USER MANUAL

NOA by biped

VERSION 2024.7

Last update date: May 2025

Index

Read this document carefully before using the device. Pay particular attention to the terms of use and caution messages.

In case of doubt, visit this document regularly.

Welcome to the biped universe!

We're glad you've decided to join biped's mission: making everyone free to explore the world. We believe that technology is the best way to support our mission.

Our first device is named NOA. It is an AI powered vest that will become your daily companion.

In this user manual, you'll learn to use the vest, and become an expert! Ready for your next steps with NOA? Let's go!

NOA is a patented medical device under (EU)2017/745 regulation.

CE

Foreword

NOA is a smart vest, worn on the shoulders, with super wide-angle cameras, powered by Artificial Intelligence (AI), that helps you in your daily mobility. The vest is developed by ***biped robotics***.

NOA stands for Navigation, Obstacle, and AI. The device is controlled by a keyboard on the side of the device, or with a smartphone application.

biped robotics started in early 2021, when Mael, co-founder & CEO, met a person who was using a white cane. The person was also doing a FaceTime call to a friend who helped him remotely: “Turn left, turn right, avoid the stairs on your right, and cross the street to get to the train station”. Doing a Ph.D. in AI, Mael realized that AI and cameras could somehow replicate this using GPS navigation, obstacle avoidance, and AI scene descriptions. ***biped robotics*** was born.

Since then, over 250 beta-testers have been enrolled in 10 countries, 10 different prototypes were developed, helped walk hundreds of kilometers collectively, various low vision centers and Orientation & Mobility trainers were involved, and 2 years later, NOA was born.

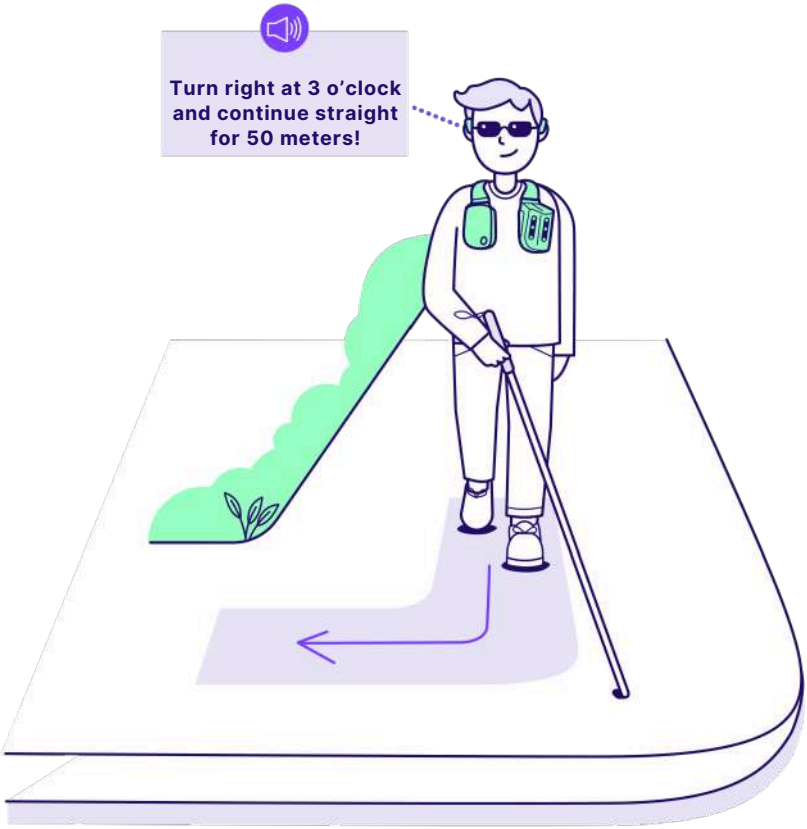
You’re joining a group of pioneers, definitely optimistic about what technology can bring to mankind. We’re grateful for your support, and we can’t wait for you to take your first steps with NOA.

1. Product description

NOA is the world's very first solution that combines all the aspects of mobility in a single device. Here's a breakdown of the features:

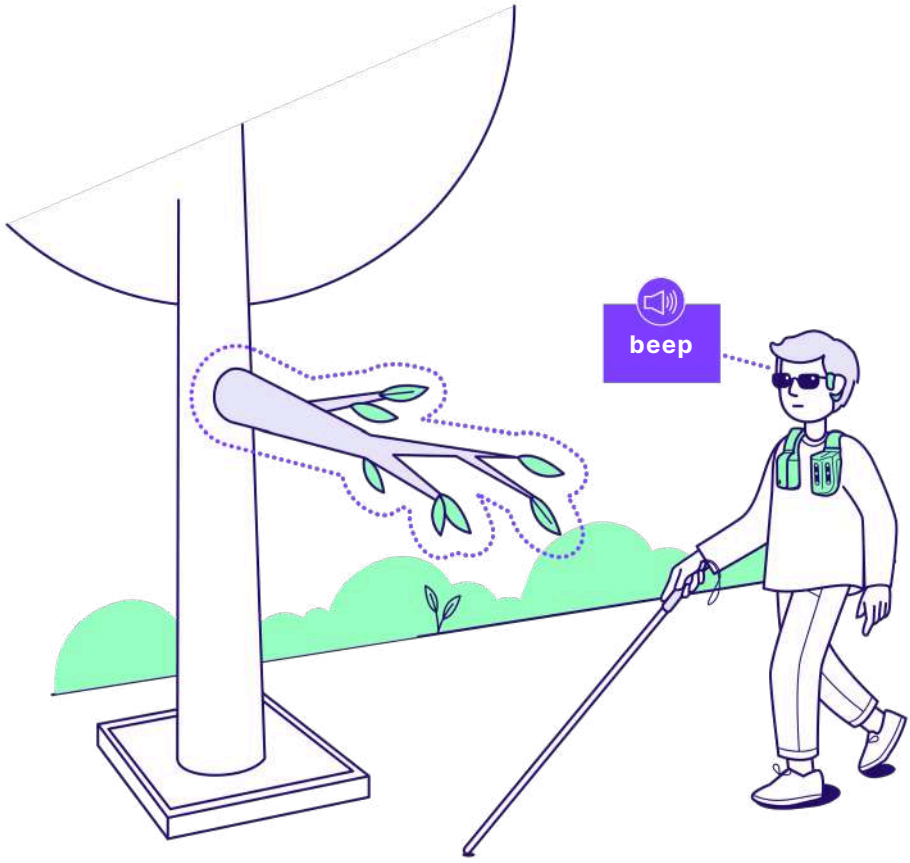
Navigation directions

NOA provides turn-by-turn navigation instructions through bone-conduction headphones, e.g. "In 5 meters, turn right at 2 o'clock". Our GPS is optimized for pedestrian navigation and minimizes the number of intersections to cross. The GPS will indicate crosswalks, confirm the direction the user took, indicate turns clockwise, and reroute in case of wrong direction.



Obstacle avoidance

NOA intuitively informs you of obstacles around with 3D “beeps” coming from the location of the obstacles. It can detect head-level obstacles like branches, ground-level obstacles like holes or poles, and lateral obstacles like electric scooters. The sound is of higher pitch for obstacles at head level (e.g. a traffic sign or a low-hanging branch), or lower pitch if the obstacle is at ground level (e.g. poles or holes). Obstacles are prioritized based on collision risks which means that an obstacle on the side might not be a danger if not on user’s trajectory.



AI scene description

If you are stuck or want a description of your environment, press the "AI button" on your right to get a full, precise description of the scene directly in your headphones. It can highlight elements like crosswalks, doors, and benches, read signs, and more.

In addition to the training included in NOA app, we strongly recommend engaging in orientation and mobility sessions.

2. Safety instructions

Please read the following safety instructions carefully. Your health and safety are our priorities. Failure to follow these instructions can lead to an injury, a device malfunction, and/or a poor user experience. We use the following symbols:

CAUTION, a potential risk of accident or injuries

WARNING, a possible technical damage

Recommendations

1. Complete NOA's training program in the app before use.

2. It is recommended to take orientation and mobility lessons with a certified professional.

3. Familiarity with smartphones is required for optimal use. Use NOA with Open Run Pro bone conduction headphones or equivalent open-ear headphones.

Lifetime & warranty

The expected service life and electronics warranty of NOA is **2 years**, provided it is used as intended with all safety, maintenance, and care recommendations.

A reasonable day-to-day use of NOA does not warrant replacement or refund. Under normal use conditions, the cables, the case and the vest structure may suffer minor scratches and scuffs.

If the NOA device or biped branded accessories do not work properly within warranty period, despite a reasonable use and care, customers are eligible for a replacement and should contact us: support@biped.ai

Once the NOA device has reached its end of life or has to be replaced by a new unit, please return the device to your local distributor, or dispose of components and materials in an environment-friendly manner in your local waste center for electronic devices.

Transportation & storage

For storage and travel, use the travel bag or the product box provided. Store at room temperature, avoid humid places, dust, or extreme heat.

Do not transport NOA in a checked luggage in an aircraft! Always carry your device with you in an aircraft or a train.

Serious incident

Please report serious incidents attributable to the product to the manufacturer and the responsible authority of the Member State in which you are established.

Note: The user manual is written using the metric system. However, NOA supports both metric and Imperial measurement systems. You can easily select your preferred system in the settings on the smartphone application.

3. Usage

Target users

Visually impaired end-users
NOA is ideal for those who are partially sighted or blind, especially if you:

- Have severe low vision, making it hard to detect obstacles.
- Use a primary mobility aid (like a cane or guide dog) and have basic orientation training.
- Are comfortable with smartphones or open to learning new tech.
- Lead an active lifestyle or want to be more active.
- Are taller than 130cm (4.3ft) and have no physical restrictions like shoulder or back pain.
- Have sufficient hearing or use Bluetooth cochlear implants.

NOA complements a white cane or guide dog but isn't a replacement. It's also suitable for kids over 130cm or wheelchair users (though it isn't optimized for detecting small, floor-level obstacles).

Orientation and mobility trainers
O&M trainers have access to special training and the app's "Companion mode." For access, contact: hello@biped.ai

Intended use

⚠ The vest is meant to be used exclusively as a complement to white canes and guide dogs for persons with a visual impairment to detect obstacles on user's trajectory with an audio feedback.

Environmental conditions

Permissible ambient conditions:
Operating temperature range: 0°C to 35°C
Storage and transport in original packaging: -5°C to 50°C
Permissive relative humidity: 10% to 80%
Water resistance: Water splash to light rain

Impermissible ambient conditions:
Acids, sand, medium to heavy rain, snow, fog

Contra-indications

For NOA to work properly, the following rules should be followed:

- Do not use another pair of headphones than the one recommended
- Do not use NOA without proper prior training and without reading the instructions for use
- Do not combine the product with other components that are not certified according to the Medical Devices Act
- Do not use NOA for any other activity than walking
- Do not use NOA if it has been damaged. In case of doubt after a fall, contact us at support@biped.ai
- Do not exceed the life cycle and reuse on another user
- Do not use NOA in impermissible ambient conditions
- Do not wear NOA in direct contact with your skin
- Do not block the vents of NOA, the device might overheat
- Do not use beyond shelf-life

Degraded performance might occur in case of light rain, heavy sunlight, or full darkness.

Side effects

NOA may cause shoulder or back pain after long periods of use. Headphones can also produce pressure on the temples. Avoid exposure to loud sounds for a long duration.

Cleaning & maintenance

To clean the device, follow these steps:

- The cameras of NOA should be cleaned with a cleaning cloth on a regular basis
- The device should not remain wet after a light rain exposure. Dry the device with a cleaning cloth with gentle pressures
- Operate software updates on a regular basis

4.What's in the box?

Scope of delivery

We deliver a full pack of components together with your NOA device. Please read carefully the components description for optimal use. We advise you to keep the original box in case you need to return or repair your NOA.

NOA device
NOA_001

Batteries (x2)
NOA_002

Charger
NOA_003

Wall plug
NOA_004

Headphones
NOA_005

Travel bag
NOA_006

Velcro strap
NOA_007

Cleaning cloth
NOA_008

The full scope of the delivery is described in the table below:

Item	Description	Quantity
NOA_001	A NOA device.	1
NOA_002	Batteries to plug-in the device. Up to 3 hours battery. 3 hours charging time.	2
NOA_003	A magnetic charger, with a slot to insert the battery.	1
NOA_004	A wall-plug for the charger. Depending on the order country, might be a US, UK or EU charger.	1
NOA_005	A pair of Shokz Open Run pro bone-conduction headphones.	1
NOA_006	A travel bag with inserts for 2 batteries, and the charger.	1
NOA_007	A velcro strap to position NOA comfortably on your chest.	1
NOA_008	A cleaning cloth to clean your NOA.	1

Technical specifications

Component	Description
Acquisition sensors: Depth cameras, infrared cameras	
Frame rate	Up to 30 images per second
Light conditions	Day and Night
Range	30 centimeters, up to 10 meters (1 to 33ft)
Field of view	90 degrees vertical and 170 degrees horizontal field of view
Connectivity: WiFi, Bluetooth, BLE	
Device: Weight, battery, operational range	
Device weight	1044 grams (2.30 lbs)
Battery weight	224 grams (0.49 lbs)

5. The vest

The button set

On the right side of NOA (computer side), there are 10 buttons that will enable you to trigger features and interact with the user interface on the go.

- **The Main button:** metal button on the bottom corner of the frontal face used for taking general actions like pausing/resuming the device or turning it on or off.
- **The Features panel:** 6 buttons on the right outer side of the case, are used to trigger all NOA features (Navigation, Obstacle, AI)
- **The Interaction panel:** 3 buttons on the left inner side of the case, used to Select a feature, repeat or skip an instruction.

The main button

The Main button is a big silver button, located bottom left of the frontal face on the computing unit, on the right side of the chest.

When pressed once, it puts the device on Pause or resumes it. When pressed twice, it triggers a long scene description. On a long press, it turns the device OFF.

Single press	Pause / Resume device
Double press	Triggers a long scene description
Long press	Turns the device OFF

The Features panel

On the right lateral face of the computing unit, you will find the **Features panel to control NOA** without having to take your smartphone out.

You will find 3 rows of 2 buttons:

- The first row, called **N**, controls **the Navigation feature**. It is the top one. It has two buttons, **N1**, and **N2**. N1 is closer to your chest, and you can identify it as it has a single vertical line engraved on the button. N2 has two vertical lines.

- The second row controls **O** is the **Obstacle detection feature**. This row has again 2 buttons, **O1** and **O2**. Same logic: O1 has a single vertical line, and O2, two vertical lines.

- The last row, the bottom one, called **A** controls the **AI feature**. It gives access to the buttons **A1** and **A2**. A1 has a single vertical line, A2, two.

The buttons are organized logically, so don't worry, it's rather easy to remember once you've passed the initial training.

Menu Tabs: N1, O1, A1

The Navigation button 1 (N1), the Obstacle button 1 (O1) and the AI button 1 (A1) all allow you to scroll through menus:

- **Click on N1 once, and it will pronounce the name of the first destination** you saved from the app during the setup. Click once more on N1, and you will hear your second favorite destination, and so on. You can save up to 10 favorite destinations.

Important: click the Select button to confirm your choice from a list. It's just located opposite, top left edge of the computing unit. If after going through a menu (N1, O1, A1) you don't click on the Select button, no action will be triggered and you will hear "Setting not applied".

- If you **click once on O1 to control Obstacle detection**, it will say “Obstacle detection range: 1 meter”. If you click on O1 again, the distance will increase to 1.5, 2, 2,5, 3 or even 4 meters. If you then click on the Select button, the Obstacle detection range will be modified, and you’ll hear: “Obstacle detection range selected: 4 meters”. Use this setting to adapt the distance when your environment is changing from a crowded area to a wide, open area for example.

- Finally, if you **click on A1, you can use the Object-finding features** of your NOA. Click once to find pedestrians, 2 times to find doors and exits, 3 times to find crosswalks, 4 times to find stairs and elevators, 5 times to find free seats, 6 times to find bus stops, 7 times to find reception desks, and 8 times to read text. Make sure to click on “Select” to validate your choice.

Action buttons: N2, O2, A2

The buttons that have 2 vertical lines are meant to trigger an action linked to a sensor that NOA has.

These buttons do not need any press on Select, as they directly trigger an action.

- **N2**, the button with 2 vertical lines on the Navigation row, will give you your navigation progress with a short press, including time and distance until arrival. Long press on N2 will give you a route description.

> Double click on N2 to turn OFF GPS.

- **O2**, the button with 2 vertical lines on the Obstacle row, will scan your surroundings and generate “beeps” for all the obstacles around you, one after another. This is a great way to understand in 1 to 2 seconds where you can walk, and where obstacles are.

> Double click on O2 to turn OFF obstacles. Double click again to turn ON obstacles. When switching ON and OFF the feature, you’ll hear “Obstacle detection enabled” and “Obstacles detection disabled”

- **A2**, the button with 2 vertical lines on the AI row, will take a picture of your surroundings and generate a short AI description that highlights the key elements on your path, whether the ground is flat, where doors or crosswalks are located, etc. This description is shorter, but faster, than the one generated by the double click on the Main button.

Interaction panel

Located on the left side of NOA's computer case above and below the top corner. These buttons provide helpful interaction to handle features.

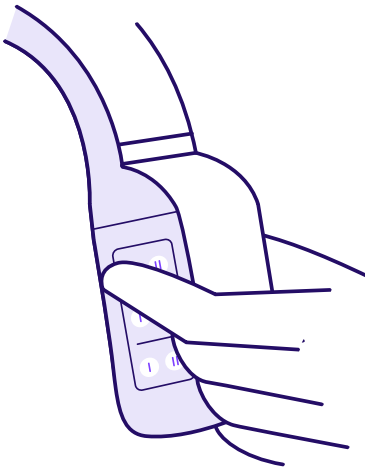
Select button

The upper button on this side is made to press and select an option from a list of menu tabs: N1, O1, A1.
> Double click on the Select button to get a full settings summary (battery level; internet and smartphone connection; obstacle range, zone, and width; holes detection).

Forward & Replay button

- The lower left button is designed to skip lengthy audio and move forward.
- The lower right button replays the last audio you missed.

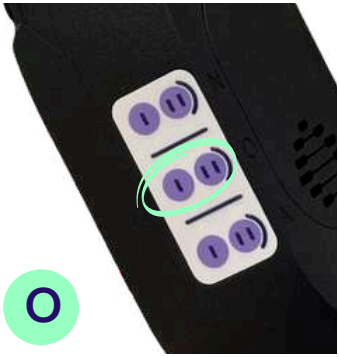
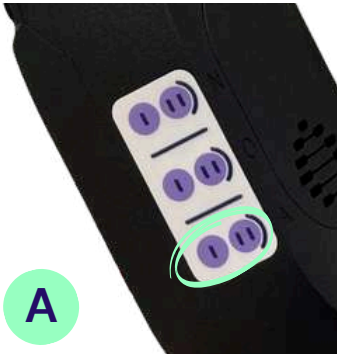
How to press the buttons?



If you use a cane in your right hand, hold the computer module with your left hand, crossing your arm on your chest. Your index, middle, and ring fingers will align with each row of the Features panel. Then, your thumb will quite naturally be placed on the other top-left side of the module, to access the Interaction panel buttons.

If you're walking with a dog in your left hand, use your right hand to access the buttons. Use your thumb to touch the Features panel and press the Interaction panel buttons with your index.

Buttons summary

Position	Feature
	**NAVIGATION:** The first upper row consists of Navigation buttons: 1. **N1 (Left):** Select destination (1 to 10) and **press the select button** to confirm selection to start GPS navigation. 2. **N2 (Right):** Short press for navigation progress. Long press for route description.
	**OBSTACLE:** The middle row consists of Obstacle buttons: 1. **O1 (Left):** Change range between 1, 1.5, 2, 2.5, 3, and 4 meters. **Press the select button** to confirm selection and set the new range. 2. **O2 (Right):** Obstacle scanning will scan your surroundings and generate “beeps” for all obstacles around you.
	**SCENE DESCRIPTION WITH AI:** The last row consists of AI buttons: 1. **A1 (Left):** Find objects (1 to 8) such as doors, exits, crosswalks, or text. **Press the select button** to validate your choice. 2. **A2 (Right):** Short scene description with quick hints for a brief overview.

Lateral detection and detection zone

Lateral detection range

From the settings, you can change the lateral detection range.

- The **narrow lateral detection** will only warn you of obstacles that are within your shoulder width. Most suitable for indoor or crowded areas.
- The **regular lateral detection** will add a slight margin to the lateral detection, on the side of your shoulders. Most suitable for ordinary outdoor travels.
- The **wide lateral detection** will pick up obstacles further on the right and the left. Most suitable for large open areas.

Detection zone

From the settings, you can also choose the detection coverage.

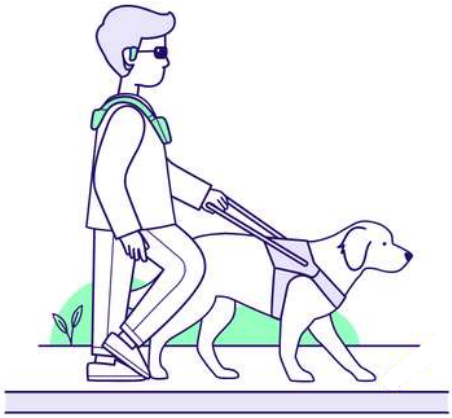
- The **full body detection** will warn you of obstacles at any height (ground-level to head-level).
- The **upper-body detection** will warn you of obstacles from the waist up.
- The **head-level detection** will only warn you of obstacles that are at head-level.

Guide dog mode

In the settings, you must select the mobility aid you use. If you are a guide dog owner, you will get additional features tailored for your use.

- **Grass areas:** from the A1 object-finding menu, you can use NOA to search for grass areas for your dog.

- **Short description:** if your dog has stopped during a walk and you want to understand why, with the short description, A2 button, NOA will try to explain the reason.



Wearing NOA on your shoulders

1. The straps of NOA can be bent to match the shape of your torso and shoulders.

2. To adjust it, make sure the straps are in contact with your shoulders, the battery is in contact with your back, and that there are no gaps created.

The cameras should be facing in front of you. If you have doubts about their position, you can identify the orientation with a « 3D line » engraved on top of the camera module.

3. Make sure the cameras are positioned vertically in front of you. They should not be pointing down or up. If that is the case, reposition the straps in a way that the cameras remain straight when you are standing up.

Charging the batteries

Follow the next steps to charge the battery:

1. Connect the power adapter to the USB end of the charging cable and then plug a power outlet of your home.

2. The charger connector has a concave slot to insert the battery. Insert the end of the battery that's opposite to the notch.

3. You should feel a firm click when the magnets make contact.

It takes 3 hours and 30 minutes to charge the device fully and each battery is expected to last for 3 hours at full capacity or a couple of days of average use.

The headphones

For an optimal experience, we recommend using bone conduction or open-ear headphones, like the Shokz OpenRun Pro or others of your choice.

To charge the Shokz:

1. Take the magnetic charger from the travel case
2. Plug it into a power outlet
3. Plug it into the magnetic connector in the headphones

You can find the magnetic connector on the right hook of the headphones, next to the volume controls.

IMPORTANT: Avoid pairing the Shokz bone conduction headphones to your phone and NOA simultaneously to avoid double pairing issues.

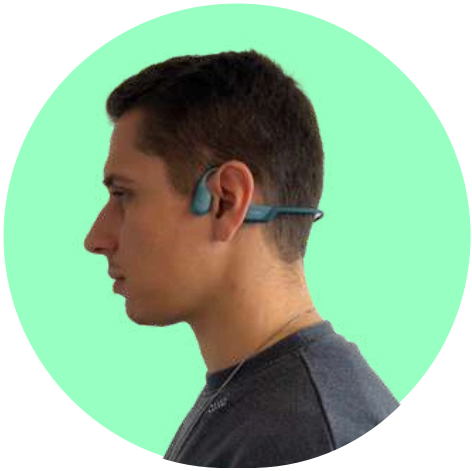
It takes 1 hour and 30 minutes to charge the headphones fully, which can last up to 10 hours with a full charge.

Wearing the headphones

1. Turn on the headphones by pressing the “+” button. You will hear：“Welcome to Shokz”.

2. Pick up the headphones, bring them behind the back of the base of your neck and position the earhooks on your ears. The transducers should be positioned in front of your ears.

3. While you are wearing the headphones, adjust headphone volume by pushing the “+” or “–” buttons. You will hear a “beep” when the volume is at its maximum volume.



The app

1. Download our app “NOA Companion” on the AppStore and PlayStore (in the QR code below). The app is fully accessible on both platforms and allows you to pair your device, change settings, run updates, train users...

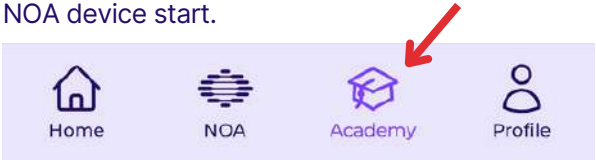
Download on the App Store

GET IT ON Google Play

2. Create your account.
3. Allow Bluetooth permission when asked.
4. Allow location permission as “Always Allow” when asked. This will allow the app to work while your phone is locked.
5. Setup your profile clicking to profile icon and fill in your settings such as your height, vision condition, primary mobility aid, etc.
6. Adjust accessibility preferences.

The audio training

Your NOA device relies on audio feedback, so we developed an audio training program, inside the smartphone application, that allows you to experience the sounds before actually starting to walk with the device. On the lower menu of the smartphone app, simply head to “Academy”, and follow the various training levels. They’re all mandatory to let your NOA device start.



6. Starting NOA

Setup NOA with the app

Slide the battery in your NOA device

- Take your NOA and identify the area that must sit behind your neck. There will be an opening for the battery.
- Grab your battery by the top notch, and slide it in the battery slot of your NOA. If plugged correctly, you will hear a small « click » from the magnetic connectors.
- Your NOA device will then start automatically, and the front LED on the left of your device will turn white.

Connect Wi-Fi

1. On “My NOA”, click on “Internet access”, select the Wi-Fi network of your choice, and type in the password. Start by configuring your home Wi-Fi. A popup should mention that the connection was successful

2. On “Home”, a small Wi-Fi logo top left shows that the connection is still active at any point

3. Then, configure your phone’s hotspot. Go in your phone settings, in “Network sharing”, and enable it (or disable it and enable it again if already activated). Copy the password and head back to NOA Companion.

4. Back in internet menu, select your hotspot name and paste the password. You now have access to internet even on the go!

IMPORTANT: If you're using an iPhone, disable “Maximize compatibility”. This option may interfere with headphone sound.

Note: Apple on iOS automatically turns off your hotspot after a few minutes if unused. So every time you want your hotspot to be connected, you might need to turn OFF and the ON again your hotspot.

If you lose internet access, a warning will be played saying “Internet access is required for this feature”.

Update NOA

From the page “My NOA”, you’ll also find the “Updates” tab that allows you to update your device regularly. Updates take 5 to 7 minutes in general.

Connecting everything

Pair NOA with your smartphone

1. In the NOA Companion app on your smartphone, go to Home in the menu, and click on « Connect NOA ». Make sure your Bluetooth is enabled. After around 15 seconds, your NOA device should appear

2. Click on the device that has been identified.

3. The first time, you should **accept** the Pairing request then, accept the Pairing request by clicking on « Pair ».

1.

2.

3.

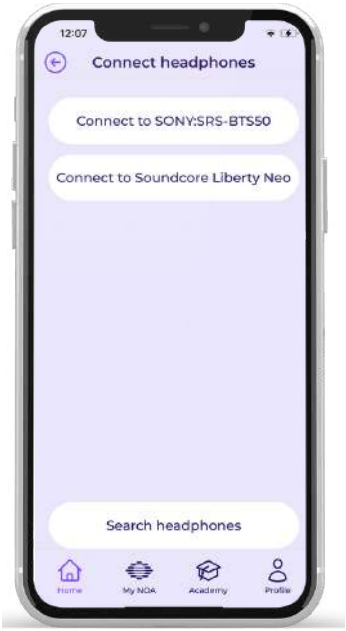
Pair NOA with headphones

1. On “Home”, click on “Connect headphones”

2. Turn ON your headphones. If you’re using the Shokz Open Run Pro, make sure to maintain a long press on the “+” button to increase the volume, until you hear “Welcome to Shokz”.

3. If you connect headphones for the first time, you must put them in pairing mode for them to appear in the list.

4. Then, click on the name of your headphones from the list shown. They should connect and appear in green. If the connection fails, click on the button a couple of times, or restart your headphones.



Note that your headphones should not be the ones you use for your iPhone, as they need to be exclusively paired to NOA.

Ready to start!

With all of that, you should now be ready to start! Find an open area, outdoors, to get started.

Go back to “Home” on the app, and click on “Start walking”.
First, try to sense obstacles around you by rotating shoulders.
Then, move slowly towards obstacles to feel the ramp up of the sound.
Then, try a scene description by clicking on A2 button.
Explore the rest of the features gradually, by following our training template below.

7. Training template

The following is a training template for relatives or mobility trainers to help provide a training session to an end-user. The onboarding can also be done independently.

Preliminaries

Find the correct spot

- Ideally, start the device outdoors in a familiar space
- Find a wide open area, with a flat floor surface
- Make sure that there is a clear 1.5 meters (5 ft) distance that is free in front of the user and around 15cm (6 in) on the side of each shoulder
- Make sure to never stand in that 1.5 meters (5 ft) zone and 15cm (6 in) on the side of each shoulder, otherwise you will be detected as an obstacle

Continous adaptation

Adjust the device preferences from the “Profile” tab.

- Input the user’s height
- Select if using a guide dog or white cane
- Set obstacle distance to the minimum

Place device on shoulders:

- Adjust the camera angle to make sure that the device faces in front of the user, and that the cameras are perpendicular to the ground
- Place the headphones around the ears

Re-visit the “Profile” tab continuously to fine-tune the device to your needs and taste.

Intermediate check: device is now on the shoulders, headphones are ON, device and app are both paired and connected, and user height is adaptated.

Companion mode

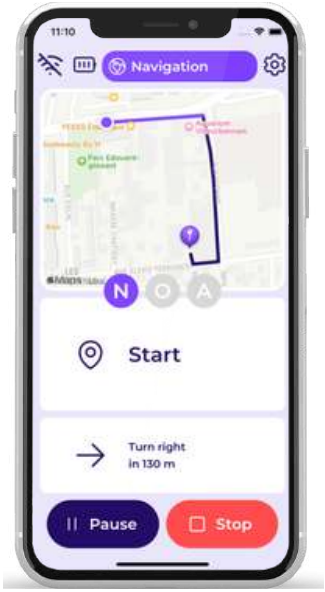
If you're an orientation & mobility trainer or a relative helping out a NOA user, you can use the "Companion mode" in the app.

The companion mode shows a map that explains what is located around the user.

The "red" dots are obstacles that are notified to the end-user with beeps. The light grey dots are obstacles that are detected by NOA, but remain silent as they don't represent a direct threat.

The circumference of the dots indicates the elevation of the obstacles, dark solid boundaries for ground obstacles, and light-dim boundaries for head-level obstacles.

The companion mode additionally shows the text of the AI descriptions once activated by the user on the device, and the GPS map with the navigation instructions when enabled.



1. Static exercices

a. Verify silence 1/2

1.

Stand in an area that you picked with no sound and obstacle.

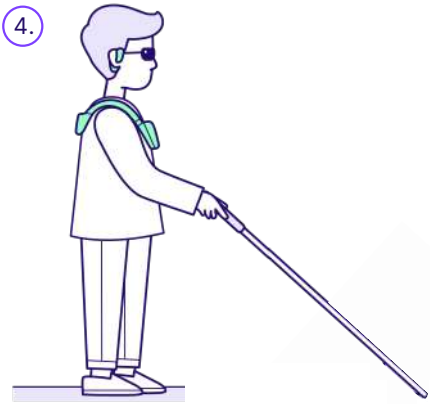
2.

Use the app and click on "Start walking".

3.

Stand still, hands along the body. Hear a first disclamer.

4.



Make sure you keep your cane in walking position.

5.

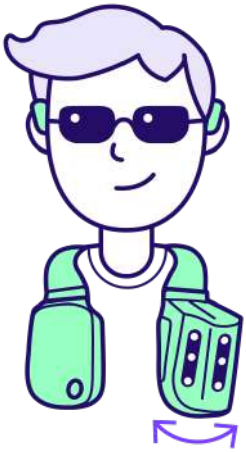
Validate you don't hear any sound.

1. Static exercices

a. Verify silence 2/2

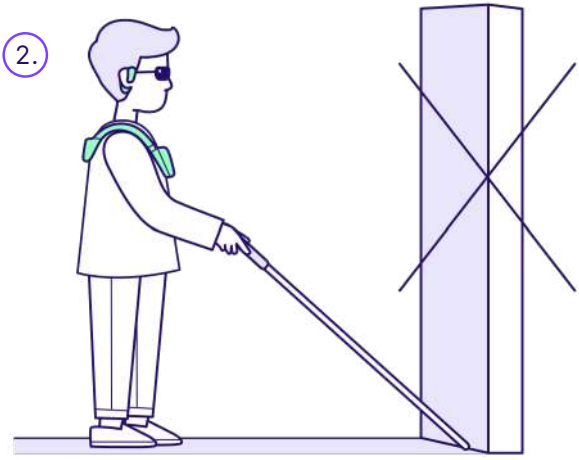
For this exercise, if you hear a beep, try to check the following cases:

1.



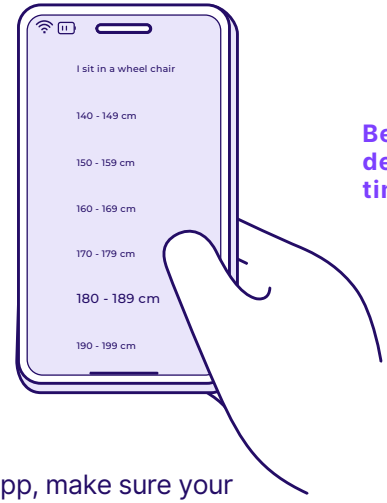
Adjust the cameras to point in front of you.

2.



Make sure there are NO close obstacles.

3.



In the App, make sure your height is properly set.

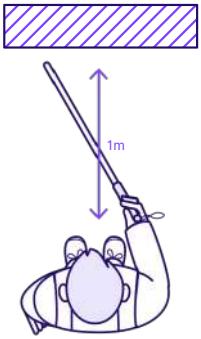
Be aware that the cane could be detected as an obstacle from time to time, especially when not extended.

1. Static exercices

b. Generate a first beep

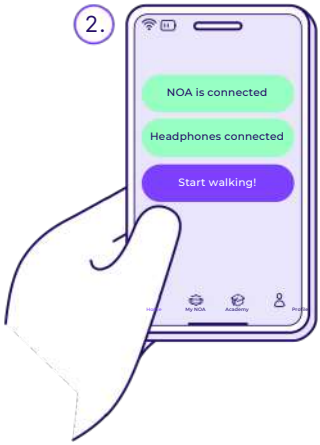
In this second exercise, your goal is to understand the sound produced by an obstacle in a real-life scenario:

1.



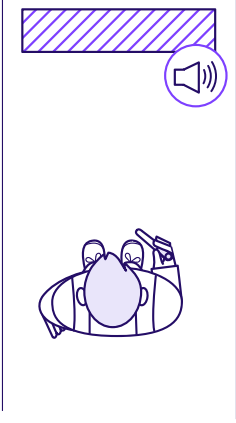
Stand in front of an obstacle, within a 1-meter range roughly.

2.



Click “Start walking” on the App.

3.

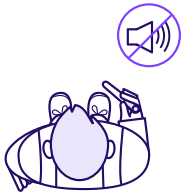


Hear the sound generated in front of you.

4.

Rotate your shoulders left to right to hear the sound balance in 3D.

5.



Find an empty area, until you hear no sounds.

6.

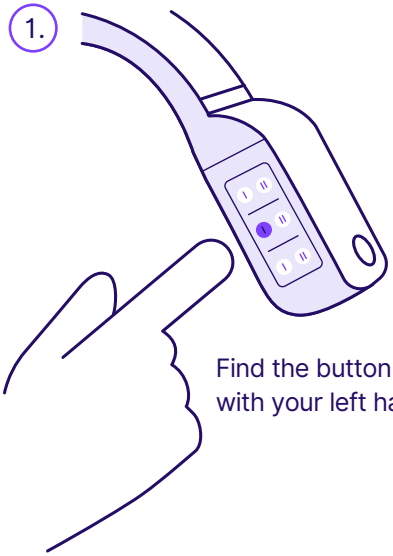
Click on the main button of the device to put on pause. **If needed, adjust the volume.**

2. Interactions exercises

a. Change distance

Now that you detected an obstacle at 1m (3ft), let's increase it to 1.5m (5ft).

1.



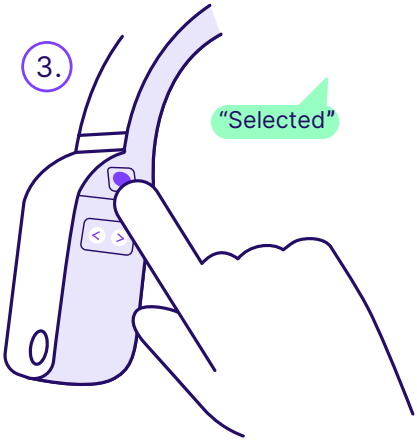
Find the button O1 with your left hand.

2.

Click on O1 once, you'll hear 1m.

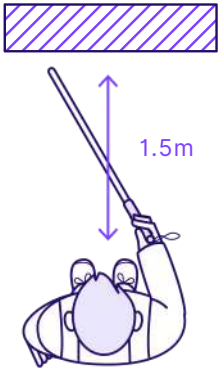
Click again and you'll hear 1.5m.

3.



Click on Select button and you'll hear "Selected".

4



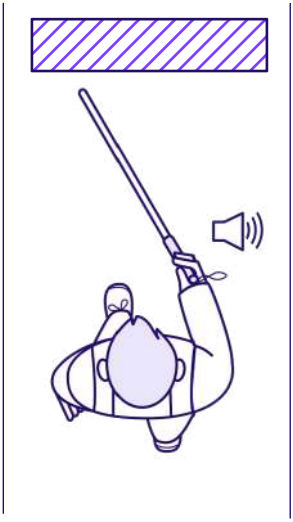
Walk back and forth in front of the obstacle and experience the change in range.

Continue to play with different ranges to find the one you feel more comfortable with considering your cane's lenght and walking pace.

2. Interactions exercises

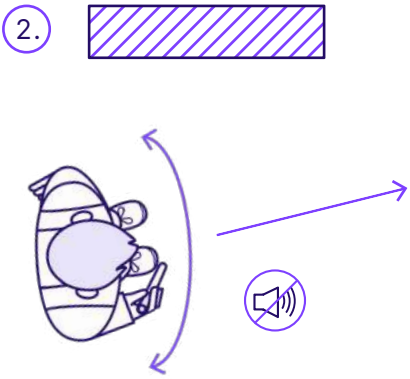
b. Start moving

1.



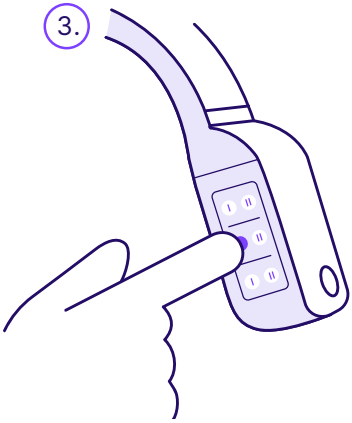
Slowly walk toward an obstacle.

2.



Rotate shoulders left to right slowly until you find a silent zone. This means the path is free.

3.

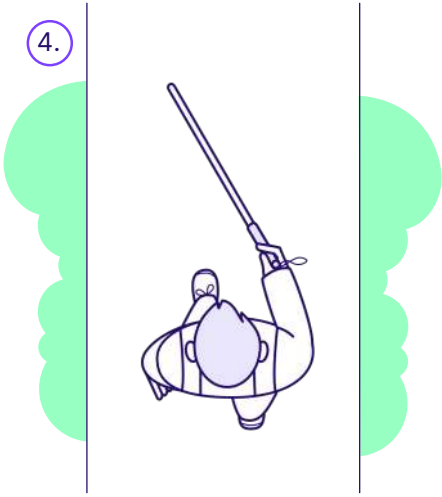


x1 =1 m
x2 =1,5 m
x3 =2 m
x4 =2,5 m
x5 =3 m
x6 =4 m

Adjust distance to:

- 1 meter: slow walkers indoor
- 1.5 meters: slow walkers outdoor
- 2 meters: average to fast walkers
- 3+meters: really fast walkers

4.

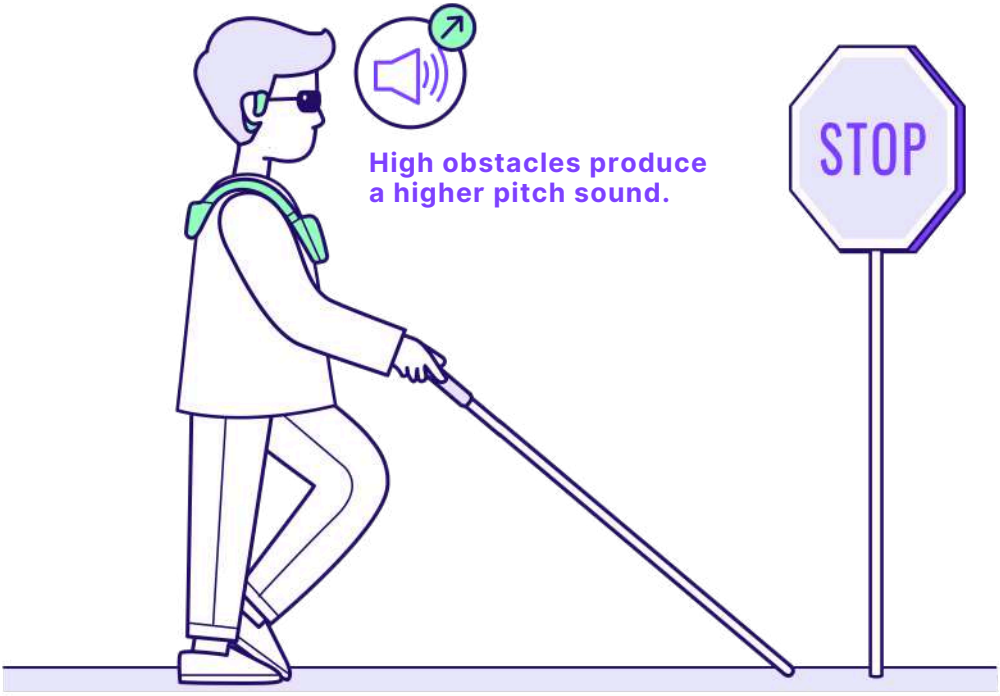


Start walking in a controlled environment, a backyard, a park...

2. Interactions exercises

c. Understanding obstacle elevation

Go to a place with obstacles at different heights, or ask your companion to simulate different obstacles elevation by holding an object in front of you at different heights.



When walking around your current location, try to detect a head-level obstacle (low hanging branches, truck mirrors, traffic sign...).

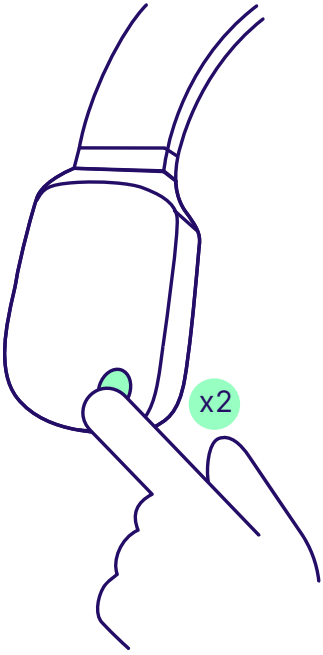
Practice with different heights, on different sides, and proximities to train your new sense.

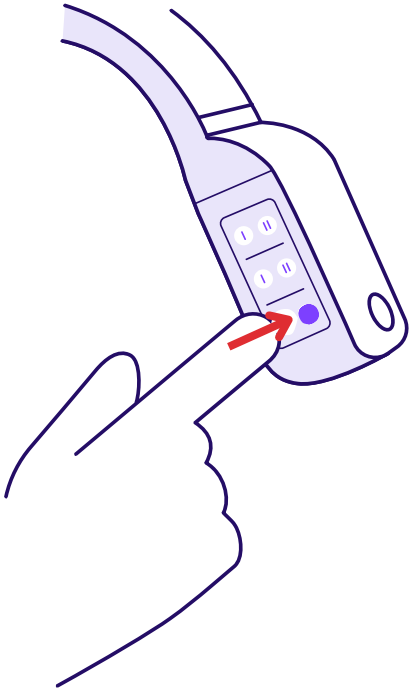
2. Interactions exercises

d. Long scene description

e. Short scene description

If not working,
check your internet connectivity.





Press the main button twice.
It will describe the surroundings with lots of details.

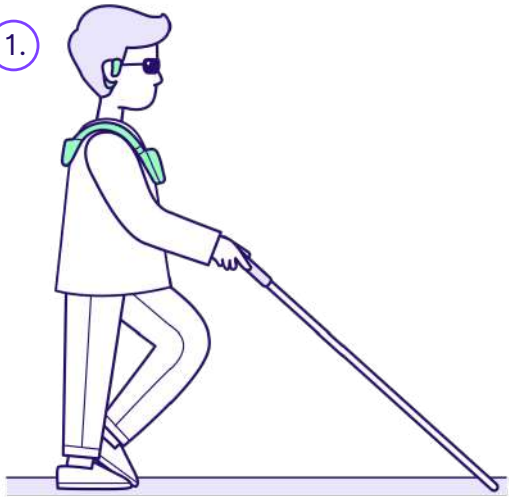
Press the A2 button once.
It will generate a short and concise description.

Practice using both description in different scenarios to familizarize with their content and learn when to use one or the other.

2. Interactions exercises

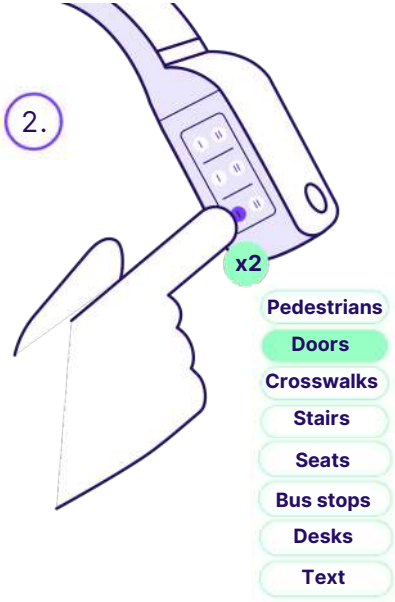
f. Finding objects

1.



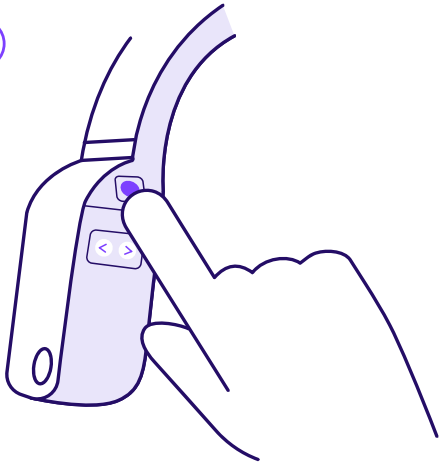
Continue to walk and get used to the sounds generated by the device.

2.



Click on the A1 button many times to explore the list of objects that can be searched.

3.



Click on “Select” to search the object around around you and wait for the response.

Repeat this exercise with different objects to explore the full list.

2. Interactions exercises

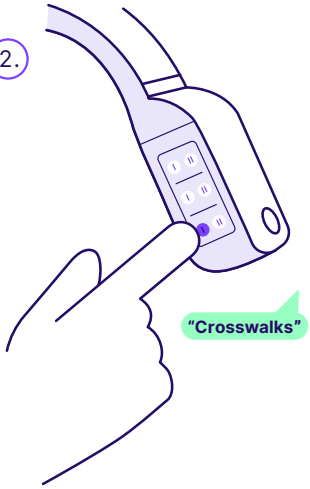
g. Find a crosswalk

Make sure you have active internet connection. It does NOT provide traffic color instructions.

1.

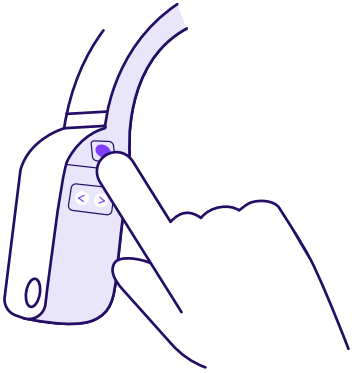
Get closer to a crosswalk at an intersection you know.

2.



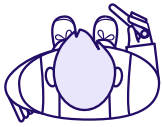
Press on the A1 button until you hear “Crosswalks” in the AI menu.

3.



Press on select button.

4.



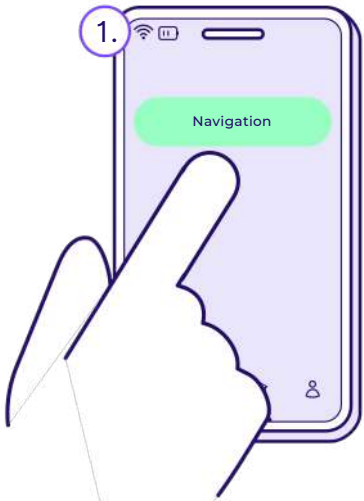
The device will describe how to cross the street.

The device won’t tell you when to cross, nor assist you as you are crossing.

3. Advanced exercises

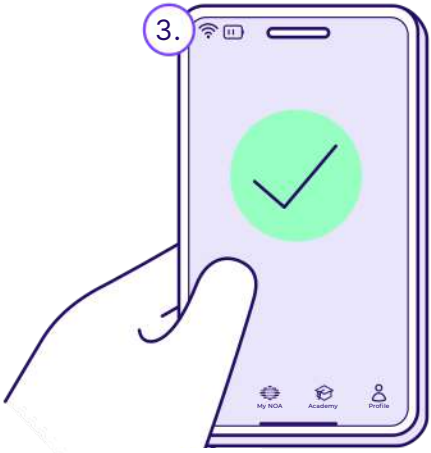
a. Set GPS

The next steps in your training is to enable GPS navigation. To do so:



When your device is activated and running, from the app, click on the Navigation button at the top.

Go to the search bar, and type-in your destination. Start with a local destination for which the path is known.



The GPS path will then be computed. Validate that the instructions are correct. A rerouting can happen after a 15-20 steps walking in the wrong direction.

3. Advanced exercises

b. Detect holes 1/2

Hole detection works for holes that are 40cm (16in) deep at minimum. Always rely on your primary mobility aid first for ground detection.

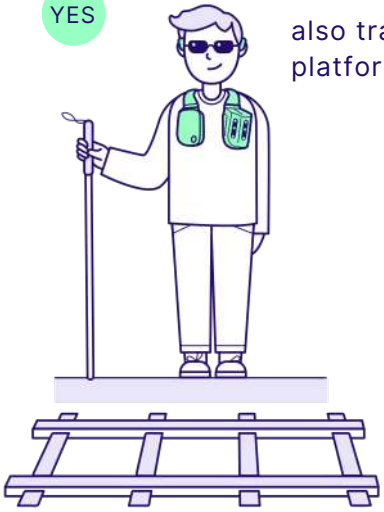
NO

You **will not** be able to use your NOA device to detect the curves of a sidewalk.

YES

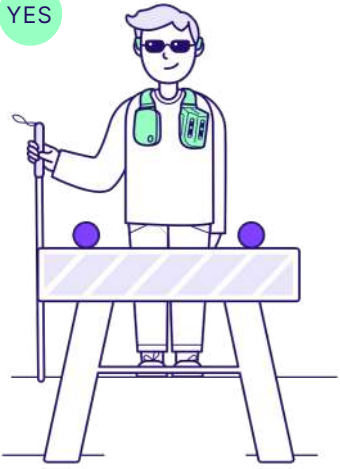
Instead, you can use NOA to detect stairs (3 steps and more)

YES



also train platforms

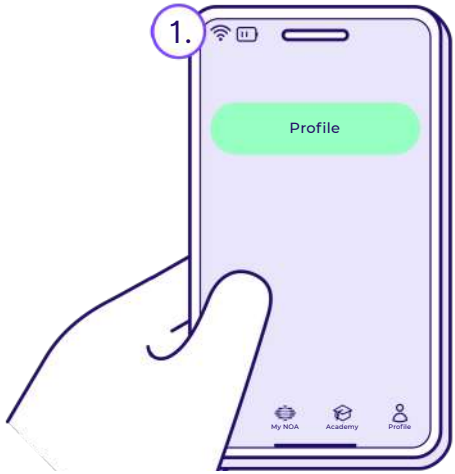
YES



or construction works for example.

3. Advanced exercises

b. Detect holes 2/2



In the app, enable
that option from “Profile”.

You’ll hear the deep
beep/reverb tone.

Make sure the stairs are wide enough, as the hand-rails might be picked up as obstacles otherwise, and deep enough. You’ll hear the deep beep/reverb tone.

Find a set of stairs you know
well, and try the hole detection.

You have all the essential components to expand your device knowledge and combine these features effectively!

Practice navigating with GPS paths, identifying crosswalks along the route, and avoiding low-hanging branches on sidewalks in familiar areas until you feel confident.

8. Legal information

Liability

The manufacturer biped robotics SA recommends the use of the product only under the given conditions and for the intended purpose and to maintain it according to the instructions for use. The manufacturer does not accept liability for damage caused by improper use or unsuitable accessories that have not been approved by the manufacturer within the scope of the use of the product.

In addition, the manufacturer is not responsible for accidents or collisions and only provides indicative pieces of information that should be processed by the user, in complement to existing mobility solutions and proper training.

Data privacy

We are committed to safeguarding the confidentiality, data privacy, and security related to the information shared or generated by our customers following the General Data Protection Regulation (GDPR).

Biped will not use personal data unless asked for with a consent form. To learn more about our privacy policy, please visit: https://www.biped.ai/privacy-policy

Regulatory Compliance

The product is certified according to the European Regulation for Medical Devices (EU)2017/745. Based on the classification criteria for medical devices according to Annex IX of the Regulation, the product is classified in Class I. The declaration of conformity was therefore issued by the manufacturer biped robotics SA under sole responsibility according to Annex VII of the Regulation.

9. Manufacturer contact

NOA is developed by **biped robotics SA** (CHE-388.584.292), based in 8 Route de la Corniche, 1066 Epalinges, Vaud, Switzerland. The trademarked name of the company is “biped”.

+41 78 909 14 25
Monday - Friday: 9AM - 6PM CET

General inquiries:
hello@biped.ai

Customer support:
support@biped.ai

www.biped.ai

10. Annexes

The following symbols are used on the product label:

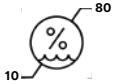
Declaration of conformity according to the applicable European guidelines

Consult instructions for use

Date of manufacturing:
DD-MM-YYYY
D = Day, M = Month, Y = Year

Address and details of the manufacturer

Temperature limitation:
0°C to 35°C



Humidity limitation:
10% to 80%

Shelf-life: 36 months

IP22

IP Rating 22

UDI

Unique Device Identifier

MD

Medical Device

EC REP

European Authorized Representative

LOT

NNN = lot-number

REF

NNN = reference-number

Keep in touch!

You're now part of the growing biped community. We sincerely hope that you will enjoy using your NOA as much as we do. Your feedback is what matters the most. You can share feedback or ask questions at any time using the following email address: **hello@biped.ai**

Maël

CEO


biped.ai