TOPXCDZ SP107E

TOPXCDZ SP107E Music Bluetooth RGB LED Controller User Manual

Model: SP107E

1. Product Overview

The TOPXCDZ SP107E is a versatile Music Bluetooth RGB LED Controller designed for controlling various types of addressable LED strips, matrix panels, and modules. It supports a wide range of LED driver ICs and offers extensive customization options through its dedicated mobile application. This controller features both AUX input and a built-in microphone for music synchronization, allowing dynamic lighting effects that react to audio.

Image: Front view of the TOPXCDZ SP107E Music Bluetooth RGB LED Controller, showing the model name, DC5V-24V power input, and AUX IN port.

2. Key Features

- **Wide Compatibility:** Supports various one-wire or two-wire LED driver ICs, including WS2811, WS2812B, SK6812, SK6812-RGBW (select WS2811 for WS2812B LEDs). *Note: Does not support RGB/RGBW LED lights without a built-in IC.*
- **Bluetooth APP Control:** Remote control via the "Led Chord" app available for iOS (10.0 or later) and Android (4.4 or later) devices with Bluetooth 4.0 or newer.
- **Music Synchronization:** Features both AUX input and a built-in high-sensitivity microphone for audio signal detection, enabling lighting effects to react to music. Sound sensitivity is adjustable.
- **Extensive Lighting Effects:** Offers 180 kinds of non-music lighting effects, 30 kinds of music lighting effects for LED matrix panels, and 18 kinds of music lighting effects for LED strips.
- **Customizable Effects:** Supports a "from-image-to-effect" method for users to create custom lighting patterns.
- **Pixel Control:** Allows setting pixel number and segments, capable of controlling up to 2048 pixels.
- **Wide Voltage Range:** Operates on DC5V~24V, with reverse connection protection for the power supply.

Important: The controller does not regulate output voltage; the power supply voltage must match the LED lights.

Image: A list of supported LED driver IC types for the SP107E controller, including WS2811, SK6812, P9411, TX1812, WS2812B, and many others.

3. Setup Instructions

3.1 Package Contents

Before starting, ensure all components are present:

- 1x SP107E Music LED Controller
- 1x User Manual
- 1x Audio Split Cable

3.2 Hardware Connection

Follow these steps to connect the controller to your LED lights and power supply:

1. **Connect LED Strip:** Connect your compatible LED strip or module to the output terminals of the SP107E controller. Ensure correct polarity (Data, Clock if applicable, Ground, VCC).
2. **Connect Power Supply:** Connect a DC5V-24V power supply to the controller's power input.*Ensure the power supply voltage matches the voltage requirements of your LED lights.*
3. **Optional AUX Input:** If using external audio, plug the supplied audio split cable into the "AUX IN" jack. Connect your audio source (e.g., MP3 player, phone) and a speaker/headset to the split cable.

Image: The SP107E controller showing its power input, AUX IN port, and output terminals for connecting to LED strips (GND, DAT, CLK, VCC).

Image: Another view of the SP107E controller, highlighting the connection points for the LED strip and power supply.

3.3 App Installation

To control the SP107E, download the "Led Chord" application:

- **For iOS:** Search "Led Chord" in the App Store (requires iOS 10.0 or later).
- **For Android:** Search "Led Chord" in Google Play (requires Android 4.4 or later).
- Alternatively, scan the QR code provided on the product packaging or controller label to download the app.

4. Operating Instructions

4.1 App Operations

Once the app is installed and the controller is powered on:

1. Ensure Bluetooth is enabled on your mobile phone.
2. Open the "Led Chord" app. Drag down to refresh the device list.
3. Select the device named "SP107E" to connect to the controller. Once connected, you can rename your controller within the app.
4. Select the correct RGB order and IC type for your LED lights. This is crucial for proper color display.

5. Adjust the pixel number to match the total number of LEDs in your setup.
6. Press "ENTER" to apply settings.
7. Explore the app's interface to select from various patterns, adjust brightness, and customize effects.

Image: The SP107E controller connected to an LED strip, with a smartphone displaying the "Led Chord" app interface, showing various color and pattern controls.

4.2 Audio Input Modes

The SP107E supports two methods for audio input:

- **AUX IN:** When the audio split cable is plugged into the "AUX IN" jack and connected to an audio source, the controller automatically switches to AUX input mode.
- **Built-in Microphone:** If no audio cable is connected to the "AUX IN" jack, the controller automatically switches to microphone input mode, reacting to ambient sounds.

5. Maintenance

To ensure the longevity and optimal performance of your SP107E controller:

- **Cleaning:** Gently wipe the controller with a dry, soft cloth. Avoid using liquid cleaners or solvents.
- **Environment:** Operate and store the controller in a dry environment, away from direct sunlight, extreme temperatures, and high humidity.
- **Connections:** Periodically check all connections to ensure they are secure and free from corrosion.
- **Power Supply:** Always use a compatible DC5V-24V power supply that matches the voltage requirements of your LED lights.

6. Troubleshooting

Problem	Possible Cause	Solution
LEDs do not light up.	No power, incorrect wiring, incompatible LED type, incorrect IC type/pixel count in app.	• Check power supply connection and ensure it's providing the correct voltage. • Verify LED strip wiring (Data, Ground, VCC). • Confirm your LED strip is an addressable type with a supported IC. • In the app, ensure the correct IC type and pixel count are selected.
Incorrect colors or flickering.	Incorrect RGB order or IC type selected in the app. Loose connections.	• In the app, verify the RGB order and IC type settings match your LED strip. • Check all physical connections for looseness.
Cannot connect to the app.	Bluetooth off, app not refreshed, controller not powered, phone compatibility issue.	• Ensure Bluetooth is enabled on your phone. • Open the app and drag down to refresh the device list. • Confirm the SP107E controller is powered on. • Check if your phone's OS version meets the app requirements (iOS 10.0+, Android 4.4+).
Music effects not working.	Incorrect audio input mode, low sound sensitivity, no audio signal.	• If using AUX, ensure the audio cable is properly connected and an audio source is playing. • If using the microphone, ensure no AUX cable is plugged in and there is ambient sound. • Adjust sound sensitivity within the app.

7. Specifications

Feature	Detail
Model	SP107E
Working Voltage	DC5V~24V
Working Current	20mA~130mA
Remote Distance	Up to 30 Meters (Bluetooth)
Max Pixels Controlled	2048 pixels
Product Size	85mm x 45mm x 22mm

Feature	Detail
Control Method	Bluetooth App (Led Chord)
Audio Input	AUX IN, Built-in Microphone
Supported IC Types	WS2811, WS2812B, SK6812, SK6812-RGBW, etc.
Certificates	CE, RoHS
Item Weight	2.72 ounces
Package Dimensions	4.13 x 2.75 x 1.1 inches

8. Warranty and Support

8.1 Warranty Information

Specific warranty details for the TOPXCDZ SP107E controller may vary by region and retailer. Please refer to your purchase documentation or contact your point of sale for detailed warranty terms and conditions.

8.2 Technical Support

For technical assistance, troubleshooting, or further inquiries regarding your TOPXCDZ SP107E Music Bluetooth RGB LED Controller, please contact TOPXCDZ customer support through the retailer's platform or the official brand website, if available.