SAPIDO

Fun Center

N+ 3.5G NES Server with BT

GR-1222

User Manual V 1.0

FCC Statement

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

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

FCC Caution

1. The device complies with Part 15 of the FCC rules. Operation is subject to the following conditions:

2. This device may not cause harmful interference, and this device must accept any interference received, including interference that may cause undesired operation.

3. FCC RF Radiation Exposure Statement: The equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

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

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

IMPORTANT NOTE
FCC Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance20cm between the radiator & your body.

CE Mark Warning

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

National Restrictions

Frequency range - 2400.0 - 2483.5 MHz

Country	Country	Reason/remark
Bulgaria	none	General authorization required for outdoor use and public service.
France	Outdoor use limited to 10 mW e.i.r.p. within the band 2454-2483.5 MHz	Military Radiolocation use. Refarming of the 2.4 GHz band has been ongoing in recent years to allow current relaxed regulation. Full implementation planned 2012.
Italy	none	If used outside of own premises, general authorization is required.
Luxembourg	none	General authorization required for network and service supply (not for spectrum).
Norway	Implemented	This subsection does not apply for the geographical area within a radius of 20 km from the centre of Ny-Ålesund.
Russian Federation	none	Only for indoor applications.

Note: Please don't use the product outdoors in France

CE Statement of Conformity

Our product has been tested in typical configuration by Ecom Sertech Corp and was found to comply with the essential requirement of "Council Directive on the Approximation of the Laws of the Member Sates relating to Electromagnetic Compatibility" (89/336/EEC; 92/31/EEC; 93/68/EEC). The Declaration of Conformity can be found at the Sapido regional website. www.sapidotech.de

CE Information of Disposal

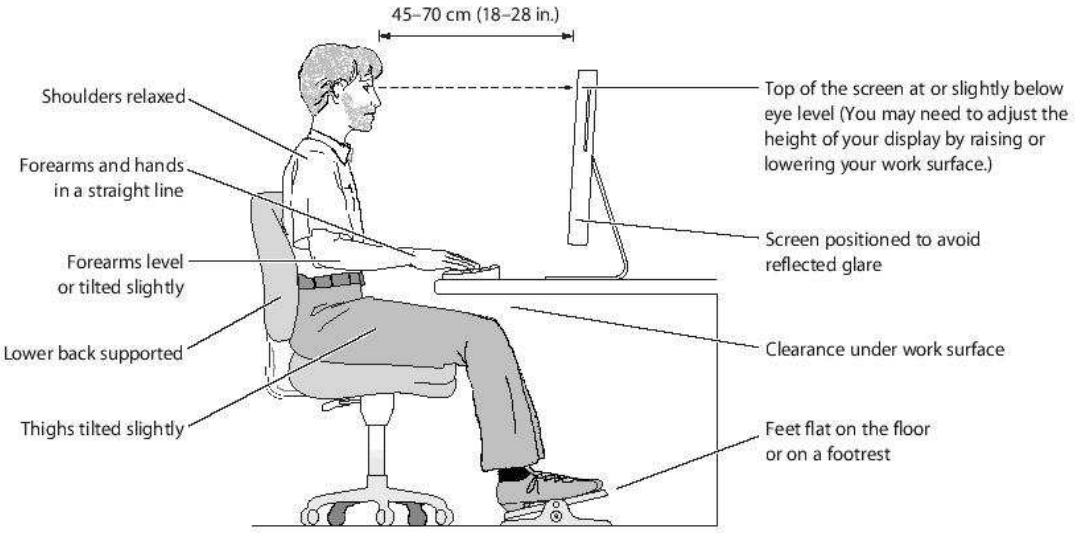
The electric and electronic equipment or unit which is labeled with crossed-out wheeled bin may not be disposed of with household waste. This mark is based on European Directive 2002/96/EC (for Waste Electric and Electronic Equipment=WEEE).

Please take it to the designated collection facilities. We will ensure the proper recycling, reuse and other forms of recovery of WEEE. WEEE has the potential effects on the environment and human health as a result of the presence of hazardous substances. You can contribute to eliminate these effects by your cooperation.

Safe Seating Gestures

You should follow the manufacturer's instructions for adjusting the backrest to fit your body properly.

- An adjustable chair that provides firm, comfortable support is best.
- Adjust the height of the chair so your thighs are horizontal and your feet flat on the floor.
    - The back of the chair should support your lower back (lumbar region).



Copyright Statement

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Chapter 1 Introduction

1.1 Overview

The main feature of N+ 3.5G NES Server is to combine Router、AP、WiFi AP three functions in one unit. Users can switch between 3 operation modes for different purpose. While several computers are sharing Internet connection, they can use firewall and WEP/WPA/WPS security system to protect network. **N+ 3.5G NES Server** is designed for both home and enterprise use, provided with high security, reliability, and easy to operate solutions for network.

1.1.1 Features

- **Cautious management**：N+ 3.5G NES Server has cautious settings for Wireless security and firewall. Secure the customer data safety on network also provides a tight management system.

- **Easy to operate**：N+ 3.5G NES Server has a friendly user interface; it can lead users to finish settings easily and quickly step by step. Users without knowledge of complex network theory can still use higher management functions like Multiple APs.

- **Multi-language PC Utility setting interface**：Installed on computer. Users can easily connect to the network by following the instruction of setup wizard step by step. Multi-language interface supports：
  Arabic、English、French、German、Italian、Japanese、Korean、Portuguese、Russian、Spanish、Simplified Chinese、Traditional Chinese.

- **USB Device Supports**：N+ 3.5G NES Server can share files to other users in local area network through Samba service. With a webcam it can become a real-time surveillance tool. N+ 3.5G NES Server can also become a FTP server by connecting with USB drives.

- **One Touch for wireless encryption connection**：N+ 3.5G NES Server has a WPS button; the encryption for wireless network is just need "One Touch".

- **Multiple wireless network modes**：N+ 3.5G NES Server provides 3 wireless modes: Router / AP / WiFi AP. It is not just a 3.5G Download Server Router; it can also be a bridge or a wireless network card. To base on different conditions, users can switch between 3 operating modes. Multiple mode choices make operation more flexible.

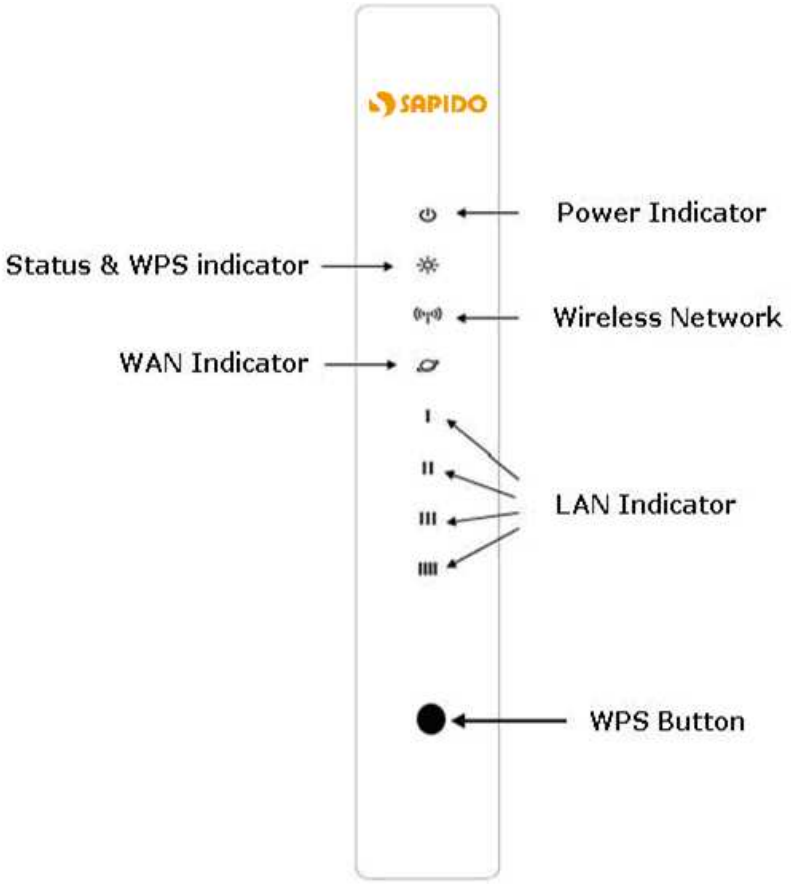
- **Highly Efficiency**：Provides better P2P service system, N+ 3.5G NES Server has 20000 sessions, it can give users better efficiency on P2P download rate.

- **BT Download**：Provides download function through BT. Users can download their files without keep their PCs on always.

- **3.5G Connection**：Users can connect to the Internet through an external 3.5G USB adapter.

1.2 The LED label

The Front of the 3.5G Download Server Router:

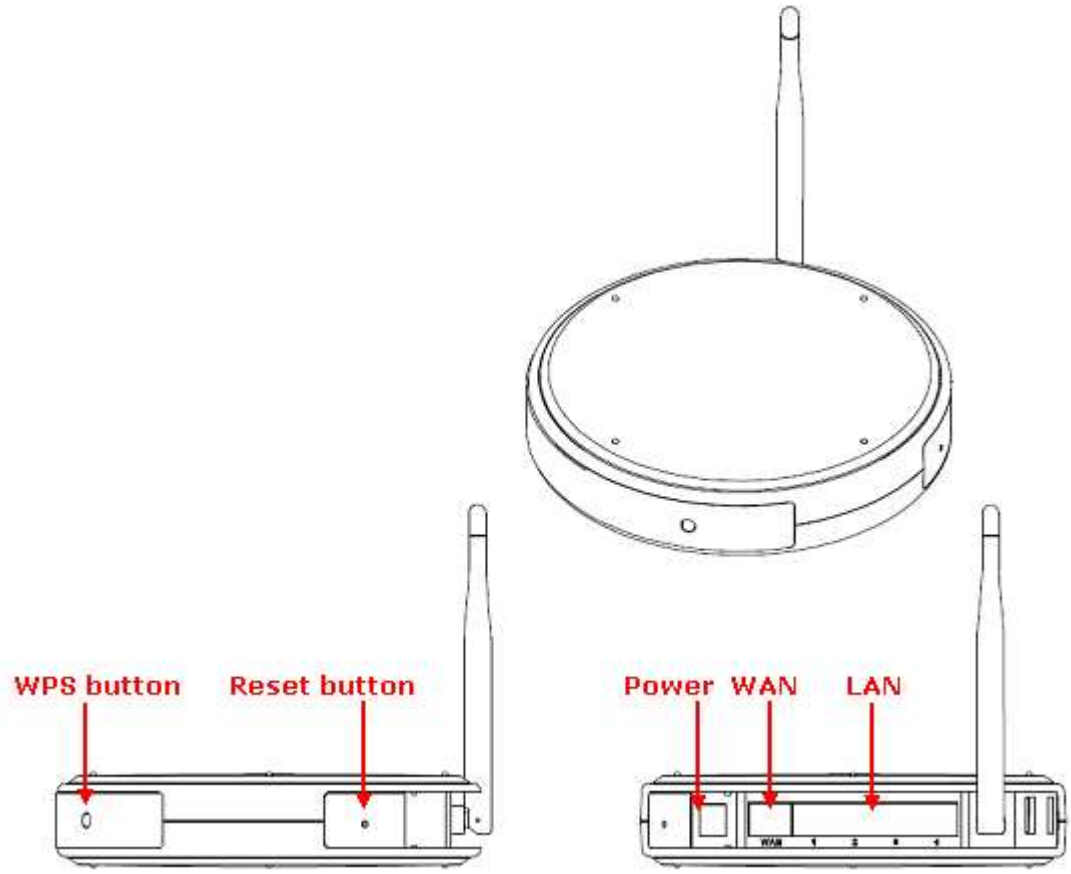


You can use the status lights on the front of the wireless router to verify various conditions:

LED	Function	Color	Status	Description
WLAN x 1	WLAN port activity	Green	On	WLAN active
			Blinking 30ms	WLAN data transmit/receive
LAN x 4	LAN port activity	Green	On	Connected at 100Mbps
			Blinking 30ms	100Mbps TX/RX Activity
		Green	On	Connected at 10Mbps
			Blinking 120ms	10Mbps TX/RX Activity
WAN x 1	WAN port activity	Green	On	Connected at 100Mbps
			Blinking 30ms	100Mbps TX/RX Activity
		Green	On	Connected at 10Mbps
			Blinking 120ms	10Mbps TX/RX Activity
Status & WPS x 1	System status & WPS start	Green & Orange	Blinking 120ms	Green : Reset / Firmware updates in progress Orange : WPS function start
Power x 1	Power indication	Green	On	Power is being applied to this product

1.3 The Back of the 3.5G Download Server Router

The back of the 3.5G Download Server Router has the following port connections:



(1.) WPS button

Users can use WPS connection easily.

(2.) LAN port

LAN port is for connecting your PC, printer server, or switch, etc.

(3.) WAN port

WAN port is for connecting to an xDSL or CABLE modem.

(4.) Reset button

This button is for resetting 3.5G Download Server Router back to factory default settings. When a user hold the reset button over 5 seconds, everything is back to factory default settings; if user just hold for 1 seconds, this machine will only reboot, not reset to factory default settings.

(5.) USB port

Users can connect with USB thumb drive or webcam.

1.4 Hardware Specifications

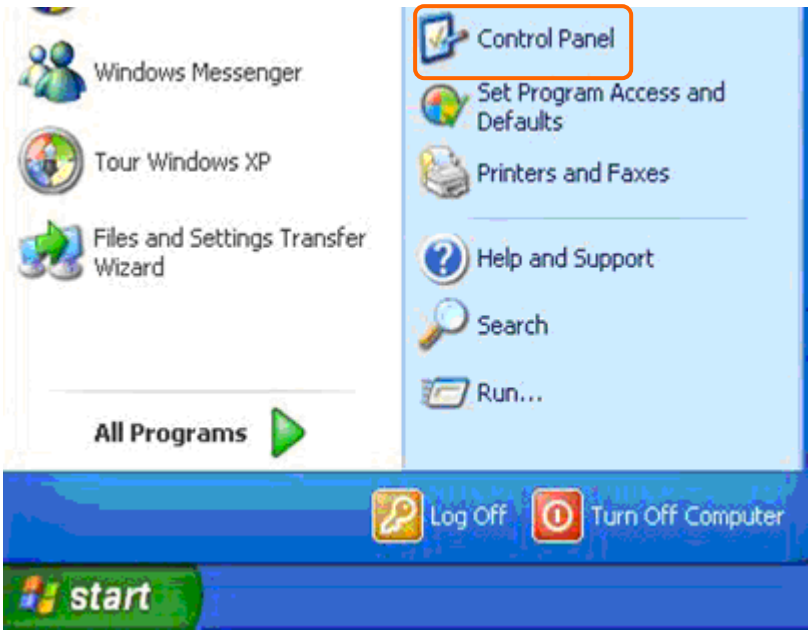
The following table provides technical specifications for the 3.5G Download Server Router:

Item	Specification
Communication Interfaces	
WAN Port	1 x 10/100 Mbps RJ45, with auto MDI/MDIX
LAN Port	4 x 10/100 Mbps RJ45, with auto MDI/MDIX
Wireless	IEEE 802.11n (Chipset onboard)
Others	
Operation Requirement	Operating Temp. 0° to 40°C (32° to 10°F) Storage Temp. -20° to 70°C (-4° to 158°F) Operating Humidity 10% to 85% Non-Condensing Storage Humidity 5% to 90% Non-Condensing
Antenna	Internal X1, External X1
Dimensions	150mm(L) x 150mm(W) x 33mm(H)
Button	**Reboot button / Reset button** – hold for 1second to reboot, hold for 5 seconds is to reset. **WPS button –** When push the WPS button, the system is entering the WPS connection mode.
Power supply	Adapt AC 100 V ~ 240 V in

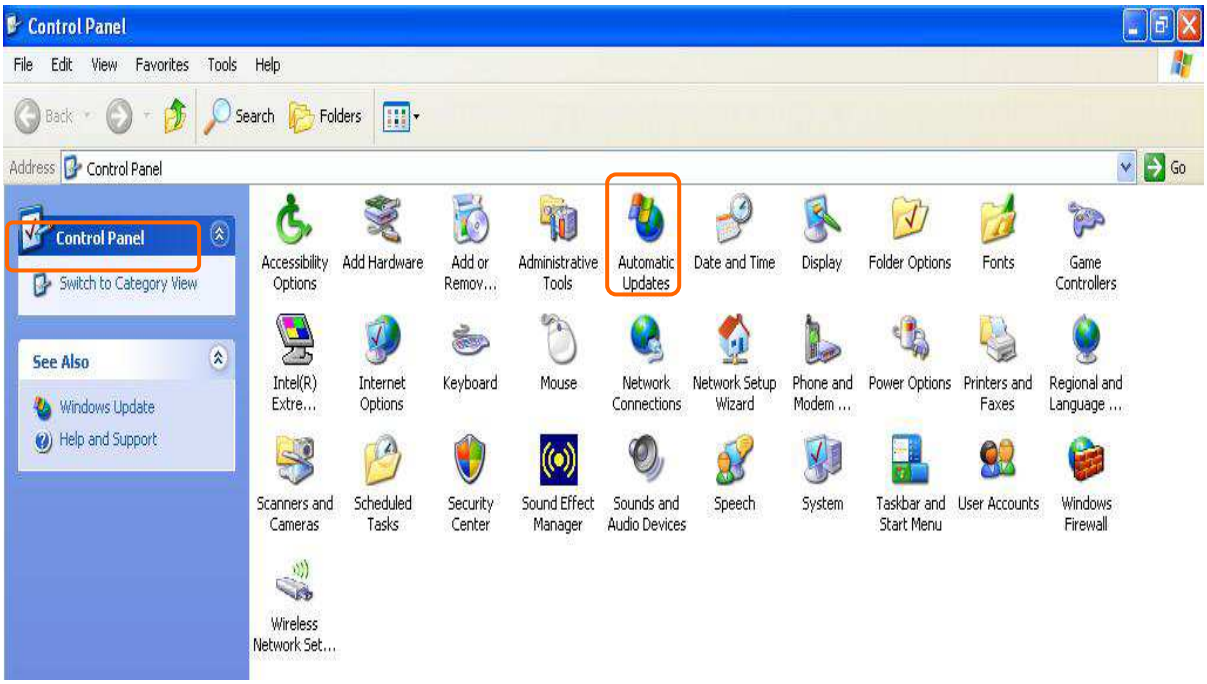
1.5 How to obtain IP address automatically under Windows XP

Please follow the instructions to operate:

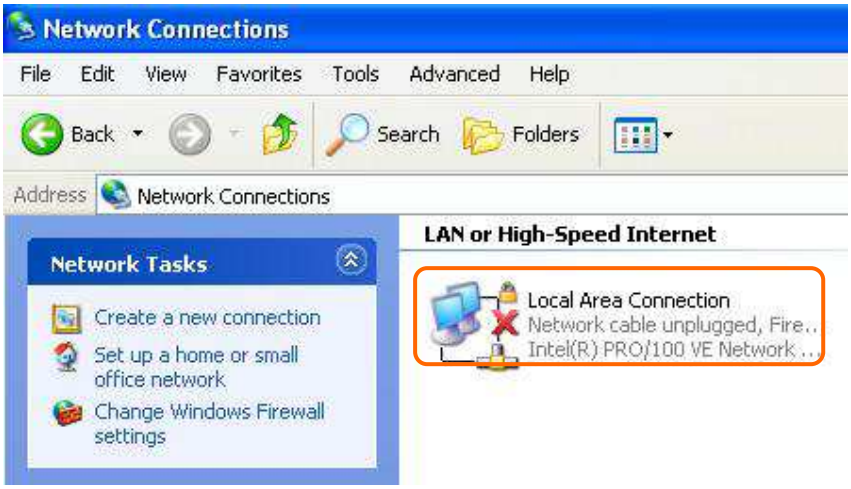
(1.) From the **Start** menu, select **Settings**, and then **Control Panel**.



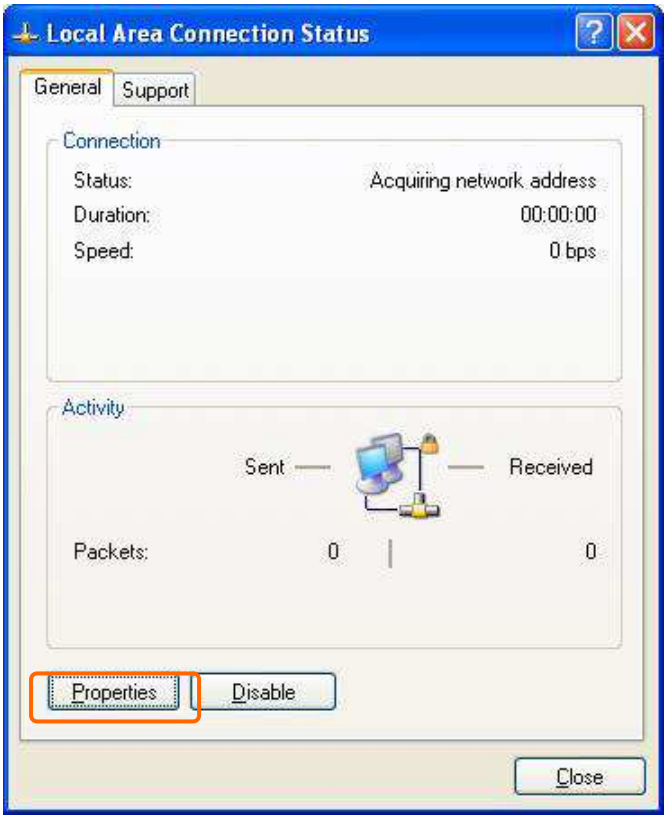
(2.) Double-click **Network Connections**.



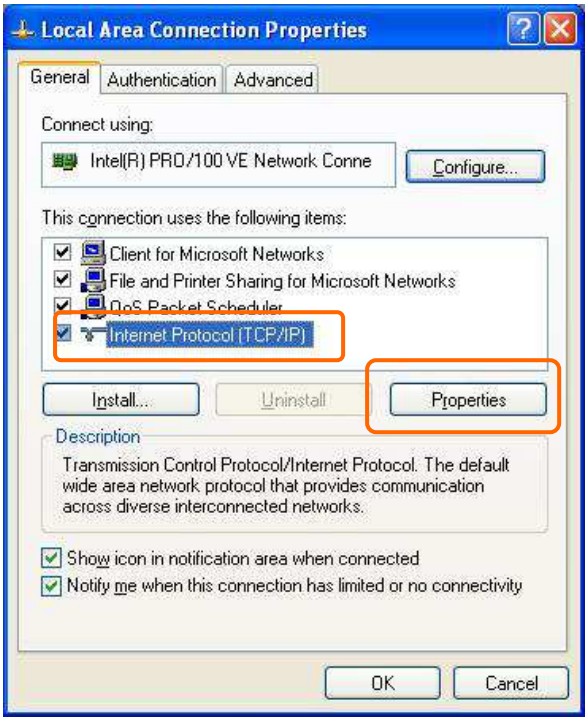
(3.) Double-click **Local Area Connection**.



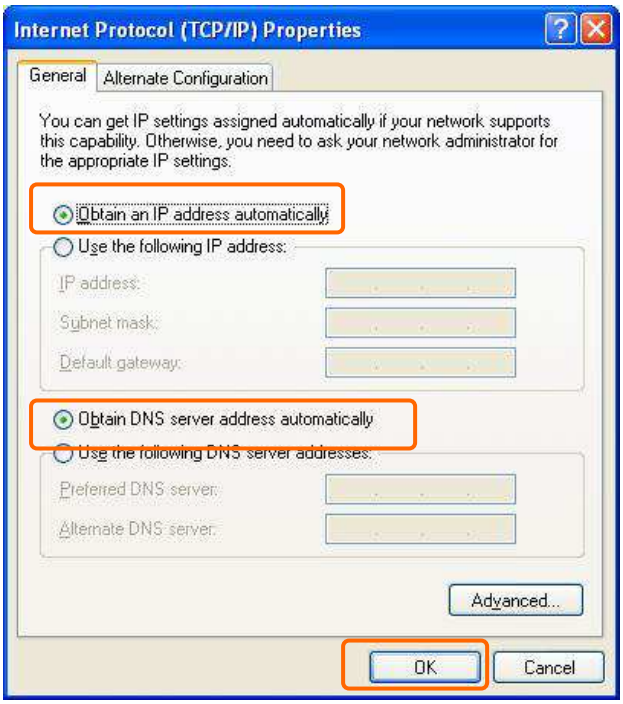
(4.) Please click **Properties**



(5.) From the **General** tab, click **Internet Protocol (TCP/IP)**, make sure it is checked, and then click **Properties**.



(6.) Please select **Obtain an IP address automatically** and **Obtain a DNS server address automatically** and then click **OK**.



Note：You must make sure that the IP address your computer obtained is from the N+ 3.5G NES Server Router's DHCP server.

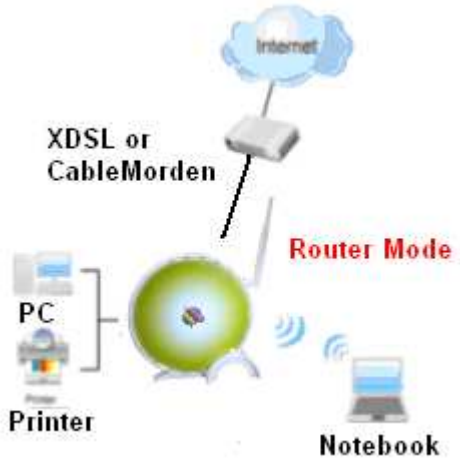
Chapter 2 Hardware Setup

2.1 Figures for Connecting Hardwares to N+ 3.5G NES Server

The N+ 3.5G NES Server is an easy to carry and wireless device for business men. It can be used in conference room, hotel, even at hotspots. N+ 3.5G NES Server is small and light, with various functions; change modes between router, AP, and Wi-Fi AP mode under administrator interface. N+ 3.5G NES Server also supports USB devices like webcam, USB thumb drive, printer, and 3.5G adapter.

2.1.1 Hardware 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.



2.1.2 Hardware Connection for AP Mode

In AP mode, N+ 3.5G NES Server becomes a bridge to support 1 local area network. Users can use wired way to connect to N+ 3.5G NES Server. administrator can manage the settings for LAN, Wireless network, NTP, password, USB drives, user accounts, FTP server, webcam, printer server, and SAMBA, etc.

2.1.3 Hardware Connection for Wi-Fi AP Mode

In Wi-Fi AP mode, N+ 3.5G NES Server becomes a bridge to support 1 local area network. Users can use wireless way to connect to N+ 3.5G NES Server . administrator can manage the settings for LAN, Wireless network, NTP, password, USB drives, user accounts, FTP server, webcam, printer server, and SAMBA, etc.

Chapter 3 One Button Setup Configuration

N+ 3.5G NES Server provide **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 configuration for Router Mode

Please select **One Button Setup** in Router Mode.

1. **Time Zone Select**

   Please select the time zone which you are at.

2. **Change Password**

   Please enter the new password.

3. **Device Name**

   Please enter the device name you want to assign to N+ 3.5G NES Server .

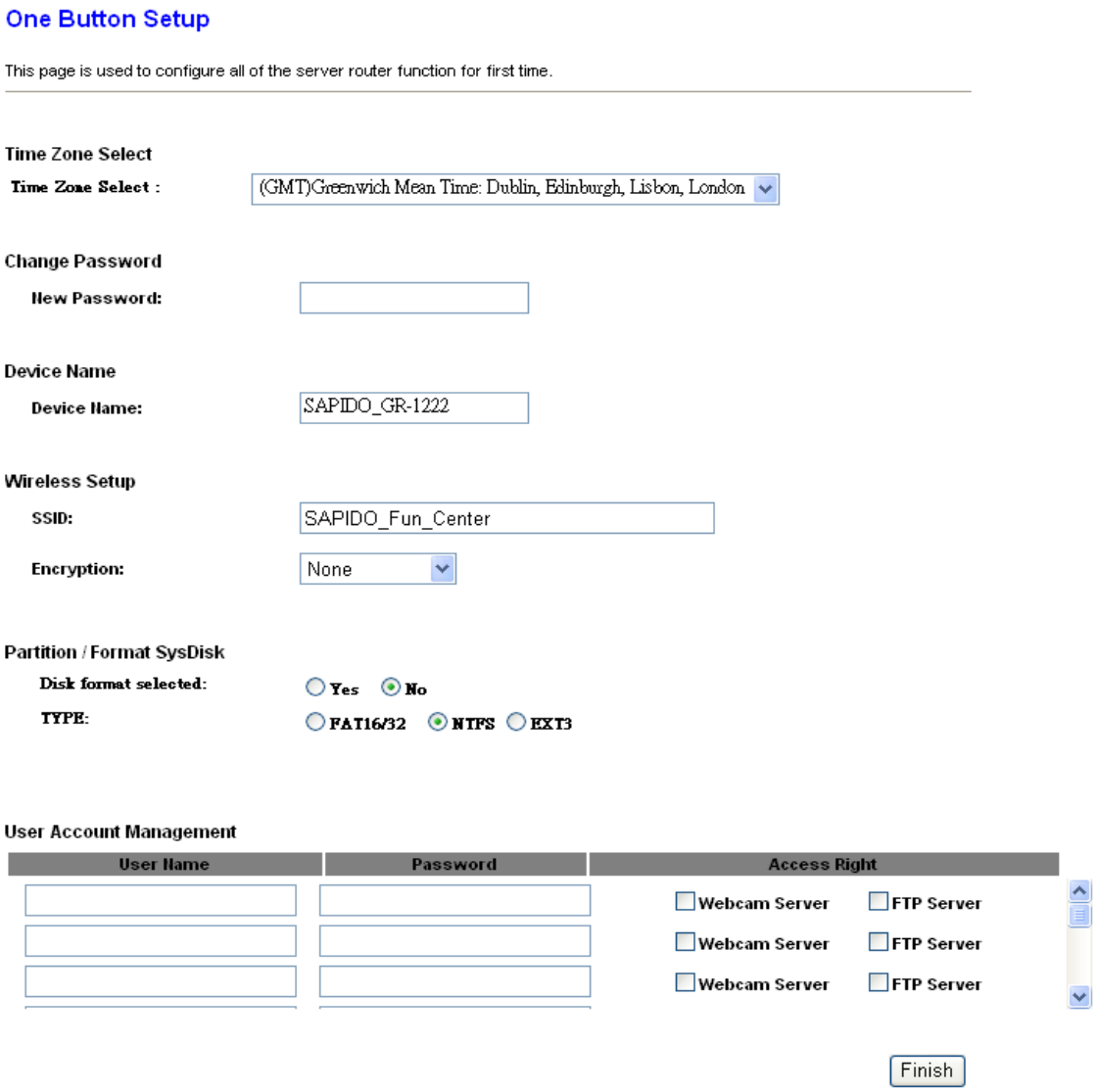
4. **WAN Interface Setup**

   Please choose the interface type.

5. **WAN Type Setup**
   Please choose the access type.
6. **Wireless Setup**
   You can assign the SSID and Encryption type.
7. **Partition / Format SysDisk**
   Users can format or partition their USB drives.
8. **User Account Management**
   Users can create user accounts and their privilege.
9. **Finished**
   Please click **finished** button to complete the setting.

3.2 One Button Setup configuration for AP Mode

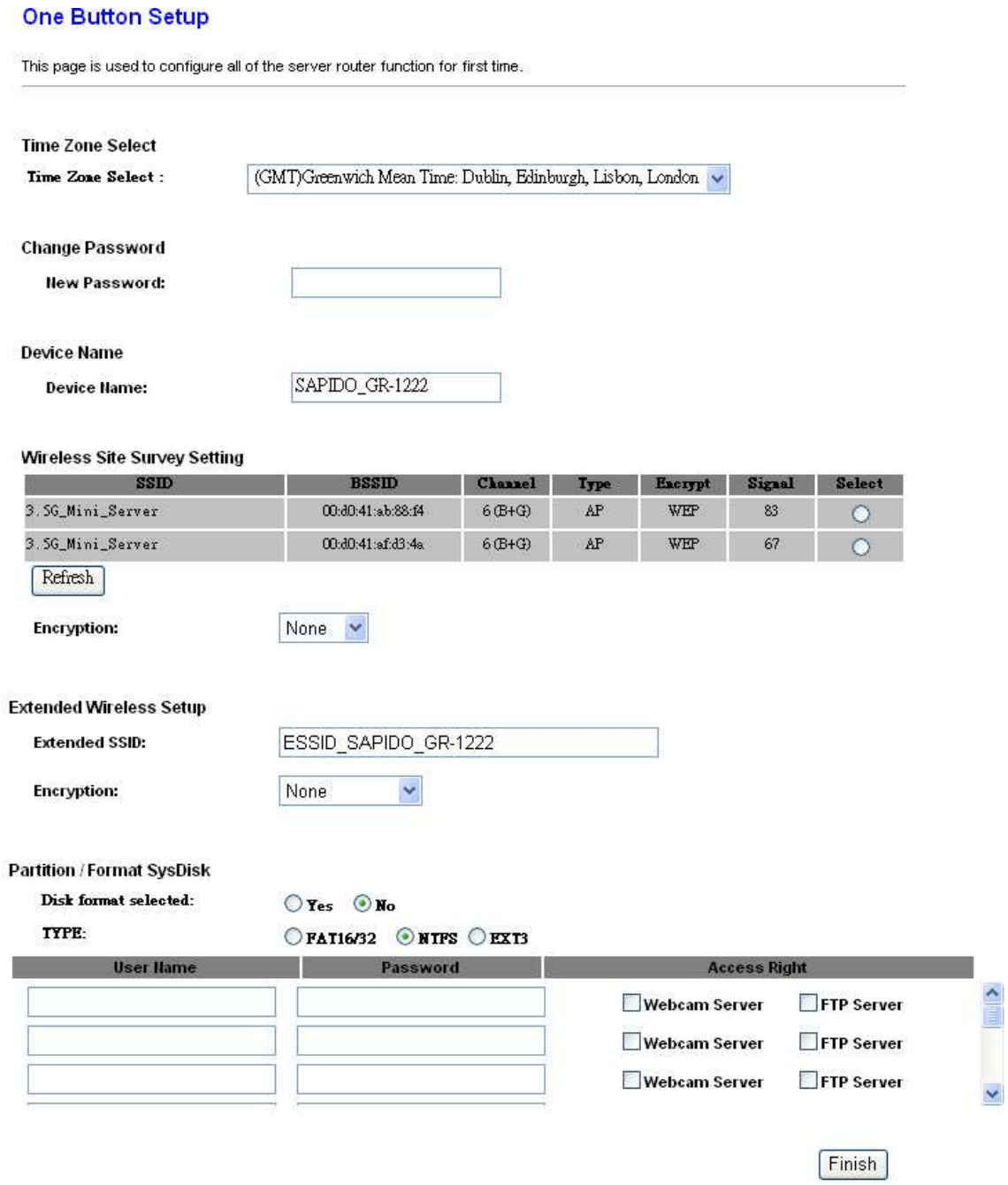
Please select **One Button Setup** in AP Mode.



1. **Time Zone Select**
   Please select the time zone which you are at.
2. **Change Password**
   Please enter the new password.
3. **Device Name**
   Please enter the device name you want to assign to N+ 3.5G NES Server .
4. **Wireless Setup**
   You can assign the SSID and Encryption type.
5. **Partition / Format SysDisk**
   Users can format or partition their USB drives.
6. **User Account Management**
   Users can create user accounts and their privilege.
7. **Finished**
   Please click **finished** button to complete the setting.

3.3 One Button Setup configuration for WiFi AP Mode

Please select **One Button Setup** in WiFi AP Mode.



1. **Time Zone Select**

   Please select the time zone which you are at.

2. **Change Password**

   Please enter the new password.

3. **Device Name**

   Please enter the device name you want to assign to N+ 3.5G NES Server .

4. **Wireless Site Survey Setting**

   Please select wireless network you want to connect and the encryption type.

5. **Extended Wireless Setup**

   You can assign the SSID and Encryption type.

6. **Partition / Format SysDisk**

   Users can format or partition their USB drives.

7. **User Account Management**

   Users can create user accounts and their privilege.

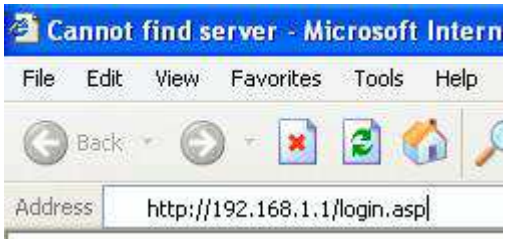
8. **Finished**

   Please click **finished** button to complete the setting.

Chapter 4 Quick Setup for the 3.5G Download Server Router

There are two ways to enter N+ 3.5G NES Server administration page:

1) Please open IE browser and then enter http://192.168.1.1.



Homepage

Please click on "**Administrator**".

The login page will show up.

Enter username and password, both default are **admin**, then click **login** to enter product main page.

2) The default UPnP of N+ 3.5G NES Server is ON. When users connect N+ 3.5G NES Server to their PC, and icon will show up in the right-down corner.

Click the **Internet Gateway Device** to open the login page.

4.1 Router Mode Configuration

Note：Quick Setup is not completed unless users finish all settings and click **Finish** button.

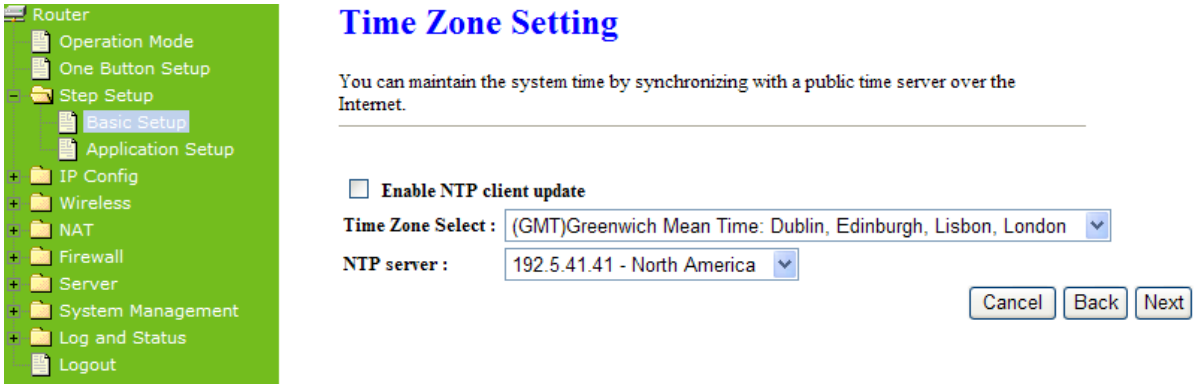
N+ 3.5G NES Server combines Router and AP to one, supports wire or wireless connecting type with ISP. It also has NAT and DHCP functions to let multiple computers using network at the same time. Wireless WAN supports Site Survey. BR360 has WPS function for easy and secure establishment of wireless network.

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** and **Application** selecting screen appears and do the setting for each items.

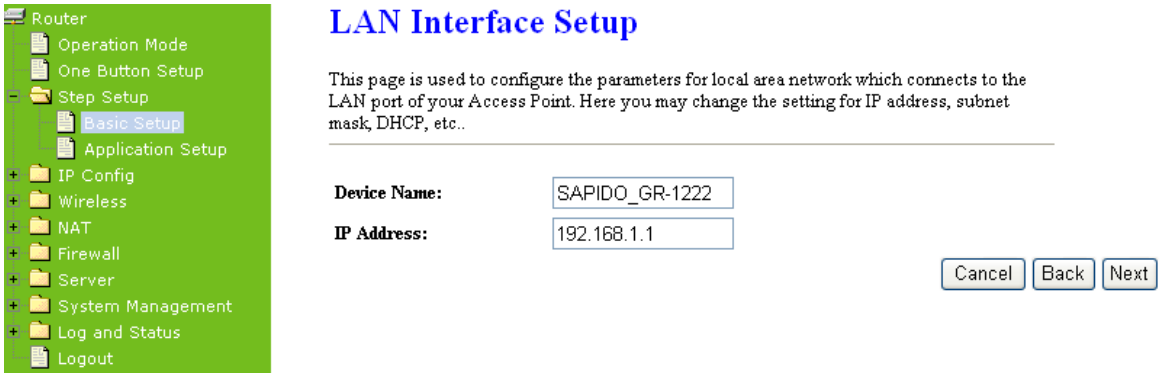
4.2.1 Time Zone Setup

You can select **Enable NTP client update** to maintain the system time.



4.2.2 LAN Interface Setup

It can let multiple local network computers connect to the Internet at the same time. The default IP address is 192.168.1.1. Please click **Next** after finished entering.

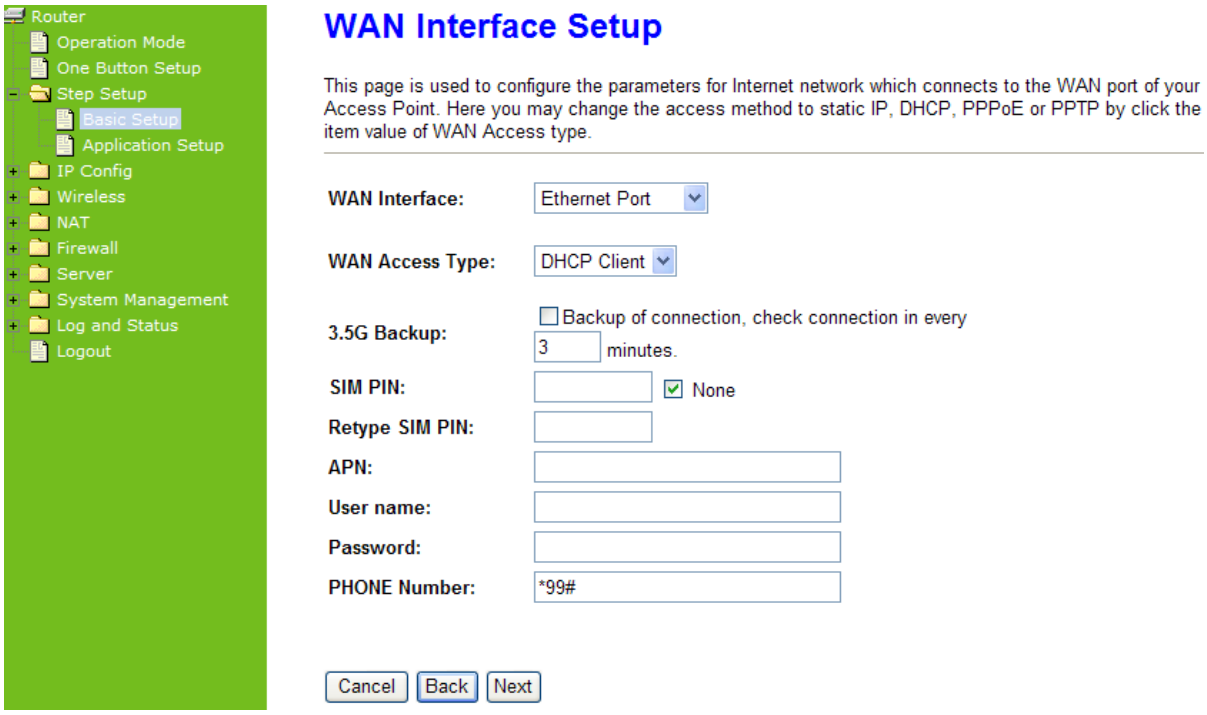


4.2.3 WAN Setup

3.5G Download Server Router supports three interfaces and four access types, users can select the options in this page.

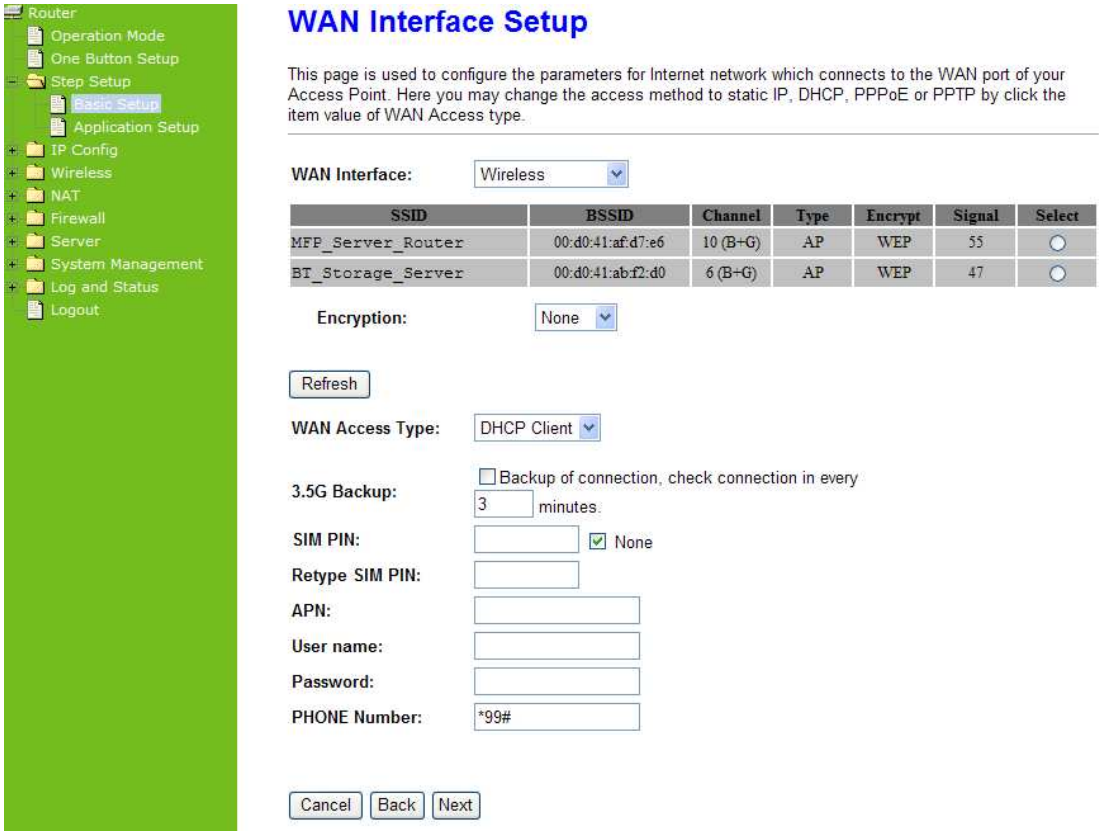
4.2.3.1 WAN Interface– Ethernet Port

If N+ 3.5G NES Server is connecting to the Internet through Ethernet cable, please select **Ethernet port**.



4.2.3.2 WAN Interface– Wireless

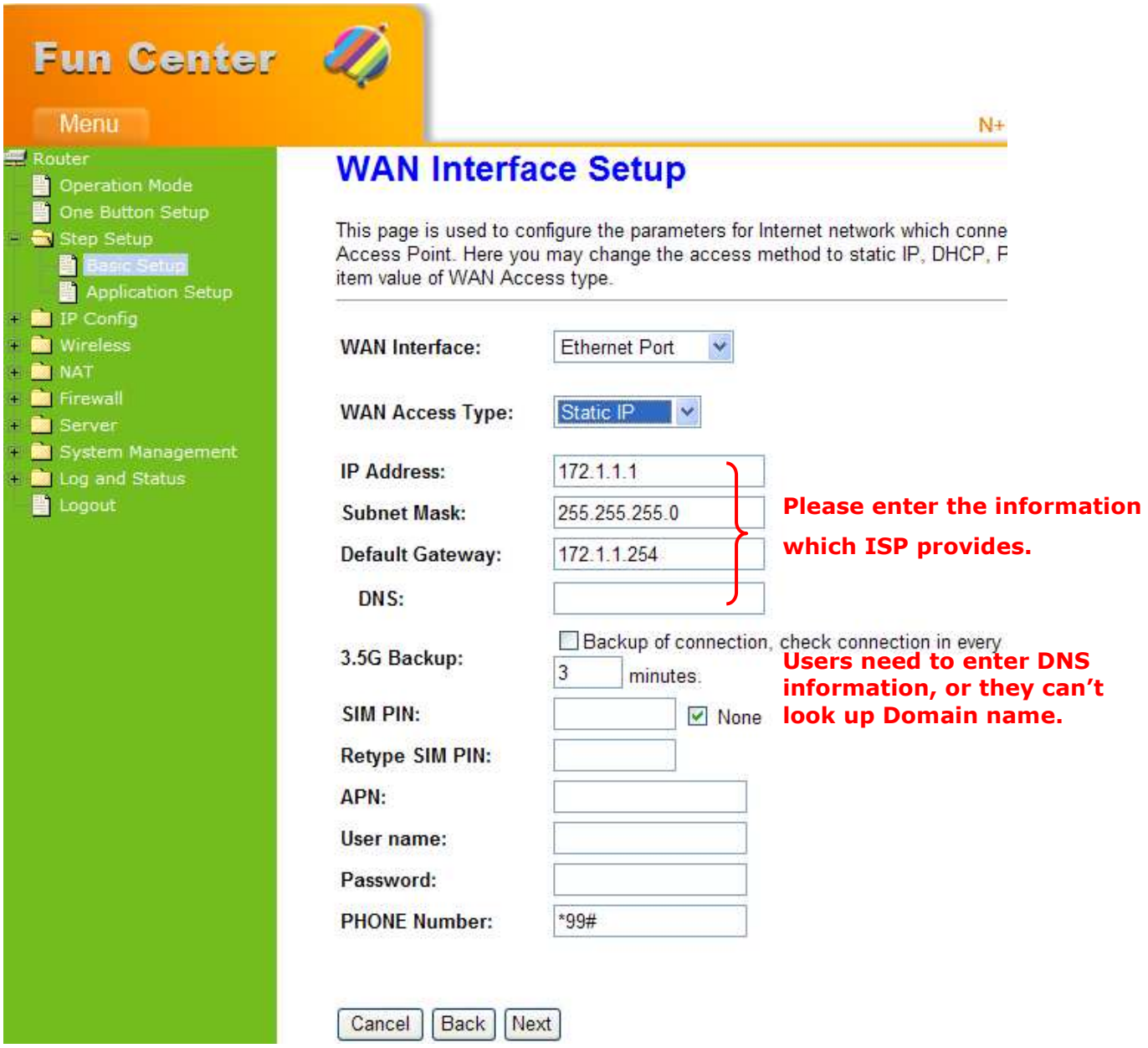
If N+ 3.5G NES Server is connecting to the Internet through wireless, please select **Wireless**.



The Wireless network which searched by N+ 3.5G NES Server will display on this page. Users can select the desired wireless network and Encryption type to connect.

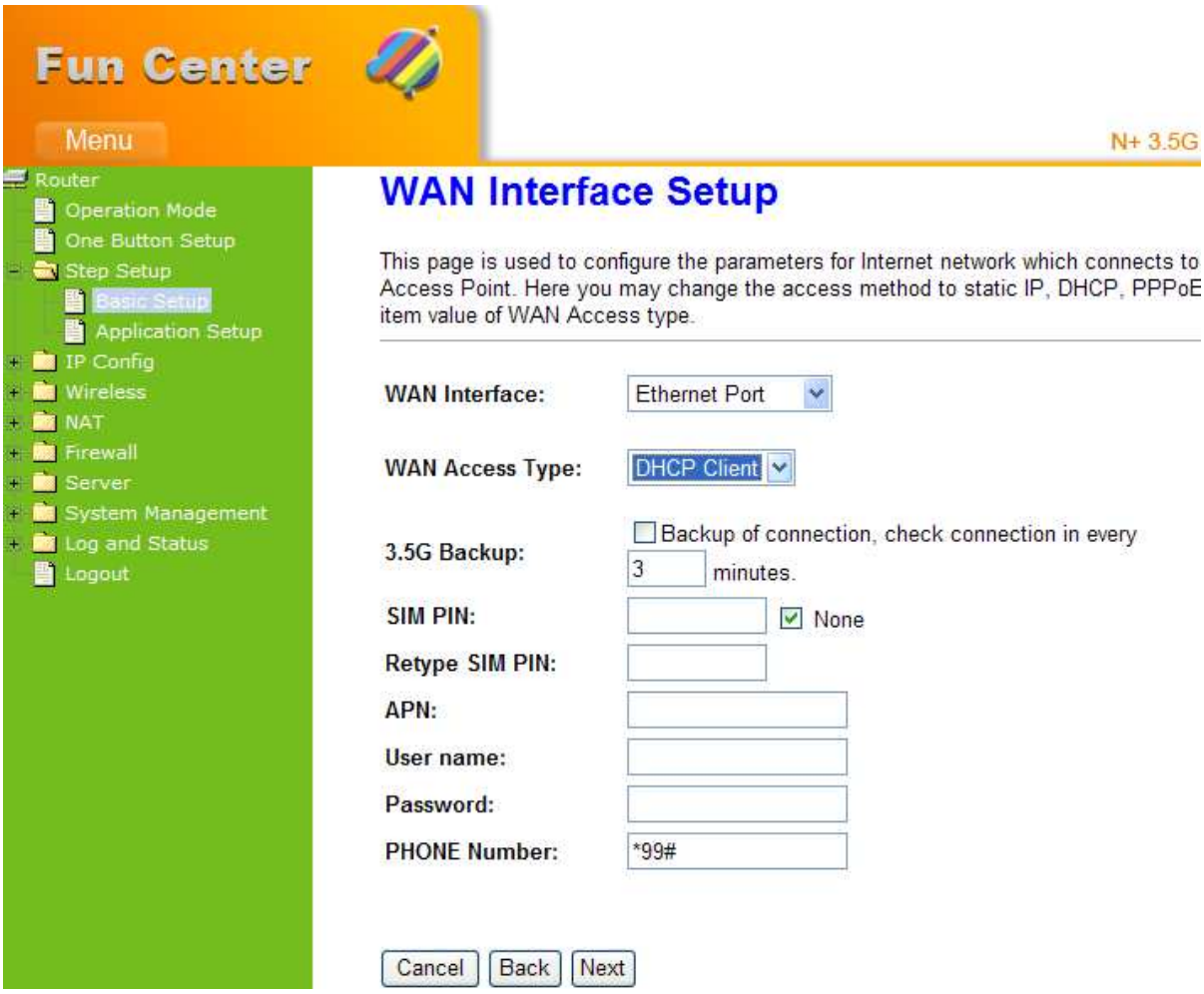
4.2.3.3 WAN Access Type – Static IP

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 use the "**3.5G Backup**" to redundant.



4.2.3.4 WAN Access Type – Dynamic IP

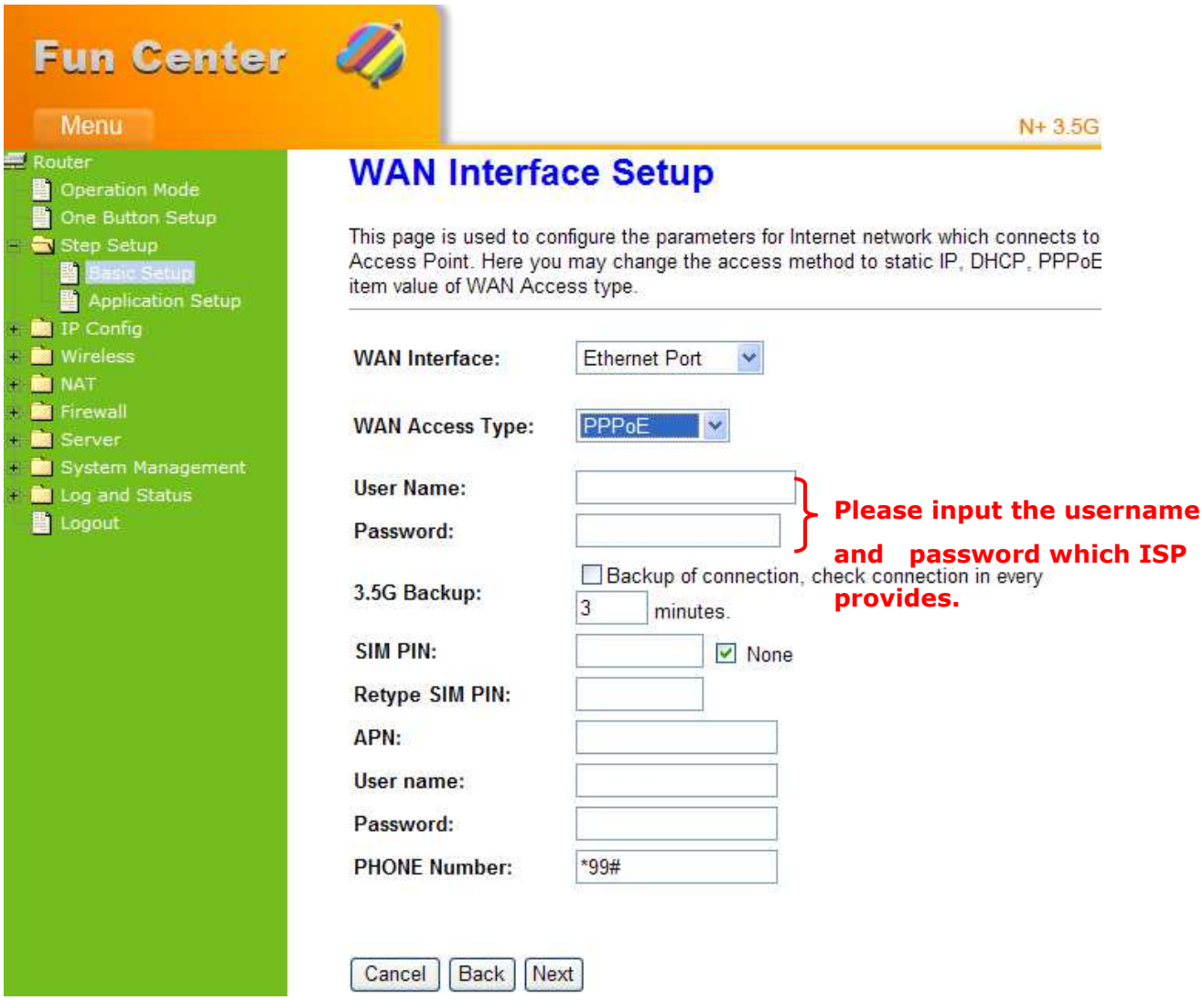
Please select **Dynamic IP** to obtain IP address automatically from your ISP. You can use the "**3.5G Backup**" to redundant.



Please click **Next** to enter the next page.

4.2.3.5 WAN Access Type – PPPoE

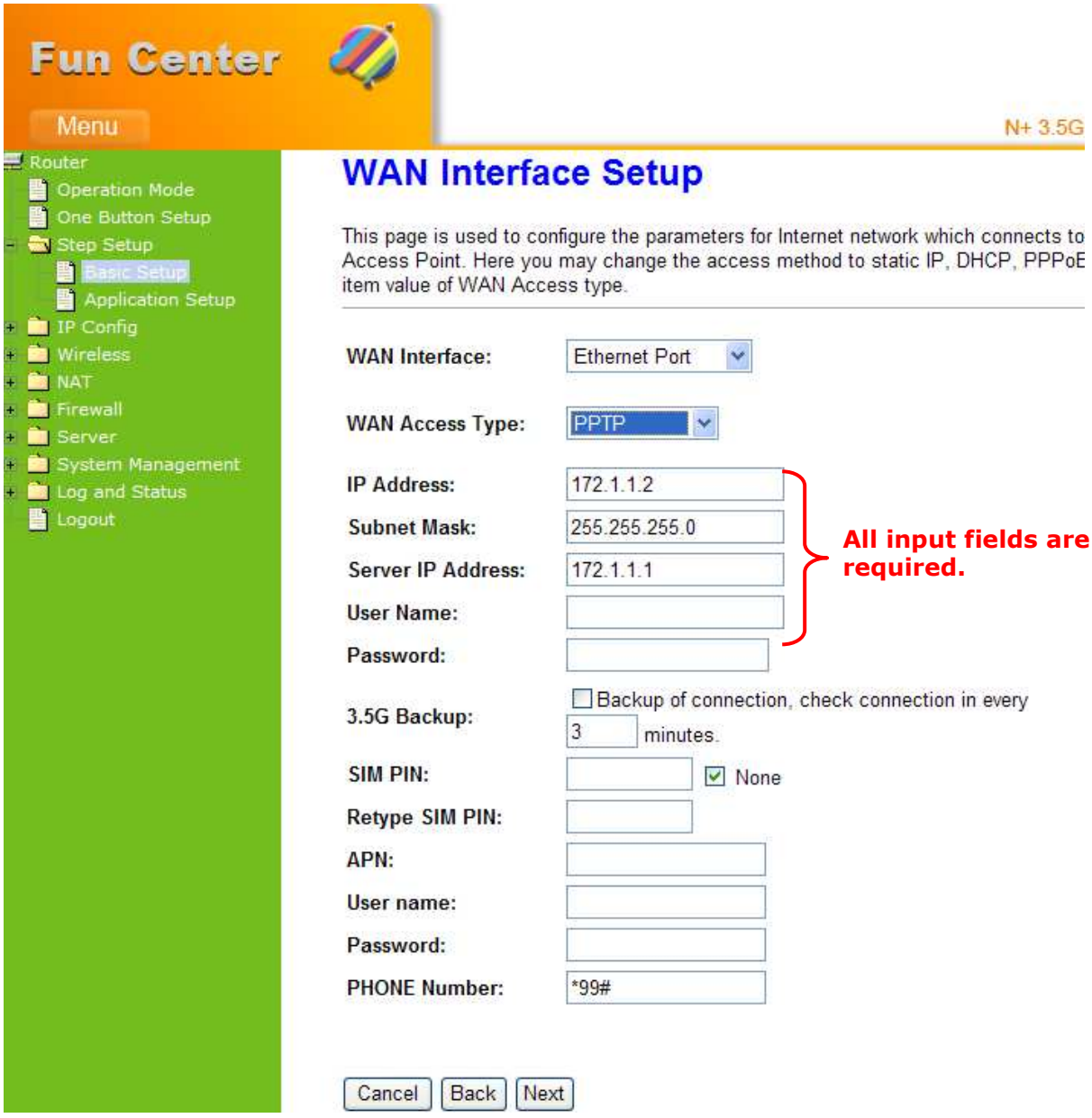
If your Internet service type is PPPoE, please select **PPPoE**. You must input username and password which ISP provides. You can use the "**3.5G Backup**" to redundant.



Please click **Next** to enter the next page.

4.2.3.6 WAN Access Type – PPTP

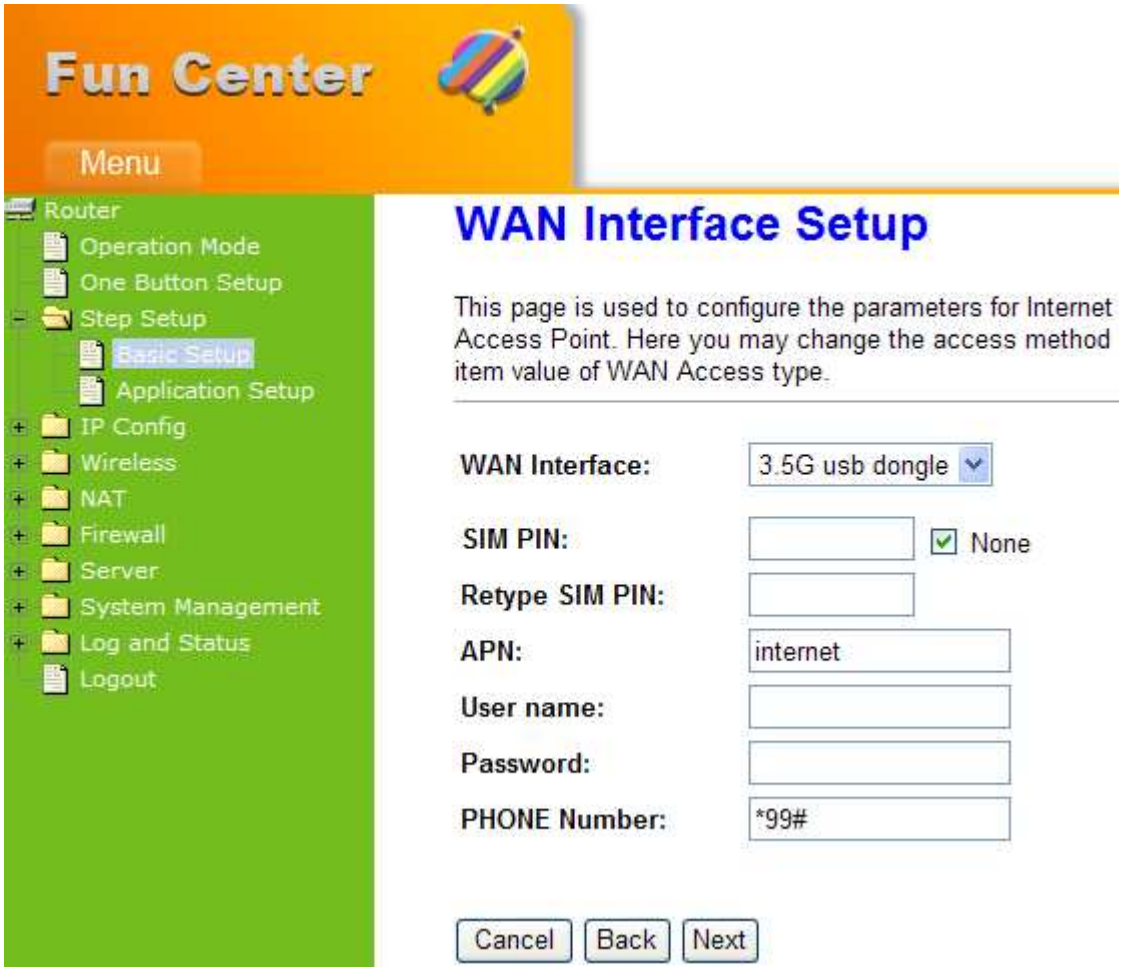
If your Internet service type is PPTP, please select **PPTP**. You need to enter username, password, IP address, Subnet Mask, and Server IP address. You can use the "**3.5G Backup**" to redundant.



Please click **Next** to enter the next page.

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.



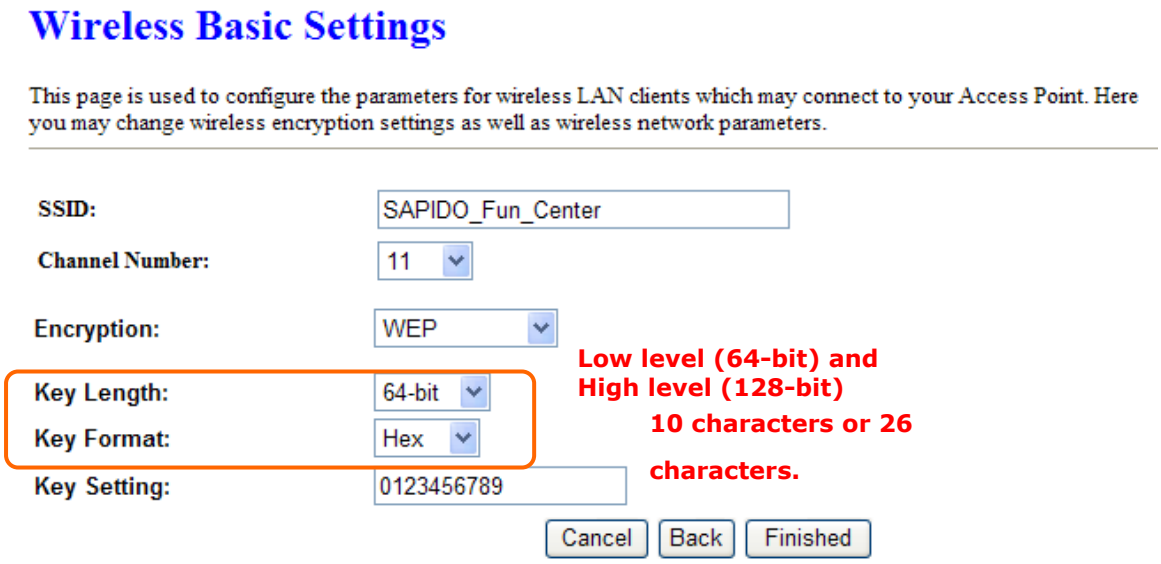
4.2.5 Wireless Setup

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

4.2.6 Wireless Security Setup

The Encryption is a free choice option, it has two main types: **WEP** and **WPA**. If you want to protect your transmitting data, you can select it base on the needs. Please follow the instructions to complete wireless security setup.

a. Wireless Security Setup — WEP



The options in **Key Length** column: 26 Hex characters (0~9, a~f, and A~F). It is decided by the choice of **WEP-64bits** or **WEP-128bits**. E.g.: WEP-64bits key= 10 Hex characters (0~9, a~f, and A~F); WEP-128bits key= 26 Hex characters (0~9, a~f, and A~F); the Key Setting is the password needs to be input after the selections.

a. Encryption—WEP

(1.) Key Length: Activate WEP encryption to protect your information from stealing by others. The 3.5G Download Server Router supports 64bits and 128bits.

(2.) Key Format: For 64bits WEP key format, it can include 5 ASCII characters or 10 Hex characters. For 128bits WEP key format, it can include 13 ASCII characters or 26 Hex characters.

*Note: 128 bits – WEP encryption is very safe, but there are other encryptions safer. Please to understand that all wireless devices must have the same WEP key length and format.

b. Wireless Security Setup — WPA（WPA、WPA2 & WPA2 Mixed）

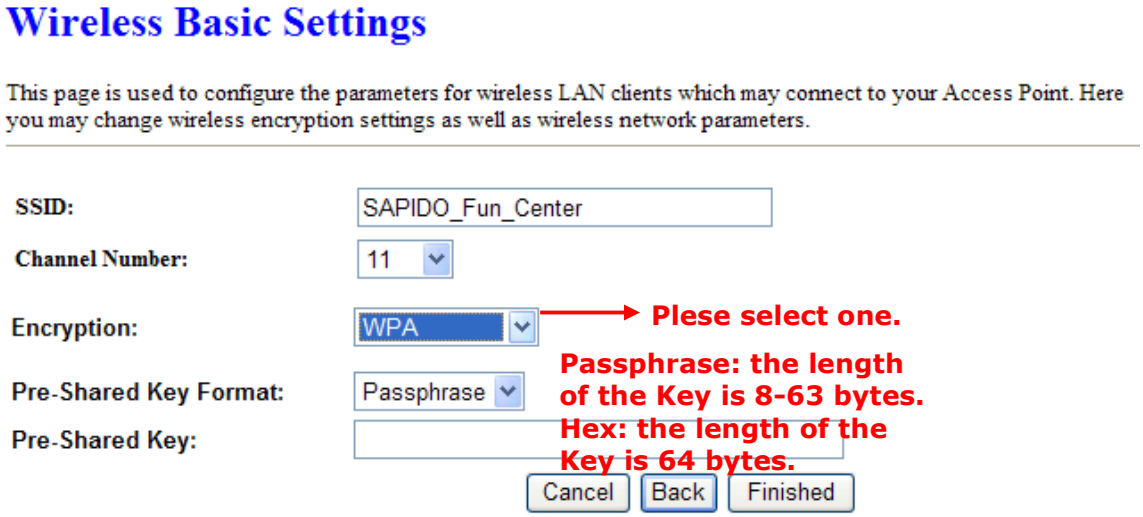
WPA (Wi-Fi Protected Access) is a system to protect wireless network security. To prevent hackers, WPA uses TKIP or AES to change key frequently.

Passphrase:

The Pre-Shared Key format is ASCII Code, and the length is 8-63 bytes(at least 8 bytes)。

Hex:

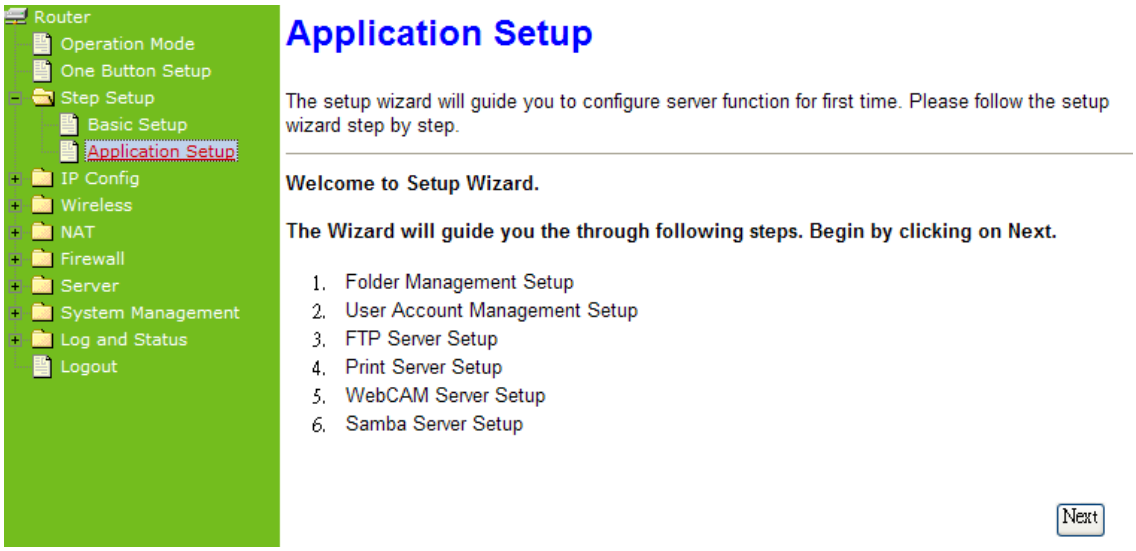
Users can input 64 Hex bytes(0~9, a~f, or A~F)。



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

4.2.7 Quick Setup Complete

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



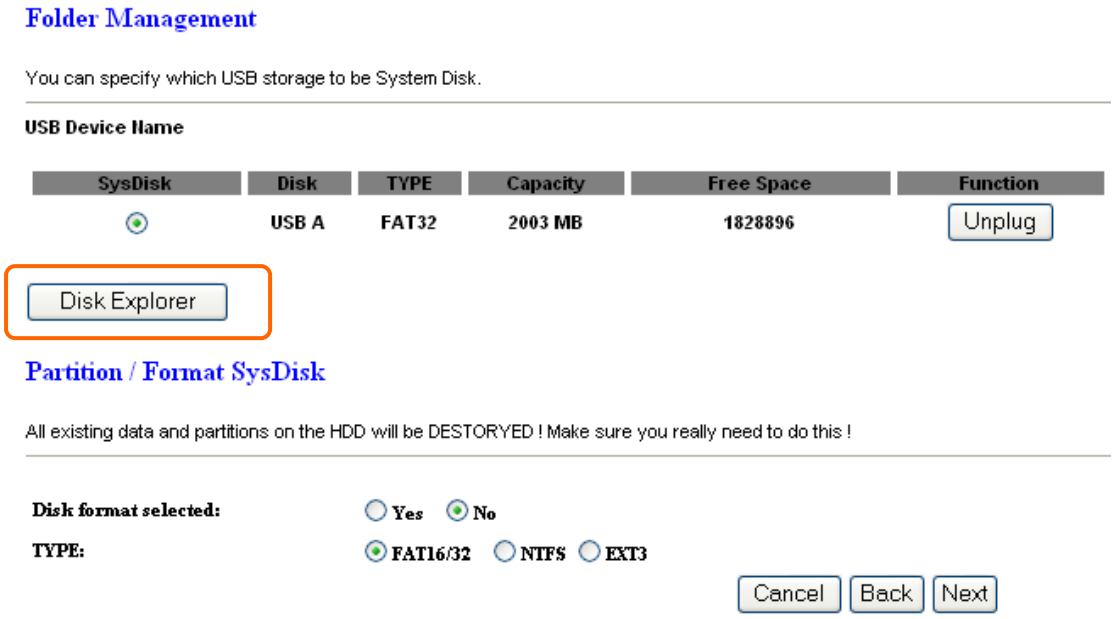
The system will reboot automatically after users complete the quick setup, then back to setup main page.

Application Setup Selection

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

4.2.8 Folder Management

Easy to check all the USB storage devices connected to your N+ 3.5G NES Server , view the entire data folder inside each storage devices, and you can do the disk formatting via click on the button in this page.



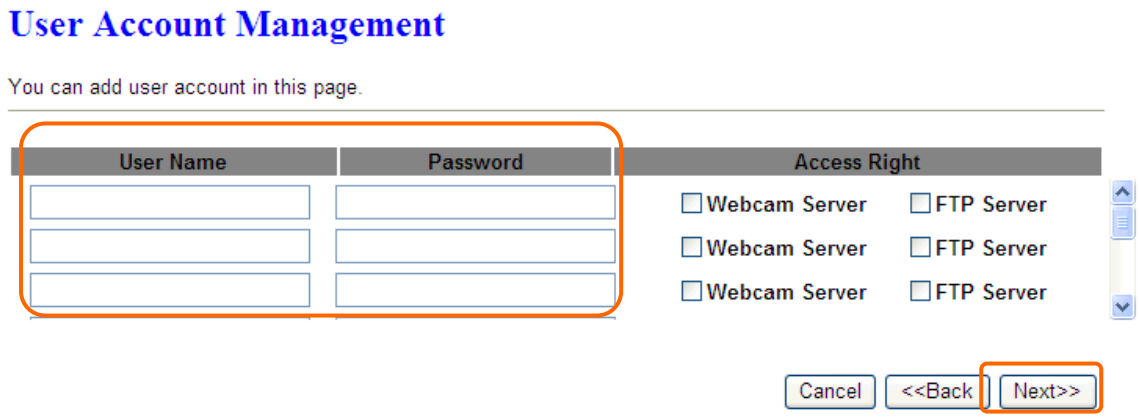
Please click on "**Next**" to continue.

4.2.9 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.

4.2.10 User Account Management

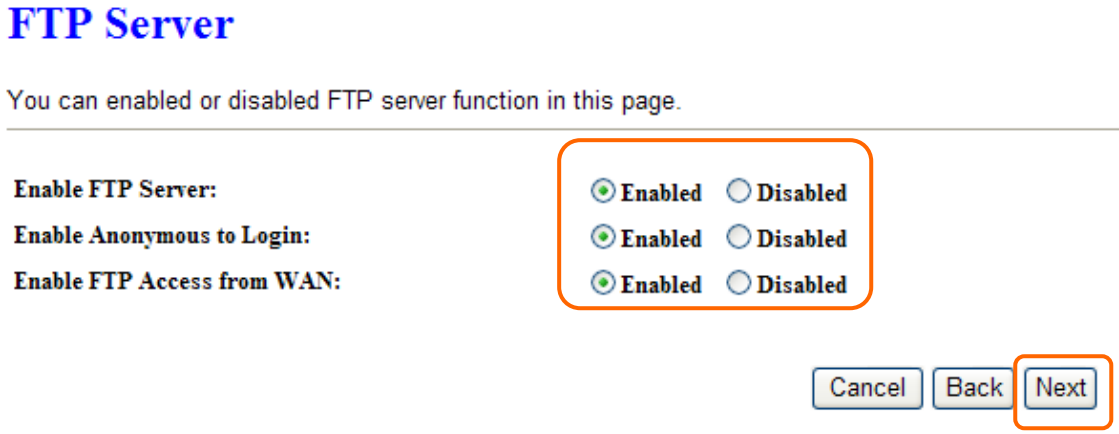
Personal users can use each individual application such as My Status, My Webcam and My Document. This section is to set the user's right. Also, all the users right will be showed in User Account List and can do the edit or delete by clicking the meaning text.



Please click on "**Next**" to continue.

4.2.11 FTP Server

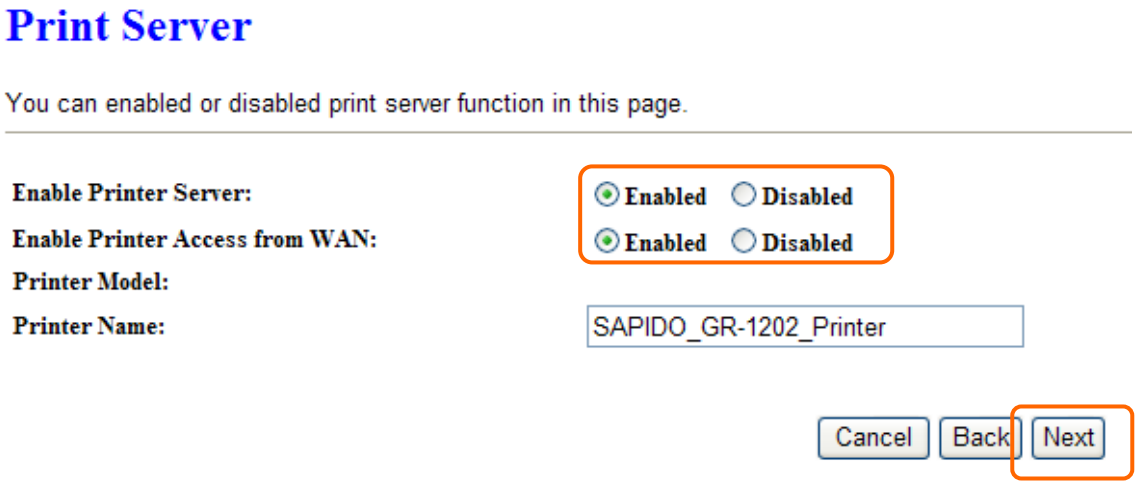
4.2.12 N+ 3.5G NES Server can be the FTP Server provides users to transmit files, also for the guest can download the files from assign website. Moreover, by connecting USB HDD, USB Flash to the router, user can easily set up a FTP Server to share or download files for local or remote users.



Please click on "**Next**" to continue.

4.2.13 Printer Server

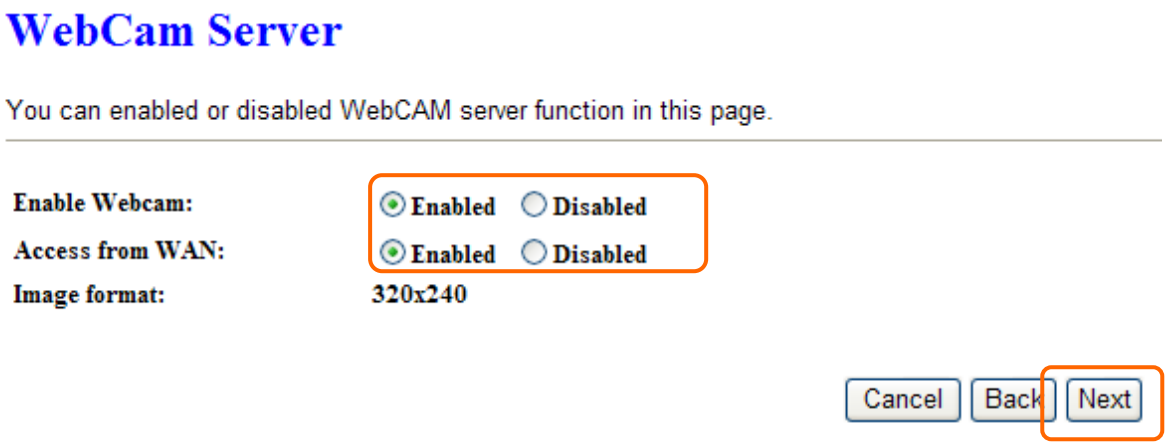
N+ 3.5G NES Server supports printers. Printer Server will be shown as Enable, therefore users can use Printer features from LAN. This function is disabled if there is no printer connecting to N+ 3.5G NES Server .



Please click on "**Next**" to continue.

4.2.14 Webcam Server

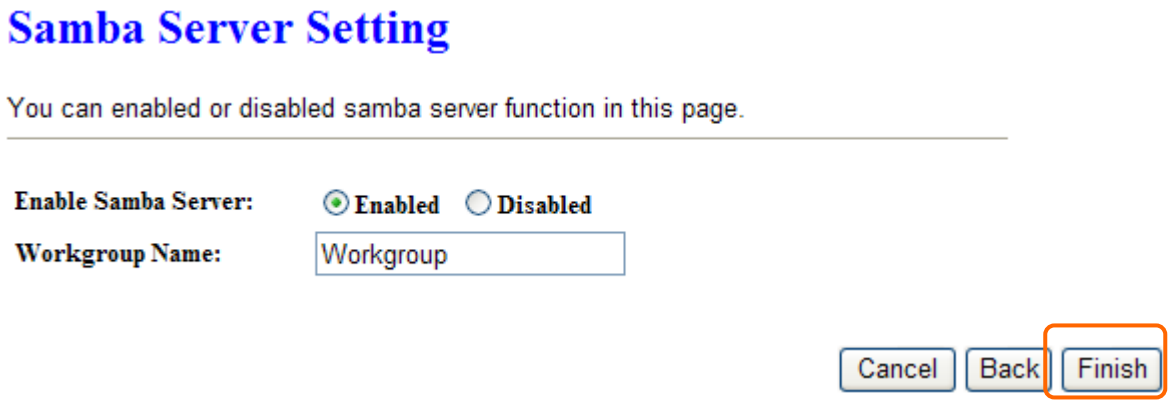
If you plan to use the N+ 3.5G NES Server as a Web Camera site, connect a supported USB Web Camera to the USB port of the N+ 3.5G NES Server . To enable the webcam server and access from WAN as demand, and the Image format is set to 320X240.



Please click on "**Next**" to continue.

4.2.15 Samba Server

Support NetBIOS protocol, the consumer sharing file and printer which provides as the My Network Places.



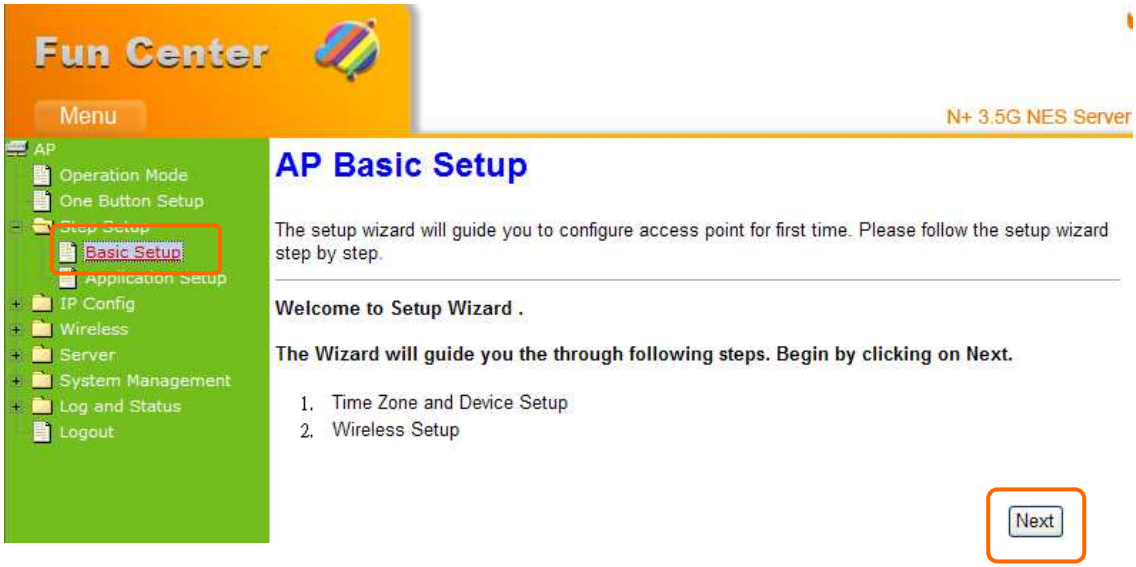
Please click on "**Finish**" to complete settings.

4.3 AP Mode Configurations

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 3.5G Download Server Router is simply using Ethernet port to connect to the upper level device and receive the IP address from it. The 3.5G Download Server Router will use the default IP address or is defined by users if the upper level device does not give one.

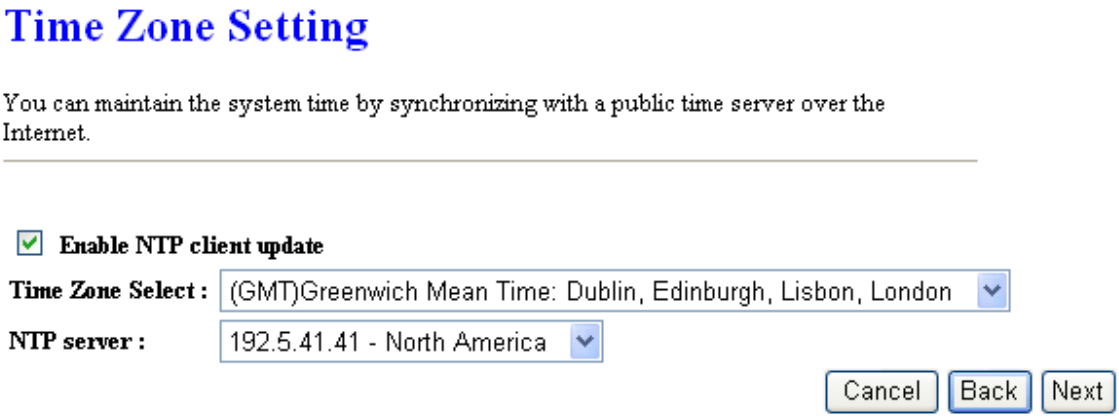
4.4 Quick Setup for AP Mode

Please Click **Next** to enter the next page.



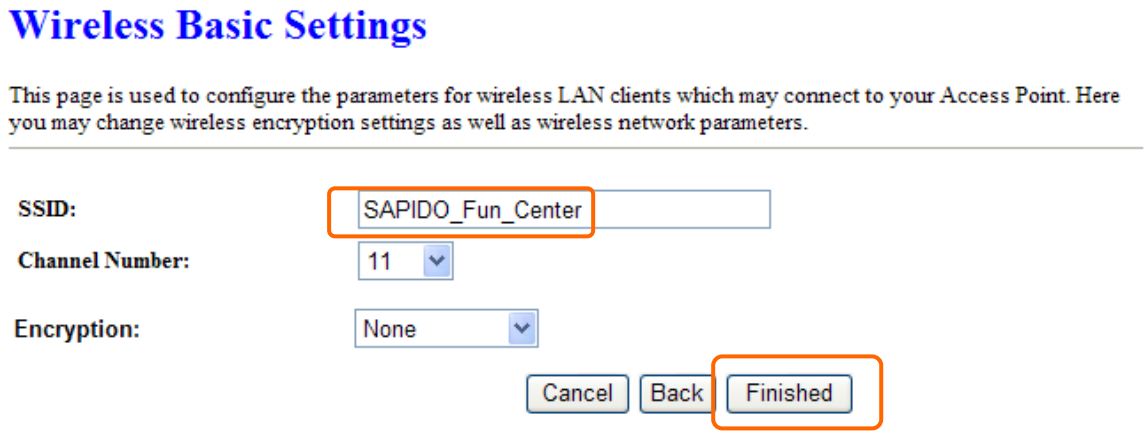
4.4.1 Time Zone Setup

You can select **Enable NTP client update** to maintain the system time.



4.4.2 Wireless Setup

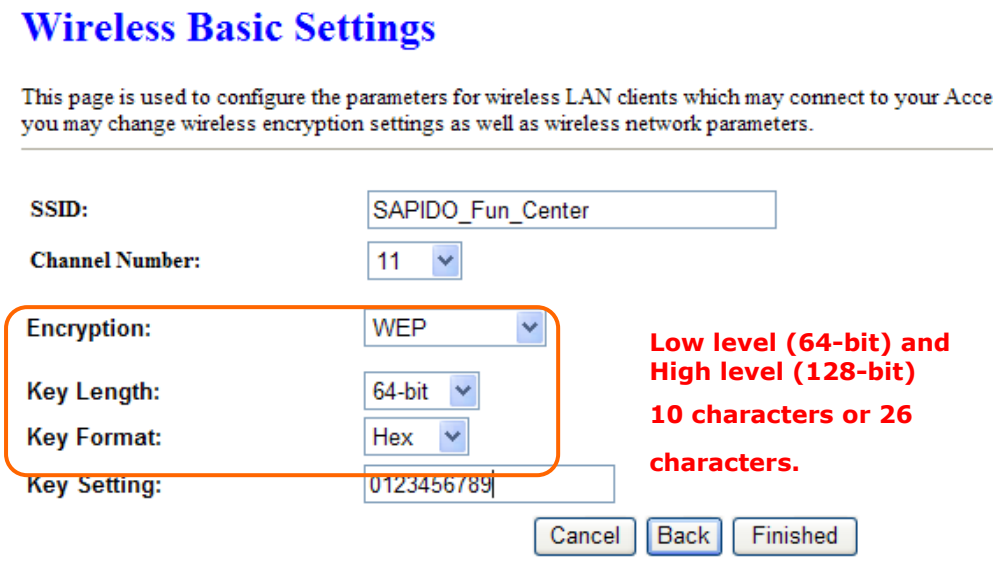
The first step to setup wireless interface is to assign SSID, the default name is **SAPIDO_Fun_Center**. Please follow the instructions to setup.



4.4.3 Wireless Security Setup

The Encryption is a free choice option, it has two main types: **WEP** and **WPA**. If you want to protect your transmitting data, you can select it base on the needs. Please follow the instructions to complete wireless security setup.

a. Wireless Security Setup — WEP



The options in **Key Length** column: 26 Hex characters (0~9, a~f, and A~F). It is decided by the choice of **WEP-64bits** or **WEP-128bits**. E.g.: WEP-64bits key= 10 Hex characters (0~9, a~f, and A~F); WEP-128bits key= 26 Hex characters (0~9, a~f, and A~F); the Key Setting is the password needs to be input after the selections.

a. Encryption－WEP

(1.) Key Length: Activate WEP encryption to protect your information from stealing by others. The 3.5G Download Server Router supports 64bits and 128bits.

(2.) Key Format: For 64bits WEP key format, it can include 5 ASCII characters or 10 Hex characters. For 128bits WEP key format, it can include 13 ASCII characters or 26 Hex characters.

*Note: 128 bits – WEP encryption is very safe, but there are other encryptions safer. Please to understand that all wireless devices must have the same WEP key length and format.

b. Wireless Security Setup — WPA（WPA、WPA2 & WPA2 Mixed）

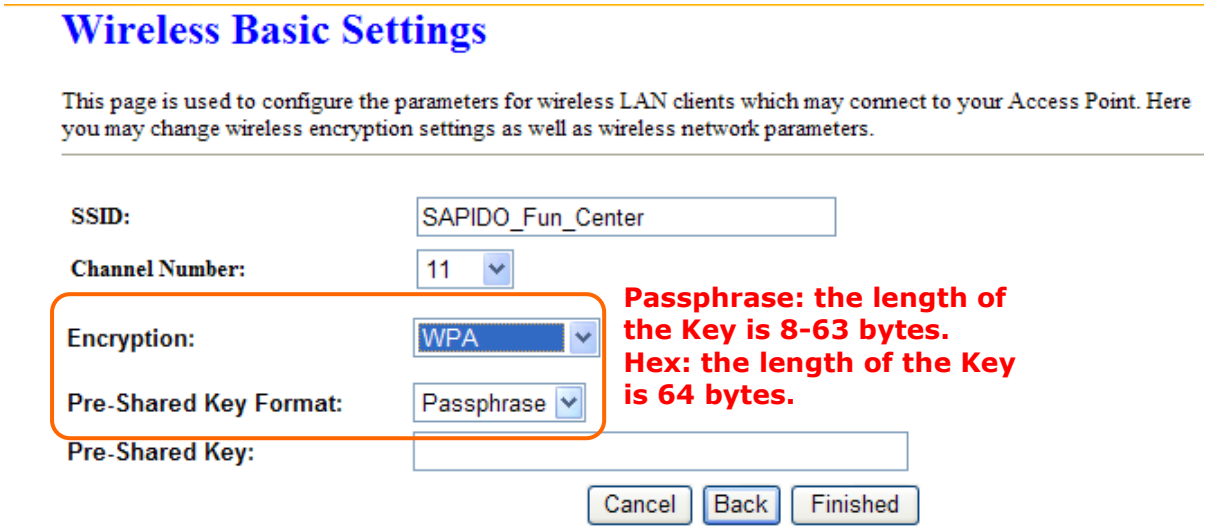
WPA (Wi-Fi Protected Access) is a system to protect wireless network security. To prevent hackers, WPA uses TKIP or AES to change key frequently.

Passphrase:

The Pre-Shared Key format is ASCII Code, and the length is 8-63 bytes(at least 8 bytes)。

Hex:

Users can input 64 Hex bytes(0~9, a~f, or A~F)。

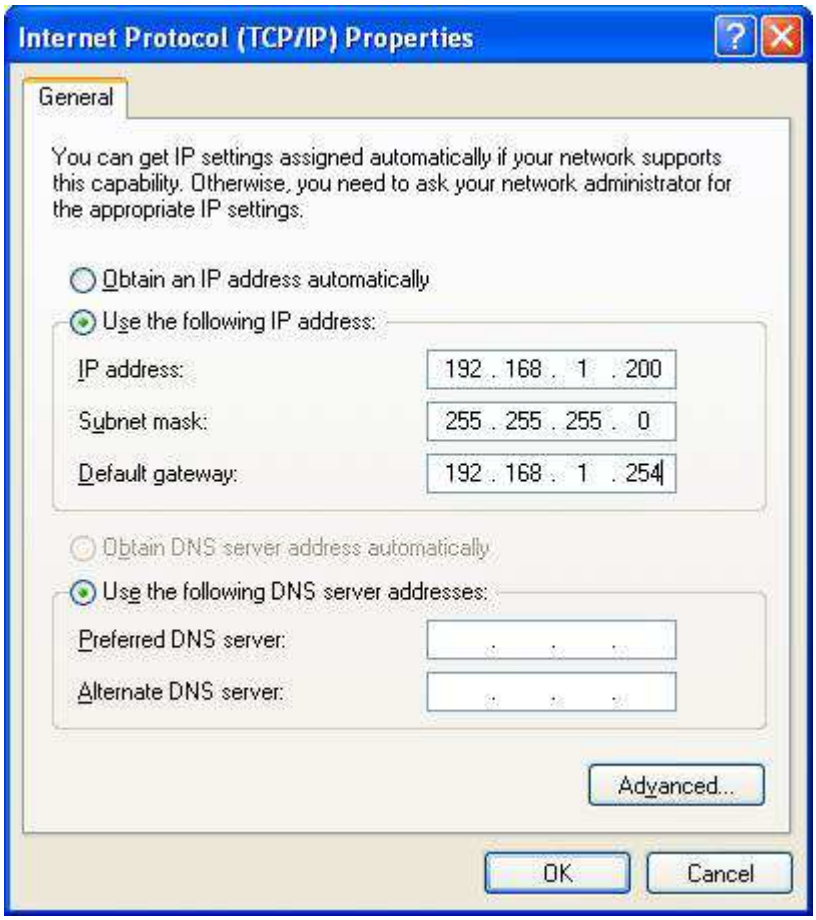


Please click **Finished** to finish the setup.

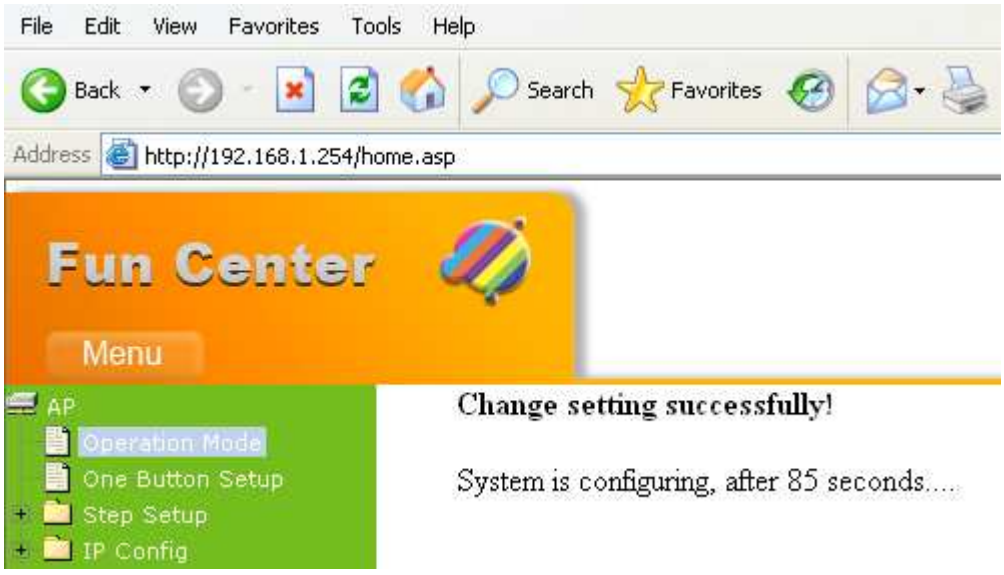
4.4.4 Quick Setup Complete

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

The DHCP is disabled in AP mode. Please setup the static IP address in LAN section after the countdown is finished. The IP address must in the same class with the default Gateway.



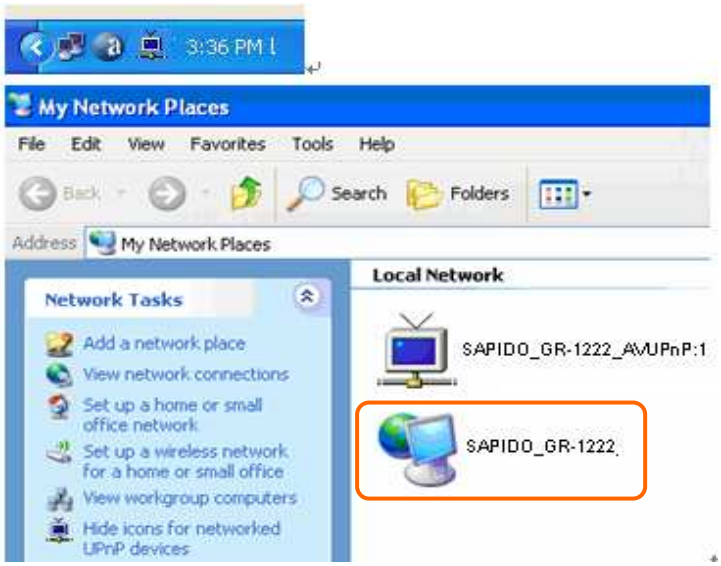
1) Please open IE browser and then enter http://192.168.1.254. (It is the default LAN IP address in AP mode.)



Please Select **Administrator** Mode.

Enter username and password, both default are **admin**, then click **login** to enter product main page.

2) The default UPnP of N+ 3.5G NES Server is ON. When users connect N+ 3.5G NES Server to their PC, and icon will show up in the right-down corner.



Click the **Internet Gateway Device** to open the login page.

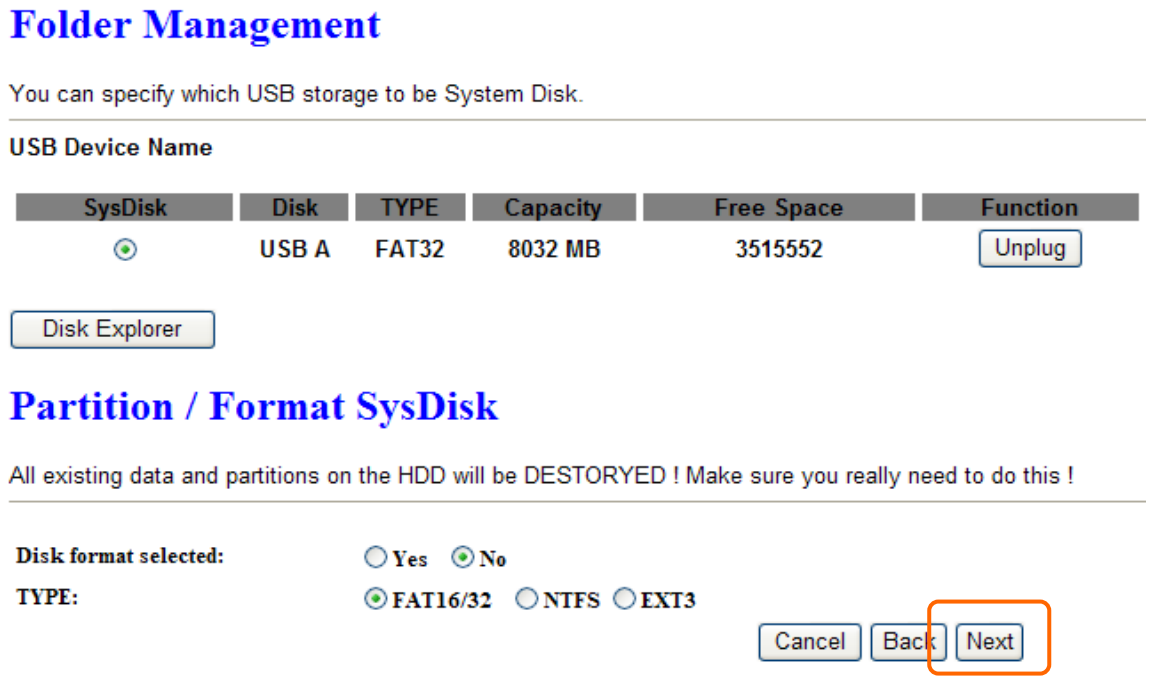
Enter username and password, both default are **admin**, then click **login** to enter product main page.

Application Setup Selection

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

4.4.5 Folder management

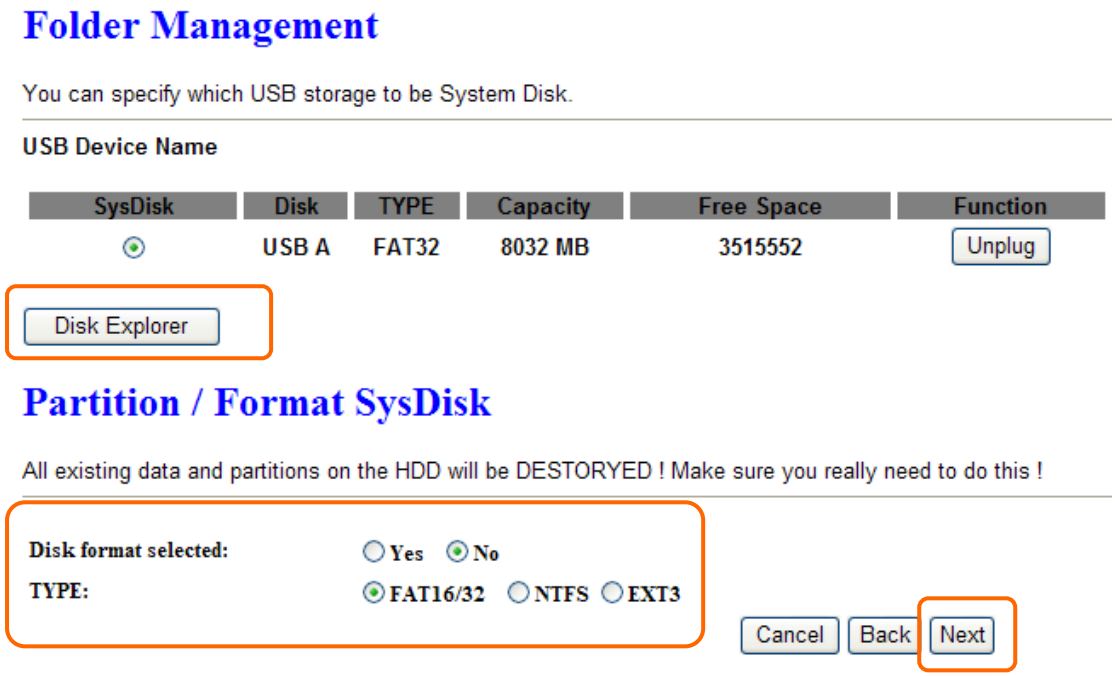
Easy to check all the USB storage devices connected to your N+ 3.5G NES Server , view the entire data folder inside each storage devices, and you can do the disk formatting via click on the button in this page.



Please click on "**Next**" to continue.

4.4.6 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 **"Disk format selected"** 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.



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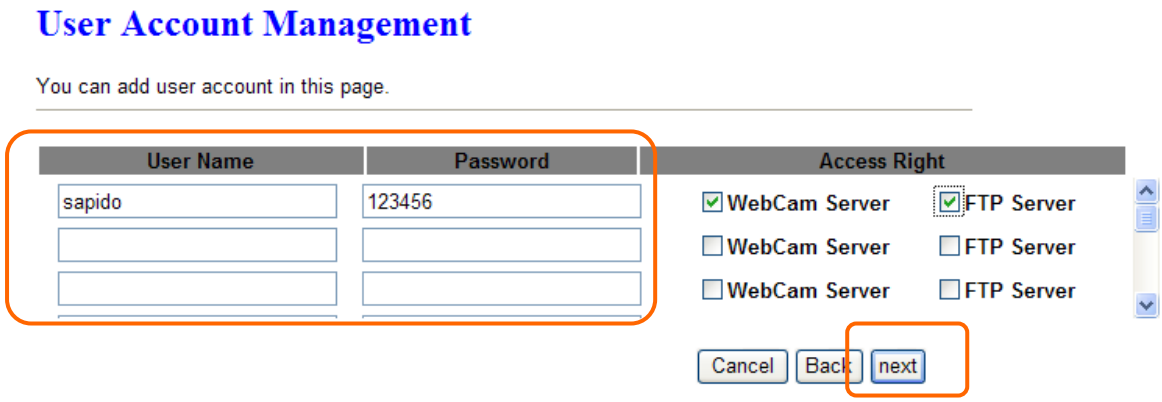
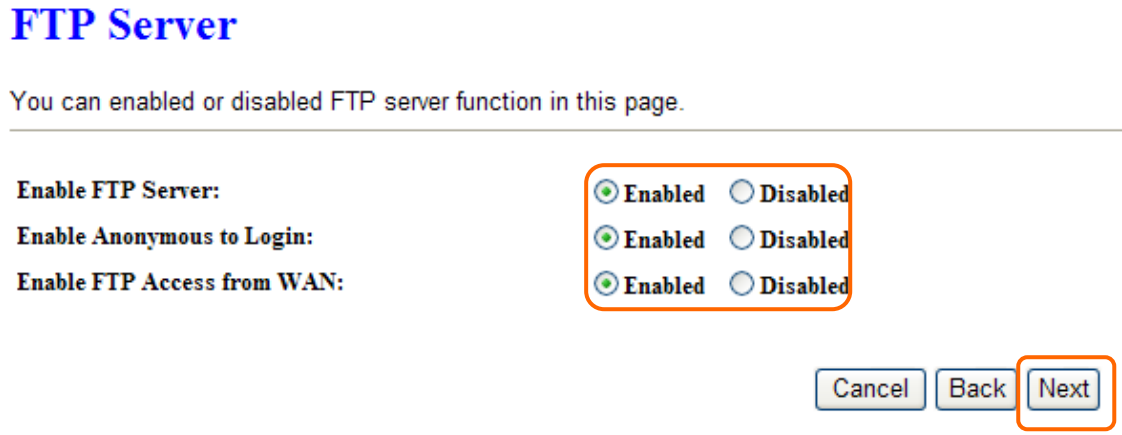


Please click on "**Next**" to continue.

4.4.8 FTP Server

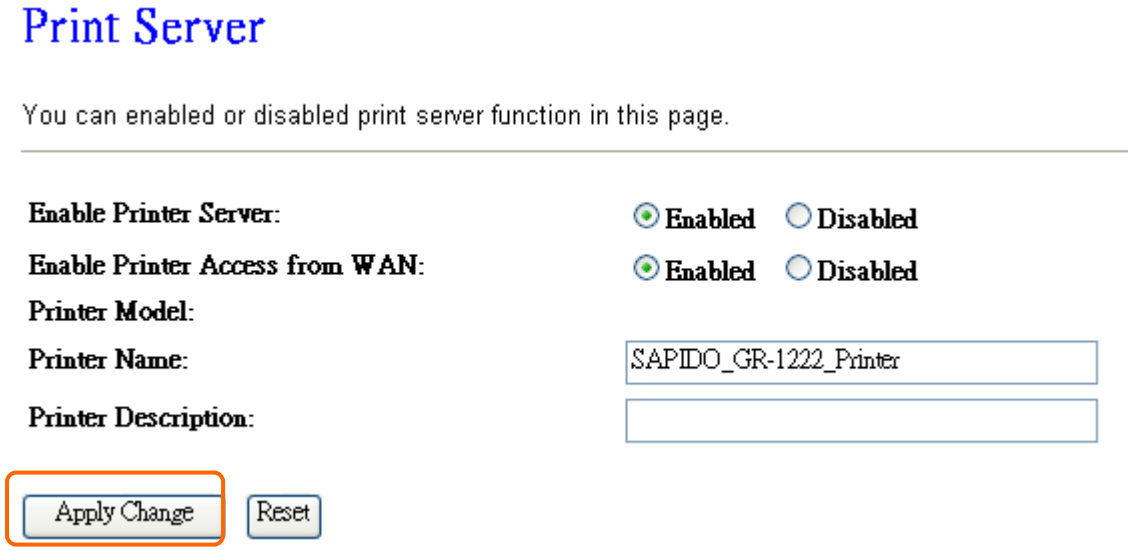
N+ 3.5G NES Server can be the FTP Server provides users to transmit files, also for the guest can download the files from assign website. Moreover, by connecting USB HDD, USB Flash to the router, user can easily set up a FTP Server to share or download files for local or remote users.



Please click on "**Next**" to continue.

4.4.9 Printer Server

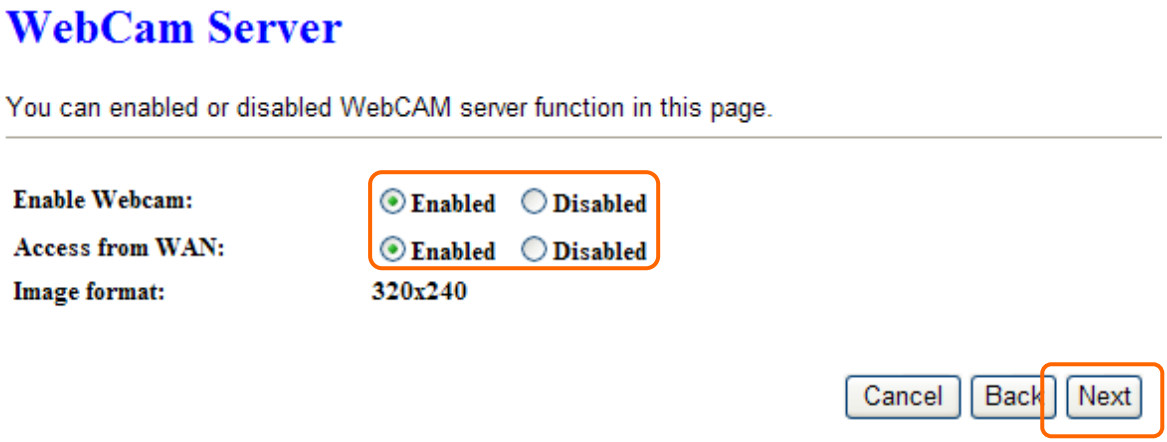
N+ 3.5G NES Server supports printers. Printer Server will be shown as Enable, therefore users can use Printer features from LAN. This function is disabled if there is no printer connecting to N+ 3.5G NES Server .



Please click on "**Next**" to continue.

4.4.10 Web Camera

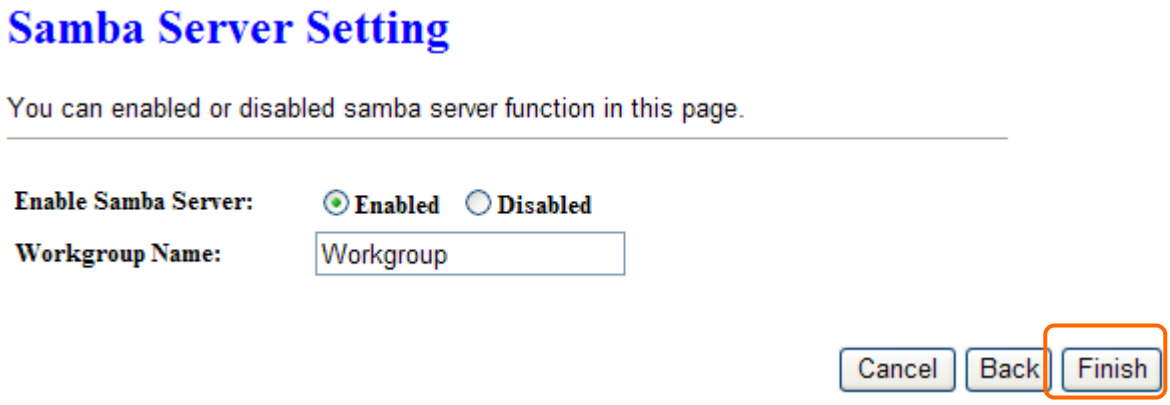
If you plan to use the N+ 3.5G NES Server as a Web Camera site, connect a supported USB Web Camera to the USB port of the N+ 3.5G NES Server . To enable the webcam server and access from WAN as demand, and the Image format is set to 320X240.



Please click on "**Next**" to continue.

4.2.16 Samba Server

Support NetBIOS protocol, the consumer sharing file and printer which provides as the My Network Places.



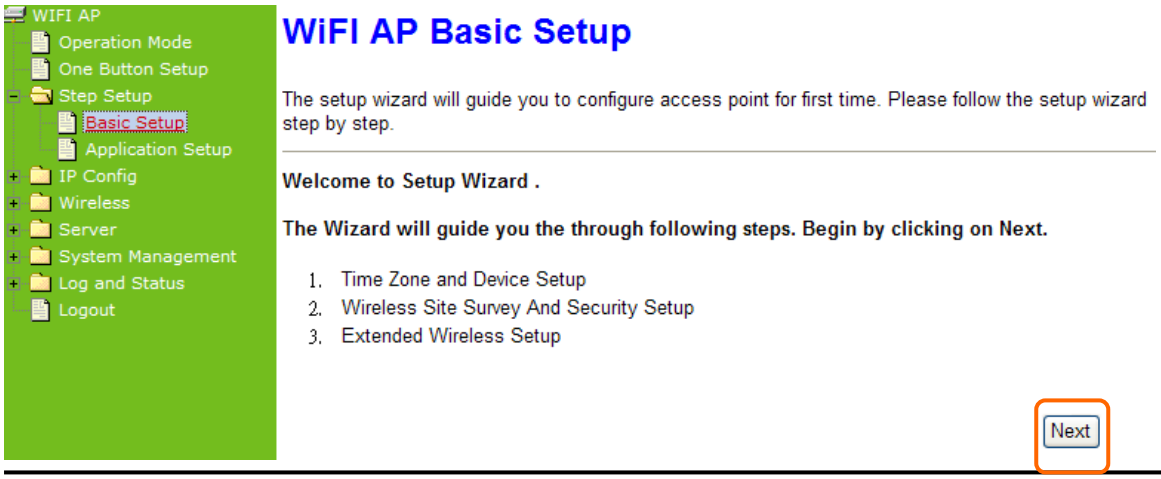
Please click on "**Finish**" to complete settings.

4.5 WiFi AP Mode Configuration

Connect to AP or wired Internet by using wireless function, and then provides wired and wireless internet bridge service for bottom level users. The AP mode doesn't support NAT. The 3.5G Download Server Router is simply using Ethernet port to connect to the upper level device and receive the IP address from it. The 3.5G Download Server Router will use the default IP address or is defined by users if the upper level device does not give one.

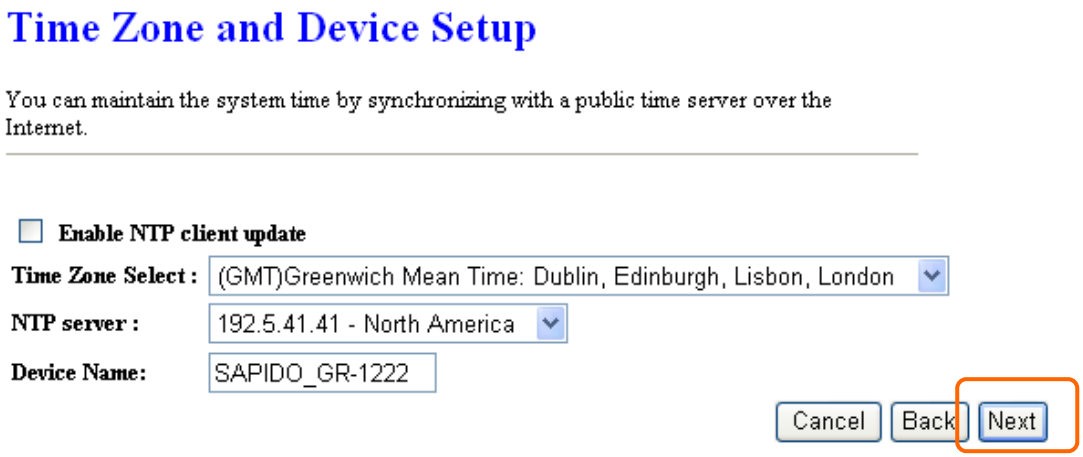
4.6 Quick Setup for WiFi AP Mode

Please Click **Next** to enter the next page.



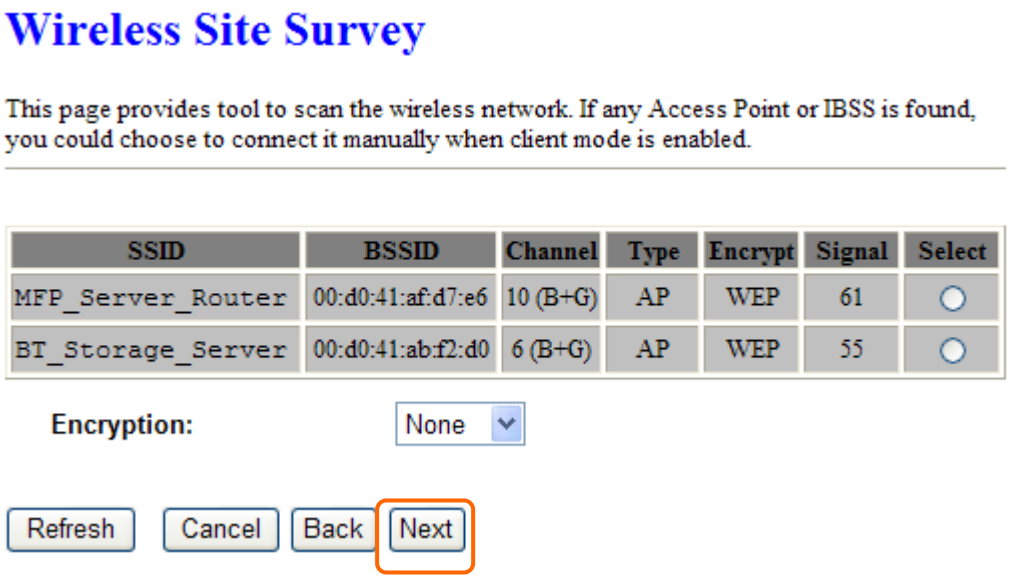
4.6.1 Time Zone Setup

You can select **Enable NTP client update** to maintain the system time.



4.6.2 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.

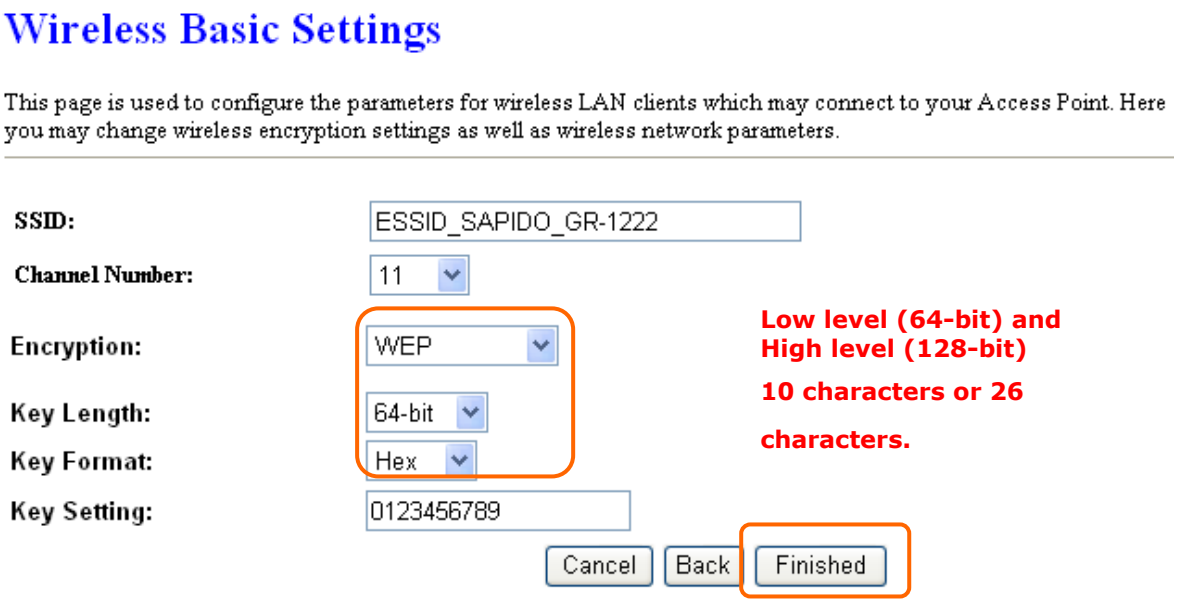


You can select the desired AP to connect and data encryption type. Click the **Refresh** button will refresh the list.

4.6.3 Wireless Security Setup

The Encryption is a free choice option, it has two main types: **WEP** and **WPA**. If you want to protect your transmitting data, you can select it base on the needs. Please follow the instructions to complete wireless security setup.

甲、Wireless Security Setup — WEP



The options in **Key Length** column: 26 Hex characters (0~9, a~f, and A~F). It is decided by the choice of **WEP-64bits** or **WEP-128bits**. E.g.: WEP-64bits key= 10 Hex characters (0~9, a~f, and A~F); WEP-128bits key= 26 Hex characters (0~9, a~f, and A~F); the Key Setting is the password needs to be input after the selections.

b. Wireless Security Setup — 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.

Passphrase:

The Pre-Shared Key format is ASCII Code, and the length is 8-63 bytes(at least 8 bytes)。

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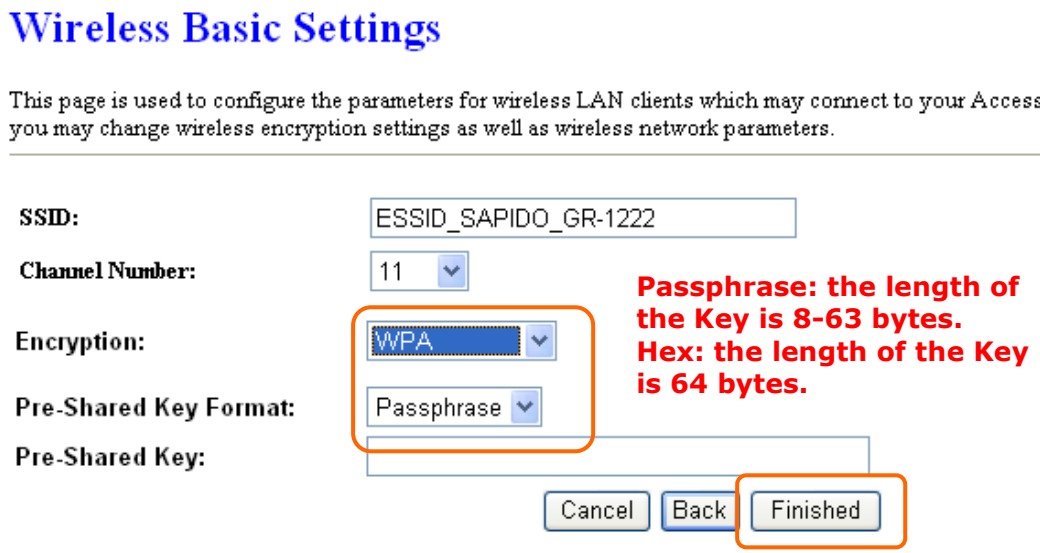
Users can input 64 Hex bytes(0~9, a~f, or A~F)。



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

4.6.4 Quick Setup Complete

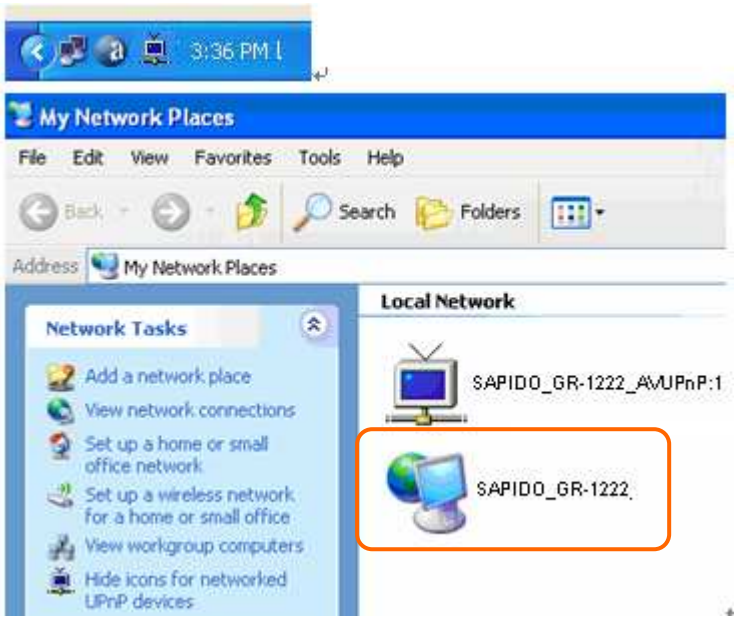
When you see this screen, it means the quick setup is almost completed.

When the countdown is down to 0, please enter http://192.168.1.254/ in address field. (It is the default LAN IP address in WiFi AP mode.)。

Please select "Administrator" to enter.

The login page will show up, please enter the username and password. The default values for both are **admin**. Click **Login** to enter the main page.

2) The default UPnP of N+ 3.5G NES Server is ON. When users connect N+ 3.5G NES Server to their PC, and icon will show up in the right-down corner.



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Enter username and password, both default are **admin**, then click **login** to enter product main page.

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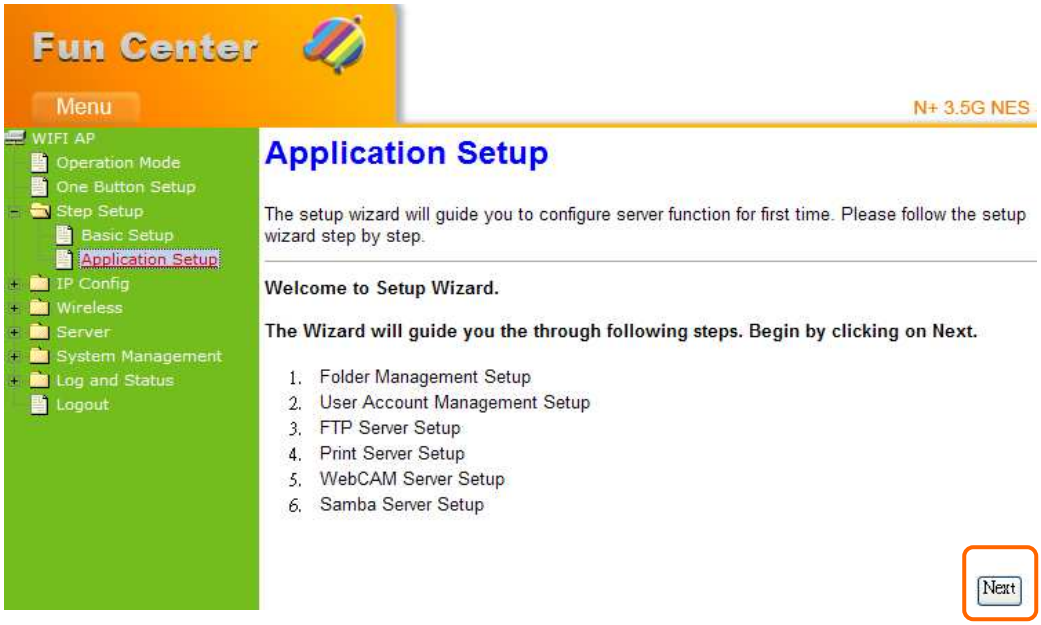

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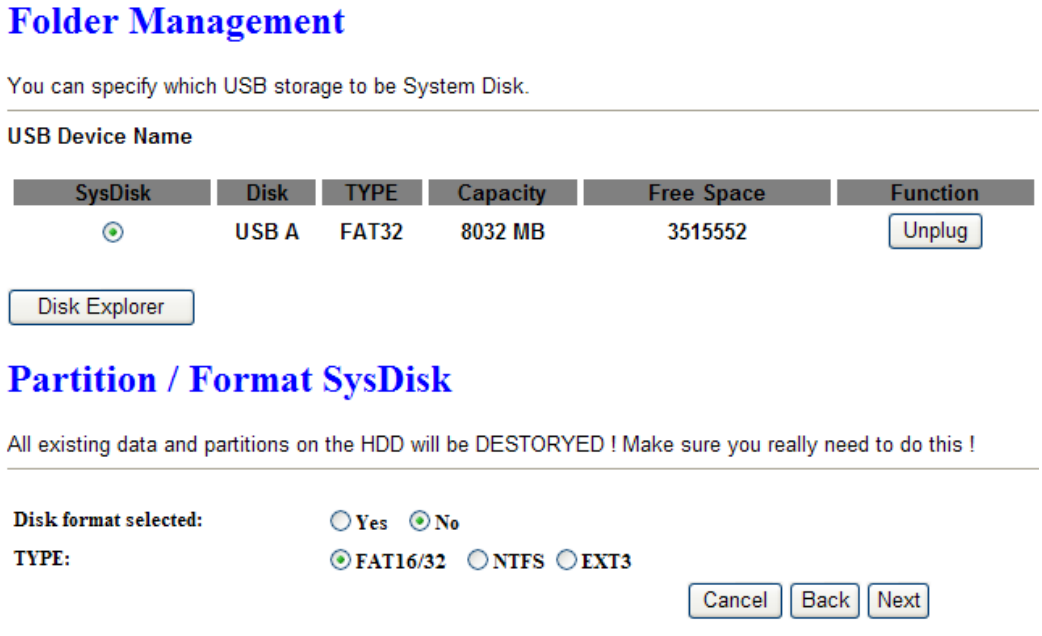

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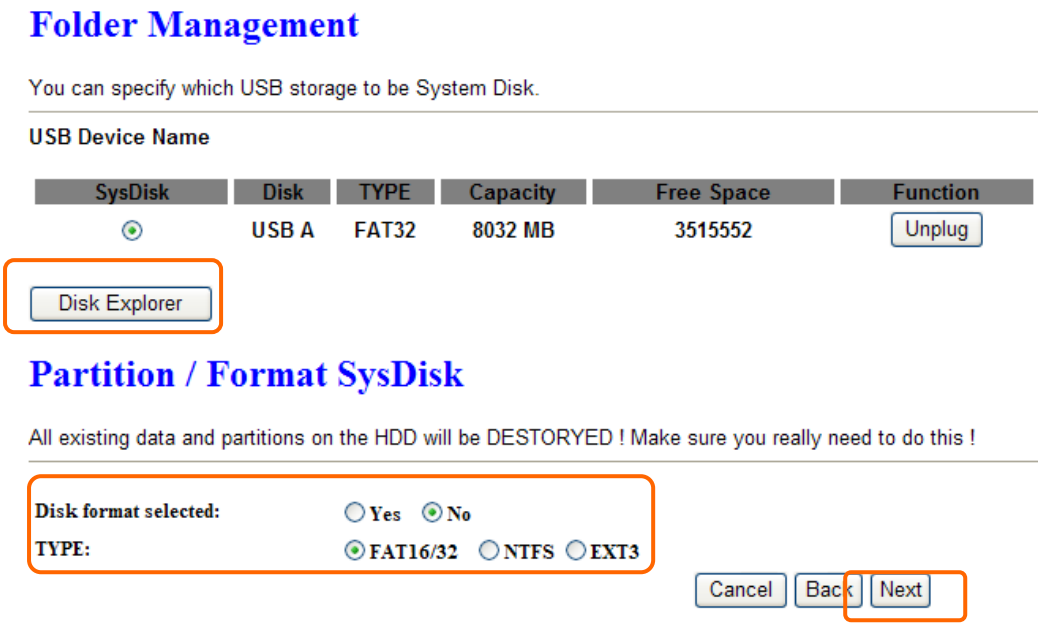

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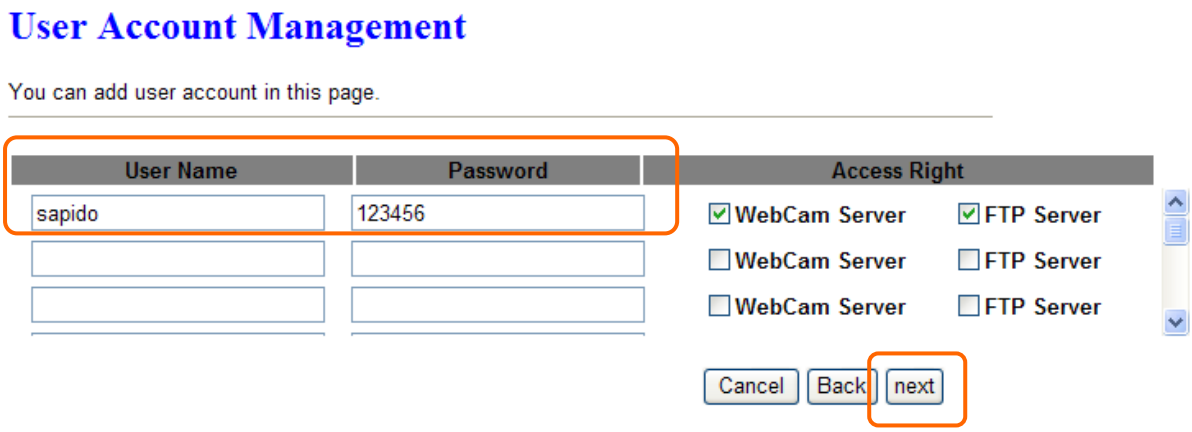

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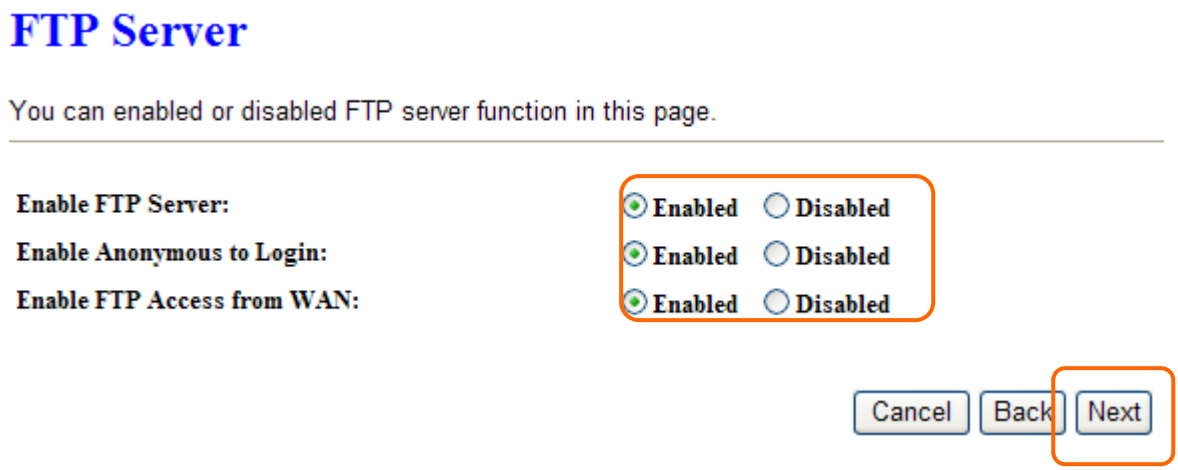

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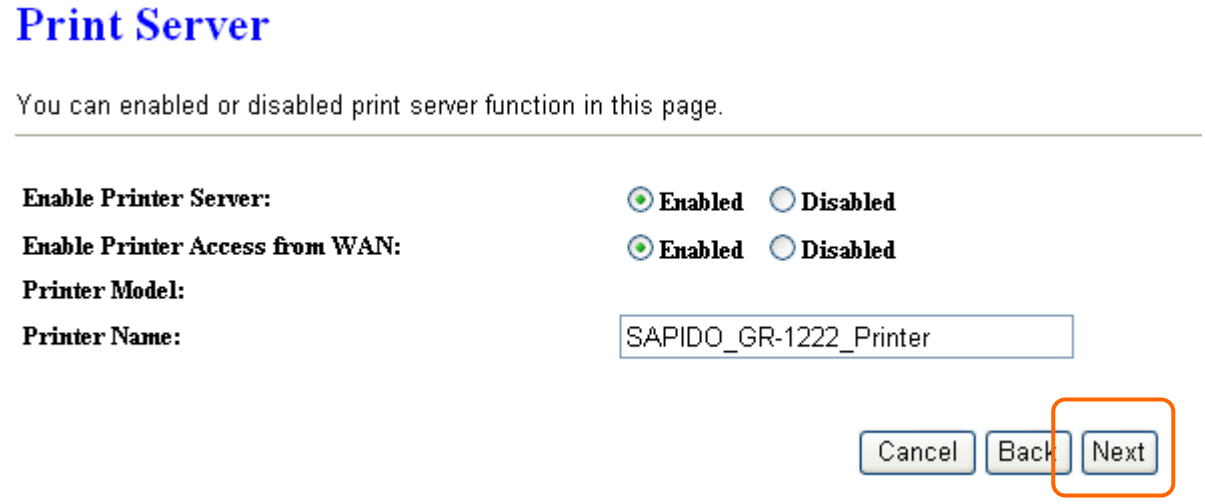
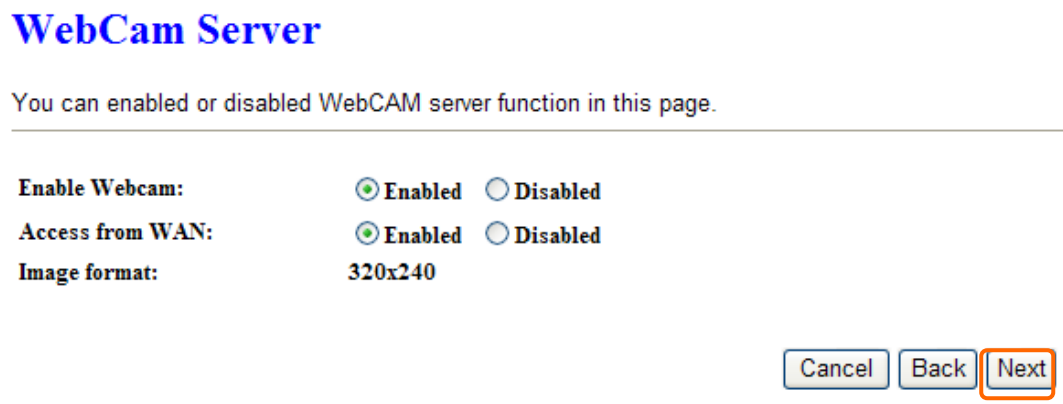


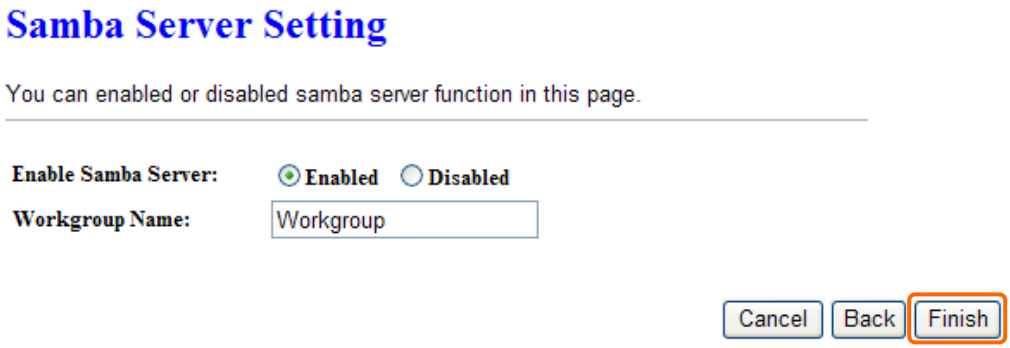
4.6.10 Web Camera

If you plan to use the N+ 3.5G NES Server as a Web Camera site, connect a supported USB Web Camera to the USB port of the N+ 3.5G NES Server . To enable the webcam server and access from WAN as demand, and the Image format is set to 320X240.



4.6.11 Samba Server

Support NetBIOS protocol, the consumer sharing file and printer which provides as the My Network Places.

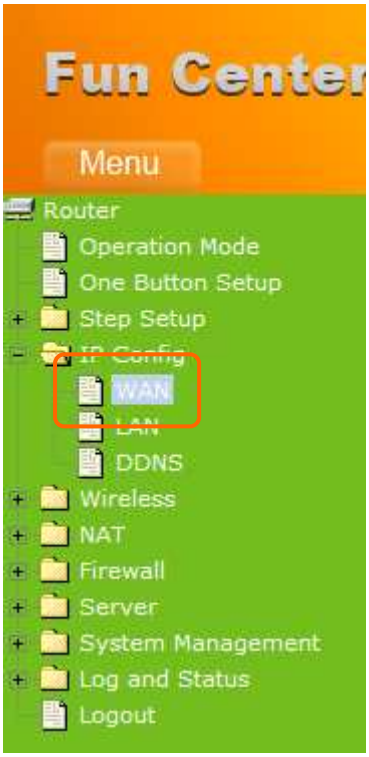


Chapter 5 Advanced Configuration for Router Mode

5.1 IP Config

This section can let users add route rules of 3.5G Download Server Router; it includes configuration of WAN, LAN, and DDNS.

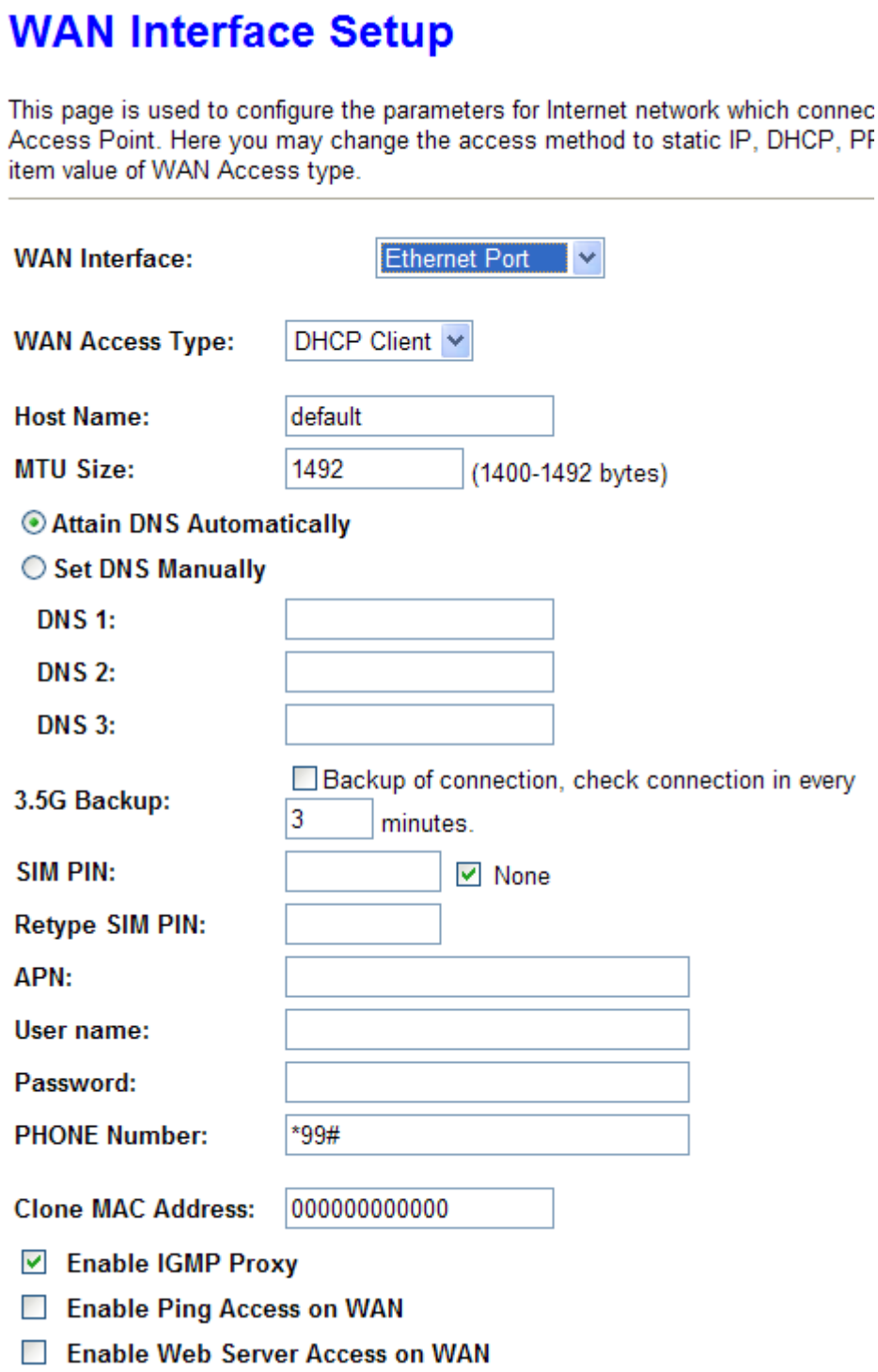
5.1.1 WAN Interface Setup



Please select WAN Interface to configure, it includes 2 interface selections (Ethernet and Wireless) and 4 access types (Static IP, Dynamic IP, PPPoE, and PPTP); please follow the instructions to configure.

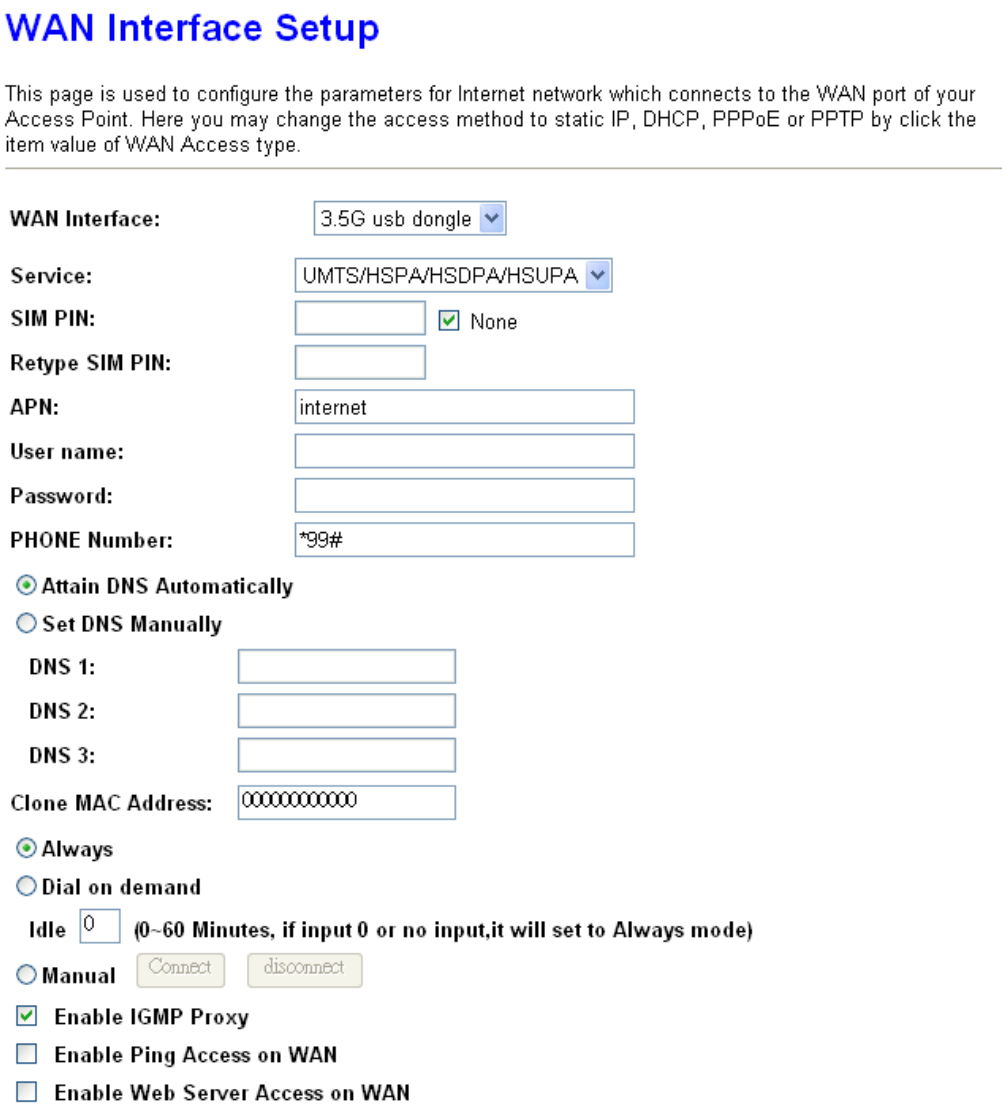
5.1.1.1 WAN Interface – Ethernet Port

If your N+ 3.5G NES Server is connecting to the Internet through the Ethernet cable, please select **Ethernet port** interface.



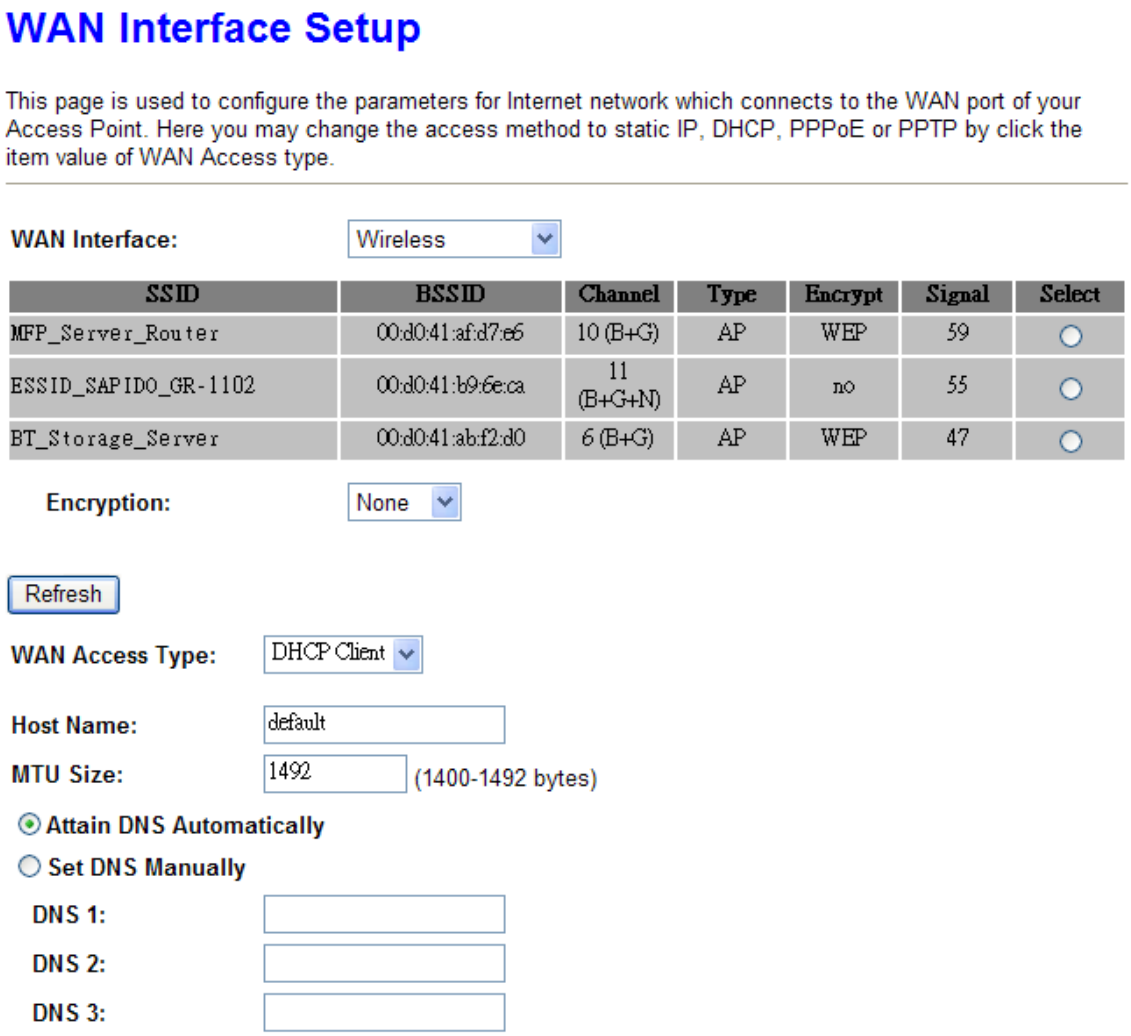
5.1.1.2 WAN Interface – 3.5G

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

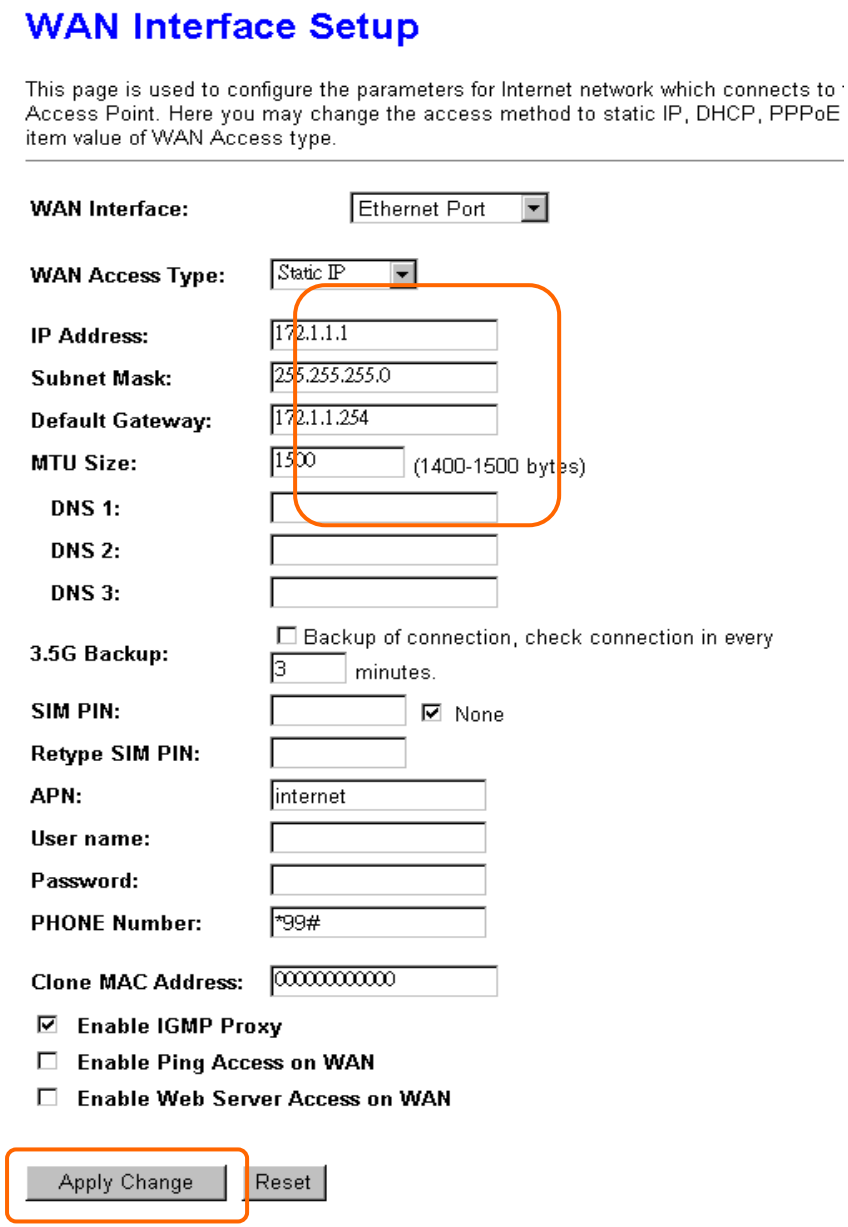
If your N+ 3.5G NES Server is connecting to the Internet through wireless, please select **Wireless** interface.



The Wireless network which searched by N+ 3.5G NES Server will display on this page. Users can select the desired wireless network and Encryption type to connect.

5.1.1.4 Static IP

If you applied for a Static IP connection type from ISP, please follow the steps to set up your WAN connection.



1. **IP Address**

   Please enter your IP address. If you don't know the address, please contact your ISP.

2. **Subnet Mask**

   Please enter the Subnet Mask address; it should be 255.255.255.0 for the most time.

3. **Default Gateway**

   Please enter the Default Gateway address. If you don't know the address, please contact your ISP.

4. **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.

5. **DNS**

   If ISP provides DNS information, please select **Attain DNS automatically**. Or you should select **Set DNS Manually**, and then input the DNS address.

6. **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, N+ 3.5G NES Server 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 shall manual turn off 3.5G connection manually after the original connection is restored.

7. **Clone MAC Address**

   If your ISP asks you to enter a specific MAC Address, please input the correct info at the column.

8. **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.

9. **Enable Ping Access on WAN**

   When users choice **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.

10. **Enable Web Server Access on WAN**

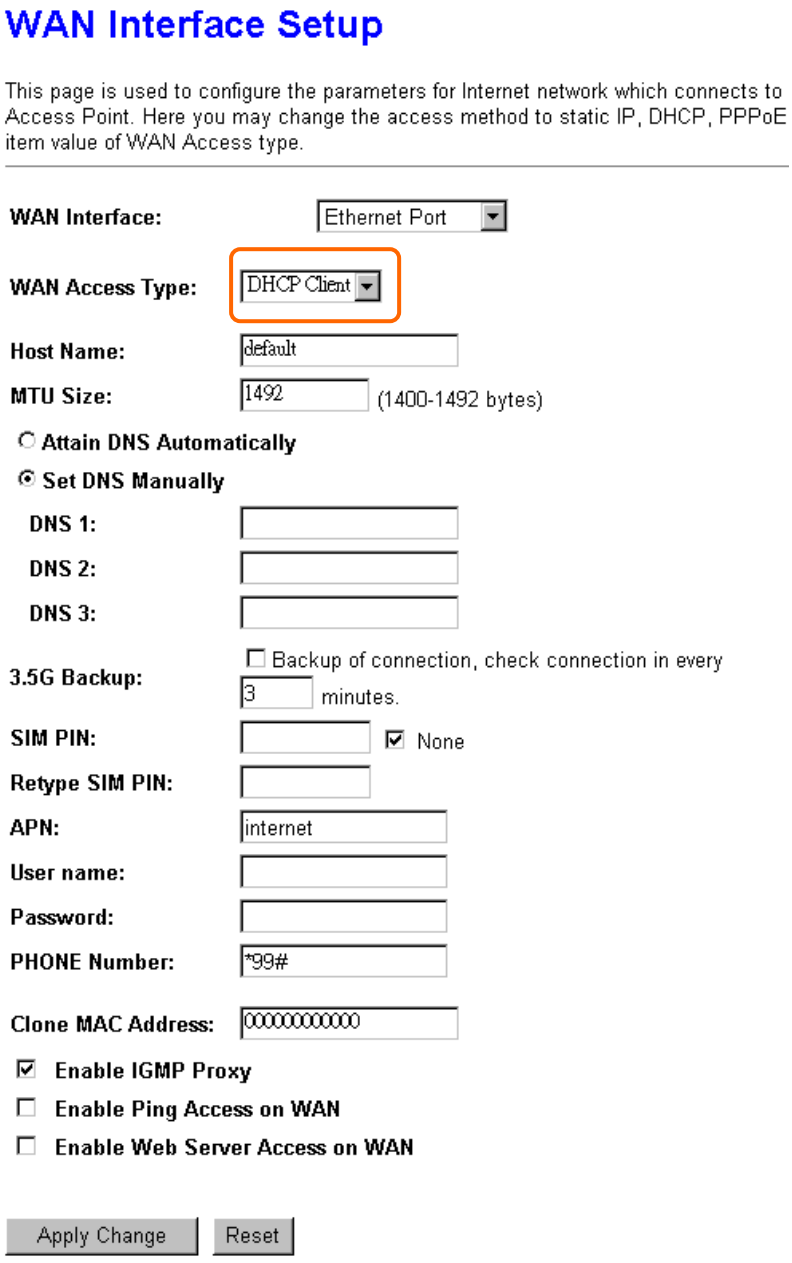
    This option is to enable Web Server Access function on WAN.

11. **Apply Changes & Reset**

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

5.1.1.5 Dynamic IP

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



1. **Host Name**

   Host name is optional for users. If your ISP requests users to input a specific host name, please input it in this section.

2. **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 1492 bytes.

3. **DNS**

   If ISP provides DNS information, please select **Attain DNS automatically**. Or you should select **Set DNS Manually**, and then input the DNS address.

4. **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, N+ 3.5G NES Server 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.

5. **Clone MAC Address**

   If your ISP asks you to enter a specific MAC Address, please input the correct info at the column.

6. **Enable IGMP Proxy**

   The **Internet Group Management Protocol** (**IGMP**) is a communications 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.

7. **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.

8. **Enable Web Server Access on WAN**

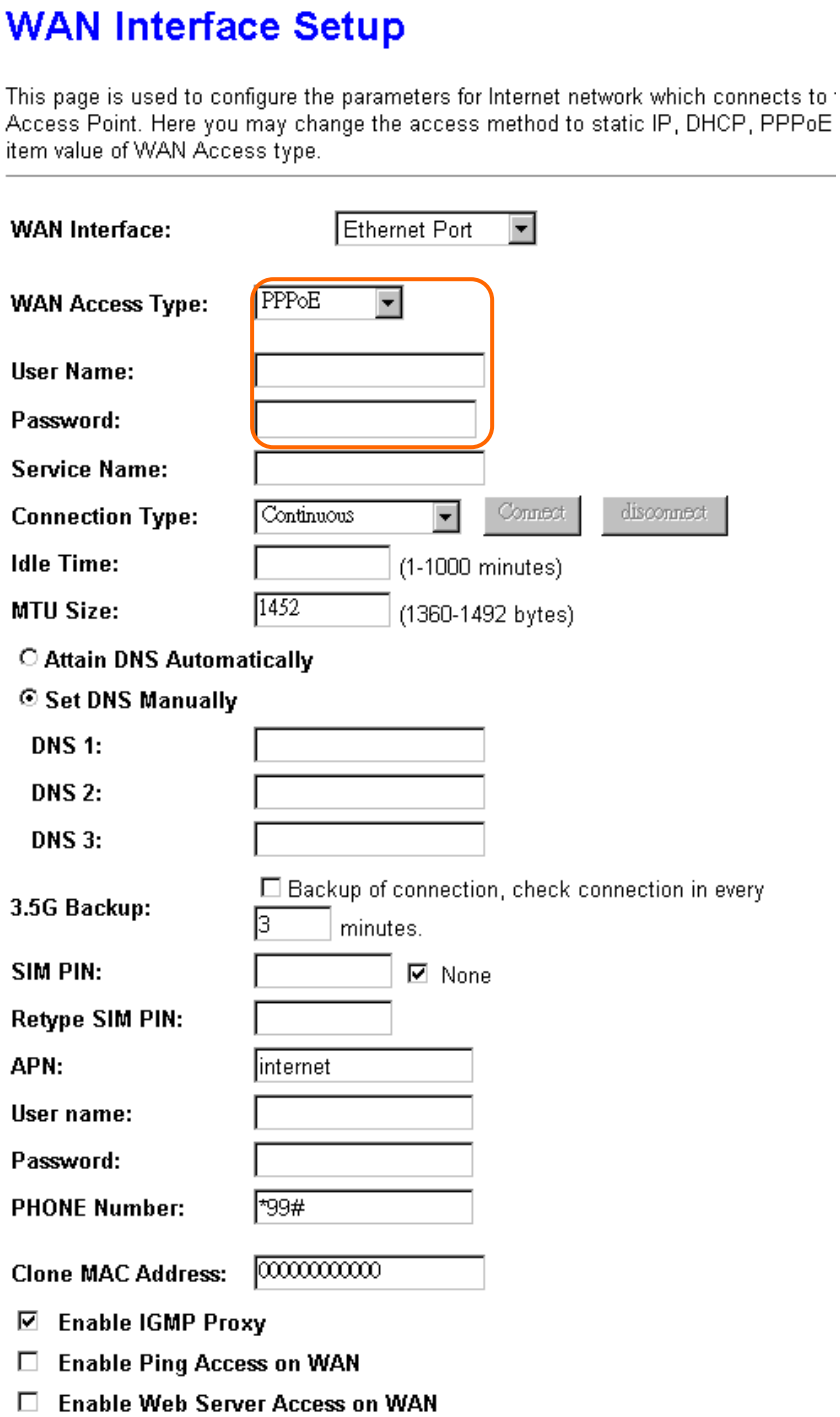
   This option is to enable Web Server Access function on WAN.

9. **Apply Changes & Reset**

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

5.1.1.6 PPPoE

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



1. User Name

Please enter the username provided by your ISP. If you don't have it, please contact your ISP.

2. **Password**

   Please enter the password provided by your ISP. If you don't have it, please contact your ISP.

3. **Service Name**

   Please enter the service name provided by your ISP. If you don't have it, please contact your ISP.

4. **Connection Type**

   It has three types: **Continuous**, **Connect on Demand**, and **Manual**.

5. **Idle Time**

   Users can input the max unused time here.

6. **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 1492 bytes.

7. **DNS**

   If ISP provides DNS information, please select **Attain DNS automatically**. Or you should select **Set DNS Manually**, and then input the DNS address.

8. **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, N+ 3.5G NES Server 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.

9. **Clone MAC Address**

   If your ISP asks you to enter a specific MAC Address, please input the correct info at the column.

10. **Enable IGMP Proxy**

    The **Internet Group Management Protocol** (**IGMP**) is a communications 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.

11. **Enable Ping Access on WAN**

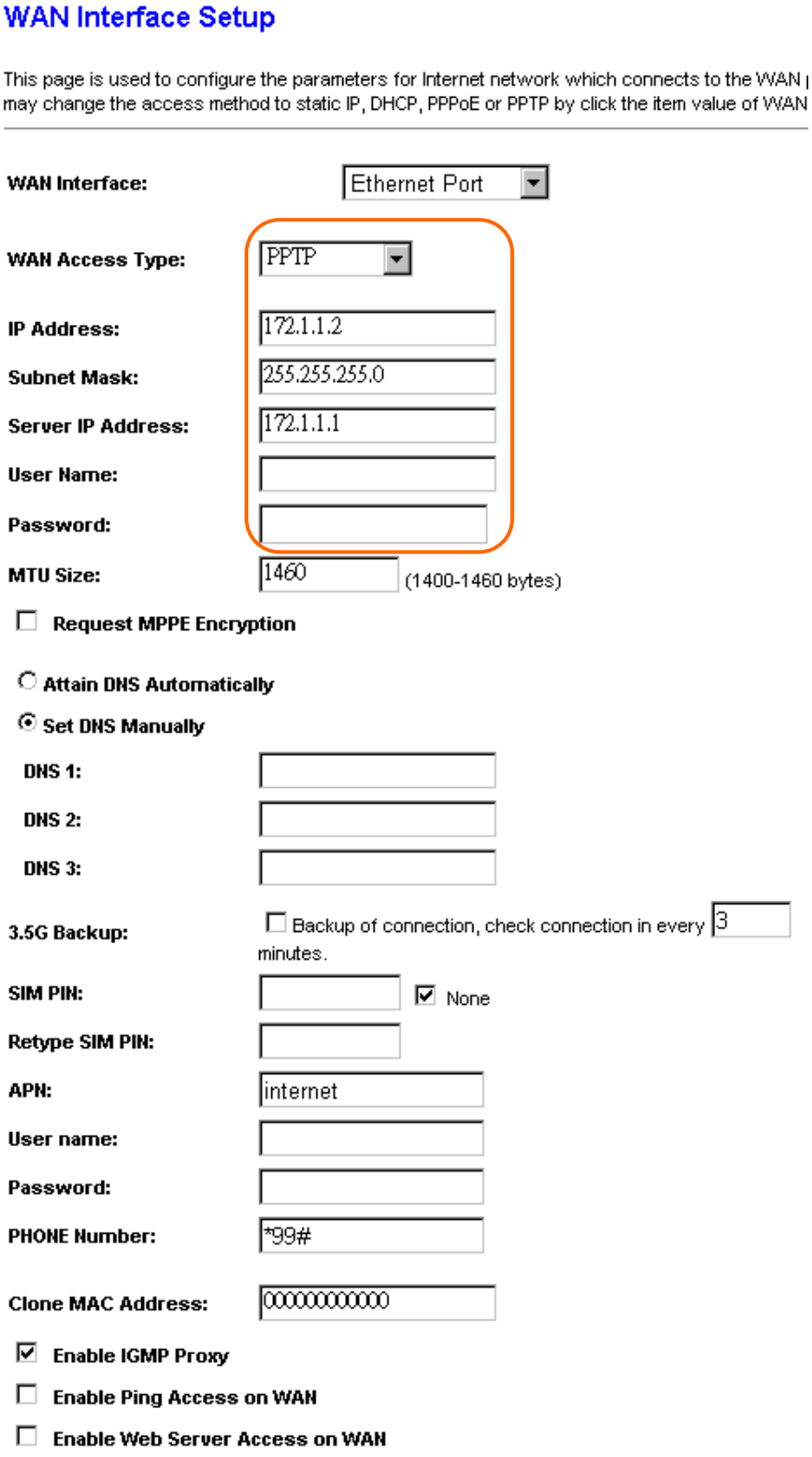
    When users enable **Enable Ping Access on WAN**, it will make WAN IP

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.

12. **Enable Web Server Access on WAN**
    This option is to enable Web Server Access function on WAN.
13. **Apply Changes & Reset**
    Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

5.1.1.7 PPTP

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



1. **IP Address**

   Please enter your IP address. If you don't know the address, please contact your ISP.

2. **Subnet Mask**

   Please enter the Subnet Mask address; it should be 255.255.255.0 for the most time.

3. **Server IP Address**

   Please enter the server IP address. If you don't know the address, please contact your ISP.

4. **User Name**

   Please enter the username provided by your ISP. If you don't have it, please contact your ISP.

5. **Password**

   Please enter the password provided by your ISP. If you don't have it, please contact your ISP.

6. **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 1492 bytes.

7. **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.

8. **DNS**

   If ISP provides DNS information, please select **Attain DNS automatically**. Or you should select **Set DNS Manually**, and then input the DNS address.

9. **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, N+ 3.5G NES Server 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.

10. **Clone MAC Address**

    If your ISP asks you to enter a specific MAC Address, please input the correct info at the column.

11. **Enable IGMP Proxy**

    The **Internet Group Management Protocol** (**IGMP**) is a communications 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.

12. **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.

13. **Enable Web Server Access on WAN**

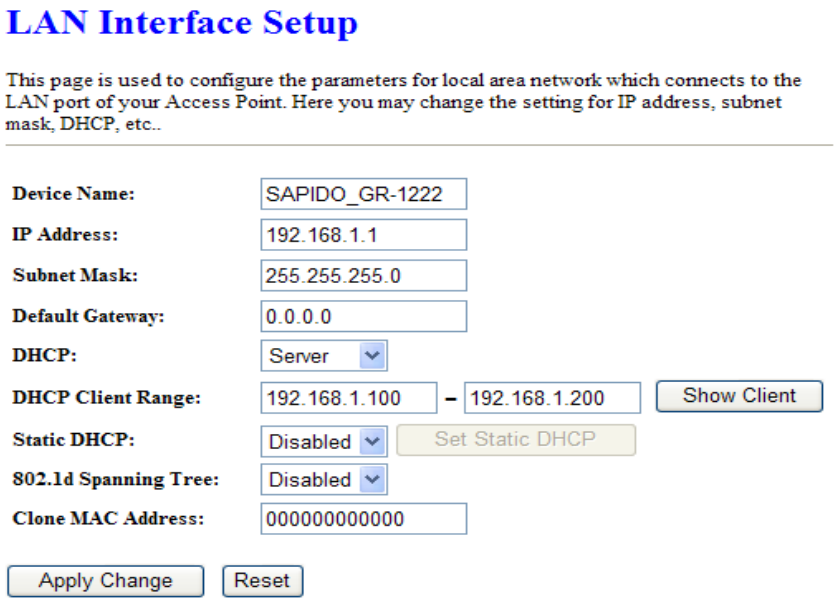
    This option is to enable Web Server Access function on WAN.

14. **Apply Changes & Reset**

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

5.1.2 LAN Interface Setup

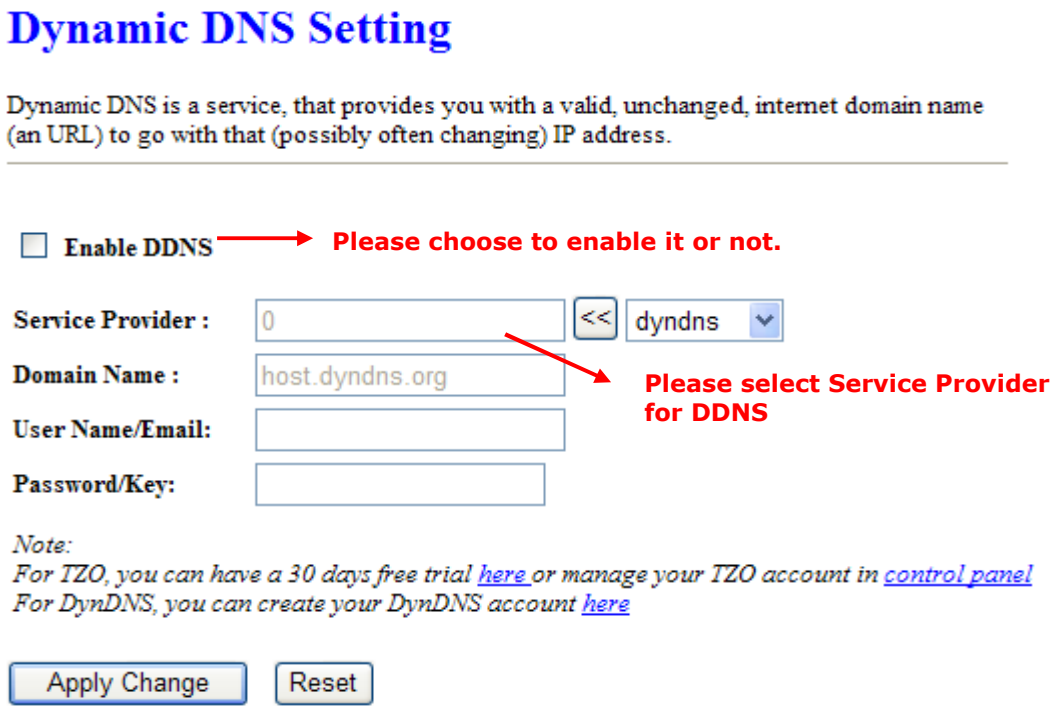
This page is used to configure for local area network which connects to the LAN port of your Access Point. Here users may change the setting for IP address, Subnet Mask, DHCP, etc.



1. **IP Address**
   The default IP address is **192.168.1.1** (recommend).
2. **Subnet Mask**
   Please enter the Subnet Mask address; it should be **255.255.255.0** for the most time.
3. **Default Gateway**
   Please enter the Default Gateway address. If you don't know the address, please contact your ISP.
4. **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.
5. **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.
6. **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.
7. **Clone MAC Address**
   If your ISP asks you to enter a specific MAC Address, please input the correct info at the column.
8. **Apply Changes & Reset**
   Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

5.1.3 Dynamic DNS Setting

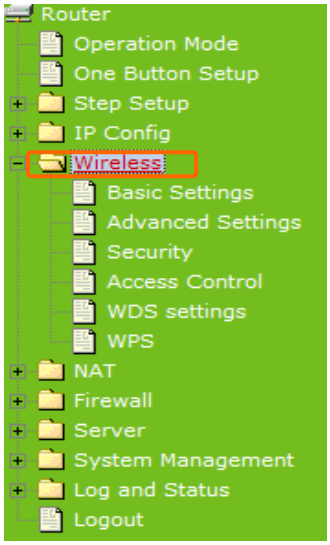
Dynamic DNS provides users with DNS service that automates the discovery and registration of client's public IP addresses. The DDNS Providers in 3.5G Download Server Router are DynDNS (http://www.dyndns.com), TZO (http://www.dyndns.org), ChangeIP, Eurodns, OVH, NO-IP, ODS, Regfish.



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.

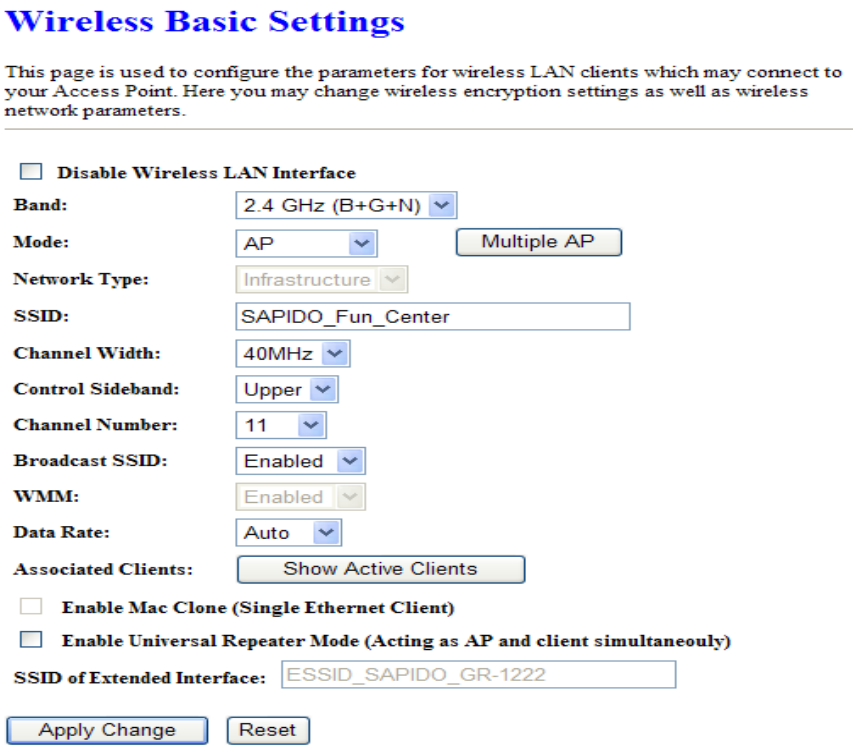
5.2 Wireless Setup

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.



1. **Disable Wireless LAN Interface**

   Turn off the wireless function.

2. **Band**

   Please select the frequency. It has 6 options:

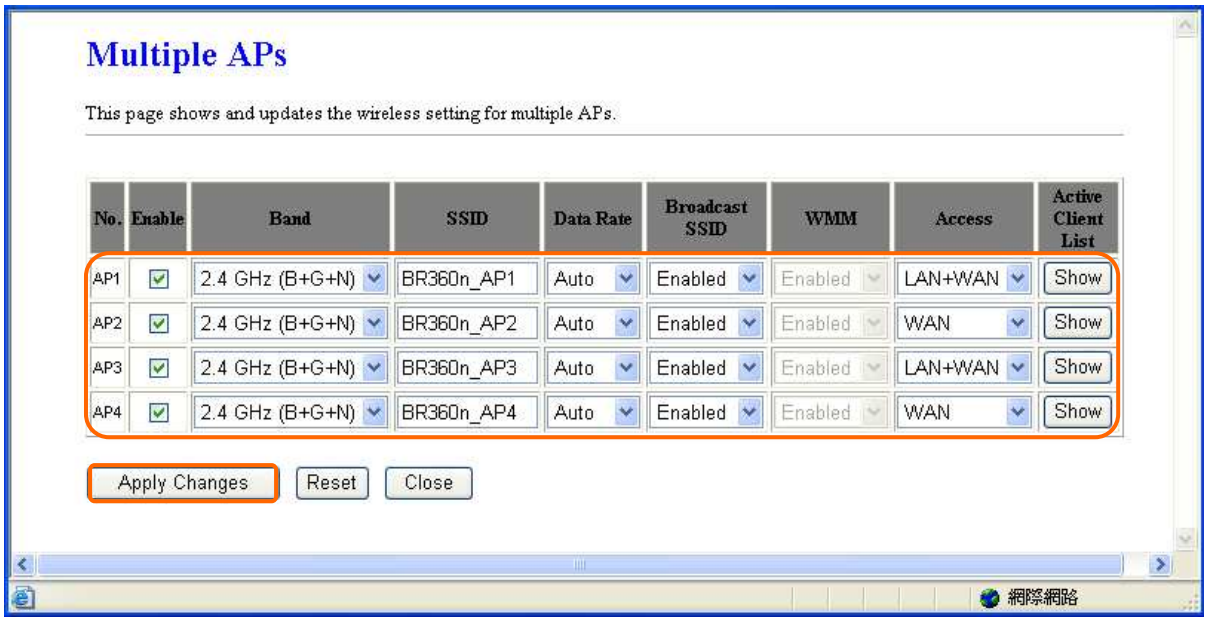
   2.4 GHz (B/G/N/B+G/G+N/B+G+N).

3. **Mode**

   Please select the mode. It has 3 modes to select:

   (AP, WDS, AP+WDS).

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



(1.) Enable: please choose to enable it or not.

(2.) Band: please select the frequency.

(3.) SSID: please enter the SSID.

(4.) Data Rate: please select the data transmission rate.

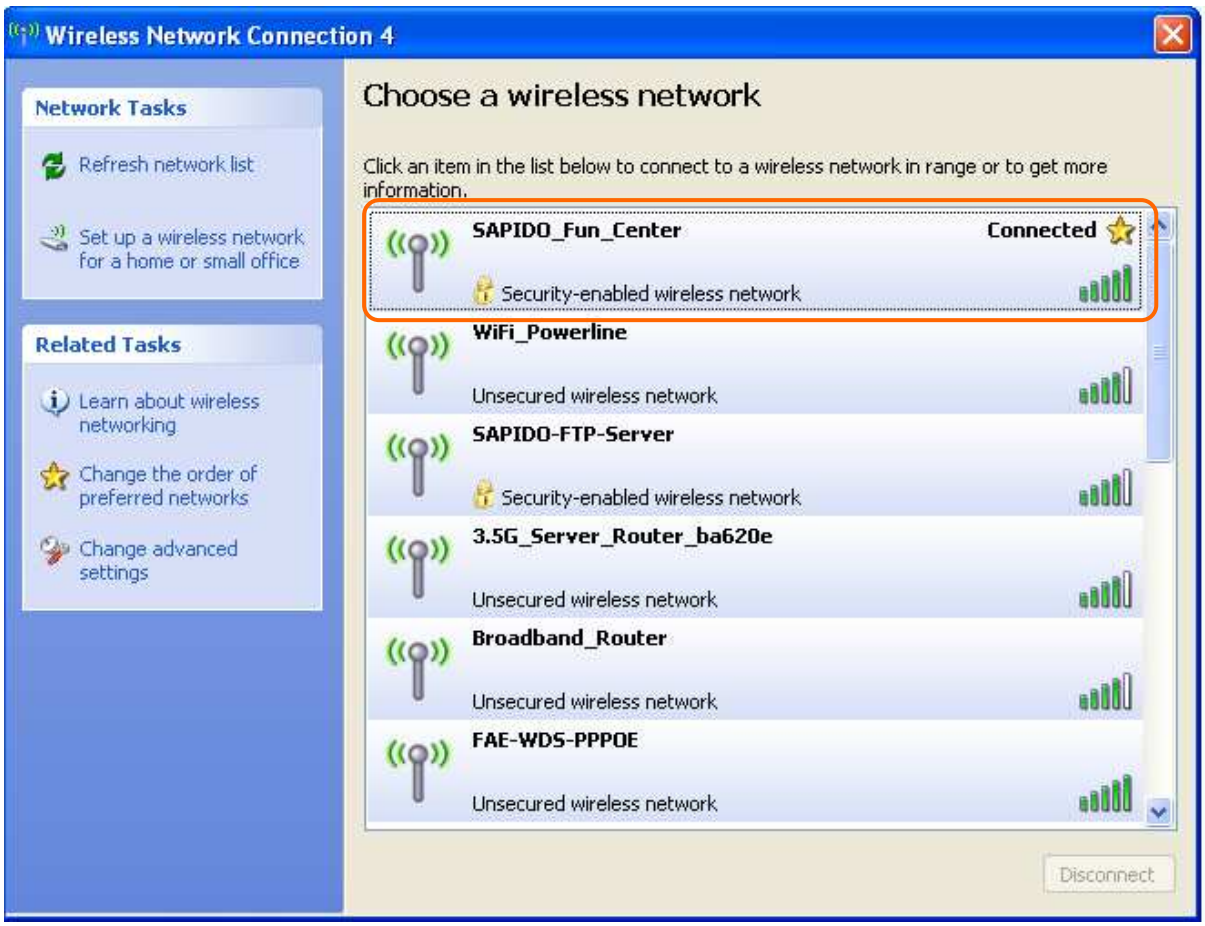
(5.) Access: enable this function can let clients use 2 access types: a. LAN+WAN: the client can access to the Internet and connect to 3.5G Download Server Router's GUI to setup. b. WAN: the client can only access to the Internet.

(6.) Active Client List: display the properties of the client which is connecting successfully.

(7.) Apply Changes: 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 N+ 3.5G NES Server _AP1 (LAN+WAN) and connect to it. If the client connects to it successfully, it will display message to notify users.



4. **Network Type**

   Please select the network type, it has 2 options: **Infrastructure** or **Ad hoc**. If the wireless mode is set to AP mode, this section is disabled.

5. **SSID**

   Service Set identifier, the default SSID is **SAPIDO_Fun_Center**, users can define to any.

6. **Channel Width**

   Please select the channel width, it has 2 options: 20MHZ, and 40MHZ.

7. **Control Sideband**

   Enable this function will control your router use lower or upper channel.

8. **Channel Number**

   Please select the channel; it has Auto, 1, 2~11 options.

9. **Broadcast SSID**

   User may choose to enable **Broadcast SSID** or not.

10. **Data Rate**

    Please select the data transmission rate.

11. **Associated Clients**

    Check the AP connectors and the Wireless connecting status.

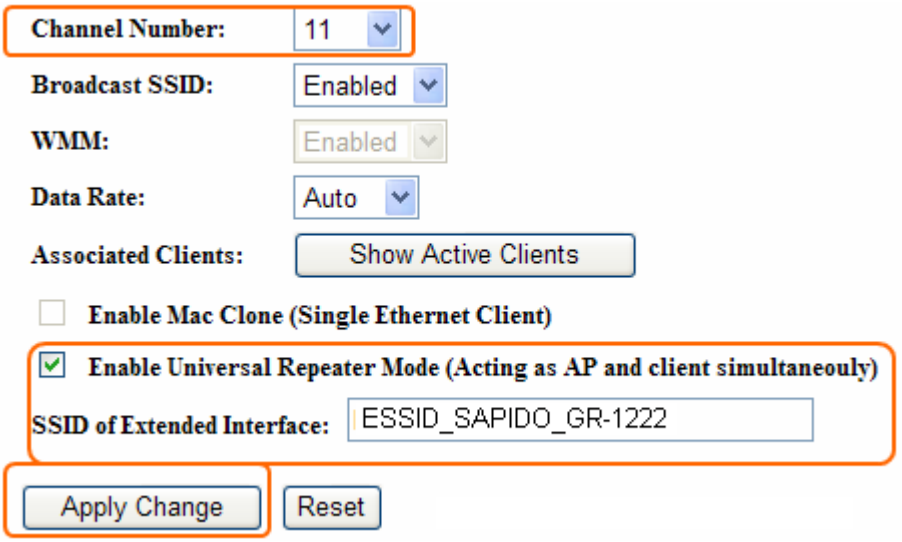
12. **Enable Mac Clone (Single Ethernet Client)**

    Clone the MAC address for ISP to identify.

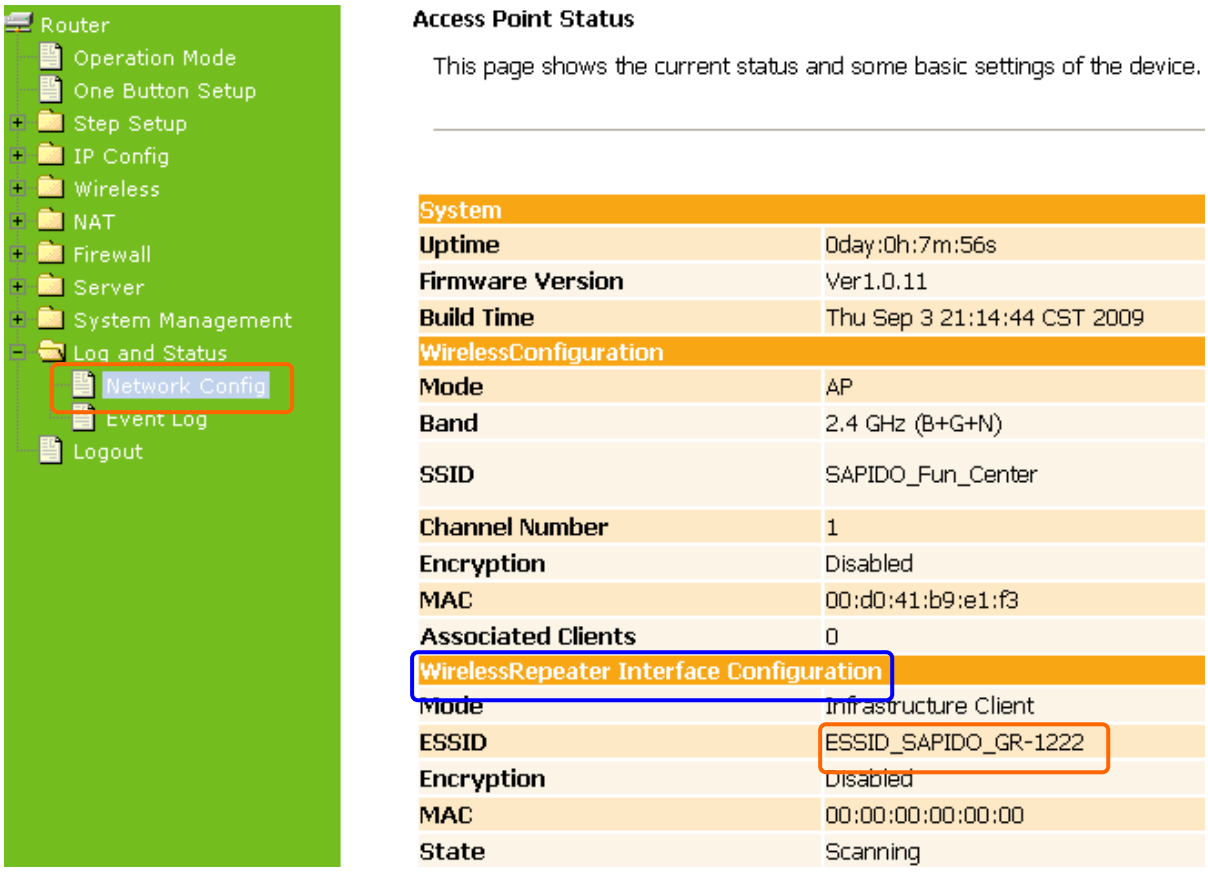
13. **Enable Universal Repeater Mode (Acting as AP and Client simultaneously)**

    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.

14. SSID of Extended Interface

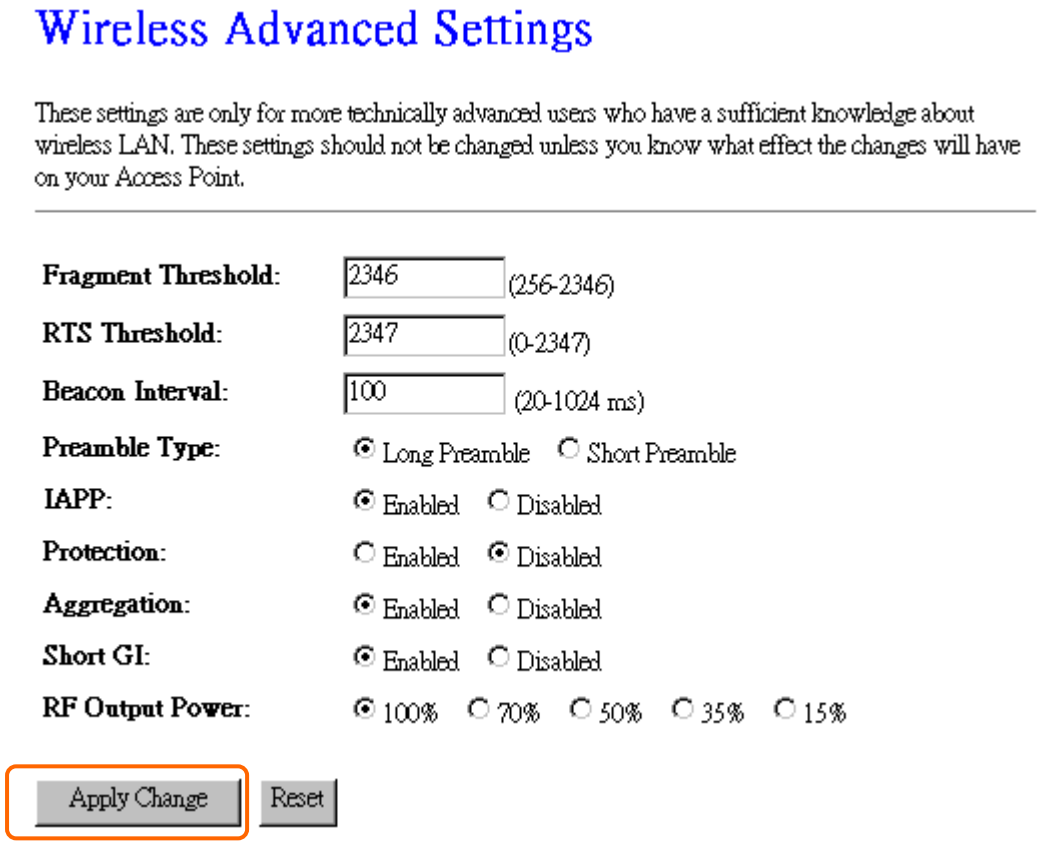
While linking the upper level device in wireless way, you can set SSID to give the bottom layer user search.

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.

5.2.2 Wireless Advanced Settings

Please follow the instructions to configure the Wireless settings.



1. **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
2. **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.
3. **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.

4. **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.

5. **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.

6. **Protection**

   Please select to enable wireless protection or not.

7. **Aggregation**

   Enable this function will combine several packets to one and transmit it. It can reduce the problem when mass packets are transmitting.

8. **Short GI**

   Users can get better wireless transmission efficiency when they enable this function.

9. **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%.

10. **Apply Changes & Reset**

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

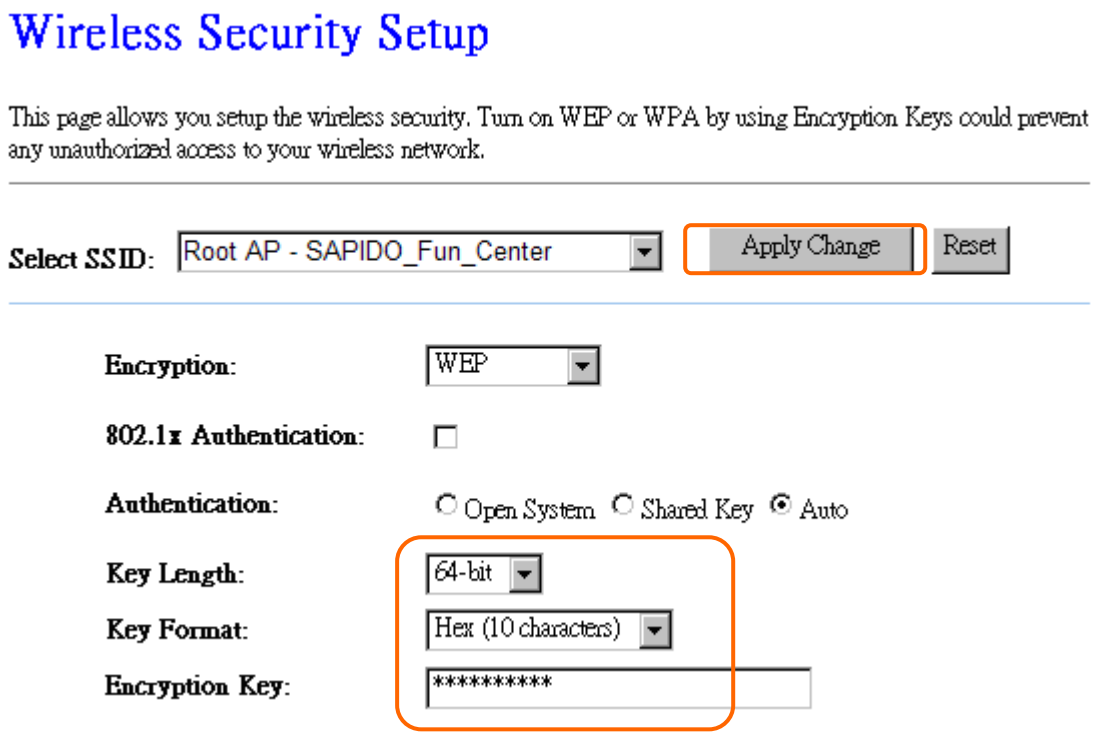
5.2.3 Wireless Security Setup

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

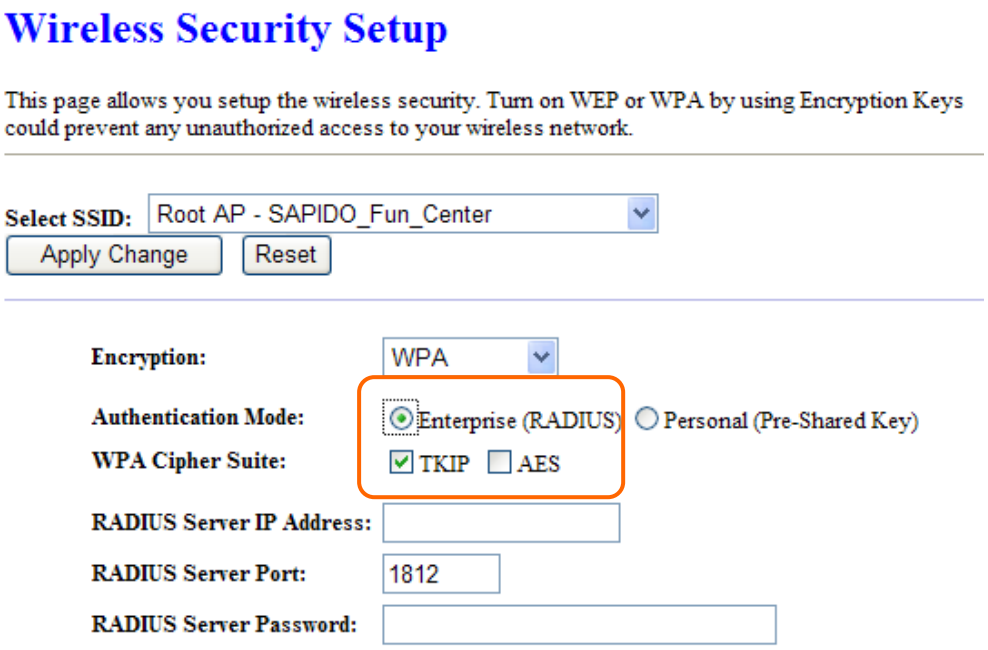
It is a safety system by using authentication to protect your wireless network. Please choose between WEP 64bits and WEP 128bits.

2. Encryption – WPA（WPA, WPA2, and 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）

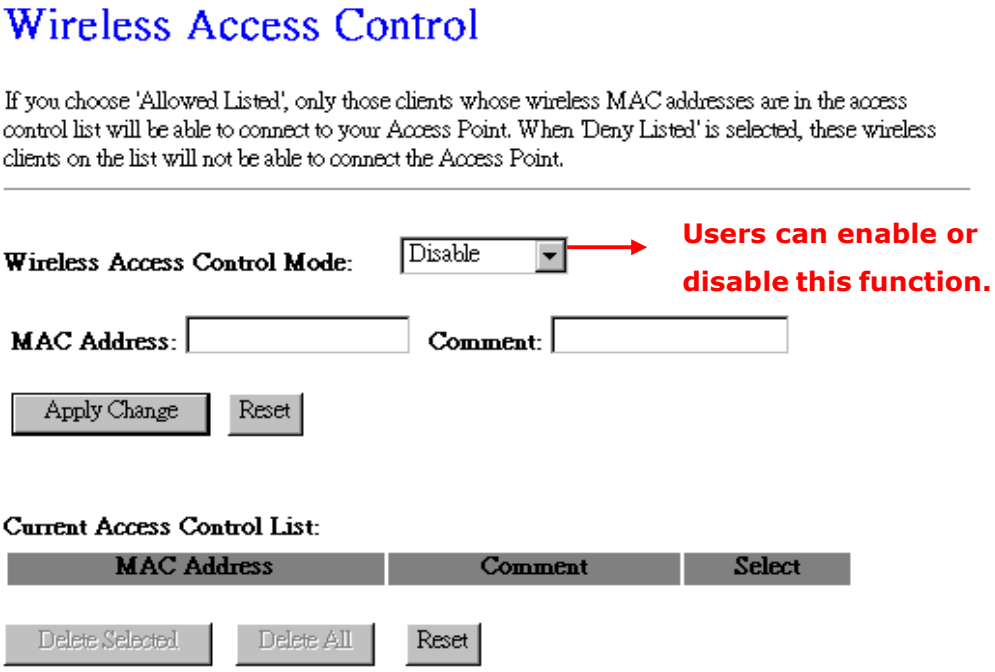
Pre-Shared Key type is ASCII Code; the length is between 8 to 63 characters. If the key type is Hex, the key length is 64 characters.

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.

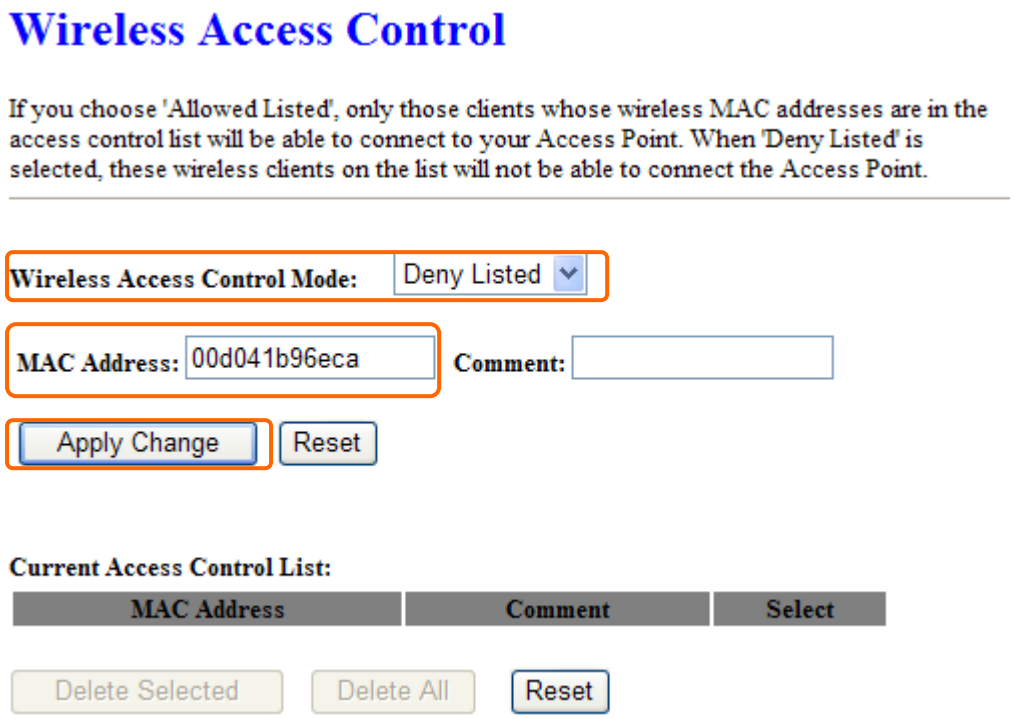
5.2.4 Wireless Access Control

The function of access control is to allow or deny users to access 3.5G Download 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.

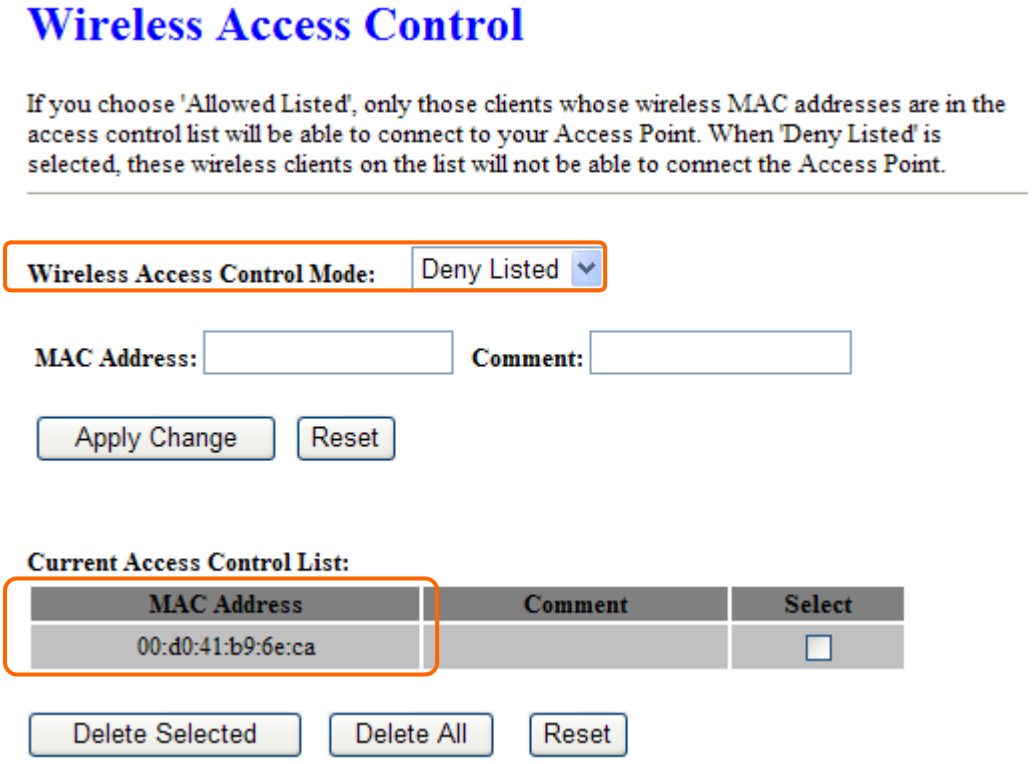


Take the wireless card as the example.

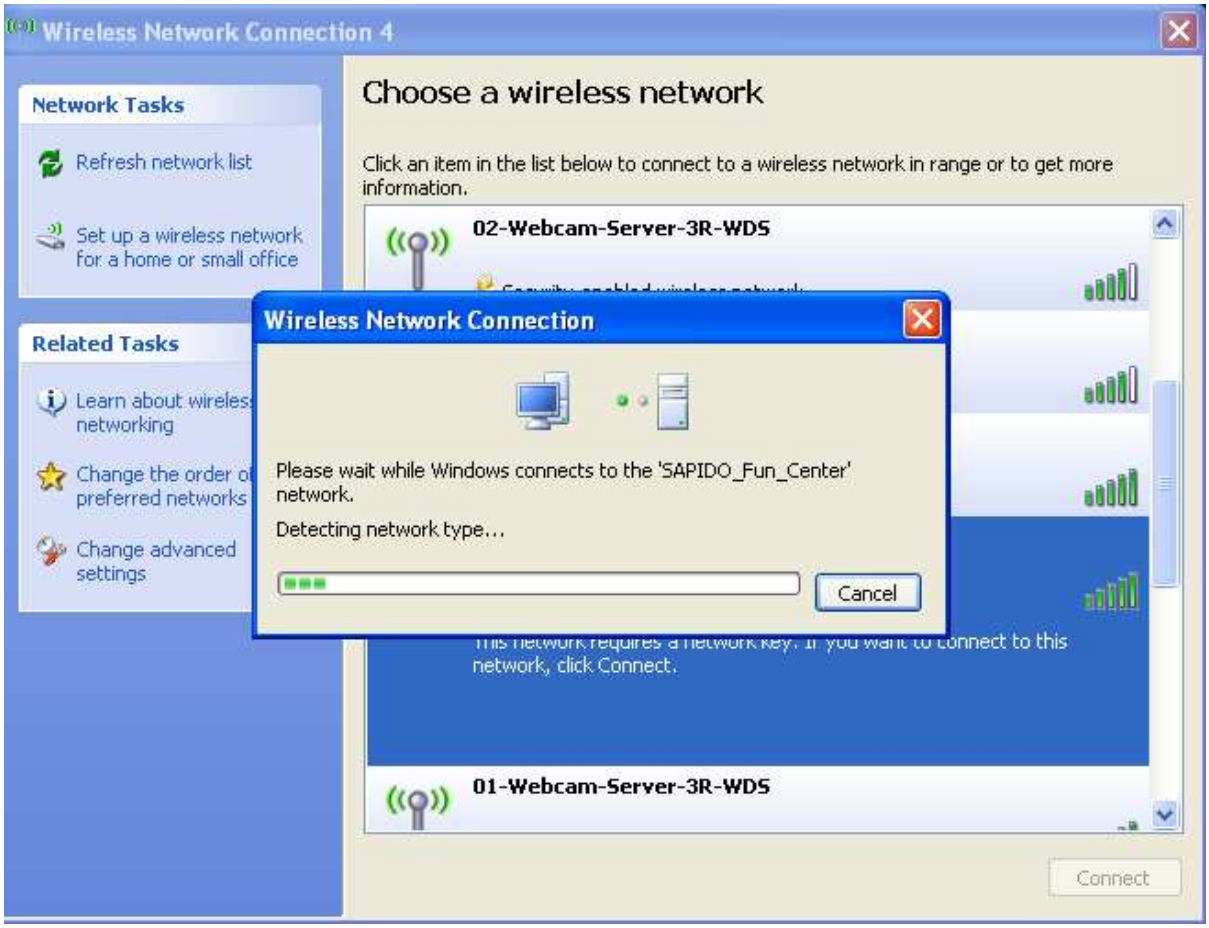
(1.) We will use **Deny Listed** as an example. Please select **Deny Listed** in **Wireless Access Control Mode** first, and then input the MAC address of wireless card in MAC Address field. Click **Apply Changes** to save the setting data.



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

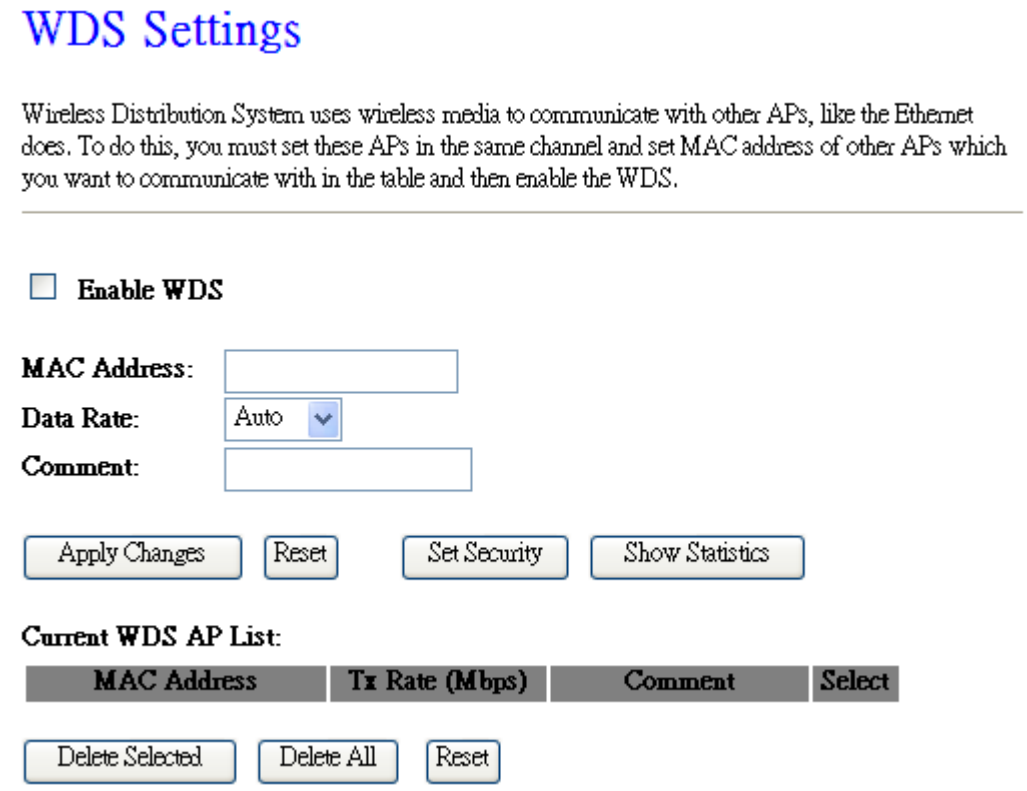


(3.) Please open wireless card UI and try to connect to this router. You will find out that the connection request will be denied.

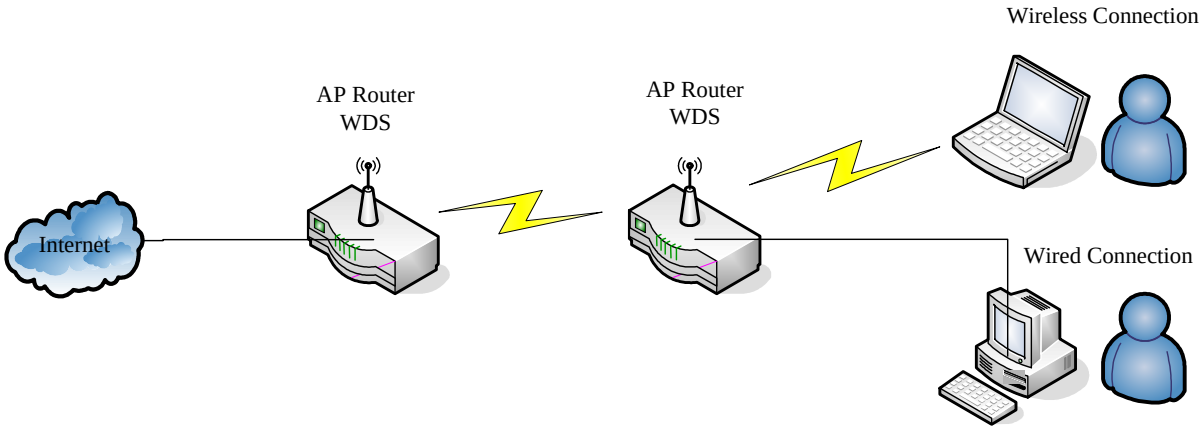

Wireless Network Connection 4
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
02-Webcam-Server-3R-WDS
Wireless Network Connection
Please wait while Windows connects to the 'SAPIDO_Fun_Center' network.
Detecting network type...
Cancel
network, click Connect.
01-Webcam-Server-3R-WDS
Connect

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.



*The following figure is the explanation.

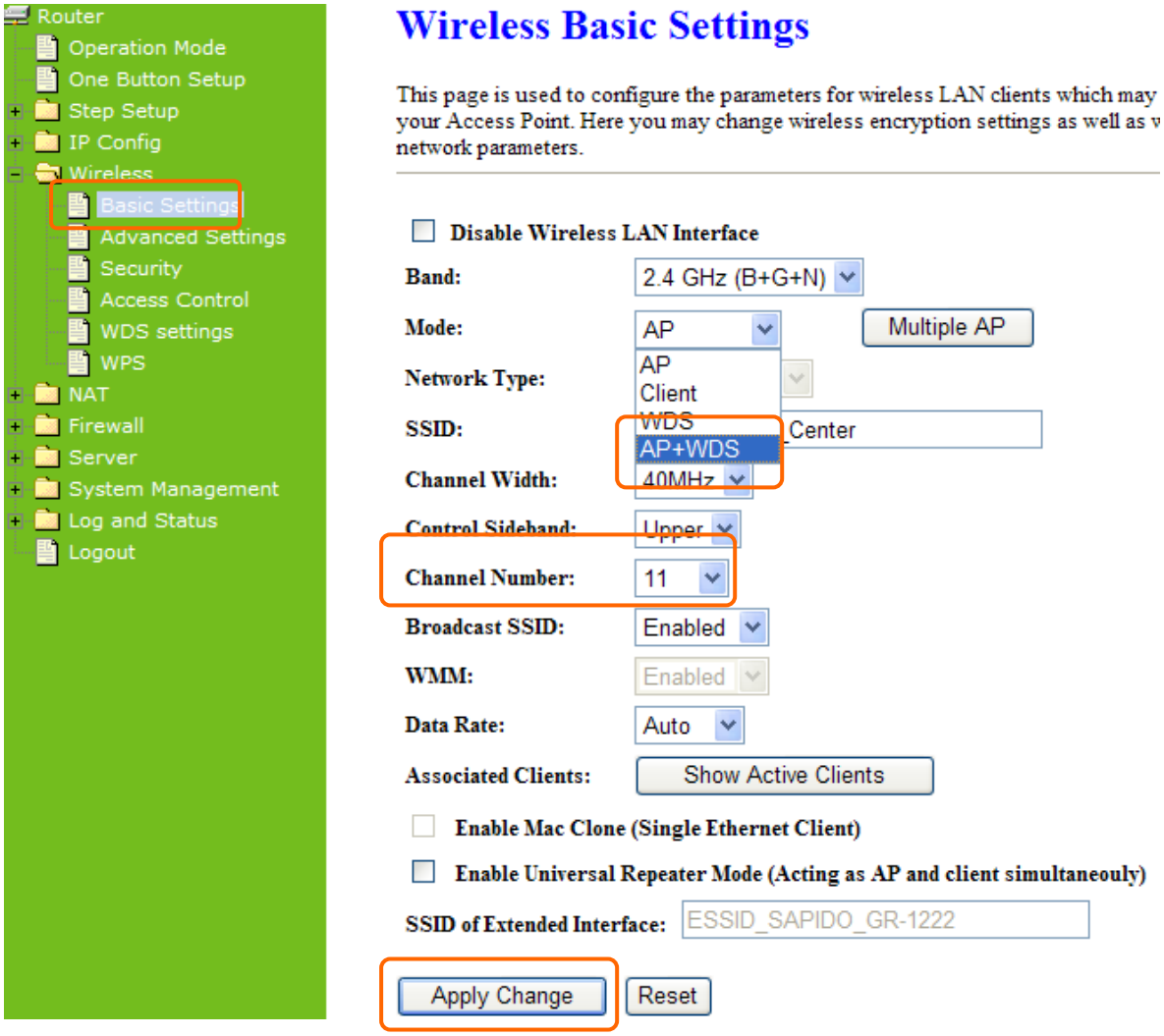


*Please follow the instructions to setup the connection.

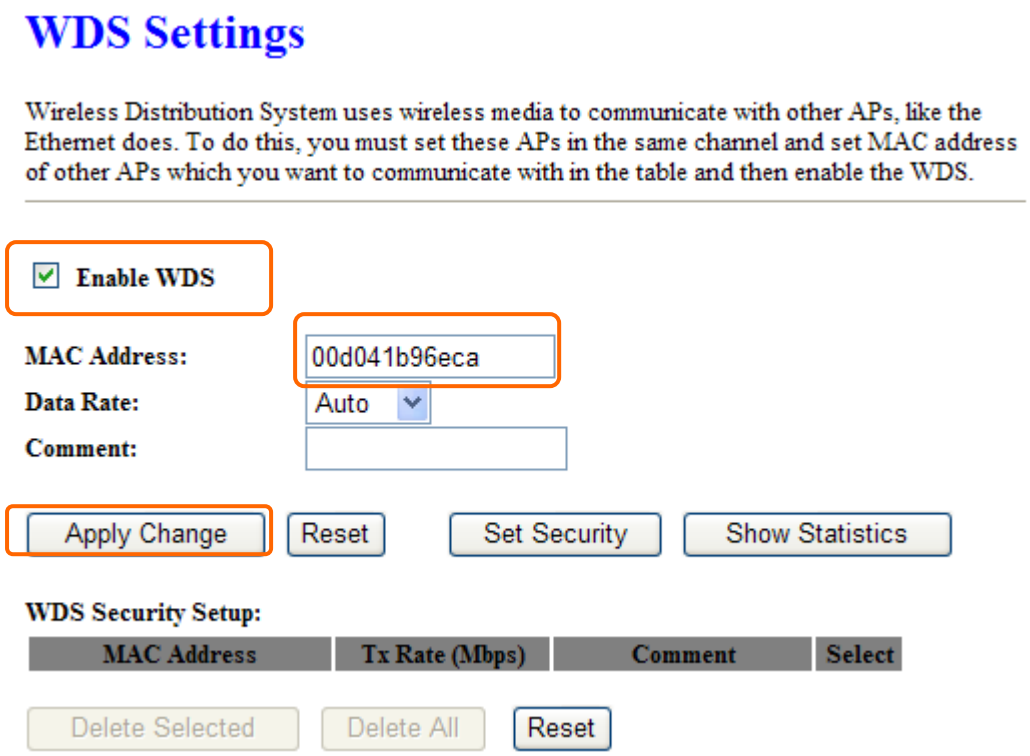
(1.) Please check the MAC address and Channel number of the upper level device.

System	
Uptime	0day:0h:4m:37s
Firmware Version	Ver1.0.3
Build Time	Fri Jul 24 18:31:11 CST 2009
WirelessConfiguration	
Mode	AP
Band	2.4 GHz (B+G+N)
SSID	SAPIDO_Fun_Center
Channel Number	11
Encryption	Disabled
MAC	00:d0:41:b9:e1:f3
Associated Clients	1

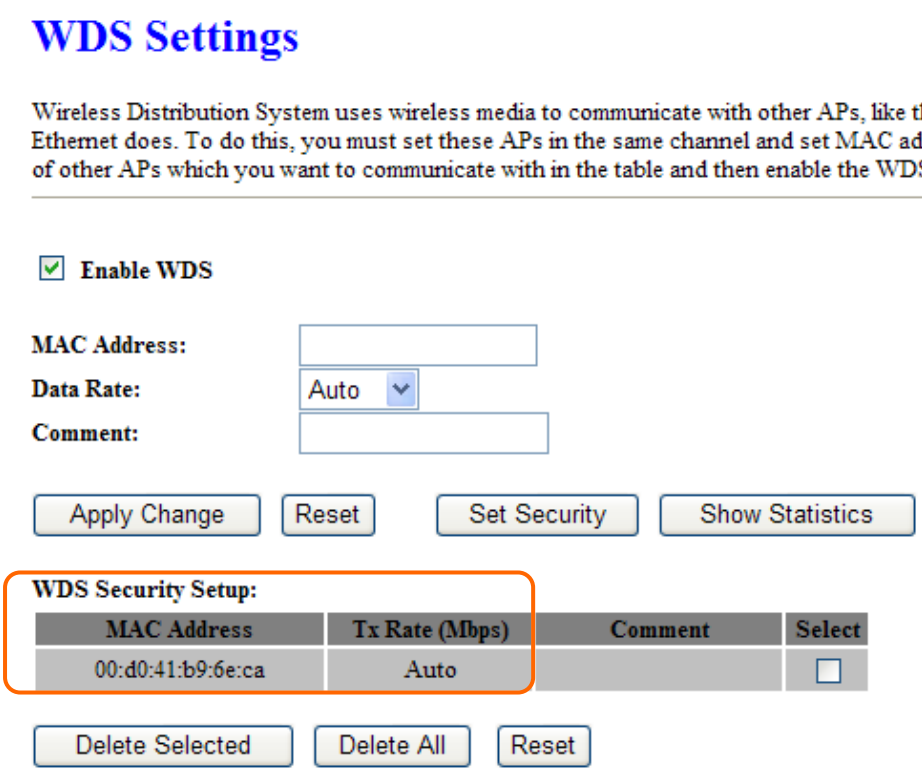
(2.) Enter the **Wireless Basic Settings** page, select **AP+WDS** mode, and then select the **Channel Number**. Click **Apply Changes** to save the setting data.



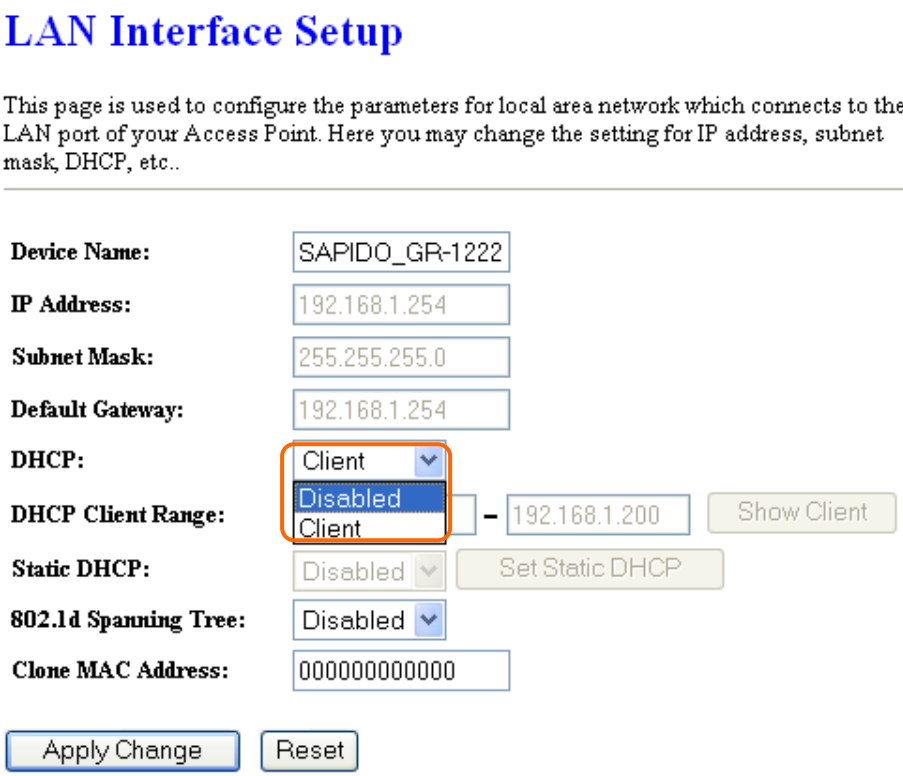
(3.) Enter the **WDS Settings** page, select **Enable WDS**, and then input the MAC address of the upper level device. Click **Apply Changes** to save the setting data.



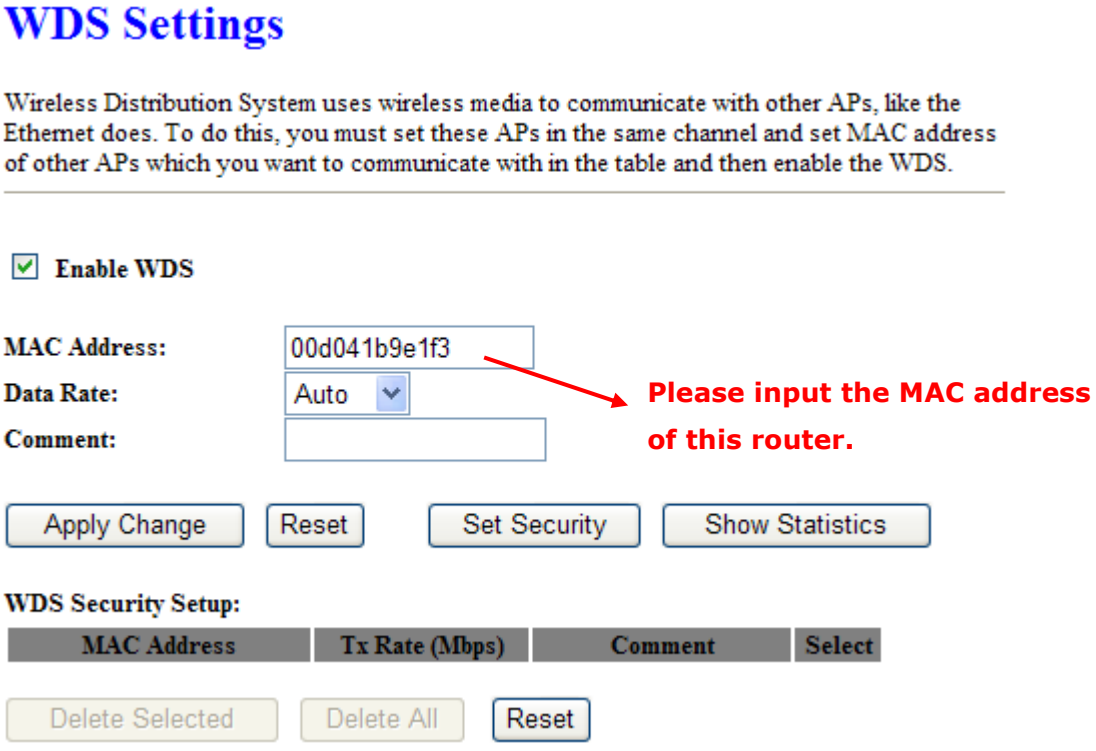
(4.) When the time counts down to 0, you will see the MAC address of the upper level device displaying on **Current WDS AP List**.



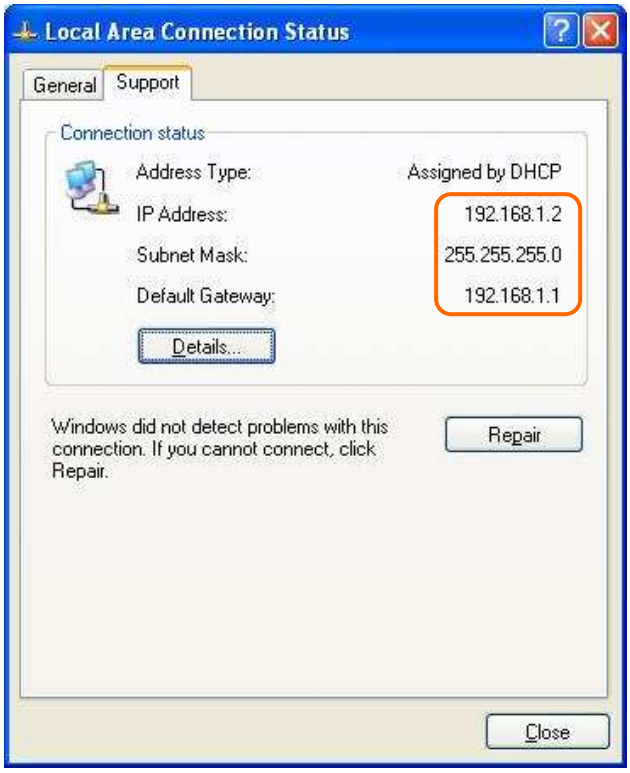
(5.) Head back to **LAN Interface**, disable **DHCP** option, and then click **Apply Changes** to save the setting data.



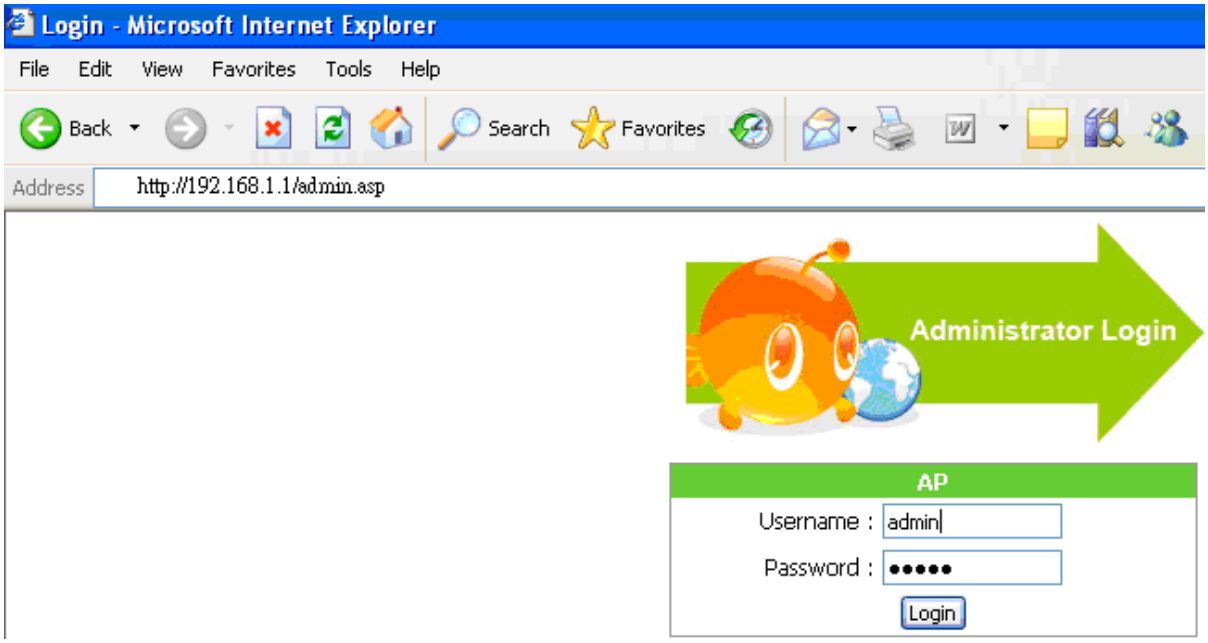
(6.) The MAC address of the upper level device is going to setup like the MAC address of the router. Enter the upper level device's **WDS settings** page, and input router's MAC address. Click **Apply Changes** to save the setting data.



(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

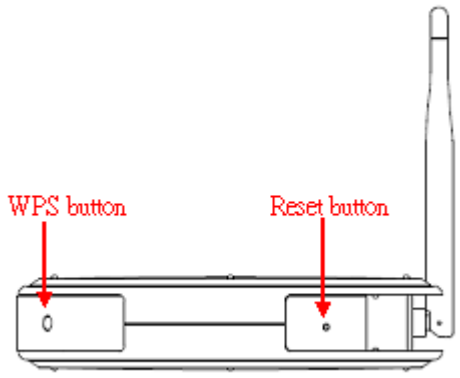
Wi-Fi Protected Setup, it can simplify the procedures of wireless encryption between N+ 3.5G NES Server and wireless network card. If the wireless network card also supports WPS function, users can activate WPS auto-encryption to speed up the procedures.

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 N+ 3.5G NES Server .



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.

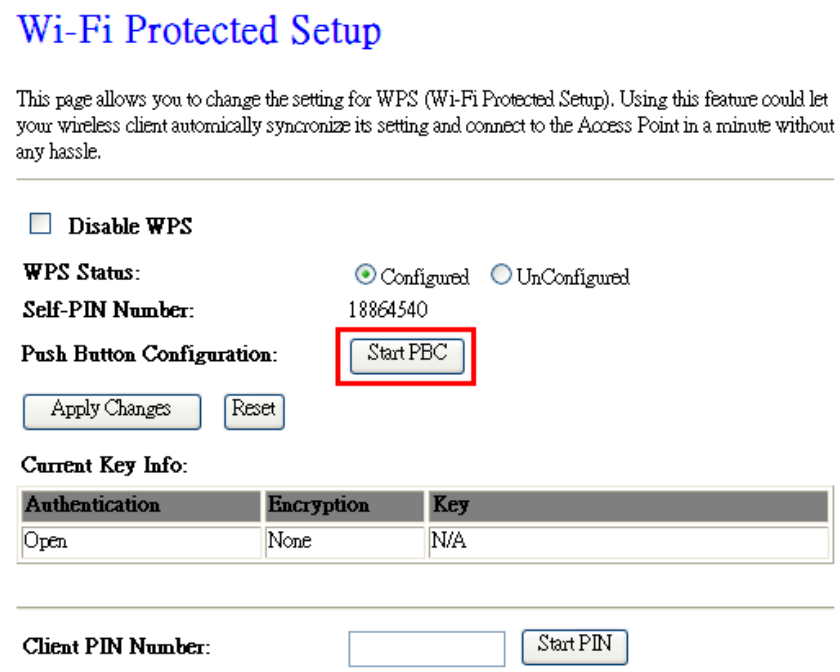
On the other hand, users need to input the information of the wireless card into the register interface. It might lead to the failure of connection, if users make mistakes on inputting. On PBC model, users only need to click the WPS button on

both sides to make a connection. It is easier to operate.

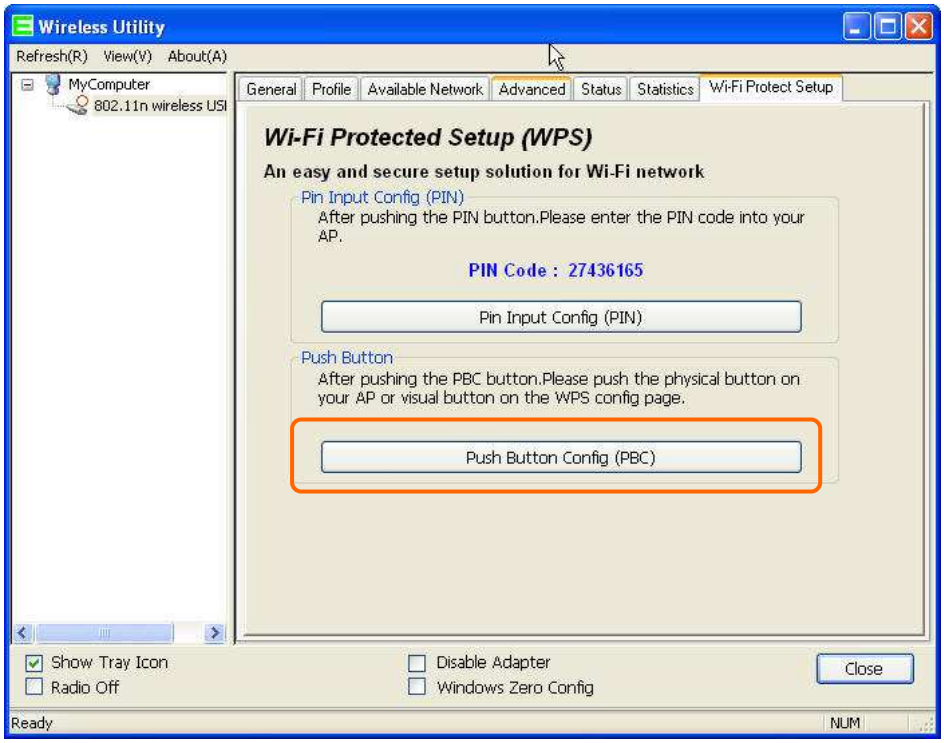
This page supports **Start PBC** and **Start PIN**; please follow the instructions to operate.

* Start PBC:

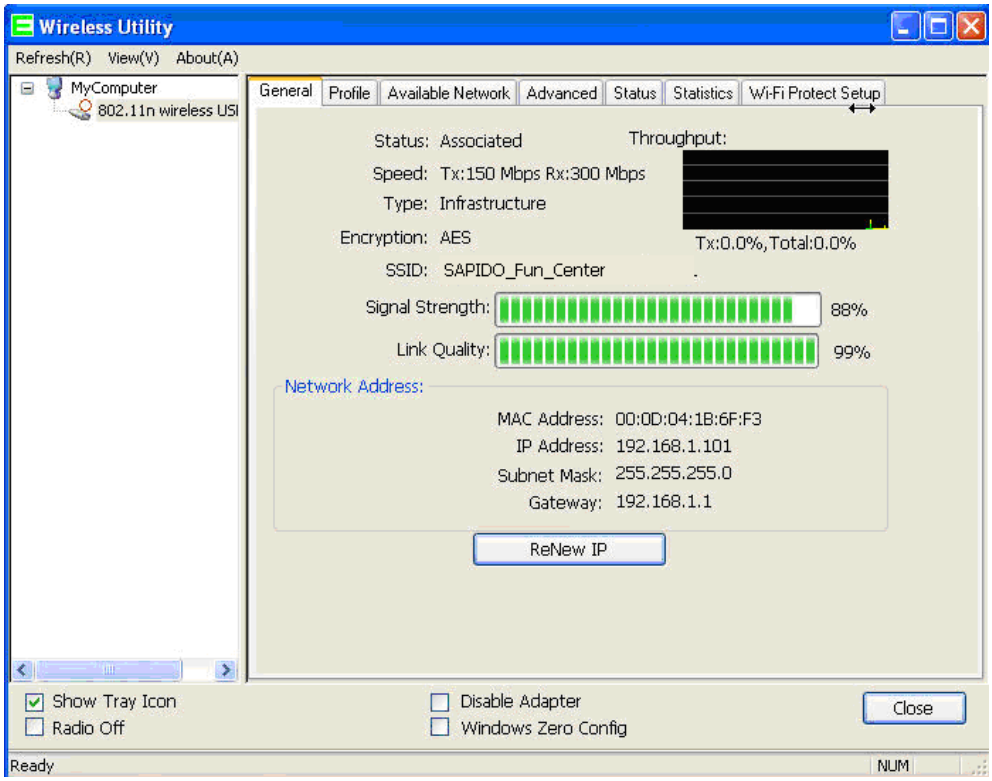
(1.) Please click **Start PBC** to connect to the wireless network card.



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

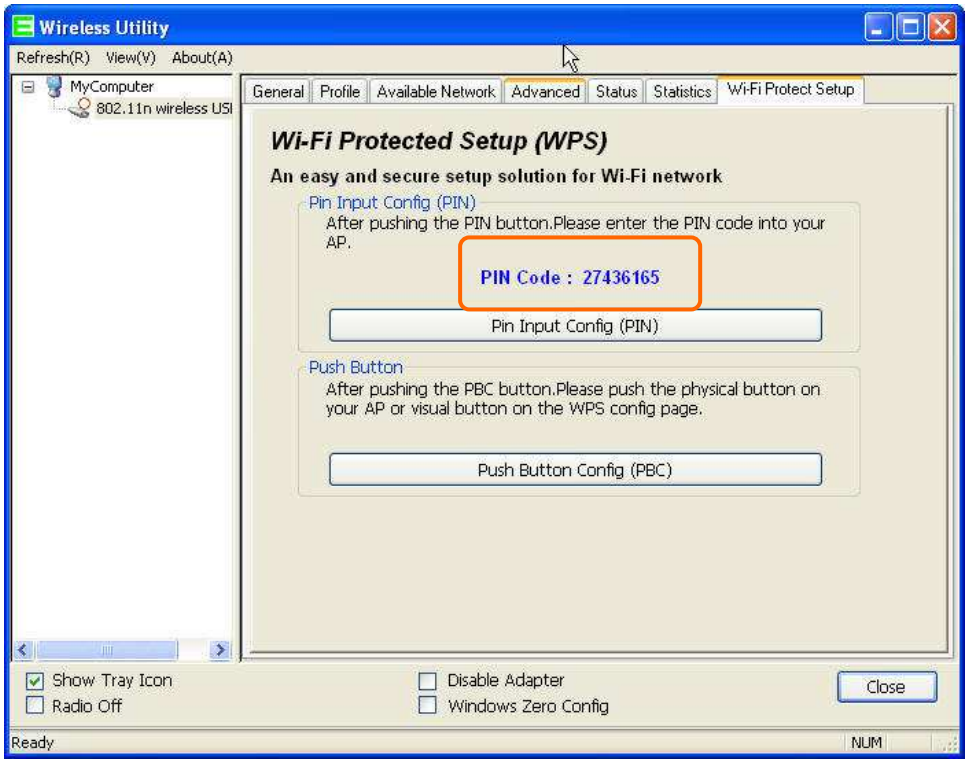


(3.) When you see **Network Address**, it means the WPS connection between wireless card and 3.5G Mobile Router is established.

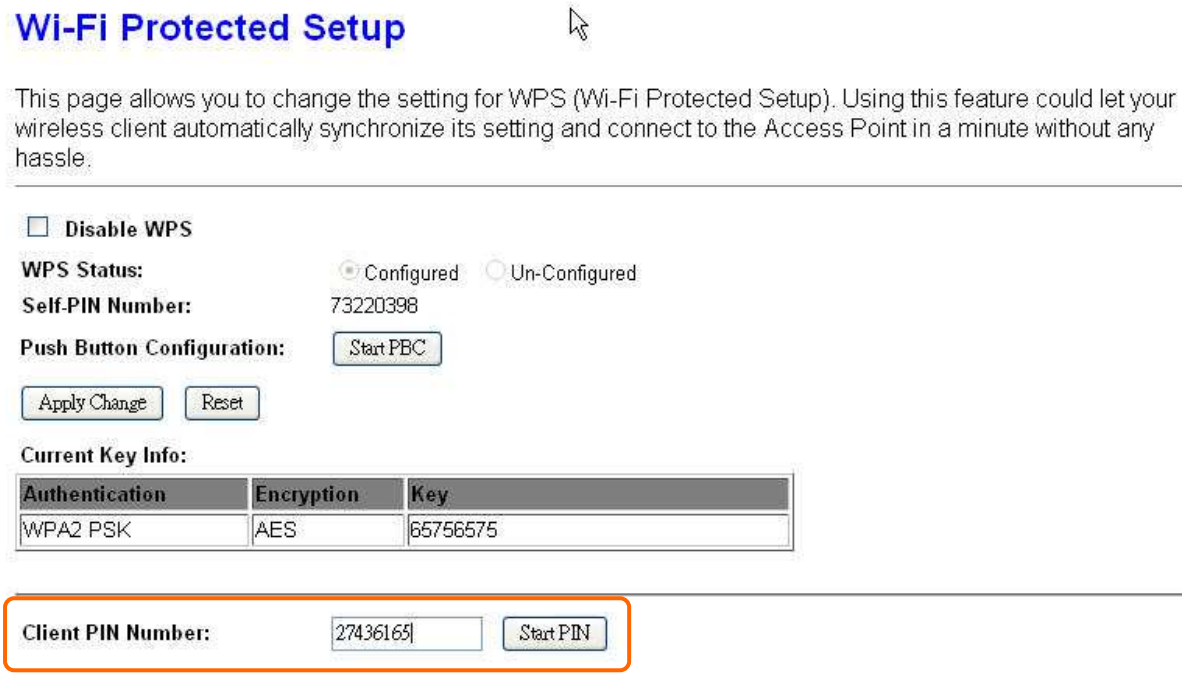


* Start PIN:

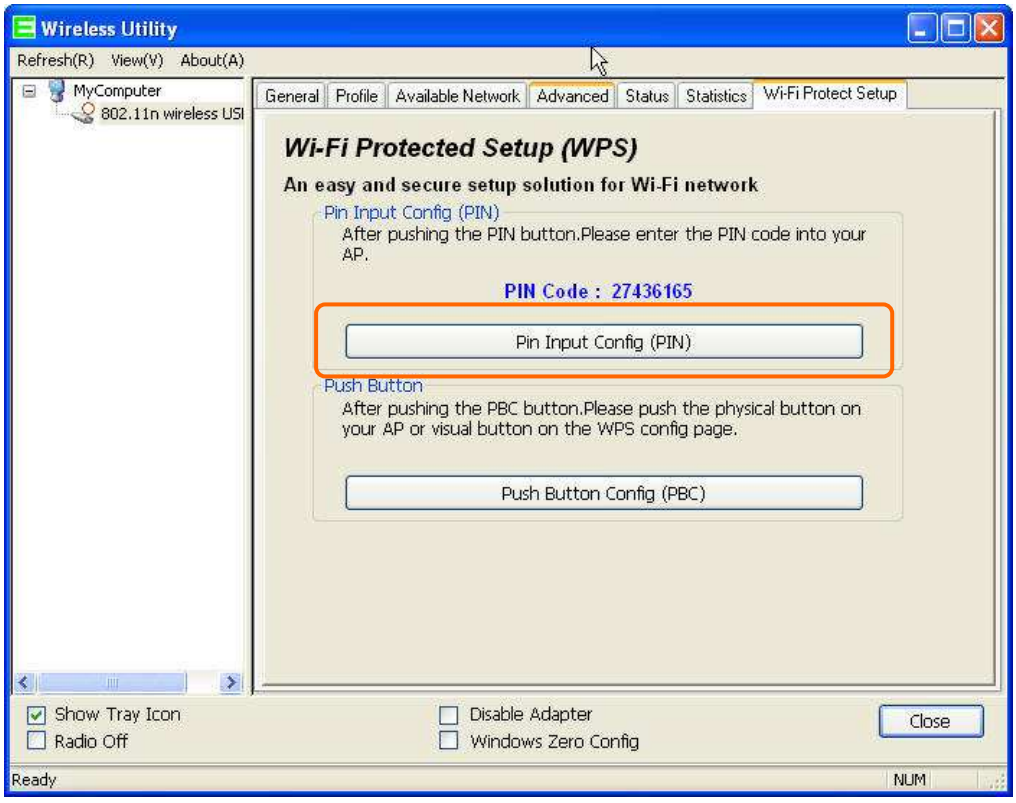
(1.) Please open the configuration page of the wireless card, and write it down.



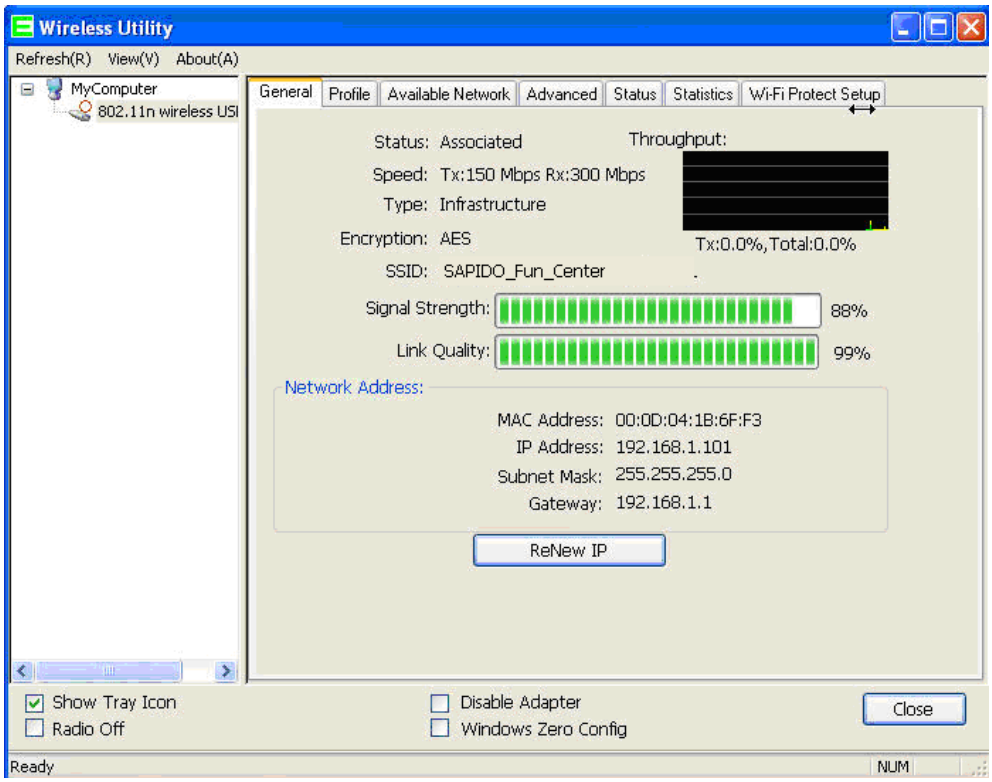
(2.) Open the Wi-Fi Protected Setup configuration page of 3.5G Mobile Router, input the PIN number from the wireless card then click **Start PIN**.



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



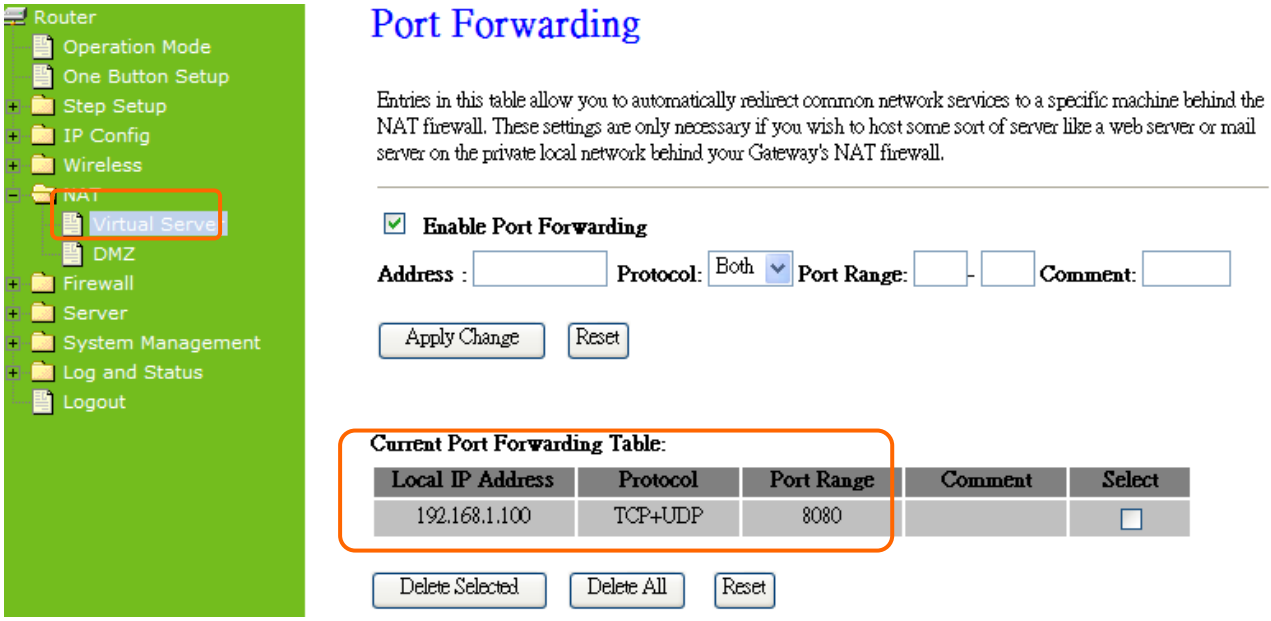
(4.) When you see **Network Address**, it means the WPS connection between wireless card and 3.5G Mobile Router is established.



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.



1. Enable Port Forwarding

Please select to enable Port Forwarding service or not.

2. IP Address

Please specify the IP address which receives the incoming packets.

3. Protocol

Please select the protocol type.

4. Port Range

Please enter the port number, for example 80-80 or 20-22。

5. Comment

You can add comments for this port forwarding rule.

6. 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. Current Port Forwarding Table

It will display all port forwarding regulation you made.

8. Delete Selected & Delete All

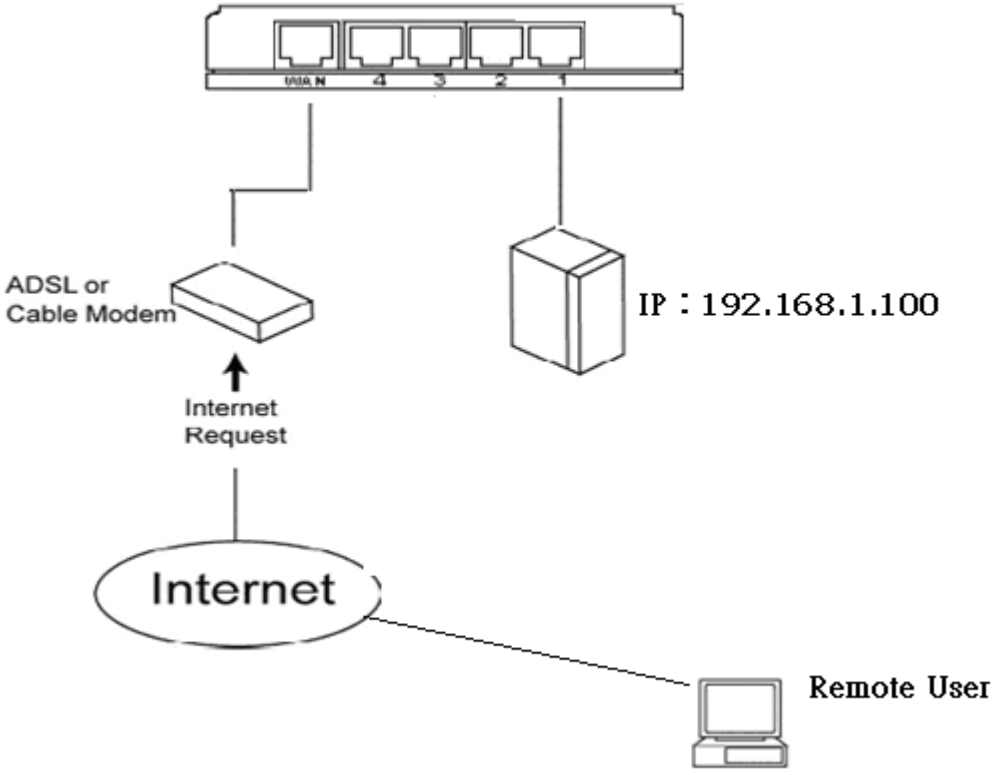
Click **Delete Selected** will delete the selected item. Click **Delete All** will delete all items in this table.

9. 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.

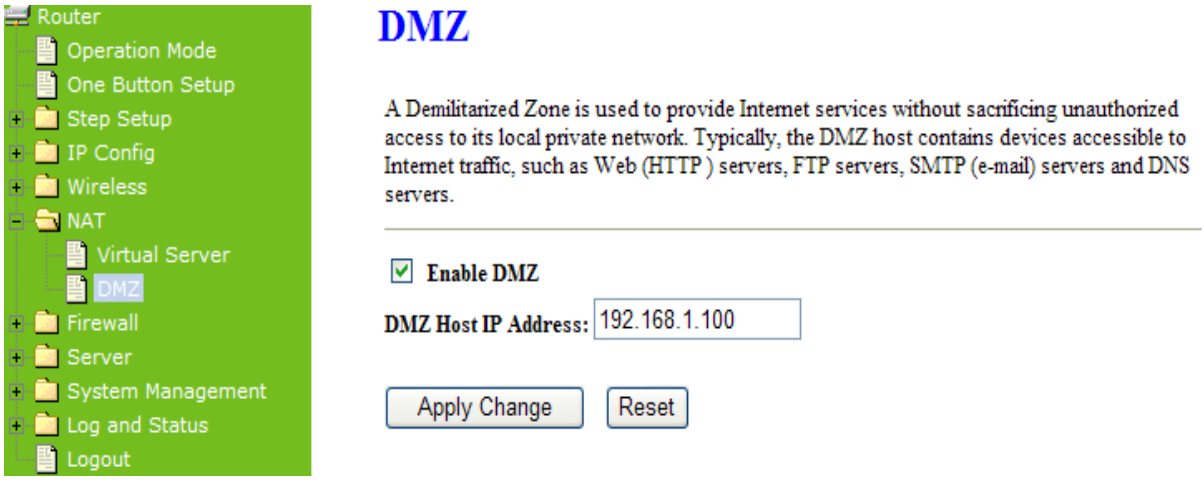
Configuration:
Private IP: 192.168.1.100
Port: 80 - 80
Type: TCP+UDP



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.



1. Enable DMZ

It will enable the DMZ service if you select it.

2. DMZ Host IP Address

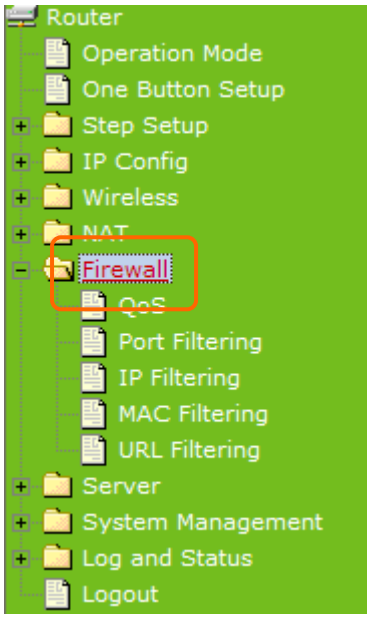
Please enter the specific IP address for DMZ host.

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.

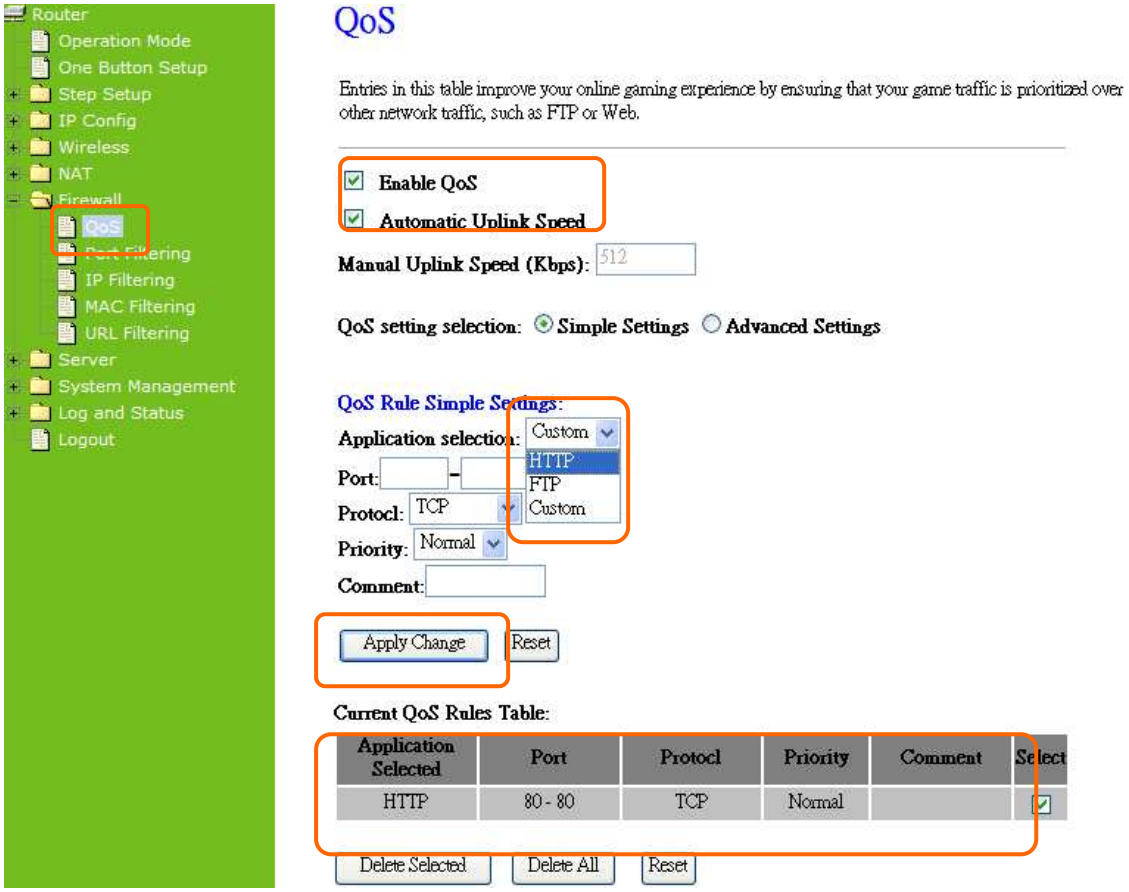
5.4 Firewall

The Firewall service includes Port Filtering, IP Filtering, MAC Filtering, and URL Filtering.



5.4.1 QoS

It is used to manage the bandwidth of upstream and downstream. The bandwidth management can limit the traffic by following the user needs. QoS is a control system, it provides different priorities for different users or data flow. It can also guarantee the performance of data flow to achieve a certain standard. The guarantee of QoS is very important for limited network, especially for streaming multimedia applications like VoIP or IPTV. These applications often require a fixed rate and are more sensitive to delay.



1. Enable QoS

Please select to enable QoS service.

2. Automatic Uplink Speed

Users can select this option to manage uplink speed automatically.

3. Qos setting selection

Users can select between simple settings or advanced settings.

4. Application selection

Please select the type of application.

5. Port

Please enter the port number.

6. Protocol

Please select the protocol.

7. Priority (1 is highest)

Please select the priority of this regulation. (1 is the most priority.)

8. Comment

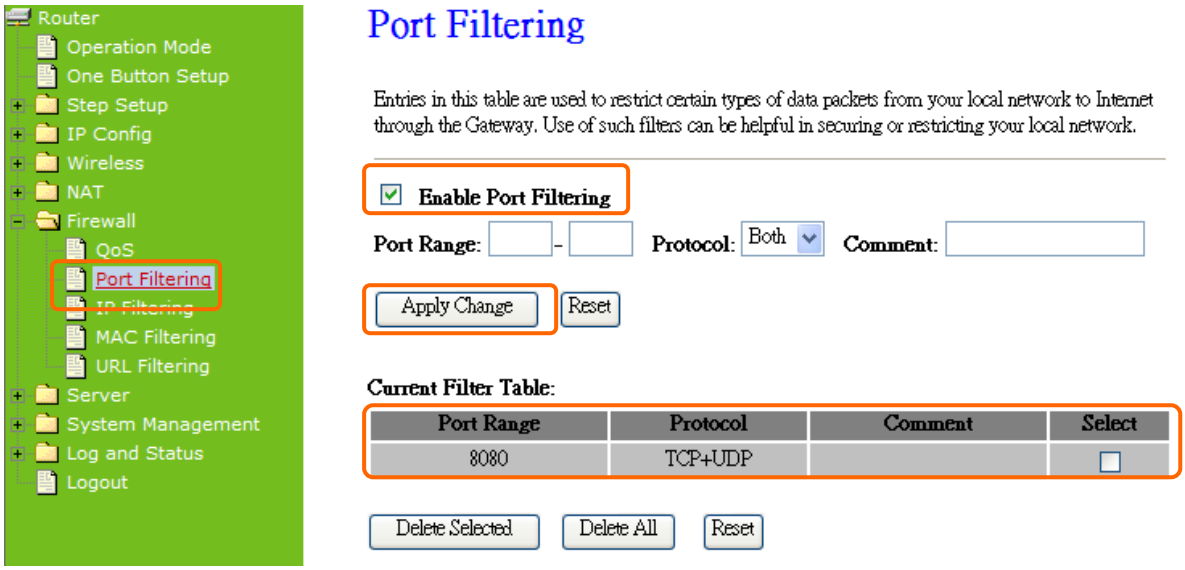
You can add comments for this regulation.

9. Apply Changes

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

5.4.2 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.



1. Enable Port Filtering

Please select **Enable Port Filtering** to filter ports.

2. Port Range

Please enter the port number that needs to be filtered.

3. Protocol

Please select the protocol type of the port.

4. Comment

You can add comments for this regulation.

5. 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. Current Filter Table

It will display all ports that are filtering now.

7. Delete Selected & Delete All

Click **Delete Selected** will delete the selected item. Click **Delete All** will delete all items in this table.

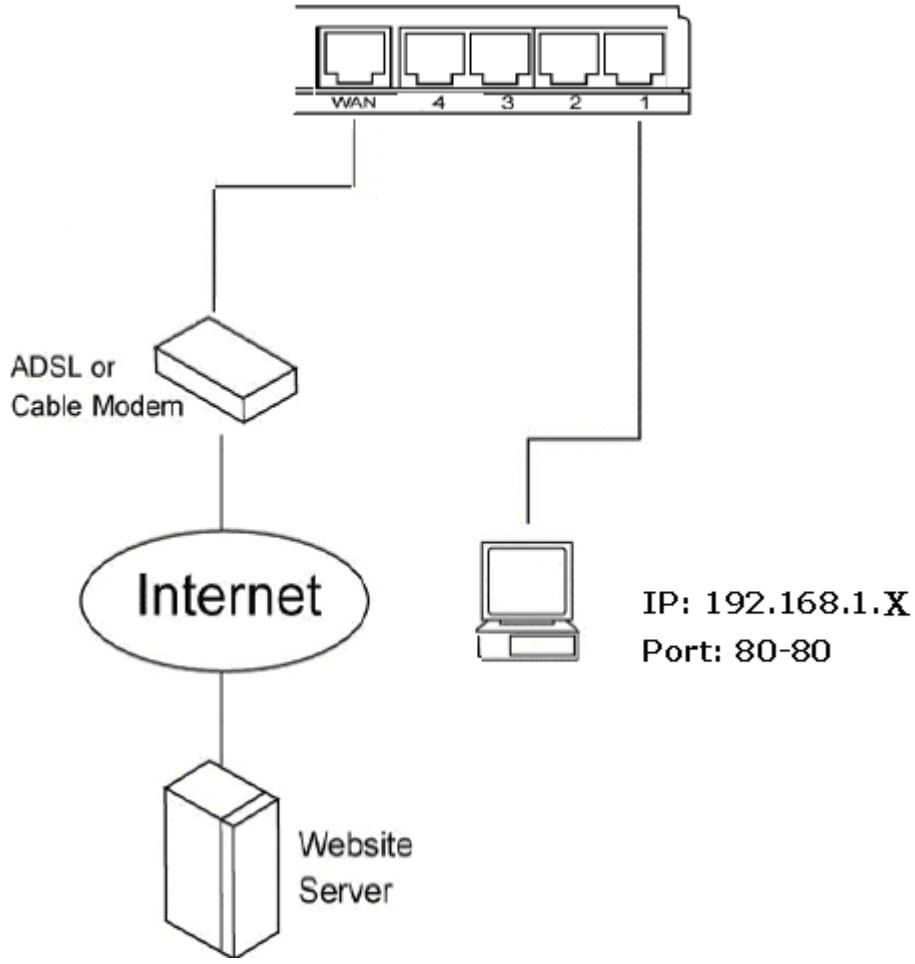
8. Reset

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

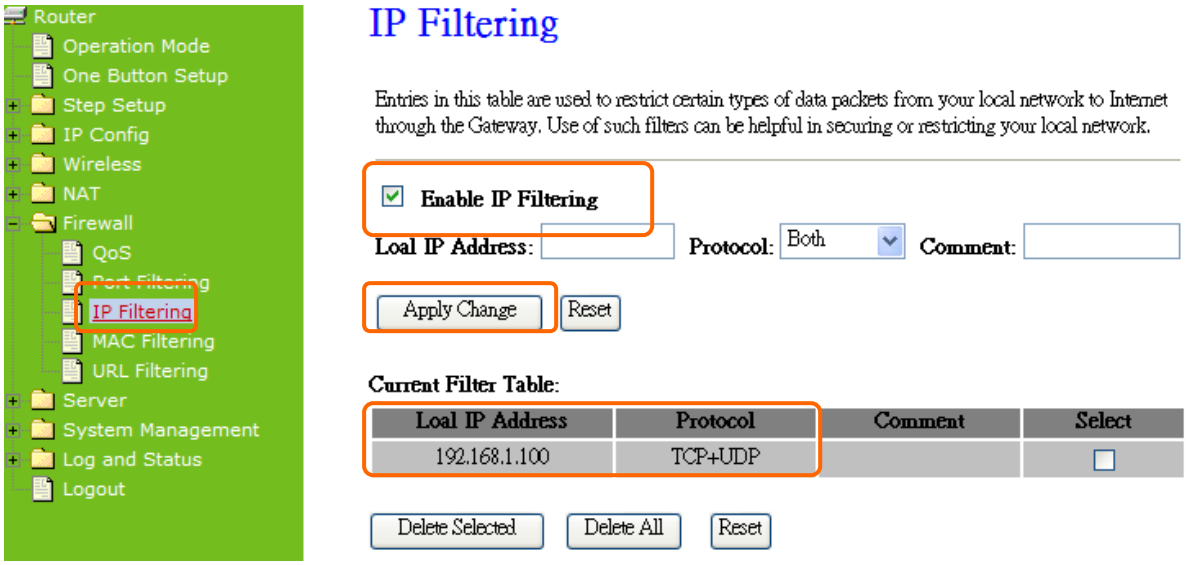
Port: 80-80



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

5.4.3 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.



1. Enable IP Filtering

Please select **Enable IP Filtering** to filter IP addresses.

2. Local IP Address

Please enter the IP address that needs to be filtered.

3. Protocol

Please select the protocol type of the IP address.

4. Comment

You can add comments for this regulation.

5. 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. Current Filter Table

It will display all IP addresses that are filtering now.

7. Delete Selected & Delete All

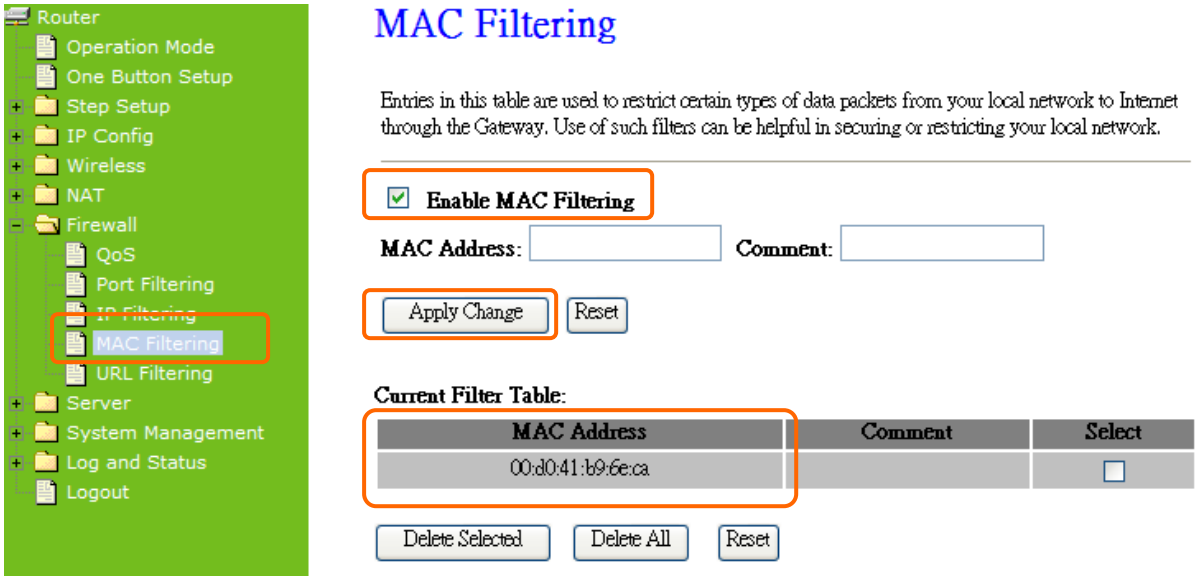
Click **Delete Selected** will delete the selected item. Click **Delete All** will delete all items in this table.

8. Reset

You can click **Reset** to cancel.

5.4.4 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.



1. Enable MAC Filtering

Please select **Enable MAC Filtering** to filter MAC addresses.

2. MAC Address

Please enter the MAC address that needs to be filtered.

3. Comment

You can add comments for this regulation.

4. 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. Current Filter Table

It will display all MAC addresses that are filtering now.

6. Delete Selected & Delete All

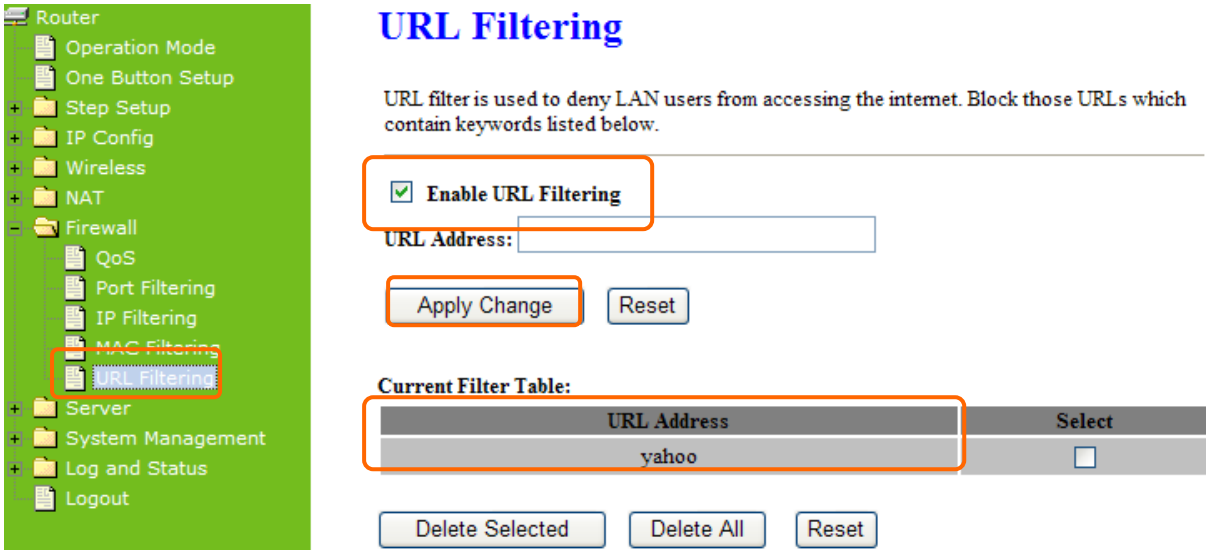
Click **Delete Selected** will delete the selected item. Click **Delete All** will delete all items in this table.

7. Reset

You can click **Reset** to cancel.

5.4.5 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.



1. Enable URL Filtering

Please select **Enable URL Filtering** to filter web pages.

2. URL Address

Please enter the URL of the web page. For example: www.google.com.

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.

4. Current Filter table

It will display all web pages that are filtering now.

5. Delete Selected & Delete All

Click **Delete Selected** will delete the selected item. Click **Delete All** will delete all items in this table.

6. Reset

You can click **Reset** to cancel.

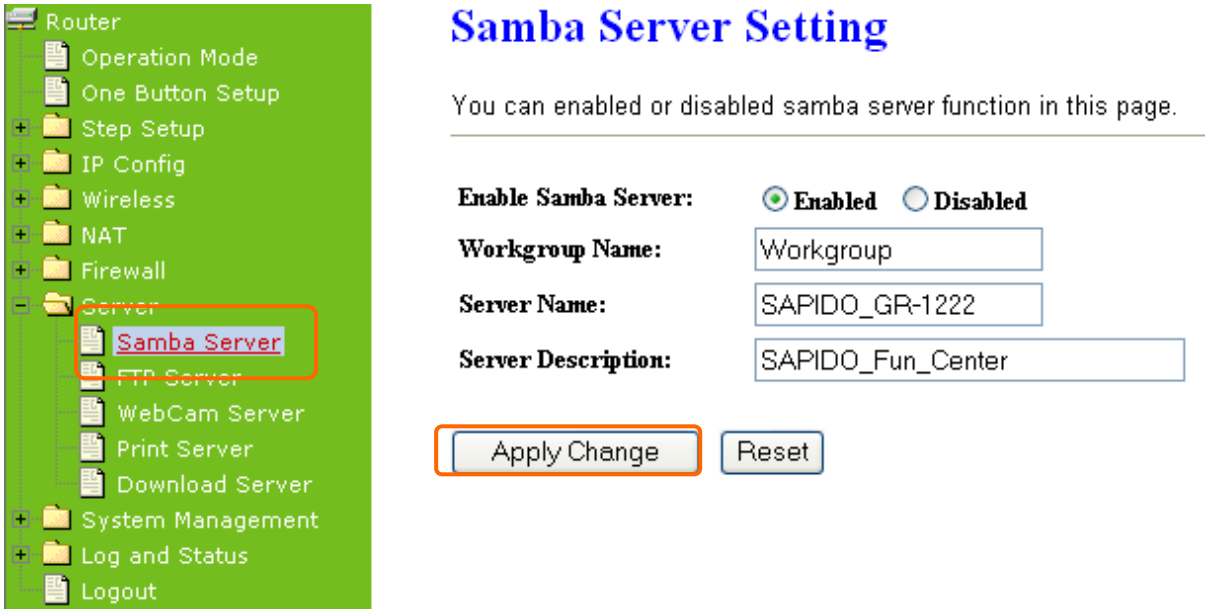
Note: This function is not in effect when the Visual Server is enabled. Please disable Visual Server before activate filter.

5.5 Server

N+ 3.5G NES Server 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.



1. **Enable Samba Server**
   Enable or disable this function.
2. **Workgroup Name**
   Input the workgroup name, default is "**WORKGROUP**".
3. **Server Name**
   Input the server name, default is "**SAPIDO_GR-1222**".
4. **Server Description**
   You can input description of the server.
5. **Apply & Cancel**
   Click on **Apply** button to finish setting. Click on **Cancel** button to clean the setting on this page.

5.5.1.1 How to enter the sharing folder

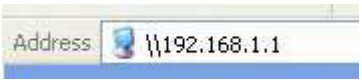
Please follow below steps.

Step 1:

Please click the "**start**", and select "**My Computer**".

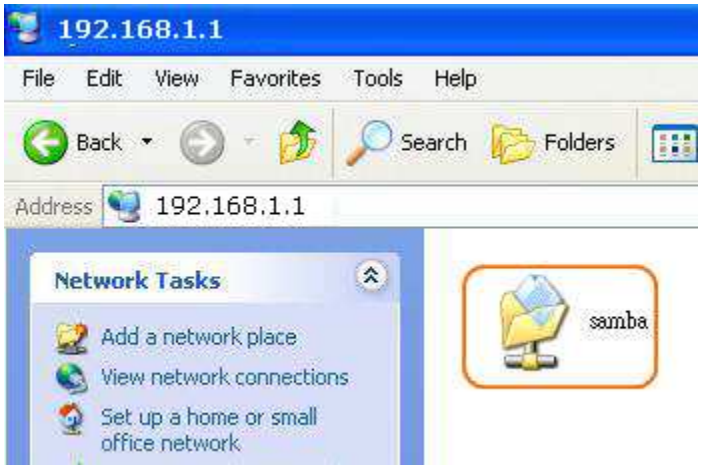
Step 2:

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



Step 3:

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

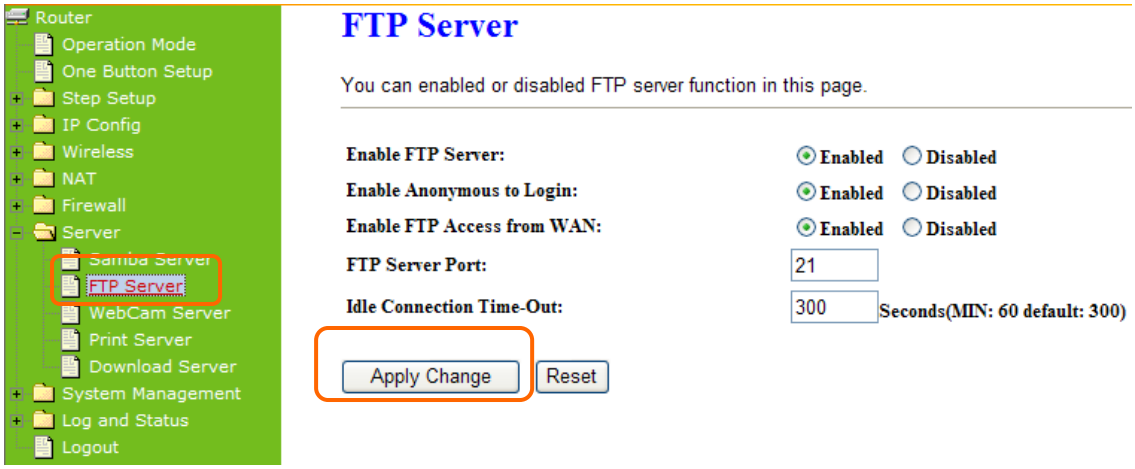


Note：

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.



1. **Enable FTP Server**

   Select to "**Enable**" or "**Disable**" FTP server.

2. **Enable Anonymous to Login**

   Allow anonymous to login after check on Enable.

3. **Enable FTP Access from WAN**

   Allow FTP access from WAN side by checking on Enable for this item.

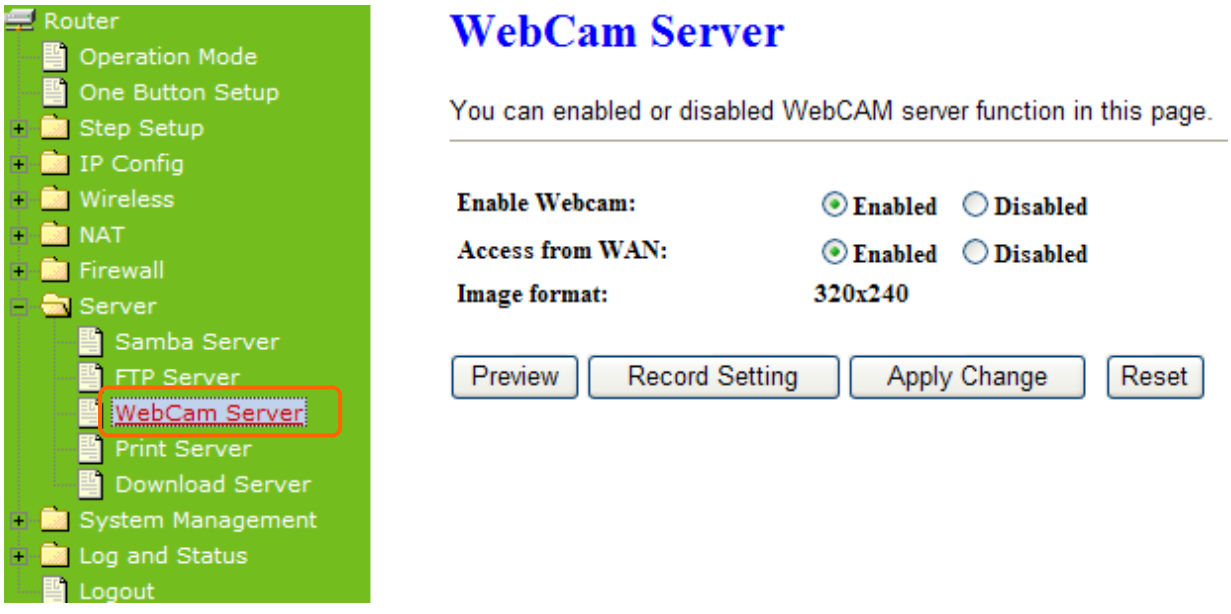
4. **FTP Server Port**
   The default is 21. Define the FTP command transfer service port. If you want to change this port number, remember to change the service port setting of your FTP client, also.
5. **Idle Connection Time-Out**
   When a specific time value is added, FTP Server will be de-activated if it has no activity within the time limit. The default is 300 seconds; the minimum is 60 seconds.
6. **Apply & Cancel**
   Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page.
7. **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.

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

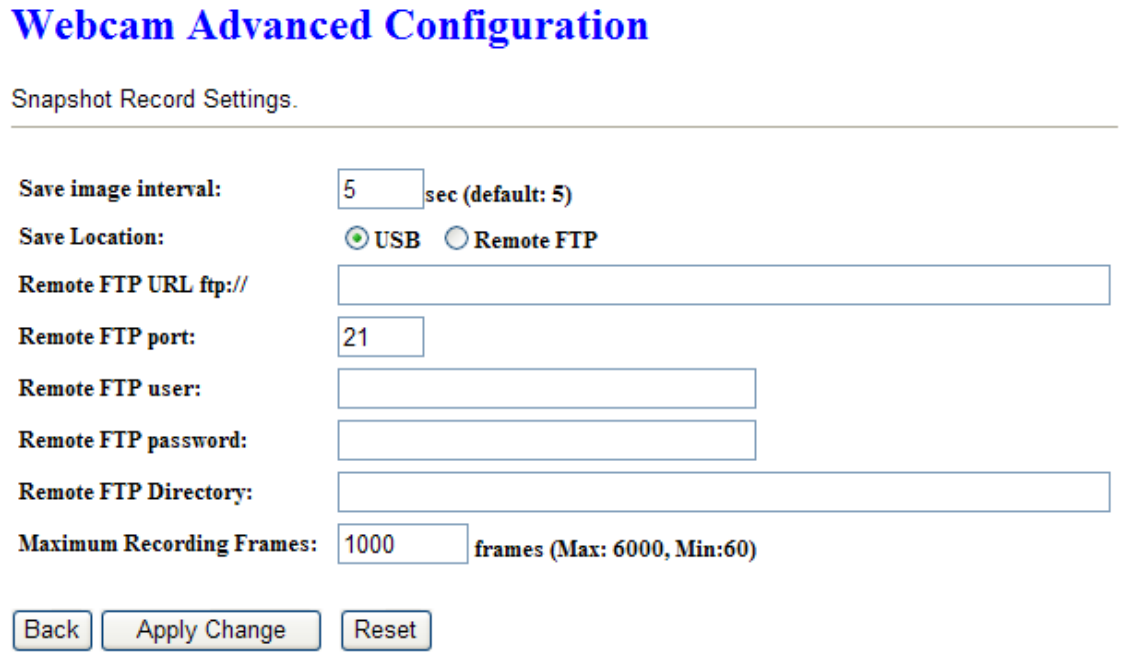


1. **Enable Webcam Server**
   Select to "**Enable**" or "**Disable**" webcam server.
2. **Access from WAN**
   Allow webcam can access from WAN side by checking on Enable for this item.

3. **Image format**
   The format is 320X240 pixels.
4. **Preview**
   Click on this button, you can preview the image from webcam.
5. **Record Setting**
   Please see the detail advance setting in "**5.5.3.2 Webcam Advanced Configuration**".
6. **Apply & Cancel**
   Click on **Apply** button to continue. Click on **Cancel** 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.



1. **Save image interval**
   For saving image, you can set the save interval time, the default value is 5 seconds.
2. **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.
3. **Remote FTP URL**
   Input the FTP URL for saving webcam image.
4. **Remote FTP port**
   Input the FTP port number under URL to save image.

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

5.5.3.3 Application for Web Camera

5.5.3.3.1 Web Camera Monitoring Application

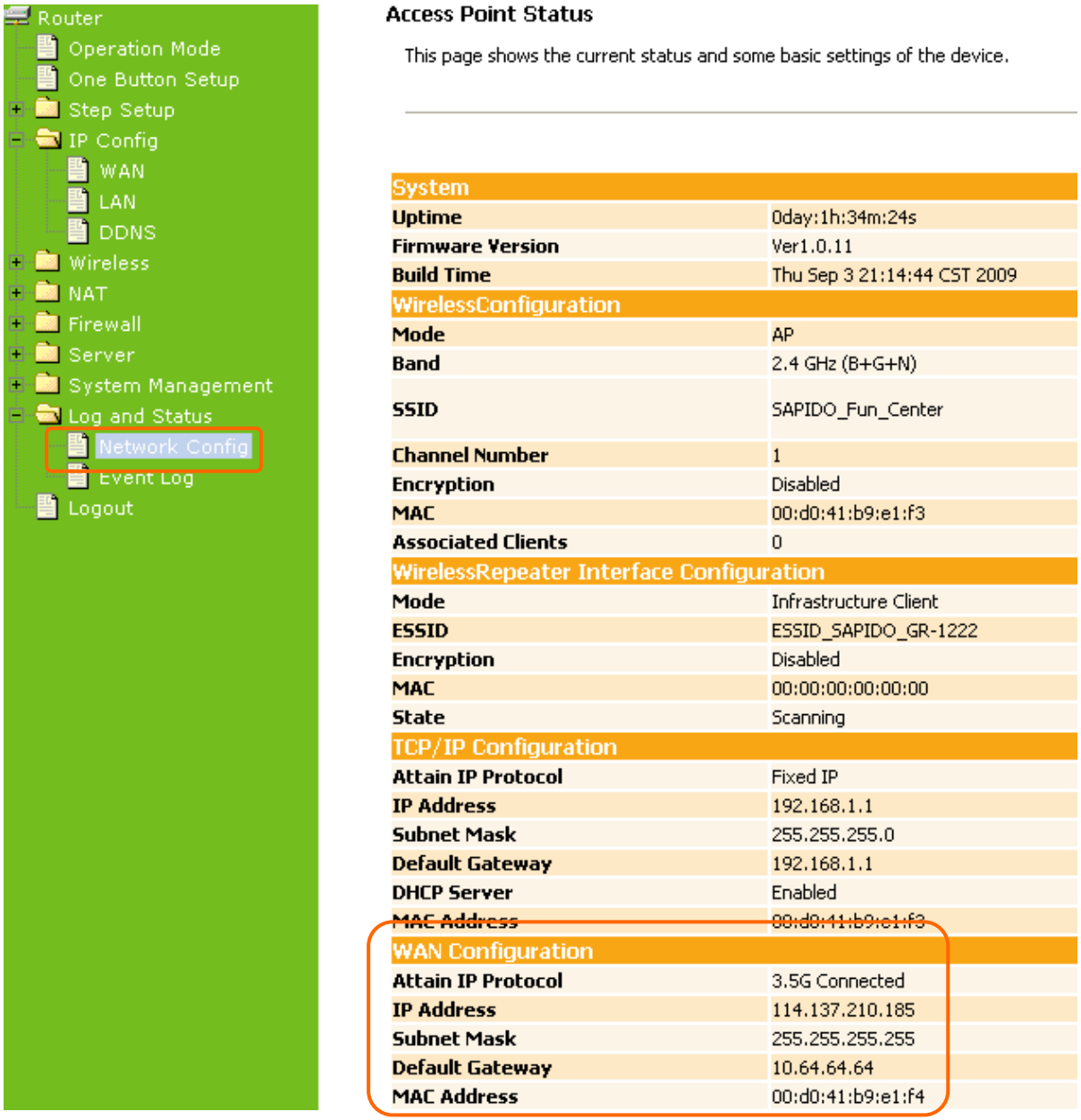
Monitor your home with a Webcam via N+ 3.5G NES Server. Take pictures via N+ 3.5G NES Server, also can do the monitoring or recording all images into the USB HDD for reviewing. Often marketed as surveillance tools for home or office security, network Webcams are now being employed by early adopters for 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.

5.5.3.3.1.1 Web Camera Monitoring via WAN connecting

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 192.168.2.51 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 "**Webcam**".

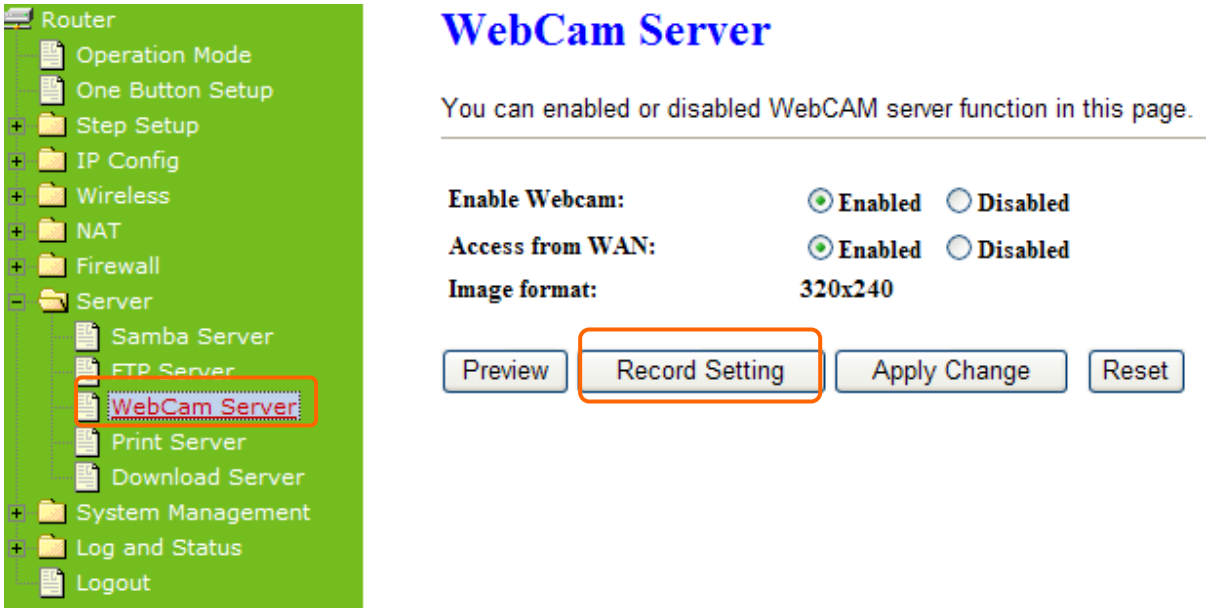
Click on Personal Panel to enter.

There will pop-up screen shows the image from web camera as example below.

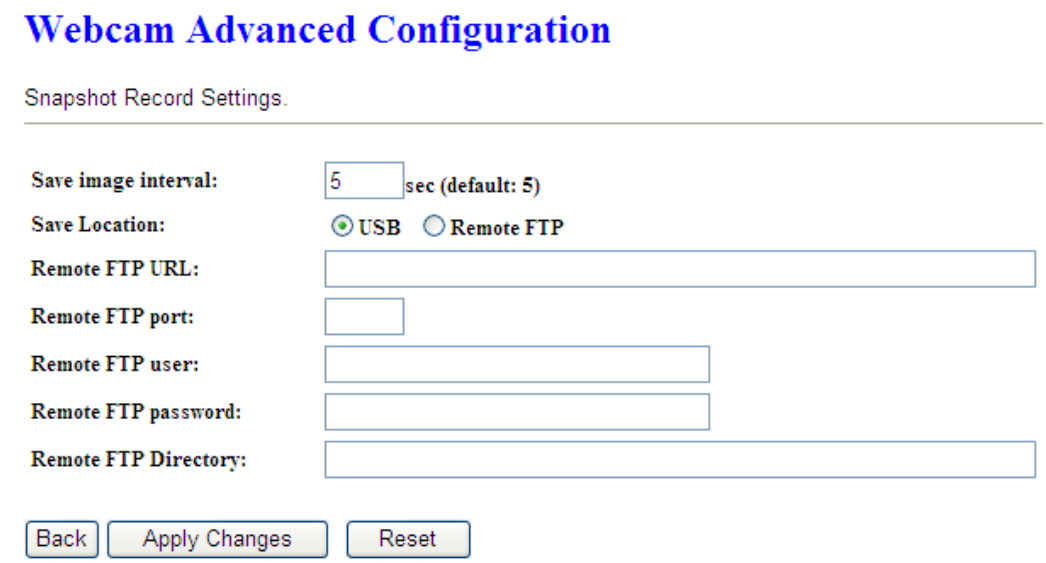
5.5.3.3.2 Web Camera Recording

5.5.3.3.2.1 Administrator

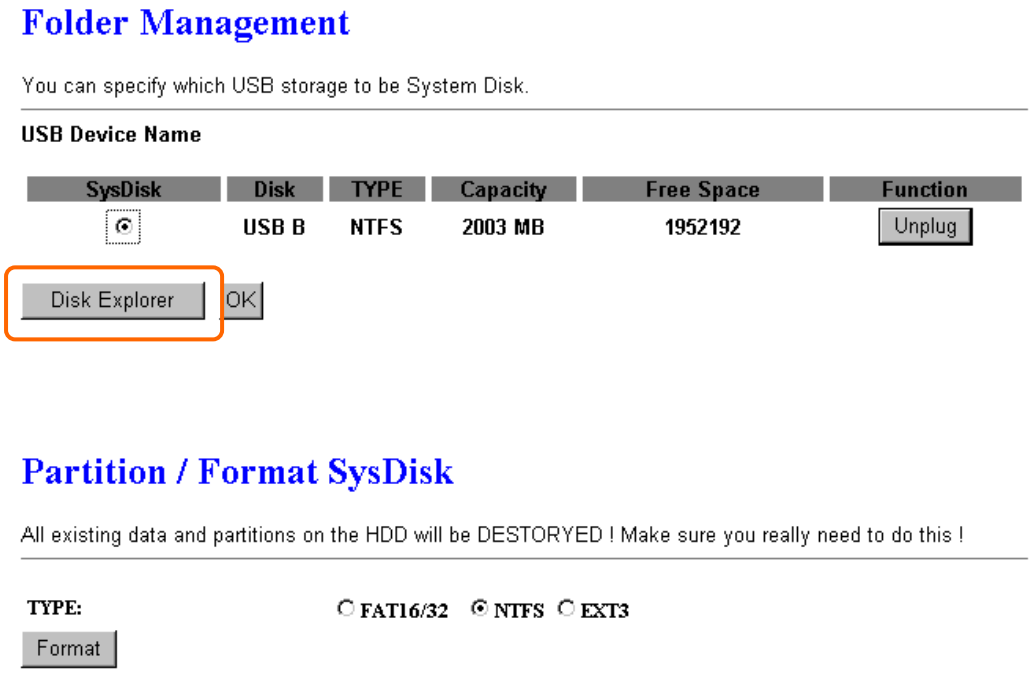
N+ 3.5G NES Server also can record the pictures from Webcam; only Administrator can do the settings. Select **Web Camera Server** from main Menu and Enable this function, click on **Record** setting button for further setting.



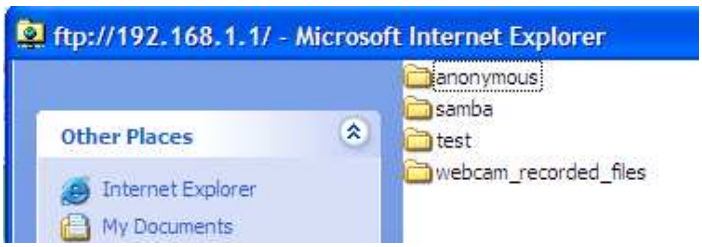
To setup the Webcam Advanced Configuration for each blank and the image from webcam will be recorded into your USB HDD or Remote FTP.



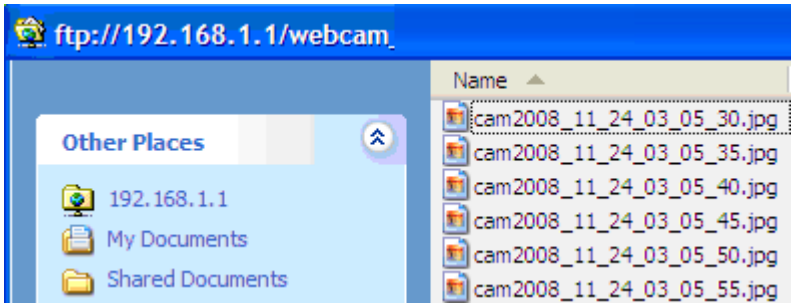
For administrator, you may view all the images from webcam recording, please select **Folder Management** and click on **Disk Explorer** to view entire folder inside the disk including webcam record files.



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

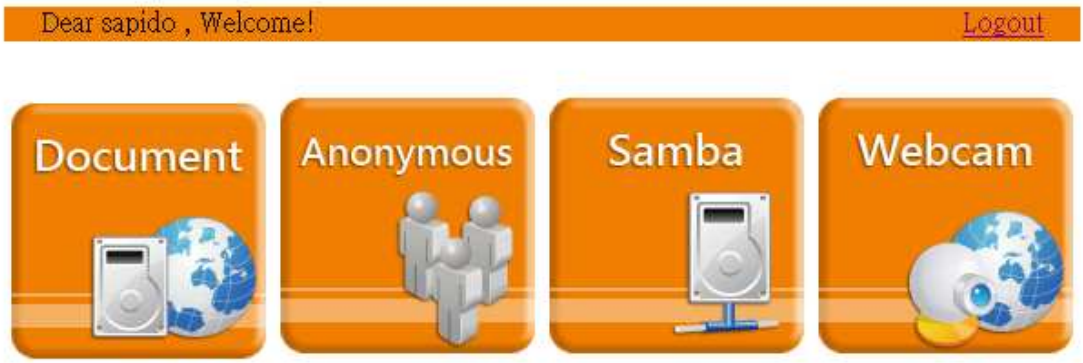


All the image files will be saved in the folder "**webcam_files**". Please open the file for checking.



5.5.3.3.2.2 Personal Application

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

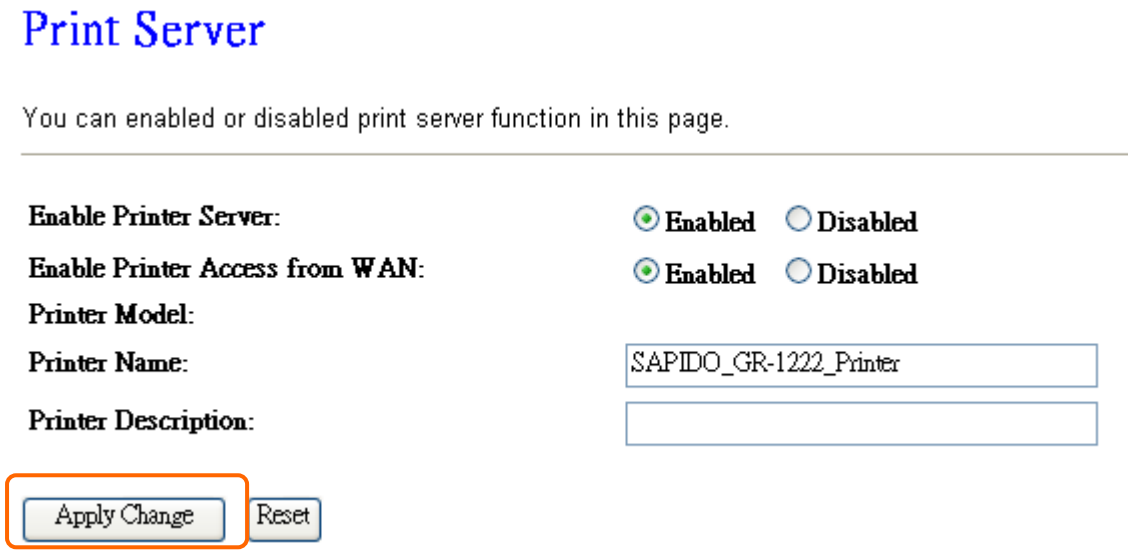


After click on "**Document**", you will see below folder screen appeared. You can save files here.

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 N+ 3.5G NES Server 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.



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

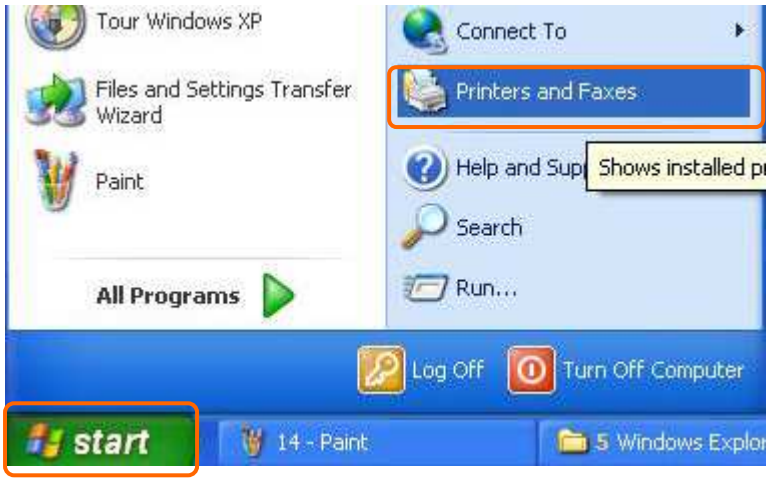
Besides above setting finished, the printer setting on PC also needs to be set as follows.

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.)

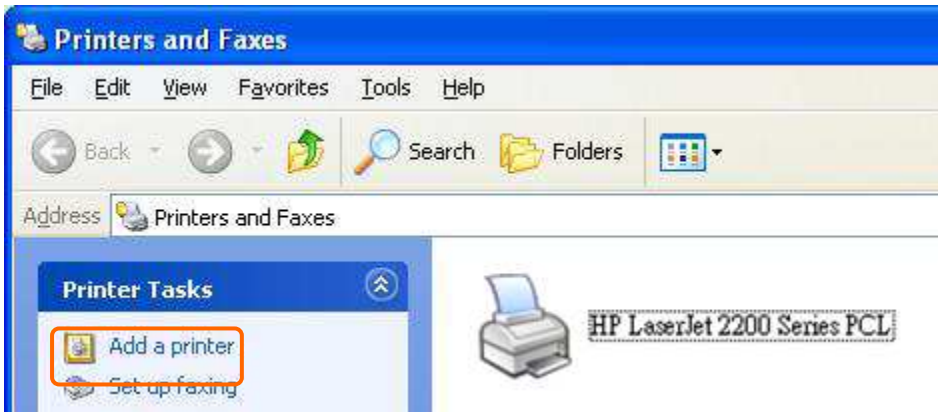
Step 1:

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



Step 2:

Click "**Add a printer**".

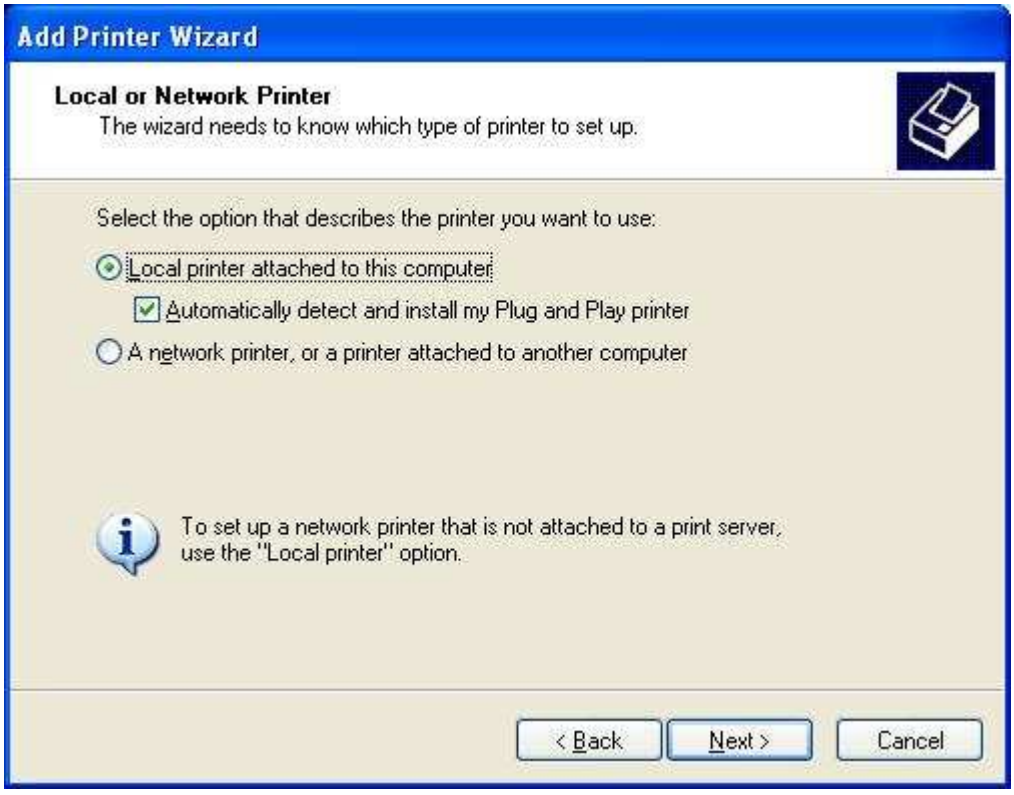


Step 3:

Click "**Next**".

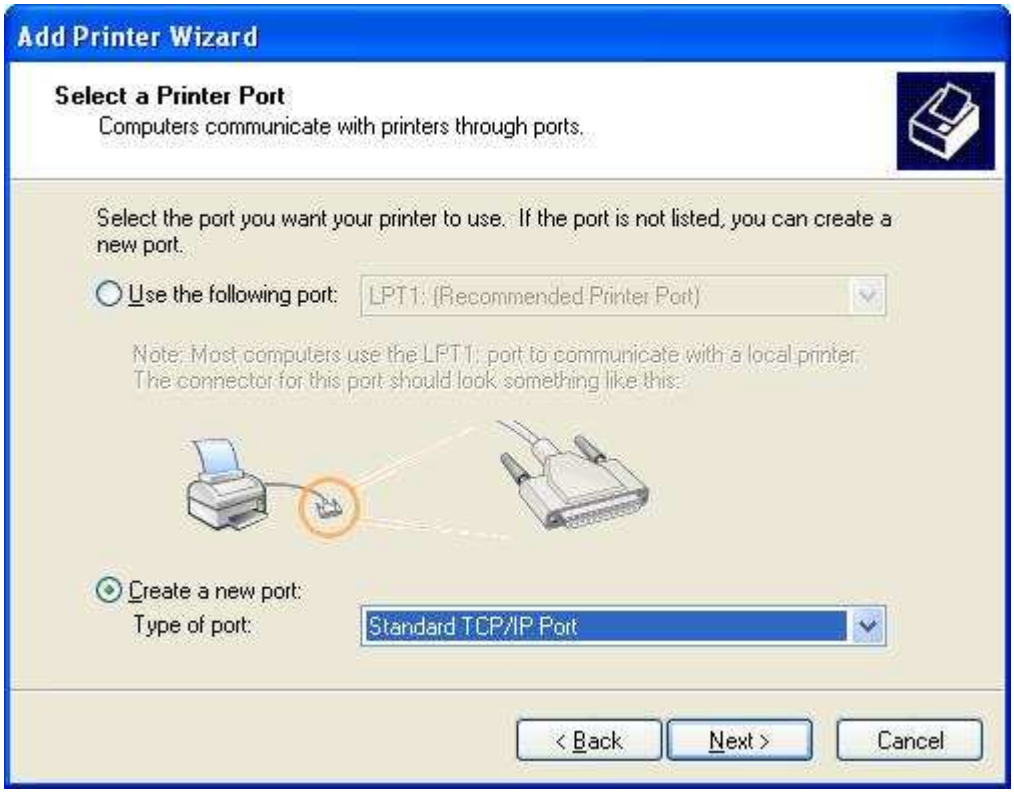
Step 4:

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**".

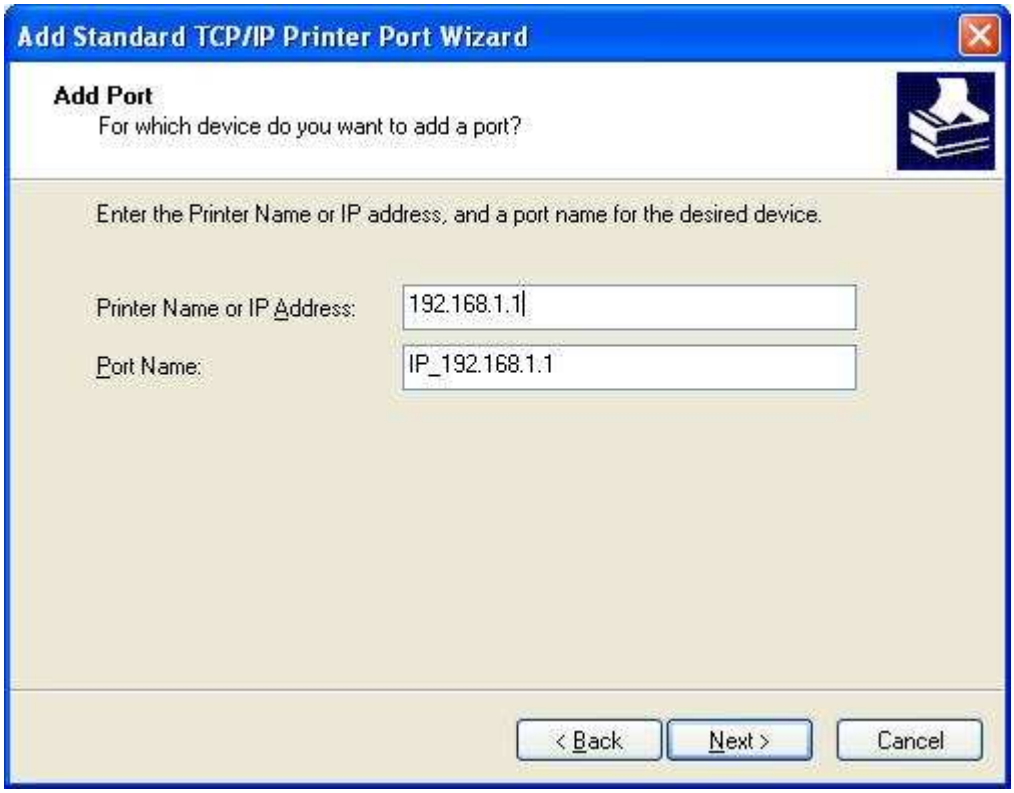


Step 6:

Click "**Next**".

Step 7:

Input the IP address of N+ 3.5G NES Server: **192.168.1.1** (Router Mode), and then click "**Next**".

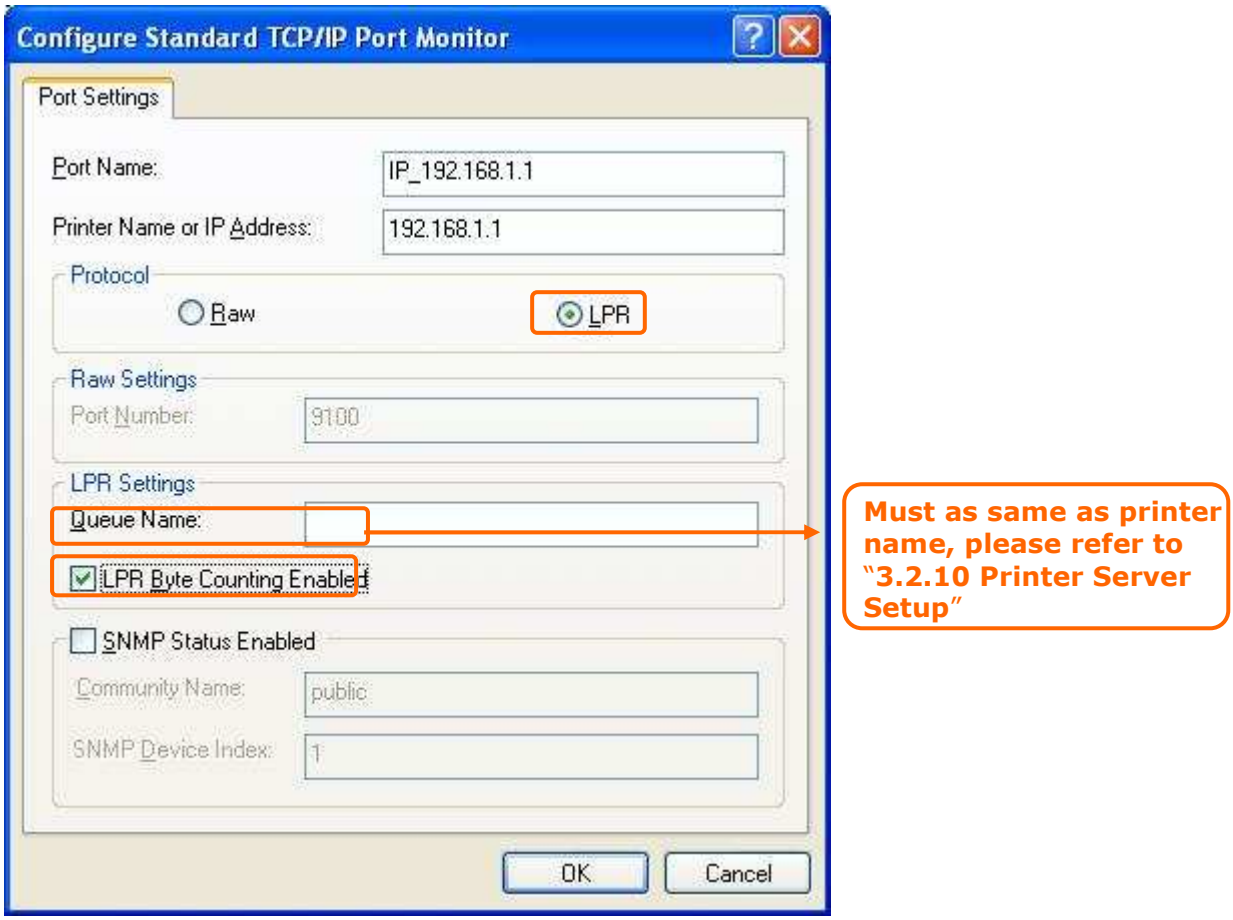


Step 8:

Select the "**Custom**" and click the "**Settings**", and then click "**Next**".

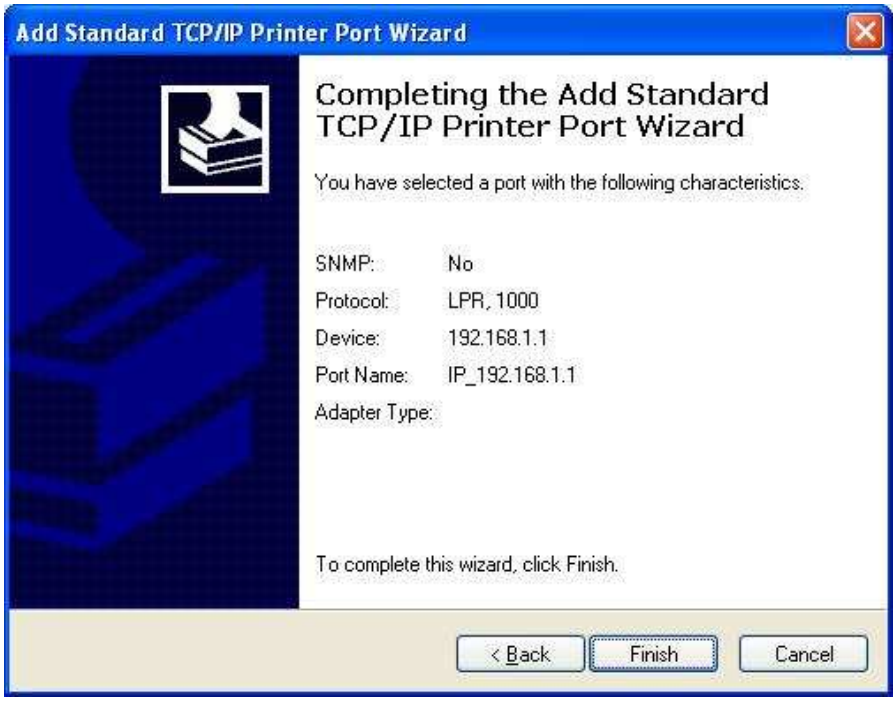
Step 9:

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:

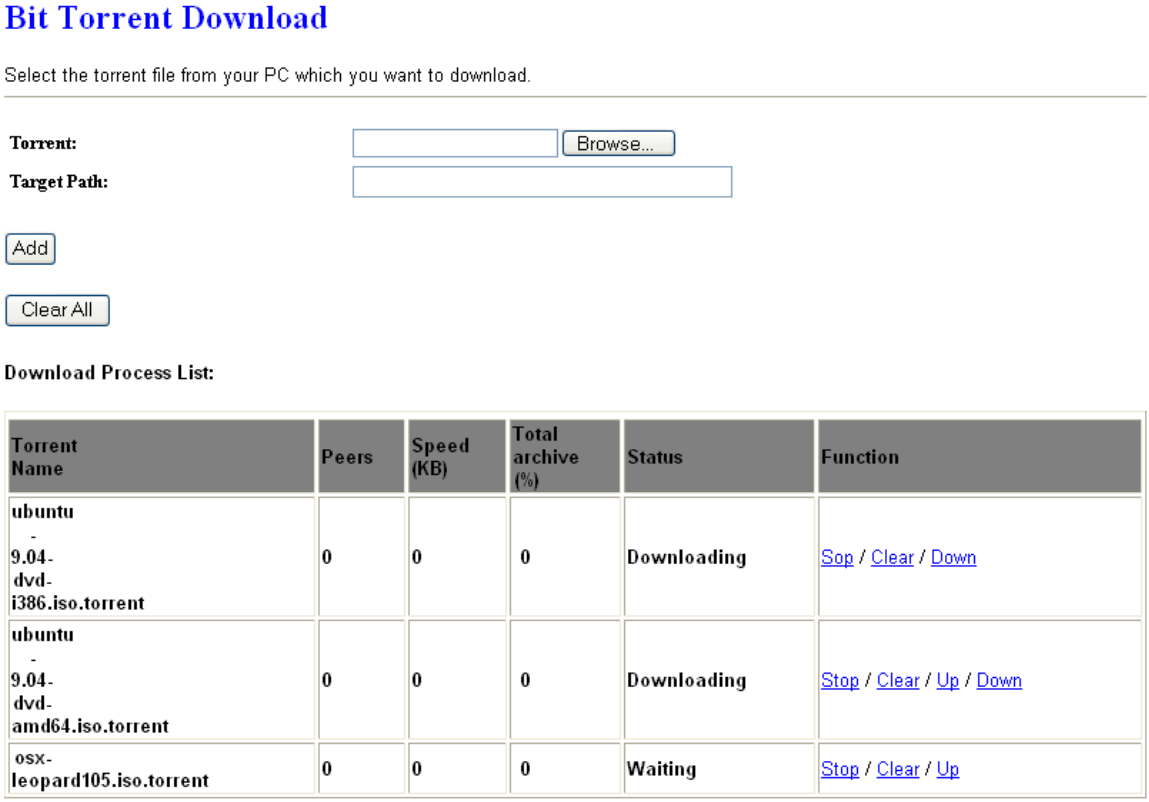
Select the "**Manufacturer**" and "**Printers**". If your printer doesn't listed in the table, please install its driver CD and then click on "**Have Disk...**" button for installation. Or click on "**Next**" button to finish the setting.

Step 12:

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

5.5.5 Download Server

Let users schedule the timing to download files by using BT. The downloaded files are saved in personal FTP Download folder.



1. Torrent

Browser any torrent file is located in user's computer.

2. Target Path

The download file's saving path.

3. Download Process List

It will display all downloading schedule.

4. Add new Torrent

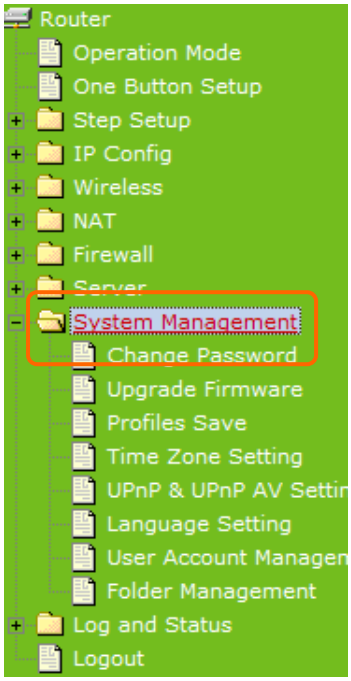
Fill in **Target Path** and click **Add,** Torrent will show in the list.

5. Clear ALL

Clear all torrents in **Download Process List.**

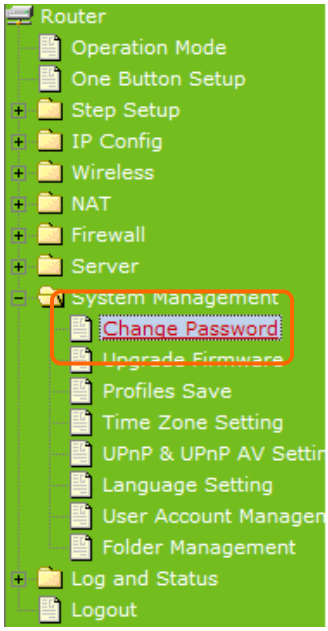
5.6 System Management

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

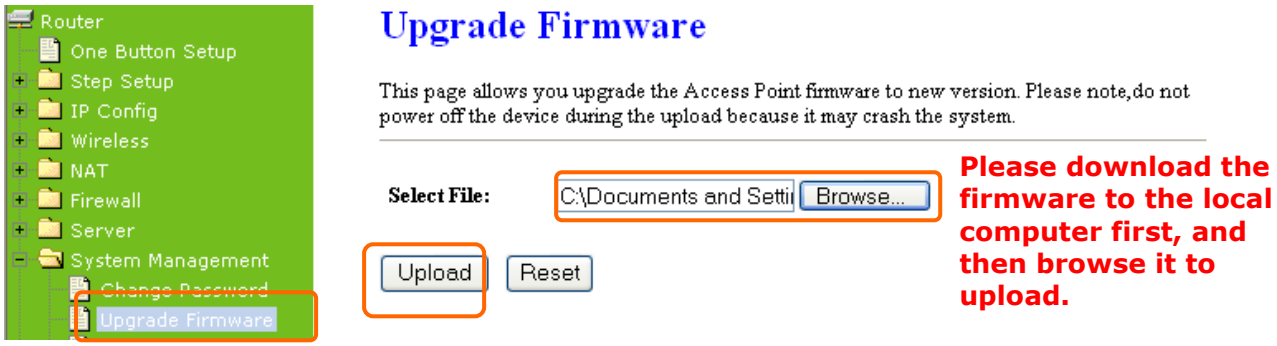
Users can set or change their password in this section.



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.sapido.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.

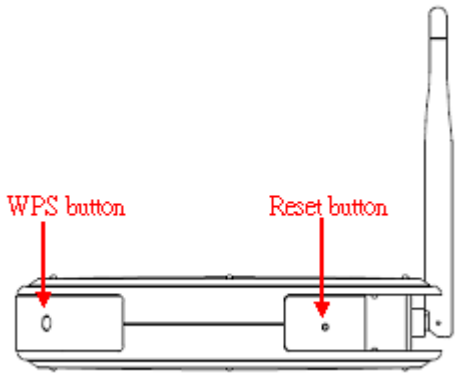


Note: To prevent that firmware upgrading is interrupted by other wireless signals and causes failure. We recommend users to use wired connection during upgrading.

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

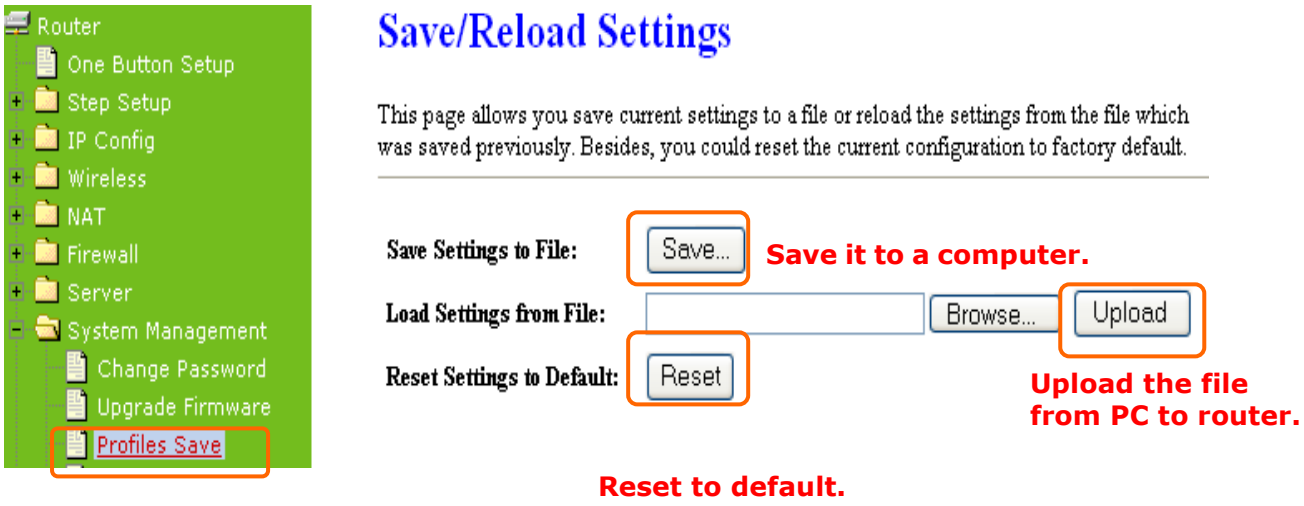
*Reset button:

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.



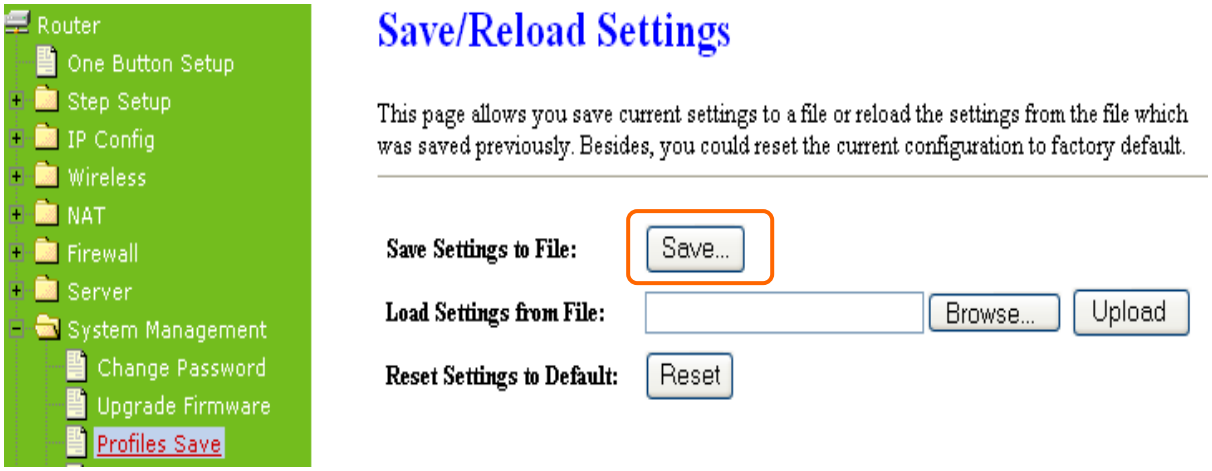
5.6.3 Profiles Save

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

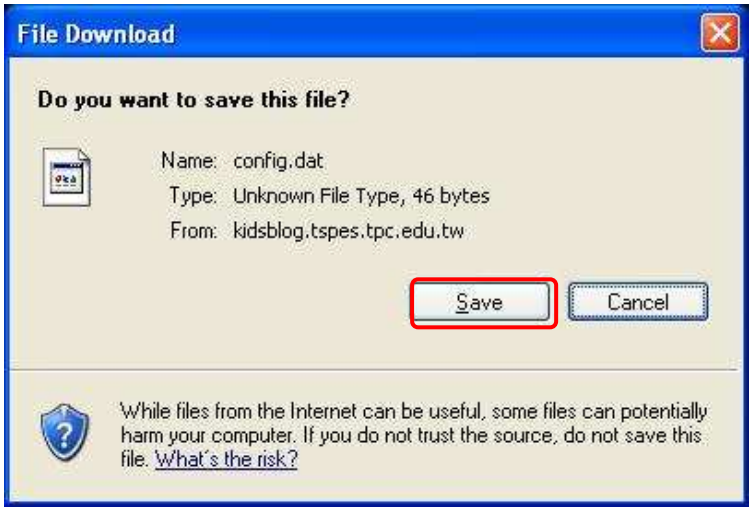


*Please see the following instructions.

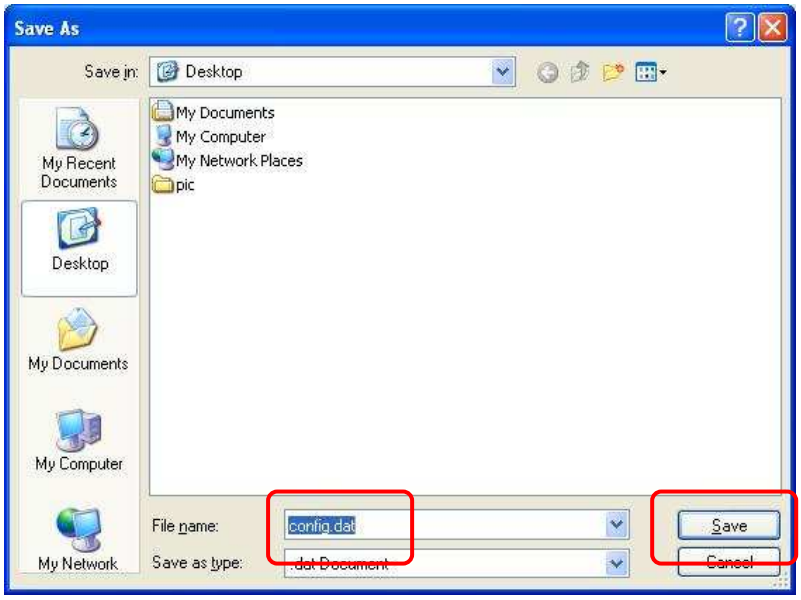
a. Please click **Save...**, a prompt window will ask user to save config.dat file. (Figure 1), please select the location (Figure 2), for example: the desktop (Figure 3).



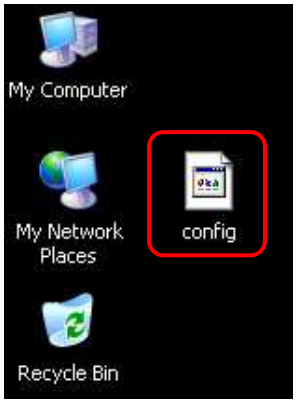
A pop window will show up and ask to save **config.dat** file. please select the location (Figure 2), for example: the desktop (Figure 3).



(Figure 1)



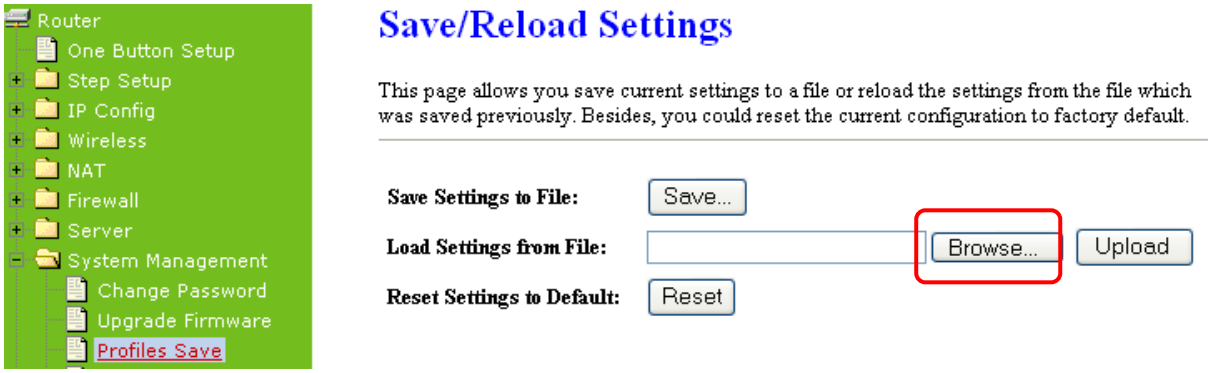
(Figure 2)



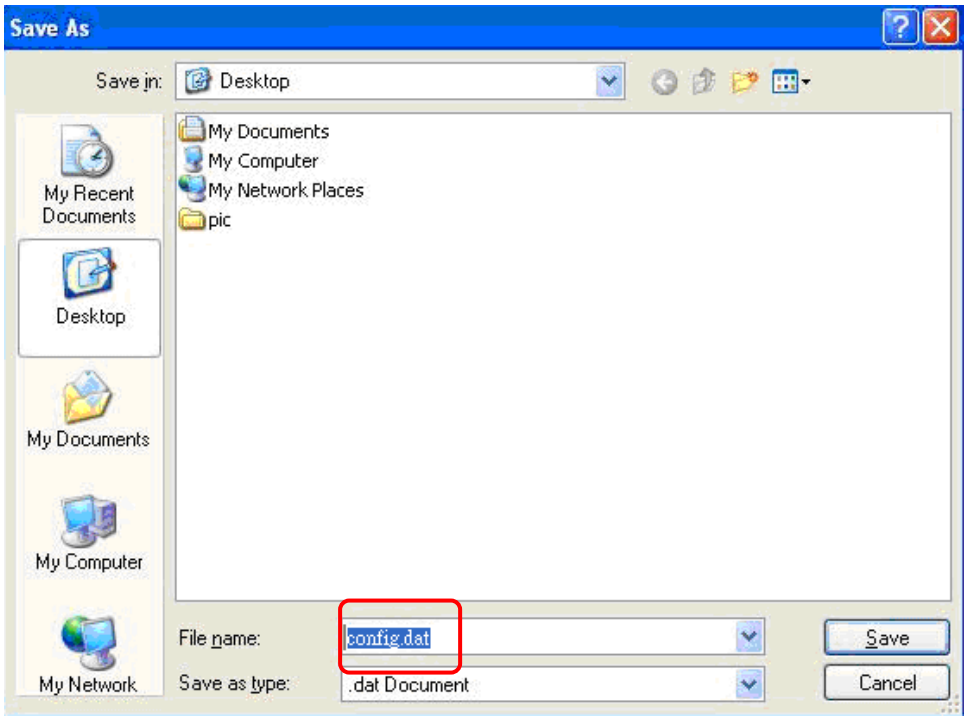
(

Figure 3)

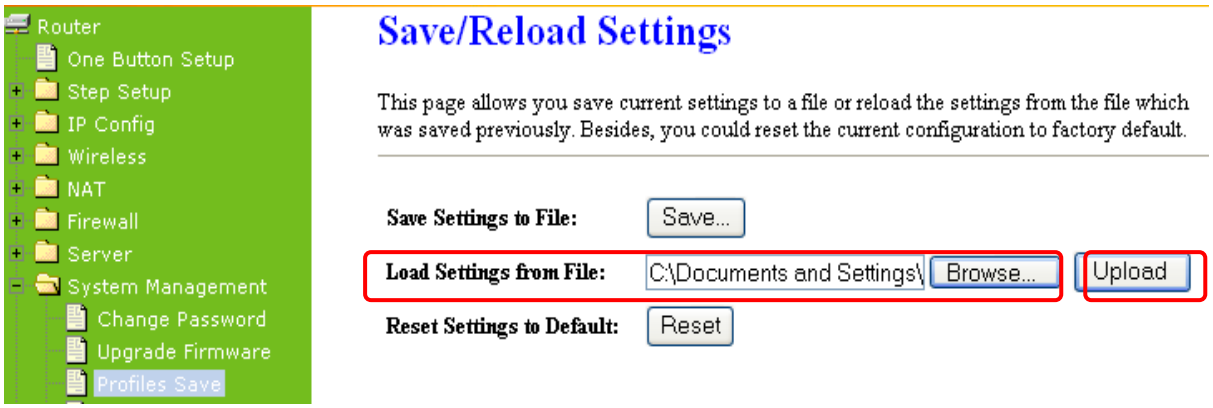
b. Please click **Browser...** (Figure 1) and select the config.dat file. (Figure 2), and then click **Upload** to retrieve (Figure 3).



(Figure 1)

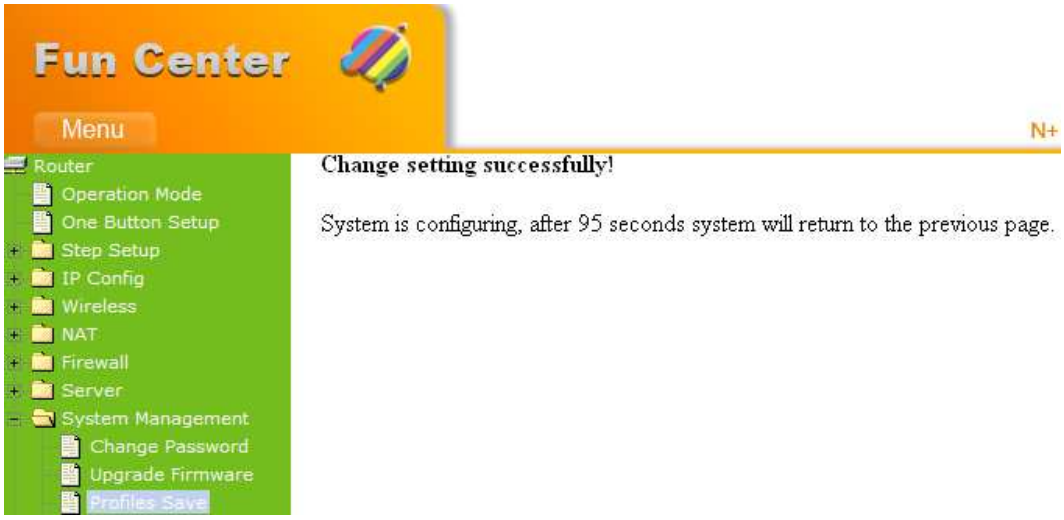


(Figure 2)

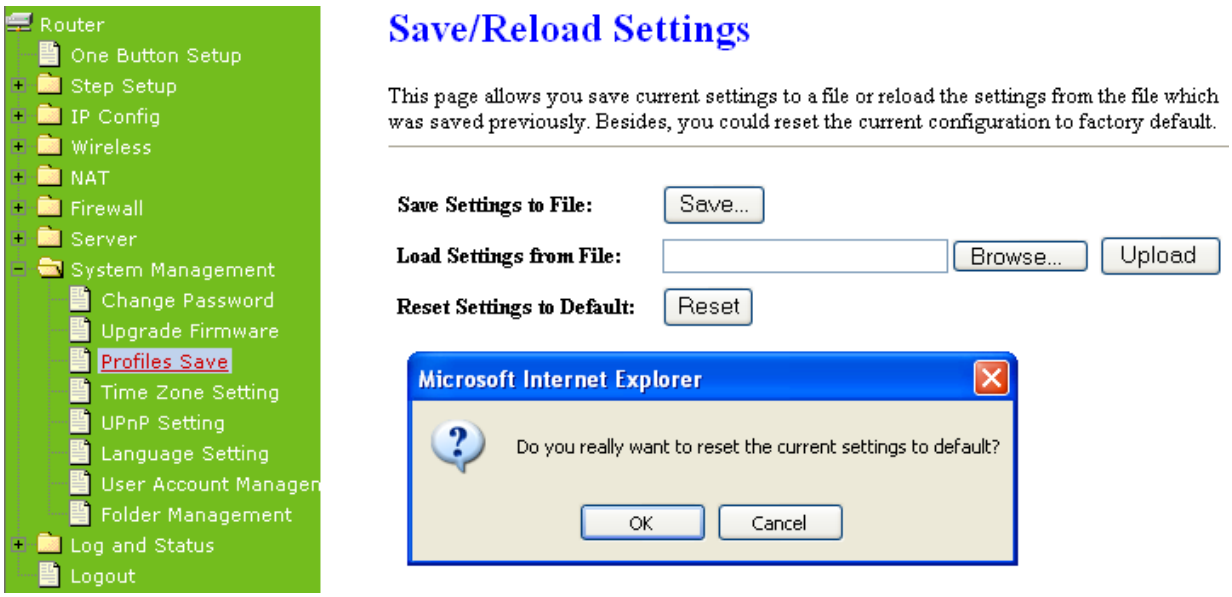


(Figure 3)

c. When you see the screen displaying like the following figure, it means update is completed. Please click **OK** to turn back to the configuration page.



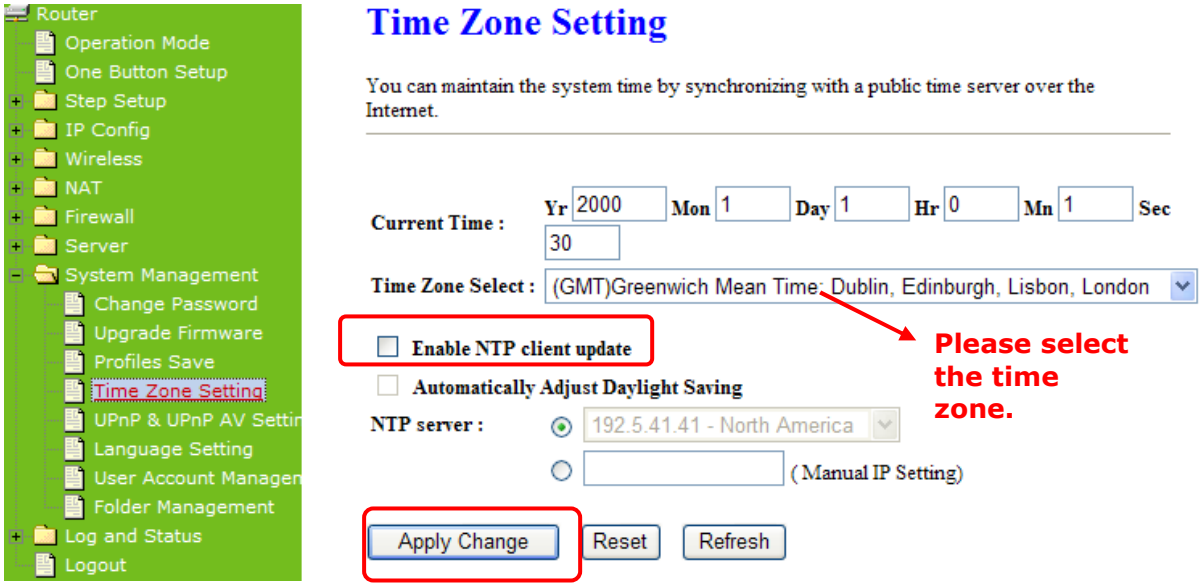
d. if you want to reset the system back to factory default settings, please click **Reset** button.



e. When you see the screen displaying like the following figure, it means reset is completed. Please click **OK** to turn back to the configuration page.

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.



1. Current Time

Users can input the time manually.

2. Time Zone Select

Please select the time zone.

3. Enable NTP client update

Please select to enable NTP client update or not.

4. Automatically Adjust Daylight Saving

Please select to enable **Automatically Adjust Daylight Saving** or not.

5. NTP server

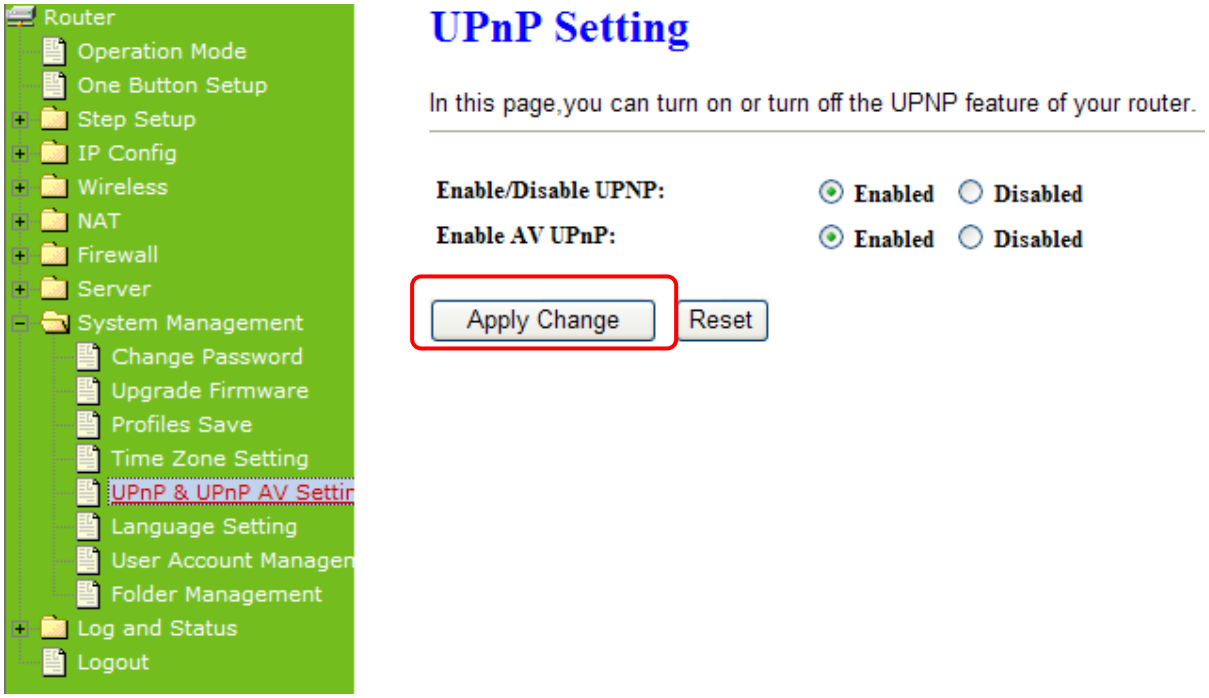
Please select the NTP server from the pull-down list, or you can enter the NTP server IP address manually.

6. 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 & UPnP AV 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 Download 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 Download Server Router. If you do not wish to use UPnP, you can disable it.



1. Enable/Disable UPnP

Select to enable or disable this function.

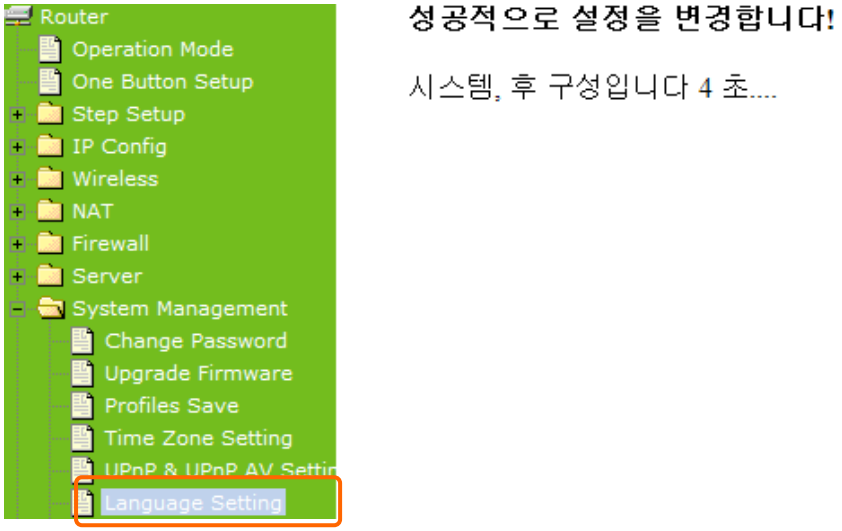
2. Enable/Disable UPnP AV

Select to enable or disable this function.

5.5.6 Language Setting

N+ 3.5G NES Server provides users with 12 languages to choose. Users can change the language of the interface configuration. Please click **Apply Changes** after selecting a language.

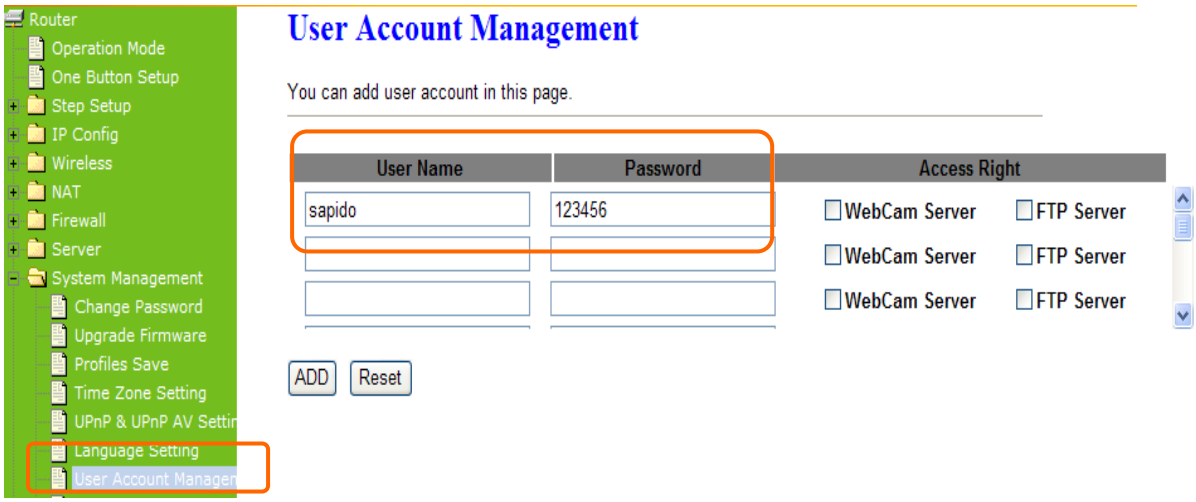
Using Korean as an example, the screen will display on the chosen language after the countdown is finished.



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

5.5.7 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.

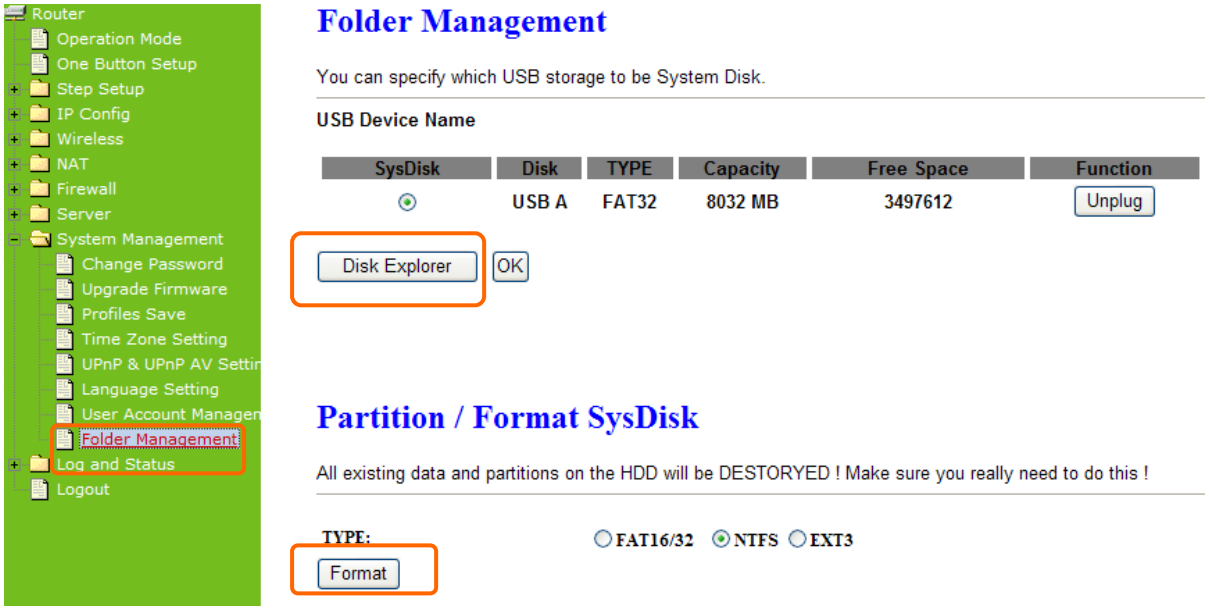


1. **User Name**
   Create the user name in this blank.
2. **Password**
   Setup the user's password.

3. **User Right**
   Enable the use to Webcam, FTP server.
4. **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.

5.5.8 Folder Management

Easy to check all the USB storage devices connected to your N+ 3.5G NES Server, 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.

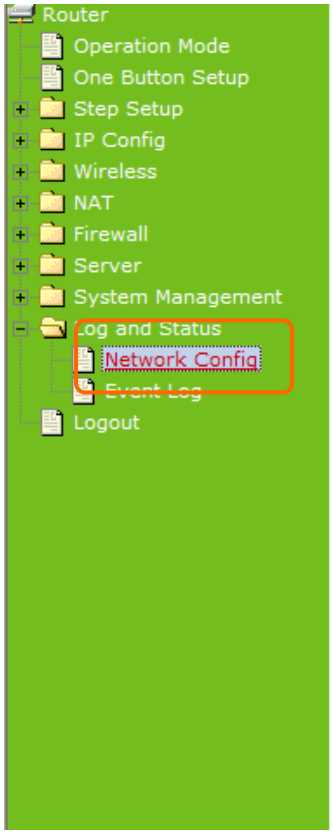
Note : You have to click on "Unplug" button before remove the USB devices.

5.6 Log & Status

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

5.6.1 Network Config

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



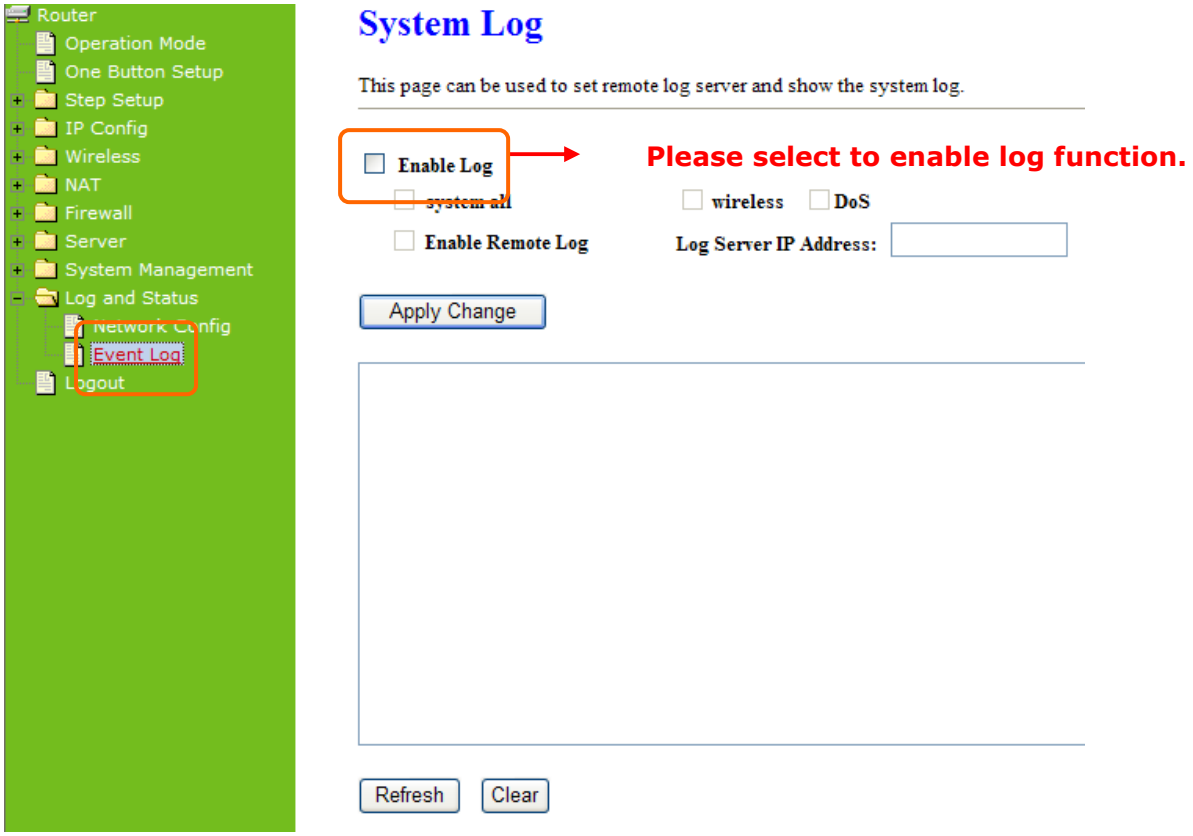
Access Point Status

This page shows the current status and some basic settings of the device.

System	
Uptime	0day:0h:8m:6s
Firmware Version	Ver1.0.3
Build Time	Fri Jul 24 18:31:11 CST 2009
WirelessConfiguration	
Mode	AP
Band	2.4 GHz (B+G+N)
SSID	SAPIDO_Fun_Center
Channel Number	11
Encryption	Disabled
MAC	00:d0:41:b9:e1:f3
Associated Clients	0
TCP/IP Configuration	
Attain IP Protocol	Fixed IP
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
DHCP Server	Enabled
MAC Address	00:d0:41:b9:e1:f3

5.6.2 Event Log

You may enable the event log feature here.



1. Enable Log

You may choose to enable Event Log or not.

2. system all、wireless & DoS

Please select the event you want to record.

3. Enable Remote Log

You may choose to enable the remote event log or not.

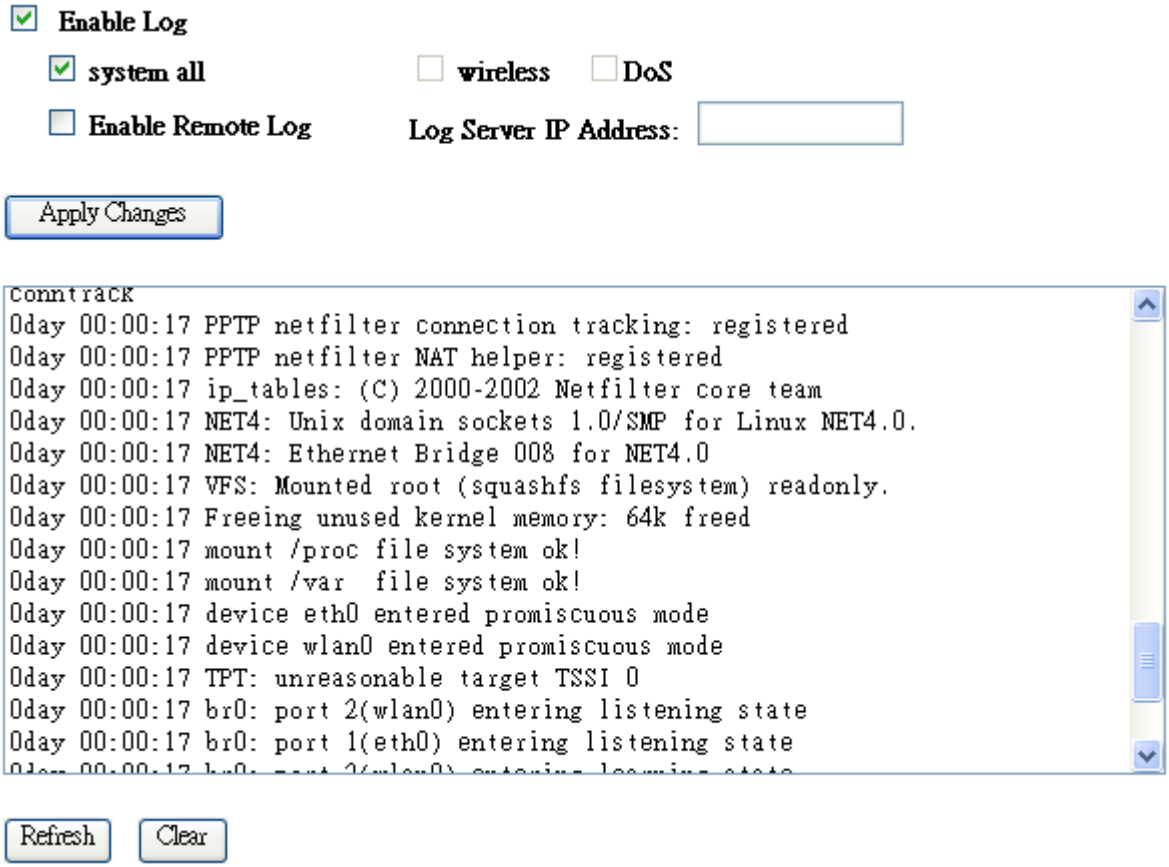
4. Log Server IP Address

Please input the log server IP Address.

5. 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.



5.7 Logout

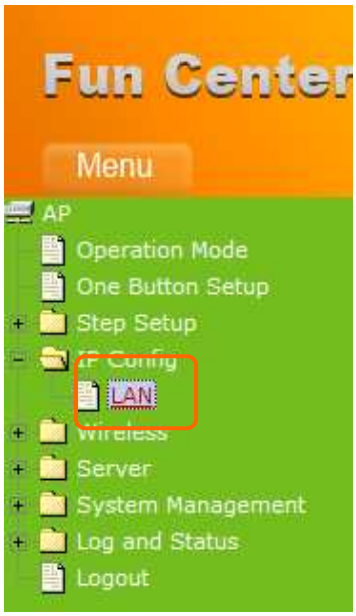
This function provides users to logout.

Chapter 6 Advanced Configuration for AP Mode

6.1 IP Config

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

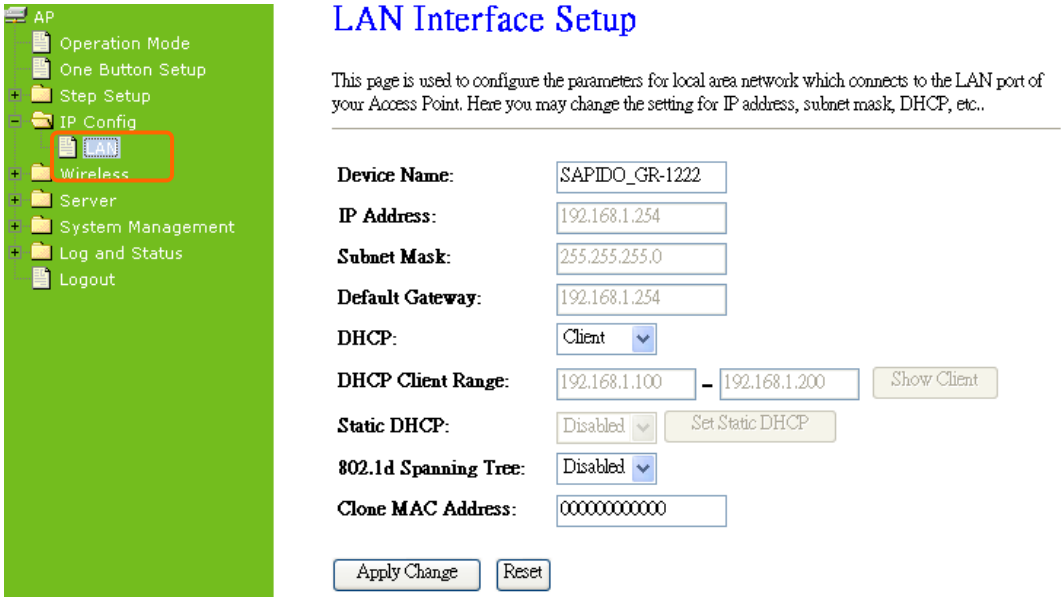
6.1.1 LAN Setup



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.



1. IP Address

The default IP address is **192.168.1.254** (recommend).

2. Subnet Mask

Please enter the Subnet Mask address; it should be **255.255.255.0** for the most time.

3. Default Gateway

Please enter the Default Gateway address. If you don't know the address, please contact your ISP.

4. 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.

5. 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.

6. 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.

7. Clone MAC Address

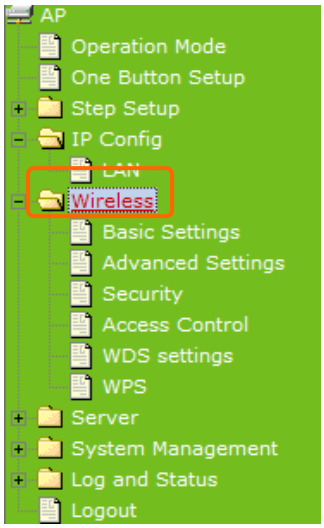
If your ISP asks you to enter a specific MAC Address, please input the correct info at the column.

8. Apply Changes & Reset

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

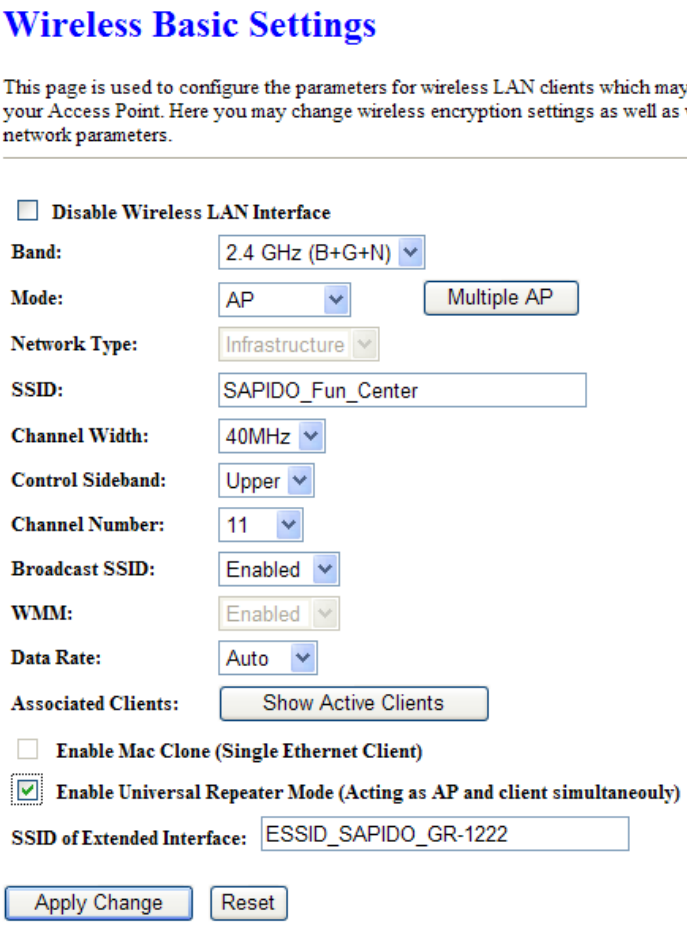
6.2 Wireless Setup

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 Settings

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



1. Disable Wireless LAN Interface

Turn off the wireless function.

2. Band

Please select the frequency. It has 6 options:

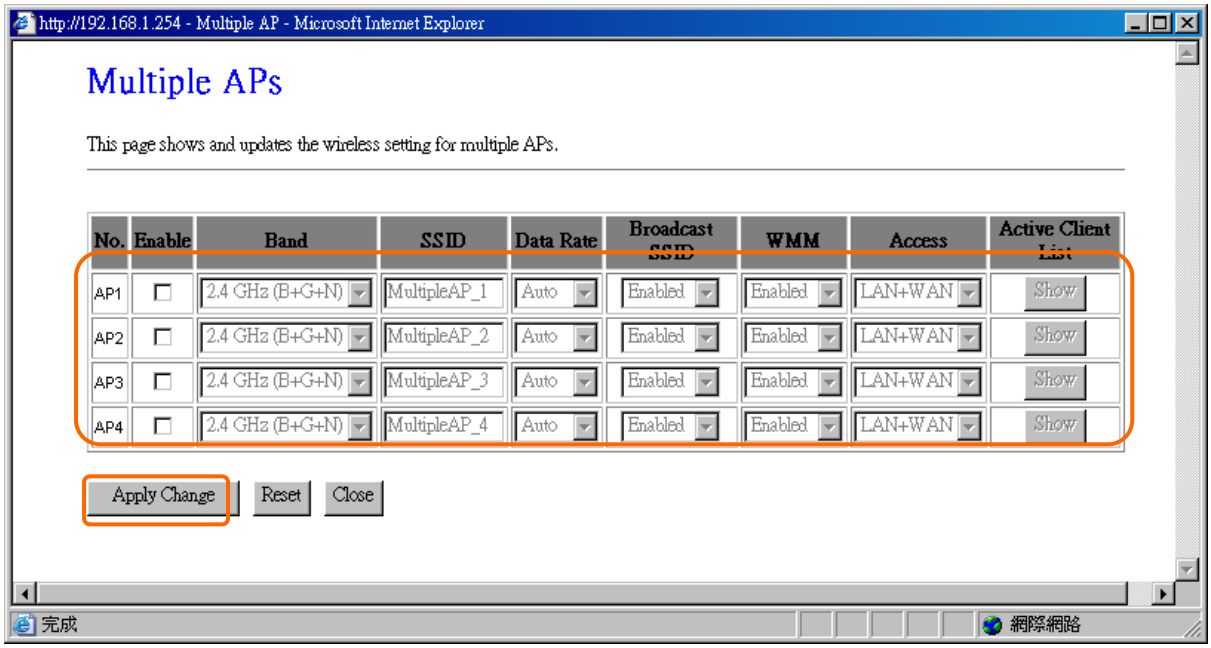
2.4 GHz (B/G/N/B+G/G+N/B+G+N).

3. Mode

Please select the mode. It has 3 modes to select:

(AP, WDS, AP+WDS).

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



(1.) Enable: please choose to enable it or not.

(2.) Band: please select the frequency.

(3.) SSID: please enter the SSID.

(4.) Data Rate: please select the data transmission rate.

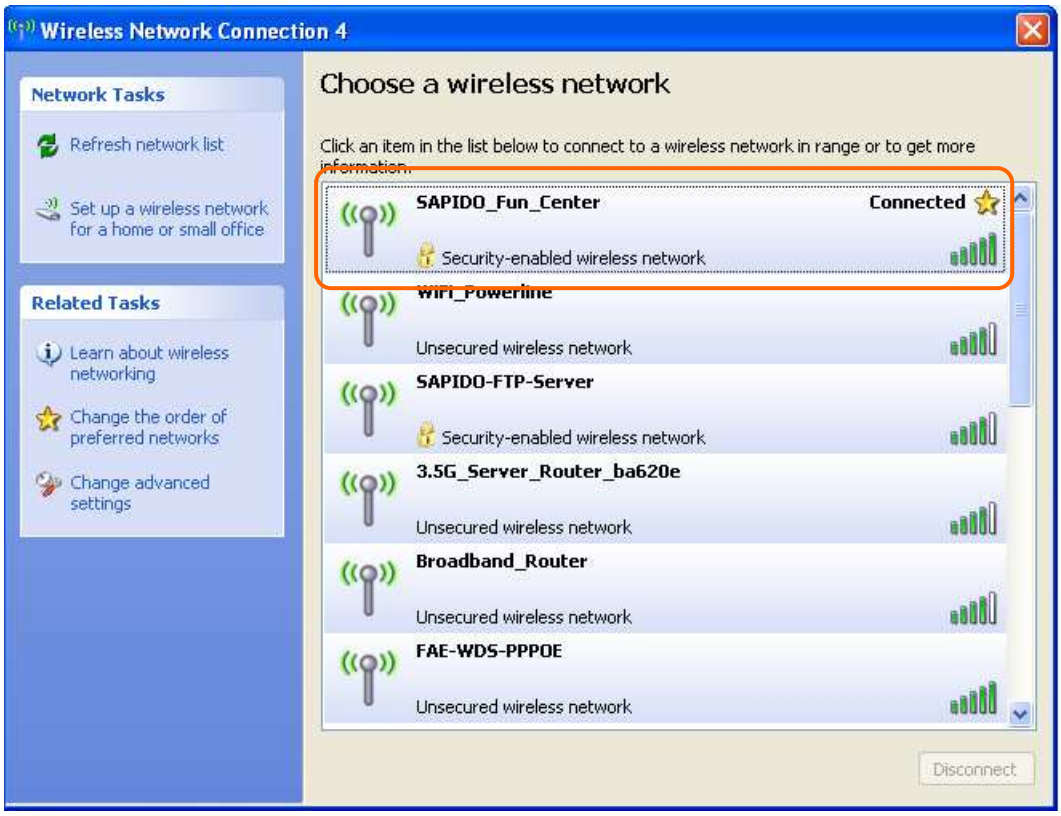
(5.) Access: enable this function can let clients use 2 access types: a. LAN+WAN: the client can access to the Internet and connect to 3.5G Download Server Router's GUI to setup. b. WAN: the client can only access to the Internet.

(6.) Active Client List: display the properties of the client which is connecting successfully.

(7.) Apply Changes: Please click **Apply Changes** to initiate or click **Reset** to cancel.

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

The Client can search for N+ 3.5G NES Server _AP1 (LAN+WAN) and connect to it. If the client connects to it successfully, it will display message to notify users.



4. Network Type

Please select the network type, it has 2 options: **Infrastructure** or **Ad hoc**. If the wireless mode is set to AP mode, this section is disabled.

5. SSID

Service Set identifier, the default SSID is **SAPIDO_Fun_Center**, users can define to any.

6. Channel Width

Please select the channel width, it has 2 options: 20MHZ, and 40MHZ.

7. Control Sideband

Enable this function will control your router use lower or upper channel.

8. Channel Number

Please select the channel; it has Auto, 1, 2~11 options.

9. Broadcast SSID

User may choose to enable **Broadcast SSID** or not.

10. Data Rate

Please select the data transmission rate.

11. Associated Clients

Check the AP connectors and the Wireless connecting status.

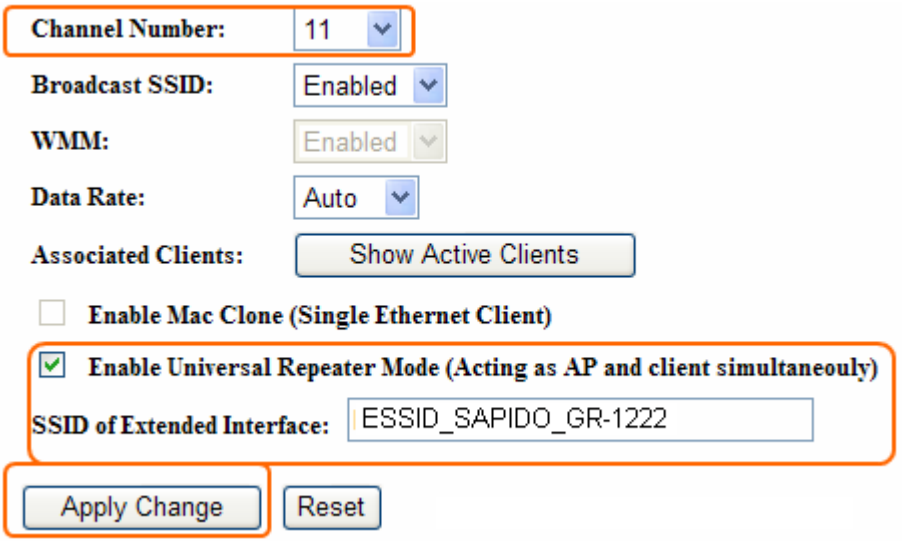
12. **Enable Mac Clone (Single Ethernet Client)**

    Clone the MAC address for ISP to identify.

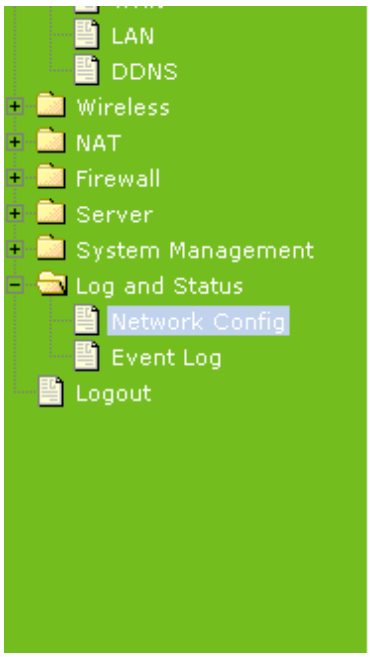
13. **Enable Universal Repeater Mode (Acting as AP and Client simultaneously)**

    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.



System	
Uptime	0day:1h:34m:24s
Firmware Version	Ver1.0.11
Build Time	Thu Sep 3 21:14:44 CST 2009
WirelessConfiguration	
Mode	AP
Band	2.4 GHz (B+G+N)
SSID	SAPIDO_Fun_Center
Channel Number	1
Encryption	Disabled
MAC	00:d0:41:b9:e1:f3
Associated Clients	0
WirelessRepeater Interface Configuration	
Mode	Infrastructure Client
ESSID	ESSID_SAPIDO_GR-1222
Encryption	Disabled
MAC	00:00:00:00:00:00
State	Scanning

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.

14. **SSID of Extended Interface**

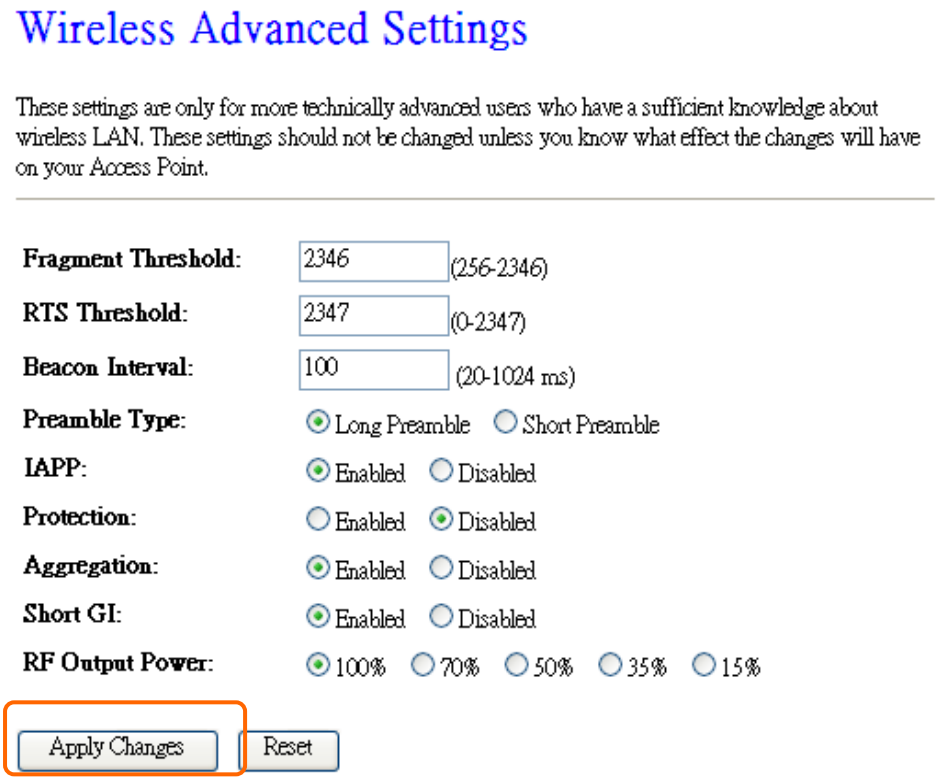
    While linking the upper level device in wireless way, you can set SSID to give the bottom layer user search.

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.

6.2.2 Wireless Advanced Settings

Please complete the wireless advanced settings as following instructions.



1. **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.

2. **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.

3. **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.

4. **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.

5. **IAPP**

   Inter Access Point Protocol. Allow seamless roaming between Access Points in your wireless network.

6. **Protection**

   Please select to enable wireless protection or not.

7. **Aggregation**

   Enable this function will combine several packets to one and transmit it. It can reduce the problem when mass packets are transmitting.

8. **Short GI**

   Users can get better wireless transmission efficiency when they enable this function.

9. **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%.

10. **Apply Changes & Reset**

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

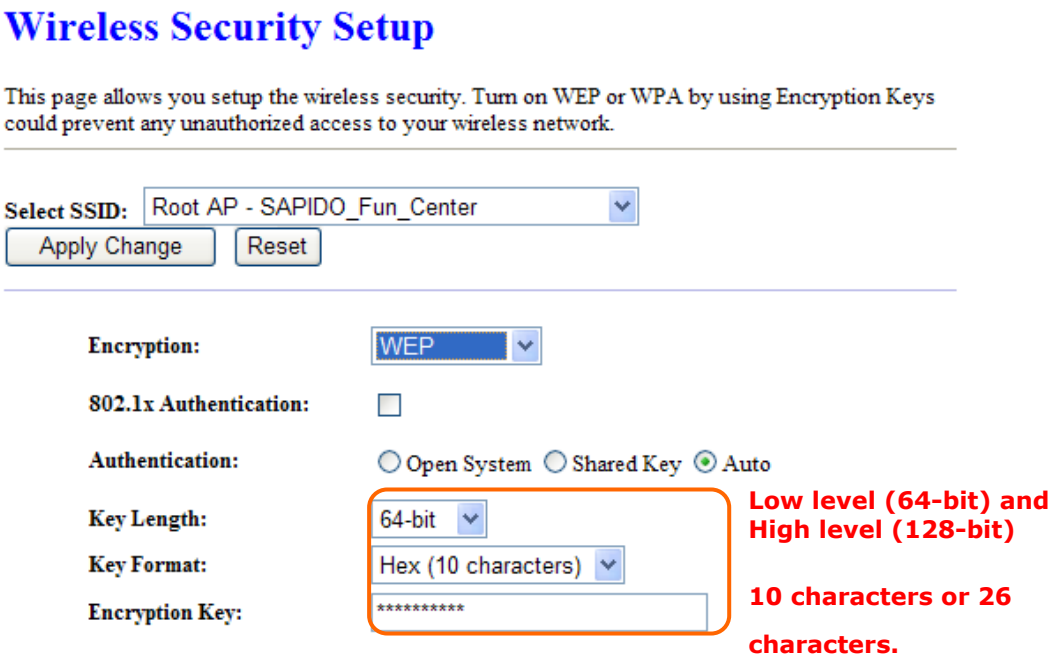
6.2.3 Wireless Security Setup

4 encryption types could be selected here, please follow below instruction 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.

4. Encryption – WPA（WPA, WPA2, and WPA2 Mixed）

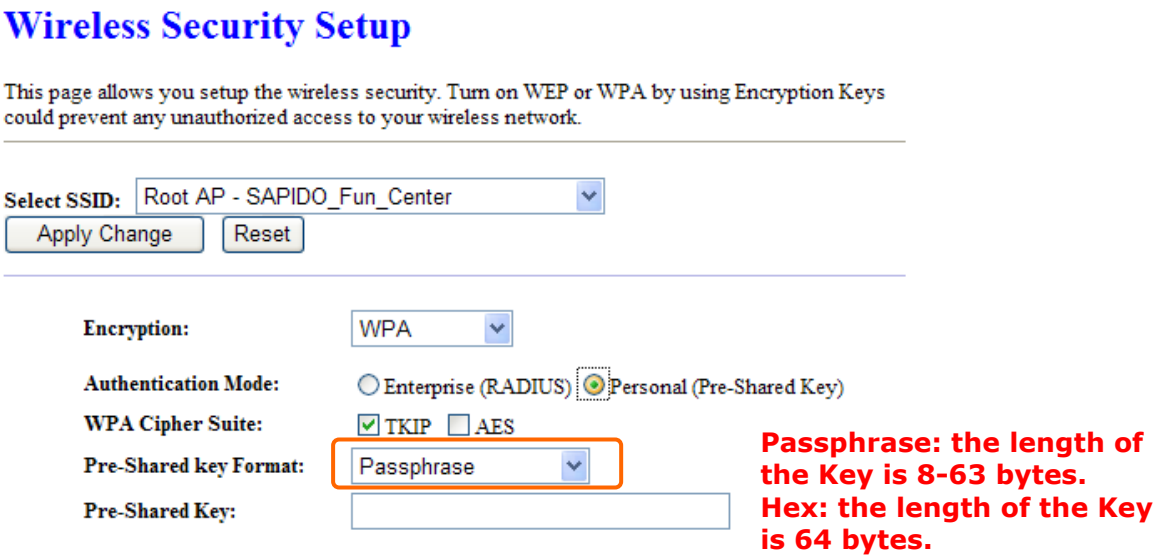
WPA Authentication Mode

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.



2. Apply Changes & Reset

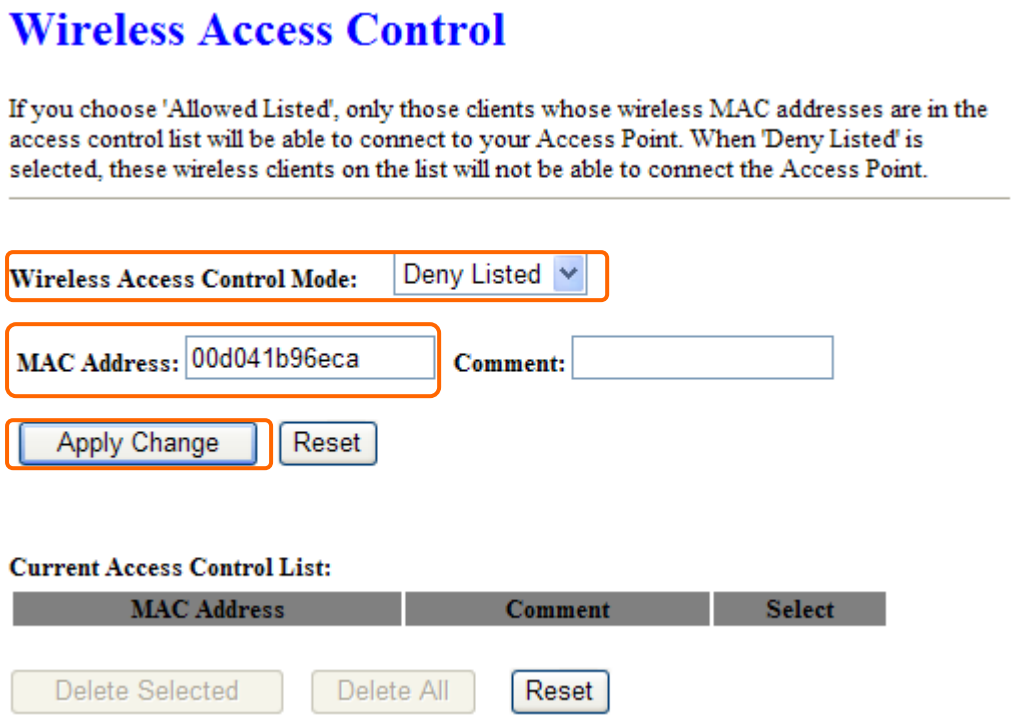
Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

6.2.4 Wireless Access Control

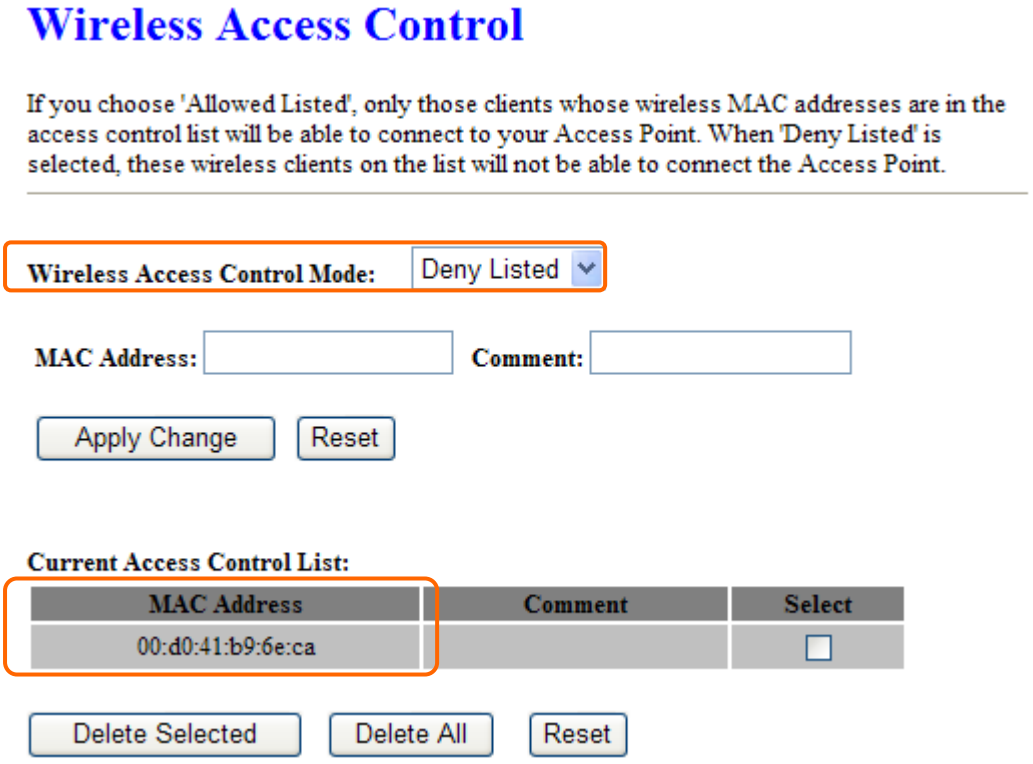
The function of access control is to allow or deny users to access 3.5G Download Server Router by according MAC address, it is optional. If you select **Allowed Listed**, then only those clients whose MAC address is listed on access control can connect to your base station. If you select **Deny Listed**,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

Take the wireless card as the example.

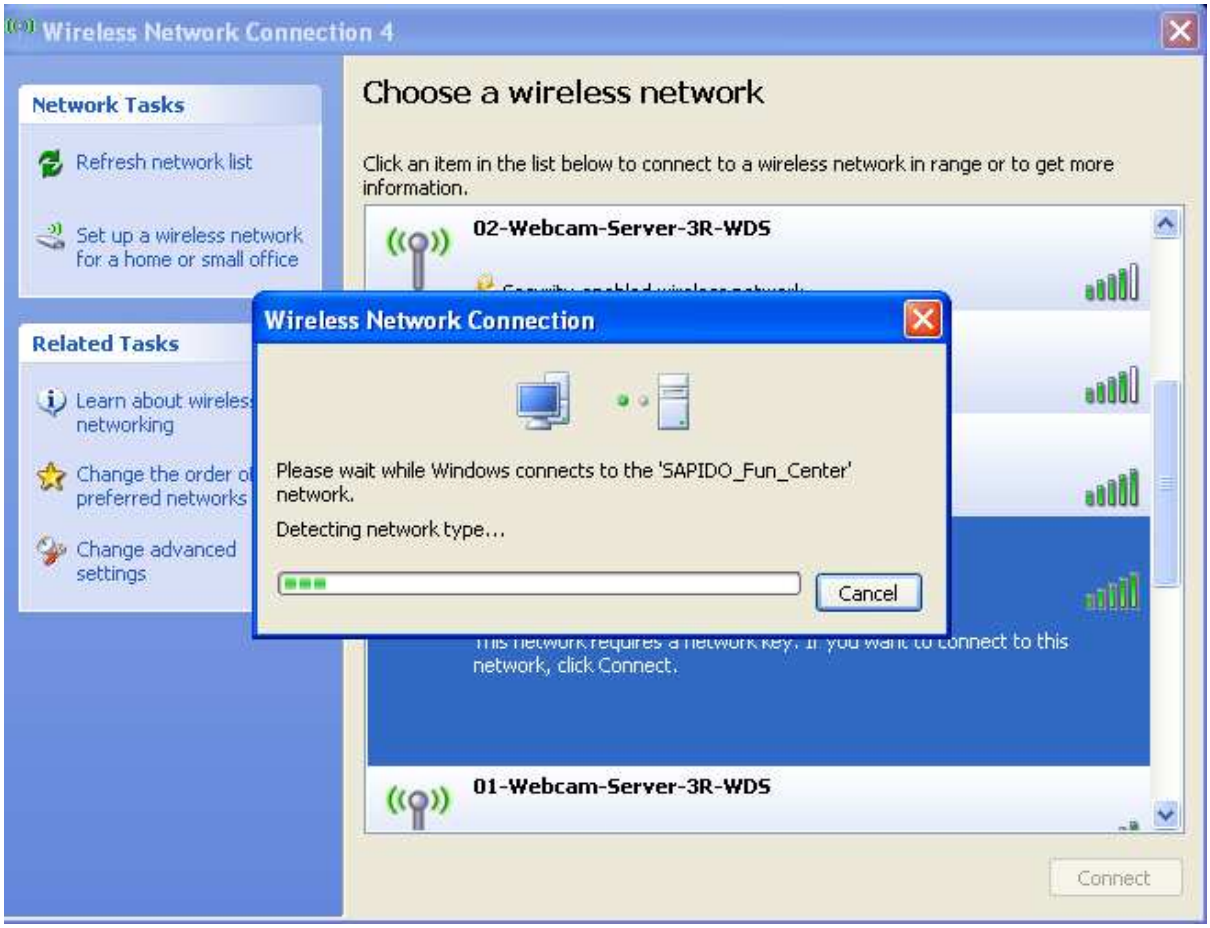
(1.) We will use **Deny Listed** as an example. Please select **Deny Listed** in **Wireless Access Control Mode** first, and then input the MAC address of wireless card in MAC Address field. Click **Apply Changes** to save the setting data.



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

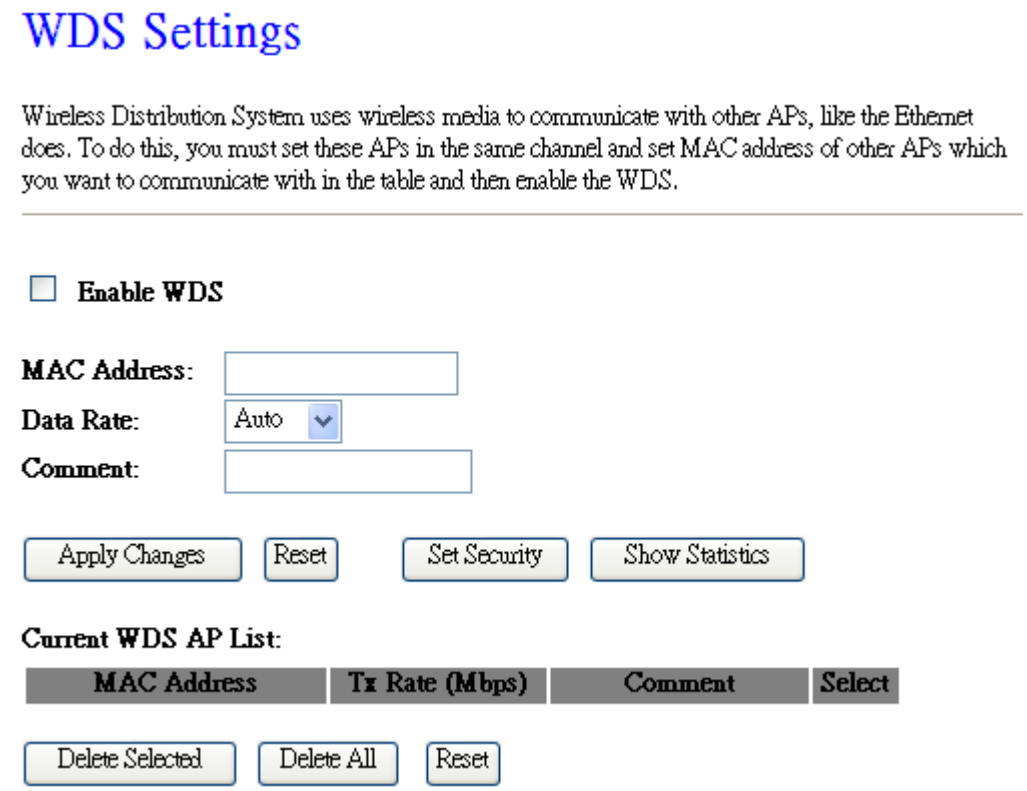


(3.) Please open wireless card UI and try to connect to this router. You will find out that the connection request will be denied.

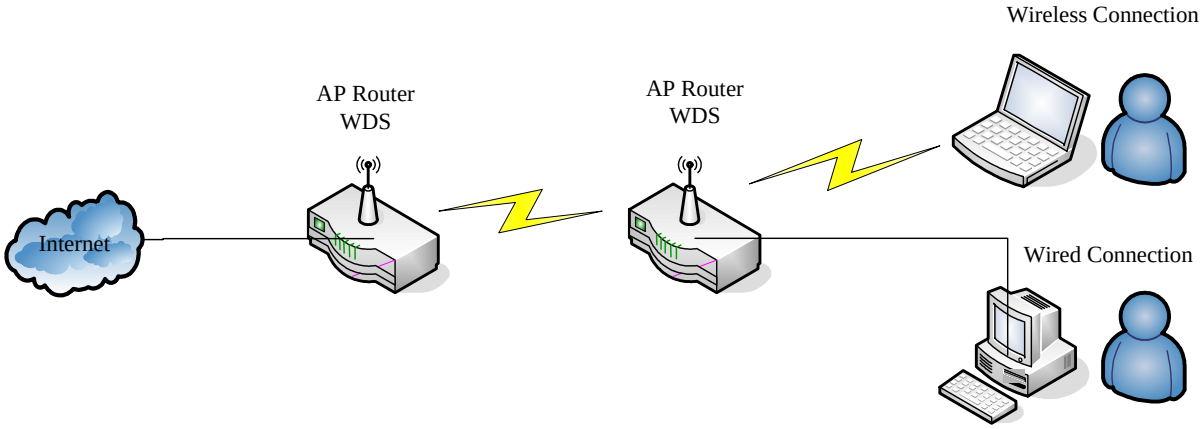

Wireless Network Connection 4
Network Tasks
Refresh network list
Set up a wireless network for a home or small office
Related Tasks
Learn about wireless networking
Change the order of preferred networks
Change advanced settings
Choose a wireless network
Click an item in the list below to connect to a wireless network in range or to get more information.
02-Webcam-Server-3R-WDS
Wireless Network Connection
Please wait while Windows connects to the 'SAPIDO_Fun_Center' network.
Detecting network type...
Cancel
network, click Connect.
01-Webcam-Server-3R-WDS
Connect

6.2.5 WDS Settings

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



* The following figure is the explanation.

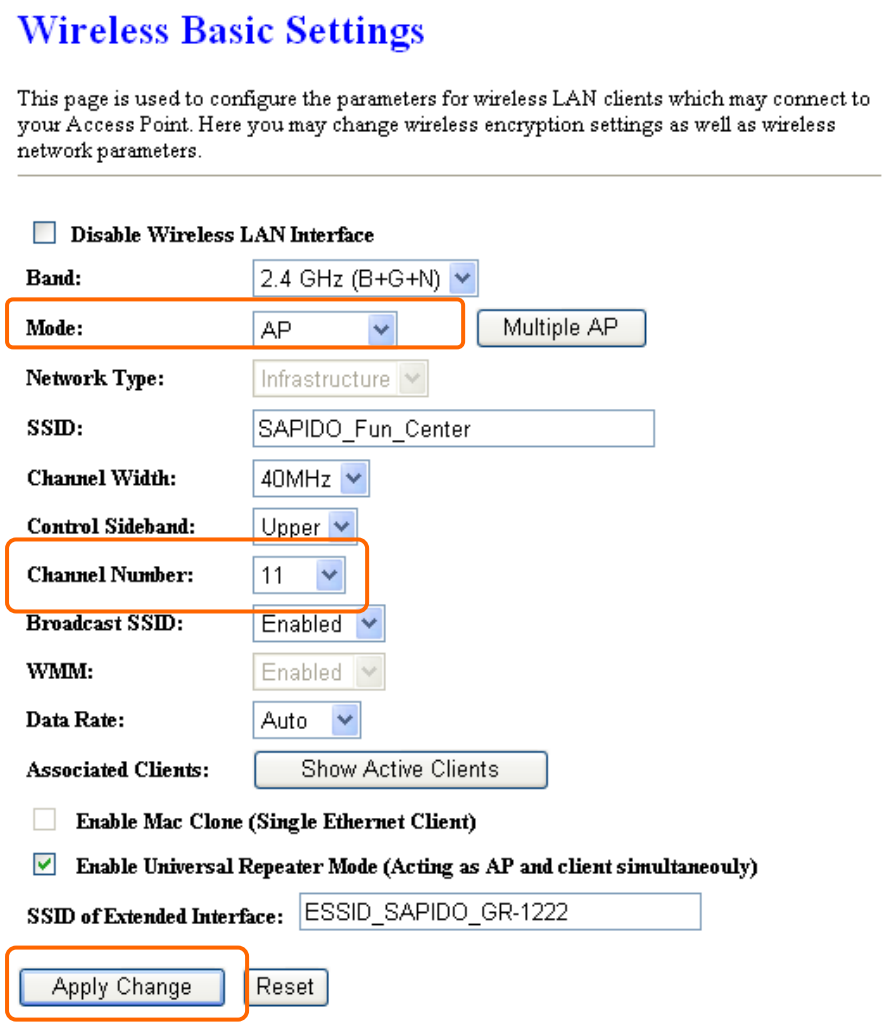


* Please follow the instructions to setup the connection.

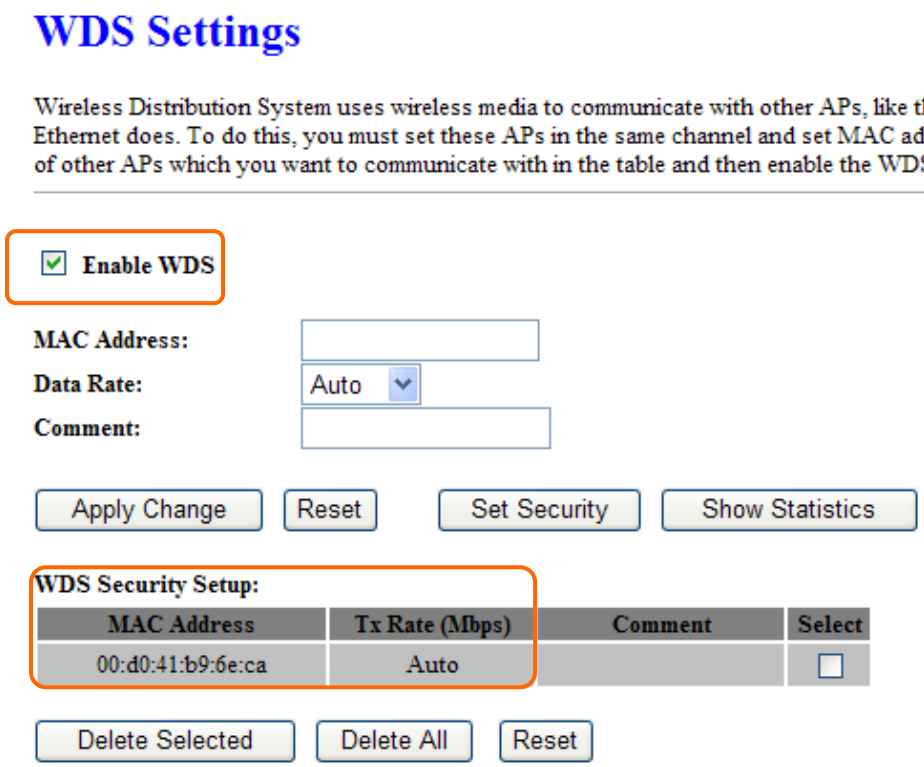
(1.) Please check the MAC address and Channel number of the upper level device.

System	
Uptime	0day:0h:25m:54s
Firmware Version	Ver1.0.11
Build Time	Thu Sep 3 21:14:44 CST 2009
WirelessConfiguration	
Mode	AP
Band	2.4 GHz (B+G+N)
SSID	SAPIDO_Fun_Center
Channel Number	11
Encryption	Disabled
MAC	00:d0:41:b9:e1:f3
Associated Clients	0
WirelessRepeater Interface Configuration	
Mode	Infrastructure Client
ESSID	ESSID_SAPIDO_GR-1222
Encryption	Disabled
MAC	00:00:00:00:00:00
State	Scanning

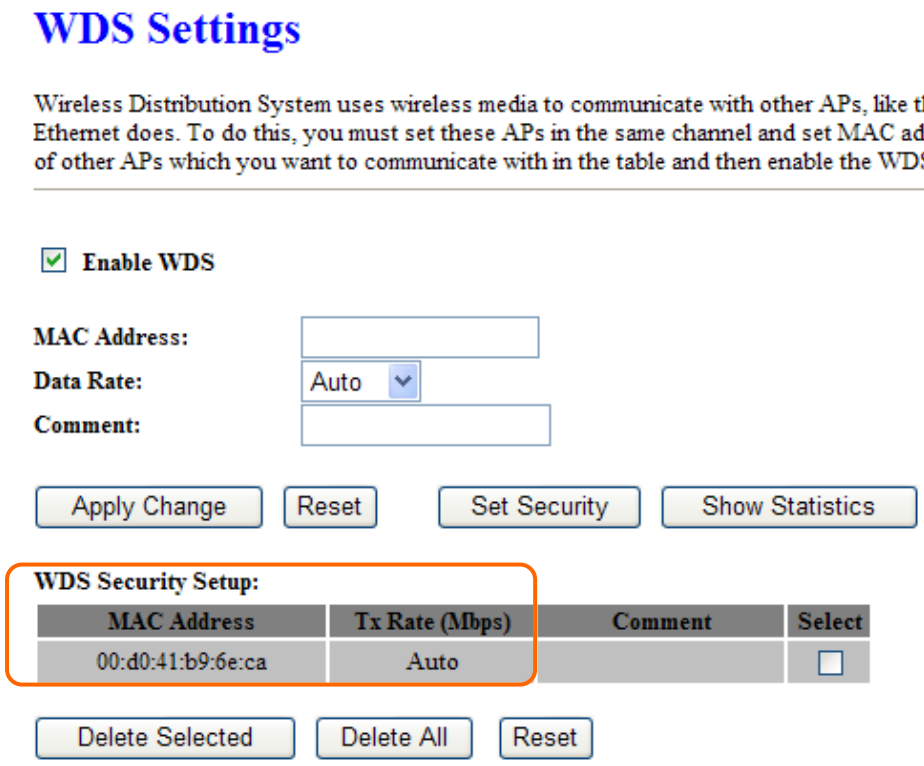
(2.) Enter the **Wireless Basic Settings** page, select **AP+WDS** mode, and then select the **Channel Number**. Click **Apply Changes** to save the setting data.



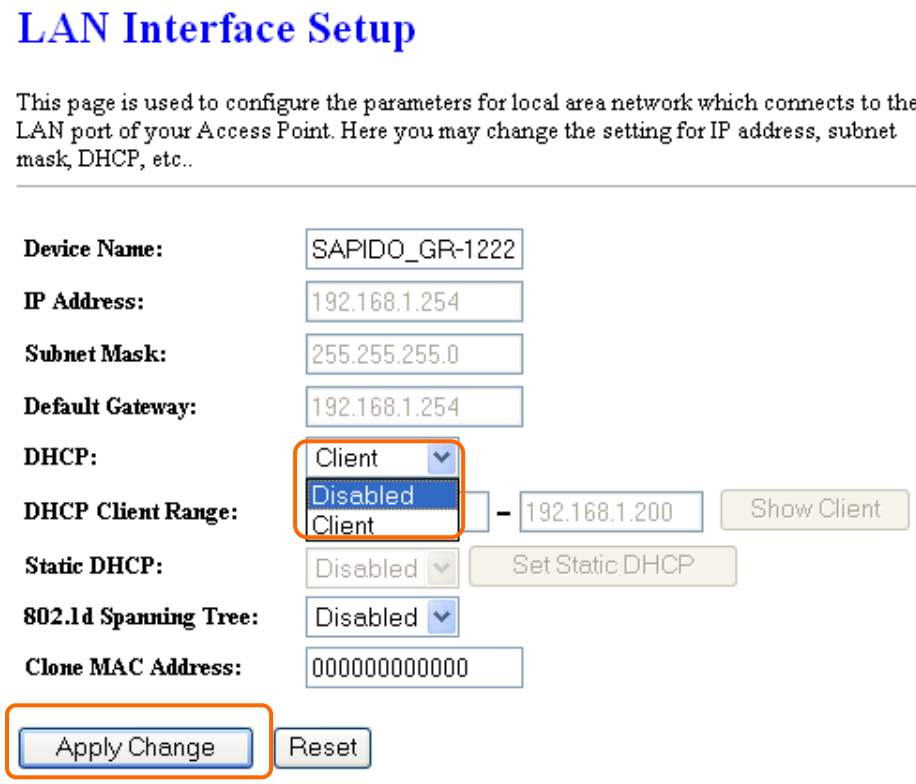
(3.) Enter the **WDS Settings** page, select **Enable WDS**, and then input the MAC address of the upper level device. Click **Apply Changes** to save the setting data.



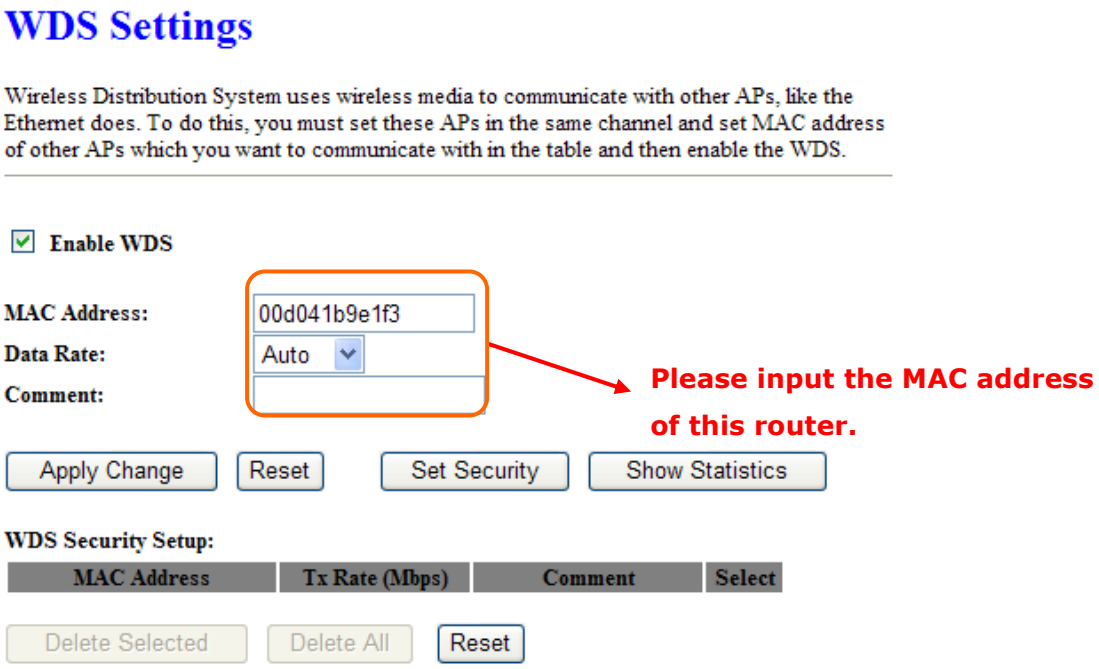
(4.) When the time counts down to 0, you will see the MAC address of the upper level device displaying on **Current WDS AP List**.



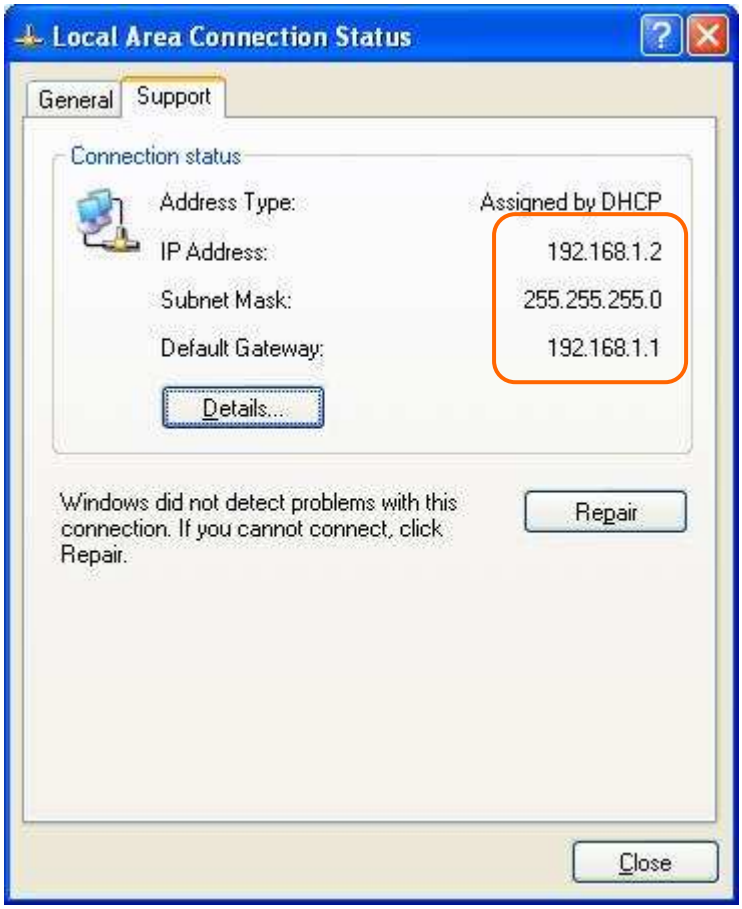
(5.) Head back to **LAN Interface**, disable **DHCP** option, and then click **Apply Changes** to save the setting data.



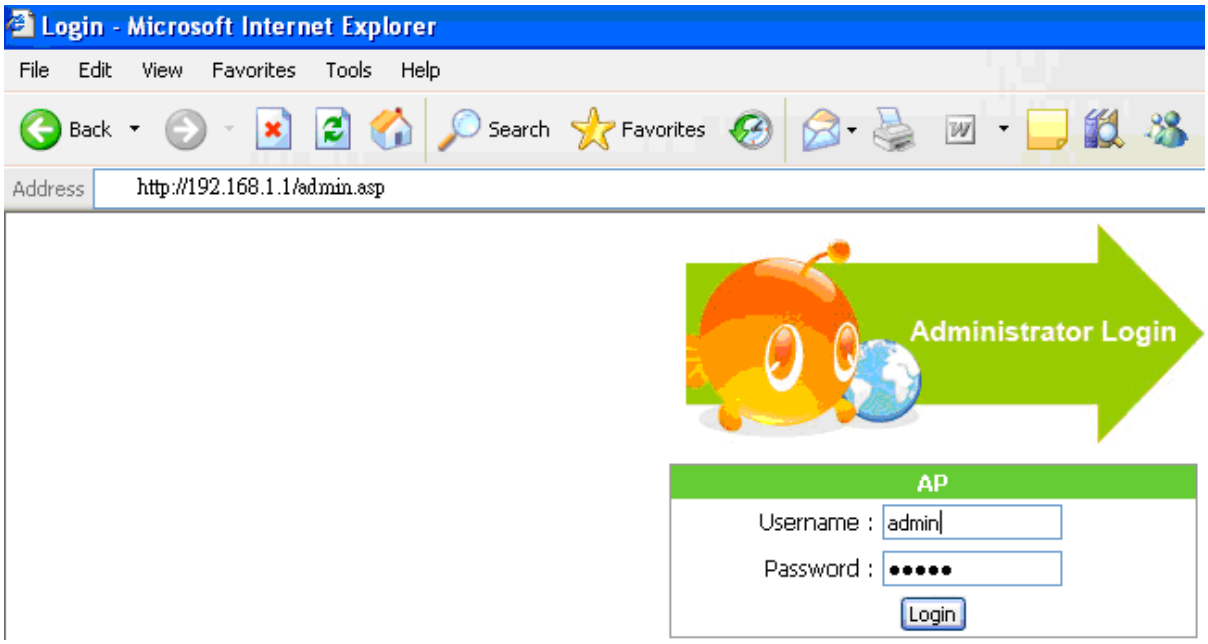
(6.) The MAC address of the upper level device is going to setup like the MAC address of the router. Enter the upper level device's **WDS settings** page, and input router's MAC address. Click **Apply Changes** to save the setting data.



(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.



6.2.6 WPS

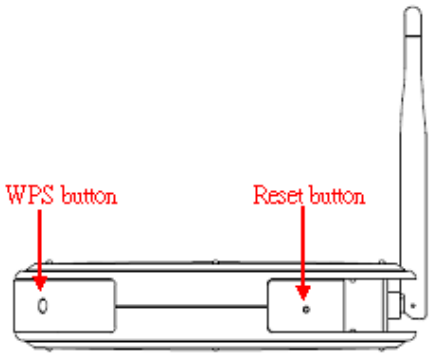
Wi-Fi Protected Setup, it can simplify the procedures of wireless encryption between N+ 3.5G NES Server and wireless network card. If the wireless network card also supports WPS function, users can activate WPS auto-encryption to speed up the procedures.

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 N+ 3.5G NES Server.



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.

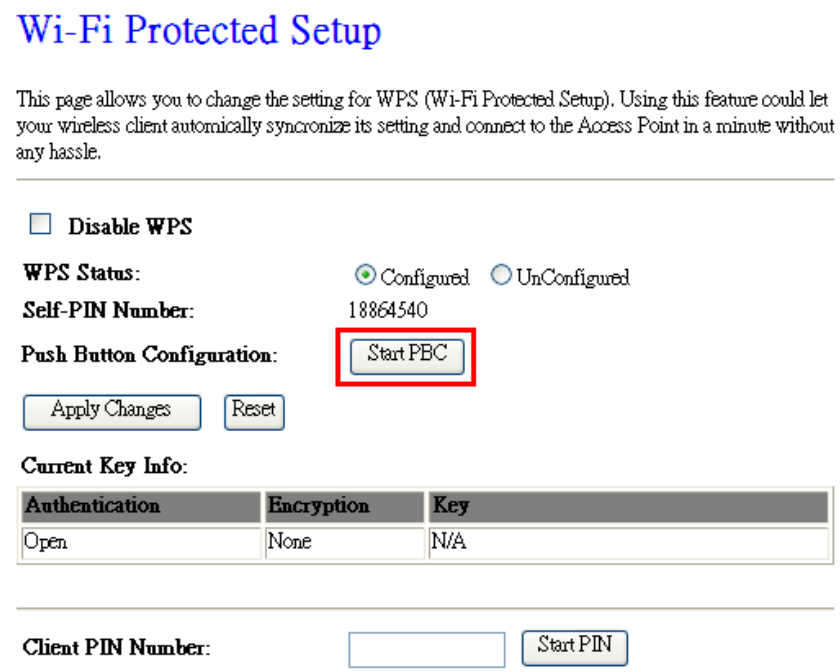
On the other hand, users need to input the information of the wireless card into the register interface. It might lead to the failure of connection, if users make mistakes on inputting. On PBC model, users only need to click the WPS button on

both sides to make a connection. It is easier to operate.

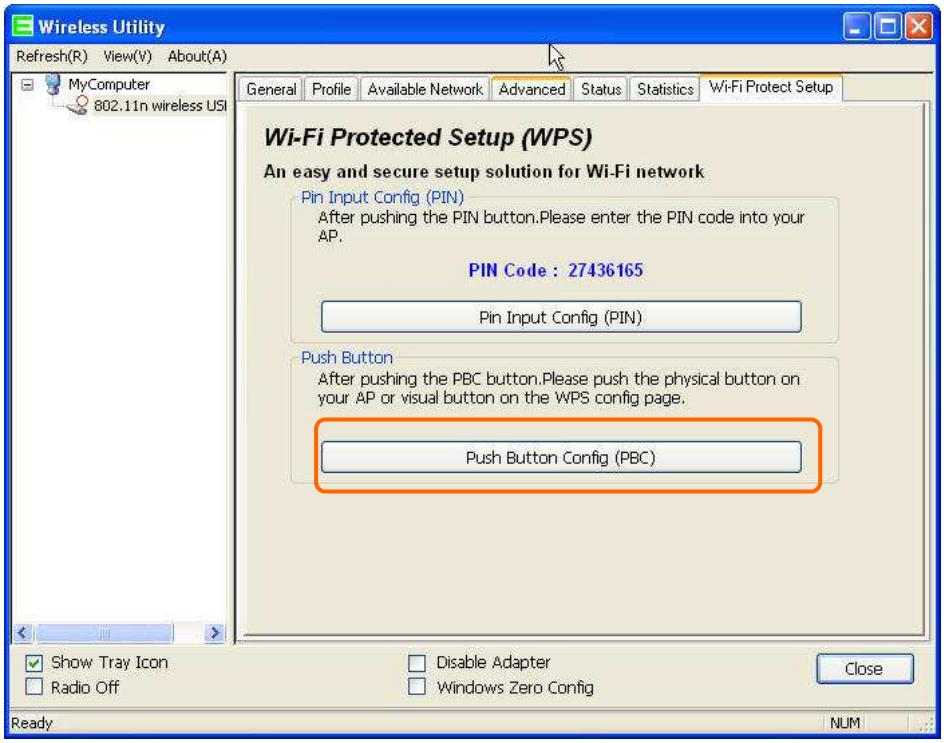
This page supports **Start PBC** and **Start PIN**; please follow the instructions to operate.

* Start PBC:

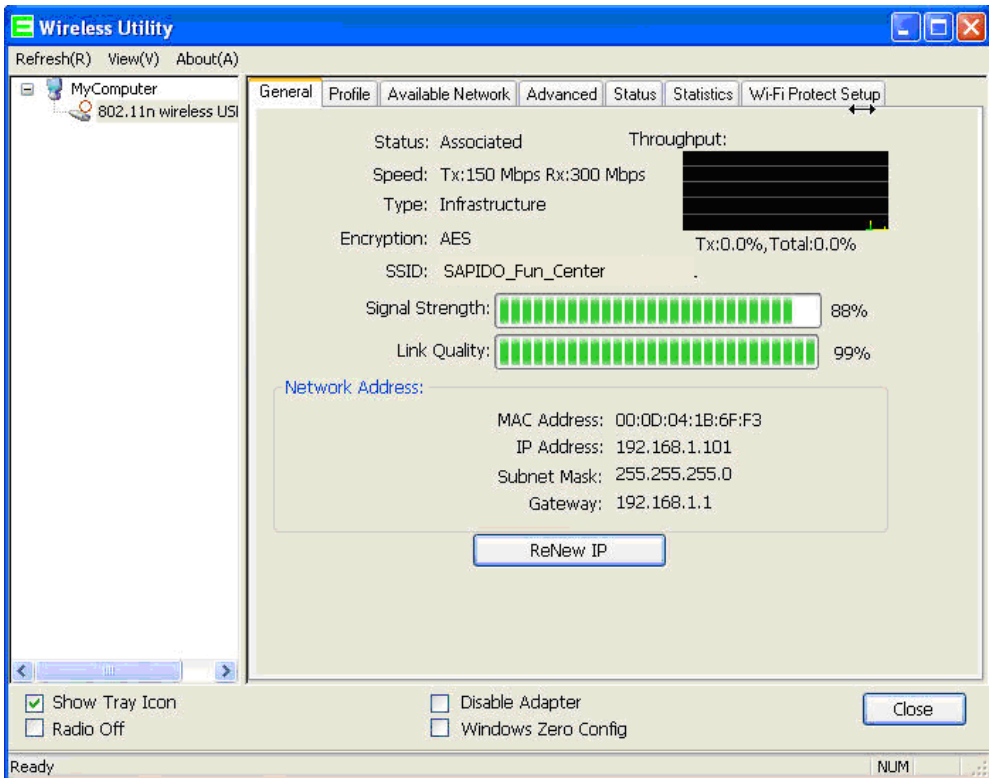
(1.) Please click **Start PBC** to connect to the wireless network card.



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

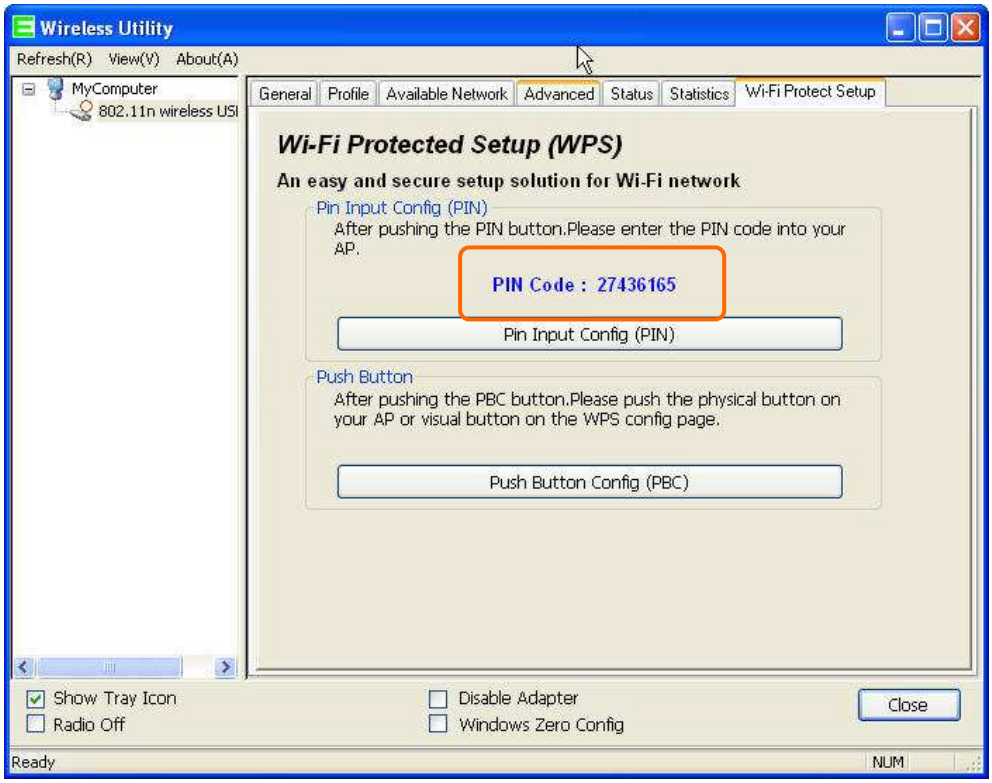


(3.) When you see **Network Address**, it means the WPS connection between wireless card and 3.5G Mobile Router is established.

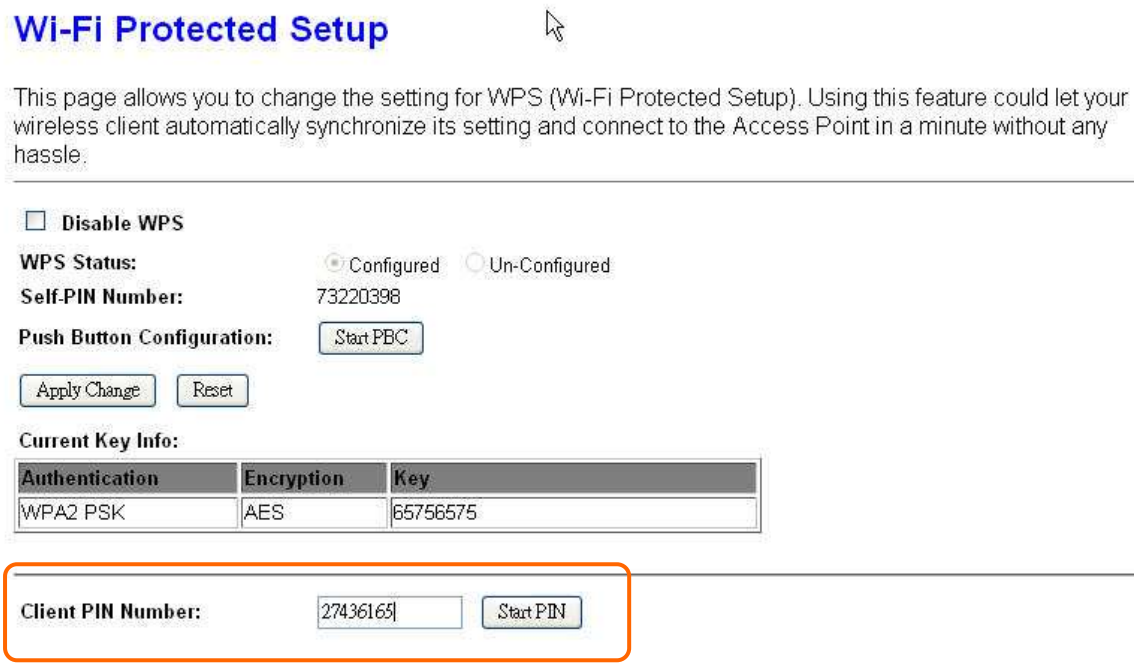


* Start PIN:

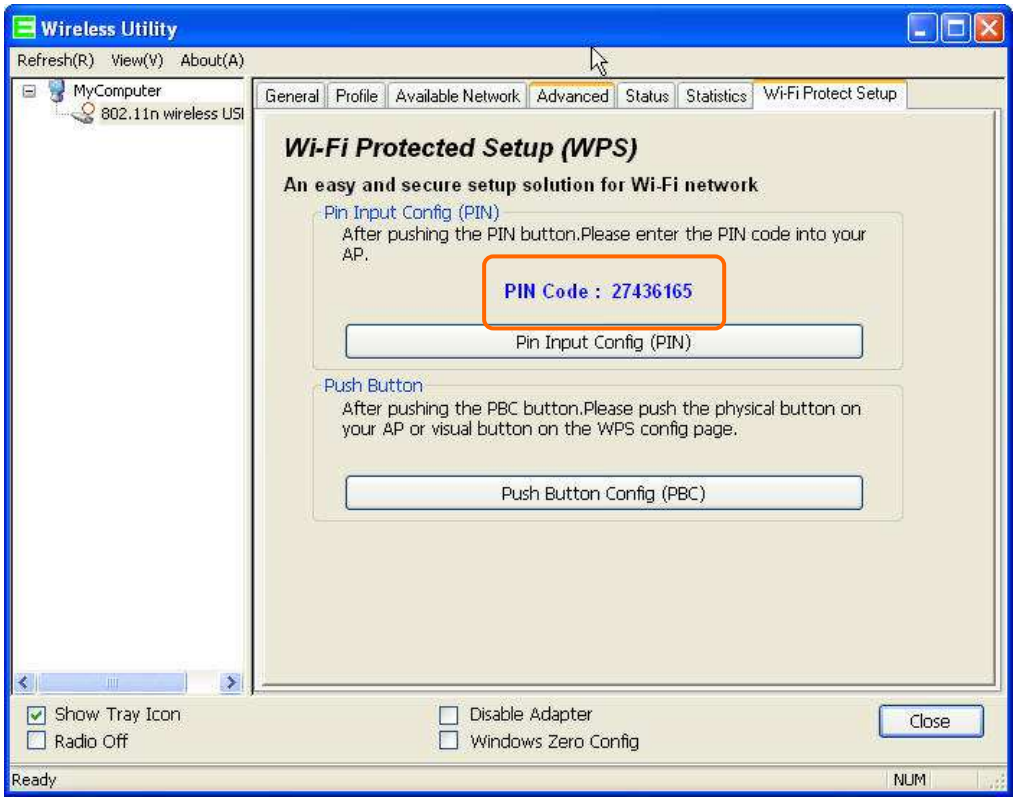
(1.) Please open the configuration page of the wireless card, and write it down.



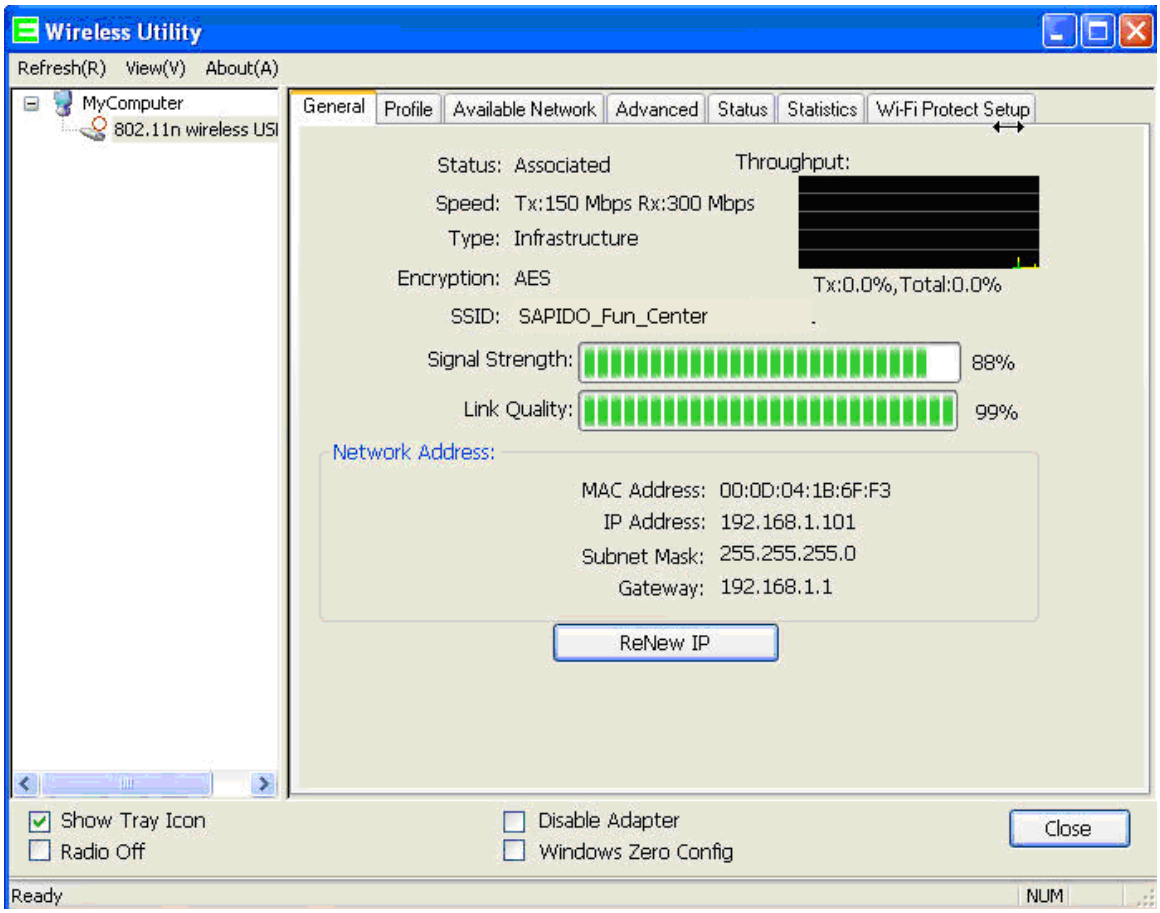
(2.) Open the Wi-Fi Protected Setup configuration page of 3.5G Mobile Router, input the PIN number from the wireless card then click **Start PIN**.



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



(4.) When you see **Network Address**, it means the WPS connection between wireless card and 3.5G Mobile Router is established.

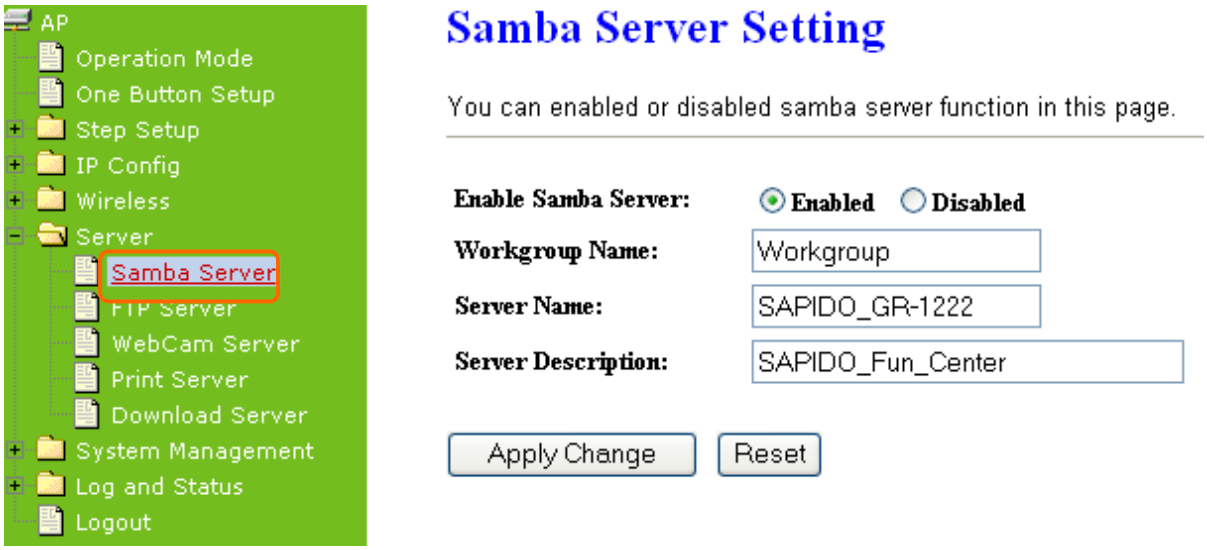


6.3 Server

N+ 3.5G NES Server 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.

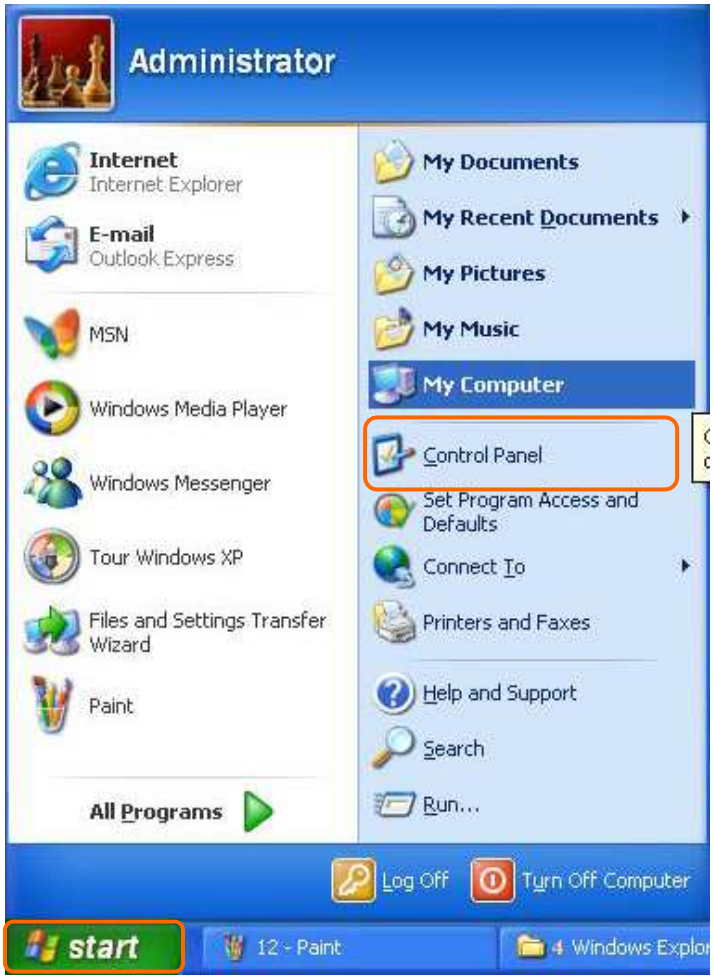


1. **Enable Samba Server**
   Enable or disable this function.
2. **Workgroup Name**
   Input the workgroup name, default is "**WORKGROUP**".
3. **Server Name**
   Input the server name, default is "**SAPIDO_GR-1222**".
4. **Server Description**
   You can input description of the server.
5. **Apply & Cancel**
   Click on **Apply** button to finish setting. Click on **Cancel** button to clean the setting on this page.

6.3.1.1 How to Enter The Sharing Folder

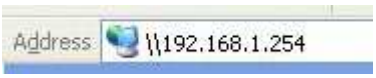
Please follow below steps.

Step 1:
Please click the "**start**", and select "**My Computer**".



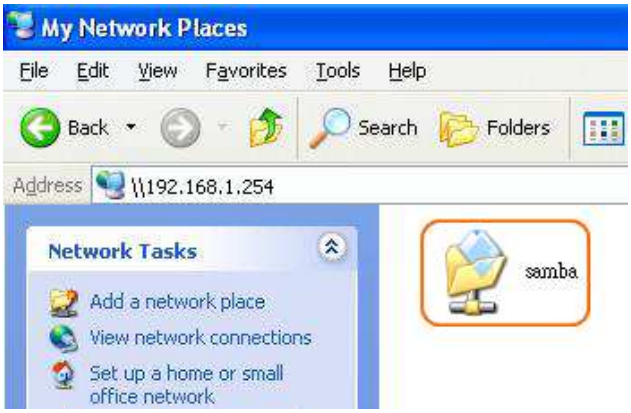
Step 2:

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



Step 3:

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

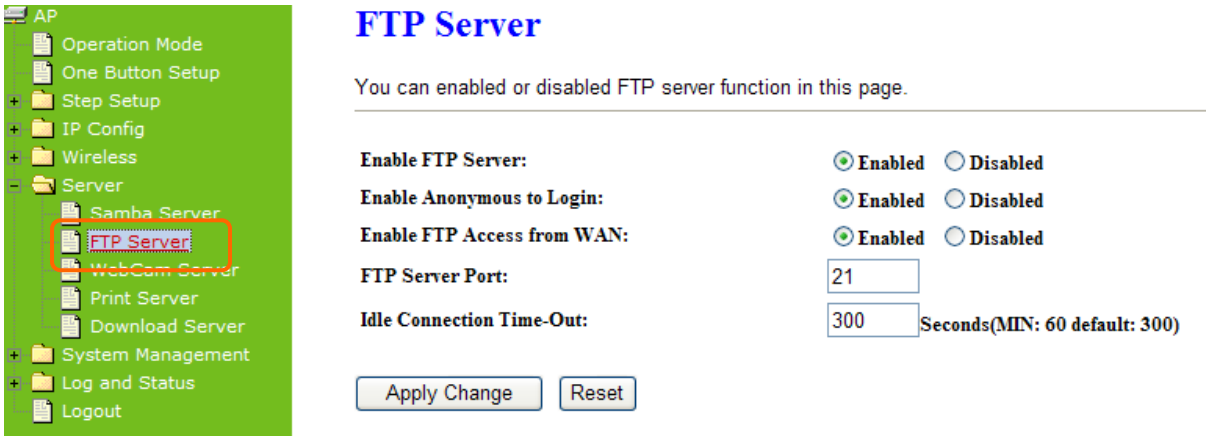


Note：

3. If connected USB flash or HDD, and then enable samba server function, it will appear a samba folder.
4. 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.



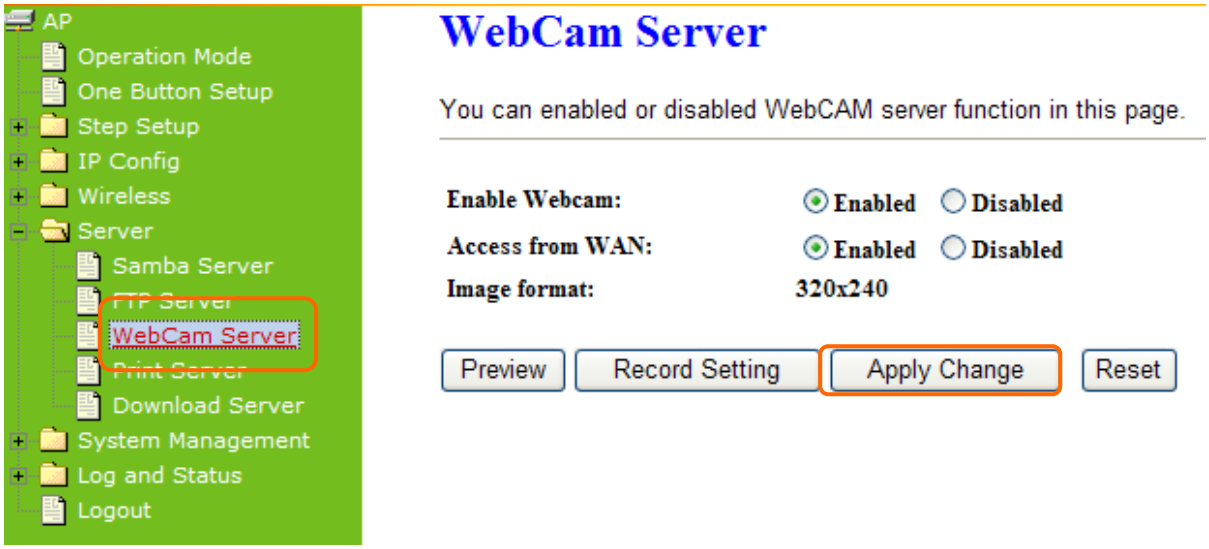
1. **Enable FTP Server**
   Select to "**Enable**" or "**Disable**" FTP server.
2. **Enable Anonymous to Login**
   Allow anonymous to login after check on Enable.
3. **FTP Server Port**
   The default is 21. Define the FTP command transfer service port. If you want to change this port number, remember to change the service port setting of your FTP client, also.
4. **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.
5. **Apply & Cancel**
   Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page.
6. **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.

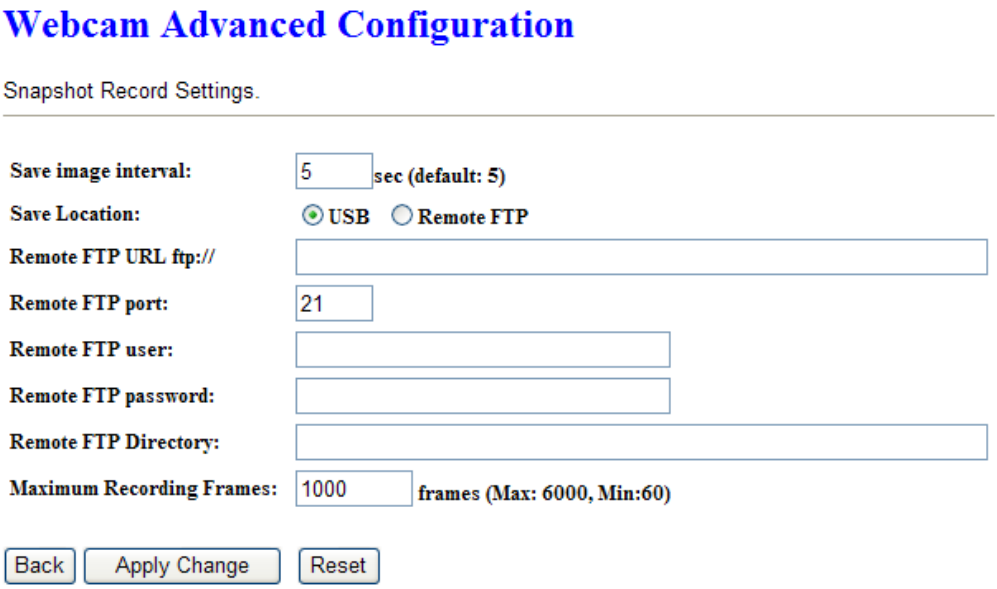
6.3.3.1 Webcam Server Basic Setting



1. **Enable webcam server**
   Select to "**Enable**" or "**Disable**" webcam server.
2. **Image format**
   The format is 320X240 pixels.
3. **Preview**
   Click on this button, you can preview the image from webcam.
4. **Record Setting**
   Please see the detail advance setting in "**6.3.3.2 Webcam Advanced Configuration**".
5. **Apply & Cancel**
   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.



1. **Save image interval**
   For saving image, you can set the save interval time, the default value is 5 seconds.
2. **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.
3. **Remote FTP URL**
   Input the FTP URL for saving webcam image.
4. **Remote FTP port**
   Input the FTP port number under URL to save image.
5. **Remote FTP user**
   Input the users name you like and it will be used to save the webcam image into the FTP server.
6. **Remote FTP password**
   Input the remote password.
7. **Remote FTP Directory**
   To provide option of which folder should be used for saving webcam image.
8. **Back**
   Click on **Back** button for returning to Webcam Basic Setting screen.
9. **Apply & Cancel**
   Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page.

6.3.3.3 Application for Webcam

6.3.3.3.1 Web Camera Monitoring Application

Monitor your home with a Webcam via N+ 3.5G NES Server. Take pictures via N+ 3.5G NES Server, 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 via 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 the login page.

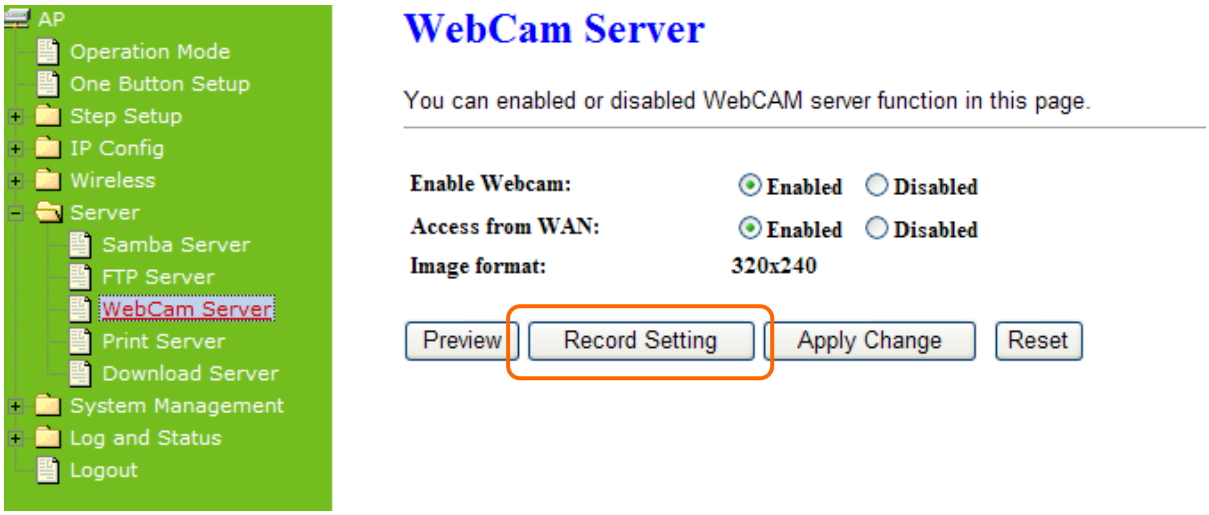
Enter username and password, and then select My Webcam.

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

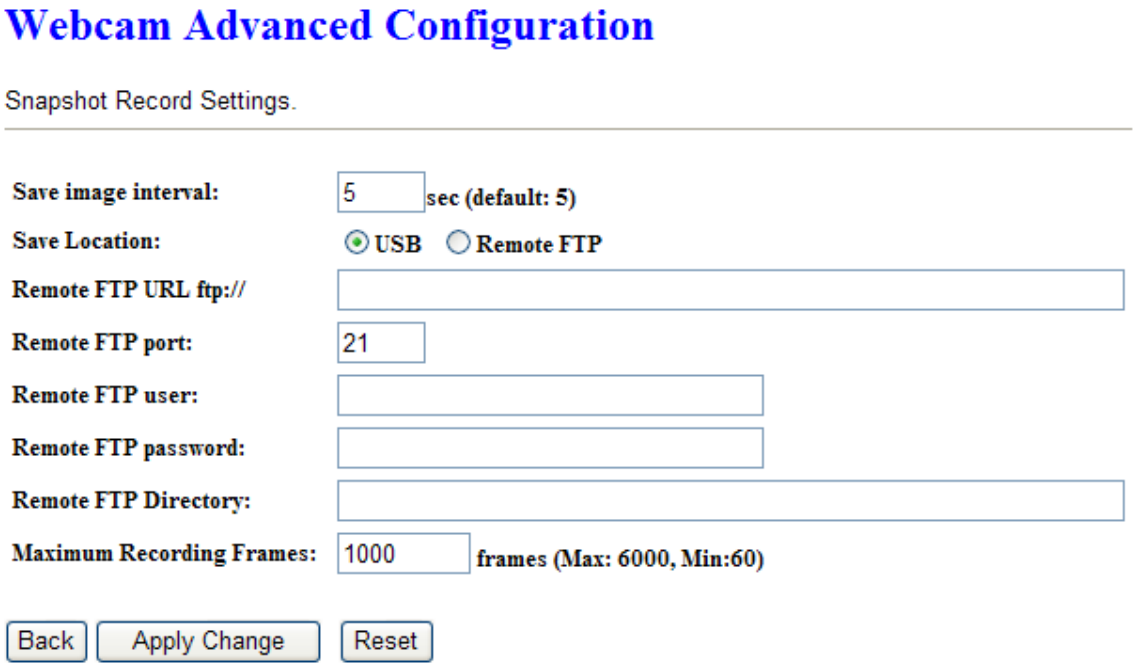
6.3.3.3.2 Web Camera Recording

6.3.3.3.2.1 Administrator

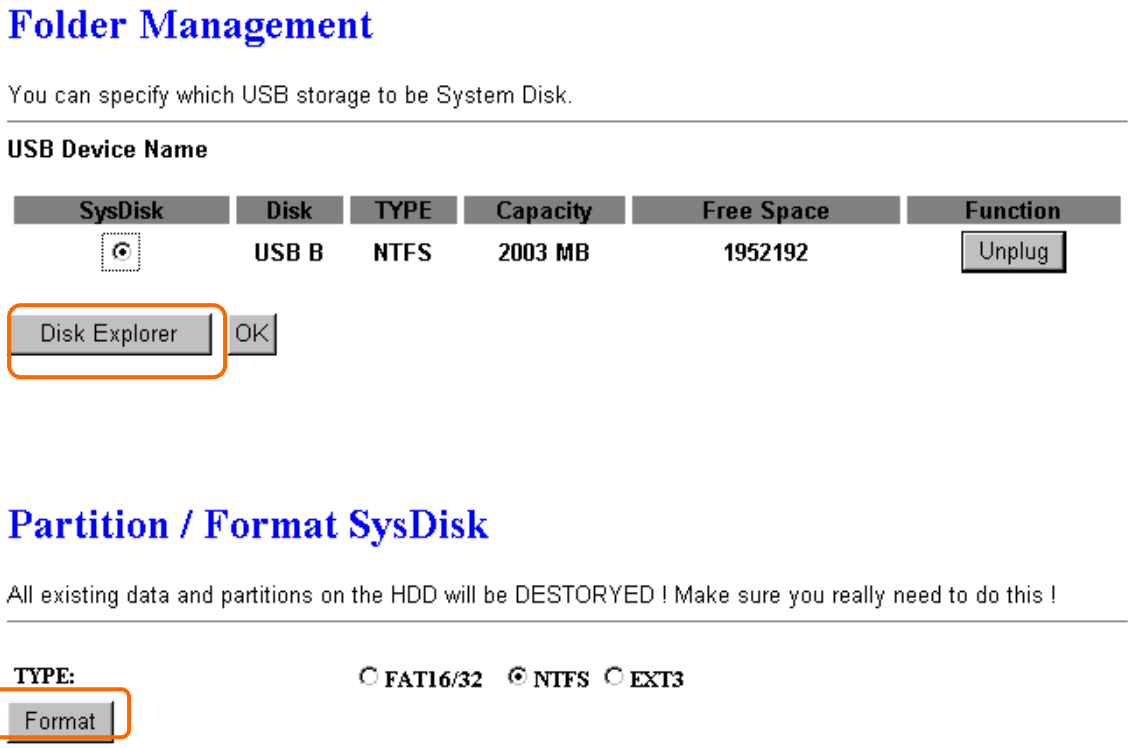
N+ 3.5G NES Server also can record the pictures from Webcam; only Administrator can do the settings. Select **Web Camera Server** from main Menu and Enable this function, click on **Record setting** button for further setting.



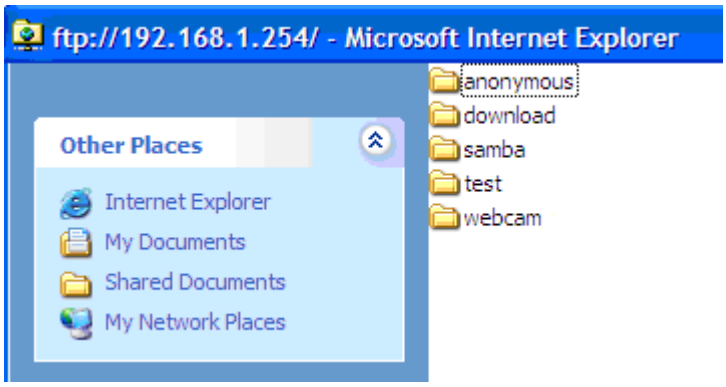
To setup the Webcam Advanced Configuration for each blank and the image from webcam will be recorded into your USB HDD or Remote FTP.



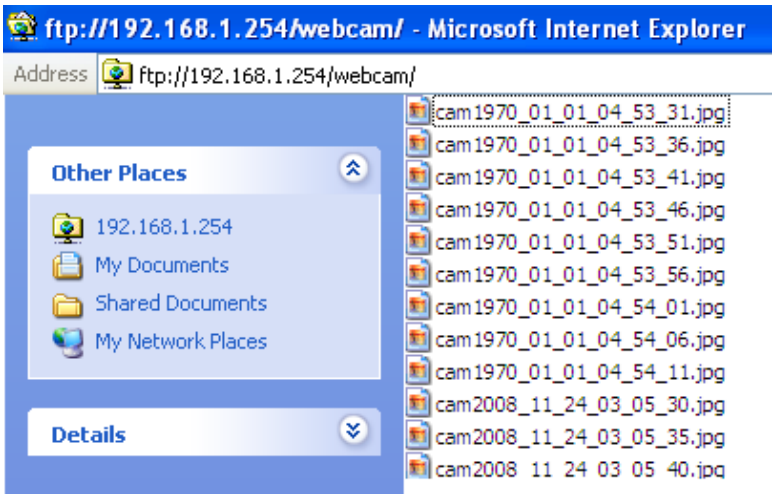
For administrator, you may view all the images from webcam recording, please select **Folder Management** and click on **Disk Explorer** to view entire folder inside the disk including webcam record files.



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

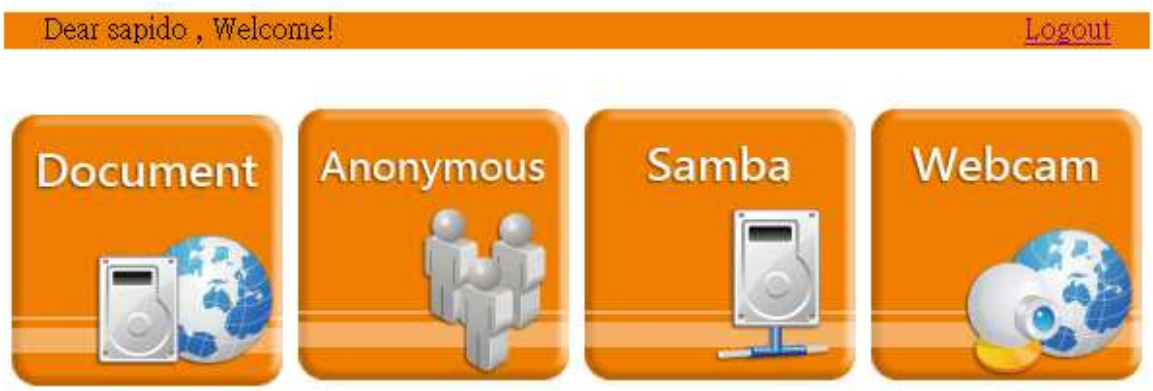


All the image files will be saved in the folder "**webcam_files**". Please open the file for checking.



6.3.3.3.2.2 Personal Application

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

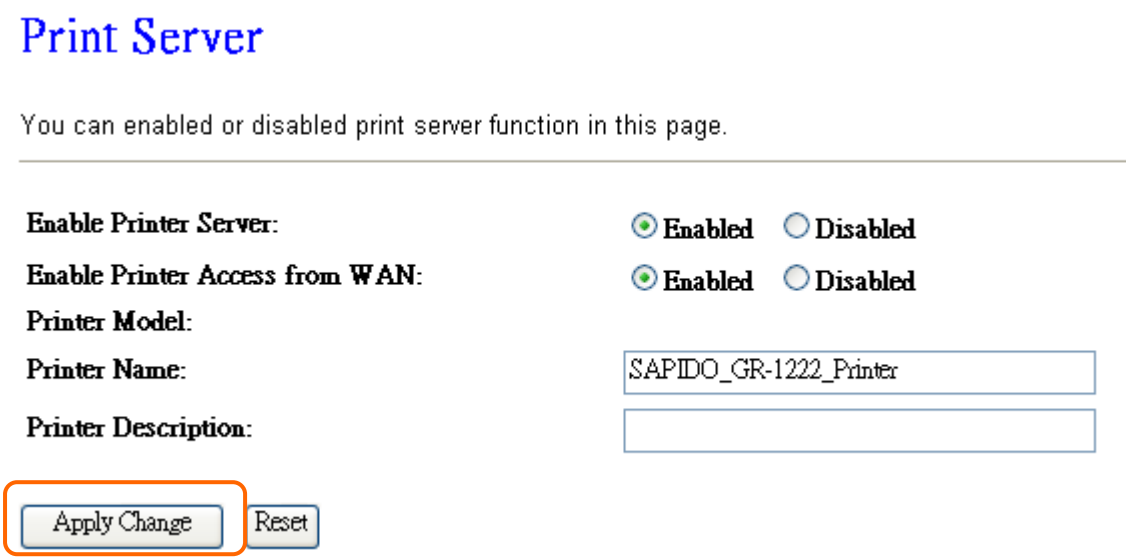


After click on "**My Document**", you will see below folder screen appeared. You can save files here.

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 N+ 3.5G NES Server 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.



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

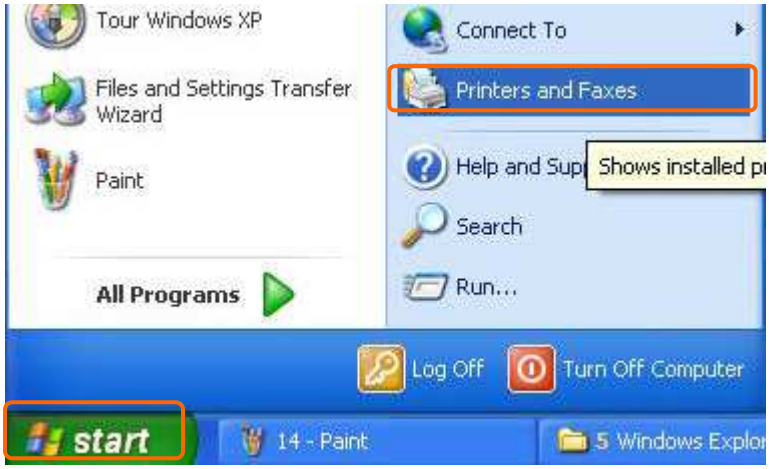
Besides above setting finished, the printer setting on PC also needs to be set as follows.

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.)

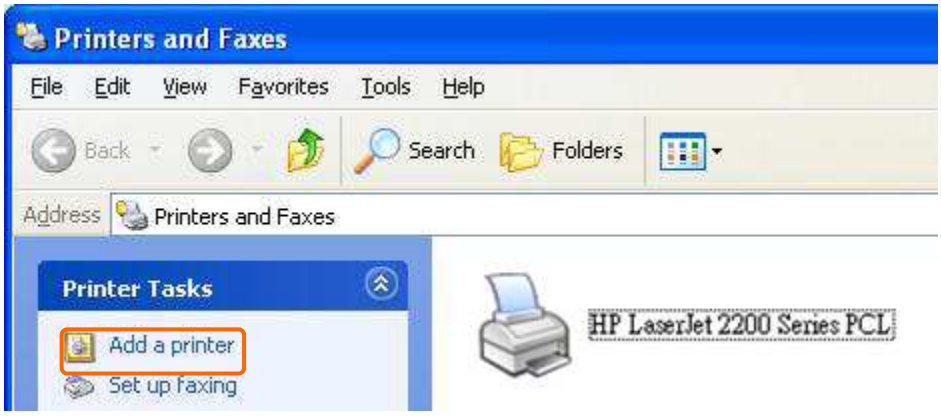
Step 1:

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



Step 2:

Click "**Add a printer**".

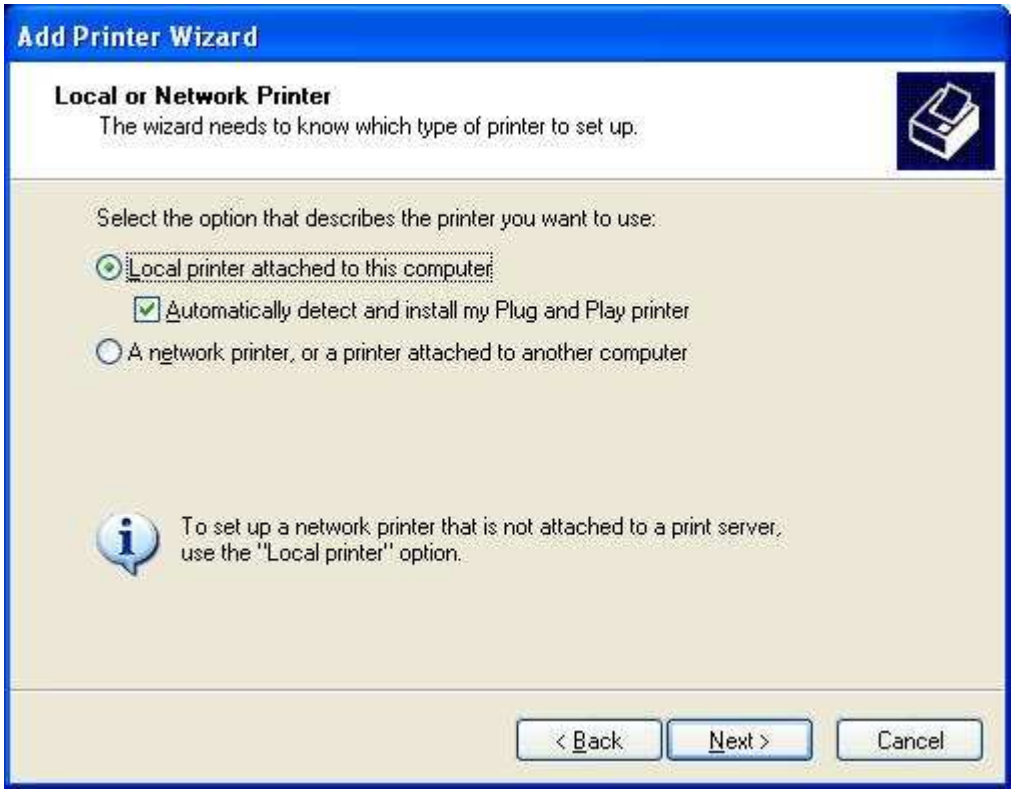


Step 3:

Click "**Next**".

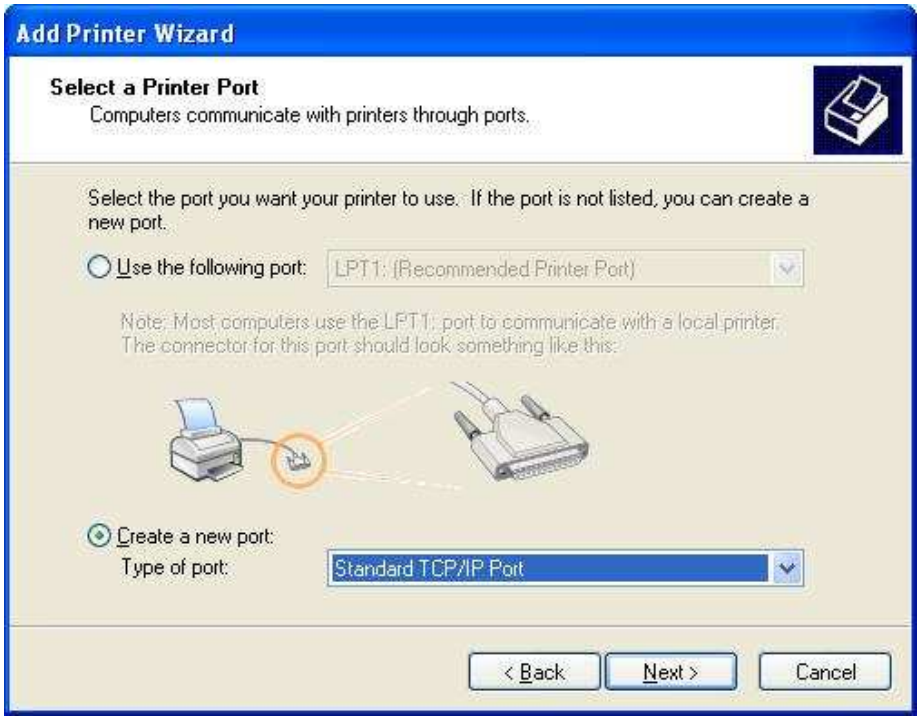
Step 4:

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**".

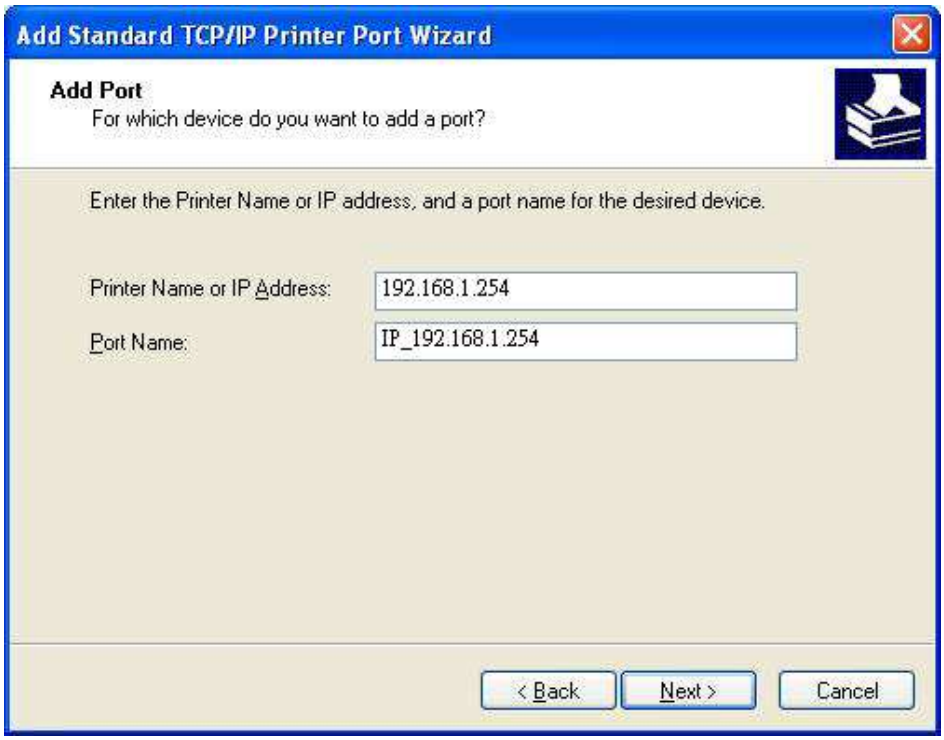


Step 6:

Click "**Next**".

Step 7:

Input the IP address of N+ 3.5G NES Server: **192.168.1.254**, and then click "**Next**".

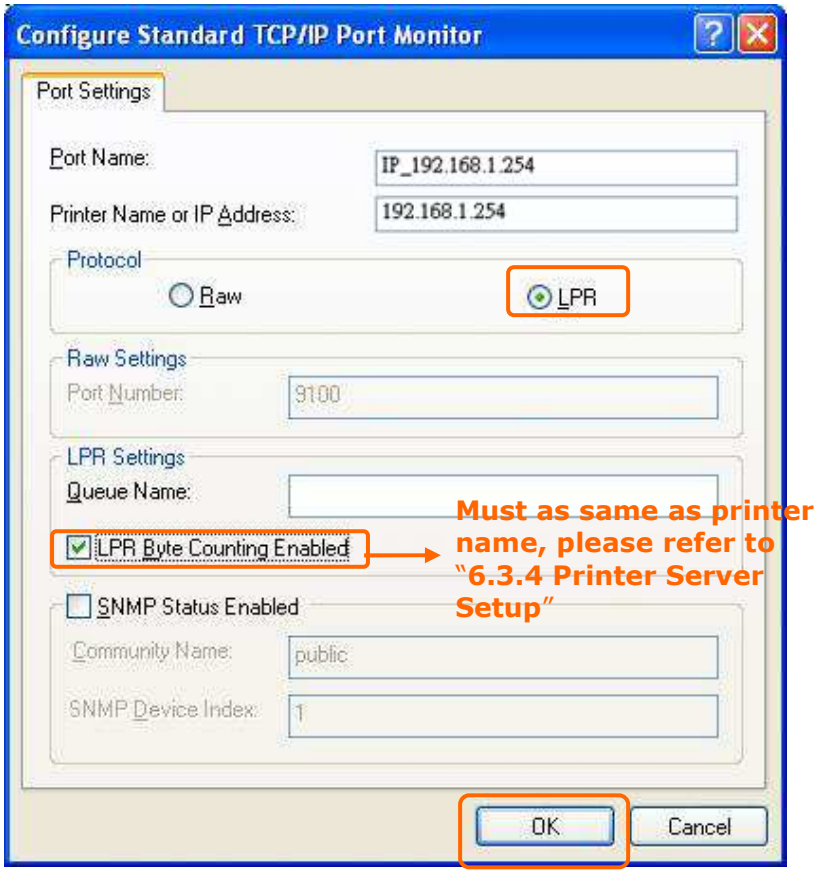


Step 8:

Select the "**Custom**" and click the "**Settings**", and then click "**Next**".

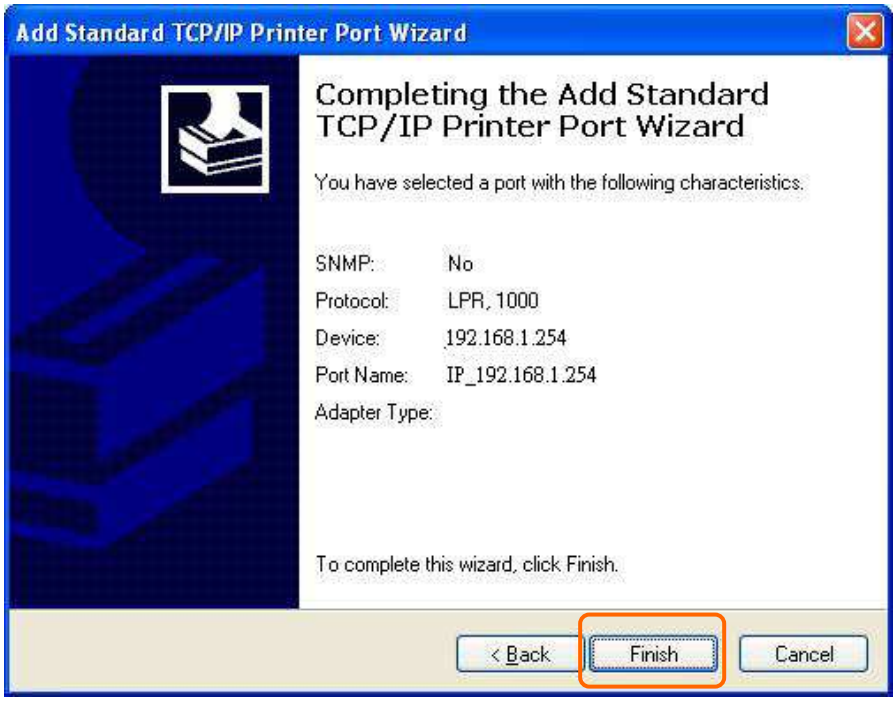
Step 9:

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**".

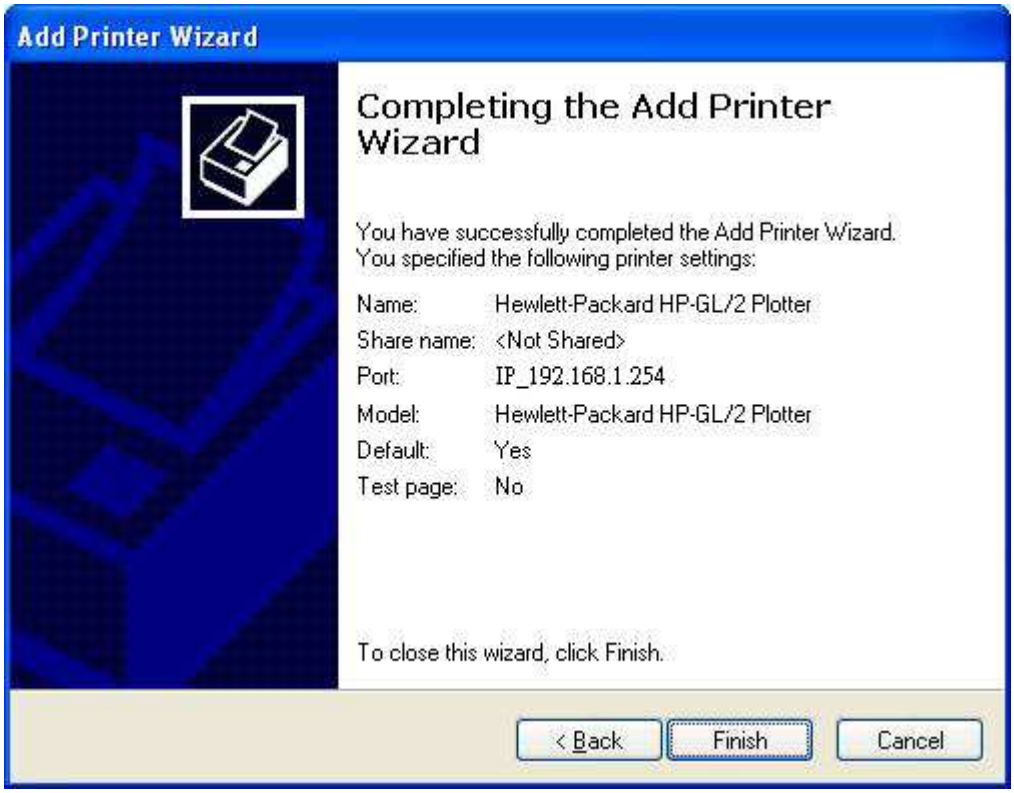


Step 11:

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.

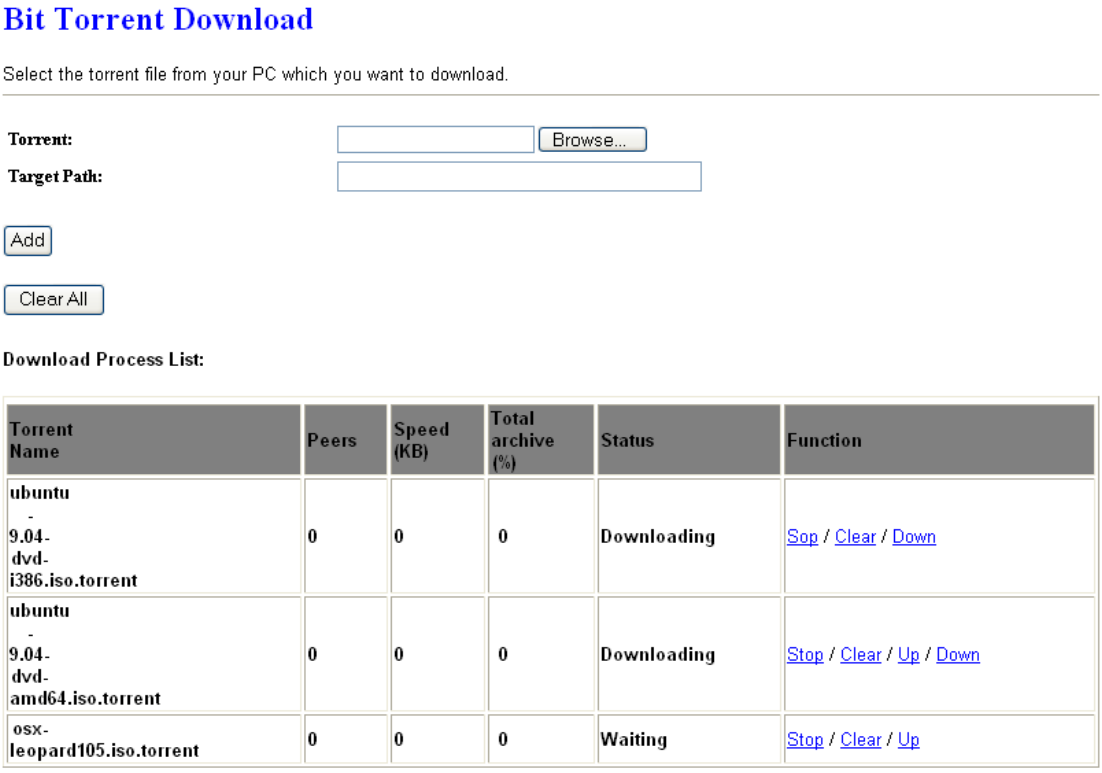
Step 12:

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



6.3.5 Download Server

Let users schedule the timing to download files by using BT. The downloaded files are saved in personal FTP Download folder.



1. Torrent

Browser any torrent file is located in user's computer.

2. Target Path

The download file's saving path.

3. Download Process List

It will display all downloading schedule.

4. Add new Torrent

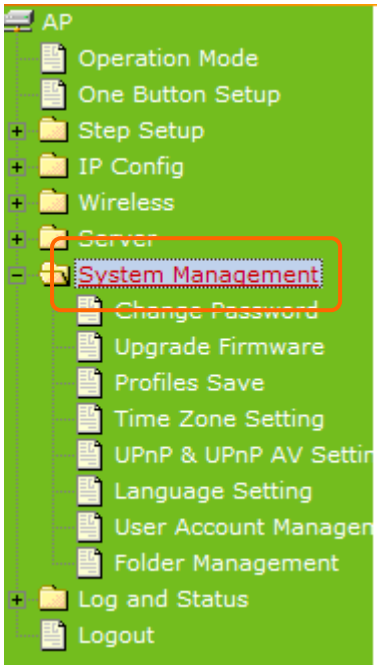
Fill in **Target Path** and click **Add,** Torrent will show in the list.

5. Clear ALL

Clear all torrents in **Download Process List.**

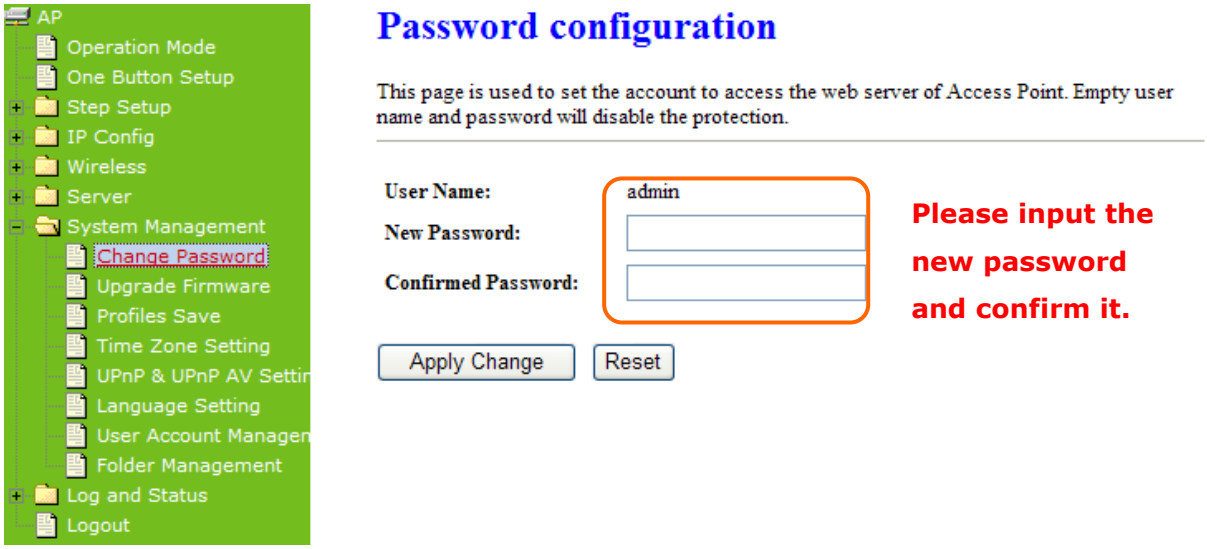
6.4 System Management

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

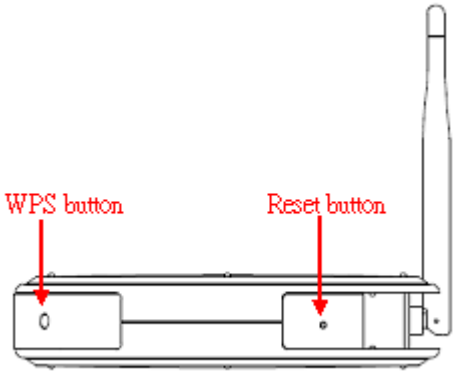
This function can upgrade the firmware of the router. There is certain risk while doing firmware upgrading. Firmware upgrade is not recommended unless the significant faulty is found and published on official website. If you feel the router has unusual behaviors and is not caused by the ISP and environment. You can check the website (http://www.sapido.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.

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

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

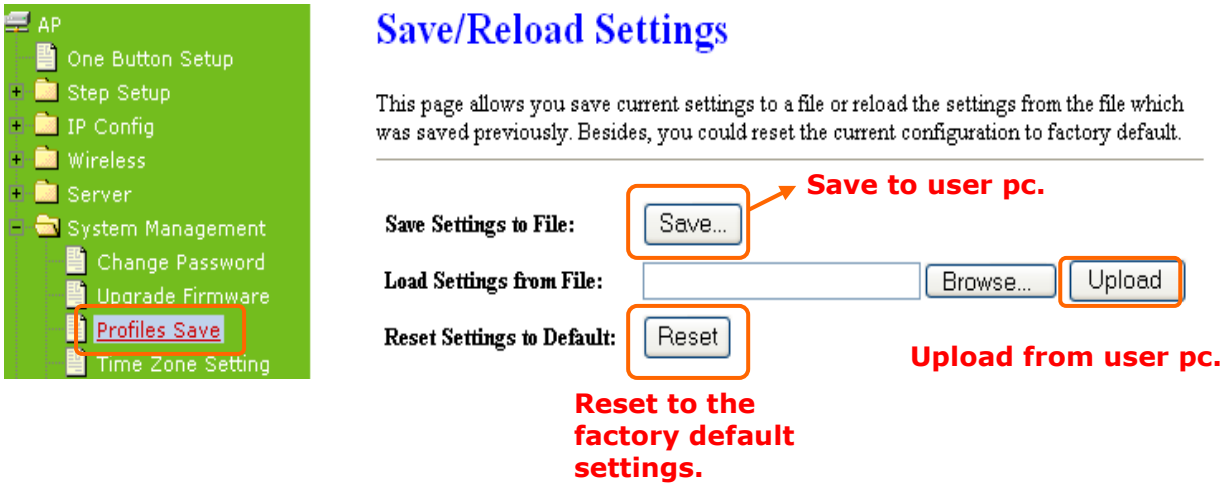
* Reset button:

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.



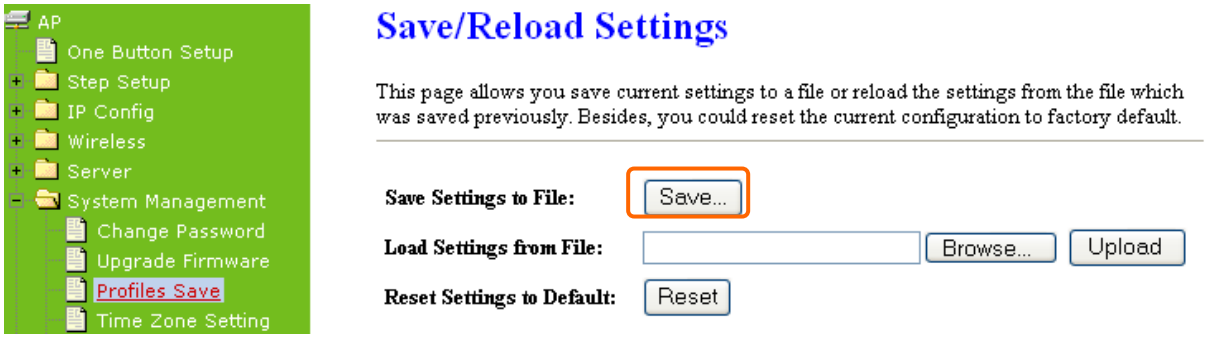
6.4.3 Profiles Save

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



* Please see the following instructions.

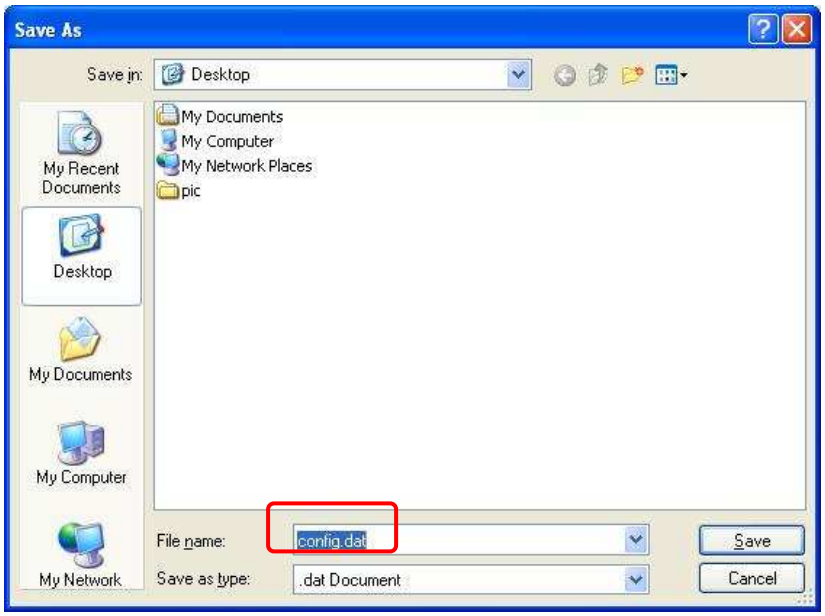
a. Please click **Save...**, a prompt window will ask user to save config.dat file. (Figure 1), please select the location (Figure 2), for example: the desktop (Figure 3).



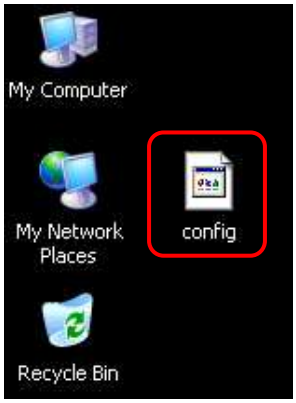
A pop window will show up and ask to save config.dat file. Please select the location (Figure

2), for example: the desktop (Figure 3).

(Figure 1)

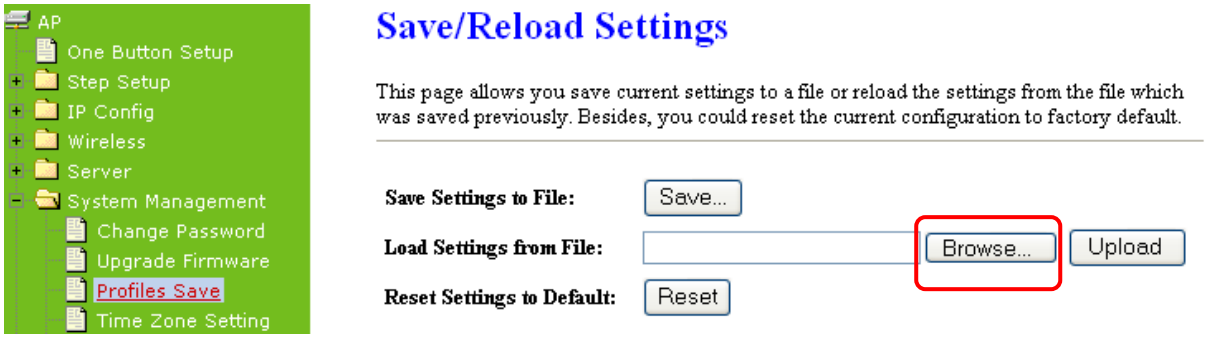


(Figure 2)

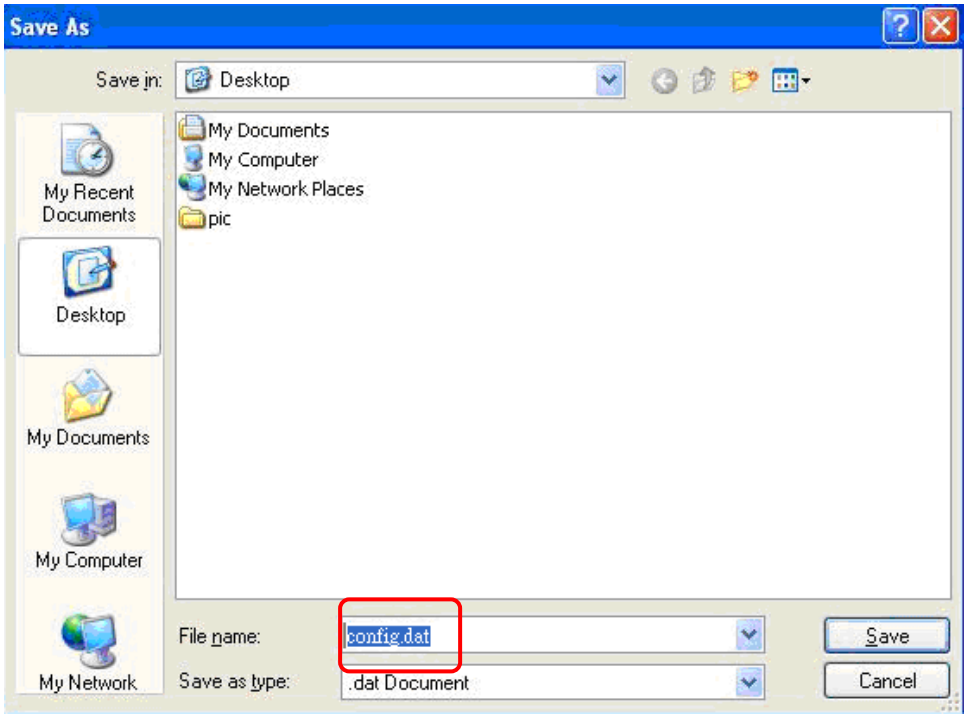


(Figure 3)

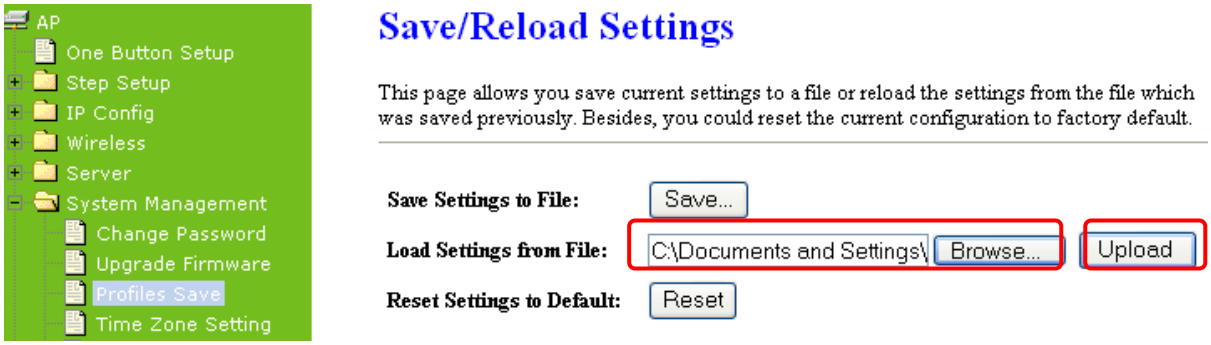
b. Please click **Browser...** (Figure 1) and select the config.dat file. (Figure 2), and then click **Upload** to retrieve (Figure 3).



(Figure 1)

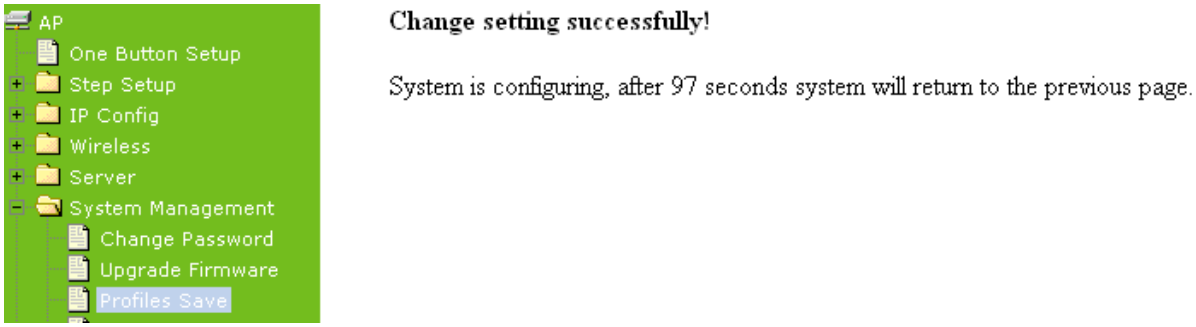


(Figure 2)

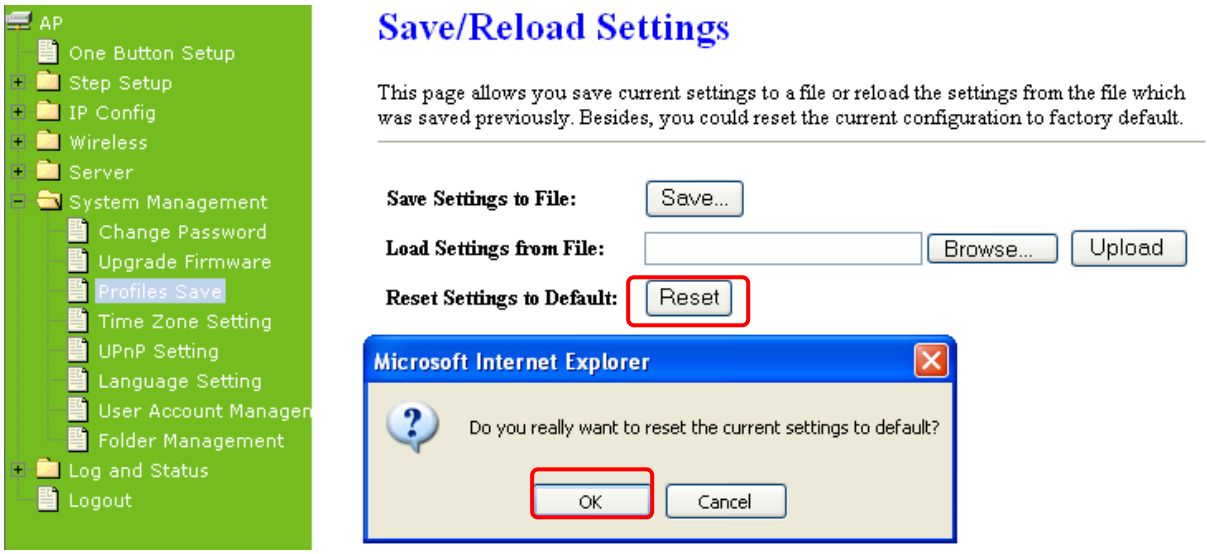


(Figure 3)

c. When you see the screen displaying like the following figure, it means update is completed. Please click **OK** to turn back to the configuration page.



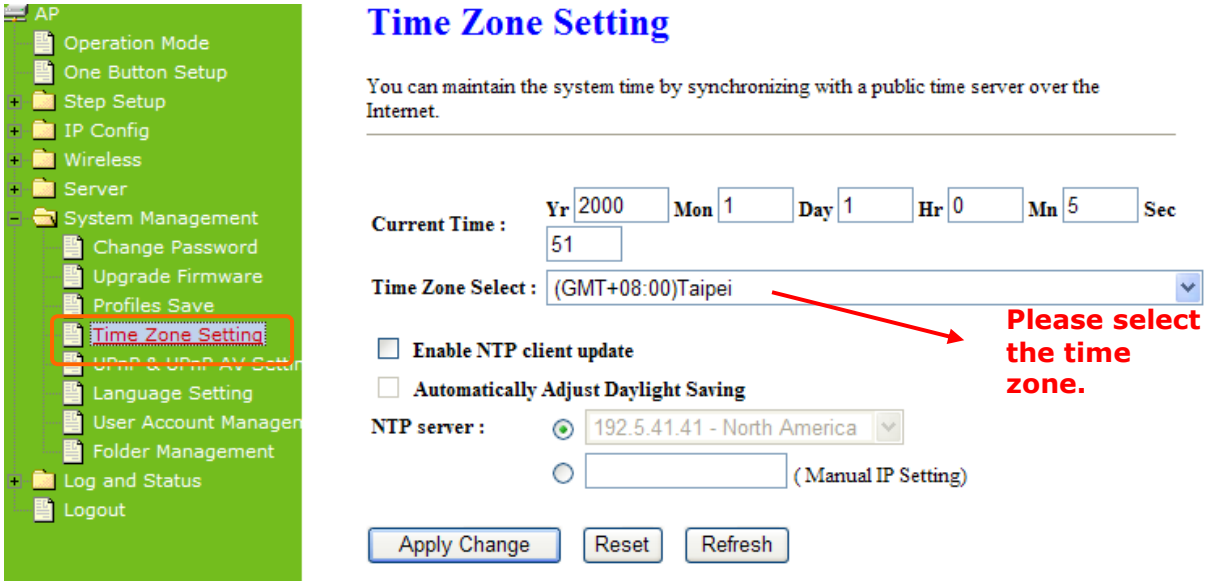
d. if you want to reset the system back to factory default settings, please click **Reset** button.



e. When you see the screen displaying like the following figure, it means reset is completed. Please click **OK** to turn back to the configuration page.

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.



1. Current Time

Users can input the time manually.

2. Time Zone Select

Please select the time zone.

3. Enable NTP client update

Please select to enable NTP client update or not.

4. Automatically Adjust Daylight Saving

Please select to enable **Automatically Adjust Daylight Saving** or not.

5. NTP server

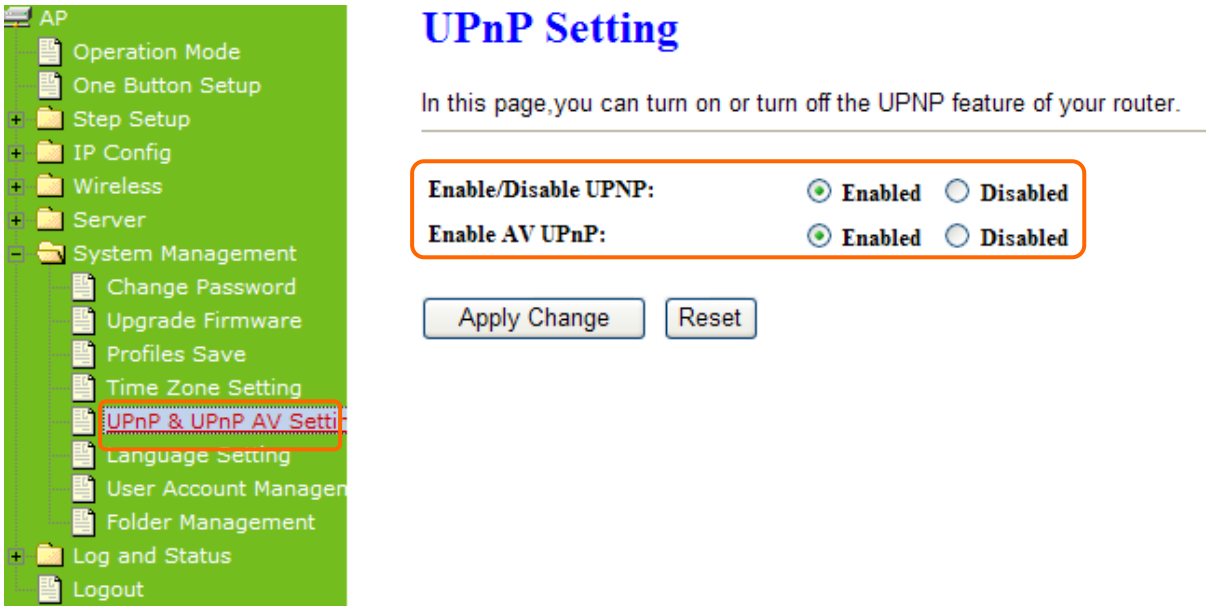
Please select the NTP server from the pull-down list, or you can enter the NTP server IP address manually.

6. 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 & UPnP AV 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 Download 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 Download Server Router. If you do not wish to use UPnP, you can disable it.



1. Enable/Disable UPnP

Select to enable or disable this function.

2. Enable/Disable UPnP AV

Select to enable or disable this function.

6.4.6 Language Setting

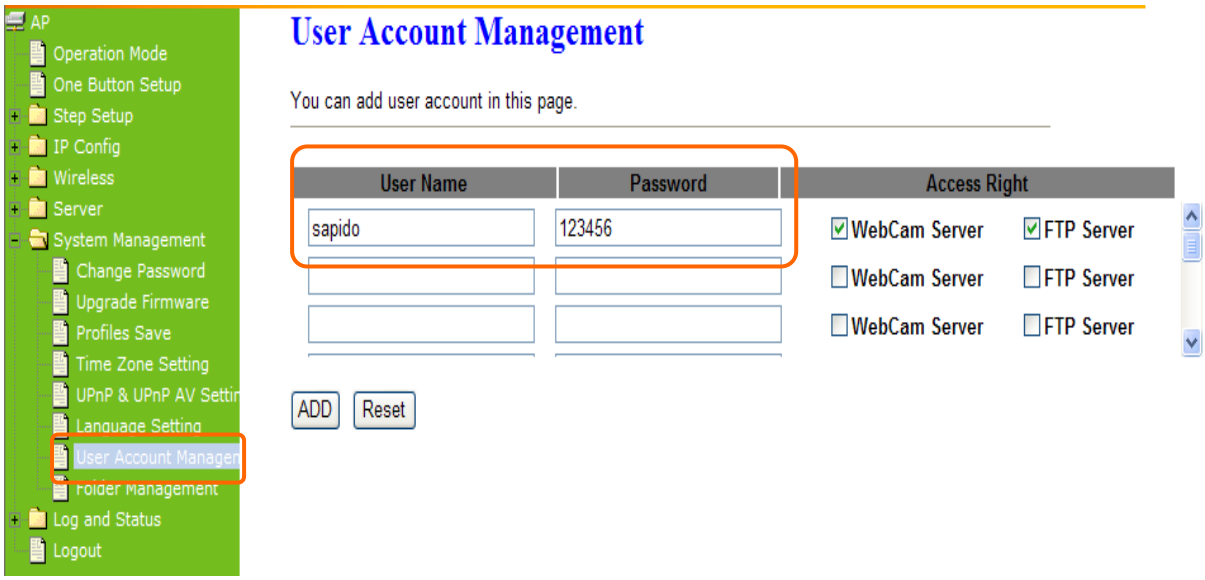
N+ 3.5G NES Server provides users with 12 languages to choose. Users can change the language of the interface configuration. Please click **Apply Changes** after selecting a language.

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

Note: 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.



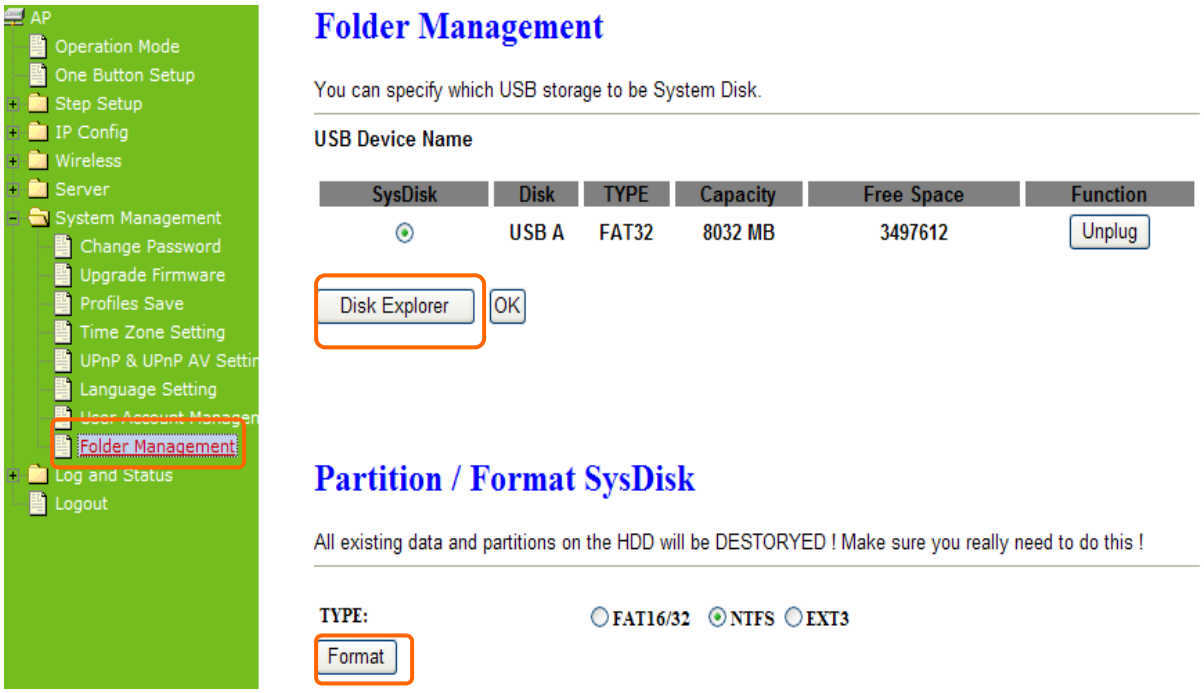
1. User Name

Create the user name in this blank.

2. **Password**
   Setup the user's password.
3. **User Right**
   Enable the use to Webcam, FTP server.
4. **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.

6.4.8 Folder Management

Easy to check all the USB storage devices connected to your N+ 3.5G NES Server, 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.

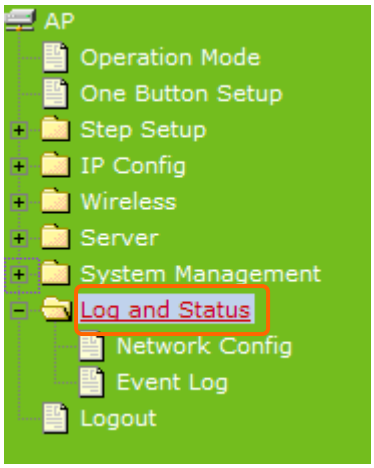


1. Select the USB Disk and click on **Mount** button for refresh all disks before you do disk partition, and the **Unplug** button will appear.
2. To partition/format the disk, please select the disk and click on **Format** button.
3. If you want to view the data inside the disk, please click on "**Disk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

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

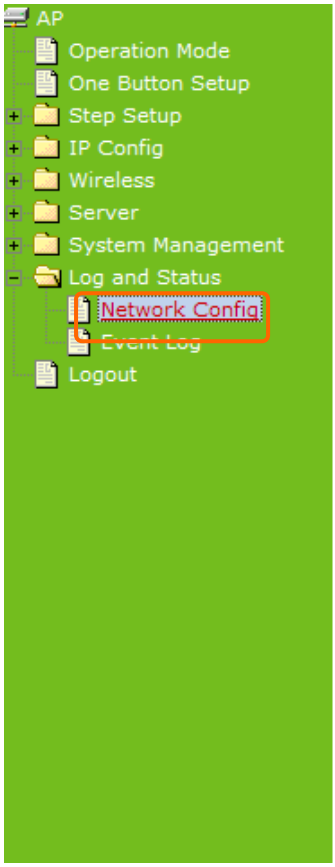
6.5 Log & Status

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.



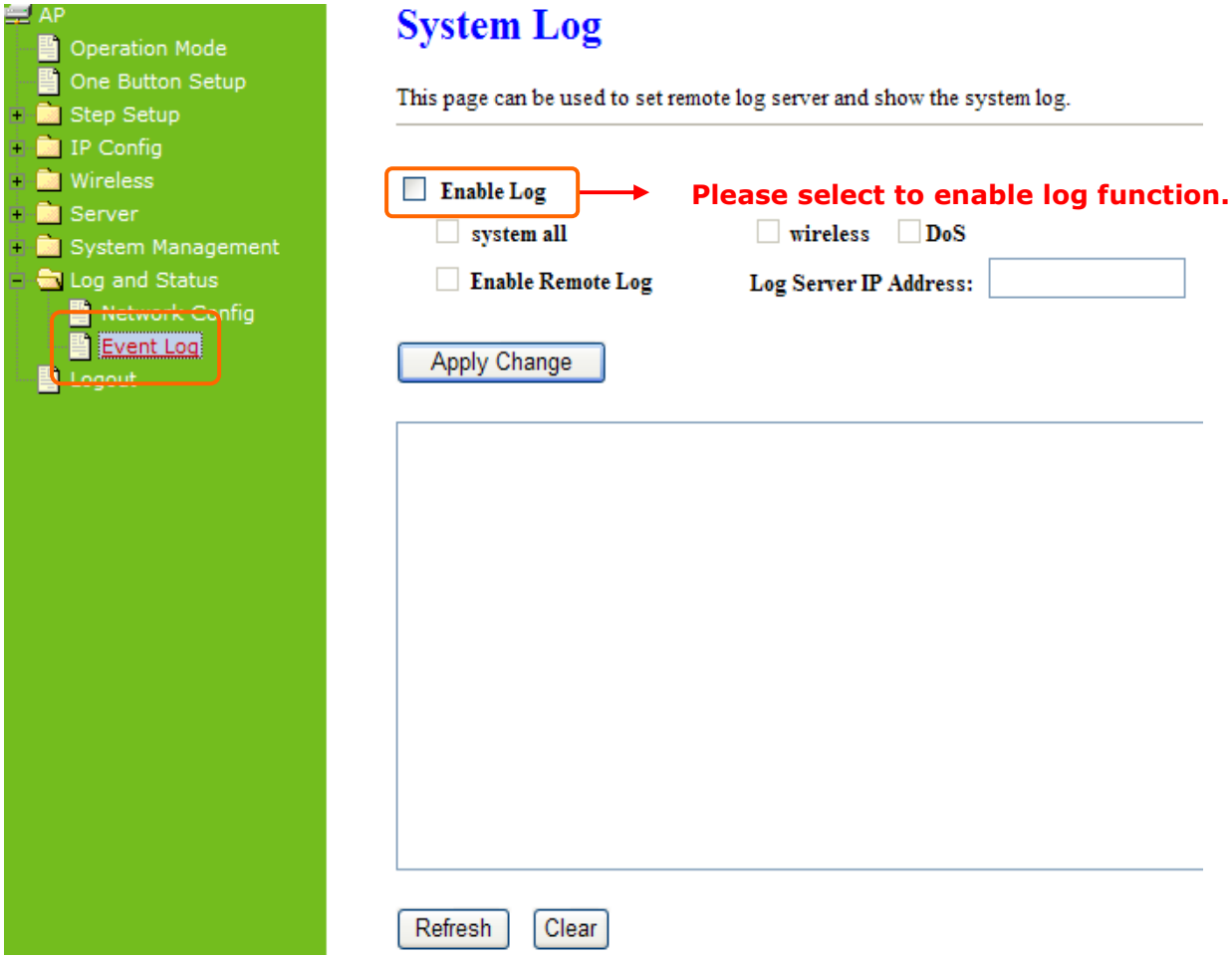
Access Point Status

This page shows the current status and some basic settings of the device.

System	
Uptime	0day:0h:8m:28s
Firmware Version	Ver1.0.3
Build Time	Fri Jul 24 18:31:11 CST 2009
WirelessConfiguration	
Mode	AP
Band	2.4 GHz (B+G+N)
SSID	SAPIDO_Fun_Center
Channel Number	11
Encryption	Disabled
MAC	00:d0:41:b9:e1:f3
Associated Clients	0
TCP/IP Configuration	
Attain IP Protocol	DHCP
IP Address	192.168.1.254
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.254
DHCP Server	Client
MAC Address	00:d0:41:b9:e1:f3

6.5.2 Event Log

You may enable the event log feature here.



1. Enable Log

You may choose to enable Event Log or not.

2. system all、wireless & DoS

Please select the event you want to record.

3. Enable Remote Log

You may choose to enable the remote event log or not.

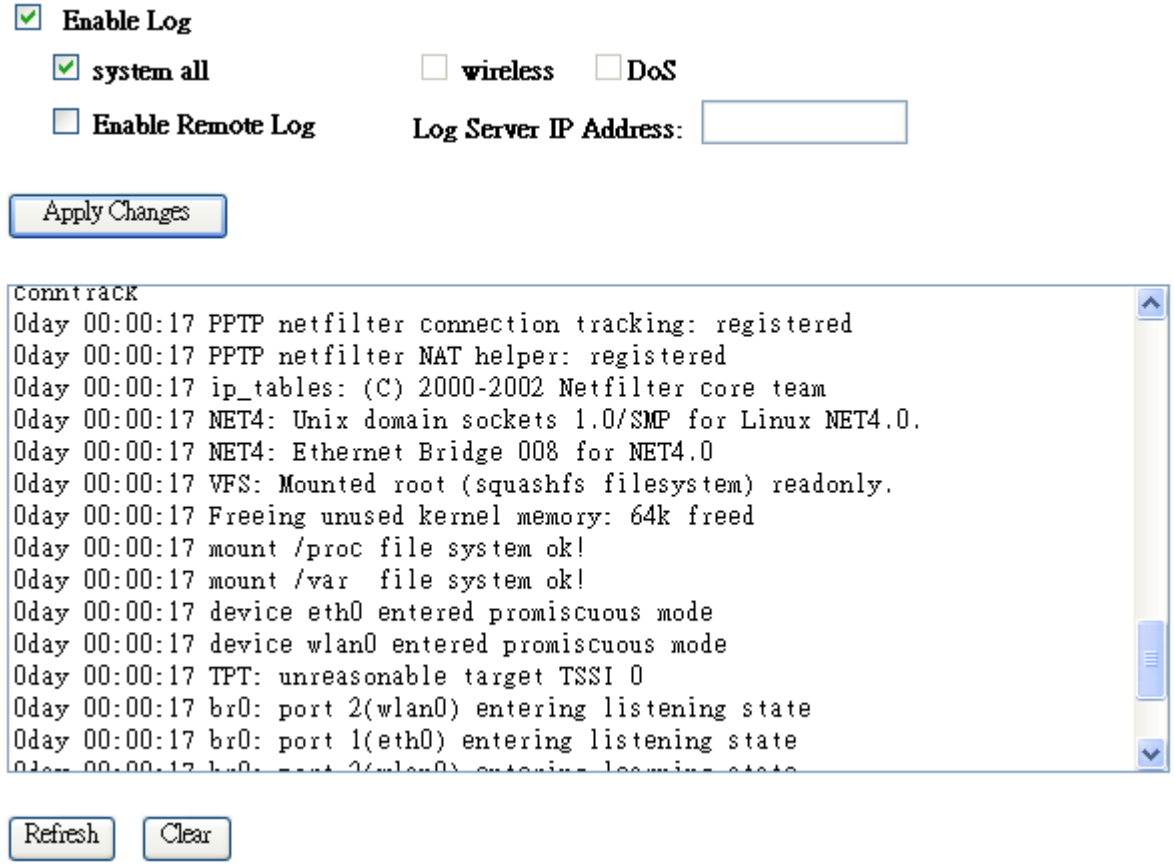
4. Log Server IP Address

Please input the log server IP Address.

5. Apply Changes & Refresh & Clear

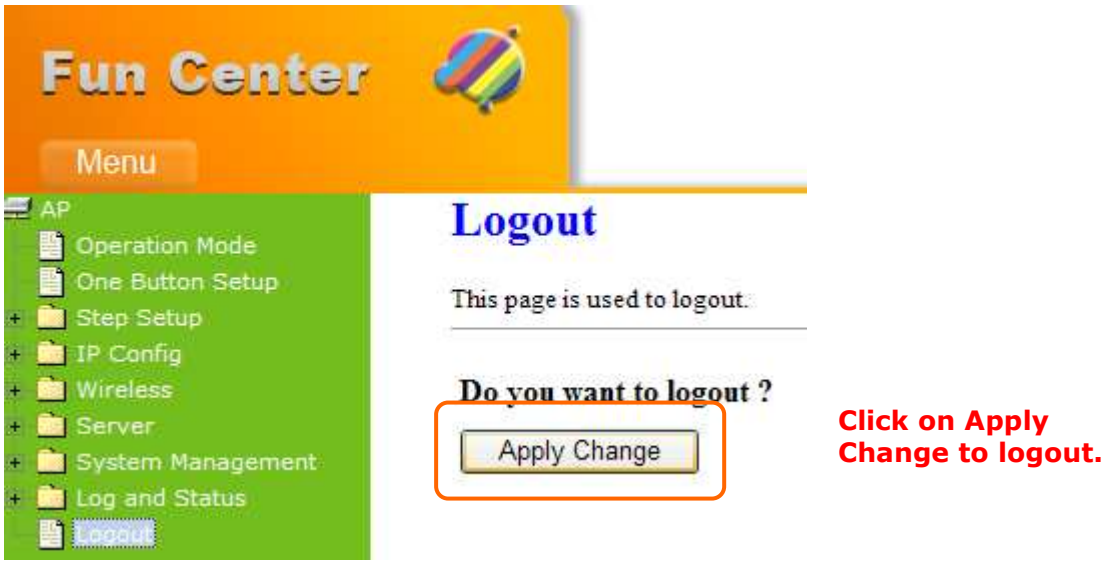
Click on **Apply Changes** to save the setting data. Click on **Refresh** to renew the system time, or on **Clear** to clear all the record.

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



6.5 Logout

This function provides users to logout.

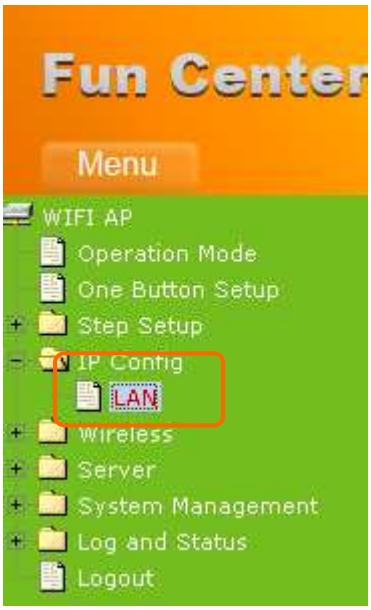


Chapter 7 Advanced Configuration for WiFi AP Mode

7.1 IP Config

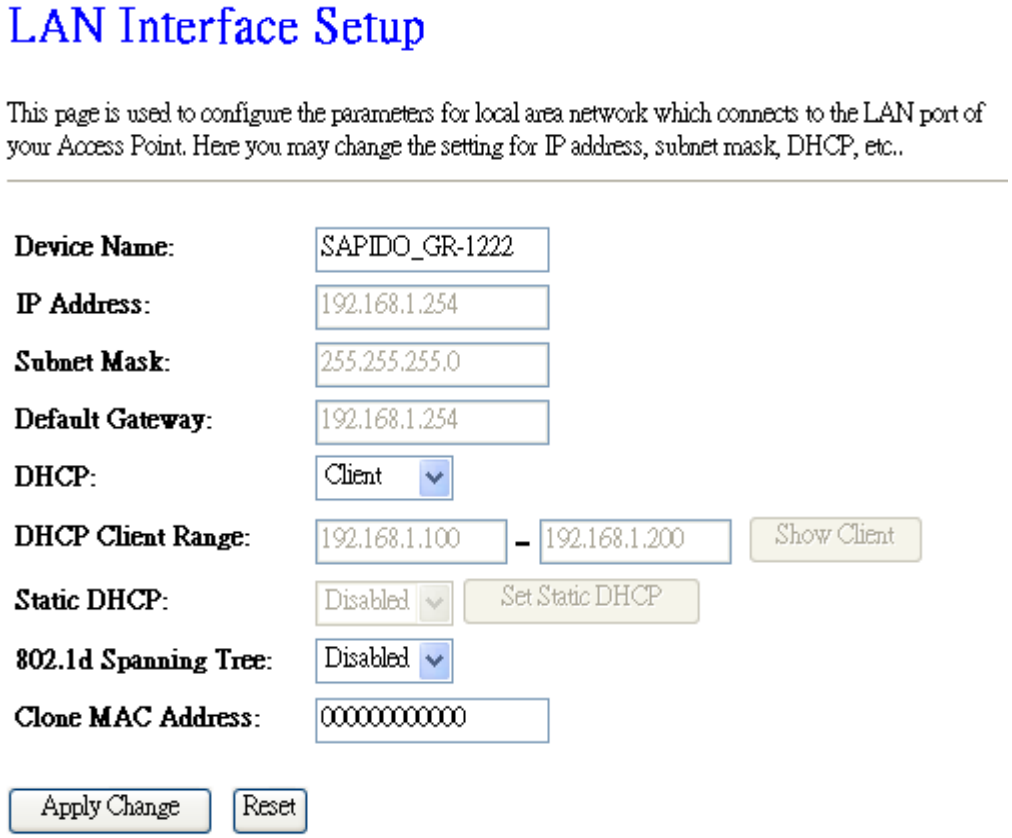
This section can let users add route rules of 3.5G Download Server Router; it includes configuration of LAN.

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.



1. **IP Address**
   The default IP address is **192.168.1.254** (recommend).
2. **Subnet Mask**
   Please enter the Subnet Mask address; it should be **255.255.255.0** for the most time.
3. **Default Gateway**
   Please enter the Default Gateway address. If you don't know the address, please contact your ISP.
4. **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.
5. **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.

6. **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.

7. **Clone MAC Address**

   If your ISP asks you to enter a specific MAC Address, please input the correct info at the column.

8. **Apply Changes & Reset**

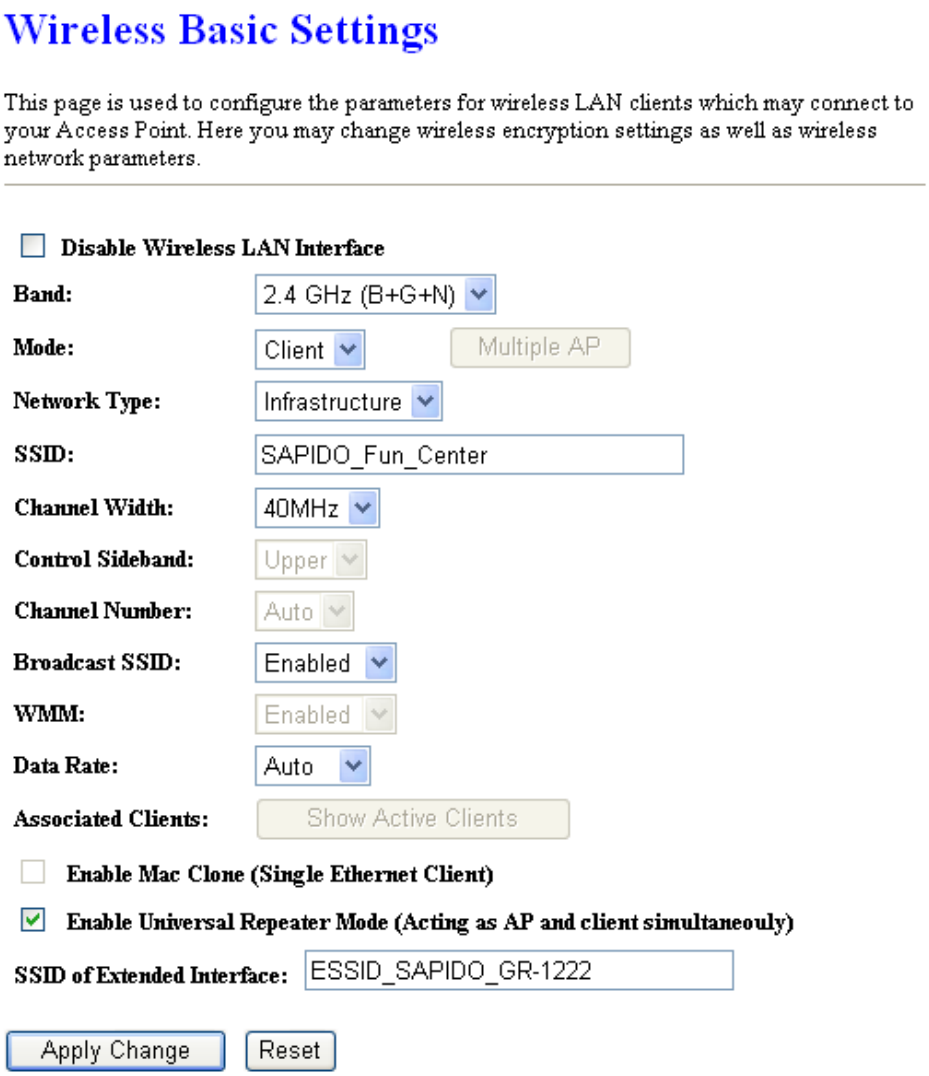
   Click on **Apply Changes** to save the setting data. Or you may click on **Reset** to clear all the input data.

7.2 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.



1. **Disable Wireless LAN Interface**
   Turn off the wireless function.
2. **Band**
   Please select the frequency. It has 6 options:
   2.4 GHz (B/G/N/B+G/G+N/B+G+N).
3. **Mode**
   Please select the mode. It has 3 modes to select:
   (AP, WDS, AP+WDS)
4. **Network Type**
   Please select the network type, it has 2 options: **Infrastructure** or **Ad hoc**.
   If the wireless mode is set to AP mode, this section is disabled.

5. SSID

Service Set identifier, the default SSID is **SAPIDO_Fun_Center**, users can define to any.

6. Channel Width

Please select the channel width, it has 2 options: 20MHZ, and 40MHZ.

7. Control Sideband

Enable this function will control your router use lower or upper channel.

8. Channel Number

Please select the channel; it has Auto, 1, 2~11 options.

9. Broadcast SSID

User may choose to enable **Broadcast SSID** or not.

10. Data Rate

Please select the data transmission rate.

11. Associated Clients

Check the AP connectors and the Wireless connecting status.

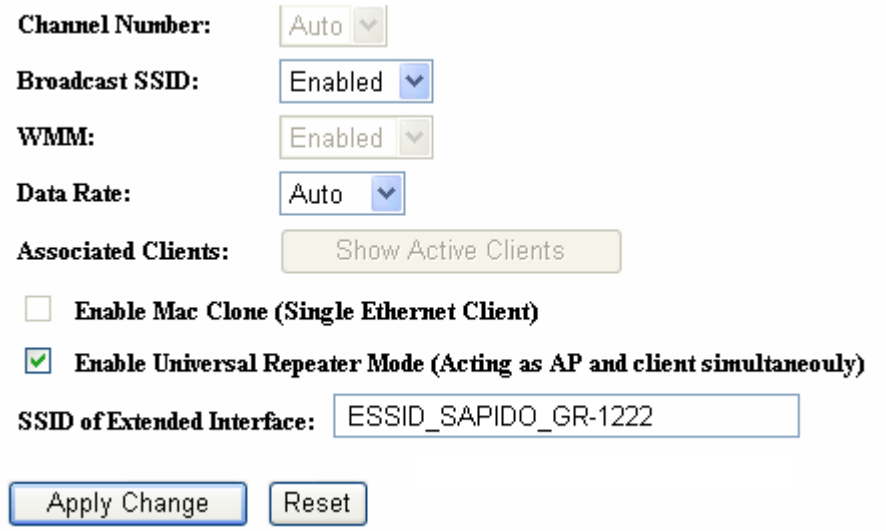
12. Enable Mac Clone (Single Ethernet Client)

Clone the MAC address for ISP to identify.

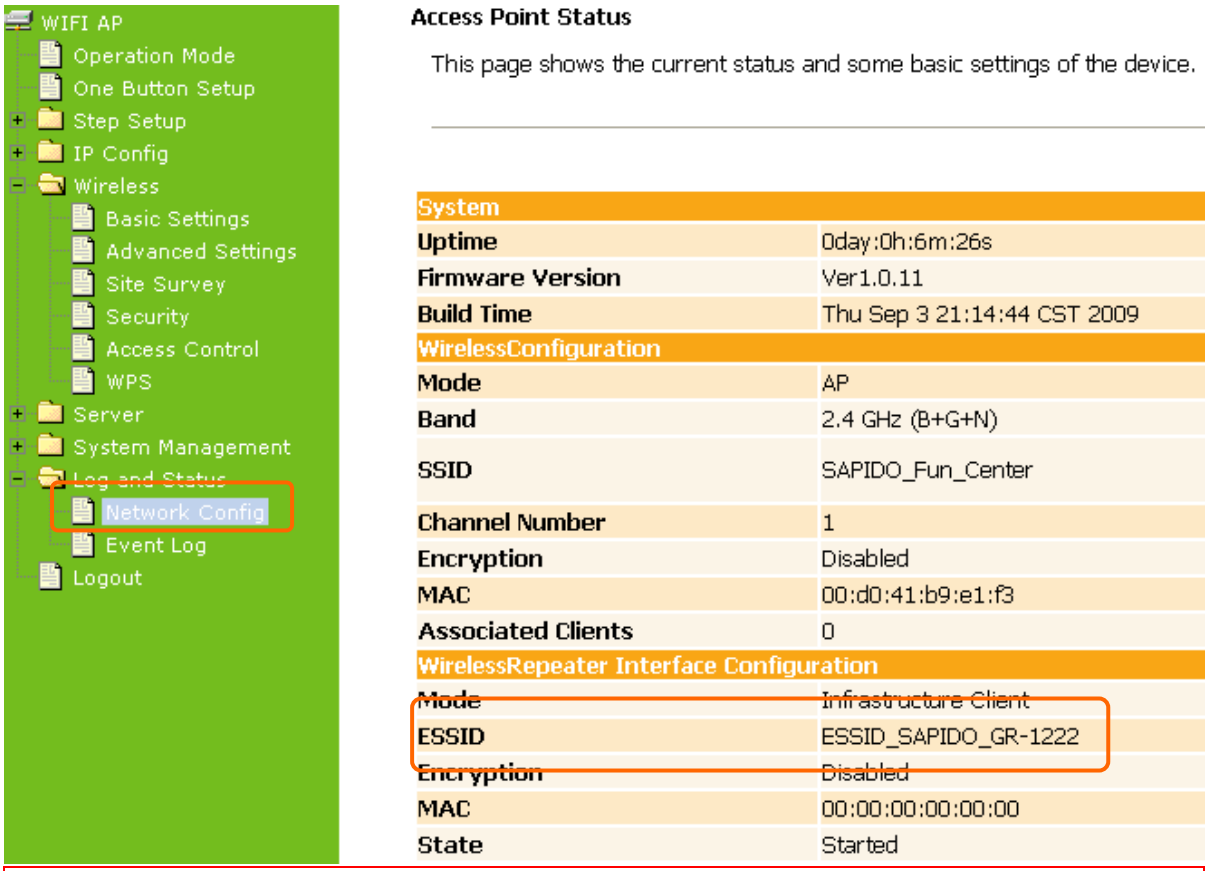
13. Enable Universal Repeater Mode (Acting as AP and Client simultaneously)

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.



Note: 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.

14. SSID of Extended Interface

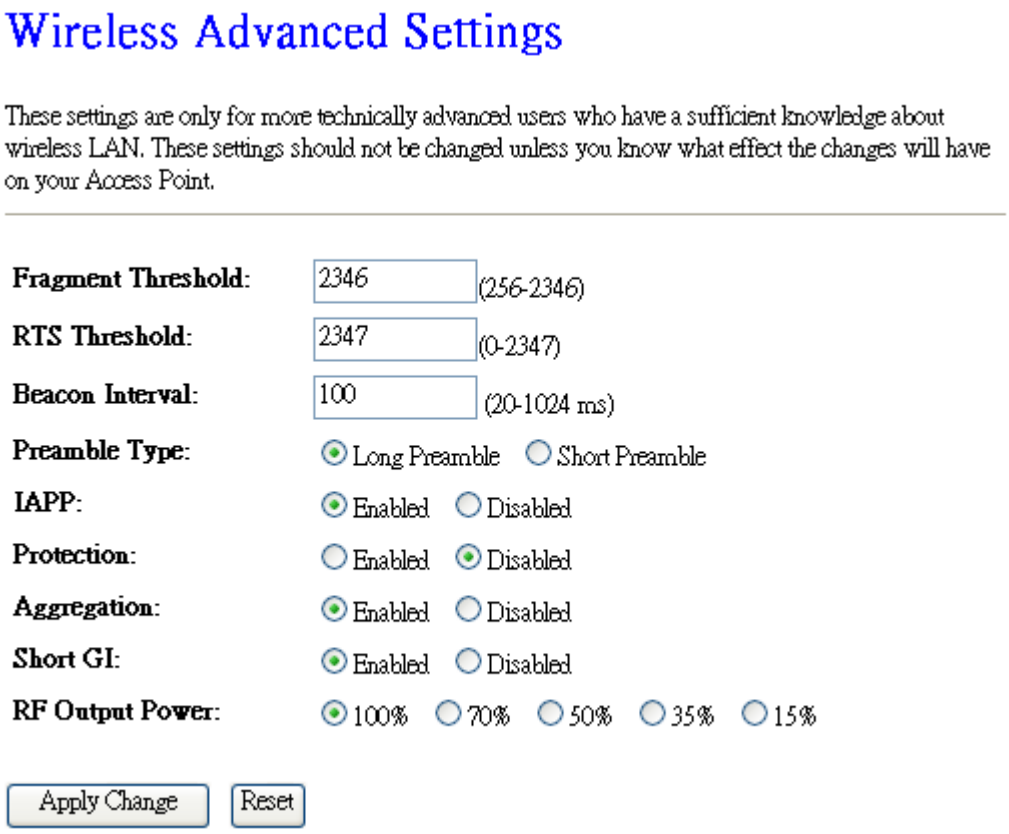
While linking the upper level device in wireless way, you can set SSID to give the bottom layer user search.

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.

7.2.2 Wireless Advanced Settings

Please complete the wireless advanced settings as following instructions.



1. 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.

2. 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.

3. 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.

4. 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.

5. IAPP

Inter-Access Point Protocol is a recommendation that describes an optional extension to IEEE 802.11 that provides wireless access-point communications among multi vendor systems.

6. Protection

Please select to enable wireless protection or not.

7. Aggregation

Enable this function will combine several packets to one and transmit it. It can reduce the problem when mass packets are transmitting.

8. Short GI

Users can get better wireless transmission efficiency when they enable this function.

9. 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%.

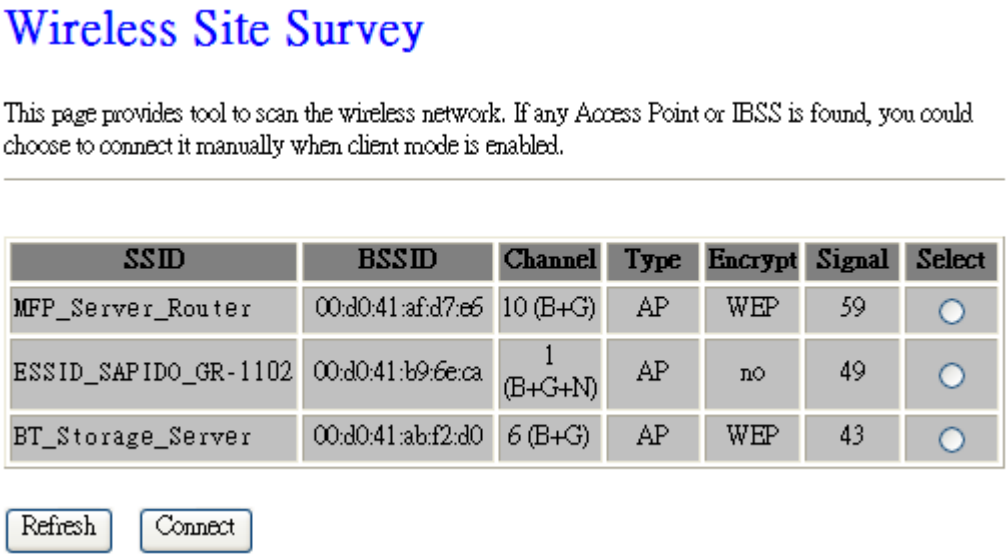
10. Apply Changes & Reset

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

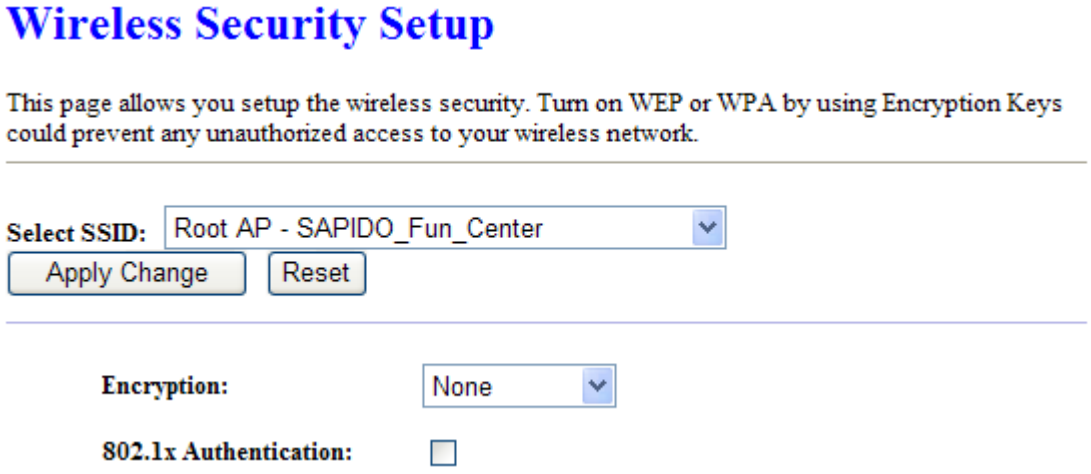
This function provides users to search existing wireless APs or wireless base stations from ISP. You can connect to a wireless AP manually in WiFi AP mode. The designed AP will appear on SSID column in Wireless Basic Setup page.

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.

1.1 802.1x 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）

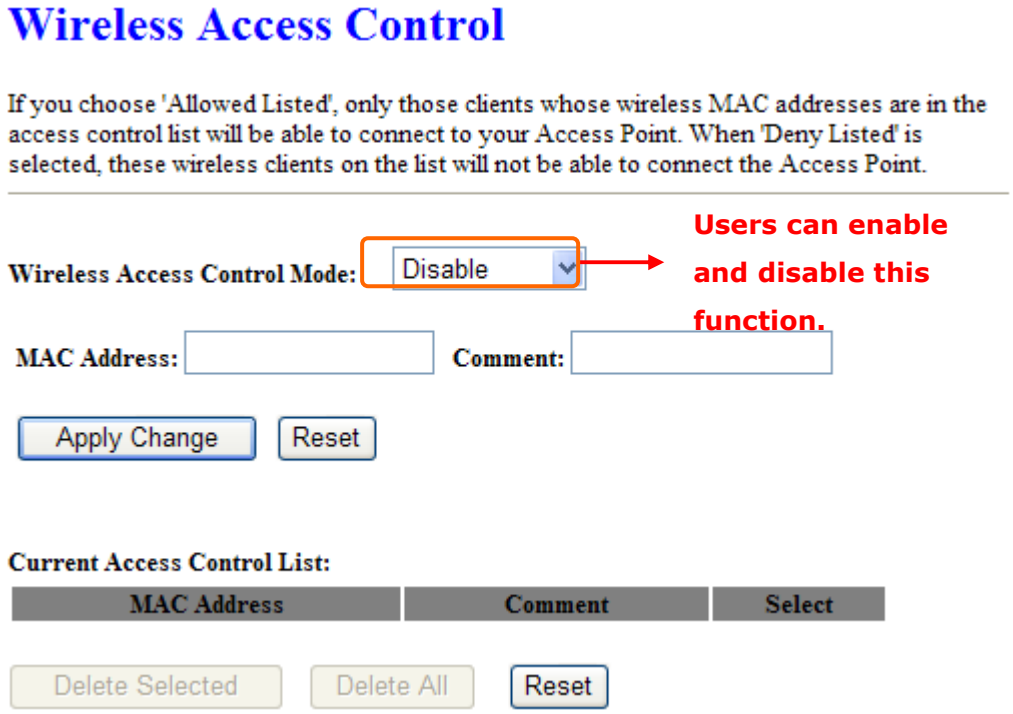
Pre-Shared Key type is ASCII Code; the length is between 8 to 63 characters. If the key type is Hex, the key length is 64 characters.

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 Access Control

The function of access control is to allow or deny users to access 3.5G Download 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

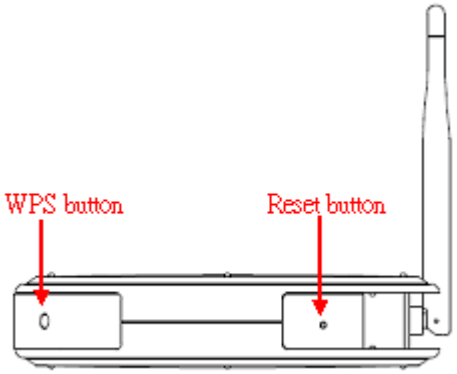
Wi-Fi Protected Setup, it can simplify the procedures of wireless encryption between N+ 3.5G NES Server and wireless network card. While the wireless network card also supports WPS function, users can activate WPS auto-encryption to speed up the procedures.

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 N+ 3.5G NES Server.



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 these 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.

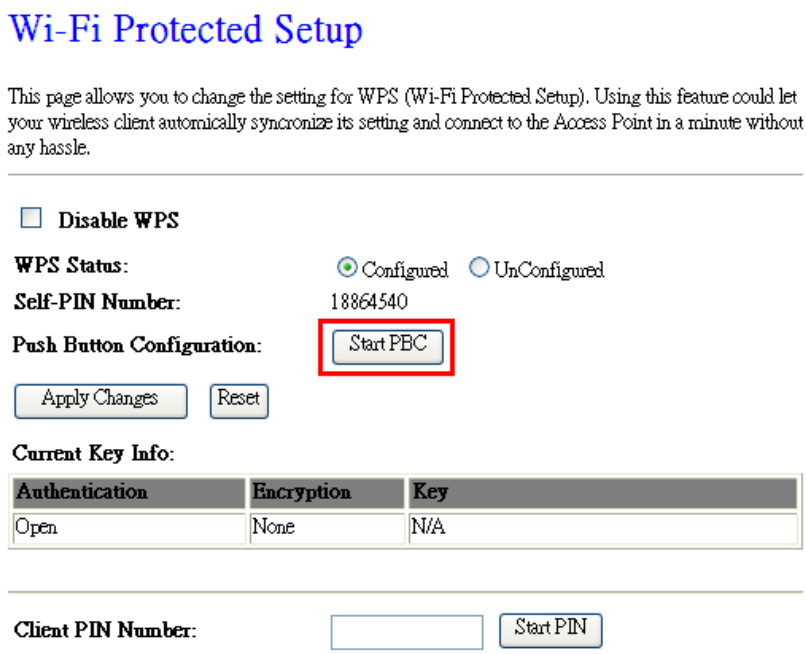
On PBC model, users push the WPS button to activate the function, and then the wireless client must push the WPS button within 2 mins to enter the network. The client will search to see if there is any wireless base station which supports WPS is activating. If the client finds a matching base, the connection 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.

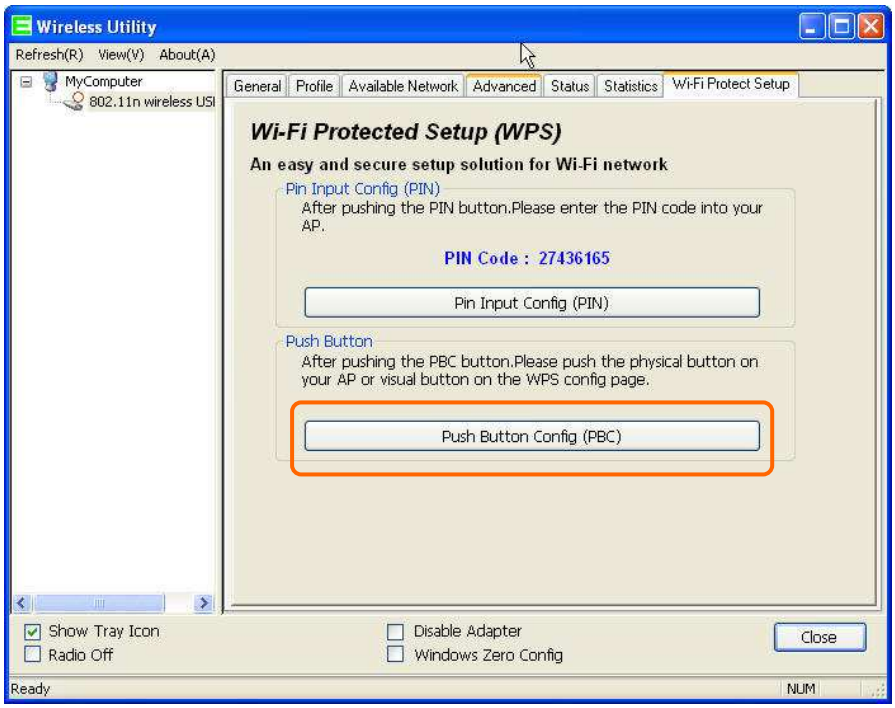
This page supports **Start PBC** and **Start PIN**; please follow the instructions to operate.

* Start PBC:

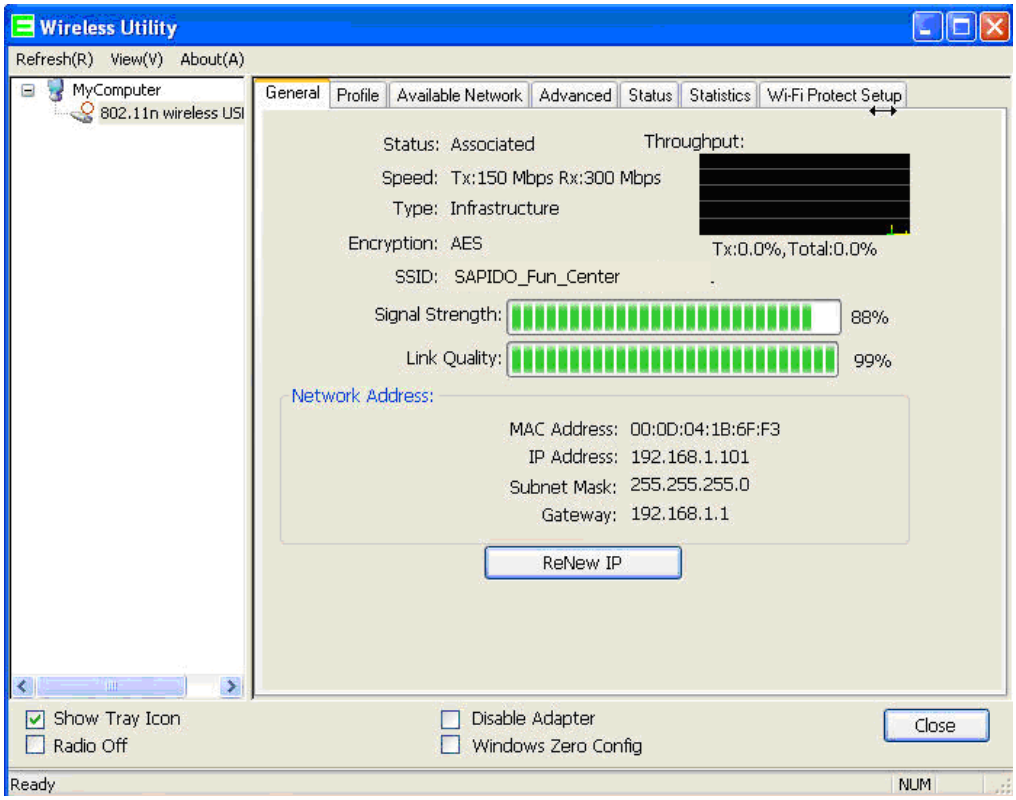
(1.) Please click **Start PBC** to connect to the wireless network card.



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

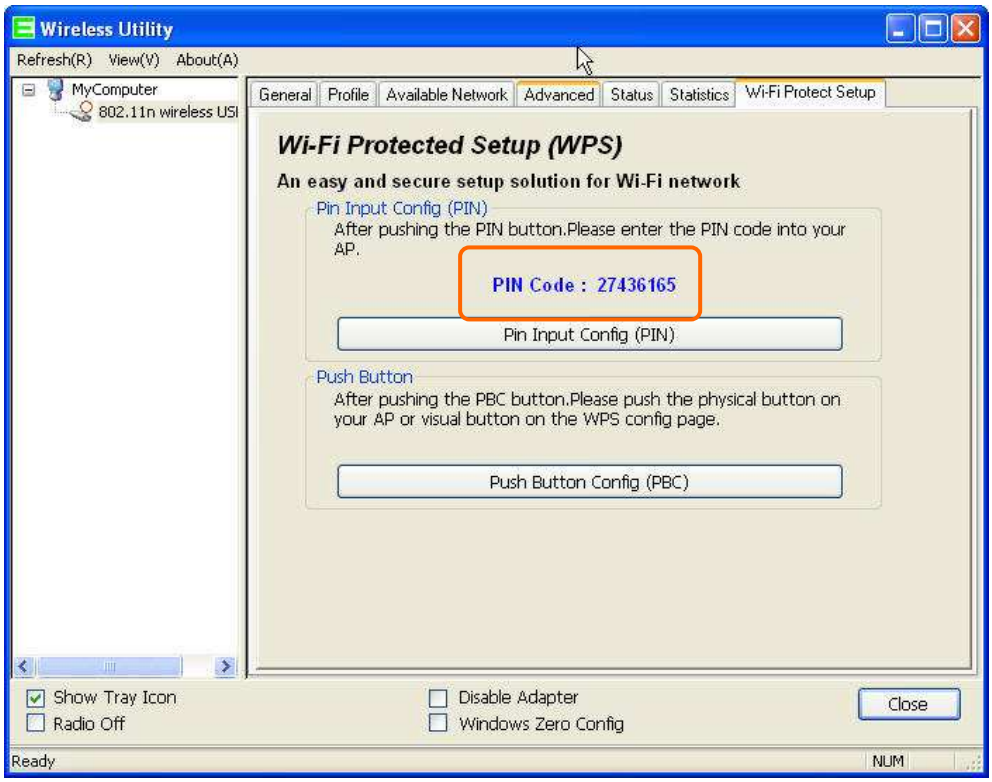


(3.) When you see **Network Address**, it means the WPS connection between wireless card and 3.5G Mobile Router is established.

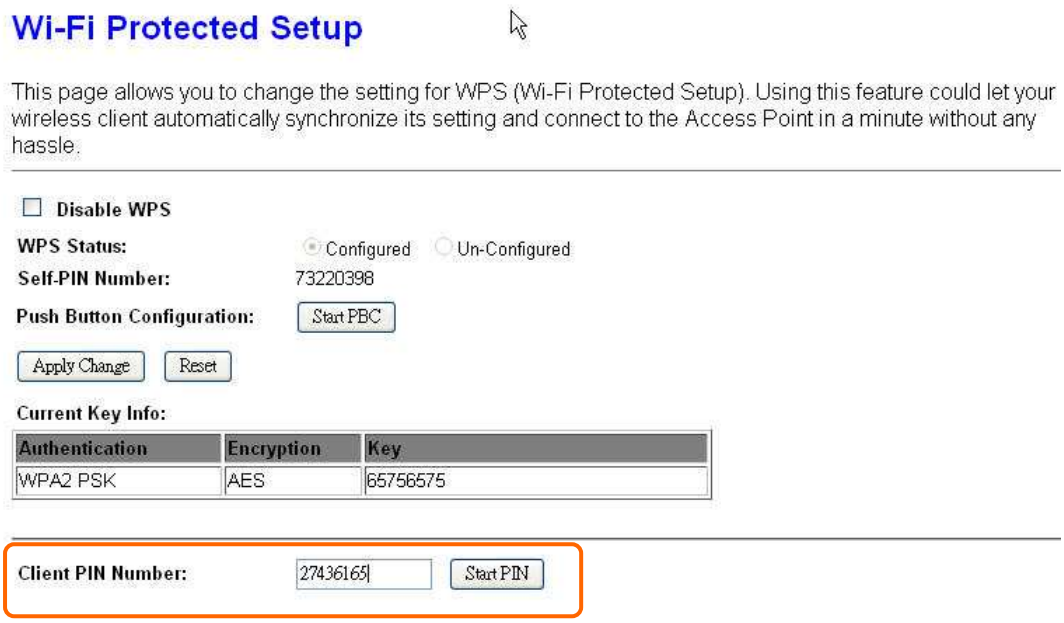


* Start PIN:

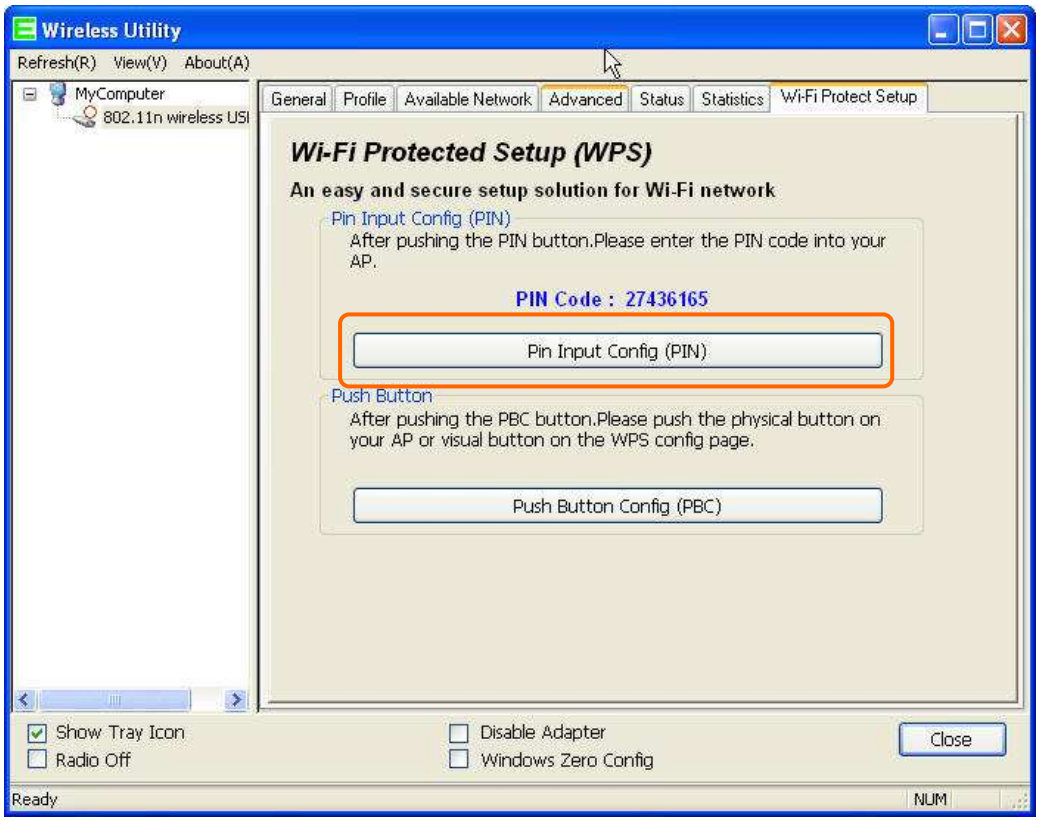
(1.) Please open the configuration page of the wireless card, and write it down.



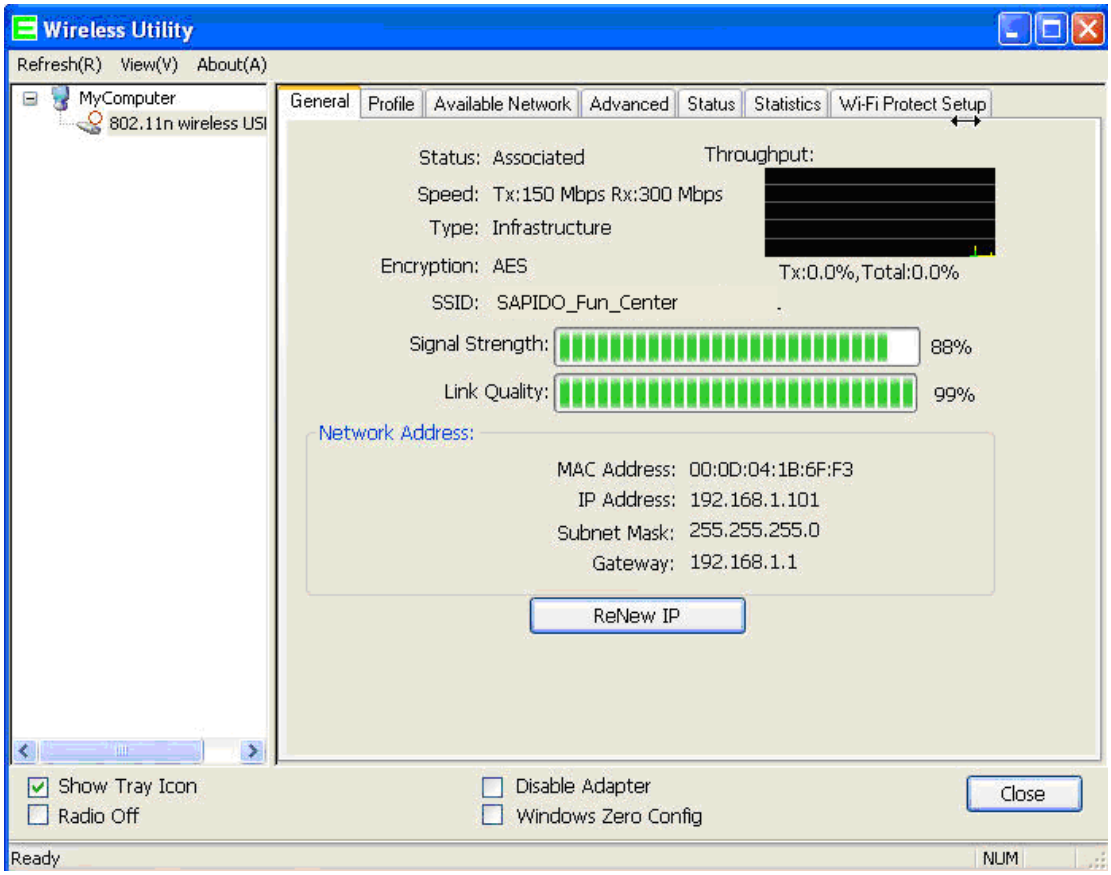
(2.) Open the Wi-Fi Protected Setup configuration page of 3.5G Mobile Router, input the PIN number from the wireless card then click **Start PIN**.



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



(4.) When you see **Network Address**, it means the WPS connection between wireless card and 3.5G Mobile Router is established.

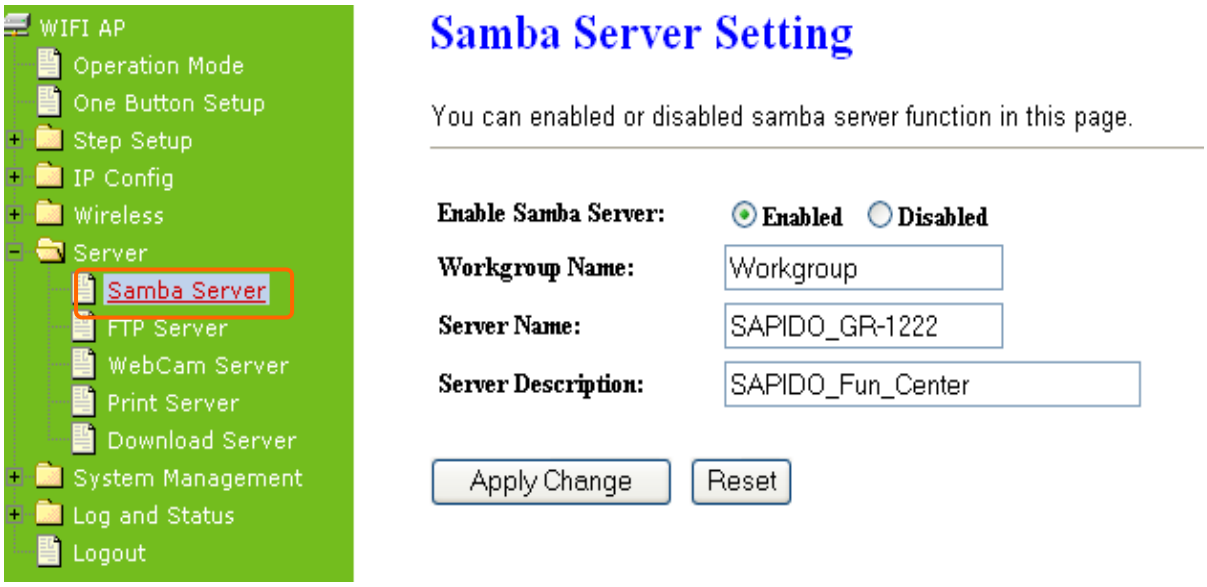


7.3 Server

N+ 3.5G NES Server 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.



6. Enable Samba Server

Enable or disable this function.

7. **Workgroup Name**

   Input the workgroup name, default is "**WORKGROUP**".

8. **Server Name**

   Input the server name, default is "**SAPIDO_GR-1222** ".

9. **Server Description**

   You can input description of the server.

10. **Apply & Cancel**

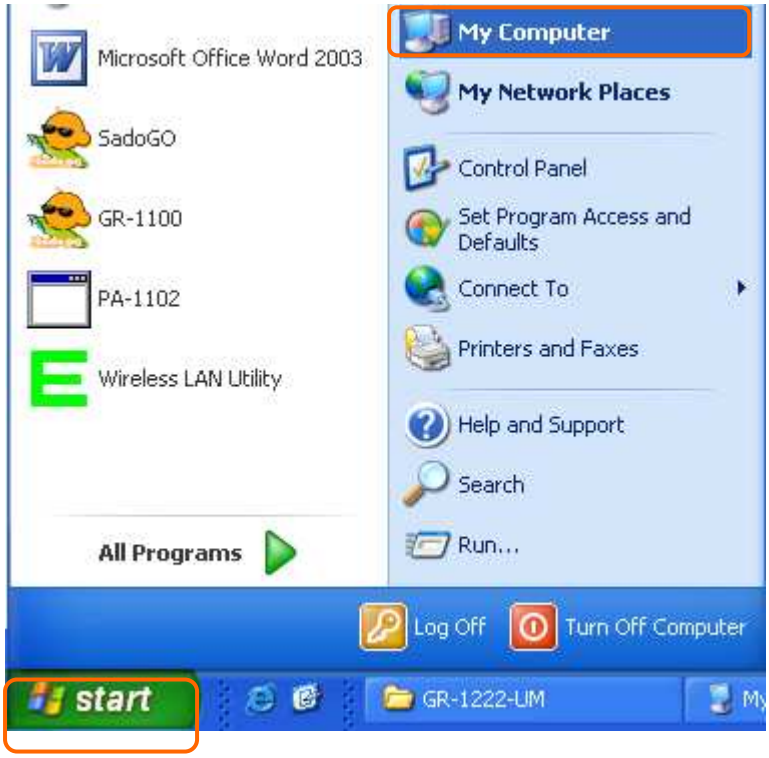
    Click on **Apply** button to finish setting. Click on **Cancel** button to clean the setting on this page.

7.3.1.1 How to Enter Sharing Folder

Please follow below steps.

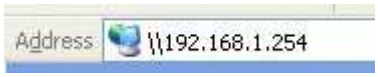
Step 1:

Please click the "**start**", and select "**My Computer**".



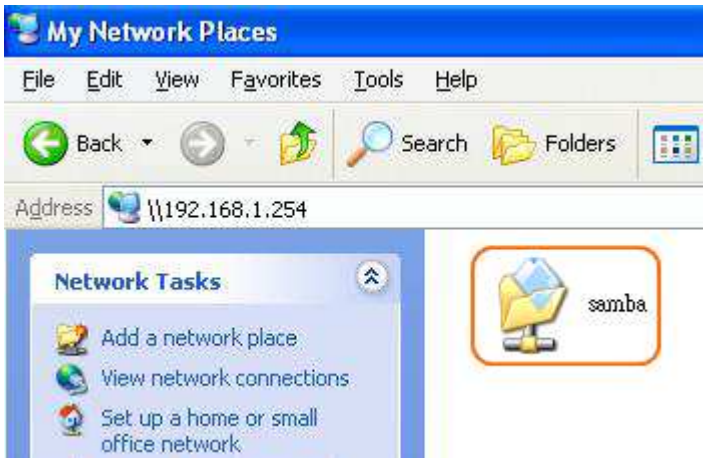
Step 2:

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



Step 3:

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

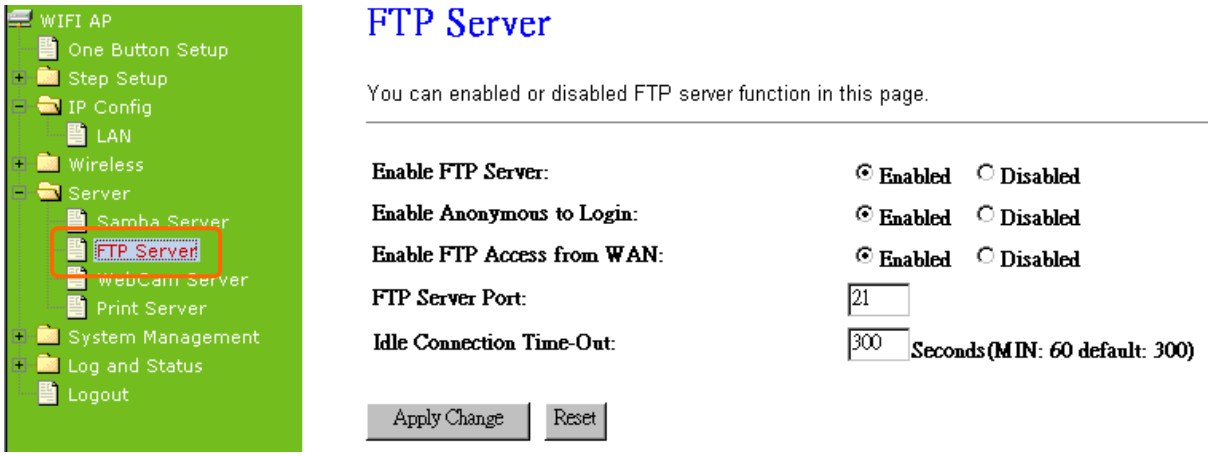


Note :

5. If connected USB flash or HDD, and then enable samba server function, it will appear a samba folder.
6. 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.



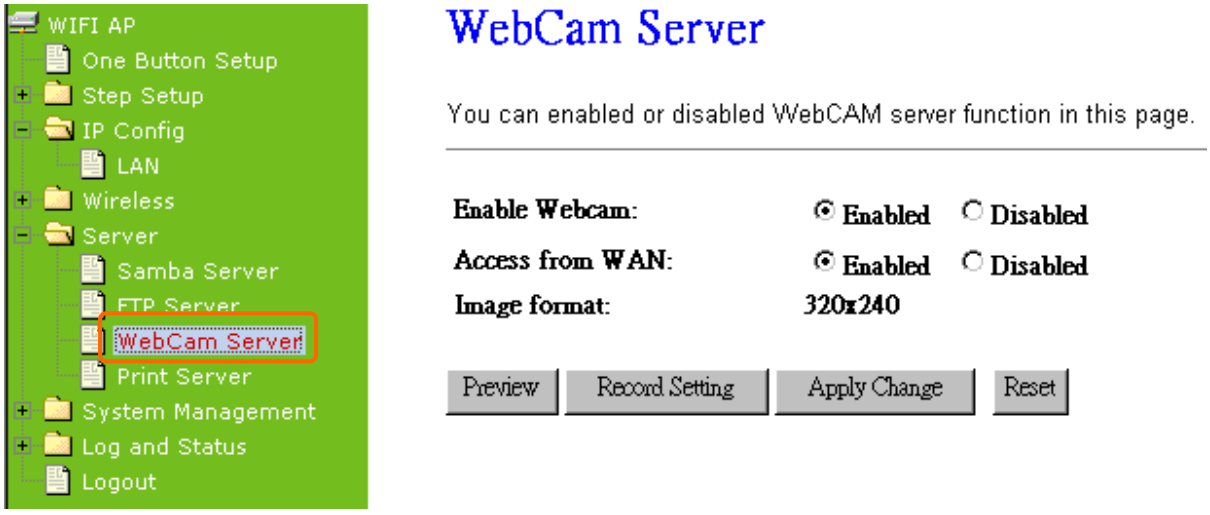
1. **Enable FTP Server**
   Select to "**Enable**" or "**Disable**" FTP server.
2. **Enable Anonymous to Login**
   Allow anonymous to login after check on Enable.
3. **FTP Server Port**
   The default is 21. Define the FTP command transfer service port. If you want to change this port number, remember to change the service port setting of your FTP client, also.
4. **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.
5. **Apply & Cancel**
   Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page.
6. **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.

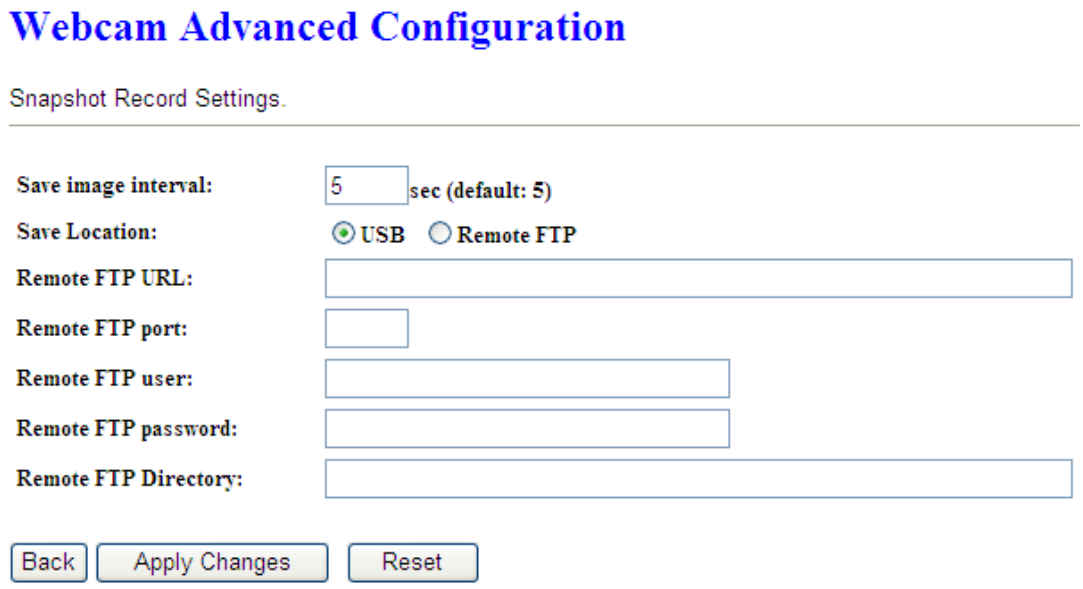
7.3.3.1 Webcam Basic Setting



1. **Enable Webcam Server**
   Select to "**Enable**" or "**Disable**" webcam server.
2. **Image format**
   The format is 320X240 pixels.
3. **Preview**
   Click on this button, you can preview the image from webcam.
4. **Record Setting**
   Please see the detail advance setting in "**4.4.3.2 Webcam Advanced Configuration**".
5. **Apply & Cancel**
   Click on **Apply** button to continue. Click on **Cancel** button to clean the setting on this page.

7.3.3.2 Webcam Advanced Setting

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



1. **Save image interval**
   For saving image, you can set the save interval time, the default value is 5 seconds.
2. **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.

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

7.3.3.3 Application for Webcam

7.3.3.3.1 Web Camera Monitoring Application

Monitor your home with a Webcam via N+ 3.5G NES Server. Take pictures via N+ 3.5G NES Server, 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.

7.3.3.3.1.1 Web Camera Monitoring via 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 login page.

Enter username and password to login and select My Webcam.

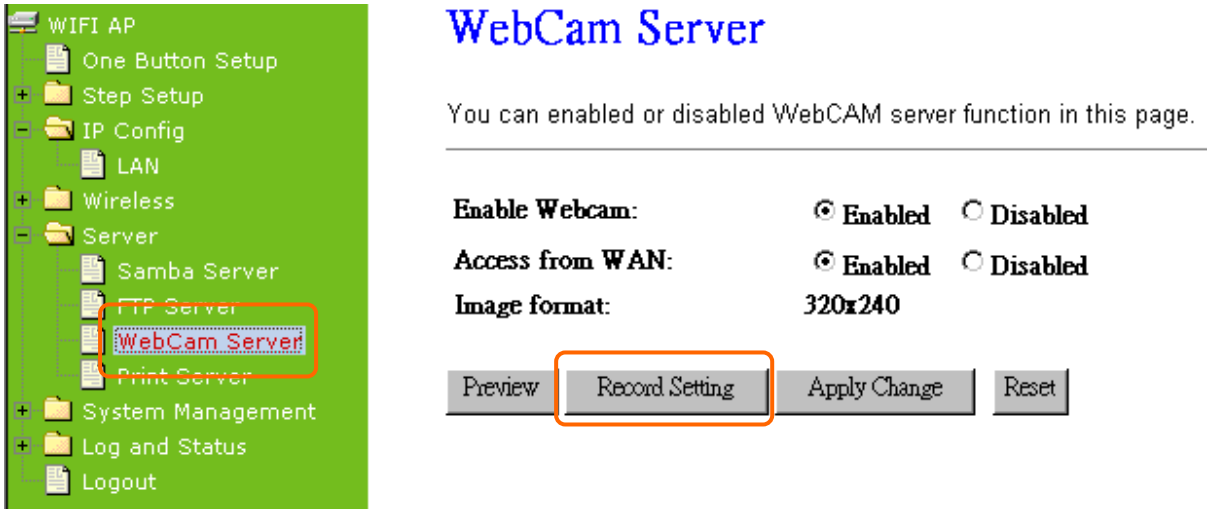
There will pop-up screen shows the image from web camera as example below.

There will pop-up screen shows the image from web camera as example below.

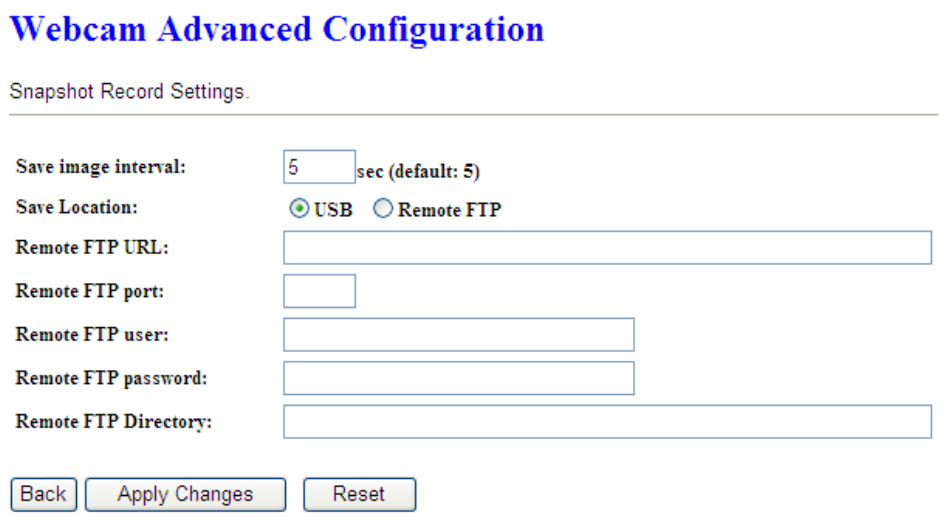
7.3.3.3.2 Web Camera Recording

7.3.3.3.2.1 Administrator

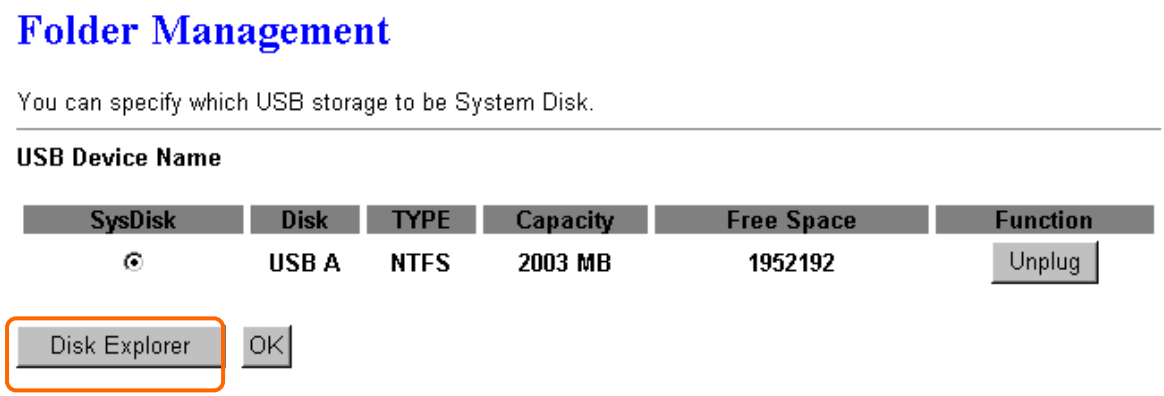
N+ 3.5G NES Server also can record the pictures from Webcam; only Administrator can do the settings. Select **Web Camera Server** from main Menu and Enable this function, click on **Record** setting button for further setting.

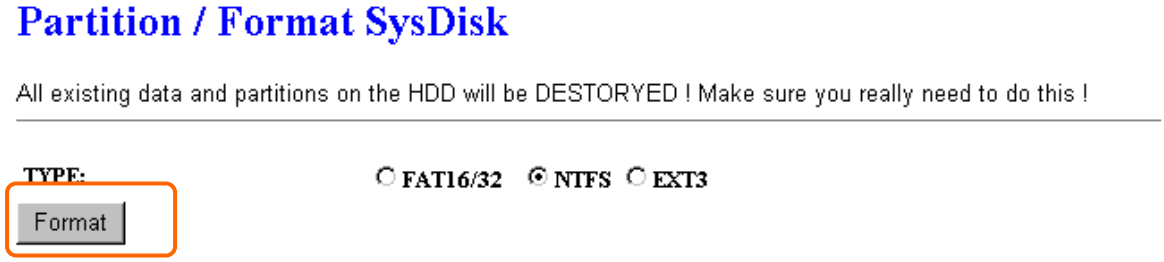


To set up the Webcam Advanced Configuration for each text field, the image from webcam will be recorded into your USB HDD or Remote FTP. Click on **Apply Changes** after setup finished.

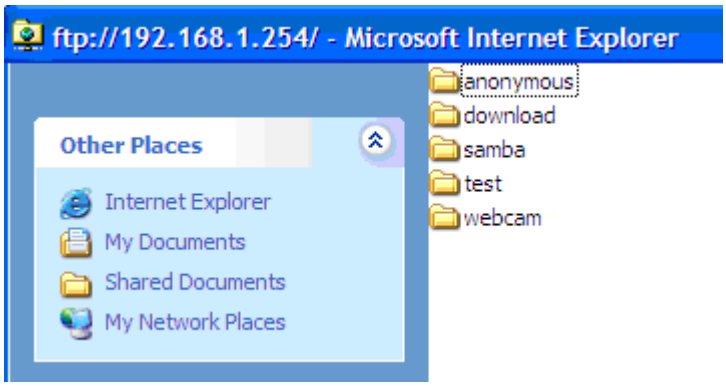


For administrator, you may view all the images from webcam recording, please select **Folder Management** and click on **Disk Explorer** to view entire folder inside the disk including webcam record files.

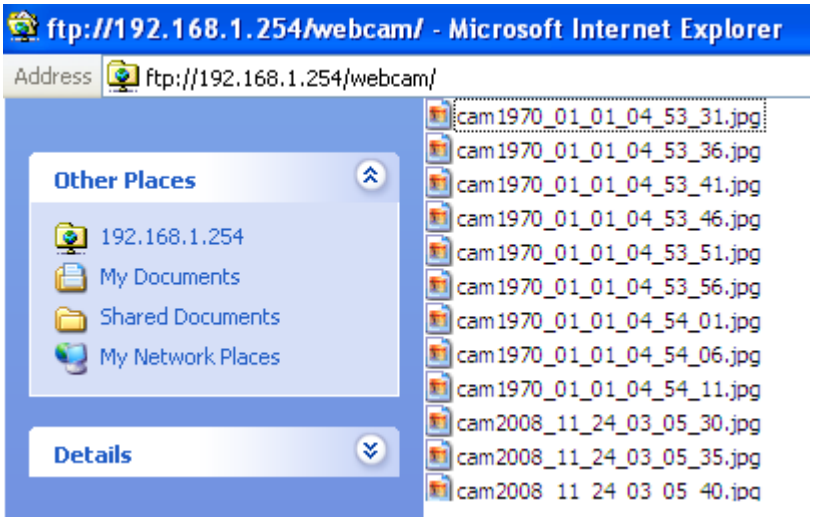




After click on **Disk Explorer**, you will see the folder screen appear including all the folders inside N+ 3.5G Mini Server Router. (Below is the example.)



For getting the images from web camera or any files inside router, you may copy the files into your own HDDs directly. In addition, all image files are stored in webcam_files folder, click to examine the content inside.



7.3.3.3.2.2 Personal Application

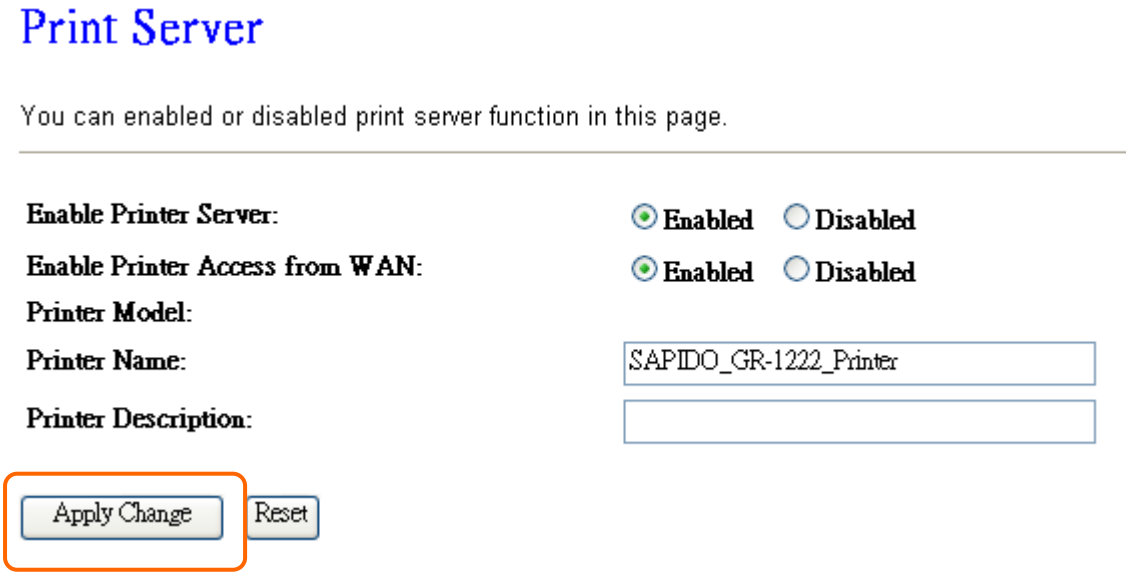
All the users under administrator's setting can view entire webcam recording images from **Document**. Please log in with your own personal account. For viewing your own folder, please click on **" Document**".

After click on ***Document***, you will see folder screen appear as the example below.

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

7.3.4 Printer Server

The two USB ports on N+ 3.5G NES Server 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.



1. **Enable Printer Server**
   Check **Enable** for applying printer server.
2. **Printer Model**
   The printer model will be shown when plug the USB printer.
3. **Printer Name**
   Input the name of printer you like.
4. **Printer Description**
   Input the description of printer as your demand.
5. **Apply & Cancel**
   Click on **Apply** button to continue. Click on **Cancel** button to clean the setting

on this page.

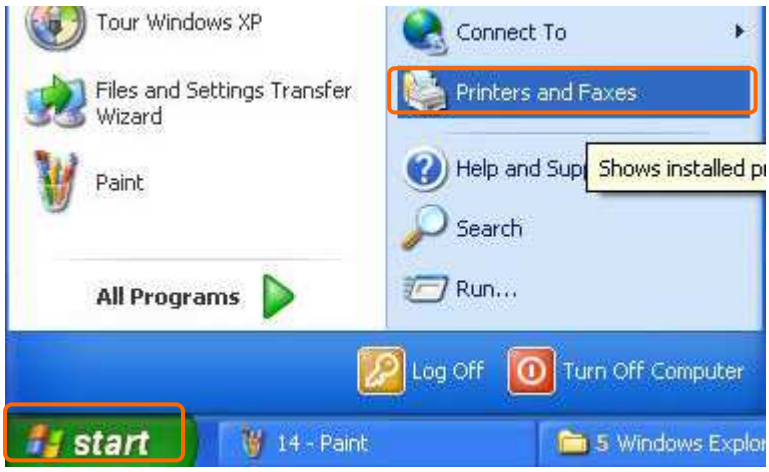
Besides above setting finished, the printer setting on PC also needs to be set as follows.

7.3.4.1 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.)

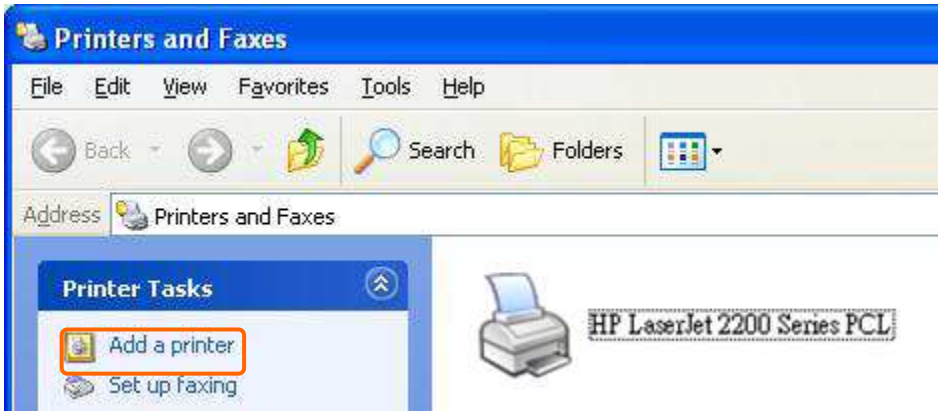
Step 1:

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



Step 2:

Click "**Add a printer**".

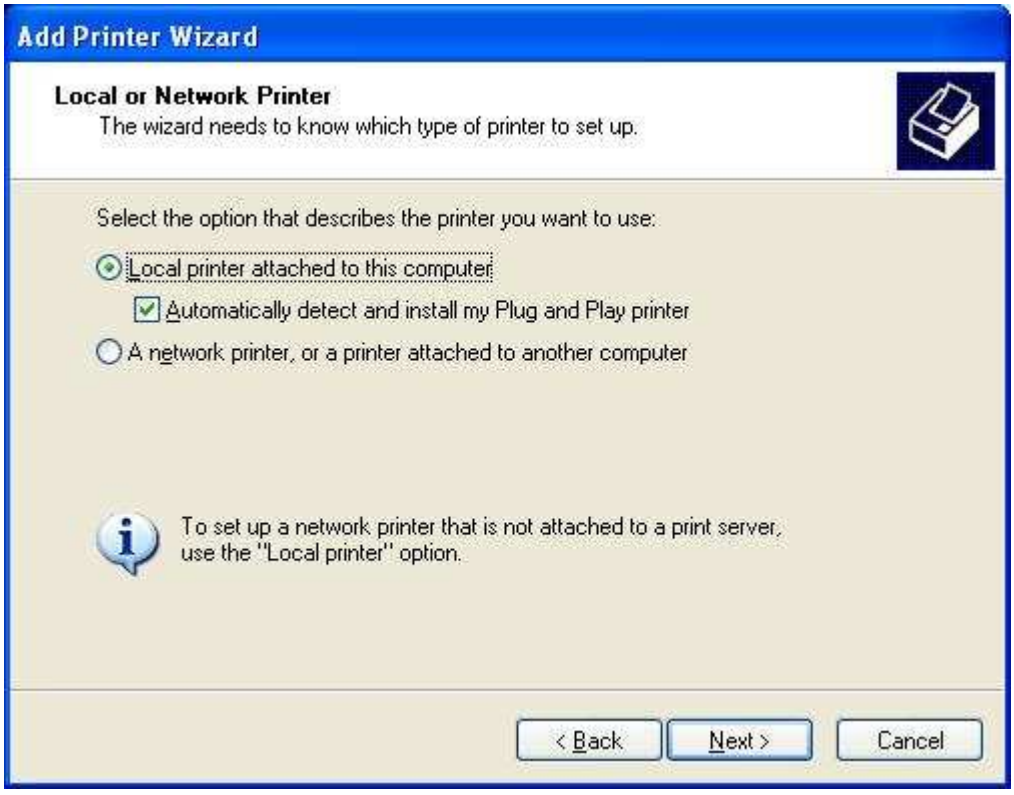


Step 3:

Click "**Next**".

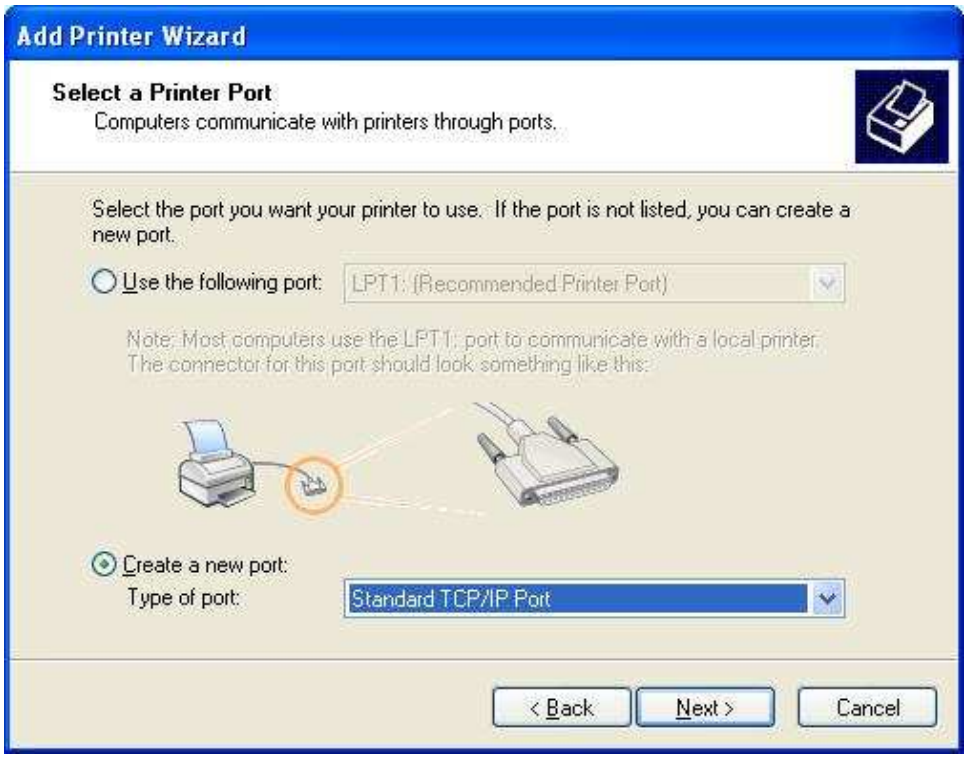
Step 4:

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**".

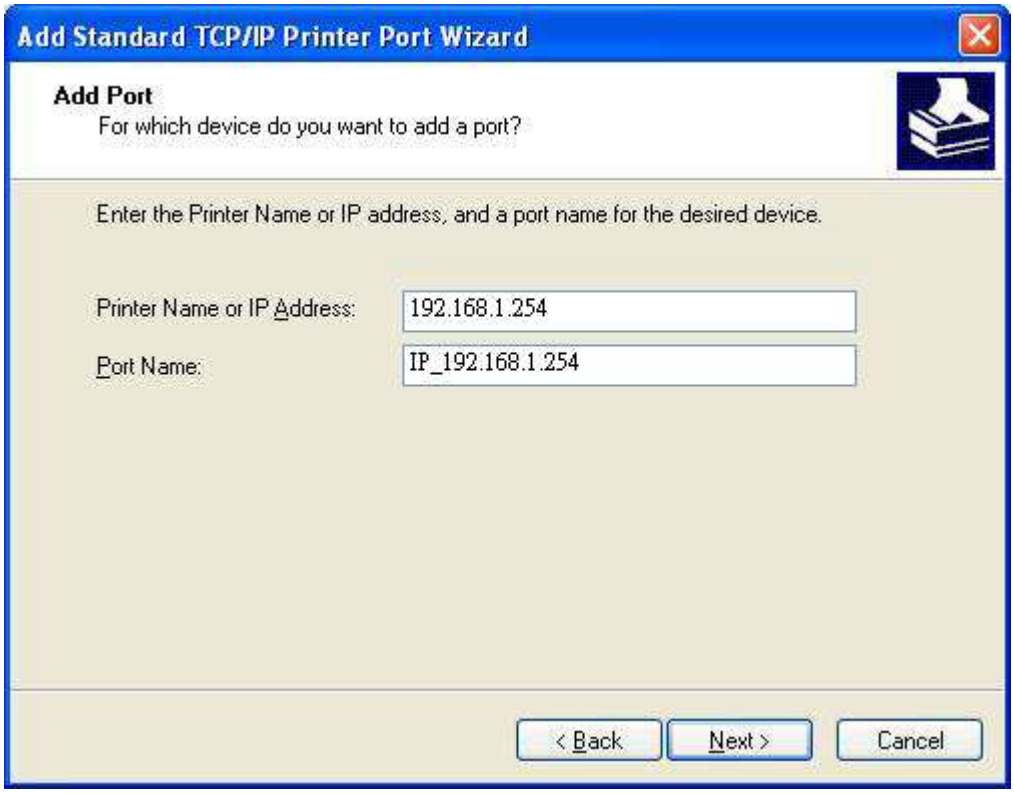


Step 6:

Click "**Next**".

Step 7:

Input the IP address of N+ 3.5G NES Server: **192.168.1.254**, and then click "**Next**".

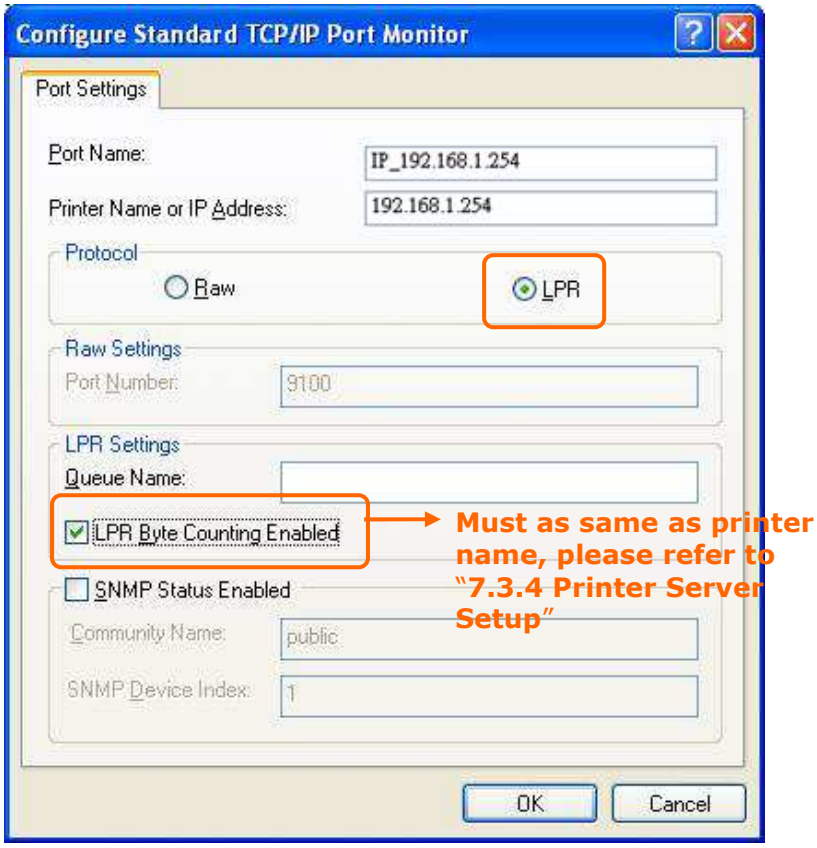


Step 8:

Select the "**Custom**" and click the "**Settings**", and then click "**Next**".

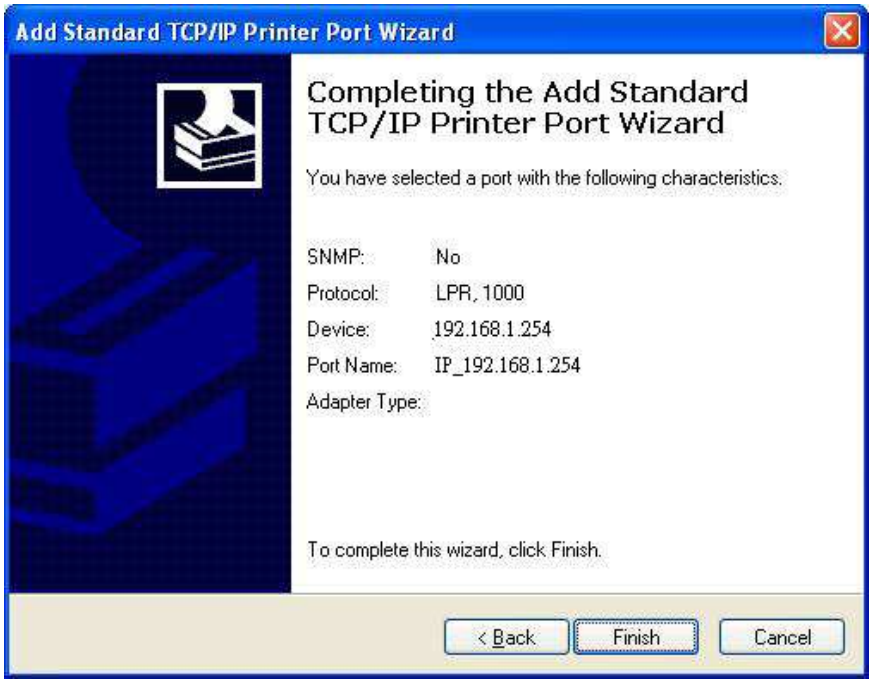
Step 9:

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**".

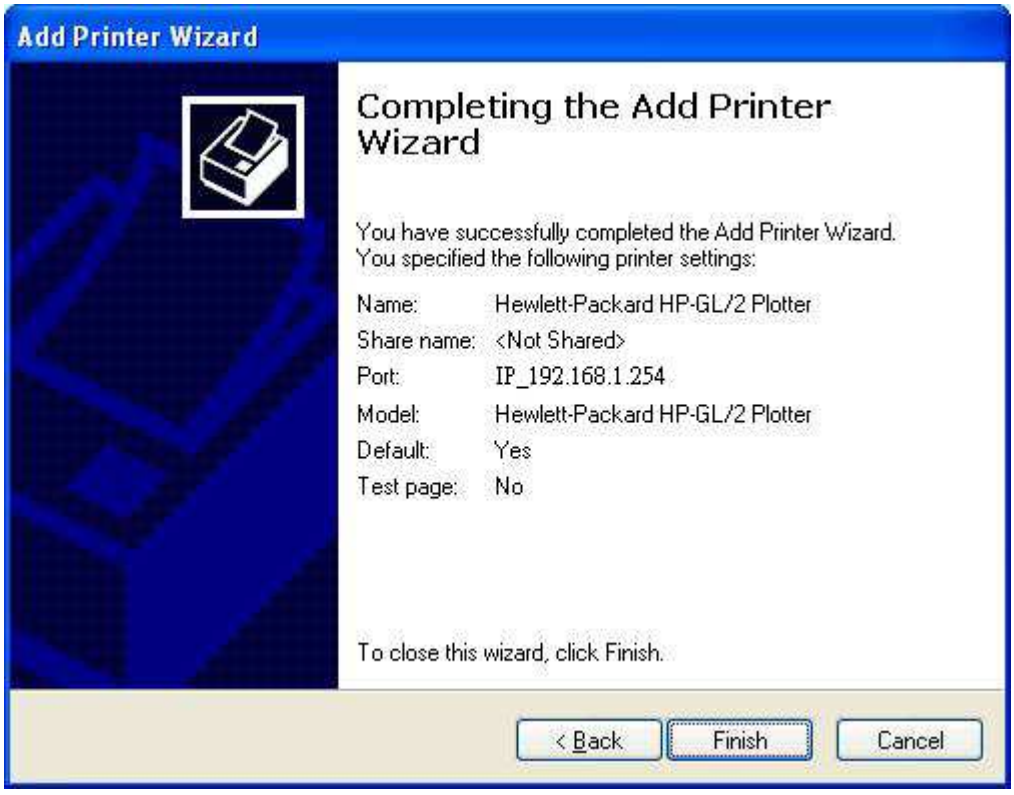


Step 11:

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.

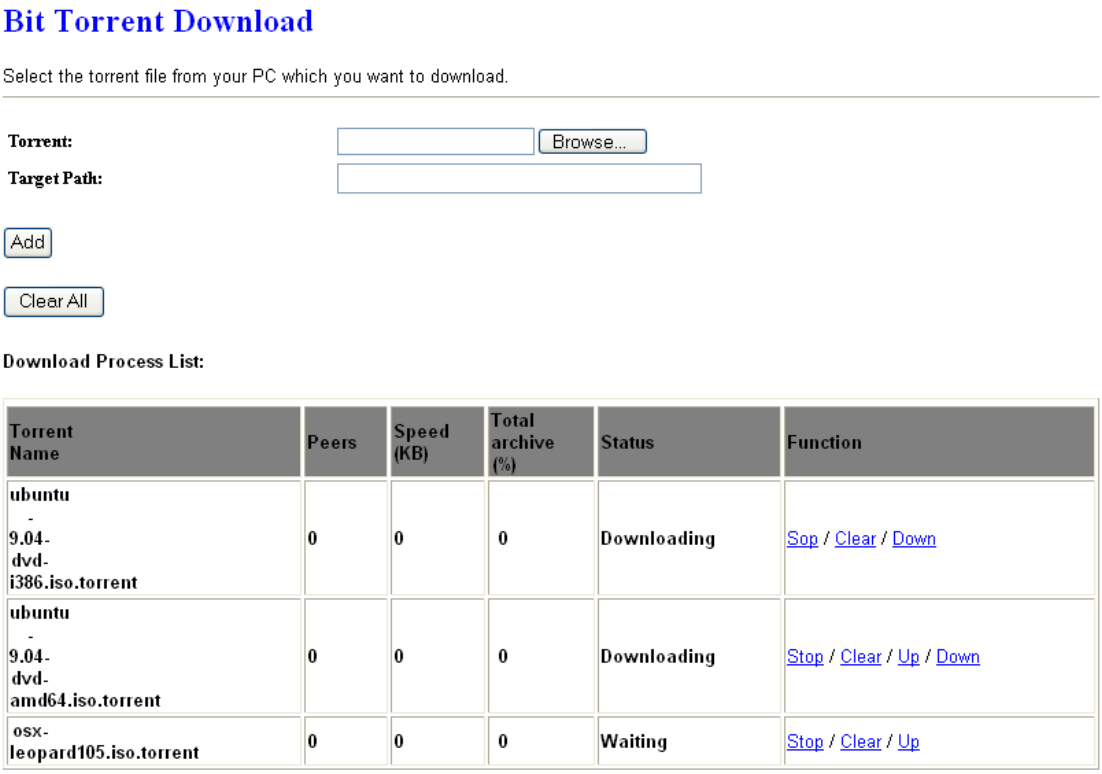
Step 12:

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



7.3.5 Download Server

Let users schedule the timing to download files by using BT. The downloaded files are saved in personal FTP Download folder.



1. Torrent

Browser any torrent file is located in user's computer.

2. Target Path

The download file's saving path.

3. Download Process List

It will display all downloading schedule.

4. Add new Torrent

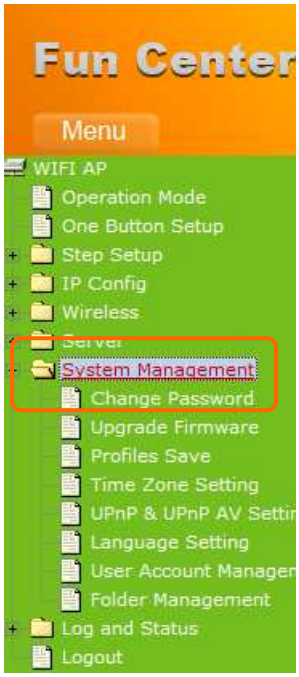
Fill in **Target Path** and click **Add,** Torrent will show in the list.

5. Clear ALL

Clear all torrents in **Download Process List.**

7.4 System Management

It has 6 sections: Change Password, Firmware Upgrade, Profiles Save, Time Zone Setting, UPnP Setting, and Language Setting. Making detailed settings are easier for users to setup.



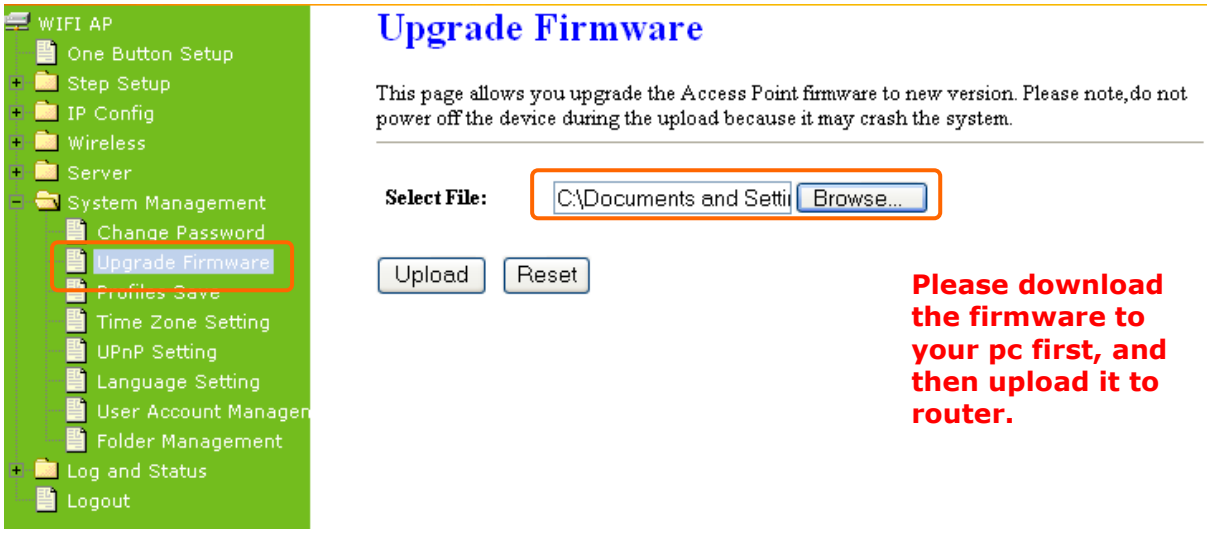
7.4.1 Change Password

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.sapido.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.

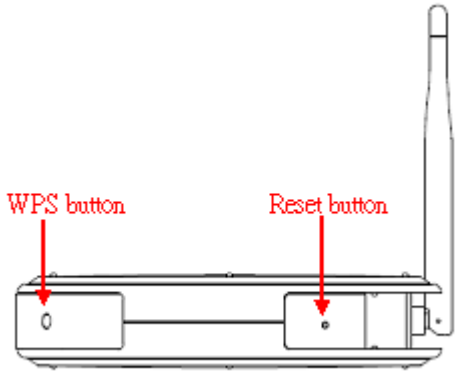


Note: To prevent that firmware upgrading is interrupted by other wireless signals and causes failure. We recommend users to use wired connection during upgrading.

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

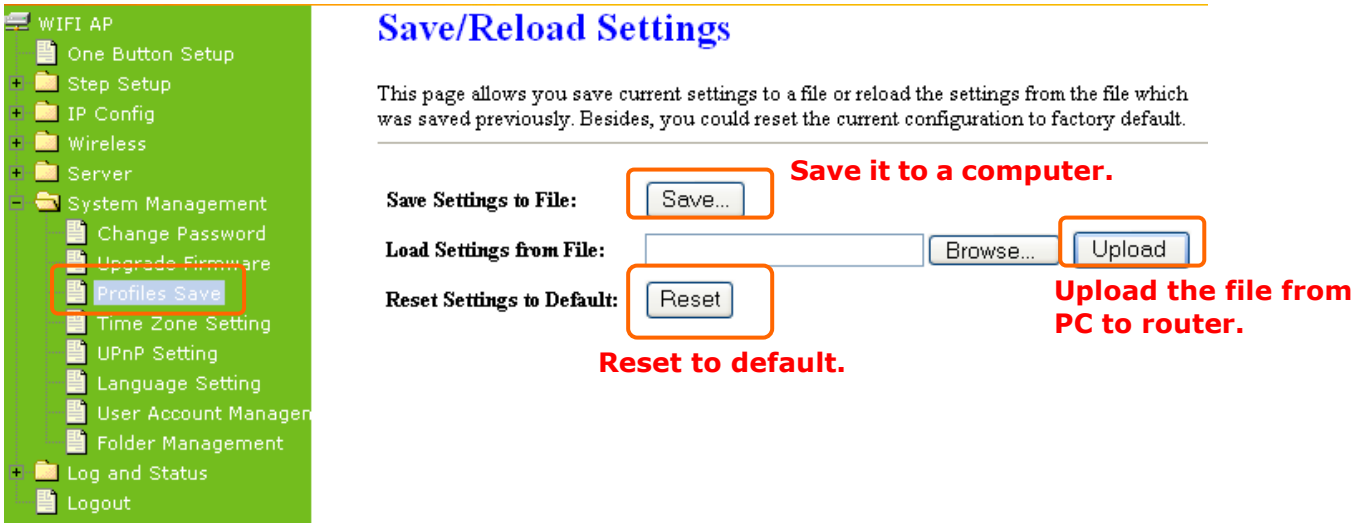
*Reset button:

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.



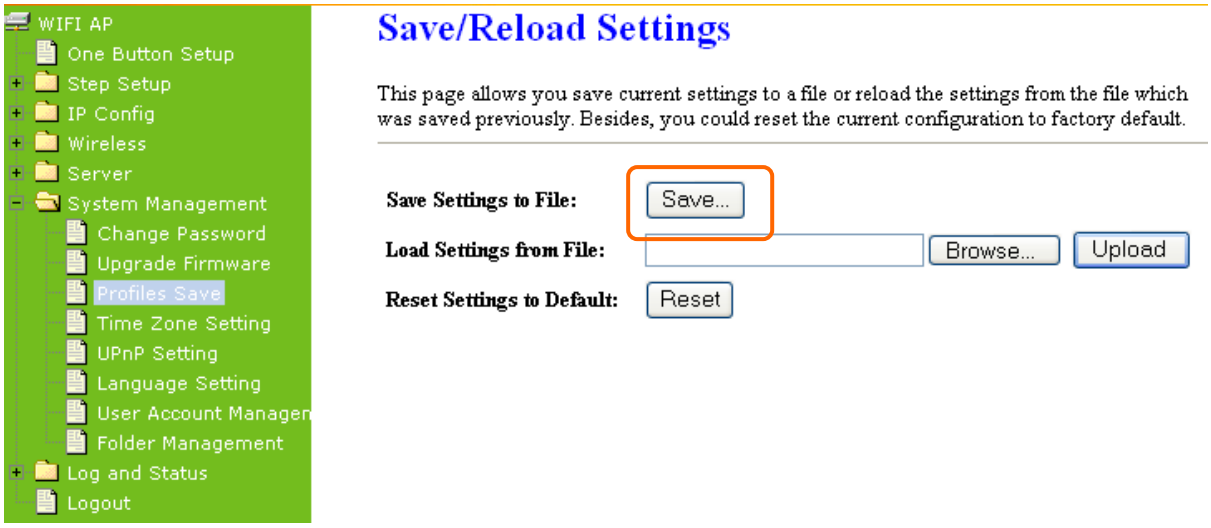
7.4.3 Profiles Save

The Profiles Save option lets user save and retrieve a file containing your router's configuration settings



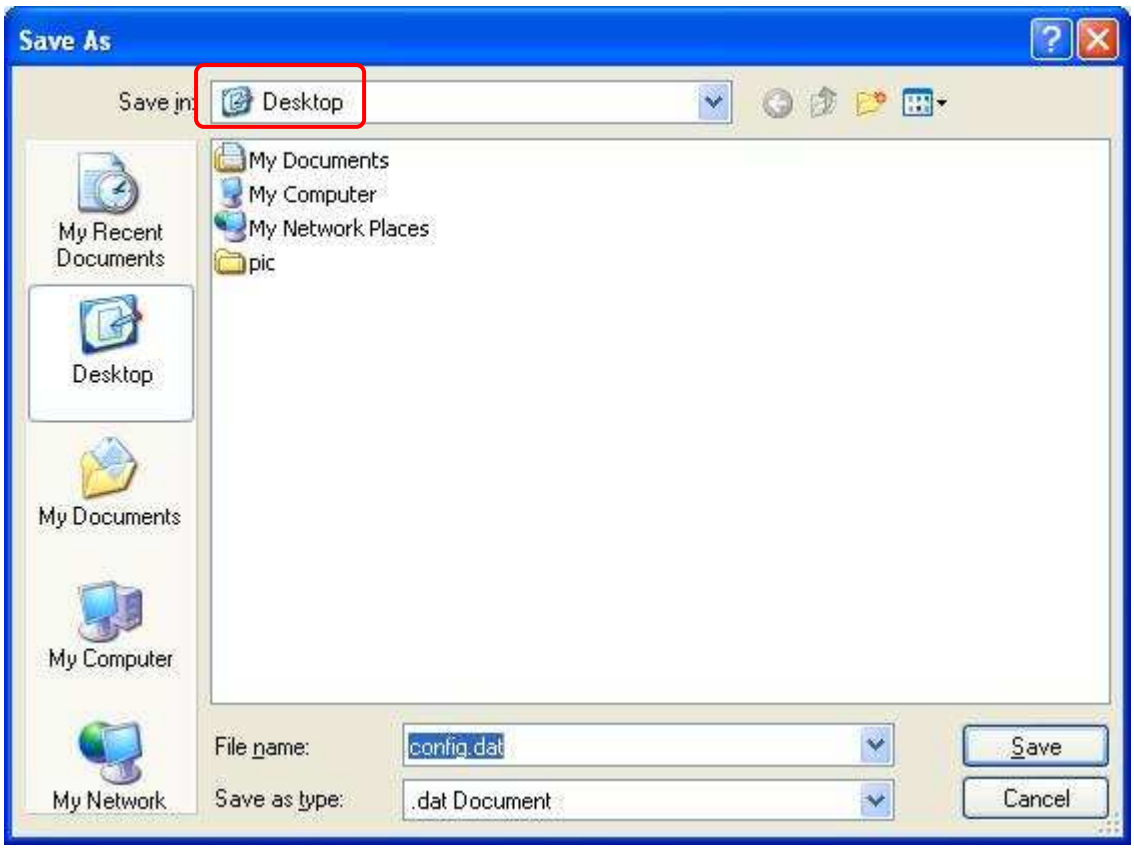
*Please see the following instructions.

a. Please click **Save...**, a prompt window will ask user to save config.dat file. (Figure 1), please select the location (Figure 2), for example: the desktop (Figure 3).

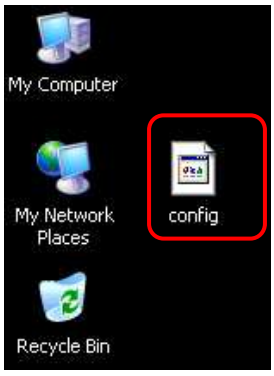


A pop window will show up and ask to save **config.dat** file.

(Figure 1)

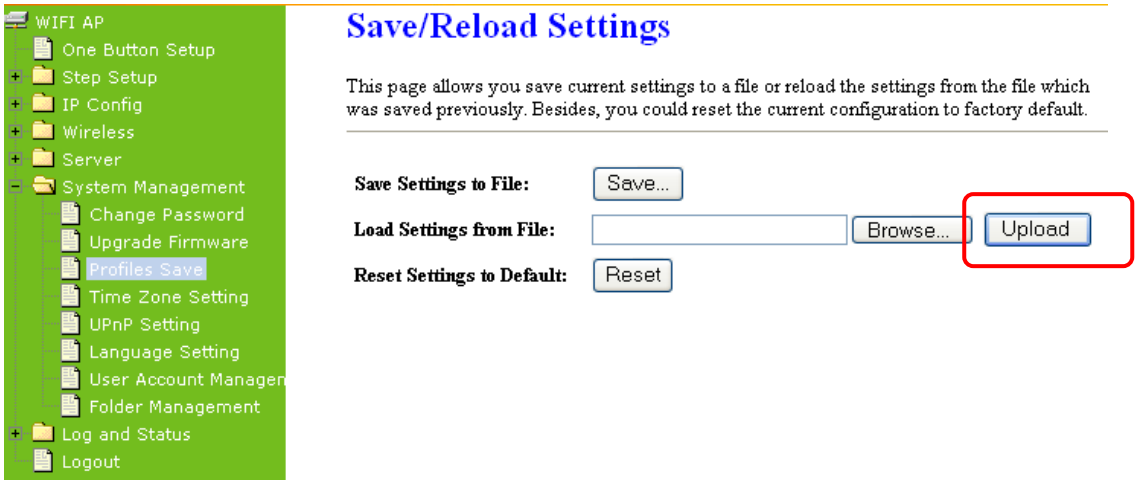


(Figure 2)

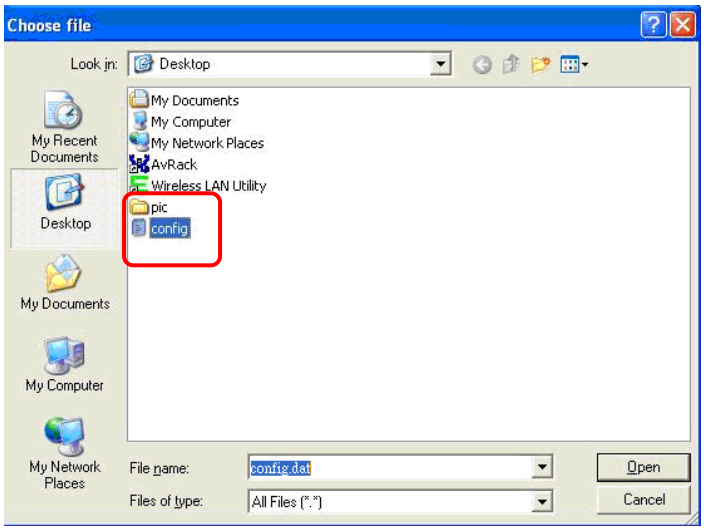


(Figure 3)

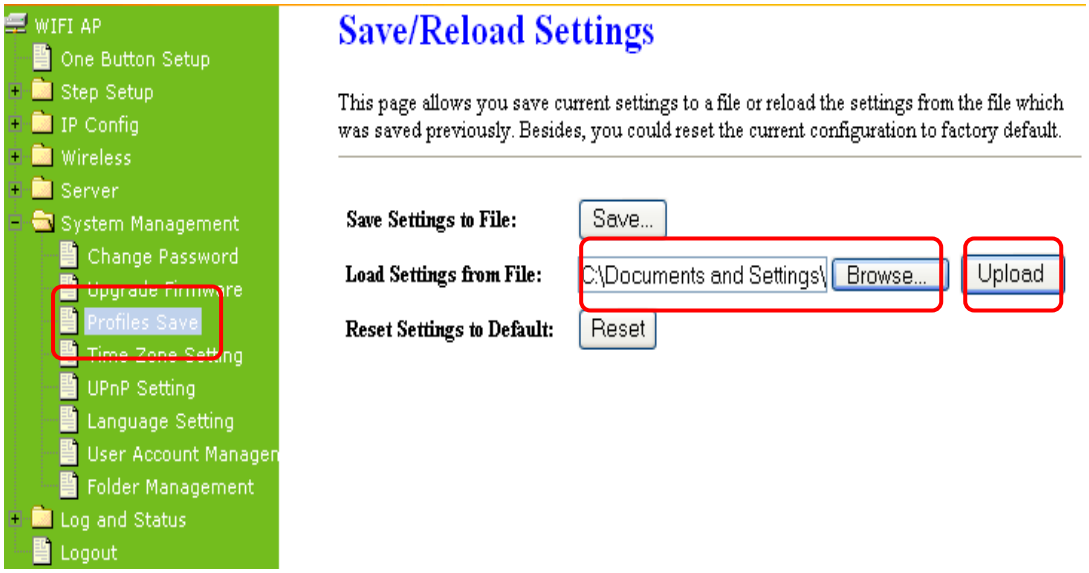
b. Please click **Browser...** (Figure 1) and select the config.dat file. (Figure 2), and then click **Upload** to retrieve (Figure 3).



(Figure 1)



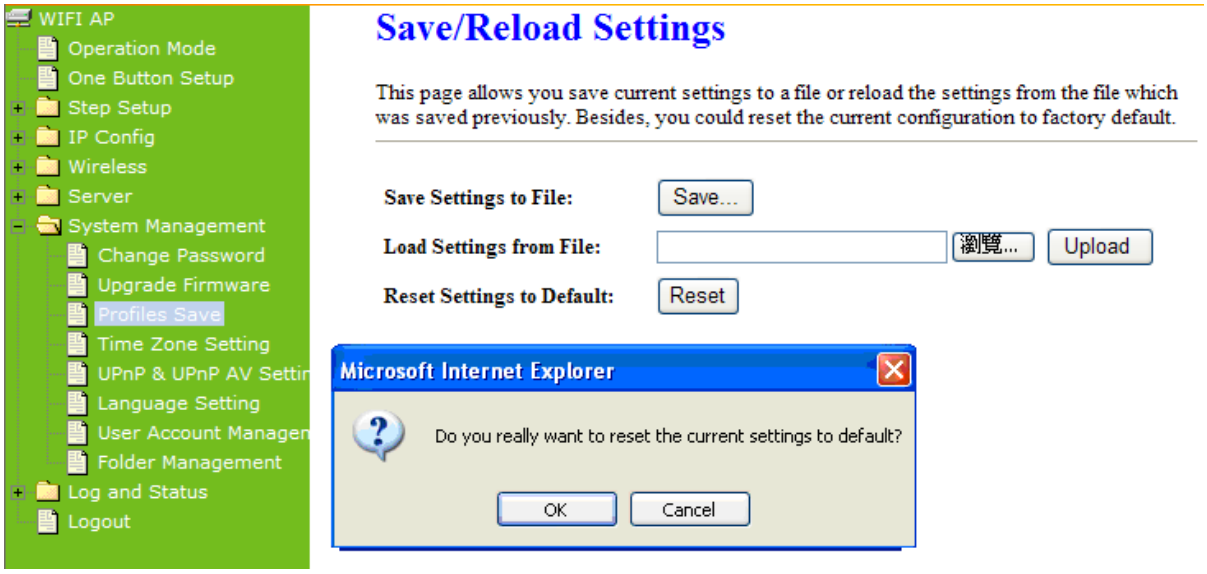
(Figure 2)



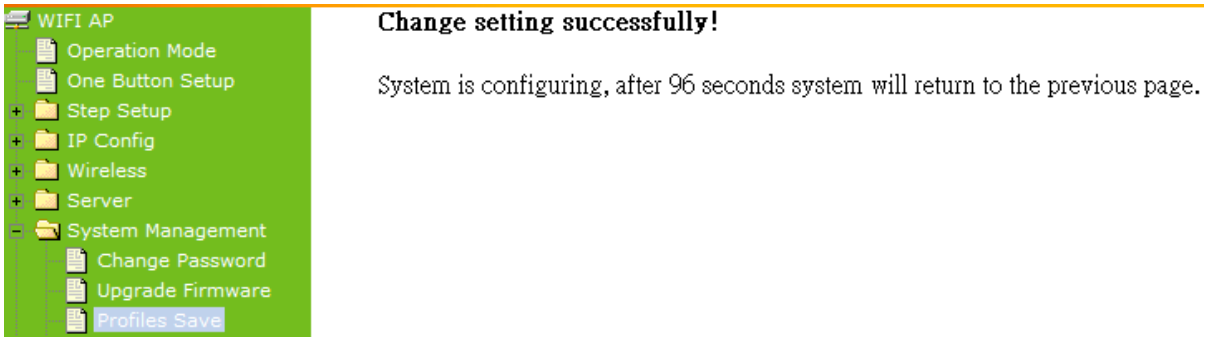
(Figure 3)

c. When you see the screen displaying like the following figure, it means update is completed. Please click **OK** to turn back to the configuration page.

d. if you want to reset the system back to factory default settings, please click **Reset** button.

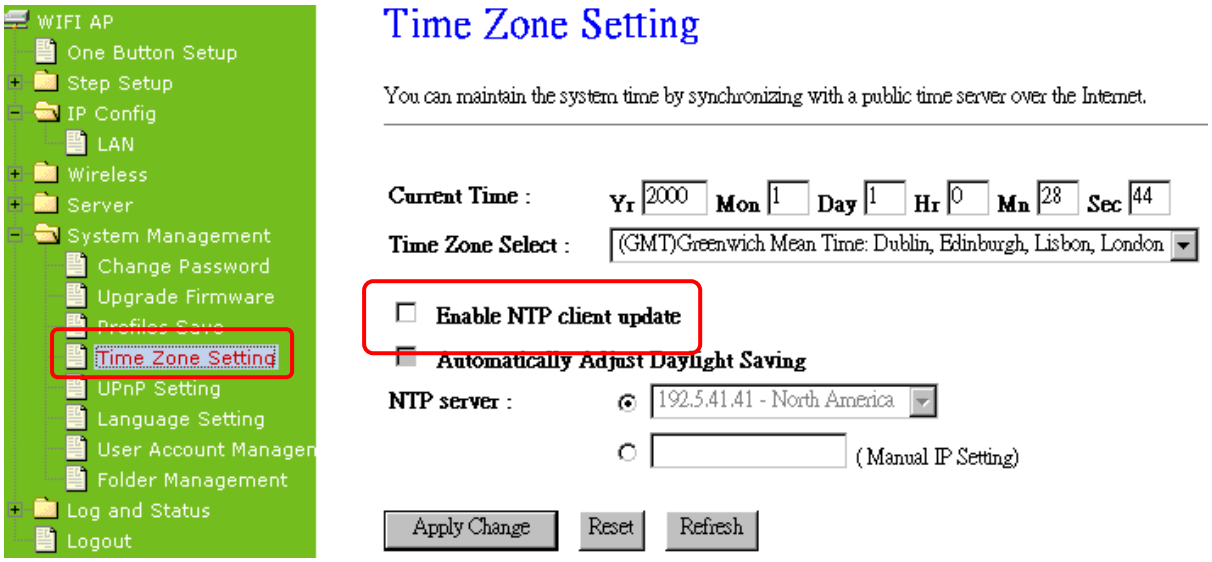


e. When you see the screen displaying like the following figure, it means reset is completed. Please click **OK** to turn back to the configuration page.



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.



1. Current Time

Users can input the time manually.

2. Time Zone Select

Please select the time zone.

3. Enable NTP client update

Please select to enable NTP client update or not.

4. Automatically Adjust Daylight Saving

Please select to enable **Automatically Adjust Daylight Saving** or not.

5. NTP server

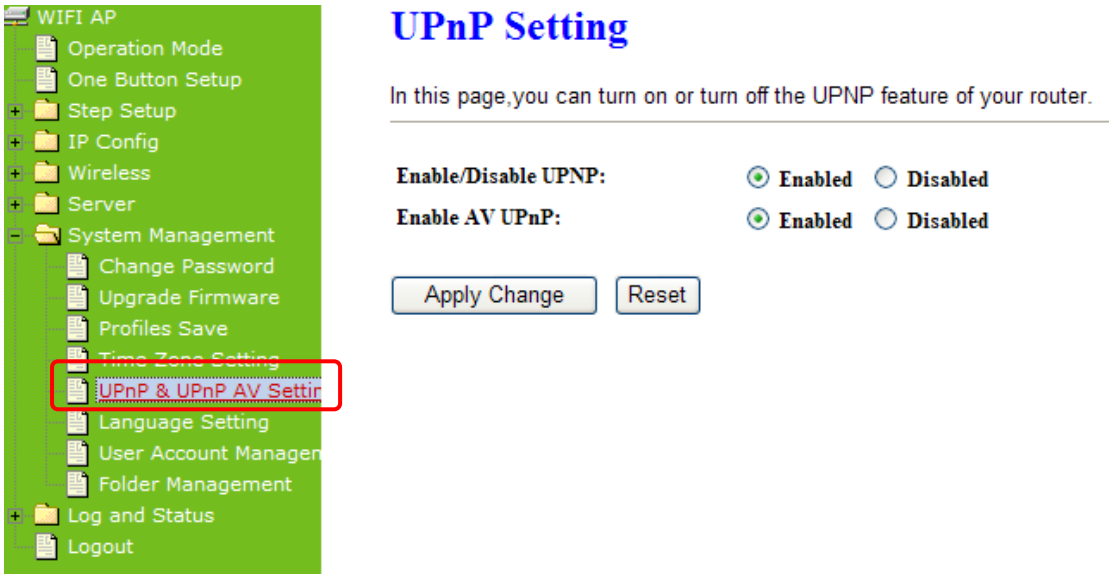
Please select the NTP server from the pull-down list, or you can enter the NTP server IP address manually.

6. 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 & UPnP AV 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 Download 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 Download Server Router. If you do not wish to use UPnP, you can disable it.



1. Enable/Disable UPnP

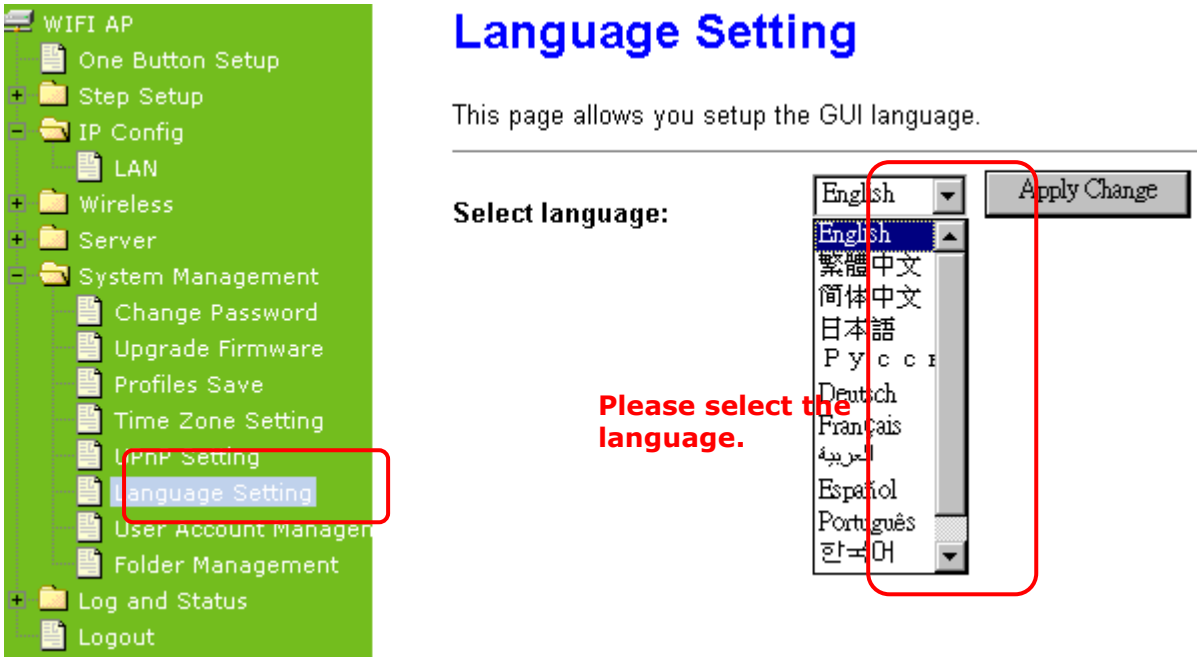
Select to enable or disable this function.

2. Enable/Disable UPnP AV

Select to enable or disable this function.

7.4.6 Language Setting

This page provides users with 12 languages to choose to do the interface configuration. Please click **Apply Changes** after selecting a language.

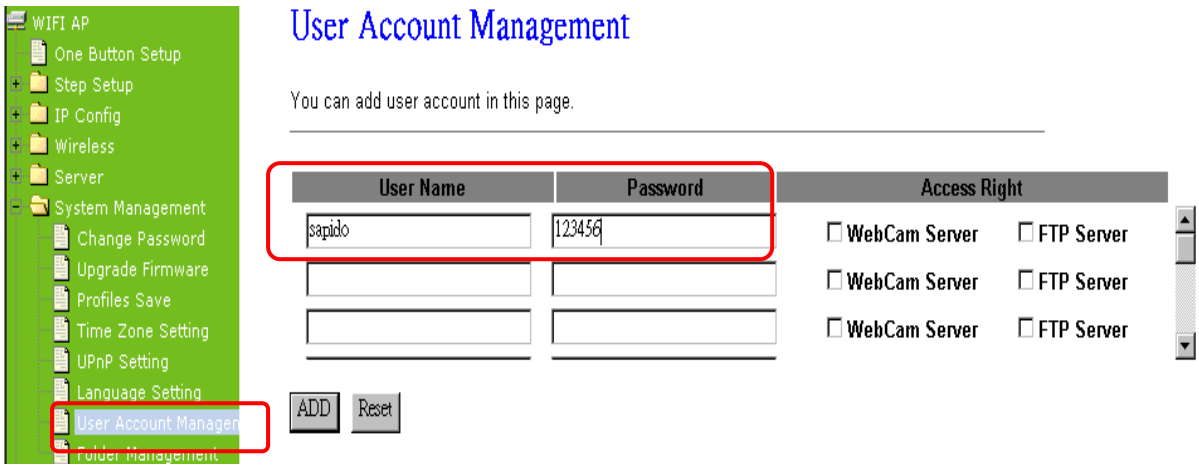


Using Korean as an example, the screen will display on the chosen language after the countdown is finished.

Note: 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

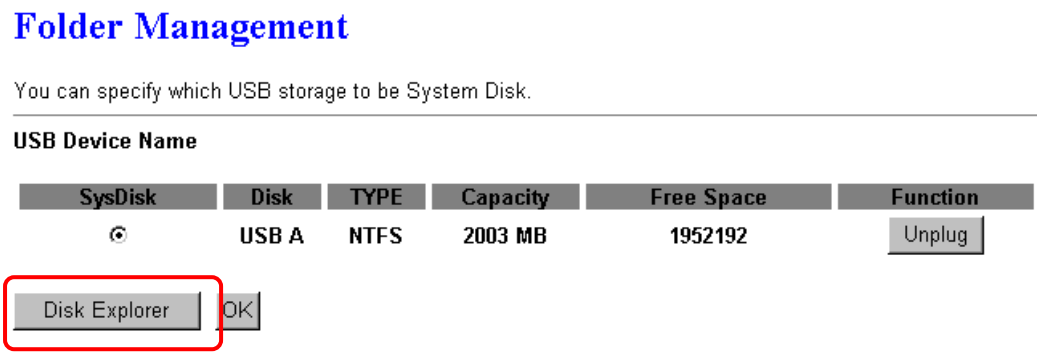
Personal users can use each individual application such as My Status, My Webcam and My Document. This section is to set the user's right. Also, all the users right will be showed in User Account List and can do the edit or delete by clicking the meaning text.



1. **User Name**
   Create the user name in this blank.
2. **Password**
   Setup the user's password.
3. **User Right**
   Enable the use to Webcam, FTP or Samba server.
4. **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.

7.4.8 Folder Management

Easy to check all the USB storage devices connected to your N+ 3.5G NES Server , 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.

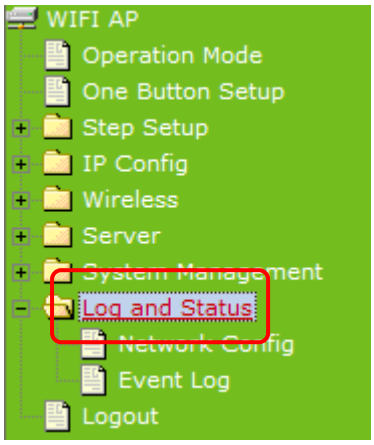


1. Select the USB Disk and click on **Mount** button for refresh all disks before you do disk partition, and the **Unplug** button will appear.
2. To partition/format the disk, please select the disk and click on **Format** button.
3. If you want to view the data inside the disk, please click on "**Disk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

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

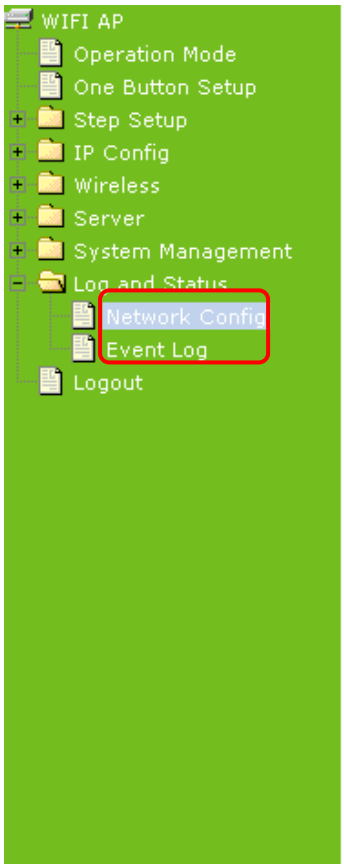
7.5 Log & Status

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.



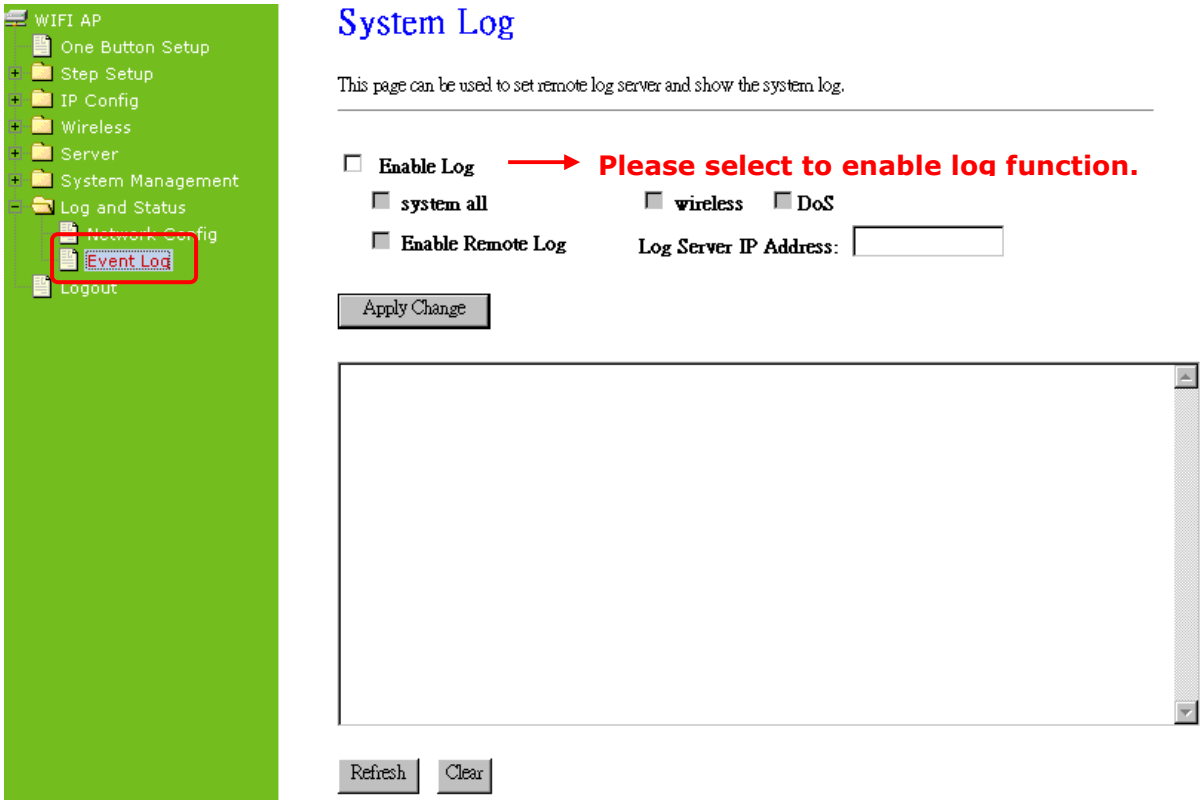
Access Point Status

This page shows the current status and some basic settings of the device.

System	
Uptime	0day:0h:15m:47s
Firmware Version	Ver1.0.11
Build Time	Thu Sep 3 21:14:44 CST 2009
WirelessConfiguration	
Mode	AP
Band	2.4 GHz (B+G+N)
SSID	SAPIDO_Fun_Center
Channel Number	1
Encryption	Disabled
MAC	00:d0:41:b9:e1:f3
Associated Clients	0
WirelessRepeater Interface Configuration	
Mode	Infrastructure Client
ESSID	ESSID_SAPIDO_GR-1222
Encryption	Disabled
MAC	00:00:00:00:00:00
State	Started

7.5.2 Event Log

You may enable the event log feature here.



1. Enable Log

You may choose to enable Event Log or not.

2. system all、wireless & DoS

Please select the event you want to record.

3. Enable Remote Log

You may choose to enable the remote event log or not.

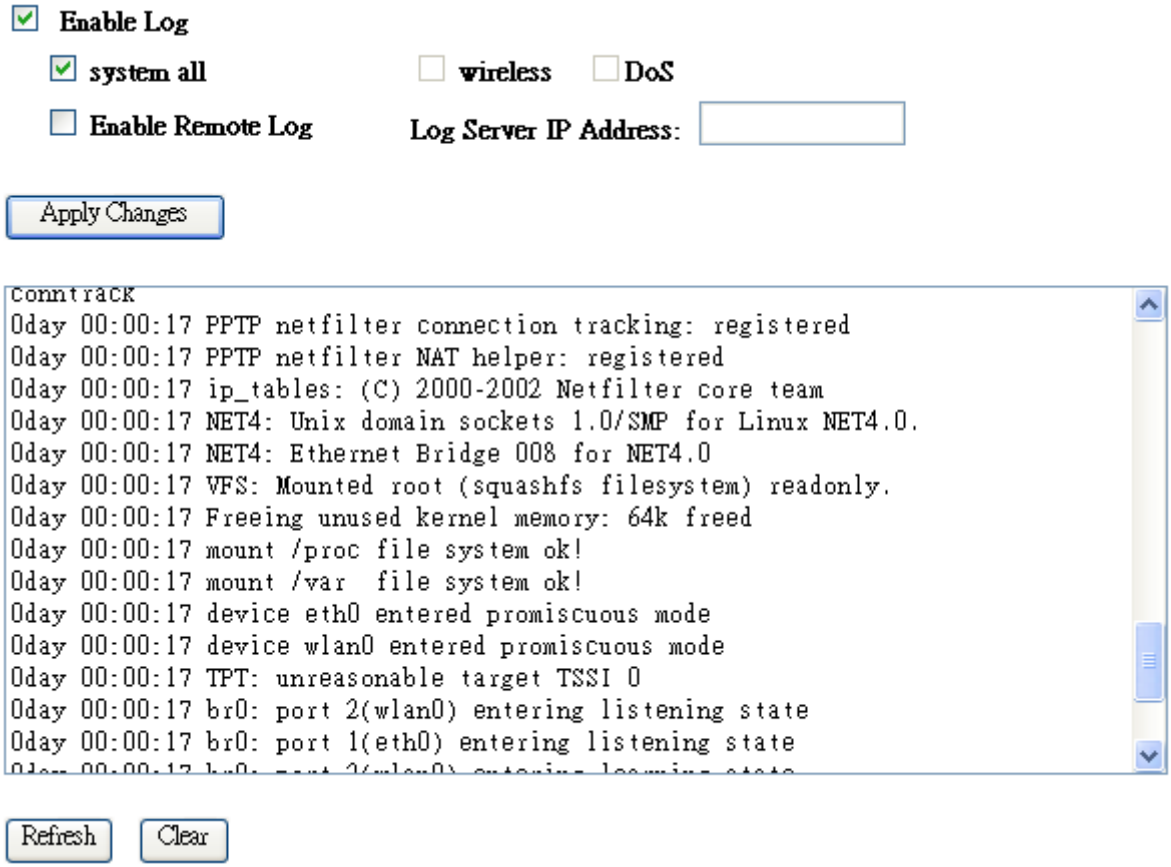
4. Log Server IP Address

Please input the log server IP Address.

5. Apply Changes & Refresh & Clear

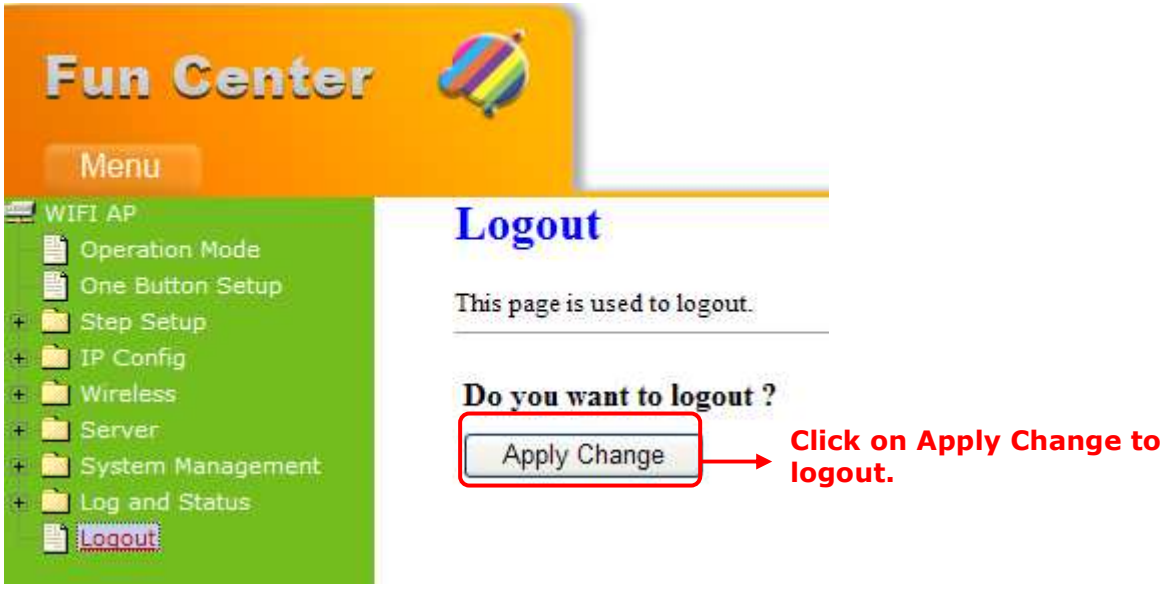
Click on **Apply Changes** to save the setting data. Click on **Refresh** to renew the system time, or on **Clear** to clear all the record.

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



7.6 Logout

This function provides users to logout.



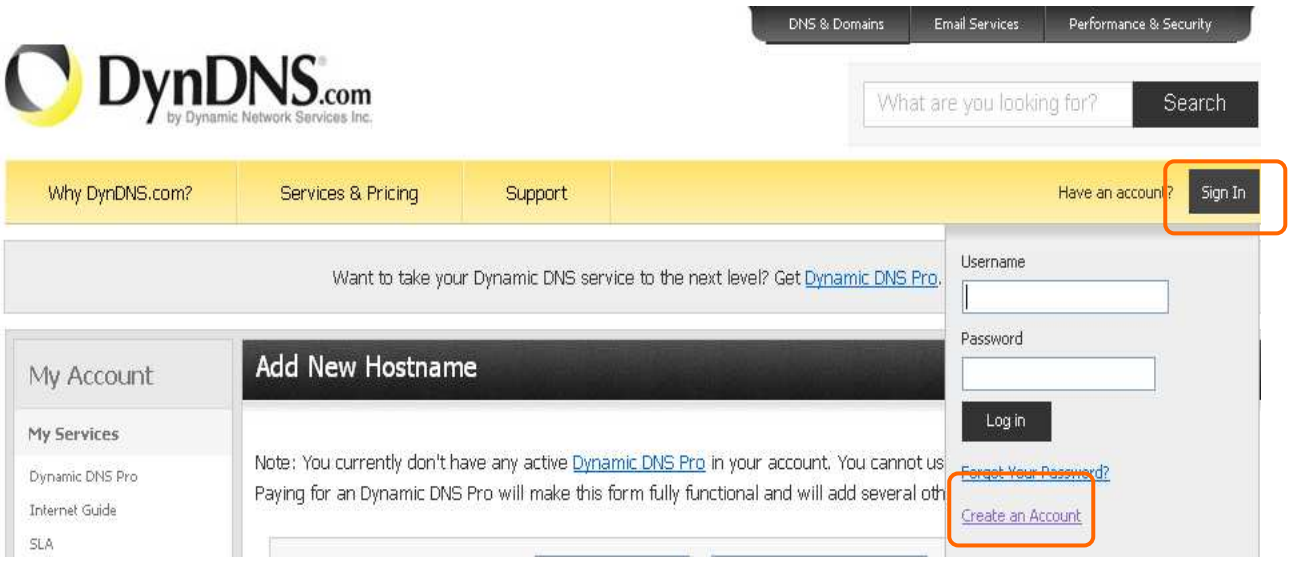
Chapter 8 DDNS Account Setup

DDNS is a service changes the dynamic IP to the static IP. The settings of DDNS can solve the problem of being given the different IP by router every time. After setting the Router, your host name would correspond to your dynamic IP. Moreover, via the host name application, it could be easier for you to use FTP, Webcam and Printer remotely.

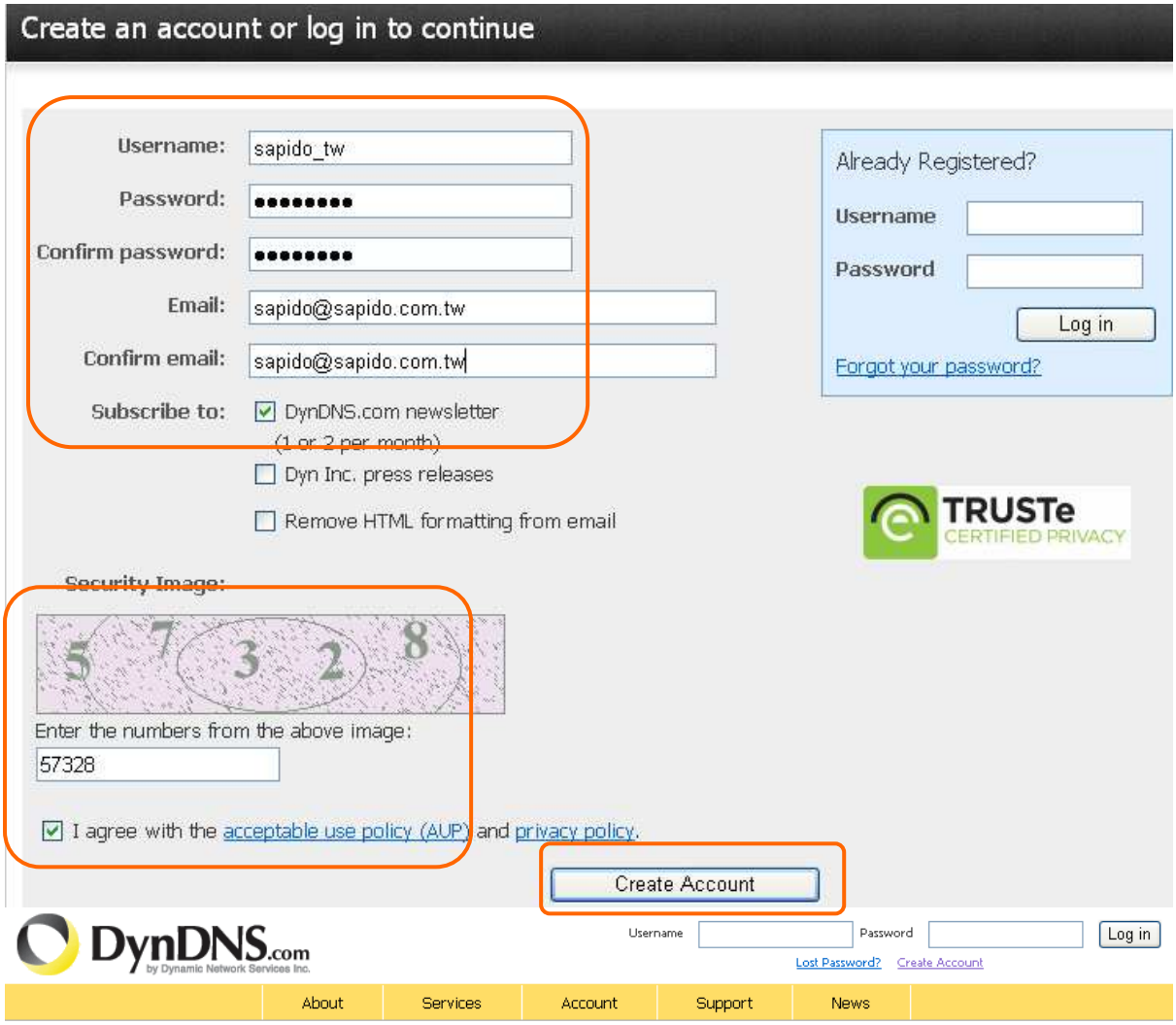
Dynamic DNS allows you to make an assumed name as a dynamic IP address to a static host name. Please configure the dynamic DNS below. Please select **Dynamic DNS** under the **IP Config** folder, and follow the instructions below to enter the **Dynamic DNS** page to configure the settings you want.

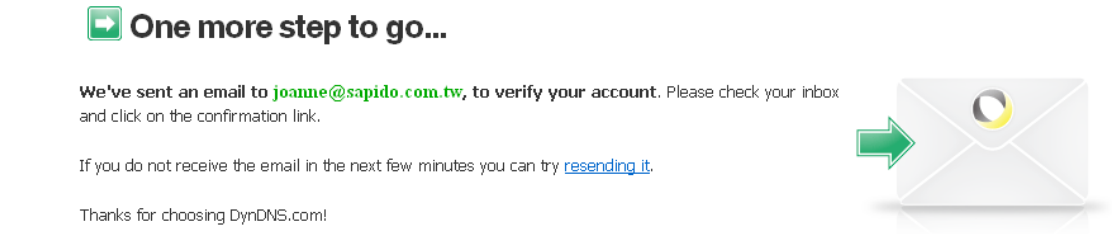
If you don't have a DDNS account, please follow the steps to complete your DDNS with Dynamic IP settings.

Step 1. First access the Internet and fill http://www.dyndns.com/ into the address field of your web browser, then click **Create Account**.



Step 2. Fill in the form as required, and then click on **Create Account** button.





Step 3. When you got this account created message, close it, and check your mailbox. You would get a mail from DynDNS website.

Step 4. Click on the indicated address within your mail to confirm.

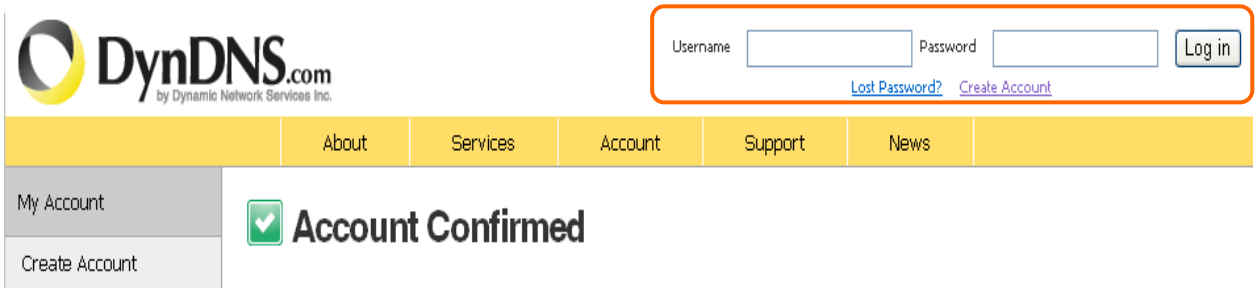
Your DynDNS.com Account ' sapido ' has been created. You need to visit the confirmation address below within 48 hours to complete the account creation process:

https://www.dyndns.com/account/confirm/BDJZJYlWzdYnrQBVEP1bcQ

Our basic service offerings are free, but they are supported by our paid services. See http://www.dyndns.com/services/ for a full listing of all of our available services.

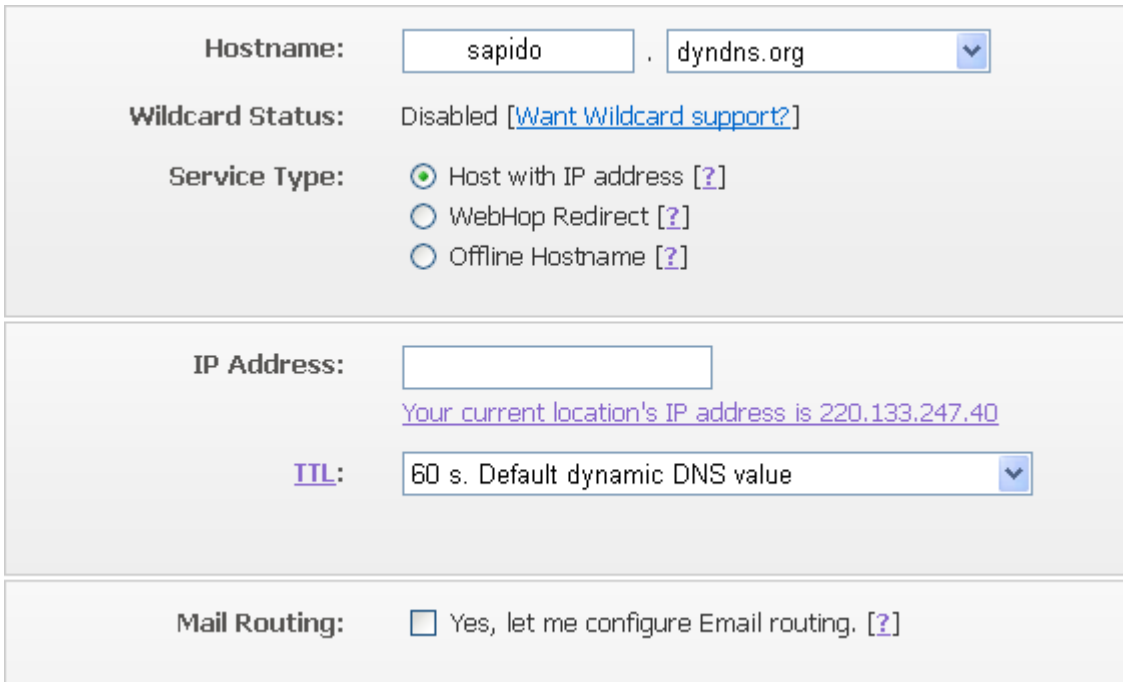
If you did not sign up for this account, this will be the only communication you will receive. All non-confirmed accounts are automatically deleted after 48 hours, and no addresses are kept on file. We apologize for any inconvenience this correspondence may have caused, and we assure you that it was only sent at the request of someone visiting our site requesting an account.

Step 5. Click on **login.**

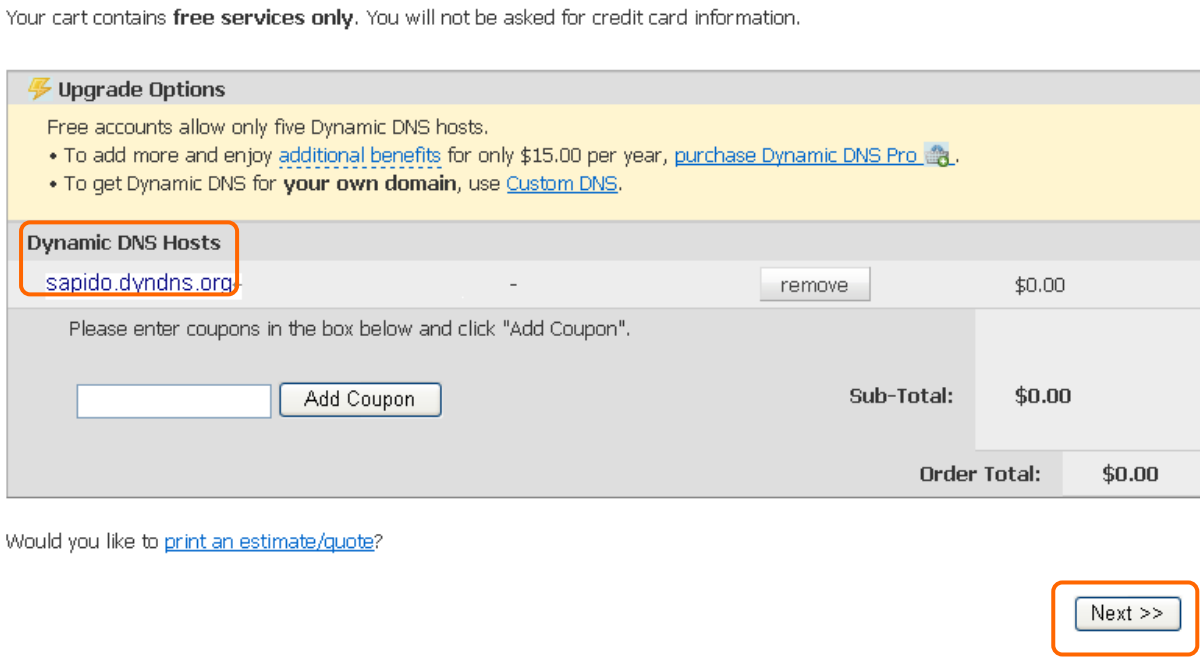


Step 6. Click **Add New Hostname**.

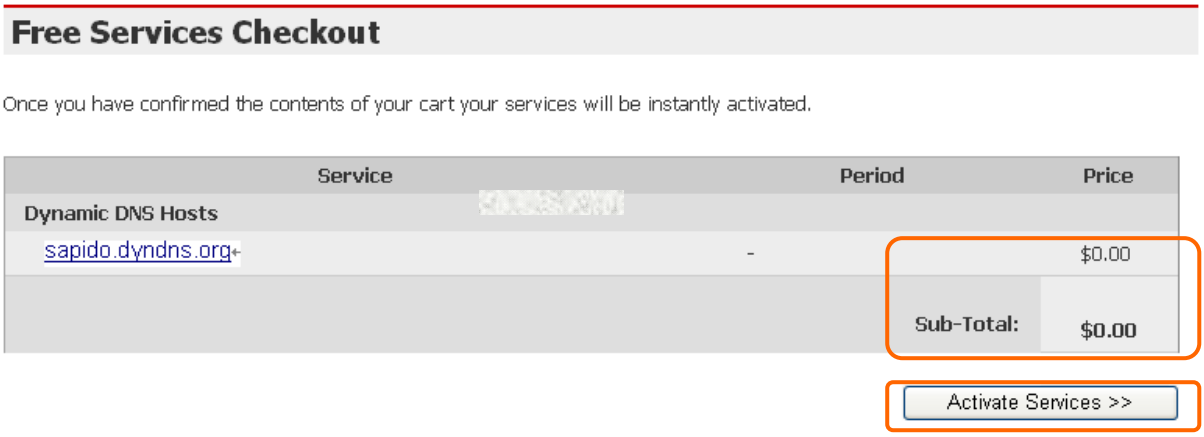
Step 7. Put in your favorite hostname and service type, and then click **Create Host** after finished.



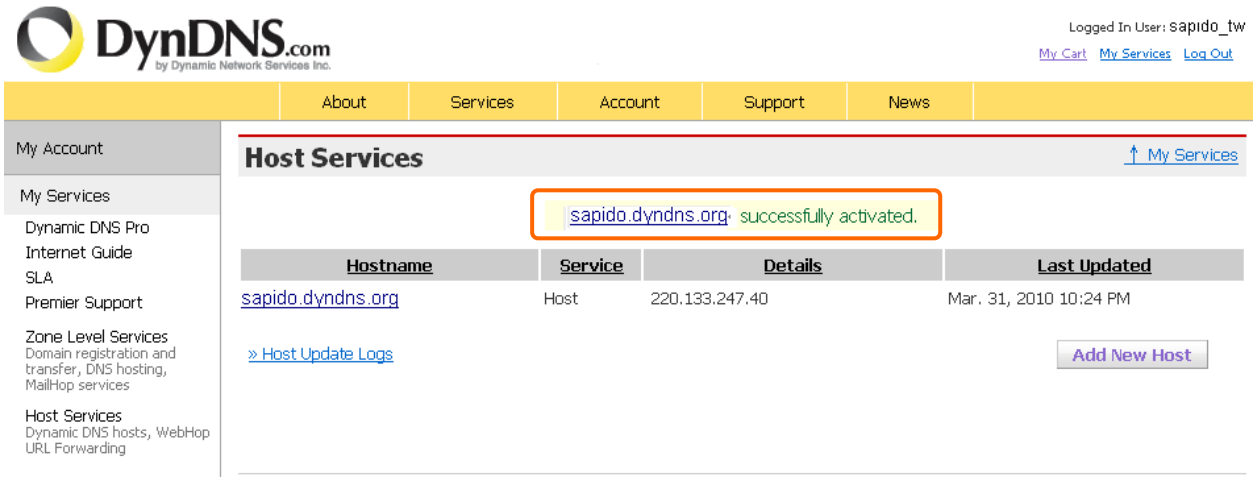
Step 8. Your hostname has been created when you see the following page.



Step 9. Click "**Activate Service**"



Step 10. Finish

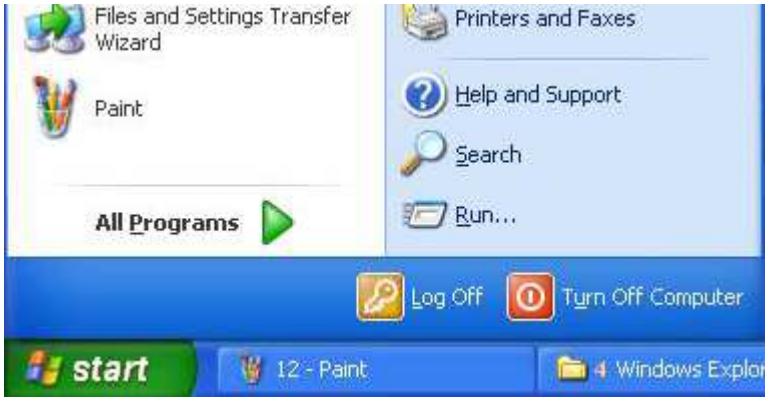


Chapter 9 Q & A

9.1 Installation

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

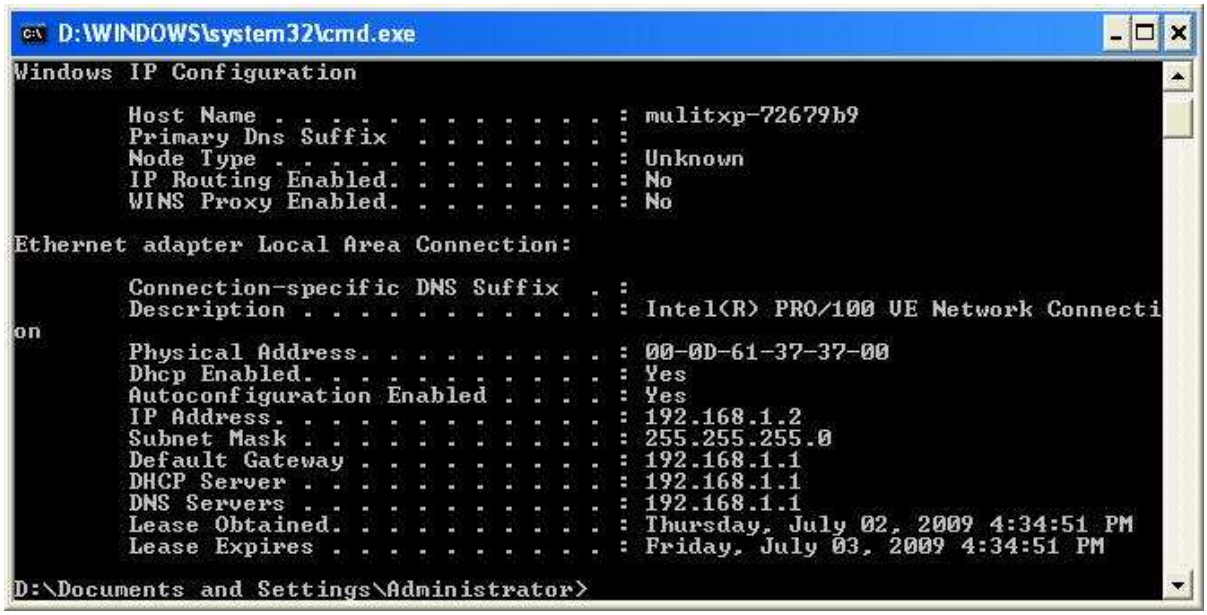
A: (1) From the **Start** menu, select **Run**, an input box will appear with a flashing cursor.



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.

1. 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.

2. 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 lights

1. Q: The Power Indicator of my 3.5G Download 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 Download Server Router？

A: You could try to reset the 3.5G Download 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 Download Server Router is back to factory default settings.

3. Q: My 3.5G Download 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 Download 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 Download 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 Download Server Router.

9.4 Operating System Settings

1. Q: My computer can't connect to the Internet after installed the 3.5G Download 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 web page 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 Download Server Router Setup

1. Q: Why does the setting page of the 3.5G Download 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 Download 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 Download 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 Download 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 Download 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 Download Server Router assign DNS setting to clients.

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 Download Server Router's WEP interface.

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

9.7 Supports

1. Q: What is the maximum value for 3.5G Download Server Router to support IP address?

A: 3.5G Download 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 Others

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 Download Server Router and setup your computer manually.

3. Q: What is purpose for Extend SSID of 3.5G Download 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.

2. WiFi 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	WiFi 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 Operating 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 Browsers

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 SadoGo Utility

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