IBUBBLE

by notilo plus

USER MANUAL

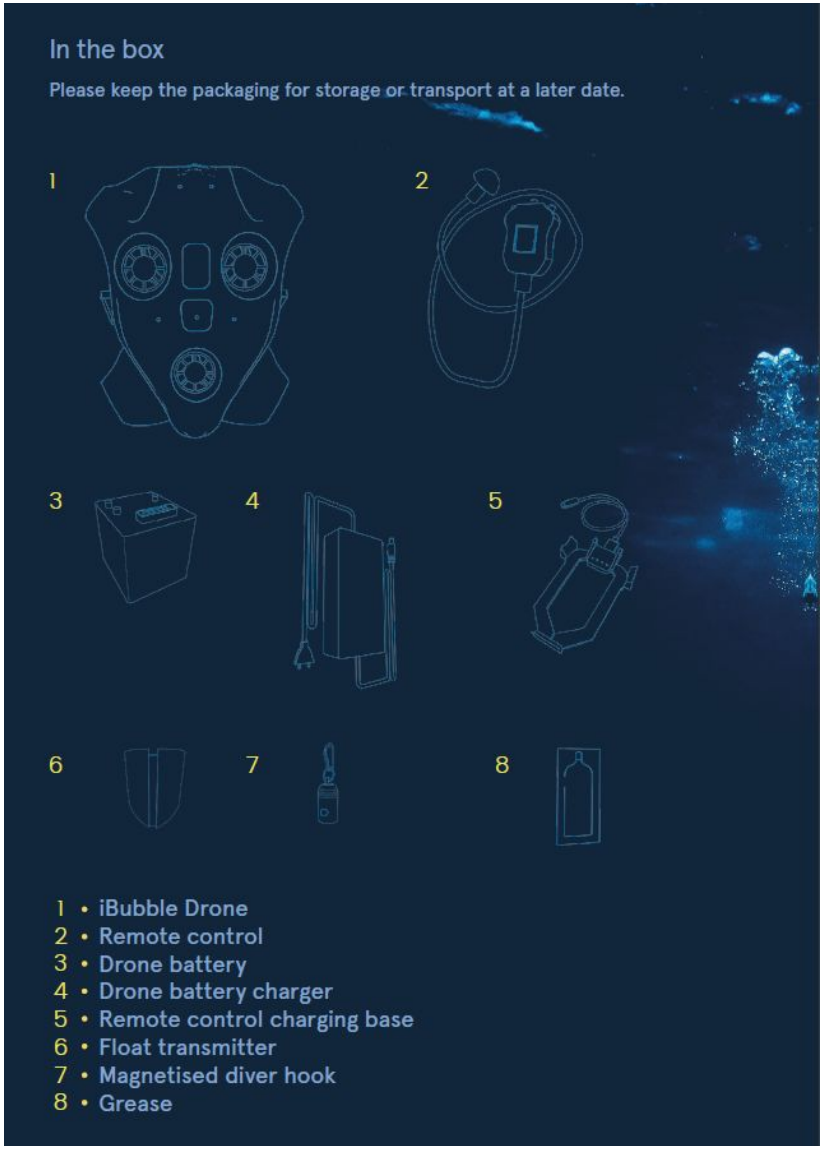
PRODUCT PRESENTATION

Congratulation on the purchase or your iBubble !

Before using your drone, please read this document carefully.

The following contains all necessary information regarding your drone and its use.

Items presentation



Your iBubble

Learn more about your

Your iBubble remote

The remote control allows you to control the drone when immersed. The buttons are used to browse the different menus.

Press one of the side buttons for 3 seconds to access the corresponding menu. Browse up and down then confirm the action using the "Select" button.

At any time, you can disarm the motors of your iBubble by pressing the 2 side buttons simultaneously.

FIRST TIME SETUP

FIRST TIME SETUP

Upon starting your iBubble for the first time, it is necessary to register and update it. To do so, follow the instructions below.

1. **Preparation**

Put the battery and the drone's remote in charge until they are fully charged before starting the updating process.

Before turning on your iBubble, please make sure that your drone is in a clear area and that the propellers are not blocked in any way.

2. Plug in the battery

Please watch the following video to understand how the battery compartment of the iBubble works and how to plug in the battery: :
https://www.youtube.com/watch?v=gagrXSrIDfs

Instructions:

- Turn the iBubble upside down on a plane surface and open the battery compartment turning counter clockwise.

- Connect the battery aligning its connector with its counterpart located at the bottom of the battery compartment.
  (A slight beep confirms the correct connection of the battery).

FIRST TIME SETUP

- Check for grease on the o-ring joint located on the removable bell. If necessary, apply a new layer of grease on the joint. Be sure to always handle the seal carefully and never use sharp objects.

  If the seal is damaged, change it (available in our online store). It is recommended to change the seal at least every 50 dives.

- Screw the battery bell as far as possible, checking first that there is no sand, salt or other material that would impede the seal at the joint, the bell thread and other friction parts.

  The seal must be placed in the groove farthest from the thread of the battery bell.
  Make sure that the bell is aligned vertically with the thread to prevent blockage.

3. Downloading and starting the iBubble app

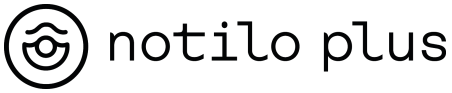
In order to register and update your iBubble, you need to install the iBubble Camera application on your smartphone or tablet. You can download it on the Android PlayStore as well as on Apple's AppStore.

Once the app is downloaded, start it and follow the instructions to register your drone. Once your iBubble is registered, the latest update will be downloaded on your phone. Once finished, the application will ask you to start your iBubble. Read the following section to turn it on.

FIRST TIME SETUP

4. Preparing the remote

Turn on your remote by pressing the "Select" button.
When the **Notilo Plus logo** appears, press both Mode and Scen buttons at the same time. The BOOTLOADER screen will then appear.



Important information: If the screen of the remote displays the **DEBUG** screen instead of the **BOOTLOADER** screen, turn it off by pressing the three buttons Mode, Scen and Select at the same time. This will turn off the remote. The DEBUG menu appears when all three buttons are pressed when the IBUBBLE logo appears.

5. Starting the drone

Once the remote is in BOOTLOADER mode, put it on the designed location on the drone and leave it there until the first time setup is over.

As soon as the remote is placed on the drone, it will turn on and beep. **When turned on for the first time,** iBubble does **not** turn on its status LEDs and emits a WiFi signal named ibubble-B827EBXXXXX (the X's represent a sequence of random digits.).

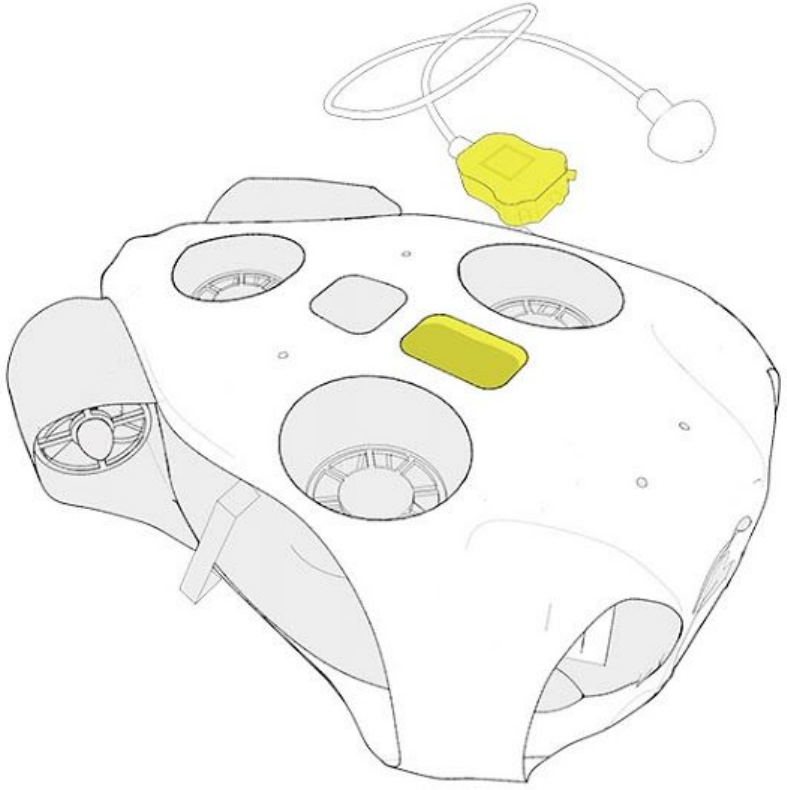
6. Registration and update

To register and update your drone, launch the iBubble app on your smartphone and follow the given instructions.

Important: Once the update is downloaded to your Smartphone, be sure to turn off mobile data on your phone to ensure an optimal connection to your iBubble.

Follow the update process in the app. Once the update is complete, the drone will restart, update and synchronize with the remote.

You can then connect to iBubble through the app and set it up.



KNOWING YOUR IBUBBLE

KNOWING YOUR IBUBBLE

Turning the iBubble on and off

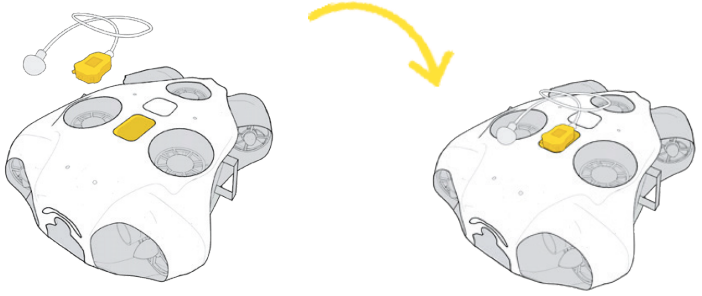
To turn on your iBubble, simply turn the remote on and place it on its dedicated cradle on the drone. iBubble will turn on and run its startup tests.

To turn off your iBubble, turn off the remote and place it on the drone for 10 seconds, then remove it. The drone will turn off.

Caution: Turning off iBubble by removing the battery may damage its components. We strongly advise not to turn off iBubble this way.

Synchronization

- Turn on the remote by pressing the Select button for 2 seconds.
- Place the remote on its dedicated base on the drone, checking for obstructions on the portholes of the remote and drone.
- iBubble turns on and starts its booting sequence. After one minute, the remote synchronizes with the drone.
- Once synchronized, the remote displays the "Disarm" scenario and the iBubble LED turns solid green.



KNOWING YOUR IBUBBLE

Synchronization info

- The synchronization must be done within a maximum of **5 minutes** before launching the drone in the water. A longer delay can lead to degraded performances of the drone.

- If an error message appears on the remote, please contact iBubble support via **support.ibubble.camera** specifying the nature of the error.

- When it is turned on, iBubble activates all its engines, turns on its headlights and beeps.
  If iBubble doesn't successfully perform its self tests (for instance, a motor doesn't turn, or the lights do not flash), do not dive with your drone. Try restarting the drone. If the problem persists, please contact our support.

Scenarios description

To access the scenarios menu, press the Scen. button for two seconds.
The menu is then displayed. To navigate, use the Scen. and Mode buttons. To select a scenario, press the Select button.

Disarm

This scenario starts automatically when the drone is synchronized. When this scenario is activated, it immediately stops the drone and allows it to be safely taken underwater or in the air.
The "Disarm" scenario must be activated before taking the drone out of the water and is also the scenario to activate in case of emergency or distress.

Follow

iBubble turns to the transmitter of the remote and starts following it while keeping a certain distance that you can set up via the iBubble app.
When the transmitter approaches the drone, iBubble moves away. If the transmitter goes away, iBubble will automatically follow him to get to the right distance.

KNOWING YOUR IBUBBLE

Lead

This scenario first moves iBubble on the other side of the transmitter, 180 ° from its original position.
Once in place, the drone will face away from the transmitter. If you swim in its direction, the drone will move forward as well and film what you see, turning its back to the transmitter.

Come

This scenario moves iBubble close to the diver, then disarms it.
Once disarmed, take the drone by its handles to manually film the points of interest.
To reactivate the drone, simply change the scenario.
Be careful not to hold the drone when it is reactivated.

Circle

Once started, this scenario allows the drone to circle around the transmitter while keeping it in the center of the frame.
When you activate this scenario, it is advised to stay still in order to get the best effect.

Stay

This scenario forces iBubble to stay in place while the diver moves.
When this scenario is activated, the drone remains in place. This allows you to take a stable, panoramic view.
Be careful not to get too far from iBubble, as it may lose the transmitter’s signal and rise to the surface.

Turn Back

This scenario works in the same way as the Lead Scenario. However, the drone does not perform the initial movement. It simply turns in the opposite direction of the transmitter.

KNOWING YOUR IBUBBLE

Modes description

To access the modes menu, press the Mode button for two seconds.
The menu is then displayed. To navigate, use the Scen. and Mode buttons. To select an option, press the Select button.

Lights

This mode allows you to turn the drone headlights on and off to illuminate the frontal area of the drone.

Far / Close

The Far / Close mode allows you to choose iBubble's underwater tracking distance.

Once activated, the drone will change its tracking distance:

- Close mode is indicated by a single flashing of the headlights.
- The Far mode is indicated by a triple flashing of the headlights.

The tracking distance is adjustable in the iBubble app.

Obstacle

By default, iBubble's obstacle avoidance is activated.

- To deactivate it, select Obstacle mode and confirm.
- To reactivate it, select the Obstacle mode again. When activated, the drone will detect obstacles and try to avoid them.

To avoid the collision between iBubble and the surrounding elements, it is recommended to leave the Obstacle avoidance on at all times.
However, if you dive into a complex and narrow environment, it is best to turn off obstacle avoidance to enhance the drone’s behaviour.

Picture / Video

These modes allow you to take a video or photo remotely, but **only if a GoPro is paired** with iBubble and turned on.

- Picture mode allows you to take a picture. The GoPro has to be not recording.
- Video mode allows you to start and stop the video recording of the GoPro.

KNOWING YOUR IBUBBLE

To pair and position your camera to your drone, please go to the "Installing your camera" section.

Remote shortcuts

The iBubble remote includes shortcuts that allow you to quickly access its various functions.

Here is the list :

- Press twice the Mode button: **Far / Close mode.**
- Press twice the Select button: **Follow Scenario.**
- Press twice the Scen button: **GoPro Video Mode.**
- Simultaneous pressing the Mode & Scenario buttons: **Disarm Scenario**.
- Simultaneous pressing all three buttons: **Switch off the remote.**

Status LEDs

The status LEDs in front of the drone allow the user to know the status of the drone.

Update status

During the update process of the drone, the LEDs indicate the status of the drone in addition to the application.

The steps are as follows:

- Update start: **green LED flashing.**
- Update installation: **white LED flashing, then LEDs off.**
- Remote needed in BOOTLOADER mode: **All LEDs (Green, Blue and White) flash at the same time.**
- Remote update: **steady green LED, flashing white LED**
- End of update: **Green fixed LED, fixed white LED**

Startup

When it starts, the drone flashes its LEDs.

Initialisation: **Green LED flashing.**

Drone ready to dive: **fixed green LED .**

Initialization error on startup: **Green LED flashing quickly.**

KNOWING YOUR IBUBBLE

Information LEDs

The iBubble LEDs will flash during the dive in the following cases:

- Obstacle detected: **green LED flashing.** Once the obstacle is no longer detected, the LED becomes fixed again.
- Low drone battery: **blue LED flashing.**
- Critical drone battery: **blue LED flashing quickly.**
- Leak detected or battery incorrectly connected : **white LED flashing.**

Headlights meaning

Getting started

Upon starting, the drone tests its headlights. Each headlight flashes quickly and then turns off.

Diving

In operation, the headlights are mainly used to illuminate the environment.
But they are also used to warn users in the following cases:

- When the drone receives a command from the remote (e.g. Far / Close, Obstacle On / Off, ...), it flashes its headlights to show that the command has been taken into account.
    - Far / Close: 1 flash for the Close parameter, 3 flashes for the Far parameter.
    - Floor / Ceiling detection: If the drone gets stuck for more than 5 seconds, it will flash its headlights quickly to indicate its blocking then automatically switch to the Stay scenario.

KNOWING YOUR IBUBBLE

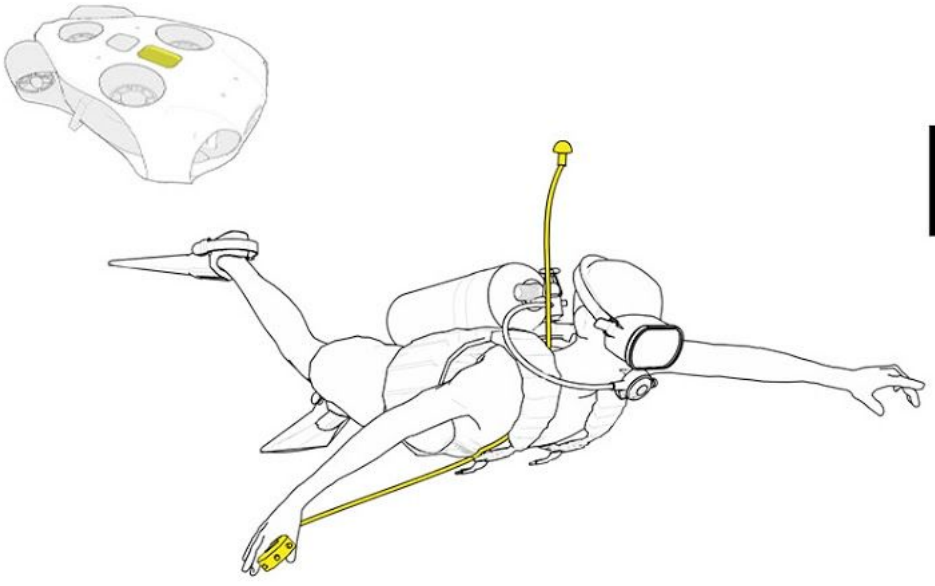
Installing your camera

To install your camera on your drone, you only need to use the fixing screw provided to this purpose located at the front of the drone.

Cameras with camera action mount such as GoPro, Paralenz or Sony are compatible with iBubble.

Currently, the iBubble app allows you to associate your camera (GoPro only) with your drone and to control it with the iBubble remote. To associate it, launch the iBubble app and connect to the drone, making sure to keep the remote on it.

Select the camera association option from the app menu and follow the instructions for pairing.



DIVING WITH IBUBBLE

DIVING WITH IBUBBLE

WARNING: Your iBubble is under your responsibility. Be careful not to damage the seabed when using the drone. In some cases, obstacle avoidance can not prevent your iBubble from colliding with obstacles in its path. If your iBubble can not keep up with you, it will automatically come back to the surface after 90 seconds.

Diving preparation

When possible, connect the battery before diving. This will allow you to check the seal in a secure environment.

A slight "beep" confirms that the insertion of the battery has been done correctly. Make sure the gasket is clean and greased. If necessary, you can add grease.

When you screw the battery bell back in, make sure there is no gap left between the drone and the bell.

To unscrew the bell from the battery, hold the drone in position and apply a strong grip on the bell using the opening tool provided. Unscrew the bell counterclockwise. If the bell seems to be stuck, try pulling gently but firmly in all directions; this will allow the seal to find its groove.

To avoid losing time, it is recommended to connect the battery before attending the briefing.

Feel free to "introduce" iBubble to other divers at the first briefing. Warn them that you dive with your drone, and give them basic safety instructions (do not put your hands in the propellers, do not block his ascension etc.).

Turn on your camera and check the strength of the stand with a screwdriver.

Check that there is no object obstructing the propellers, turn on the remote and put it on the drone.

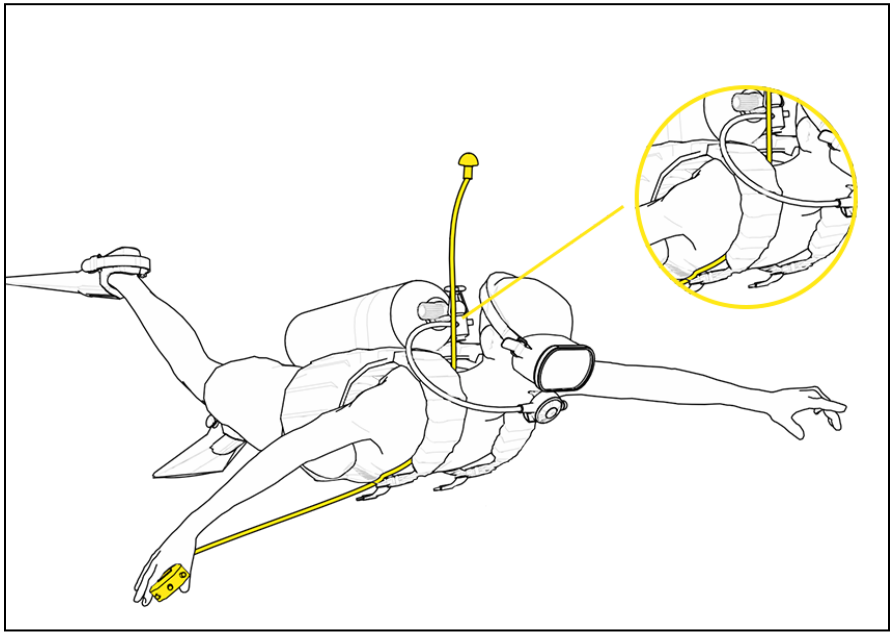
Prepare your dive during the synchronization between the drone and the remote while being attentive to the "Beeps" emitted by the drone.

Ask the boat crew to pass you the drone once you are in the water.

DIVING WITH IBUBBLE

When you are ready to dive, but before putting fixing your dive tank, check that the drone is fully synchronized (fixed green LED, remote displaying Disarm).

Setting up the transmitter



The remote is equipped with a cable at the end of which is an acoustic transmitter. This transmitter is used by iBubble to position itself. It must remain visible to the drone at all times. Avoid positioning it where it would be hidden.

Also, make sure that it can not be torn off or hit an obstacle while underwater.

Make sure the remote remains within reach for the duration of your dive.

Once the drone and the remote have been synchronized, place the remote on your equipment using the magnetic strap and make sure you can always reach it.

It is recommended to raise the cable of the remote along the BC, passing it through the scratch of the inflator.

Position the transmitter so that it floats above your head at a distance of about 16 inches (40cm).

DIVING WITH IBUBBLE

Diving

It's time to put your drone in the water!

- Put it gently in the water near the diver - do not throw it in the water.
- Before activating the drone, make sure the transmitter is immersed and at least 20 inches (50 cm) below the surface.
- Leave a minimum of 16 feet (5m) of space around the drone to prevent a possible backwards movement when starting the first scenario.
- Do not hold the drone when activating it in order to avoid any risk of injury for the diver.
- When the drone goes from disarmed to armed status, sound returns confirm the arming of the engines. If no sound is emitted and the drone doesn’t move, the drone is still disarmed.
- In case of swell: it is recommended to bring the drone disarmed to a depth of at least 16 feet (5m) and to arm it at this there. This allows you to reduce the risk of malfunction due to the swell.

Diving down

When all the divers are ready, start the descent. For a better overview and safety, keep your companions and your iBubble in the same field of vision.
Always adhere to diving standards when diving with iBubble. Divers safety comes first!

End of dive

When your dive is nearing the end, switch to the "Come" scenario. It is then **mandatory** to switch to the "Disarm" scenario to take iBubble out of the water manually.

Once you're on the surface, iBubble will remain 19 inches (50 cm) below the surface when the Follow scenario is activated. Keep in mind that it is not necessarily visible by the boat coming towards you. The captain must already pay attention to the divers and iBubble being smaller than them, you have to be extra mindful of the drone’s position.

DIVING WITH IBUBBLE

This is why we advise you to take the drone with your hands once you are on the surface and keep it clearly visible after activating the "Disarm" scenario.
Once the surroundings are safe and you are ready to get back on the boat, check that iBubble is correctly disarmed and pass it to the crew on the boat, then get back on board.

Be sure to remove any excess water from iBubble. Turn off the remote first and then iBubble *. Do not forget to turn off your camera!

Once on land, rinse the drone with clear water and let it air dry. Once dried, remove the battery from the drone.

** To turn off iBubble, the remote must be turned off first. You will not be able to disable iBubble if the remote is turned on.*

<u>Always</u> activate the "Disarm" scenario BEFORE taking the drone out of the water. There is a risk that the engines will restart unexpectedly if it is not disarmed.

Precautions and tips

- **Never turn on iBubble underwater.** This will distort its pressure setting and the drone will try to go down too fast.

- If you turn off your iBubble underwater, **do not try to re-sync it during the dive.**
  Finish your dive by tying it to your gear or go to the surface and synchronize it there.

- iBubble's obstacle avoidance only activates at a depth of 6.5 ft (2 m).

    - Do not forget this information when you test iBubble in a shallow pool. It will not be able to avoid obstacles such as people or walls.

- The position of iBubble is relative to the transmitter, not to the remote itself. If it usually floats 3 feet (1m) above your head, adjust the iBubble setting accordingly.

- In order to adjust the depth of iBubble when it follows you, use the Scenario menu in the iBubble app.

DIVING WITH IBUBBLE

- iBubble **always** emits a sound when changing from Disarm to another scenario.
    - If you do not hear the beep when you switch modes, try going back to the Disarm scenario then switch to the Follow mode. If the problem persists, re-synchronize the drone or contact our support.

- If the drone or remote are turned off or removed unexpectedly while they are synchronizing, do not dive with iBubble. Restart the process correctly.

- If you are underwater when the synchronization is lost, follow every safety procedures before attempting to retrieve the drone. Pull the emergency shutdown plug located under the drone to turn it off. Tie it then to your equipment and finish your dive.

- The "Disarm" scenario must be activated before taking the drone out of the water.

- The Disarm Scenario must also be activated in case of an emergency or distress.

EXPLORER MODE

EXPLORER MODE

Presentation

To use the Explorer mode on the iBubble app, the Explorer Pack is required (iBubble accessory, sold separately).

The Explorer Pack consists in a cable reel with a built-in WIFI beacon that allows you to control iBubble directly from your smartphone or tablet.
Follow the instructions below to use the Explorer Pack in its entirety and to avoid errors when using it.

Before you start

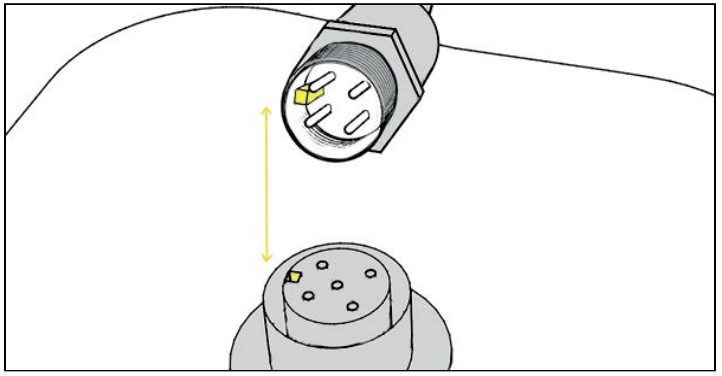
Charge the Explorer Pack and the battery of your iBubble.

To charge the Explorer pack, plug it into a USB charger with its µUSB cable. When charged, the battery indication LED will be solid green.

Connecting the drone

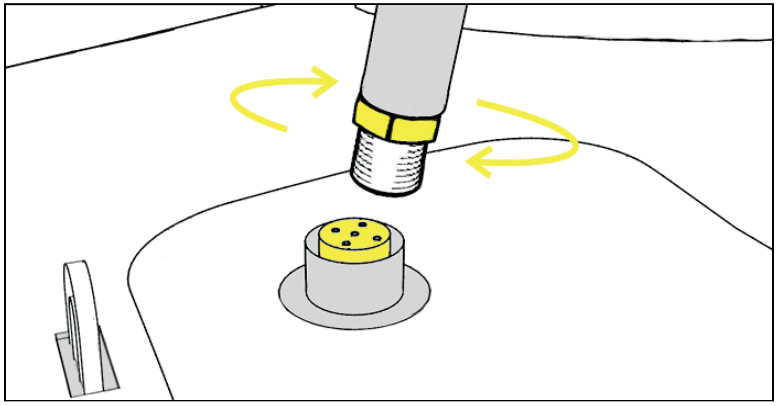
- To connect the Explorer Pack's cable, remove the connector protectors on the cable and drone then **screw them together** to prevent damage to the drone.

- To properly connect the cable to the drone, be sure to align the cable guide with the jack on the drone.

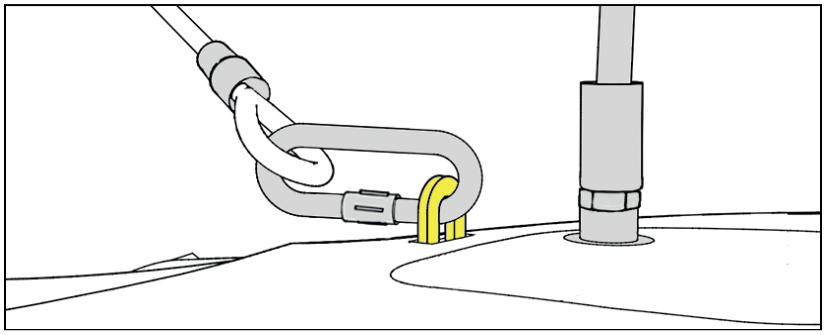


EXPLORER MODE

- To screw the cable to the drone, do not touch the end of the cable directly: Use the screwing ring for this purpose.

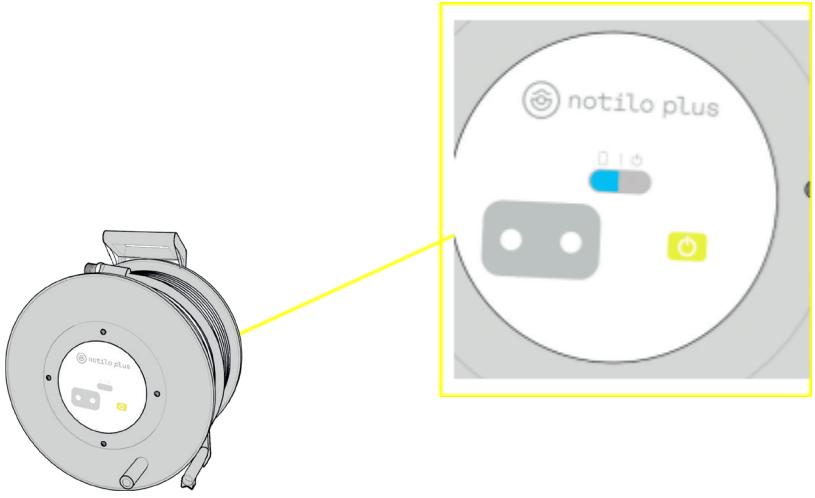


- Once the cable is well screwed, secure it to the drone by attaching the loop to the ring on the top of the drone with the carabiner.



Starting the beacon

- Press the On / Off button.
- Wait for the status LED to flash blue.

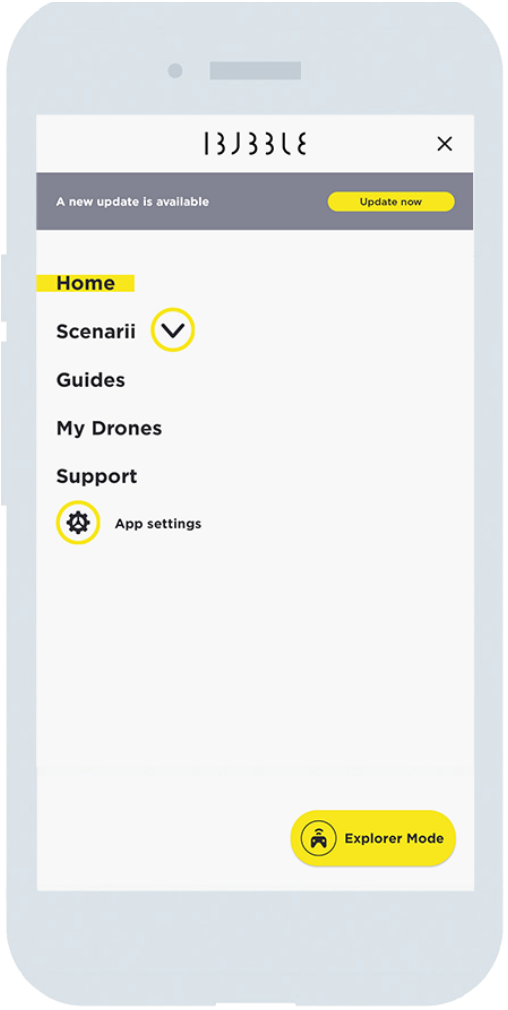


EXPLORER MODE

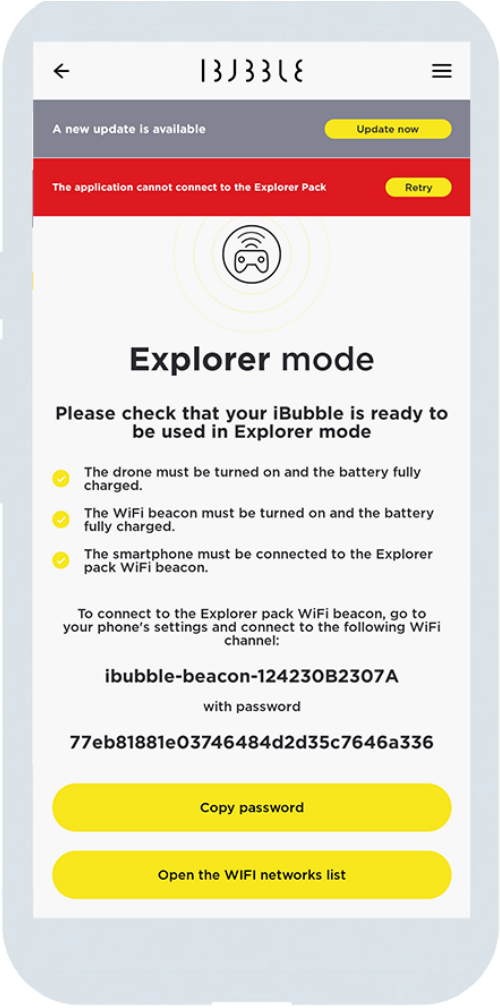
Launching the Explorer mode

First connection to the beacon

- Connect to the drone via the Wifi network it emits.
- Open the app menu and click the Explorer Mode button at the bottom right corner of the screen:
- The next screen tells you how to connect to the beacon.



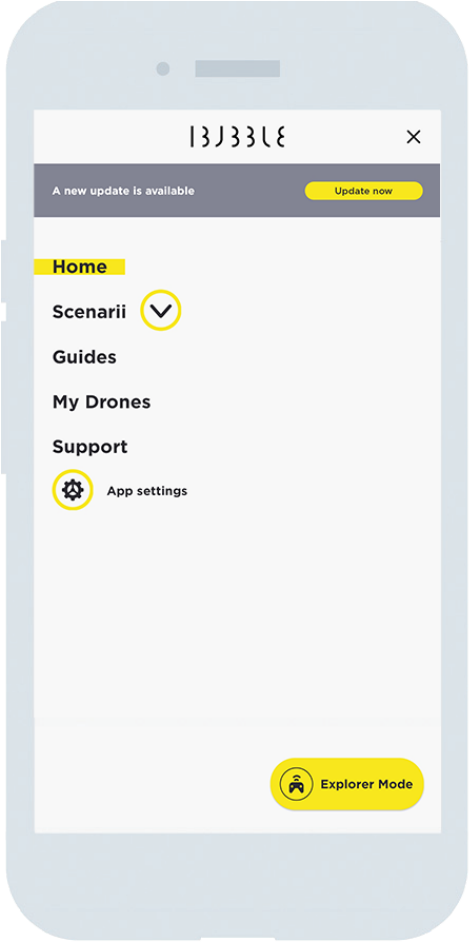
- To copy the password associated with the beacon's Wifi, click on "Copy password". Connect to the beacon's WiFi network and paste the password.
- Once your phone is connected to the beacon, get back to the application. After a short moment, the application goes into Explorer mode.
- Explorer mode then starts.



EXPLORER MODE

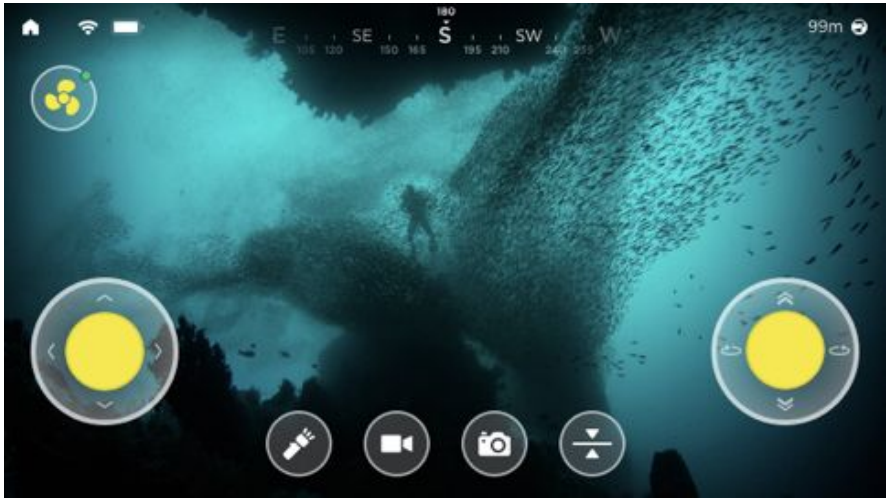
Subsequent connection to the beacon

- Connect your phone to the beacon via Wifi.
- Open the app menu and click the Explorer Mode button at the bottom right corner of the screen:
- Explorer mode starts.



Controls

When the Explorer mode is launched, several buttons appear on your screen, as well as the video feedback of the drone.



- The home button (top left) allows you to exit Explorer mode.
- The depth icon (top right) shows you the current depth of the drone.
- The helix icon allows you to **arm and disarm** the drone. Be sure to **always disarm** the drone before touching it.
- The left joystick controls forward, backward and side movements.

- The right joystick controls the depth and rotational movements.
- The light icon controls the iBubble’s headlights.
- The video icon starts and stops the video recording of the GoPro. This icon is displayed when a GoPro is associated with the drone.
- The camera icon allows the GoPro to take a picture if it is not recording. This button only appears when a GoPro is paired with the drone.
- The stabilization icon allows you to activate and deactivate the depth control mode for total stabilization underwater.

While in Explorer mode, if the connection is lost while iBubble is still armed, an integrated security switch is triggered: iBubble goes to the 'Stay' scenario for 10 seconds, then switches to the 'Surface' scenario if the connection is not restored. The lights of the drone flash until the connection is regained.

End of use

To stop the drone, bring it to the surface near you. Before recovering the drone, **make sure it is disarmed.**

Disarm it by pressing the 'Disarm' button (button shaped as a propeller) then confirm disarming the drone. Once disarmed, recover the drone by taking it by its handles.

When you're in a dry place, turn off the Explorer Pack, the drone, and then the app.

Disconnect the cable and be sure to **replace the connector protectors** in their respective positions to prevent damage to the drone or the Explorer pack.