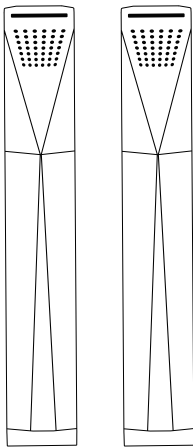
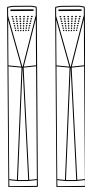


# GRANEYE

## User Manual



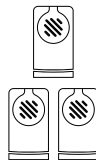
## Product Overview



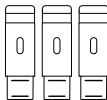
Camera



Hub



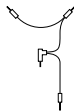
Echo



Mounting Arm



Arm Extension



Echo Cable



USB A-C Cable



USB C-C Cable



Stability Pad

### Download translated version of this user manual.

[link.gran-darts.com/GranEye\\_user-manual](http://link.gran-darts.com/GranEye_user-manual)

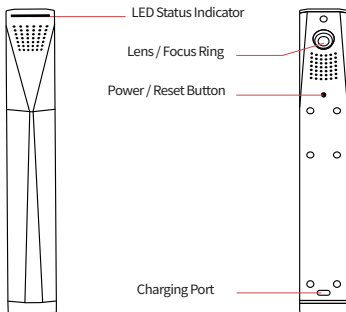


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- Vous pouvez télécharger les versions traduites de ce manuel.
- Puede descargar las versiones traducidas de este manual.
- Puoi scaricare le versioni tradotte di questo manuale.
- この説明書の翻訳版をダウンロードできます。
- 您可以下載本手冊的翻譯版本。
- 이 설명서의 번역본을 다운로드할 수 있습니다



## List of Components

CAMERA

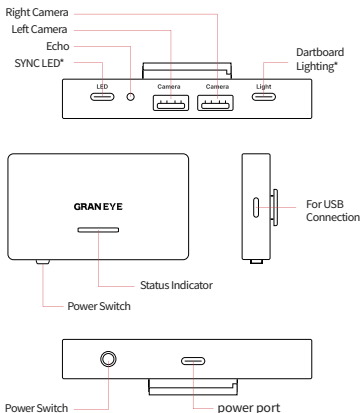


### LED Status Indicator Condition

LED Indicator Stats	Description
● Stays lit up in red	Star ting up
⋯ Slowly flashes in red	Not connected
⋯ Slowly flashes in green	Attempting to connect to Wi-Fi
● Stays lit up in green	Camera is connected to Wi-Fi
● Stays lit up in blue	Connected via USB
● Stays lit up in sky blue	Captured image
● Stays lit up in purple	Operating in video streaming mode
⋯ Rapidly flashes in red	Received command to factory reset / firmware update / delete Wi-Fi information

## List of Components

HUB



### LED Status Indicator Condition

LED Indicator Stats	Description
⋯ Slowly flashes in red	Not connected
● Stays lit up in green	Connected via Bluetooth
● Stays lit up in red	Insufficient power
● Stays lit up in orange	Firmware update in progress

**\*SYNC LED:** This port is dedicated to the SYNC LED. It is sold separately and not included in the package.

**\*Dartboard Lighting:** This port is dedicated to dartboard lighting. The light is sold separately and not included in the package. third-party lights are also supported

## You Also Need



**A USB adapter is not included. Please provide your own.**

- ✓ Type-C port
- ✓ PD (Power delivery) compatible
- ✓ Outputs 20W or higher

✓ Output: 5V = 3A/9V = 3A/  
12V = 2.5A/20V = 1.5A

✗ Output: 5V = 2.4A

### ⚠ Precautions

Adequate power supply is necessary for comfortable use of GRAN EYE. Please use a **USB Type-C charger** that can supply **20W** or higher.

Insufficient power can cause the following issues:



Unable to connect



Unstable connection



Unable to capture camera footage

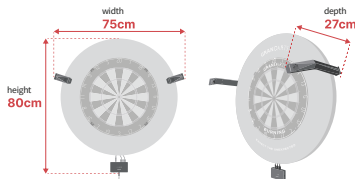
## Getting Started

To use GRAN EYE, install the GranDarts app on your smartphone or tablet. You can register a new account, or log in with your existing GRANBOARD account.



## Install Precautions

Make sure to check in advance the space required to install GRAN EYE.



## Download Translated PDF



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[link.gran-darts.com/GranEye\\_user-manual](http://link.gran-darts.com/GranEye_user-manual)

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- 이 설명서의 번역본을 다운로드할 수 있습니다

## Video Guide



Watch a video for the installation steps.

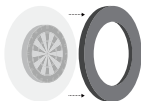
English / Dutch / Francis / Spanish / 日本語

# Installation

5min

## Remove Surround

Remove your dartboard surround from the dartboard.



## Install Echo

Install the three Echo units one by one. Only the mounting positions are specified. It doesn't matter which Echo goes where.

### ⚠ Precautions

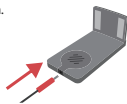


If you are using a dartboard with a rotation lock wheel, it may interfere with the Echo and prevent it from being mounted in the correct position. Please remove the wheel before use.

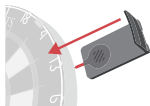
### Position of Number 13

First, attach the Echo to the number 13 position.

- 1 Prepare the Echo-dedicated cable. Connect either of the two red jacks to the Echo until it clicks.



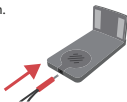
- 2 Attach the Echo to the dartboard using the magnet so that the Echo is positioned on the back side of the dartboard.



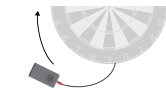
### Position of Number 14

Next, attach the Echo to the number 14 position.

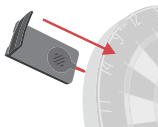
- 1 Connect the remaining red jack to the Echo until it clicks.



- 2 Route the cable underneath the dartboard.



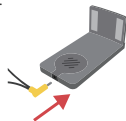
- 3 Attach the Echo at the number 14 position.



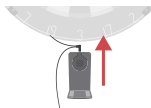
### Position of Number 3

Finally, attach the Echo to the number 3 position.

- 1 Connect the yellow L-shaped jack to the Echo until it clicks.



- 2 Attach the Echo at the number 3 position. Make sure the cable is not caught or tangled.



### Is Your Dartboard Wobbling?

If your dartboard feels unstable or wobbly, use the included Stability Pad to reduce movement and improve balance.

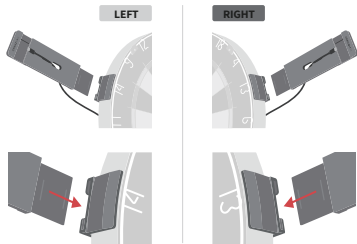


## Install Mounting Arms for Camera

- 1 Prepare the USB A-C cables. Pass the Type-C ends through the cable guide on the mounting arms.

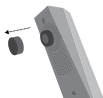


- 2 Insert the mounting arms into the Echoes attached at positions 13 and 14. Secure them until you hear a click.



## Install Cameras

- 1 Remove the lens cap straight off.



### ⚠ Precautions

Pull the lens cap straight off without twisting it. The lens is designed to rotate for focus adjustment. Twisting the cap may cause the image to become blurry.



- 2 Attach the camera to the tip of the mounting arm. Secure it until you hear a click.

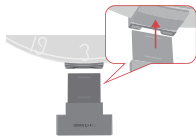


- 3 Connect the USB cable to the camera.



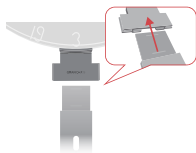
## Install Arm Extension

Use the Arm Extension for the Echo installed at the number 3 position. Insert the Arm Extension into the Echo and secure it until it clicks. Make sure the logo is facing outward when installing.



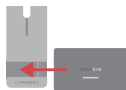
## Install Mounting Arm

Insert the third Mounting Arm into the Arm Extension. Secure it until you hear a click.



## Install Hub

Attach the Hub to the tip of the Mounting Arm you just installed. Slide it in from the right and secure it until you hear a click.



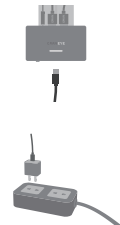
## Connect & Organize Cables

- 1 Connect the two camera cables and the Echo cable to the Hub. Make sure each cable is inserted fully and securely.
- 2 Use the clips on both sides of the Arm Extension to organize the cables.



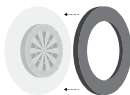
## Connect to Power

- 1 Connect the included USB C to C cable to the Hub's power port.
- 2 Plug it into the USB adapter you prepared.



## Place Back Surround

Reattach the surround to its original position.



## Initial Connection

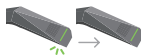
### Method 1: Wi-Fi Connection



Select Wi-Fi connection and follow the app instructions to enter your home Wi-Fi information.



Have the left and right cameras scan the QR code containing your Wi-Fi information (SSID and password).



When the cameras light up **green**, the connection is complete.

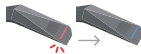
### Method 2: USB Connection



Select USB connection and follow the app instructions to connect the cable.



Permission requests for the camera and hub will appear. Please allow all of them.



When the camera lights up **blue**, the connection is complete.

### Can't connect?

If you are having trouble with the initial connection, please visit our website for help.

<https://link.gran-darts.com/graneye-help>



## Adjust Focus Point



If the focus is blurry, you can adjust the focus by rotating the lens ring.

## Calibration

Calibration is the process of correctly dividing the dartboard into scoring sections. If the calibration is not done properly, it may lead to incorrect scoring.

### Calibration Steps

#### 1 Select the brand of your dartboard

There are slight dimensional differences between dartboards depending on the manufacturer. If your dartboard's manufacturer is listed, you can select the preset for it. If it is not listed, please select "Other." You will be able to fine-tune the settings manually at the end.

#### 2 Start Calibration

Press "Start Calibration" The AI will automatically perform the calibration. The results will be displayed within a few seconds.

#### 3 Calibration Result

##### Case1: no adjustment need



If the actual wire and the green ring overlap as shown in the left image, select **OK**.

Check the calibration result for the other camera as well. The calibration will be complete.

##### Case2: need an adjustment



If the actual wire and the green ring are misaligned as shown in the left image, select **Not Aligned**.

Proceed to the next step, calibration correction.

#### Calibration Correction



Enlarge or reduce the green ring to correct the misalignment. Press **OK** to save the corrected content.



### Is the result completely distorted?

Calibration may fail if the AI detects the four reference points in the wrong positions.

Detection may fail under the following conditions:

- Dartboards with unique designs or unusual color schemes
- Extremely bright or dark lighting environments
- Blurry video (out-of-focus image or dirty lens)
- Manufacturing defects on the dartboard (e.g., excessively raised wires)

If detection fails, please try manual calibration. You can find detailed instructions on our Help Desk.

#### 🔗 Help Desk

<https://link.gran-darts.com/graneyeye-help>

## Using GRAN EYE



ON

To use GRAN EYE's auto-scoring function, please turn on "Use GRAN EYE" in the gameplay settings.

## Advanced Settings

### AI Model Settings

You can check and switch the AI model used for auto-scoring. Please select a model that runs smoothly based on your device's specifications.

### Firmware Update

To enhance your experience, we regularly release firmware updates to introduce new features and fix any software issues that may arise during use. When a new firmware version becomes available, we recommend updating to the latest version to ensure optimal performance. Please select a model that runs smoothly based on your device's specifications.

### Initialize GRAN EYE Settings

You can reset the GRAN EYE settings configured in the app.

#### Items that will be cleared

- Wi-Fi information you entered
- Your dartboard brand
- Calibration settings

#### Items that will not be cleared

- Wi-Fi information stored in the camera
- Selected AI model
- Previous play data

## Restart Camera

If the connection with the camera is unstable, please restart the camera.



Command: **Press and Release**



## Delete Wi-Fi Information

If you want to delete Wi-Fi information once saved to the camera, please try the following command.



Command: **Press + Hold 5 seconds**



This is effective when incorrect information has been loaded or when you want to connect to a different Wi-Fi network.

## Factory Reset Camera

If the firmware update fails or the camera stops functioning properly, please perform a factory reset.



Command: **Click × 5 times**



When you perform a factory reset, the camera's program will also fall back to the factory version. After resetting, be sure to update the firmware.

## Disclaimer

1. This product is a precision device. We are not responsible for any damage or malfunction caused by improper handling, impact, or dropping during transport or installation by the user.
2. We shall not be held liable for any direct or indirect damages resulting from the use of this product, including but not limited to data loss, equipment damage, or disputes with third parties.
3. This product is intended for indoor use only. We are not responsible for any malfunctions caused by exposure to direct sunlight, rain, or other outdoor conditions.
4. The performance and accuracy of this product may vary depending on your usage environment (such as device, network, power supply, and installation conditions).
5. Product specifications, design, and features are subject to change without prior notice.
6. Improper use of the product — including modification or the use of non-recommended accessories — may void the warranty.
7. Certain features may not function correctly due to app updates or changes to your operating system version.
8. Temporary issues caused by software or app-related bugs are not covered under warranty.
9. The magnets on the Echo units may become detached over time due to repeated attachment and removal, or as a result of drops or impact... such detachment is considered a normal characteristic of the product and is not covered under warranty.

## Safety and Handling Precautions

- This product is for indoor use only. Avoid using it in areas with water or high humidity.
- Do not subject the product to strong impacts or vibrations, as this may cause damage or malfunction.
- Avoid leaving the product in high temperatures or under direct sunlight for extended periods.
- Do not touch the camera lens. Dirt or scratches may reduce performance.
- Do not disassemble or modify the product. Doing so may void the warranty.
- Keep the product out of reach of small children.

- When connecting to a power source, use only the recommended USB adapter and cable.
- If you notice any abnormalities, stop using the product immediately and contact customer support.

## Warranty

Warranty coverage and replacement policies may vary by region. In most regions, defective units can be replaced within a limited warranty period, typically within 90 days of purchase. Please contact customer support for details applicable to your area.

Product defects are covered under warranty when customers provide the following information:

- Proof of purchase
- Location and symptoms of the defect

Please note that the warranty does not cover the following cases:

1. When proof of purchase and warranty period cannot be verified.
2. Damage, malfunction, or loss due to shipping issues.
3. Damage or malfunction due to incorrect installation, improper handling or storage. (e.g., use in humid environments, malfunction caused by dropping during installation, etc.)
4. Damage or malfunction resulting from unauthorized repair, modification, or disassembly by individuals.
5. Damage or malfunction resulting from use with third-party components or products that do not comply with this product's specifications.
6. Damage or malfunction resulting from force majeure. (fire, earthquake, flood, theft, etc.)
7. Purchases made through channels other than the official website or authorized retailers. (e.g., second-hand purchases, etc.)  
Consumable parts or parts that are naturally expected to deteriorate over time.  
When cooperation is not provided in supplying information to identify
9. defects or causes of malfunction.

## Contact & Support

For any questions or issues regarding the product, please refer to our help desk or contact us directly.

### 📞 Help Desk

<https://link.gran-darts.com/graneyeye-help>

### ✉️ Contact Us

<https://link.gran-darts.com/contactus>

from the GranDarts app: Menu > Support > Contact

## Stay Updated

Stay informed about what's new and what's coming next in the GranDarts app.

### 📖 Changelog

Check out the changelog for recent updates.

<https://link.gran-darts.com/changelog>

### 🗺️ Roadmap

Check out the roadmap for upcoming features.


<https://link.gran-darts.com/roadmap>

### 📌 Topics

We regularly share announcements, feature spotlights, event info, behind-the-scenes stories, and other updates.

<https://link.gran-darts.com/topics>

## Follow Us

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 [facebook.com/granboard.official](https://facebook.com/granboard.official)

 [@gran\\_darts](https://www.instagram.com/@gran_darts)

## Regulatory Compliance Information

### EU Authorized Representative

Apex CE Specialists GmbH  
Gräfenberger Allee 277, 40237 Düsseldorf, Germany  
E-mail: [info@apex-ce.com](mailto:info@apex-ce.com)



User manual, RF specifications and Declaration of Conformity:  
[https://link.gran-darts.com/download\\_graneyeye-docs](https://link.gran-darts.com/download_graneyeye-docs)  
(also accessible via the QR code)

### Radio Frequency (RF) Specifications

GRAN EYE consists of two wireless units:

Hub (Bluetooth Low Energy)

Camera (2.4GHz Wi-Fi)

Both units comply with the essential requirements of the Radio Equipment Directive (RED) 2014/53/EU.

#### Bluetooth (Hub)

Based on certified test reports (GRN0217 BLE), the following RF parameters apply:

- Frequency range: 2402–2480 MHz
- Maximum RF output power: –1.50 dBm (EIRP)
- Modulation: GFSK (1 Mbps)
- Antenna type: Internal antenna, 0 dBi

#### Wi-Fi (Camera)

Based on certified test reports (GRN0217 Wi-Fi 2.4GHz), the following RF parameters apply:

- Frequency range: 2412–2472 MHz (Channels 1–13)
- Maximum RF output power: 13.13 dBm (EIRP)  
(worst case value measured under 802.11b)
- Modulation:
  - 802.11b: DSSS
  - 802.11g: OFDM
  - 802.11n (HT20): OFDM
- Antenna type: Internal antenna, 0 dBi

## Konformitäts- und Gesetzliche Hinweise

### EU-Bevollmächtigter

Apex CE Specialists GmbH  
Gräfenberger Allee 277, 40237 Düsseldorf, Deutschland  
E-Mail: [info@apex-ce.com](mailto:info@apex-ce.com)



Benutzerhandbuch, HF-Spezifikationen und Konformitätserklärung:  
[https://link.gran-darts.com/download\\_graneyeye-docs](https://link.gran-darts.com/download_graneyeye-docs)  
(auch über den QR-Code zugänglich)

### Funktechnische Spezifikationen (RF)

GRAN EYE besteht aus zwei drahtlosen Einheiten:

• Hub (Bluetooth Low Energy)

• Kamera (2,4-GHz-Wi-Fi)

Beide Einheiten erfüllen die grundlegenden Anforderungen der Richtlinie 2014/53/EU (RED).

#### Bluetooth (Hub)

Basierend auf den zertifizierten Prüfberichten gelten die folgenden HF-Parameter:

- Frequenzbereich: 2402–2480 MHz
- Maximale HF-Sendeleistung: –1,50 dBm (EIRP)
- Modulation: GFSK (1 Mbps)
- Antennentyp: Interne Antenne, 0 dBi

#### Wi-Fi (Kamera)

Basierend auf zertifizierten Prüfberichten gelten folgende HF-Parameter:

- Frequenzbereich: 2412–2472 MHz (Kanäle 1–13)
- Maximale HF-Sendeleistung: 13,13 dBm (EIRP)  
(schlechtester Fall gemessen im Modus 802.11b)
- Modulation:
  - 802.11b: DSSS
  - 802.11g: OFDM
  - 802.11n (HT20): OFDM
- Antennentyp: Interne Antenne, 0 dBi