

# **User Guide**

AV600 Powerline Wi-Fi Extender TL-WPA4220

REV3.0.0 1910012098

# Contents

Abou	t This (	Guide	1
Chap	ter 1.	Get to Know Your Powerline Extender	2
1. 1. 1. 2. 1. 3.	Main Fe Produc 1. 3. 1.	t Overview eatures t Appearance LED Legend Physical Interface	
Chap	ter 2.	Initial Use	6
2. 1. 2. 2.		Jp a New Secure Wireless Networknd the Existing Wireless Network	
Chap	ter 3.	Configuring via Web Management Interface	11
3. 1.	3. 1. 1.	ement Interface Log In Change the Login Account	12
3. 2.	3. 2. 1. 3. 2. 2.	Powerline Network Add a New Device to the Powerline Network Change Powerline Network Name	13 14
3. 3. 3. 4. 3. 5.	Wi-Fi C Wireles 3. 5. 1.	ove lones Network Customize Wireless Settings	
3. 6. 3. 7. 3. 8. 3. 9. 3. 10.	LED Sc Schedu Parenta Guest N	Wireless Clients hedules Ile Your Wireless Function Il Controls letwork ter	
3.11.	3. 11. 1 3. 11. 2 3. 11. 3	stration LAN IP Address Set Up System Time Upgrade the Firmware Back Up and Restore Configuration Settings	26 26 28
		System Log	

# **About This Guide**

This guide is a complement to Quick Installation Guide. The Quick Installation Guide provides instructions for quick Internet setup, while this guide contains details of each function and demonstrates how to configure them in typical scenarios.

When using this guide, please notice that features of the powerline extender may vary slightly depending on the model and software version you have, and on your location and language. All images, parameters and descriptions documented in this guide are used for demonstration only.

#### Conventions

In this guide the following conventions are used:

Convention	Description
Powerline extender	Stands for AV600 Powerline Wi-Fi Extender without any explanation.
Teal_Underlined	Hyperlinks are in teal and underlined. You can click to redirect to a website or a specific section.
Teal	Key information appears in teal, including management page text such as menus, items, buttons and so on.
>	The menu structures to show the path to load the corresponding page. For example, Wireless > MAC Filter means the MAC Filter function page is under the Wireless menu.
Note:	Ignoring this type of note might result in a malfunction or damage to the device.
Ø Tips:	Indicates important information that helps you make better use of your device.
Symbols on the web page	<ul> <li>Click to edit the corresponding entry.</li> <li>Click to delete the corresponding entry.</li> <li>Click to enable or disable the corresponding entry.</li> </ul>

#### More Info

- The latest software, management app and utility are available from the Download Center at <a href="http://www.tp-link.com/support">http://www.tp-link.com/support</a>.
- The Quick Installation Guide (QIG) can be found where you find this guide or inside the product packaging.
- Specifications can be found on the product page at <a href="http://www.tp-link.com">http://www.tp-link.com</a>.
- A Technical Support Forum is provided for you to discuss our products at <a href="http://forum.tp-link.com">http://forum.tp-link.com</a>.
- Our Technical Support contact information can be found at the Contact Technical Support page at <a href="http://www.tp-link.com/support">http://www.tp-link.com/support</a>.

# **Chapter 1**

# Get to Know Your Powerline Extender

This chapter introduces the powerline extender by detailing its main features and appearance.

It contains the following sections:

- Product Overview
- Main Features
- Product Appearance

# 1.1. Product Overview

TP-Link's Powerline Wi-Fi Extender is a combined wired/wireless network expansion device. With the help of your home's existing electrical circuitry, it can extend your Wi-Fi to wherever you want in your house.

Ethernet ports and built-in antennas enable the powerline Wi-Fi extender to provide wired and wireless access for multiple computers and mobile devices.

With an array of additional features, the powerline Wi-Fi extender is the perfect choice for your home or business network.

# 1.2. Main Features

- tpPLC Utility to manage the whole powerline network easily and conveniently.
- Wi-Fi Move to synchronize any changes of Wi-Fi Settings and LED schedules across a secured powerline network.
- Wi-Fi Clone to copy wireless network name (SSID) and password of your router to the extender at the press of a button.
- Guest Network to set a new wireless network for guests without disclosing your own wireless network.
- Wi-Fi Schedules to set when your Wi-Fi will be on.
- Multiple Ethernet ports to connect the TVs, game consoles, or PCs to the internet at the same time.

# 1.3. Product Appearance

Your powerline extender may differ in appearance slightly from that depicted because of the region and product version.

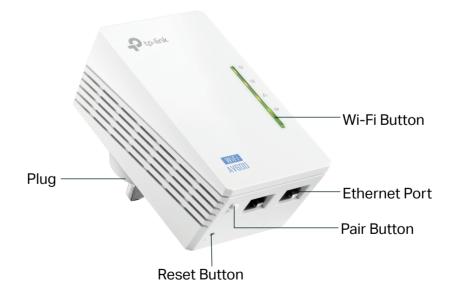
#### 1.3.1. LED Legend



LEDs indicate the powerline extender's working status. For more details, please refer to the following table.

Name	Status	Indication
	On/Off	The powerline extender is on or off.
U Power	Blinking	Pairing is in progress.
	Yellow- green	The powerline extender is connected to the powerline network and is in a suitable location.
<b>企</b> Powerline	Red	The powerline extender is experiencing poor signal strength. Try plugging it into another wall socket.
	Off	The powerline extender is not connected to any powerline network.
🖧 Ethernet	On	At least one Ethernet port is connected to a powered-on device.
	Off	No Ethernet port is connected to a powered-on device.
	On	The wireless function is enabled.
	Off	The wireless function is disabled.
奈 Wireless		Slowly: The powerline extender is cloning 2.4GHz wireless network settings from the main router.
	Blinking	Quickly: The powerline extender is syncing 2.4GHz wireless network settings.

#### 1. 3. 2. Physical Interface



#### Wi-Fi Button

Press and hold the button for 1 second to copy wireless settings from the main router to the extender. Go to <u>Wi-Fi Clone</u> for more information.

Press and hold the button for about 5 seconds to turn the wireless function on or off. The wireless function is on by default. You can turn it off at night and then on in the morning by pressing this button.

#### **Ethernet Port**

Connect the Ethernet ports to your wired devices, such as a computer, a router or a game console, via Ethernet cables.

#### **Pair Button**

Press and hold the button for 1 second to join a powerline network. Go to <u>To Set Up a</u> <u>New Secure Wireless Network</u> for more information.

Press and hold the button for about 8 seconds until the powerline LED turns off to leave the existing powerline network.

#### Reset

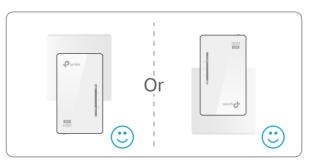
Press and hold the Reset button for at least 5 seconds to reset the powerline extender to factory default settings. When Reset is triggered properly, all LEDs will turn off and start on again.

#### Plug

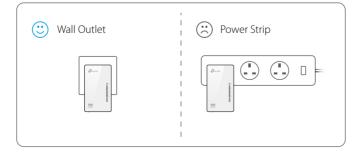
The powerline adapter has a Plug that can be connected to any standard power socket. Note:

1. The provided plug may differ from the picture due to different regional power specifications.

2. Use the product in below directions.



3. Plug the product directly into a wall socket instead of a power strip.



# **Chapter 2**

# **Initial Use**

This chapter guides you on how to use the powerline extender when you first open the package.

It contains the following sections:

- <u>To Set Up a New Secure Wireless Network</u>
- <u>To Extend the Existing Wireless Network</u>

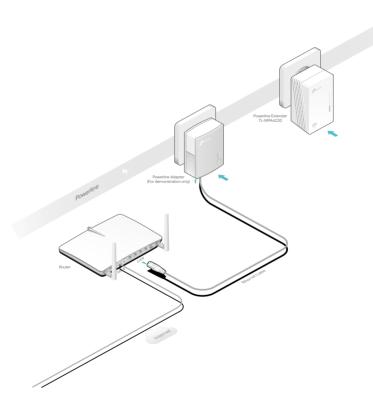
## 2.1. To Set Up a New Secure Wireless Network

I want to: Use the Powerline Wi-Fi Kit to set up a new secure wireless network in my house.

For example, I have a wireless router in my house, but the wireless signal cannot reach every corner. So I bought a Powerline Wi-Fi Kit to extend the wireless network. The Powerline Wi-Fi Kit includes a powerline adapter and a powerline extender.

How can I1. Connect the powerline adapter to an available LAN port of<br/>the router.

- 2. Plug the powerline adapter into a wall socket.
- **3.** Plug the powerline extender into a wall socket near the adapter.



- 4. Pair the powerline devices.
  - a. Press the Pair button on the powerline adapter for 1 second. The Power LED starts blinking.
     Note: If the Power LED does not blink, press it again.
  - b. Within two minutes, press the Pair button on the powerline extender for 1 second. The Power LED starts blinking.

When the Powerline LED turns solid, the pairing process is complete.



 Relocate the extender to the Wi-Fi "dead" zone. Use the SSID (network name) and password on the provided Wi-Fi Info Card to connect to the internet.

Note: A red Powerline LED indicates poor signal strength. Move the extender to another location.

Default Wireless Setting	- -
Powerfere March 2000 Control C	
₽	-

# Done! Now enjoy the internet with the SSID and password printed on the Wi-Fi Info Card!

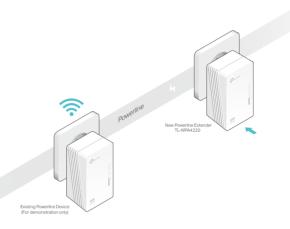
## 2.2. To Extend the Existing Wireless Network

#### I want to:

Extend the existing wireless network by adding a new powerline extender to the existing powerline network.

For example, I already set up a wireless network using powerline devices, but the wireless network is still not big enough to reach the top floor. So I bought a new powerline extender to extend the wireless network.

1. Plug the new powerline extender into a wall socket near one of the existing powerline extender.



- 2. Check the new extender's Powerline LED 🏠 . Is it on?
- If it is on, follow Step 4 > A.
- If it is off, follow Step 3 and Step 4 > B.
- **3.** Add the new powerline extender to the existing powerline network by pairing two powerline devices.
  - a . Press the Pair button on the existing powerline device for 1 second. The Power LED starts blinking.
     Note: If the Power LED does not blink, press again.
  - b. Within two minutes, press the Pair button on the new powerline extender for 1 second. The Power LED starts blinking. When the Powerline LED turns solid, the pairing process is complete.

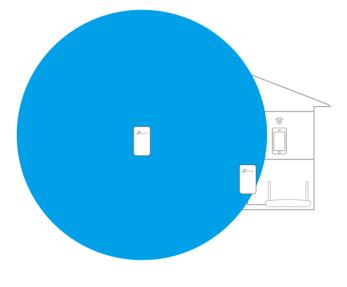


4. Relocate the new extender to the Wi-Fi "dead" zone.

How can I do that?

Note: A red Powerline LED indicates poor signal strength. Move the extender to another location.

- A. Use the SSID (network name) and password on the provided Wi-Fi Info Card to connect to the internet.
- B. Use the SSID (network name) and password of your existing wireless network to connect.



Done!

Enjoy the Internet through your extended network!

# **Chapter 3**

# **Configuring via Web Management Interface**

The powerline extender has a management interface to configure all settings. The management interface can be opened on any device that has a web browser, such as Internet Explorer, Chrome or Firefox. This chapter is going to give detailed information on what functions the powerline extender has and how to configure them.

It contains the following sections:

- <u>Management Interface</u>
- <u>Manage Powerline Network</u>
- Wi-Fi Move
- <u>Wi-Fi Clone</u>
- Wireless Network
- <u>LED Schedules</u>
- <u>Schedule Your Wireless Function</u>
- Parental Controls
- Guest Network
- MAC Filter
- Administration

# 3.1. Management Interface

#### 3.1.1. Log In

There are two methods to log in to the management interface.

#### Method 1: Via web browser

Follow the steps below:

- 1. Connect your device to the powerline extender wirelessly.
- 2. Launch a web browser and type in <u>http://tplinkplc.net</u> to open the management interface.

New Tab	×
← → C <sup>i</sup>	http://tplinkplc.net

3. Enter admin (the default username and password) for both username and password. We recommend you change them immediately after your first login.

admin	
Login	

4. Click Login.

#### Method 2: Via tpPLC utility

Follow the steps below:

- 1. Connect your computer to the powerline extender via an Ethernet cable or wirelessly.
- 2. Obtain and install the tpPLC Utility from the product's Support page at <a href="http://www.tp-link.com">http://www.tp-link.com</a>.
- 3. Open the utility, move your mouse over your powerline extender, and click the () icon that appears beside it.
- 4. Enter admin for both username and password.
- 5. Click Login.

#### 3. 1. 2. Change the Login Account

We strongly recommend you change the login account immediately after the first login.

Follow the steps below to change the account.

1. Go to System Tools > Administration.

Account Management			
Old Username:			
Old Password:			
New Username:			
New Password:			
New Password.	Low Middle High	I	
Confirm New Password:			
		Save	

- 2. Follow instructions on the page to set a new username and password. A strong password should be at least 8 characters in length, combining uppercase and lowercase letters, numbers and punctuations.
- 3. Click Save to make the settings effective.

## 3.2. Manage Powerline Network

A powerline network is formed of powerline devices, including adapters and extenders. Powerline devices in the same powerline network share the same powerline network name.

#### 3. 2. 1. Add a New Device to the Powerline Network

- 1. Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.
- 2. Go to the Status page. Click the Powerline Network icon to see the Powerline Device List.

Powerline Device List					
List of all Powerline devices in the current powerline network.					
Local Device					
<b>)</b>	12-54-25-42-54-52	RX:467Mbps	TX:465Mbps	Ĩ	
•					
			Back	Refresh	

3. Click the add icon • and enter the Powerline Key of the device you want to add. The Powerline Key contains 16 capital letters, formed like XXXX-XXXX-XXXX-XXXX. It is printed on the back of the powerline device.

Add a New	Device				
Please enter th	e Powerlin	e Key prin	ited o	on its back.	
ВКНВ -	KSYS -	SARU	)-[	WMRA	
		Cancel		Add	

4. Click Add to add the device.

#### 3. 2. 2. Change Powerline Network Name

You can change the extender's powerline network name to add it to or remove it from a powerline network.

Follow the steps below to change the name.

- 1. Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.
- 2. Go to Device Settings > Powerline.

werline			
MAC Address:	00-42-20-02-17-03		
Powerline Key:	LDDQ-VUHI-HQUF-YCYW		
Network Name:	Sam's Powerline	Default	

- 3. Change the Network Name. You can also click Default to use the default network name, e.g. HomePlugAV. However, if the default name is used, the Wi-Fi Move function will be automatically disabled.
- 4. Click Save to make the settings effective.

## 3.3. Wi-Fi Move

Wi-Fi Move is enabled by default. With the feature enabled, any changes made to the Wi-Fi settings and LED schedules of one powerline extender will be automatically synchronized to other powerline extenders whose Wi-Fi Move feature is also enabled on the same powerline network.

Follow the steps below to enable the Wi-Fi Move feature:

- 1. Connect to the powerline extender wirelessly. Visit<u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.
- 2. Go to Wireless > Wi-Fi Move.
- 3. Toggle On to enable the feature.

W	Wi-Fi Move				
	Note: Wi-Fi Move f	unction synchronizes all Wi-Fi Settings and LED Schedules.			
	Wi-Fi Move:				

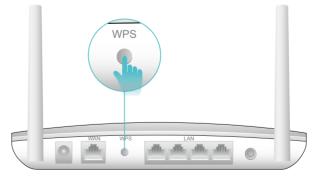
#### Note:

When Wi-Fi Move is enabled, the following features will be synced: Wireless SSID & Password, Wireless Security, Wireless Mode, Wireless Radio Status, Wi-Fi Schedules, LED Schedules, Wi-Fi Clone Settings, MAC Filter Settings, Parental Controls, and Guest Network.

# 3.4. Wi-Fi Clone

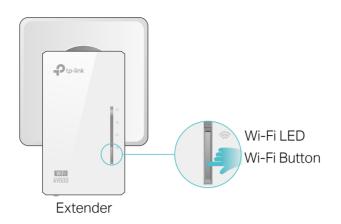
l want to:	Copy wireless settings from my router to my extender, so I can use the same SSID and password to access the internet in my house.
How can I do that?	<ol> <li>Before cloning, make sure your router supports the same band as your extender. If you do not know how to check this, go to your router's User Guide for more information.</li> </ol>
	2. Plug your extender near your router.

3. Press the WPS button on your router.



Wireless Router

**4.** Within two minutes, press the Wi-Fi button on the front panel of the extender for 1 second. The Wi-Fi LED starts blinking.



**Done!** When the Wi-Fi LED blinks quickly for 3 seconds and then stays on, the Wi-Fi Clone process is complete.

## 3.5. Wireless Network

#### 3. 5. 1. Customize Wireless Settings

The powerline extender's wireless network name (SSID), password, and security option are preset in the factory. The preset SSID and password can be found on the product label and Wi-Fi Info Card. You can customize the wireless settings according to your needs.

Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.

Go to Wireless > Settings page.

#### To enable or disable the wireless function:

Select the box to enable the wireless function. Deselect the box to disable wireless function. If disabled, all wireless settings will be ineffective.

Wireless		
2.4GHz:	✓ Enable Wireless Radio	

#### To change the wireless network name (SSID) and password:

The default SSID is TP-Link\_XXXX, and the default password is printed on the Wi-Fi Info Card. You can change the default ones by directly entering new ones in the field. SSID is up to 32 characters, and the value in both SSID and password is case-sensitive.

#### Note:

Remember to write down the new SSID and password, for you will be disconnected when new settings are effective.

Network Name (SSID):	TP-Link_1DA1	☐ Hide SSID
Password:	12345670	

#### To hide SSID:

Select Hide SSID, and your SSID will not be broadcasted. It won't display when you scan for local wireless network list on your wireless device and you need to manually join the network.



#### To have more advanced settings

Click Advanced below Password to have more advanced settings.

	Advanced
Security:	WPA/WPA2-Personal (Recommended)
Version:	Auto     WPA-PSK     WPA2-PSK
Encryption:	O Auto O TKIP   AES
Mode:	802.11b/g/n mixed 🔍
Channel Width:	Auto O 20MHz O 40MHz
Channel:	Auto
Transmit Power:	🔿 Low 🔿 Middle 💿 High

Security: Select an option from the Security drop-down list. The extender provides three options, No Security, WPA/WPA2 Personal (Recommended), and WEP. WPA2 uses the newest standard and the security level is the highest. Don't change the default settings unless necessary.

Mode: Select the desired mode.

- 802.11n only: Select only if all of your wireless clients are 802.11n devices.
- 802.11g/n mixed: Select if you are using both 802.11g and 802.11n wireless clients.
- 802.11b/g/n mixed: Select if you are using a mix of 802.11b, 11g, and 11n wireless clients.

Note: When 802.11n only mode is selected, only 802.11n wireless clients can connect to the extender. It is strongly recommended that you select 802.11b/g/n mixed, so that all of 802.11b, 802.11g, and 802.11n wireless clients can connect to the extender.

Channel Width: Select the channel width. The default setting is Auto, which can adjust the channel width for your clients automatically.

Channel: Select the channel you want to use from the drop-down list. This field determines which operating frequency will be used. It is not necessary to change the wireless channel unless you notice interference problems with another nearby access point.

Transmit Power: Select the level of transmit power. We recommend you choose High to have the best signal strength.

#### 3. 5. 2. Wireless Clients

Follow the steps below to view detailed information of all wireless clients connected to the extender.

- 1. Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.
- 2. Go to Wireless > Clients page.

nline V	Vireless Clients				
Total (	Clients: 1				👌 Refresh
ID	Device Name	IP Address	MAC Address	Wireless Band	Security
1	android- 61a2dbec646dc5d0	192.168.0.100	58-1F-28-DA-E6-40	2.4GHz	WPA2-PSK

3. Now you can view the detailed information, including MAC address, connected wireless band, security option as well as the packets transmitted.

Tips: You can also see the wireless details by clicking the wireless clients icon on the Status > Wireless Clients page.

# 3.6. LED Schedules

I want to:	Automatically turn off LEDs at times when I do not want light in my room.
	For example, I want to turn LEDs off everyday from 00:00am to 7:00am.
How can I do that?	<ol> <li>Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u> and log in with the username and password you set for the extender.</li> </ol>
	2. Go to Device Settings > LED Schedules.
	<b>3.</b> Enable the LED Scheduler. If you are prompted of changes synchronization, click Continue.

Note:	Please	make sure	the time setting	s are correct before using this	function.	
LED S	chedule	er:		)		
D Off	Sche	dules				
Note:	Any ch	anges made	e to LED Schedu	es will be synchronized acros	s powerline extende	ers whose Wi-F
			e to LED Schedu . Be careful to m		s powerline extende	-
					s powerline extende	ers whose Wi-F Add 😑 Dele
					s powerline extende Status	-
	functio	n is enabled	. Be careful to m	nake changes.	•	Add 😑 Dele

- 4. Click Add to add an entry.
- 5. Choose LED Off Time from 00:00 to 7:00, and then check all boxes from Sunday to Saturday.

**Note:** Please make sure that the system time is correct before using this function.

6. Select Enable this entry to make it effective.

D Off	Sche	edules				
				Iles will be synchronized across powe make changes.		nders whose Wi Add 😑 De
	ID	From	То	Day(s)	Status	Modify
Rej			n. 🗹 Mon.	7:00 V Tue. V Wed. V Thu.	✓ Fri.	✓ Sat.
				Cance		ОК

7. Click OK to save the settings.

#### Done!

Now your LEDs will be turned off automatically at 00:00 and turned on at 7:00am the next morning.

## 3.7. Schedule Your Wireless Function

I want to: Automatically turn off my wireless network at times when I do not need the wireless connection.

For example, I want to turn them off from 00:00am to 7:00am. Yet if I have my wireless devices connected to the extender at that

time, I want the wireless on till all devices are disconnected from the internet.

- How can I1. Connect to the powerline extender wirelessly. Visitdo that?http://tplinkplc.netand log in with the username and<br/>password you set for the extender.
  - 2. Go to Wireless > Wi-Fi Schedules.

i-Fi So	chedu	ules				
Note:	Please	e make sure	the time set	ttings are correct before using this function	on.	
Wi-Fi	Schedu	uler:				
	Do not	turn off Wi-f	i while clien	ts are connected to it.		
						Save
	ff Sch	odulos				
i-Fi O	ff Scł	nedules				
Note:	Any ch	hanges made		chedules will be synchronized across pow to make changes.	erline exte	enders whose Wi-
Note:	Any ch	hanges made				enders whose Wi-
Note:	Any ch	hanges made				

- **3.** Enable the Wi-Fi Scheduler. If you are prompted of changes synchronization, click Continue.
- 4. Check the box of Do not turn off Wi-Fi while clients are connected to it and click Save.
- 5. Click Add to add an entry.
- 6. Choose 00:00 and 7:00 from the drop-down list. Check all boxes from Sunday to Saturday.
  Note: Please make sure that the system time is correct before using this function.
- 7. Select Enable this entry to make it effective.

	ID	From	То	Day(s)	Status	Modif
Re			:00 💌 - 7:0	D0 V V Tue. V Wed. V Th	u. 🕑 Fri.	✓ Sat.

8. Click OK to save the settings.

**Done!** Now your Wi-Fi will be automatically turned off at 00:00 and turned on at 7:00am the next morning.

#### Note:

The Wi-Fi LED will turn off if the wireless network is disabled.

# 3.8. Parental Controls

I want to:	Control when my children's wireless devices can access the internet.
	For example, I want to allow my children's wireless devices to access only from 18:00 (6PM) to 22:00 (10PM) on weekdays and not other times.
How can I do that?	<ol> <li>Connect to the powerline extender wirelessly. Visit <u>http://</u> <u>tplinkplc.net</u>, and log in with the username and password you set for the extender.</li> </ol>
	2. Go to Parental Controls.

Note:	Please ma	ake sure the time sett	ings are correct before using	this function.		
Paren	tal Contro	ls:				
vices	Under	Parental Control	s			
vices	Under	Parental Control	s		🕂 Add	🕒 Delet
vices	Under	Parental Control	S Internet Access Time	Description	+ Add Status	Delet Modify

- **3.** Enable Parental Controls. If you are prompted of changes synchronization, click Continue.
- 4. Click Add.
- 5. Click View Existing Devices, and select the device to be controlled. Or, enter the MAC Address manually.
- 6. Click the <sup>(S)</sup> icon to set the Internet Access Time. Drag the cursor over the appropriate cell(s) and click Save.

**Note:** Please make sure that the system time is correct before using this function.

00.00	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	
00:00								
01:00								
02:00 -								
03:00								
05:00								
06:00								
07:00								
07:00								
09:00								
10:00								
11:00								
12:00								
13:00								
14:00								
15:00								
16:00								
17:00								
18:00								
19:00								
20:00								
21:00								
22:00								
23:00								
24:00								
24.00		Access Time						

- 7. Enter a Description for the entry.
- 8. Select Enable this entry to make it effective.

					🕂 Ado	d 😑 Dele	
	ID	MAC Address	Internet Access Time	Description	Status	Modify	
MAC Address: Internet Access Time: Description:		rnet Access Time:	D8-5D-4C-B4-46-EA		View Existing Devices		
	Desc	ription:	Jenny's PC	(Optional	)		

9. Click OK to save the settings.

**Done!** Now the controlled device can access only from 18:00 (6PM) to 22:00 (10PM) on weekdays and not other times.

### 3.9. Guest Network

- I want to: Create a network for my guests, providing internet access for them while at the same time limit the network authorities for guests to ensure network security and privacy.
- How can I1. Connect to the powerline extender wirelessly. Visitdo that?http://tplinkplc.net, and log in with the password you set for<br/>the extender.
  - 2. Go to Guest Network.
  - **3.** Check the box of relative entry to limit network authorities. If you have problems understanding these items, click the question mark on the upper right corner to have more information.
  - 4. Click Save to make the settings effective. If you are prompted of changes synchronization, click Continue.

Guest Network		
☑ Allow guests to see each	other	
Do not allow guests to m	anage my netwo	rk
Automatic disable after	2 hours	•

#### 5. Configure the following settings.

#### Guest Network Settings

2.4GHz:	Enable Guest Network	
Network Name (SSID):	TP-Link_Guest_1DA1	
Security:	O No Security   WPA/WPA2-Personal	
Password:	12345670	

#### To enable or disable the guest network function:

Select the box to enable the guest network function. Deselect the box to disable guest network function. If disabled, all guest network settings of the corresponding band will be ineffective.

#### To change the guest network name (SSID) and password:

The default SSID is TP-Link\_Guest\_XXXX, and the default password is printed on the Wi-Fi Info Card. You can change the default ones by directly entering new ones in the field. SSID is up to 32 characters, and the value in both SSID and password is case-sensitive.

**Done!** Now you can tell your guests to connect to the guest network you created.

### 3.10. MAC Filter

This function exploits the uniqueness of the MAC (Medium Access Control) address, a unique 12-digit hexadecimal address (for example, D8-5D-4C-B4-46-EA) of every network device, to determine if the device can or cannot access your wireless network.

I want to:

Prevent unauthorized users from accessing my wireless network by utilizing the network device's MAC address.

For example, I have a computer that is connected to my wireless

network. Now, an unknown device (an intruder) is also using my wireless network, which affects my internet speed. I would like to control my wireless network with the following capabilities:

- My computer is always allowed to access the wireless network.
- The unknown device is not allowed to access the wireless network.
- I don't have to keep changing my wireless password as often.
- How can I1. Connect to the powerline extender wirelessly. Visitdo that?http://tplinkplc.net, and log in with the username and<br/>password you set for the extender.
  - 2. Go to Wireless > MAC Filter.
  - **3.** Enable MAC Filter. If you are prompted of changes synchronization, click Continue.
  - 4. Select either of the filtering rules (here we select Block wireless access from the devices listed below), and then click Save.

MAC Filter Settings	
MAC Filter:	
MAC Filter	
Select the filtering rule:	Block wireless access from the devices in the list below.
	$\bigcirc$ Allow wireless access only from the devices in the list below.
	Save

vice l	List				
					🕂 Add 😑 Delet
	ID	MAC Address	Description	Status	Modify
	MAC	Address:		View Devices	
	Desc	ription:		(Optional)	
			Enable this entry		
				Cancel	ок

#### 5. Click Add under Device List to add devices to the list.

- 6. Click View Devices to see how many devices are now connected to the network. Click Choose to choose a device. You can also enter the MAC Address manually.
- **7.** Give a description of the entry in the Description field. (Optional)
- 8. Select Enable this entry to make this entry effective.
- 9. Click OK to save the settings.

**Done!** Now MAC Filter is implemented to protect your wireless network.

## 3.11. Administration

#### 3.11.1. LAN IP Address

Follow the steps below to configure LAN settings of the extender.

Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.

Go to Device Settings > LAN Settings.

AN Settings	
LAN Type:	Dynamic IP     O Static IP
IP Address:	192.168.0.254
Subnet Mask:	255.255.255.0 💌
Default Gateway:	192.168.0.1

LAN Type: Select Dynamic IP to have your extender automatically obtain IP Address from the main router. Select Static IP to manually configure the LAN parameters.

IP Address: The IP address of the powerline extender.

Subnet Mask: The subnet mask associated with IP address.

Default Gateway: The IP address of the gateway device.

#### 3. 11. 2. Set Up System Time

System time is the time displayed while the extender is running. The system time you configure here will be used for other time-based functions like Parental Controls and Wi-Fi Schedules. You can manually set how to get the system time.

Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.

Go to System Tools > Time Settings page.

ïme Zone:	(GMT) Greenwich Mean Time, Dubl	in, London 🛛 🔻
ate:	01/06/2017	DD/MM/YY
ime:	20 🔻 : 38 💌 : 24 💌	(HH/MM/SS)
TP Server I:	0.0.0.0	(Optional)
TP Server II:	0.0.0.0	(Optional)

#### To automatically synchronize the time:

- 1. Select your local Time Zone from the drop-down menu.
- 2. In the NTP Server I field, enter the IP address or domain name of your desired NTP Server. (Optional)
- 3. In the NTP Server II field, enter the IP address or domain name of the second NTP Server. (Optional)
- 4. Click Get GMT and click Save.

#### To manually set the date and time:

- 1. In the Time Settings field, select your local Time Zone.
- 2. Enter the current Date.
- 3. Set the current Time (In 24-hour clock format, e.g. 16:00:00 is 04:00PM).
- 4. Click Save.

#### To set up Daylight Saving time:

Daylight-Saving Time													
Daylight-Saving Time:	🗌 Ena	ble Dayl	ight :	Savi	ng								
Start:	2017	Mar.	$\overline{\mathbf{v}}$	м	Last	$\overline{\mathbf{v}}$	w	Sun.	$\overline{\mathbf{v}}$	D	1a.m.	$\overline{\mathbf{v}}$	н
End:	2017	Oct.	$\overline{\mathbf{v}}$	м	Last	$\overline{\mathbf{v}}$	w	Sun.	$\overline{\mathbf{v}}$	D	2a.m.	W	н
	Dayligh	it saving	is d	own									
												Sa	ive

- 1. Select Enable Daylight Saving.
- 2. Select the correct Start date and time when daylight saving time starts at your local time zone.
- 3. Select the correct End date and time when daylight saving time ends at your local time zone.
- 4. Click Save.

#### 3. 11. 3. Upgrade the Firmware

TP-Link is dedicated to improving and richening the product features, giving you a better network experience. We will release the latest firmware at our official website, you can download the latest firmware file from our website: <u>www.tp-link.com</u> and upgrade the firmware to the latest version.

- 1. Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.
- 2. Go to System Tools > Firmware Upgrade page and confirm the Hardware Version.

Manual Upgrade		
New Firmware File:	Browse	
Firmware Version:	3.0.0 Build 20170220 Rel.55106	
Hardware Version:	TL-WPA4220 v3.0	
	Upgrad	le

3. Go to <u>www.tp-link.com</u>. Download the latest firmware file for the extender.

**Note:** The upgraded firmware version must correspond to the hardware.

#### 4. Click Browse to locate the downloaded new firmware file, and click Upgrade.

#### 5. Wait a few minutes for the upgrading and rebooting.

- Note:
- 1. Before upgrading the firmware, it's better to back up your current settings.
- 2. During the upgrading process, do not turn off or reset the extender.
- If the upgrade is interrupted, it's possible your extender may stop working and its LEDs blink once a second. In this case, please connect your computer to the extender via an Ethernet cable, and set your computer to static IP 192.168.0.X and subnet mask 255.255.255.0. Then visit <u>http://192.168.0.254</u> to complete the upgrade.

#### 3. 11. 4. Back Up and Restore Configuration Settings

The configuration settings are stored as a configuration file in the extender. You can back up the configuration file to your computer for future use and restore the extender to a previous settings from the backup file when needed. Moreover, if needed, you can erase the current settings and reset the extender to the default factory settings.

#### To backup configuration settings:

- 1. Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.
- 2. Go to System Tools > Backup & Restore page.

Backup	
Save a copy of your current settings.	
	Backup

3. Click Backup to save a copy of the current settings to your local computer. A config. bin file will be stored to your computer.

#### To restore configuration settings:

- 1. Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.
- 2. Go to System Tools > Backup & Restore page.

Restore			
Restore sav	ed settings from a file.		
File:		Browse	
			Restore

- 3. Click Browse to locate the backup configuration file stored on your computer, and click Restore. The configuration file is config.bin.
- 4. Wait a few minutes for the restoring and rebooting.

**Note:** During the restoring process, do not turn off or reset the extender.

#### To reset the extender to factory default settings:

- 1. Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.
- 2. Go to System Tools > Backup & Restore page.

Factory Default Restore	
Revert all the configuration settings to their default values.	
	Factory Restore

- 3. Click Factory Restore to reset the extender.
- 4. Wait a few minutes for the resetting and rebooting.
- 1. During the resetting process, do not turn off the extender.

2. We strongly recommend you back up the current configuration settings before resetting the extender.

#### 3.11.5. System Log

When the extender does not work properly, you can save the system log and send it to the technical support for troubleshooting.

Follow the steps below to save the system log:

- 1. Connect to the powerline extender wirelessly. Visit <u>http://tplinkplc.net</u>, and log in with the username and password you set for the extender.
- 2. Go to System Tools > System Log.

Sys	tem	Log					
Log Filter: Type= ALL			and Level = A	LL Y	•		
						🖒 Refresh	🖨 Delete All
	ID	Time	Туре	Level	Log Content		
	1	0 days 00:41:09	OTHERS	INFO	User cleared up all the logs.		
Sa	ave Lo	9					

- 3. Choose the type and level of the system log according to your need.
- 4. Click Save Log to save the system log to local.

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# 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:

- 1) This device may not cause harmful interference.
- 2) 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 colocated or operating in conjunction with any other antenna or transmitter."

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.Pour les produits disponibles aux états-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

# 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.

#### **RF Exposure Information**

This device meets the EU requirements (1999/5/EC Article 3.1a) on the limitation of exposure of the general public to electromagnetic fields by way of health protection.

The device complies with RF specifications when the device used at 20 cm from your body.

#### **Canadian Compliance Statement**

This device complies with Industry Canada license-exempt RSSs. Operation is subject to the following two conditions:

- 1. This device may not cause interference, and
- 2. This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1. l'appareil ne doit pas produire de brouillage;
- 2. l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

#### **Radiation Exposure Statement:**

This equipment complies with IC 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.

#### Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

#### Industry Canada Statement

CAN ICES-3 (B)/NMB-3(B)

#### Korea Warning Statements:

당해 무선설비는 운용중 전파혼신 가능성이 있음.

#### NCC Notice & BSMI Notice:

注意!

依據 低功率電波輻射性電機管理辦法

第十二條 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或功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通行;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,指依電信規定作業 之無線電信。低功率射頻電機需忍受合法通信或工業、科學以及醫療用電波輻射性電機 設備之干擾。

安全諮詢及注意事項

- 請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。
- 清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行清潔。
- 注意防潮,請勿將水或其他液體潑灑到本產品上。
- 插槽與開口供通風使用,以確保本產品的操作可靠並防止過熱,請勿堵塞或覆蓋開口。
- 請勿將本產品置放於靠近熱源的地方。除非有正常的通風,否則不可放在密閉位置中。
- 請不要私自打開機殼,不要嘗試自行維修本產品,請由授權的專業人士進行此項工作。



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EHC

#### **Safety Information**

- When product has power button, the power button is one of the way to shut off the product; when there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.
- Don't disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.
- Avoid water and wet locations.

Symbol	Explanation			
	Class II equipment			
$\sim$	AC voltage			
	RECYCLING This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment. User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.			
	Indoor use only			

#### Explanation of the symbols on the product label