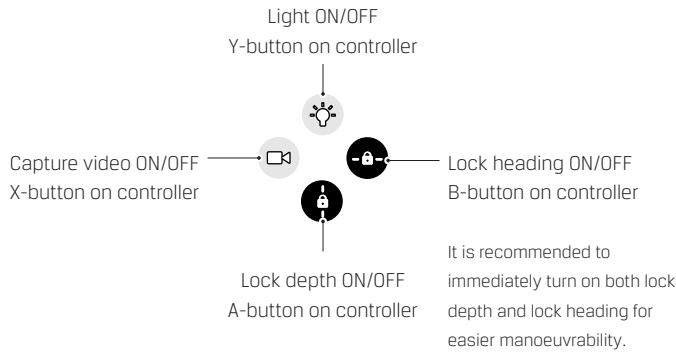
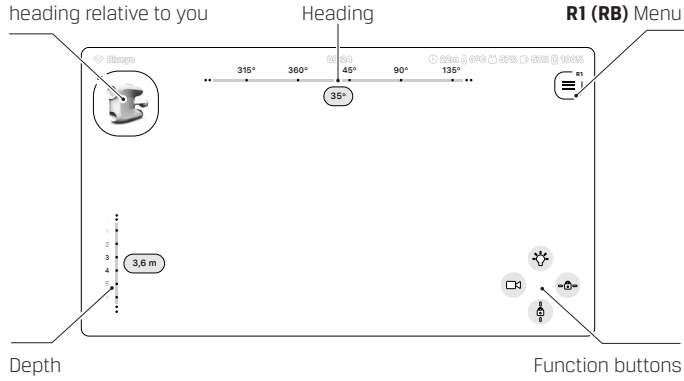


# App

## Diving with remote controller

**L1 (LB)** 3D-view of drone heading relative to you



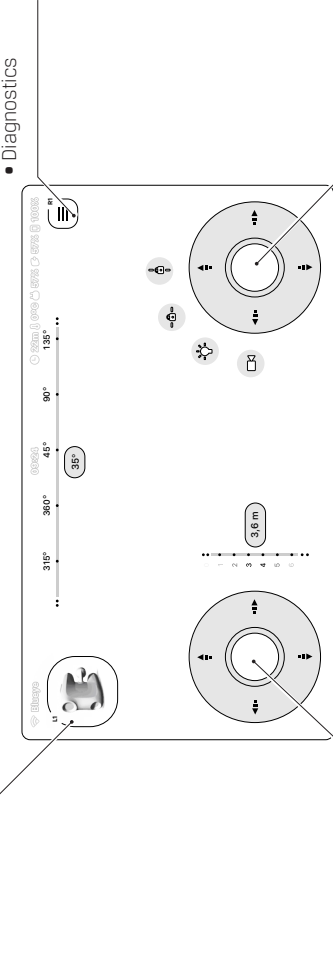
## Diving without remote controller

Pressing **L1** brings up information about:

- Dive time
- Remaining battery
- Remaining storage

Pressing **R1 (RB)** brings up menu for viewing:

- Control instructions
- Light settings
- Camera settings
- Calibration
- Diagnostics



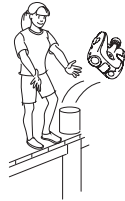
## Diving



Lower the drone slowly into the water by hand. A boat hook can also be used from heights.



It is not recommended to lower the drone by the tether as this will shorten the life-time of the tether.



DO NOT throw the drone into the water.

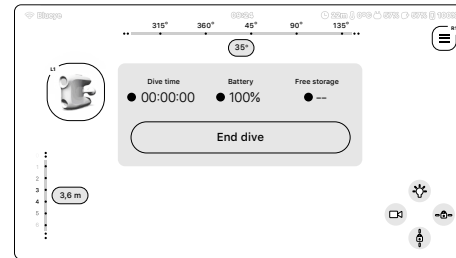
## Ending a dive



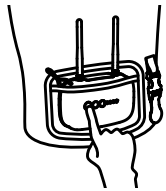
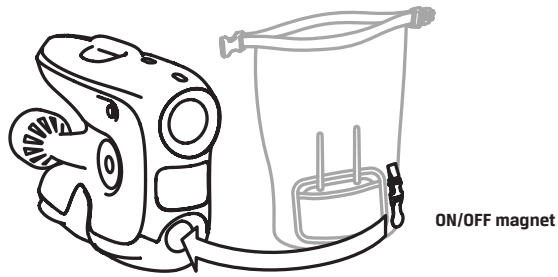
Before picking the drone up from the water, make sure that both lock depth and lock heading are turned off. If not, the thrusters will try to compensate for movements also when the drone is out of the water.



Pick up the drone from the water.



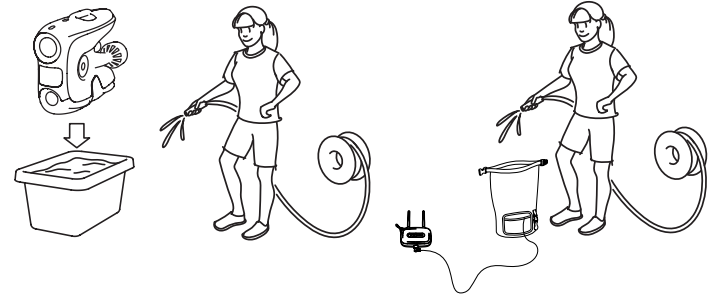
To transfer videos and images to a mobile device directly after the dive, press the L1 on the controller and tap "End dive". The connection screen will appear in the app. Tap "Download video files" to choose which files to download to the mobile device.



When finished with the dive, make sure that both the drone and the surface unit are turned off. The drone is turned off by putting the "OFF" side of the magnet attached to the tether bag against the LED light window. When the drone is turned off all indicator lights in the LED light window will be off.

Also check and remove any foreign objects in the thrusters, for example sea weed.

## After each dive in salt water



To avoid unnecessary wear on the drone and tether, after each dive in salt water, the drone and tether must be rinsed with fresh water.

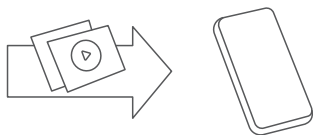
The drone can either be submerged in fresh water or rinsed with a garden hose. Running the thrusters submerged in fresh water after each dive will keep them in shape longer.

The tether can be rinsed inside the tether bag, just remember to remove the Surface Unit away from the bag.

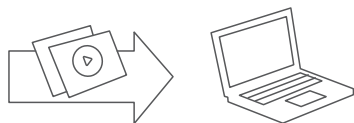
Instructions for changing propellers can be found at [support.blueyeroobotics.com](http://support.blueyeroobotics.com)

## Transferring videos and images

Transferring video and images from the drone can either be done in the app or on a PC.



To transfer videos and images to a mobile device, turn on the drone and surface unit, connect the mobile device to the surface unit Wi-Fi, start the app, and choose "Transfer video files".



To transfer videos and images to a PC go to this address: <https://www.blueye.no/Software/FileTransfer>

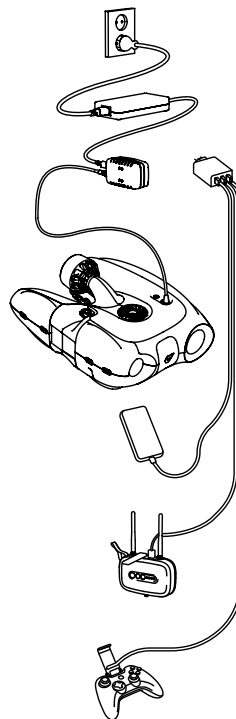
Download and install the Blueye File Transfer Desktop App on the computer.

Turn on the drone and the surface unit and connect the computer to the surface unit Wi-Fi.

Open the Blueye File Transfer Desktop App and choose which files to download to the computer.

Turn off the drone when files have been transferred.

## Charging the batteries



Before charging the drone make sure that the drone is turned off. Connect the power supply to the charger and connect the power supply to the wall socket. Make sure that the charging selector switch on the bottom is set to drone charging. See page 7.

Place the drone on a robust and stable surface laying on the left side to remove any risk of the drone falling over.

Unscrew the charging connector cap on the drone and connect the charger to the charging port on the drone with the included charging cable.

Open the connector lid on the Surface Unit and connect an output of the external USB charger to the charging port (micro USB) on the Surface Unit. Make sure the USB output rating is minimum 2.1A. Connect the other USB outputs on the external USB charger to charge a mobile device and the controller.

To disconnect the power supply from the mains, pull the plug from the wall socket outlet. Make sure that the wall socket outlet is easily accessible.

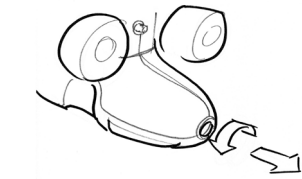


**Do not turn the drone on while charging, it may damage the drone and/or charger. When finished charging remember to put the charging connector cap back on.**

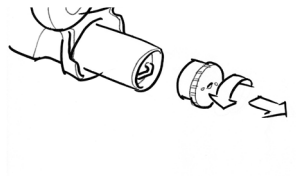
## Charging the battery outside of drone



**Warning:** We recommend charging the battery inside the drone as much as possible to limit wear of the o-rings on the aluminium lid.

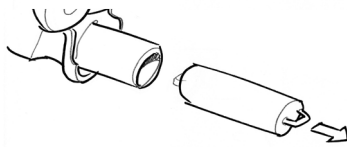


1. Open lid.

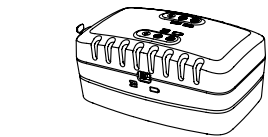


2. Unscrew the aluminium lid with the pin spanner to open it.

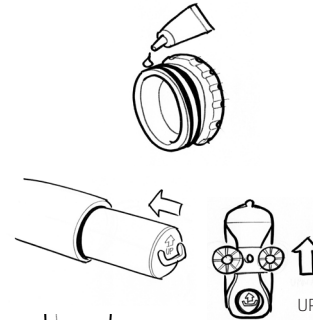
3. Pull out the battery.



4. Make sure that the charging selector switch on the bottom is set to battery charging.

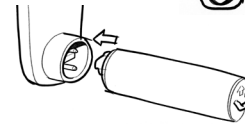


5. Remove the blue cover on charger. Connect the power supply to a wall socket and connect the battery directly to the back of the charger.



6. Inspect o-ring for damages. Put a small amount of silicone grease on the o-ring before closing the lid.

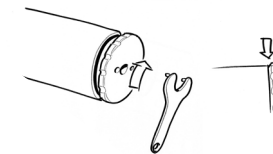
7. Insert the battery. Make sure that the arrow on the battery is pointing upwards.



8. Make sure that the battery is pushed all the way in. There are two guiding pins at the bottom of the battery canister that will align the battery with the connector. Fold down the handle.



9. Close the aluminium lid with the pin spanner. Make sure to not tighten the lid too much, but there shouldn't either be a large gap between the aluminium lid and the aluminium tube. Be careful to not damage the threads of the lid when closing.



10. Close the battery lid by sliding it along the battery tube. The battery lid cannot be pushed all the way in. Tightening the thumb screw will move the lid into place.

## Maintenance/Service



**Always remove battery from drone before replacing parts. Do not open or detach any parts other than described in the maintenance procedure. Any maintenance work not included in the list is forbidden**

### List of servicable parts:

- Propeller
- Tether\*
- SD-Card\*
- Thrusters\*

\*See separate manuals.

## Propeller replacement

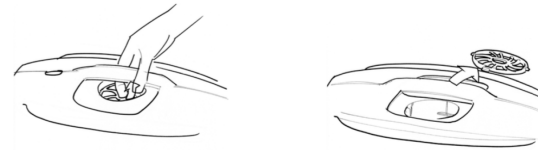
If one of the propellers is broken, they can easily be replaced with a spare propeller. Cleaning the propeller should also be done regularly if diving in salt water.



**Note that the propeller direction of the replacement propeller is the same as the one being replaced.** The propellers are marked with CW (clockwise) or CCW (counter-clockwise).

### Vertical Propeller

Remove the grid on top and unscrew the propeller to replace it with a new one.

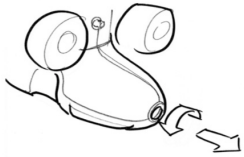


1. Remove the grid on the top.

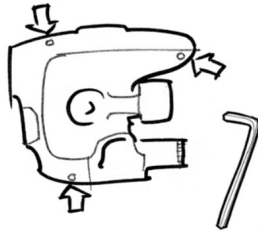


2. Unscrew the propeller with a hex key.

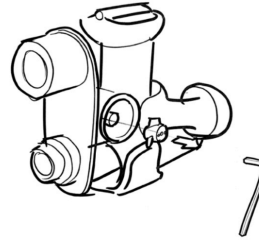
## Lateral Propeller



Remove the battery cover.



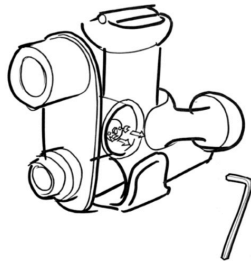
Unscrew the 3 screws that hold the side covers with a hex key.



Pull the propeller out to replace it with a new one.

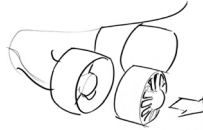


Open the side cover.

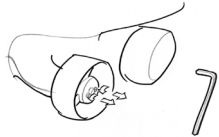


Unscrew the 2 screws holding the propeller.

## Forward/Backwards Propellers



1. Unscrew the 4 screws holding the thruster grids in place and remove the grid.



2. Unscrew the 2 screws holding the propeller and pull the propeller out.
3. Replace the propeller with a new one.

## Specifications

### Drone specifications

#### Drone

Ingress protection  
Dimensions  
Weight in air  
Construction

*IPX8*

*485 x 257 x 354 mm (LxWxH)*

*8.6 kg (with salt water ballast)*

*ABS enclosures, Aluminium pressure enclosures, Polycarbonate (PC) windows*

Buoyancy material  
Maximum rated depth  
Forward speed at normal use  
Thrusters  
Run time at normal use  
Operating temperature

*HCP 30 Polymer Foam*

*150 m*

*1.5 m/s (3 knots)*

*4 x 350 W*

*Approx. 2 hours*

*-5 to +35 °C*

#### Camera

Sensor  
Max image size  
Shutter speed  
Picture max resolution  
Picture type  
Video resolution

*CMOS, 1/3 inch*

*1920 x 1080 pixels*

*1/30 s - 1/8000 s*

*2M (1920 x 1080)*

*JPEG*

*FHD: 1920 x 1080 25/30 Fps, HD: 1280 x 720 25/30 Fps*

Video type  
Video storage bit-rate  
SD card

*MP4*

*2 to 16 MBit/s*

*64 GB*

#### LED lights

Luminous flux  
Colour temperature  
Colour rendering index (CRI)  
Adjustable dimming

*3300 Lumen*

*5000 K*

*70*

*Yes*



### Smart Battery Pack

Nominal Voltage	14.8 V
Nominal Capacity	6500 mAh
Nominal Energy	96.2 Wh
Operating temperature	-5 to +35 °C
Charging temperature	5 to 30 °C

### Sensors

IMU	3 axis gyro & accelerometer & magnetometer
Depth sensor	Resolution: 0.2 mbar
Depth sensor operating range	0 to 30 bar
Temperature sensor	+/-1 °C

### Tether

Length	75 m
Breaking strength	100 kg
Number of cables	1 twisted pair (copper)
Size	26 AWG

### Controller

Compatibility	iOS or Android
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### Surface Unit specifications

#### Surface Unit

Ingress protection	IP64
Dimensions	38 x 149 x 158 mm (LxWxH)
Operating frequency	2.4 GHz / 5.8 GHz
Max Wi-Fi distance	30 m
Battery	19.48 Wh
Operating temperature	-5 to +35 °C
Transmitter power	125 mW
Operating voltage	5 - 8.4 V
Output, USB A	5 V, 400 mA
Input, Micro USB	5 V, 2.1 A
Antenna	Dual-band 3dBi RP-SMA Male

### Charger specifications

#### Charger

Dimensions	56 x 107 x 64 mm (LxWxH)
Operating temperature	5 to 30 °C
Operating rel. humidity	20% to 80%
Input	19.5 V, 4 A
Output	16.8 V, 2.5 A

### Power supply

Input	100 - 240 V, 3A, 50 - 60 Hz
Output	19.5 V, 11.8 A
Operating temperature	0 to 40 °C
Operating rel. humidity	20% to 80%
Manufacturer	FSP GROUP
Model	FSP230-AJAN3

# Symbol overview

## Drone



Standby



Charging. Shows where to connect the charging cable.

## Charger



Charging symbol



Battery charging symbol



Drone symbol



Battery fully charged symbol



Battery symbol

## Surface unit



Standby



Battery checking.



Drone. Lights up when the surface unit is turned on and it is connected to the drone.



Charging. Shows where to connect the charging cable.

## Markings



Waste Electrical and Electronic Equipment (WEEE as in directive 2012/19/EU) should not be mixed with general household waste.



CE (Conformité Européenne) indicates compliance with requirements regarding the safety, environmental impact, health, and consumer protection for products sold within the European Economic Area. The full text of the EU declaration of conformity is available at the following internet address: [www.blueyero-botics.com](http://www.blueyero-botics.com).



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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio

communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- *Reorient or relocate the receiving antenna.*
- *Increase the separation between the equipment and receiver.*
- *Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- *Consult the dealer or an experienced radio/TV technician for help.*

## ISED

This Device complies with Industry Canada License-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage ; (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

It is strictly prohibited to replace the antenna by any antenna not approved by Blueye.

## Recycling information



This product should not be disposed of in the general household waste. Instead, in order to prevent possible harm to the environment or human health from uncontrolled waste disposal, please dispose of this product separately in accordance with your local laws and regulations. Please check with your Local Authority or retailer for recycling advice.

## Manufacturer markings

Marking plate for the drone can be found on the outside of the tube containing the battery. See section "Charging the battery outside of drone" for instructions on how to gain access to the battery tube.

# Battery warnings

The following warnings apply to both the Blueye Surface Unit and the Blueye Smart Battery.

**Important: Blueye Surface Unit battery is only accessible to Blueye service personnel and cannot be accessed by any means by the user or operator. Only the Blueye Smart Battery can be accessed by the user or operator.**

- **CAUTION: RISK OF EXPLOSION IF (Drone) BATTERY IS REPLACED WITH AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.**
- Do not dispose batteries in household waste. Obey local waste disposal regulations. Do not subject the battery to mechanical shock.
- Observe the plus (+) and minus (-) marks on the battery and equipment and ensure correct use.
- Always purchase the battery and charger from Blueye Robotics.
- Keep the battery clean and dry.
- Wipe the battery terminals with a clean dry cloth if they become dirty.
- The battery needs to be charged before use. Always use the correct charger and refer to the Start Guide for proper charging instructions.
- Do not leave the battery in prolonged charge when not in use.
- After extended periods of storage, it may be necessary to charge and discharge the battery several times to obtain maximum performance.
- Retain the original product literature for future reference.
- Use the battery only for the application for which it was intended.
- When possible, remove the battery from the equipment when not in use.
- Only charge the drone battery with the supplied charger. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another. A short-circuit of the

battery terminals can lead to burns, fire and serious injury.

- Under abusive condition, liquid may be ejected from the battery; avoid contact.
- If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from battery may cause irritation or burns.
- Do not use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
- Do not expose a battery pack or appliance to fire or excessive temperature. Exposure to fire or temperature above 130 °C (266 °F) may cause explosion.
- Follow all charging instructions and do not charge the battery pack outside of the temperature range specified in this instruction. Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.
- Do not open, modify or attempt to repair the battery pack.
- Do not charge the battery pack in a damp or wet environment.
- Do not cover the charger or the battery pack with cloth or anything else. The charger and battery pack heats up during charge and lack of ventilation may result in fire or serious injury.
- Do not use the battery pack for appliances that it is not intended for.
- Keep battery packs and chargers away from children if not thoroughly supervised.
- Failure to comply with these warnings can lead to explosion, fire, leakage and/or serious injury.

*FOR MORE TIPS,  
TUTORIALS AND VIDEOS VISIT  
**[WWW.BLUEYEROBOTICS.COM](http://WWW.BLUEYEROBOTICS.COM)***

**blueye<sup>®</sup>**