

MALIIGAZA HC-SP548E

MALIIGAZA HC-SP548E WiFi Bluetooth Music Pixel LED Smart Controller User Manual

Model: HC-SP548E

1. INTRODUCTION

The MALIIGAZA HC-SP548E is a versatile WiFi and Bluetooth enabled smart controller designed for addressable RGB LED pixel strip lights. It offers multiple control methods including a dedicated mobile application, an RF remote control, and a physical control box. This controller supports various LED driver IC models and integrates with smart home systems like Amazon Alexa and Google Assistant, providing dynamic lighting effects synchronized with music.

This manual provides detailed instructions for the installation, operation, and troubleshooting of your HC-SP548E controller to ensure optimal performance and user experience.

2. PACKAGE CONTENTS

Please verify that all items are present in your package:

- 1 x MALIIGAZA HC-SP548E LED Controller
- 1 x RF Remote Control
- 1 x User Manual (This document)

3. PRODUCT OVERVIEW

The HC-SP548E controller features a compact design with essential ports and buttons for easy setup and control. The included RF remote provides convenient wireless operation.



Image 3.1: The MALIIGAZA HC-SP548E LED Controller and its accompanying RF Remote Control. The controller is a white rectangular unit with a short cable ending in a 3-pin connector, and three buttons labeled M, ON/OFF, and S. The remote is a white, elongated device with numerous colored and labeled buttons for various functions.

Controller Components

Introduction to Controller:

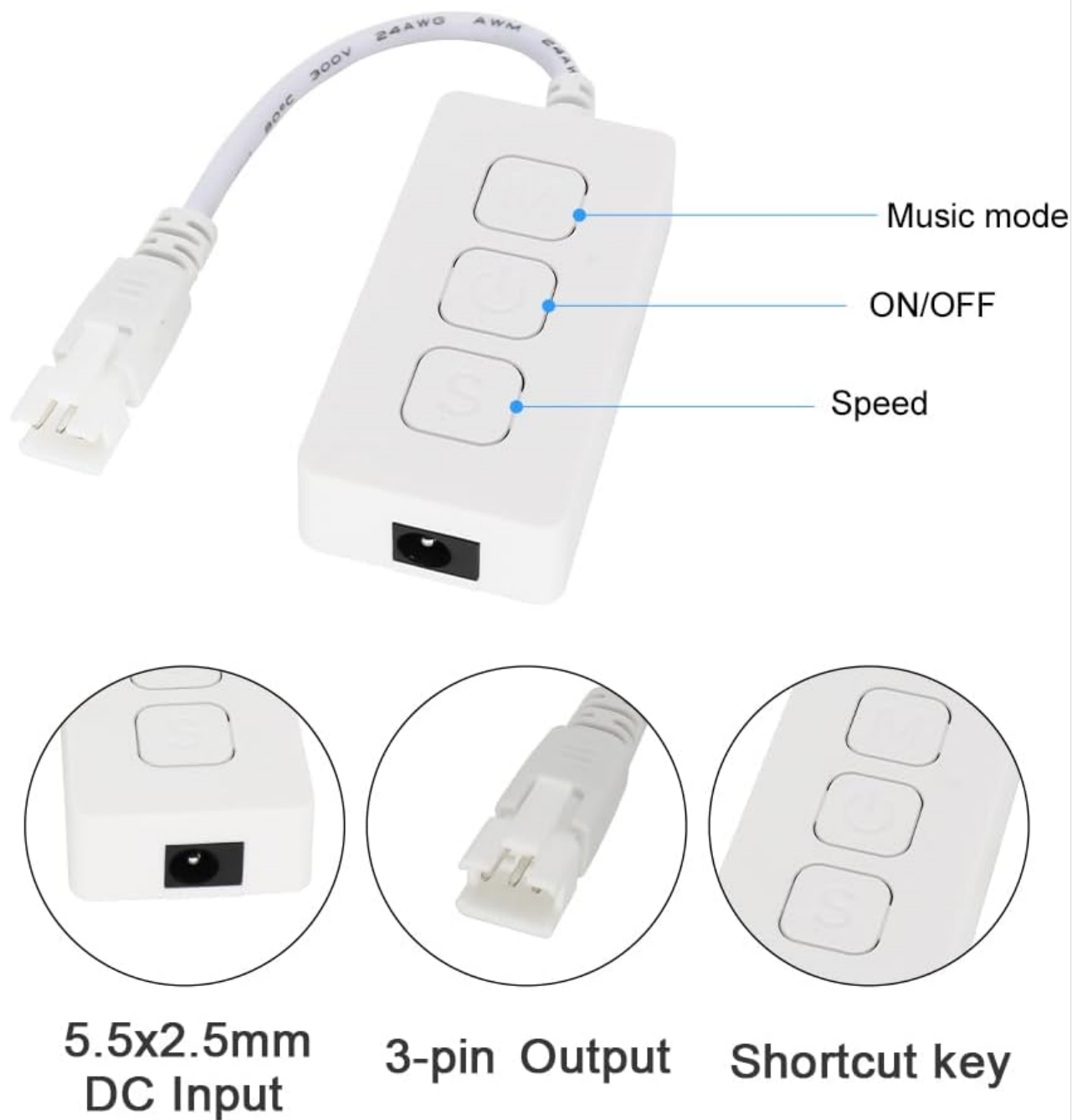


Image 3.2: Detailed view of the HC-SP548E controller highlighting its features. It shows the 5.5x2.5mm DC Input port, the 3-pin Output connector for the LED strip, and the three control box buttons: 'M' for Music mode, 'ON/OFF' for power, and 'S' for Speed/Mode selection.

- **5.5x2.5mm DC Input:** Power input port for the controller.
- **3-pin Output:** Connector for addressable LED strip lights.
- **Control Box Buttons:**
 - **M (Music Mode):** Activates music synchronization effects.
 - **ON/OFF:** Powers the LED strip on or off.
 - **S (Speed/Mode):** Adjusts the speed of dynamic effects or cycles through modes.

RF Remote Control Functions

The RF remote control provides comprehensive control over the LED strip. Refer to Image 3.1 for button layout.

- **ON/OFF:** Power on/off the LED strip.

- **1H/2H:** Timer functions (if supported by firmware).
- **Speed Up/Down:** Adjusts the speed of dynamic effects.
- **Mode Up/Down:** Cycles through dynamic lighting modes.
- **AUTO:** Activates automatic mode cycling.
- **Music Mode Buttons:** Activates various music synchronization effects.
- **Brightness Up/Down:** Adjusts the overall brightness.
- **W (White):** Activates pure white light.
- **Color Selection Buttons:** Direct access to various static colors (Red, Green, Blue, Yellow, Cyan, Pink, etc.).

4. SETUP

4.1 Wiring Instructions

1. **Connect LED Strip:** Connect your addressable RGB LED strip to the 3-pin output connector of the HC-SP548E controller. Ensure correct polarity (Data, Ground, VCC).
2. **Connect Power Supply:** Connect a compatible DC power supply (5V-24V) to the 5.5x2.5mm DC Input port on the controller.
3. **Voltage Matching:** **Crucially, the output voltage of the power supply must match the voltage requirements of your LED strip.** For example, if you are using a 24V LED strip, you must use a DC 24V power supply. Using an incorrect voltage can damage the LED strip or the controller. (LED strip and power supply are not included).

4.2 App Download and Initial Connection

The HC-SP548E controller is primarily controlled via the BanlanX mobile application.

Application introduction



BanlanX

DOWNLOAD

The LED BanlanX app from app store

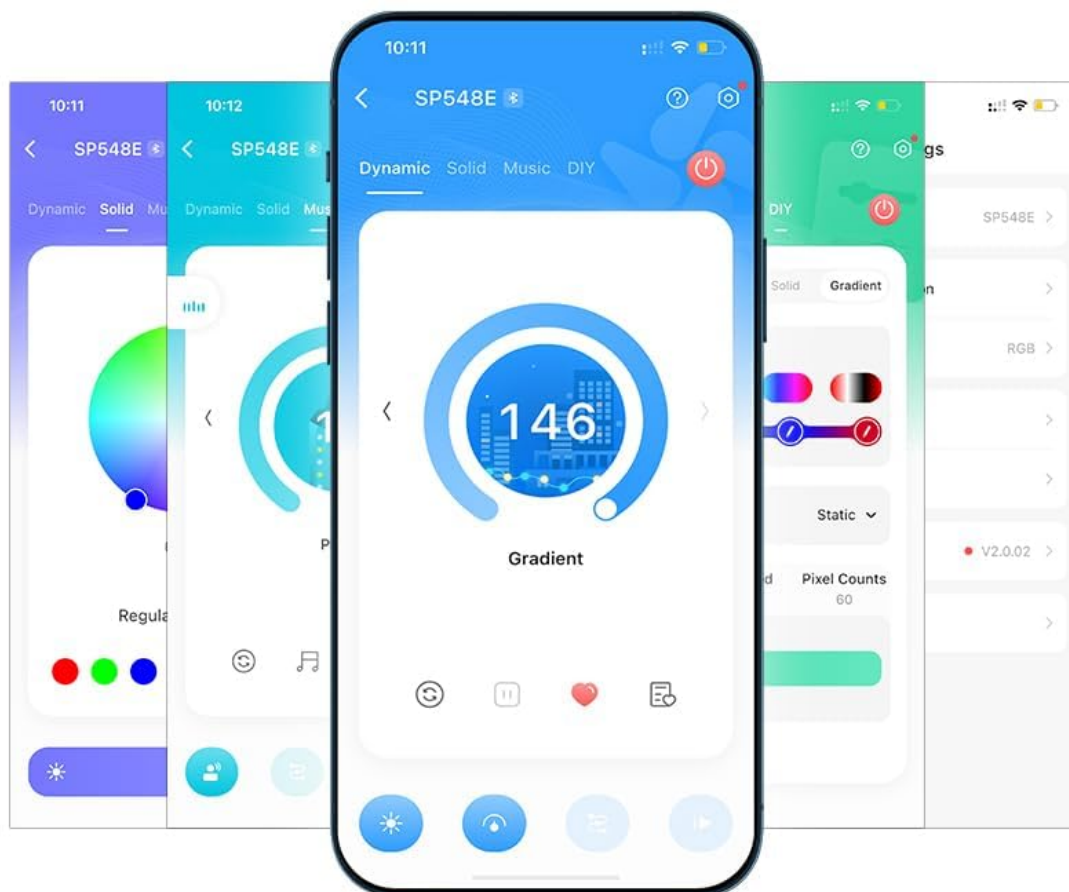


Image 4.1: Screenshot showing the 'Application introduction' with a QR code for downloading the BanlanX app from the app store. Below it, multiple screenshots of the BanlanX app interface are displayed, illustrating dynamic, solid, music, and DIY lighting control options for the SP548E controller.

1. **Download the BanlanX App:** Search for "BanlanX" in the App Store (for iOS) or Google Play Store (for Android 4.4/iOS 1.0 or higher). Alternatively, scan the QR code shown in Image 4.1 or visit <https://download.ledhue.com/page/scenex/> to download the app.
2. **Power On Controller:** Ensure your HC-SP548E controller is powered on and connected to your LED strip.
3. **Open BanlanX App:** Launch the BanlanX app on your smartphone.
4. **Add Device:** The app should automatically detect the controller via Bluetooth. Follow the on-screen prompts to add the device. You may need to connect the controller to your 2.4GHz Wi-Fi network for remote cloud control and smart assistant integration.

5. OPERATING INSTRUCTIONS

5.1 App Control (BanlanX)

The BanlanX app offers extensive control over your LED strip lights.

- **Dynamic Effects:** Choose from 146 built-in dynamic effects, including rainbow, twinkling stars, and waves. Adjust the speed, effect length, and brightness as needed. You can also collect up to 9 favorite effects for quick access.

- **Static Colors:** Select from a wide range of static colors by sliding RGB values.
- **Color DIY:** Create custom solid or gradient color effects using the DIY function within the app.
- **Pixel Counts:** Configure the number of pixels in your LED strip for accurate effect display.



Image 5.1: An example of a chasing light strip effect (running light/breathing light) displayed in a room, controlled via the BanlanX app. The app interface shows options for DIY effects, brightness, speed, and pixel counts.

5.2 RF Remote Control

Use the RF remote for direct control without needing the app. Refer to Section 3 for button functions.

5.3 Control Box Buttons

The physical buttons on the controller provide basic control:

- Press 'M' to cycle through music modes.
- Press 'ON/OFF' to toggle power.
- Press 'S' to adjust effect speed or cycle through modes.

5.4 Music Rhythm Synchronization

The controller can synchronize lighting effects with music.

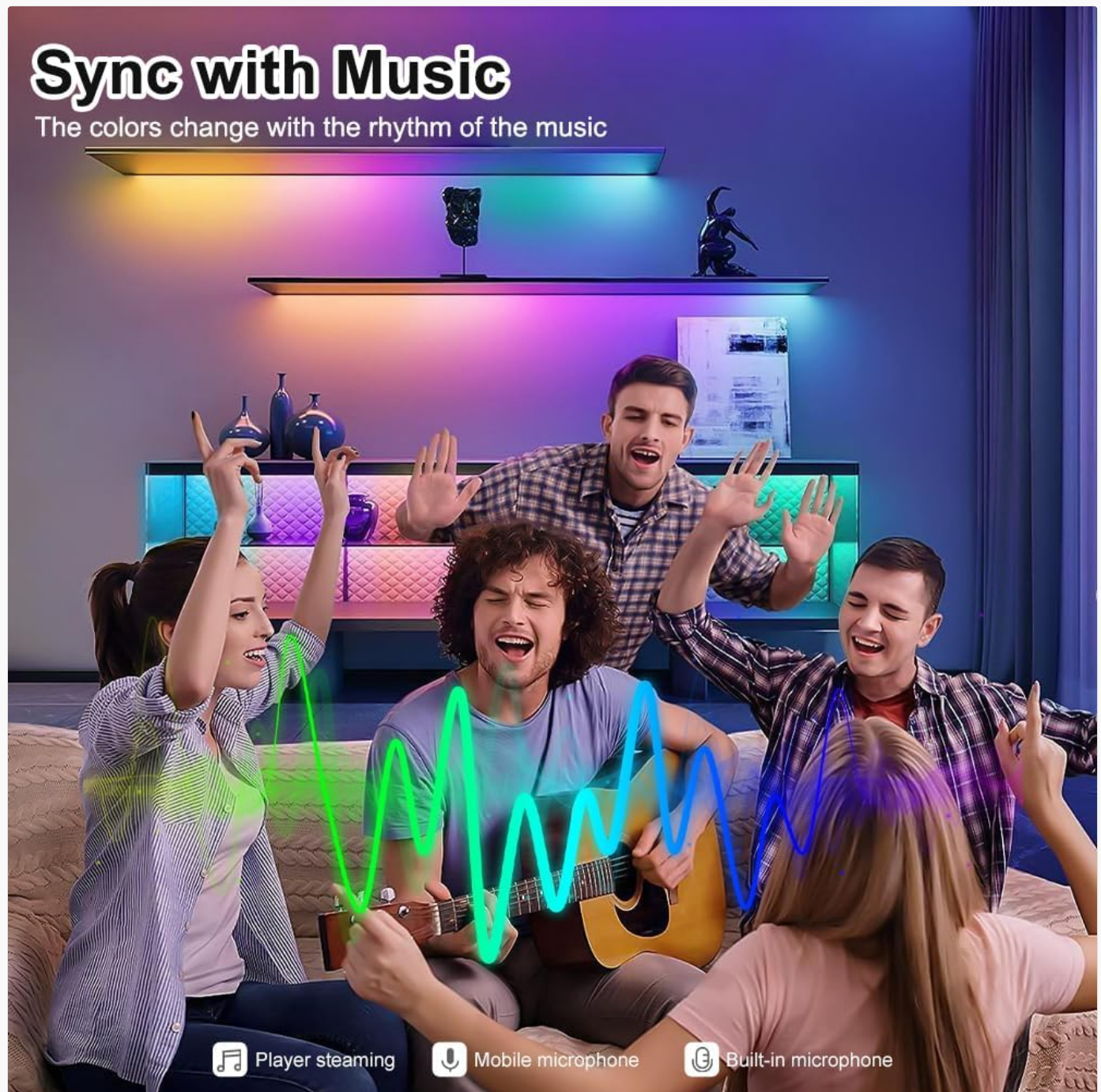


Image 5.2: People enjoying LED strip lighting synchronized with music. Icons indicate three methods of music capture: Player streaming, Mobile microphone, and Built-in microphone.

There are 3 types of music capture methods:

- **Phone Microphone:** Uses your smartphone's microphone to detect ambient sound.
- **Player Streaming:** Synchronizes with music played through your device.
- **Built-in Microphone:** The controller has a high-sensitivity microphone that automatically adjusts light and spectrum according to ambient sound.

Choose from 18 different music effects within the BanlanX app.

5.5 Voice Activation (Alexa/Google Assistant)

Integrate your controller with Amazon Alexa or Google Assistant for voice control.

Voice Control

Third party Voice ControlControlling more convenient

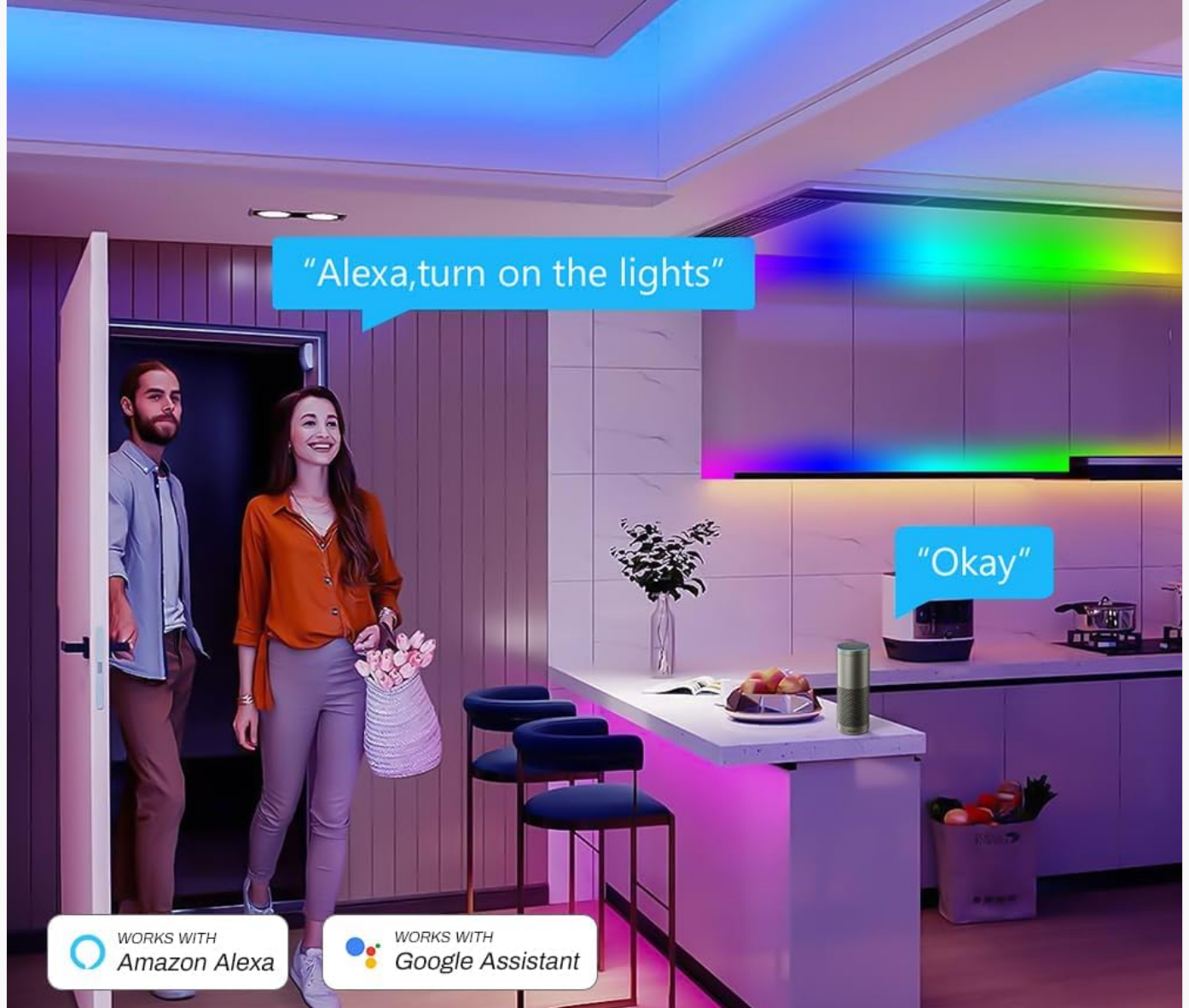


Image 5.3: An illustration of voice control in a home setting, with a person speaking to an Alexa device. The image includes logos for "Works with Amazon Alexa" and "Works with Google Assistant."

1. Ensure your controller is connected to your Wi-Fi network via the BanlanX app.
2. Open your Alexa or Google Home app.
3. Add the "BanlanX" skill/service.
4. Discover devices.
5. You can now use voice commands such as "Alexa, turn on the lights" or "Hey Google, change light color to blue."

5.6 Remote Cloud Control

Once connected to your home Wi-Fi network, you can control your LED lights remotely from anywhere using the BanlanX app, even when you are away from home.

Smart phone 4G/5G Control

3G/4G/5G signal control, you can control the home lights at any time and any place



Image 5.4: A person using a smartphone to control home lighting remotely via 4G/5G signal. An inset image shows a bedroom with LED strip lights, indicating remote control functionality.

5.7 Dimming

The LED strip brightness can be adjusted from 0% to 100% using either the BanlanX app or the RF remote control.



Image 5.5: An illustration demonstrating the 0-100% dimmable feature of the LED lights, controllable via both the BanlanX app and the RF remote. Different brightness levels (20%, 40%, 60%, 80%, 100%) are shown.

6. TROUBLESHOOTING

- **LED Strip Effect Stuck or Dim:** If the lighting effect appears stuck or the end of the LED strip becomes dim, this indicates a voltage drop. It is a normal physical phenomenon for longer LED strips. To resolve this, you may need to add additional voltage injection points along the LED strip to maintain consistent brightness and effect quality.
- **Limited Google Home Functionality:** Some users may experience limited functionality with Google Home, where only ON/OFF commands are supported, and color or brightness adjustments are unavailable. This can be due to specific integration limitations or ongoing updates. Ensure your BanlanX app and Google Home app are updated to the latest versions.
- **Connectivity Issues:** Ensure your smartphone's Bluetooth is enabled for initial setup. For Wi-Fi control, confirm your router is broadcasting a 2.4GHz network, as the controller may not support 5GHz Wi-Fi. Restarting the controller and your router can often resolve temporary connection problems.
- **Incorrect LED Driver IC:** Verify that your LED strip uses a supported driver IC (e.g., WS2811, WS2812B, US1903,

WS2801). The controller supports almost all LED driver chips in the market.

- **Power Supply Voltage Mismatch:** Double-check that the power supply voltage matches the LED strip's voltage (e.g., 24V strip requires a 24V power supply). An incorrect voltage will prevent the LED strip from functioning correctly or may cause damage.

7. SPECIFICATIONS

Feature	Detail
Model Number	HC-SP548E
Brand	MALIIGAZA
Input Voltage	DC 5V-24V
Max Wattage	144 Watts
Control Methods	App (BanlanX), RF Remote Control, Control Box Buttons, Voice (Alexa/Google Assistant)
Connectivity	WiFi (2.4GHz), Bluetooth
Supported ICs	WS2811, WS2812B, US1903, WS2801, and most other addressable LED driver chips
Max Pixels Controlled	Up to 1200 pixels
Indoor/Outdoor Usage	Indoor
Material	Plastic
Dimensions	4.92 x 1.38 x 1.1 inches (Controller)
Weight	2.47 ounces (Controller)

8. MAINTENANCE

The MALIIGAZA HC-SP548E controller requires minimal maintenance.

- Keep the controller in a dry environment, away from moisture and extreme temperatures.
- Clean the exterior with a soft, dry cloth if necessary. Do not use harsh chemicals or abrasive cleaners.
- Ensure proper ventilation around the controller to prevent overheating.
- Regularly check all connections to ensure they are secure.

9. SUPPORT

For further assistance or technical support, please refer to the MALIIGAZA brand store on Amazon or contact customer service through your purchase platform. Ensure you have your product model number (HC-SP548E) and purchase details ready when seeking support.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question

and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question