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› RGBZONE SP107E Bluetooth LED Controller User Manual

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Model: SP107E

Brand: RGBZONE

INTRODUCTION

The RGBZONE SP107E Bluetooth LED Controller is designed to provide versatile and dynamic lighting control for various LED setups, including WS2812b, WS2811 LED strips, matrix panels, and modules. This controller offers both app control via Bluetooth and music synchronization capabilities through an AUX input or a built-in microphone, allowing for a wide range of customizable lighting effects.

It is compatible with almost every kind of one-wire or two-wire LED driver IC and features numerous pre-programmed lighting modes, making it ideal for DIY projects and enhancing ambient lighting with interactive music synchronization.

WHAT'S IN THE BOX

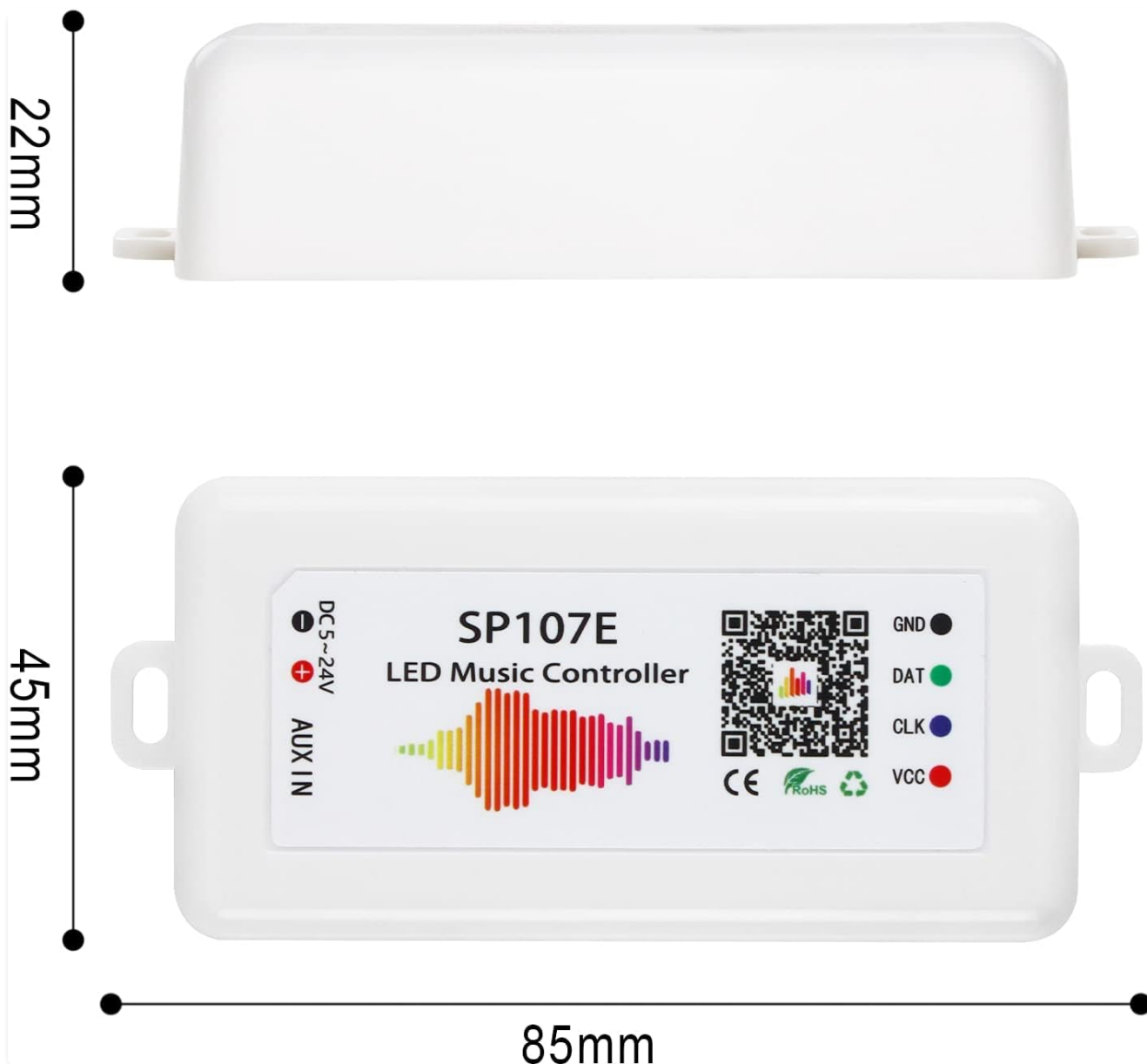


Image: The SP107E controller shown with all its included accessories: a screwdriver, an audio cable, and various connector cables.

- 1 x LED Controller (SP107E)
- 1 x User Manual
- 1 x Screwdriver
- 1 x Audio Cable
- 1 x 3PIN Connector Cable
- 1 x DC Connector Cable

SPECIFICATIONS

Feature	Detail
Brand	RGBZONE
Model	SP107E

Feature	Detail
Color	RGB (Red, Green, Blue)
Material	Plastic
Power Source	Corded Electric
Voltage	5-24 Volts (DC)
Max Wattage	144 Watts
Controller Type	App Control, Remote Control
Connectivity Technology	Bluetooth
Special Feature	Adjustable, Music Sync
Item Weight	2.89 ounces
Dimensions (L x W x H)	4.13 x 2.72 x 1.1 inches (approx. 85mm x 45mm x 22mm)
Compatible ICs	WS2811, WS2812B, WS2813, WS2801, SK6812, SK6812-RGBW, SM16703, TM1804, TM1814, TM1914, UCS1903, LPD8806, P943S, P9813, P9411, INK1003, P9413, DMX512, APA102, APA105, TX1812, TX1813, GS8206, GS8208, SK9822, P9412

Input: connect to power support

Output: connect for LED strip

 "+"live wire

 "-"neutral wire

 VCC

 DAY

 CND

Image: Detailed dimensions of the SP107E controller, showing its length, width, and height.

APP Control

Simplified connection with two-wire light



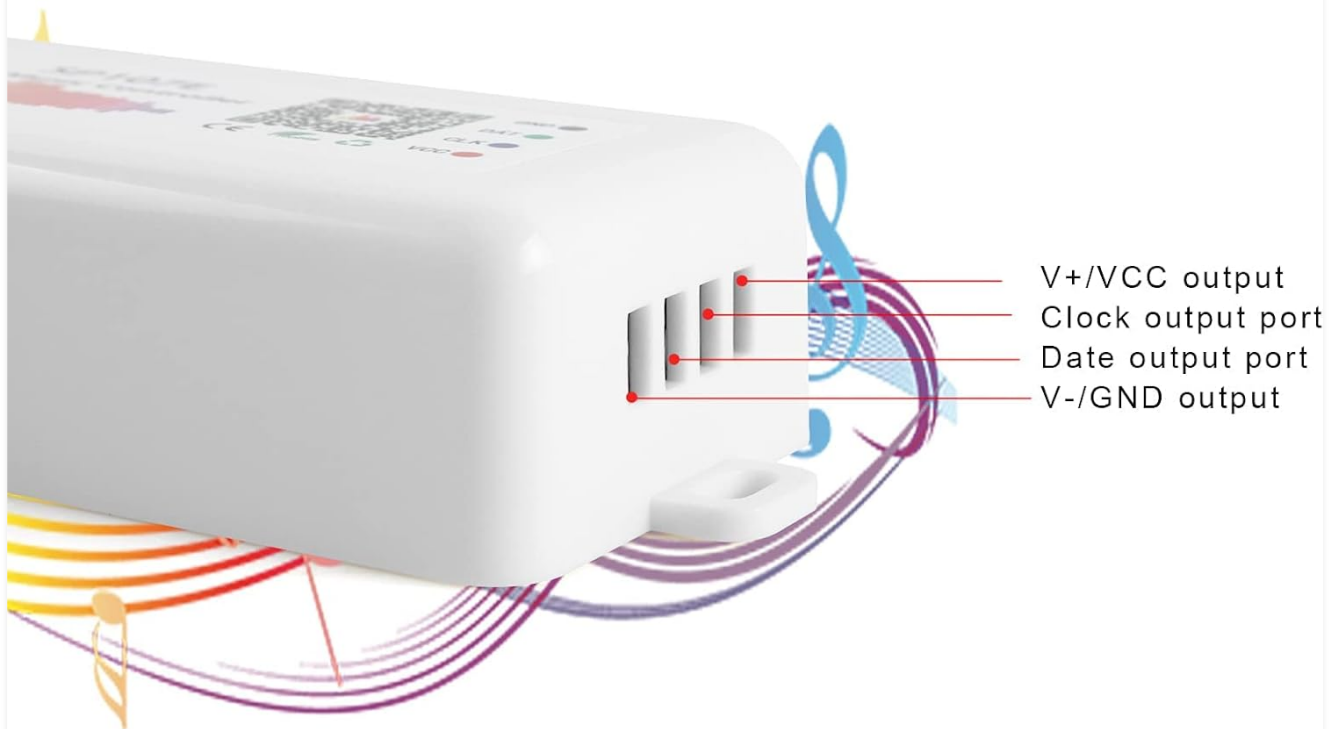
Image: A comprehensive list of 29 different LED driver ICs that are compatible with the SP107E controller.

SETUP GUIDE

1. Wiring Connections

Ensure all connections are secure and correctly aligned before applying power. The controller operates on a DC 5-24V power supply. Connect the power supply to the input terminals and the LED strip to the output terminals.

Compatible with 29 LED driver ics



WS2811	SM16703	TM1814	TN1914	GS8206
WS2812B	TM1804	TM1913	P943S	GS8208
WS2813	UCS1903	P9813	P9411	SK9822
WS2801	LPD6803	INK1003	P9413	P9414
SK6812	LPD8806	DMX512	TX1812	P9412
SK6812-RGBW	APA102	APA105	TX1813	

Image: A clear diagram illustrating how to connect the power supply to the input and the LED strip to the output of the SP107E controller.

HOW TO DO THE WIRE CONNECTION?

The color of the LED connector wire doesn't match the color of the controller. Be sure to distinguish GND/DAT/CLK/VCC on LED Strip.

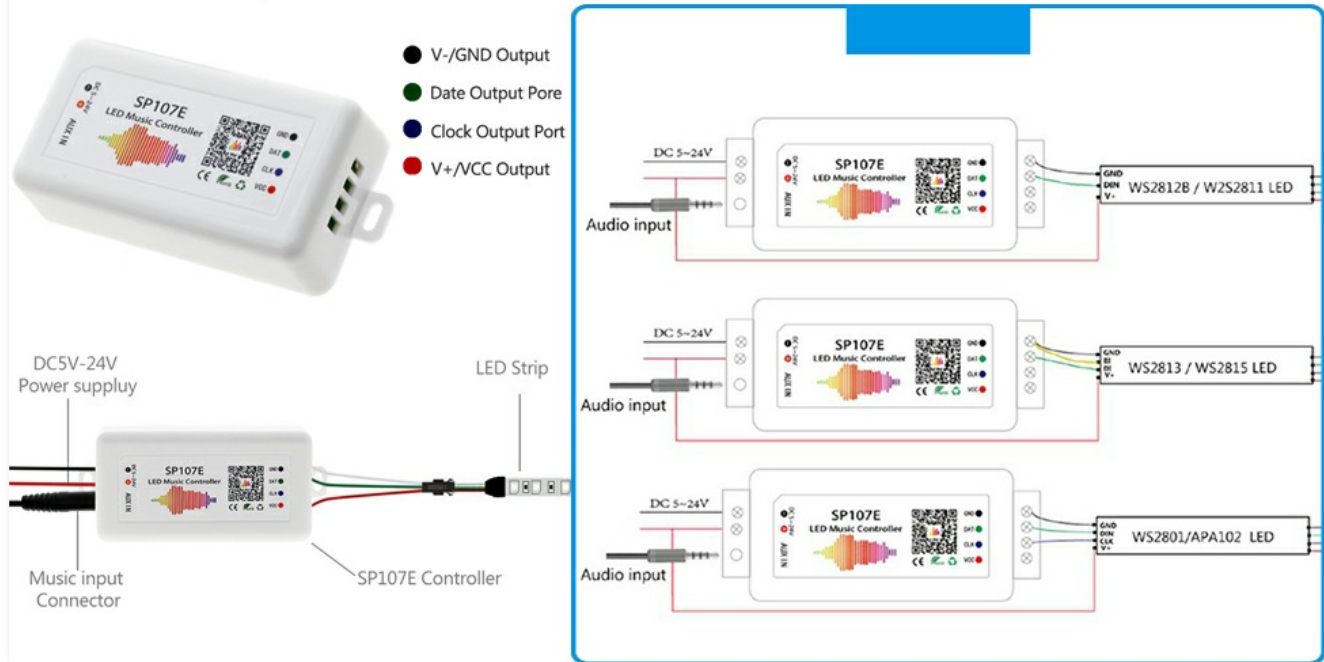


Image: Comprehensive wiring instructions detailing connections for different LED strip types (WS2812B/WS2811, WS2813/WS2815, WS2801/APA102) to the SP107E controller.

- **Power Input:** Connect your DC 5-24V power supply to the input port. Ensure the voltage matches your LED strip's requirements.
- **LED Strip Output:** Connect your LED strip to the output terminals. Pay close attention to the GND (Ground), DAT (Data), CLK (Clock - for some ICs), and VCC (Voltage) connections. The included 3PIN and DC connector cables facilitate this.
- **Important Note:** The color of the LED connector wire may not always match the color of the controller's labels. Always distinguish connections by their labels: GND, DAT, CLK, and VCC on both the LED strip and the controller.

2. App Installation

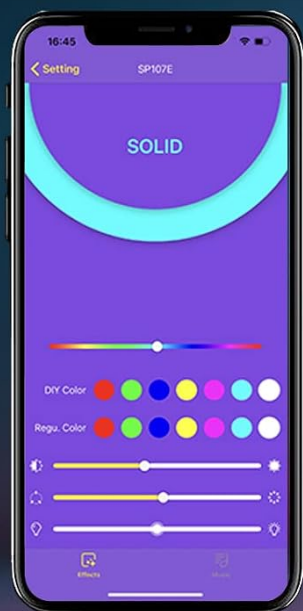
The SP107E controller is controlled via a smartphone app. Scan the QR code on the controller or visit the official download page to install the app.

[Download the LED Chord App Here](#)

OPERATING INSTRUCTIONS

1. Bluetooth Connection

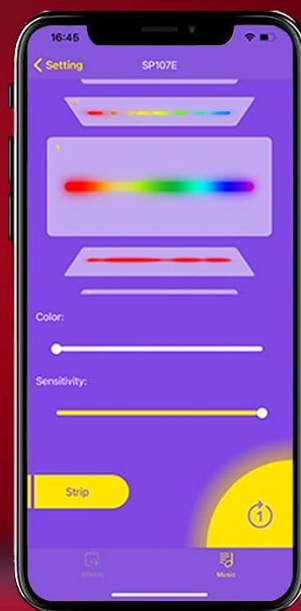
Once the app is installed and the controller is powered on, open the app on your smartphone. Drag down to refresh the device list and select "SP107E" to connect. The app supports both ISO and Android smart devices.



180 Dynamic Color Modes
for Static Solid Color Adjustable



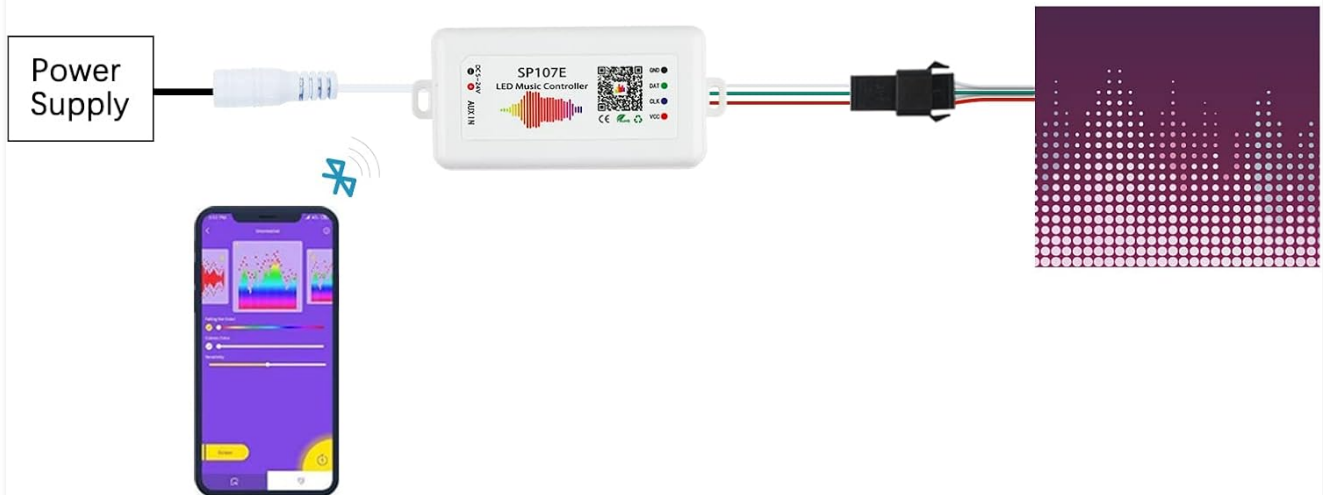
30 Music Sync Color Modes
for LED Matrix Panel



18 Kinds of Music Lighting
Effects for LED Strip

Image: A smartphone screen showing the user interface of the SP107E control app, demonstrating its intuitive design.

Connection Method 1: Built-in MIC



Connection Method 2: AUX Input



Image: Three distinct app interfaces: one for solid color selection, one for music synchronization with an LED matrix, and another for music synchronization with an LED strip.

2. Music Synchronization Modes

The SP107E offers two methods for music input, allowing the lighting effects to synchronize with audio:

- **Built-in Microphone:** The controller has an integrated microphone that captures ambient sound, and the lighting effects will change according to the rhythm of the sound.
- **AUX Input:** For a cleaner audio signal, connect an external audio source (like a phone or music player) directly to the AUX input port using the provided audio cable. This mode helps shield external noise, reacting only to the direct audio input.



Image: A visual representation of the two music input methods: using the controller's built-in microphone or connecting an external audio source via the AUX input.



Image: The SP107E controller shown connected to a set of speakers, demonstrating the AUX input feature for music-synchronized lighting.

Your browser does not support the video tag.

Video: Demonstration of the SP107E Bluetooth LED Music Controller's music sync capabilities, showing LED matrix panels and LED strips reacting to audio input via the built-in microphone.

3. Lighting Effects and Customization

The controller offers a wide array of lighting effects and customization options:

- **Music Lighting Effects:** 30 kinds for LED matrix panels and 18 kinds for LED strips.
- **Non-Music Lighting Effects:** 180 kinds of dynamic color modes for static solid color adjustment.
- **Adjustable Parameters:** The speed of effects, brightness, number of pixels, color order, and sensitivity are all adjustable via the app.
- **SK6812-RGBW Support:** When using SK6812-RGBW LEDs, the pure white channel can be adjusted independently.
- **Pixel Control:** Control up to 960 IC chips (LED pixels) in total. You can set the number of segments and pixels per segment according to your LED array.
- **Memory Function:** The controller saves user settings when powered off.

- BUILD-IN MIC
- AUX INPUT

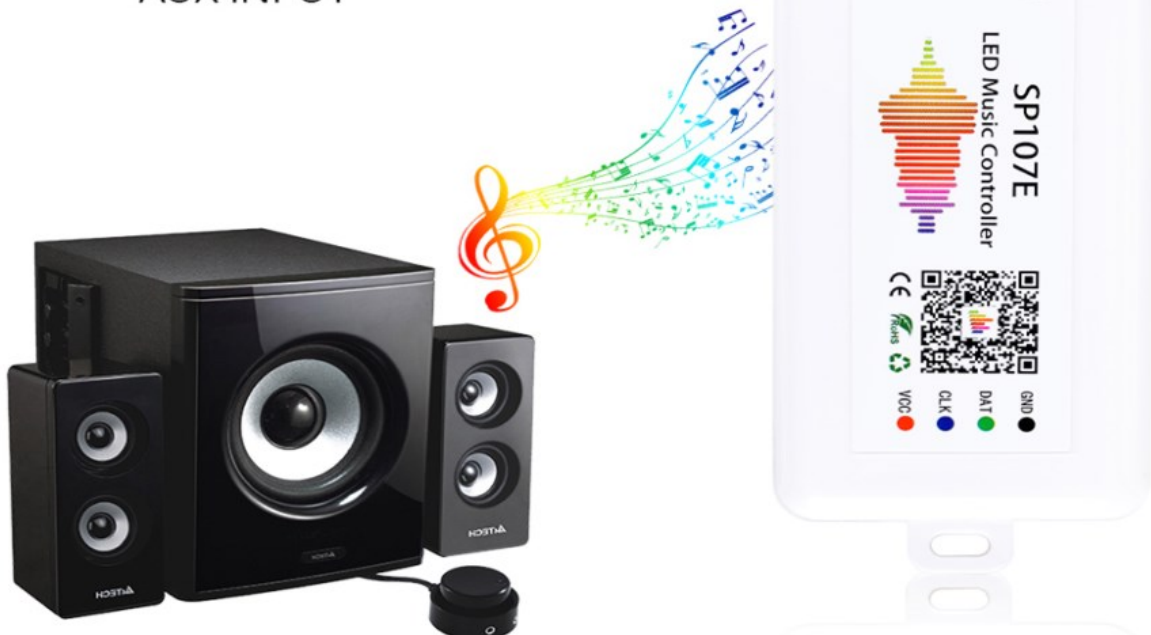


Image: A collage of LED strip lights showcasing a variety of vibrant colors and dynamic lighting effects achievable with the controller.



Image: An example of a room interior beautifully lit with RGBZONE LED lighting, highlighting the ambient and decorative possibilities.

MAINTENANCE

- **Cleaning:** Use a dry, soft cloth to clean the controller. Do not use liquid cleaners or aerosols.
- **Storage:** Store the controller in a cool, dry place away from direct sunlight and extreme temperatures when not in use.
- **Handling:** Avoid dropping or subjecting the controller to strong impacts, as this can damage internal components.
- **Power Supply:** Always ensure you are using a power supply that matches the voltage requirements (DC 5-24V) of the controller and your LED strips. Using an incorrect voltage can cause damage.

TROUBLESHOOTING

Controller not powering on:

- Check the power supply connection. Ensure it is securely plugged into the controller and a working power outlet.
- Verify the power supply voltage matches the controller's requirements (DC 5-24V).
- Inspect the power cable for any damage.

LEDs not lighting up or flickering:

- Ensure the LED strip is correctly connected to the controller's output terminals (GND, DAT, CLK, VCC). Double-check polarity.
- Confirm that the LED strip's voltage matches the power supply and controller's output.
- Check if the correct IC type is selected in the app for your specific LED strip.
- Verify the number of pixels and segments are correctly configured in the app.
- If using a long LED strip, ensure adequate power delivery throughout the strip.

Unable to connect via Bluetooth app:

- Make sure Bluetooth is enabled on your smartphone.
- Ensure the controller is powered on and within Bluetooth range.
- Close and reopen the app, then try refreshing the device list.
- Restart your smartphone and the controller.
- If multiple Bluetooth devices are nearby, ensure you are selecting the correct "SP107E" device.

Music sync not working correctly:

- **Built-in Mic:** Ensure the controller's microphone is not obstructed. Adjust the sensitivity setting in the app.
- **AUX Input:** Verify the audio cable is securely connected to both the controller's AUX input and the audio source. Check the volume level on your audio source.
- Ensure the correct music mode (Built-in Mic or AUX Input) is selected in the app.

WARRANTY AND SUPPORT

RGBZONE products are manufactured to high-quality standards. For warranty information, technical support, or any inquiries regarding your SP107E Bluetooth LED Controller, please refer to the contact information provided in your product packaging or visit the official RGBZONE website.

Keep your purchase receipt as proof of purchase for warranty claims.