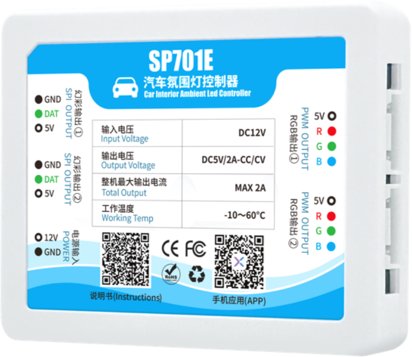
Car Interior Ambient Led Controller User Manual


SP701E
汽车氛围灯控制器
Car Interior Ambient Led Controller
GND
DAT
5V
幻彩输出① SPI OUTPUT
GND
DAT
5V
幻彩输出② SPI OUTPUT
12V
GND
电源输入 POWER
输入电压 Input Voltage
DC12V
输出电压 Output Voltage
DC5V/2A-CC/CV
整机最大输出电流 Total Output
MAX 2A
工作温度 Working Temp
-10～60°C
说明书(Instructions)
手机应用(APP)
5V
R
G
B
PWM OUTPUT RGB输出①
5V
R
G
B
PWM OUTPUT RGB输出②

SP701E is a highly specialized LED controller designed specifically for LED decorations within the vehicle cabin. It's independently developed brand-new visual APP interface is tailored for automotive styling, providing users with an exceptional lighting atmosphere experience and convenient operation.

Controller Description

1.Product Features

Visual APP Interface

Provides an intuitive user experience

Preview Lighting Effects

Convenient for users to adjust

Supports Automatic Frame Synchronization

Achieves automatic synchronization of lighting effects

No Need to Distinguish Between Master/Slave

Simplifies configuration and facilitates system operation

Lamp Voltage Combination

Meets the power requirements of various LED lamps

Whole Vehicle Global Control

Whole vehicle mode / Partitioned mode

SPI+PWM Dual Lamps

Achieves a wider combination of lighting effects

Various Optional Combination Methods

Satisfies the atmosphere lighting needs of different vehicles

Equipped with Current Detection Circuit

Ensures the stability and safety of the controller

Cutting off the power supply to the lighting fixtures

Reduces energy consumption and extends battery life.

Supports Lamp Color Calibration

Achieves uniform calibration of vehicle lights.

Password Management Function

Enhances the system's security

2.Controller Optional Combination Methods

Serial Number	Configuration Method	Controller Combination Method
Method 1	Whole Vehicle Configuration	Central Control *1 + Doors *4

Method 2	Central Control Standalone Configuration	Central Control *1
Method 3	Doors Standalone Configuration	Doors *4

Notes:

1.Each central control controller can control: Central Control Light SPI + Footwell Light PWM.
2.Each door controller can control: 1 Door Light SPI + 1 Storage Light PWM.

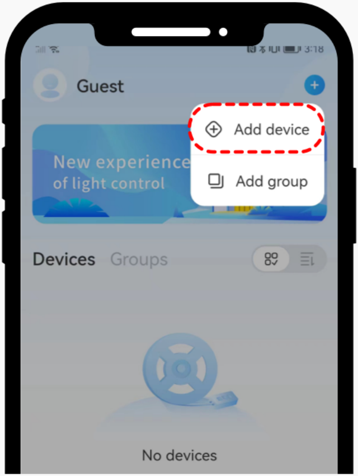
APP User Instructions

1.APP Download Instructions

Method 1: Scan the QR code on the left to download and install.

Method 2: Search for "BanlanX" in the App Store or Google Play to download and install. (Supports only iOS 10.0 and above, Android 4.4 and above systems)

2.APP Connection to Controller Process


Guest
Add device
Add group
New experience
of light control
Devices
Groups
No devices

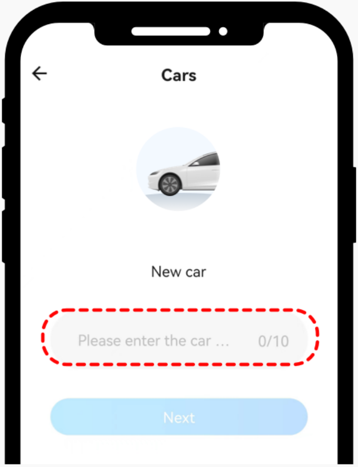
① Adding the First

Click the "+" in the top right corner of the APP homepage, select "Add Device," and choose the controller you need to add from the search list;

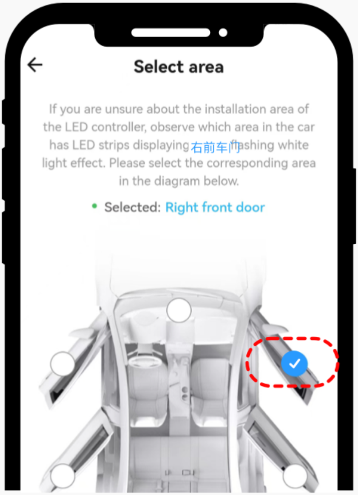
When there are multiple controllers in a vehicle, multiple devices will be found; they need to be added one by one sequentially.

2 Create a New Vehicle

When adding for the first time, you need to create a new vehicle first, enter the vehicle name, and click save to complete the vehicle creation.


Cars
New car
Please enter the car ...
0/10
Next

3 Select the Installation Area for the First Controller



Select area

If you are unsure about the installation area of the LED controller, observe which area in the car has LED strips displaying 右前车门 flashing white light effect. Please select the corresponding area in the diagram below.

Selected: Right front door

The light strip controlled by the controller being added will flash in white quickly, indicating the location of that controller; in the APP, select the area corresponding to the actual installation location, and choose the correct installation area based on the light prompt;

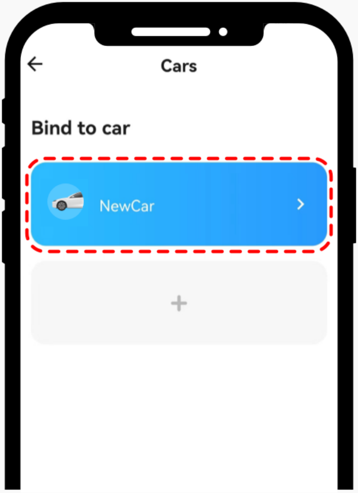
M Right front door

After successful addition, you will directly enter the control interface; the first controller added to the vehicle is set as the master by default, and a "M" identifier will be displayed in front of the area name.

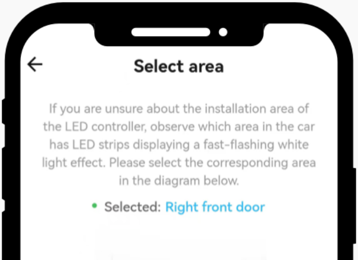
4 Adding the Second Controller

Return to the homepage and add the second controller following the method described in step ①;

Then select the vehicle that has already been created.

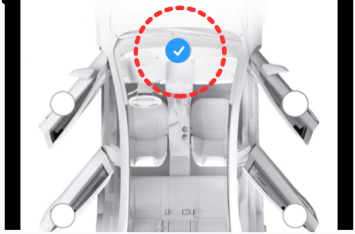

Cars
Bind to car
NewCar
+

5 Select the corresponding location in the APP's installation area according to the actual installation position (based on the light prompt).


Select area

If you are unsure about the installation area of the LED controller, observe which area in the car has LED strips displaying a fast-flashing white light effect. Please select the corresponding area in the diagram below.

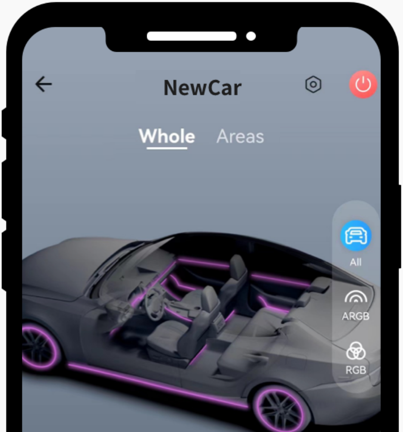
Selected: Right front door

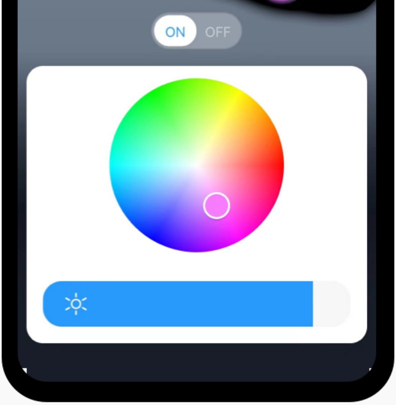


Apart from the first controller added as the master controller by default, all other controllers, regardless of the order added, are considered sub-controllers. When choosing the installation area, ensure the area in the APP corresponds to the actual location of the controller.

Add all vehicle controllers following the above method.

6 After successful addition, you will re-enter the control interface.


NewCar
Whole
Areas
All
ARGB
RGB

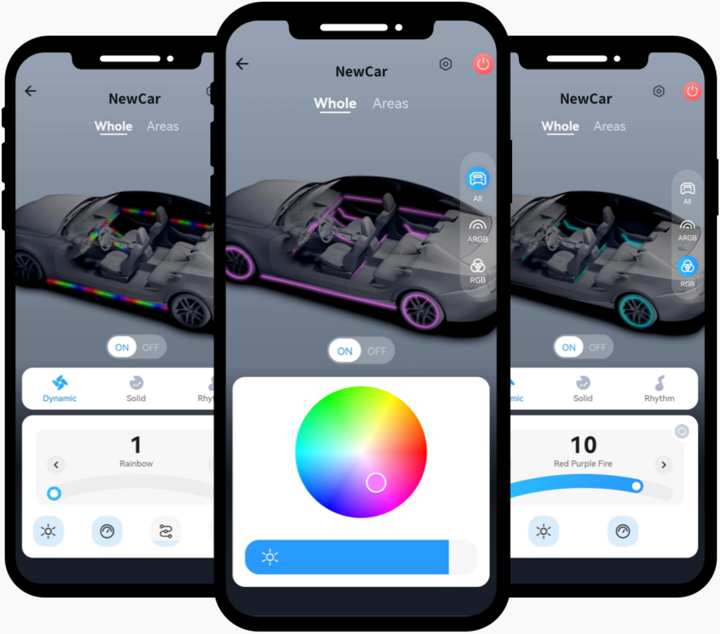


You can adjust the lighting effects through **[Dynamic]**, **[Solid]**, **[Rhythmm]** based on the vehicle's whole or partitioned location.

3.APP Vehicle Light Adjustment Instructions

Whole Vehicle Mode

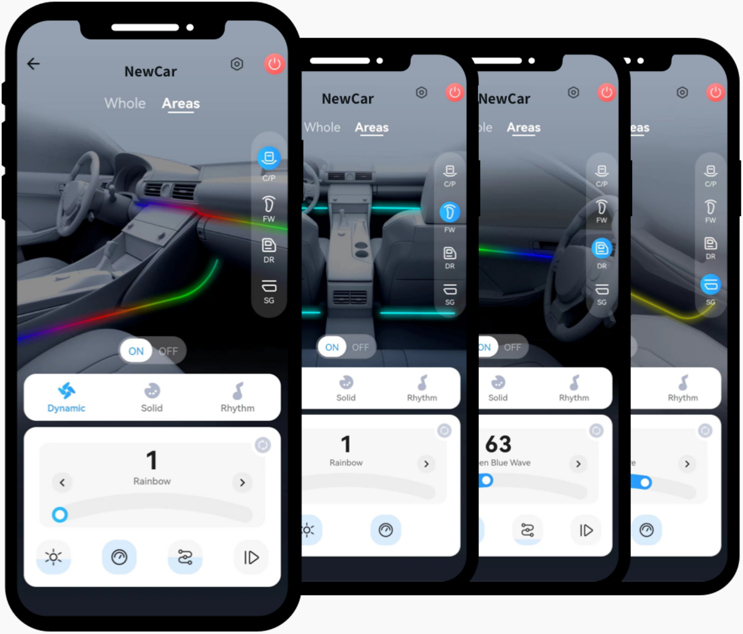
Unified control of the entire vehicle's lighting


NewCar
Whole
Areas
All
ARGB
RGB
ON
OFF
Dynamic
Solid
Rhythm
1
Rainbow
10
Red Purple Fire

You can control the lighting by switching between Whole - **[All]**, Whole - **[ARGB]** , and Whole - **[RGB]**

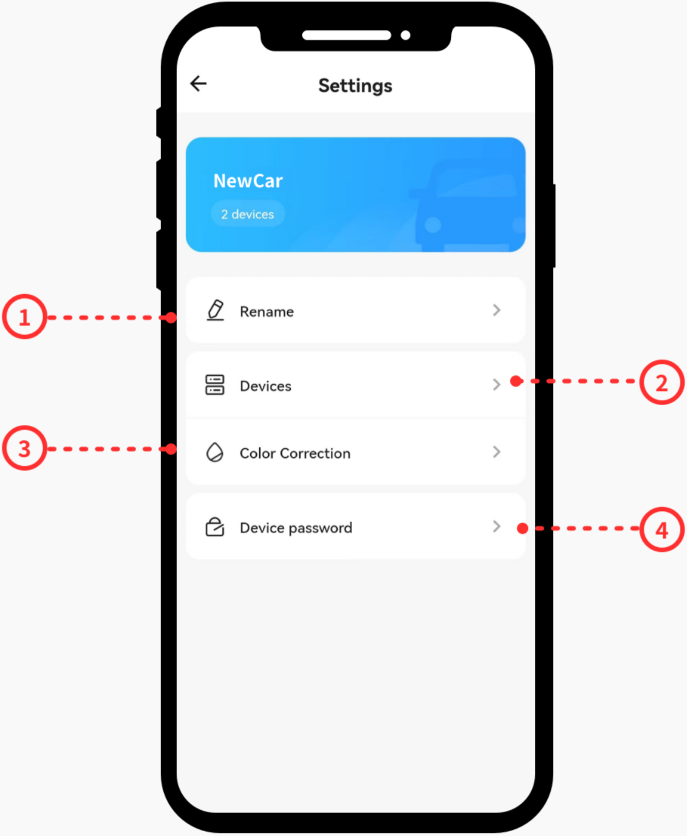
Areas Mode

Independent control of vehicle area lighting


NewCar
Whole
Areas
C/P
FW
DR
SG
ON
OFF
Dynamic
Solid
Rhythm
1
Rainbow
63
en Blue Wave

You can independently control partition lighting by switching C/P , FW , DR, SG.

4.APP Settings Instructions



Settings

NewCar

2 devices

Rename

Devices

Color Correction

Device password

① **Rename:** Allows modification of the vehicle name.

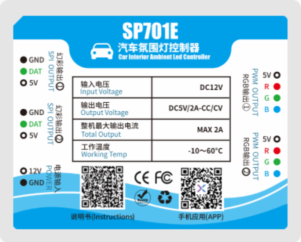
② **Device :** You can select the vehicle controller to delete the device or upgrade its firmware.

③ **Color Calibration:** Select the corresponding position of the car light to calibrate its color, preventing issues like inaccurate light colors.

④ **Device Password：** Management of the car light's security password.

Controller Parameters

1.Controller Ports and Parameters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12V GND
POWER 电源输入
5V R G B
PWM OUTPUT RGB输出①
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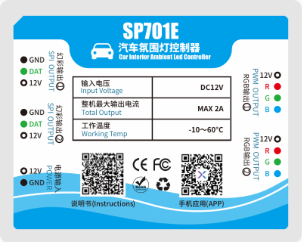
①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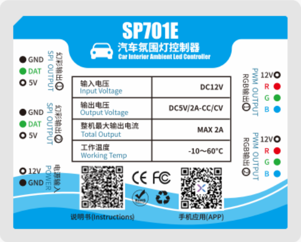
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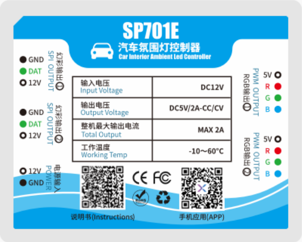
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③ ④

Note: Four types of lamp voltage combinations are available for selection.

Input Power	DC12V
Working Current	15mA
Lamp Type	SPI type lamps: Three-channel RGB color magic conventional single-line zero-code driven lamps PWM type lamps: 3CH PWM RGB lamps
SPI Lamp Voltage	5V or 12V (optional)
PWM Lamp Voltage	5V or 12V (optional)
PI Lamp Power Switch	Cuts off the power supply to the lamps when turned off
Maximum Total Output Current	MAX 2A (Total current for SPI+PWM lamps)
5V Power Output	5V2A-CC/CV
Enclosure Dimensions	64mm*52mm*15mm

FCC Caution:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:?(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception,which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC’s RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.