

BTF-LIGHTING RFBLACK14KEY5V12V

BTF-LIGHTING WS2811/WS2812B RF LED Controller Instruction Manual

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your BTF-LIGHTING 14-key Wireless RF RGB LED Controller. This controller is designed for use with WS2811, WS2812B, 1903 IC, and 6803 IC digital color LED pixel strips and modules. Please read this manual thoroughly before use to ensure proper functionality and safety.

2. SAFETY INFORMATION

- Ensure the input voltage matches the output voltage of the LED strip (e.g., DC5V WS2812B LED Strip requires a DC5V power supply).
- Insufficient power supply can cause the controller to malfunction, leading to frozen LED strip colors or unresponsive remote control.
- When lighting up multiple colors, power consumption increases. For example, 1 color (red, green, or blue) consumes approximately 0.1W/LED, 2 colors (red+green) consume 0.2W/LED, and 3 colors (red+green+blue = mixed white) consume 0.3W/LED. Ensure your power supply can handle the total load.
- If the LED strip becomes very hot during use, it may be necessary to add additional voltage to the strip to prevent overheating and ensure stable operation.
- This controller is not compatible with SK6812 RGBW LED strips due to their 4-channel configuration.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- 1x RF LED Controller (LED2013-X)
- 1x 14-key RF Wireless Remote Control
- Connection cables



Image 3.1: The BTF-LIGHTING RF LED Controller and its accompanying 14-key remote control.

4. SETUP

4.1. Connecting the LED Strip

1. Connect the 3-pin output connector of the RF LED Controller to the input connector of your compatible LED pixel strip (e.g., WS2811, WS2812B). Ensure the pins align correctly.

Press R button , Light up Green ?

Press G button ,light up Red ?



Adjust the Color Order :

Why you press **R** , the LED strip light up Green or Blue?

How to solve the color mismatch?







1. Connect the LED strip and power supply , Press  turn off the LED strip.
2. Long press  for 3 seconds
3. Press the  key Until the LED Strip is red
4. Press the  key Until the LED Strip is green
5. Press the  key Until the LED Strip is blue
6. Press  turn off the LED strip.

Image 4.2: Visual guide for adjusting the color order of the LED strip to match the remote control's color buttons.

5. OPERATING INSTRUCTIONS

5.1. Remote Control Functions

The 14-key RF remote control allows you to manage various aspects of your LED strip lighting. The remote operates using Radio Frequency (RF) technology, providing a wider control range compared to infrared (IR) remotes.

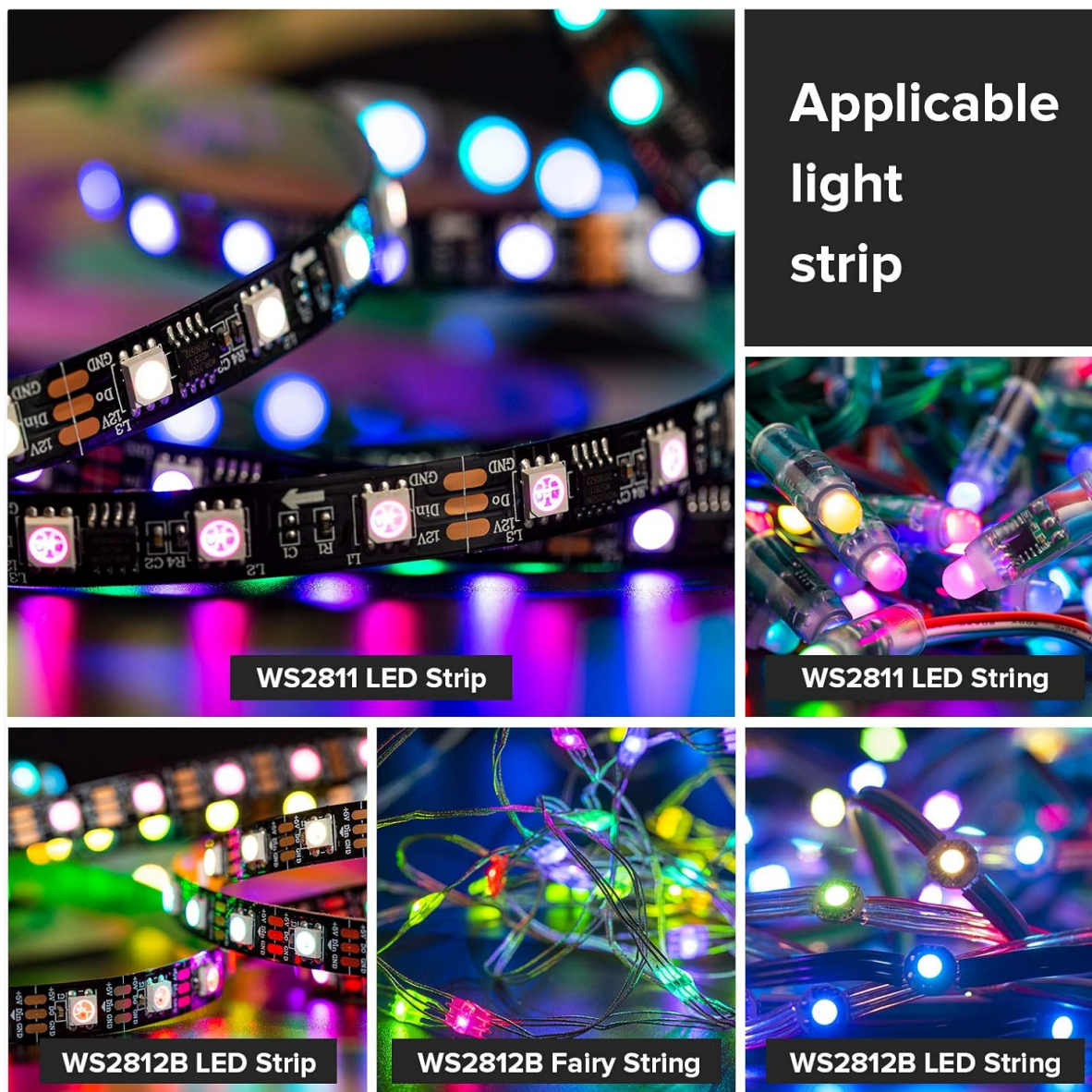


Image 5.1: The 14-key RF remote control, highlighting its various buttons for mode, speed, DIY effects, and direct color selection.

- **Power Button:** Turns the LED strip on or off.
- **MODE + / MODE -:** Cycles through 300+ kinds of chasing or static lighting effects.
- **SPEED + / SPEED -:** Adjusts the speed of dynamic lighting effects or the brightness of static colors.
- **MENU AUTO:** Activates an automatic cycle through various lighting modes. Long press for 3 seconds to enter color order adjustment mode (see Section 4.3).
- **DIY + / DIY -:** Selects custom play lists or effects.
- **ADD DIY / DEL DIY:** Adds or deletes custom DIY effects.
- **W:** Activates white light.
- **R / G / B:** Selects Red, Green, or Blue static colors directly.

Video 5.1: This video demonstrates the functionality of the RF remote controller, showcasing how to change colors and modes on an LED strip.

Video 5.2: A demonstration of the RF 14-key controller in action, showing various lighting effects and color changes.

5.2. Adjusting Pixel Number

The controller allows adjustment of the pixel number to optimize effects for different strip lengths. Refer to the specific instructions provided with your LED strip for the correct pixel count. Incorrect pixel settings may result in incomplete or distorted lighting effects.

6. ADVANCED USAGE

6.1. Adding Voltage to Prevent Overheating

For longer LED strips or applications where the strip becomes excessively warm, adding voltage at intermediate points can help maintain consistent brightness and prevent overheating. This involves connecting additional power injection points along the strip.

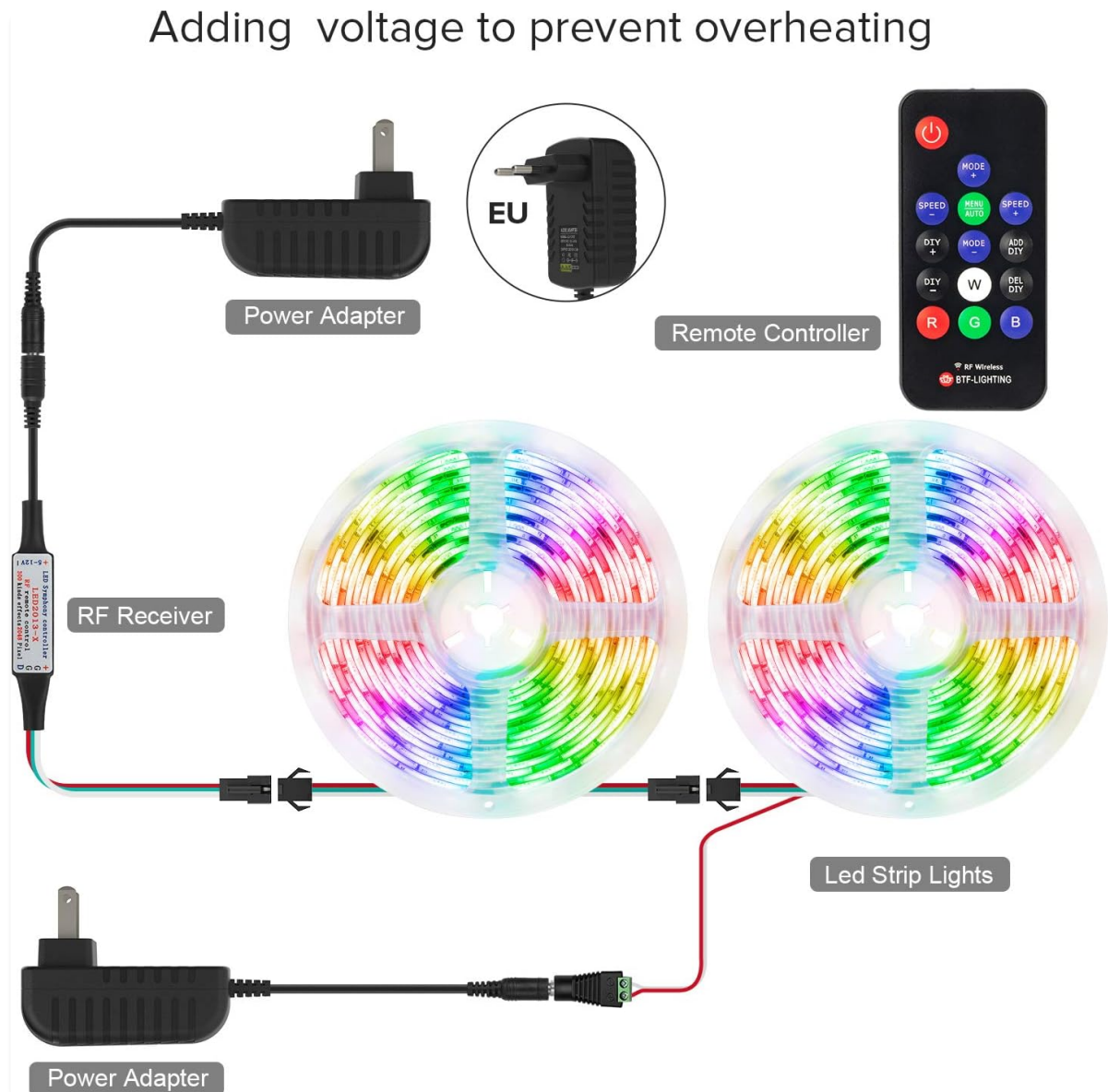


Image 6.1: Illustration of adding voltage to LED strip lights using multiple power adapters to prevent overheating, especially for longer installations.

7. COMPATIBILITY

This controller is suitable for a wide range of digital LED pixel products:

- **Supported:** All WS2812B products (e.g., WS2812B strip, WS2812B fairy string), WS2811 string, 1903 IC, 6803 IC. Supports all 3-pin single signal IC chip LED products.

- **Not Supported:** SK6812 RGBW LED strips (due to 4-channel configuration).

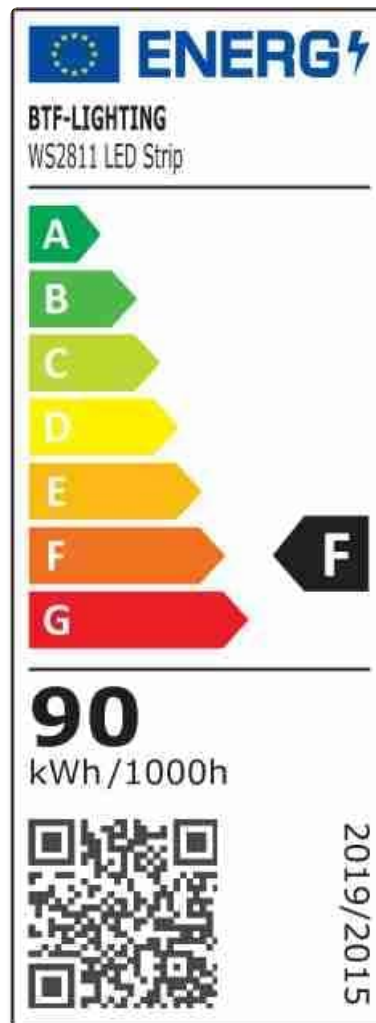


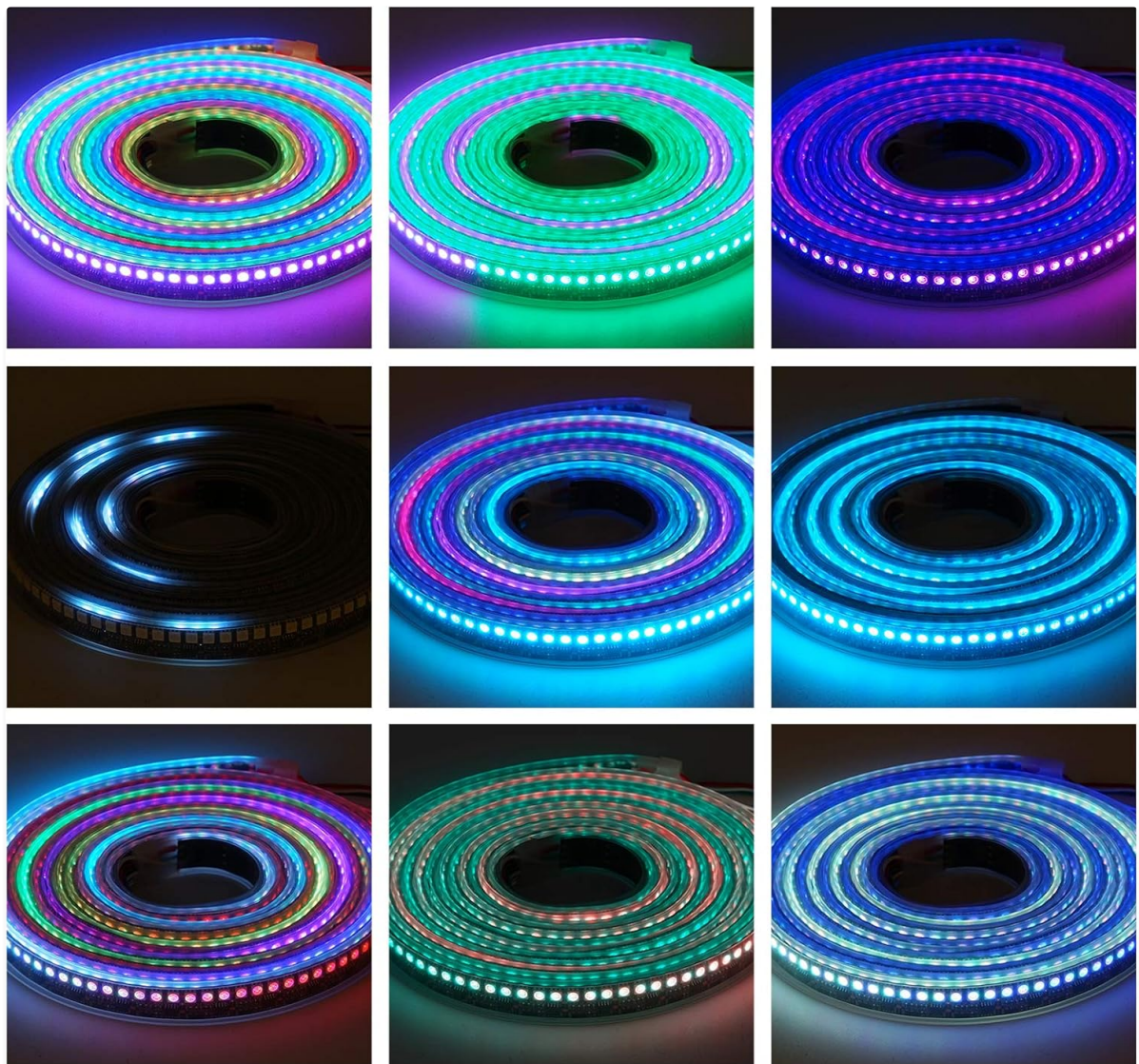
Image 7.1: Examples of applicable LED light strips and strings, including WS2811 and WS2812B types.

8. TROUBLESHOOTING

- **Remote Not Working / Inconsistent Colors:**
 - Ensure the remote battery (CR2025) is installed correctly and has sufficient charge. Replace if necessary.
 - Perform the Color Order Adjustment procedure described in Section 4.3.
- **LED Strip Frozen / Controller Unresponsive:**
 - This often indicates an insufficient power supply. Verify your power adapter meets the voltage and current requirements for your LED strip. Consider adding voltage injection points for longer strips (see Section 6.1).
 - Ensure all connections are secure and free from damage.
- **Limited Remote Range:**
 - The remote uses RF, which generally has good range. However, thick walls or strong interference can reduce it. Ensure the controller is not obstructed by large metal objects.
 - A weak remote battery can also reduce range.
- **Wiring Confusion:**
 - For custom wiring, the standard pinout is typically Red for positive voltage, White for Ground, and Green for Data. Always verify with a multimeter if unsure to prevent damage.

9. SPECIFICATIONS

Feature	Specification
Model Number	RFBLACK14KEY5V12V
Brand	BTF-LIGHTING
Controller Type	RF Remote
Input/Output Voltage	DC 5V/12V (Input voltage = Output voltage)
Number of Keys (Remote)	14
Supported IC Chips	WS2811, WS2812B, 1903, 6803 (3-pin single signal)
Max Pixels Controlled	1024 pixels (voltage addition recommended for high pixel counts)
Lighting Effects	300+ chasing or static effects
Remote Battery	CR2025 button battery (not included)
Material	Plastic
Item Weight	0.7 Ounces
Indoor/Outdoor Usage	Indoor use only



Chase Effect + Static Effect. Simple and Easy to Use!

Image 9.1: A visual representation of the diverse chase and static lighting effects achievable with the controller.



Image 9.2: Energy label for BTF-LIGHTING WS2811 LED Strip. For more details, visit the [EPREL database](#).

10. MAINTENANCE

- Keep the controller and remote clean and dry. Avoid exposure to moisture or extreme temperatures.
- Regularly check all connections for looseness or corrosion.
- Replace the remote control battery (CR2025) when its performance degrades.

11. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official BTF-LIGHTING website or contact your retailer. Keep your purchase receipt as proof of purchase.

For additional resources and product information, visit the [BTF-LIGHTING Store on Amazon](#).

Related Documents - RFBLACK14KEY5V12V

<div>Multilingual Index</div> <div>English..... P.01</div> <div>Deutsch..... P.11</div> <div>Español..... P.20</div> <div>Français..... P.29</div> <div>Italiano..... P.38</div> <div>日本語..... P.47</div> <div>Nederlands..... P.57</div>	<div>BTF-LIGHTING WS2812B/WS2812B ECO RGB LED Strip User Manual</div> <div>User manual for BTF-LIGHTING WS2812B and WS2812B ECO individually addressable RGB LED strips. Covers product parameters, precautions, installation, and recommended accessories.</div>
<div>Multilingual Index</div> <div>English..... P.1</div> <div>Deutsch..... P.11</div> <div>Español..... P.21</div> <div>Français..... P.31</div> <div>Italiano..... P.41</div> <div>Nederlands..... P.51</div> <div>日本語..... P.61</div>	<div>BTF-LIGHTING WS2811 IC RGB LED Strip User Manual - Installation & Specifications</div> <div>Comprehensive user manual for the BTF-LIGHTING WS2811 IC RGB LED Strip. Covers product specifications, installation guides, wiring diagrams, precautions, and recommended accessories for addressable RGB LED lighting.</div>
<div>Multilingual Index</div> <div>English..... P.01</div> <div>Deutsch..... P.14</div> <div>Español..... P.26</div> <div>Français..... P.38</div> <div>Italiano..... P.50</div> <div>日本語..... P.62</div> <div>Nederlands..... P.74</div>	<div>BTF-LIGHTING FCOB WS2812B SPI RGB IC LED Strip User Manual</div> <div>User manual for the BTF-LIGHTING FCOB WS2812B SPI RGB IC LED Strip, detailing product parameters, installation, precautions, and controller compatibility for optimal lighting setups.</div>
<div>Multilingual Index</div> <div>English..... P.01</div> <div>Deutsch..... P.12</div> <div>Español..... P.22</div> <div>Français..... P.32</div> <div>Italiano..... P.42</div> <div>Nederlands..... P.52</div>	<div>BTF-LIGHTING SPI Single Color LED Strip User Manual (SMD-FCOB-DIMIC-01-EN)</div> <div>Comprehensive user manual for the BTF-LIGHTING SPI Single Color LED Strip (SMD-FCOB-DIMIC-01-EN). Covers product specifications, installation, precautions, connection diagrams, controller/power supply compatibility, and thermal management. Available in multiple languages.</div>
<div>Multilingual Index</div> <div>English..... P.1</div> <div>Deutsch..... P.11</div> <div>Español..... P.21</div> <div>Français..... P.31</div> <div>Italiano..... P.41</div> <div>日本語..... P.51</div> <div>Nederlands..... P.61</div>	<div>BTF-LIGHTING FCOB SPI RGB IC LED Strip User Manual</div> <div>User manual for the BTF-LIGHTING FCOB SPI RGB IC LED Strip, detailing product specifications, installation, and usage. Features addressable RGB lighting with WS2811 IC for dynamic lighting effects.</div>

<div><div>Multilingual Index</div><div><div>English----- P.1</div><div>Deutsch----- P.10</div><div>Español----- P.19</div><div>Français----- P.28</div><div>Italiano----- P.37</div><div>Nederlands----- P.46</div></div></div>	<div><div>BTF-LIGHTING FCOB SPI RGBCCT LED Strip User Manual</div><div>User manual for the BTF-LIGHTING FCOB SPI RGBCCT LED Strip, detailing product specifications, installation, precautions, and recommended accessories.</div></div>
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