

# SHIELD: Quick Start Guide

## Hardware overview



## System LED

Functions	Description
Battery power indicator	Green – near full power Yellow – mid battery Red – low battery Red fast flash – almost run out of battery Flash slowly -- charging
Bluetooth connection	Blue steady (taillight only)
System status	Blue flash – pairing Blue fast flash – transferring data

## Functions of button

Functions	Description
1 click	Check battery capacity
3 clicks (Controller only)	Enable find-my-bike of taillight
Long press 3 seconds	Enter device pairing mode
Long press 10 seconds	Restart device
Disarming tap code (taillight only)	Double click enable tap code, which consists 5 short- or long-press combination

### Things in the box



### Activate your device

The devices shipping to you were set to shipping mode. To activate your device, you must connect devices to a 5V power through USB cable. Then, pair your devices with APP to complete activation and use all functions.

### **Download APP**

For Android phone

<https://www.pgyer.com/gOWW>

## Install your SHIELD

Install your controller of SHIELD to your helmet

- To size adjustment wheel

Use a silicone ring to fix your controller on size adjustment wheel of your helmet. Be sure that direction of controller's USB must face bottom right and white cover must face backward.



- To the back of helmet



## Install your taillight to your bike

Silicone  
band



## Release your taillight from mount

Push the release tool into the side hole and then push taillight out of the mount.



## Disable the quick release snap



## **Main functions**

### **1. Automated turn and brake signal**

SHIELD by EESSENS is the first bike taillight equipped with this “automatic turning signals” function. Our patented sensor algorithm in the controller detects your gesture of “shoulder check” correctly by the motion of your head. When your head turns to check the traffic behind you, the controller on your helmet will check your turning angle, speed and hold time. If these factors meet the criteria, the controller will trigger the turn light. We have optimized the ability of the turn-head algorithm over time. Now, the algorithm can detect FOUR different gestures: look at side, glance backwards, scan backwards and stare backwards over your shoulder. The later three of them have include most cyclers’ shoulder checking patterns. You can simply select in the EESSENS APP which gestures best fit your riding habit, to avoid falsely triggering turn signals.

### **2. Anti-theft alarm**

Anti-theft mode of SHIELD will protect your bike. If someone is messing with your bike, a 110-dB alarm will sound to deter bad guys. A warning is also instantly sent to both your wireless controller on the helmet and the EESSENS app.

### **3. Find-my-bike**

After a long day, you may forget the exact location where you parked your bike and feel frustrated when you search for your bike on the street or in the parking lot. SHIELD can assist you in searching for your bike efficiently. You can easily turn on “FIND-BIKE” feature by pressing the wireless sensing controller or virtual button in EESSENS APP. A bright light and loud sound of SHIELD will guide you to your bike’s location.

### **4. Companion APP**

EESSENS APP helps you configure the light conveniently, with selections for light mode, disarm passcode, speed levels of turning head and so on. New software features will be added to SHIELD through the EESSENS APP. Send us your needs. The EESSENS team is looking forward to your feedback, allowing us to upgrade our product to improve your experience.

## **Risk of using the product**

1. The product has passed CE/FCC and reliability test, but it hasn’t been developed completely. It will have bugs
2. Using VPN is highly recommended because the server is built in US. The local Internet connection is not reliable.
3. Even the taillight has anti-theft mode. A good bike lock is still needed to prevent from theft.
4. The wireless connection distance between controller and taillight is 130 meters in open space. The distance will decrease due to blocks or surrounding radiated noise. Next version of hardware will double the distance.

**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 Warning:**

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.

**Caution:** Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.



## ISED Statement

- English: This device complies with Industry Canada license - exempt RSS standard(s).

Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

The digital apparatus complies with Canadian CAN ICES - 3 (B)/NMB - 3(B).

- French: Le présent appareil est conforme aux CNR d'Industrie Canada 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'utilisateur de 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.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé.

Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.