

User Guide

TCSEGWB13FA0

**Portable Battery Powered WIFI Access
Point**



FCC 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 or more of the following measures:

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference.

This device must accept any interference received, including interference that may cause undesired operation.

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

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for this transmitter must be installed to provide a

separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.”

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.

This device has been designed to operate with the antennas listed below, and having a maximum gain of 3 dBi. Antennas not included in this list or having a gain greater than 3 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

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Package Contents

- TCSEGWB13FA0 Portable Battery Powered WIFI Access Point
- Power Adapter
- Battery
- USB Cable
- Ethernet cable
- Quick Installation Guide

 **Note:**

Make sure that the package contains the above items. If any of the listed items are damaged or missing, please contact with your distributor.

Chapter 1. Introduction

Thank you for choosing the TCSEGWB13FA0 Portable Battery Powered WIFI Access Point.

1.1 Overview of the Router

TCSEGWB13FA0 from Schneider is a truly wireless networking platform which is able to broadcast a wireless signal at up to 150Mbps around a room, creating a mobile office or entertainment network for up to five devices to access the Internet simultaneously. The device is the ideal travel companion, with pocket-sized dimensions and powered by its own powerful internal 2000mAh battery, users can work or play for hours on end. The device is also incredibly easy to use, allowing users to rapidly set up an Internet connected wireless network in as little time as it takes to plug in their WAN cable and when finished, simply place the device back in their pockets.

1.2 Conventions

The router or TCSEGWB13FA0 mentioned in this guide stands for TCSEGWB13FA0 Portable Battery Powered WIFI Access Point without any explanation.

1.3 Main Features

- Make use of IEEE 802.11n wireless technology to provide a wireless data rate of up to 150Mbps.
- One 10/100M Auto-Negotiation RJ45 WAN port, four 10/100M Auto-Negotiation RJ45 LAN ports, supporting Auto MDI/MDIX.
- Provides WPA/WPA2, WPA-PSK/WPA2-PSK authentication, TKIP/AES encryption security.
- Supports AP mode
- Supports UPnP, Dynamic DNS, Static Routing.
- Built-in NAT and DHCP server supporting static IP address distributing.
- Provides 64/128/152-bit WEP encryption security
- Supports Flow Statistics.
- Supports firmware upgrade and Web management.

1.4 Panel Layout

1.4.1 The Front Panel

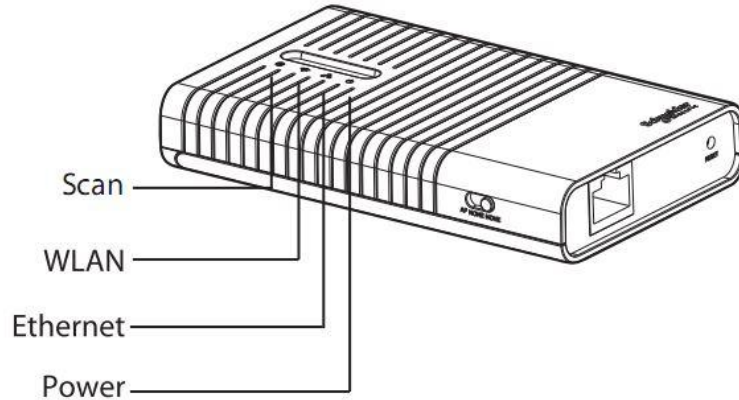


Figure 1-1 Front Panel sketch

The router's LEDs are located on the front panel (View from bottom to top).





LED	Status	Description
 Power	Solid (Green)	The battery is full or the power supply is normal.
	Solid (Orange) Solid (Green)	The battery is being charged.
	Solid (Red)	The battery power is low, you need to charge it.
	Flashing (Red)	The battery is abnormal .
 Ethernet	Flashing	The Ethernet port is transferring data
	Off	No device is linked to the LAN port.
 WLAN	On	The wireless function is enabled.
	Flashing	There is data being transferred through wireless.
	Off	The wireless function is disabled due to internal error.
 Scan	On	Scan is working and at least one device is detected.
	Flashing	Scan is working and no device is detected.
	Off	Scan is not started.

Table 1-1 The LEDs Description

1.4.2 The Rear Panel

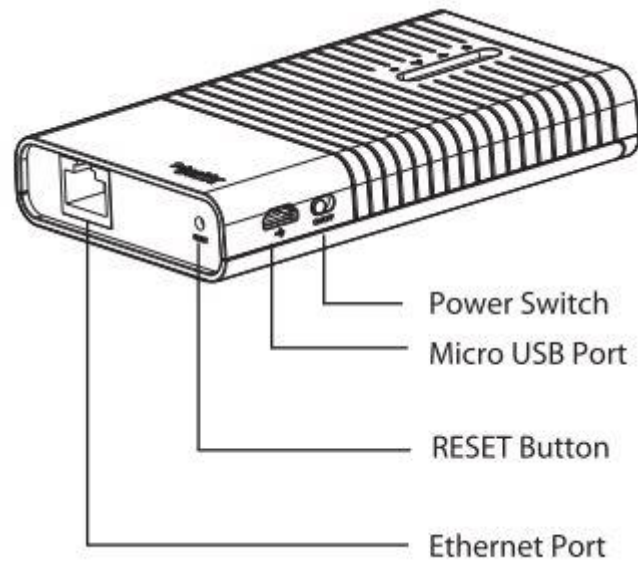


Figure 1-2 Rear Panel sketch

The following parts are located on the rear panel (View from left to right).

Item	Description
Power Switch	This switch is used to power on the Router.
Micro USB Port	This port is used to be connected to the provided power adapter.
Reset Button	With the Router powered on, press and hold the Reset button for at least 10 seconds , and then the Router will restore to the default settings.
Ethernet Port	This Port can be used as either a LAN port or WAN port.
Mode Switch	Keep switch at AP mode. Other modes are reserved.

Chapter 2. Connecting the Router

2.1 System Requirements

- Broadband Internet Access Service (DSL/Cable/Ethernet)
- One DSL/Cable Modem that has an RJ45 connector (which is not necessary if the Router is connected directly to the Ethernet.)
- PCs with a working Ethernet Adapter and an Ethernet cable with RJ45 connectors
- TCP/IP protocol on each PC
- Web browser, such as Microsoft Internet Explorer, Mozilla Firefox or Apple Safari

2.2 Installation Environment Requirements

- Place the Router in a well ventilated place far from any heater or heating vent
- Avoid direct irradiation of any strong light (such as sunlight)
- Keep at least 2 inches (5 cm) of clear space around the Router
- Operating Temperature: 0°C~40°C (32°F~104°F)
- Operating Humidity: 10%~90%RH, Non-condensing

Chapter 3. Quick Installation Guide

This chapter will show you how to configure the basic functions of your TCSEGWB13FA0 Portable Battery Powered WIFI Access Point.

3.1 Travel Router (AP) Mode

➤ Access Point

In this mode, the TCSEGWB13FA0 is connected to a wired network and transforms the wired Internet access into wireless so that multiple users can share the Internet.




3.2 PC configuration

Here we take Wireless Network Connection as an example. (You can also go to Local Area Connection to configure the PC for wired network connection, and then configure the router.)

1. For Windows XP, please go to **Start → Settings → Control Panel → Network and Internet Connections → Network Connections**; for Windows 7, please go to **Start → Settings → Control Panel → View network status and tasks → Manage network connection**. Right click **Wireless Network Connection**, and select **Properties**.
2. For Windows XP, double click **Internet Protocol (TCP/IP)** in the item list; for Windows 7, double click **Internet Protocol Version 4 (TCP/IPv4)**.
3. Select **“Obtain an IP address automatically”** and **“Obtain DNS server address automatically”**. Click **OK** to finish the settings.

3.2.1 Connect to Network

1. Click the icon  at the bottom of your desktop.
2. Click “**Refresh network list**”, and then select the network. Click **Connect**.

 **Note:**

The default SSID of the network is SE_TCSEGW_XXXXXX. (The XXXXXX is the last six characters of the router’s MAC address.)

3. When **Connected** appears, you’ve successfully connected to the wireless network.

3.2.2 Router Configuration

To access the configuration utility, open a web-browser and type the default address <http://223.22.33.223> in the address field of the browser.



Figure 3-1 Login the Router

After a moment, a login window will appear, similar to the Figure 3-2. Enter **admin** for the **User Name** and **Password**, both in lower case letters. Then click the **OK** button or press the **Enter** key.



Figure 3-2 Login Windows

 **Note:**

If the above screen does not pop-up, it means that your Web-browser has been set to a proxy. Go to Tools menu>Internet Options>Connections>LAN Settings, in the screen that appears, cancel the Using Proxy checkbox, and click **OK** to finish it.

Chapter 4. Configuring the Router

This chapter will show each Web page's key functions and the configuration way.

4.1 Login

After your successful login, you will see the thirteen main menus on the left of the Web-based utility. On the right, there are the corresponding explanations and instructions.



Figure 4-1 the main menu

The detailed explanations for each Web page's key function are listed below.

4.2 Devices List

The Devices List page will display all the devices which link to the Router.

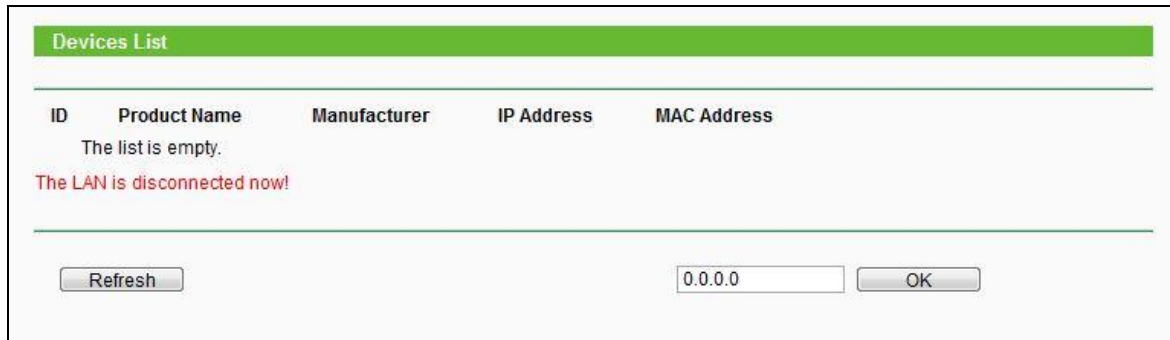


Figure 4-2 the Devices List

4.3 Status

The Status page provides the current status information about the Router. All information is read-only.

Status

Firmware Version: 1.1.0 Build 140923 Rel.35104n
Hardware Version: SE3040 v2 00000000

Wired

MAC Address: C4-6E-1F-74-85-04
IP Address: 223.22.33.223
Subnet Mask: 255.255.255.0

Wireless

Operation Mode: Access Point
Name (SSID): SE_TCSEGW_748504
Channel: Auto (Current channel 11)
Mode: 11bgn mixed
Channel Width: Automatic
MAC Address: C4-6E-1F-74-85-04

Traffic Statistics

	Received	Sent
Bytes:	0	0
Packets:	0	0

System Up Time: 0 days 00:00:52 Refresh

Figure 4-3 Router Status

4.4 WPS

This section will guide you to add a new wireless device to an existing network quickly by **WPS (Wifi Protected Setup)** function.

- a) Choose menu “**WPS**”, you will see the next screen (shown in Figure 4-4).

WPS (Wi-Fi Protected Setup)

WPS Status: **Enabled** Disable WPS

Current PIN: **12345670** Restore PIN Gen New PIN
 Disable PIN of this Device

Add A New Device: Add Device

Figure 4-4 WPS

- **WPS Status** - Enable or disable the WPS function here.

- **Current PIN** - The current value of the Router's PIN is displayed here. The default PIN of the Router can be found in the label or User Guide.
- **Restore PIN** - Restore the PIN of the Router to its default.
- **Gen New PIN** - Click this button, and then you can get a new random value for the Router's PIN. You can ensure the network security by generating a new PIN.
- **Add device** - You can add a new device to the existing network manually by clicking this button.

b) To add a new device:

If the wireless adapter supports Wi-Fi Protected Setup (WPS), you can establish a wireless connection between wireless adapter and Router using either Push Button Configuration (PBC) method or PIN method.

 **Note:**

To build a successful connection by WPS, you should also do the corresponding configuration of the new device for WPS function meanwhile.

4.5 Network

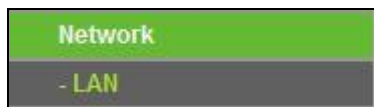
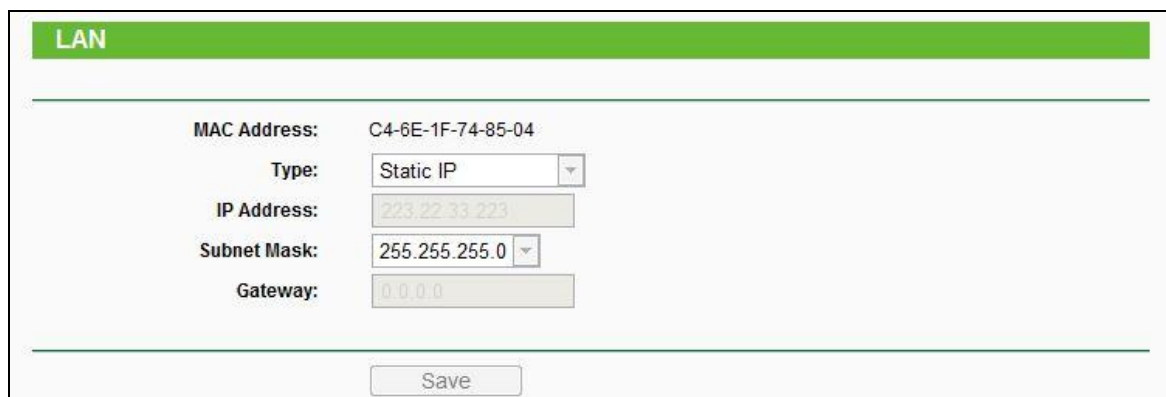


Figure 4-5 the Network menu

There is one submenus under the Network menu (shown in Figure 4-5): **LAN**. Click it, and you will be able to configure the corresponding function.

4.5.1 LAN

Choose menu "**Network** → **LAN**", you can configure the IP parameters of the LAN on the screen as below.


 A screenshot of the LAN configuration page. At the top is a green header bar with the word "LAN" in white. Below it is a white form area with the following fields:

- MAC Address: C4-6E-1F-74-85-04
- Type: Static IP (dropdown menu)
- IP Address: 223.22.33.223
- Subnet Mask: 255.255.255.0 (dropdown menu)
- Gateway: 0.0.0.0

 At the bottom of the form is a "Save" button.

Figure 4-6 LAN

- **MAC Address** - The physical address of the Router, as seen from the LAN. The value can't be changed.

- **IP Address** - Enter the IP address of your Router or reset it in dotted-decimal notation (factory default: 223.22.33.223).
- **Subnet Mask** - An address code that determines the size of the network. Normally use 255.255.255.0 as the subnet mask.

 **Note:**

1. If you change the IP Address of LAN, you must use the new IP Address to log in the Router.
2. If the new LAN IP Address you set is not in the same subnet, the IP Address pool of the DHCP server will change accordingly at the same time, while the Virtual Server and DMZ Host will not take effect until they are re-configured.

4.6 Wireless

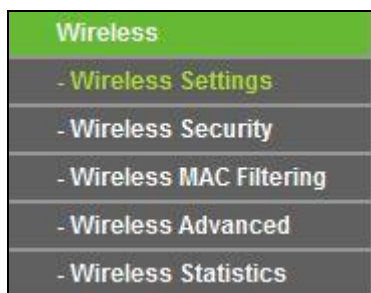


Figure 4-7 Wireless menu

There are five submenus under the Wireless menu (shown in Figure 4-7): **Wireless Settings**, **Wireless Security**, **Wireless MAC Filtering**, **Wireless Advanced** and **Wireless Statistics**. Click any of them, and you will be able to configure the corresponding function.

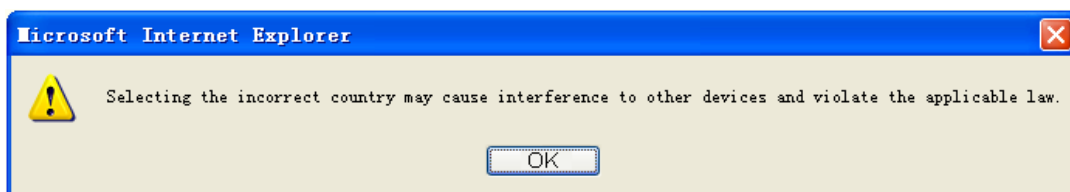
4.6.1 Wireless Settings

Choose menu "**Wireless** → **Wireless Settings**", you can configure the basic settings for the wireless network on this page.

Figure 4-8 Wireless Settings

- **SSID** - Enter a value of up to 32 characters. The same name of SSID (Service Set Identification) must be assigned to all wireless devices in your network. Considering your wireless network security, the default SSID is set to be (XXXXXX indicates the last unique six numbers of each Router's MAC address). This value is case-sensitive. For example, *TEST* is NOT the same as *test*.
- **Region** - Select your region from the pull-down list. This field specifies the region where the wireless function of the Router can be used. It may be illegal to use the wireless function of the Router in a region other than one of those specified in this field. If your country or region is not listed, please contact your local government agency for assistance.

When you select your local region from the pull-down list, click the **Save** button, then the Note Dialog appears. Click **OK**.



Note Dialog

 **Note:**

Limited by local law regulations, version for North America does not have region selection option.

- **Channel** - This field determines which operating frequency will be used. The default channel is set to Auto. so the AP will choose the best channel automatically. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point.
- **Mode** - Select the desired mode. The default setting is 11bgn mixed.

11b only - Select if all of your wireless clients are 802.11b.

11g only - Select if all of your wireless clients are 802.11g.

11n only- Select only if all of your wireless clients are 802.11n.

11bg mixed - Select if you are using both 802.11b and 802.11g wireless clients.

11bgn mixed - Select if you are using a mix of 802.11b, 11g, and 11n wireless clients.

Select the desired wireless mode. When 802.11g mode is selected, only 802.11g wireless stations can connect to the Router. When 802.11n mode is selected, only 802.11n wireless stations can connect to the AP. It is strongly recommended that you set the Mode to **802.11b&g&n**, and all of 802.11b, 802.11g, and 802.11n wireless stations can connect to the Router.

- **Channel width** - Select the channel width from the pull-down list. The default setting is automatic, which can adjust the channel width for your clients automatically.

 **Note:**

If **11b only**, **11g only**, or **11bg mixed** is selected in the **Mode** field, the **Channel Width** selecting field will turn grey and the value will become 20M, which is unable to be changed.

- **Enable Wireless Router Radio** - The wireless radio of this Router can be enabled or disabled to allow wireless stations access.
- **Enable SSID Broadcast** - When wireless clients survey the local area for wireless networks to associate with, they will detect the SSID broadcast by the Router. If you select the **Enable SSID Broadcast** checkbox, the Wireless Router will broadcast its name (SSID) on the air.

4.6.2 Wireless Security

Choose menu "**Wireless** → **Wireless Security**", you can configure the security settings of your wireless network.

There are five wireless security modes supported by the Router: WEP (Wired Equivalent Privacy), WPA (Wi-Fi Protected Access), WPA2 (Wi-Fi Protected Access 2), WPA-PSK (Pre-Shared Key), WPA2-PSK (Pre-Shared Key).

Figure 4-9 Wireless Security

- **Disable Security** - If you do not want to use wireless security, select this check box, but it's strongly recommended to choose one of the following modes to enable security.
- **WPA/WPA2 – Personal (Recommended)** - It's the WPA/WPA2 authentication type based on pre-shared passphrase.
 - **Version** - you can choose the version of the WPA-PSK security on the drop-down list. The default setting is **Automatic**, which can select **WPA-PSK** (Pre-shared key of WPA) or **WPA2-PSK** (Pre-shared key of WPA) automatically based on the wireless station's capability and request.
 - **Encryption** - When **WPA-PSK** or **WPA** is set as the Authentication Type, you can select either **Automatic**, or **TKIP** or **AES** as Encryption.

 **Note:**

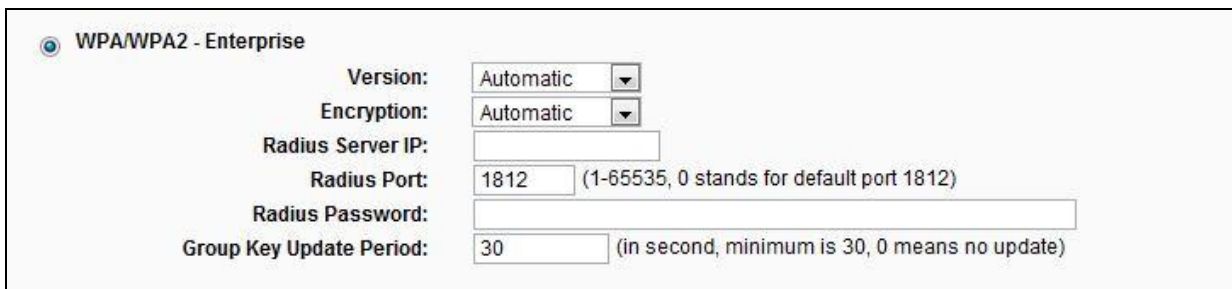
If you check the **WPA/WPA2 – Personal (Recommended)** radio button and choose TKIP encryption, you will find a notice in red as shown in Figure 4-10.

Figure 4-10

- **PSK Password** - You can enter ASCII characters between 8 and 63 characters or 8 to 64 Hexadecimal characters.
 - **Group Key Update Period** - Specify the group key update interval in seconds. The value should be 30 or above. Enter 0 to disable the update.
- **WPA /WPA2 - Enterprise** - It's based on Radius Server.
- **Version** - you can choose the version of the WPA security on the pull-down list. The default setting is **Automatic**, which can select **WPA (Wi-Fi Protected Access)** or **WPA2 (WPA version 2)** automatically based on the wireless station's capability and request.
 - **Encryption** - You can select either **Automatic**, or **TKIP** or **AES**.

 **Note:**

If you check the **WPA/WPA2 - Enterprise** radio button and choose TKIP encryption, you will find a notice in red as shown in Figure 4-10.



WPA/WPA2 - Enterprise

Version:

Encryption:

Radius Server IP:

Radius Port: (1-65535, 0 stands for default port 1812)

Radius Password:

Group Key Update Period: (in second, minimum is 30, 0 means no update)

Figure 4-11

- **Radius Server IP** - Enter the IP address of the Radius Server.
 - **Radius Port** - Enter the port that radius service used.
 - **Radius Password** - Enter the password for the Radius Server.
 - **Group Key Update Period** - Specify the group key update interval in seconds. The value should be 30 or above. Enter 0 to disable the update.
- **WEP** - It is based on the IEEE 802.11 standard. If you select this check box, you will find a notice in red as show in Figure 4-12.

Figure 4-12

- **Type** - you can choose the type for the WEP security on the pull-down list. The default setting is **Automatic**, which can select **Open System** or **Shared Key** authentication type automatically based on the wireless station's capability and request.
- **WEP Key Format** - **Hexadecimal** and **ASCII** formats are provided. **Hexadecimal** format stands for any combination of hexadecimal digits (0-9, a-f, A-F) in the specified length. **ASCII** format stands for any combination of keyboard characters in the specified length.
- **WEP Key**- Select which of the four keys will be used and enter the matching WEP key that you create. Make sure these values are identical on all wireless stations in your network.
- **Key Type** - You can select the WEP key length (64-bit, or 128-bit, or 152-bit.) for encryption. "Disabled" means this WEP key entry is invalid.

64-bit - You can enter 10 hexadecimal digits (any combination of 0-9, a-f, A-F, zero key is not promoted) or 5 ASCII characters.

128-bit - You can enter 26 hexadecimal digits (any combination of 0-9, a-f, A-F, zero key is not promoted) or 13 ASCII characters.

152-bit - You can enter 32 hexadecimal digits (any combination of 0-9, a-f, A-F, zero key is not promoted) or 16 ASCII characters.

Note:

If you do not set the key, the wireless security function is still disabled even if you have selected Shared Key as Authentication Type.

Be sure to click the **Save** button to save your settings on this page.

4.6.3 Wireless MAC Filtering

Choose menu "**Wireless** → **Wireless MAC Filtering**", you can control the wireless access by configuring the Wireless MAC Address Filtering function, shown in Figure 4-13.

Figure 4-13 Wireless MAC address Filtering

To filter wireless users by MAC Address, click **Enable**. The default setting is **Disabled**.

- **MAC Address** - The wireless station's MAC address that you want to filter.
- **Status** - The status of this entry either **Enabled** or **Disabled**.
- **Description** - A simple description of the wireless station.

To Add a Wireless MAC Address filtering entry, click the **Add New...** button. The "**Add or Modify Wireless MAC Address Filtering entry**" page will appear, shown in Figure 4-14:

Figure 4-14 Add or Modify Wireless MAC Address Filtering entry

To add a MAC Address Filtering entry, follow these instructions:

1. Enter the appropriate MAC Address into the **MAC Address** field. The format of the MAC Address is XX-XX-XX-XX-XX-XX (X is any hexadecimal digit). For example: 00-0A-EB-00-07-8A.
2. Enter a simple description of the wireless station in the **Description** field. For example: Wireless station A.
3. **Status** - Select **Enabled** or **Disabled** for this entry on the **Status** pull-down list.
4. Click the **Save** button to save this entry.

To modify or delete an existing entry:

1. Click the **Modify** in the entry you want to modify. If you want to delete the entry, click the **Delete**.
2. Modify the information.
3. Click the **Save** button.

Click the **Enable All** button to make all entries enabled

Click the **Disable All** button to make all entries disabled.

Click the **Delete All** button to delete all entries

Click the **Next** button to go to the next page

Click the **Previous** button to return to the previous page.

For example: If you desire that the wireless station A with MAC address 00-0A-EB-00-07-8A and the wireless station B with MAC address 00-0A-EB-00-23-11 are able to access the router, but all the other wireless stations cannot access the router, you can configure the **Wireless MAC Filtering** list by following these steps:

1. Click the **Enable** button to enable this function.
2. Select the radio button: **Allow the stations specified by any enabled entries in the list to access** for **Filtering Rules**.
3. Delete all or disable all entries if there are any entries already.
4. Click the **Add New...** button and enter the MAC address 00-0A-EB-00-07-8A /00-0A-EB-00-23-11 in the **MAC Address** field, then enter wireless station A/B in the **Description** field, while select **Enabled** in the **Status** pull-down list. Finally, click the **Save** and the **Back** button.

The filtering rules that configured should be similar to the following list:

Filtering Rules				
<input type="radio"/> Deny the stations specified by any enabled entries in the list to access.				
<input checked="" type="radio"/> Allow the stations specified by any enabled entries in the list to access.				
ID	MAC Address	Status	Description	Modify
1	00-0A-EB-00-07-8A	Enabled	wireless station A	Modify Delete
2	00-0A-EB-00-23-11	Enabled	wireless station B	Modify Delete

4.6.4 Wireless Advanced

Choose menu “**Wireless**→**Wireless Advanced**”, you can configure the advanced settings of your wireless network.

Wireless Advanced		
Beacon Interval :	<input type="text" value="100"/>	(40-1000)
RTS Threshold:	<input type="text" value="2346"/>	(256-2346)
Fragmentation Threshold:	<input type="text" value="2346"/>	(256-2346)
DTIM Interval:	<input type="text" value="1"/>	(1-255)
	<input checked="" type="checkbox"/>	Enable WMM
	<input checked="" type="checkbox"/>	Enable Short GI
	<input type="checkbox"/>	Enable AP Isolation
<input type="button" value="Save"/>		

Figure 4-15 Wireless Advanced

- **Beacon Interval** - Enter a value between 40-1000 milliseconds for Beacon Interval here. The beacons are the packets sent by the router to synchronize a wireless network. Beacon Interval value determines the time interval of the beacons. The default value is 100.
- **RTS Threshold** - Here you can specify the RTS (Request to Send) Threshold. If the packet is larger than the specified RTS Threshold size, the router will send RTS frames to a particular receiving station and negotiate the sending of a data frame. The default value is 2346.
- **Fragmentation Threshold** - This value is the maximum size determining whether packets will be fragmented. Setting the Fragmentation Threshold too low may result in poor network performance since excessive packets. 2346 is the default setting and is recommended.
- **DTIM Interval** - This value determines the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the router has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. You can specify the value between 1-255 Beacon Intervals. The default value is 1, which indicates the DTIM Interval is the same as Beacon Interval.
- **Enable WMM** - WMM function can guarantee the packets with high- priority messages being transmitted preferentially. It is strongly recommended enabled.

- **Enable Short GI** - This function is recommended for it will increase the data capacity by reducing the guard interval time.
- **Enabled AP Isolation** - This function can isolate wireless stations on your network from each other. Wireless devices will be able to communicate with the router but not with each other. To use this function, check this box. AP Isolation is disabled by default.

 **Note:**

If you are not familiar with the setting items on this page, it's strongly recommended to keep the provided default values; otherwise it may result in lower wireless network performance.

4.6.5 Wireless Statistics

Choose menu "**Wireless**→**Wireless Statistics**", you can see the MAC Address, Current Status, Received Packets and Sent Packets for each connected wireless station.

Wireless Statistics				
Current Connected Wireless Stations numbers: 1 <input type="button" value="Refresh"/>				
ID	MAC Address	Current Status	Received Packets	Sent Packets
1	00-1F-3B-D4-3B-E3	STA-ASSOC	191	126
<input type="button" value="Previous"/> <input type="button" value="Next"/>				

Figure 4-16 The router attached wireless stations

- **MAC Address** - The connected wireless station's MAC address.
- **Current Status** - The connected wireless station's running status, one of **STA-AUTH / STA-ASSOC / STA-JOINED / WPA / WPA-PSK / WPA2 / WPA2-PSK / AP-UP / AP-DOWN / Disconnected**.
- **Received Packets** - Packets received by the station.
- **Sent Packets** - Packets sent by the station.

You cannot change any of the values on this page. To update this page and to show the current connected wireless stations, click on the **Refresh** button.

If the numbers of connected wireless stations go beyond one page, click the **Next** button to go to the next page and click the **Previous** button to return the previous page.

 **Note:**

This page will be refreshed automatically every 5 seconds.

4.7 DHCP

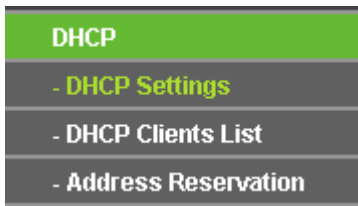


Figure 4-17 The DHCP menu

There are three submenus under the DHCP menu (shown in Figure 4-16): **DHCP Settings**, **DHCP Clients List** and **Address Reservation**. Click any of them, and you will be able to configure the corresponding function.

4.7.1 DHCP Settings

Choose menu “**DHCP→DHCP Settings**”, you can configure the DHCP Server on the page (shown in Figure 4-18).The router is set up by default as a DHCP (Dynamic Host Configuration Protocol) server, which provides the TCP/IP configuration for all the PC(s) that are connected to the router on the LAN.

 A screenshot of a web configuration page titled 'DHCP Settings'. The page has a green header bar. Below the header, there are several configuration fields:

- DHCP Server:** Radio buttons for 'Disable' (selected) and 'Enable'.
- Start IP Address:** Text input field containing '223.22.33.100'.
- End IP Address:** Text input field containing '223.22.33.199'.
- Address Lease Time:** Text input field containing '10' followed by 'seconds'.
- Default Gateway:** Text input field containing '223.22.33.223' with '(Optional)' to its right.
- Default Domain:** Text input field with '(Optional)' to its right.
- Primary DNS:** Text input field containing '0.0.0.0' with '(Optional)' to its right.
- Secondary DNS:** Text input field containing '0.0.0.0' with '(Optional)' to its right.

 At the bottom of the form is a 'Save' button.

Figure 4-18 DHCP Settings

- **DHCP Server - Enable or Disable** the DHCP server. If you disable the Server, you must have another DHCP server within your network or else you must configure the computer manually.
- **Start IP Address** - Specify an IP address for the DHCP Server to start with when assigning IP addresses. 223.22.33.100 is the default start address.
- **End IP Address** - Specify an IP address for the DHCP Server to end with when assigning IP addresses. 223.22.33.199 is the default end address.
- **Address Lease Time** - The **Address Lease Time** is the amount of time a network user will be allowed connection to the router with their current dynamic IP Address. Enter the amount of time in minutes and the user will be "leased" this dynamic IP Address. After the time is up,

the user will be automatically assigned a new dynamic IP address. The range of the time is 1 ~ 2880 minutes. The default value is 120 minutes.

- **Default Gateway** - (Optional) Suggest to input the IP address of the LAN port of the router, default value is 223.22.33.223.
- **Default Domain** - (Optional) Input the domain name of your network.
- **Primary DNS** - (Optional) Input the DNS IP address provided by your ISP. Or consult your ISP.
- **Secondary DNS** - (Optional) Input the IP address of another DNS server if your ISP provides two DNS servers.

 **Note:**

To use the DHCP server function of the router, you must configure all computers on the LAN as "Obtain an IP address automatically" mode.

4.7.2 DHCP Clients List

Choose menu "DHCP→DHCP Clients List", you can view the information about the clients attached to the router in the next screen (shown in Figure 4-19).

DHCP Clients List				
ID	Client Name	MAC Address	Assigned IP	Lease Time
1	tplink-d19c5dd6	40-61-86-C4-98-43	192.168.0.100	01:59:46

Figure 4-19 DHCP Clients List

- **ID** - The index of the DHCP Client.
- **Client Name** - The name of the DHCP client.
- **MAC Address** - The MAC address of the DHCP client.
- **Assigned IP** - The IP address that the router has allocated to the DHCP client.
- **Lease Time** - The time of the DHCP client leased. After the dynamic IP address has expired, a new dynamic IP address will be automatically assigned to the user.

You cannot change any of the values on this page. To update this page and to show the current attached devices, click the **Refresh** button.

4.7.3 Address Reservation

Choose menu "DHCP→Address Reservation", you can view and add a reserved addresses for clients via the next screen (shown in Figure 4-20).When you specify a reserved IP address for a

PC on the LAN, that PC will always receive the same IP address each time when it accesses the DHCP server. Reserved IP addresses should be assigned to the servers that require permanent IP settings.

Figure 4-20 Address Reservation

- **MAC Address** - The MAC address of the PC for which you want to reserve IP address.
- **Reserved IP Address** - The IP address of the router reserved.
- **Status** - The status of this entry either **Enabled** or **Disabled**.

To Reserve IP addresses:

1. Click the **Add New ...** button. (Pop-up Figure 4-20)
2. Enter the MAC address (in XX-XX-XX-XX-XX-XX format.) and IP address in dotted-decimal notation of the computer you wish to add.
3. Click the **Save** button when finished.

Figure 4-21 Add or Modify an Address Reservation Entry

To modify or delete an existing entry:

1. Click the **Modify** in the entry you want to modify. If you want to delete the entry, click the **Delete**.
2. Modify the information.
3. Click the **Save** button.

Click the **Enable/ Disabled All** button to make all entries enabled/disabled

Click the **Delete All** button to delete all entries

Click the **Next** button to go to the next page and click the **Previous** button to return the previous page.

4.8 System Tools

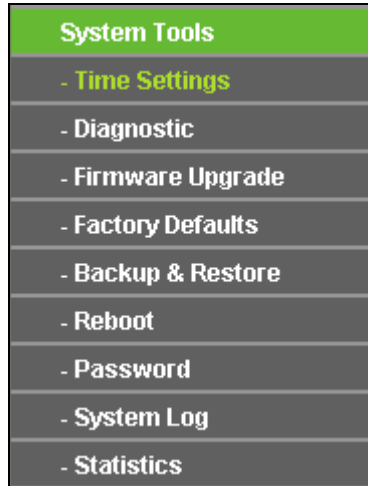


Figure 4-22 The System Tools menu

Choose menu "**System Tools**", and you can see the submenus under the main menu: **Time Settings**, **Diagnostic**, **Firmware Upgrade**, **Factory Defaults**, **Backup & Restore**, **Reboot**, **Password**, **System Log** and **Statistics**. Click any of them, and you will be able to configure the corresponding function. The detailed explanations for each submenu are provided below.

4.8.1 Time Settings

Choose menu "**System Tools**→**Time Settings**", and then you can configure the time on the following screen.

Time Settings

Time zone: (GMT+08:00) Beijing, Hong Kong, Perth, Singapore

Date: 5 26 2011 (MM/DD/YY)

Time: 11 11 32 (HH/MM/SS)

NTP Server I: 0.0.0.0 (Optional)

NTP Server II: 0.0.0.0 (Optional)

Enable Daylight Saving

Start: Mar 3rd Sun 2am

End: Nov 2nd Sun 3am

Daylight Saving Status: daylight saving is down.

Note: Click the "GET GMT" to update the time from the internet with the pre-defined servers or entering the customized server(IP Address or Domain Name) in the above frames.

Figure 4-23 Time Settings

- **Time Zone** - Select your local time zone from this pull down list.
- **Date** - Enter your local date in MM/DD/YY into the right blanks.
- **Time** - Enter your local time in HH/MM/SS into the right blanks.
- **NTP Server I / NTP Server II** - Enter the address or domain of the **NTP Server I** or **NTP Server II**, and then the router will get the time from the NTP Server preferentially. In addition, the router built-in some common NTP Servers, so it can get time automatically once it connects the Internet.
- **Enable Daylight Saving** - Check the box to enable the Daylight Saving function.
- **Start** - The time to start the Daylight Saving. Select the month in the first field, the week in the second field, the day in the third field and the time in the last field.
- **End** - The time to end the Daylight Saving. Select the month in the first field, the week in the second field, the day in the third field and the time in the last field.
- **Daylight Saving Status** - Displays the status whether the Daylight Saving is in use.

To set time manually:

1. Select your local time zone.
2. Enter the **Date** in Month/Day/Year format.
3. Enter the **Time** in Hour/Minute/Second format.

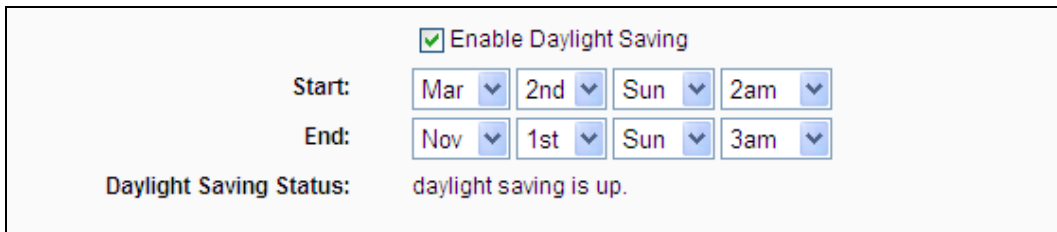
4. Click **Save**.

To set time automatically:

1. Select your local time zone.
2. Enter the address or domain of the **NTP Server I** or **NTP Server II**.
3. Click the **Get GMT** button to get system time from Internet if you have connected to the Internet.

To set Daylight Saving:

1. Check the box to enable Daylight Saving.
2. Select the start time from the drop-down lists in the **Start** field.
3. Select the end time from the drop-down lists in the **End** field.
4. Click the **Save** button to save the settings.



Enable Daylight Saving

Start: Mar 2nd Sun 2am

End: Nov 1st Sun 3am

Daylight Saving Status: daylight saving is up.

Figure 4-24 Daylight Saving

Note:

- 1) The time will be lost if the router is turned off.
- 2) The router will automatically obtain GMT from the Internet if it is configured accordingly.
- 3) The Daylight Saving will take effect one minute after the configurations are completed.

4.8.2 Diagnostic

Choose menu “**System Tools** → **Diagnostic**”, you can transact Ping or Traceroute function to check connectivity of your network in the following screen.

Diagnostic Tools

Diagnostic Parameters

Diagnostic Tool: Ping Traceroute

IP Address/ Domain Name:

Ping Count: (1-50)

Ping Packet Size: (4-1472 Bytes)

Ping Timeout: (100-2000 Milliseconds)

Traceroute Max TTL: (1-30)

Diagnostic Results

The Router is ready.

Figure 4-25 Diagnostic Tools

- **Diagnostic Tool** - Check the radio button to select one diagnostic tool.
 - **Ping** - This diagnostic tool troubleshoots connectivity, reachability, and name resolution to a given host or gateway.
 - **Traceroute** - This diagnostic tool tests the performance of a connection.

Note:

You can use ping/traceroute to test both numeric IP address or domain name. If pinging/tracerouting the IP address is successful, but pinging/tracerouting the domain name is not, you might have a name resolution problem. In this case, ensure that the domain name you are specifying can be resolved by using Domain Name System (DNS) queries.

IP Address/Domain Name - Type the destination IP address (such as 202.108.22.5) or Domain name (such as http://www.tp-link.com)

- **Pings Count** - The number of Ping packets for a Ping connection.
- **Ping Packet Size** - The size of Ping packet.
- **Ping Timeout** - Set the waiting time for the reply of each Ping packet. If there is no reply in the specified time, the connection is overtime.
- **Traceroute Max TTL** - The max number of hops for a Traceroute connection.

Click **Start** to check the connectivity of the Internet.

The **Diagnostic Results** page displays the result of diagnosis.

If the result is similar to the following screen, the connectivity of the Internet is fine.

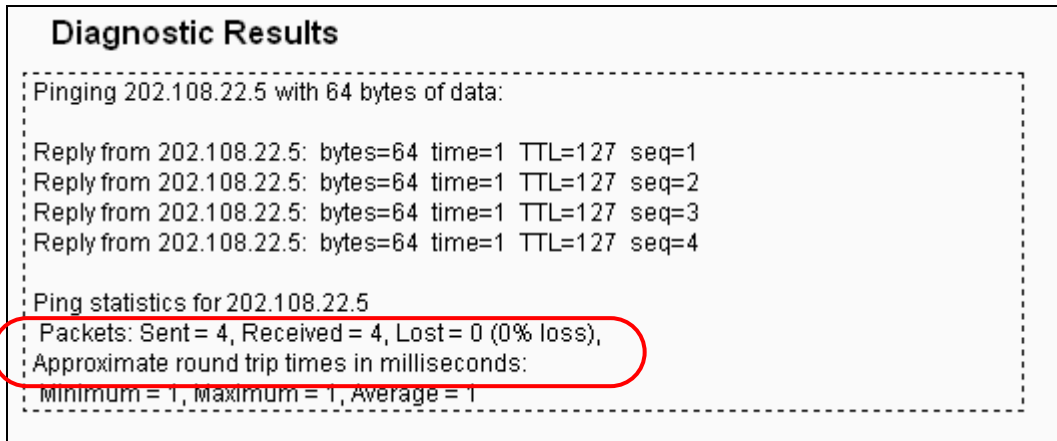


Figure 4-26 Diagnostic Results

Note:

Only one user can use this tool at one time. Options “Number of Pings”, “Ping Size” and “Ping Timeout” are used for **Ping** function. Option “Tracert Hops” are used for **Tracert** function.

4.8.3 Firmware Upgrade

Choose menu “**System Tools** → **Firmware Upgrade**”, you can update the latest version of firmware for the router on the following screen.



Figure 4-27 Firmware Upgrade

- **Firmware Version** - This displays the current firmware version.
- **Hardware Version** - This displays the current hardware version. The hardware version of the upgrade file must accord with the router’s current hardware version.

To upgrade the router's firmware, follow these instructions below:

1. Download a more recent firmware upgrade file from the TP-LINK website (<http://www.tp-link.com>).
2. Type the path and file name of the update file into the **File** field. Or click the **Browse** button to locate the update file.

3. Click the **Upgrade** button.

Note:

- 1) Each rule can only be used by one host on the LAN at a time. The trigger connection of other hosts on the LAN will be refused. New firmware versions are posted at <http://www.tp-link.com> and can be downloaded for free. There is no need to upgrade the firmware unless the new firmware has a new feature you want to use. However, when experiencing problems caused by the router rather than the configuration, you can try to upgrade the firmware.
- 2) When you upgrade the router's firmware, you may lose its current configurations, so before upgrading the firmware please write down some of your customized settings to avoid losing important settings.
- 3) Do not turn off the router or press the Reset button while the firmware is being upgraded, otherwise, the router may be damaged.
- 4) The router will reboot after the upgrading has been finished.

4.8.4 Factory Defaults

Choose menu "**System Tools** → **Factory Defaults**", and you can restore the configurations of the router to factory defaults on the following screen.

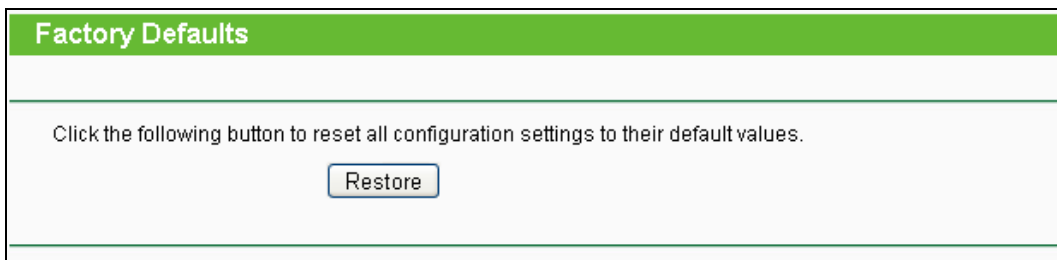


Figure 4-28 Restore Factory Default

Click the **Restore** button to reset all configuration settings to their default values.

- The default **User Name**: admin
- The default **Password**: admin
- The default **IP Address**: 223.22.33.223
- The default **Subnet Mask**: 255.255.255.0

Note:

Any settings you have saved will be lost when the default settings are restored.

4.8.5 Backup & Restore

Choose menu "**System Tools** → **Backup & Restore**", you can save the current configuration of the router as a backup file and restore the configuration via a backup file as shown in Figure 5-86.

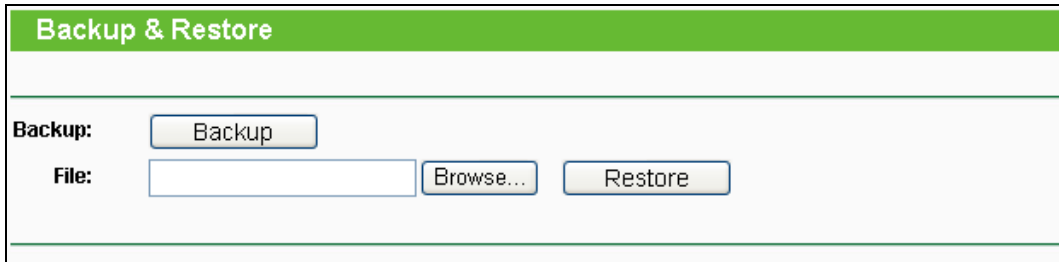


Figure 4-29 Backup & Restore Configuration

- Click the **Backup** button to save all configuration settings as a backup file in your local computer.
- To upgrade the router's configuration, follow these instructions.
 - Click the **Browse...** button to locate the update file for the router, or enter the exact path to the Setting file in the text box.
 - Click the **Restore** button.

 **Note:**

The current configuration will be covered by the uploading configuration file. The upgrade process lasts for 20 seconds and the router will restart automatically. Keep the router on during the upgrading process to prevent any damage.

4.8.6 Reboot

Choose menu “**System Tools** → **Reboot**”, you can click the **Reboot** button to reboot the router.

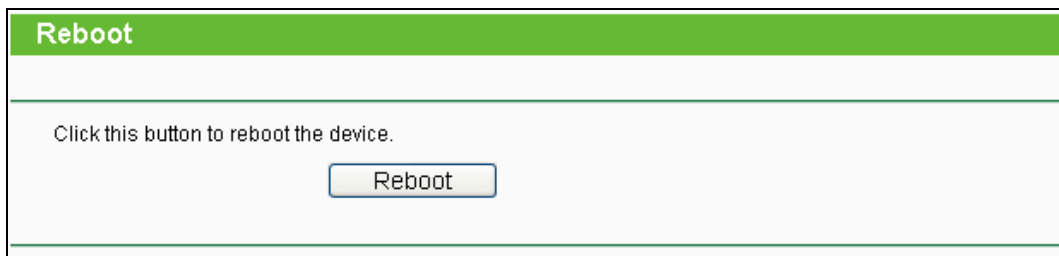


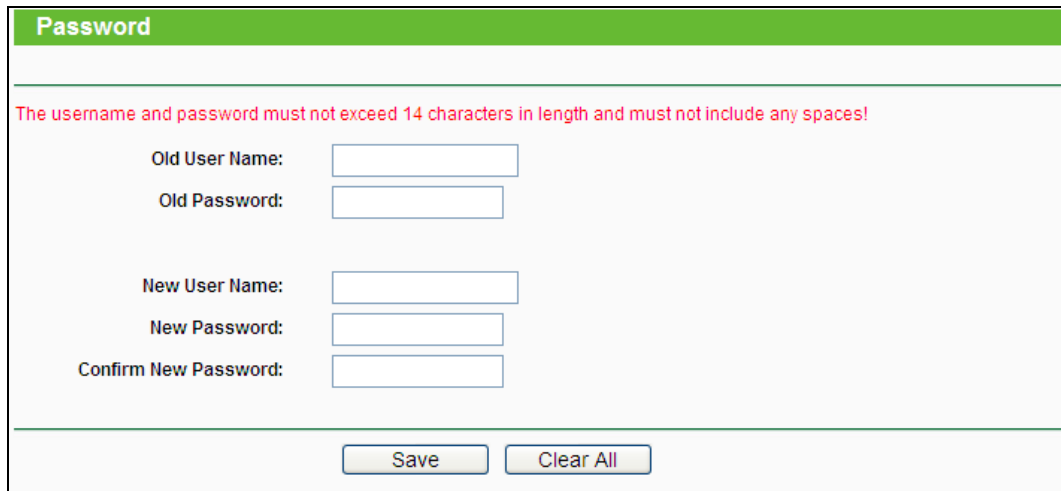
Figure 4-30 Reboot the router

Some settings of the router will take effect only after rebooting, which include

- Change the LAN IP Address (system will reboot automatically).
- Change the DHCP Settings.
- Change the Wireless configurations.
- Change the Web Management Port.
- Upgrade the firmware of the router (system will reboot automatically).
- Restore the router's settings to factory defaults (system will reboot automatically).
- Update the configuration with the file (system will reboot automatically).

4.8.7 Password

Choose menu “**System Tools** → **Password**”, you can change the factory default user name and password of the router in the next screen as shown in Figure 4-31.



Password

The username and password must not exceed 14 characters in length and must not include any spaces!

Old User Name:

Old Password:

New User Name:

New Password:

Confirm New Password:

Figure 4-31 Password

It is strongly recommended that you should change the factory default user name and password of the router, because all users who try to access the router's Web-based utility or Quick Setup will be prompted for the router's default user name and password.

 **Note:**

The new user name and password must not exceed 14 characters in length and not include any spaces. Enter the new Password twice to confirm.

Click the **Save** button when finished.

Click the **Clear All** button to clear all.

4.8.8 System Log

Choose menu “**System Tools** → **System Log**”, you can view the logs of the router.

System Log

Log Type: Log Level:

Index	Time	Type	Level	Log Content
2	1st day 00:00:17	DHCP	NOTICE	DHCP server started
1	1st day 00:00:07	OTHER	INFO	System started

Time = 1970-01-01 0:00:31 32s
H-Ver = SE3040 v2 00000000 : S-Ver = 1.1.0 Build 140923 Rel.35104n
L = 223.22.33.223 : M = 255.255.255.0
W1 = DHCP : W = 0.0.0.0 : M = 0.0.0.0 : G = 0.0.0.0

Current No. Page

Figure 4-32 System Log

- **Log Type** - By selecting the log type, only logs of this type will be shown.
- **Log Level** - By selecting the log level, only logs of this level will be shown.
- **Refresh** - Refresh the page to show the latest log list.
- **Save Log** - Click to save all the logs in a txt file.
- **Clear Log** - All the logs will be deleted from the router permanently, not just from the page.

Click the **Next** button to go to the next page, or click the **Previous** button return to the previous page.

4.8.9 Statistics

Choose menu “**System Tools** → **Statistics**”, you can view the statistics of the router, including total traffic and current traffic of the last Packets Statistic Interval.

Statistics

Current Statistics Status: **Disabled**

Packets Statistics Interval(5-60): Seconds
 Auto-refresh

Sorted Rules:

IP Address/ MAC Address	Total		Current				Modify
	Packets	Bytes	Packets	Bytes	ICMP Tx	UDP Tx	
The current list is empty.							

entries per page. Current No. page

Figure 4-33 Statistics

- **Current Statistics Status** - Enable or Disable. The default value is disabled. To enable, click the **Enable** button. If disabled, the function of DoS protection in Security settings will disabled.
- **Packets Statistics Interval (5-60)** - The default value is 10. Select a value between 5 and

60 seconds in the pull-down list. The Packets Statistic interval indicates the time section of the packets statistic.

- **Sorted Rules** - Choose how displayed statistics are sorted.

Select the **Auto-refresh** checkbox to refresh automatically.

Click the **Refresh** button to refresh immediately.

Click **Reset All** to reset the values of all the entries to zero.

Click **Delete All** to delete all entries in the table.

Statistics Table:

IP/MAC Address		The IP and MAC address are displayed with related statistics.
Total	Packets	The total number of packets received and transmitted by the router.
	Bytes	The total number of bytes received and transmitted by the router.
Current	Packets	The total number of packets received and transmitted in the last Packets Statistic interval seconds.
	Bytes	The total number of bytes received and transmitted in the last Packets Statistic interval seconds.
	ICMP Tx	The number of the ICMP packets transmitted to WAN per second at the specified Packets Statistics interval. It is shown like "current transmitting rate / Max transmitting rate".
	UDP Tx	The number of UDP packets transmitted to the WAN per second at the specified Packets Statistics interval. It is shown like "current transmitting rate / Max transmitting rate".
	TCP SYN Tx	The number of TCP SYN packets transmitted to the WAN per second at the specified Packets Statistics interval. It is shown like "current transmitting rate / Max transmitting rate".
Modify	Reset	Reset the value of the entry to zero.
	Delete	Delete the existing entry in the table.

There would be 5 entries on each page. Click **Previous** to return to the previous page and **Next** to the next page.

Appendix A: FAQ

1. How to quick start to beginner for first connection?

Step-by-step quick start to beginner for first connection.

Step 1: establish wireless network connection.

1. Keep LAN port open and power on WIFER.
2. Activate your WIFI interface inside your laptop, tablet...
3. Check if your (laptop, tablet) device is auto IP setting.
4. Search SSID SE_TCSEGW_XXXXXX and enter the Wireless.
Password : Refer to 1 Physical Description.
5. Launch the connection with SSID SE_TCSEGW_XXXXXX and wait until WIFI connection achieved.

Step 2: access web page.

1. Depending on the Browser type the WEB site of WIFER can be automatically opened without more action.
2. If the WEB site of WIFER is not opening you can force the browser to open it by entering a simple URL like "www.a.com".
3. if the WEB site of WIFER is not again opening you Disable proxy in your web browser.
- 4: For the first time you open the WEB site of WIFER enter:
User Name: admin & Password: admin.

2. Router Configuration

1 First login to the Web site : for your comfort and access security it is recommended to :

1. set a new User Name and Password personal values:
click to System Tools/Password.
2. set a new wireless parameters by renaming the default SSID (wireless Network name) and Security Type/Password:
click to Wireless/Wireless security.
3. save your configuration in a configuration Backup file:
click to System Tools/Backup & Restore.

2 Embedded DHCP server

1. WIFER is set up by default as a DHCP (Dynamic Host Configuration Protocol) server which provides the TCP/IP configuration for all devices connected on LAN & WLAN.
2. It's MUST to set your wireless device (laptop, tablet, smart-phone) as auto-setting for TCP/IP configuration. DHCP server is always active on WLAN.
3. DHCP TCP/IP configuration server configure the TCP/IP network parameters only for devices sending a DHCP request.
4. When WIFER is connected to LAN, the DHCP server detects devices connected on LAN and configures the TCP/IP network parameters in a way to avoid IP duplication.
5. DHCP TCP/IP configuration server detects devices (IP addresses) appearing on LAN and reconfigure IP of connected devices on WLAN to avoid duplicated IP.

3. What should I do when I am not able to connect my labtop, tablet, smart-phone to TCSEGWB13FA0 using WIFI?

1. At first Refer to 1 Physical Description.
2. Check the position of the Power Switch.
3. Check LED Power & read status description.
4. Check LED WLAN & read status description.
5. It's MUST to set your wireless device (laptop, tablet, smart-phone) as auto-setting for TCP/IP configuration.
6. If no more connection to access to WIFER, use a pin to press and hold the Reset Button (hole: Refer to 1 Physical Description) for 10 seconds to reset WIFER configuration to factory settings:
 - The default User Name: admin.
 - The default Password: admin.
 - The default IP Address: 223.22.33.223.
 - The default Subnet Mask: 255.255.255.0.

4. What should I do when I am not able to see presence of devices connected to LAN in the WEBpage Device List?

1. When WIFER is plugged, check LED Ethernet & read status description.
2. If Power switch Button is ON & LED power is Solid Green & LED Scan is not flashing please change the ETHERNET cable & try again to connect WIFER to LAN.
3. WIFER is not able to detect all devices connected to ETHERNET. Ethernet Switches can introduce some limitations & IP filtering: connect LAN of WIFER close to your devices.
4. if no more device discovered disconnect the LAN WIFER ETHERNET cable, make a Power cycle OFF/ON wait 30 seconds & connect LAN of WIFER close to your devices.
5. Check the LED Scan if flashing & wait some time to see if the LED is now fixed to ON status: Refer to 1 Physical Description.
6. if no more device discovered disconnect the LAN WIFER ETHERNET cable & use a pin to press and hold the Reset Button for 10 seconds. Restart the Step-by-Step first connection sequence.

Appendix B: Specifications

General	
Standards	IEEE 802.11n、 IEEE 802.11g、 IEEE 802.11b、 IEEE 802.3、 IEEE 802.3u、 IEEE 802.3x、 IEEE 802.1X
Protocols	TCP/IP、 DHCP、 NAT
Ports	One 10/100M Auto-Negotiation WAN/LAN RJ45 port (Auto MDI/MDIX)
Cabling Type	10BASE-T: UTP category 3, 4, 5 cable (maximum 100m)
	100BASE-TX: UTP category 5, 5e cable (maximum 100m)
LEDs	PWR, Internet, WLAN, Ethernet
Safety & Emissions	FCC, CE
Wireless	
Frequency Band	2.4~2.4835GHz
Radio Data Rate	11n: up to 150Mbps (Automatic) 11g: 54/48/36/24/18/12/9/6M (Automatic) 11b: 11/5.5/2/1M (Automatic)
Frequency Expansion	DSSS (Direct Sequence Spread Spectrum)
Modulation	11n: BPSK,QPSK,16-QAM,64-QAM 11g: BPSK,QPSK,16-QAM,64-QAM 11b: CCK,DQPSK,DBPSK
Security	WEP/WPA/WPA2/WPA2-PSK/WPA-PSK
Antenna Gain	0dBi
Environmental and Physical	
Temperature.	Operating : 0°C~40°C (32°F~104°F)
	Storage: -40°C~70°C(-40°F~158°F)
Humidity	Operating: 10% ~ 90% RH, Non-condensing
	Storage: 5% ~ 90% RH, Non-condensing