# BRNKL

Setup Guide

**BRNKL**

# Before you start

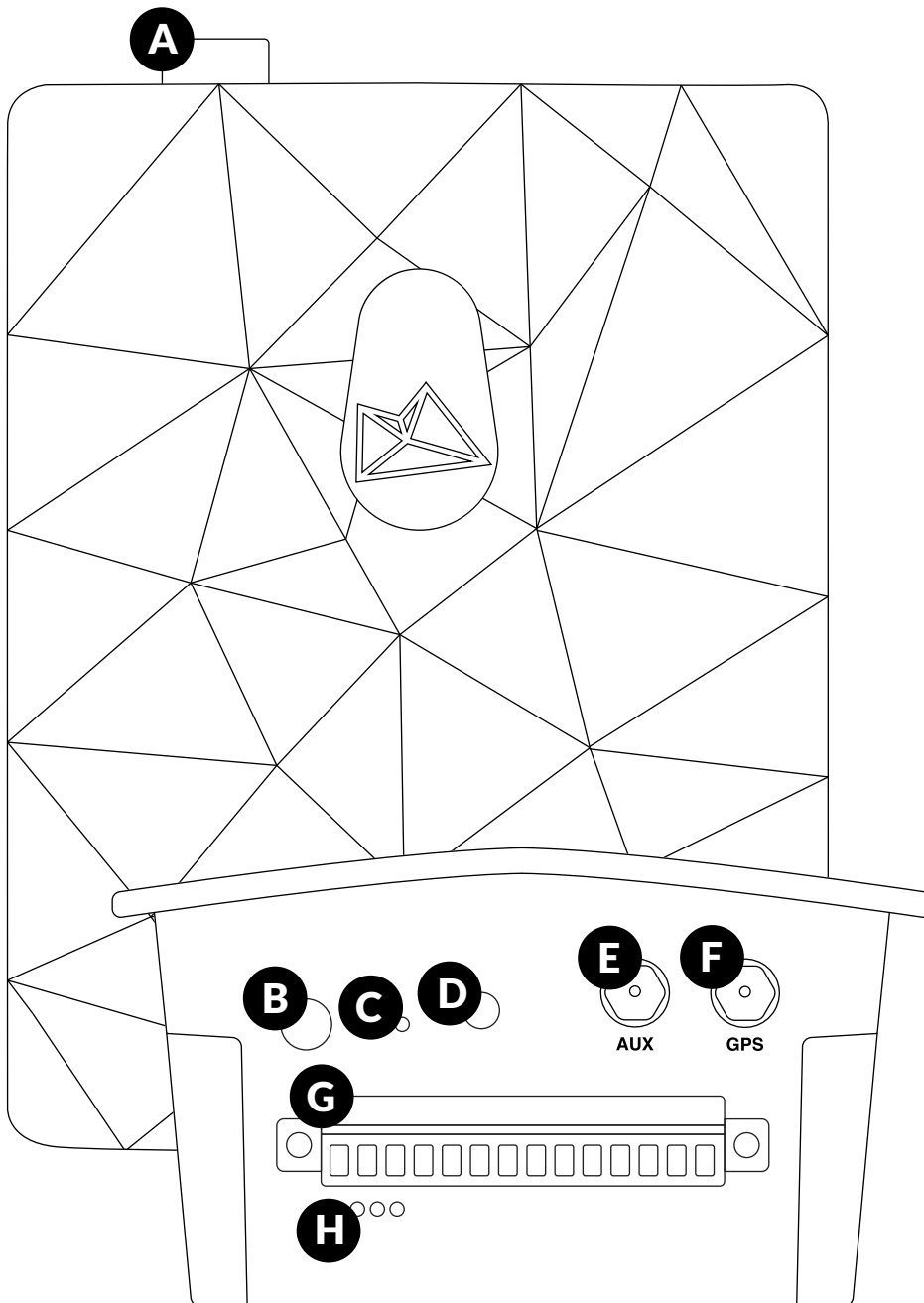**Caution:** If you're unfamiliar with basic electrical systems, hire a professional installer or a marine electrician.

# Contents

# Meet BRNKL



| | | | |
|---|---|---|---|
| **A** | Device port | **E** | Mobile antenna port |
| **B** | Connection test button | **F** | GPS antenna port |
| **C** | Reset button | **G** | Connector |
| **D** | Indicator light | **H** | Environmental sensors |

# Setup options

Set up BRNKL to monitor and secure your boat or vehicle.

## Basic setup

**BRNKL** | Know temperature, humidity, pressure, pitch angle, heel angle, and impact.

**Antenna** | Know your BRNKL position and stay connected using international mobile networks.

**House battery** | Power your BRNKL and know battery voltage.

## Add devices

Connect existing devices directly to your BRNKL:

**Battery** | Know battery voltage.

**Bilge pump** | Know bilge pump activity.

**Ignition switch** | Know ignition switch activity.

Add BRNKL devices or adapt existing devices with accessories:

**Security devices** | Secure entrances and areas.

**Monitoring accessories** | Add more onboard systems and devices.

ⓘ Find **Add device** resources at **brnkl.io/help**

# Set up BRNKL

Set up BRNKL to monitor and secure your boat or vehicle.

Follow these steps:

### What you need

1. **Subscribe**

2. **Install BRNKL**

3. **Add antenna**

4. **Add house battery**

5. **Add devices**

6. **Set and calibrate**

# What you need

You need these things to complete the basic setup of your BRNKL:

## In the box

- BRNKL

- 2.5 mm flathead screwdriver

- Antenna

- Mounting bracket

  > Mounting screws (Qty 8)

## Devices

- iOS or Android™ mobile device

  > Internet connection

- Onboard battery or battery bank

  > 5 V to 32 V DC

## Services

- Credit card

- Mobile network coverage

## Tools

- Heat gun or butane torch

- Pencil

- Phillips #1 screwdriver

- Wire stripper and crimper tool

You may need:

- Flashlight or headlamp

- Multi-head screwdriver

- Non-conductive fish tape

- Power drill and bit set

- Wrench set

## Supplies

- 3 A fuse, ATC/ATO

- Cable ties

- Cable tie mounts

- Heat-shrink ring terminals,
  22–18 AWG (Qty 2)

  > One sized to house battery
    terminal

  > One sized to common ground
    terminal

- Heat-shrink butt connector,
  22–18 AWG

- In-line fuse holder,
  18 AWG, ATC/ATO

- Marine grade wire, 18 AWG
  (black or yellow)

- Marine grade wire, 18 AWG (red)

# Subscribe

Stay connected to your BRNKL with a BRNKL service subscription.

**To subscribe, do one of the following:**

- Create account and subscribe

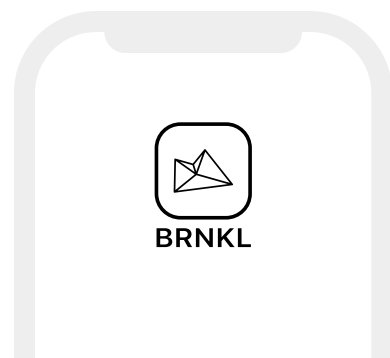- Subscribe with existing account

## Create account and subscribe

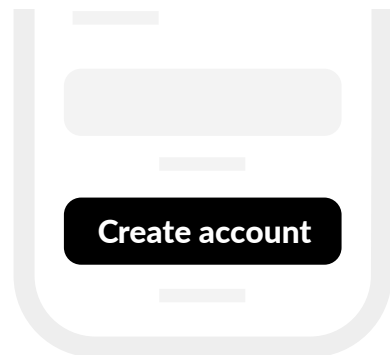Create a new user account and subscribe to BRNKL service.

**To create account and subscribe:**

On your mobile device:
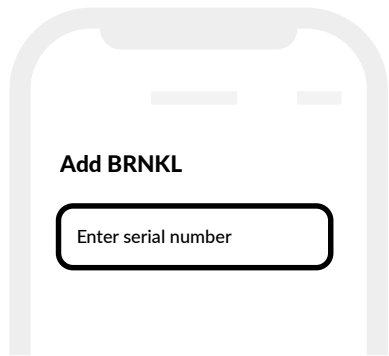
1. Install and open the **BRNKL** app.



2. Open **BRNKL**, select **Create account**.



3. Follow the instructions to create a new user account.

4. When prompted, enter the BRNKL **serial number**.

**Add BRNKL**

Enter serial number

5. Follow the instructions to select and subscribe to a service plan.
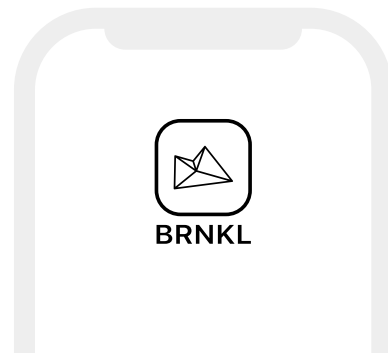
# Subscribe with existing account

Subscribe to BRNKL service with your existing BRNKL user account.

## To subscribe using existing account:

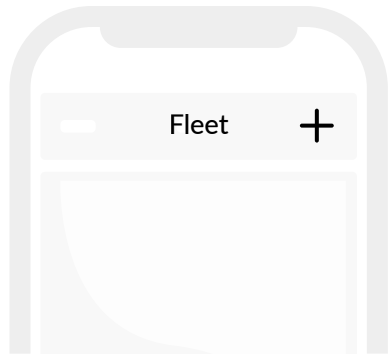On your mobile device or browser:

1. Open **BRNKL**.

BRNKL

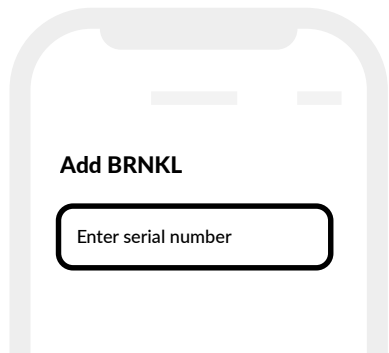If prompted, enter your account credentials.

2. From **Map**, **Graphs**, **Photos** or **Alerts**, select the name of the displayed BRNKL.

Name

3. From **Fleet**, select ✚.



4. When prompted, enter the BRNKL
**serial number**.



5. Follow the instructions to select
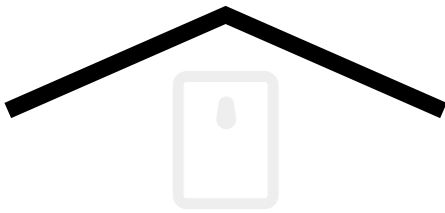and subscribe to a service plan.

# Install BRNKL

Position and secure your BRNKL.
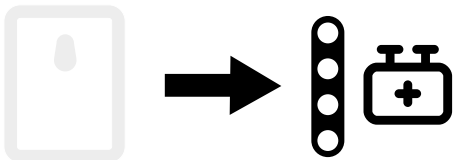
To install BRNKL, follow these steps:

## A | Select position

Follow these guidelines:

- Place indoors in a dry location.

- Allow efficient access to a constant, unswitched **house battery terminal** ⊕.
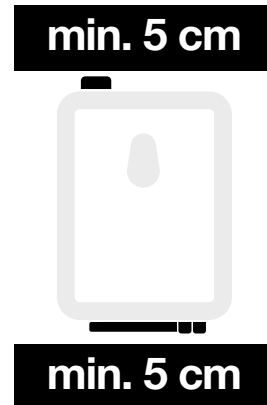
- Provide for antenna placement within 3 m (10 ft).

  See *Install antenna* (page 13) for details.

- Allow for discreet wiring routes from connected devices.

- Provide a stable **vertical** mounting surface (preferred).

- Allow 5 cm (2") of clearance to access the ports on the top and bottom of the BRNKL.
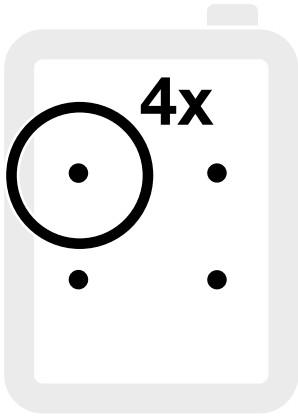
**min. 5 cm**

**min. 5 cm**

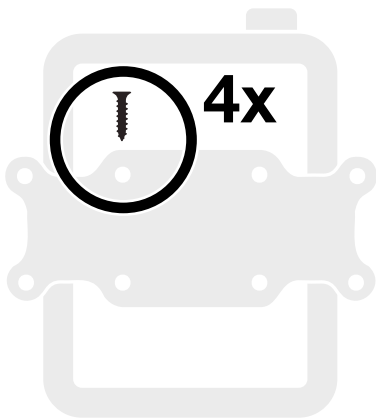- DO NOT place with bottom connector facing up.

## B | Attach mounting plate

WIth the BRNKL placed facedown:

1. Align the mounting plate with the holes on the rear of the BRNKL.



2. Attach the mounting plate using the four supplied screws.
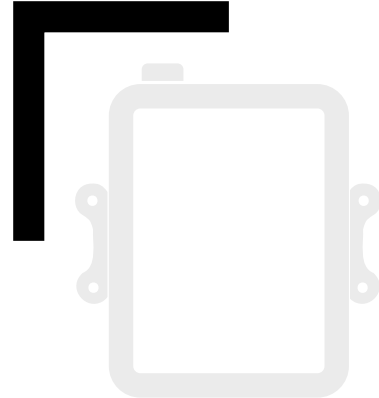


## C | Mount assembly

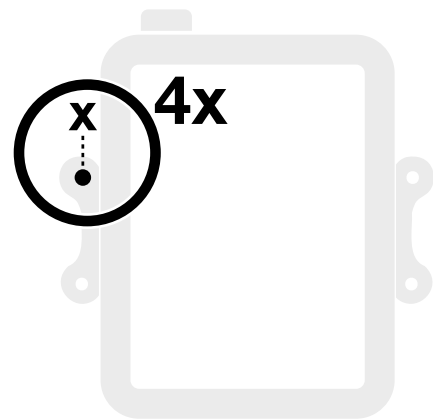On the mounting surface:

1. Place the BRNKL assembly in the selected position.
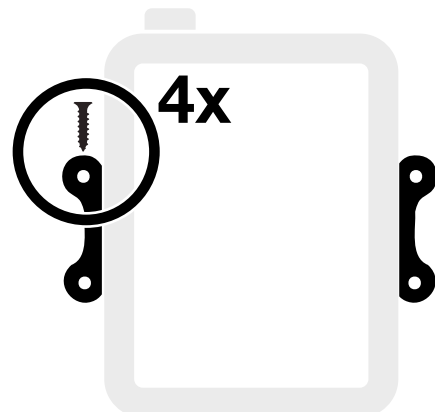
   Align squarely.



2. Mark the four screw holes.

   Drill pilot holes as required.



3. Secure with four supplied screws.

# Add antenna

Connect GPS and mobile networks to your BRNKL by adding the supplied antenna.

**To add antenna, follow these steps:**

1. Install antenna
2. Prepare antenna cable
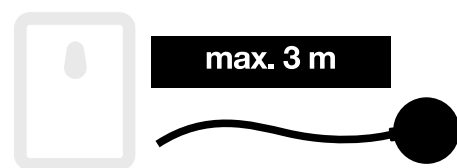3. Connect antenna

## ① Install antenna

Position and secure the supplied antenna.

To install antenna, follow these steps:

### A | Select position
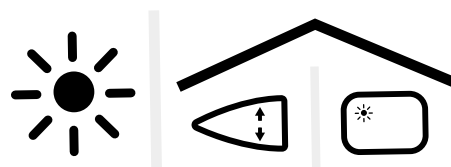
Follow these guidelines:

- Place antenna within **3 m (10 ft)** of the BRNKL.



- If the boat or vehicle has a **metal body**, position the antenna outdoors, or indoors next to a window.
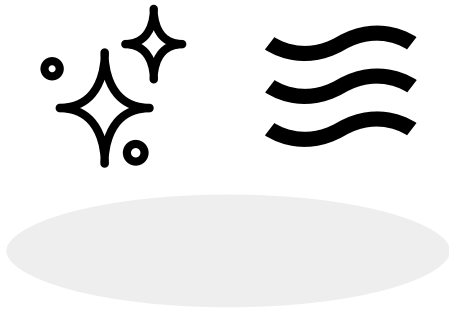


- If the boat or vehicle has a **fibreglass body**, position the antenna outdoors, or indoors next to an outside wall or window.
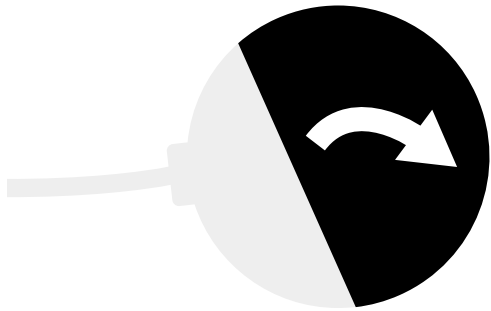
## B | Secure

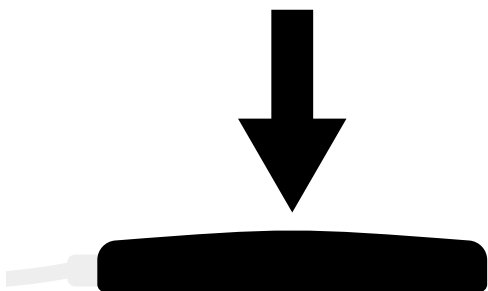1. Make sure the mounting surface is clean and dry.

2. On the bottom of the antenna, completely remove the the self-adhesive backing.

3. With adhesive facing the mounting surface:

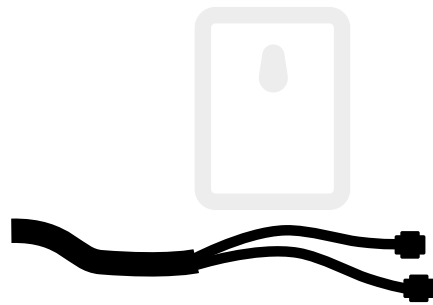   > Place the antenna in position, then press firmly to secure.

## ② **Prepare antenna cable**

Prepare the antenna cable before connecting to your BRNKL.

**To prepare antenna cable:**

From the installed antenna:

1. Route the antenna cable to the BRNKL.

2. Secure with cable ties and mounts.
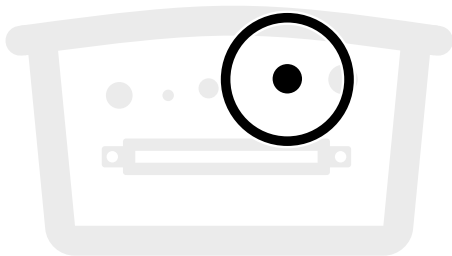
## ③ Connect antenna

Connect the supplied antenna to your BRNKL.

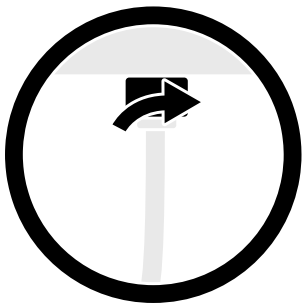To connect antenna, follow these steps:

### A | Connect mobile antenna

On the bottom of the BRNKL:

1. Plug the **4G** antenna cable into the **AUX** mobile antenna port.
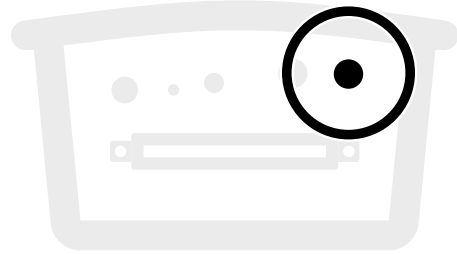
**4G ➡ AUX**

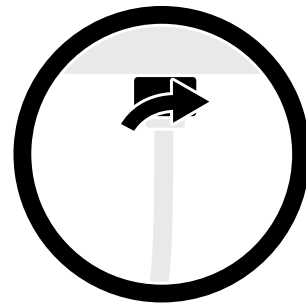2. Turn the collar to fasten.

### B | Connect GPS antenna

On the bottom of the BRNKL:

1. Plug **GPS&BD** antenna cable into the **GPS** antenna port.

**GPS&BD ➡ GPS**

2. Turn the collar to fasten.

# Add house battery

Power your BRNKL and know battery voltage by adding a house battery.

**To add house battery, follow these steps:**

① Prepare house battery wiring

② Connect house battery

③ Test house battery connection

④ Set house battery settings

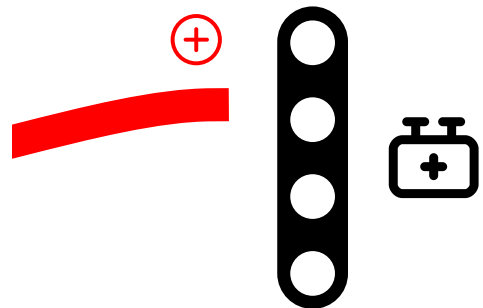## ① Prepare house battery wiring

Prepare wiring before connecting a house battery or battery bank to your BRNKL.

To prepare house battery wiring, follow these steps:

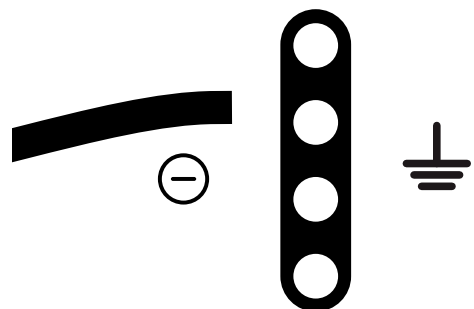### A | Run wiring

Follow these guidelines:

- DO NOT connect wiring at this stage.

- From the BRNKL, run two wires:

  > **Red wire** ⊕ to a constant, unswitched **house battery terminal** ⊕.

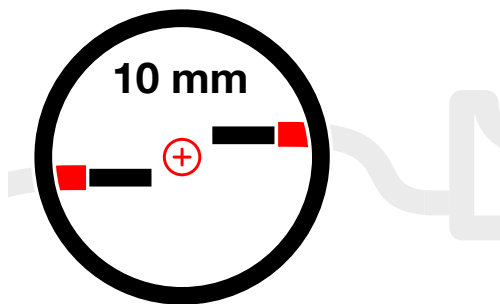  > **Black wire** ⊖ to a **common ground terminal** ⊖.

- Leave 20 cm (8") of extra wire at each end.

- Route wiring within conduit, wall cavities, or wiring channels.
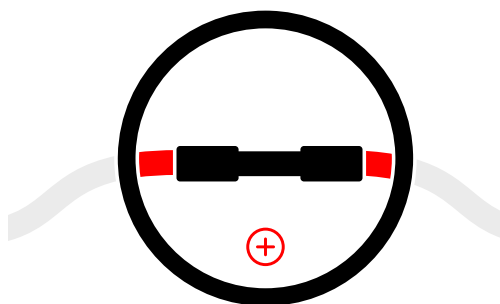
- Secure with cable ties and mounts.

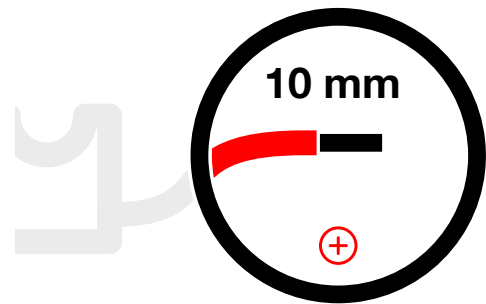## B | Prepare battery terminal wiring

At the battery terminal end of wiring:

1. Trim any extra wire.

2. Strip 10 mm (1/2") of insulation from the end of the **red wire** ⊕ and one **fuse holder lead** ⊕.



3. Connect and crimp the two wires with a heat-shrink butt connector
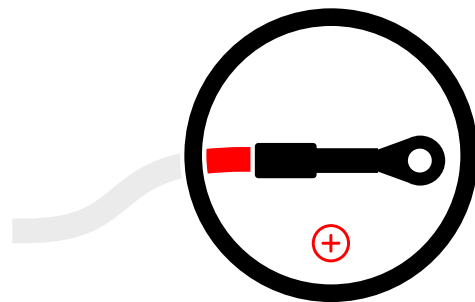
   Heat seal the connection.



4. On the remaining **fuse holder lead** ⊕, strip 10 mm (1/2") of insulation from the end of the lead.



5. Connect and crimp a ring terminal to the lead.

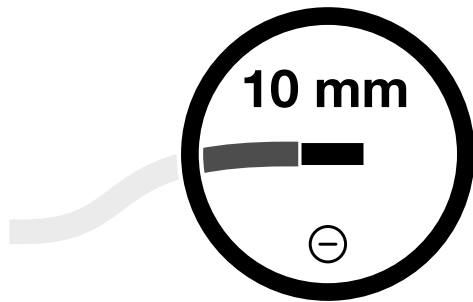   Size the ring terminal to fit the battery terminal.

   Heat seal the connection.

## C | Prepare common ground wiring

At the common ground end of wiring:

1. Trim any extra wire.

2. Strip 10 mm (1/2") of insulation from the end of the wire.



3. Connect and crimp a ring terminal to the wire.

   Size the ring terminal to fit the common ground terminal.

   Heat seal the connection.



## D | Prepare BRNKL wiring

At the BRNKL end of the wiring:
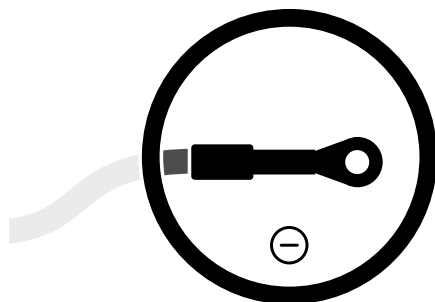
1. Trim any extra wire.

2. Strip 5 mm (1/4") of insulation from the ends of the **red wire** ⊕ and **black wire** ⊖.
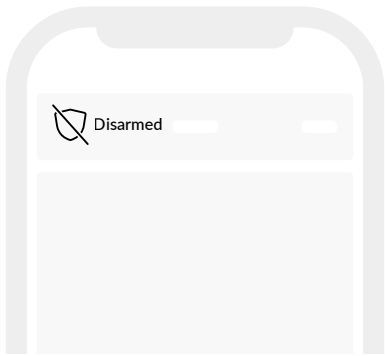
## ② Connect house battery wiring

Connect a house battery or battery bank to your BRNKL.

To connect house battery, follow these steps:

### A | Disarm BRNKL

- On the mobile device or browser, **Disarm** BRNKL.

  See *Disarm BRNKL* (page 31)



### B | Connect battery terminal

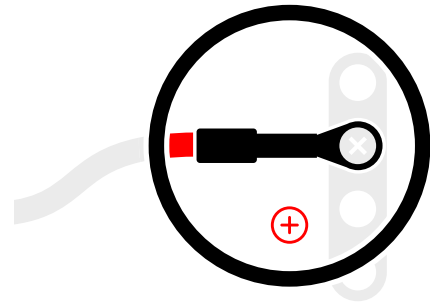At the battery terminal:

1. From the fuse holder, remove any fuse.
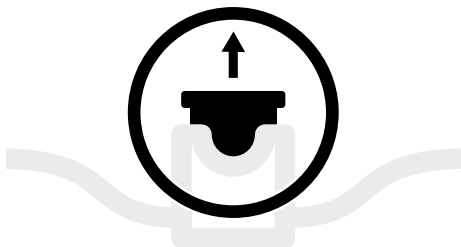


2. Attach the **fuse holder ring terminal** ⊕ to the positive **battery terminal** ⊕.
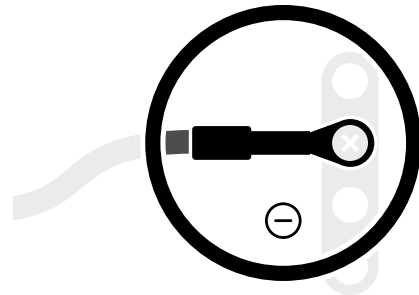


3. Secure the wire with cable ties and mounts.

### C | Connect common ground

At the common ground terminal:

1. Attach the **black wire ring terminal** ⊖ to a **common ground terminal** ⊖.



2. Secure the wire with cable ties and mounts.

## D | Connect BRNKL

On the BRNKL:

1. Remove the connector.

   See *Remove connector* (page 32)
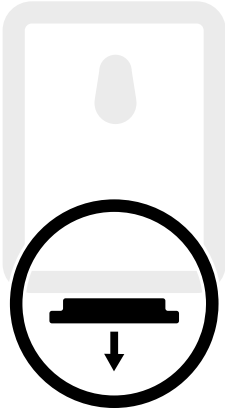


2. On the connector, loosen the screws above slots **10** and **14**.

3. Insert the **red wire** ⊕ into slot **10**, then tighten the screw to fasten.
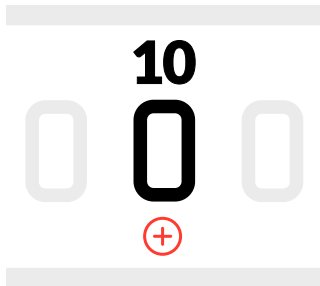


4. Insert the **black wire** ⊖ into slot **14**, then tighten the screw to fasten.



5. Reattach the connector.

   See *Attach connector* (page 31)
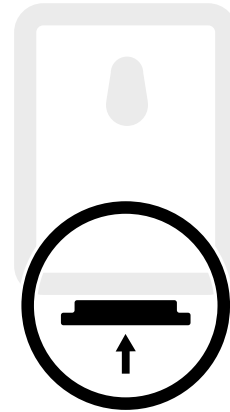


6. Secure the wires.

## E | Insert fuse

At the battery terminal end of the wiring:

- Insert 3 A fuse into the fuse holder.
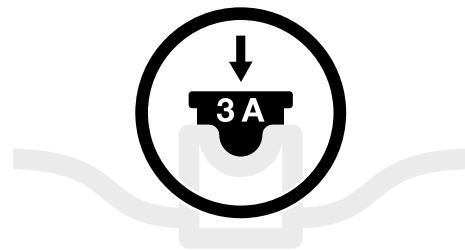
## ③ Test house battery connection

Make sure your house battery is connected to your BRNKL.

To test house battery connection, follow these steps:

### A | Wait 15 minutes

- Wait 15 minutes after reattaching the connector or connecting a new device.
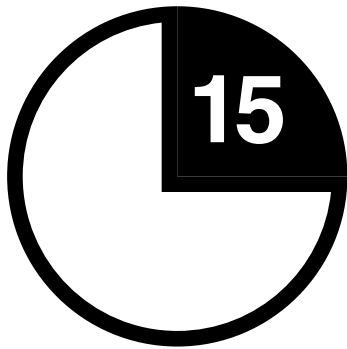


### B | Check battery voltage

On the mobile device or browser:

1. Open **BRNKL**.



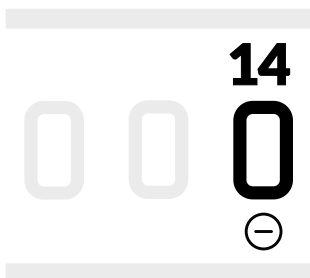2. From **Map** or **Graphs**, select the grid view.
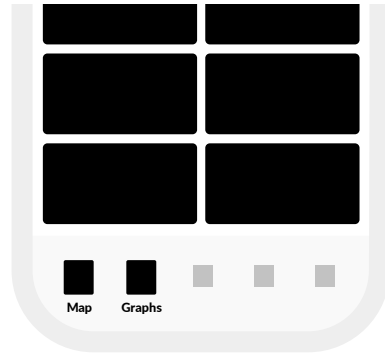


3. Go to **Battery 1**, then check the reported voltage.

   BRNKL shows a battery voltage (V) value when connected.

# ④ Set house battery settings

Update device settings for your BRNKL to monitor a house battery or battery bank.

## To set house battery settings:

On your mobile device or browser:

1. Open **BRNKL**.
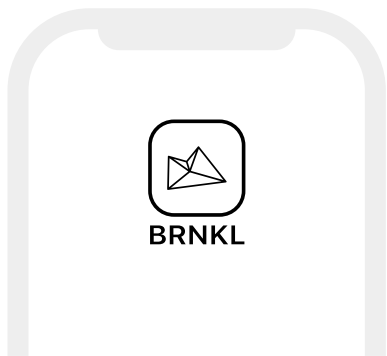


2. From **Settings**, select **Devices**, then go to **Battery 1** settings.
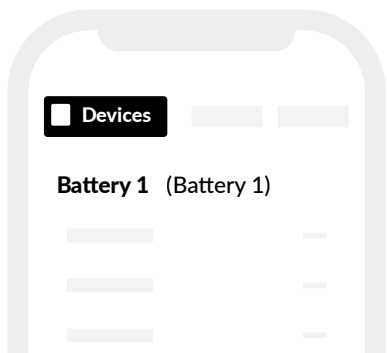


3. Do one of the following:

> For a **12 V battery**, enter the following settings:



| House battery | (Battery 1) |
|---|---|
| Monitor | |
| Alert | |
| Name | House battery |
| Decimal places | 1 |
| | |
| High voltage alert (V) | 14.5 |
| Low voltage alert (V) | 11.5 |
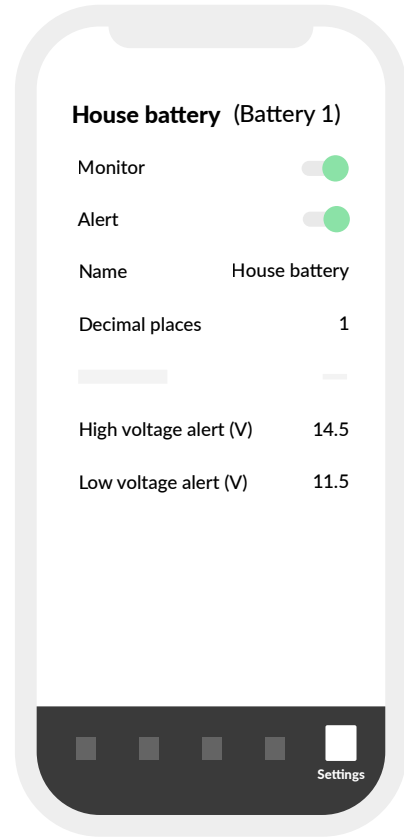
> For a **24 V battery**, enter the following settings:

House battery  (Battery 1)

| | |
|---|---|
| Monitor | |
| Alert | |
| Name | House battery |
| Decimal places | 1 |
| | |
| High voltage alert (V) | 29.0 |
| Low voltage alert (V) | 23.0 |
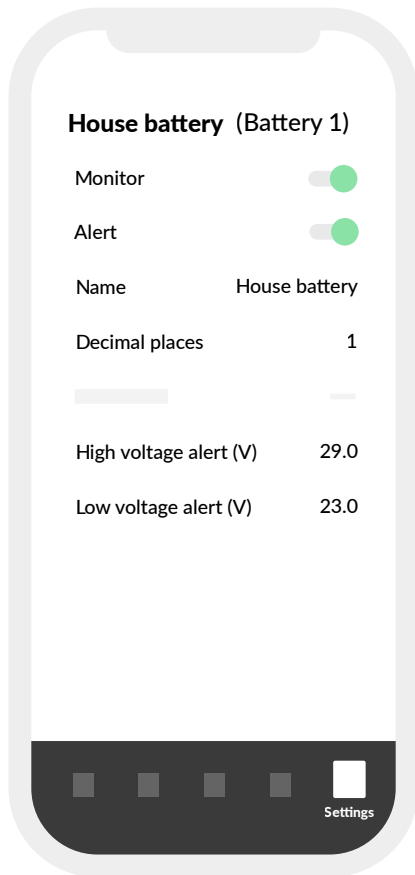
Settings

# Add devices

Add planned devices (if any) to your BRNKL before calibrating.

## To add devices:

- Follow instructions for the type of device.

(i)   Find **Add device** resources at **brnkl.io/help**

4. **Save** settings.

Save

# Set and calibrate

Set and calibrate your BRNKL to complete set up.

**To set and calibrate, follow these steps:**

1. Set monitoring

2. Set alerts

3. Set geofence

4. Calibrate accelerometer

## ① Set monitoring

Select which devices and built-in sensors you want BRNKL to monitor.

> ⓘ To send alerts about a device, BRNKL must monitor the device.

**To set up monitoring:**

On your mobile device or browser:

1. Open **BRNKL**.

BRNKL

2. From **Settings**, select **Devices**.

Devices

3. In the settings for each device, do one of the following:

> To monitor the device, turn on **Monitor**.



> To ignore the device, turn off **Monitor**.



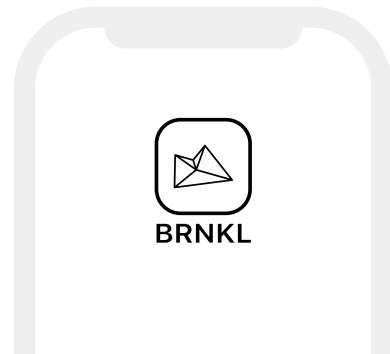4. **Save** settings.



## ② Set alerts

Select which devices and built-in-sensors you want BRNKL to send alerts about.

> ⓘ To send alerts about a device, BRNKL must monitor the device.

### To set alerts:

On your mobile device or browser:

1. Open **BRNKL**.



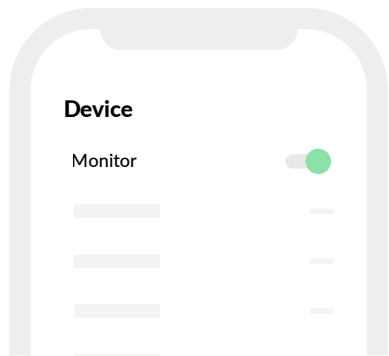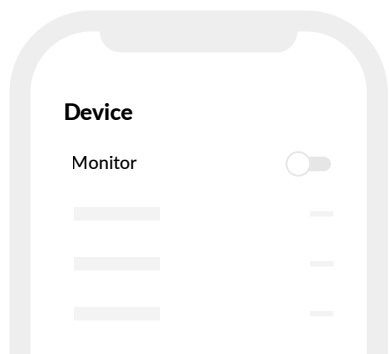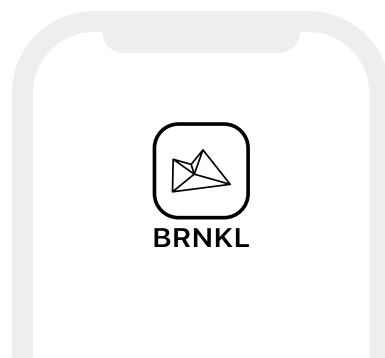2. From **Settings**, select **Devices**.

3. In the settings for each monitored device, do one of the following:

> To send alerts about the device, turn on **Alert**.
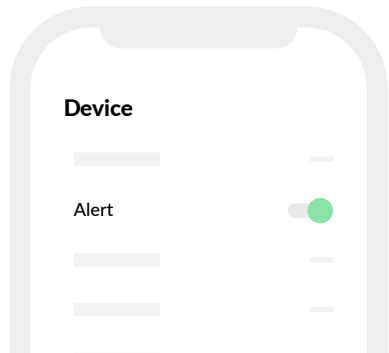
Device

Alert

> To stop alerts about the device, turn off **Alert**.
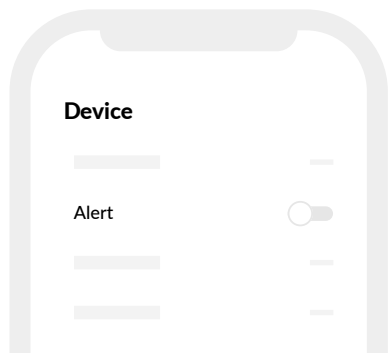
Device

Alert

4. **Save** settings.

Save

## ③ Set geofence

Set an area boundary for BRNKL to monitor and send an alert when crossed.

### To set geofence area:

On your mobile device or browser:

1. Open **BRNKL**.
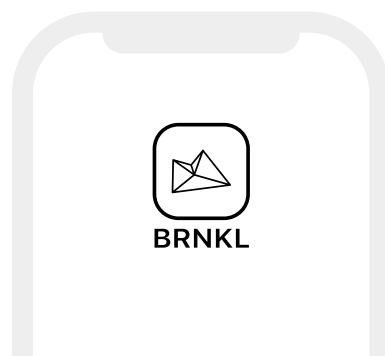
BRNKL

2. From **Map**, select **Set geofence**.

Set geofence

3. In geofence settings, turn on
**Monitor**.
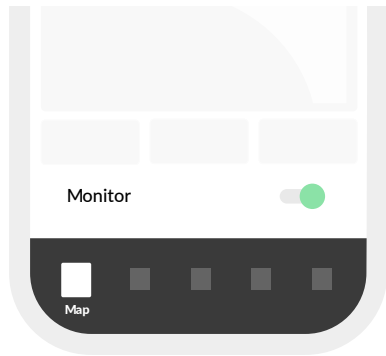
Monitor

4. On the map, select and drag the
handles to change the geofence
area.
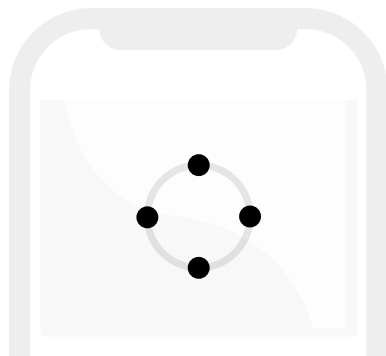
5. Set desired area, then **Save**.

Save

## ④ **Calibrate accelerometer**

Calibrate your BRNKL accelerometer
to accurately monitor pitch and heel
angles.

⚠ Recalibrate any time you change
your BRNKL's position.

### To calibrate accelerometer:

On your mobile device or browser:

1. Open **BRNKL**.
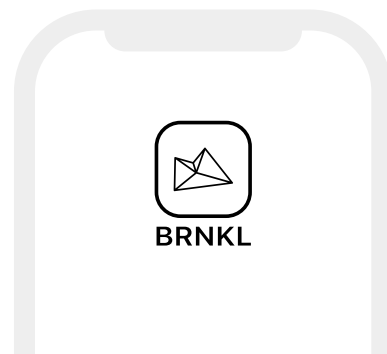
BRNKL

2. From **Settings**, select **Devices**, then
go to **Pitch and heel angle** settings.

Devices

Pitch and heel angle

3. In **Calibrate**, select ⊕.

**Pitch and heel angle**
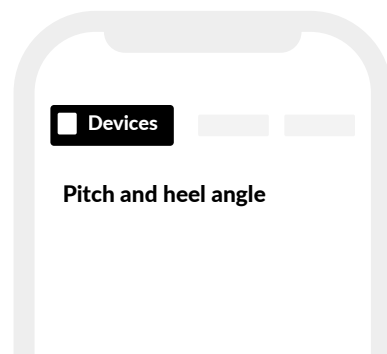
Calibrate                    ⊕
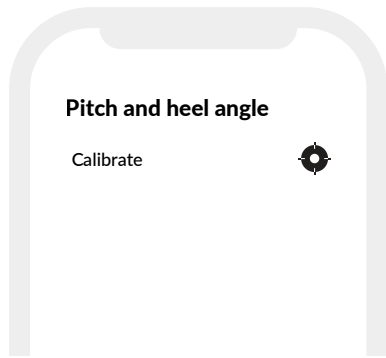
4. **Save** settings.

Save

# Common tasks

**Arm BRNKL (page 30)**

**Attach connector (page 31)**

**Disarm BRNKL (page 31)**

**Remove connector (page 32)**

# Arm BRNKL

Arm your BRNKL to send alerts when something happens.

## To arm BRNKL:

On your mobile device or browser:

1. Open **BRNKL**.



2. From **Map**, **Graphs**, **Photos** or **Alerts**, go to the status bar.



3. Check the status indicator, then do one of the following:

   > If status is **Armed**, do nothing. BRNKL is armed.



   > If status is **Disarmed**, select the status indicator to arm.
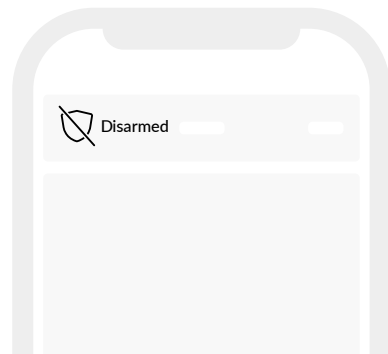
# Attach connector

Attach the connector after connecting a new device.

**To attach connector:**

On the bottom of the BRNKL:

1. Align the connector with the connector slot.



2. Press firmly to insert.
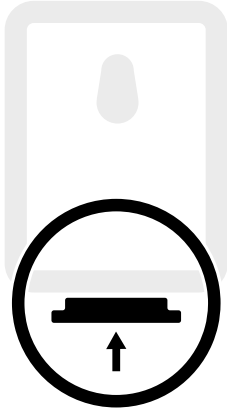


3. Tighten the screws at each end of the connector to secure.
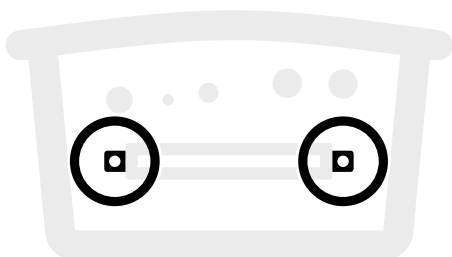


# Disarm BRNKL

Disarm your BRNKL to stop sending alerts.

**To disarm BRNKL:**

On your mobile device or browser:
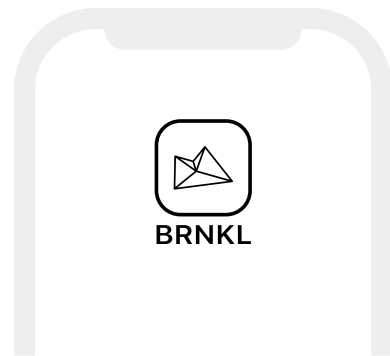
1. Open **BRNKL**.



2. From **Map**, **Graphs**, **Photos** or **Alerts**, go to the status bar.
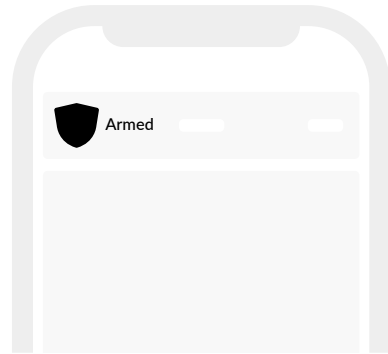
3. Check the status indicator, then do one of the following:

> If status is **Disarmed**, do nothing. BRNKL is disarmed.
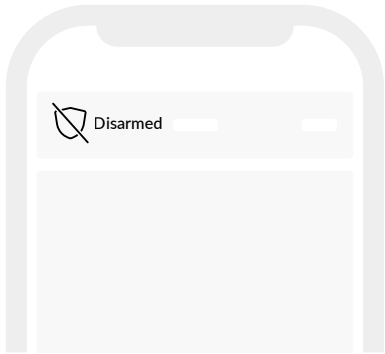


> If status is **Armed**, select the status indicator to disarm.
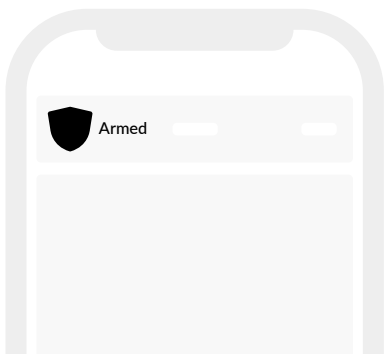


# Remove connector

Remove the connector before connecting a new device.

**To remove the connector:**

1. On the bottom of the BRNKL, find the green connector.



2. Loosen the screws at each end of the connector.

   DO NOT remove the screws.
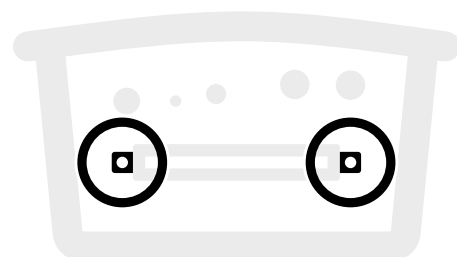
3. Grasp and pull the connector to
    remove.
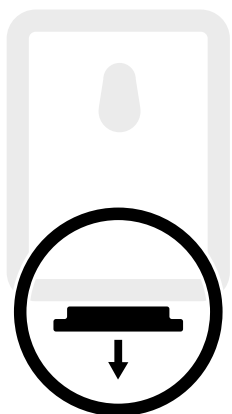
# Reference

**BRNKL Connections (page 35)**

**House battery settings (page 36)**

# BRNKL Connections
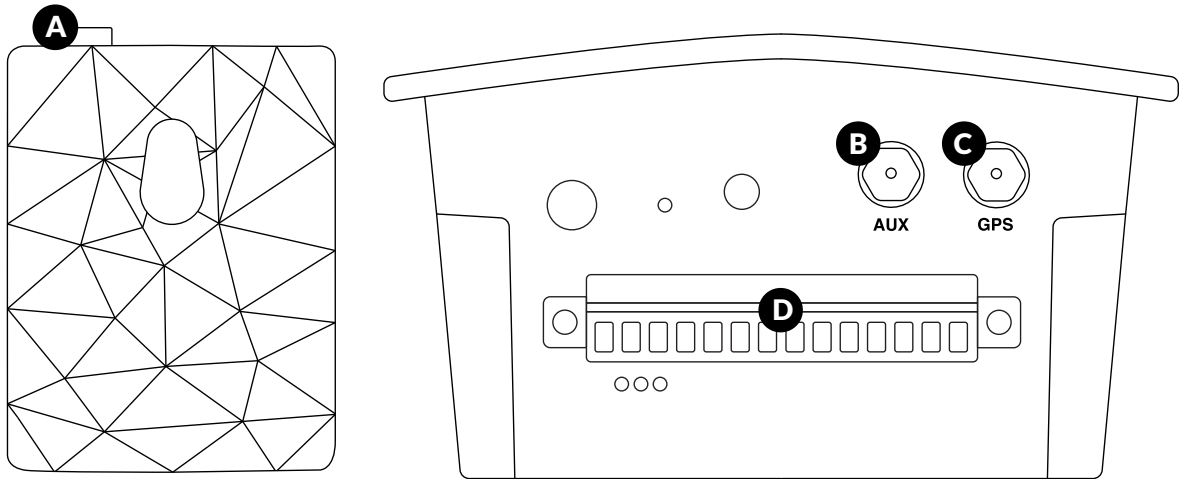


| Terminal | | Connection | |
|---|---|---|---|
| **A** | | BRNKL Mate | |
| | | Camera | |
| | | Satellite device | |
| **B** | | Mobile antenna **4G** | |
| **C** | | GPS antenna **GPS&BD** | |
| **D** | **1** | Common ground | |
| | **2** | Output 1 | |
| | **3** | Output 2 | |
| | **4** | Digital 1 | |
| | **5** | Digital 2 | |

| Terminal | | Connection | |
|---|---|---|---|
| **D** | **6** | Digital 3 | |
| | **7** | Digital 4 | |
| | **8** | Bilge pump | |
| | **9** | Shore power | |
| | **10** | Battery 1 | |
| | **11** | Battery 2 | |
| | **12** | Battery 3 | |
| | **13** | Battery 4 | |
| | **14** | Common ground | |

# House battery settings

**12 V**

**House battery**  (Battery 1)

| | |
|---|---|
| Monitor | 🟢 |
| Alert | 🟢 |
| Name | House battery |
| Decimal places | 1 |
| | |
| High voltage alert (V) | 14.5 |
| Low voltage alert (V) | 11.5 |

Settings

**24 V**

**House battery**  (Battery 1)

| | |
|---|---|
| Monitor | 🟢 |
| Alert | 🟢 |
| Name | House battery |
| Decimal places | 1 |
| | |
| High voltage alert (V) | 29.0 |
| Low voltage alert (V) | 23.0 |

Settings
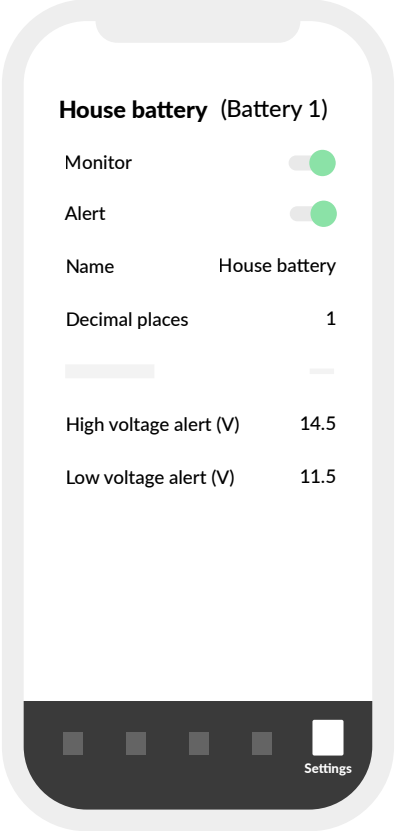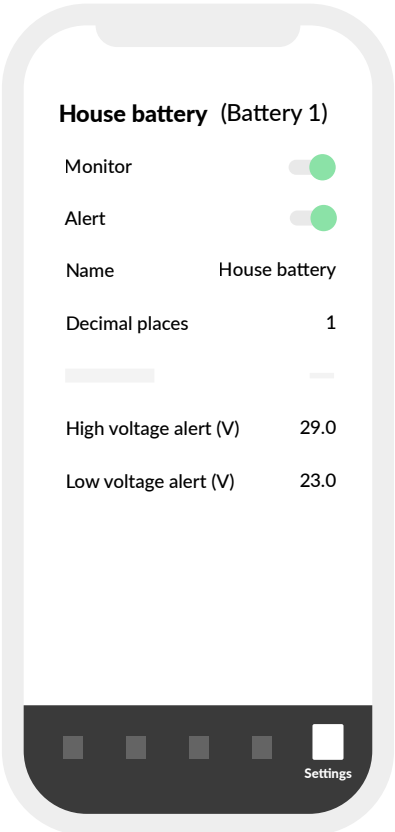
# Legal

## FCC / Industry Canada Notices

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. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class A 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.

This device complies with Industry Canada's licence-exempt RSSs. 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.

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.

CAN ICES-3 (A)/NMB-3(A) – This Class A Digital Apparatus Complies with Canadian ICES-003. Cet Appareil numerique de la classe (A) est conforme a la norme NMB-003 du Canada.

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# Always on board.

BRNKL