

## Vrabcry SP611E

# SP611E Bluetooth LED Strip Light Controller User Manual

Model: SP611E | Brand: Vrabcry

## 1. PRODUCT OVERVIEW

The SP611E Bluetooth LED Strip Light Controller is designed to provide versatile control over addressable LED strips such as WS2811 and WS2812B. It offers both app control via Bluetooth for iOS and Android devices and a 38-button infrared (IR) remote control, allowing for flexible operation. This controller supports various dynamic and music synchronization effects, making it ideal for creating diverse lighting atmospheres.



Image 1: The SP611E LED controller unit and its accompanying 38-button infrared remote control.

## Key Features:

- **Music/Sound Synchronization Effects:** Features a built-in high-sensitivity microphone to capture audio signals, allowing LED lights to react to music rhythm. Includes 18 music effects (e.g., full-color rhythm spectrum, gradient energy, Christmas, beat, party). Adjustable length, brightness, and sensitivity.
- **Rich Color Modes (Non-Music):** Offers 142 built-in dynamic effects (e.g., rainbow, twinkling stars, waves) and numerous static color effects. Adjustable speed, effect length, and brightness. Allows saving up to 9 favorite effects and precise RGB color spectrum adjustment in static mode.
- **Timer Function:** Schedule LED lights to turn on/off automatically at specified times, frequencies, and channels. Supports up to 5 timing events. Note: All timing events are deleted when the ECU is powered off.
- **IC Driver Model Support:** Compatible with most LED driver ICs on the market, including WS2811, WS2812B, SK6812RGB (SK6812RGBW not supported), and US1903. Controls up to 600 pixels.
- **Easy Control Methods:** Operable via the control box, mobile application (iOS 10.0+ and Android 4.4+), and infrared remote control.

## 2. SETUP AND INSTALLATION

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Before installation, ensure all components are present and the LED strip is compatible with the controller's voltage requirements. The controller operates on 5-24V DC, which must match your LED strip's voltage. For example, a 5V LED strip requires a 5V power supply.

### 2.1. Wiring Connections:

1. **Power Supply Connection:** Connect a compatible DC power supply (5-24V, depending on your LED strip) to the controller's DC input port. Ensure correct polarity.
2. **LED Strip Connection:** Connect your addressable LED strip to the controller's output port. The controller supports 3-pin LED strips. Ensure the data, ground, and power lines are correctly aligned.
3. **IR Receiver:** The controller includes an IR receiver for the remote control. Ensure it is not obstructed for optimal remote performance.



Image 2: The SP611E controller unit, remote, and a diagram illustrating the wiring connections for the LED strip and power supply.

## 2.2. App Installation:

To utilize the full features of the SP611E controller, download the dedicated mobile application.

- Scan the QR code provided on the controller unit or in the product packaging to download the app.
- Alternatively, search for the app name (usually indicated in the product manual or packaging) in your device's app store (Apple App Store for iOS, Google Play Store for Android).
- Ensure your device meets the minimum OS requirements: iOS 10.0 or later, Android 4.4 or later.
- Enable Bluetooth on your mobile device and open the app. The app should automatically connect to the controller.

## 3. OPERATING INSTRUCTIONS

### 3.1. App Control:

The mobile application provides comprehensive control over your LED strip. Once connected, you can:

- **Music Synchronization:** Select from 18 music effects. The built-in microphone will pick up sound, and the lights will react. Adjust sensitivity, brightness, and effect length.
- **Dynamic Modes:** Choose from 142 dynamic effects like rainbow, waves, and twinkling. Customize speed, length, and brightness.
- **Static Colors:** Select a single color from a wide spectrum. Fine-tune RGB values for precise color selection.
- **Timer Function:** Set up to 5 scheduled events for automatic power on/off.

- **Device Management:** Rename the device, calibrate RGB channel sequence, and manage grouping for multiple controllers.

### 3.2. IR Remote Control:

The 38-button IR remote provides direct control without needing the app. Ensure the remote has a battery (not included) and is pointed towards the controller's IR receiver.



Image 3: The SP611E controller unit showing its physical buttons for basic control.

Key remote functions include:

- **ON/OFF:** Power the LED strip on or off.
- **Color Buttons:** Directly select various static colors (R, G, B, W, and other preset colors).
- **Mode Buttons:** Cycle through dynamic effects.
- **Brightness/Speed Adjustment:** Increase or decrease brightness for static colors, or speed for dynamic effects.
- **Music Modes:** Activate various music synchronization effects.
- **Length Adjustment:** Adjust the length of certain effects.

## 4. MAINTENANCE

To ensure the longevity and optimal performance of your SP611E controller, follow these simple maintenance guidelines:

- Keep the controller and remote clean and dry. Avoid exposure to moisture or extreme temperatures.
- Do not place the controller near heat sources or in direct sunlight.
- Ensure proper ventilation around the controller to prevent overheating.
- When replacing the remote control battery, use the specified type (battery not included with product).

- Avoid physical impact or crushing of the controller unit.

## 5. TROUBLESHOOTING

If you encounter issues with your SP611E controller, please refer to the following common troubleshooting steps:

- **LED Strip Not Lighting Up / Partial Lighting:**
  - Verify that the power supply voltage matches the LED strip's voltage (e.g., 5V strip needs 5V power supply). **Incorrect voltage can damage the LED strip and controller.**
  - Check all wiring connections (power, data, ground) between the power supply, controller, and LED strip for secure and correct polarity.
  - Ensure the LED strip itself is functional by testing it with a known working controller or power source if possible.
  - Confirm the LED strip's IC model is supported by the SP611E (e.g., WS2811, WS2812B, SK6812RGB). SK6812RGBW is not supported.
- **Remote Control Not Responding:**
  - Ensure the remote has a working battery and it is inserted correctly.
  - Point the remote directly at the controller's IR receiver and ensure there are no obstructions.
  - Try operating the controller via the mobile app to confirm the controller unit is functional.
- **App Connection Issues:**
  - Ensure Bluetooth is enabled on your mobile device.
  - Restart the app and/or your mobile device.
  - Ensure the controller is powered on.
  - Check if your mobile device's operating system meets the minimum requirements (iOS 10.0+, Android 4.4+).
- **Music Sync Not Working:**
  - Ensure the built-in microphone on the controller is not obstructed.
  - Increase the volume of the music source.
  - Adjust the sensitivity setting within the app.

If the problem persists after trying these steps, please contact customer support for further assistance.

## 6. SPECIFICATIONS

| Feature               | Specification                  |
|-----------------------|--------------------------------|
| Product Name          | SP611E Bluetooth Music Control |
| Control Mode          | APP + Infrared Remote Control  |
| Operating Temperature | -20°C to 60°C (-4°F to 140°F)  |
| Working Current       | 2mA - 14mA                     |
| Output Channel        | RGB 3 channels                 |

| Feature                 | Specification   |
|-------------------------|---|
| Max Output Current      | 2A/channel (RGB)  |
| Max Output Power        | 5V: <30W; 12V: <72W; 24V: <144W                               |
| Max Control Pixels      | 600 pixels  |
| Input Voltage           | 5-24V DC (matches LED strip voltage)                          |
| Supported IC Models     | WS2811, WS2812B, SK6812RGB, US1903 (SK6812RGBW not supported) |
| Connectivity Technology | Bluetooth   |
| Material                | Plastic   |
| Item Weight             | 54.4 grams (approx. 1.92 oz)                                  |
| Package Dimensions      | 12.5 x 5.49 x 2.01 cm (approx. 4.92 x 2.16 x 0.79 inches)     |

*Note: LED strip and power supply are not included. Remote control battery is not included.*

## 7. WARRANTY AND SUPPORT

For any questions regarding the SP611E Bluetooth LED Controller, please do not hesitate to contact the seller or manufacturer. Refer to your purchase documentation for specific warranty terms and contact information.

We are committed to providing excellent customer service and support for our products.