

Wave Emergency Lighting App Instruction Guide







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Introduction

Wave[™] can address emergency lighting units individually or in groups, utilizing bluetooth mesh protocols. This advanced and easy to use control system operates using the Wave Application on a mobile device without requiring a gateway. This state of the art wireless control system will make sure all the mandatory tests for your emergency lighting are done on time. The system components are easily commissioned using the Wave app. The mesh network enables wireless communication up to 100 feet or more between devices, and commissioning does not require any internet access.

Security is important to us which is why the Wave App employs data encryption to ensure mesh network security. The configuration settings for each device are stored in encrypted QR codes and each network device cannot be accessed without the QR code. Our solutions make it easy to install the right smart emergency lighting unit into a new development project or upgrade an existing building and convert it to an easy to maintain network allowing you to adapt to the needs of the future.

System Capabilities

Wave emergency lighting platform have the following capabilities:

- Automated testing: The system will perform automatically all the necessary testing to make sure the emergency lighting is functionnal.
- Scheduling Function Test: Allows to scedhule the mandatory monthly function test. You can choose the day, the time and the frequence at which this test will be performed.
- Scheduling Discharge Test: Allows to schedule the mandatory annual test. You can choose the day and time at which this test will be performed.
- Automated report: The system will compile all the testing results in one report log easy to read and export.

Capacity Limits

The following chart provides the capacity limits of the Wave platform:

Emergency lighting	Up to 100 emergency lighting devices (nodes) per zone. Unlimited zones available with each zone having its own sharable QR code with commands and setting info assignable
device	for administrative or user level.
	To darimine dative of deer level.
Emergency lighting device / Group	An emergency lighting device can be a member of up to 20 groups.
Deposit less	The report log can store up to 500 test reports. After this limit, the oldest test will be
Report log	automatically deleted to make room for the new ones.
Maximum distance	Bluetooth supports a maximum range of 100 feet (30.5 meters) under ideal, unobstructed
between units	conditions.

Cautions

1. Do not use more than one mobile device during the commissioning process.

Using multiple mobile devices may cause unexpected results such as data corruption, duplicate light addresses. etc.

2. Ensure commissioning data has been synchronized to the cloud before sharing QR code.

Access rights to the zone can be shared to other users by sharing the QR code. Before sharing the QR code, please make sure the zone data has been uploaded to the cloud (requires internet connection). The app will try to sync the data automatically in the background to the server (cloud) whenever an update has been made to the zone. You may also click 'Force Sync' on the 'More' page to sync manually.

Note: During the commissioning process, or whenever an update has been made to the zone, the app will try to save and sync the commissioning data to the cloud. This requires an internet connection, either by WIFI or data connection.

- The mobile device must have a good internet connection during commissioning to save/ update the commissioning data to the corresponding QR code. If the internet connection is functioning properly, the app will sync the data to the cloud in the background. You may share the OR code to other users immediately after commissioning is completed.
- If the mobile device does not have a good internet connection during commissioning, the user will see an error prompt in the 'More' page but may continue the commissioning process. Please remember to 'Force Sync' the data to the cloud when the mobile device has a good internet connection.

Do NOT share the QR code to others before you successfully sync the data.

- If the mobile device has a poor internet connection, the app will attempt to sync commissioning data to the cloud, but each communication may take longer or may fail after a long delay due to the poor connection. In such conditions, it will be difficult to continue the commissioning process.
 - It is suggested to turn off WIFI (or put the phone in AIRPLANE MODE) and complete the commissioning process. At a time later when a good internet connection is available, the user can sync commissioning data to the cloud.

Do NOT share the QR code to others before you successfully sync the data.

How to Download the App

To download the Wave app, scan the QR code below, which corresponds to the type of smart phone that will be downloading the app:

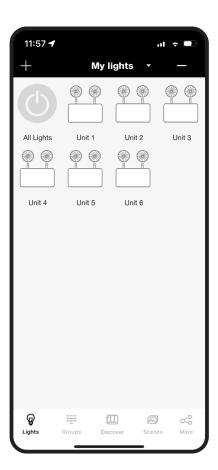




Download on the

App Store



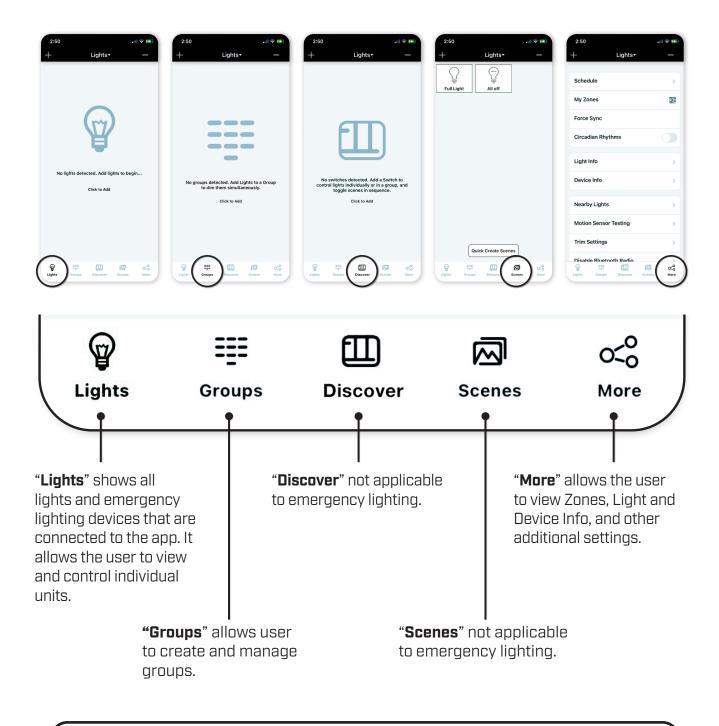


IMPORTANT

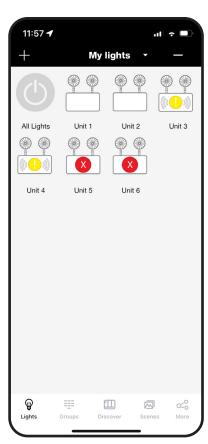
The app supports most Android smart phones. Some Android phone models may not be supported due to issues with the phone's hardware or firmware. The app requires access to the network and Bluetooth, so please approve access requests from the app. The app will not collect user's private data. Accept the prompt to allow access to photos for QR codes to be automatically saved in your album.

Wave will update the app when there are new features or bug fixes. Please enable the auto update of the app so that new version of the app will be pushed to your mobile phone.

How to Navigate the App



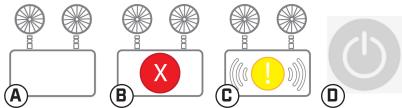
Note: The Wave system is thoughtfully designed to support both emergency lighting and general lighting needs, providing a versatile solution for a wide range of applications. However, it's important to note that certain features and functionalities may be specific to general lighting and may not be applicable to emergency lighting scenarios. Please ensure that you are using the system features that are best suited to your specific lighting requirements.



Emergency lighting Devices Icons

The Lights page displays every emergency lighting device linked to the app, with icons showing the status of each device:

- **A. Connected** The emergency lighting device icon is empty, indicating it is working normally.
- **B. Test failed** A red circle is displayed in the middle of the emergency lighting device icon, indicating a problem after a test.
- **C. Offline** A yellow circle is displayed in the middle of the emergency lighting device icon, it is most likely either not getting power or is out of range of the mesh network.
- **D. All Lights** A default full system on/off switch, not applicable to emergency lighting units.



More Page The More Page contains additional settings and features of the app.

Schedule - Not applicable to emergency lighting, see page 22 for emergency lighting device scheduling.

My Zones - Create, edit and delete zones Generate and share QR codes

Force Sync - Sync data and settings across devices

Circadian Rhythms - Not applicable to emergency lighting

Light Info - Check info on all connected lights, groups and scenes in a zone

Device Info - Not applicable to emergency lighting

Nearby Lights - See a list of all online lights nearby

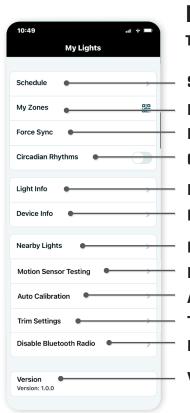
Motion Sensor Testing - Not applicable to emergency lighting

Auto Calibration - Not applicable to emergency lighting

Trim Settings - Not applicable to emergency lighting

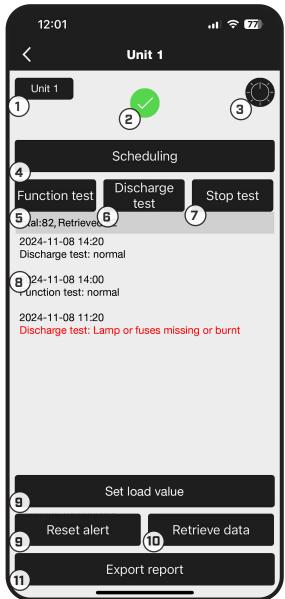
Disable Bluetooth Radio - Disables all bluetooth connections to the app for quick control transfer

Version - Displays current app version



Unit Page

By taping on an emergency lighting device or group connected to the APP, you will enter in the unit page with the following functions:



- **1. Unit Name** Button to change the unit's name.
- 2. Unit Status An icon displays the status of the unit: a green icon indicates it is working properly, a yellow icon means it is not connected to the mesh network, and a red icon signifies that the unit failed its latest test and requires attention.
- **3. Blinking Function** A button to make all the lamps in the circuit blink. This is useful for ensuring all lights are properly connected, identifying the circuit you're working on, or locating a faulty lamp.
- **4. Scheduling** Allows you to acces the scheduling page for this unit.
- **5. Function Test** Allows you to start a function test manually.
- **6. Discharge Test** Allows you to start a discharge test manually.
- **7. Stop Test** Stops the test you started manually before it ends.
- 8. Testing Log Display all tests performed on the units, starting with the most recent. Failed tests are shown in red, along with a description of the issue. Scroll down to view older entries.
- 9. Set load value You are required to use this function the first time you install the system. It will run a function test and store the default load value of the circuit.
- **10. Reset Alert** Use this after resolving the issue from a failed test; otherwise, the same error message will reappear.
- **11. Retreive Data** Use this to erase all data on your iOS or Android device and download it again from the bluetooth module in the unit. This should be used only in rare cases where the information on the device is corrupted or incomplete.
- **12. Export Log** Allows you to display the test log in a table format that is easy to download.



Commissioning

The following commissioning procedure is recommended:

Preparation Work:

- a. Define the emergency lighting layout and path of egress
- b. Install all emergency lighting units
- c. Turn on the system to make sure everything is properly connected



Setting Emergency lighting Devices, Groups and Schedules:

- a. Create Zones and generate QR Codes
- b. Connect battery units to the app
- c. Group battery units
- d. Set schedules
- e. Use the "Set load value" function to set default loads value





Deliver Project:

a. Share QR codes



Quick Set Up Guide



Zones

- Create
- Rename
- Delete





Lights

- Add
- Name or rename
- Delete



Groups

- Create
- Rename
- Delete
- Add or remove units



Testing Schedule

- Schedule
- Export





QR codes

- Scan
- Save
- Share

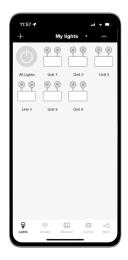


Easy Setup



DOWNLOAD THE APP

Very simple! Thanks to Bluetooth Mesh Enabled Battery Units









COMMISSIONING Fast and simple via smart phone app



TEST AND REPORT Intuitively via phone





Zones

Since emergency lighting has different needs, it is recommended to create a zone specifically for emergency lighting units to keep them separate from other Genio compatible luminaires.

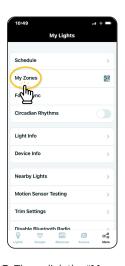
Note that the more Genio units you have in a single zone, the stronger your Bluetooth mesh network will be. We recommend using one large zone divided into smaller groups rather than multiple small zones.

It is also recommended to create QR codes for all zones and predefine groups, test schedules, and their names before commissioning to minimize onsite work. Each QR code represents a zone and all battery units within it. For detailed instructions on scanning, creating, and sharing QR codes, please refer to the QR Code chapter on page 25.

Creating Zones



 Start the Wave app and click the "More" page.



2. Then click the "**My Zones**" button.



3. Click "Create" in the top-right and then click "Confirm."



4. Input the name of the QR code and then click "**DK**."



5. All zones can be found in the "**My Zones**" list and you can switch between them by clicking on them.

Renaming Zones



On the My Zones
 page, press the edit
 button located to
 the right of the zone
 name.



- **2.** Enter preferred zone name as prompted.
- 3. Press "OK" to save.

Deleting Zones



1. Select the **Zone** to delete and slide finger from right to left over that Zone.



Press the red delete button that appears.
Confirm by pressing "Delete."
Note: User cannot delete the zone in which they are currently active.





Lights

The Lights page is the first page you'll see upon opening the app. It is the primary page for controlling individual emergency lighting devices. Add units by zone, and do not turn on more than 100 emergency lighting devices at the same time.

To prevent wireless communication jamming, turn off units that are not in the current zone.

To Add Emergency lighting Devices Into The App



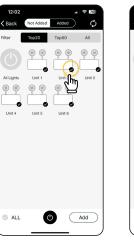
- 1. From the Lights page, click the "+" button in the upper left corner.
- 2. The app will scan for emergency lighting devices that can be added to the zone.



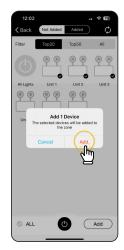
3. Select Top20, Top50 or All from the filter at top of screen to show battery units with the strongest Bluetooth signal.



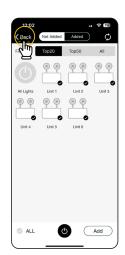
4. Select the emergency lighting device you want to add by pressing the check mark located in the lower right corner of desired unit icons.



5. Click "Add" to associate all of the selected emergency lighting devices into the zone.



6. Confirm by clicking the "Add" button in the dialog box.



7. Click the "Back" button to return to the Lights page. Confirm that all emergency lighting devices have been added and successfully connected with the app.

Note: Commissioning performance may decline if there are more than 150 factory-setting emergency lighting devices powered up at the same site. Please power off some factory-setting emergency lighting devices before continuing.

To Name or Rename Emergency Lighting Device



1. From the My Lights page, press on a selected unit to go to the unit page.



2. Click on the unit's name located in the upper left of the scheduling/report page.



- 3. Enter the unit's new name in the dialog box.
- 4. Press "OK" to save.

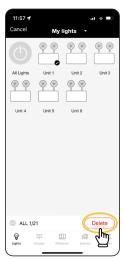
To Delete Emergency Lighting Device



1. From the My Lights page, click the "-" button in the upper right corner.



Select the units you want to delete by tapping on them and checking the box.



3. Click "Delete" in the bottom right corner.



4. Click "Delete" in the dialog box to confirm.



Groups

Groups enable you to control a set of emergency lighting devices.

The app provides a default group named "All Lights" which gives the user control over all emergency lighting devices in the zone.

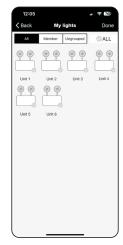
Create a Group



- 1. Select the "Groups" page in the bottom menu.
- 2. Click the "+" in the top left corner.



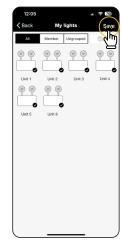
3. Type the group name and then press "OK"



4. Select the Emergency lighting Device you want to add to the group by clicking the checkbox located at the bottom right of the desired unit.



- 5. Use the filter at the top of the screen to help add proper units to the group:
- · All: All lights are shown.
- Grouped: Only units added to at least 1 group are shown.
- Unarouped: Only units that have NOT been added to a group are shown.



6. After all units have been selected, press "Save" to save the Group.

Rename a Group



1. Click the Group that you wish to rename.



- 2. Enter new group name as prompted
- 3. Click "OK" to confirm.

Deleting a Group



1. Select the Group to delete and slide finger from right to left over that Group.

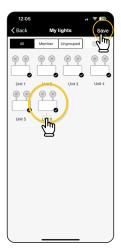


- 2. Press the red delete button that appears
- 3. Confirm by pressing "Delete"

Add or Remove Emergency Lighting Devices In a Group



- 1. Select which group to add or remove lights, from the Groups page.
- 2. Tap "Members" to see all current units in the group.



- 3. Select which units you want to add or remove.
- 4. Press "Save" to confirm changes.





Testing Schedule

Testing Schedule

The app allows to schedule monthly and annual tests at the desired time and day.

Schedule the Function Test



the "Schedulina" button.



1. On the unit page, click 2. Click on the day of the week you want the function test to be performed.



3. Click on the time to set the time you want the function test to be performed.



- 4. Scroll to your chosen hour and minute.
- 5. Confirm your choice to go back.



- 6. Select your desired frequency of testing.
- 7. Click on "Save **Changes**" to go back to the unit screen.

Important: Once your system is properly installed, use the "Set load value" button to setup the system's default load values. It will perform a 5 minutes function test to detect this value. Every subsequent tests will use this first values to detect a failure.

Schedule the Discharge Test



1. Click on the date to select the day of the year you want your discharge test to be performed.



- 2. Scroll to your chosen month and day.
- 3. Confirm your choice to go back.



4. Click on the time to set the time you want the discharge test to be performed.



- 5. Scroll to your chosen hour and minute.
- 6. Confirm your choice to go back.

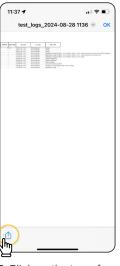


to go back to the unit screen. A light will blink to indicate a successful connection.

Export the Test Log







2. Click on the transfer icon to send it to another device.

Example of a Test Log

Light ID	Light Name	test_time	test_type	test_result
12	Unit 1	2024-11-07 11:30	Function test	Normal
		2024-11-07 11:20	Discharge test	Normal
		2024-11-05 10:15	Discharge test	Battery damaged
		2024-11-03 11:30	Discharge test	Charger malfunction
		2024-11-02 15:05	Discharge test	High battery voltage

Meaning of message in test log

Test result	Meaning	Action to take
Normal	Your unit is operating normally.	
High battery voltage	The battery went higher than its nominative value.	This condition will disappear on its own once the battery voltage goes down. Reset the alert and run another function test. If the error persist, verify the battery calibration.
Battery disconnected	The battery is disconnected or has a very low voltage.	Verify if the battery is correctly connected. If it is, verify its voltage and replace it if necessary. Reset the alert and run a function test to recalibrate the system.
Lamps or fuses missing or burnt	A lamp or a fuse is either burnt or missing.	Verify if the fuse in your battery unit is good. If it is, run a function test to turn on all the lamps connected and identify the defective one. Replace it, reset the alert and run a function test to recalibrate the system.
Bad battery	The battery lasted less than its rating time during a discharge test or the battery voltage dropped very abruptly during a function test.	Replace the battery. Reset the alert and run a function test to recalibrate the system.
Charger malfunction	The battery voltage didn't reach it's normal voltage after charging for 24 hours.	Reset the alert and run a discharge test. if the issue persist, replace the charger board.
Transfer malfunction	The charger didn't perform the transfer from Normal to Emergency lighting mode properly.	Push the test button to clear the alarm and run a function test to make sure the transfer from Normal to Emergency lighting mode work properly.
Time error	The real-time clock of the bluetooth module is not functionning properly.	Replace the internal coin battery of the bluetooth module. Reset the alert and run a discharge test to recalibrate the system.

QR Codes

Whenever a zone is created, two QR codes are automatically generated, one for the Admin level and one for the User level. The QR codes represent the zone, as well as all of the lights, switches, and groups associated with that zone.

The **User** QR code allows the user to dim, activate a scene, or control lights on that zone, but it does not allow the user to add, delete, or change lights, groups, or scenes. The Admin QR code allows a user to control and edit all settings within the APP. Only users with the Admin QR codes can share Admin QR codes.

100



User level

To Scan QR Codes and Share Zones







- 1. On the More page, click on My Zones.
- 2. Select a zone in the list or click "Scan or Select OR code".



3. Center the boxed camera frame around the QR code and scan it.

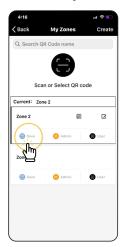


4. You can also select QR codes saved in the phone by pressing the "Album" button.



5. The app will automatically add a new scanned Zone after the QR code has been scanned.

To Save QR Codes



- 1. Allow the app access to photos for QR codes to be saved to the phone.
- 2. Press the "Save" button located under the zone name.
- 3. QR codes will be saved on an auto-generated album folder in your phone.

To Share QR Codes



1. From the My Zones page, select the Zone to share and click on either Admin or User.



2. A QR code will be displayed on the app. It can then be scanned by another for sharing or you can screenshot it and send it to another for scanning.

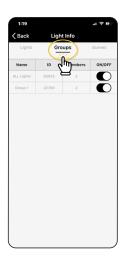
Additional Settings

Checking Lights and Groups Information

From the More page, The Light Info tab will display a list of all of the information for lights, groups and scenes in a zone.



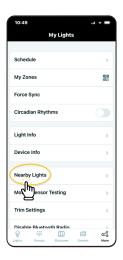




- 1. From the More page, click on "Light Info"
- 2. Switch between Lights or Groups to display the desired information.

To Check Nearby Lights

On the More page, the Nearby Lights tab is useful in the commissioning process because it lists all online lights that are connected and not connected to the app.

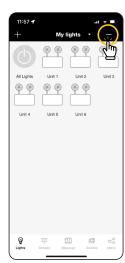




- 1. From the More page, click "Nearby Lights".
- 2. Press the Refresh button if lights don't show up.

Restoring Factory Settings

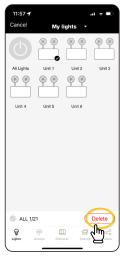
Restore By Deleting Lights



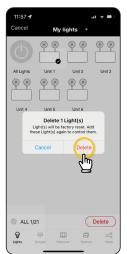
1. From the Lights page, 2. Click the check for select the "-" button in the upper right corner.



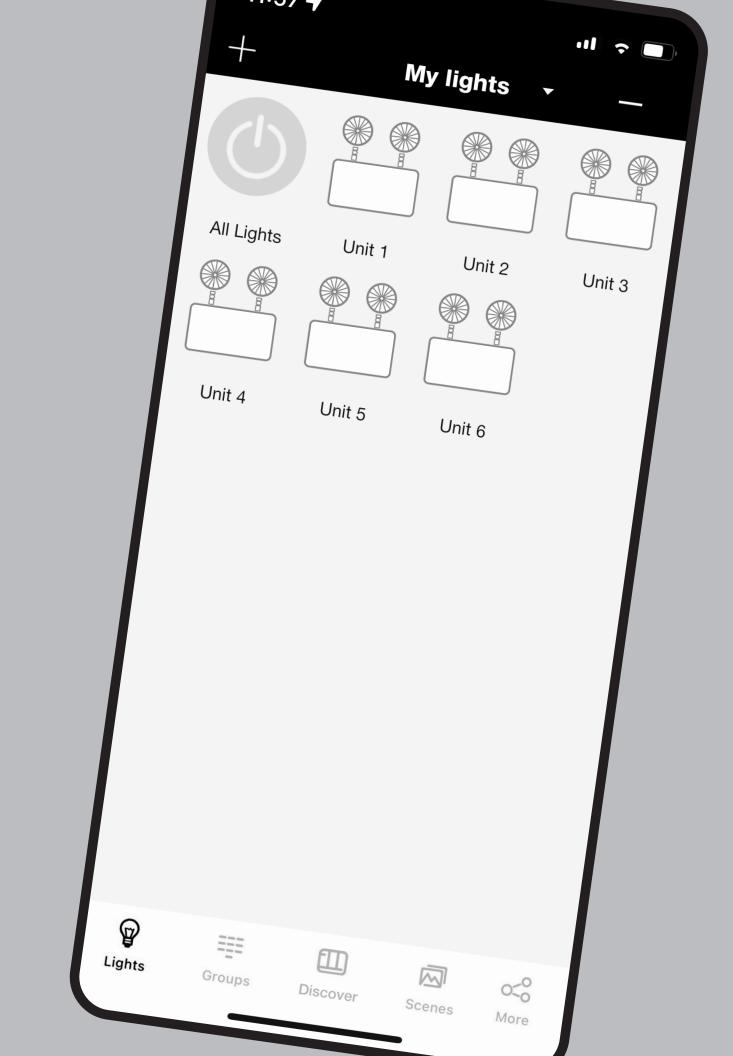
each light that you want to delete and reset.



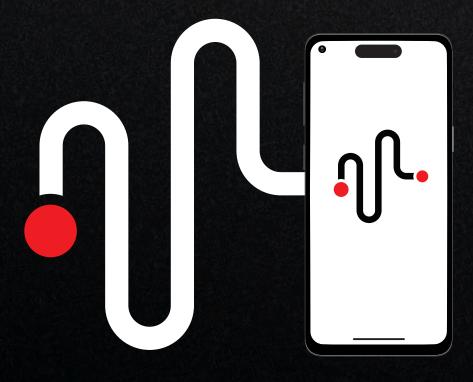
3. Click the "Delete" button in the bottom right corner to delete and reset all selected lights.



4. Click "Delete" in the dialog box to confirm.



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Emergency Lighting

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