Navigator - Cartography

notilo plus

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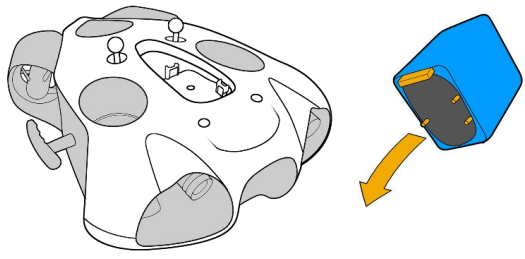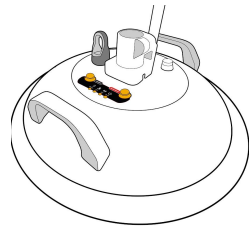
I - PREPARING FOR THE OPERATION

Prepare your equipment

The day before the exploration, charge all devices.

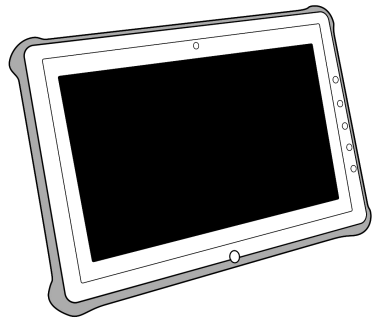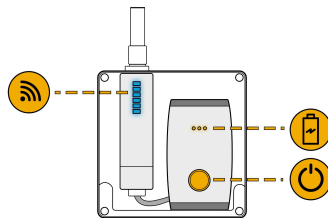**Navigator - Cartography**

Battery for SEASAM Drone

Navigator

Control Unit

Controller

Ground Station

	Charging Time	Usage Time	Waterproof
M Batteries	2,5 hours	1 hours	**NO**
L Batteries	3,5 hours	1,5 hour	**NO**
XL Batteries *	Up to 10 hours	4 hours	**NO**
Control unit	3 hours	15 hours	NO
Controller	2 hours	14 hours	NO
Navigator	2,5 hours	4 hours	YES
Ground Station	1,5 hour	3 hours	NO

*Require a specific charger

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Prepare your equipment

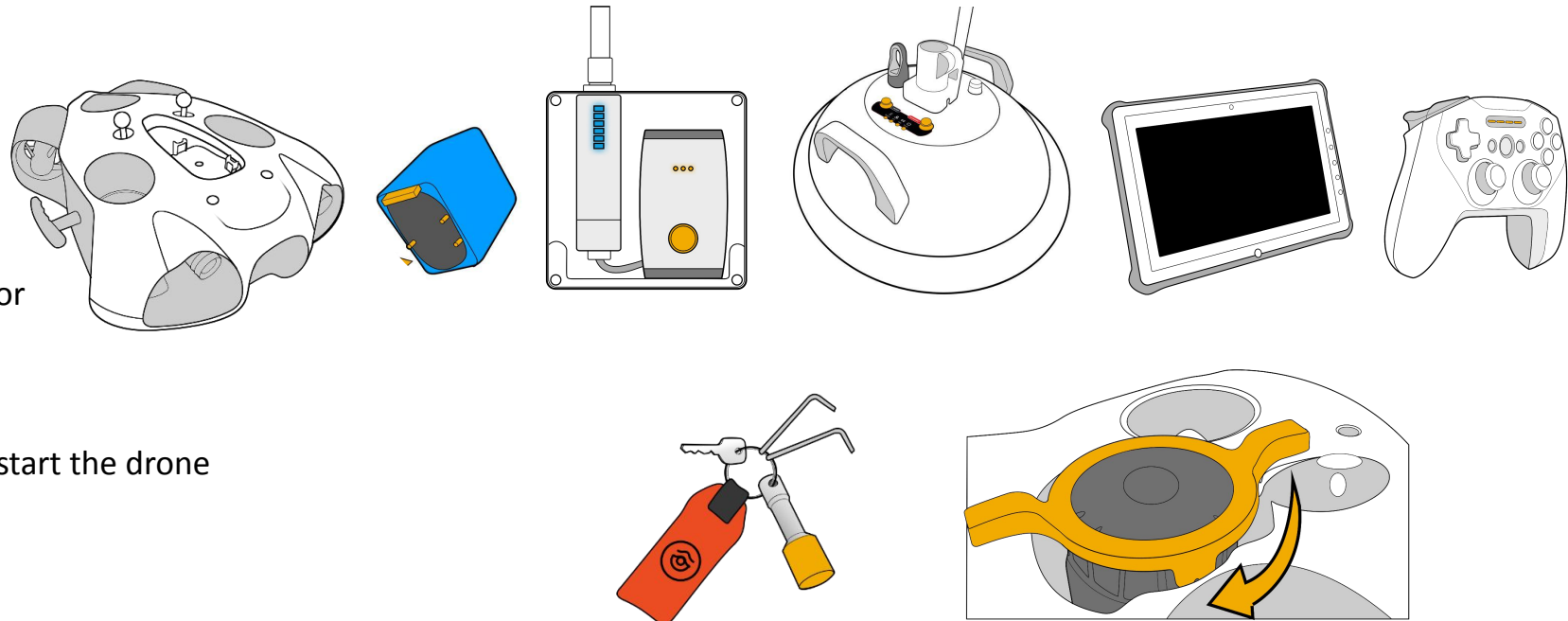The day of the operation, verify the check list to avoid forget anything

Navigator - Cartography

Main equipment
- ❏ Seasam Drone
- ❏ Battery for the drone
- ❏ Opening tool for battery compartment
- ❏ Navigator and Ground Station
- ❏ Cable to connect the drone to the Navigator
- ❏ 2 antennas
- ❏ Controller
- ❏ Control unit
- ❏ Underwater remote control or Magnet to start the drone
- ❏ The USBL if you have them

Additional
- ❏ Grease for the O-ring
- ❏ Towel to dry the drone
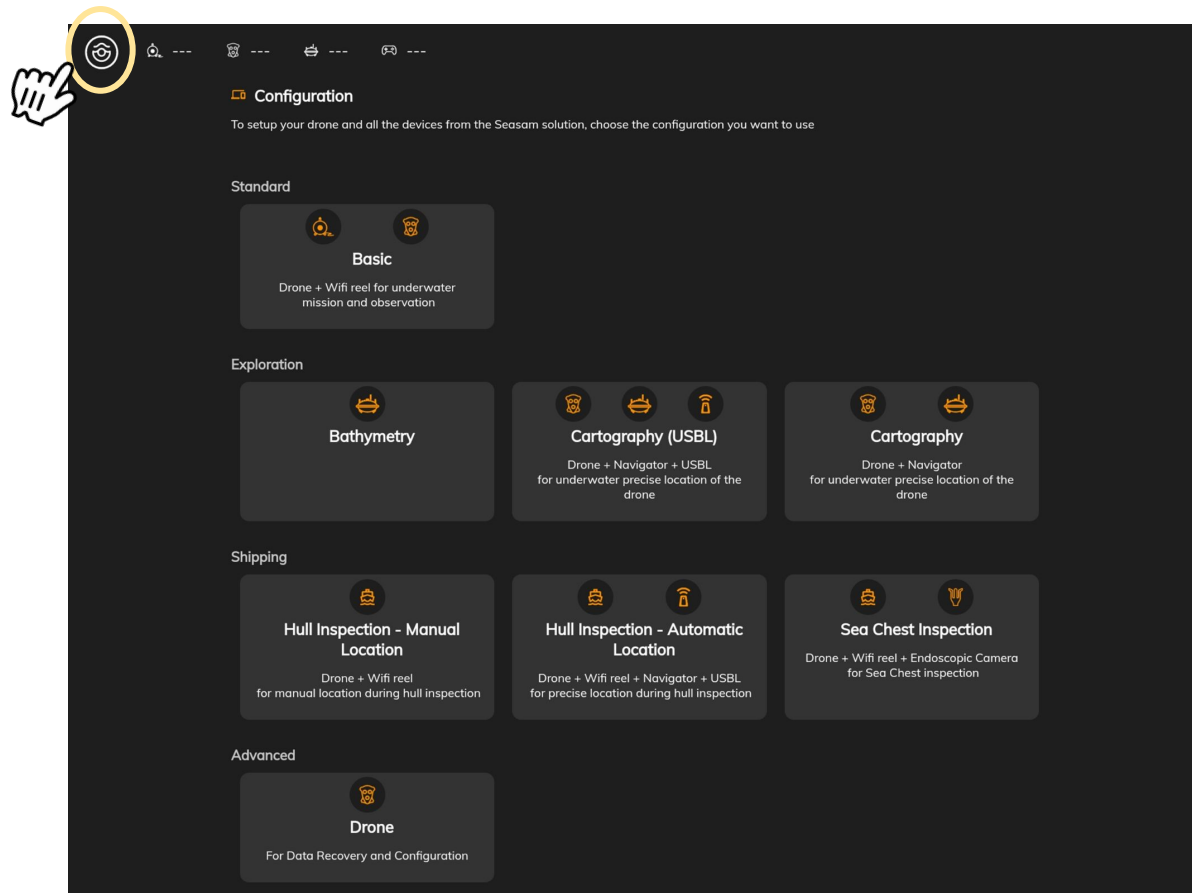- ❏ Allen key for the float/weight for the drone (according to your battery)

Download the map

Before setting up the equipment, you have to download the map on Seasam Control App.
To do so, **turn on the control unit and connect it to internet**
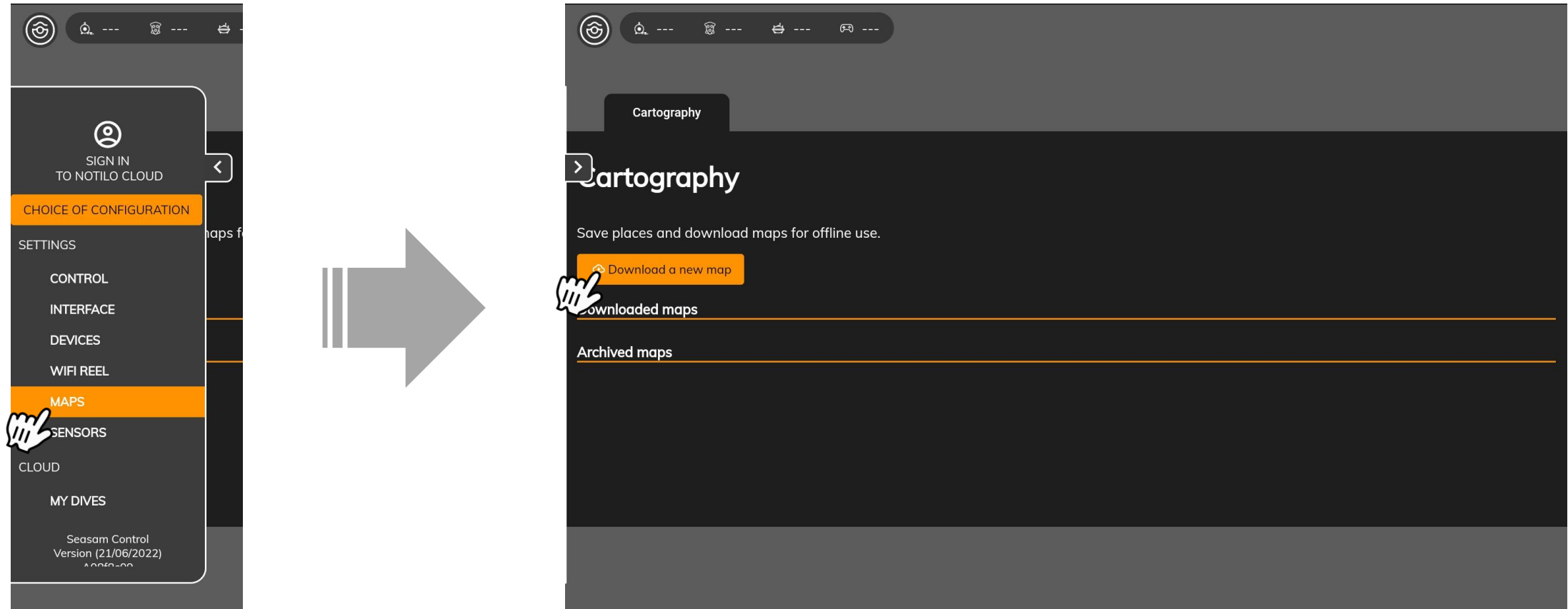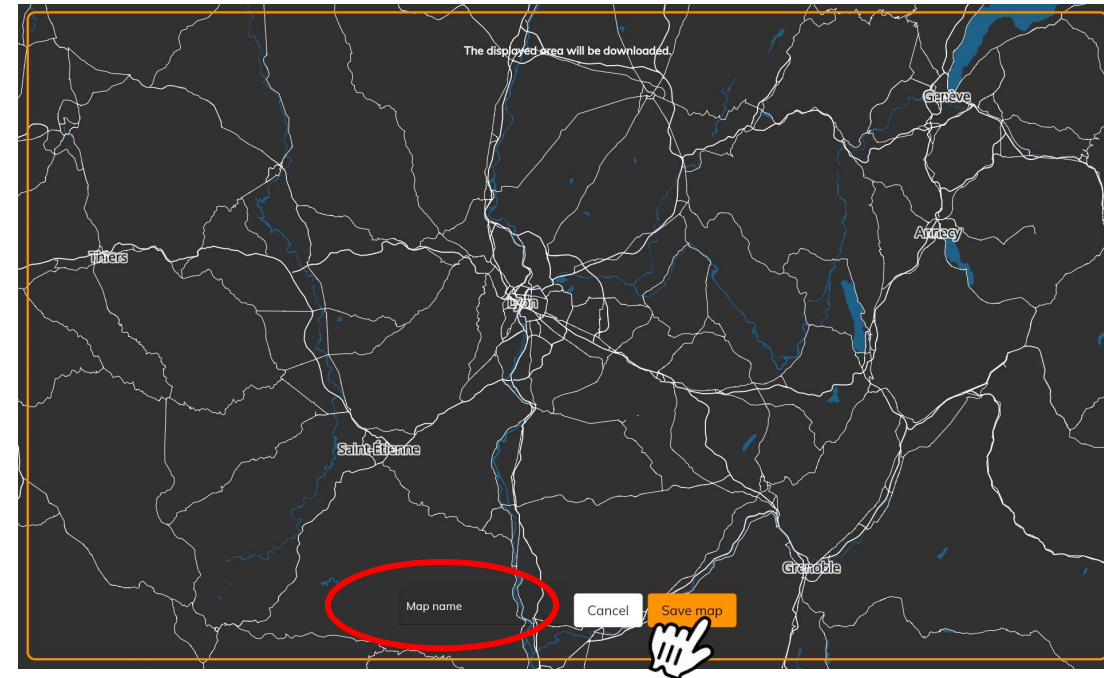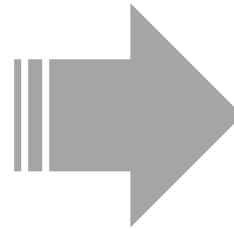Open Seasam Control and go directly to the settings

Download the map

Access the "Map" settings and select "download a new map"

Download the map

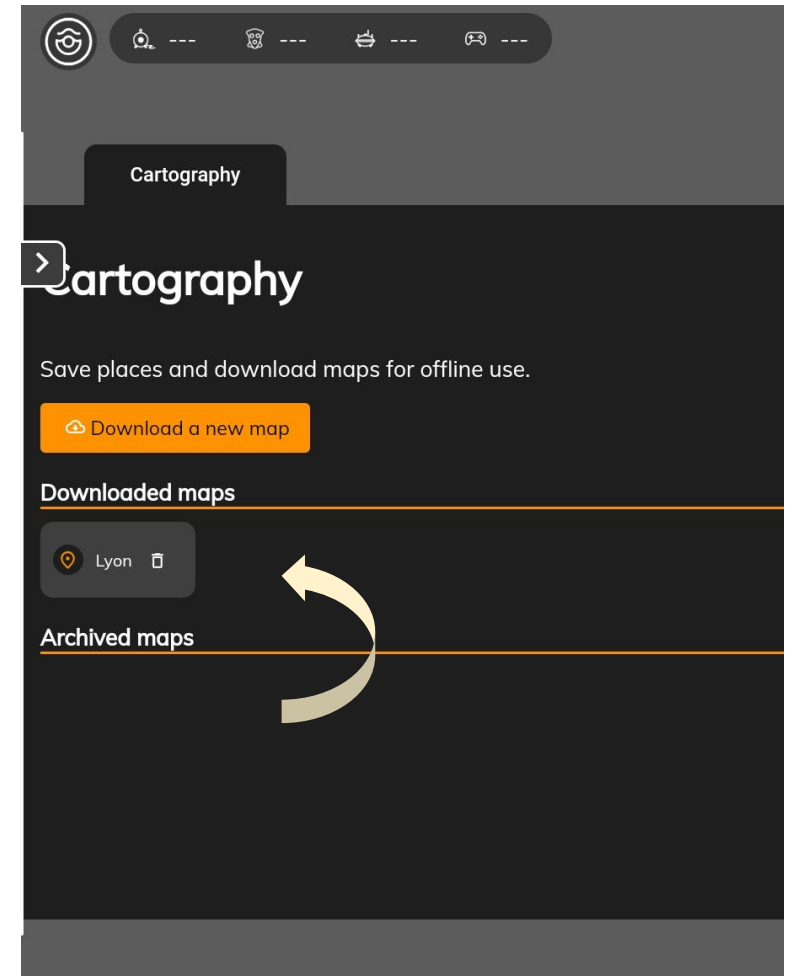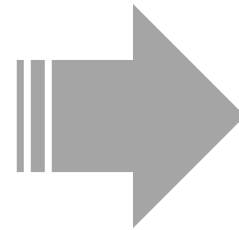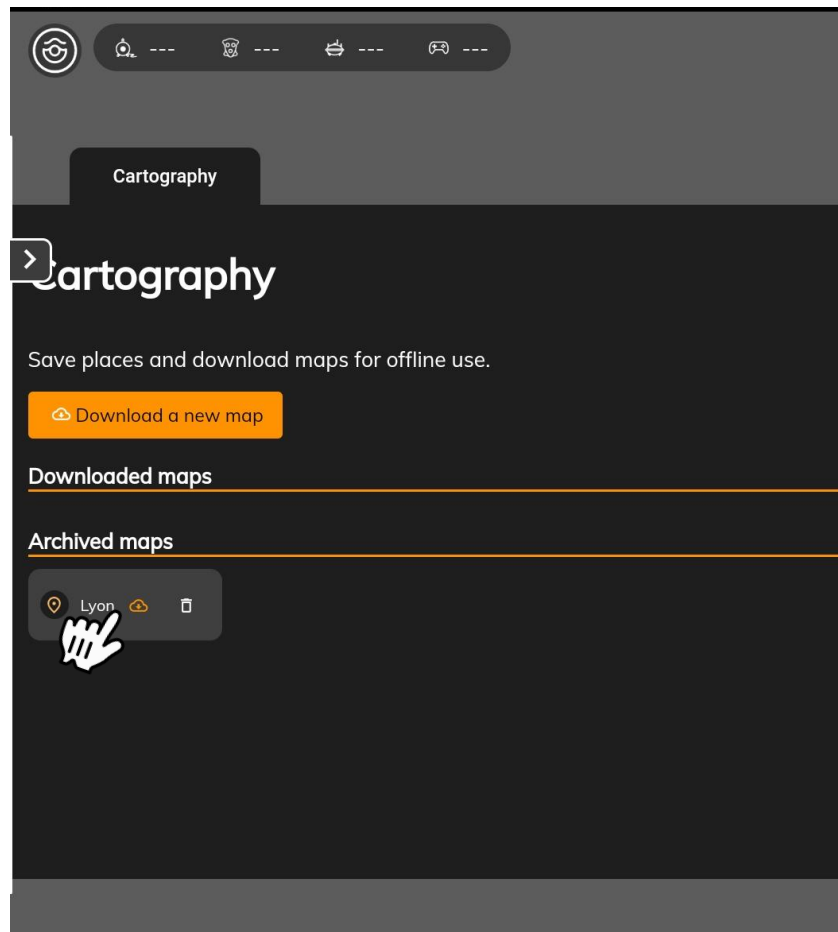The world map open, zoom in <u>as much as possible</u> to the place where you will use the drone then give a name and save the map

Download the map

In the maps settings, the map appears in the archived map, **select the cloud to download it.**
The map in now saved in the "downloaded maps"

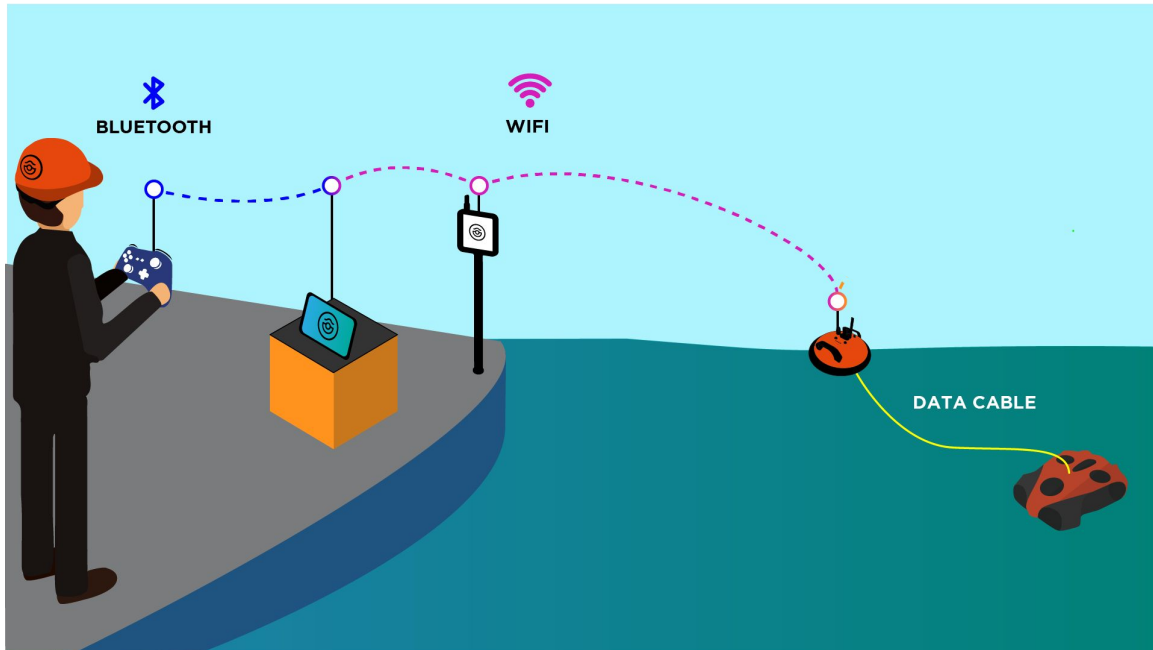# II - SET UP CHOICE AND INSTALLATION

Choice of set up

You can now prepare your equipment.

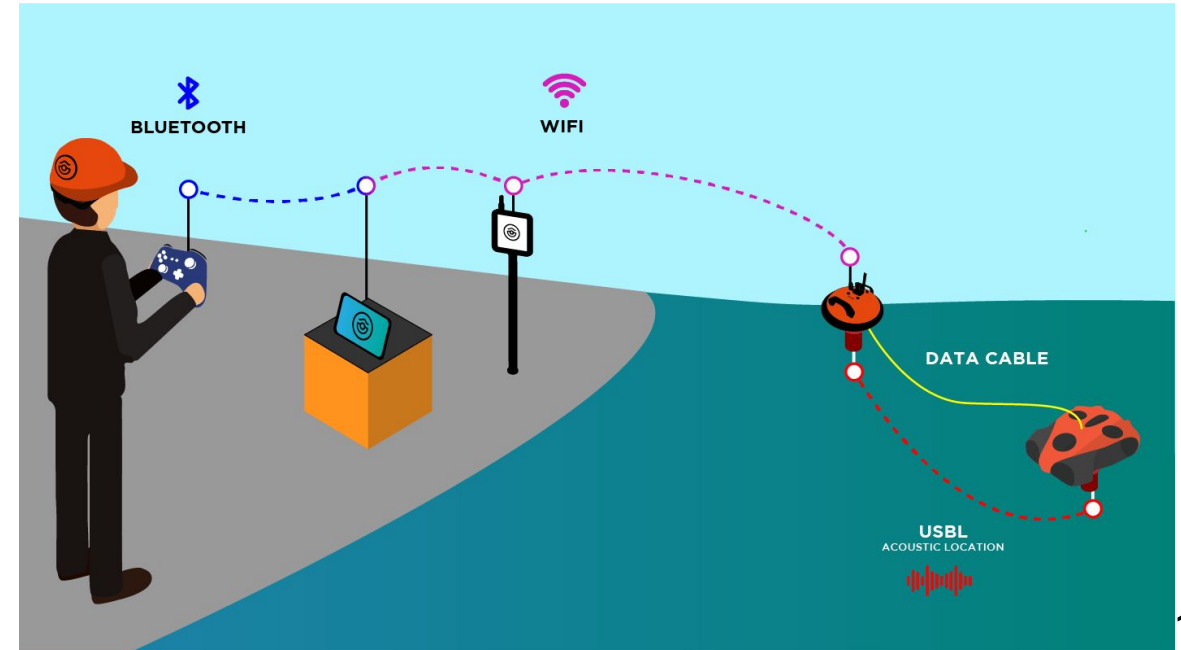With the Navigator you have two choices of set up :

- **Navigator Only**
    - To replace the WiFi Reel
    - To use the cartography feature and see the Navigator on the map

Go to page 12

- **Navigator with USBL**
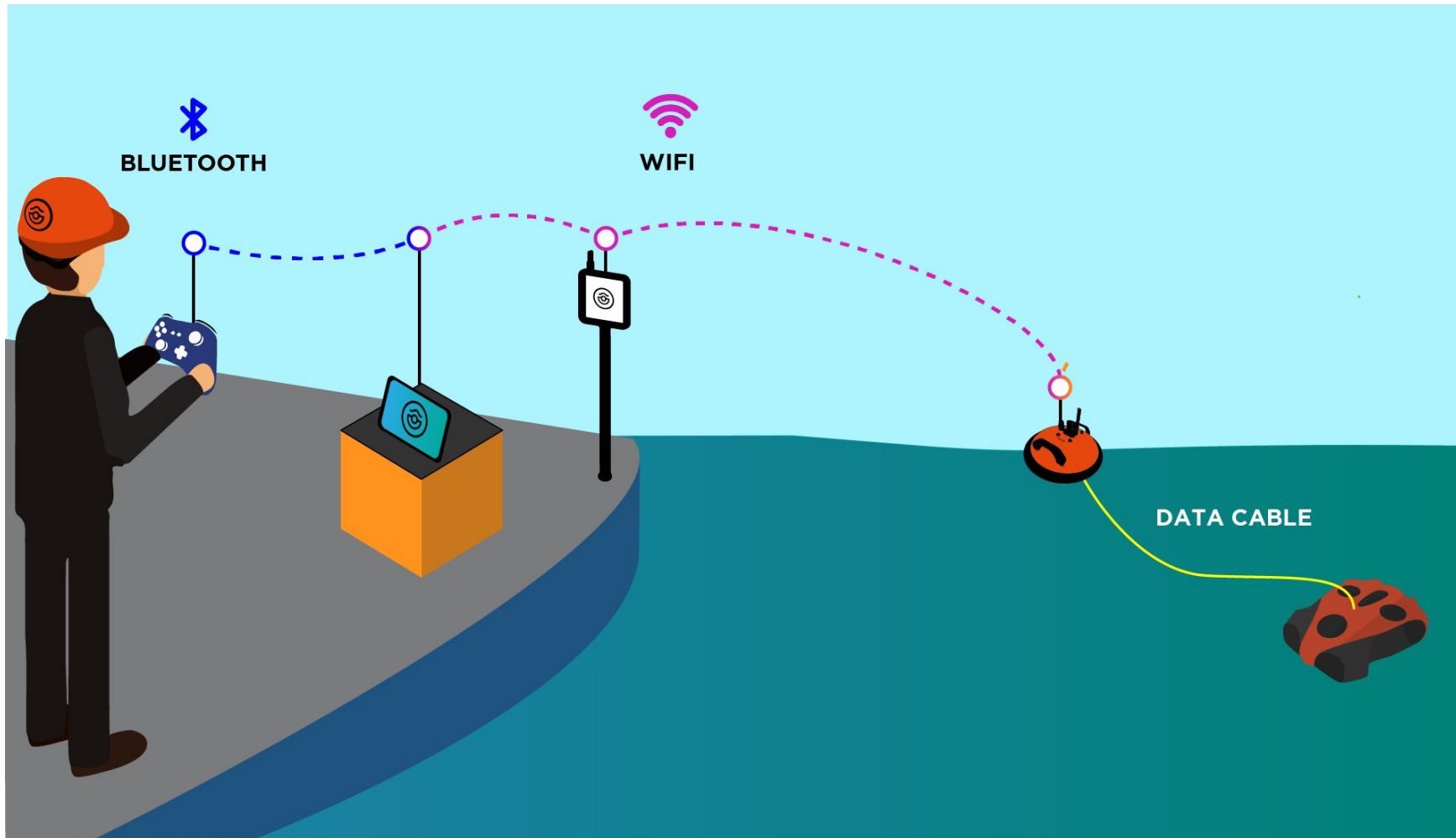   - To use the cartography feature and see both the Navigator and the drone on the map

Go to page 18

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NAVIGATOR ONLY

Setup - Navigator Only
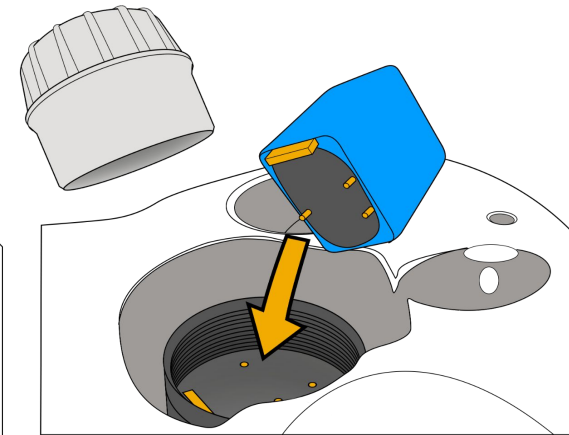

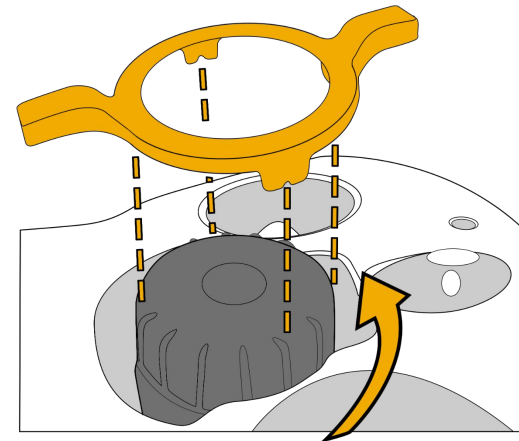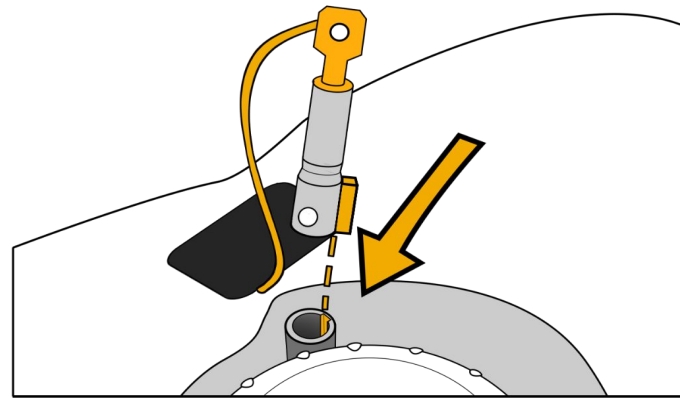BLUETOOTH

WIFI

DATA CABLE

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NAVIGATOR ONLY

Connecting the battery

Ensure that the emergency stop on the underside of the drone is properly inserted.
Make sure that the safety guide is aligned in the right direction

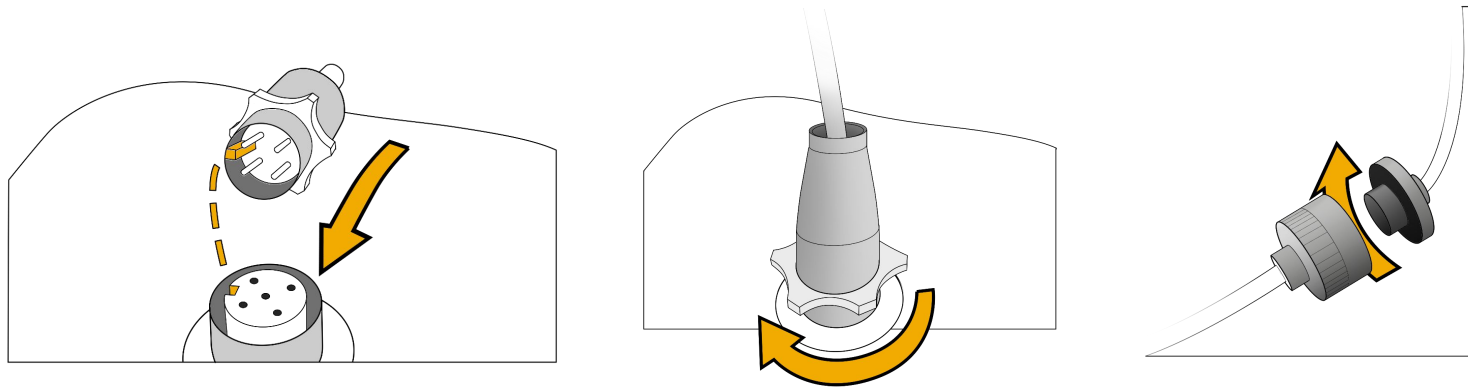Make sure the battery compartment is properly closed. Use the dedicated tool.

NAVIGATOR ONLY

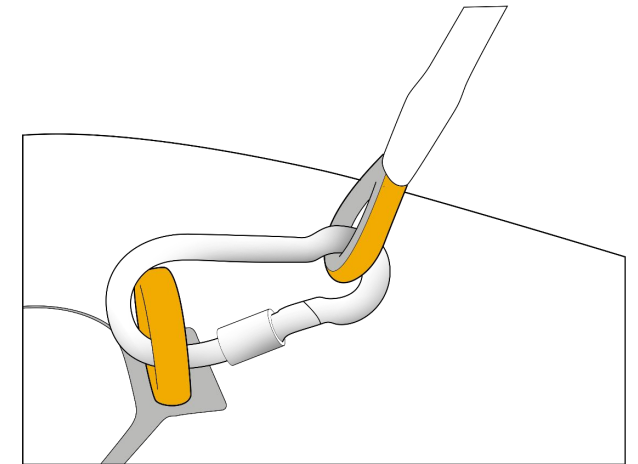## Connecting the Navigator to the drone - drone's side

Standard Connector

Subconn Connector

Attach and lock the carabiner on the drone to secure the Drone

15

Connecting the Navigator to the drone - Navigator's side

Connect the cable under the Navigator on the connector with a drone's image
- Mind the guide on the cap to be sure you place it in the correct position
- Ensure you connect it properly and hear a "click" when you screw the connector **otherwise the water could enter the connector and damage it.**

Attach and lock the carabiner on the Navigator to secure the connection

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II – SET UP CHOICE AND INSTALLATION

Set up the Navigator and the Ground Station

Screw the two antennas with care on the Navigator and the the Ground Station
Secure the ring while screwing the antennas.
Be sure it is properly screw to ensure good connectivity and avoid losing the antennas.

Your setup is complete you can go to page 25

NAVIGATOR & USBL

Setup - Navigator with USBL

NAVIGATOR & USBL

Set up the USBL transmitter and receiver on the Navigator and drone

USBL Receiver
Place the plot of the USBL under the Navigator and secure it.
Connect the cable under the Navigator on the connector with a pinger sticker.
- Mind the guide on the cap to be sure you place it in the correct position
- Ensure you connect it properly and hear a "click" when you screw the connector **otherwise the water could enter the connector and damage it.**
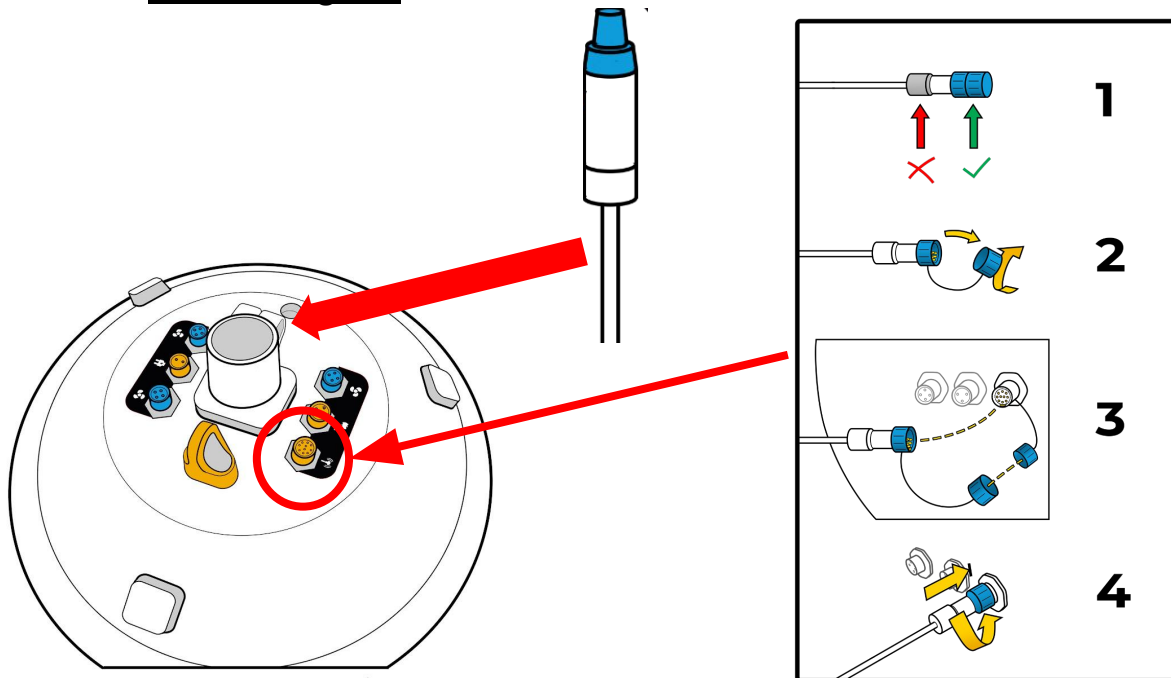
USBL Transmitter
Connect the USBL transmitter to the cable under the drone **before to place the battery inside the drone.**
You can fix the transmitter on the ball's drone thanks to the clamp provided.
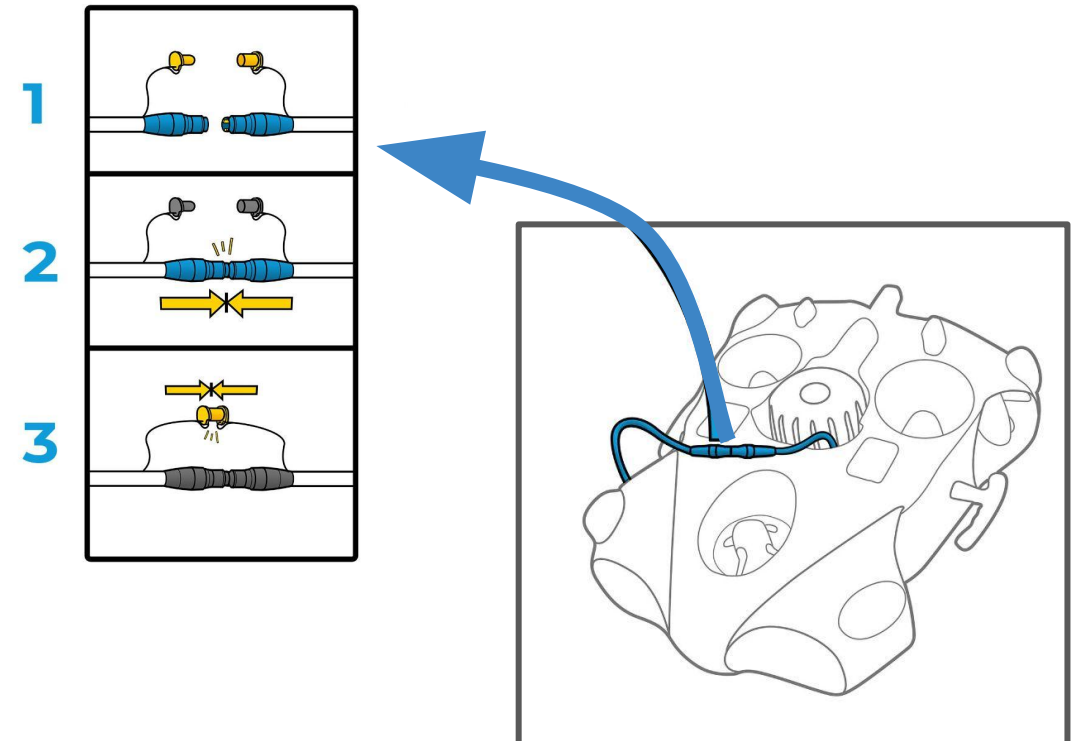
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Connecting the battery

Ensure that the emergency stop on the underside of the drone is properly inserted.
Make sure that the safety guide is aligned in the right direction

Make sure the battery compartment is properly closed. Use the dedicated tool.
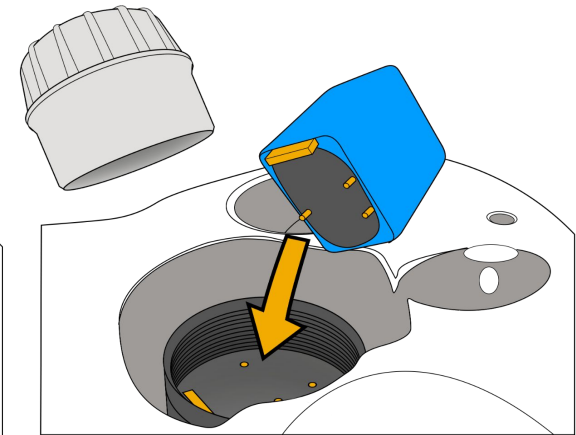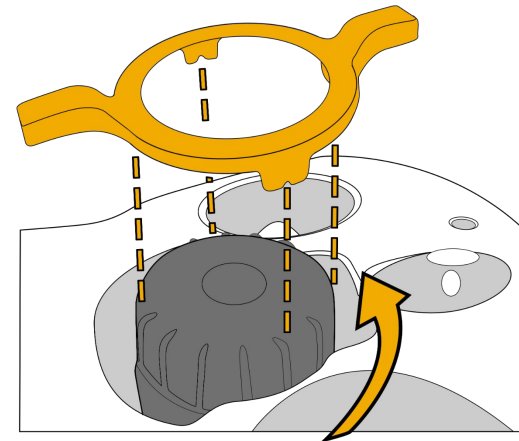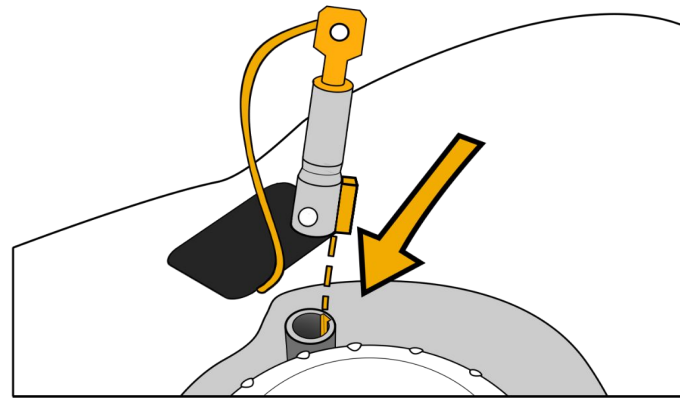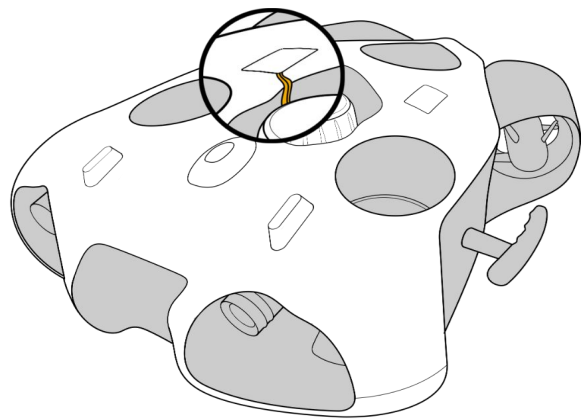
Connecting the Navigator to the drone - drone's side

Standard Connector
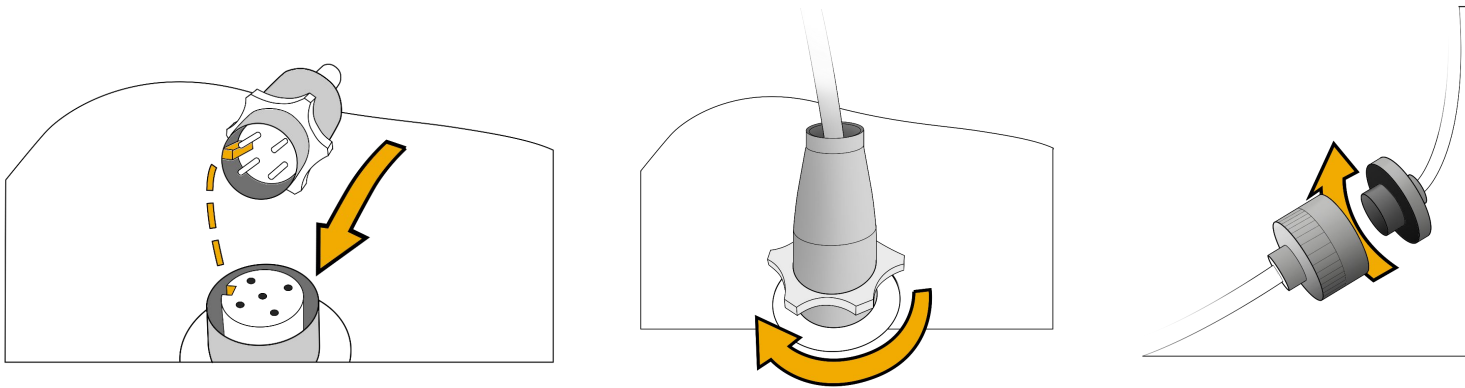
Attach and lock the carabiner on the drone to secure the Drone
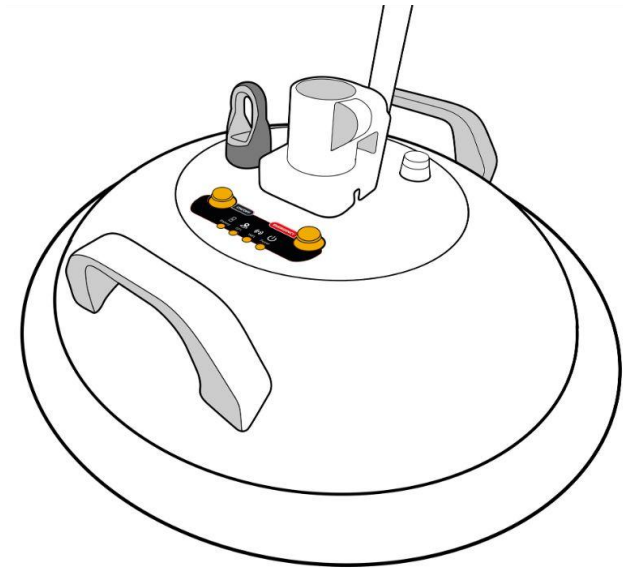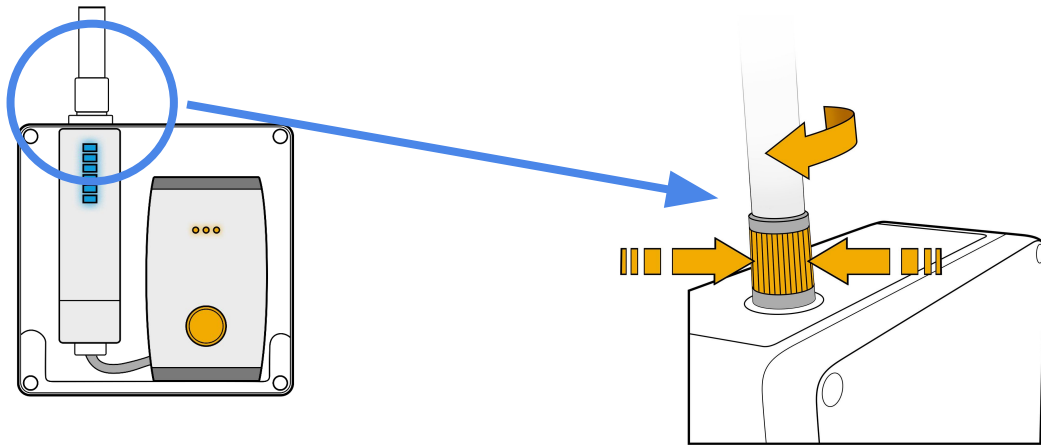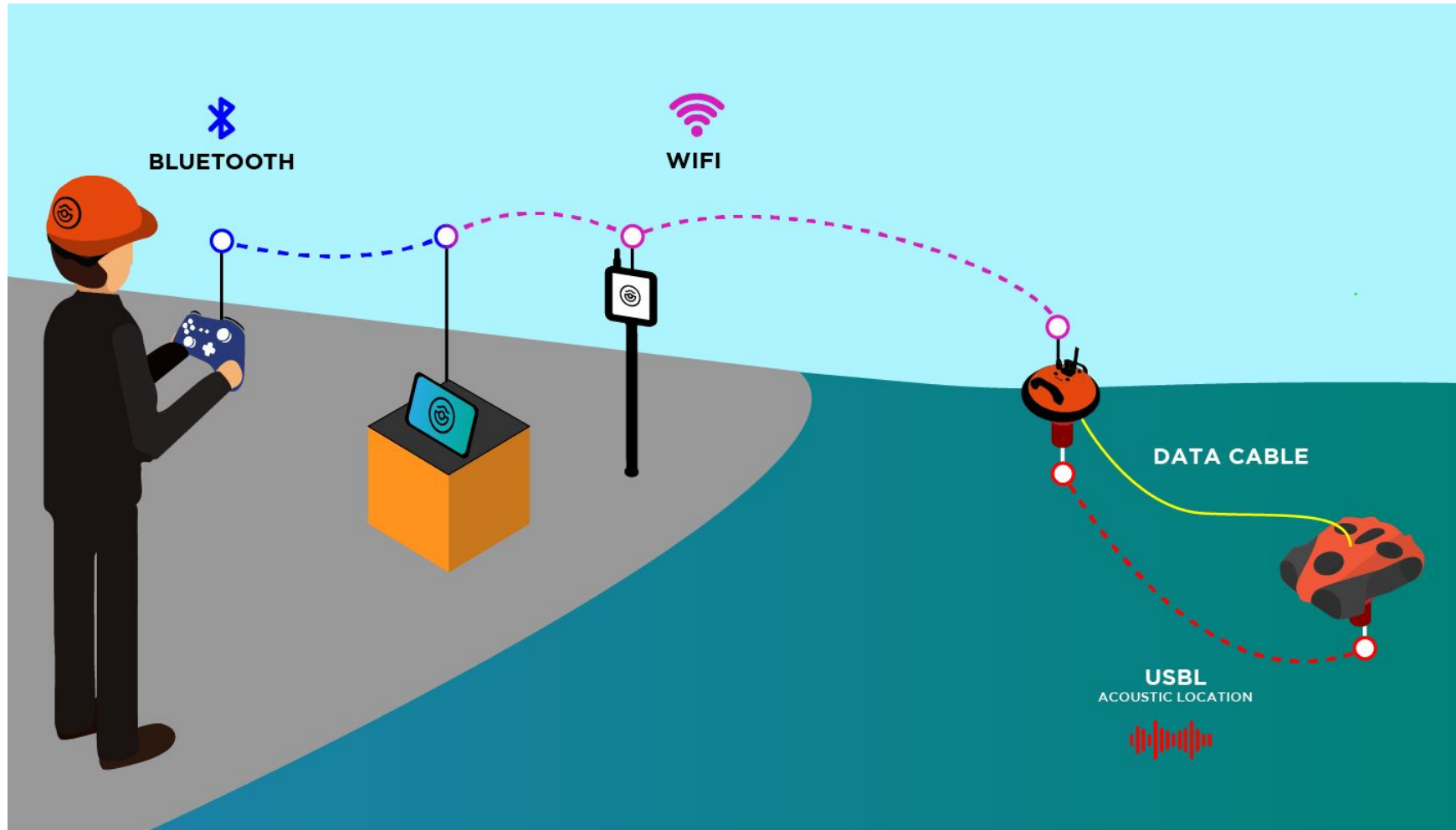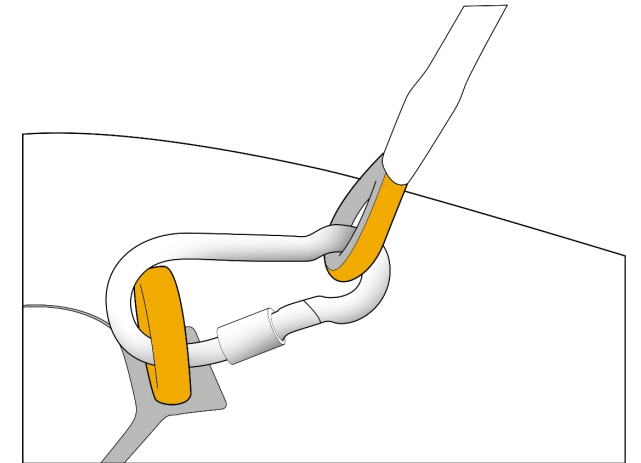
Subconn Connector
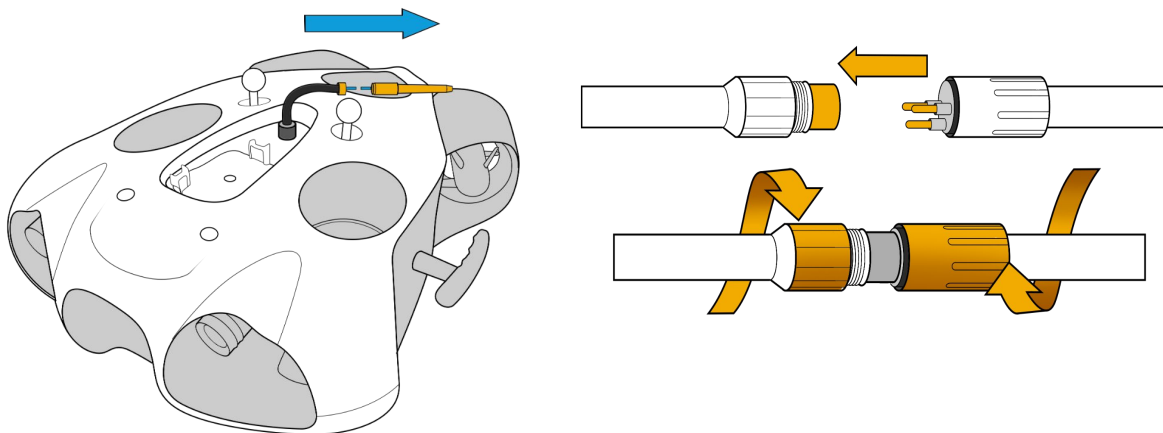
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Connecting the Navigator to the drone - Navigator's side

Connect the cable under the Navigator on the connector with a drone sticker.
- Mind the guide on the cap to be sure you place it in the correct position
- Ensure you connect it properly and here a "click" when you screw the connector **otherwise the water could enter the connector and damage it.**
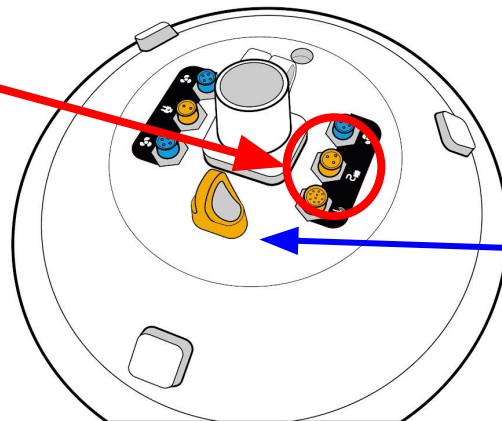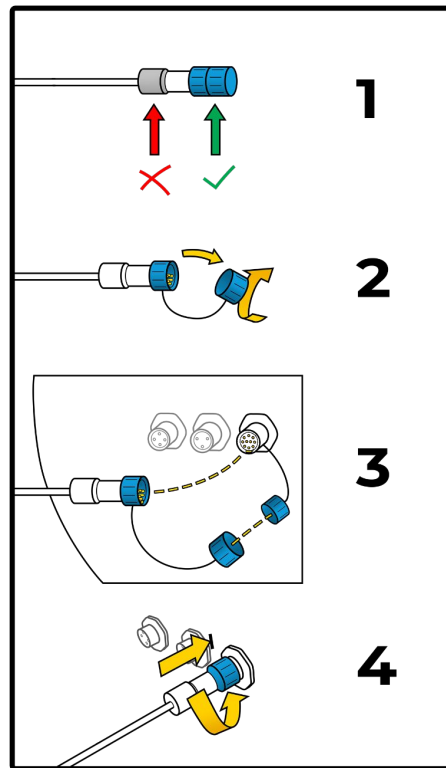
Attach and lock the carabiner on the Navigator to secure the connection
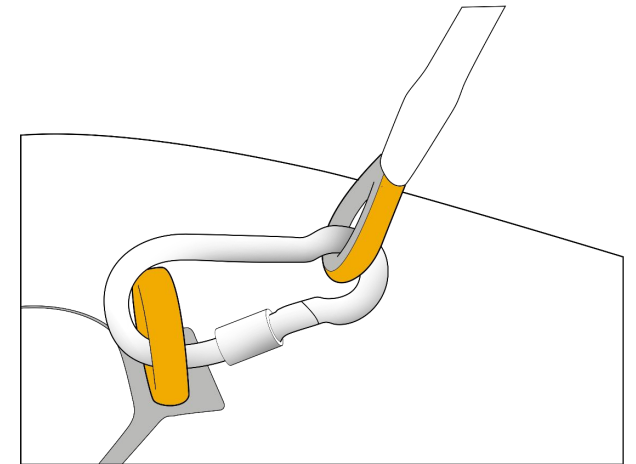
Set up the Navigator and the Ground Station

Screw the two antennas with care on the Navigator and the the Ground Station
Secure the ring while screwing the antennas.
Be sure it is properly screw to ensure good connectivity and avoid losing the antennas.

III - STARTING UP THE EQUIPMENT

Starting up the equipment

Start the Ground Station.
Two blue LEDs light up at the bottom of the 6 LEDs on the antenna.
<u>When the Navigator and the ground station are fully connected, the other four LEDs light up.</u>
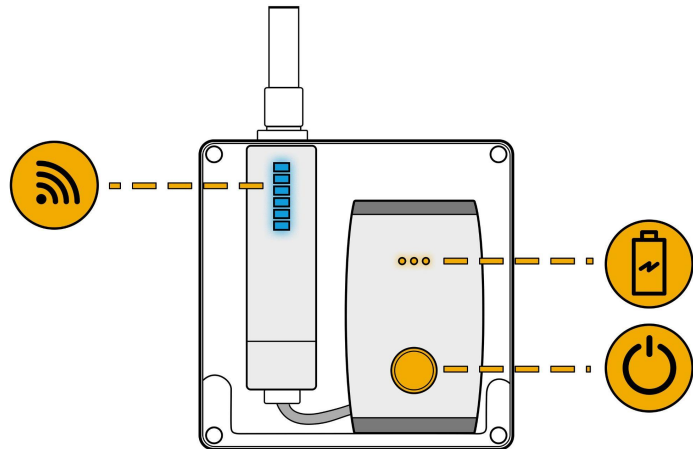
Start the Navigator by clicking once on the ON/OFF button
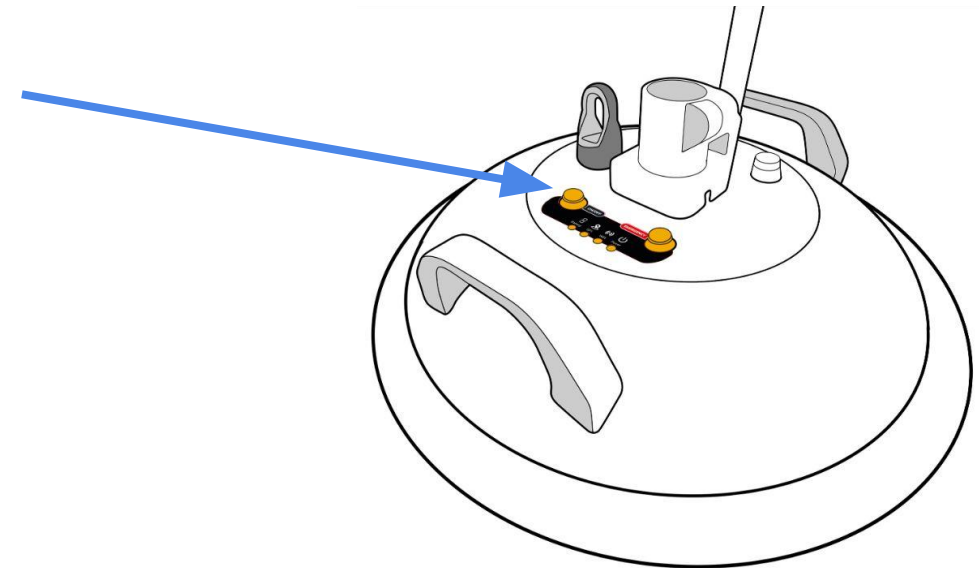
Starting up the equipment

Place the magnet on the "Power" icon on top of the drone.
The drone will turn on and test all its components. It will make sounds and activate its lights.
Make sure that nothing is in the way and that the motors are not jammed.
When this process is complete, the green front LED will be solid.
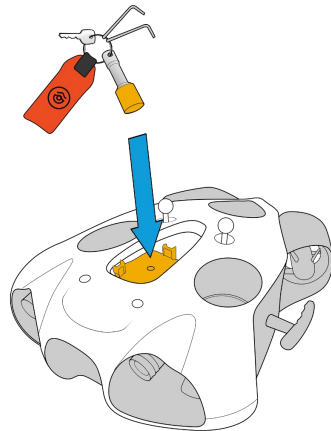
Turn on the controller.
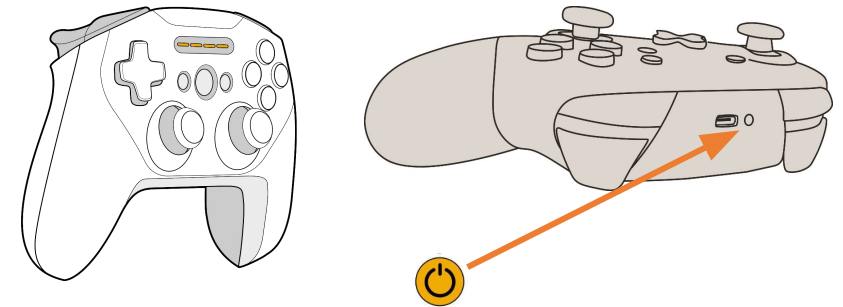
III – STARTING UP THE EQUIPMENT

Connecting to the Ground Station

Once the 6 Blue LEDs of the Ground Station are lighted up, connect the tablet to the WiFi signal of the Ground Station

The wifi network is: *"GroundStation"*.
The password is **@Notilo+**

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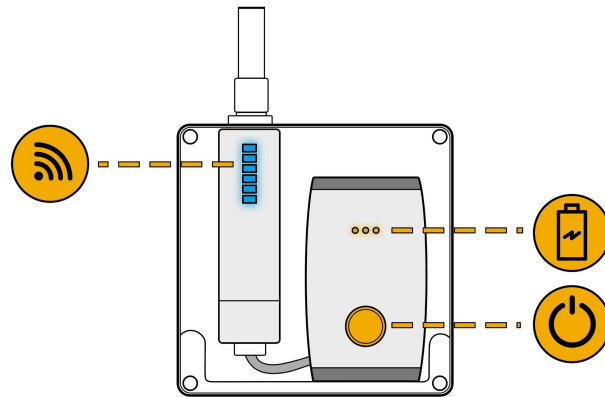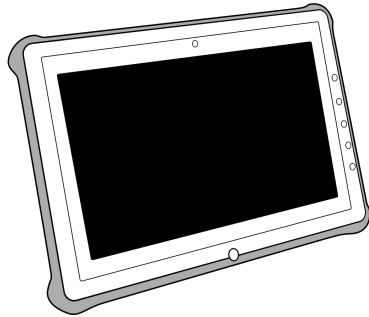
Connection of the controller

Connect the tablet to the controller via Bluetooth

Steelseries controller
Device name: *SteelSeries Stratus Duo*
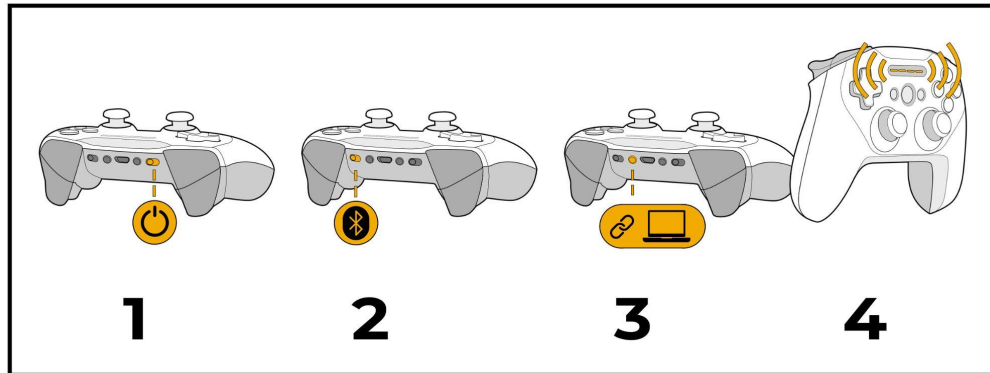
Switch Controller
Device name: *Pro Controller*
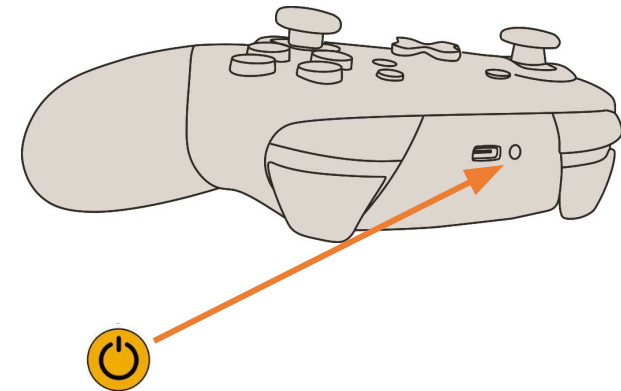
Choice of configuration

Start Seasam Control or select "Choice of Configuration" if you have already opened the app.
In the configuration menu, select the configuration corresponding to your setup

NAVIGATOR ONLY

NAVIGATOR & USBL

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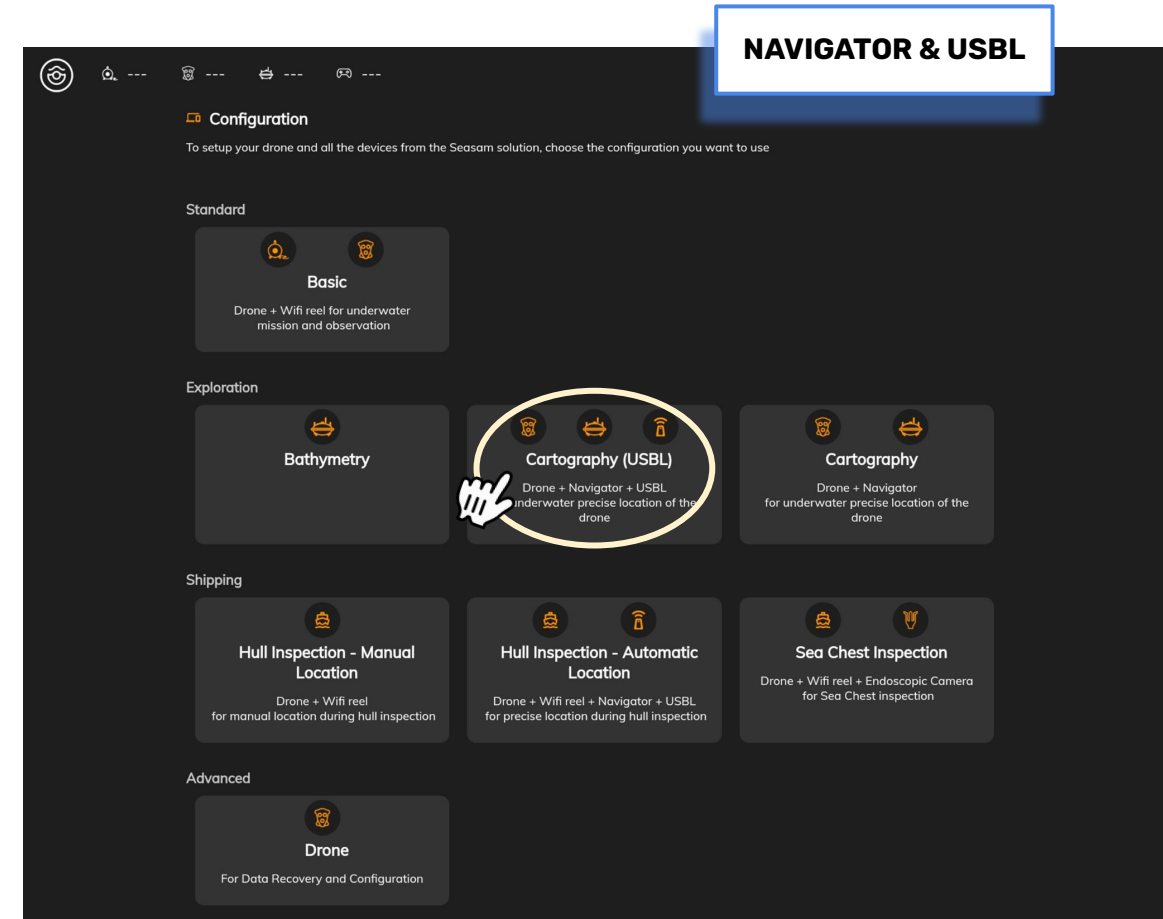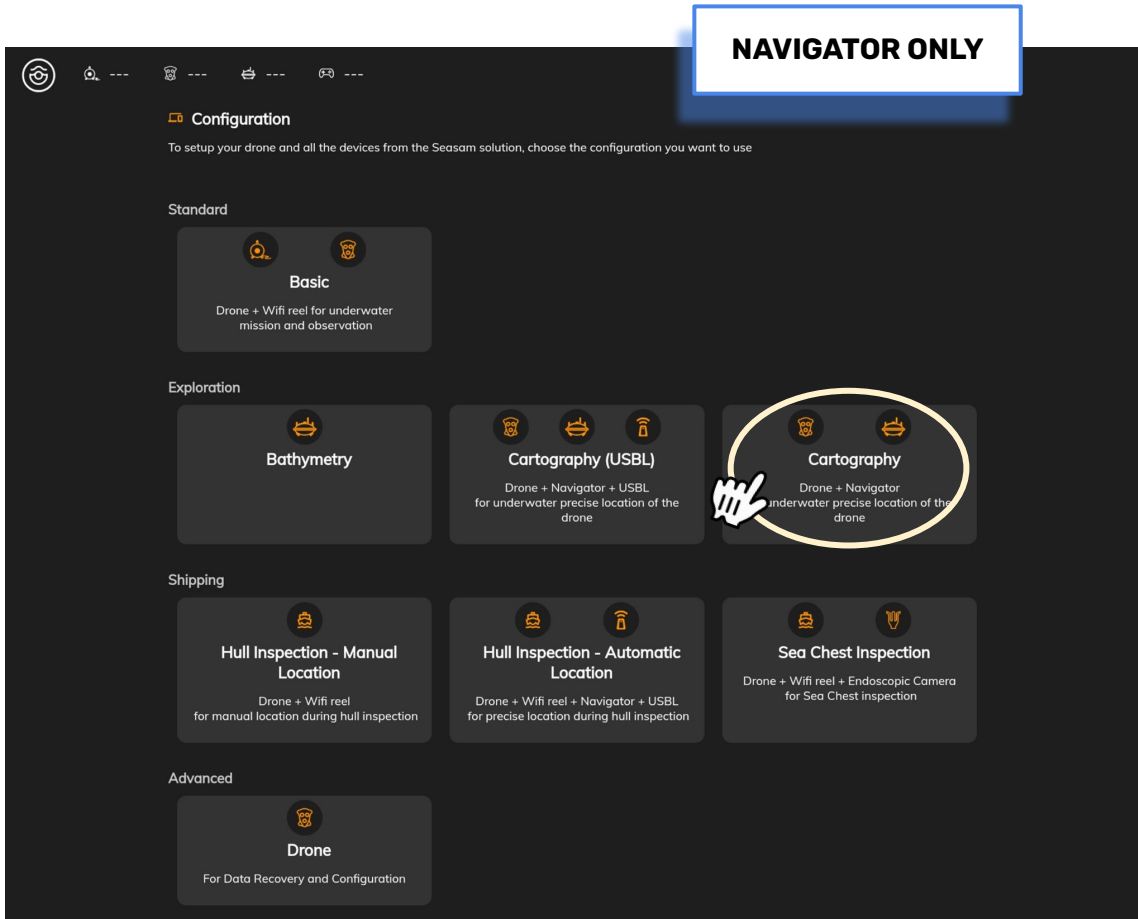
Map selection

The map previously downloaded **(see page 7)** is available and will be displayed when you are at the operation site. If you have more than one map downloaded there is no need to select, the system will automatically detect your location of operation.

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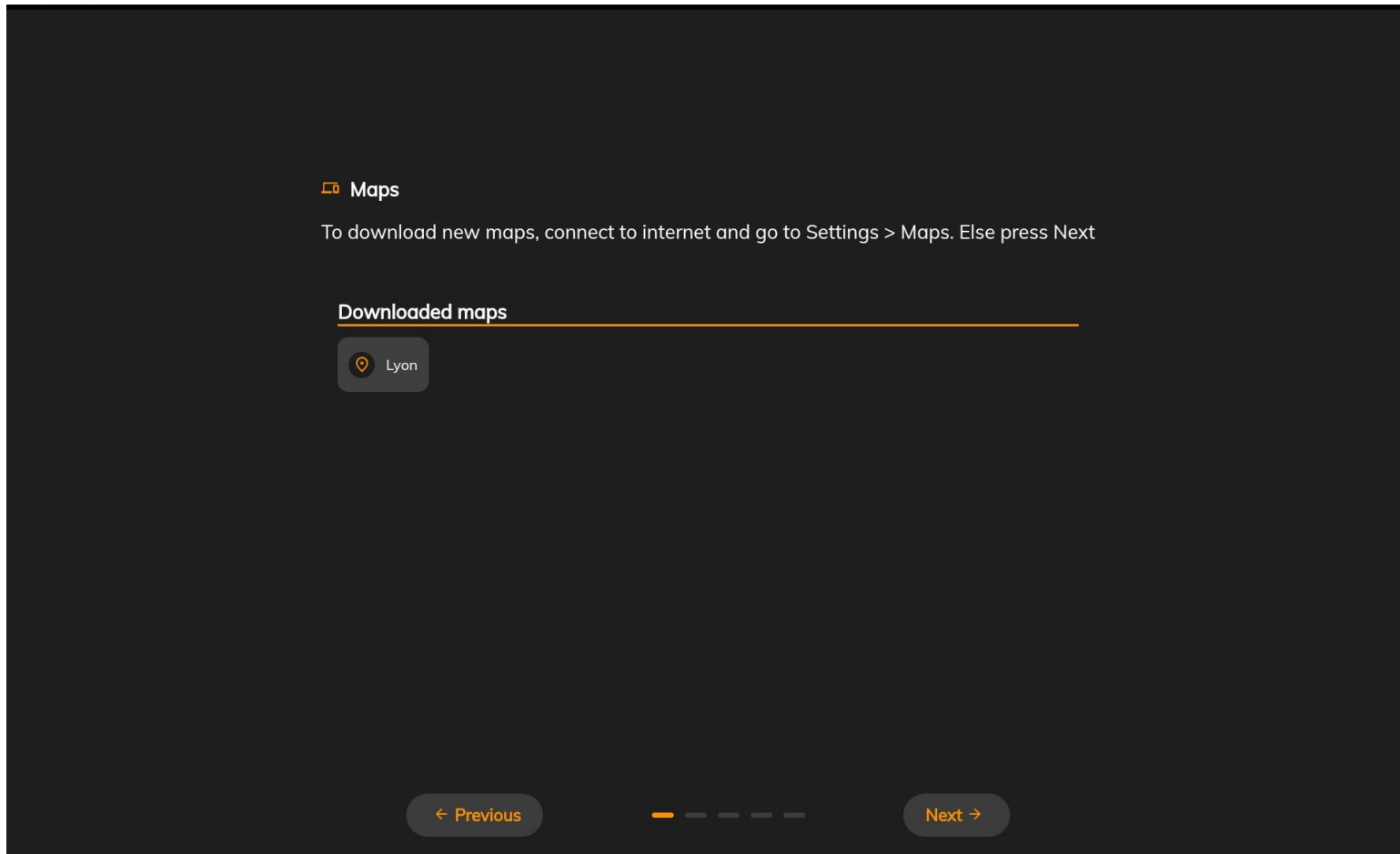
Set up & Connection - Navigator with USBL

Check that you have not forget anything

Checking the connections

This screen checks that all the equipment is connected correctly.
Once both connections are checked, click on "Continue" to access the control screen.

Move a joystick on the controller to have the connection checked.

The system checks that the drone AND the Navigator AND the Ground Station are **switched on and physically connected together.**

If the green tick takes a long time to appear :
- Wait a few seconds
- Check the physical connections
- Make sure the drone the Ground Station and the Navigator are turned on
- Make sure the tablet is connected to the Ground Station network
- Go back to the previous page and press "Next" again

If the problem persists contact support@notiloplus.com

Network Connection

Connect the controller to the tablet through Bluetooth

○ Controler Bluetooth Connection

In the WiFi settings of the tablet, select the network of the Ground Station to start the connection.

○ Ground Station Wifi Connection

← Previous   Continue
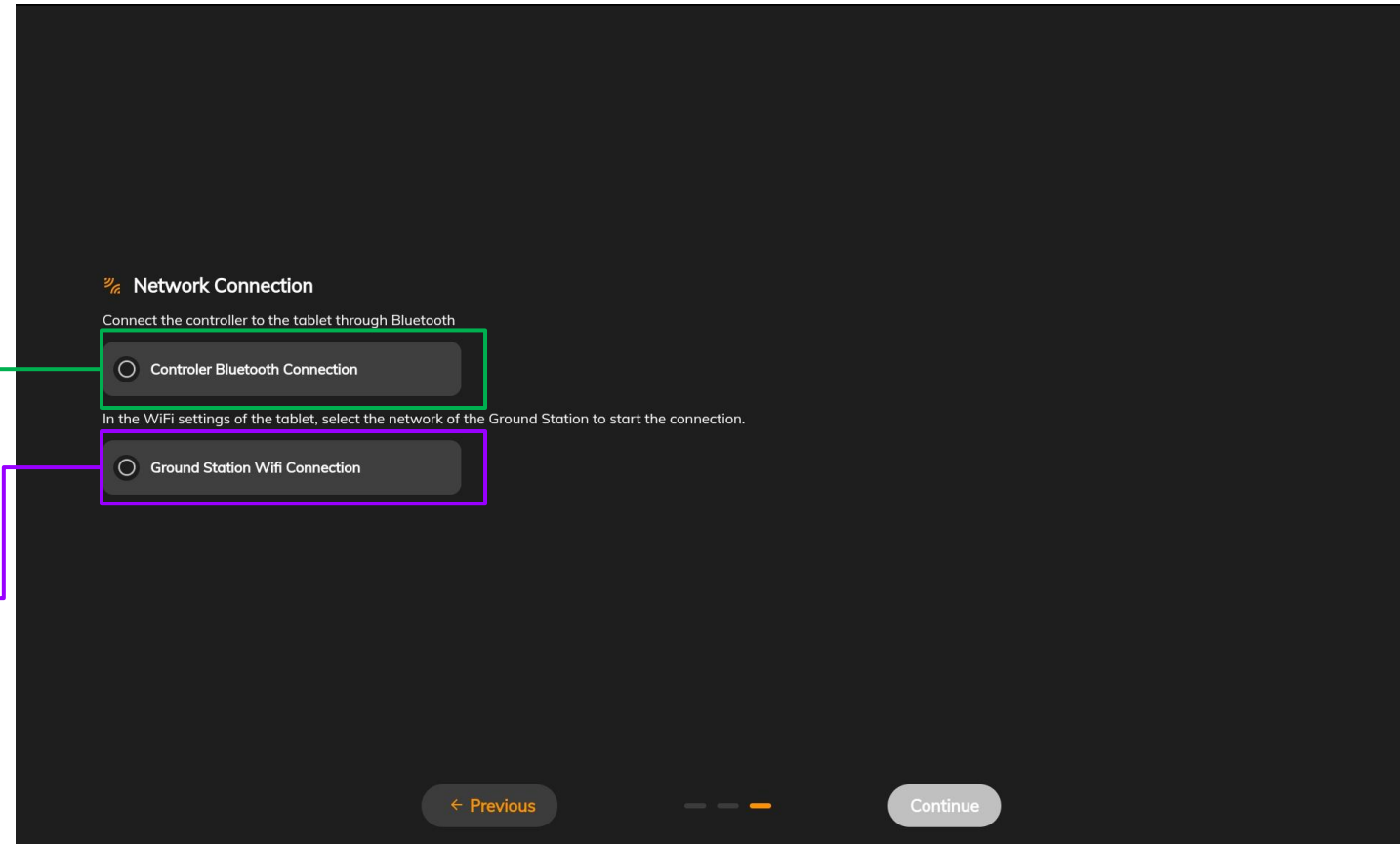
USBL Calibration - Navigator with USBL

Calibrate your USBL by following the instructions on the App.
Please use extra care, the USBL must not receive any shocks.

📶 USBL

USBL Inertia Calibration

The USBL receiver uses magnetic sensors for localization. To perform this calibration, you will need to rotate the receiver in every direction.

Global System Calibration
Gyroscope Calibration
Accelerometer Calibration
Magnetometer Calibration

Save calibration   Saved

1. Gyroscope Calibration
Lay the sensor on a flat surface
for 10s

2. Accelerometer Calibration
Put the USBL flat and maintain
it static for 10s on each of its 3
axes

3. Magnetometer Calibration
Move the sensor in shape of a 8

📶 USBL connected

← Previous   — — ▬ —   Next →

📶 USBL

Clock Synchronisation

The USBL system has to synchronize the emitter and receiver. Please put these two devices in contact and start synchronization.

Start calibration

USBL receiver
USBL emitter

Instruction

Handle the transmitter/receiver with care and do not knock them together. Leave the two in contact until

the synchro is finished.

📶 USBL connected

← Previous   — — — ▬   Continue

IV - USING CARTOGRAPHY

IV – USING CARTOGRAPHY

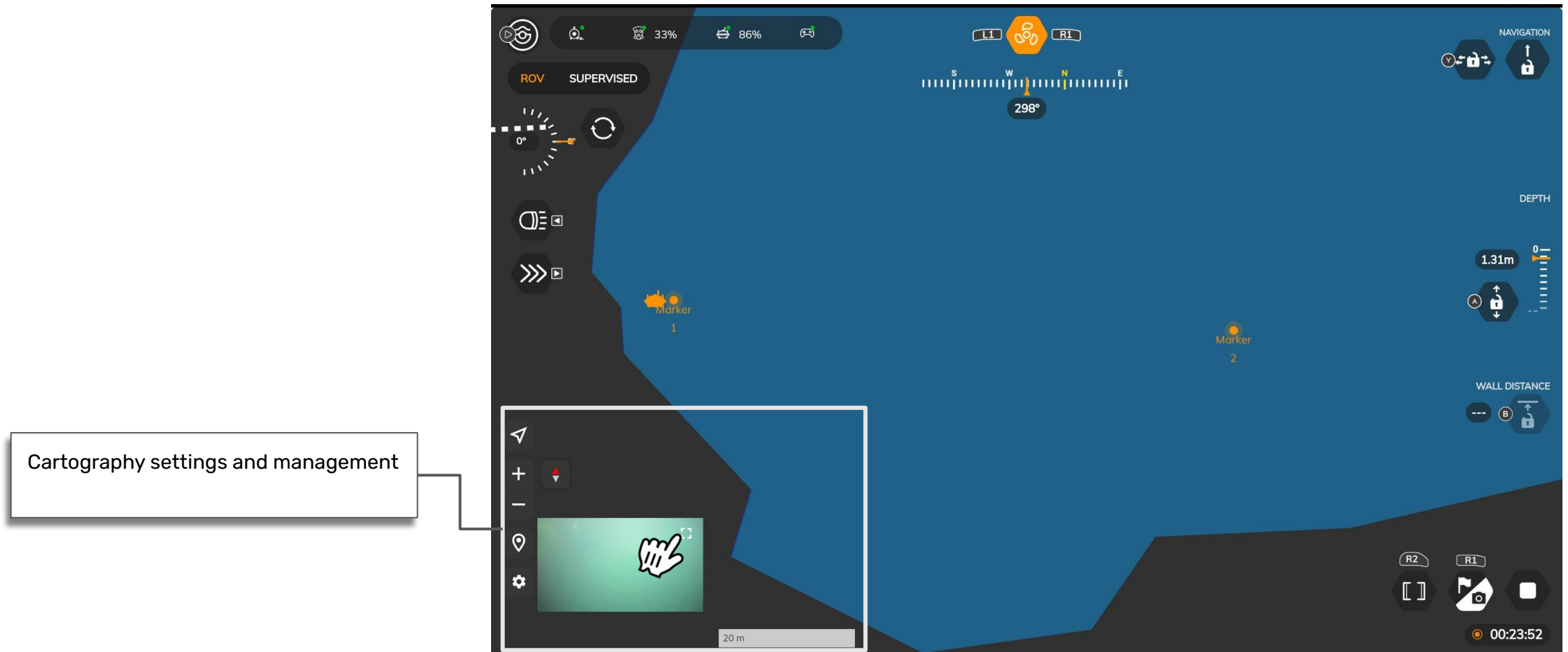## Cartography interface

You now have both the video feedback and the map on Seasam Control.
You can switch between both of them by clicking on the square icon on the bottom left pop-up.

Cartography settings and management
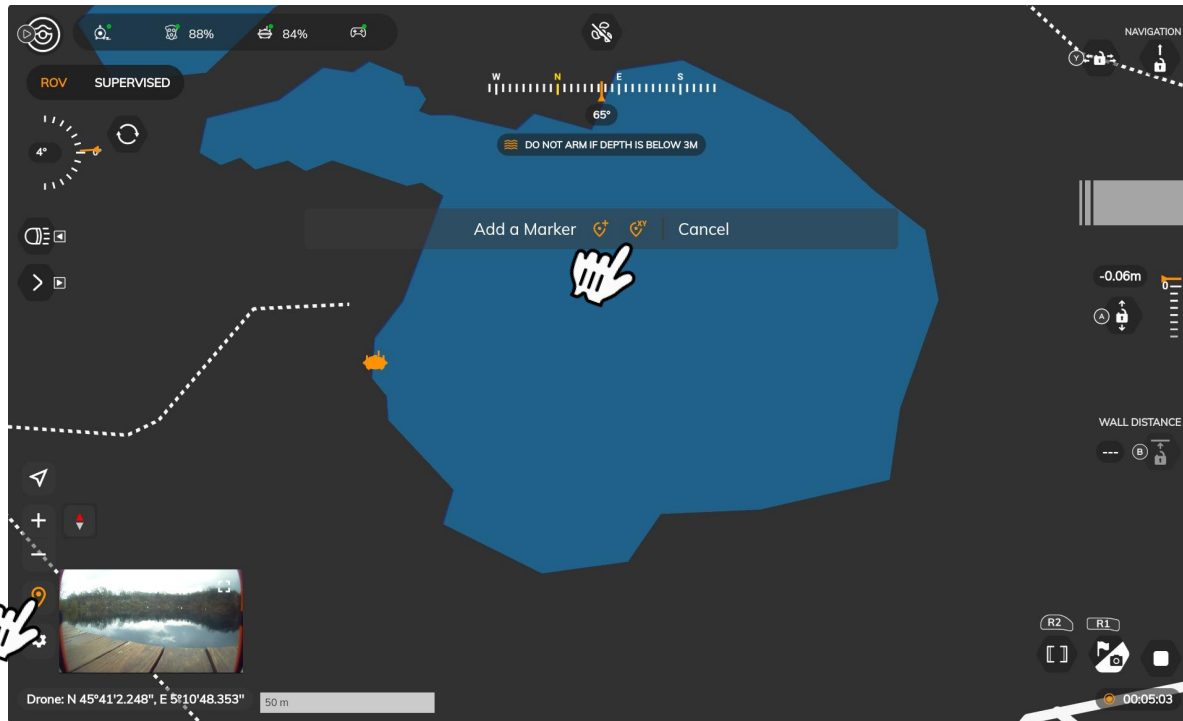
Display the path

You can display the path of your drone. Click on the setting icon on the bottom left of your screen.
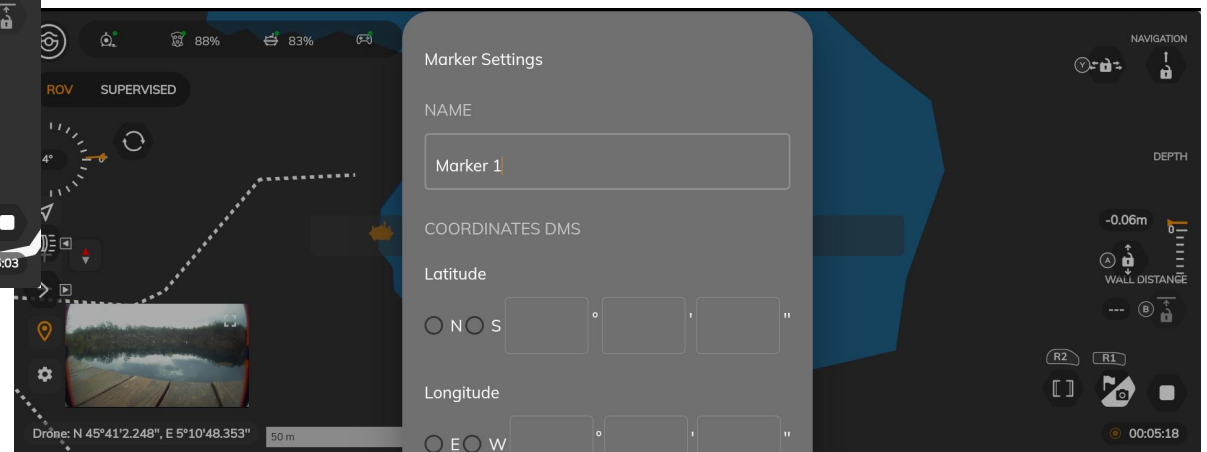Then, check "Display path". Save by clicking on "Apply".

Add a marker

To add a marker, select the location icon on the bottom left on your screen.
Then, choose between a selected point on the map or to enter the coordinates of a precise point.

If you choose the "XY point", a pop-up window appears allowing you to enter the coordinates of the marker.

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IV – USING CARTOGRAPHY

Waypoint

Select the marker you want the drone to go to then select "travel to"
According to the set up, either the navigator (Navigator Only) or the drone (Navigator & USBL) will then go to the position of the marker.
You cannot control the drone with the controller. If you want to get the control back you need to stop the feature. **See next page**
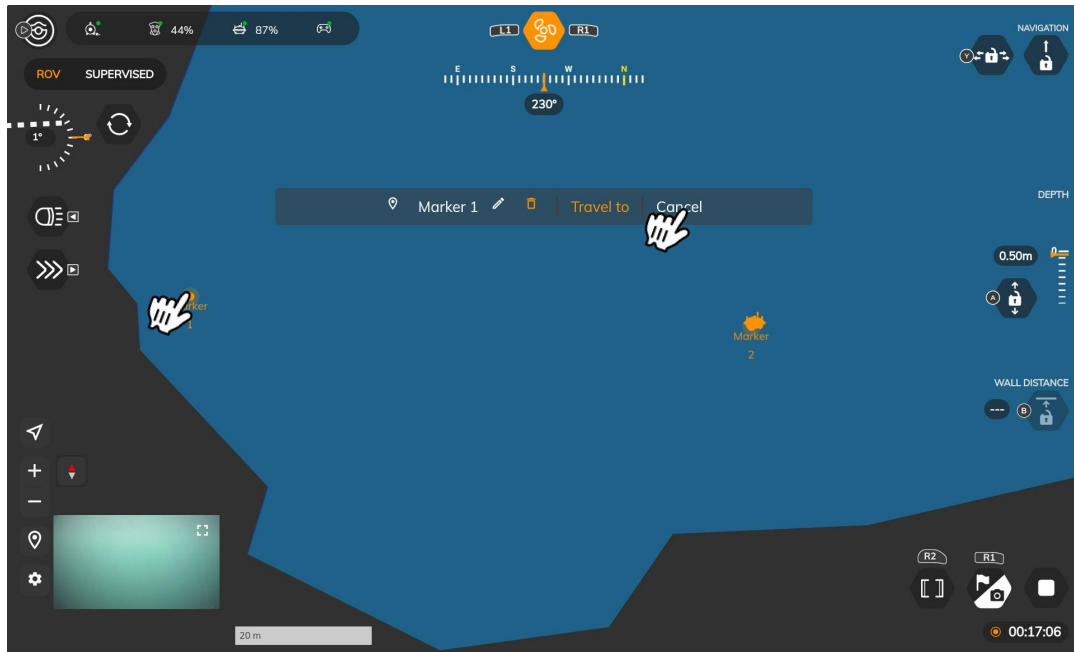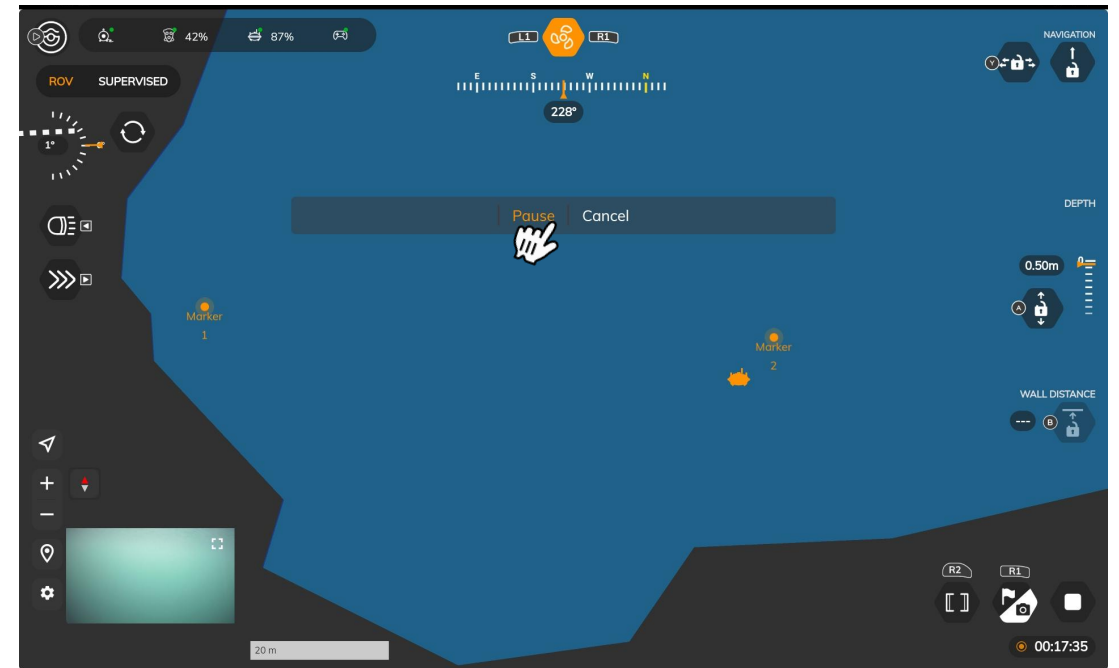

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Waypoint

If you want to stop the drone from going to the marker, select again the marker then :

"Cancel" twice to stop it completely

"Cancel" then "Pause" on the second display if you want to restart after

OR

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More information : https://support.seasam.notiloplus.com/

Contact us : support@notiloplus.com