N300 High Power Easy-N-Range Extender

TEW-737HRE

User's Guide

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 distance 20cm between the radiator & your body.

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

The availability of some specific channels and/or operational frequency bands are country dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

For Taiwan 警語：

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC. The following test methods have been applied in order to prove presumption of conformity with the essential requirements of the R&TTE Directive 1999/5/EC:

EN60950-1: 2006/A11:2009/A1:2010

Safety of Information Technology Equipment

EN 62311:2008

Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields (110MHz - 40 GHz) - General public

EN 300 328 V1.8.1

Electromagnetic compatibility and Radio spectrum Matters (ERM); Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive

EN 301 489-1 V1.9.2 2011-09

Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements

EN 301 489-17 V2.2.1 2012-09

Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for 2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment

This device is a 2.4 GHz wideband transmission system (transceiver), intended for use in all EU member states and EFTA countries, except in France and Italy where restrictive use applies.

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

cs Česky [Czech]	*[Jméno výrobce]* tímto prohlašuje, že tento *[typ zařízení]* je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
da Dansk [Danish]	Undertegnede *[fabrikantens navn]* erklærer herved, at følgende udstyr *[udstyrets typebetegnelse]* overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
de Deutsch [German]	Hiermit erklärt *[Name des Herstellers]*, dass sich das Gerät *[Gerätetyp]* in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
et Eesti [Estonian]	Käesolevaga kinnitab *[tootja nimi = name of manufacturer]* seadme *[seadme tüüp = type of equipment]* vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
en English	Hereby, *[name of manufacturer]*, declares that this *[type of equipment]* is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
es Español [Spanish]	Por medio de la presente *[nombre del fabricante]* declara que el *[clase de equipo]* cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
el Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ *[name of manufacturer]* ΔΗΛΩΝΕΙ ΟΤΙ *[type of equipment]* ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.
fr Français [French]	Par la présente *[nom du fabricant]* déclare que l'appareil *[type d'appareil]* est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
it Italiano [Italian]	Con la presente *[nome del costruttore]* dichiara che questo *[tipo di apparecchio]* è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Latviski [Latvian]	Ar šo *[name of manufacturer / izgatavotāja nosaukums]* deklarē, ka *[type of equipment / iekārtas tips]* atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo *[manufacturer name]* deklaruoja, kad šis *[equipment type]* atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
nl Nederlands [Dutch]	Hierbij verklaart *[naam van de fabrikant]* dat het toestel *[type van toestel]* in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
mt Malti [Maltese]	Hawnhekk, *[isem tal-manifattur]*, jiddikjara li dan *[il-mudel tal-prodott]* jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/EC.
hu Magyar [Hungarian]	Alulírott, *[gyártó neve]* nyilatkozom, hogy a *[... típus]* megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.
pl Polski [Polish]	Niniejszym *[nazwa producenta]* oświadcza, że *[nazwa wyrobu]* jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
pt Português [Portuguese]	*[Nome do fabricante]* declara que este *[tipo de equipamento]* está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
sl Slovensko [Slovenian]	*[Ime proizvajalca]* izjavlja, da je ta *[tip opreme]* v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky [Slovak]	*[Meno výrobcu]* týmto vyhlasuje, že *[typ zariadenia]* spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
fi Suomi [Finnish]	*[Valmistaja = manufacturer]* vakuuttaa täten että *[type of equipment = laitteen tyyppimerkintä]* tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
sv Svenska [Swedish]	Härmed intygar *[företag]* att denna *[utrustningstyp]* står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

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INTRODUCTION

The Wireless Range Extender enables you to extend your existing wireless network coverage by placing the Wireless Range Extender in between your router and the wireless client devices. This is great for extending wireless coverage to basements, home offices or bedrooms that might be distant from your wireless router. The Wireless Range Extender increases the range of your wireless network by extending the wireless coverage of an existing wireless network.

Features:

Faster Wireless Networking - The Wireless Range Extender provides up to 300Mbps* wireless connection with other 802.11n wireless clients. This capability allows users to participate in real-time activities online, such as video streaming, online gaming, and real-time audio.

Extend Internet access for wireless devices - Allows you to extend your internet access throughout your home with devices such as laptops, Smartphones, tablets and more.

IEEE 802.11n and 802.11g Compliant - The Wireless Range Extender is still fully compatible with the IEEE 802.11g standards, so it can connect with existing 802.11g USB and Cardbus adapters.

UNPACKING AND SETUP

This chapter provides unpacking and setup information for the N300 High Power Easy-N-Range Extender.

Unpacking

Open the box of the Wireless Range Extender and carefully unpack it. The box should contain the following items:

- One N300 High Power Easy-N-Range Extender
- One CD contain User's Guide

If any item is found missing or damaged, please contact your local reseller for replacement.

Setup

The setup of the Wireless Range Extender can be performed properly using the following methods:

The easiest and most secure way to connect your Wireless Range Extender to your the router or access point is WPS (Wi-Fi Protected Setup).

Please refer to your user manual for information on your router or access point make sure you understand how to enable WPS.

Once you know, follow the steps below:

Step 1 - Plug the Wireless Range Extender into a wall outlet and verify if the power LED has turned from red to a blinking amber.

Step 2 - Press the WPS button on your AP/Router.

Note: Usually the WPS LED will blink once it is pressed. Check your router's manual for more information.

Step 3 - Press and hold the WPS button until the light starts blinking green and then release. Please allow up to two minutes for the WPS process to finish. Once the connection is successful the LED will be solid green.

Step 4 - Your AP/Router and Wireless Range Extender will be connected when the LED light turns solid green.

Note: If connection fails, try moving your Wireless Range Extender *closer to your wireless router/access point and repeat steps 2 and 3.*

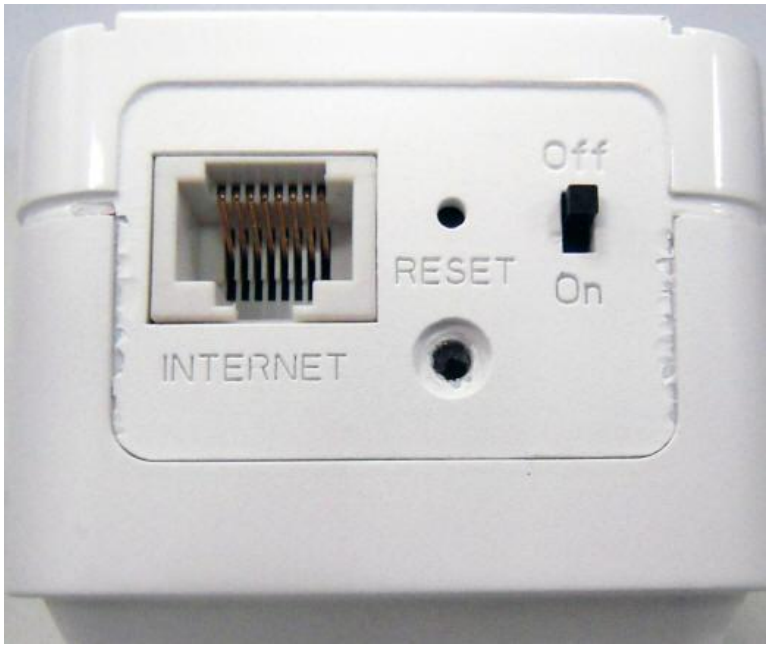
Step 5 - To connect your wireless clients to the Wireless Range Extender, use the Wi-Fi Network SSID and the Wi-Fi Password located on your configuration note. You may also use WPS to connect your clients to the Wireless Range Extender.

HARDWARE INSTALLATION

LED

LED Indicator	Color	Status	Description
Power/Status	Green	Solid Green	The device is connected to a wireless router or AP
		Blinking Green	The device is processing a connection
		Light off	The device is off
	Amber	Blinking Amber	During boot up or a factory reset
		Light off	The device is powered off

The figure below shows the rear panel of the IEEE 802.11b/g/n Wireless Range Extender.



Rear Panel

INTERNET

There is an RJ-45 10/100Mbps Auto-MDIX port for the WAN that connects to the xDSL/Cable modem for Internet connectivity.

RESET

Use a pin-shaped item to push to reset this device to factory default settings. It will be a useful tool when the manager forgot the password to login, and needs to restore the device back to default settings.

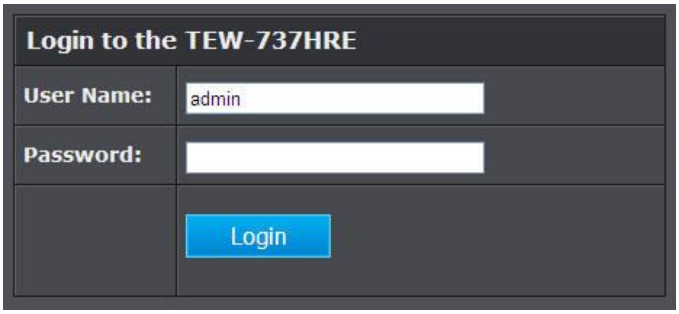
On/Off Power Switch

Push the router On/Off push button to turn your Wireless Range Extender "On" (down position) or "Off" (up position).

Web-based Configuration Setup Wizard

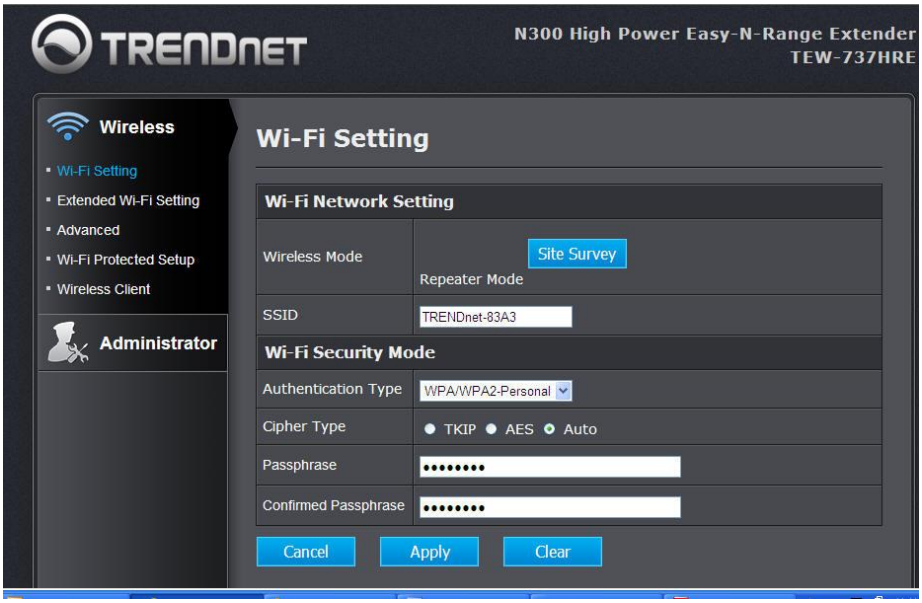
1)To access the configuration utility, open a web-browser such as Internet Explorer and enter http://tew-737hre

2. Enter the Password you created when you first logged on during the setup wizard and click **Login**.



WiFi-Setting

Use this section to manually configure the wireless settings for your Repeater.



Wireless Mode: This will automatically be **Repeater Mode**.

Site Survey: Scans and displays available Wi-Fi networks.

Wi-Fi Network Name: When you are browsing for available wireless networks, this is the name that will appear in the list (unless Visibility Status is set to Invisible, see below). This name is also referred to as the SSID. For security purposes, it is highly recommended to change from the default network name.

Channel Width: Select the Channel Width:

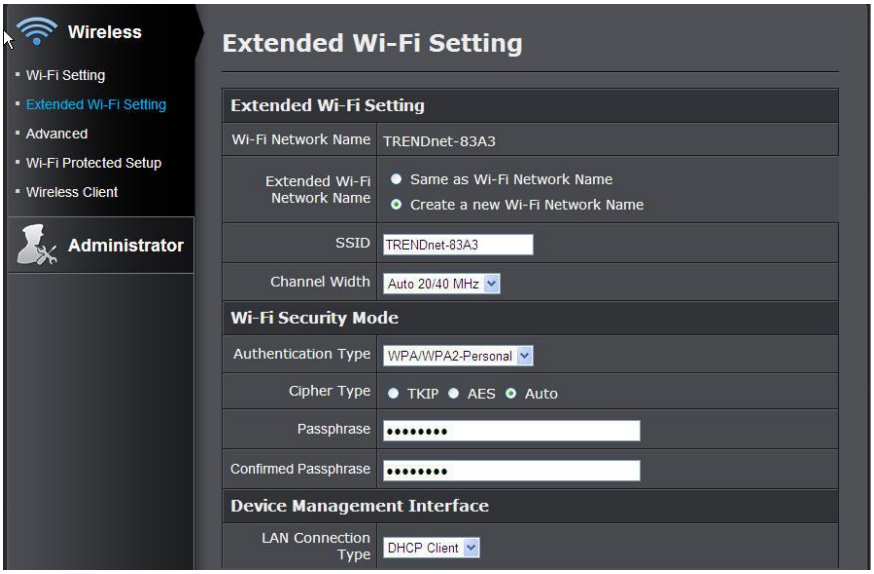
Auto 20/40 - This is the default setting. Select if you are using both 802.11n and non-802.11n wireless devices.

20MHz - Select if you are not using any 802.11n wireless clients.

WiFi Security Mode: Select WEP or WPA Personal.

Extended WiFi Setup

This page allows you to configure the wireless LAN settings for your Repeater. You have the option of creating a new Wi-Fi Network Name for your Repeater or you may use the same Wi-Fi Network Name as your wireless router or AP.



Wi-Fi Network Name: Displays the current Wi-Fi Network Name you are connected to.

Extended Wi-Fi Network Name: Select **Same as Wi-Fi Network Name** or **Create a new Wi-Fi Network Name.**

Channel Width: Select the Channel Width:

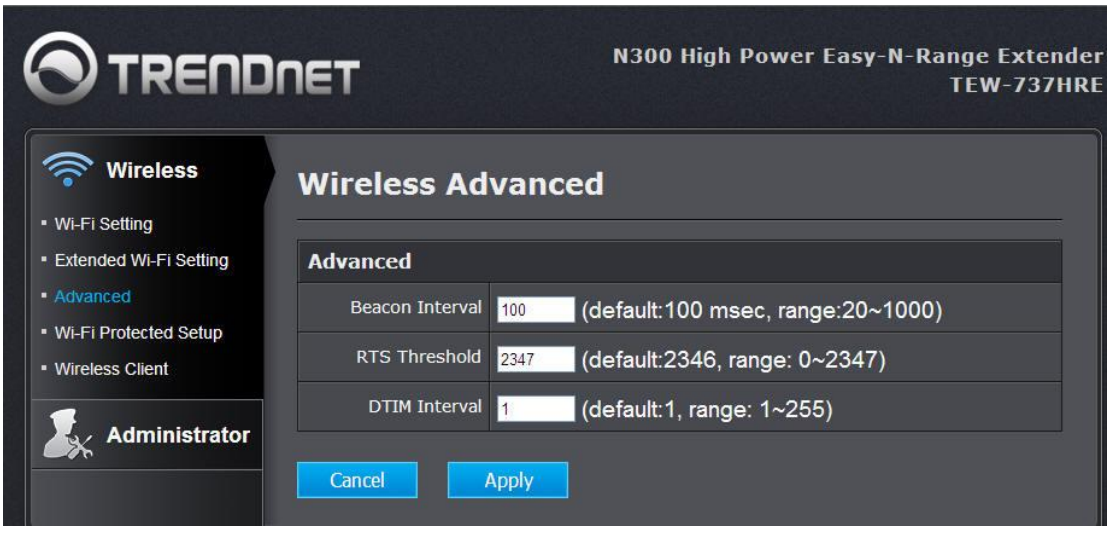
Auto 20/40 - This is the default setting. Select if you are using both 802.11n and non-802.11n wireless devices.

20MHz - Select if you are not using any 802.11n wireless clients.

Security Mode: Select WEP or WPA Personal.

Advance

These settings are advanced options that can be configured to change advanced wireless broadcast specifications. It is recommended that these settings remain set to their default values unless you are knowledgeable about the effects of changing these values. Changing these settings incorrectly can degrade performance.



Beacon Interval – A beacon is a management frame used in wireless networks that transmitted periodically to announce the presence and provide information about the router's wireless network. The interval is the amount time between each beacon transmission.

Default Value:100 milliseconds (range: 25-1000)

RTS Threshold – The Request To Send (RTS) function is part of the networking protocol. A wireless device that needs to send data will send a RTS before sending the data in question. The destination wireless device will send a response called Clear to Send (CTS). The RTS Threshold defines the smallest data packet size allowed to initiate the RTS/CTS function.

Default Value: 2346 (range: 256-2346)

DTIM Interval – A Delivery Traffic Indication Message (DTIM) is an informational message that is sent as part of a beacon by an access point (your wireless router) to a wireless client (wireless device or connecting station) in sleep mode to provide an alert that data is awaiting delivery. The DTIM Interval (also called Data Beacon Rate) is the amount of time between DTIM transmissions included in part of a beacon.

Default Value: 1 (range: 1-255)

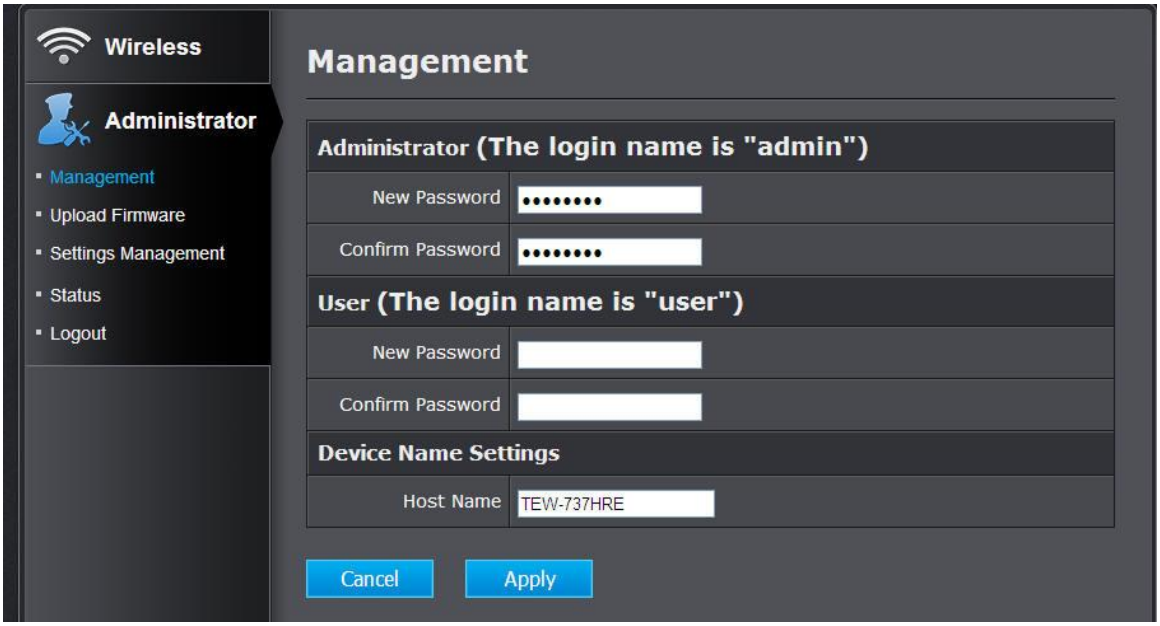
Wi-Fi Protected Setup (WPS)

If your wireless device has WPS PIN (typically an 8-digit code printed on the wireless device product label or located in the wireless device wireless software utility), you can use this method.

WPS: Enable or Disable the WPS (Wi-Fi Protected Setup) function
Status: Display the state (Un-configured State/Configured State) information of WPS.
Self-PIN Number: Display the default PIN number of WLAN Router.
Client PIN Number: Type Client PIN number the client uses to negotiate with WLAN Router via WPS protocol. It is only used when users want their station to join Router's network.
Push Button Configuration: Clicking the Start PBC button will invoke the Push Button Configuration (PBC) method of WPS. It is only used when WLAN Router acts as a Registrar.

Management

Your router management page http://192.168.10.100 is accessed through the use of your Internet web browser (e.g. Internet Explorer, Firefox, Chrome, Safari, Opera) and will be referenced frequently in this User's Guide.



1. Open your web browser (e.g. Internet Explorer, Firefox, Safari, Chrome, or Opera) and go to http://192.168.10.100. Your router will prompt you for a user name and password.

2. Next to Language, click the drop-down list to select your preferred language. Enter the default user name and password and then click Login.
Default User Name: admin

Default Password: admin

3. Log into your router management page
4. Click on Main, and click on Password.
5. Under the Administrator section, in the New Password field, enter the new password, and in the Confirm Password field, retype the new password again to confirm.
6.User (Optional): The User account is an additional account used for viewing the settings on the router management page only. Accessing the router management page using the User account will restrict access to viewing only and will not allow any settings to be changed.
Default User Name: user

Default Password: user

7. To save changes, click Apply.

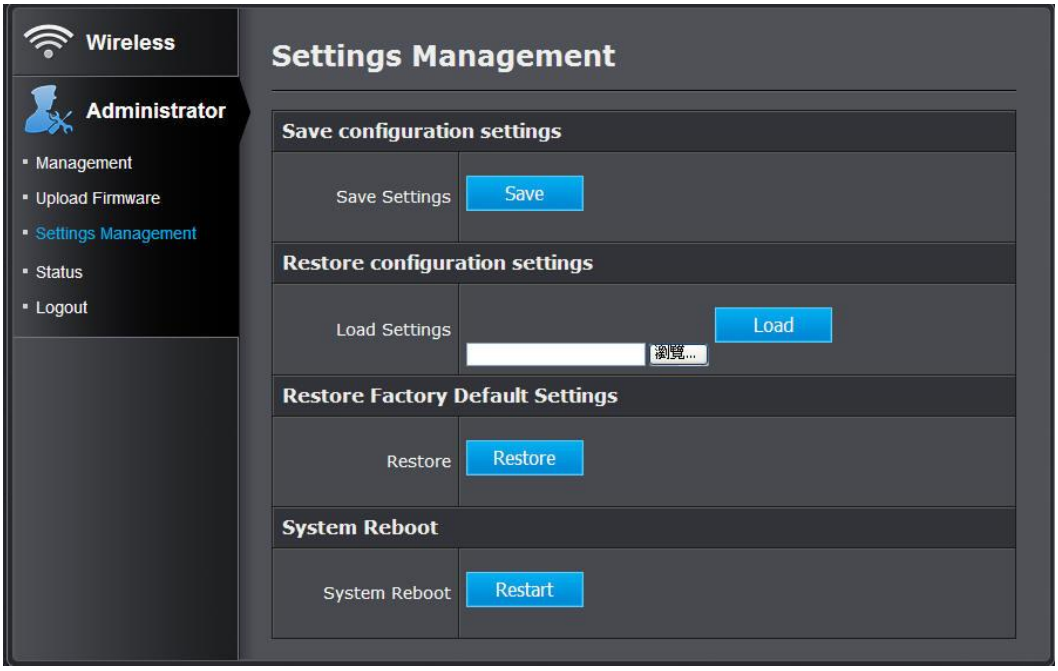
Host Name: Type the host name in the text box. The host name is required by some ISPs. The default host name is " TEW-737HRE"

Upload Firmware

This function enables users to keep the Repeater firmware up to date.

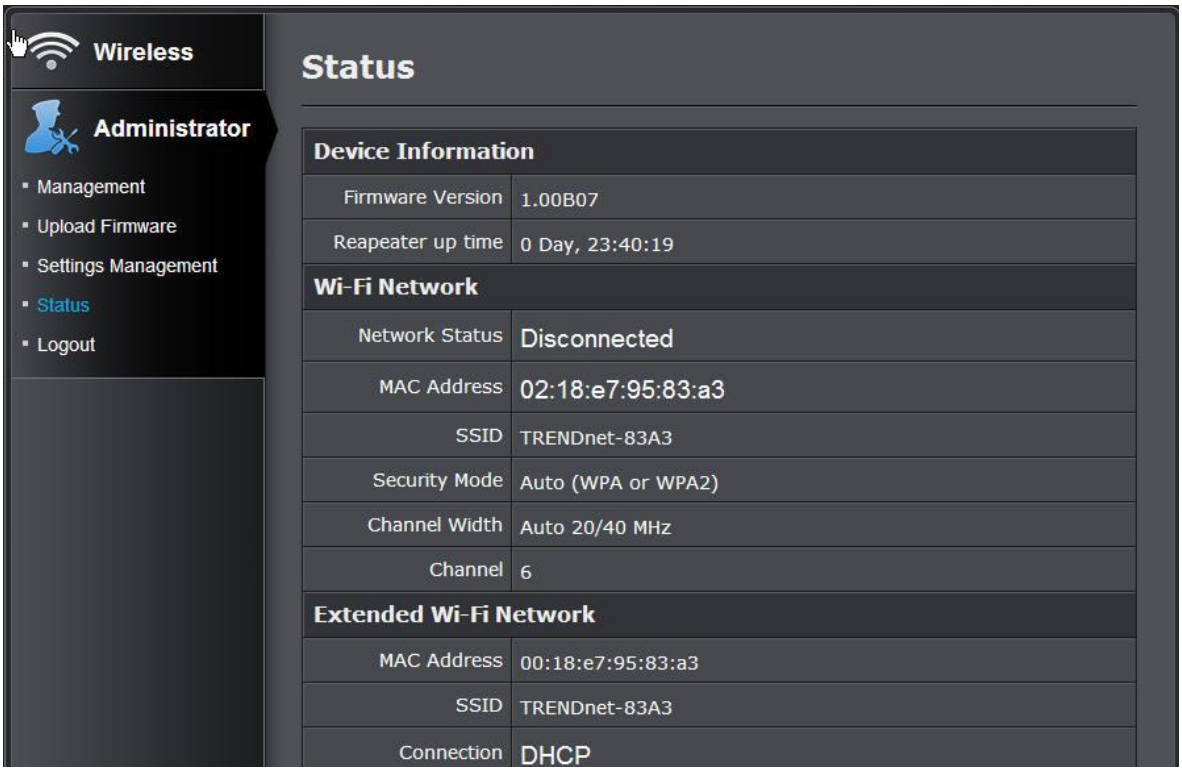
Setting Management

You may have added many customized settings to your repeater and in the case that you need to reset your router to default, all your customized settings would be lost and would require you to manually reconfigure all of your router settings instead of simply restoring from a backed up router configuration file.



Status

You may want to check the system information of your repeater such as WAN (Internet) connectivity, wireless and wired network settings, router MAC address, and firmware version.



TECHNICAL SPECIFICATIONS

General	
Standards	IEEE 802.3 (10BASE-T), IEEE 802.3u (100BASE-TX), IEEE 802.11b, IEEE 802.11g, IEEE 802.11n, IEEE 802.3az
Protocol	CSMA/CA with ACK
Radio Technology	DSSS/OFDM
Data Transfer Rate	802.11n mode: up to 300Mbps (auto sense) 802.11g mode: up to 54Mbps (auto sense) 802.11b mode: up to 11Mbps (auto sense)
Receiver Sensitivity	300Mbps: Typical - 66dBm @ 10% PER 54Mbps: Typical - 72dBm @ 10% PER 11Mbps: Typical - 90dBm @ 8% PER
Transmit Power (mean EIRP)	20dBm (+/- 1.5dB) typically @ 802.11b at 1 to 11Mbps 20dBm (+/- 1.5dB) typically @ 802.11g at 6Mbps 18dBm (+/- 1.5dB) typically @ 802.11g at 54Mbps 20dBm (+/- 1.5dB) typically @ 802.11n at MCS0/HT20 18dBm (+/- 1.5dB) typically @ 802.11n at MCS7/HT20 19dBm (+/- 1.5dB) typically @ 802.11n at MCS0/HT40 17dBm (+/- 1.5dB) typically @ 802.11n at MCS7/HT40
Antenna Type	2x2 Internal PIFA antenna
Frequency Range	2412 ~ 2484 MHz ISM band
Modulation Schemes	DBPSK/DQPSK/CCK/OFDM
Security	64/128-bits WEP Encryption; WPA, WPA-PSK, WPA2, WPA2-PSK
Channels	1~11 Channels (US) 1~13 Channels (EU)
Number of Ports	LAN: 1 x 10/100Mbps Auto-MDIX Fast Ethernet port
Physical and Environmental	
AC inputs	100-240VAC, 50-60Hz, 0.1A
Power Consumption	6.0W (Max)
Temperature	Operating: 0^{o}C ~ 40^{o} C, Storage: -10^{o} ~ 70^{o} C
Humidity	Operating: 10% ~ 90%, Storage: 5% ~ 90%
Dimensions	67 x 56 x 45 mm
EMI:	FCC Class B, CE Mark B