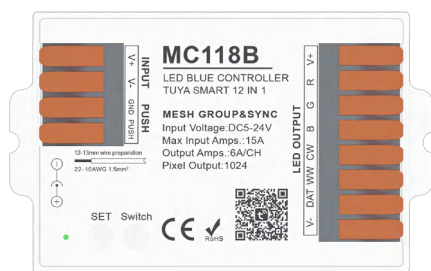
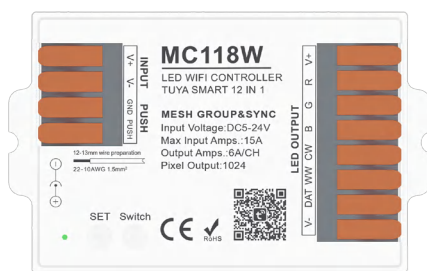


MC118X | LED CONTROLLER TUYA SMART 12 IN 1

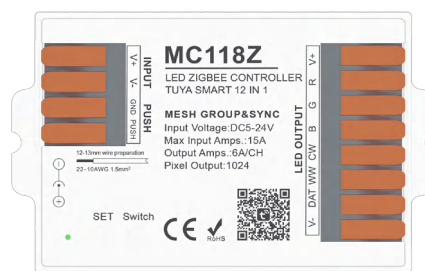
tuya MESH CE RoHS



MC118B-BLUETOOTH



MC118W-WIFI



MC118Z-ZIGBEE

1. The MC118X supports 12 different types of LED strips and lighting specifications, covering mainstream LED strip categories such as PWM/SPI single-color, color temperature, RGB, RGBW, and RGB CCT. A single device can replace multiple specialized controllers.
2. This device uses 2.4GHz (MESH wireless self-organizing network technology) based on a mature MESH architecture. Devices can achieve real-time synchronization without delay, and it natively supports grouping and group management. Users can freely divide lighting zones to achieve single-zone control, multi-zone linkage, and unified dimming across all scenes. Under the MESH protocol ecosystem, there are no hierarchical restrictions. All remote controls, sensors, and controllers are within the same self-organizing network. Peripheral signals can be relayed through any node, avoiding issues such as signal loss or blind spots caused by walls that occur with ordinary 2.4G remotes. Even in large apartments, multi-story buildings, or large commercial spaces, full-space peripheral linkage control can be achieved without additional signal amplifiers.
3. At the same time, you can choose to equip the device with one of three mainstream smart modules: Tuya Bluetooth, Wi-Fi, or ZigBee.

Choose the Bluetooth module (MC118B) for quick pairing and debugging via direct close-range Bluetooth connection. Choose the Wi-Fi module (MC118W) for direct connection to the local area network to achieve remote cloud control. Choose the ZigBee module (MC118Z) to connect to a ZigBee smart gateway and integrate into a whole-home smart home ecosystem, fully covering different customer wiring conditions and smart renovation requirements.

Compatible remote controls A single device can support 10 remote controls at the same time



MR10X Series



MR11X Series



MR011 DIM/CCT



MR333 RGB



MR20X Series



MR02X Series



MR501-Human body sensor

Supports multiple MESH wireless remote controls of the same system, allowing users to freely choose according to scene requirements: wall-mounted 86-type button remote control, handheld portable multi-zone remote control, knob-type stepless dimming remote control, etc. All can be paired and used directly without additional wiring, and can be installed by simply sticking them in any location to achieve zone dimming and one-key scene activation.

Compatible voice assistants Support language command switch, brightness, color.



小米小爱



小智管家



天猫精灵



百度小度



Amazon Alexa



Yandex Alice



Google Assistant

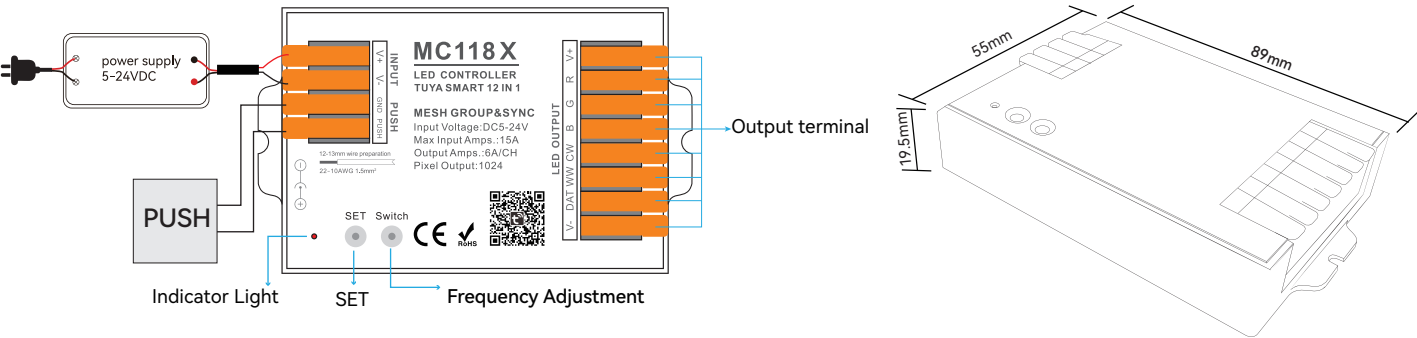
peculiarity

- Supports multiple control methods, including APP control, voice commands via smart speakers, PUSH buttons, and MESH series remote controllers.
- Parameters such as LED model, output segments, PWM frequency (1/4/8/16kHz), and SPI color correction can be configured through Tuya Smart/Smart Life; provides color temperature and brightness adjustment, preset scene mode selection, and supports music rhythm mode, multi-segment LED strip music effects, and matrix LED music spectrum effects. Enables intelligent dimming and ambiance control.
- Supports pairing with multiple devices, allowing simultaneous control of multiple units. One remote controller can manage and synchronize up to 500 controllers. Each controller can be controlled by up to 10 remote controllers. (Control distance is 30 meters)
- Supports OTA (Over-The-Air) remote firmware upgrades. Device firmware can be updated online through the App to obtain feature optimizations and performance improvements, ensuring long-term stable operation of the device.

Device parameters

Input voltage	DC 5-24V	Environment	
Input current	6/CH; 15A max	Operating temperature	Ta:-20℃~+60℃
Pixel Output	1024	Maximum temperature of the case	Tc:+65℃
Access signal	MESH+BLUETOOTH/WIFI/ZIGBEE	IP rating	IP20
Control the distance	30M	Wrap	
Size	L89XW55XH19.5mm	Package size	L6XW9.3XH2.4cm/0.07kg
Authentication	CE,ROHS	Box size (100 pcs)	L32XW26XH20cm/8kg

Equipment mechanism and installation



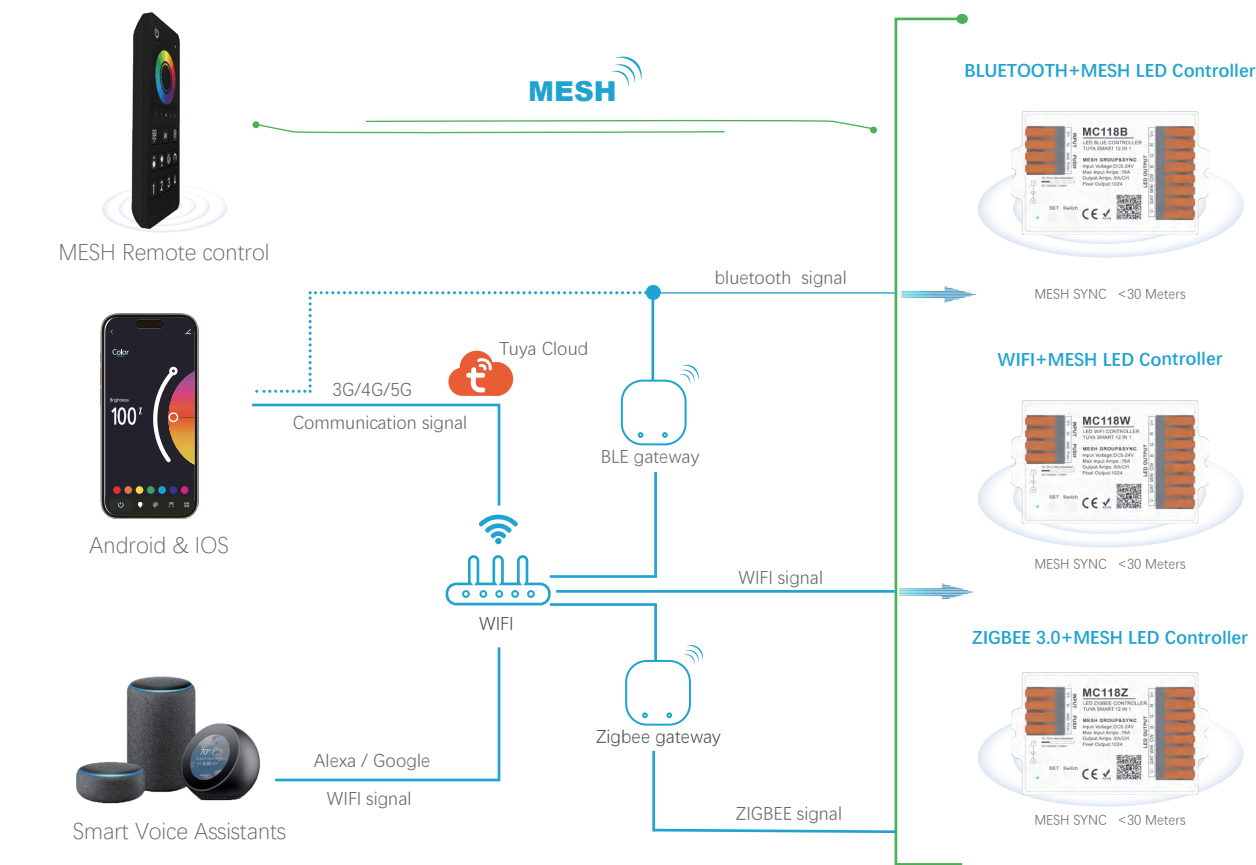
Device Wiring

Different types of LEDs correspond to different output ports; the ports match the selected LED type, along with the following specific port descriptions.

LED Type		Wiring port								Main parameters
		V-	DAT	WW	CW	B	G	R	V+	
1	1CH PWM DIM				✓				✓	Output:6A/CH
2	2CH PWM CCT			✓	✓				✓	Output:6A/CH
3	3CH PWM RGB					✓	✓	✓	✓	Output:6A/CH Max 15A
4	4CH PWM RGBW				✓	✓	✓	✓	✓	Output:6A/CH Max 15A
5	5CH PWM RGCCT			✓	✓	✓	✓	✓	✓	Output:6A/CH Max 15A
6	SPI DIM	✓	✓						✓	Max Pixels:1024
7	SPI CCT	✓	✓						✓	Max Pixels:1024
8	SPI RGB	✓	✓						✓	Max Pixels:1024
9	SPI RGBW	✓	✓						✓	Max Pixels:1024
10	SPI RGCCT	✓	✓						✓	Max Pixels:1024
11	SPI RGB+1CH PWM DIM	✓	✓		✓				✓	Output:6A/CH Max Pixels:1024
12	SPI RGB+2CH PWM CCT	✓	✓	✓	✓				✓	Output:6A/CH Max Pixels:1024

Schematic diagram of the control connection

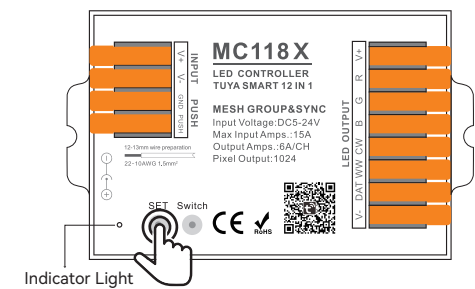
MESH wireless communication technology



Controller Configuration Function Description

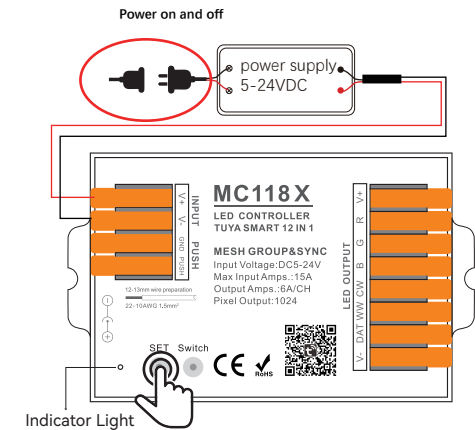
1. Controller Configuration Function Description

1-1. Controller Configuration Settings - SET Button



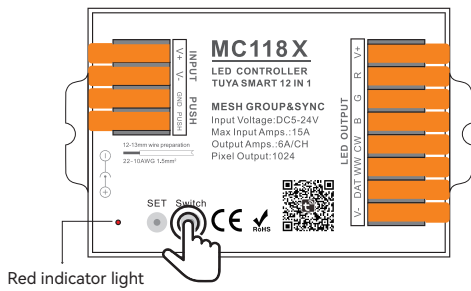
function	'SET' button method
ON/OFF	Short press 'SET' (release within 1 second)
Pairing Remote control	Press and hold the 'SET' button on the controller for 1-3 seconds, then release the button after the controller indicator flashes rapidly. Then, within 30 seconds, press any group button on the remote to complete the remote pairing process.
Network configuration	Press and hold the 'SET' button on the controller for 3-5 seconds, then release the button after the controller indicator light flashes slowly. Opening the TUYA app will trigger automatic network pairing, which lasts for 30 seconds.
Device Reset	Press and hold the 'SET' button on the controller for 7-10 seconds, the controller indicator light will 'flash rapidly → flash slowly → turn off → light up again,' indicating that the reset was successful and all paired remote controls and APP data have been cleared.

1-2. Controller Configuration Settings - Power On/Off Function Description



function	Power-on and power-off method
ON/OFF	Not supported
Pairing Remote control	After 3 consecutive power-on, the power is turned off, and the controller indicator flashes quickly. The controller is in the pairing state of the remote control, the remote control triggers the effective code matching time for 3 seconds, and then press any grouping button on the remote control within 30 seconds to complete the remote control pairing process.
Network configuration	After 5 consecutive power-on, the power is turned off, the controller indicator light flashes slowly, and the device is turned ON TUYA APP will trigger the automatic distribution network, and the distribution network status lasts for 30 seconds.
Device Reset	After 10 consecutive power-on and power-off, the controller indicator light will 'blink quickly one by one, blink slowly one by one, turn off one by one, and light up again,' indicating that it has been successfully reset and all paired remote controls and APP data have been cleared.

1-3. Controller Configuration Settings - PWM-Frequency Adjustment.



2. Tuya smart download

Download and install the [Smart Life] or [Tuya Smart] APP

Search for [Tuya Smart] on Apple or Google Play or scan the QR code below to download and install the app.

Please click on the "Sign Up" button to create an account and use it for the first time, if you already have an account, log in directly.

Please download the corresponding Tuya/Smart Life APP according to your region.



Scan the QR code to download the APP



Smart Life APP



Tuya Smart APP

3. Connect to your smartphone

MC118W-WIFI Connection process

1. Make sure your smartphone is working under a WLAN network.
2. Open the login APP, press and hold "SET" to add a device, if it is not found, please click "+" in the upper right corner, and then manually select "Add Device", when adding, you need to enter the WiFi password of your smartphone connection, and wait for 5-10 seconds to complete the connection after successfully entering.
3. Once the connection is successful, the new device will be displayed on the home page, then tap on the device and enter the control interface to do more.

Follow these steps to complete the connection:

Add a device

Create Scene

Add Quick Toggle Card

Scan

Add Device

A device is being added

WIFI SMART 12-IN-1

Click Add device

Add to

Please enter your Wi-Fi information

Please select the device to work Wi-Fi and enter the password

MC118B-BLUETOOTH Connection process

1. Make sure your smartphone is working under a WLAN network.
2. Open the login APP, press and hold "SET" to add a device, if you don't find it, please click "+" in the upper right corner, then manually select "Add Device", wait for 5-10 seconds to complete the connection.
3. Once the connection is successful, the new device will be displayed on the home page, then tap on the device and enter the control interface to do more.

Follow these steps to complete the connection:

Add a device

Create Scene

Add Quick Toggle Card

Scan

Add Device

A device is being added

WIFI SMART 12-IN-1

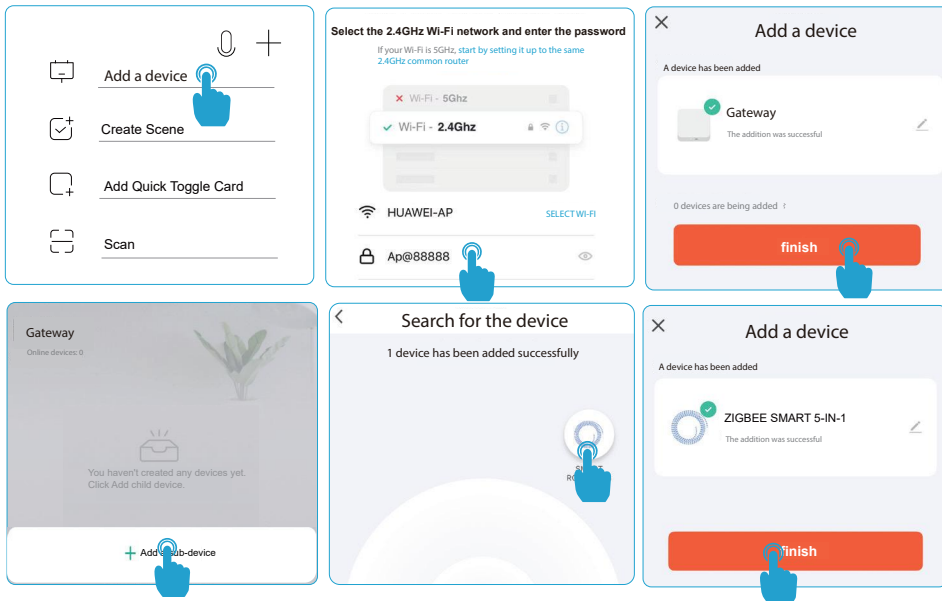
Click Add device

Add to

MC118Z-ZIGBEE Connection process

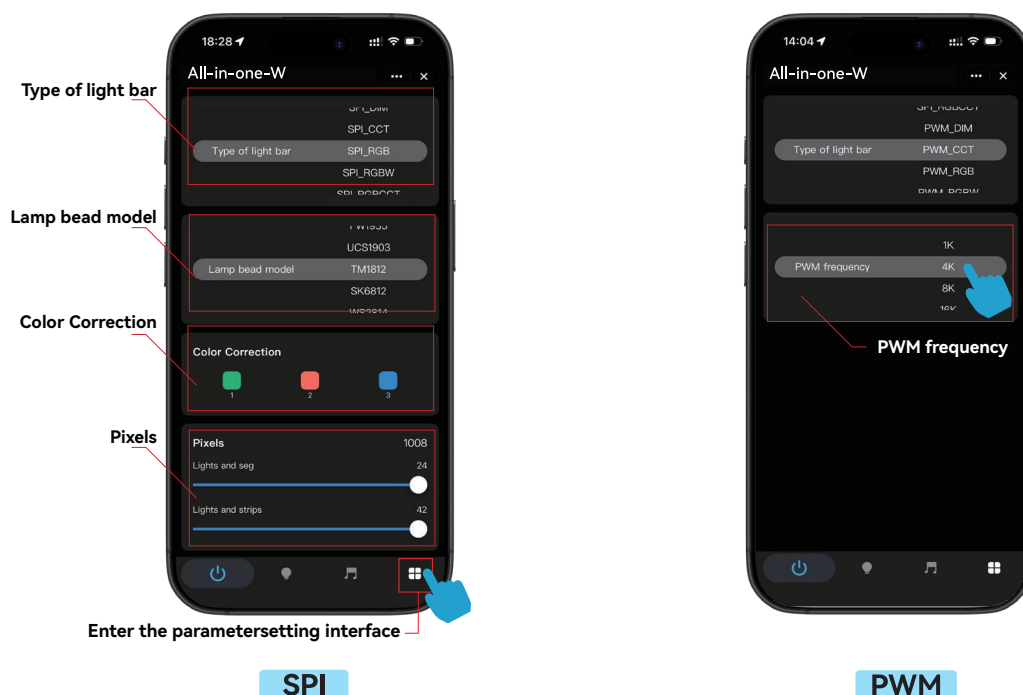
1. Make sure your smartphone is working under a WLAN network.
2. Open the Tuya APP, select Manually Add Gateway Central Control, select Zigbee Gateway, and enter the WIFI password to connect (Incorrect WIFI password will cause the connection to fail, non-2.4G network WIFI also will cause the connection to fail).
3. Reset the Zigbee gateway device, the red and blue lights of the Zigbee gateway are always on, turn on the power supply, please confirm that the red light is flashing, the blue light is always on, and the red light is always on after the connection is successful.
4. Click Done to enter the gateway control interface, add sub-devices, and confirm that the sub-devices belong to the network configuration mode (please place the gateway, controller, and smartphone close to each other for quick speed Pairing identification) long press the controller "SET" for 5 seconds, after the connection is successful, the sub-device will be displayed on the home page, then tap the device and enter the control interface to do more.
5. After the controller is installed in the APP, we can easily control the LED lighting with the APP.

Follow these steps to complete the connection:



Introduction to the functions of the APP interface

The MC118X is a multifunctional LED controller that works with 12 different types of LEDs. To make sure it runs properly, adjust the LED settings based on the type of LED you're using.



Type of light bar:

Compatible with 12 different types of LEDs, which are:SPI-DIM,SPI-CCT,SPI-RGB,SPI-RGBW,SPI-RGBCCT,PWM-DIM,PWM-CCT,PWM-RGB,PWM-RGBW,PWM-RGBCCT,SPI-RGB+PWM-DIM,SPI-RGB+PWM-CCT.

SPI--Lamp bead model:

Choose the IC based on the type of driver IC used by the LED.

SPI--Pixels:

Set the number of segments and LEDs on the light strip

SPI--Color Correction:

The purpose of color correction is to align the controller's commands with the actual colors displayed by the LED.

--Enter the color correction interface.

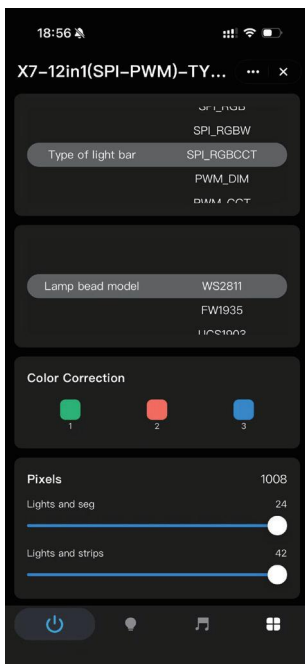
--Within the color correction interface, select the color button that matches the actual color displayed by the LED. For example, if the LED displays red light, select the red button. Continue this process for all color buttons.

The correction interface automatically adapts to the selected LED type, providing intuitive correction options. For instance, RGBCCT type LED will display options for five colors, while RGB type LED will show three, ensuring users can quickly and accurately adjust colors.

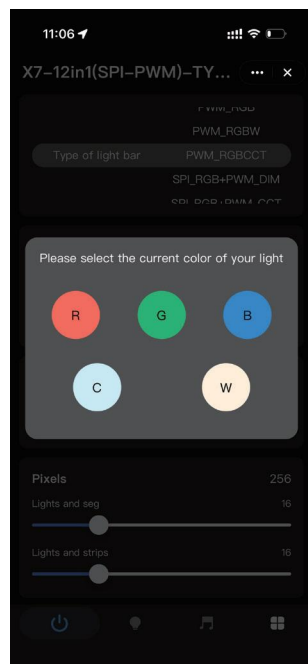
PWM--PWM frequency:

Sets the switching frequency of the PWM output signal. Available options: 1 kHz, 4 kHz, 8 kHz, 16 kHz.

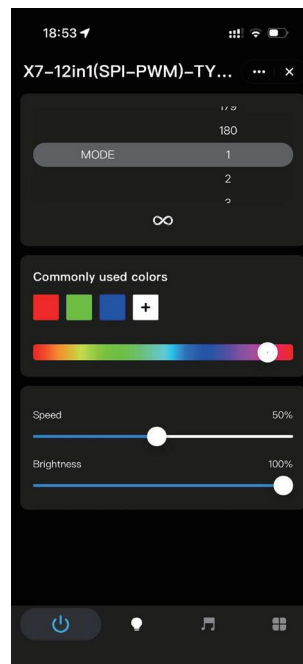
APP interface



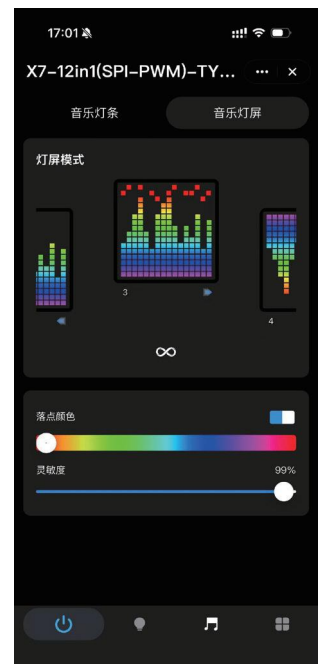
Parameter Settings



Color Correction



Mode Interface



Music Mode

Safety Precautions

1. Please do not use this device in areas with large metal surfaces or environments with strong electromagnetic waves, otherwise the control distance may be severely affected.
2. Please check whether the input voltage of the constant voltage power supply meets the requirements of the controller, and check whether the connections of the cathode and anode are correct.
3. Always disconnect the power before wiring, rewiring, or maintenance. Live operation is strictly prohibited to avoid short circuits or electric shocks.
4. Please confirm that the voltage and power of the connected light strips/fixtures match the rated parameters of the controller. Overloading is strictly prohibited to avoid damaging the controller or power supply.
5. Before use, please verify whether the type of light strip (PWM/SPI, single color temperature / RGB/RGBW/RGBCCT) corresponds to one of the 12 specifications supported by the controller. For SPI-type light strips, please confirm the IC model and signal direction.
6. The controller should be installed in a dry, ventilated place free of corrosive gases, avoiding high temperatures, high humidity, rain, and direct sunlight. For waterproof protection, please choose a waterproof enclosure (based on the actual product protection level).