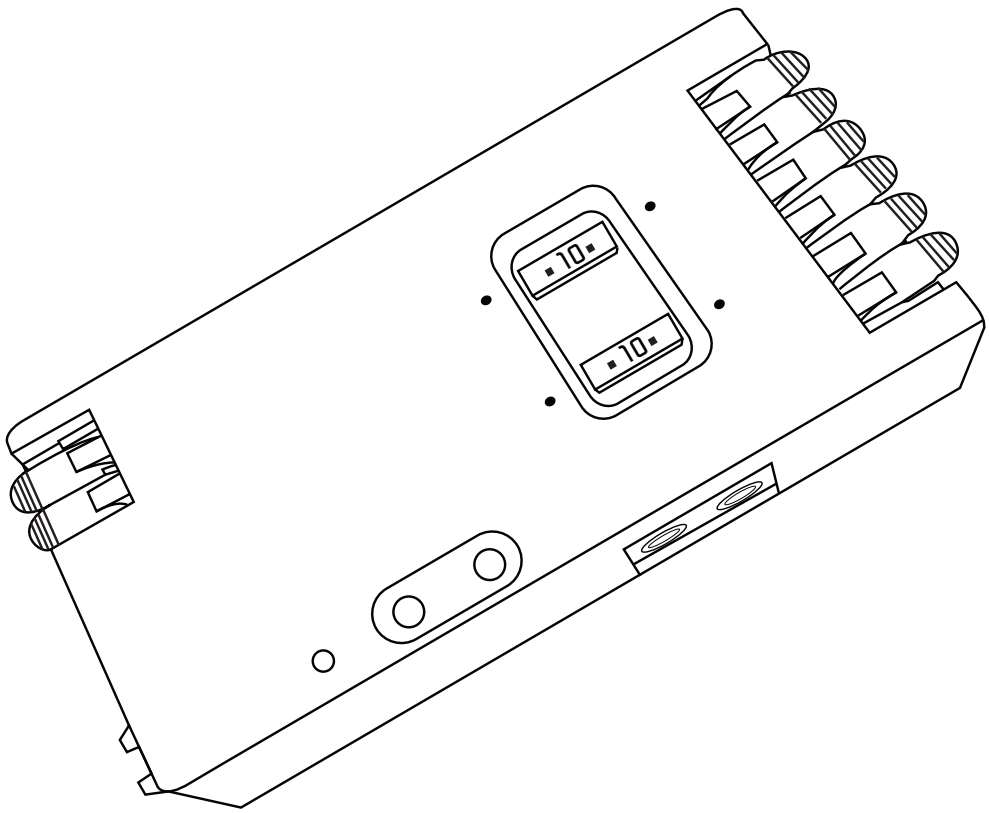
GLEDOPTO®

SonicX *Sound Driven Light Alive*

WLED Digital Controller



User Manual

GL-C-118WL / GL-C-118WL-RF

Product Parameter

Input Voltage: DC 5-12-24V

Input Current: 20A Max

Output Current/Channel: 10A Max

Total Output Current: 20A Max

Audio Port: 3.5mm Audio Jack

Material: Flame-retardant PC

Operating Temperature: -20~45°C

Recommended IC quantity：800x2 Max

Type-C Input Voltage: DC 5V

Type-C Input Current: 3A Max

DC Jack Voltage: DC 5-12-24V

DC Jack Current: 5A Max

DC Jack: Φ5.5xΦ2.1mm

Size: 113x47x19mm

IP Rating: IP20



GL-C-118WL



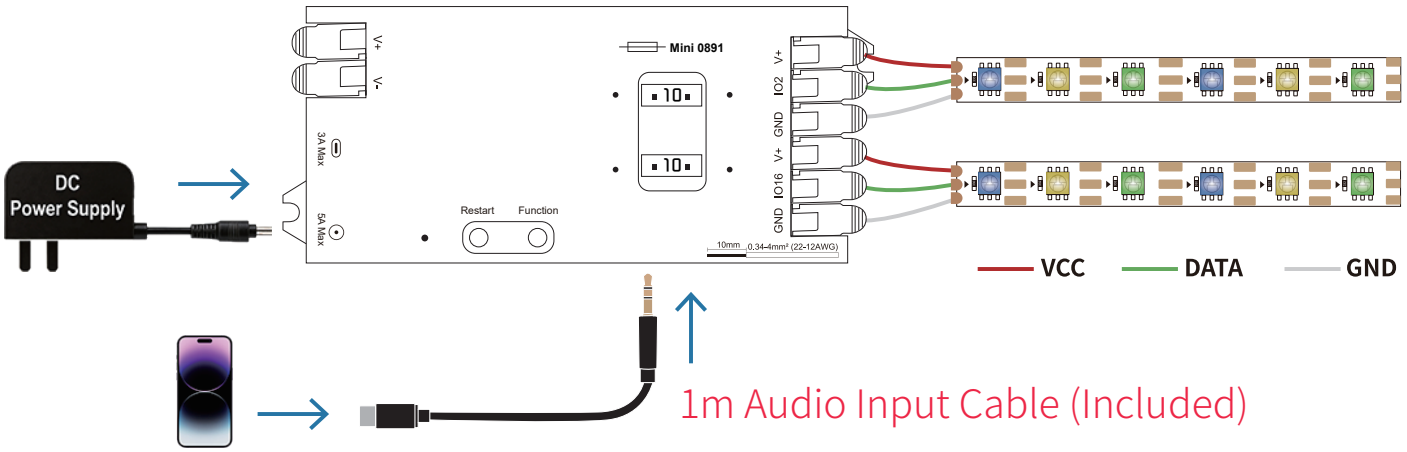
GL-C-118WL-RF

Model	GL-C-118WL	GL-C-118WL-RF
Control Protocol	WiFi	WiFi+2.4G RF

Wiring Terminal Instructions

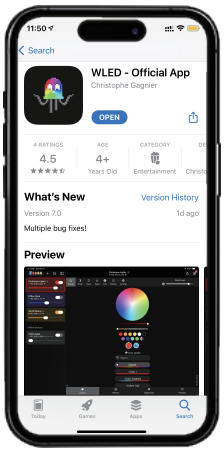
1. WLED controller supports connecting up to two digital LED strips.

2. The output terminals labeled 'V+, IO2,GND; V+, IO16, GND' should be connected to the LED strip's 'VCC DATA GND'.



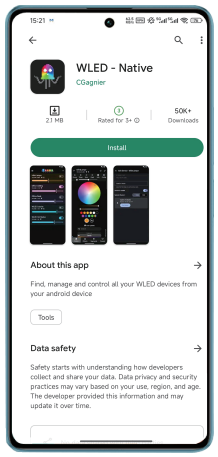
1m Audio Input Cable (Included)

APP Download Method



IOS

Search for and download **WLED/ WLED Native** in the App Store.



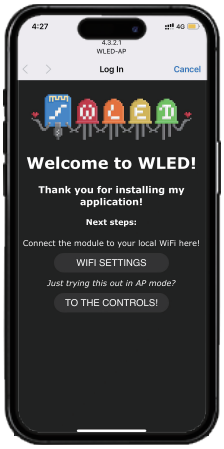
Android

Search for and download **WLED/ WLED Native** in the Google Play Store.

APP Configuration Steps



1. Power on the WLED controller.
2. Open the phone settings and enter WiFi settings, find"WLED-AP" and connect to it with the password "wled1234".



3. After successful connection, it will automatically jump to the WLED page (or enter the website 4.3.2.1 in the browser to enter the WLED page).

4. Click "WIFI SETTINGS", set the WiFi account and password, and the click"Save & Connect" at the top of the screen to save.



5. Keep both your phone and the WLED controller connected to the same Wi-Fi network. Then, open the WLED-Native APP, and the WLED controller will be displayed in the list.



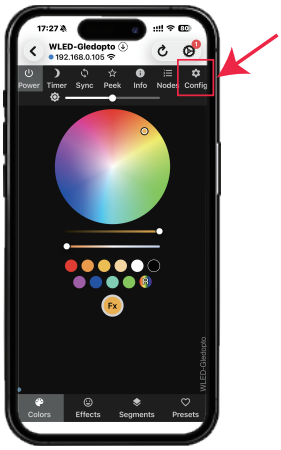
Note:

1. After the WLED controller disconnects from the router, the chip will restart and return to the preset state (you can find the hotspot "WLED-AP" in your phone's WiFi settings).

2. If the WLED controller is not displayed or cannot be found in the APP, you can open a browser, enter the IP address of the WLED controller, and use the web interface for control (To find the controller's IP address: Connect to the Wi-Fi, find the web address at the bottom or body of the router, enter this address in the browser, and then you can view the controller's IP address in the router's backend interface).

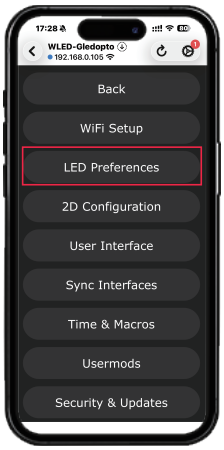
LED Strip Configuration

1



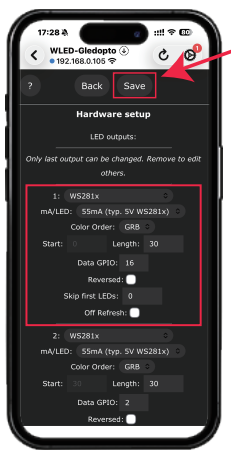
Click on "Config"

2



Select "LED Preferences"

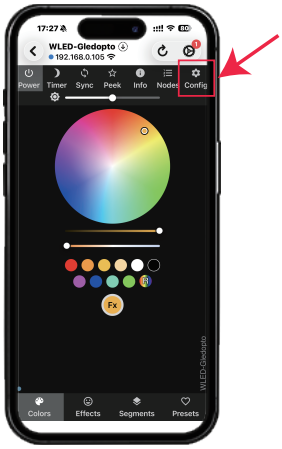
3



Find "Hardware setup" to configure information

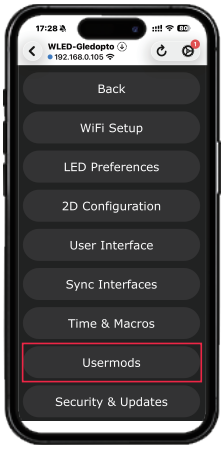
Relay Configuration

1



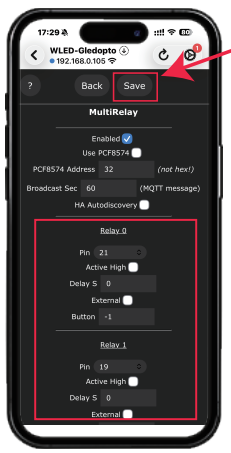
Click on "Config"

2



Select "Usermods"

3



Find "MultiRelay" to configure

Configuration Information:

1.Relay0 Pin as 21 2. Relay1 Pin as 19

Note:

1. When turning off the light via the APP, remote control, or push switch, the power supply to the output terminal will be cut off to save energy.It should be noted that this function cannot deactivate the supplementary power supply.
2. Upgrading or resetting may result in the loss of some configurations. If the relay is not properly configured, the light strip may fail to light up when powered on.

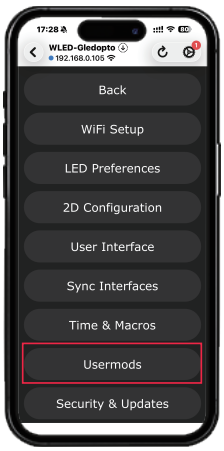
External Audio Configuration

1



Click on "Config"

2



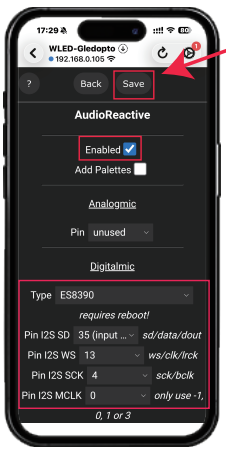
Select "Usermods"

3



Find "Usermod Setup"
Configure "Global I²C GPIOs (HW)"

4



Find "AudioReactive"
Check "Enabled"
Configure "Digitalmic"

"Global I²C GPIOs (HW)" Configuration:

1. SDA: 18 2.SCL: 14

"Digitalmic" Configuration:

1. Type: ES8390 2. Pin I2S SD: 35
3. Pin I2S WS: 13 4. Pin I2S SCK: 4
5. Pin I2S MCLK: 0

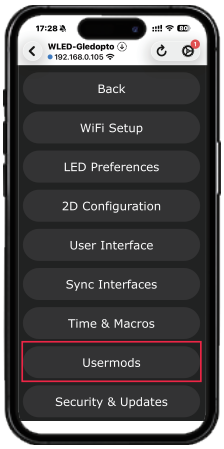
Audio Signal Adjustment:

1



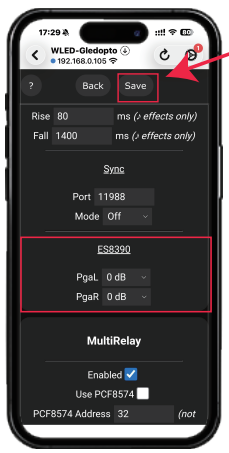
Click on "Config"

2



Select "Usermods"

3



Find "AudioReactive"
Configure "ES8390"

Option Descriptions:

PgaL / PgaR: Adjusts audio input sensitivity

Note:

1. The External Audio function is configured by default.
2. Please power cycle the device after saving the configuration for the new settings to take effect.

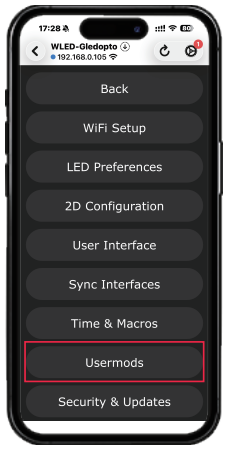
Built-in Microphone Configuration

1



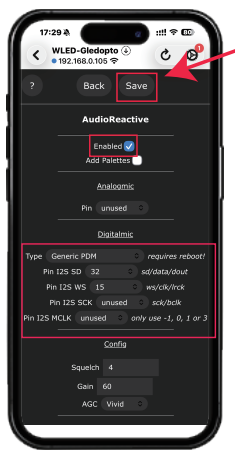
Click on "Config"

2



Select "Usermods"

3



Find "AudioReactive"
Check "Enabled"
Configure "Digitalmic"

Configuration Information:

1. Type: Generic PDM 2. Pin I2S SD: 32 3. Pin I2S WS: 15

Note:

Please power cycle the device after saving the configuration for the new settings to take effect.

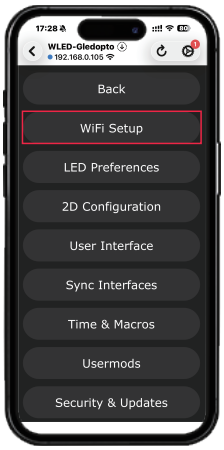
WLED Remote Configuration

1



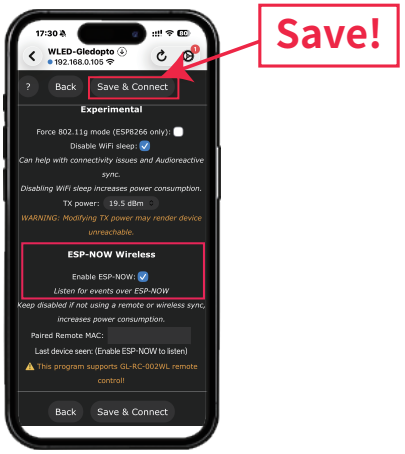
Click on "Config"

2



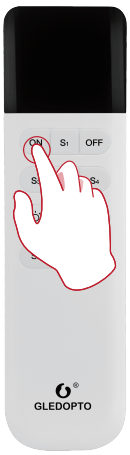
Select "WiFi Setup"

3



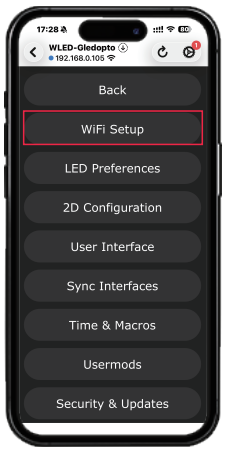
Find "ESP-NOW Wireless"
Check "Enable ESP-NOW"
Click "Save & Connect"

4



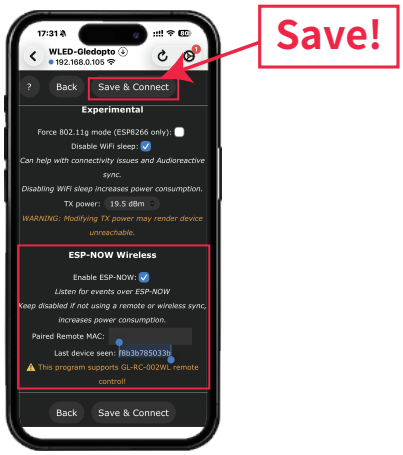
Long press any key of WLED remote control for 1 second

5



Select "WiFi Setup"

6



Find "ESP-NOW Wireless"
Copy the "Last device seen" field to "Paired Remote MAC"

Model	GL-RC-001WL	GL-RC-002WL
Compatibility	√	√

2.4G RF Remote Configuration(if available)

Pairing:



Short press once
(Power on the device, within 4s)

1. Power on the controller (Execute the next step within four seconds after the relay indicator light or light strip has turned on).
2. Press the "On" button of any group on the RF remote control (check the user manual of each remote control for details).
3. When the light strips connected to the controller flash 3 times, it indicates a successful connection with the remote control.

Unpairing:

Method 1:



Short press for 5 times
(Power on the device, within 4s)

Method 2:



Short press for 5 times
(Power on the device, within 4s)

1. Power on the controller (Execute the next step within four seconds after the relay indicator light or light strip has turned on).
2. Press the Master "On" button on the RF remote control or the Group "On" button of the room where the controller is located for 5 times.
3. When the light strips connected to the controller flash 3 times, it indicates a disconnection from the remote control.

Notes:

1. The controller can be paired with up to 4 remote controls. When the 5th remote control is paired, the 1st paired remote will be automatically unpaired.
2. The controller can pair with any of the groups 1–4 of the remote control. Once paired with one of these groups, it cannot be paired with the remaining groups of that remote control.

Model	GL-RC-009S	GL-RC-208
Compatibility	√	√

RF Remote Control Function(if available)



GL-RC-009S

① “W” key
Switch to the previous mode

② “M” key
Short press: Switch to the next mode
Long press: Return to the static mode (Solid)

③ S1/S2/S3/S4: Short press to invoke preset
(The presets need to be set in the APP)

GL-RC-208



“F” key (Quick switch function)

The “F” key enables quick navigation within the currently active control area. The specific functions are as follows:

1) **After touching the color wheel**

   Short press the “F” key: Switch colors[Red -- Green -- Blue]

2) **After touching the color temperature bar**

   Short press the “F” key: Switch color temperature[Warm white -- Neutral white(warm and cold mixed white) -- Cold white]

3) **After touching the brightness bar**

   Short press the “F” key: Switch brightness[25% -- 50% -- 100%]

4) **After a short press of the “M” key**

   Short press the “F” key: Switch the dynamic effect[Blink -- Flow -- Meteor -- Twinkle -- Wipe -- Breathe -- Chase -- Rainbow]

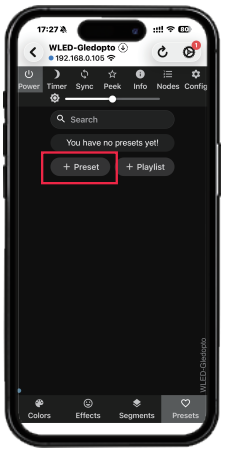
Preset Settings Steps

1



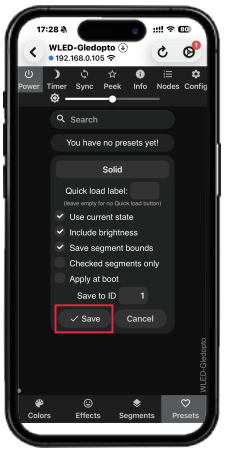
Click on "Presets"

2



Select "+Preset"

3



Click on "Save"

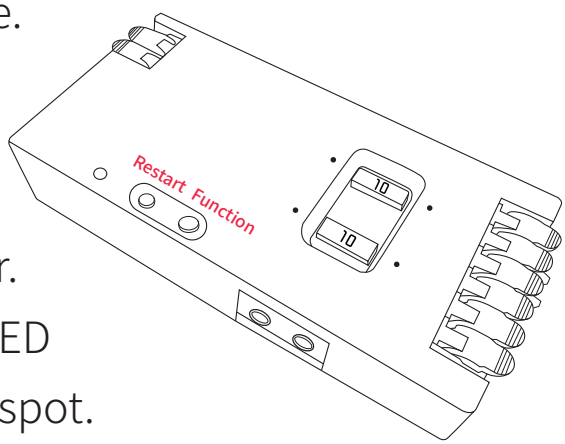
Note:

The saved Preset represents the current state of the controller.Save to ID 1 is S1, Save to ID 2 is S2, Save to ID 3 is S3, and Save to ID 4 is S4.

Description of Button Functions

Restart (EN):

Pressing the button will switch off the controller module,releasing it will switch it back on. Useful when the controller needs to be restarted after configuring the microphone.



Function (GPIO17):

1. Short press: Power on/off.
2. Long press for 1 second: Adjust the color.
3. Long press for 10 seconds: Reset the WLED controller and activate the WLED-AP hotspot.

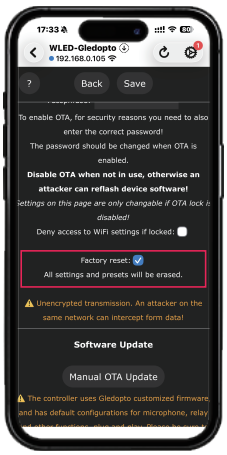
Reset to Factory Settings

1. Button Reset

Long press the "Function" button for 10 seconds to reset the WLED controller, and the WLED-AP will pop up.

2. APP Reset

Enter into the WLED control page and click on the top right corner "Config". Click on "Security & Updates" at the bottom, and then scroll down to find "Factory reset" and check the box. Click "Save" to reset the controller.



Firmware update method

① Type-C UART
(https://gledopto.com/wled_flash.html)

② Gledopto official firmware
(https://github.com/GLEDOPTO/WLED/releases)



①



②

Troubleshooting and Solution

Number	Symptoms	Solution
1	Indicator light is not on	Check whether the input power connection is correct
2	APP shows "offline"	1. Check if the phone is on the same network as the controller. 2. Check if the controller is out of the range of the WIFI connection, causing unstable connection. 3. Turn off and on the controller to retry.
3	APP is connected, but the light strip is not controllable	1. Check if the power supply is working properly. 2. Check if the power supply voltage matches the light strip. 3. Check if the input power connection is correct. 4. Check if the light strip connection is correct. 5. Check if the GPIO settings in the APP are correct. 6. Check if the light strip IC model in the APP is set correctly.
4	The brightness of the light strip is low, and the front and back colors are significantly different	1. Check if the power supply is working properly. 2. Check if the power supply matches the light strip. 3. Check if all connections are good, and use conductive and short wires as much as possible for connection. 4. Add power supply at an appropriate position. 5. Check if the APP has set a limit on brightness or current.



1. Before turning on the power, make sure all electrical connections are correct and tight. Never connect, disconnect, or repair the device while it is powered on.
2. Please keep the product working within the rated voltage and current range. Using it outside this range may damage the product, lower its performance, or cause safety accidents.
3. Do not take apart or modify the product yourself. Unprofessional handling may cause internal short circuits or electric leaks, leading to fire or electric shock risks.
4. This product relies on wireless signals. Please do not use it inside metal boxes, closed metal cabinets, or areas with strong magnetic fields. Otherwise, the wireless signal may become weak, drop, or stop working properly.

Warning

This is a precision electronic device. Please avoid using it in the following environments:

1）Damp places with humidity over 80%;
2）Temperatures outside the working range (-20°C to 45°C);
3）Areas with strong electric fields or near high-voltage power lines;
4）Places with heavy dust or corrosive gases.

Note: Using the product incorrectly may break it or reduce its lifespan.

Disclaimer

1. We may change product specs due to tech upgrades or different production batches without prior notice. Please refer to the actual product or our official website for the latest info.
2. This manual is for reference only and doesn't guarantee absolute performance, appearance, or features. The actual product you receive may look a bit different due to production batches or software versions.
3. Any parts, accessories, or features shown in this manual are just for reference and might not be included in the standard package. Please check what's actually in the box.
4. All content in this manual (including text, data, images, and design) is owned by [GLEDOPTO]. You can't copy, share, change, or use any part of it without our written permission.
5. Our product can connect with third-party devices or software, but we can't control their updates. If third-party changes or stops their service, causing our product to have limited features or stop working, we are not responsible.