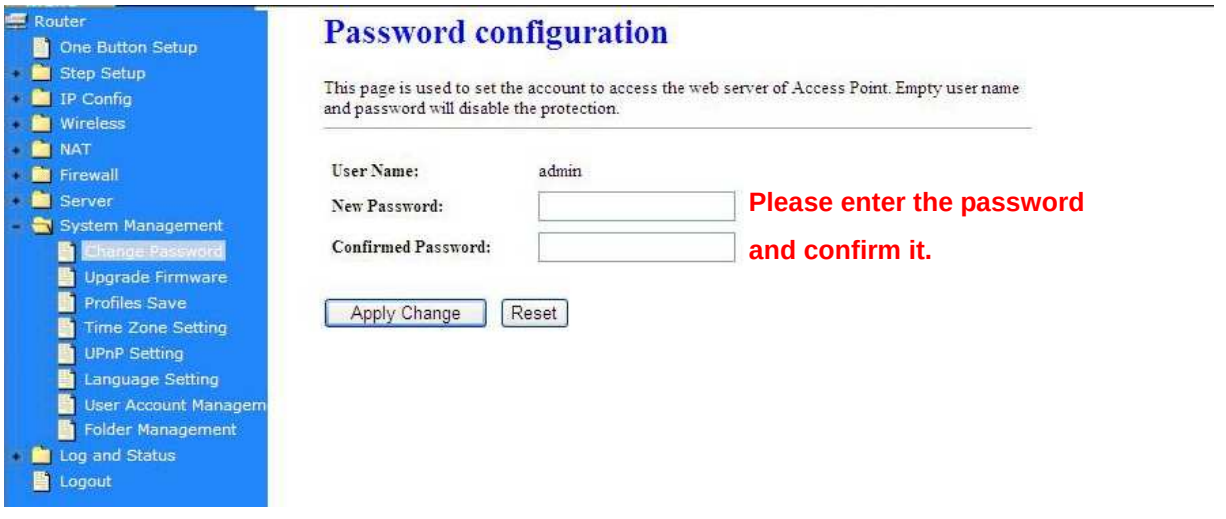
## 5.6 System Management

It has 6 sections: Change Password, Firmware Upgrade, Profiles Save, Time Zone Setting, UPnP Setting, and Language Setting. It is easy and helpful for users making more detailed settings.




### 5.6.1 Change Password

Users can set or change their password in this section.



Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

### 5.6.2 Firmware Upgrade

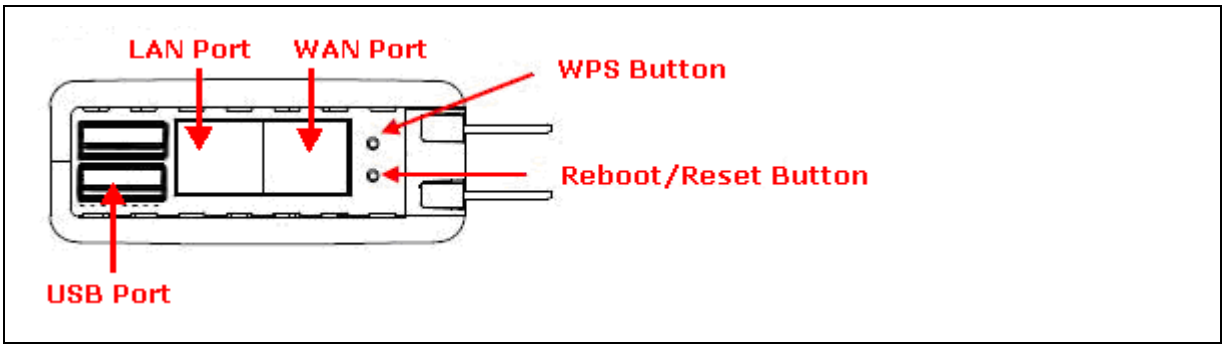
This function can upgrade the firmware of the router. There is certain risk while doing firmware upgrading. Firmware upgrade is not recommended unless the significant faulty is found and published on official website. If you feel the router has unusual behaviors and is not caused by the ISP and environment. You can check the website (http://www.cnet.com.tw) to see if there is any later version of firmware. Download the firmware to your computer, click **Browser** and point to the new firmware file. Click **Upload** to upgrade the firmware. You can't make any move unless the machine reboot completely.


Caution: To prevent that firmware upgrading is interrupted by other wireless signals and causes failure. We recommend users to use wired connection during upgrading.

Caution: The firmware upgrade will not remove your previous settings.

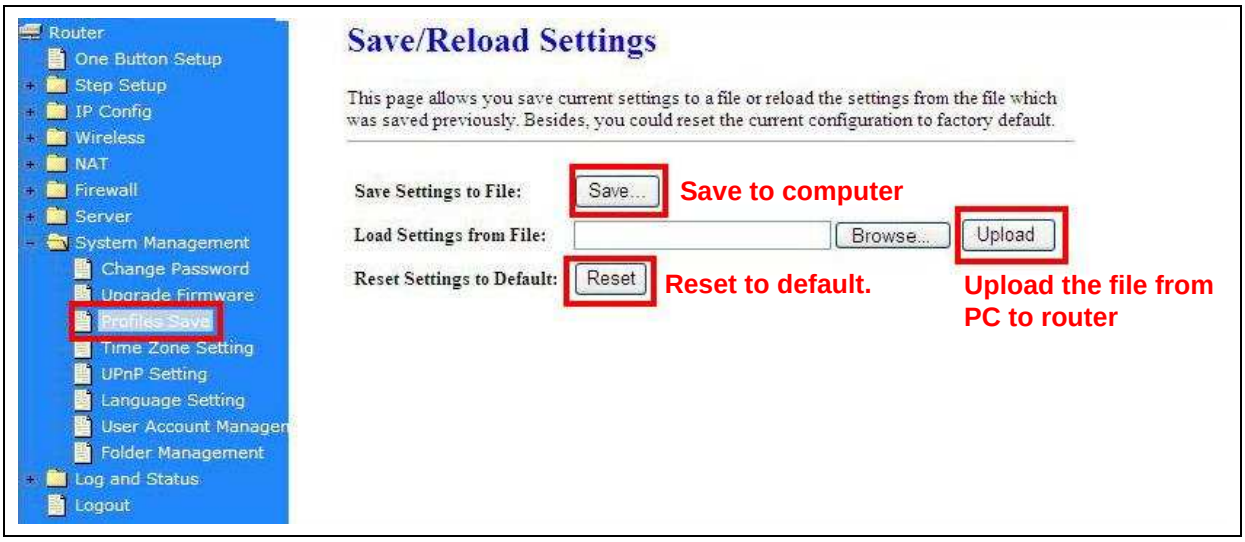
*Reset button:

On the back of this router, there is a reset button. If you can not login the administrator page by forgetting your password; or the router has problem you can't solve. You can push the reset button for 5 seconds with a stick. The router will reboot and all settings will be restored to factory default settings. If the problem still exists, you can visit our web site to see if there is any firmware for download to solve the problem.




### 5.6.3 Profile Save

Users can save or restore the setting profile, and reset the setting to factory default.

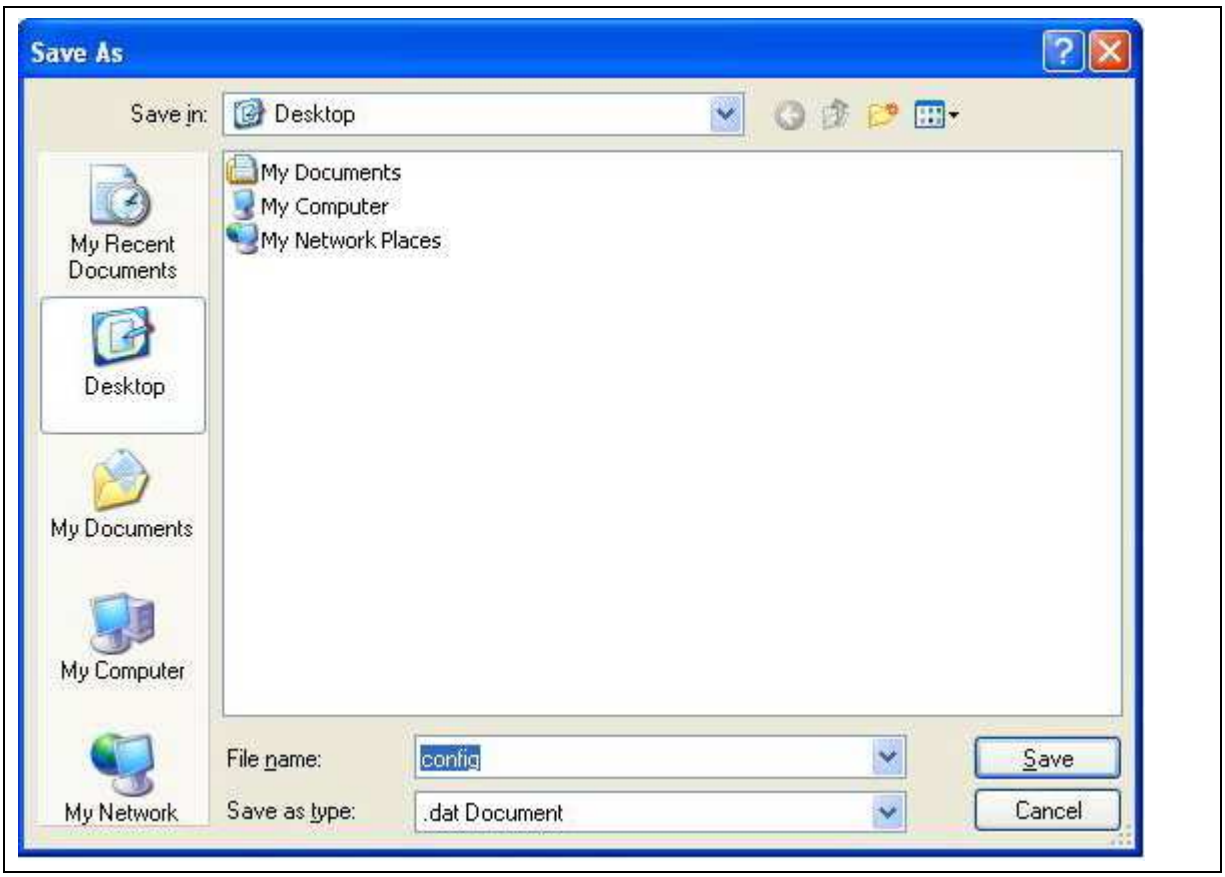


a. Save Configuration

(1) Click **Save**


(2) Please click Save to save configuration to your computer.

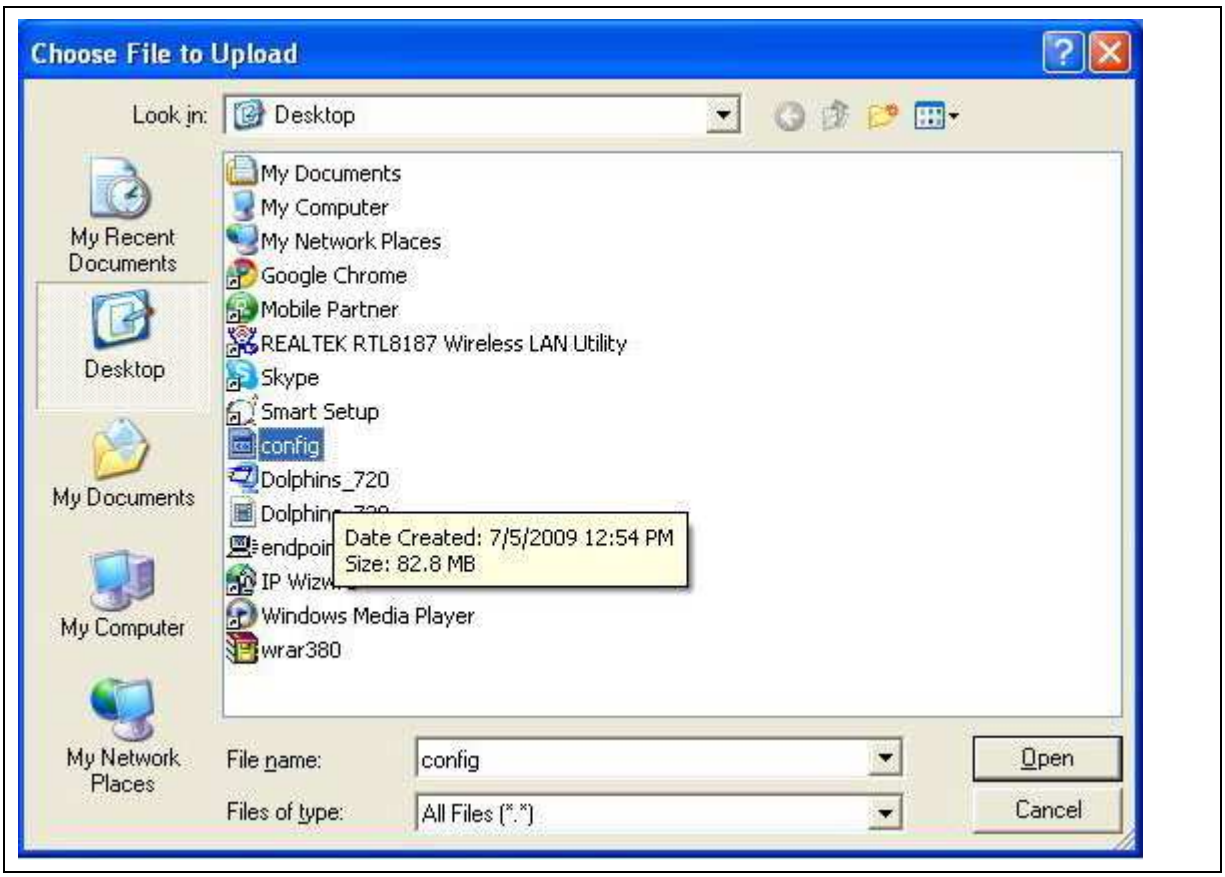
(3) Select the location which you want to save file, then click **Save.**



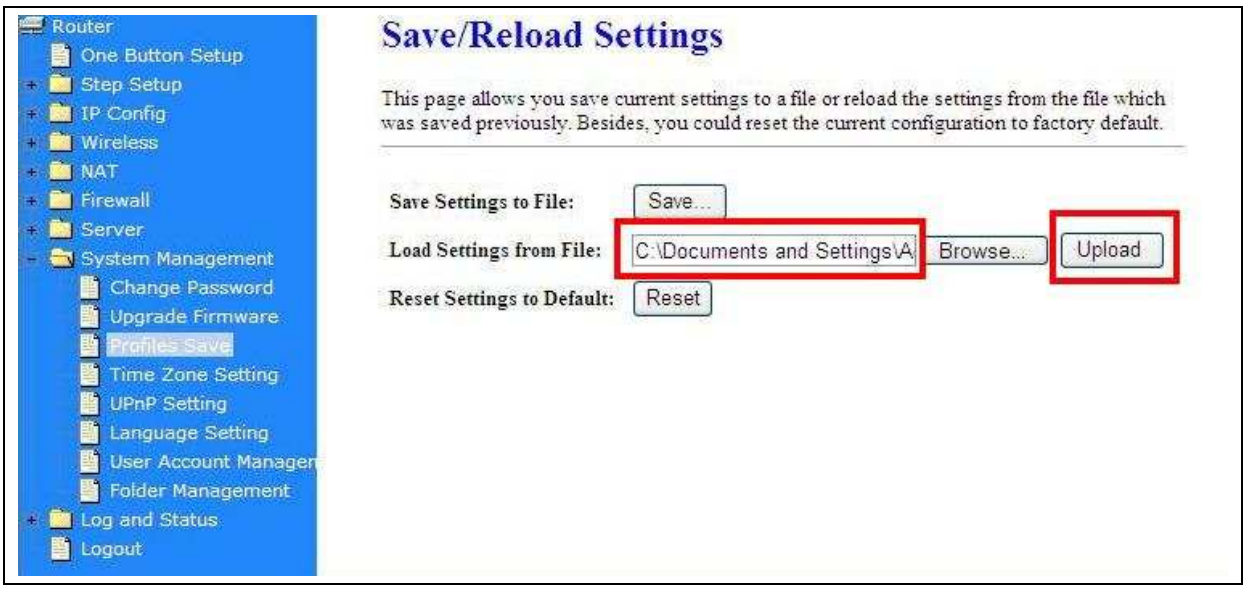

b. Load configuration file

(1) Click **Browser**

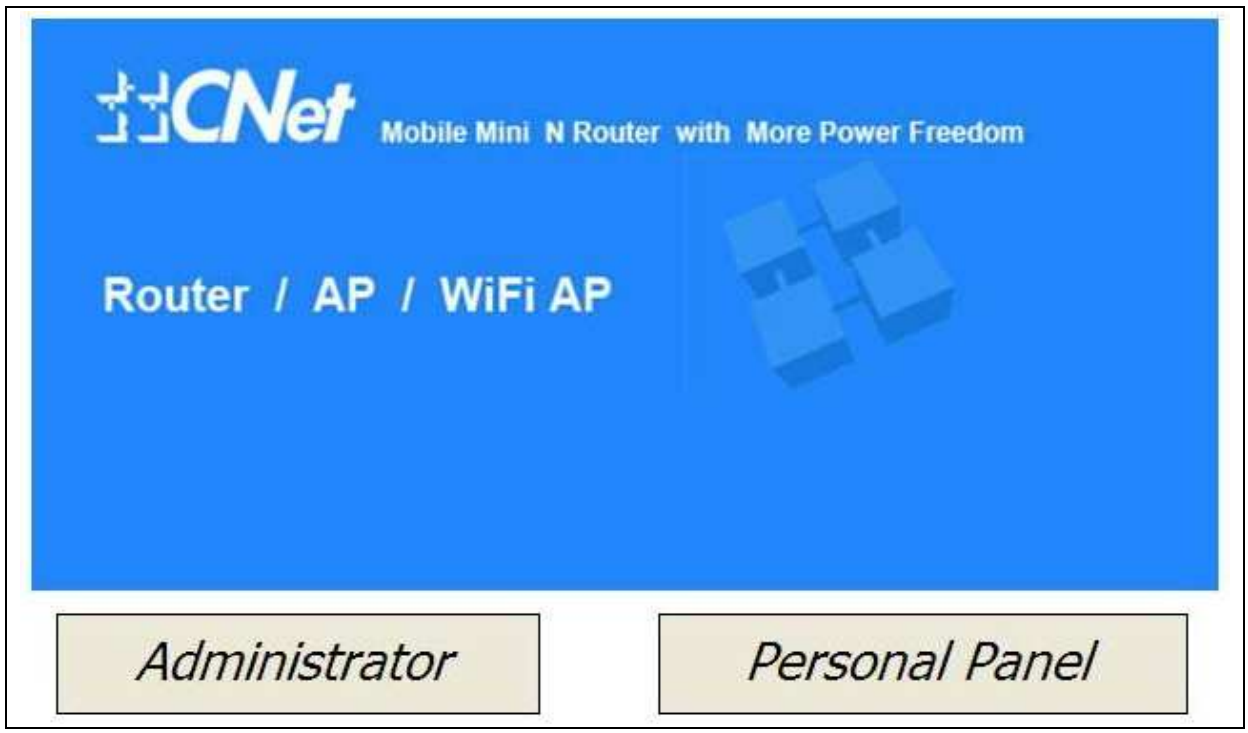
(2) Select configuration file then click **Open**




(3) Click **Upload** to upload configuration file to CWR-935M.

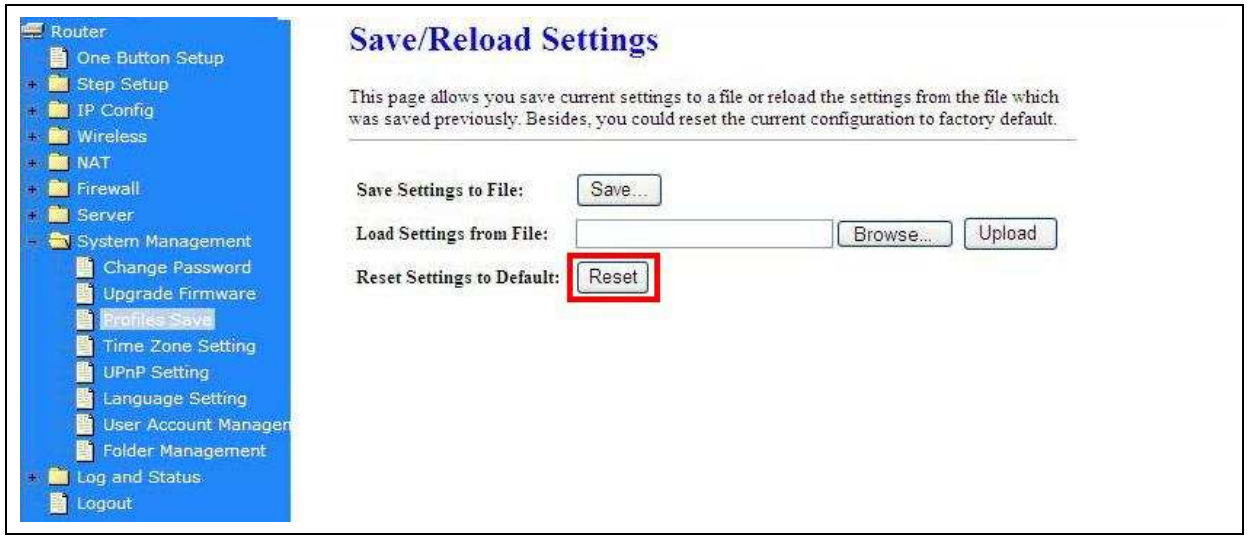


(4) After 90 seconds, CWR-935M will finish process and reboot. Please click **Administrator** to login




(C) Reload factory default setting

1. Please click **Reset**

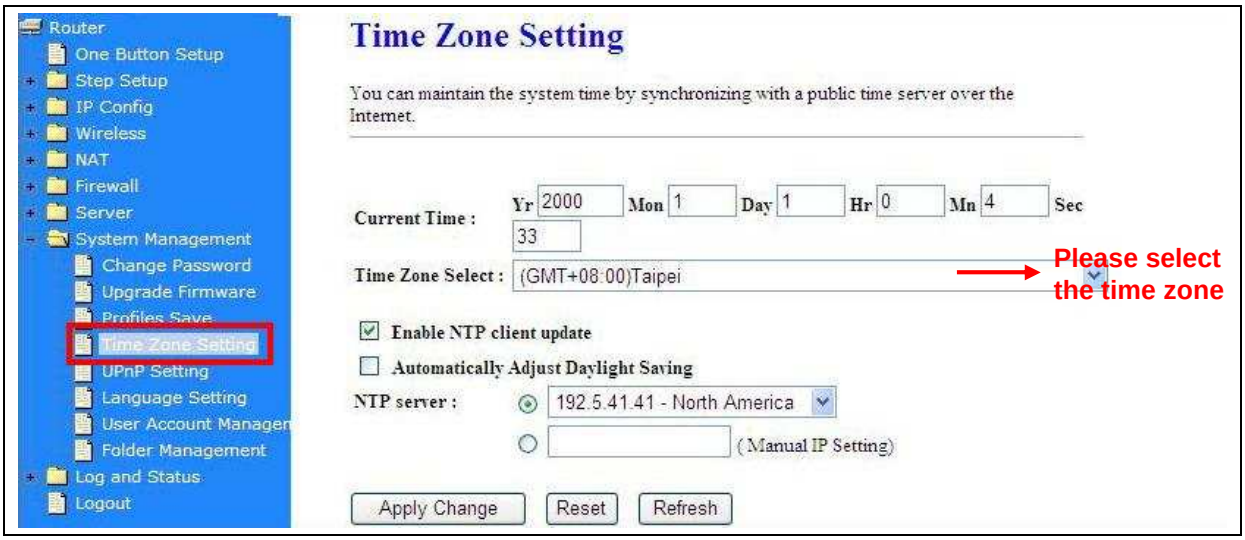


(2) Please click **OK** to start reload factory default setting to CWR-935M


(3) After 90 seconds, CWR-935M will finish process and reboot. Please click **Administrator** to login

### 5.6.4 Time Zone Setting

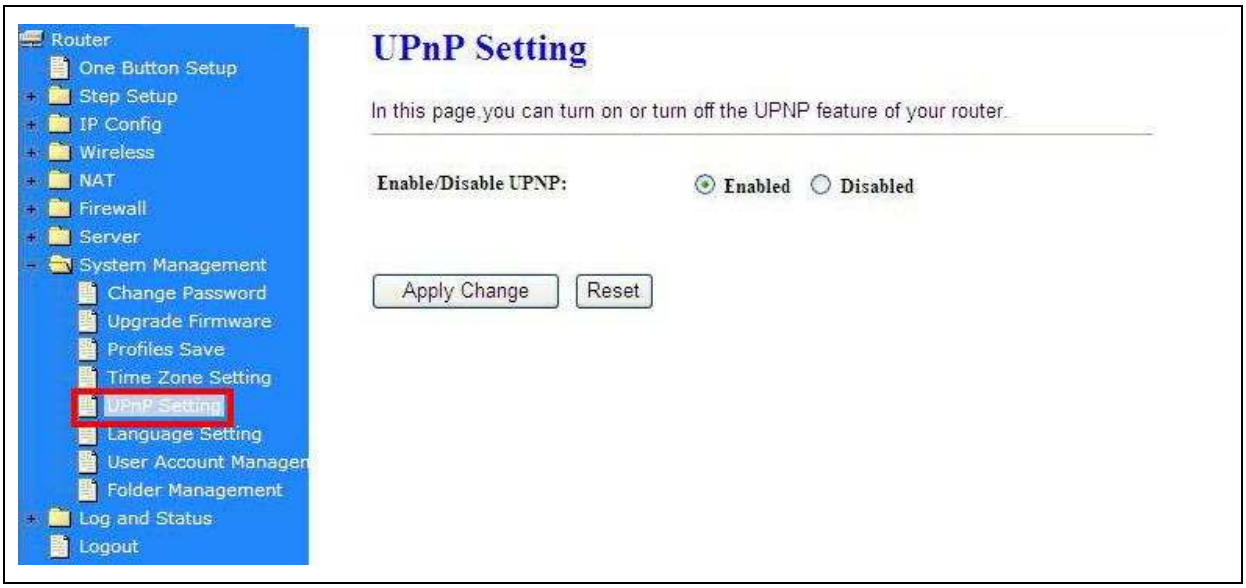
This function allows users to select their time zone and NTP server. Users can adjust the time manually or through the NTP server.




| Item | Description |
|---|---|
| Current Time | Users can input the time manually. |
| Time Zone Select | Please select the time zone. |
| Enable NTP client update | Please select to enable NTP client update or not. |
| Automatically Adjust Daylight Saving | Please select to enable **Automatically Adjust Daylight Saving** or not. |
| NTP Server | Please select the NTP server from the pull-down list, or you can enter the NTP server IP address manually. |
| Apply Changes & Reset & Refresh | Please click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. Or you may click on **Refresh** to update the system time on the screen. |

### 5.6.5 UPnP Setting

**Universal Plug and Play** (**UPnP**) is a set of networking protocols promulgated by the UPnP Forum. The goals of UPnP are to allow devices to connect seamlessly and to simplify the implementation of networks in the home (data sharing, communications, and entertainment) and in corporate environments for simplified installation of computer components. CWR-935M supports UPnP function, and can cooperate with other UPnP devices. When you activate UPnP, please click **My Network Places**. Users will see an **Internet Gateway Device** icon. By click the icon, users can enter the GUI of 3.5G server router. If you do not wish to use UPnP, you can disable it.

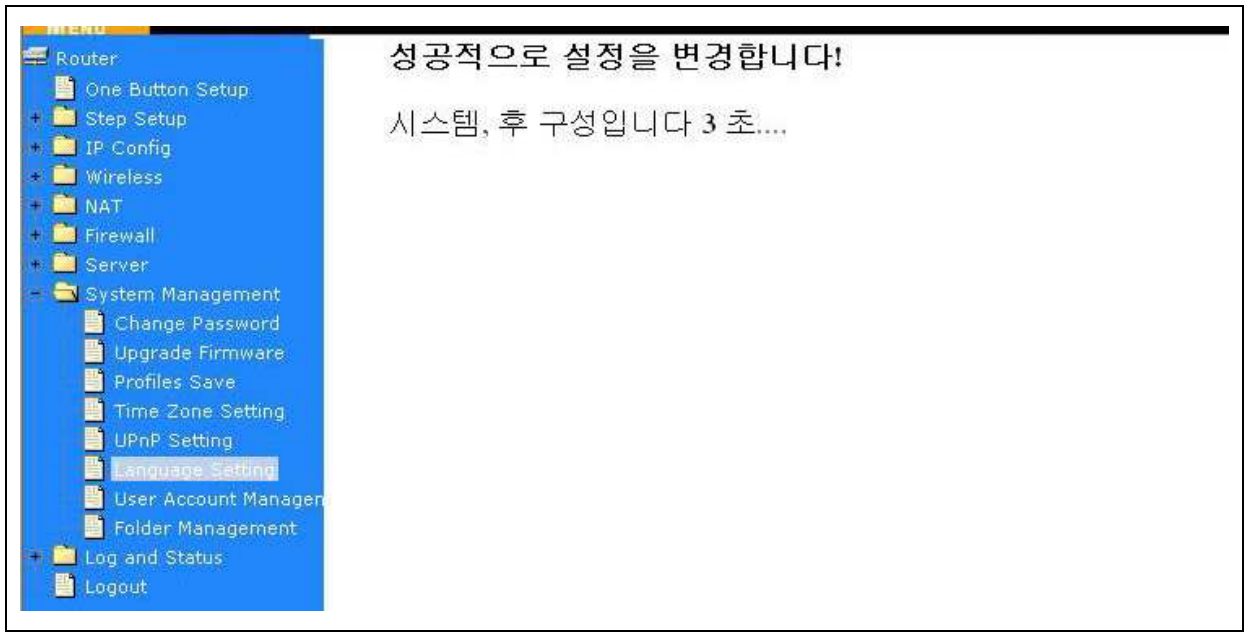

Router
One Button Setup
Step Setup
IP Config
Wireless
NAT
Firewall
Server
System Management
Change Password
Upgrade Firmware
Profiles Save
Time Zone Setting
UPnP Setting
Language Setting
User Account Manager
Folder Management
Log and Status
Logout
UPnP Setting
In this page,you can turn on or turn off the UPNP feature of your router.
Enable/Disable UPNP:
Enabled
Disabled
Apply Change
Reset


My Network Places
File Edit View Favorites Tools Help
Back
Search
Folders
Address
My Network Places
Network Tasks
Add a network place
View network
Local Network
CWR-935M

### 5.6.6 Language Setting

CWR-935M provides users with 12 languages to choose. Users can change the language of the interface configuration. Please click **Apply Changes** after selecting a language.


Using Korean as an example, the screen will display on the chosen language after the countdown is finished.




Caution: After countdown, you can press **Ctrl+F5** forcing the page to refresh. This can avoid any translation uncompleted situation.

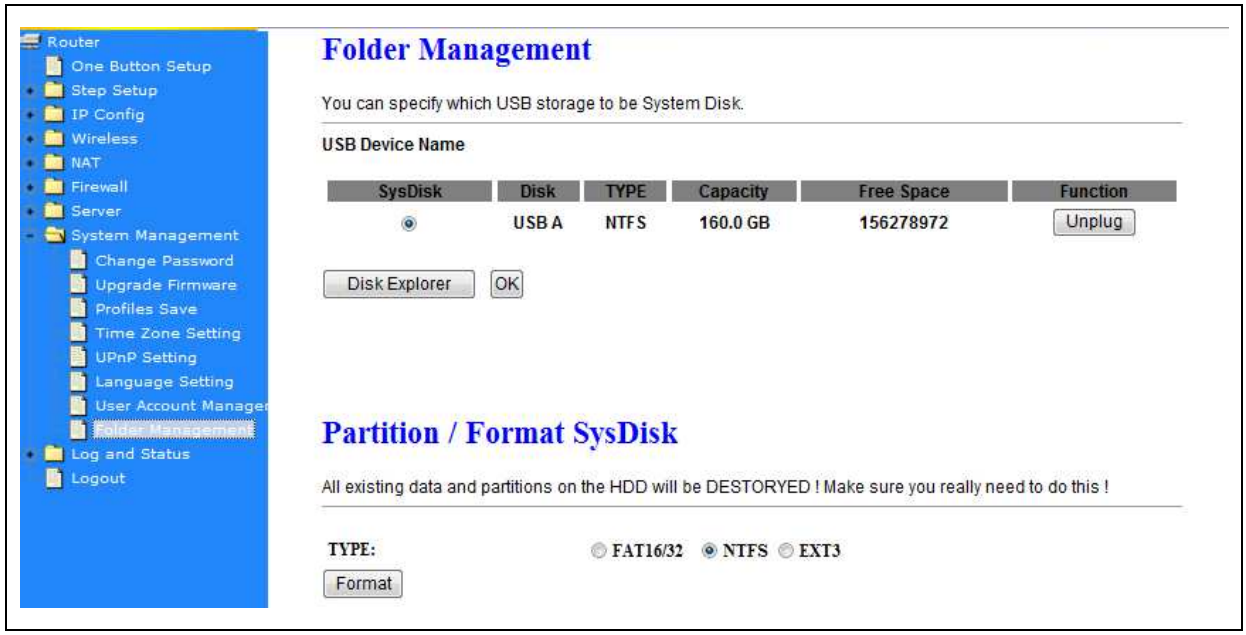
### 5.6.7 User Account Management

Personal users can use each individual application such as My Status, My Webcam and My Document. This section is to set the user's right. Also, all the users right will be showed in User Account List and can do the edit or delete by clicking the meaning text.


| Item | Description |
|---|---|
| User Name | Create the user name in this blank. |
| Password | Setup the user's password. |
| Access Right | Enable the use to Webcam, FTP server. |
| Apply & Cancel | Click on **Apply** button to add the settings into the list table. Click on **Cancel** button to clean the setting on this page. |

### 5.6.8 Folder Management

Easy to check all the USB storage devices connected to your CWR-935M, view the entire data folder inside each storage devices, and you can do the disk formatting/partition via click on the button in this page.

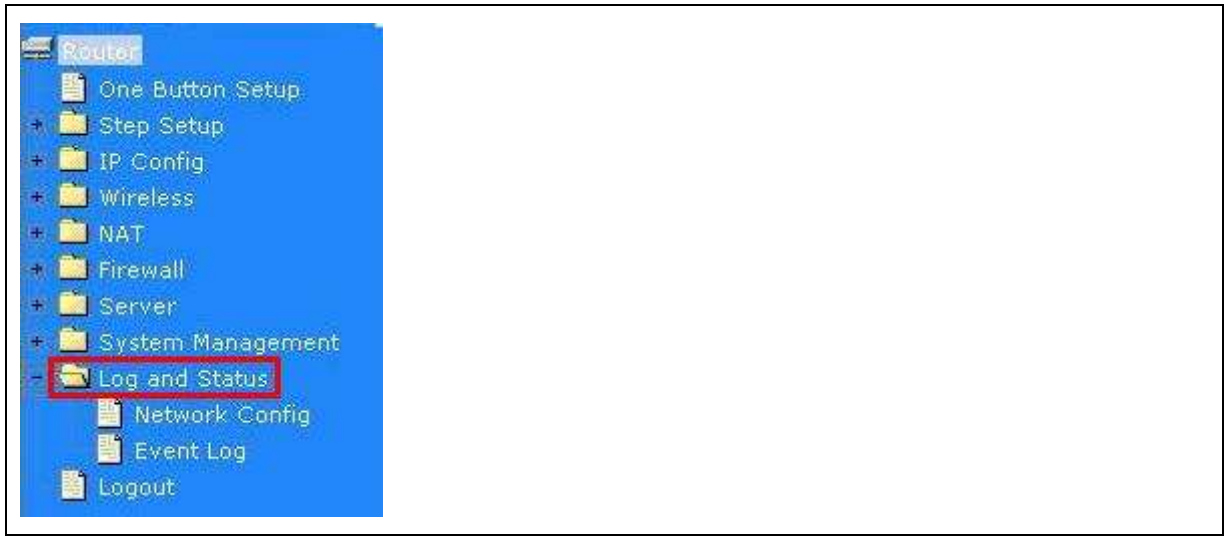



1. Select the USB Disk and click on **Mount** button for refresh all disks before you do disk partition, and the **Unplug** button will appear.
2. To partition/format the disk, please select the disk and click on **Format** button.
3. If you want to view the data inside the disk, please click on "**Disk Explorer**" to view all the disks folders inside the device.

Note：You have to click on "Unplug" button before remove the USB devices.

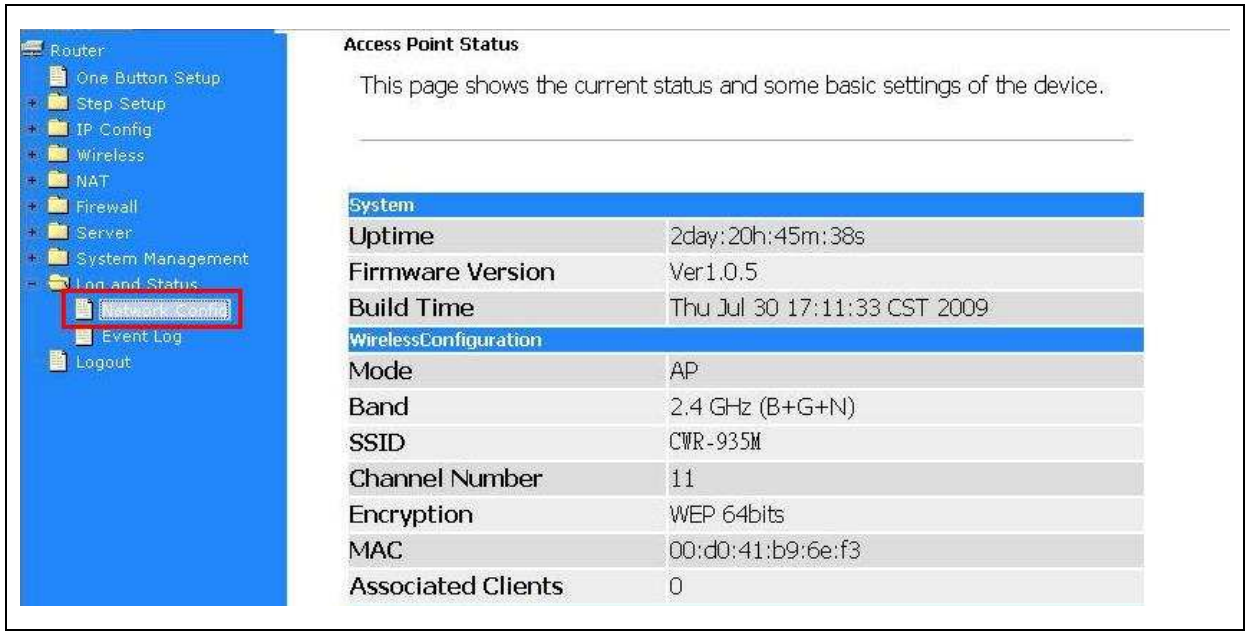
## 5.7 Log & Status

The category provides **Network Config** and **Event Log** status for users to know the operation status.



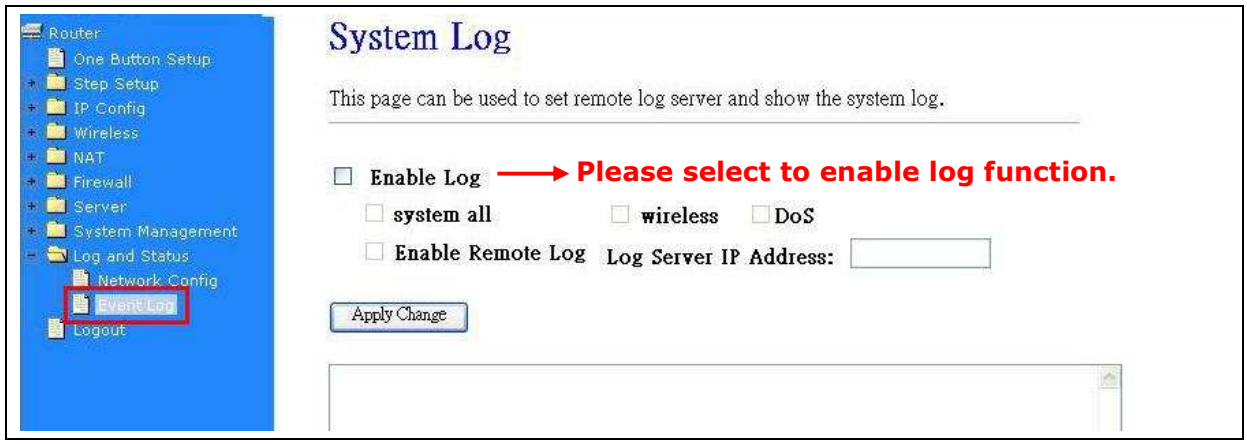
### 5.7.1 Network Config

Users can check the Internet status under this category, including Firmware version, Wireless setting, Connecting Time, WAN, TCP/IP …information.




### 5.7.2 Event Log

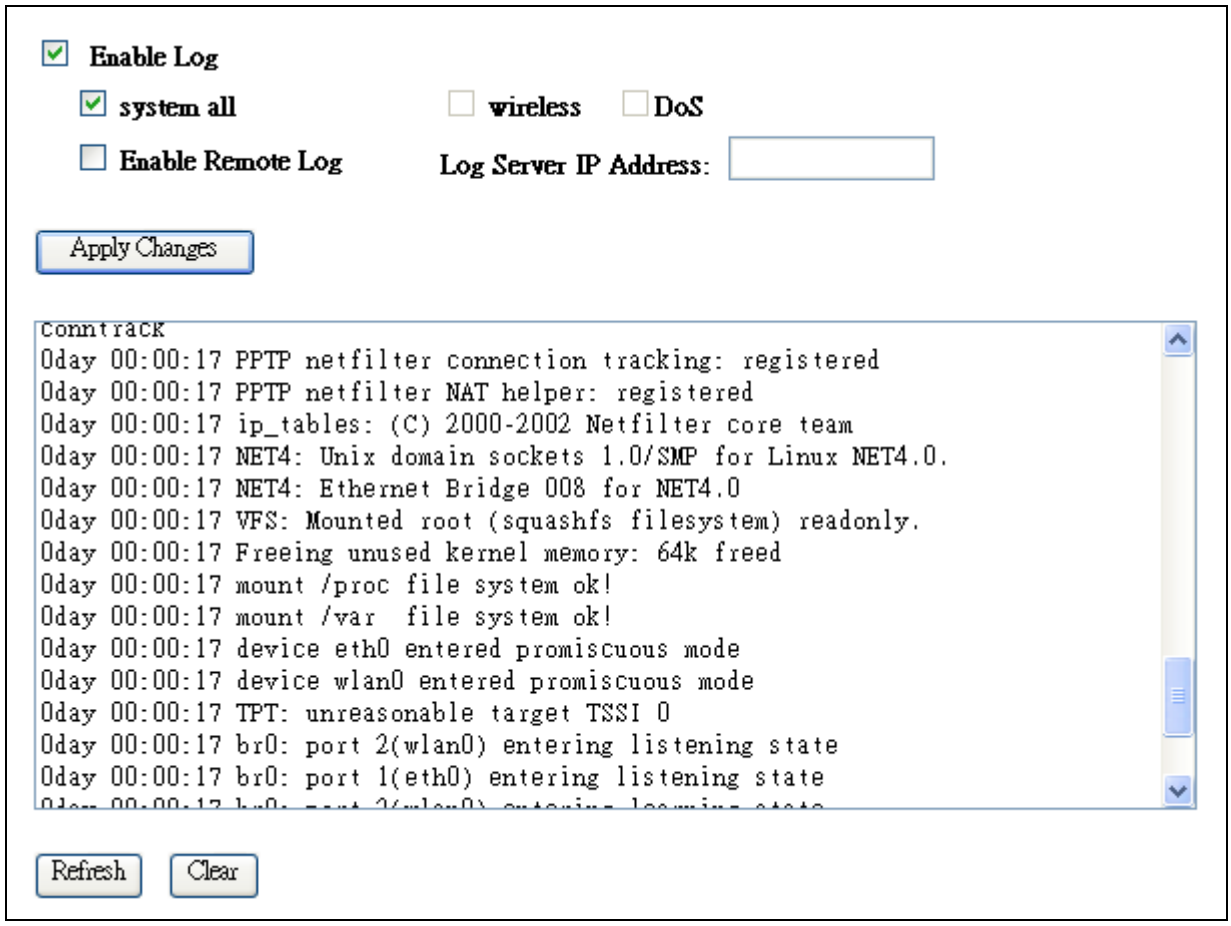
You may enable the event log feature here.




| Item | Description |
|---|---|
| Enable Log | You may choose to enable Event Log or not |
| System all, Wireless, DoS | Please select the event you want to record. |
| Enable Remote Log | You may choose to enable the remote event log or not. |
| Log Server IP Address | Please input the log server IP Address. |
| Apply & Cancel | Click on **Apply** button to add the settings into the list table. Click on |

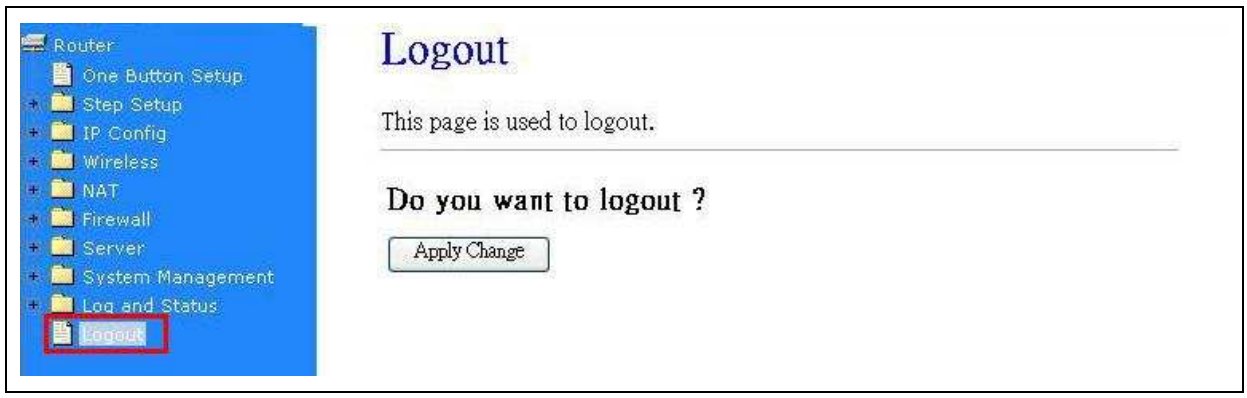
| | |
|---|---|
| | **Cancel** button to clean the setting on this page. |

*The following figure is an example when users click **Apply Changes** to record the event log.




## 5.8 Logout

This function provides users to logout.



# Chapter 6. Advanced Configuration for AP Mode

## 6.1 IP Config

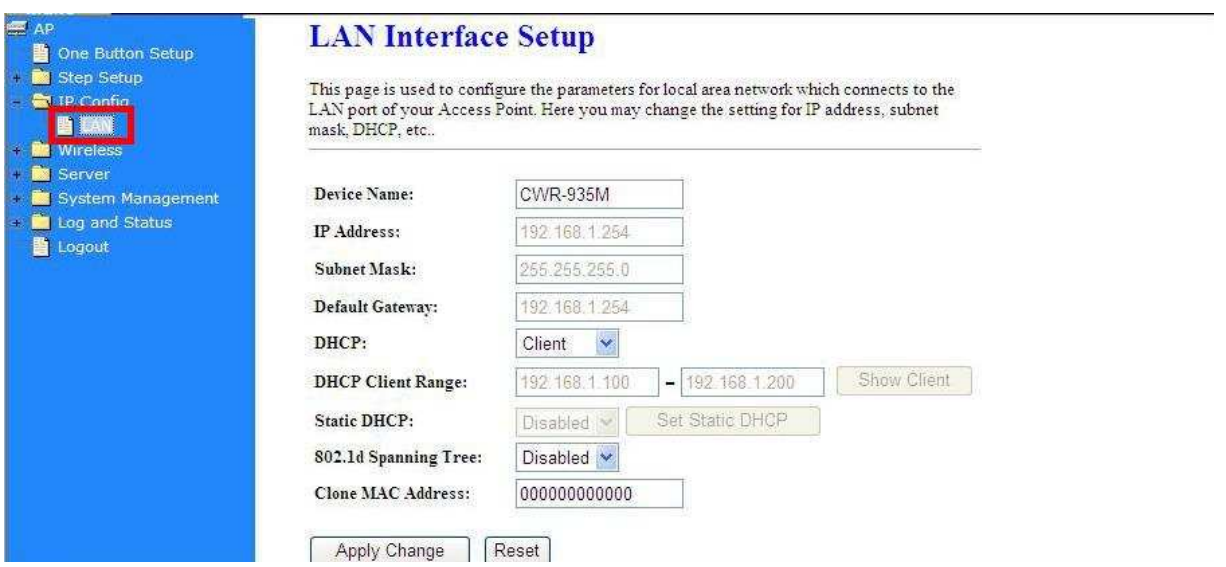
In this category, you can setup the IP rules under AP Mode.

### 6.1.1 LAN Setup


Please click on **LAN** of **IP Config** and follow the below setting.

### 6.1.2 LAN Interface Setup

This page is used to configure for local area network which connects to the LAN port of your Access Point. Here users may change the setting for IP address, Subnet Mask, DHCP, etc.



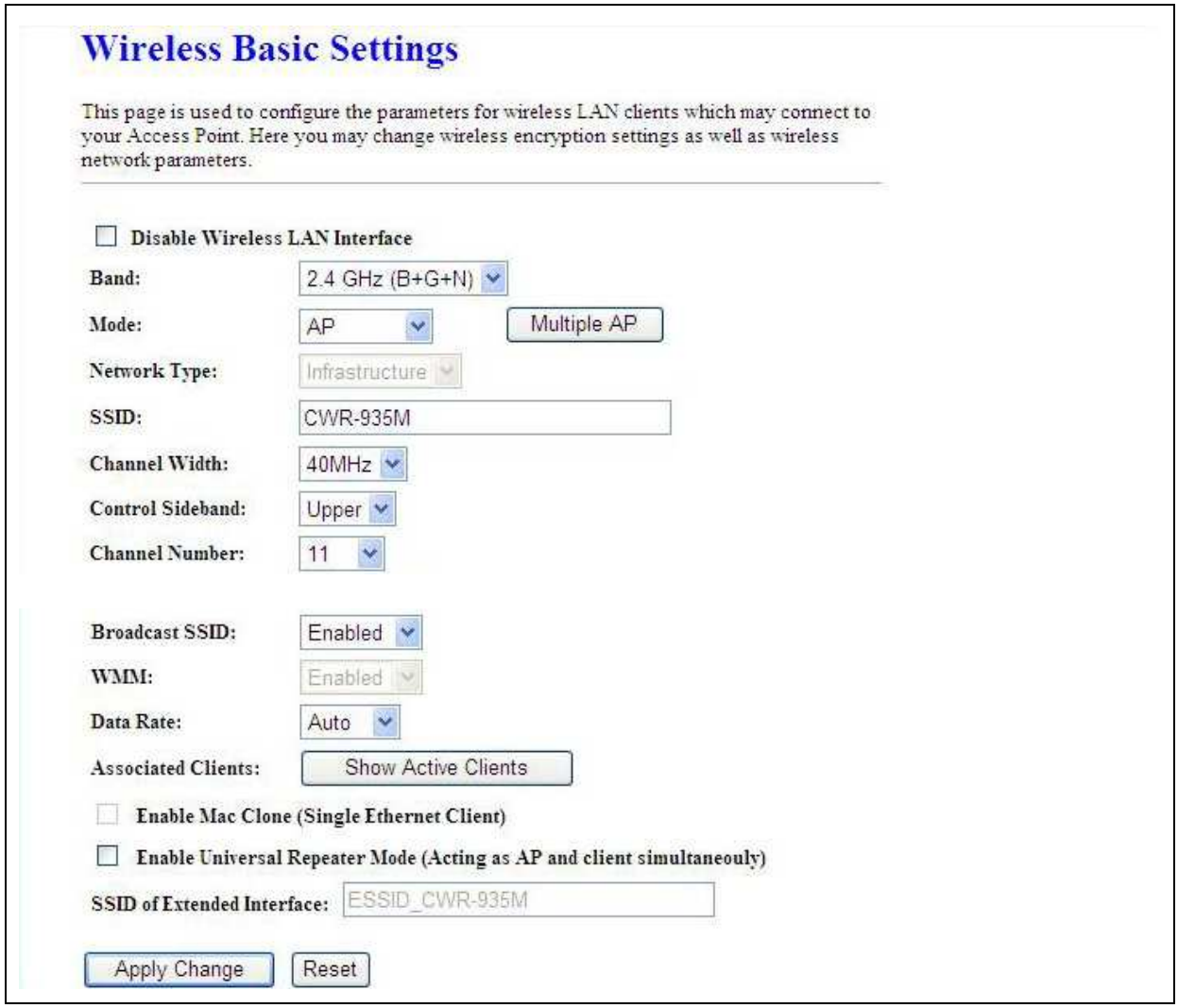
| Item | Description |
|---|---|
| Device Name | Name of CWR-935M |
| IP Address | The default IP address is **192.168.1.254** (recommend). |
| Subnet Mask | Please enter the Subnet Mask address; it should be **255.255.255.0** for the most time. |
| Default Gateway | Please enter the Default Gateway address. If you don't know the address, please contact your ISP. |
| DHCP | Users can choose to enable DHCP service or not. The DHCP server will give an unused IP address to a computer which is requesting for one. That computer must be a DHCP client, and then it can obtain an IP address automatically. |
| DHCP Client Range | The default value is 192.168.1.100 - 192.168.1.200. The DHCP server will assign an IP to a computer from this range. The **Show Client** will display every assigned IP address, MAC address, and expired time. |
| 802.1d Spanning Tree | IEEE 802.1d **Spanning Tree Protocol** (**STP**) is a link layer network protocol that ensures a loop-free topology for any bridged LAN, This function is optional. |
| Clone MAC Address | If your ISP asks you to enter a specific MAC Address, please input the correct info at the column. |
| Apply Changes & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

## 6.2 Wireless Setup

The category includes **Basic Settings**, **Advanced Settings**, **Security**, **Access Control**, **WDS settings**, and **WPS**. Please read below for the setting instruction.

### 6.2.1 Wireless Basic Setting

The basic settings related to the wireless are specified as following.



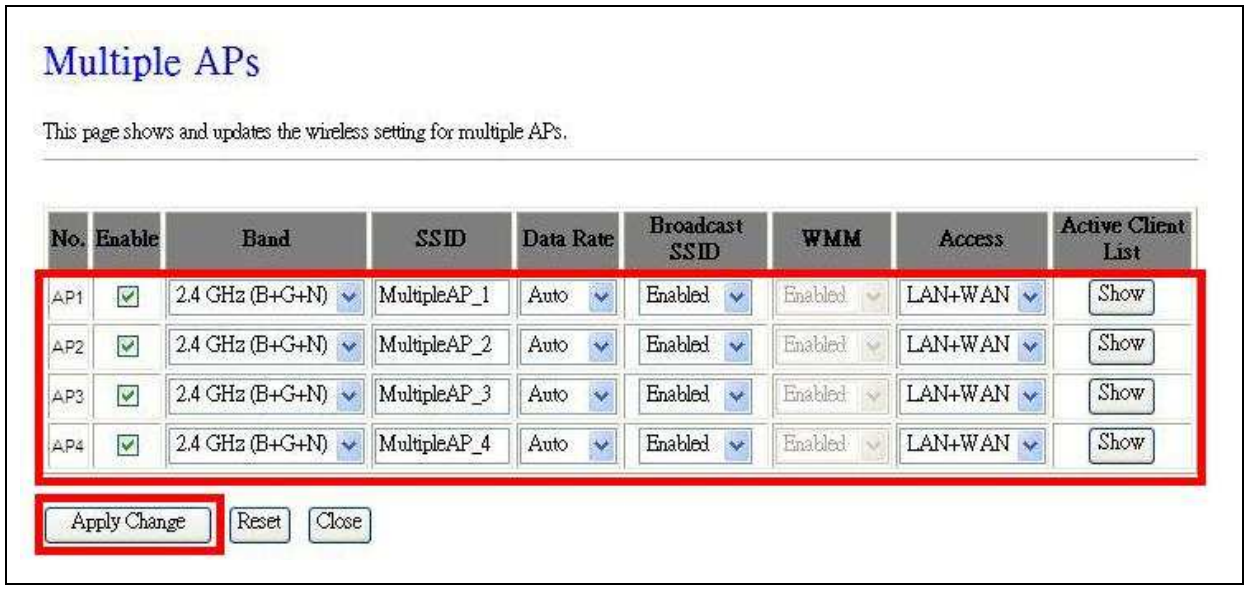

| Item | Description |
|---|---|
| Disable Wireless LAN Interface | Disable Wireless LAN Interface |
| Band | Please select the frequency. It has 6 options: 2.4 GHz (B/G/N/B+G/G+N/B+G+N). |
| Mode | Please select the mode. It has 3 modes to select: (AP, WDS, AP+WDS).<br>**Multiple APs** can provide users another 4 different SSID for connection. Users can add or limit the properties for each connection<br>(Please check Note 1). |
| SSID | Service Set identifier, the default SSID is **CWR-935M**, users can |

| | |
|---|---|
| | define to any. |
| Channel Width | Please select the channel width, it has 2 options: 20MHZ, and 40MHZ. |
| Control Sideband | Enable this function will control your router use lower or upper channel. |
| Channel Number | Please select the channel; it has Auto, 1, 2~11 options. |
| Broadcast SSID | User may choose to enable **Broadcast SSID** or not. |
| Data Rate | Please select the data transmission rate. |
| Associated Clients | Check the AP connectors and the Wireless connecting status. |
| Enable MAC Clone (Single Ethernet Client) | Clone the MAC address for ISP to identify. |
| Enable Universal Repeater Mode (Action as AP and Client **simultaneously**) | Allow to equip with the wireless way conjunction upper level, provide the bottom layer user link in wireless and wired way in the meantime.<br>((Please check Note 2). |
| SSID of Extended Interface | While linking the upper level device in wireless way, you can set SSID to give the bottom layer user search. |
| Apply Changes & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

Note.

1. Multiple APs

   **Multiple APs** can provide users another 4 different SSID for connection. Users can add or limit the properties for each connection.



| Item | Description |
|---|---|
| Enable | Please choose to enable it or not. |
| Band | Please select the frequency. |
| SSID | Please enter the SSID. |
| Data Rate | Please select the data transmission rate. |
| Broadcast SSID | User may choose to enable **Broadcast SSID** or not. |
| Access | Enable this function can let clients use 2 access types: a. LAN+WAN: the client can access to the Internet and connect to 3.5G server router's GUI to setup. b. WAN: the client can only access to the Internet. |
| Active Client List | Display the properties of the client which is connecting successfully. |
| Apply Changes & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

**Take the client side of wireless network card as an example:**

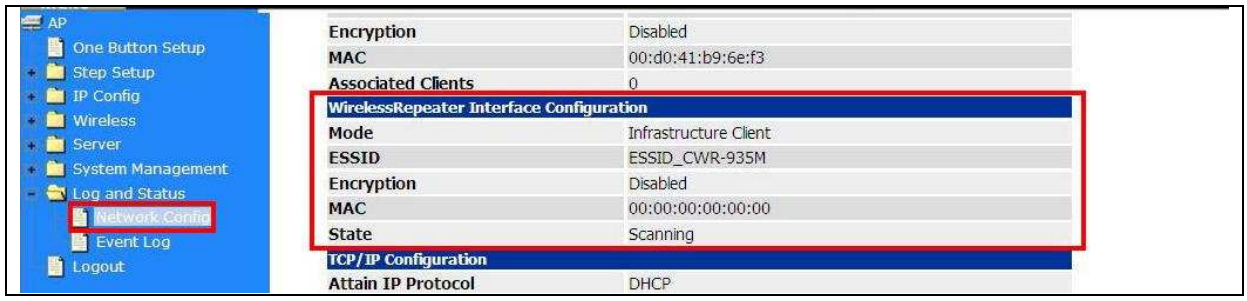
The Client can search for MultipleAP_1 (LAN+WAN) and connect to it. If the client connects to it successfully, it will display message to notify users.

**2. Enable Universal Repeater Mode (Acting as AP and Client simultaneously)**

Allow to equip with the wireless way conjunction upper level, provide the bottom layer user link in wireless and wired way in the meantime. (The IP that bottom layer obtains is from upper level.)

Ex: When users enable the Universal Repeater to connect to the upper level device, please input the channel and SSID of the upper level device on router's GUI. Click on **Apply Changes** to save the settings. (The DHCP in IP config needs to be disabled.)

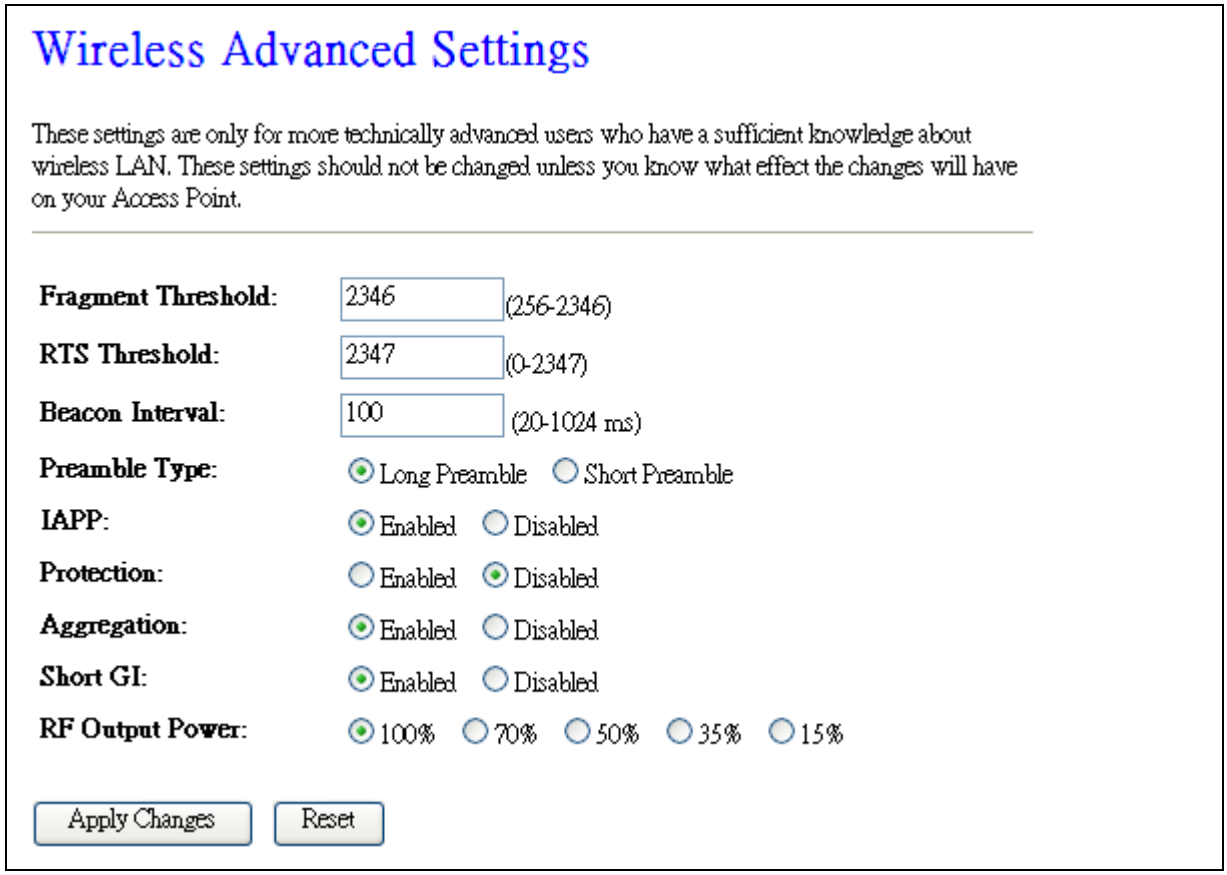

Users can go to the network Config section and check the information of upper level in Wireless Repeater Interface Configuration.




If the bottom layer device is trying to make a connection, users must input the SSID of this router as a relay station. The IP that the bottom layer device gets is from the upper level device.

### 6.2.2 Wireless Advanced Settings

Please complete the wireless advanced settings as following instructions.




| Item | Description |
|---|---|
| Fragment Threshold | To identify the maxima length of packet, the over length packet will be fragmentized. The allowed range is 256-2346, and default length is 2346 Bytes. |
| RTS Threshold | This value should remain at its default setting of 2347. The range is 0~2347. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the present RTS threshold size, the RTS/CTS mechanism will not be enabled. The router sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission. Fill the range from 0 to 2347 into this blank. |
| Beacon Interval | Beacons are packets sent by an access point to synchronize a wireless network. Specify a beacon interval value. The allowed setting range is |

| | |
|---|---|
| | 20-1024 ms. |
| Preamble Type | Preamble is the first subfield of PPDU, which is the appropriate frame format form transmission to PHY (Physical layer). There are two options, Short Preamble and Long Preamble. The Short Preamble option improves throughput performance. Select the suit Preamble as Short or Long Preamble. |
| IAPP | Inter Access Point Protocol. Allow seamless roaming between Access Points in your wireless network. |
| Protection | Please select to enable wireless protection or not. |
| Aggregation | Enable this function will combine several packets to one and transmit it. It can reduce the problem when mass packets are transmitting. |
| Short GI | Users can get better wireless transmission efficiency when they enable this function. |
| RF Output Power | Users can adjust the RF output power to get the best wireless connection. Users can choose from 100%, 70%, 50%, 35%, and 15%. |
| Apply Changes & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

### 6.2.3 Wireless Security Setup

Four encryption types could be selected here, please follow below instruction for the setting.

**a. Encryption – WEP**

**a. Set WEP Key**

This section provides 64bit and 128bit WEP encryptions for wireless network. Users can also choose ASCII and Hex shared Key format to protect data.


**b. 802.1x Authentication**

It is a safety system by using authentication to protect your wireless network. Please choose between WEP 64bits and WEP 128bits.

**ii. Encryption – WPA, WPA2, and WPA2 Mixed**

**a. Enterprise (RADIUS)**

Please input the Port, IP Address, and Password of Authentication RADIUS Server.

**b. Personal (Pre-Shared Key)**

Pre-Shared Key type is ASCII Code; the length is between 8 to 63 characters. If the key type is Hex, the key length is 64 characters.


Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

### 6.2.4 Wireless Access Control

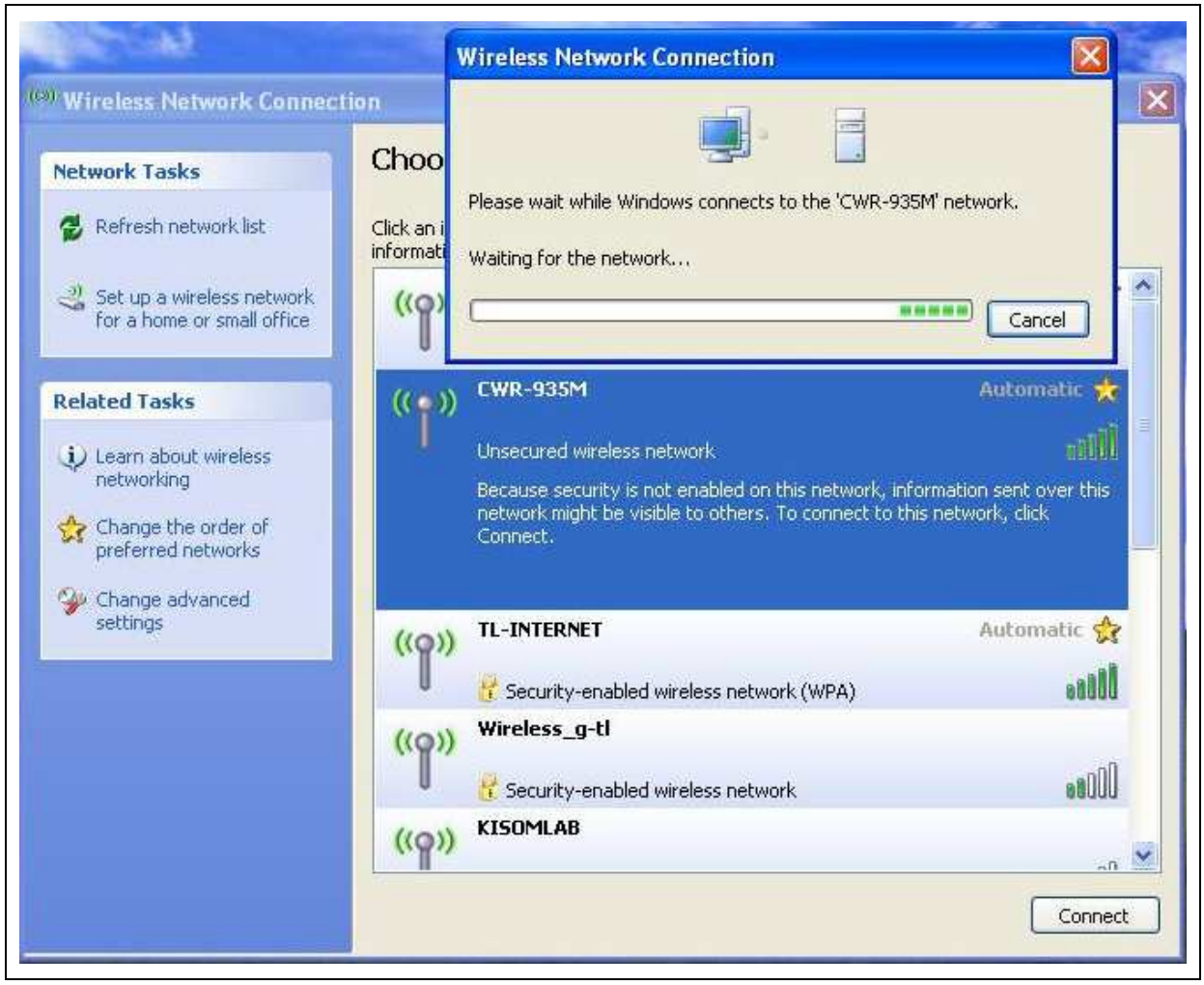
The function of access control is to allow or deny users to access 3.5G server router by according MAC address, it is optional. If you select **Allowed Listed**, then only those clients whose MAC address is listed on access control can connect to your base station. If you select **Deny Listed**, those clients whose MAC address is listed on access control can't connect to your base station.

Take the wireless card as the example.

(1) We will use **Deny Listed** as an example. Please select **Deny Listed** in **Wireless Access Control Mode** first, and then input the MAC address of wireless card in MAC Address field. Click **Apply Changes** to save the setting data.

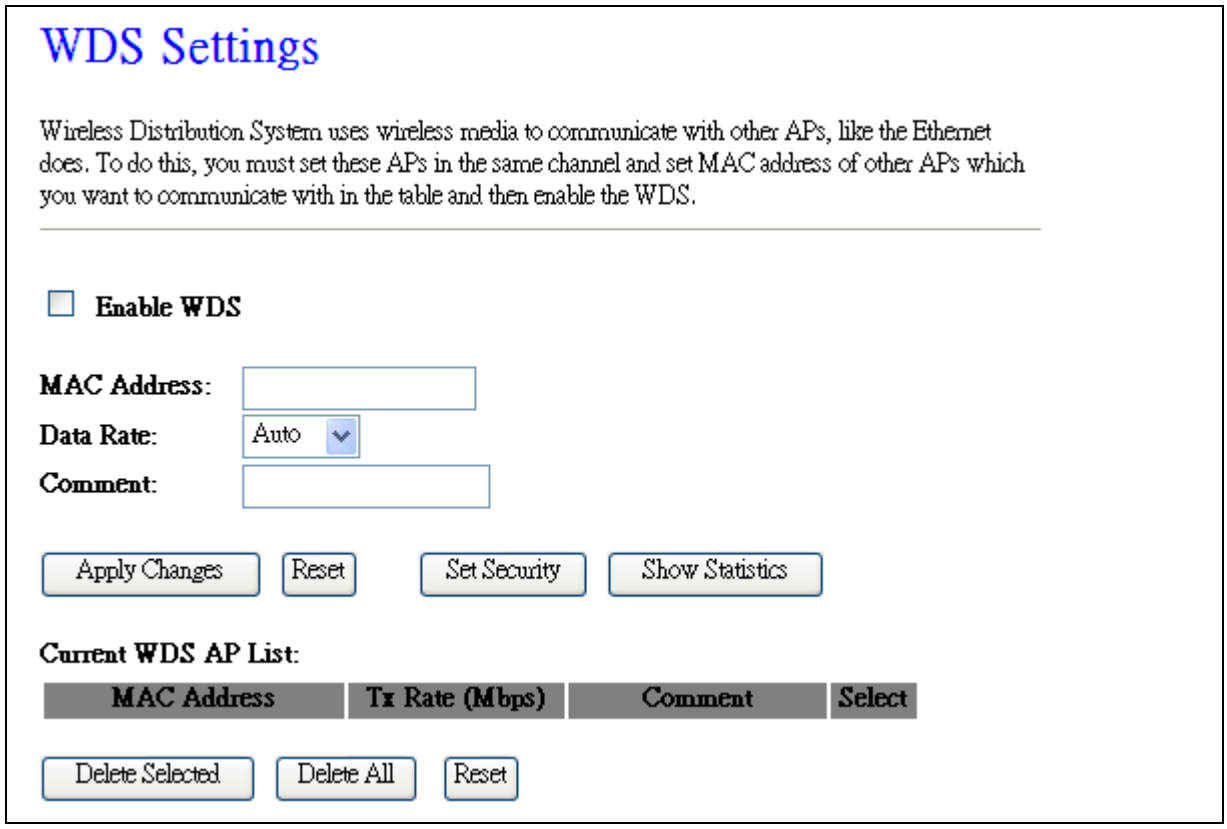
(2). You will find out that the MAC address appears on **Current Access Control List**, it means the initiation is completed.

(3) Please open wireless card UI and try to connect to this router. You will find out that the connection Request will be denied.

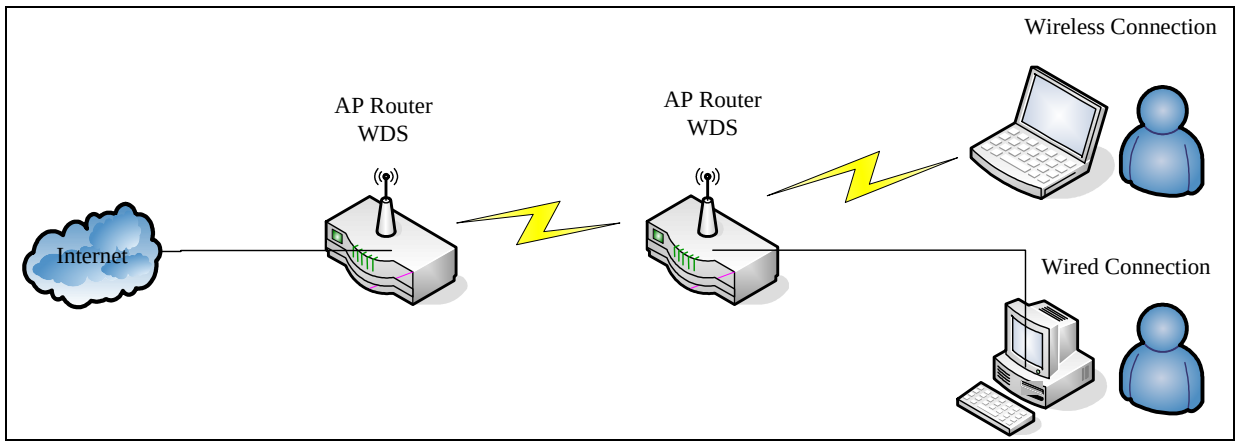


### 6.2.5 WDS Setting

Wireless basic settings must enable WDS first. This function can communicate with other APs by adding MAC address into the same channel.

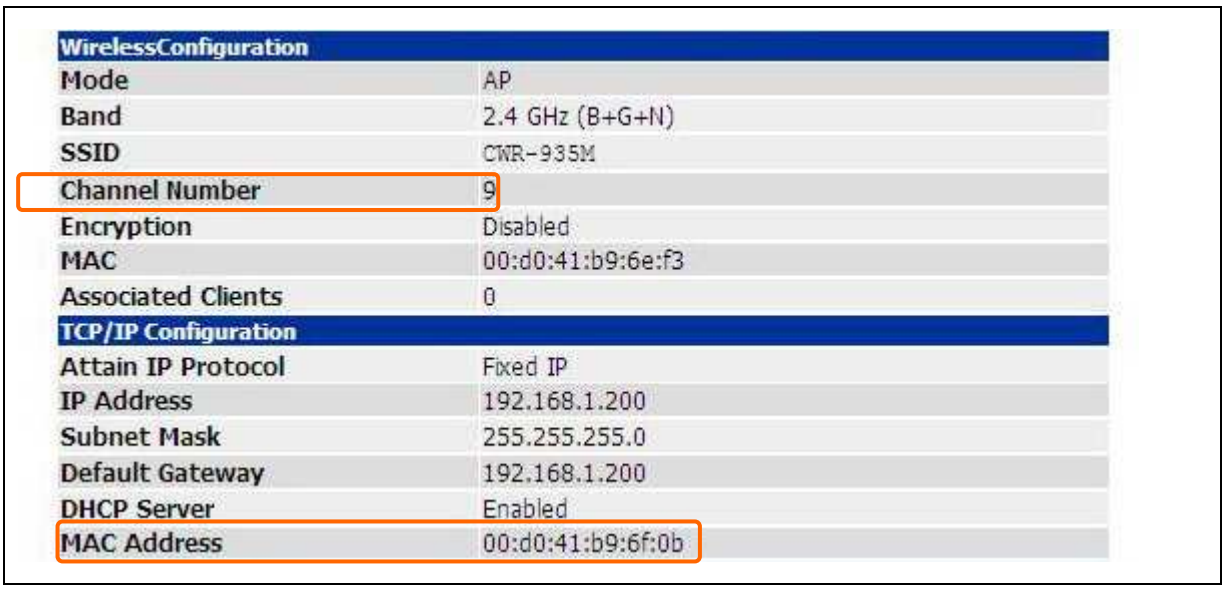



* The following figure is the explanation.



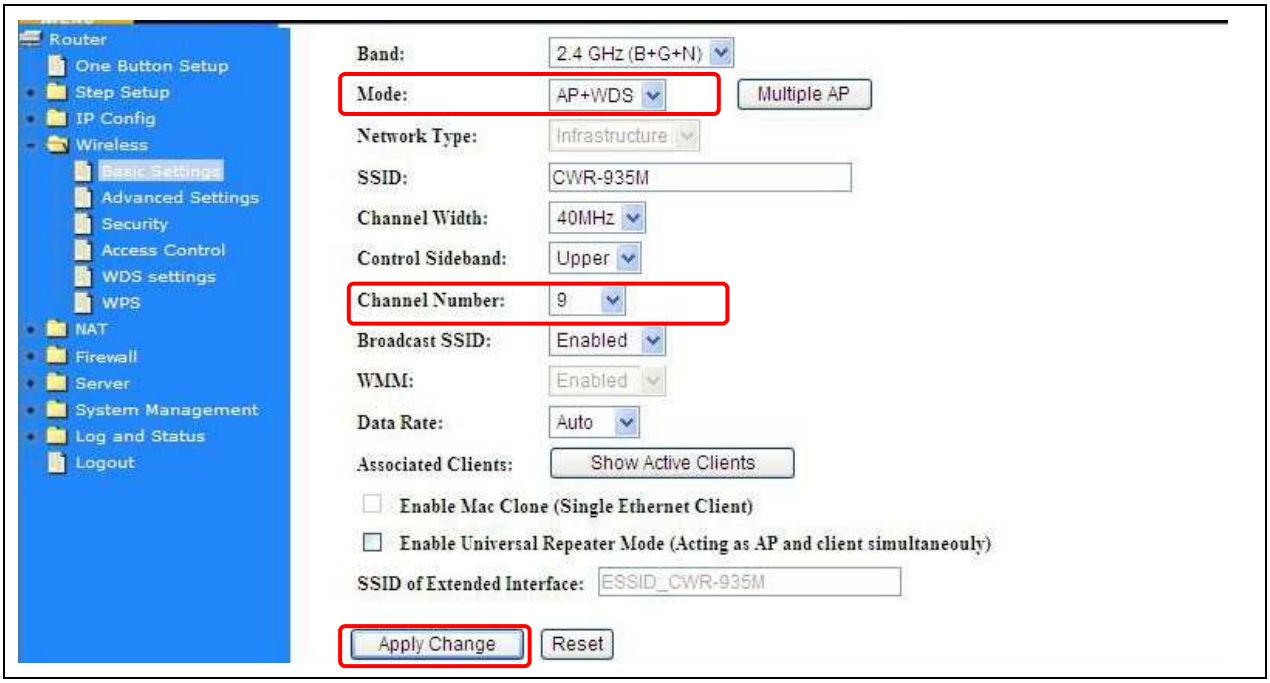
* Please follow the instructions to setup the connection.

(1). Please check the MAC address and Channel number of the upper level device.

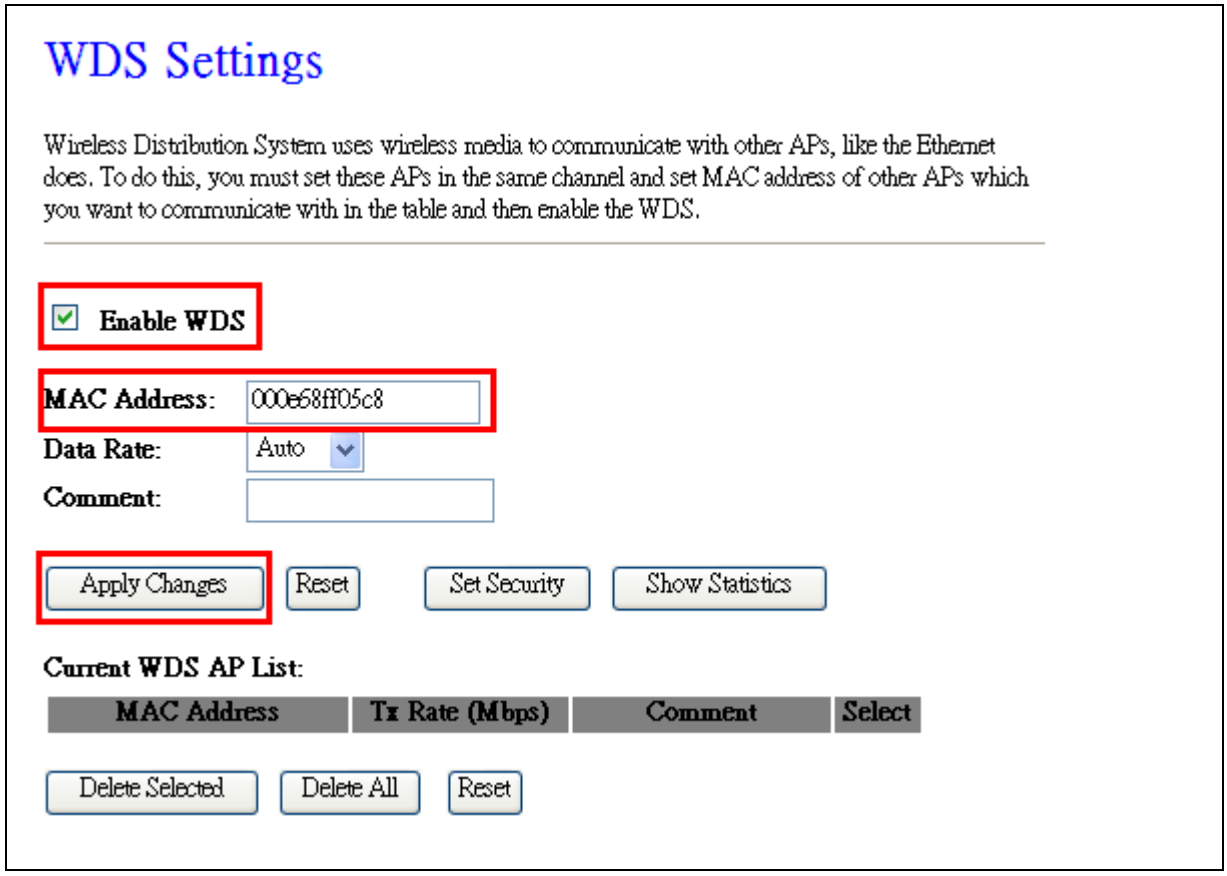


| WirelessConfiguration | |
|---|---|
| Mode | AP |
| Band | 2.4 GHz (B+G+N) |
| SSID | CWR-935M |
| Channel Number | 9 |
| Encryption | Disabled |
| MAC | 00:d0:41:b9:6e:f3 |
| Associated Clients | 0 |
| **TCP/IP Configuration** | |
| Attain IP Protocol | Fixed IP |
| IP Address | 192.168.1.200 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | 192.168.1.200 |
| DHCP Server | Enabled |
| MAC Address | 00:d0:41:b9:6f:0b |

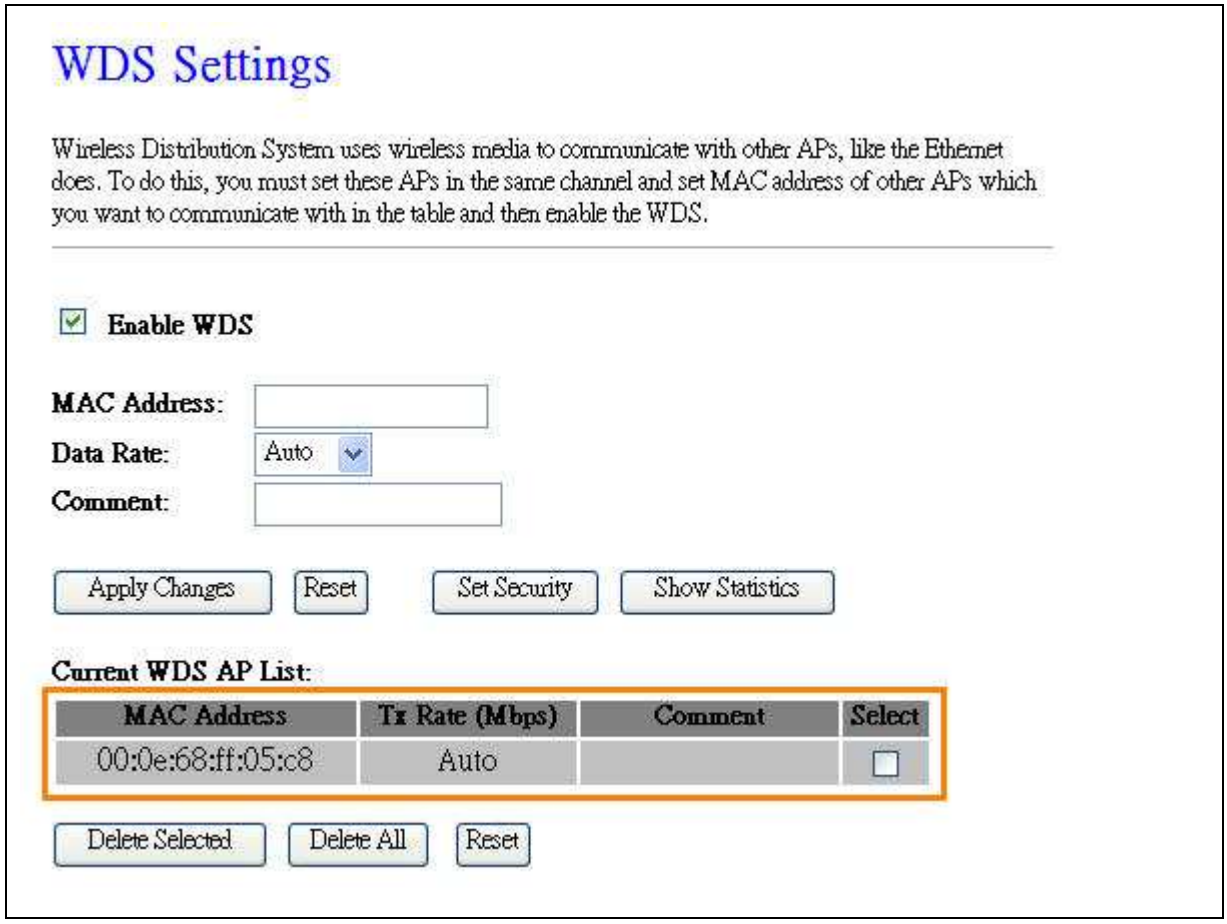
(2). Enter the **Wireless Basic Settings** page, select **AP+WDS** mode, and then select the **Channel Number**. Click **Apply Changes** to save the setting data.



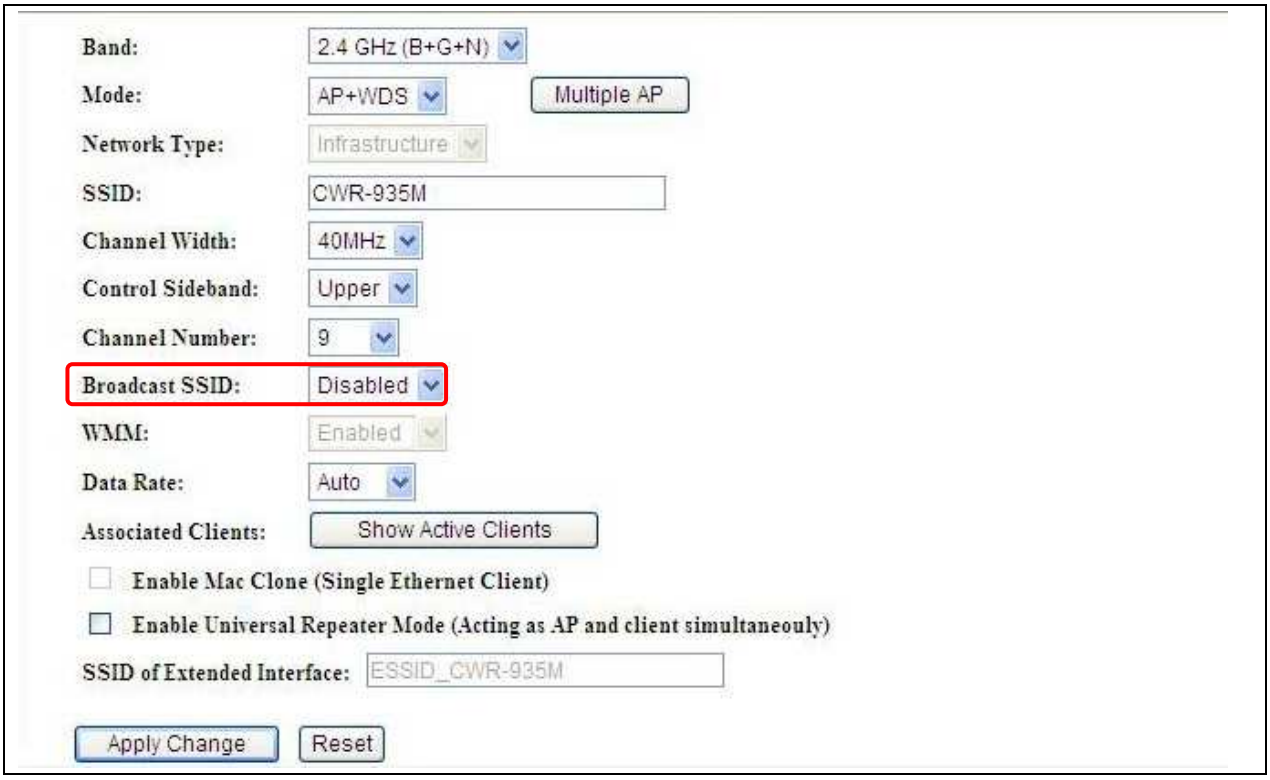
(3.) Enter the **WDS Settings** page, select **Enable WDS**, and then input the MAC address of the upper level device. Click **Apply Changes** to save the setting data.



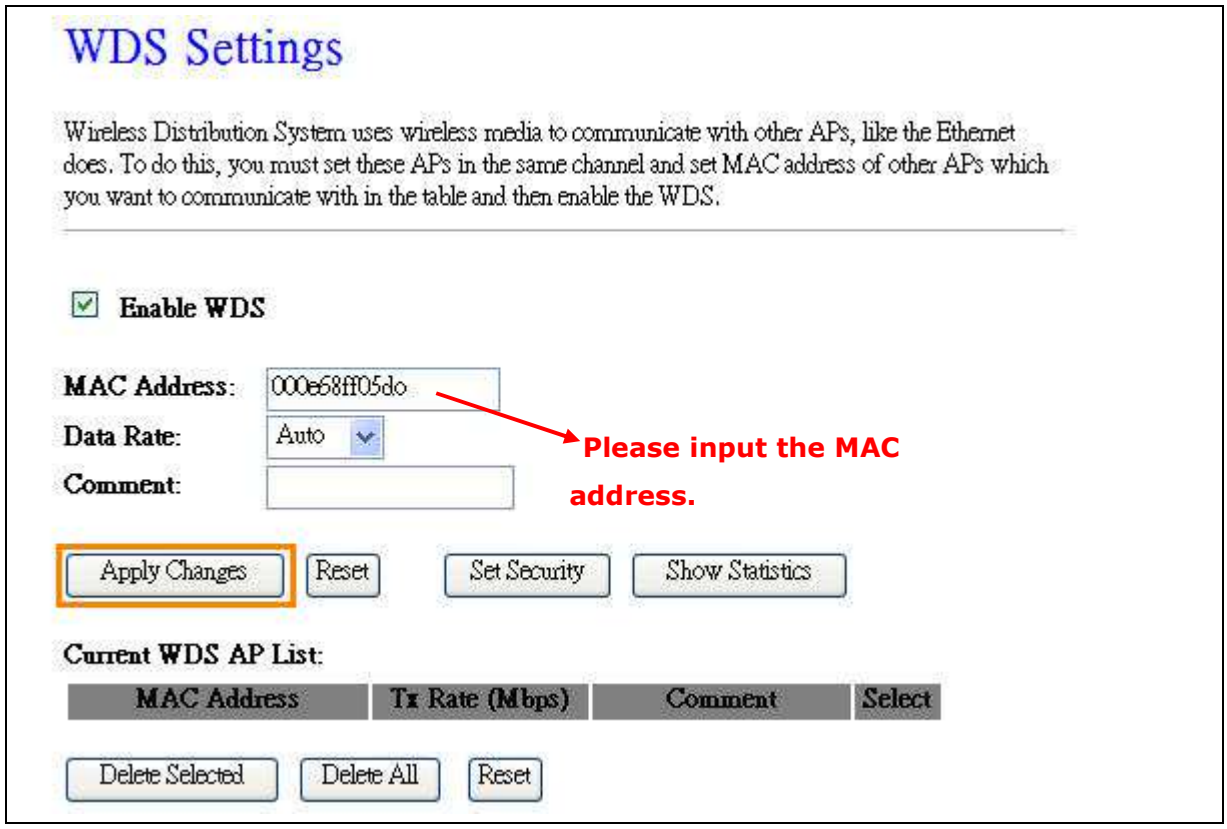
(4). When the time counts down to 0, you will see the MAC address of the upper level device displaying on **Current WDS AP List**.



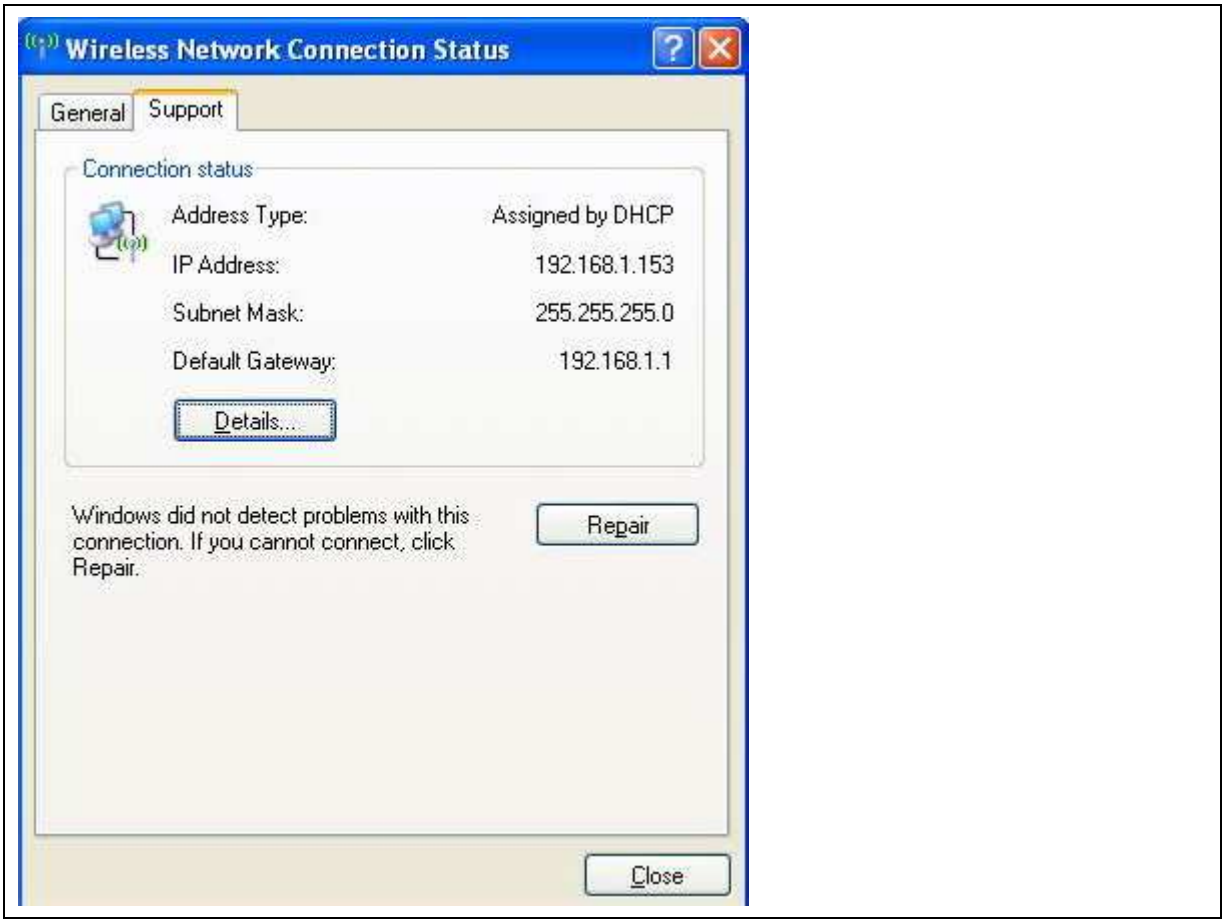
(5). Head back to **LAN Interface**, disable **DHCP** option, and then click **Apply Changes** to save the setting data.



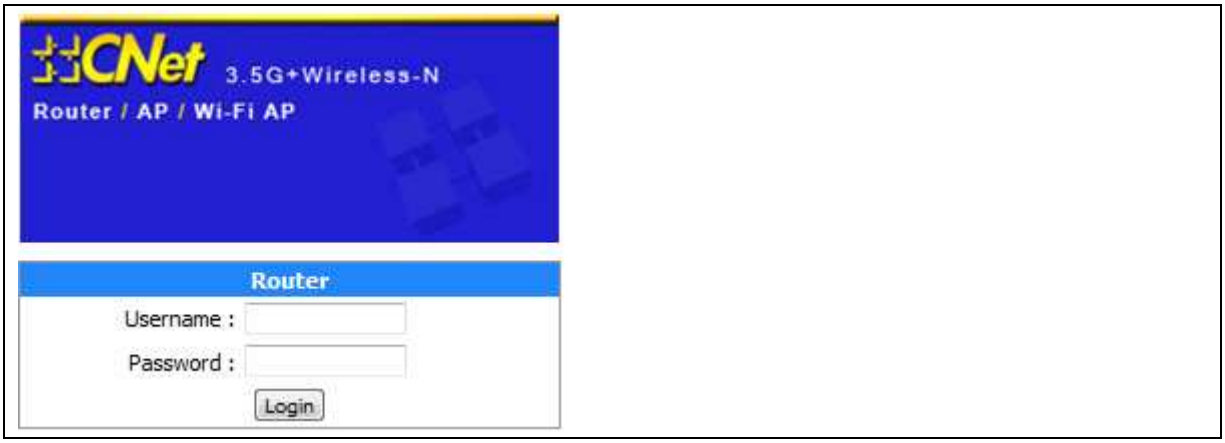
(6.) The MAC address of the upper level device is going to setup like the MAC address of the router. Enter the upper level device's **WDS settings** page, and input router's MAC address. Click **Apply Changes** to save the setting data.



(7) After initiating the upper level device, please check Local Area Connections. Click Supports to check out the IP address which is assigned by upper level device.




(8) You can input http://192.168.1.1 in IE browser to enter the GUI page of the upper level device and make sure the connection.

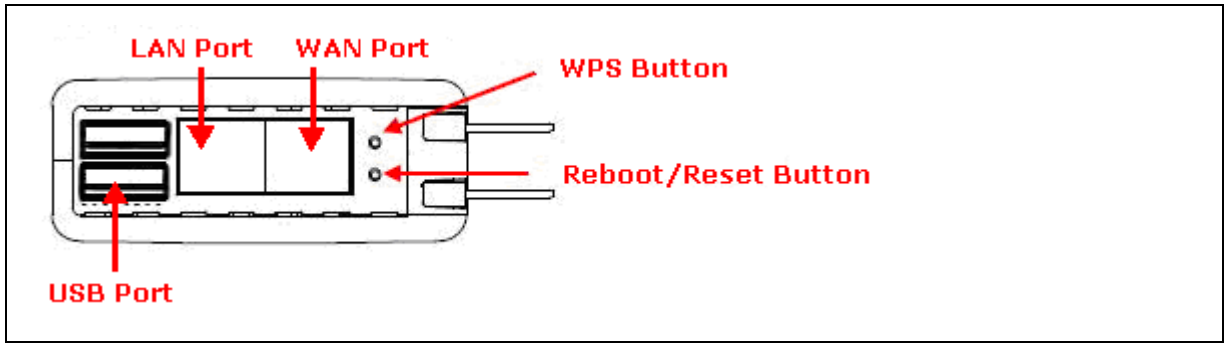


### 6.2.6 WPS

Wi-Fi Protected Setup, it can simplify the procedures of wireless encryption between CWR-935M and wireless network card. If the wireless network card also supports WPS function, users can activate WPS auto-encryption to speed up the procedures.

WPS supports 2 models: PIN (Personal Information Number) and PBC (Push Button Configuration). These models are approved by the Wi-Fi Alliance.

**PIN model**, in which a PIN has to be taken either from a sticker label or from the web interface of the WPS device. This PIN will then be entered in the AP or client WPS device to connect.
**PBC model**, in which the user simply has to push a button, either an actual or a virtual one, on both WPS devices to connect.
*The following figure is the display of the front of CWR-935M



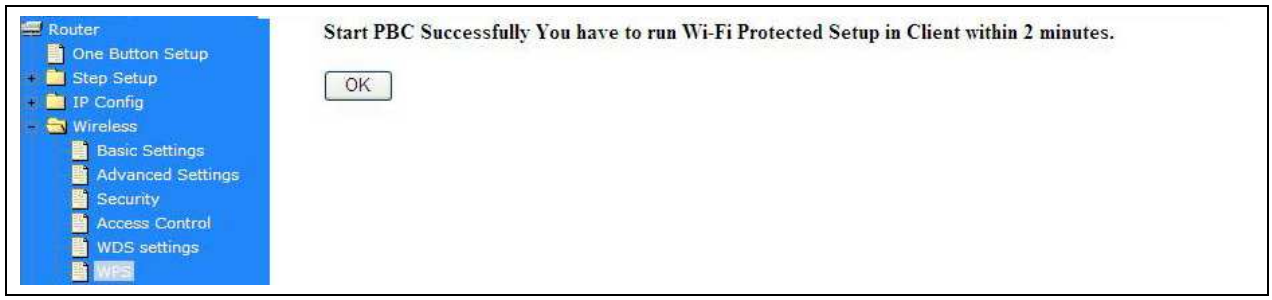

When users select a specific model on wireless base station, the clients can connect to the base by selecting the same model.
The connection procedures of PIN and PBC are almost the same. The small difference between those two is:
Users input the PIN of wireless card in the base station first; it will limit the range of the clients. It is faster to establish a connection on PIN model.
On PBC model, users push the WPS button to activate the function, and then the wireless client must push the WPS button in 2 mines to enter the network. The client will search to see if there is any wireless base station which supports WPS is activating. If the client finds a matching base, the connection will be established. The speed of establishing a connection is slower than the PIN model because of this extra step.
On the other hand, users need to input the information of the wireless card into the register interface. It might lead to the failure of connection, if users make mistakes on inputting. On PBC model, users only need to click the WPS button on both sides to make a connection. It is easier to operate.

This page supports **Start PBC** and **Start PIN**; please follow the instructions to operate.

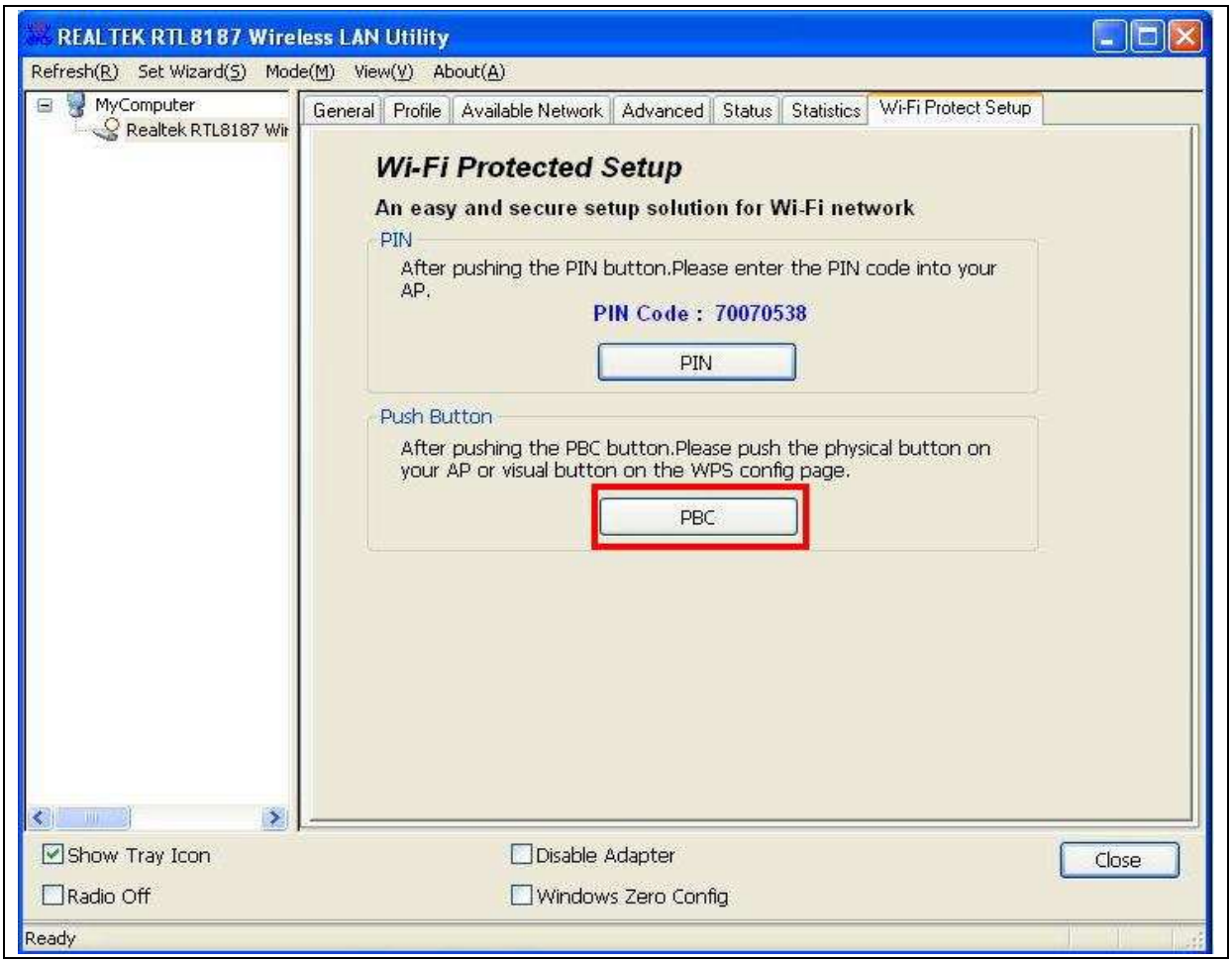
* Start PBC:

(1) Please click **Start PBC** to connect to the wireless network card.

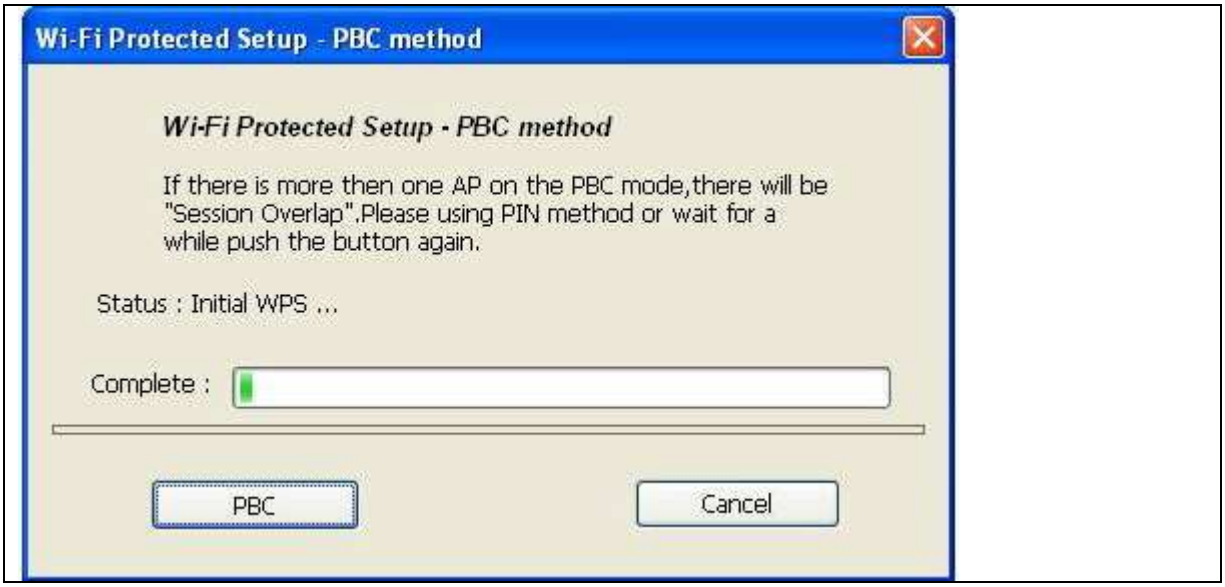

(2) Please click **OK** to start WPS process..



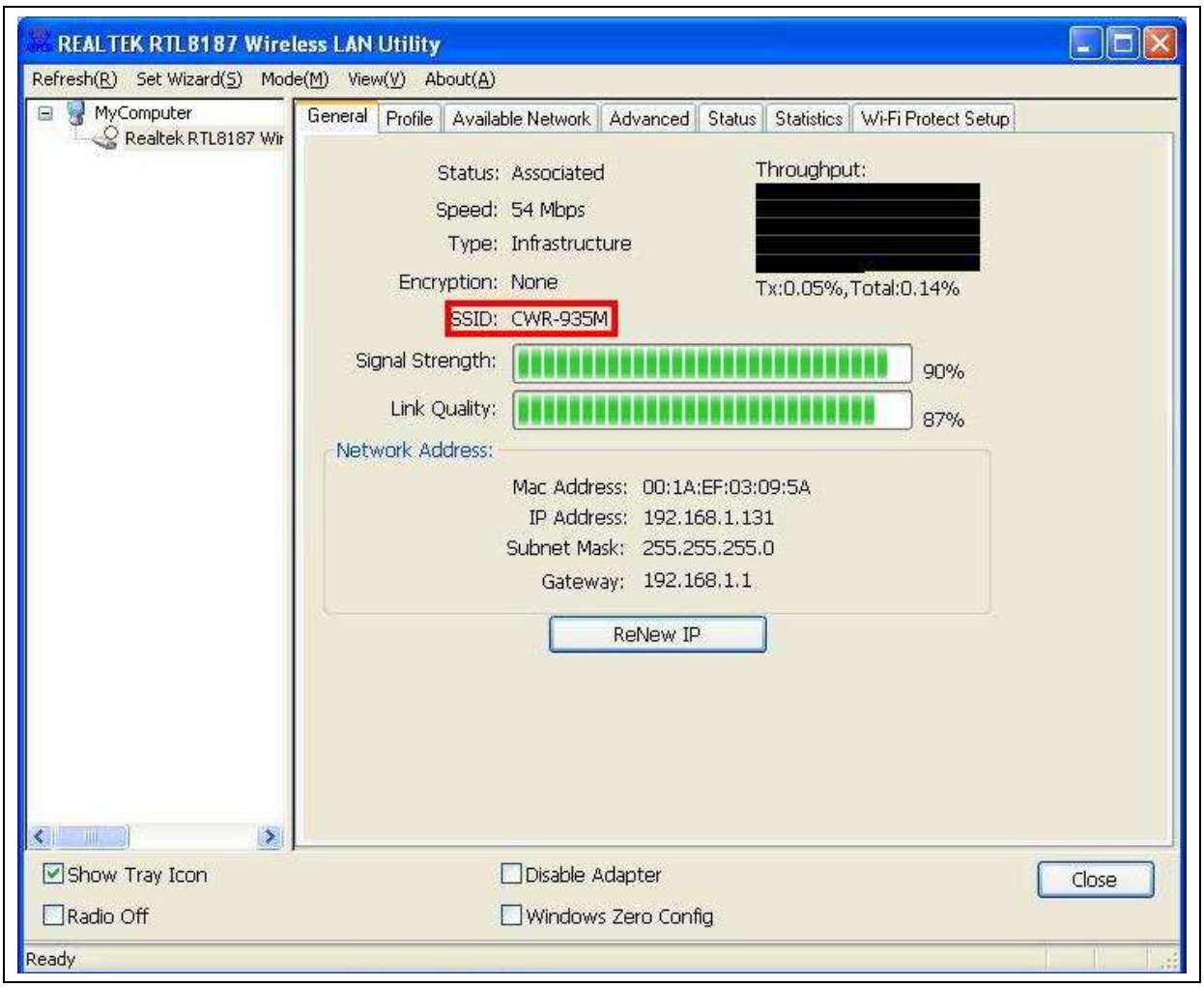
(3) Open the configuration page of the wireless card which supports WPS. Click the **Wi-Fi Protect Setup**, and then click **PBC** to make a WPS connection with AP from the WPS AP list (PBC-Scanning AP).




(3) Dongle starts WPS process.

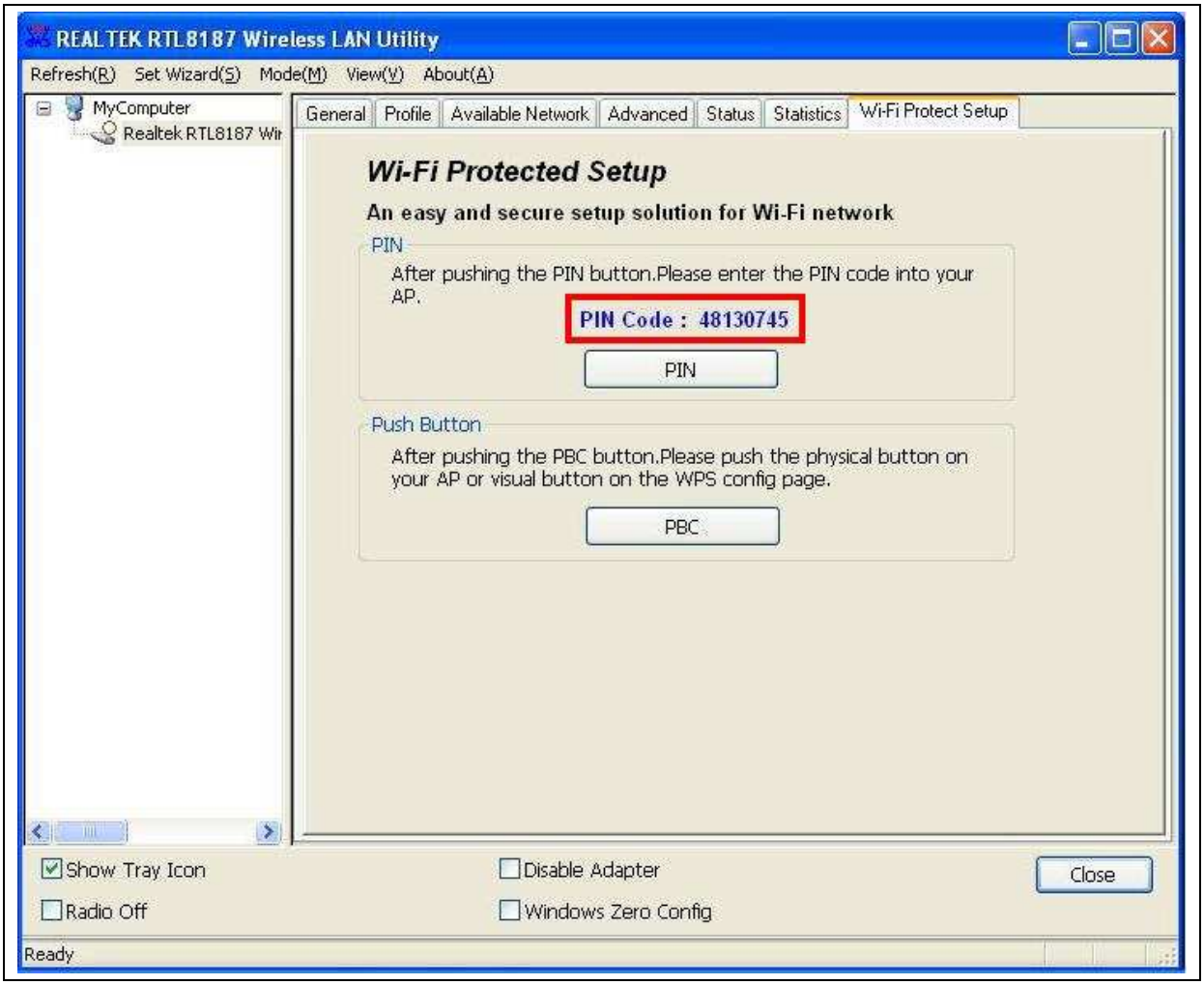


(3) After finish WPS configure successful, Wireless USB Dongle will get network information from CWR-935M. It means the WPS connection between wireless card and CWR-935M is established.

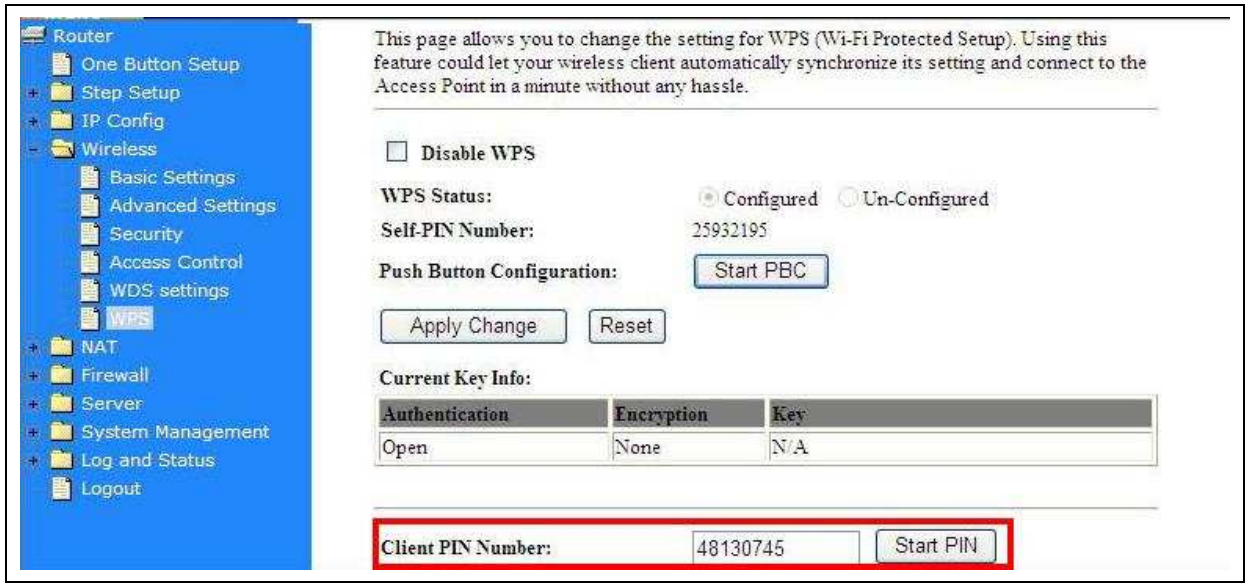


* Start PIN:

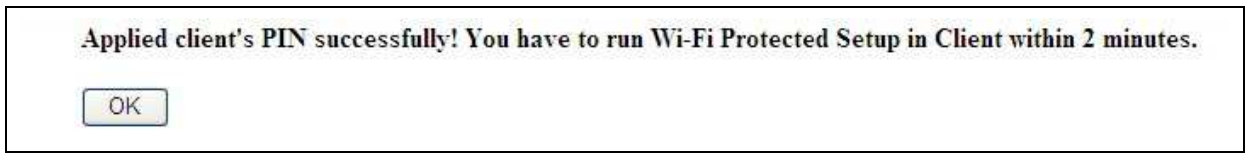
(1.) Please open the configuration page of the wireless card to get a PIN number, and write it down.



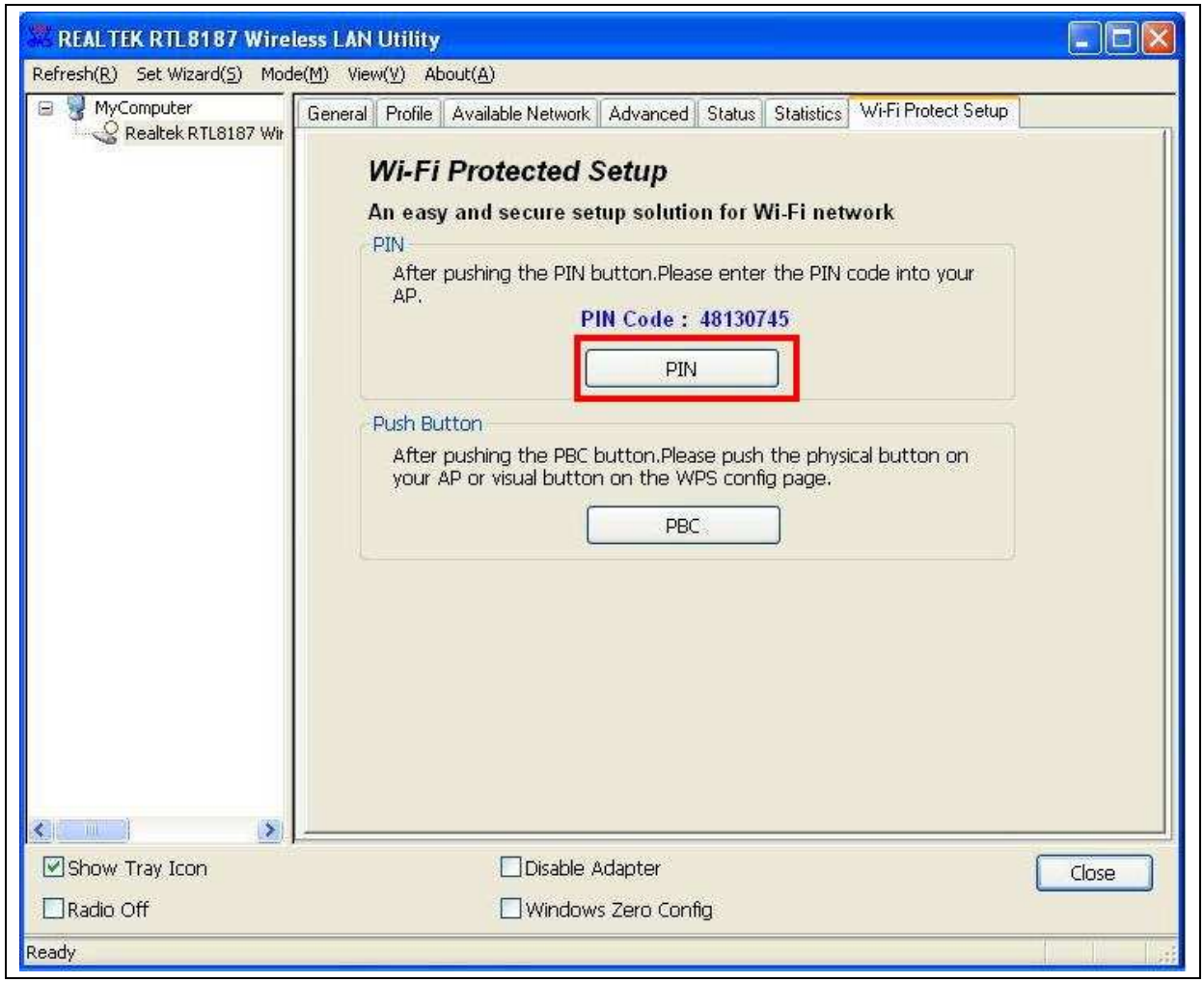
(2) Open the Wi-Fi Protected Setup configuration page of CWR-935M, input the PIN number from the Wireless card then click **Start PIN**.



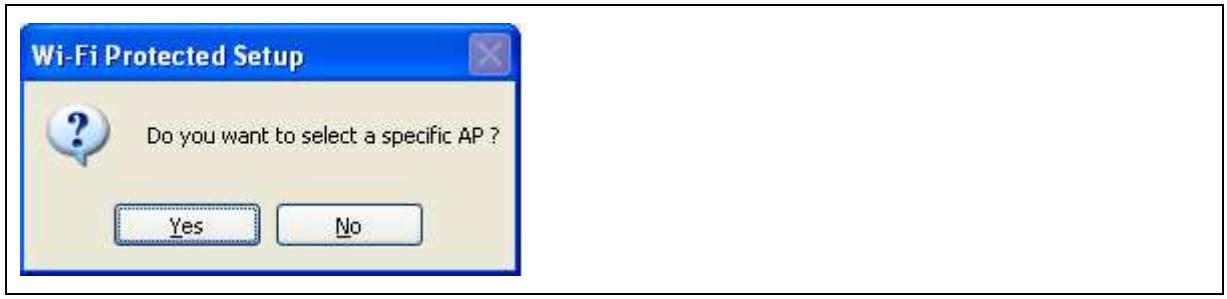

(3) Click **OK** to starts process.



(4) Open the configuration page of the wireless card which supports WPS. Click the **PIN** to make a WPS connection with AP from the WPS AP list (PIN-Begin associating to WPS AP).




(5) Click **No,** then USB Dongle starts WPS Process.



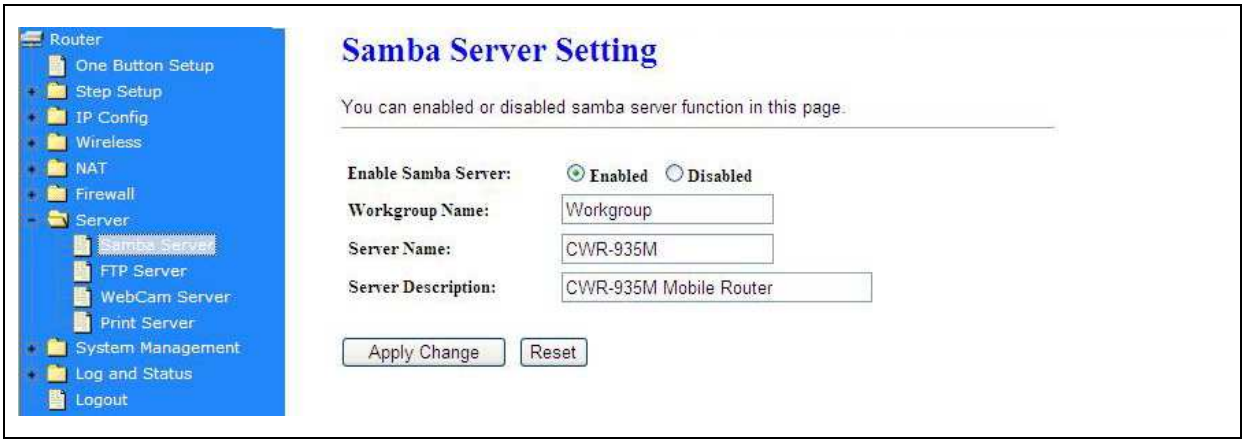
(5) WPS process. .


## 6.3 Server

CWR-935M provides Samba Server, FTP Server, Web Camera Server, and Printer Server Application.

### 6.3.1 Samba Server

Support NetBIOS Protocol, the consumer sharing file or printer which provides as the "**My Network Places**". Please make sure storage devices and printers are connecting to USB ports on the router and already mounting.



| Item | Description |
|---|---|
| Enable Samba Server | Enable or disable this function. |
| Workgroup Name | Input the workgroup name, default is “**Workgroup**”. |
| Server Name | Input the server name, default is “**CWR-935M**”. |
| Server Description | You can input description of the server, default is “CWR-935M Mobile Router” |
| Apply Changes & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

#### 6.3.1.1 How to Enter the Sharing Folder

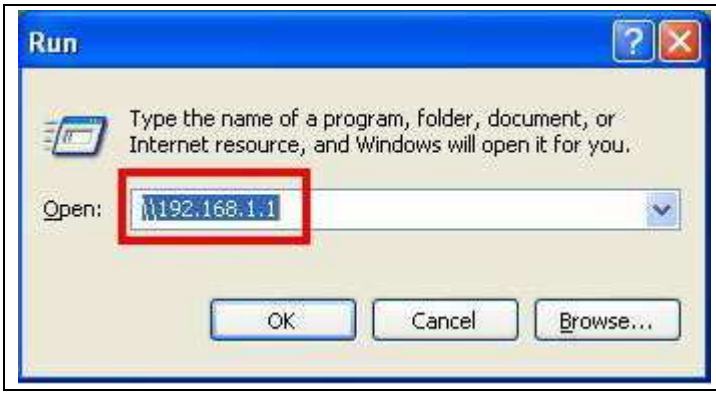
Please follow below steps.

Step 1:

Please click the “**start**”, and select “**Run**”.

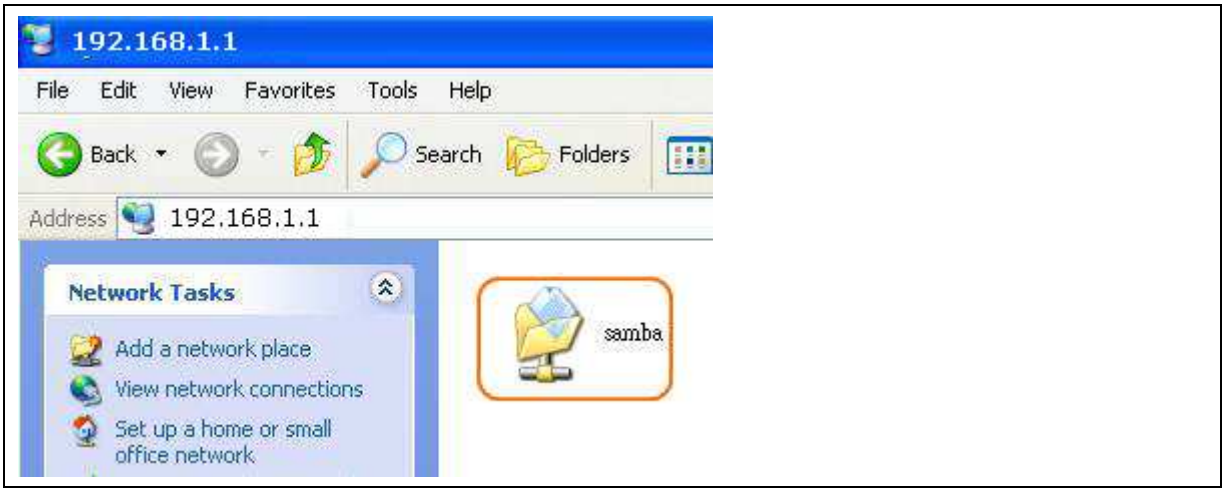
Step 2:

In the Address blank input the IP address: \\192.168.1.1.




Step 3:

Appear following menu, can open following to share internal data.

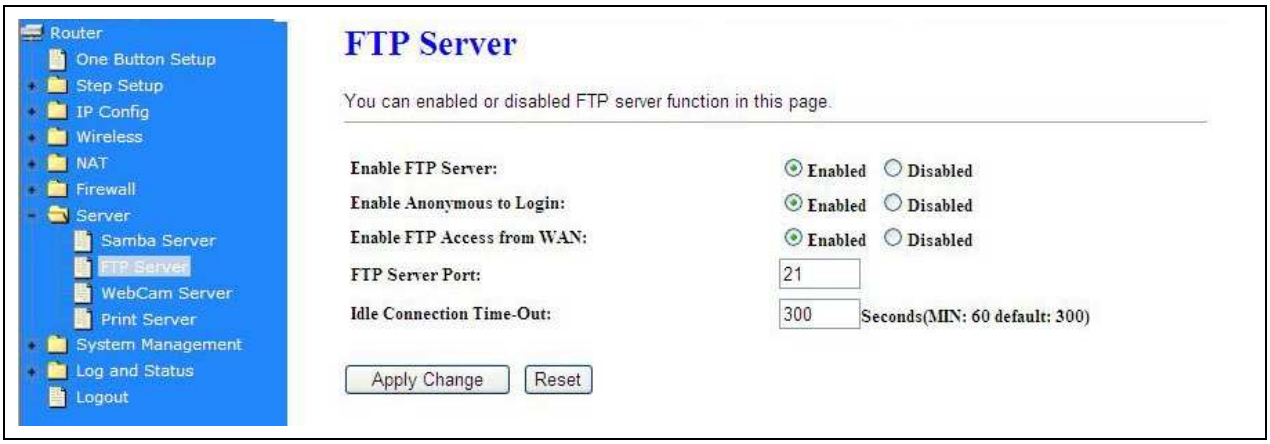



Note：

1. If connected USB flash or HDD, and then enable samba server function, it will appear a samba folder.
2. If connected USB printer, and then enable printer server function, it will appear a printer icon.

### 6.3.2 FTP Server

FTP Server utility allows both local and remote users to upload or download files, pictures or MP3 music form the same storage device. Before configure FTP Server, please make sure the storage device is properly plug into any USB port on the router and make sure this USB storage device is detected by the router.



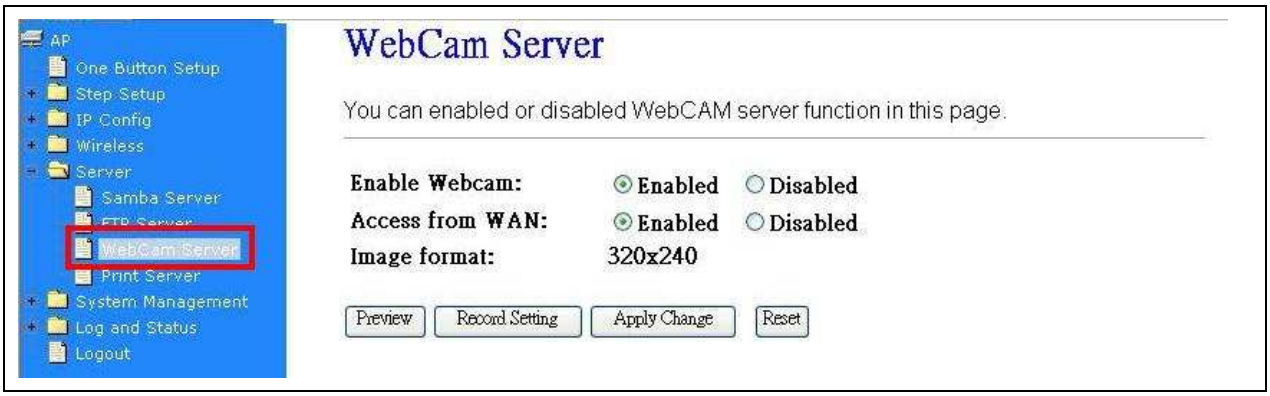

| Item | Description |
|---|---|
| Enable Samba Server | Select to “**Enable**” or “**Disable**” FTP server. |
| Enable Anonymous to Login | Allow anonymous to login after check on Enable. |
| FTP Server Port | The default is 21. Define the FTP command transfer service port. If you want to change this port number, remember to change the service port setting of your FTP client, also. |
| Idle Connection Time-Out | When a specific time value is added, FTP Server will be de-activated if it has no activity within the time limit. The default is 300 seconds; the minimum is 60 seconds. |
| Apply & Changes | Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page. |
| User Account List | User Name, Status, and Opened Directory/File can be shown on the list. |

Note：FTP server is compatible with FAT32 or EXT3 format USB storage device. In case you need to format your USB storage device. Please always make sure the device is formatted with FAT32 or EXT3 standard.

### 6.3.3 Webcam Server

By connecting web camera to the router, it allows user to monitor their home or office from remote locations.

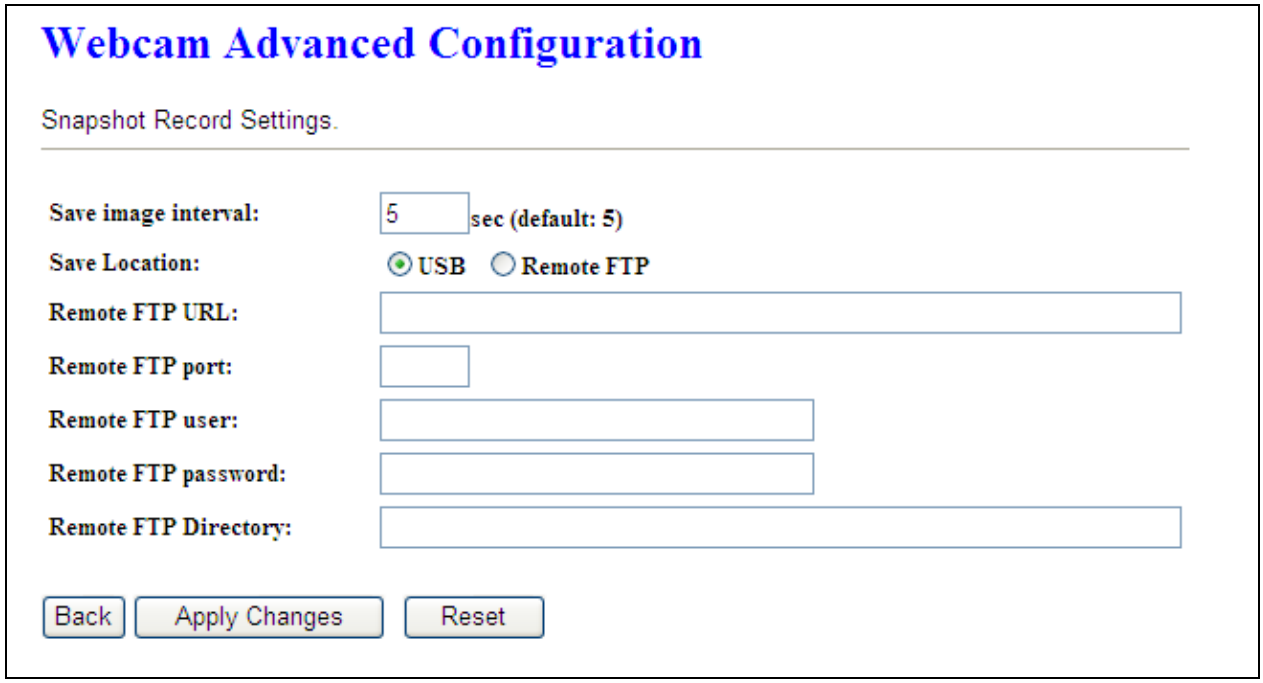
#### 6.3.3.1 Webcam Server Basic Setting




| Item | Description |
|---|---|
| Enable Webcam Server | Select to "**Enable**" or "**Disable**" webcam server. |
| Image format | The format is 320X240 pixels. |
| Preview | Click on this button, you can preview the image from webcam. |
| Record Setting | Please see the detail advance setting in "**6.3.3.2 Webcam Advanced Configuration**". |
| Apply & Changes | Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page. |

### 6.3.3.2 Webcam Server Advanced Setting

Click on "**Record Setting**" button, and the screen will appear as below.




| Item | Description |
|---|---|
| Save image interval | For saving image, you can set the save interval time, the default value is 5 seconds. |
| Server Location | Set the save location for webcam image, you may save into **USB HDD** or **Remote FTP**; if select save to **Remote FTP**, please continue following remote FTP setting. |
| Remote FTP URL | Input the FTP URL for saving webcam image. |
| Remote FTP port | Input the FTP port number under URL to save image. |
| Remote FTP user | Input the users name you like and it will be used to save the webcam image into the FTP server. |
| Remote FTP password | Input the remote password. |
| Remote FTP Directory | To provide option of which folder should be used for saving webcam image. |
| Back | Click on **Back** button for returning to Webcam Basic Setting screen. |
| Apply & Changes | Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page. |

### 6.3.3.3 Application of Webcam

#### 6.3.3.3.1 Web Camera Monitoring Application

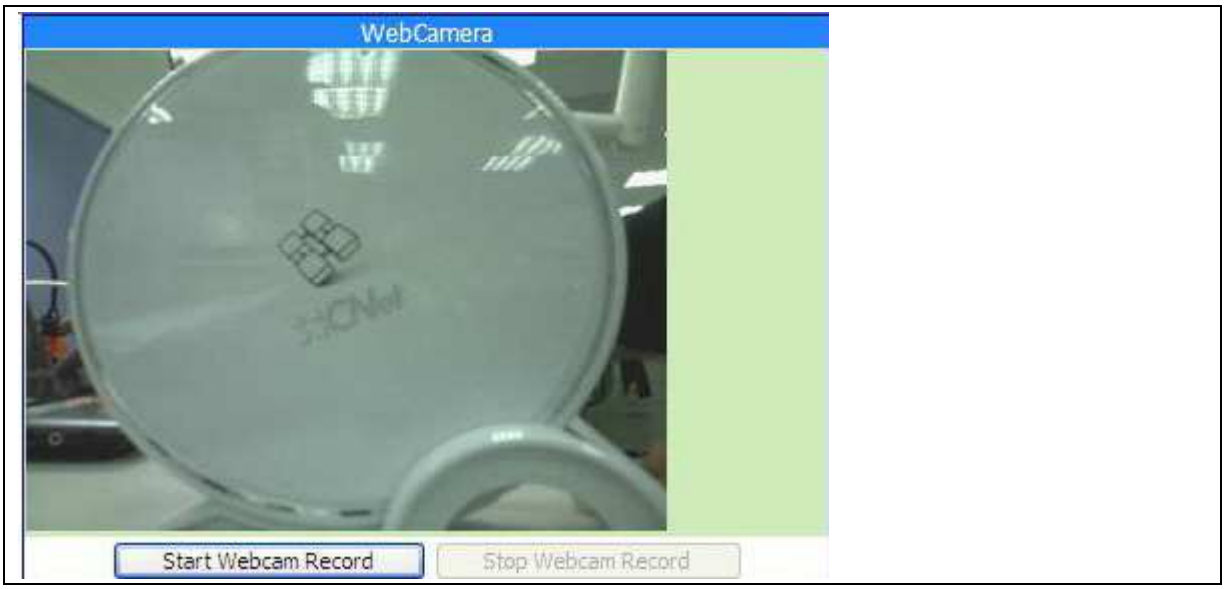
Monitor your home with a Webcam via CWR-935M. Take pictures via CWR-935M, also can do the monitoring or recording all images into the USB HDD for reviewing. Often marketed as surveillance tools for home or office security, network Webcams are now being employed by early adopters for more personal matters, such as watching kids and monitoring pets. The Webcam can be remotely accessed and controlled via a browser. Besides, to record and monitor live action with USB webcam, also can view the image through Internet browsers or 3G mobile phones.

##### 6.3.3.3.1.1 Web Camera Monitoring WAN connecting

Users must config with Visual Server or DMZ settings. Input 192.168.1.254 into browser blanks, and you will see the personal account login screen appear then input your own user account and password. After login by personal, your will see the personal control panel screen as below, please click on "**My Webcam**".

Click on Personal Panel to enter

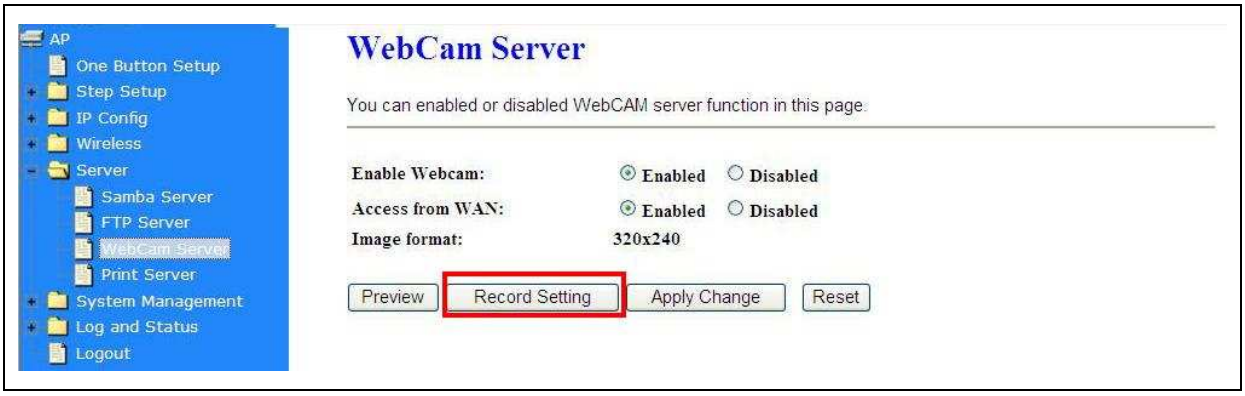

There will be a pop-up screen showing the image from web camera as below example.



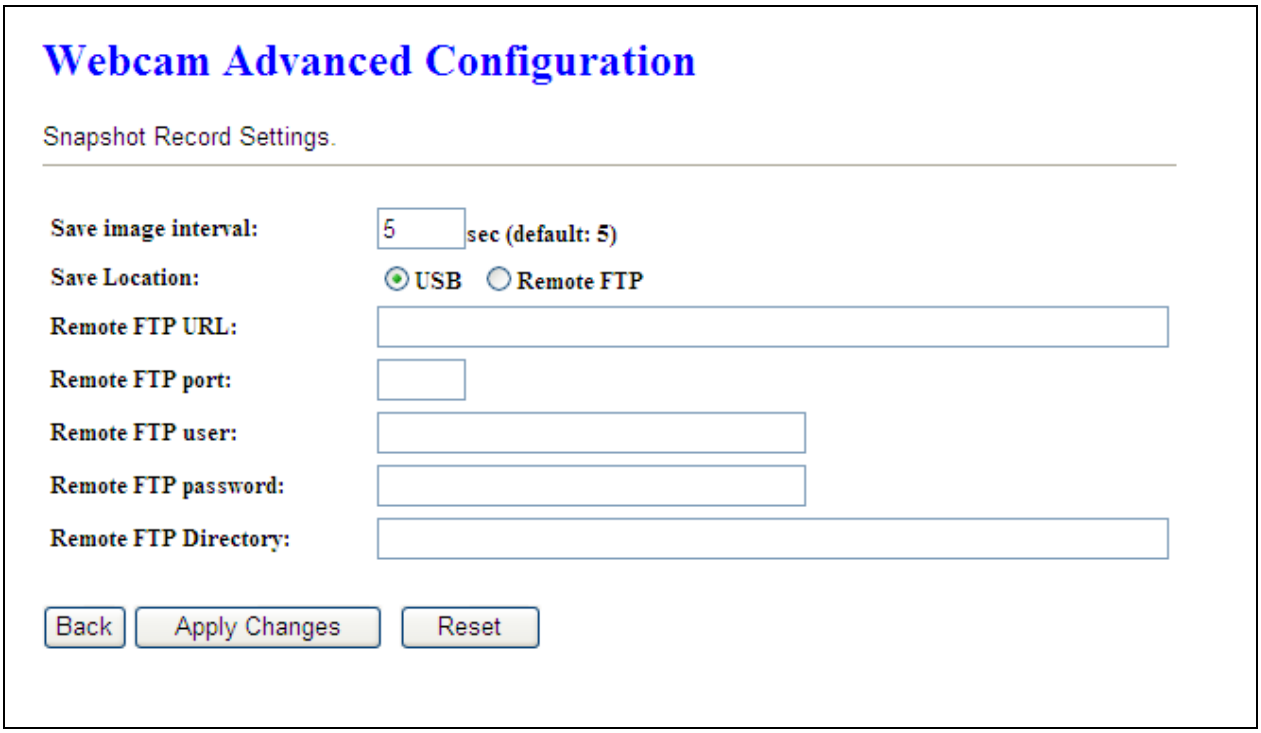

### 6.3.3.3.2 Web Camera Recording

#### 6.3.3.3.2.1 Administrator

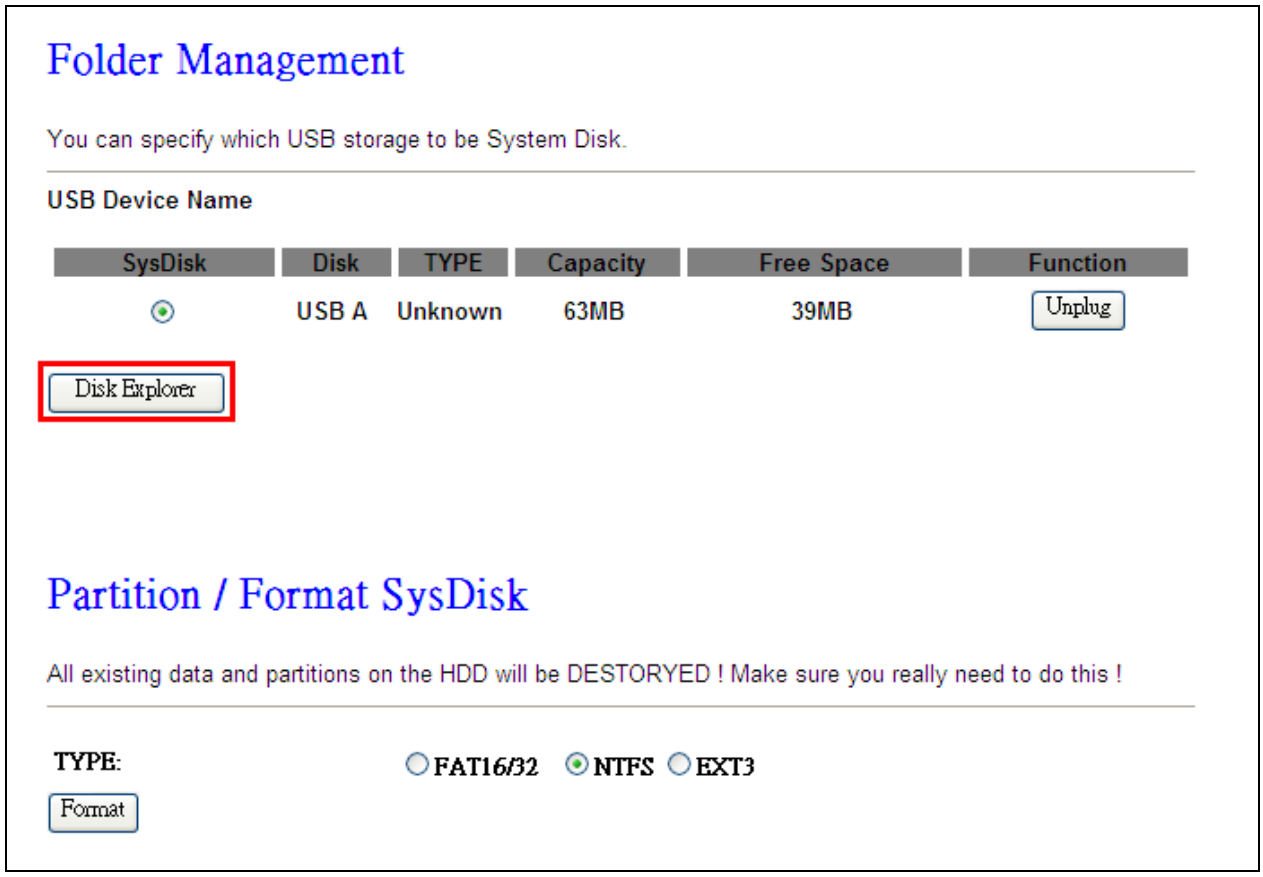
CWR-935M also can record the pictures from Webcam; only Administrator can do the settings. Select **Web Camera Server** from main Menu and Enable this function, click on **Record** setting button for further setting.



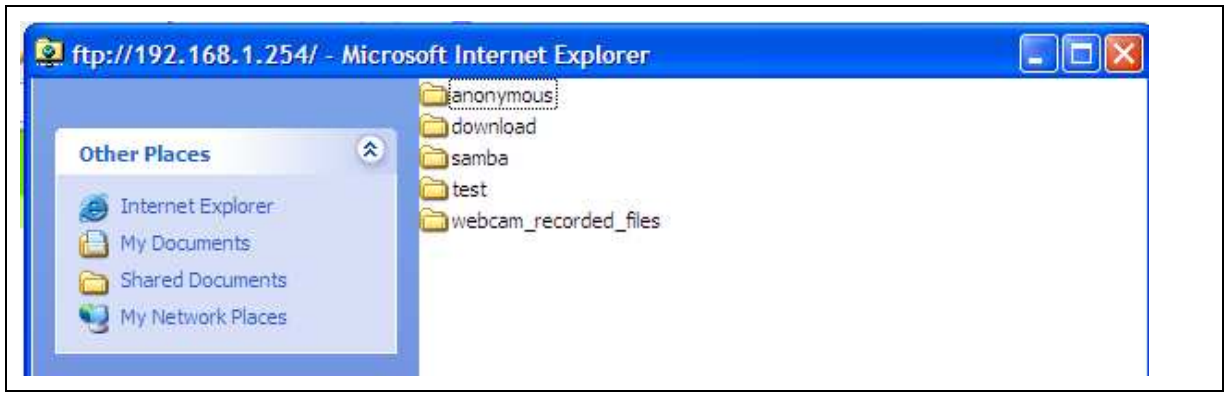

To setup the Webcam Advanced Configuration for each blank and the image from webcam will be recorded into your USB HDD or Remote FTP.



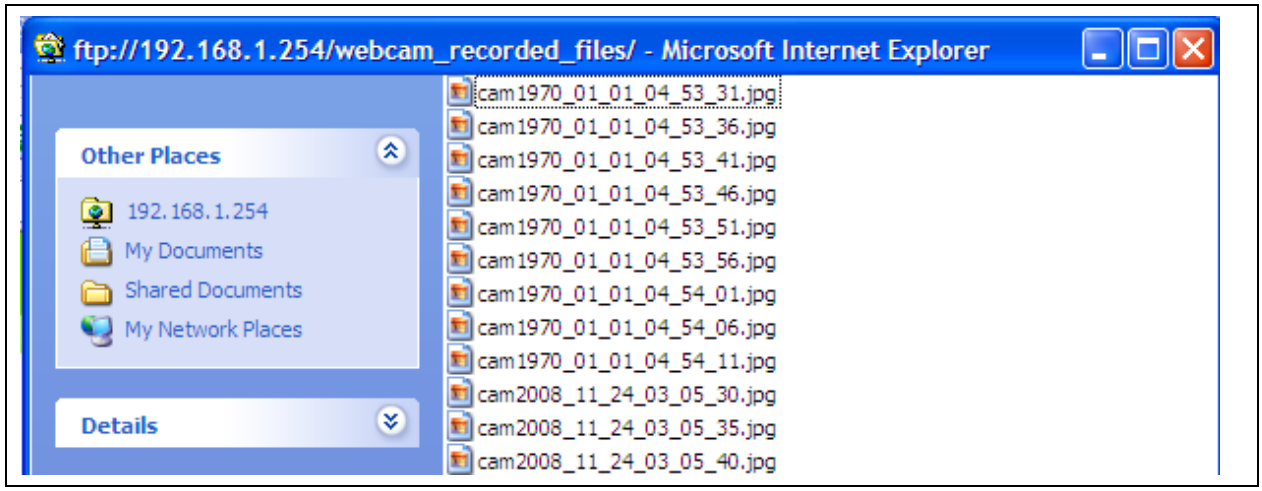
For administrator, you may view all the images from webcam recording, please select **Folder Management** and click on **Disk Explorer** to view entire folder inside the disk including webcam record files.




After click on **Disk Explorer**, you will see the folder screen appear including all the folders.



All the image files will be saved in the folder "**webcam_recorded_files**". Please open the file for checking.




#### 6.3.3.3.2.2 Personal Application

All the users under administrator's setting can view entire webcam recording images from **My Document**. Please login by your own personal account. For viewing your own folder, please click on "**My Document**".


After click on "**My Document**", you will see below folder screen appeared. You can save files here.

Note：If you can't open the folder inside the FTP server, please check with administrator to setup your FTP & Webcam's privileges.

### 6.3.4 Printer Server

The two USB ports on CWR-935M are for connection with printers to be shared on the local area network. Follow the below steps to setup your PC to connect to a Printer server.


| Item | Description |
|---|---|
| Enable Printer Server | Check **Enable** for applying printer server. |
| Printer Model | The printer model will be shown when plug the USB printer. |
| Printer Name | Input the name of printer you like. |
| Printer Description | Input the description of printer as your demand. |
| Apply & Changes | Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page. |

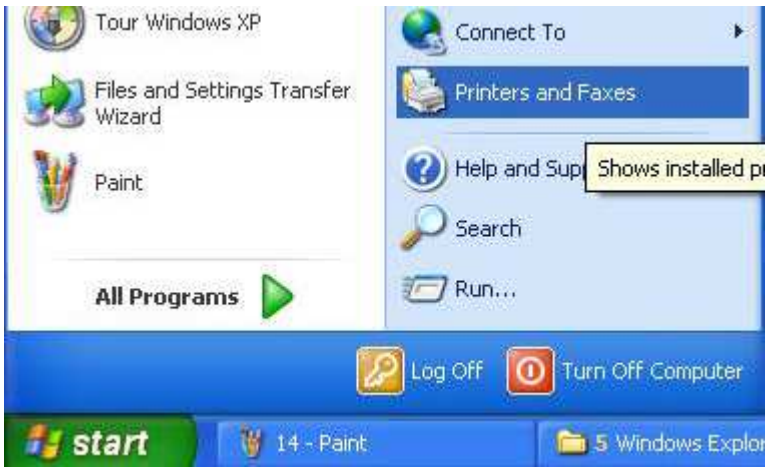
Besides above setting finished, the printer setting on PC also needs to be set as follows.

#### 6.3.4.1 Printer Setting for PC

After Enable Printer Server in Quick Setup and Printer Server Configuration, please follow below steps to set the detail **LPR** settings in your PC. (Below example is for Windows XP platform.)

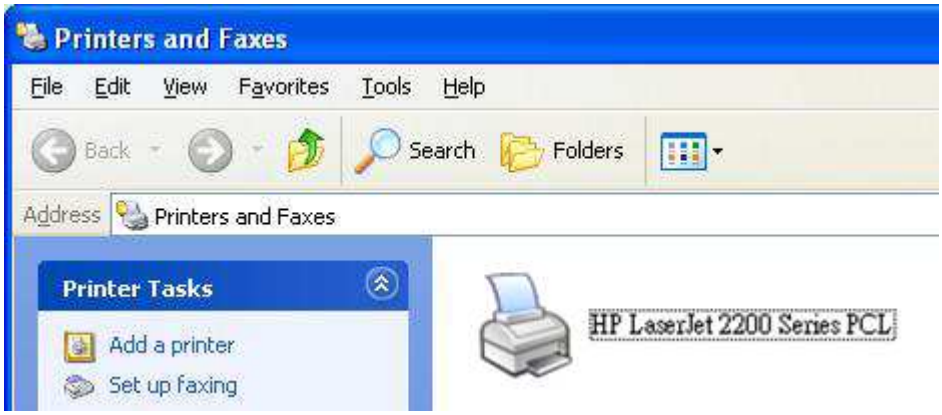
Step 1:

Please go to **Start** > **Printers and Faxes** to add a printer.




Step 2:

Click "**Add a printer**".



Step 3:

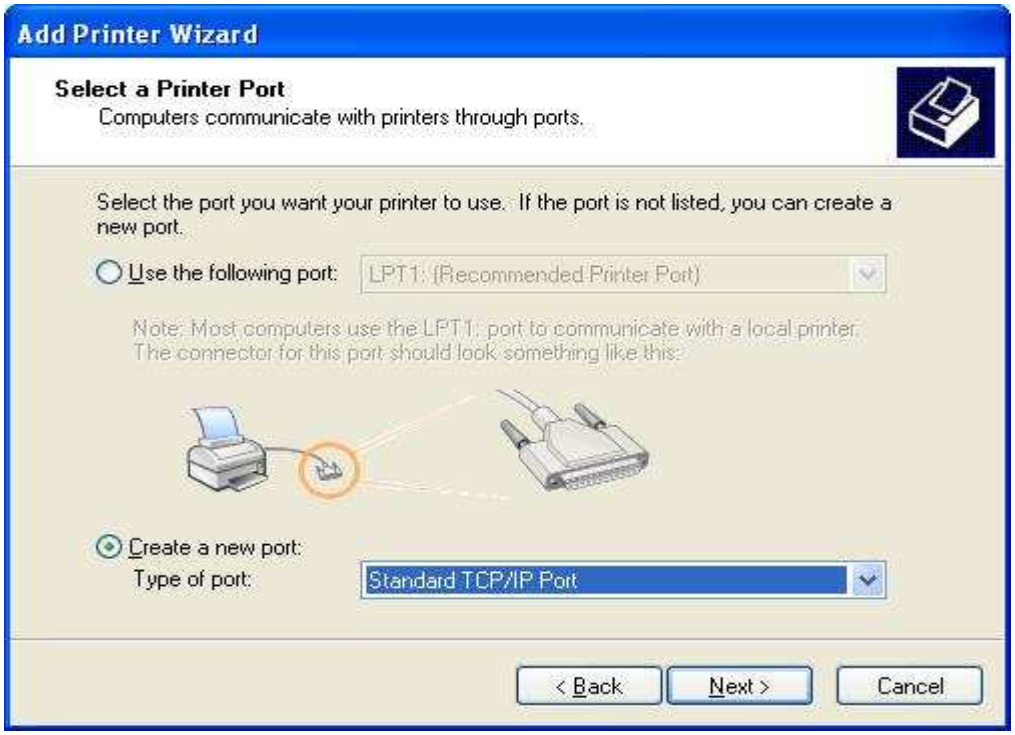
Click “**Next**”.


Step 4:

Click the “**Local printer attached to this computer**”, and then click “**Next**”.

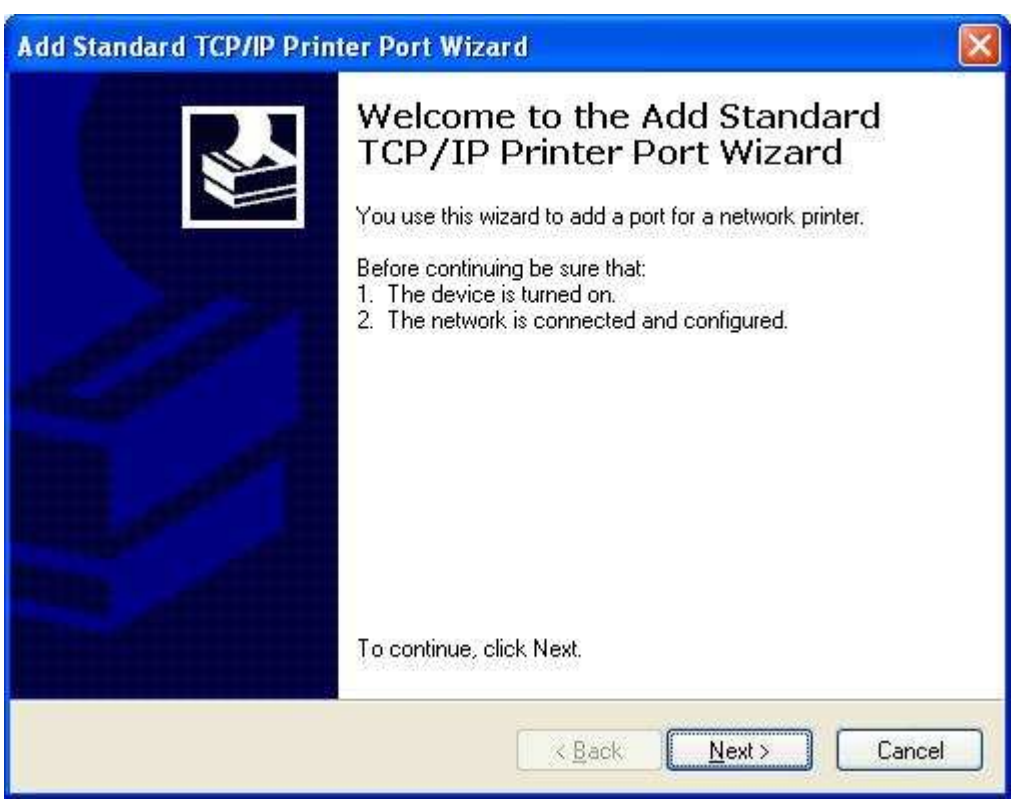
Step 5:

Click the “**Create a new port**” and select the “**Standard TCP/IP Port**”, and then click “**Next**”.




Step 6:

Click “**Next**”.



Step 7:

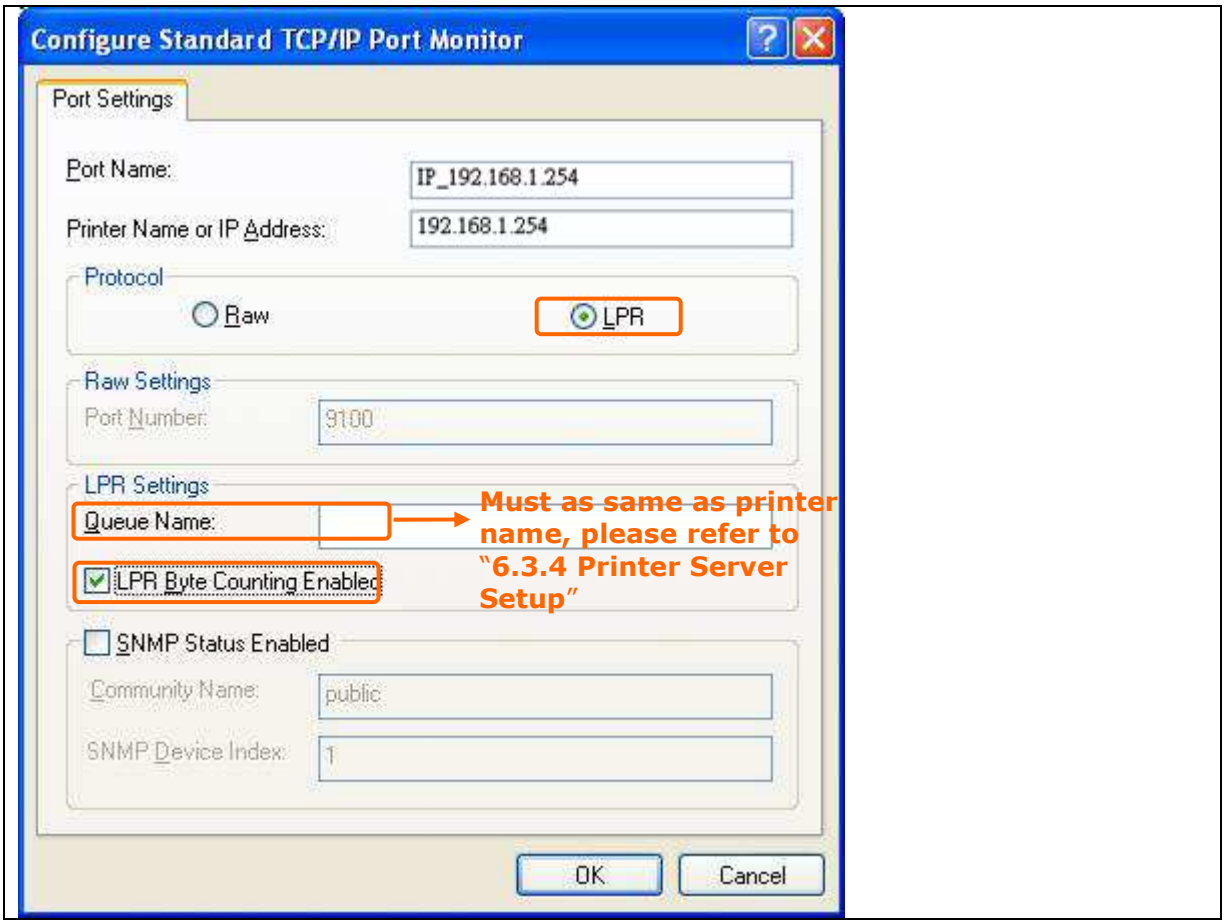
Input the IP address of CWR-935M: **192.168.1.254**, and then click “**Next**”.

Step 8:

Select the “**Custom**” and click the “**Settings**”, and then click “**Next**”.

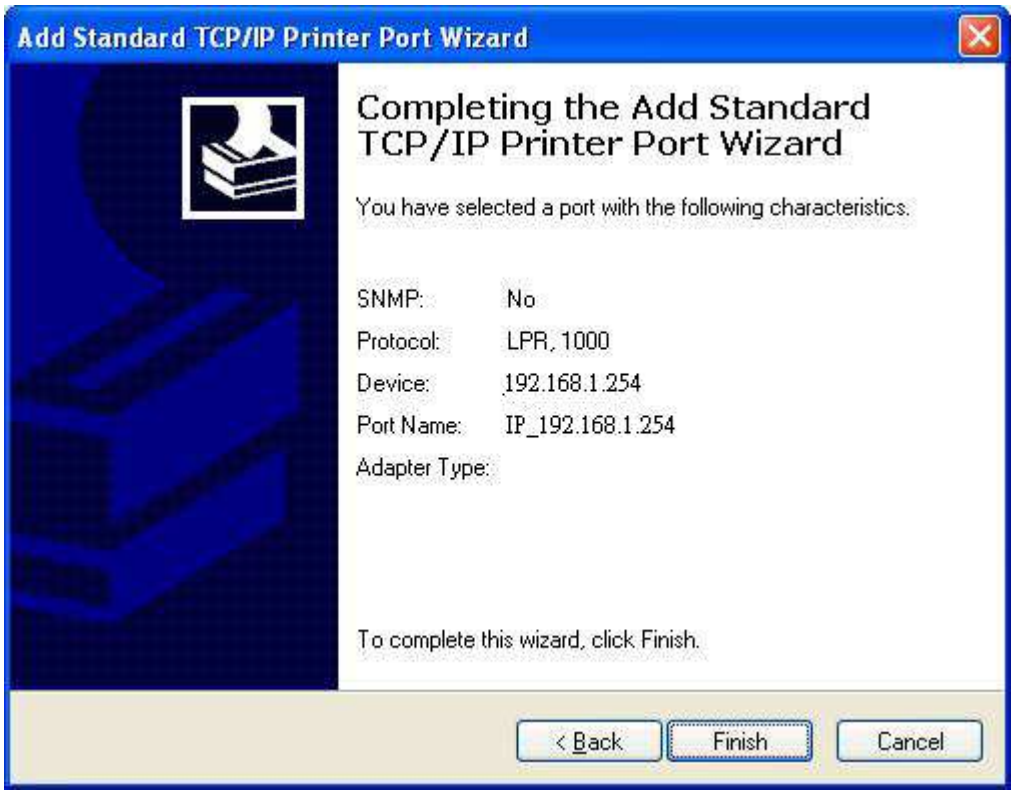
Step 9:

Select “**LPR**” and give it the same “**Queue Name**” as USB Printer Name as shown, and mark “**LPR Byte Counting Enabled**”. Finally, click on “**OK**” button.



Step 10:

Click the “**Finish**”.



Step 11:

Select the “**Manufacturer**” and “**Printers**”. If your printer doesn’t listed in the table, please install its driver CD and then click on “**Have Disk…**” button for installation. Or click on “**Next**” button to finish the setting.

Step 12:

Click on **Finish** button and all steps of setting printer server are completely.


## 6.4 System Management

It has 6 sections: Change Password, Firmware Upgrade, Profiles Save, Time Zone Setting, UPnP Setting, and Language Setting. It is easy and helpful for users making more detailed settings.


### 6.4.1 Change Password

Users can set or change their password in this section.


Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

### 6.4.2 Firmware Upgrade

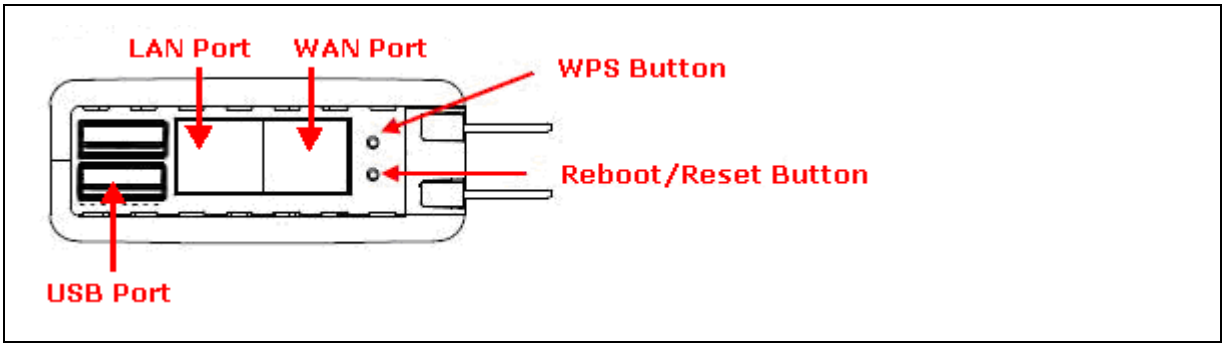
This function can upgrade the firmware of the router. There is certain risk while doing firmware upgrading. Firmware upgrade is not recommended unless the significant faulty is found and published on official website. If you feel the router has unusual behaviors and is not caused by the ISP and environment. You can check the website (http://www.cnet.com.tw) to see if there is any later version of firmware. Download the firmware to your computer, click **Browser** and point to the new firmware file. Click **Upload** to upgrade the firmware. You can't make any move unless the machine reboot completely.


Caution: To prevent that firmware upgrading is interrupted by other wireless signals and causes failure. We recommend users to use wired connection during upgrading.

Caution: The firmware upgrade will not remove your previous settings.

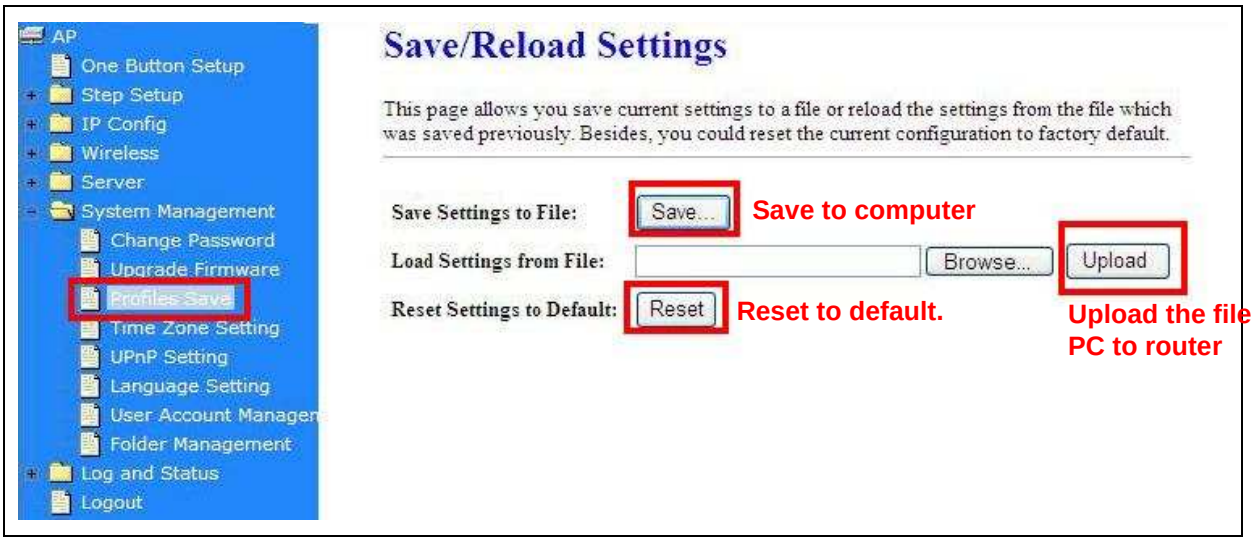
* Reset button:

On the back of this router, there is a reset button. If you can not login the administrator page by forgetting your password; or the router has problem you can't solve. You can push the reset button for 5 seconds with a stick. The router will reboot and all settings will be restored to factory default settings. If the problem still exists, you can visit our web site to see if there is any firmware for download to solve the problem.



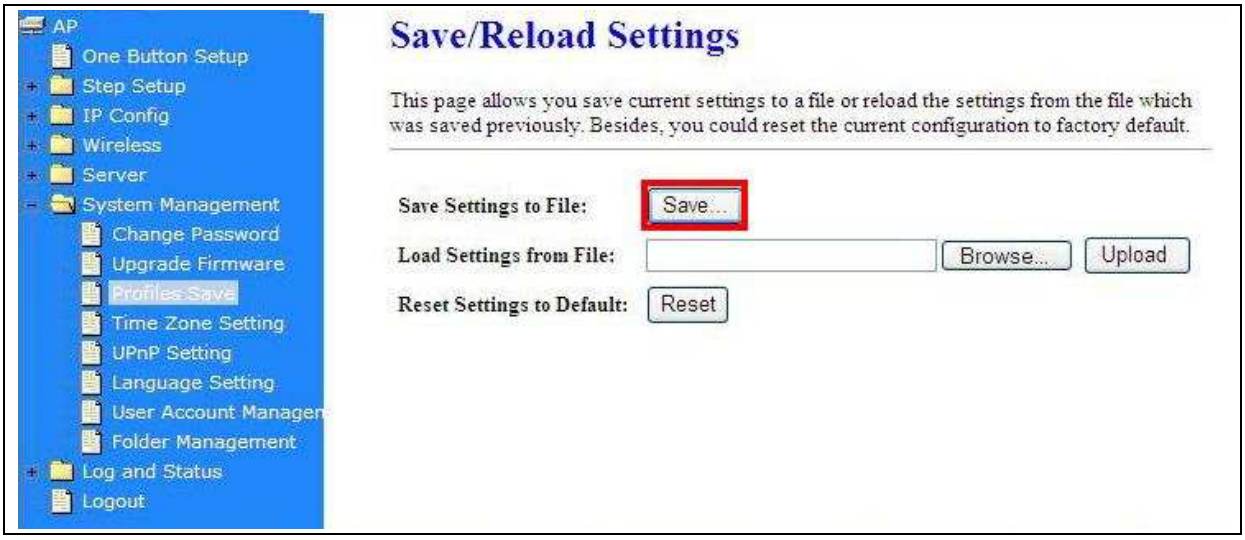

### 6.4.3 Profile Save

Users can save or restore the setting profile, and reset the setting to factory default.



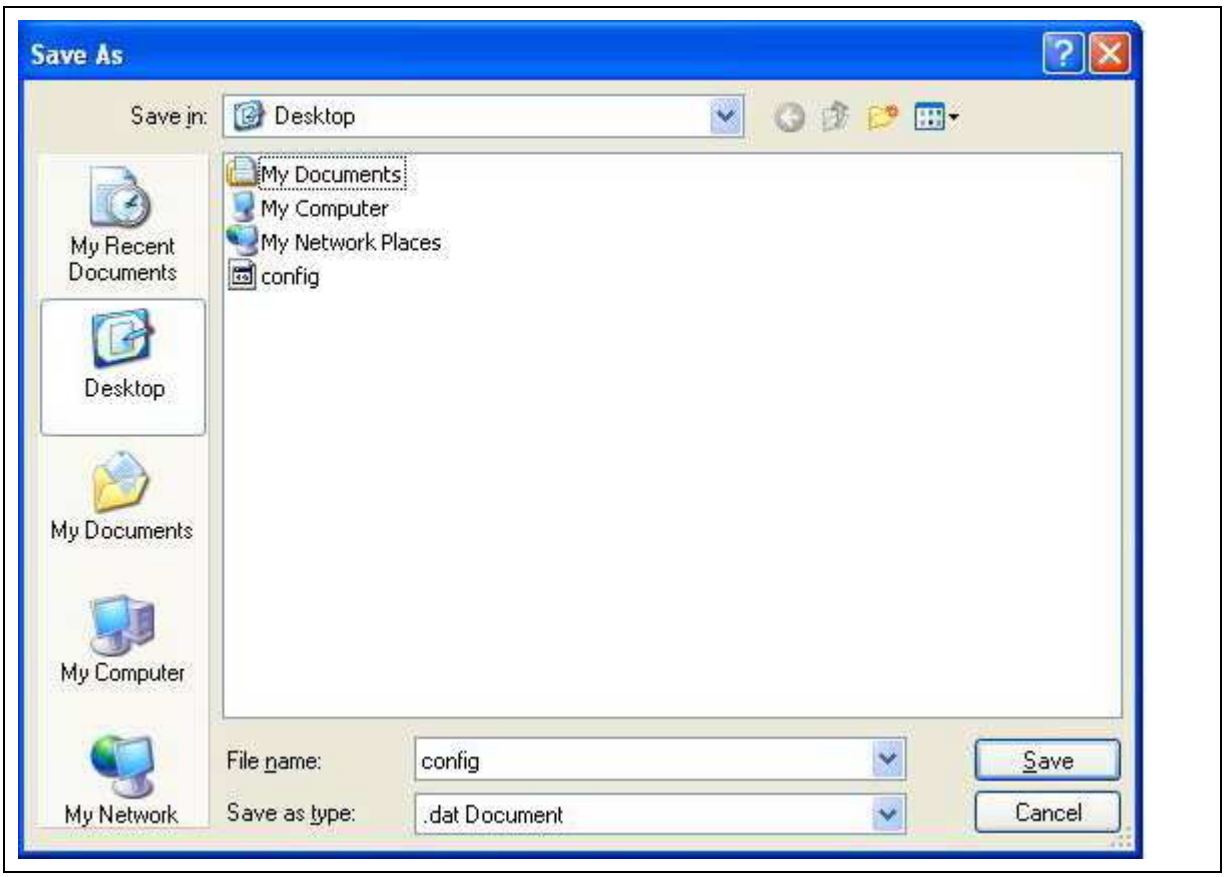

a. Save Configuration

(1) Click **Save**



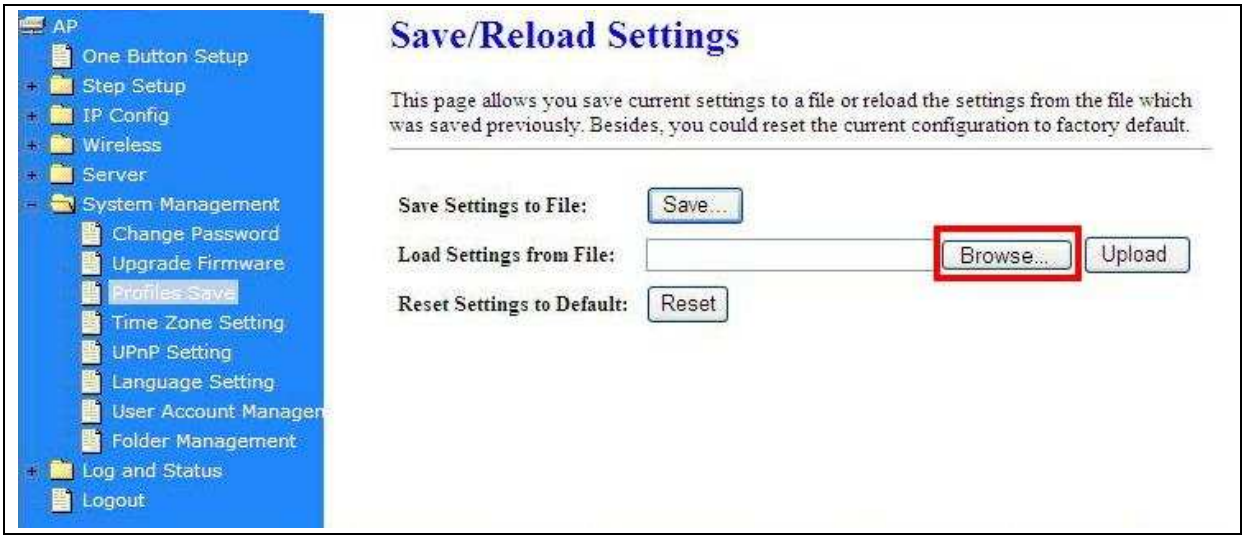

(2) Please click Save to save configuration to your computer.

(3) Select the location which you want to save file, then click **Save.**

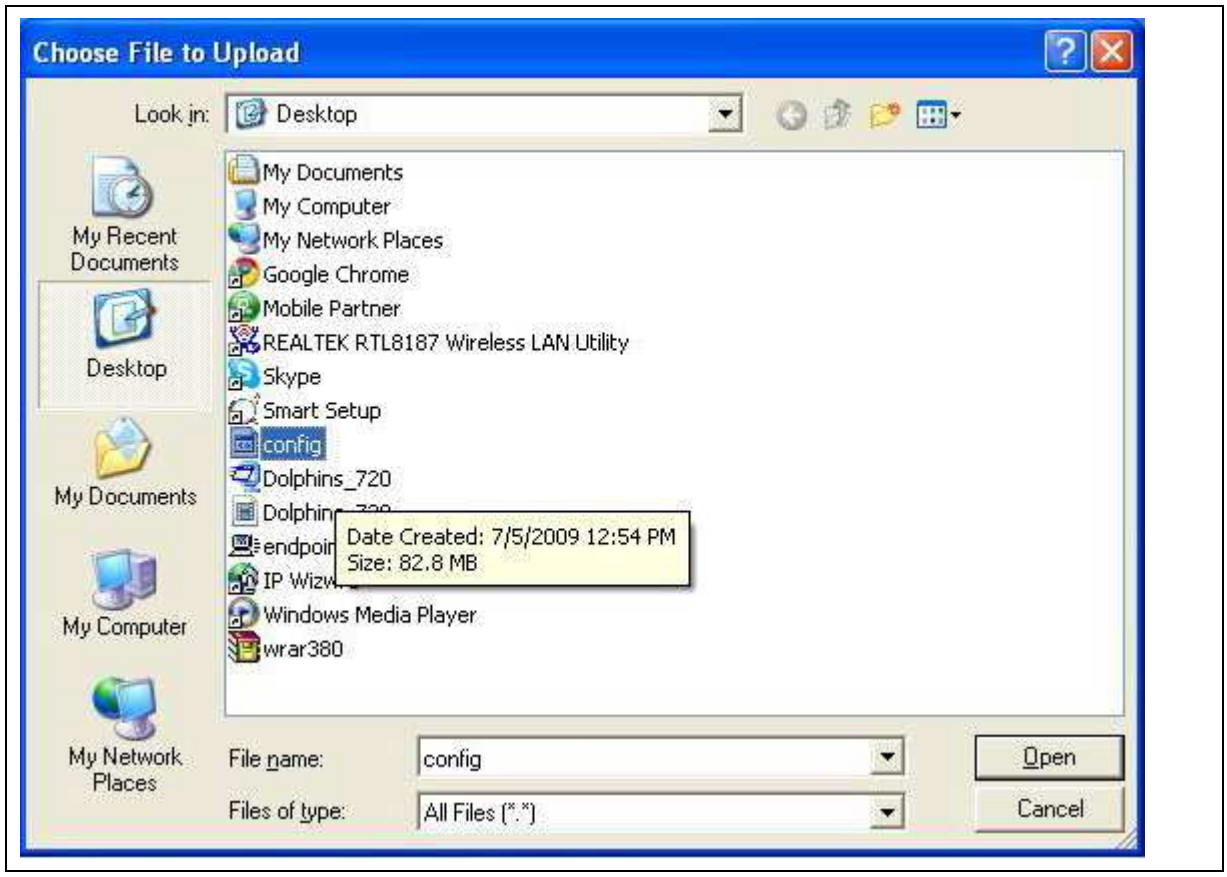



b. Load configuration file

(1) Click **Browser**

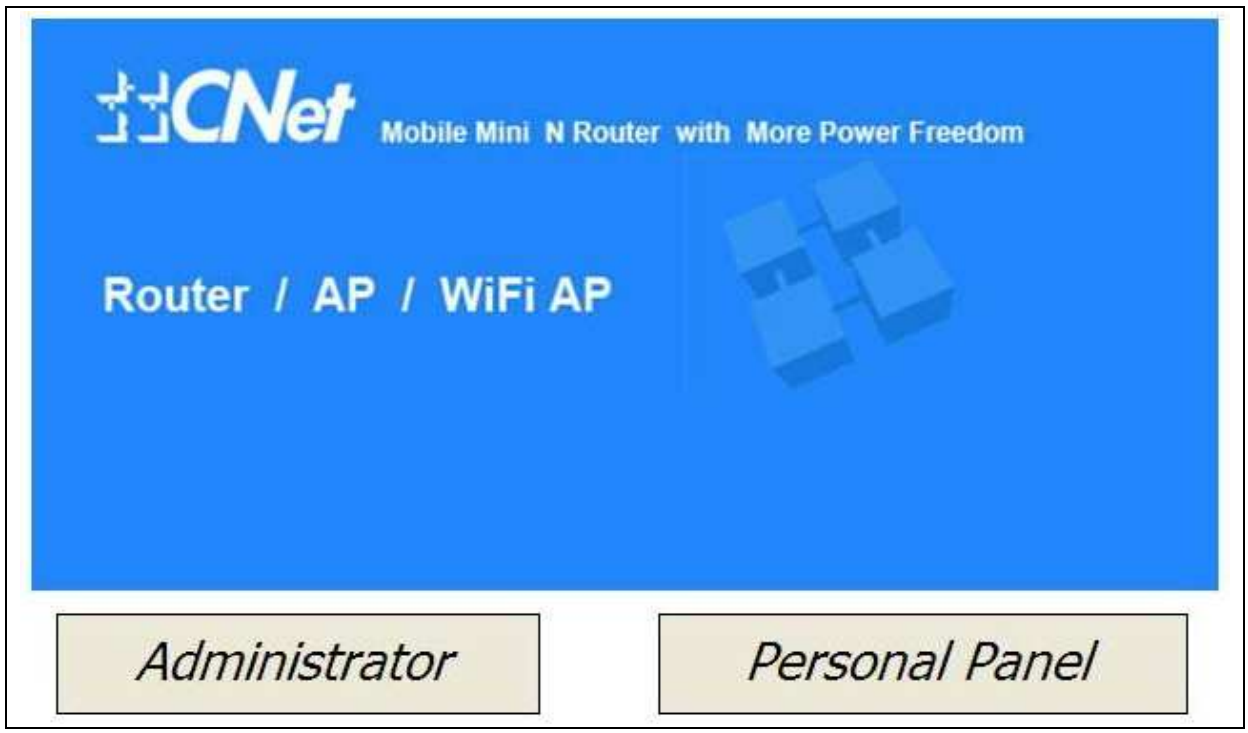


(2) Select configuration file then click **Open**



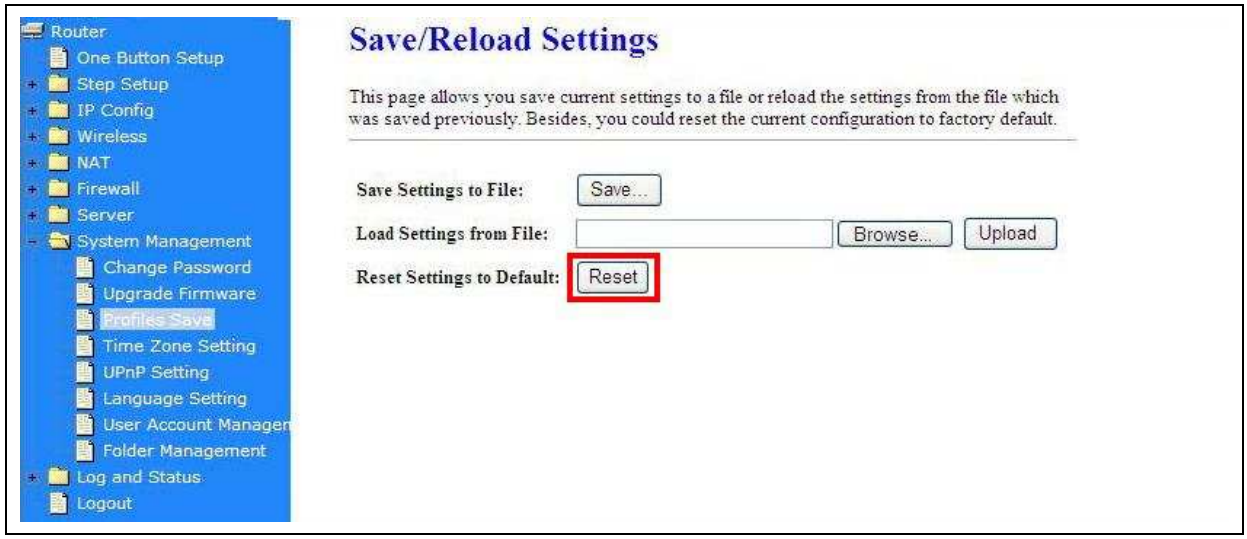

(3) Click **Upload** to upload configuration file to CWR-935M.

(4) After 90 seconds, CWR-935M will finish process and reboot. Please click **Administrator** to login




(C) Reload factory default setting

1. Please click **Reset**

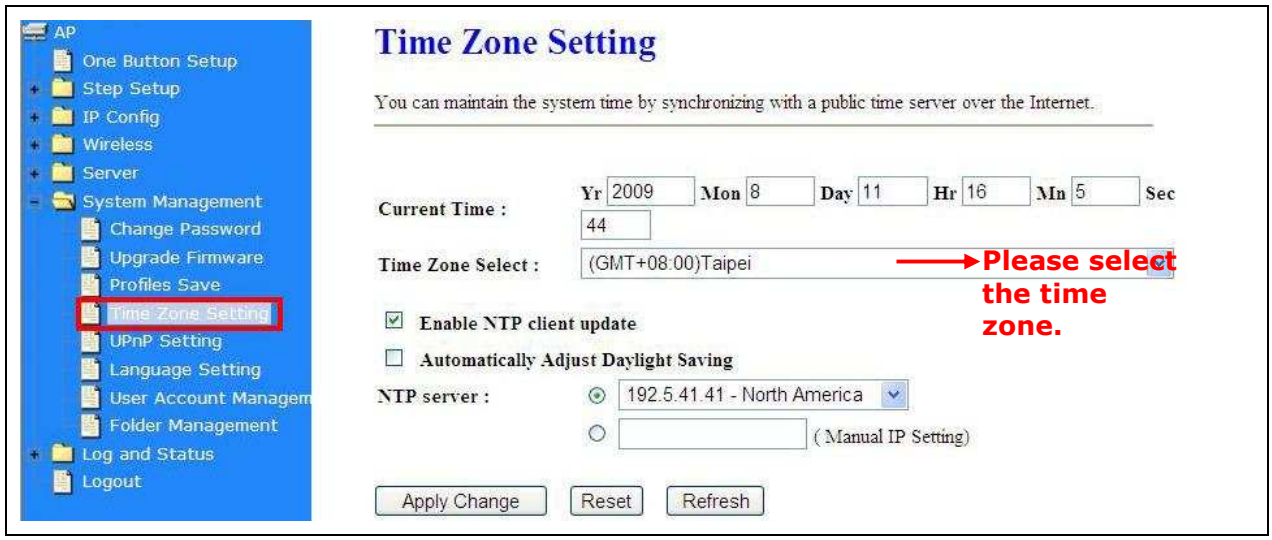


(2) Please click **OK** to start reload factory default setting to CWR-935M


(3) After 90 seconds, CWR-935M will finish process and reboot. Please click **Administrator** to login

### 6.4.4 Time Zone Setting

This function allows users to select their time zone and NTP server. Users can adjust the time manually or through the NTP server.

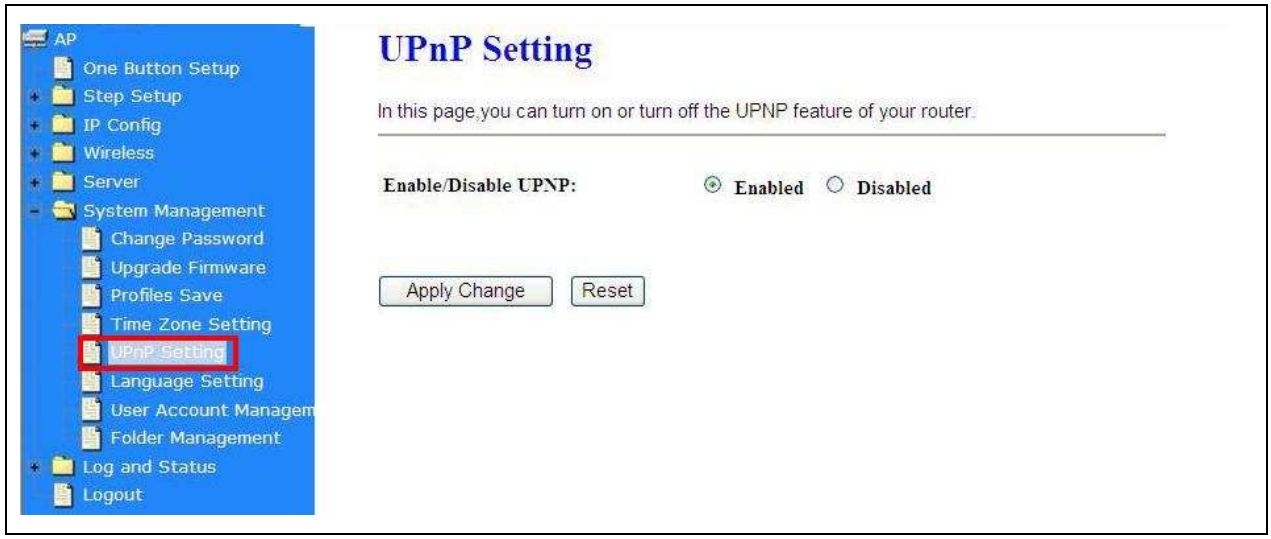



| Item | Description |
|---|---|
| Current Time | Users can input the time manually. |
| Time Zone Select | Please select the time zone. |
| Enable NTP client update | Please select to enable NTP client update or not. |
| Automatically Adjust Daylight Saving | Please select to enable **Automatically Adjust Daylight Saving** or not. |
| NTP Server | Please select the NTP server from the pull-down list, or you can enter the NTP server IP address manually. |
| Apply Changes & Reset & Refresh | Please click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. Or you may click on **Refresh** to update the system time on the screen. |

### 6.4.5 UPnP Setting

**Universal Plug and Play** (**UPnP**) is a set of networking protocols promulgated by the UPnP Forum. The goals of UPnP are to allow devices to connect seamlessly and to simplify the implementation of networks in the home (data sharing, communications, and entertainment) and in corporate environments for simplified installation of computer components. 3.5G server router supports UPnP function, and can cooperate with other UPnP devices. When you activate UPnP, please click **My**

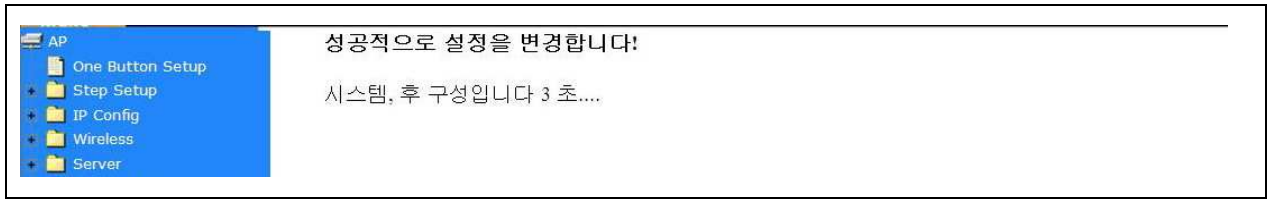
**Network Places**. Users will see an **Internet Gateway Device** icon. By click the icon, users can enter the GUI of 3.5G server router. If you do not wish to use UPnP, you can disable it.




### 6.4.6 Language Setting

CWR-935M provides users with 12 languages to choose. Users can change the language of the interface configuration. Please click **Apply Changes** after selecting a language.

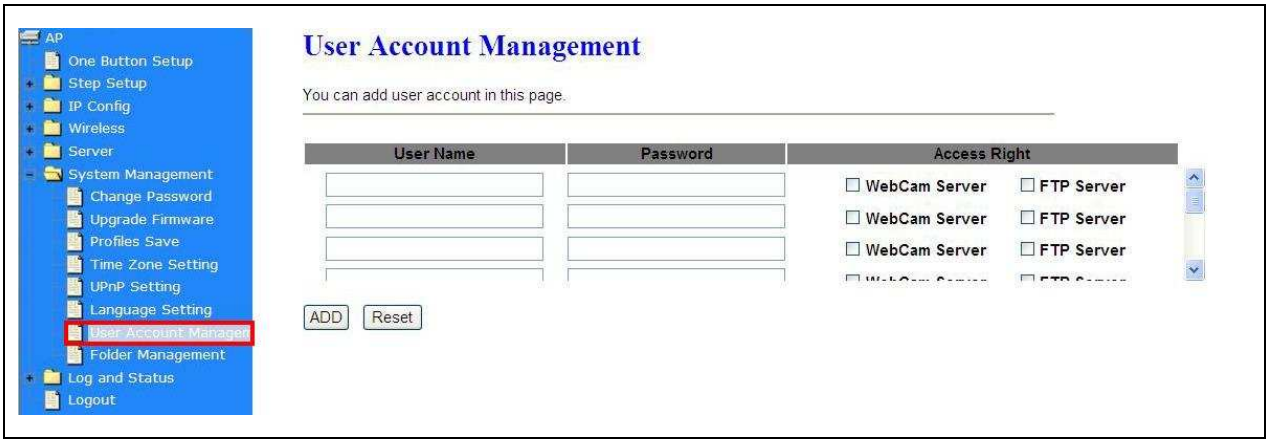

Using Korean as an example, the screen will display on the chosen language after the countdown is finished.




Caution: After countdown, you can press **Ctrl+F5** forcing the page to refresh. This can avoid any translation uncompleted situation.

### 6.4.7 User Account Management

Personal users can use each individual application such as My Status, My Webcam and My Document. This section is to set the user's right. Also, all the users right will be showed in User Account List and can do the edit or delete by clicking the meaning text.




| Item | Description |
|---|---|
| User Name | Create the user name in this blank. |
| Password | Setup the user's password. |
| User Right | Enable the use to Webcam, FTP server. |
| Apply & Changes | Click on **Apply** button to add the settings into the list table. Click on **Cancel** button to clean the setting on this page. |

### 6.4.8 Folder Management

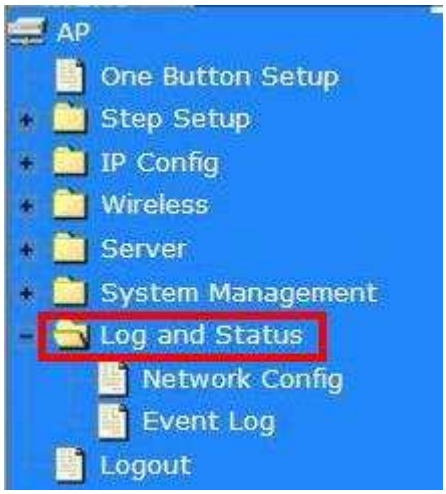
Easy to check all the USB storage devices connected to your CWR-935M, view the entire data folder inside each storage devices, and you can do the disk formatting/partition via click on the button in this page.


1. Select the USB Disk and click on **Mount** button for refresh all disks before you do disk partition, and the **Unplug** button will appear.
2. To partition/format the disk, please select the disk and click on **Format** button.
3. If you want to view the data inside the disk, please click on "**Disk Explorer**" to view all the disks folders inside the device.

Note：You have to click on “Unplug” button before remove the USB devices.

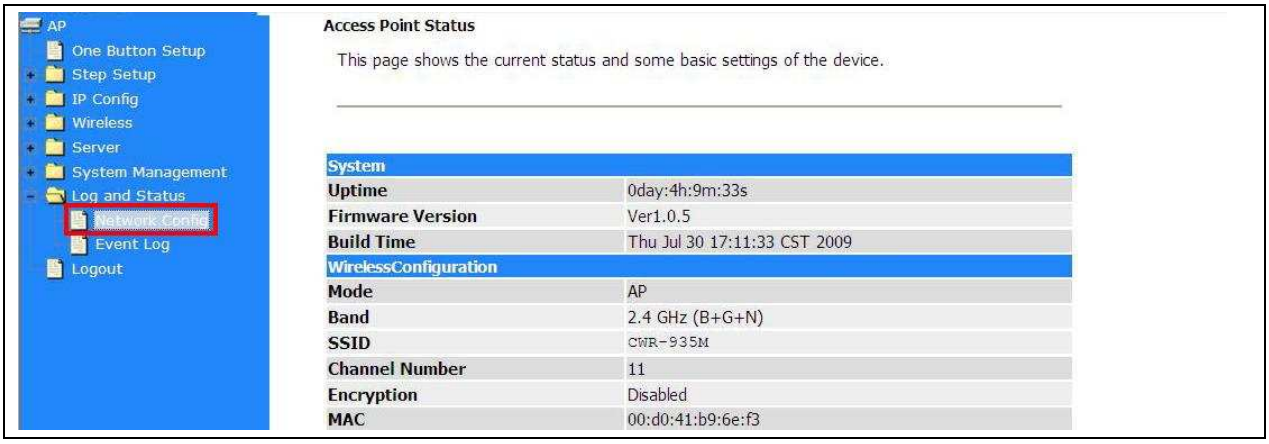
## 6.5 Log & Status

The category provides **Network Config** and **Event Log** status for users to know the operation status.



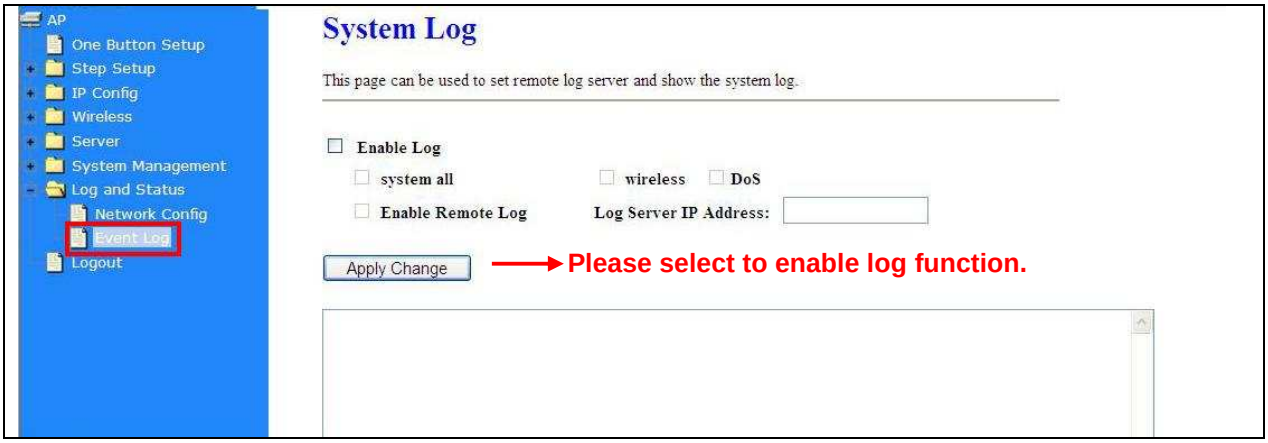

### 6.5.1 Network Config

Users can check the Internet status under this category, including Firmware version, Wireless setting, Connecting Time, WAN, TCP/IP …information.



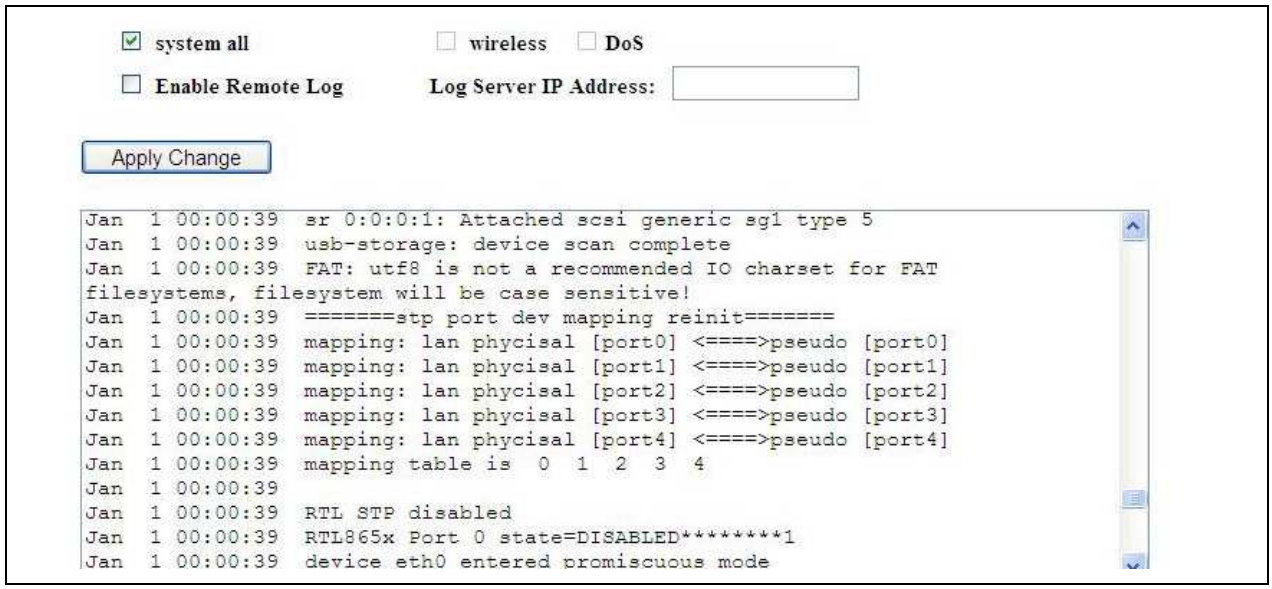
### 6.5.2 Event Log

You may enable the event log feature here.

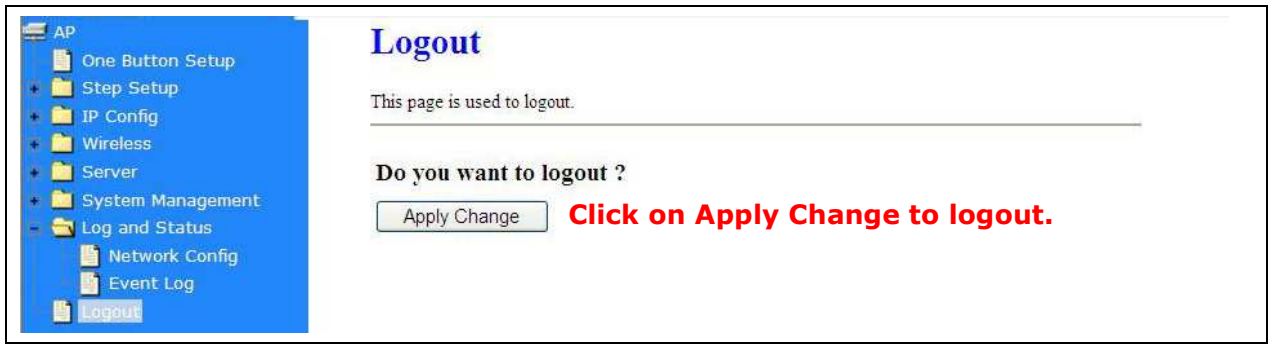



| Item | Description |
|---|---|
| Enable Log | You may choose to enable Event Log or not. |
| System all, Wireless, & DoS | Please select the event you want to record. |
| Enable Remote Log | You may choose to enable the remote event log or not. |
| Log Server IP Address | Please input the log server IP Address. |
| Apply Changes & Refresh & Clear | Click on **Apply Changes** to save the setting data. Click on **Refresh** to renew the system time, or on **Clear** to clear all the record. |

* The following figure is an example when users click **Apply Changes** to record the event log.



### 6.6 Logout

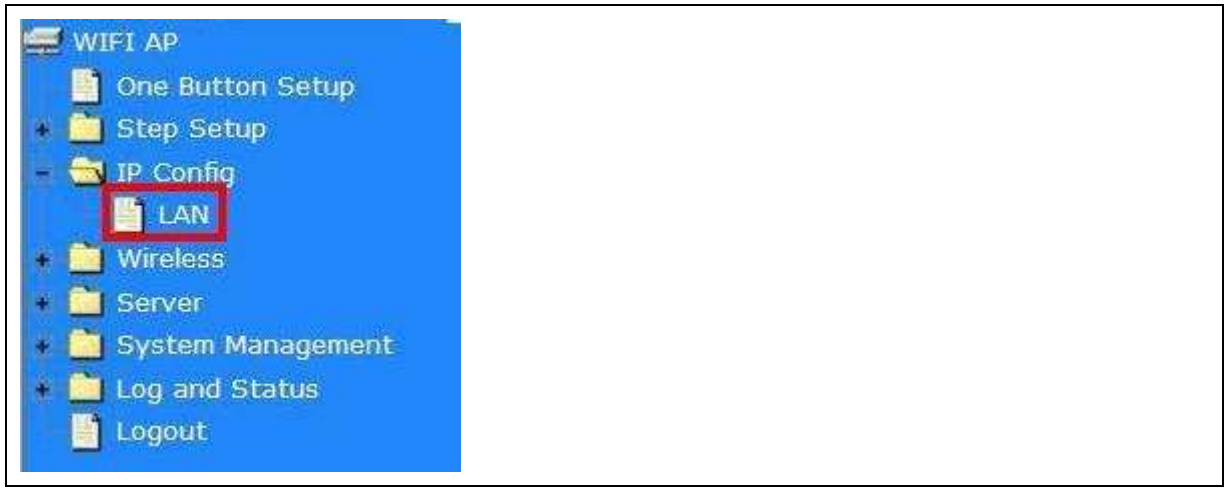



# Chapter 7. Advanced Configuration for Wi-Fi AP Mode

### 7.1 IP Config

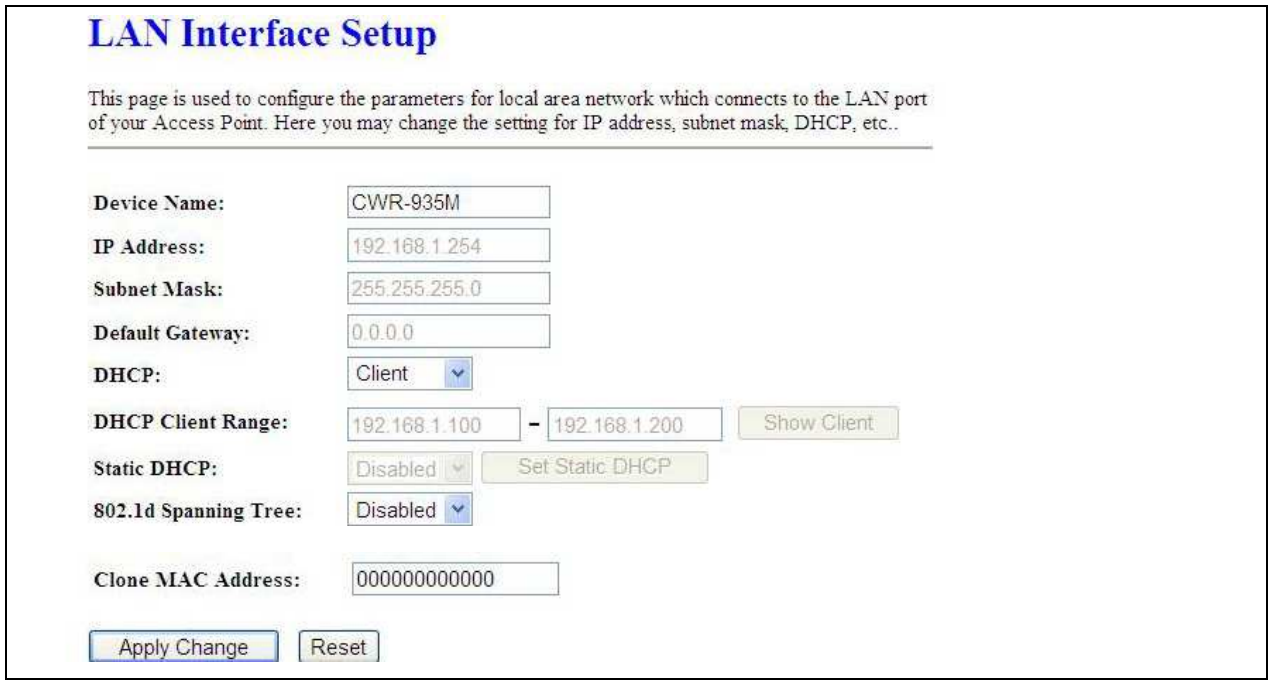
This section can let users add route rules of 3.5G server router; it includes configuration of LAN.

#### 7.1.1 IP Config -- LAN



### 7.1.2 LAN Interface Setup

This page is used to configure for local area network which connects to the LAN port of your Access Point. Here users may change the setting for IP address, Subnet Mask, DHCP, etc.




| Item | Description |
|---|---|
| Device Name | The name of device |
| IP Address | The default IP address is **192.168.1.254** (recommend). |
| Subnet Mask | Please enter the Subnet Mask address; it should be **255.255.255.0** for the most time. |
| Default Gateway | Please enter the Default Gateway address. If you don't know the address, please contact your ISP. |
| DHCP | Users can choose to enable DHCP service or not. The DHCP server will give an unused IP address to a computer which is requesting for one. That computer must be a DHCP client, and then it can obtain an IP address automatically. |
| DHCP Client Range | The default value is 192.168.1.100 - 192.168.1.200. The DHCP server will assign an IP to a computer from this range. The **Show Client** will display every assigned IP address, MAC address, and expired time. |
| 802.1d Spanning Tree | IEEE 802.1d **Spanning Tree Protocol** (**STP**) is a link layer network protocol that ensures a loop-free topology for any bridged LAN, This function is optional. |

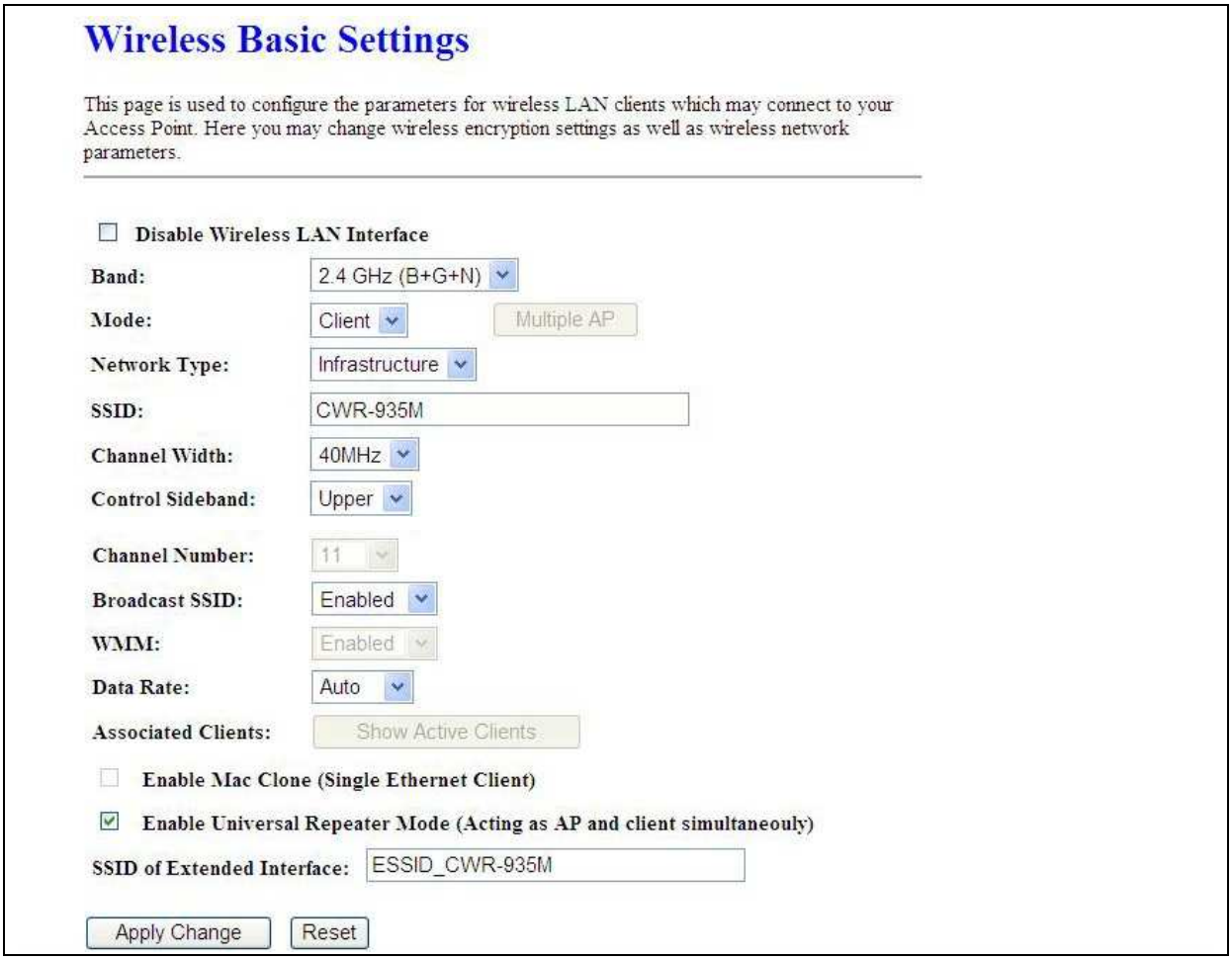
| | |
|---|---|
| Clone MAC Address | If your ISP asks you to enter a specific MAC Address, please input the correct info at the column. |
| Apply Change & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

## 7.2 Wireless Setup

The category includes **Basic Settings**, **Advanced Settings**, **Site Survey**, **Security**, **Access Control**, and **WPS**. Please read below for the setting instructions.

### 7.2.1 Wireless Basic Setting

The basic settings related to the wireless are specified as following.




| Item | Description |
|---|---|
| Disable Wireless LAN Interface | Turn off the wireless function. |
| Band | Please select the frequency. It has 6 options: 2.4 GHz (B/G/N/B+G/G+N/B+G+N). |
| Mode | In Wi-Fi AP mode only support Clint mode |
| Network Type | Please select the network type, it has 2 options: **Infrastructure** or **Ad hoc**. |
| SSID | Service Set identifier, the default SSID is **CWR-935M**, users can define to any. |
| Channel Width | Please select the channel width, it has 2 options: 20MHZ, and 40MHZ. |

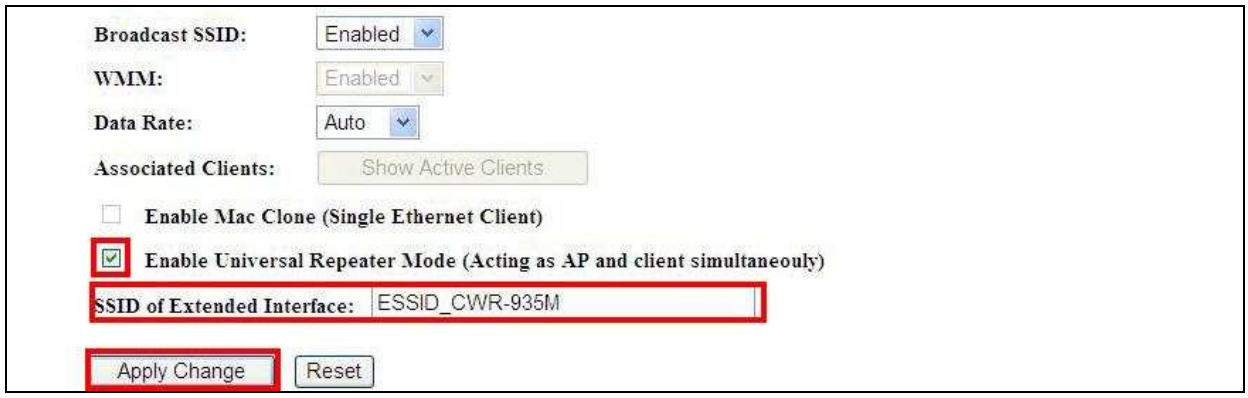
| | |
|---|---|
| Control Sideband | Enable this function will control your router use lower or upper channel. |
| Broadcast SSID | User may choose to enable **Broadcast SSID** or not. |
| Data Rate | Please select the data transmission rate. |
| Associated Clients | Check the AP connectors and the Wireless connecting status. |
| Enable MAC Clone (Single Ethernet Client) | Clone the MAC address for ISP to identify. |
| Enable Universal Repeater Mode (Action as AP and Client **simultaneously**) | Allow to equip with the wireless way conjunction upper level, provide the bottom layer user link in wireless and wired way in the meantime. (Please check Note 1). |
| SSID of Extended Interface | While linking the upper level device in wireless way, you can set SSID to give the bottom layer user search. |
| Apply Changes & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

Note.

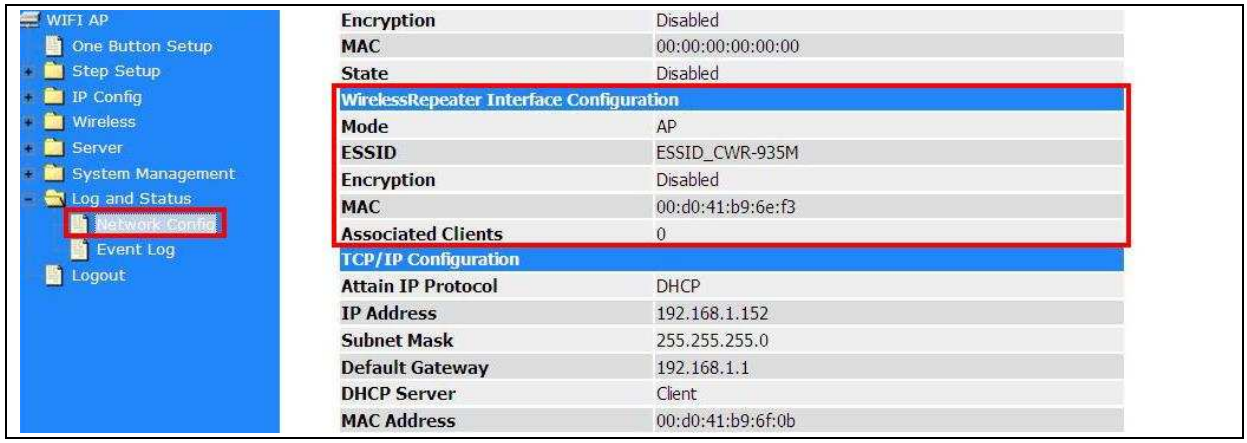
1. **Enable Universal Repeater Mode (Acting as AP and Client simultaneously)**

   Allow to equip with the wireless way conjunction upper level, provide the bottom layer user link in wireless and wired way in the meantime. (The IP that bottom layer obtains is from upper level.)

   Ex: When users enable the Universal Repeater to connect to the upper level device, please input the channel and SSID of the upper level device on router's GUI. Click on **Apply Changes** to save the settings. (The DHCP in IP config needs to be disabled.)



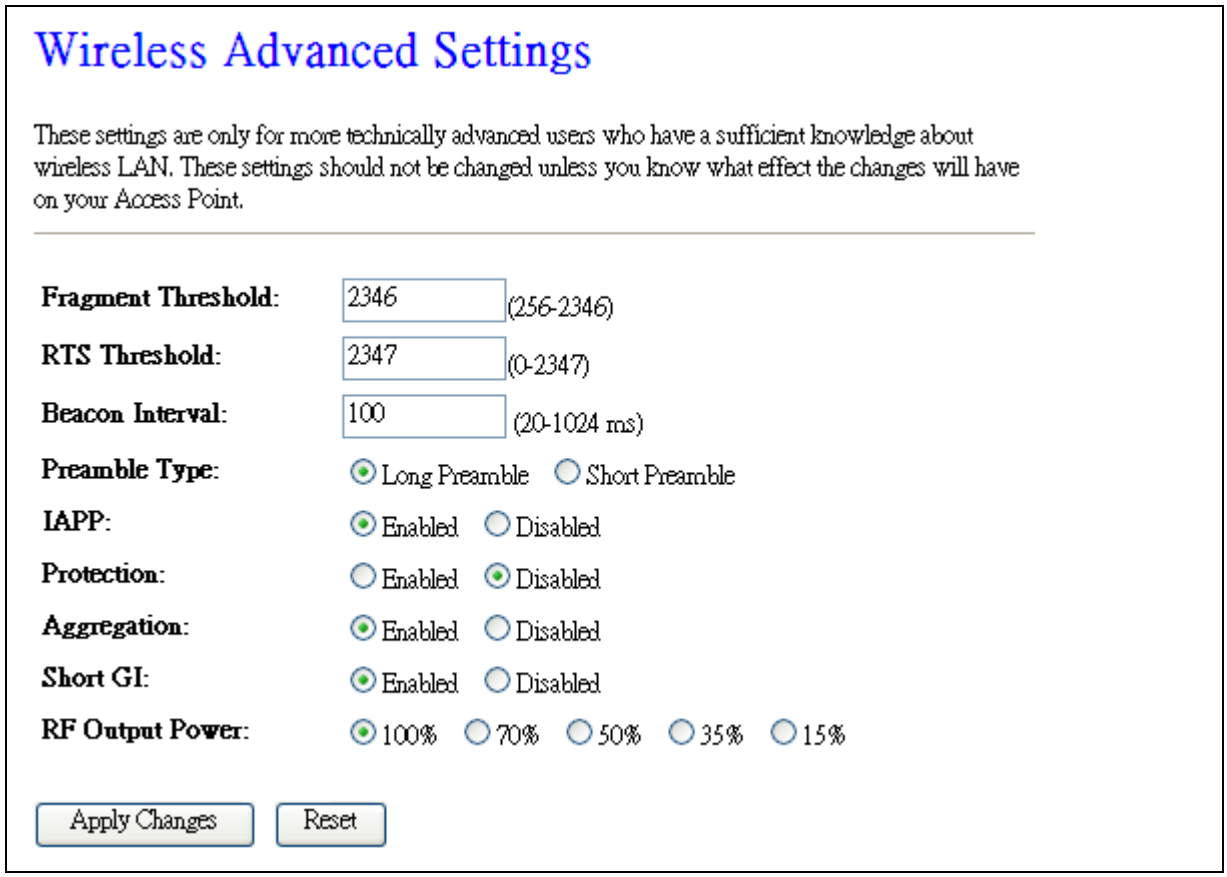
Users can go to the network Config section and check the information of upper level in Wireless Repeater Interface Configuration.




Caution: when users enable the wireless encryption. The upper level and lower devices can connect to each other even if their encryption types are not the same.

### 7.2.2 Wireless Advanced Settings

Please complete the wireless advanced settings as following instructions.

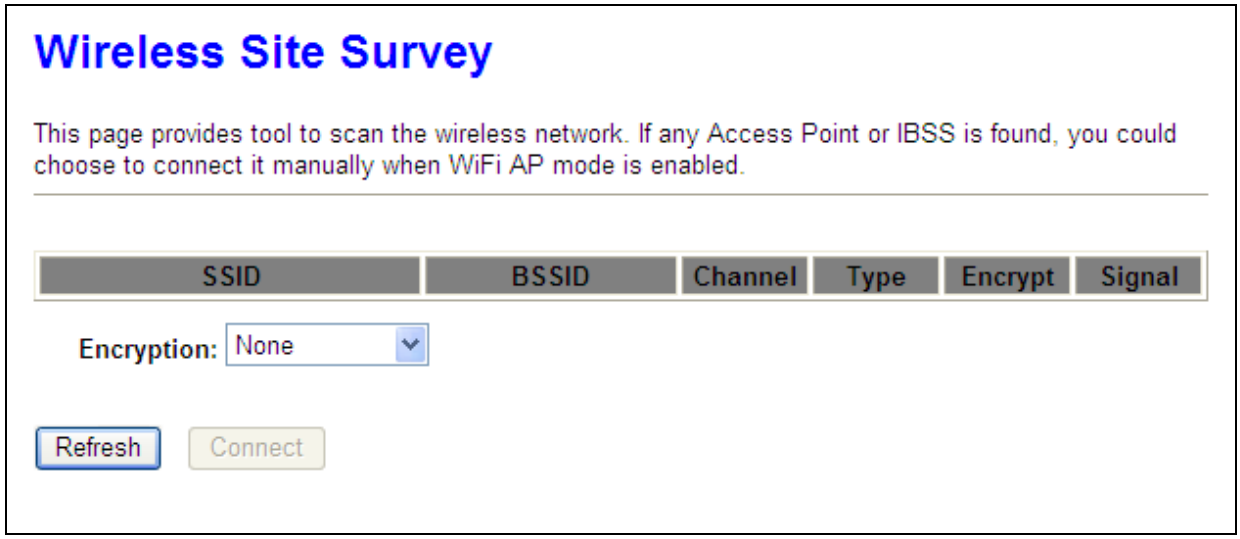


| Item | Description |
|---|---|
| Fragment Threshold | To identify the maxima length of packet, the over length packet will be fragmentized. The allowed range is 256-2346, and default length is 2346 Bytes. |
| RTS Threshold | This value should remain at its default setting of 2347. The range is 0~2347. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the present RTS threshold size, the RTS/CTS mechanism will not be enabled. The router sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission. Fill the range from 0 to 2347 into this blank. |
| Beacon Interval | Beacons are packets sent by an access point to synchronize a wireless network. Specify a beacon interval value. The allowed setting range is 20-1024 ms. |
| Preamble Type | Preamble is the first subfield of PPDU, which is the appropriate frame format form transmission to PHY (Physical layer). There are two options, Short Preamble and Long Preamble. The Short Preamble option improves throughput performance. Select the suit Preamble as Short or Long Preamble. |
| IAPP | Inter Access Point Protocol. Allow seamless roaming between Access Points in your wireless network. |
| Protection | Please select to enable wireless protection or not. |
| Aggregation | Enable this function will combine several packets to one and transmit it. It can reduce the problem when mass packets are transmitting. |
| Short GI | Users can get better wireless transmission efficiency when they enable this function. |
| RF Output Power | Users can adjust the RF output power to get the best wireless connection. Users can choose from 100%, 70%, 50%, 35%, and 15%. |
| Apply Changes & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

### 7.2.3 Wireless Site Survey

This function provides users to search existing wireless APs or wireless base stations from ISP. You can connect to a wireless AP manually in Wi-Fi AP mode. The designed AP will appear on SSID column in Wireless Basic Setup page.

Please click on **Refresh** to refresh the list. Click **Connect** after select an existing AP to connect.




### 7.2.4 Wireless Security Setup

4 encryption types could be selected here, please follow below instructions for the setting.

1. **Encryption – WEP**

**1.1 Set WEP Key**

This section provides 64bit and 128bit WEP encryptions for wireless network. Users can also choose ASCII and Hex shared Key format to protect data.


**1.2 802.1x Authentication**

It is a safety system by using authentication to protect your wireless network.

Please choose between WEP 64bits and WEP 128bits.

2. **Encryption – WPA（WPA、WPA2 & WPA2 Mixed）**

**WPA Authentication Mode**

**2.1 Enterprise (RADIUS)**

Please input the Port, IP Address, and Password of Authentication RADIUS Server.

**2.2 Personal（Pre-Shared Key）**

Pre-Shared Key type is ASCII Code; the length is between 8 to 63 characters. If the key type is Hex, the key length is 64 characters.


**3. Apply Changes & Reset**

Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

### 7.2.5 Wireless Access Control

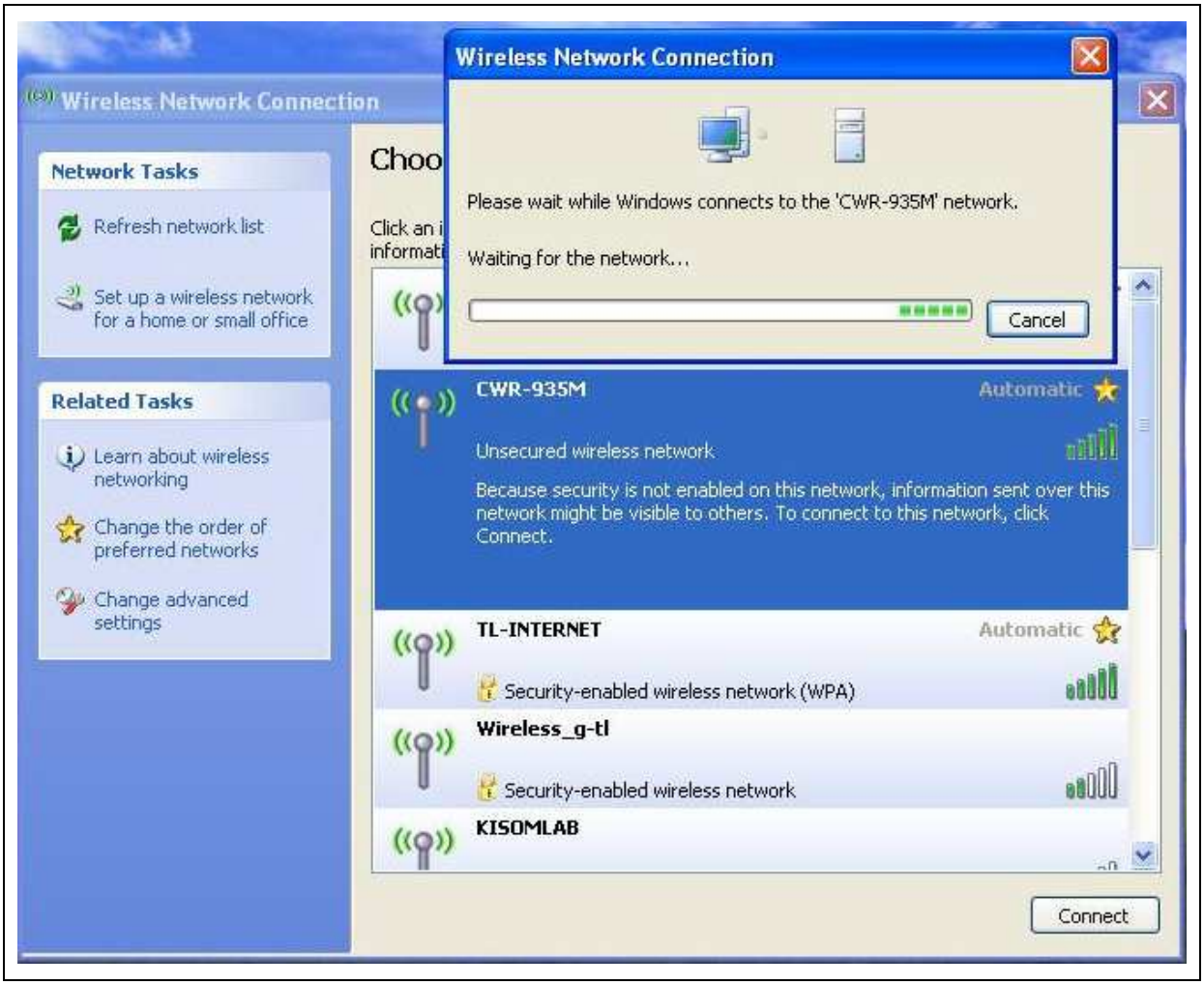
The function of access control is to allow or deny users to access 3.5G server router by according MAC address, it is optional. If you select **Allowed Listed**, then only those clients whose MAC address is listed on access control can connect to your base station. If you select **Deny Listed**, those clients whose MAC address is listed on access control can't connect to your base station.


Take the wireless card as the example.

(1) We will use **Deny Listed** as an example. Please select **Deny Listed** in **Wireless Access Control Mode** first, and then input the MAC address of wireless card in MAC Address field. Click **Apply Changes** to save the setting data.

(2) You will find out that the MAC address appears on **Current Access Control List**, it means the initiation is completed.


(3) Please open wireless card UI and try to connect to this router. You will find out that the connection request will be denied.




### 7.2.6 WPS Setting

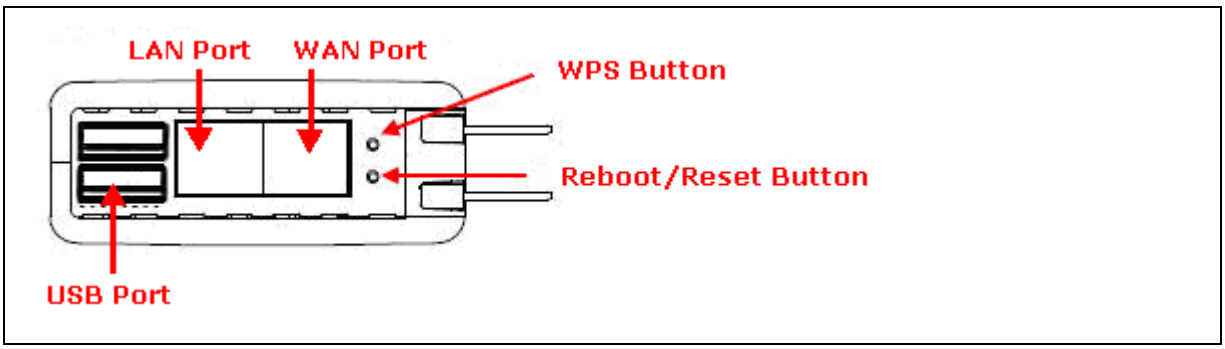
Wi-Fi Protected Setup, it can simplify the procedures of wireless encryption between CWR-935M and other Wireless Router or Access Point. If your Wireless Router or Access Point also supports WPS function, users can activate WPS auto-encryption to speed up the procedures.

WPS supports 2 models: PIN (Personal Information Number) and PBC (Push Button Configuration). These models are approved by the Wi-Fi Alliance.

**PIN model**, in which a PIN has to be taken either from a sticker label or from the web interface of the WPS device. This PIN will then be entered in the AP or client WPS device to connect.

**PBC model**, in which the user simply has to push a button, either an actual or a virtual one, on both WPS devices to connect.

*The following figure is the display of the front of CWR-935M.



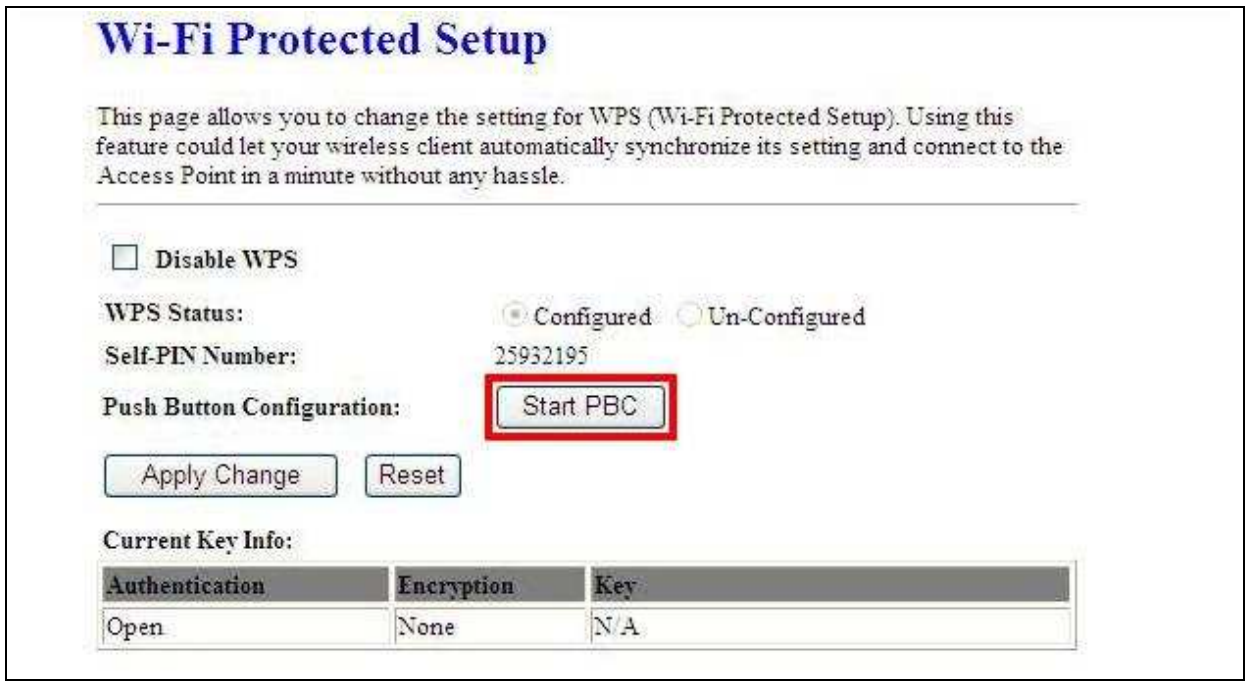

When users select a specific model on wireless base station, the clients can connect to the base by selecting the same model.

The connection procedures of PIN and PBC are almost the same. The small difference between those two is:

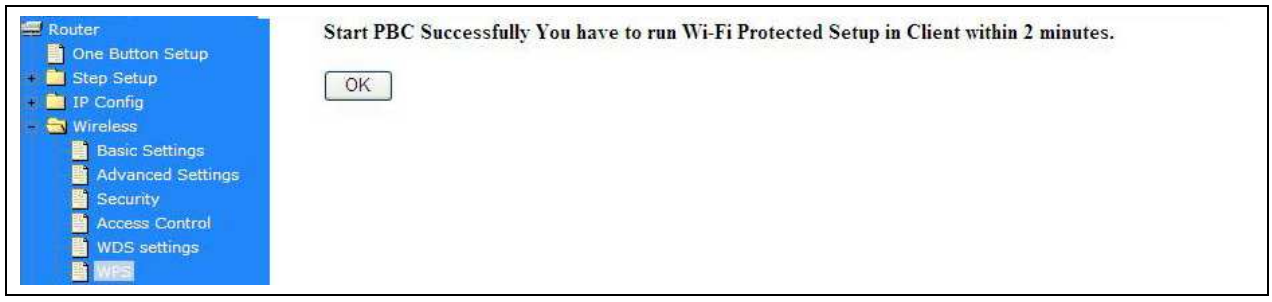
Users input the PIN of wireless card in the base station first; it will limit the range of the clients. It is faster to establish a connection on PIN model.
On PBC model, users push the WPS button to activate the function, and then the wireless client must push the WPS button in 2 mins to enter the network. The client will search to see if there is any wireless base station which supports WPS is activating. If the client finds a matching base, the connection will be established. The speed of establishing a connection is slower than the PIN model because of this extra step.
On the other hand, users need to input the information of the wireless card into the register interface. It might lead to the failure of connection, if users make mistakes on inputting. On PBC model, users only need to click the WPS button on both sides to make a connection. It is easier to operate.
This page supports **Start PBC** and **Start PIN**; please follow the instructions to operate.

* Start PBC:

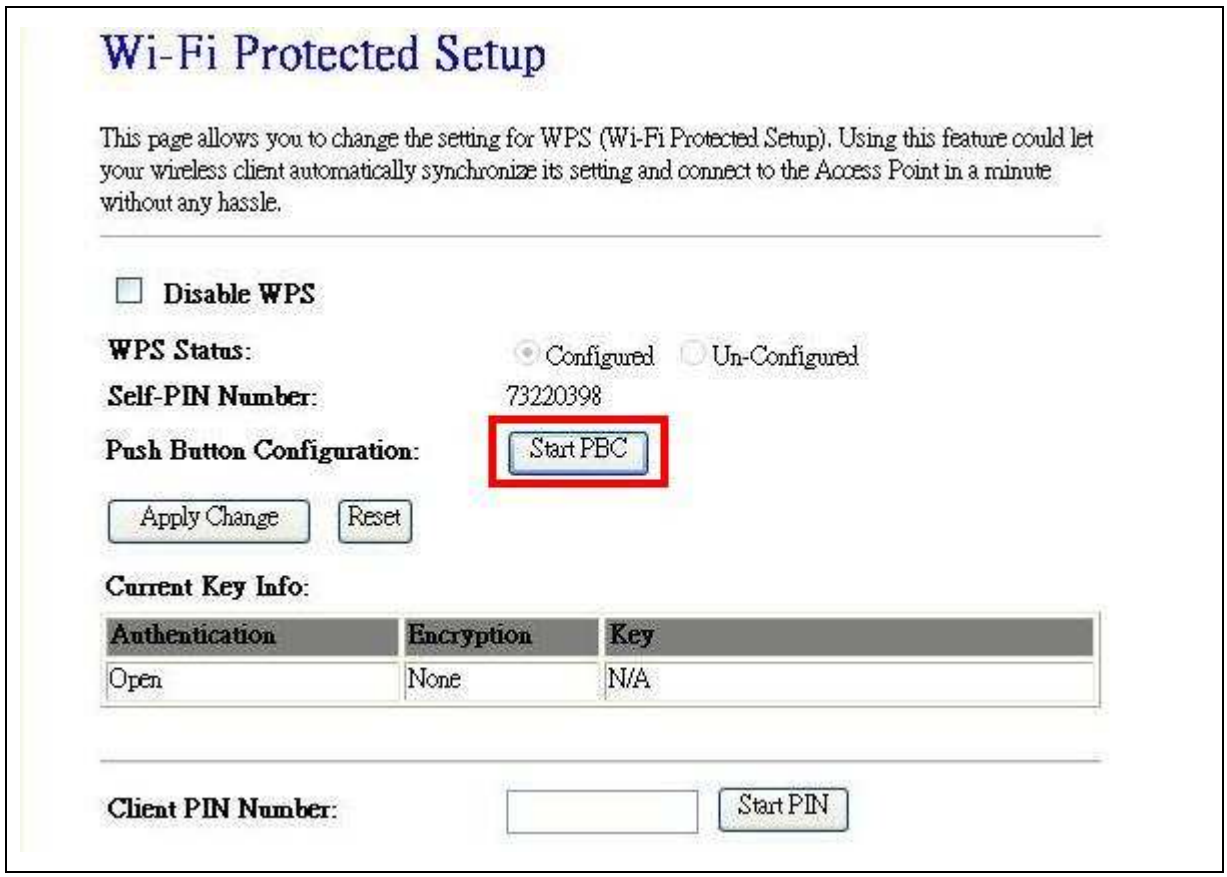
(1) Please click **Start PBC** to connect to the other Wireless Router.



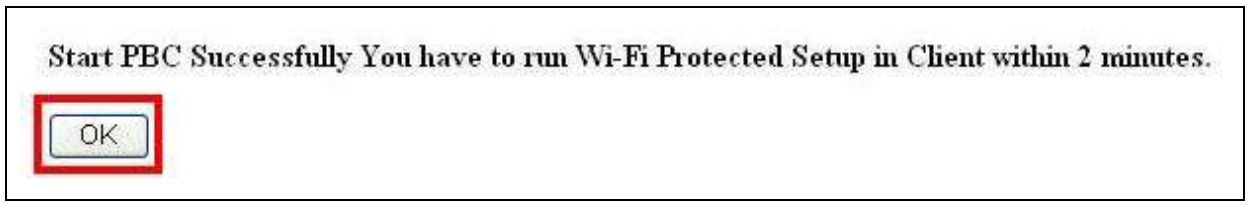

(2) Please click **OK** to start WPS process.



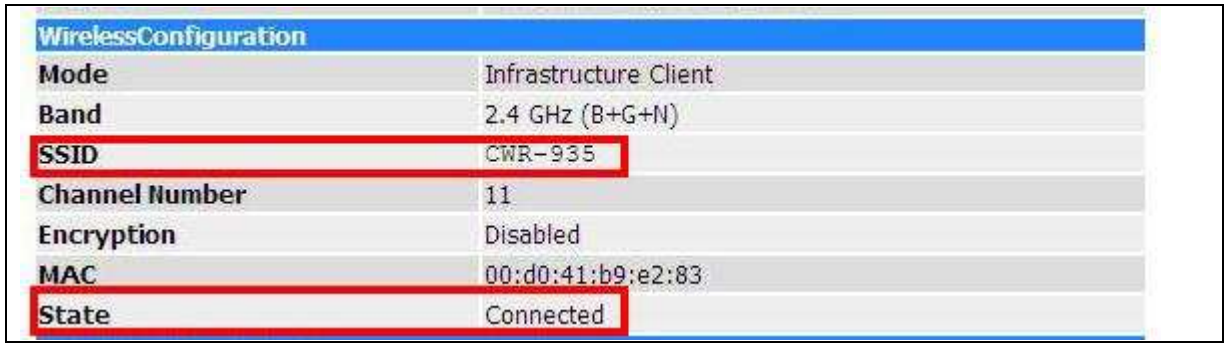
(3) Open the configuration page of the Wireless Router, like CWR-935 which supports WPS. Click the **WPS** page, and then click **Start PBC** to make a WPS connection.




(4) Click **OK** to start WPS process.

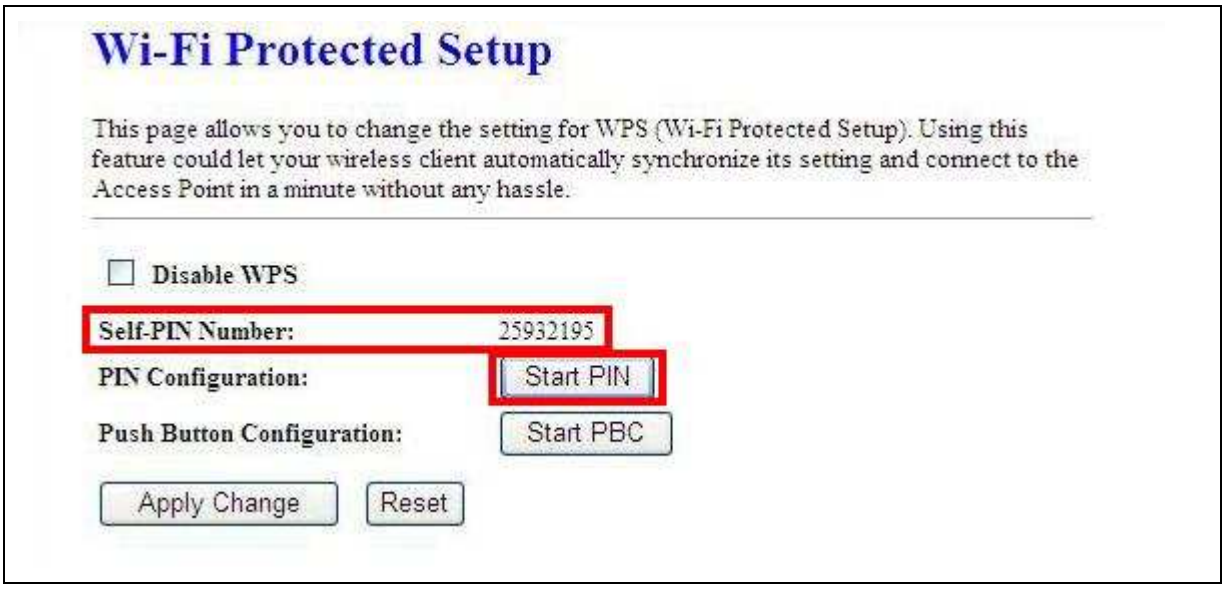



(5) When WPS process finish, please check the Wireless Configuration of CWR-935M, you can find CWR-935M already connect to CWR-935 via WPS.

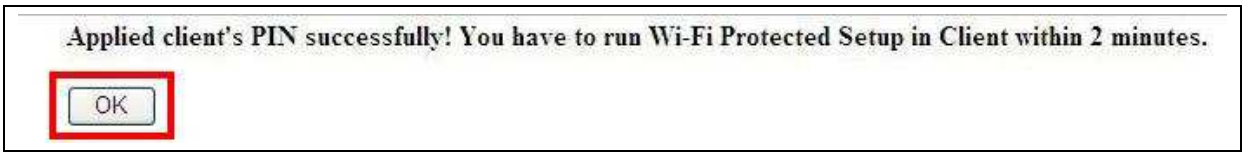


* Start PIN:

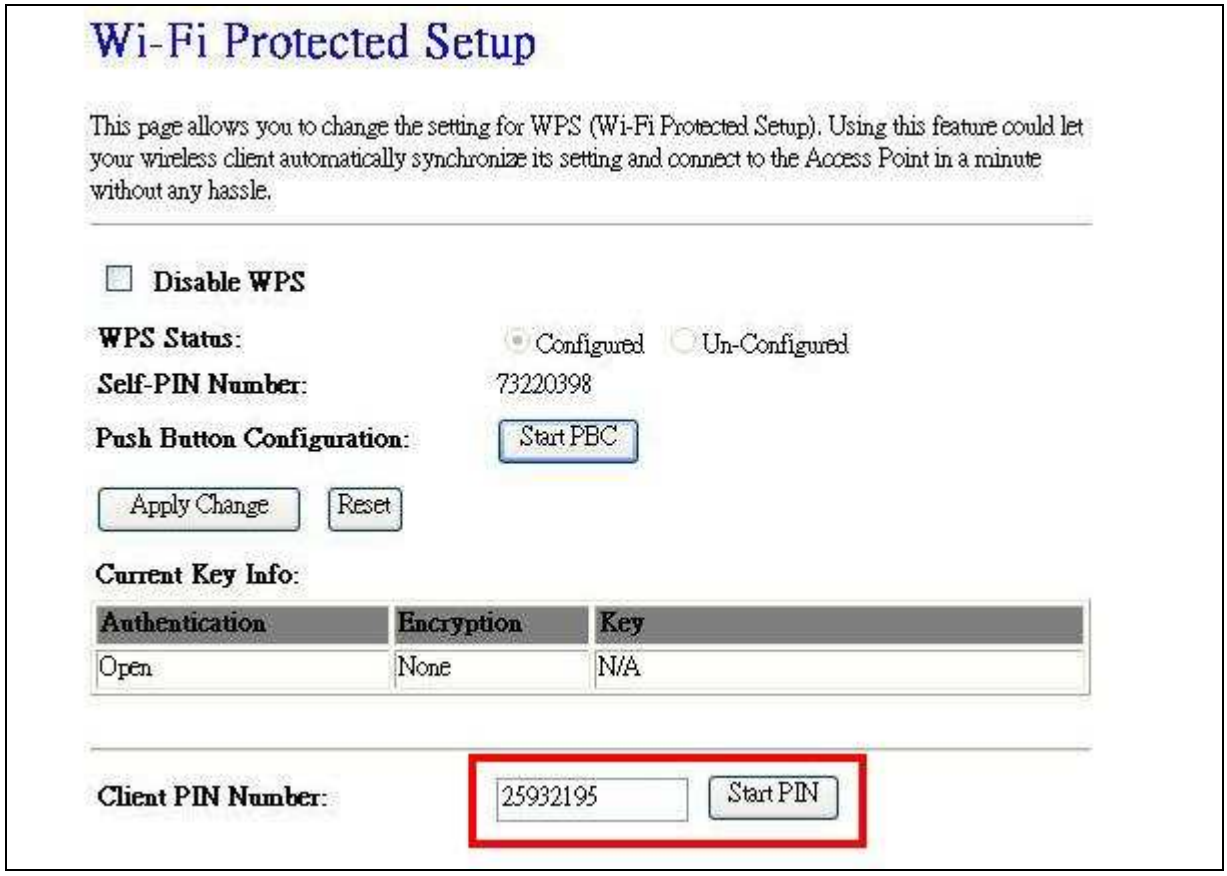
(1) Please open the WPS configuration page of the CWR-935M to get a PIN number, and write it down.



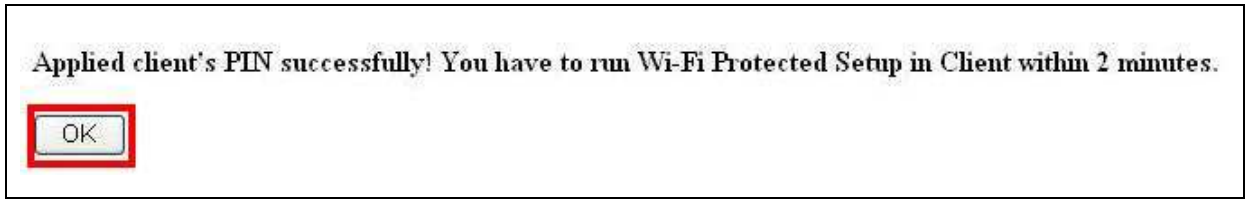

(2) Please click **OK** to start WPS process..



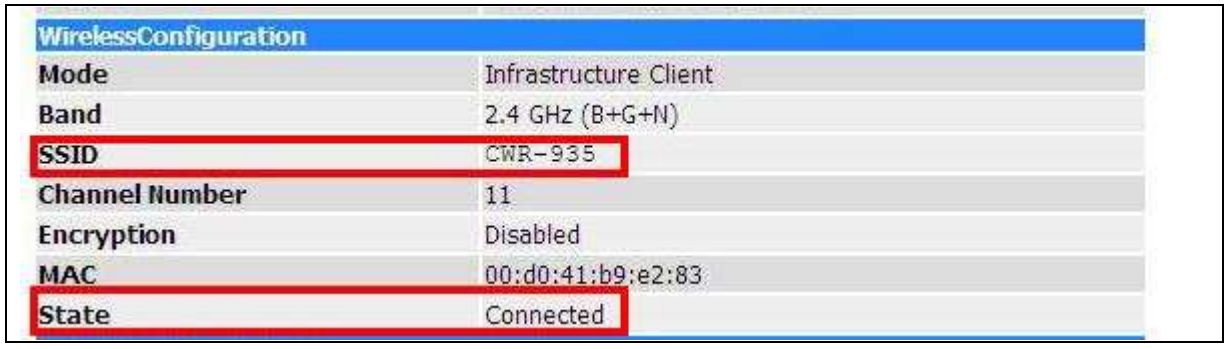
(3) Open the configuration page of the Wireless Router, like CWR-935 which supports WPS. Click the **WPS** page, fill the WPS PIN code.




(4) Click **OK** to starts process.

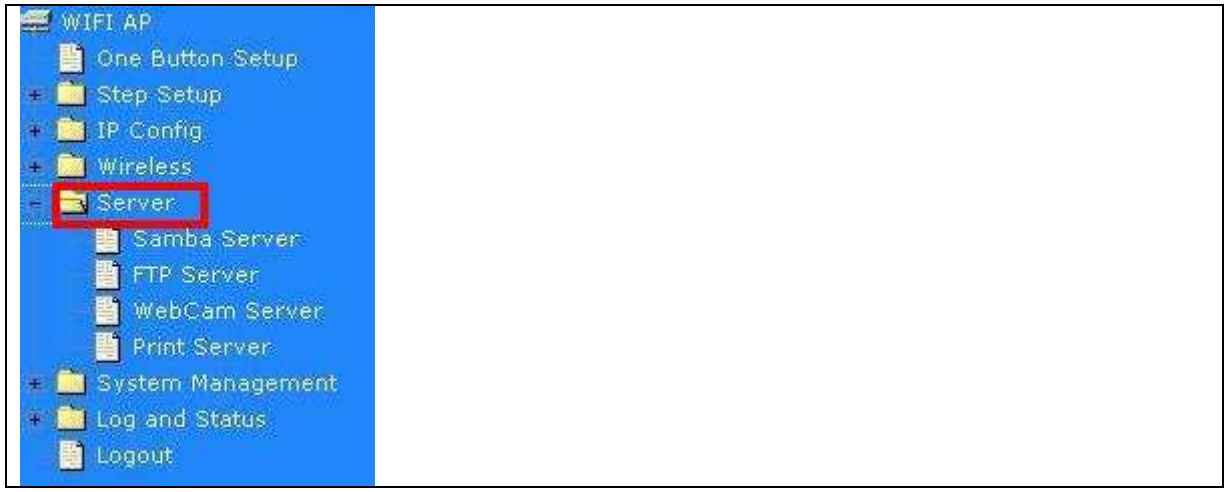


(5) When WPS process finish, please check the Wireless Configuration of CWR-935M, you can find CWR-935M already connect to CWR-935 via WPS.



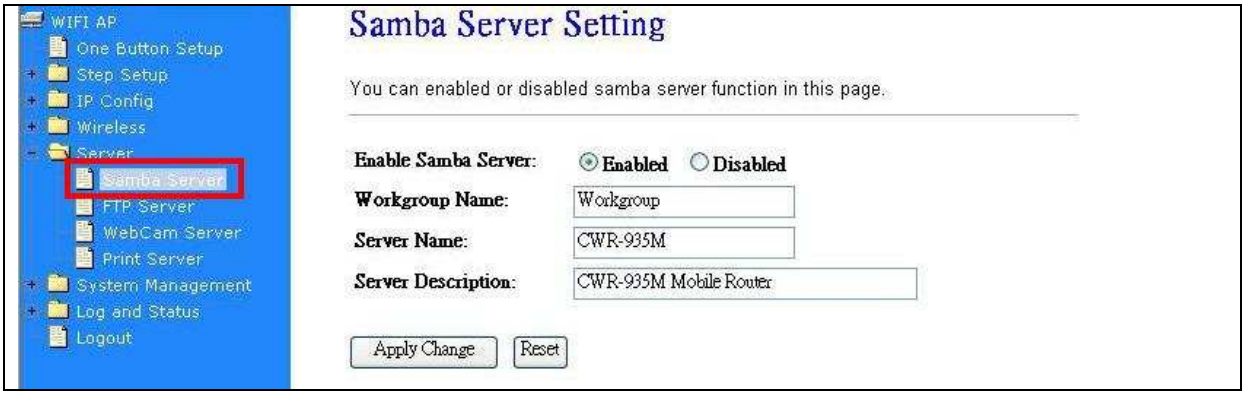

## 7.3 Server

CWR-935M provides Samba Server, FTP Server, Web Camera Server, and Printer Server Application.




### 7.3.1 Samba Server

Support NetBIOS Protocol, the consumer sharing file or printer which provides as the "**My Network Places**". Please make sure storage devices and printers are connecting to USB ports on the router and already mounting.




| Item | Description |
|---|---|
| Enable Samba Server | Enable or disable this function. |
| Workgroup Name | Input the workgroup name, default is “**Workgroup**”. |
| Server Name | Input the server name, default is “**CWR-935M**”. |
| Server Description | You can input description of the server. |
| Apply Changes & Reset | Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. |

#### 7.3.1.1 How to Enter the Sharing Folder

Please follow below steps.

Step 1:

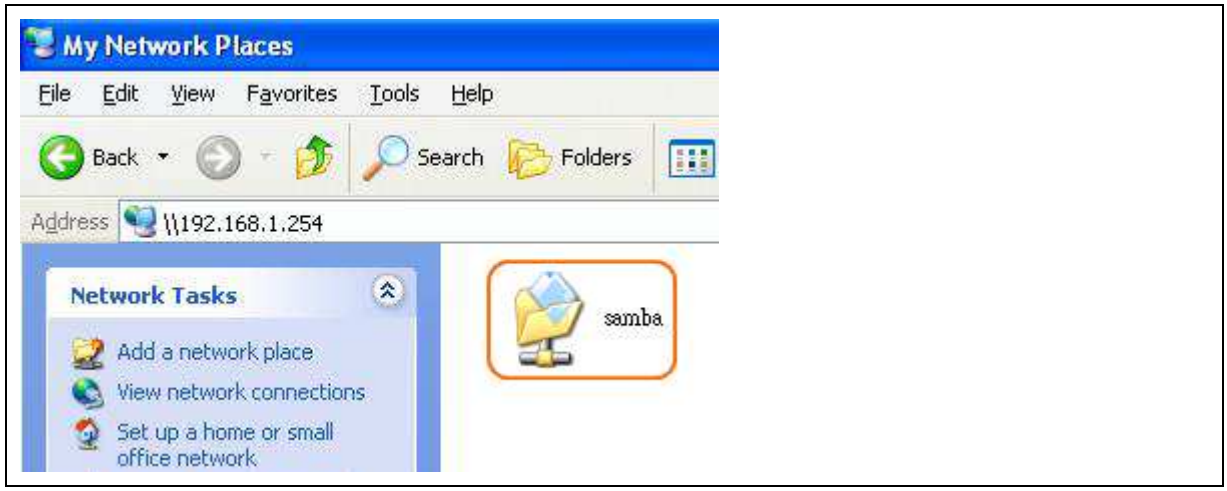
Please click the “**start**”, and select “**My Computer**”.


Step 2:

In the Address blank input the IP address: \\192.168.1.254.

Step 3:

Appear following menu, can open following to share internal data.

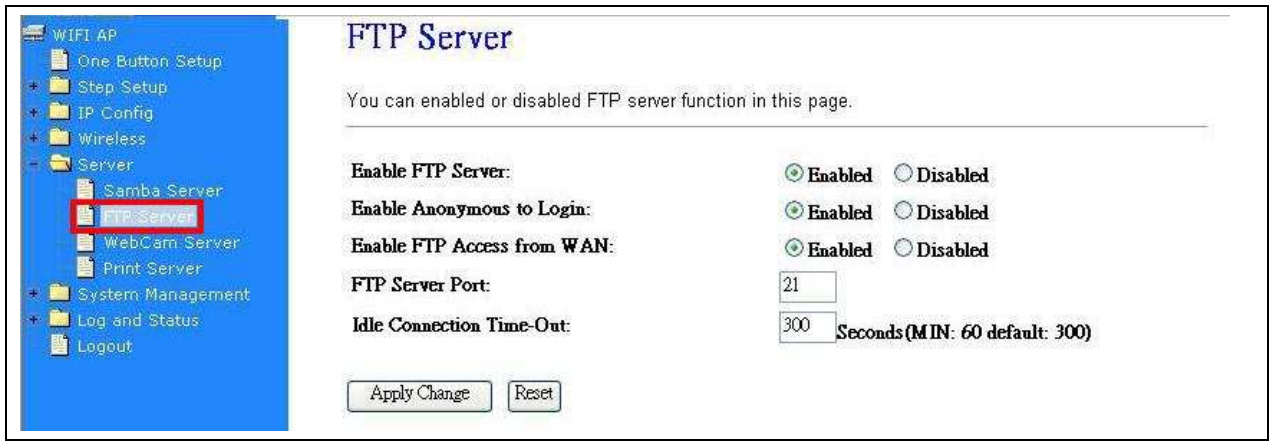



Note：

1. If connected USB flash or HDD, and then enable samba server function, it will appear a samba folder.
2. If connected USB printer, and then enable printer server function, it will appear a printer icon.

### 7.3.2 FTP Server

FTP Server utility allows both local and remote users to upload or download files, pictures or MP3 music form the same storage device. Before configure FTP Server, please make sure the storage device is properly plug into any USB port on the router and make sure this USB storage device is detected by the router.



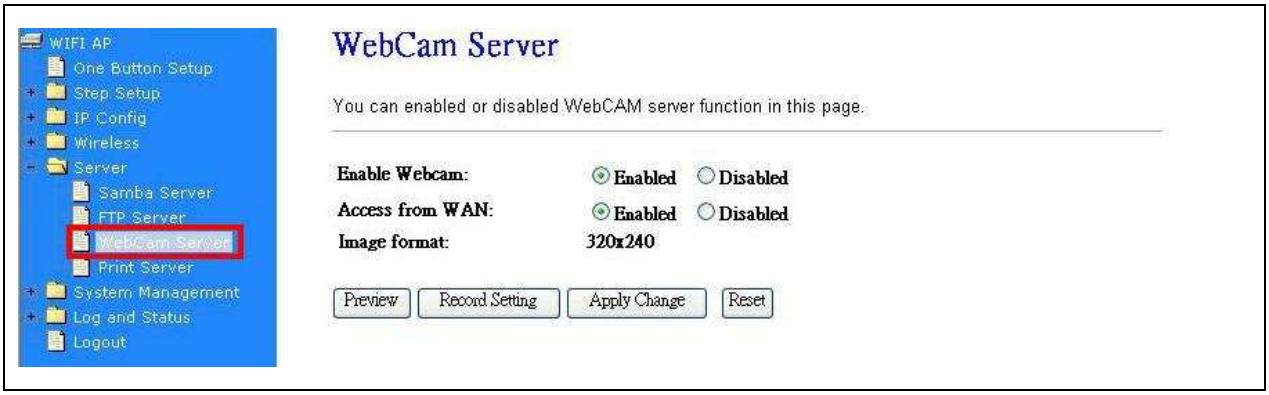
| Item | Description |
|---|---|
| Enable FTP Server | Select to “**Enable**” or “**Disable**” FTP server. |
| Enable Anonymous to Login | Allow anonymous to login after check on Enable. |
| FTP Server Port | The default is 21. Define the FTP command transfer service port. If you want to change this port number, remember to change the service port setting of your FTP client, also. |
| Idle Connection Time-Out | When a specific time value is added, FTP Server will be de-activated if it has no activity within the time limit. The default is 300 seconds; the minimum is 60 seconds. |
| Apply & Changes | Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page. |
| User Account List | User Name, Status, and Opened Directory/File can be shown on the list. |

Note：FTP server is compatible with FAT32 or EXT3 format USB storage device. In case you need to format your USB storage device. Please always make sure the device is formatted with FAT32 or EXT3 standard.

### 7.3.3 Webcam Server

By connecting web camera to the router, it allows user to monitor their home or office from remote locations.

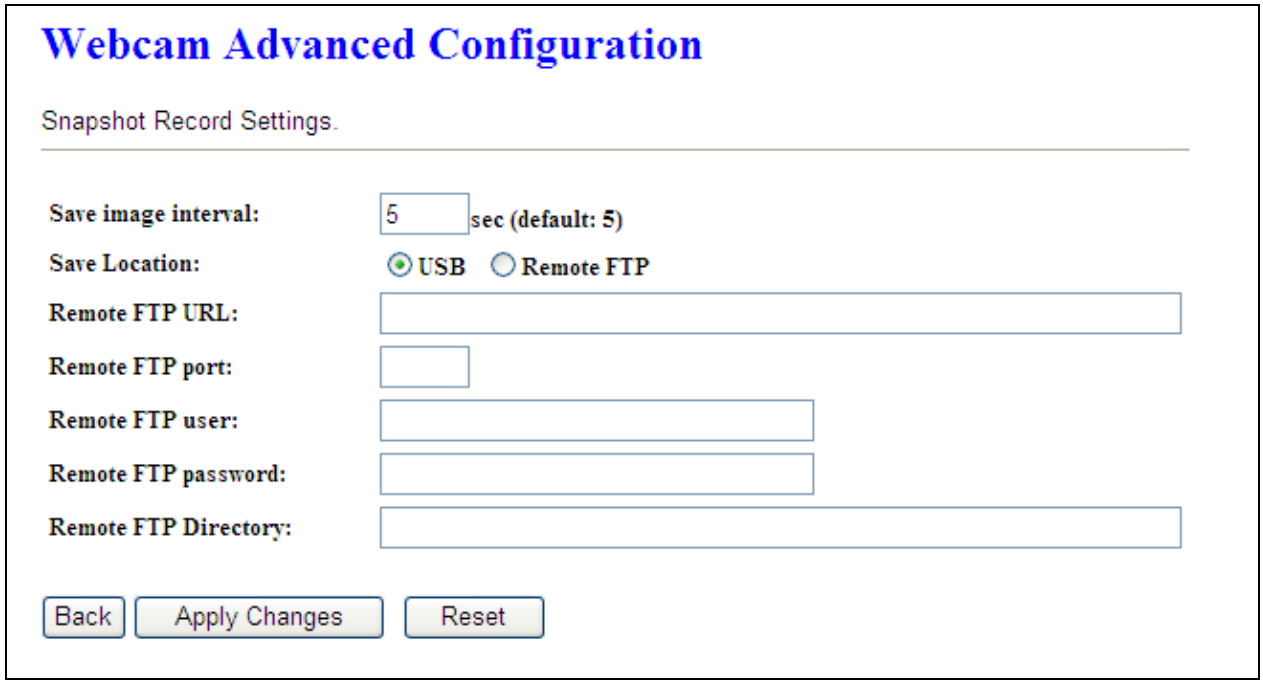
#### 7.3.3.1 Webcam Server Basic Setting



| Item | Description |
|---|---|
| Enable Webcam Server | Select to “**Enable**” or “**Disable**” webcam server. |
| Image format | The format is 320X240 pixels. |
| Preview | Click on this button, you can preview the image from webcam. |
| Record Setting | Please see the detail advance setting in “**6.3.3.2 Webcam Advanced Configuration**”. |
| Apply & Changes | Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page. |

### 7.3.3.2 Webcam Server Advanced Setting

Click on “**Record Setting**” button, and the screen will appear as below.




| Item | Description |
|---|---|
| Save image interval | For saving image, you can set the save interval time, the default value is 5 seconds. |
| Server Location | Set the save location for webcam image, you may save into **USB HDD** or **Remote FTP**; if select save to **Remote FTP**, please continue following remote FTP setting. |
| Remote FTP URL | Input the FTP URL for saving webcam image. |

| | |
|---|---|
| Remote FTP port | Input the FTP port number under URL to save image. |
| Remote FTP user | Input the users name you like and it will be used to save the webcam image into the FTP server. |
| Remote FTP password | Input the remote password. |
| Remote FTP Directory | To provide option of which folder should be used for saving webcam image. |
| Back | Click on **Back** button for returning to Webcam Basic Setting screen. |
| Apply & Changes | Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page. |

#### 7.3.3.3 Application of Webcam

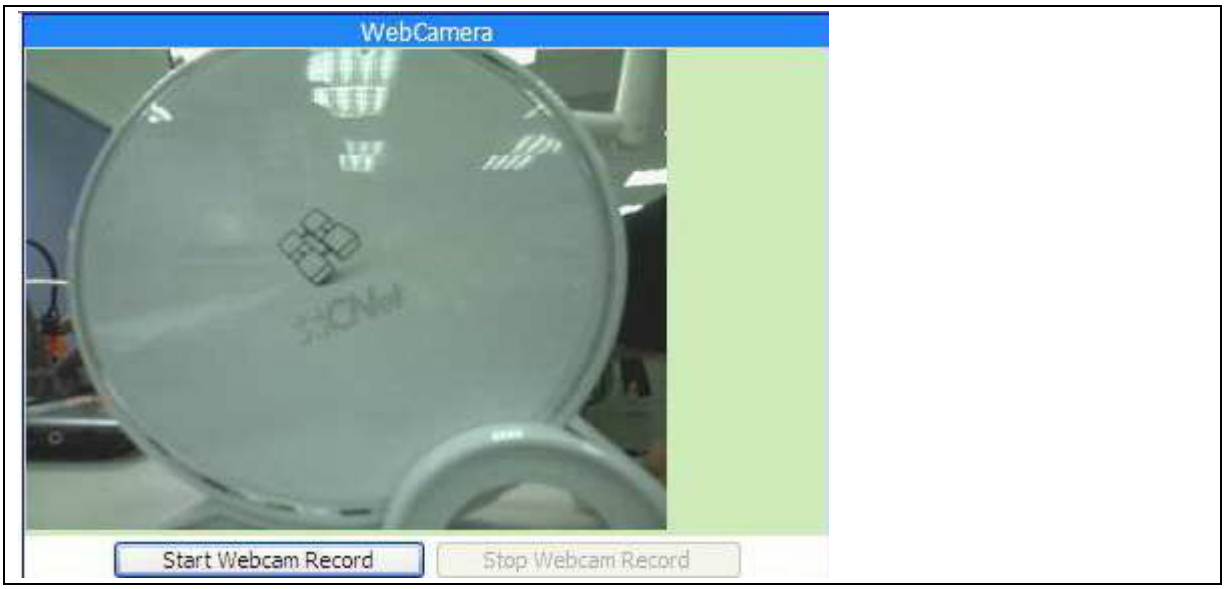
##### 7.4.3.3.1 Web Camera Monitoring Application

Monitor your home with a Webcam via CWR-935M. Take pictures via CWR-935M, also can do the monitoring or recording all images into the USB HDD for reviewing. Often marketed as surveillance tools for home or office security, network Webcams are now being employed by early adopters for more personal matters, such as watching kids and monitoring pets. The Webcam can be remotely accessed and controlled via a browser. Besides, to record and monitor live action with USB webcam, also can view the image through Internet browsers or 3G mobile phones.

###### 7.4.3.3.1.1 Web Camera Monitoring WAN connecting

Users must config with Visual Server or DMZ settings. Input 192.168.1.254 into browser blanks, and you will see the personal account login screen appear then input your own user account and password. After login by personal, your will see the personal control panel screen as below, please click on "**My Webcam**".

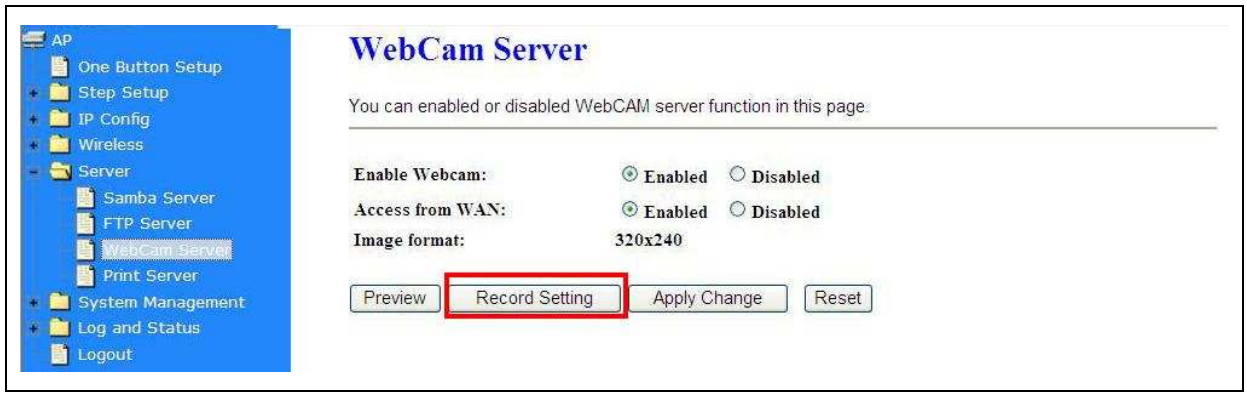

There will be a pop-up screen showing the image from web camera as below example.



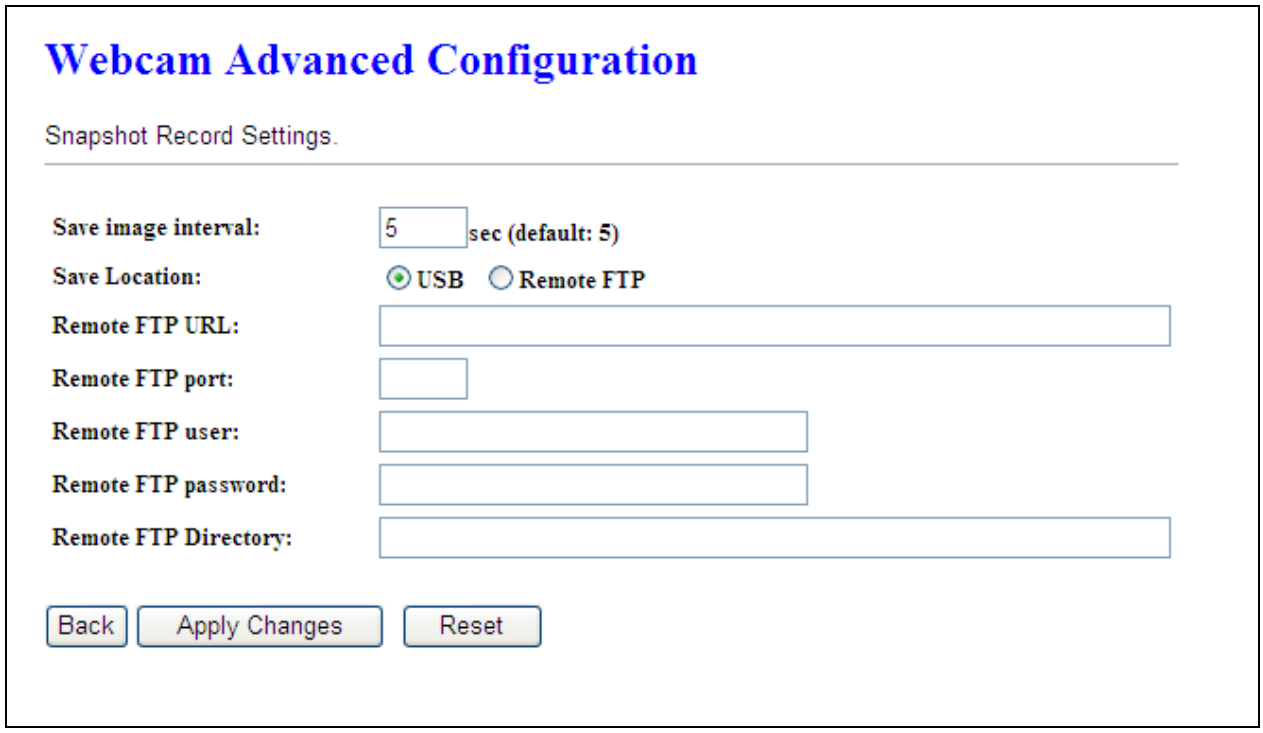
### 7.4.3.3.2 Web Camera Recording

#### 7.4.3.3.2.1 Administrator

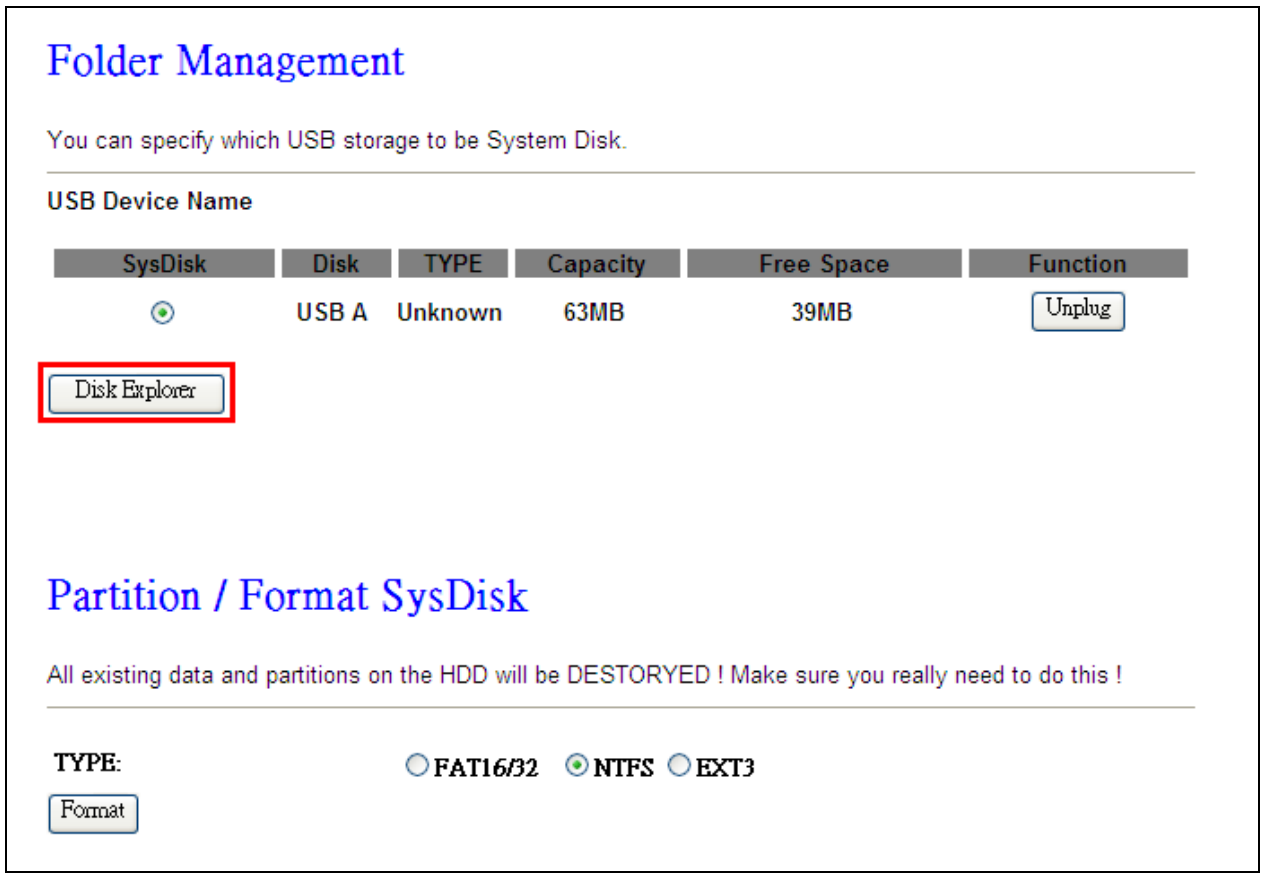
CWR-935M also can record the pictures from Webcam; only Administrator can do the settings. Select **Web Camera Server** from main Menu and Enable this function, click on **Record** setting button for further setting.



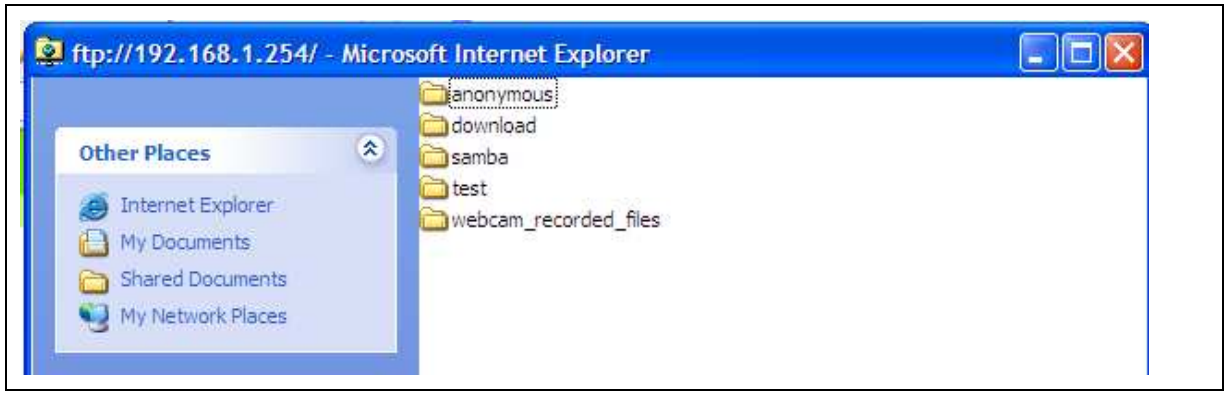

To setup the Webcam Advanced Configuration for each blank and the image from webcam will be recorded into your USB HDD or Remote FTP.



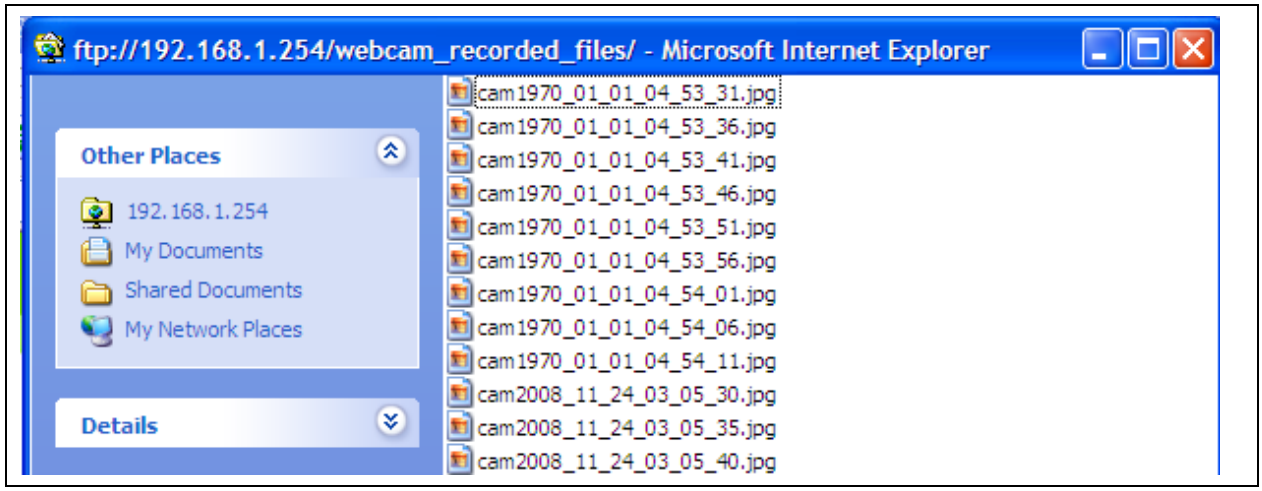

For administrator, you may view all the images from webcam recording, please select **Folder Management** and click on **Disk Explorer** to view entire folder inside the disk including webcam record files.




After click on **Disk Explorer**, you will see the folder screen appear including all the folders.



All the image files will be saved in the folder "**webcam_recorded_files**". Please open the file for checking.




#### 7.4.3.3.2.2 Personal Application

All the users under administrator's setting can view entire webcam recording images from **My Document**. Please login by your own personal account. For viewing your own folder, please click on "**My Document**".


After click on "**My Document**", you will see below folder screen appeared. You can save files here.

Note：If you can't open the folder inside the FTP server, please check with administrator to setup your FTP & Webcam's privileges.

#### 7.3.3.4 Printer Server

The two USB ports on CWR-935M are for connection with printers to be shared on the local area network. Follow the below steps to setup your PC to connect to a Printer server.


| Item | Description |
|---|---|
| Enable Printer Server | Check **Enable** for applying printer server. |
| Printer Model | The printer model will be shown when plug the USB printer. |
| Printer Name | Input the name of printer you like. |
| Printer Description | Input the description of printer as your demand. |
| Apply & Changes | Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page. |

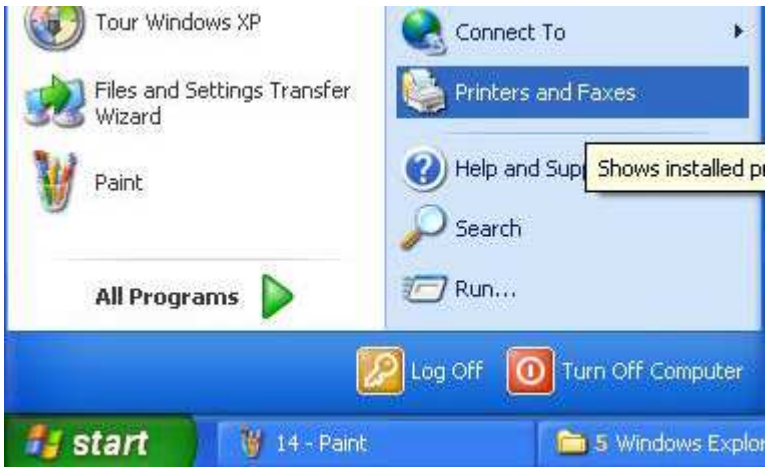
Besides above setting finished, the printer setting on PC also needs to be set as follows.

#### 7.3.3.5 Printer Setting for PC

After Enable Printer Server in Quick Setup and Printer Server Configuration, please follow below steps to set the detail **LPR** settings in your PC. (Below example is for Windows XP platform.)

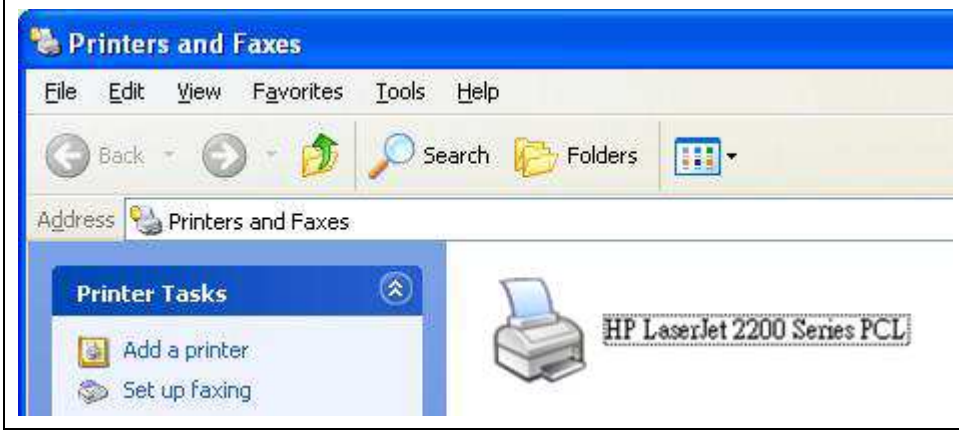
Step 1:

Please go to **Start** > **Printers and Faxes** to add a printer.




Step 2:

Click "**Add a printer**".

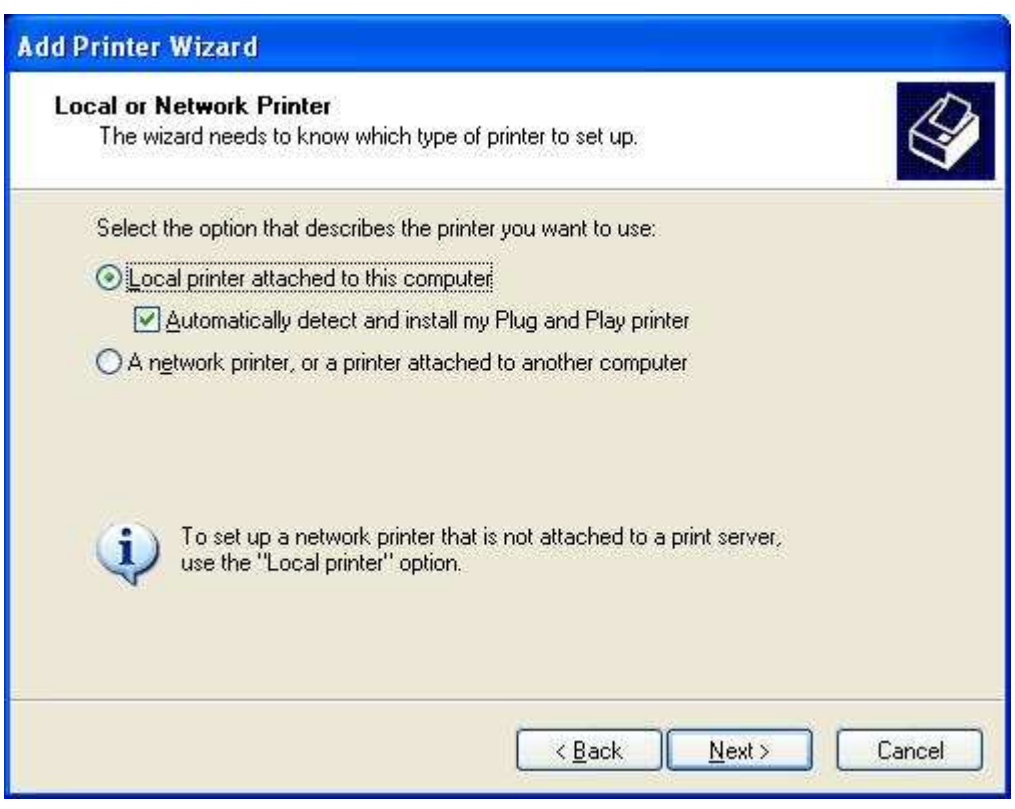


Step 3:

Click “**Next**”.

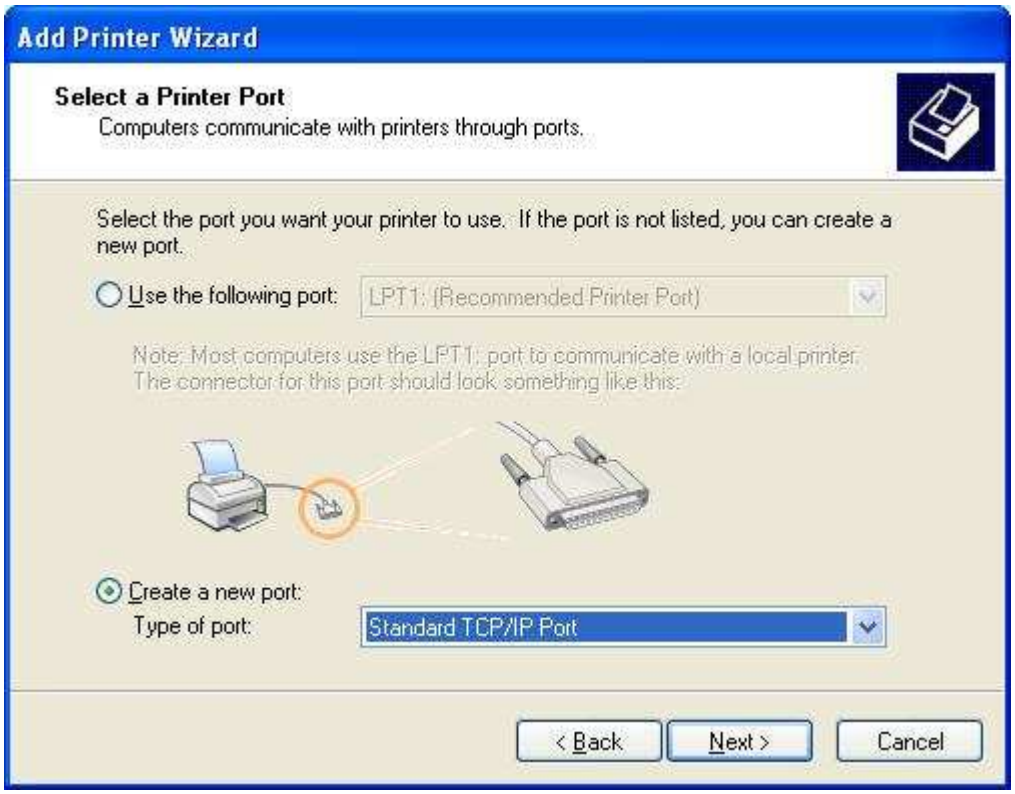

Step 4:

Click the “**Local printer attached to this computer**”, and then click “**Next**”.



Step 5:

Click the “**Create a new port**” and select the “**Standard TCP/IP Port**”, and then click “**Next**”.




Step 6:

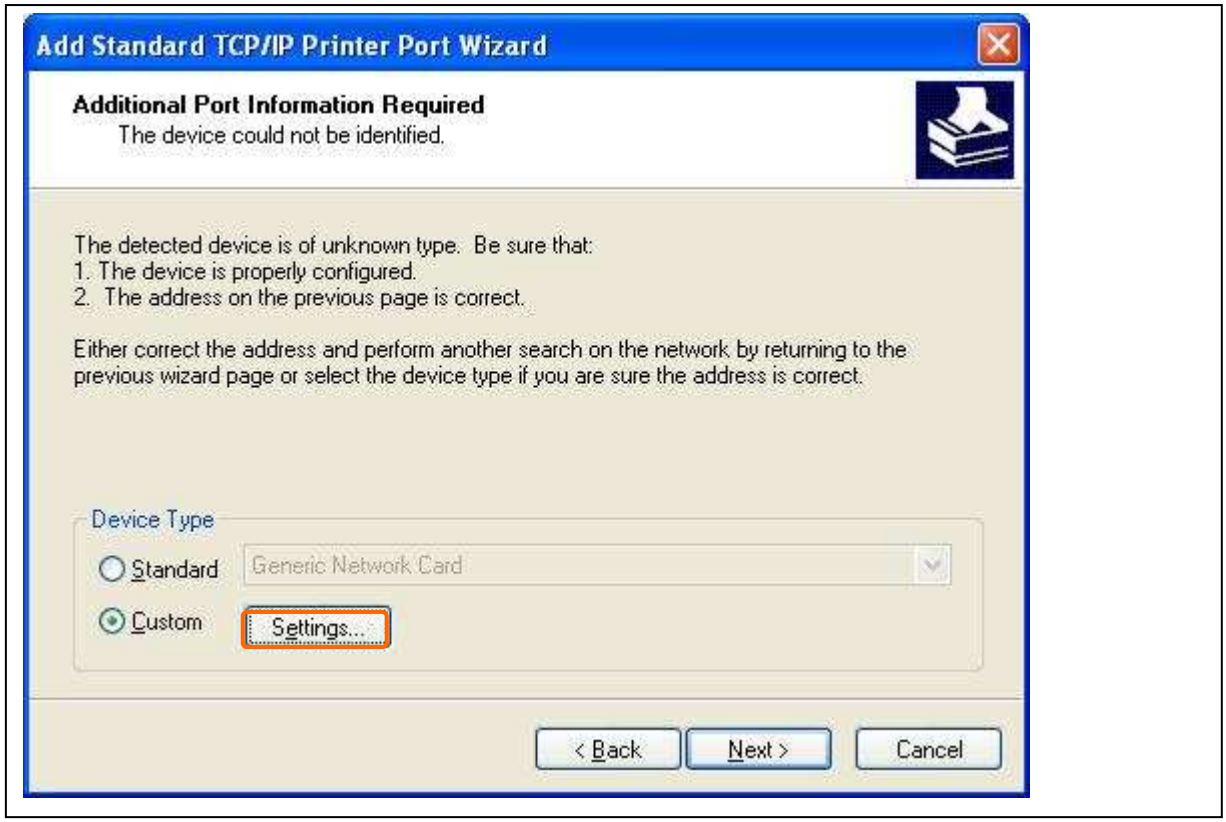
Click “**Next**”.

Step 7:

Input the IP address of CWR-935M: **192.168.1.254**, and then click “**Next**”.

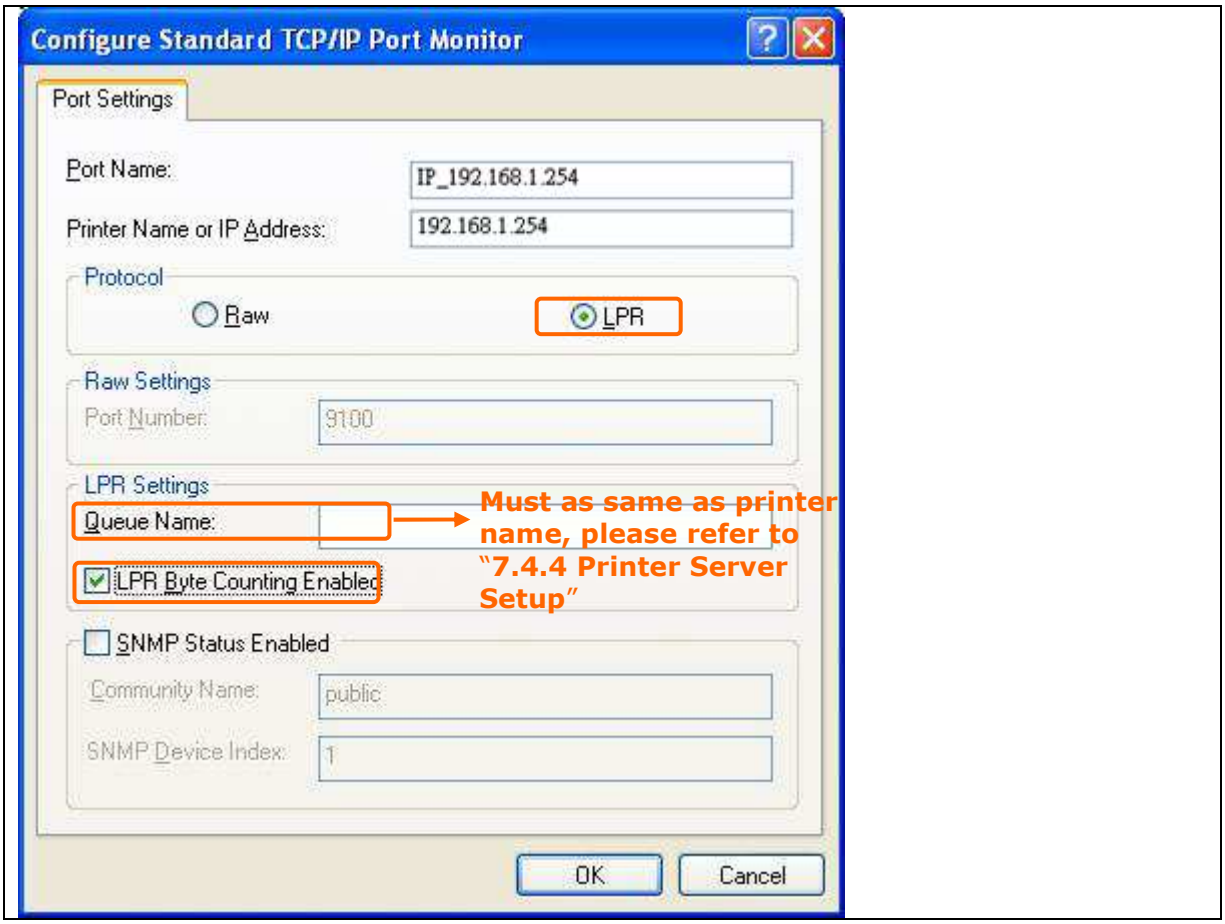

Step 8:

Select the “**Custom**” and click the “**Settings**”, and then click “**Next**”.


Add Standard TCP/IP Printer Port Wizard
Additional Port Information Required
The device could not be identified.
The detected device is of unknown type. Be sure that:
1. The device is properly configured.
2. The address on the previous page is correct.
Either correct the address and perform another search on the network by returning to the previous wizard page or select the device type if you are sure the address is correct.
Device Type
Standard
Generic Network Card
Custom
Settings...
< Back
Next >
Cancel

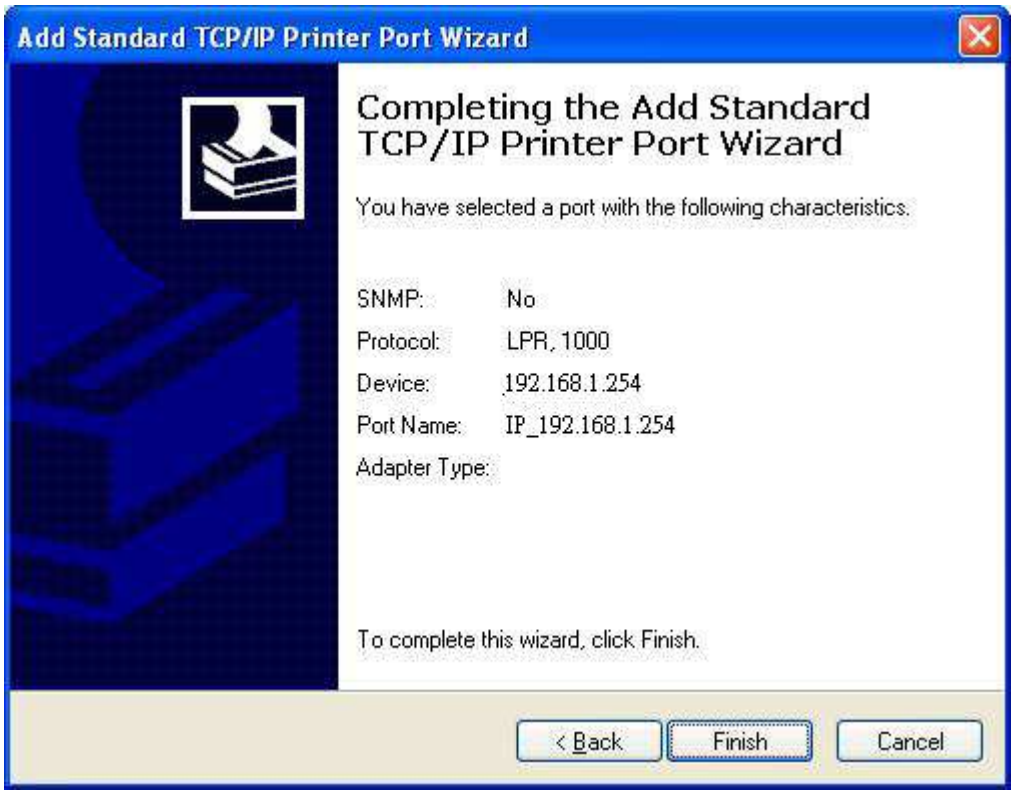
Step 9:

Select “**LPR**” and give it the same “**Queue Name**” as USB Printer Name as shown, and mark “**LPR Byte Counting Enabled**”. Finally, click on “**OK**” button.



Step 10:

Click the “**Finish**”.

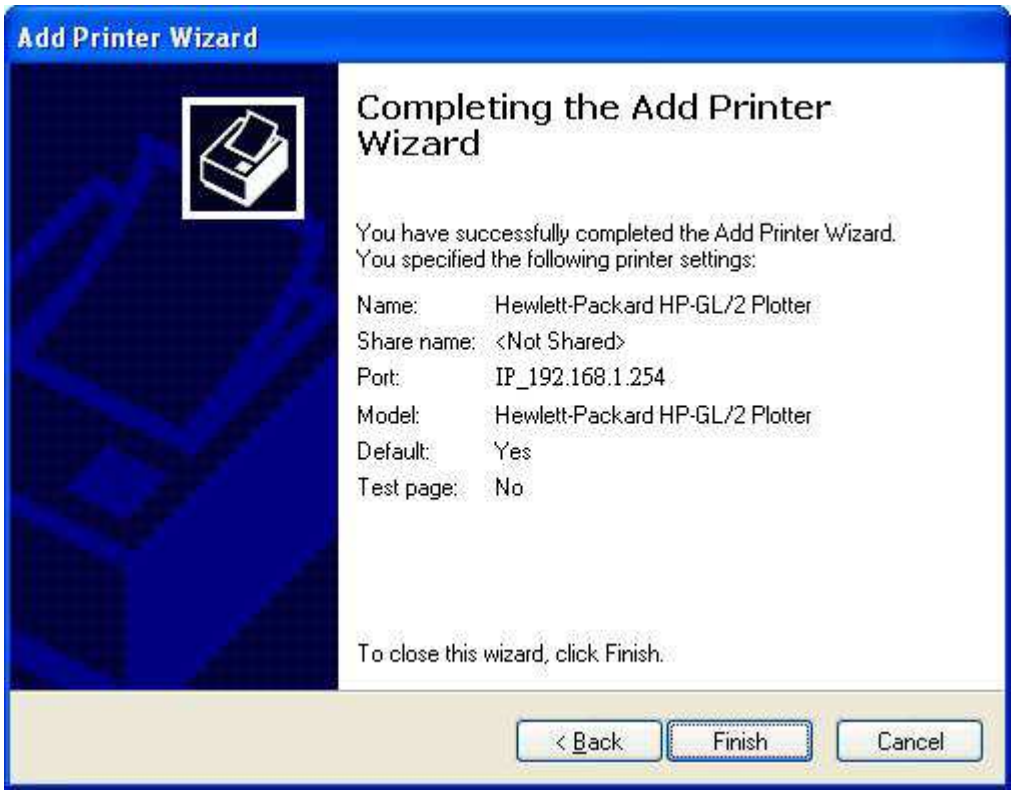


Step 11:

Select the “**Manufacturer**” and “**Printers**”. If your printer doesn’t listed in the table, please install its driver CD and then click on “**Have Disk…**” button for installation. Or click on “**Next**” button to finish the setting.

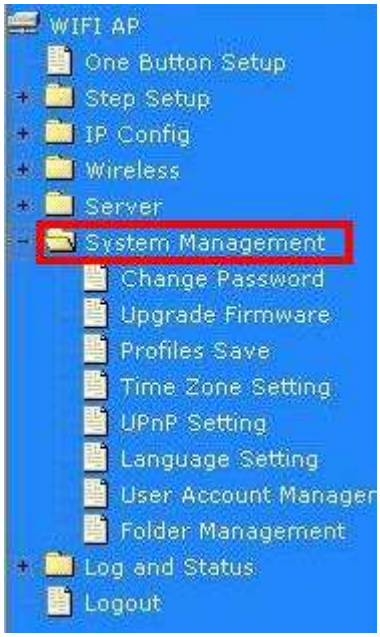
Step 12:

Click on **Finish** button and all steps of setting printer server are completely.



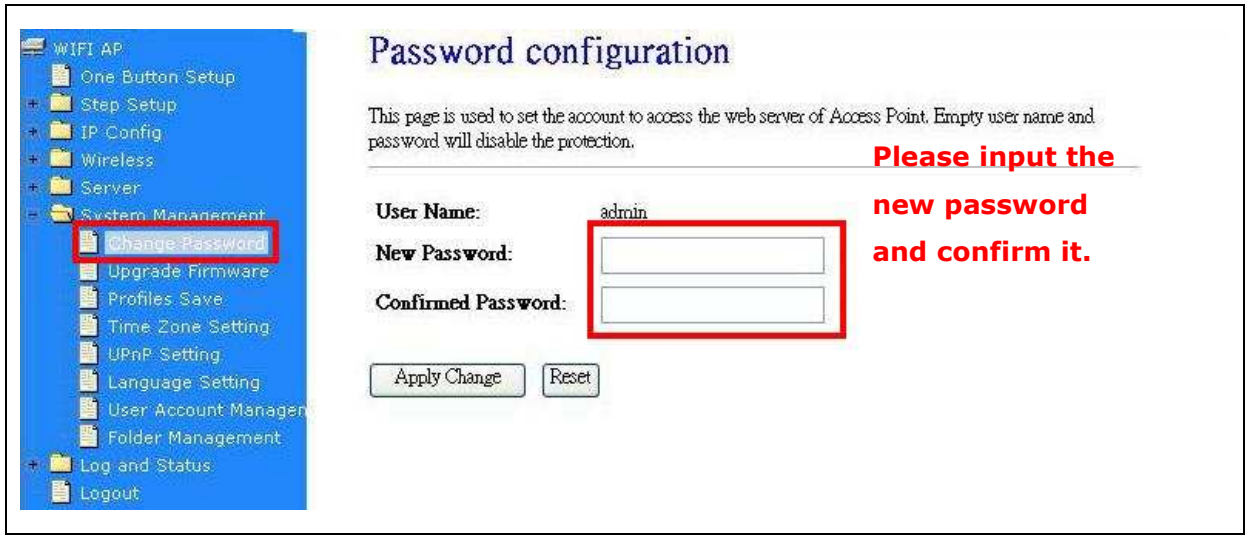

## 7.4 System Management

It has 6 sections: Change Password, Firmware Upgrade, Profiles Save, Time Zone Setting, UPnP Setting, and Language Setting. It is easy and helpful for users making more detailed settings.



### 7.4.1 Change Password

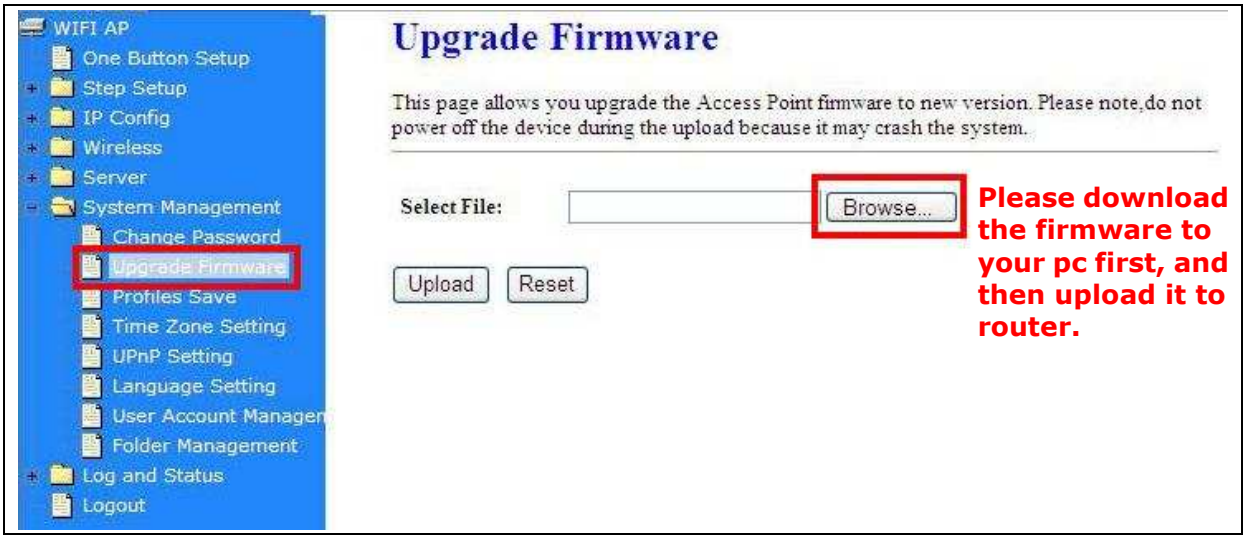
Users can set or change their password in this section.




Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

### 7.4.2 Firmware Upgrade

This function can upgrade the firmware of the router. There is certain risk while doing firmware upgrading. Firmware upgrade is not recommended unless the significant faulty is found and published on official website. If you feel the router has unusual behaviors and is not caused by the ISP and environment. You can check the website (http://www.cnet.com.tw) to see if there is any later version of firmware. Download the firmware to your computer, click **Browser** and point to the new firmware file. Click **Upload** to upgrade the firmware. You can't make any move unless the machine reboot completely.

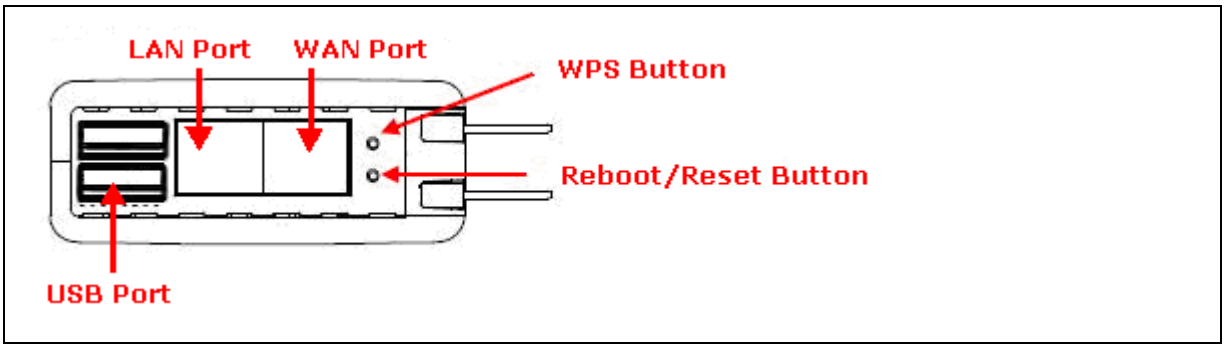



Caution: To prevent that firmware upgrading is interrupted by other wireless signals and causes failure. We recommend users to use wired connection during upgrading.

Caution: The firmware upgrade will not remove your previous settings.

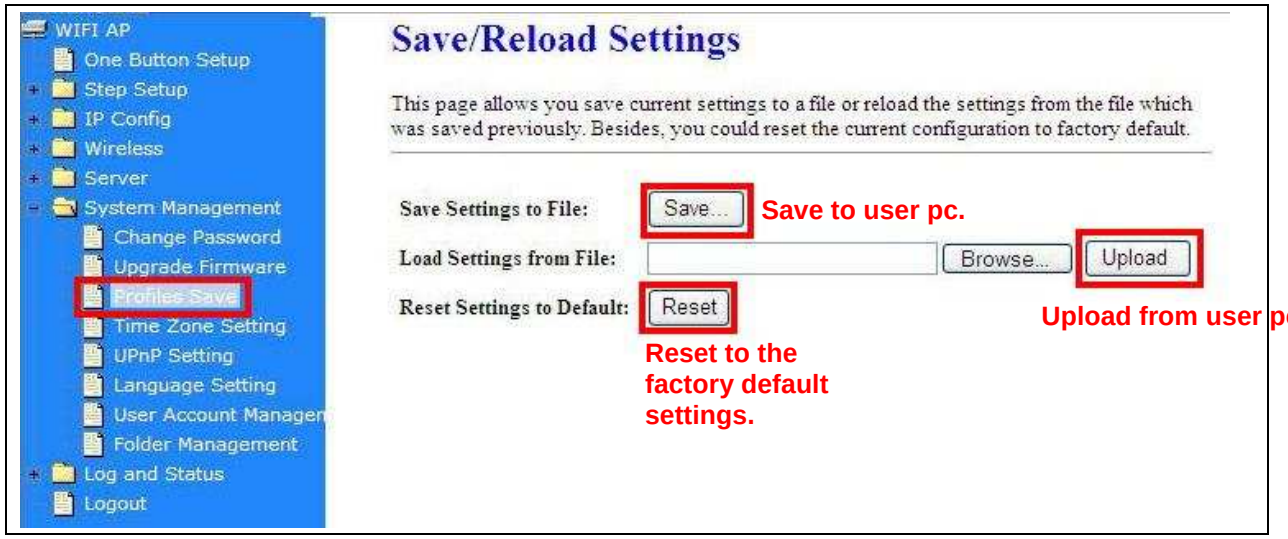
* Reset button:

On the back of this router, there is a reset button. If you can not login the administrator page by forgetting your password; or the router has problem you can't solve. You can push the reset button for 5 seconds with a stick. The router will reboot and all settings will be restored to factory default settings. If the problem still exists, you can visit our web site to see if there is any firmware for download to solve the problem.



### 7.4.3 Profile Save

Users can save or restore the setting profile, and reset the setting to factory default.

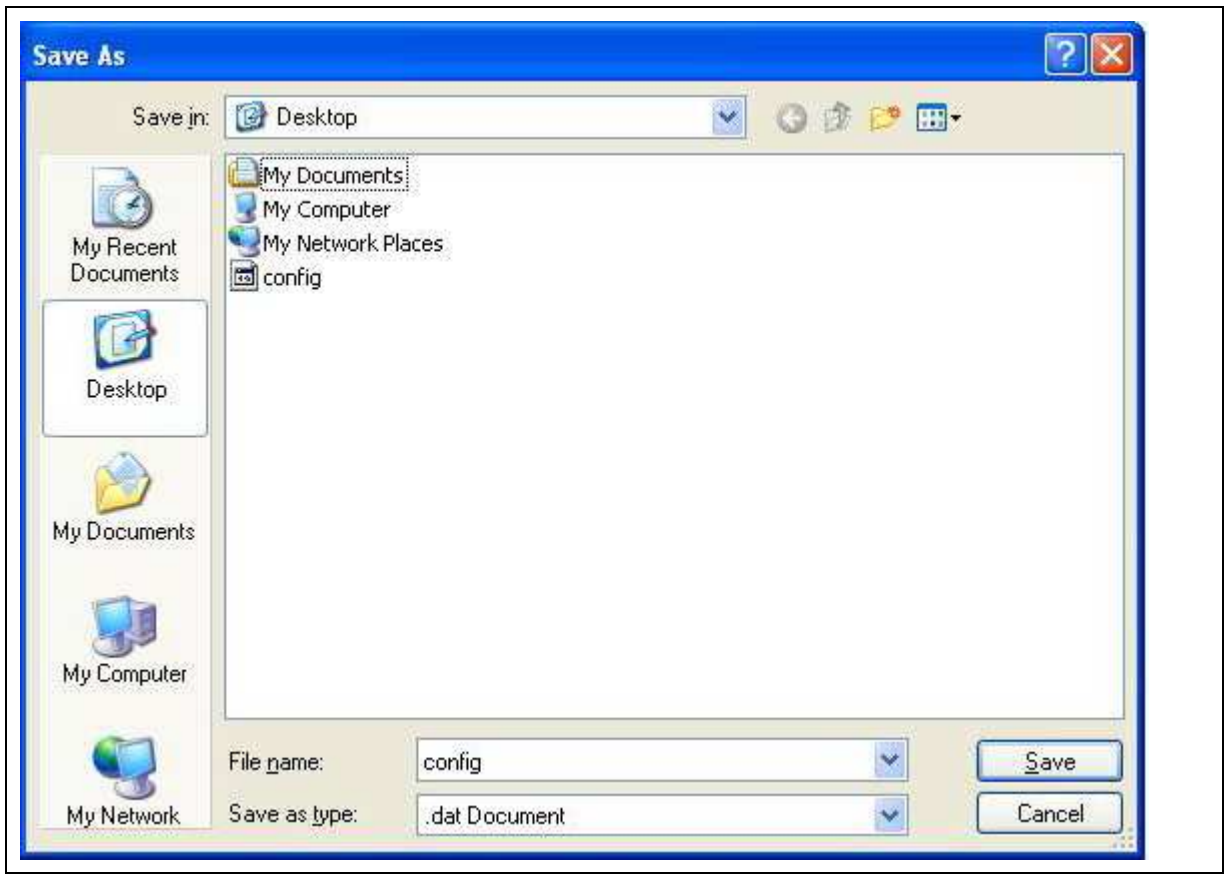



a. Save Configuration

(1) Click **Save**

(2) Please click Save to save configuration to your computer.

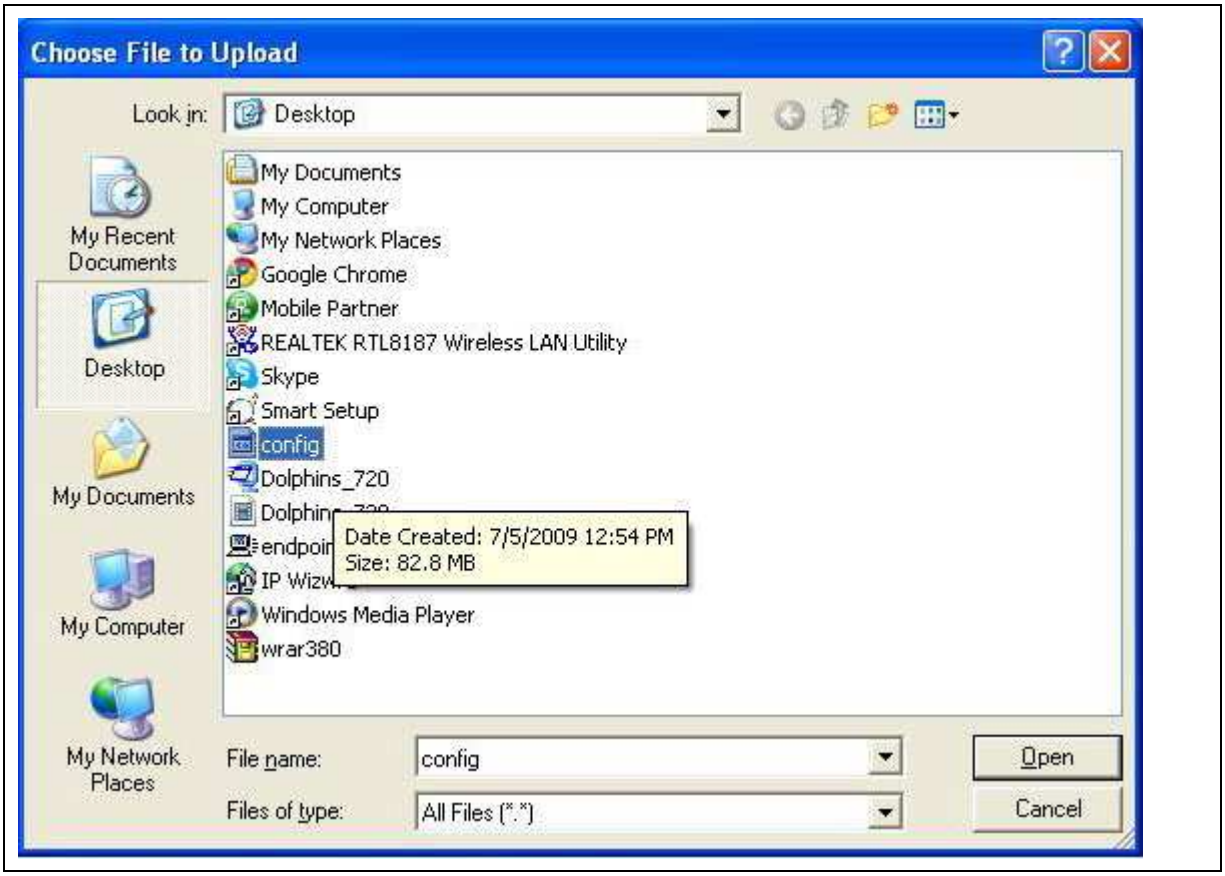

(3) Select the location which you want to save file, then click **Save.**



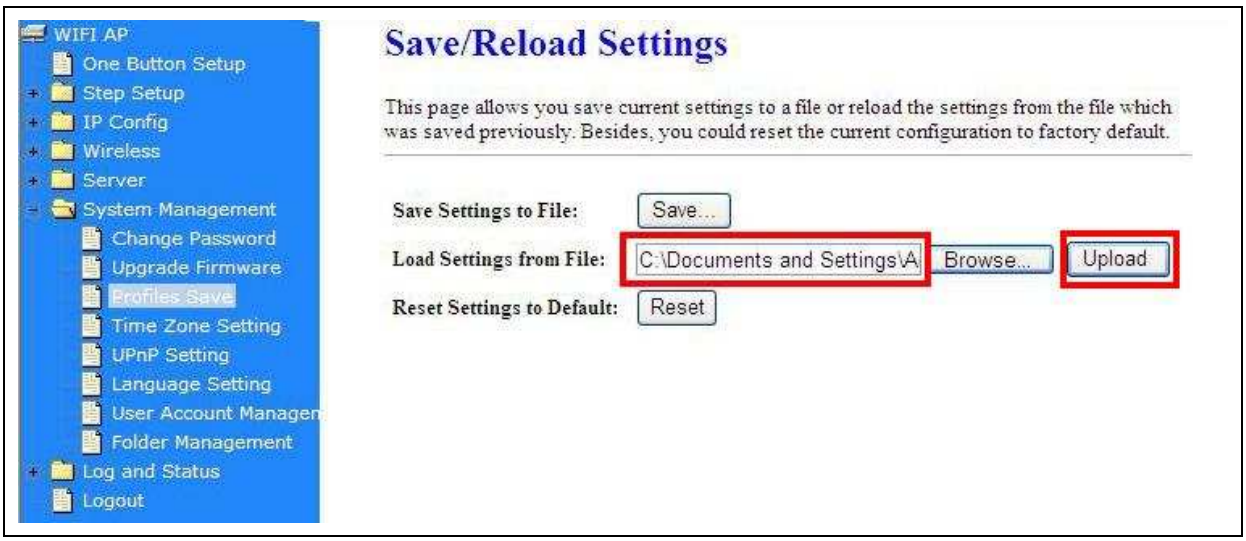
b. Load configuration file

(1) Click **Browse**

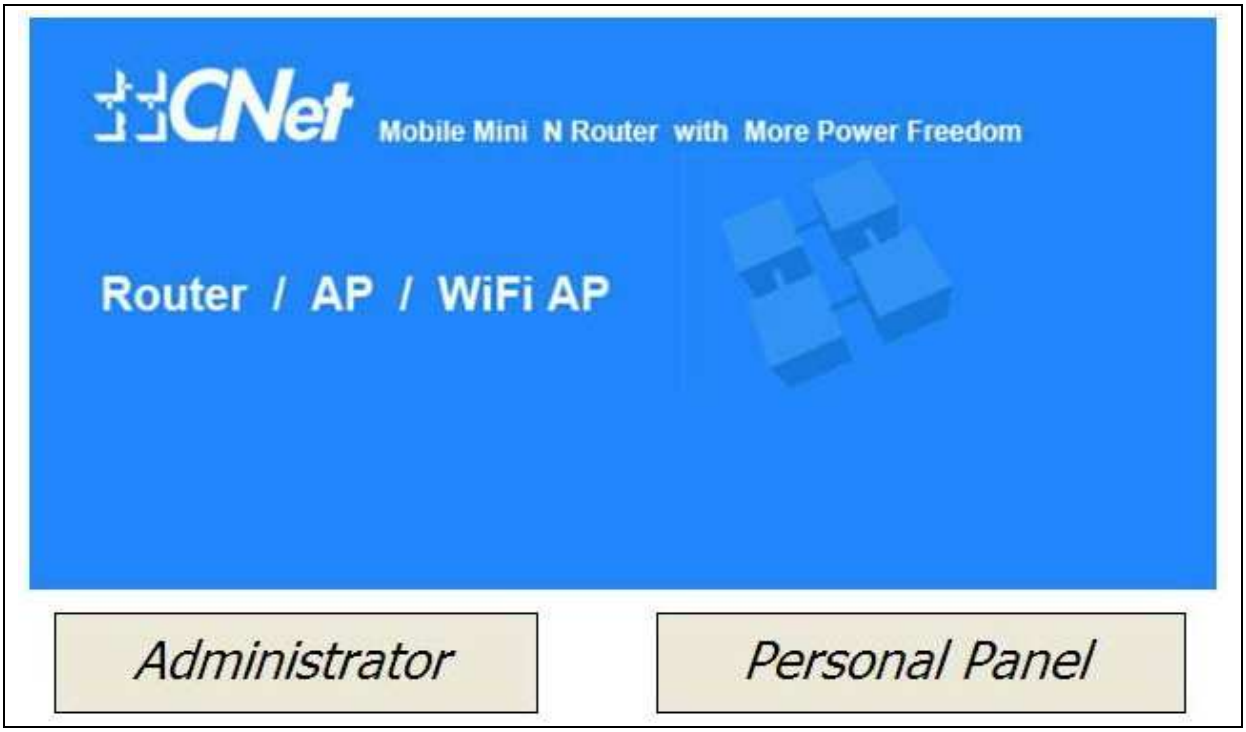

(2) Select configuration file then click **Open**



(3) Click **Upload** to upload configuration file to CWR-935M.



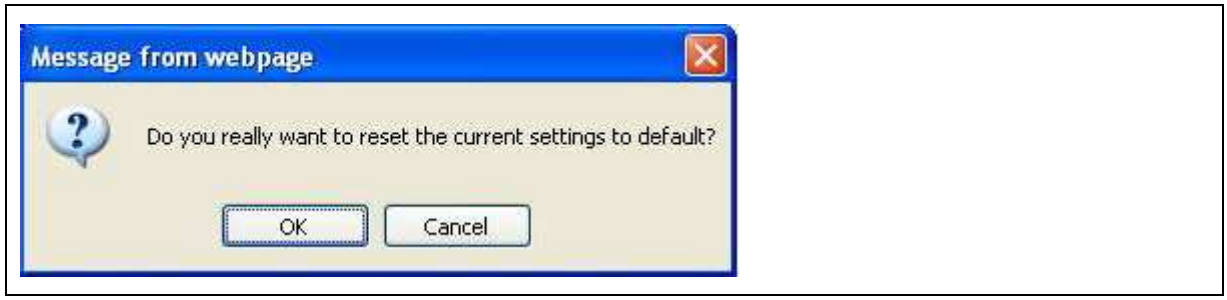

(4) After 90 seconds, CWR-935M will finish process and reboot. Please click **Administrator** to login



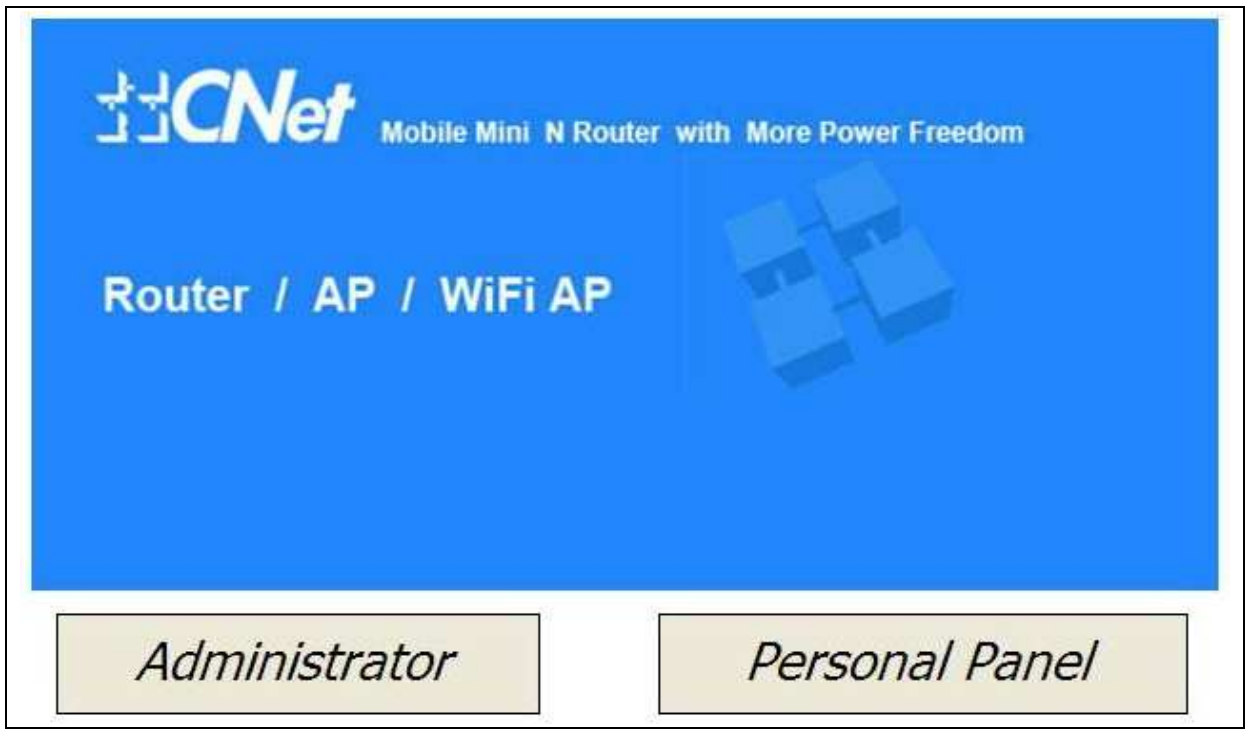
(C) Reload factory default setting

1. Please click **Reset**


(2) Please click **OK** to start reload factory default setting to CWR-935M

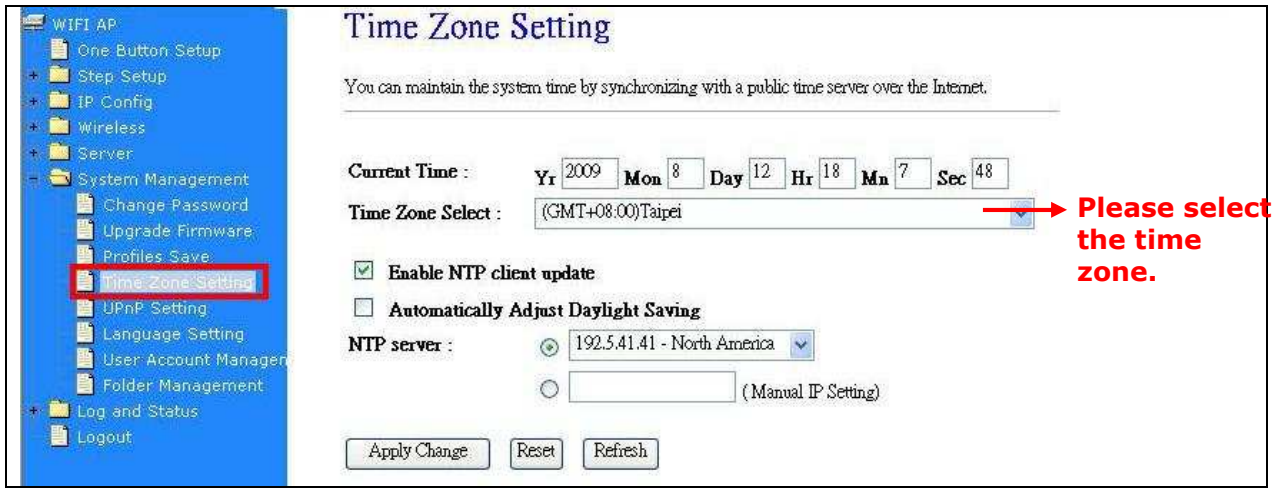


(3) After 90 seconds, CWR-935M will finish process and reboot. Please click **Administrator** to login




### 7.4.4 Time Zone Setting

This function allows users to select their time zone and NTP server. Users can adjust the time manually or through the NTP server.

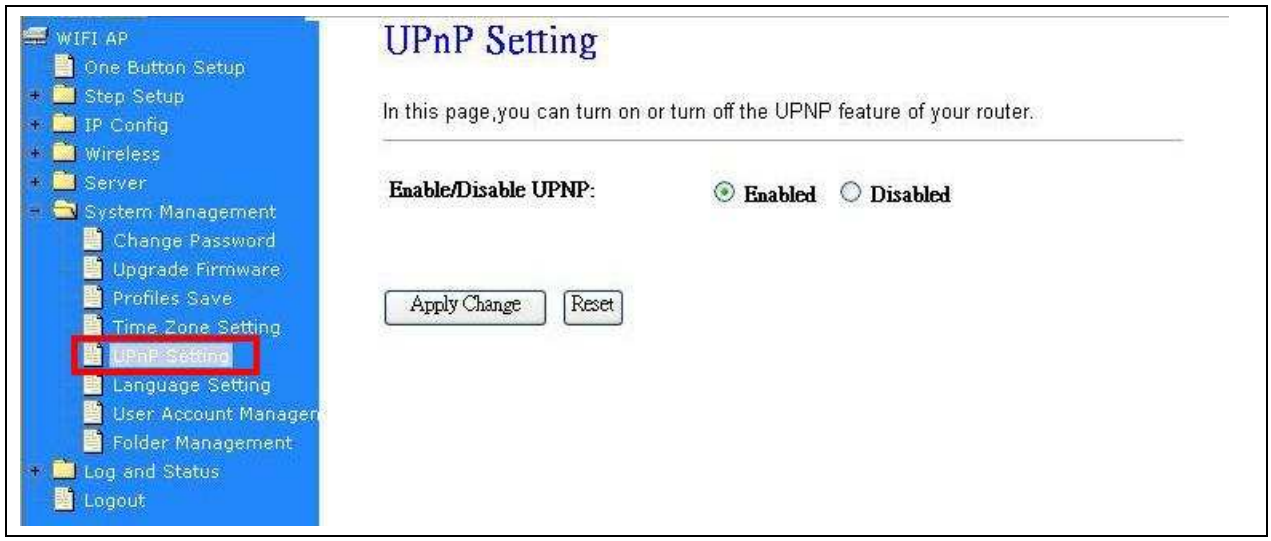



| Item | Description |
|---|---|
| Current Time | Users can input the time manually. |
| Time Zone Select | Please select the time zone. |
| Enable NTP client update | Please select to enable NTP client update or not. |

| | |
|---|---|
| Automatically Adjust Daylight Saving | Please select to enable **Automatically Adjust Daylight Saving** or not. |
| NTP Server | Please select the NTP server from the pull-down list, or you can enter the NTP server IP address manually. |
| Apply Changes & Reset & Refresh | Please click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data. Or you may click on **Refresh** to update the system time on the screen. |

### 7.4.5 UPnP Setting

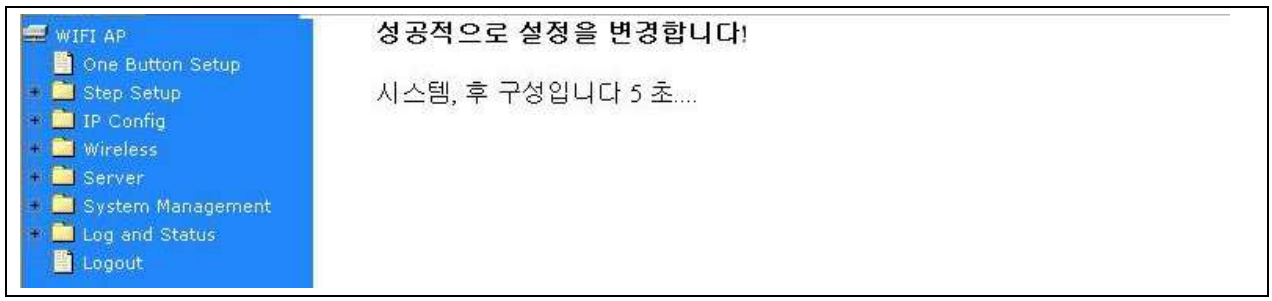
**Universal Plug and Play** (**UPnP**) is a set of networking protocols promulgated by the UPnP Forum. The goals of UPnP are to allow devices to connect seamlessly and to simplify the implementation of networks in the home (data sharing, communications, and entertainment) and in corporate environments for simplified installation of computer components. 3.5G server router supports UPnP function, and can cooperate with other UPnP devices. When you activate UPnP, please click **My Network Places**. Users will see an **Internet Gateway Device** icon. By click the icon, users can enter the GUI of 3.5G server router. If you do not wish to use UPnP, you can disable it.




### 7.4.6 Language Setting

CWR-935M provides users with 12 languages to choose. Users can change the language of the interface configuration. Please click **Apply Changes** after selecting a language.


Using Korean as an example, the screen will display on the chosen language after the countdown is finished.




Caution: After countdown, you can press **Ctrl+F5** forcing the page to refresh. This can avoid any translation uncompleted situation.

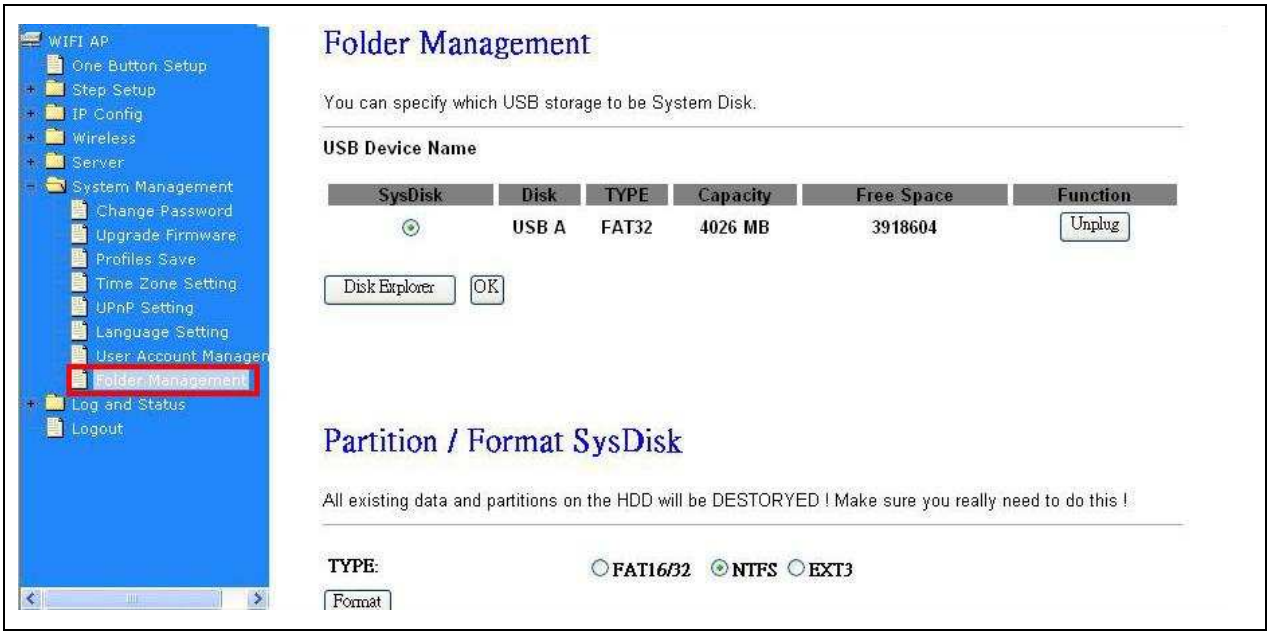
### 7.4.7 User Account Management

Personal users can use each individual application such as My Status, My Webcam and My Document. This section is to set the user's right. Also, all the users right will be showed in User Account List and can do the edit or delete by clicking the meaning text.


| Item | Description |
|---|---|
| User Name | Create the user name in this blank. |
| Password | Setup the user's password. |
| User Right | Enable the use to Webcam, FTP server. |
| Apply & Changes | Click on **Apply** button to add the settings into the list table. Click on **Cancel** button to clean the setting on this page. |

### 7.4.8 Folder Management

Easy to check all the USB storage devices connected to your CWR-935M, view the entire data folder inside each storage devices, and you can do the disk formatting/partition via click on the button in this page.

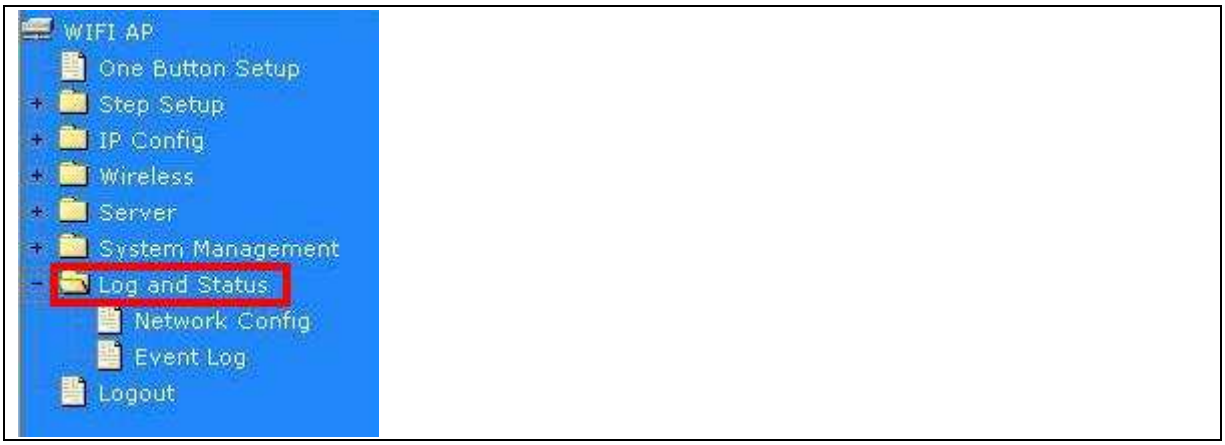



1. Select the USB Disk and click on **Mount** button for refresh all disks before you do disk partition, and the **Unplug** button will appear.
2. To partition/format the disk, please select the disk and click on **Format** button.
3. If you want to view the data inside the disk, please click on "**Disk Explorer**" to view all the disks folders inside the device.

Note：You have to click on "Unplug" button before remove the USB devices.

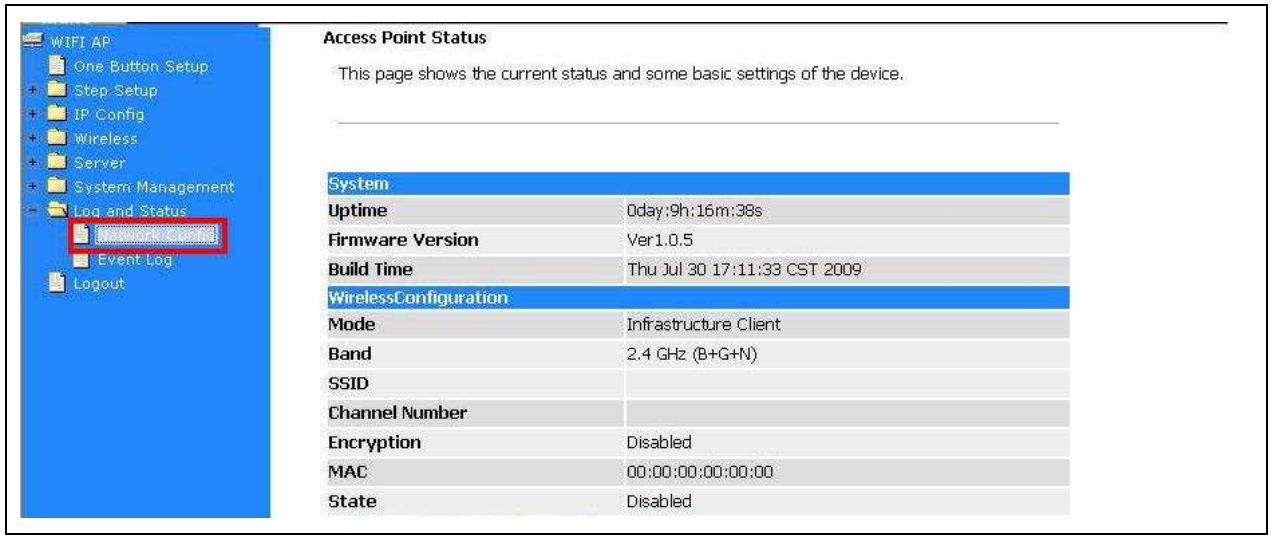
## 7.5 Log & Status

The category provides **Network Config** and **Event Log** status for users to know the operation status.



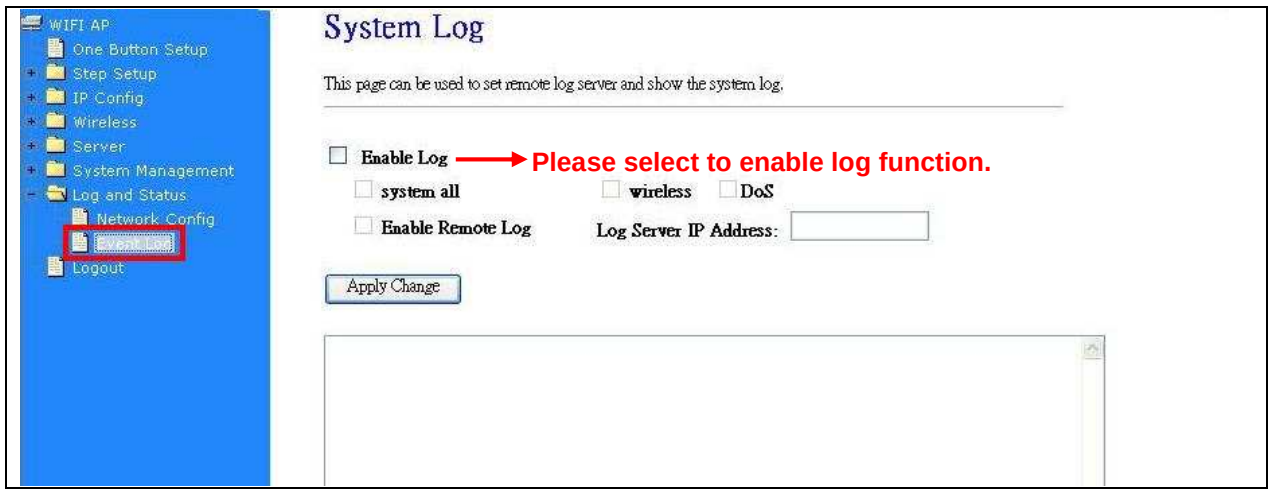
### 7.5.1 Network Config

Users can check the Internet status under this category, including Firmware version, Wireless setting, Connecting Time, WAN, TCP/IP …information.



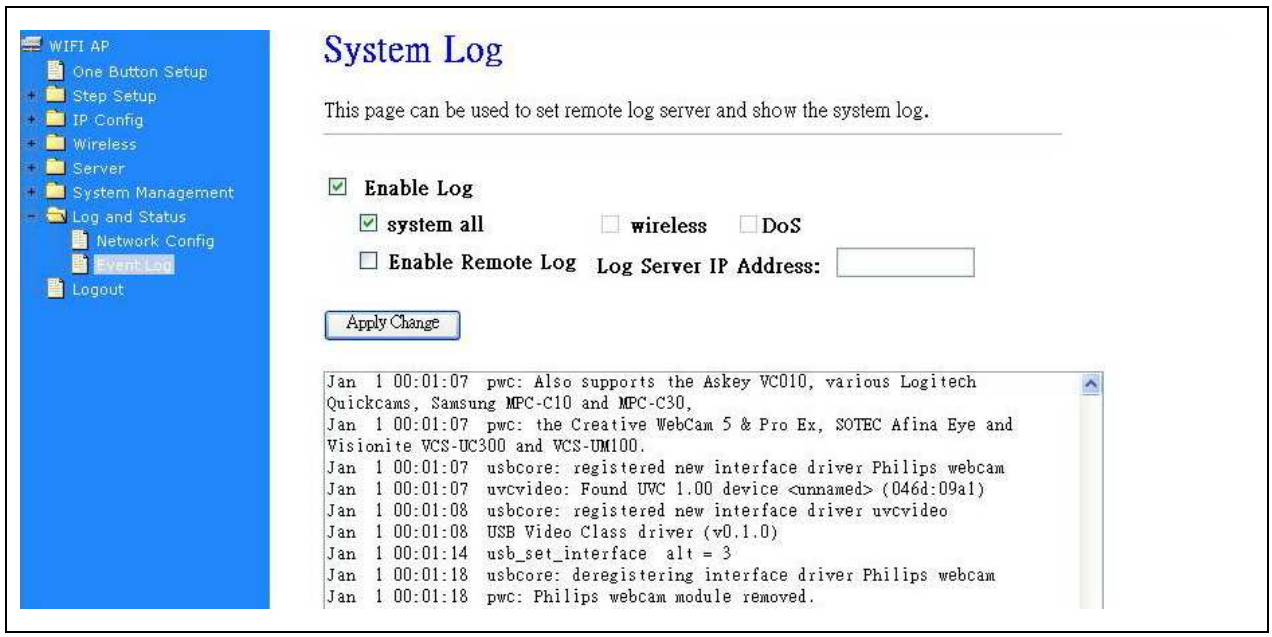

### 7.5.2 Event Log

You may enable the event log feature here.

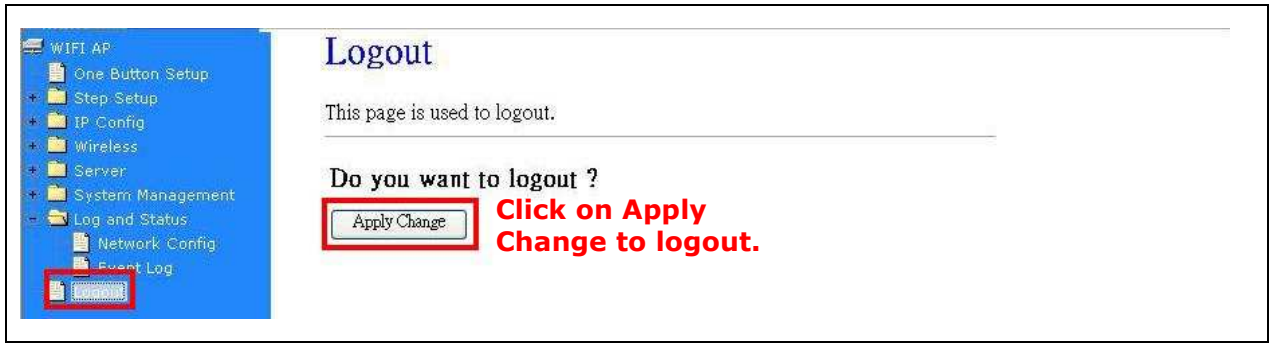



| Item | Description |
|---|---|
| Enable Log | You may choose to enable Event Log or not. |
| System all, Wireless, & DoS | Please select the event you want to record. |
| Enable Remote Log | You may choose to enable the remote event log or not. |
| Log Server IP Address | Please input the log server IP Address. |
| Apply Changes & Refresh & Clear | Click on **Apply Changes** to save the setting data. Click on **Refresh** to renew the system time, or on **Clear** to clear all the record. |

* The following figure is an example when users click **Apply Changes** to record the event log.




### 7.6 Logout

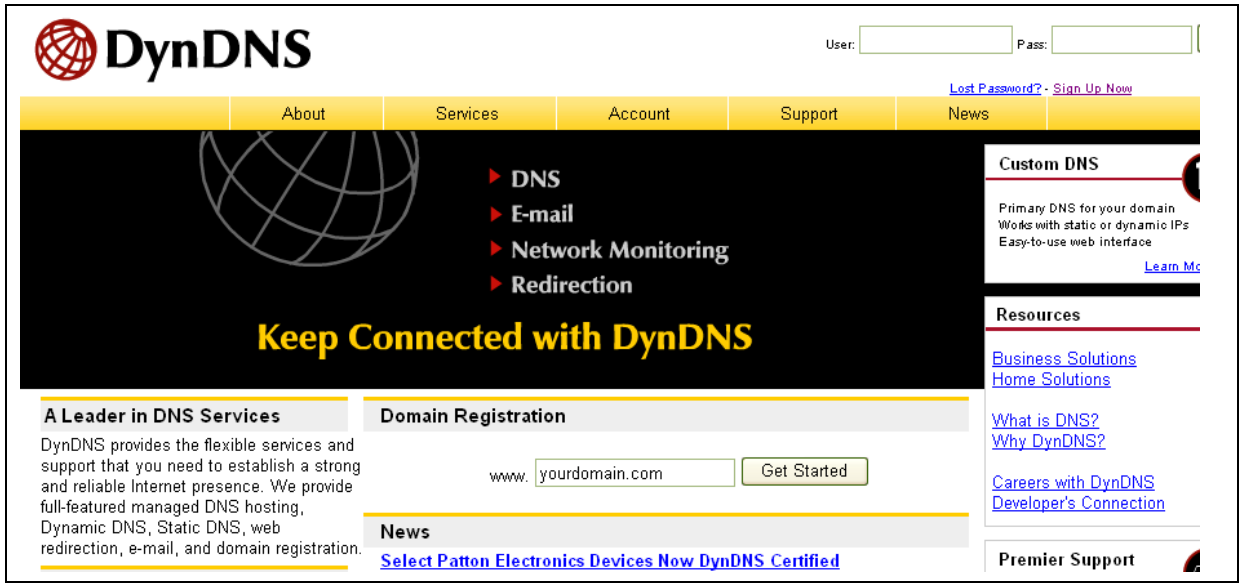



# Chapter 8. DDNS Account Setup

DDNS is a service changes the dynamic IP to the static IP. For ADSL & Cable users, the settings of DDNS can solve the problem of being given the different IP by router every time. After setting the Router, your hostname would correspond to your dynamic IP.

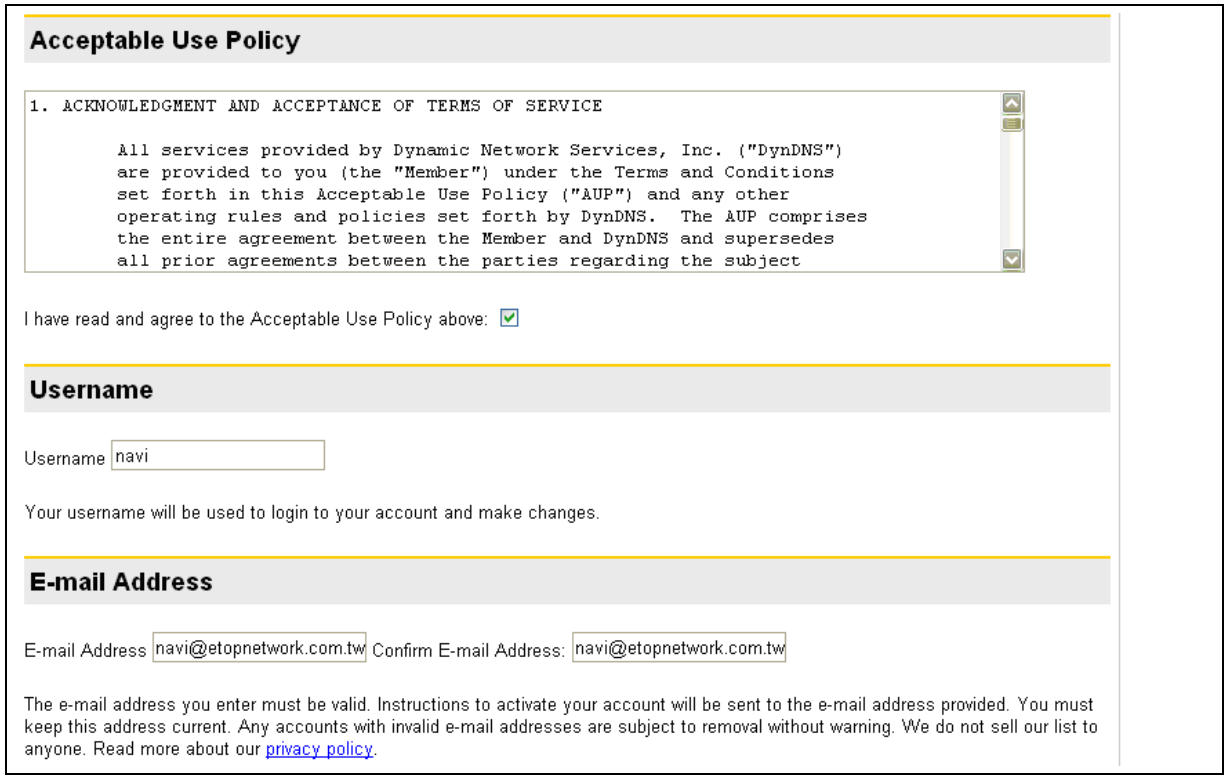
【Step 1】

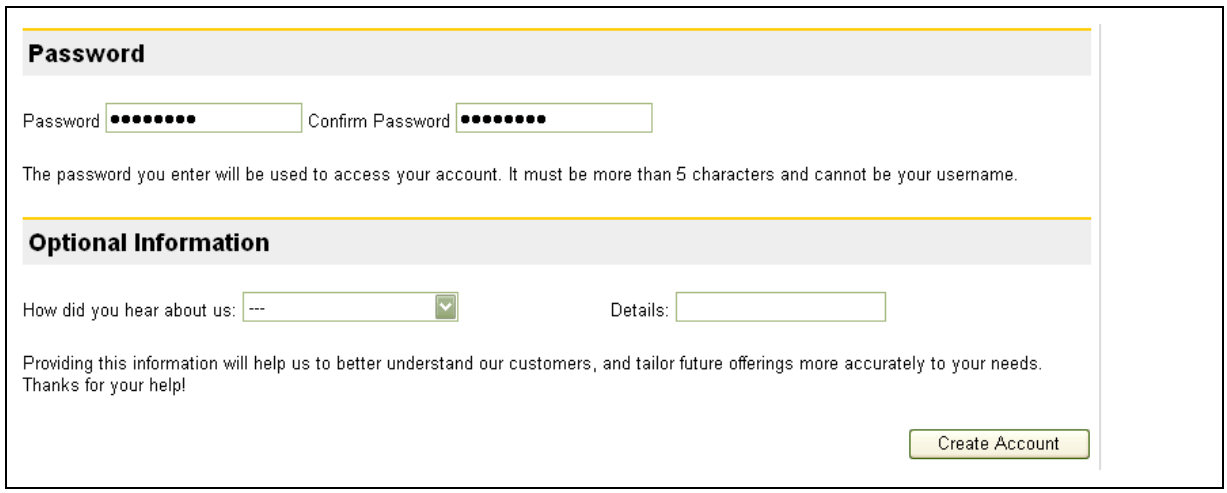
Please visit the website http://www.dyndns.com/, and click on **Sign Up Now**.




【Step 2】

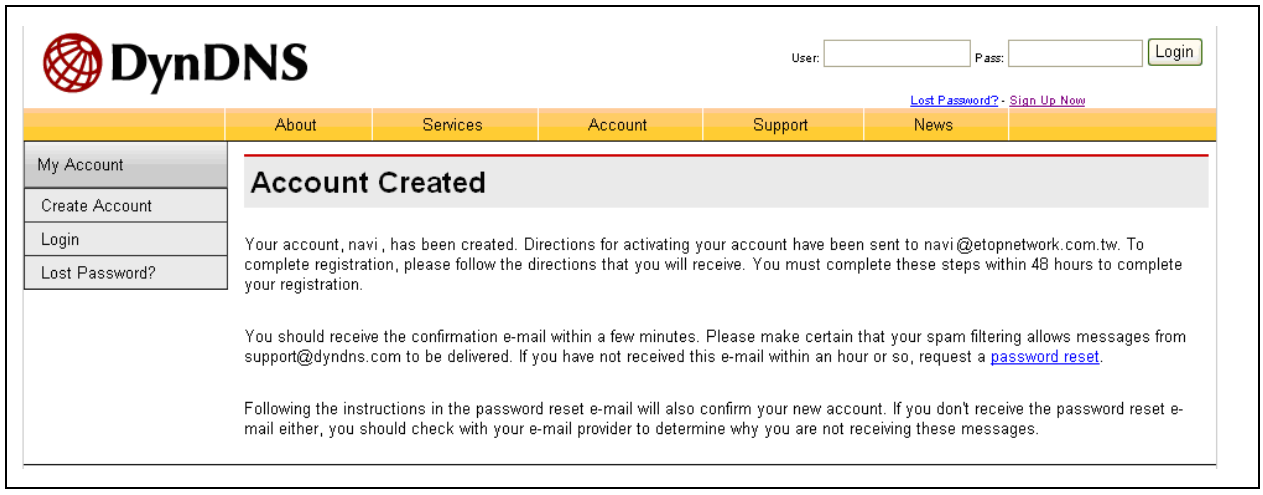
Please fulfill the requested information at the column, and click on **Create Account** when finished. (The information shown on the screen is for your reference only)






【Step 3】

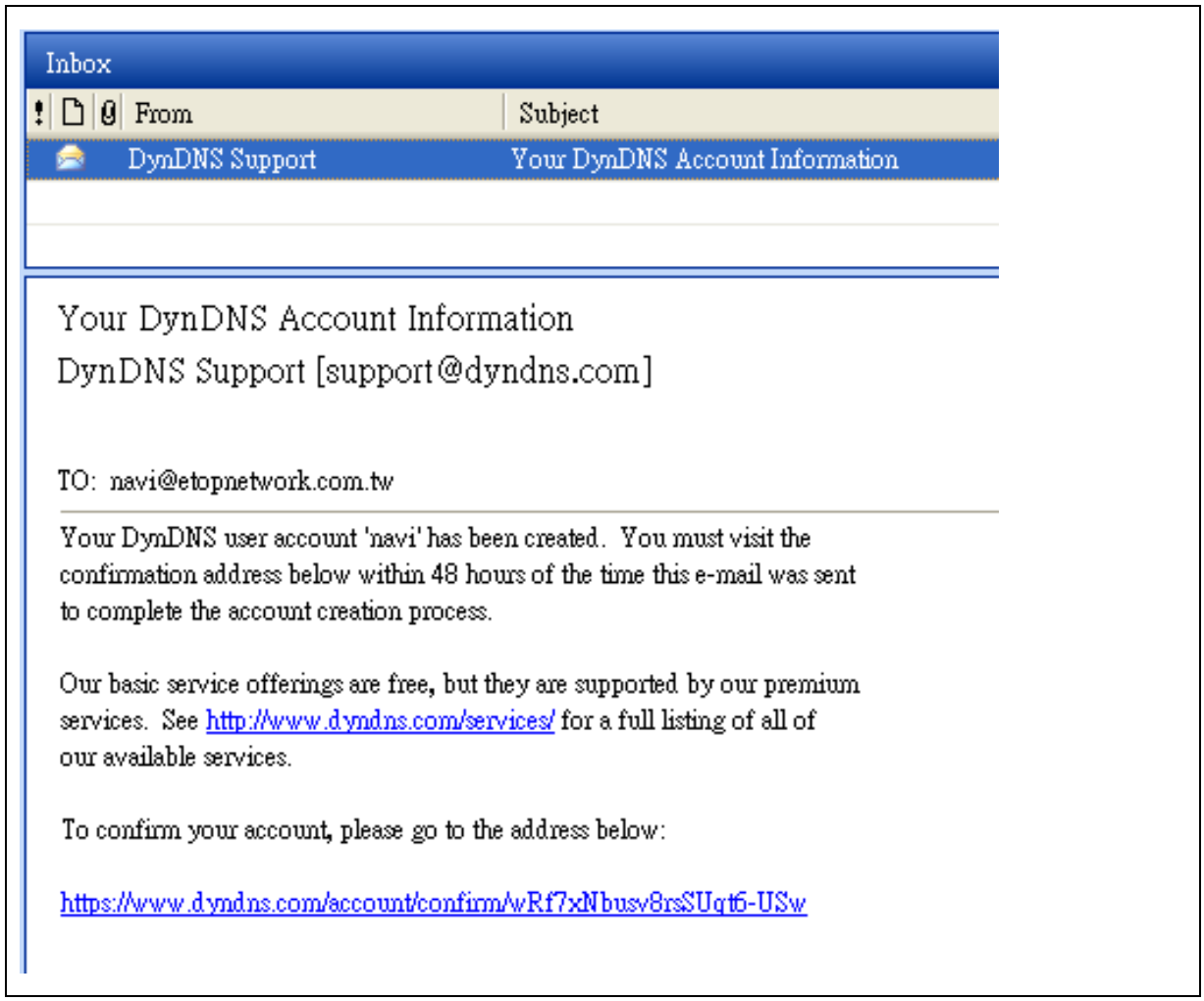
When the below window appears, you already finish the registration. Please check your E-mail box, and you will receive an e-mail from the DynDNS.



【Step 4】

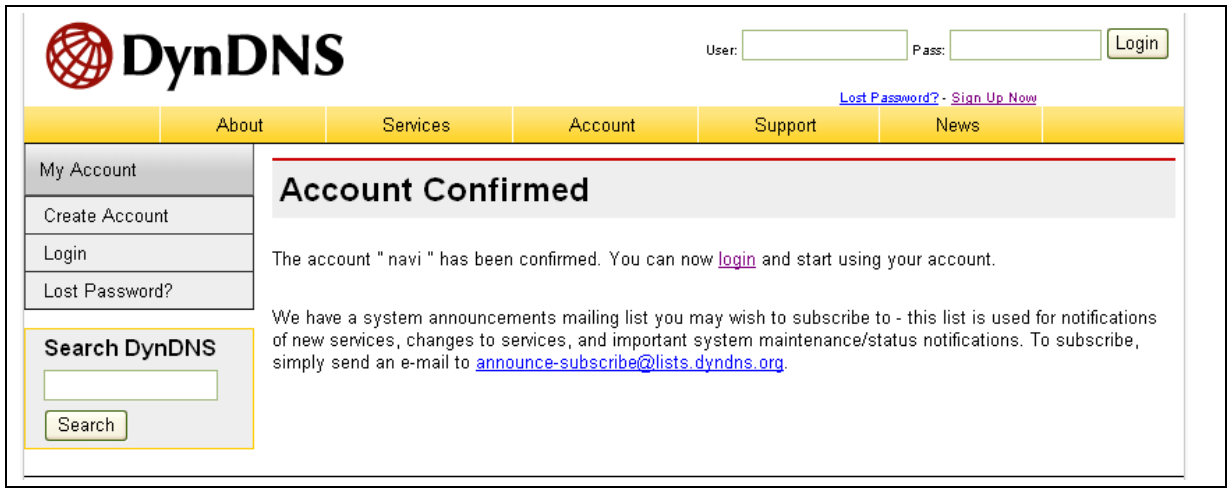
Please open the email sent from DynDNS.

Click on the link to confirm your account.



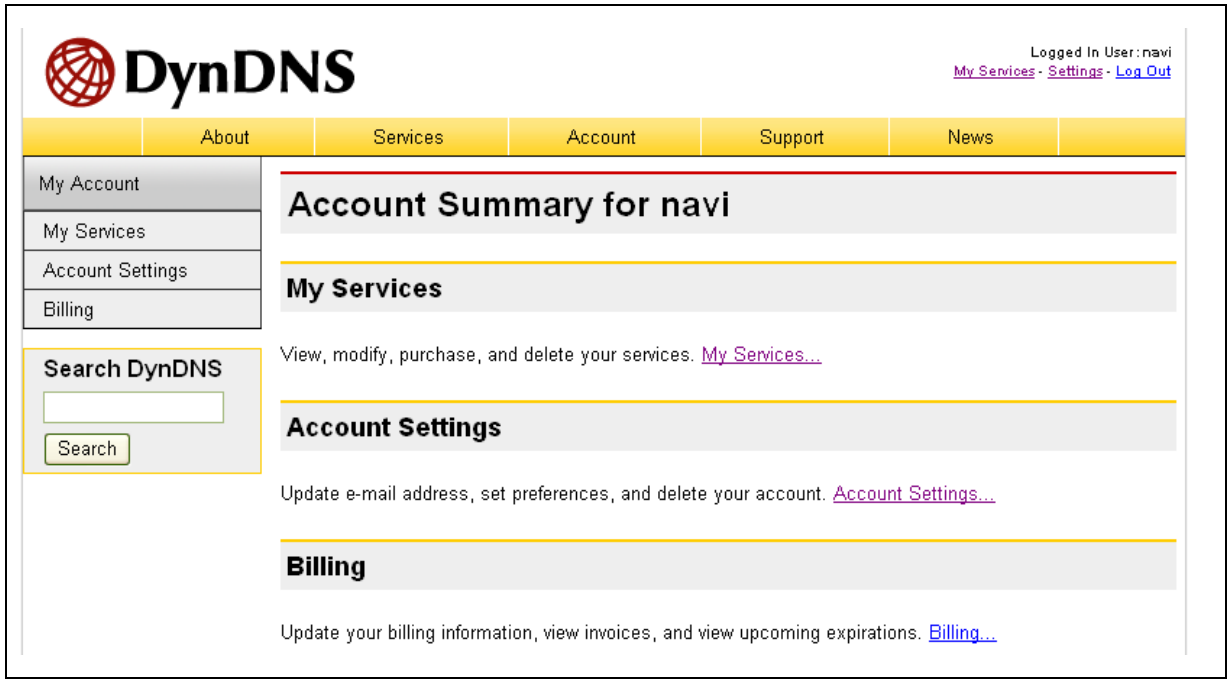

【Step 5】

Please click on **login**.



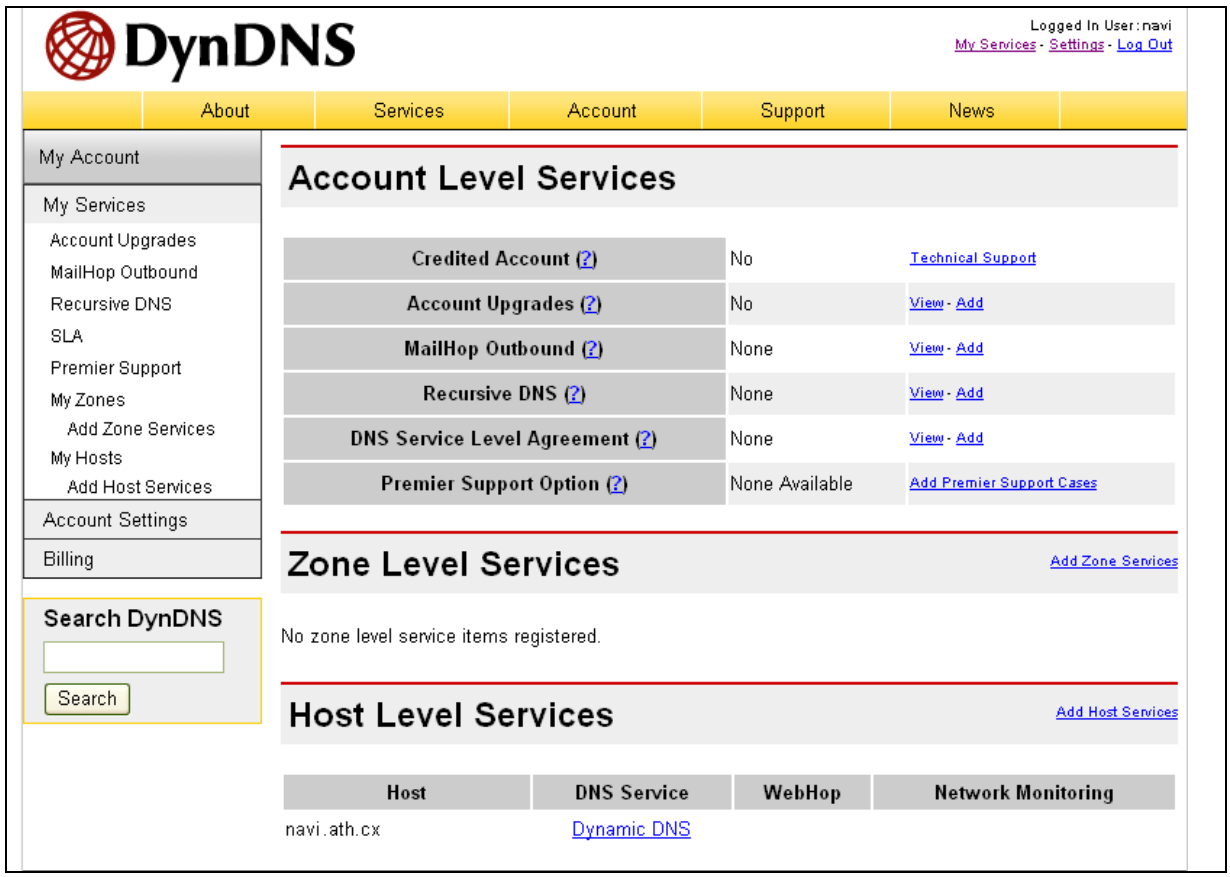
【Step 6】

Please click on **My Services** under the Account Summary for the linkage.



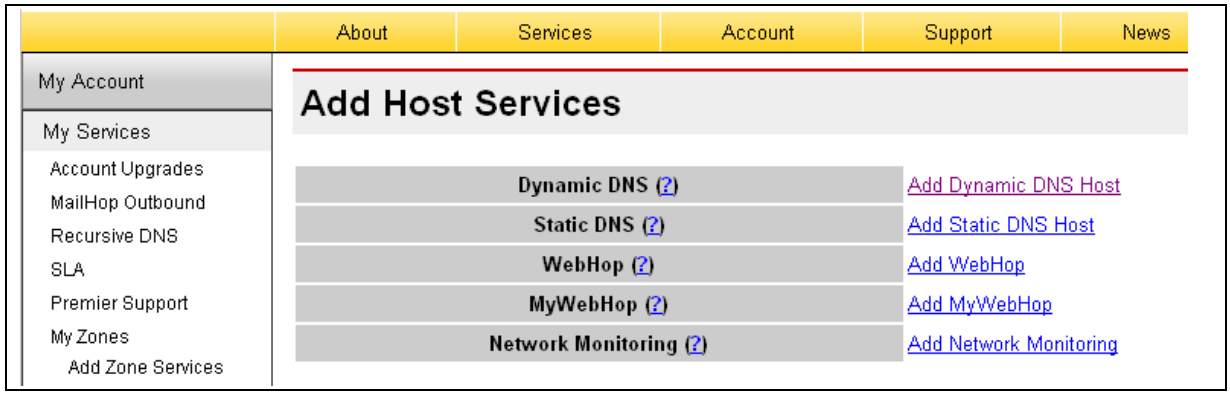

【Step 7】

Please click on **Add Host Services**.



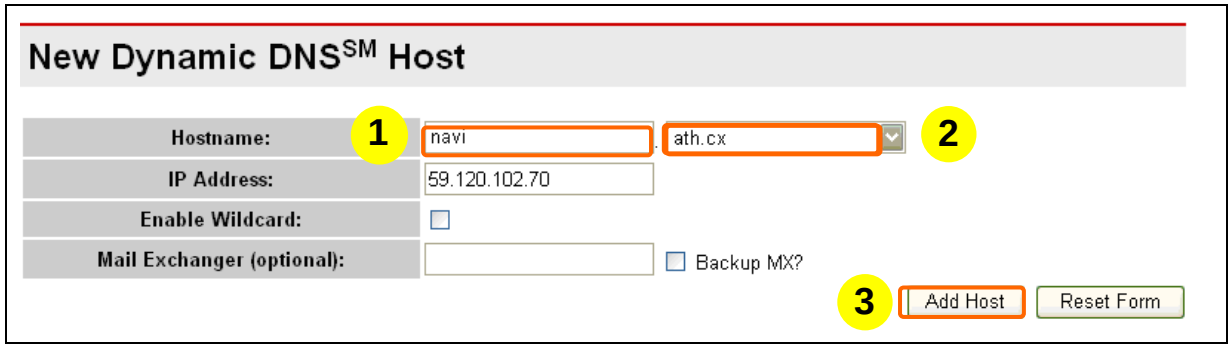
【Step 8】

Please click on **Add Dynamic DNS Host**.



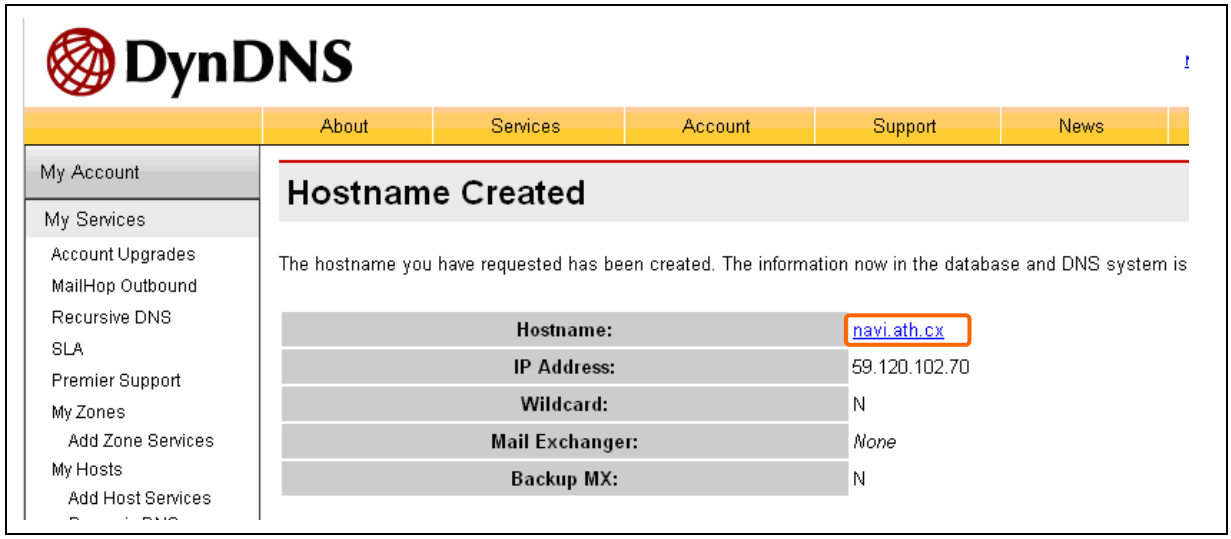

【Step 9】

1. Please input the account you applied.
2. Please select the hostname preferred at the drop-down menu.
3. Please click on **Add Host** to add the name.




【Step 10】

When the below window appears, it means your hostname is created.

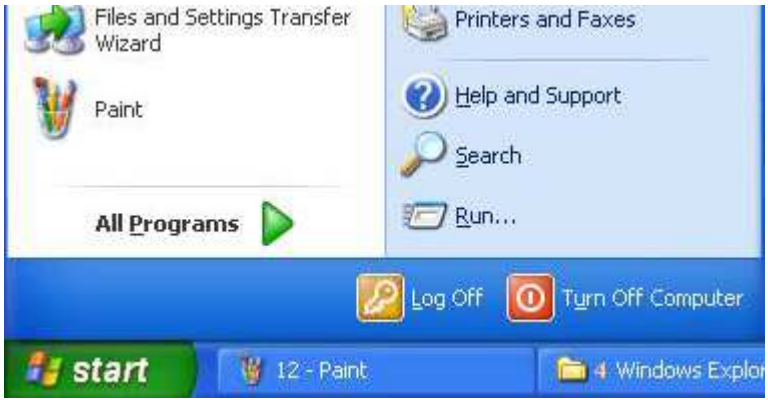


# Chapter 9. Q & A

## 9.1 Installation

**1. Q: Where can I find the IP and MAC address of my computer?**

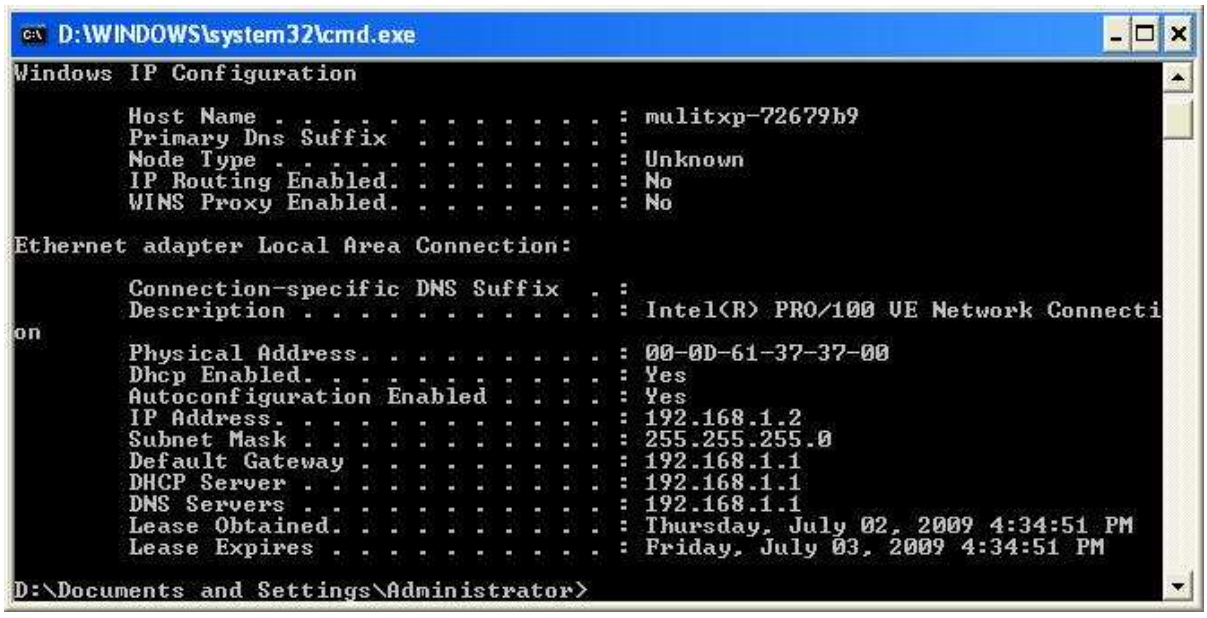
A: (1) From the **Start** menu, select **Run**, an input box will appear with a flashing cursor.




Type "**cmd**" or "**Command**" in the Run box

(2) An MS DOS Window will open, please input **ipconfig /all**, and then press **Enter**.


You will see information about Ethernet adapter for Local Area Connection.




• **IP address** (192.168.1.100)：

This is the IP address of your computer.

• **Default Gateway** (192.168.1.1)

This is the Gateway IP address of your computer.

• **Physical Address** (00-0D-61-37-66-ED)

This is the MAC address of your network interface card.

**2. Q: Where should I install the XDSL Router in a network environment?**

A: In a typical network environment, the router should be installed between XDSL network and Local Area Network.

**3. Q: My network speed is very slow, why?**

A: Please make sure your network cable is less than 100m. Or you can install a bridge between your router and computer to keep the quality of signal. You can also try to…:

- Please make sure the network traffic is less than 37% of bandwidth.
- Please check to see there are no more than 10 broadcast messages in network traffic.
- Please check the network topology and settings.

## 9.2 LED light

**1. Q: The Power Indicator of my 3.5G server router is not on, why？**

A: Please check the power supply first.

**2. Q: Even I confirmed the IP address and Local Network are good, I still can't connect to the login page of 3.5G server router？**

A: You could try to reset the 3.5G server router back to factory default settings. Please hold the **Reset** button over 5 seconds. The **STATUS** light will be off, and then every LED indicator will be on again. It means the 3.5G server router is back to factory default settings.

**3. Q: My 3.5G server router will shut down automatically without any warning, why?**

A: Please check the power adapter connection again, then check STATUS indicator. If the indicator is still not on, the memory inside the router might be damaged, please contact the sales.

## 9.3 IP Address

**1. Q: What is the default IP address of the 3.5G server router?**

A: The default IP address is 192.168.1.1, and the Subnet mask is 255.255.255.0。

**2. Q: I don't know my WAN IP address?**

A: There are two ways to find it.

1: Please check with your ISP.

2: Please select **Log & Status** on the left menu of the 3.5G server router, and then select **Network Configuration**, you will see the WAN IP address.

**3. Q: How do I know that I have static IP address on WAN?**

A: Please check with your ISP, or select **Network Configuration** to check out.

**4. Q: Can I use personal domain name on this router? Or should I use the IP address which provided by router?**

A: Yes, you can use your own domain name on 3.5G server router.

## 9.4 Operating System Setting

**1. Q: My computer can't connect to the Internet after installed the 3.5G server router, why?**

A: Please follow the instructions：（Windows 2000 & XP）**Start** > **Settings** > **Network Connections** > double click **Local Area Connections** > select **Properties** > double click **Internet Protocol**（**TCP/IP**）> select **obtain an IP address automatically** > click **OK**. Then open your browser to try again. If you still can't connect to the login page, please test the following methods：

- Make sure there is no one using the same IP address.
- Turn off the computer, then ping the IP was given to that computer, make sure there is no other device responding.
- Check the network cable connection condition, or use another cable to test again.

**2. Q: Why can't I use the utility?**

A: Solution 1: Check out your Ethernet connection and power adapter.

Solution 2: Make sure that the IP address of your computer is located between 192.168.1.2 and 192.168.1.254. The Subnet Mask should be 255.255.255.0. The default Gateway is 192.168.1.1. To confirm these settings, please follow the instructions below.

**Windows 95 or 98:**

1. Click **Start** > **Run** > input **winipcfg** > click **OK**.

2. Check out the IP address, Subnet Mask, and Default Gateway. If the data is incorrect, please input **Release All**, press enter, and then input **Renew All**.

**Windows NT, 2000, or XP:**

1. Click **Start** > **Run** > input **cmd** > click **OK**.
2. Please input **ipconfig /all** on Command Prompt.
3. Check out the IP address, Subnet Mask, and Default Gateway. If the data is incorrect, please input **ipconfig /release**, press **Enter**, and then input **ipconfig /renew**.

Solution 3: Check the connection settings of your browser and make sure the HTTP Proxy is disabled. Please open your browser.

**Internet Explorer:**

1. Select **Tools** > **Internet Options** > **Connections**.
2. Select **Never dial a connection**, and click on **LAN settings**.
3. Make sure no checkbox is selected. Press **OK**.
4. Press **OK**.

**Netscape Navigator:**

1. Select **Edit** > **Preferences** > select **Advanced**.
2. Select **Proxies** > Select **Direct connection to the Internet** > Click on **OK**.

**3. Q: The webpage browsing is frozen, disconnection during downloading, or un-readable text shown on my screen. What should I do?**

A: Right click on **My Computer** > **Properties** > select **Device Manager** on **Hardware** tab > right click on **Network Adapters** > select **Properties >** select **Advanced** tab > select **Link Speed/Duplex Mode** on the left, and choose **10Mbps/Half Duplex** > click **OK**.

**4. Q: Why am I unable to connect to the website settings?**

A: You may remove the proxy settings from your browser.

## 9.5 3.5G Server Router Setup

**1. Q: Why does the setting page of the 3.5G server router will automatically shut down without any warning?**

A: Please click on **Logout** first > Close your browser > Re-open the browser > login the administration page.

**2. Q: How to setup DHCP?**

A: DHCP is widely used on large local area network. The 3.5G server router can manage and assign the IP address from 2 to 253. Without DHCP, users need to setup IP address for each computer manually. Please login the administration page, you can setup DHCP under **IP Config** > **LAN**.

**3. Q: How can I upgrade the firmware of the 3.5G server router?**

A: You can visit the official website to download the firmware. Open the administration page; you can upgrade the firmware under the section of **System Management**.

**4. Q: My 3.5G server router can't connect to ISP, why?**

A:

1. Please check the power of Cable/XDSL modem.
2. Please check the connection of Cable/XDSL modem.
3. Check the LED status of WAN to make sure Cable/XDSL modem is connecting with 3.5G server router.

If your ISP requires username and password, please make sure they are correct. The ISP will use there to identify users if the network service uses DHCP without authentication.

**5. Q: I can ping the computer outside the local area network, but I can't use the Internet.**

A: Check the DNS settings on your computer. If your computer is the client of DHCP, please remove any DNS setting. Let the 3.5G server router assign DNS setting to clients.

**6. Q: The 3.5G server router can't save settings after I click the Apply button.**

A: The 3.5G server router should save the settings immediately after the Apply button is clicked. If the situation occurs, we suggest you to reboot the machine.

## 9.6 Wireless Network

**1. Q: After the inspection, I still can not use wireless connection with my notebook.**

A: Sometimes the wireless network settings are very complicated. Especial when you manage the encryption system of different products. Any different password settings may cause the disconnection with other clients. Let's see some possible situations.

For the first-time users, make sure your router and workstation using the same SSID name. When a wireless device is trying to connect to wireless network, SSID is an access password. SSID can be used for distinguish between different areas of wireless network. So when all the base stations and equipments trying to connect to a specific area of the wireless network, they must use the same SSID name; and workstations are not allowed to connect to the Internet, unless it provide a specific name. It is similar to the network or workgroup name of the function of the region.

When you encounter great difficulties in data transmission, it is better to keep the situation simple. You can disable all WEP encryption settings.

The successful implementation of the encryption system includes a shared encryption key. The hex encryption key is commonly used. Encryption keys will allow the router to confirm workstations as trustable websites. Every manufacturer can use this encryption key technology. To prevent different products may not function properly when use on each other. Please be aware of the detail of encryption key settings.

Make sure that router and network adapter are using the same channel. You can check to see if the DHCP of your router is enabled or not. The network adapter will not get an IP address if the DHCP is disabled.

Finally, you may put the system which needs to be configured and the router on the same space during the initiation. This will reduce the interference of the wall when the signal is sent.

**2. Q: I can't setup a wireless station on my computer.**

A: Check out the following:

- The SSID of your computer and wireless station must be the same. Please remember the SSID is capital sensitive. E.g. "Workgroup" isn't the same with "workgroup".
- The WEP settings of your computer and wireless station must be the same. The default for wireless router is disabled, so should your client's.

- If the WEP of wireless router is enabled, your computer also needs to activate WP. The key from both sides should match, too.

- It might be interrupted by other radio frequency. Please check the status when close to the wireless router. Bad communication environment is like 100 feet of normal situation.

**3. Q: The speed of wireless connection is very slow.**

A: For the best connecting speed, you can try to:

- Location: Please adjust the location and direction of your router.
- Channel: Change to another channel can avoid the interruption.
- Interruption: It might be interrupted by other devices. You can turn off other devices first, and then reconnect. Any noisy device should be avoided or relocated.
- Shielding Effect: The speed might be impeded by your environment between wireless clients. Close to station is the only way to improve the speed.

**4. Q: When I use the wireless router, there are some applications not functioned properly.**

A: You may activate DMZ service to run these applications, but be aware of following issues.

- It may cause security problem if the firewall is disabled.
- Only one computer can use DMZ service.

**5. Q: I can't make a connection with the wireless router.**

A: Check out the following:

- Check out the installation of router, the connection of local area network, and the power.
- Make sure your computer is located on the same network class with wireless router.
- If your computer is set to **Obtain an IP Address automatically**（DHCP client）, please reboot it.
- If your computer uses the static IP address, please confirm the IP address is located between 192.168.1.129 ~ 192.168.1.253. The default IP address for wireless router is 192.168.1.254. The Subnet Mask is 255.255.255.0.

**6. Q: The wireless interface of WinXP is not compatible with 3.5G server router's WEP interface.**

A: The default WEP of WinXP is **Authentication Open System – WEP**, but 3.5G server router only has **Pre-Shared Key – WEP**. Please change WEP of WinXP to **Pre-shared Key – WEP**.

## 9.7 Support

**1. Q: What is the maximum value for 3.5G server router to support IP address?**

A: 3.5G server router supports 253 IP addresses under NAT mode.

**2. Q: Is this Router compatible on different platform?**

A: It is compatible to any platform supports Ethernet and TCP/IP.

## 9.8 Other

**1. Q: I always get disconnected on PPPoE mode.**

A: Games, music, and antivirus software might send packets to cause the disconnection. You can close the programs, or you can set the idle time to 0.

**2. Q: If there is a DHCP server in local network already, what should I do?**

A: Two DHCP servers located on the same network might cause problems. In this case, please turn off the DHCP server on 3.5G server router and setup your computer manually.

**3. Q: What is purpose for Extend SSID of 3.5G server router on Router and AP mode?**

A: 1. The Router and AP mode use wired connection to link to the Internet. The SSID can let wireless users search for this router by using site survey function. The Extend SSID is used to extend the range of other access points. Wireless Users can connect to the access point by just inputting its SSID.

3. Wi-Fi AP mode uses Wireless to connect to the Internet. The SSID is from connecting Access Point. The extend SSID can let wireless users search for this router by using site survey function.

| Mode | Router | AP | Wi-Fi AP |
|---|---|---|---|
| **WAN Connect** | Wire | Wire | Wireless |
| **SSID** | For User Connecting | For User Connecting | From Connecting Access Point |
| **Extend SSID** | For Extend other Access Point's Range | For Extend other Access Point's Range | For User Connecting |

**4. Q: I don’t see anything in My Webcam？**

A: This function needs Java support; you can go to the following URL to download the Java application.

http://www.java.com/zh_TW/download/index.jsp

# Chapter 10. Appendix

## 10.1 Operation System

1. Microsoft：Windows 2000, XP, Vista 32bit and the following related versions.
2. Apple：Mac OS X 10.4.7, Leopard and the following related versions.
3. Linux：Redhat 9, Fedora 6 & 7, Ubuntu 7.04 and the following related versions.

## 10.2 Browser

1. Internet Explorer ver. 6 and 7 and the following related versions.
2. FireFox ver. 2.0.0.11 and the following related versions.3.
3. Safari ver. 3.04 and the following related versions.

## 10.3 Utility

1. Microsoft：Windows 2000, XP, Vista and the following related versions.