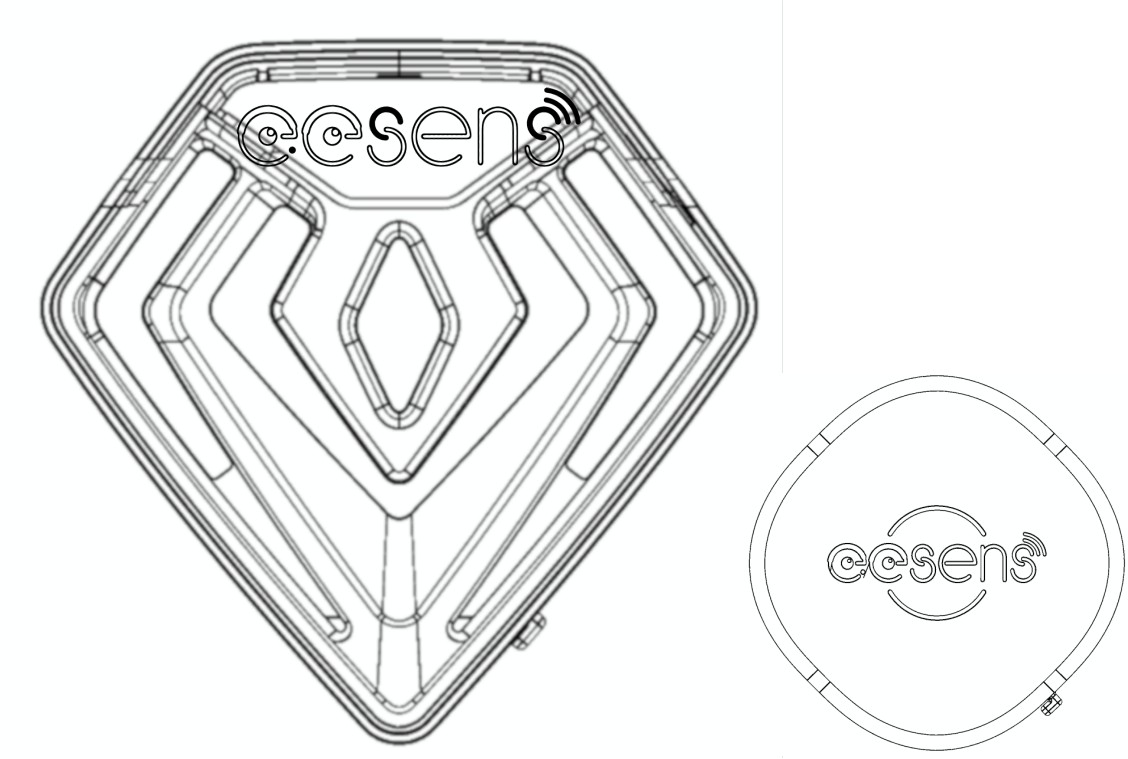
SHIELD SMART TAIL LIGHT

User Manual



Welcome to the EESENS family

Thank you for choosing EESENS' product. We strive to build something unique and useful for cyclers by embodying smart technologies, creativeness and design.

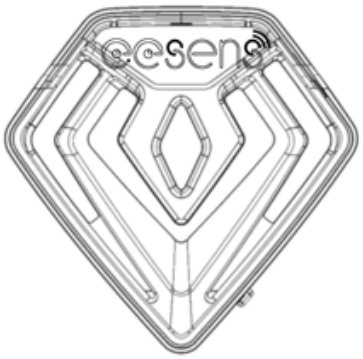
Connect to EESENS

www.eesens.com
Support@eesens.com
Facebook.com/Eesens.inc

Safety Information

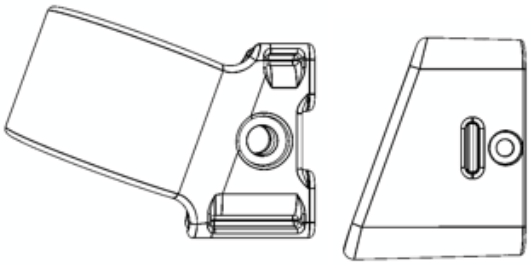
- ⚠ Read the manual carefully before using your SHIELD.
- ⚠ SHIELD is designed for paved road. Recommend not to use it in trail to prevent damaging the tail light.
- ⚠ Always pay attention to the remaining battery power while using.
- ⚠ Charge devices when the ambient temperature is between 41°F and 104°F (5°C and 40°C).
- ⚠ Cool and dry storage is recommended. Charge the battery at least 60 minutes every 3 months. Check regularly that the tail light is attached securely.
- ⚠ Dispose the device according to local regulations
- ⚠ SHIELD is designed to be a supplement, and NOT a replacement to hand signals. Please comply to local traffic regulation, when you ride on road. Having lights is good practice, but is no guarantee against preventing an accident or collision.
- ⚠ SHIELD’s Anti-theft Alarms provides better security to your bike, but it doesn’t guarantee your bike won’t be stolen. Qualified bike locks and secure parking location are still needed.

Package Content

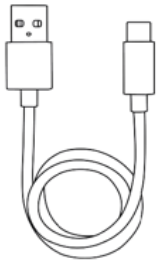


Smart
Tail Light

Sensing
Controller

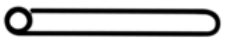


Seat post fixture
& Tail light mount



USB Cable
Type-C/A

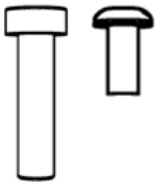
Thick & Thin
Silicone Band



Tail light
release tool

Zip tie

L wrench



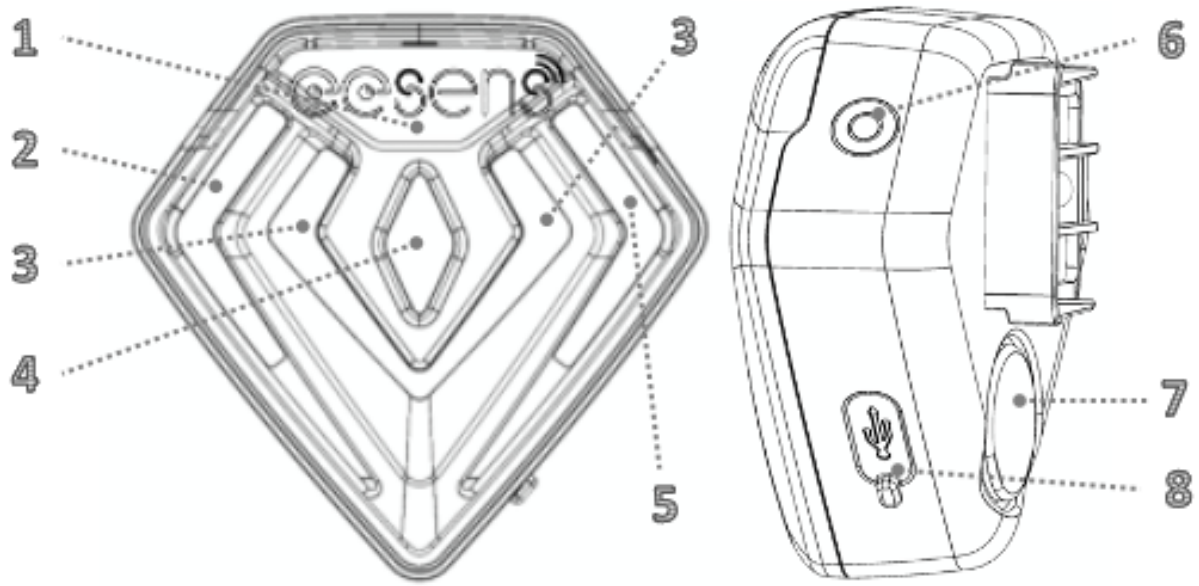
Screws
Big*1& Small*5

Silicone ring

Overview

Tail Light

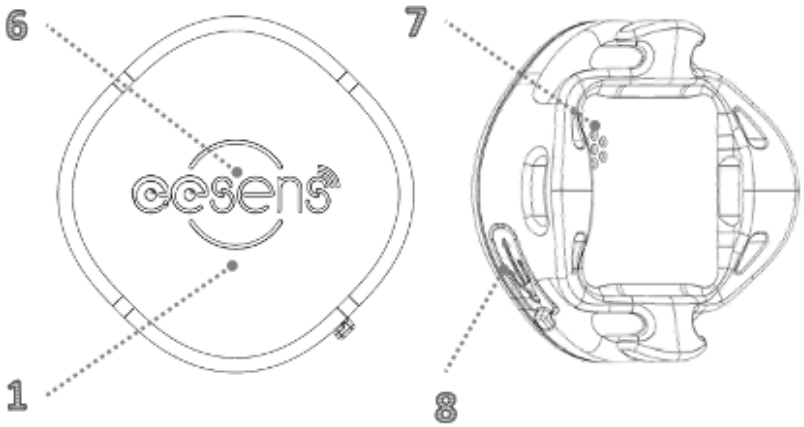
Fit to round seatpost / Li-Ion rechargeable battery / 5V USB charging / Bluetooth 5 & FSK wireless / 6-axis motion sensor / 60 lumens*5 / Capacitive touch / Status LED / 100dB Buzzer



1 Status LED | 2 Left turn signal | 3 Wide-angle light | 4 High beam | 5 Right turn signal | 6 Touch Button | 7 Buzzer | 8 USB port

Sensing Controller

Li-Ion rechargeable battery / 5V USB charging / FSK wireless / 6-axis motion sensor / Capacitive touch / Status LED / 60dB Buzzer



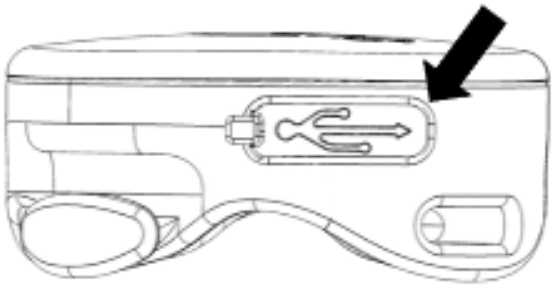
1 Status LED | 6 Touch Button | 7 Buzzer | 8 USB port

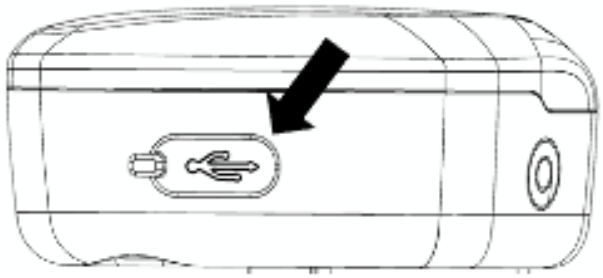
Getting Started

1. **Activate and Charge Devices**
2. **Connecting Devices with APP**
3. **Install Tail Light to Seat post**
4. **Install Controller to Helmet**

1. Activate and Charge Devices

Before using you will need to activate the SHIELD device. Pull the silicone lid over the port. Then, plug in USB-C cable into the charging port. Charging the device from empty to full (Status LED is solid green) with 5V 1A adapter takes about 2 hours.





2. Connecting Devices with APP

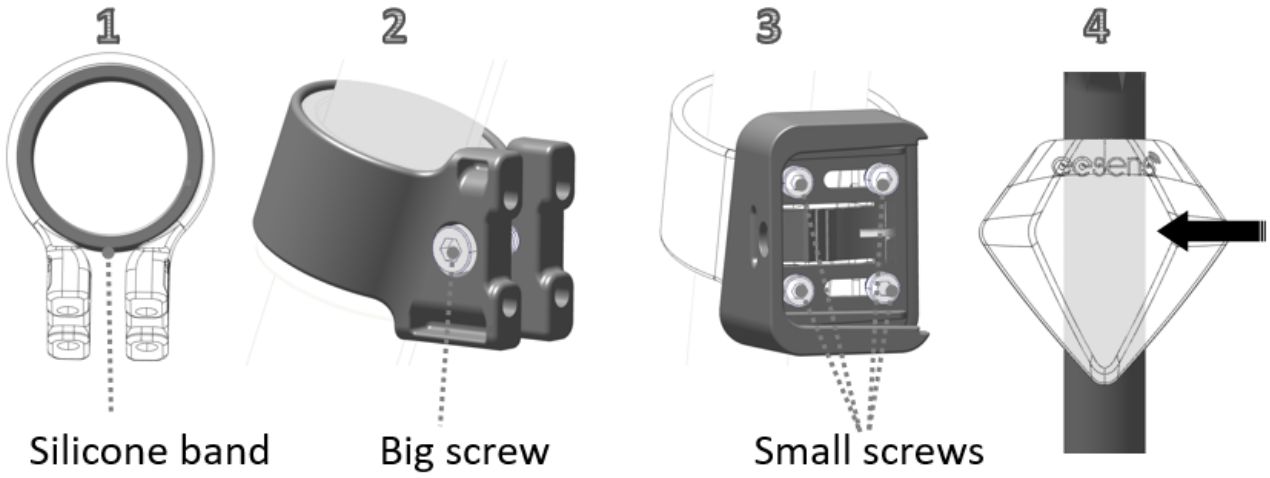
1. Download Eesens App to your smart phone:
    - Android: Google Play Store > Eesens
    - iOS: App Store > Eesens
2. Activate Bluetooth on your device and authorize all necessary permissions required by the app.

(You can read our privacy policy at https://www.eesens.com)

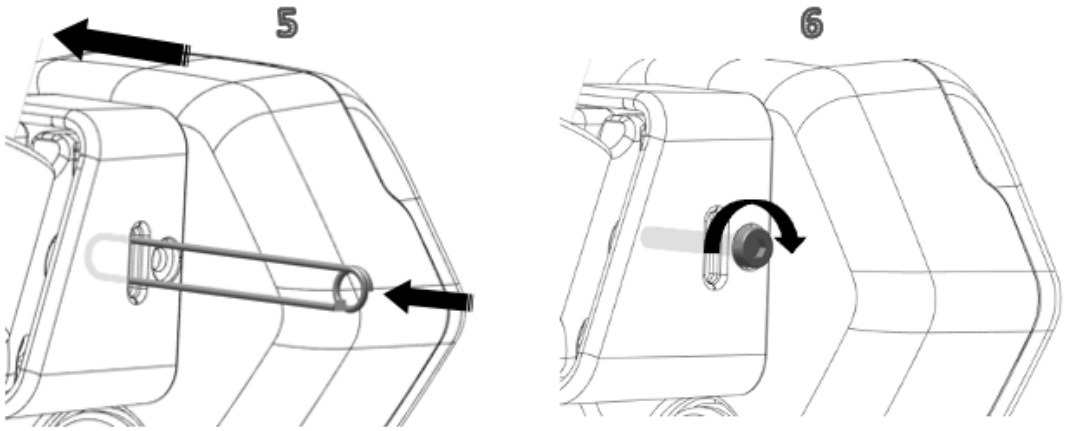
3. Follow instructions in app to connect to your SHIELD device.
4. Once connected, you can control your SHIELD and configure the settings.

3. Install Tail Light to Seat post

1. Adjust the fitting with the **Silicone Band by inserting it inside** the **Seat Post Fixture.**
2. Attach the **Fixture** to seat post, secure it use the **Big Screw**.
3. Attach the **Tail Light Mount** to the fixture, with 4 **Small Screws**.
4. Slide the Tail Light into the mount until you hear a click.



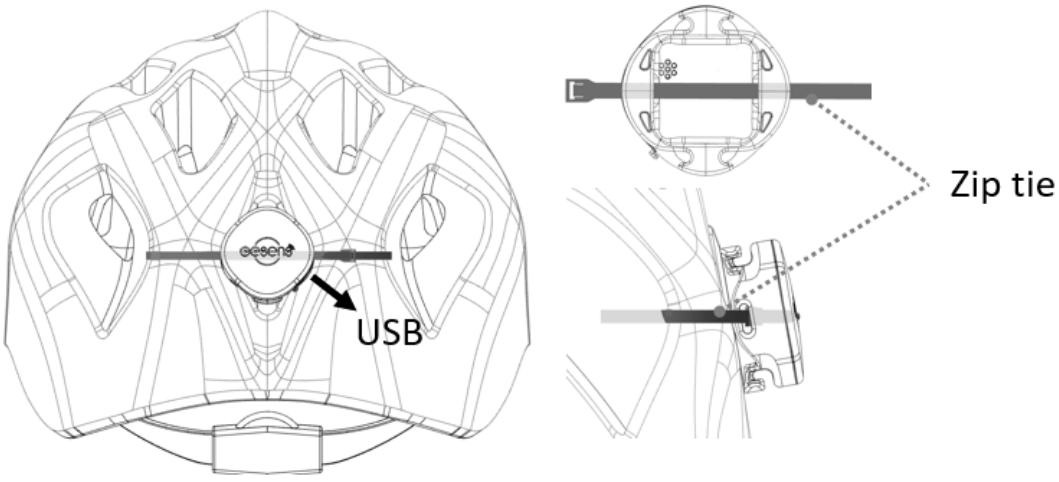
5. Take off the Tail Light by using a **Release Tool** in the box. Push the release tool into the side hole. Slide the Tail Light out of the mount.
6. You can add a **Small Screw** to fix the Tail Light on the mount more securely.



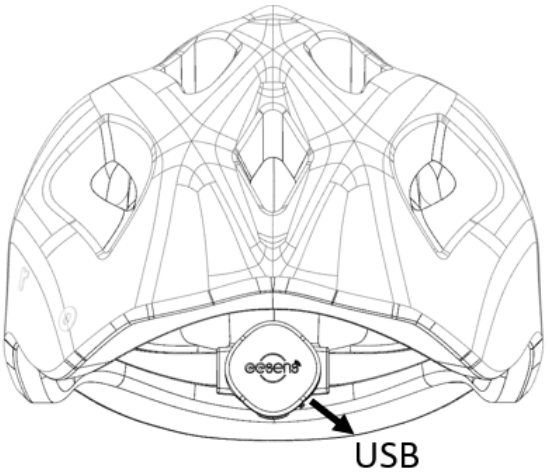
4. Install Controller to Helmet

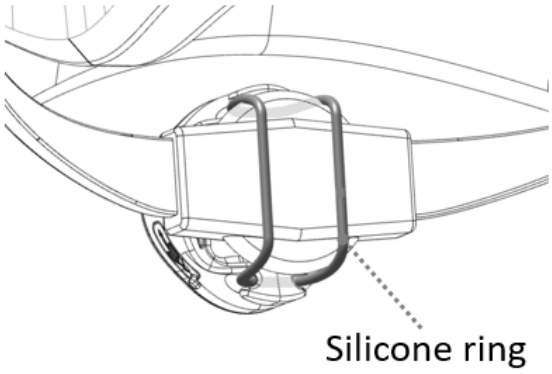
Attach Sensing Controller to helmet, according to the shape of your helmet. Ensure that you install the controller correctly.

1. Use the **Zip Tie** to mount on the back of helmet

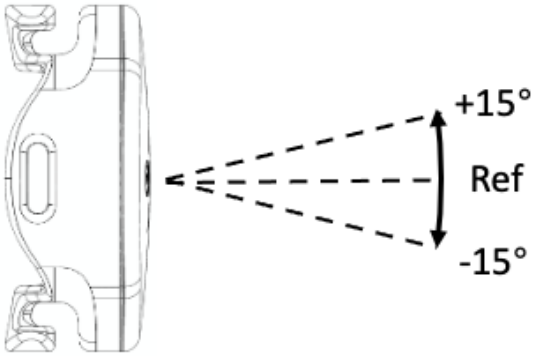


2. Use the **Silicone Ring** to mount on size adjustment wheel





To accurately read rotation angle, the controller is recommended to +/- 15° to horizontal line vertically.

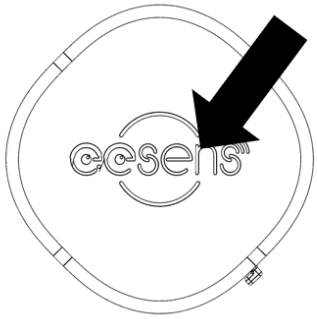


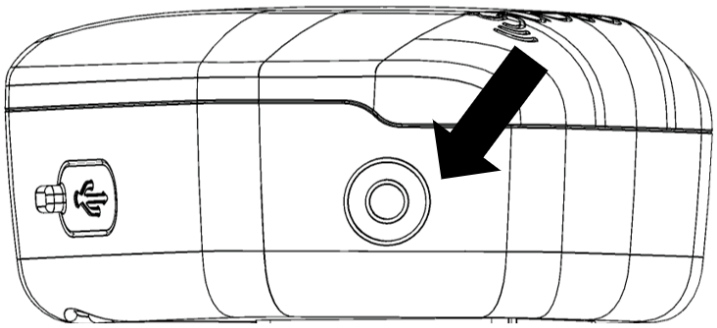
Tutorial videos are shared at https://www.eesens.com and Eesens' YouTube channel

Using SHIELD

Control the SHIELD devices in three ways:

1. **Multifunctional touch button**: SHIELD uses capacitive touch button for input. The location of touch is shown below.





2. Feedback of devices includes LED and beeps to notify you the status or command result of device.
   Motion: SHIELD devices can detect motion to execute automation functions, like on/off, brake or head-gesture.
3. **Eesens APP** can control all functions, customize settings and update features of your tail light and controller.

The devices will light up and beep to notify you the status or command results. Basic functions of SHIELD are described below.

Basic Functions of Touch

Tapping the touch button triggers a green LED flash. Then, holding for every second triggers a green LED flash and a beep.

Tail Light

Tap	1 tap: Check battery capacity 2 taps: Enter tapcode to disarm tail light
Tap and hold	2 seconds: Turn off ride light manually 3 seconds: Paring mode to link new controller 5 seconds: Turn on/off Carry Mode >10 seconds: Restart device

Sensing Controller

Tap	1 tap: Check battery capacity 3 taps: Enable “Find my bike”. Sensing controller will trigger Tail Light to blast loud sound and bright light, helping you to locate your bike.
Tap and hold	3 seconds: Paring mode to link new Tail Light 5 seconds: Turn on/off Carry Mode >10 seconds: Restart device

Status Indicators

System	3 flashing red: input wrong actions Repeated flashing red: rebooting system 5 flashing red/green: enter/exit **Carry Mode** 2 flashing yellow: start entering disarm **tapcode**

Battery and Power Indicator	Green: 70% or more of full charge Yellow: 30% to 70% of full charge Red: 20% to 30% of full charge Fast flashing red: 20% or less, in **PowerSave** mode Flash slowly – charging
Wireless connection	Solid blue: Bluetooth is connecting Flashing Blue: device is in pairing mode Fast flashing blue: device is transferring data

Motion Functions

Auto On / Off

SHIELD device turns on itself, when the device is moved for short time. If the working device isn't moved for a while, it will sleep to save power. The auto-off timer can be configured in Eesens APP.

Trigger/Cancel Turn Signals

You can trigger and cancel Turn Signals of SHIELD tail light by moving your head. You can customize your pattern in Eesens APP.

<u>Trigger Turn signal</u>

1. Turning your head quickly
2. Turn head on the side → Select "Turning Angle" in APP

3. Look back over shoulder → Select “Hold Time” in APP
4. Controller notifies you successful triggering with a beep → Enable” Beep notification” in APP
5. Check if you can trigger turn signals of both sides with the settings

Cancel Turn signal

You can cancel turn signal by lowering your head within 6 seconds after triggering turn signal. Controller notifies you successful canceling with beeps.

⚠ **Practice the action before using SHIELD for your ride**

Sensing Brake

Deceleration triggers brake light. The sensitive level can be configured in Eesens APP → select” Brake Sensitivity” in APP

Anti-theft Alarm

SHIELD’s alarm system works by detecting vibration and movement
on the device. You can turn on the alarm manually in APP. The tail light can also switch on itself, if Auto-armed setting is ON in APP.
If the armed tail light is moved, alarm will be triggered. Meanwhile, the tail light alerts to linked controller/APP to notify owner to check bike. The alarm stops, 10 seconds after the movement stops.

You can turn off the alarm by Eesens APP or entering disarm tapcode on Tail Light.

All functions may be updated with new release of software. Read the release note to know the changes in Eesens website. Subscribe our newsletter or follow our Facebook page to get latest information.

Device Settings in APP

Tail Light

Light Mode	Select a light mode, like steady, flash and so on
Auto-off	Set timer of automatic switching off ride light, starting from Tail Light is unmoved
Day flash	In bright environment, light mode switches to Day flash automatically. If Day flash is Off, ride light is off in bright environment.
Brake Sensitivity	Choose how much deceleration your brake light is given with. 1 is the most and 9 is the least level
Auto-armed	Tail light turns on anti-theft alarm automatically, 1 min after ride light is off
Disarm tapcode	With the setting ON, a tapcode can be set up. You can then disarm the alarm by entering the tapcode on your device

Sensing Controller

Turning angle & hold time	customize turning head pattern for triggering turn signals. The setting has three presetting schemes
Turn signal beeps	Controller beeps when a gesture is triggered
Working indicator	LED flashes when controller works

Firmware Update

Update devices to the latest firmware for new features or fixes. The update button will appear if Eesens APP detects newer firmware is available for your device. Tapping on the button starts updating. Don’t interrupt the updating process by quitting the App, turning off Bluetooth/phone or rebooting devices. This may cause the devices failure. We recommend strongly you to charge SHIELD to high battery level and to follow the instructions in Eesens APP before update.

⚠ **Some functions may be changed with the new software. Read the release notes in Eesens’ website to know the changes.**

Functional Modes of Tail Light

SHIELD Tail Light has other functional modes, which stop ride lights. You need to switch back to ride mode before riding bike.

Security mode

Turn on the anti-theft alarm manually or by device automatically for securing your bike. Moving tail light trigger alarms. Turn off the mode by APP or by entering tapcode on tail light. You can set a tapcode in APP. Using tapcode on tail light as following steps:

1. Tap twice on the touch of the armed tail light
2. After 2 yellow LED flashes, start entering your tapcode
3. Green LED flashes means the tail light is disarmed. Red LED flashes means your tapcode is wrong.

Carry mode

Turn off all functions related to ride lights and alarm. Entering this mode with touch command**,** for transportation. Exiting with charging, rebooting and touch command.

PowerSave mode

With low battery level, SHIELD device enables PowerSave mode to extend the use time for riding safely at night. Some functions, such as Day Flash, with high power consumption

are limited. Ride light is set to lowest intensity. SHIELD shows warning indication of low battery level. Charge your device as soon as possible.

Troubleshooting

If you are having trouble with your SHIELD, follow these steps.

Not powering on

Charge the device using the USB-C cable.

Not charging

Make sure the USB-C power source is switched on and plugged correctly. The LED indicator will display a slow pulse when charging.

Ride light doesn’t work

Tail Light may be set Day Flash off or in Carry or Security modes

Tail light makes loud noise when I move it

Turn off anti-theft alarm and the settings of Auto-armed and Brake Notification in APP.

SHIELD device doesn’t work normally

Try rebooting the device by tap and hold for 10 seconds. In rare situation, you have to run out of the battery.

APP can’t pair or connect to Eesens device

The device may have been connected by another phone. Or, location service (Android) and Bluetooth need to be turned on. All permissions need to be granted to Eesens APP.

Warranty

EESENS warrants all products sold by EESENS to be free of defects in material and workmanship for a period of one (1) year from the date of purchase. If the product fails to work during normal use, EESENS will be responsible for replacing or repairing the defective parts only. No warranty regarding the life of the batteries used in Eesens' product. The warranty is only valid if the parts are not been tampered or intentional damage. Please keep your proof of purchase. The proof must be presented in the event of any claim.

If you purchase the product from an authorized retailer, the retailer will be in charge of the warranty. Please read its warranty terms.

Warranty service must be performed by EESENS or an authorized retailer. Contract EESENS' customer service before you claim the service. The complete warranty terms are published in Eesens' website (https://www.eesens.com).

FCC COMPLIANCE STATEMENT

Warning:
Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
NOTE:
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.
FCC Statement:
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.

ISED Statement

This device complies with Part 15 of FCC Rules [and contains license-exempt transmitter(s) that comply with innovation, Science and Economic Development Canada's licence-exempt RSS Standar(s)]. Operation is subject to the following two conditions:
(1) This device may not cause interference; and(2) This device must accept any
interference received, including interference that may cause undesired operation
The digital apparatus complies with Canadian CAN ICES 3 (B)/NMB 3(B).
French: L'émetteur/récepteurexempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et DéveloppementéconomiqueCanada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
l'appareil numérique du ciem conforme canadien peut 3 (b) / nmb 3 (b).

This device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS 102

RF exposure, users can obtain Canadian information on RF exposure and compliance.
cet appareil est conforme à l'exemption des limites d'évaluation courante dans la section 2.5 du cnr - 102 et conformité avec rss 102 de l'exposition aux rf, les utilisateurs peuvent obtenir des données canadiennes sur l'exposition aux champs rf et la conformité.
This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.