

# BW Space Pro Max Underwater Drone

User Manual V1.0

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# Disclaimer and Safety Instructions

## Disclaimer

1. In order to protect the legitimate rights and interests of users, please read carefully the instruction book, disclaimers and safety instructions provided with this product before using it. Please be sure to operate this product according to instruction book and safety instructions, and Youcan Robot (Shanghai) Co., Ltd. owns the right to revise the above items.
2. Once you start using this product, you shall be deemed to have read, understood, recognized and accepted all terms and contents of the instruction book, disclaimers and safety instructions. The user shall only utilize product solely for legitimate purposes and be responsible for their own actions and all consequences.
3. In using this product, you're supposed to strictly comply with including but not limited to requirements we have mentioned in safety instructions. Users shall shoulder all responsibilities and losses caused by the violation of safety instructions, including all personal injuries, accidents, property losses, legal disputes and all other issues that may result in interest conflicts, and Youcan Robot (Shanghai) Co., Ltd shall not bear any responsibility.
4. Youcan Robot (Shanghai) Co., Ltd. shall not be liable for any breach of law directly or indirectly committed by our users.

## Safety Instructions

1. Please check the product before use, including but not limited to the durability of the parts, cracks and abrasion of the device body and propeller, battery life, etc. When any abnormal situations are found, please stop using and replace the accessories immediately.
2. Please do not use this product in harsh environments, such as strong wind, heavy rain, thunder, fog, snow, tsunami, low temperature, etc.
3. The product shall not be used in the cases of alcohol drinking, fatigue, seasickness, medicine taken, physical discomfort, etc.
4. In using this product, please keep away from the environment of high electromagnetic interference, such as WiFi hot spots and high-power transmission equipment.

5. In using this product, please ensure your own safety and wear the life jacket (self-provided), and keep away from dangerous areas and dangerous marine life, such as the tiger shark and the great white shark.

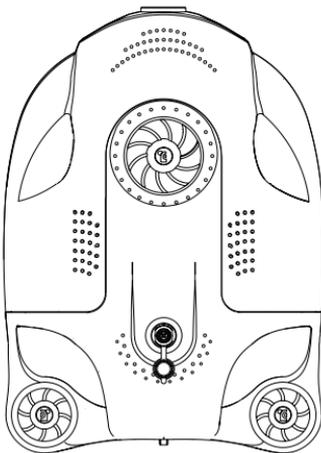
6. When the product gives the low battery notification, you should stop using the device in time. Please do not panic in case of incidents, such as outages, broken ropes, etc. BW Space Pro Max will automatically come to the surface by buoyancy.

7. Minors shall be accompanied by parents to use products or accessories to avoid dangers.

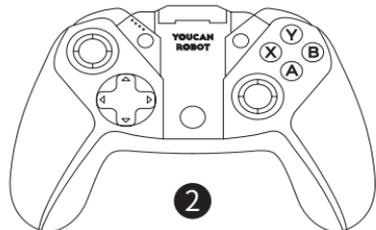
8. Please do not use this product to take pictures of others or private areas without permission, and do not use this product for reconnaissance, espionage or military activities without authorization.

 Please visit [www.youcanrobot.com](http://www.youcanrobot.com) for the latest disclaimer and safety instructions.

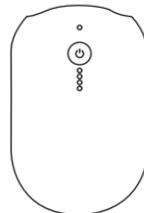
## Product List



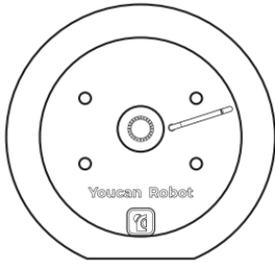
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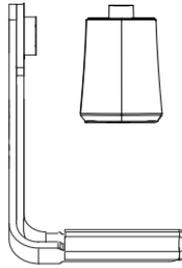
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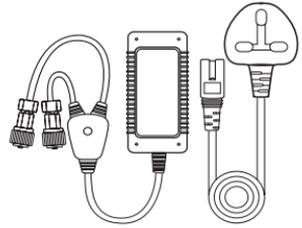
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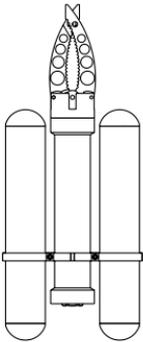
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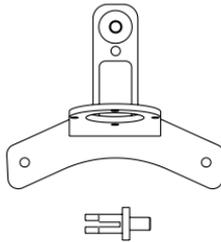
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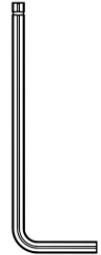
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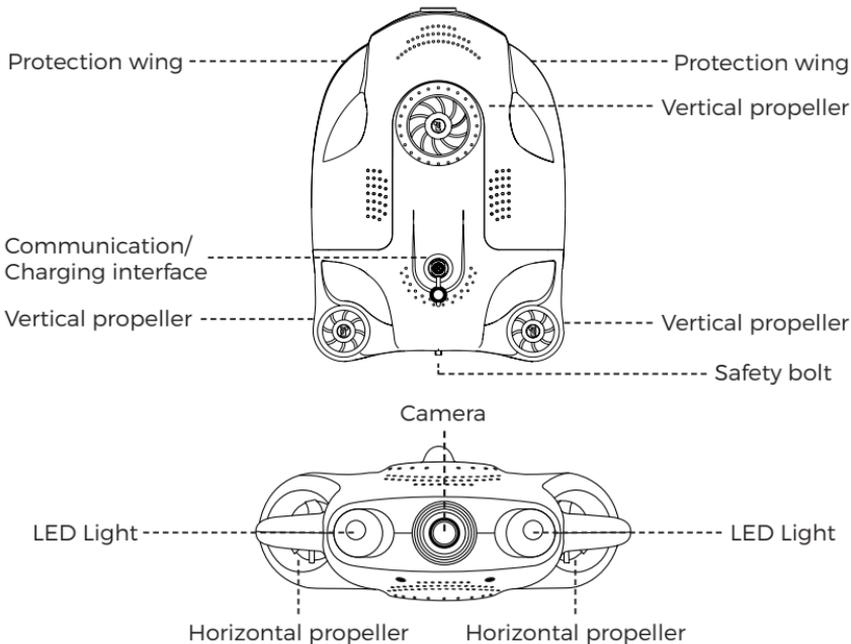


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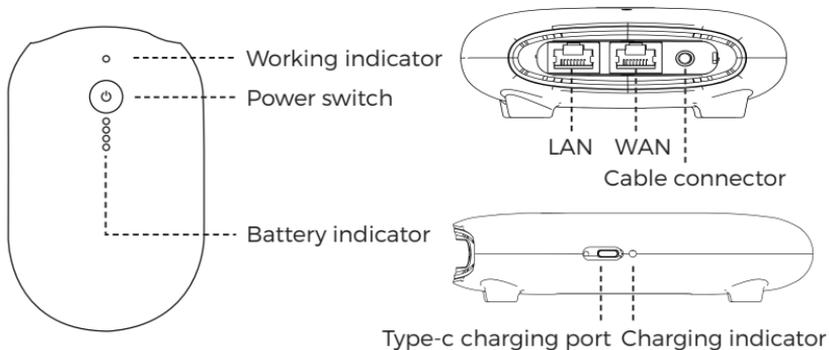
- 1 BW Space Pro Max Underwater Drone
- 2 Remote Controller
- 3 WiFi Repeater
- 4 Tether Winder
- 5 Stand and Handle
- 6 Charger
- 7 Mechanical Arm
- 8 Adapters and Mounting Bases
- 9 Adapter Cable
- 10 Sealing Lubricant and Sealing Ring
- 11 Wrench and other Tool Kits (used when installing the tether)

# Product Overview

## BW Space Pro Max



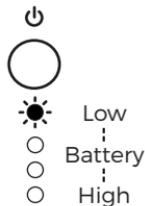
## WiFi Repeater



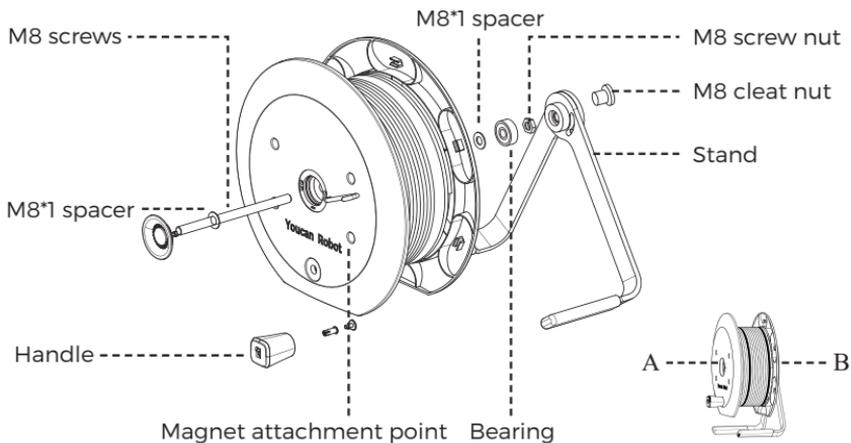
## Cautions

1. WiFi repeater can NOT operate in the water,so please do not put it into water.
2. WAN interface: Network interface, providing network signal for underwater live broadcast.  
LAN interface: can be connected to computers, notebooks and other equipment.
3. Description of the status of the power indicator of the WiFi Repeater:

when the power is lower than 25%,  
the red light is on



## Tether Winder



### [How to install the Stand]

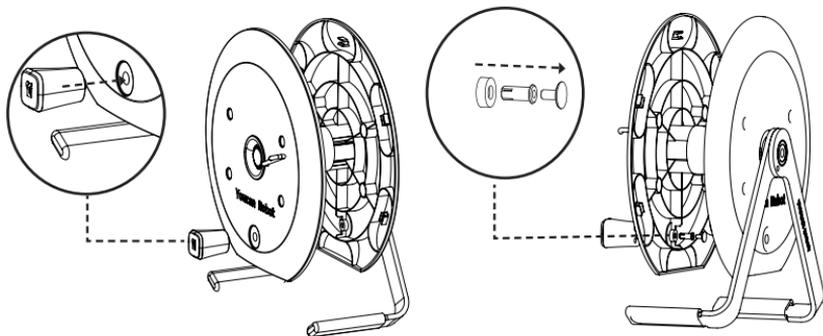
1. M8\*1 gasket into the M8 screw from the A side and insert it into the central hole of the tether winder;
2. Load the M8\*1 gasket and bearing from the B side, and then use the M8 screw nut to lock;
3. Install the bracket on the B side, and use a wrench to lock the M8 cleat nut.



Tutorial Video

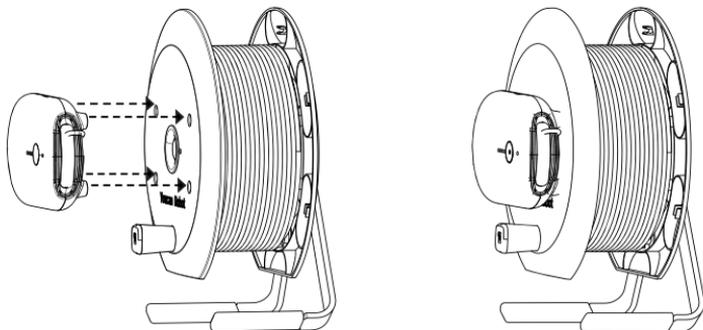
### [How to install and remove the handle]

- Insert the handle into the installation hole, insert and press the plastic buckle on the inside of the winder; when removing, lift the buckle from the inside of the winder, and then remove the handle.



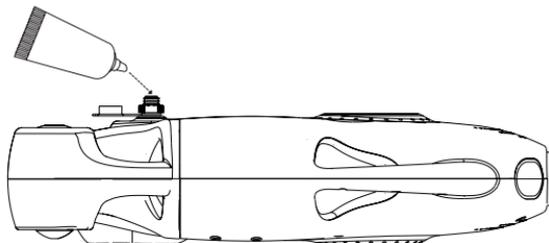
### [WiFi Repeater fixing method]

- Align the four bases of the WiFi Repeater with the magnet attraction points of the tether winder and fix them on the surface of the winder.



## Instructions of Sealing Lubricant and Sealing Ring

- Apply sealing lubricant evenly to the sealing ring of communication/charging interface and thread before using.



### 【The functions of sealing lubricant】

1. Seal the drone tightly and enhance the waterproof performance;
2. Act as a lubricant, making it easier to access the plug and reduce the loss of the sealing ring;

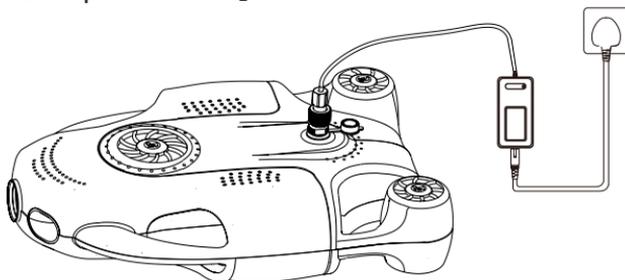
### ⓘ Cautions

The sealing ring is the spare part of the drone connector. When the original sealing ring is damaged, please replace it in time to maintain waterproof.

## Preparation

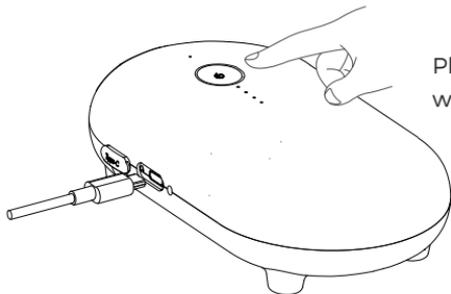
### Charging

#### 【Charging of BW Space Pro Max】



Insert the connector of the charger with 4-pin jacks into the BW Space Pro Max charging port, the power indicator turns red, indicating that charging is in progress; when the power indicator turns green, it indicates that the charging is complete.

### 【Charging of WiFi Repeater】



Please Turn off the Power when charging

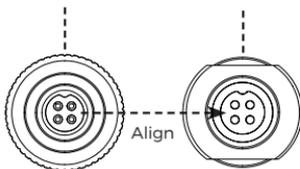
Connect the Type-c cable to the charging port of the WiFi Repeater, start charging, and the red indicator light will turn on; the indicator light will turn off, indicating that the charging is fully charged.

### Cautions

1. When connecting the device, please align the socket first, and then rotate the nut until it is tightened; when disassembling the connector, unscrew the nut firstly ,then pull out the socket.
2. Prohibited to touch the connector front end with wet or sweaty hands; water should be dried if there is water on the connector.
3. Charge the BW Space Pro Max and WiFi Repeater every three months.
4. Make sure to use the special charger provided by Youcan Robot.

Tether connector

Drone connector



1



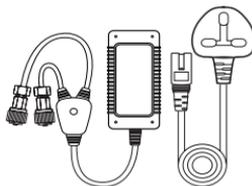
2

Please Fully Charge for the First Time Use

Please Charge Once Every Three Months



3



4

## Download Oceaneye APP

- Visit Youcan Robot website to download the Oceaneye APP:  
<https://www.youcanrobot.com/servicesupport>

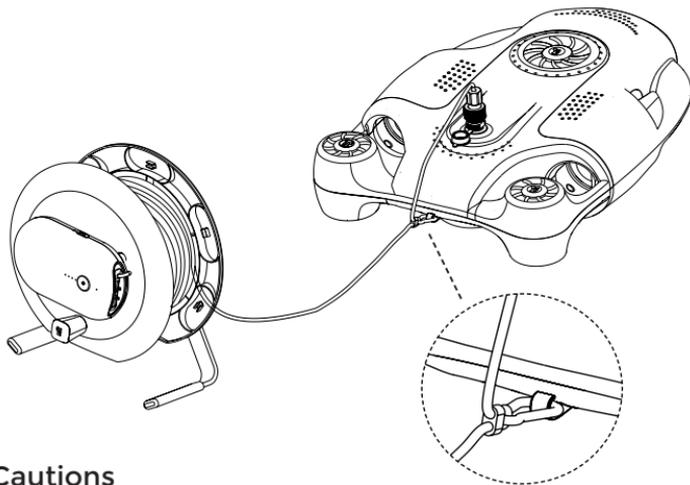
### Cautions

- The iOS system supports version 10.3 or above, and the Android system supports Android 6.0 or above;
- Since the software is constantly updated and iterated, please go to the official website or download center to update the software version in time.

# Connecting

## Connect the equipment

1. Insert the 4-pin jack connector of the tether into the BW Space Pro Max communication port, and the round hole connector into the WiFi Repeater, and activate the WiFi Repeater power button. The indicator light of the WiFi Repeater turns green, and the connection is complete.



## Cautions

Buckle the anti-lost ring on the tether to the safety bolt at the tail of the drone to increase the tether's anti-fixation strength.

## Connect to WiFi

Access the mobile phone WiFi connection interface, select Youcan-\*\*\*\*-5G(Recommended) or Youcan-\*\*\*\*, enter the password: 12345678.



## Open Oceaneye App

Open the Oceaneye APP, select the BW Space Pro Max model, and click "Start". After the connection is successful, slide to the right to unlock, and the boot is successful. At this point, you can use the APP to control the underwater movement and shooting of the drone.

### Tips

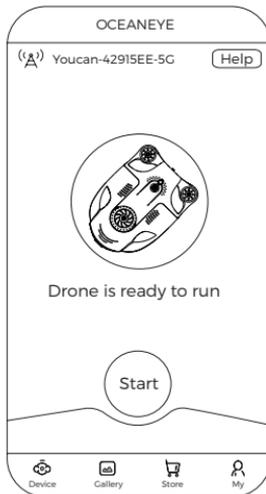
1. When the tether is inserted into BW Space Pro Max, the drone will make a "beep beep" sound, which is a normal phenomenon, indicating that the power is normal;

2. If the APP connection fails, please confirm whether the access permission of the Oceaneye APP is enabled on the mobile phone:

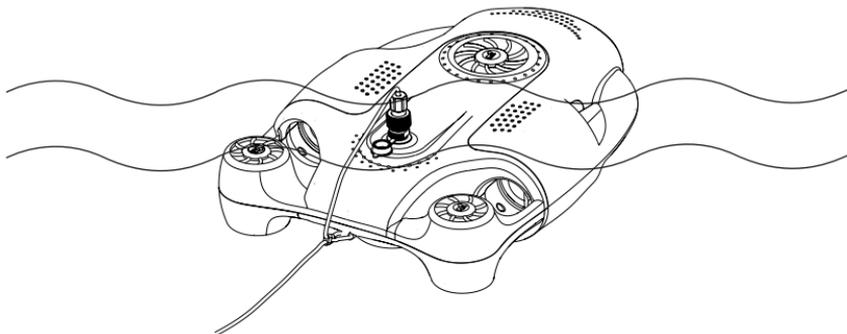
- Android phone, open "Settings", find "Apps and Services" - "Apps" - "APP info", and turn on the permissions of the Oceaneye APP (This path is slightly different on different models of mobile phones, please find the correct path according to your mobile phone, and enable access rights for the Oceaneye APP);
- iOS phone, open "Settings", find Oceaneye, click "Wireless Data", and enable "Wi-Fi and Cellular Networks" or "Local Network".

3. In case of start failure, check the following things:

- If the device is appropriately powered;
- If the jack of the tether is connected to BW Space Pro Max or WiFi Repeater jack appropriately;
- Access the mobile phone WiFi connection interface and check to see if the device is connected. If the connection fails, reconnect the WiFi Repeater.



## Put the BW Space Pro Max into water



### Important tips

#### **【Boot Upgrade】**

When connected to the device, please perform steps to prevent the drone from being unusable due to incorrect operation, if Oceaneye APP interface prompts that the boot need to be upgraded. (Note: Please do not disconnect the tether of drone with the WiFi repeater in upgrading; After upgrading, please disconnect the tether in order to restart the device).

#### **【Control system upgrade】**

To continuously optimize the operative performance of BW Space Pro Max, we will upgrade the control system of BW Space Pro Max from time to time. When you open Oceaneye APP, if the screen prompts upgrading, this indicates that the device or software is being upgraded, usually for a duration of about 1 minute. Do not quit from the upgrading. In case of failed upgrading, please exit the Oceaneye App, unplug the tether and reconnect and restart the upgrading.

#### **【Camera upgrade】**

Youcan Robot will upgrade the BW Space Pro Max camera system from time to time. If a prompt pops up and requires a camera to upgrade when you enter Oceaneye APP, BW Space Pro Max will start downloading the latest camera system and upgrade it. This process may take about 5 minutes. Please do not disconnect the device and keep Oceaneye under operation in the upgrade.

## **i** Cautions

If the APP or Drone crashed or stuck, try the following steps or methods:

- Exit the Youcan Dive APP completely and re-enter the APP to connect the drone.
- Disconnect the tether of WiFi Repeater and the drone, reconnect the tether and Oceaneye app.

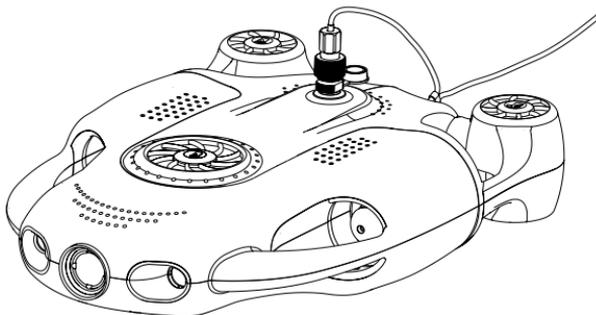
## Shut Down and Retrieval

### Shut down

Click the "⏻" button in the upper left corner of the Oceaneye APP, and BW Space Pro Max will stop working.

### Retrieval

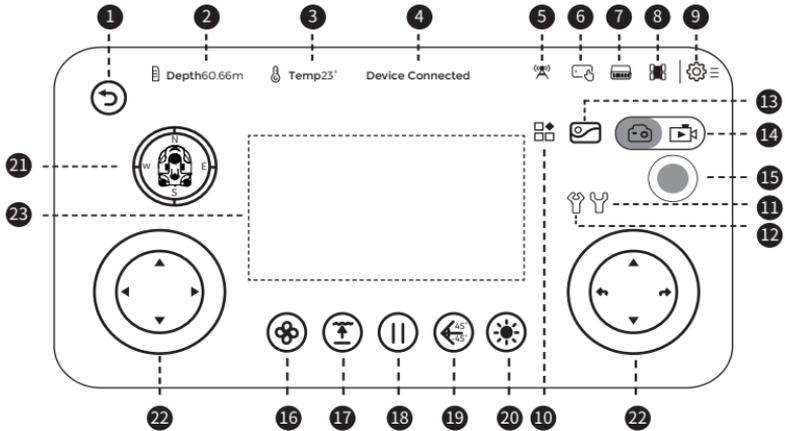
Drive the drone back to the shore or pull the tether back, disconnect the tether of the BW Space Pro Max and WiFi Repeater which means a complete shutdown.



## **i** Cautions

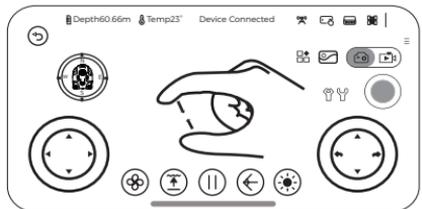
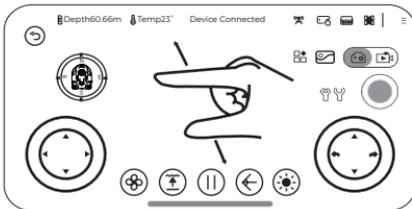
When not using the drone or WiFi Repeater, Please remember to disconnect the tether, otherwise the device will remain in standby mode and the battery will continue to be consumed.

# Introduction of Oceaneye APP



- ① Return: Return to the APP Home page.
- ② Depth: Shows the underwater depth of BW Space Pro Max.
- ③ Temperature: Display underwater real-time temperature.
- ④ Device status: Displays the device connection status.
- ⑤ WiFi Repeater information: Display the connection status information of the WiFi Repeater.
- ⑥ Operation mode: Display whether the current device is in control mode or viewing mode, release the operation authority, switch to viewing mode, and allow other devices to enter control mode.  
Note: The control mode only supports 1 person (1 mobile phone) control. In viewing mode, only underwater images can be viewed, the drone cannot be controlled.
- ⑦ WiFi Repeater battery life: Display the remaining battery capacity of WiFi Repeater.
- ⑧ BW Space Pro Max battery life: Display the remaining battery capacity of BW Space Pro Max.
- ⑨ Settings: Enter the settings interface, configure the control mode, camera, view battery information, etc.

- 10 More: Mechanical arm and live stream function.
- 11 Open: Long press the button, the Mechanical arm will open continuously; release the button, the mechanical arm will pause to open.
- 12 Close: Long press the button, the Mechanical closes continuously; release the button, the Mechanical arm closes temporarily.
- 13 Gallery: Click the button to browse and manage photos and videos.
- 14 Taking pictures and recording videos: By clicking the icon, the function of shooting and recording can be switched.
- 15 Start shooting: Click the button to take pictures or record videos.
- 16 Speed: Adjust the speed of the drone, divided into low, medium and high levels.
- 17 Floating: Click the button, the machine will float to the surface of the water.
- 18 Pause: Click the button, the propeller stops working (the camera can still take pictures and videos).
- 19 Pitch range: Adjust the attitude of the drone head to achieve  $-45^{\circ}$ ~ $45^{\circ}$  pitch shooting.
- 20 Light: Adjust the light intensity, 0-100 free adjustment.
- 21 Attitude: Display the attitude of the drone in front view, top view and side view.
- 22 Steel wheel; Divided into 3 Models, please refer to the control function diagram in the APP interface (Settings - Control Settings - Joystick Settings)
- 23 Zoom: (This feature is only available for the BW Space Pro Max Zoom)  
By placing and spreading two fingers on the screen will enlarge the image; by placing and closing two fingers on the screen will reduce the image.



## Cautions

1. The sensitivity in the control settings refers to the sensitivity of the left and right rotation of the machine, the higher the value, the more sensitive the steering.
2. Depth Calibration: The atmospheric pressure of the drone's current environment is used as the zero point for depth calibration. Please follow the steps shown in the APP to complete the depth calibration and machine calibration.
3. Due to product updates and upgrades, the user interface will be updated from time to time, please use the downloaded version software interface as the main one.

## Photos and Videos Exportation

### 【Into mobile phone】

Select the photos and videos to be downloaded in the "Gallery" interface, click to download, the photos selected will be saved in the mobile phone album. For editing or other purposes, you can export the photos and videos to your computer by connecting your phone and your computer.

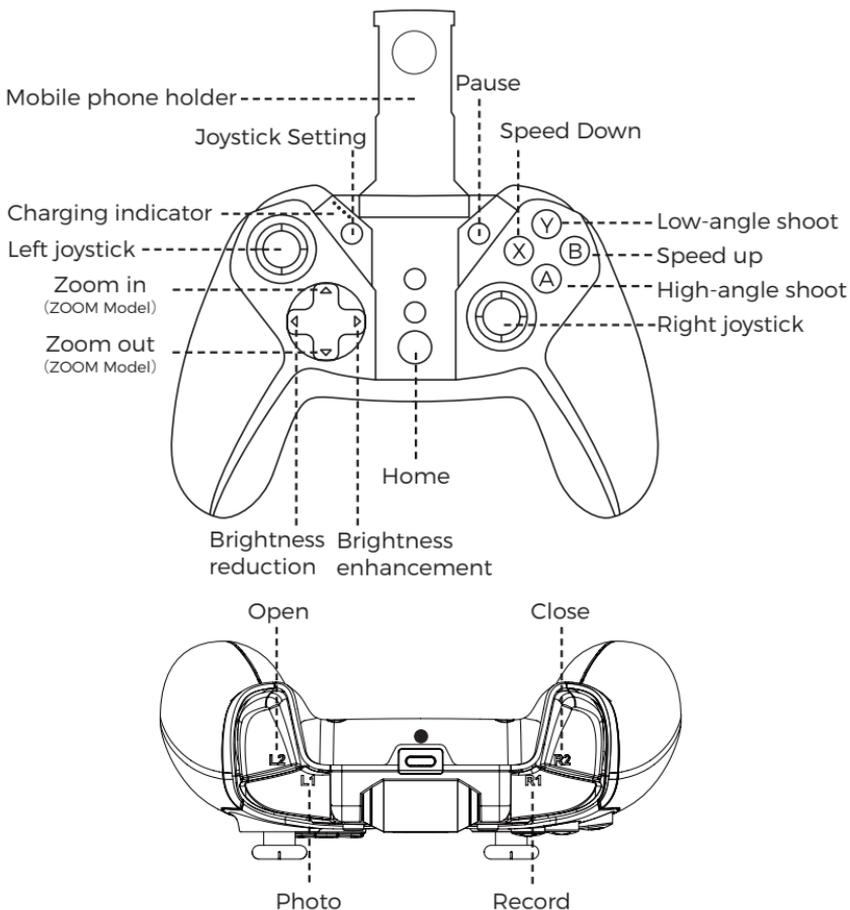
### 【Into computer】 (only support Windows system computer)

1. Visit <https://www.youcanrobot.com/servicesupport> to download the Youcan Assistant software.
2. Connect the BW Space Pro Max and WiFi Repeater with tether, search and connect the Youcan WiFi signal on the computer (Youcan-\*\*\*\*- 5G or Youcan-\*\*\*\*, password 12345678).
3. Open the Youcan Assistant and export the photos and videos to computer.

## Cautions

- If you want to delete the photos and videos in the drone's memory card, please find "General Settings" in the Oceaneye APP setting and format the SD card.
- Before deleting materials, please ensure that important materials have been downloaded and saved.

# Remote Controller



**[Joystick setting]** The default is Model 1; press once to switch to Model 2; press again to switch to Model 3.

**[Pause]** Click the button, the propeller stops working, the default is off.

**[Home]** Press power button for 3-5 seconds, and the remote controller turns on.

**[Low-angle shoot]** Set the pitch angle of  $0^{\circ}$ ~ $45^{\circ}$ , and the larger the number, the larger the angle. Each time you press the button, the pitch angle increases by  $5^{\circ}$ .

**【High-angle shoot】** Set the pitch angle of  $0^{\circ}$ ~ $45^{\circ}$ , the smaller the number, the larger the angle. Each time you press the button, the pitch angle increases by  $5^{\circ}$ .

**【Pair button for phone】** used to pair with the smart phone. (The mobile phone needs to turn on the Bluetooth function in advance).

**【Speed down】** Press the button once to shift into lower gear.

**【Speed up】** Press the button once to shift into higher gear.

**【Charging indicator】** Displays the light status when the remote is charging.

**【Left/Right Joystick】** Control the movement of the drone, consistent with the joystick setting in the mobile APP.

**【Brightness reduction】** Manually reduce the brightness of the light, and tap the button once to reduce the brightness.

**【Brightness enhancement】** Manually increase the brightness of the light, and click the button once to increase the brightness.

**【Zoom in】** Enlarge the image.

**【Zoom out】** Reduce the image.

**【Photo】** Tap the photo buttons to take photos.

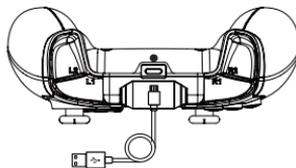
**【Record】** Click the button to start recording; click it again to stop recording.

**【Open】** Long press, the mechanical arm will open continuously; release the button, the mechanical arm will pause to open.

**【Close】** Long press, the mechanical arm closes continuously; release the button, mechanical arm closes temporarily.

## Charging for the Remote Controller

Connect the USB charging cable to the charging port of the remote control, the charging indicator lights up red and flashes slowly, to start charging; the charging indicator lights all light up red and stop flashing, indicating that the remote is fully charged.



Charging interface

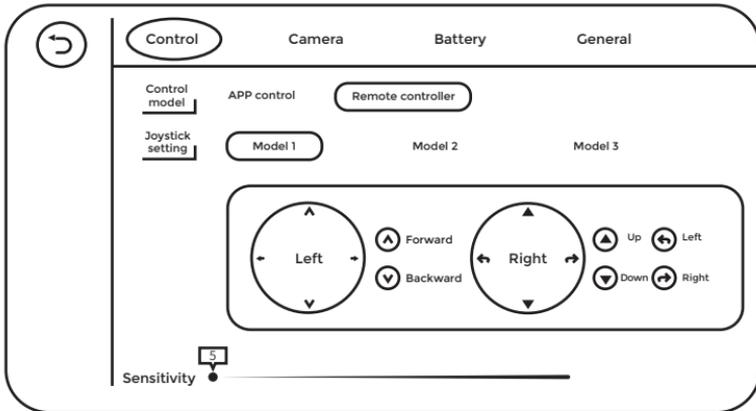
## Connect the Remote Controller and mobile phone

After the quick start step is completed, follow the process below:

1. Press the Home+A button at the same time for 3-5 seconds, the Home button will light up in blue, and the remote control will be turned on.



2. In the Oceaneye APP, select Settings- Control Mode-Remote Controller and the connection is successful after the screen pops up a "connection successful".



## Cautions

- Please make sure that the Bluetooth function of the mobile phone is turned on before connecting the remote control.
- If you can't connect to the remote, try the following:
  1. The remote control can only be paired with one mobile phone. If you change the mobile phone to control, please ignore this device in the Bluetooth settings of the mobile phone that was originally connected to this device;

2. Please turn on the location service permission in the phone settings:

**【For Android phones】**

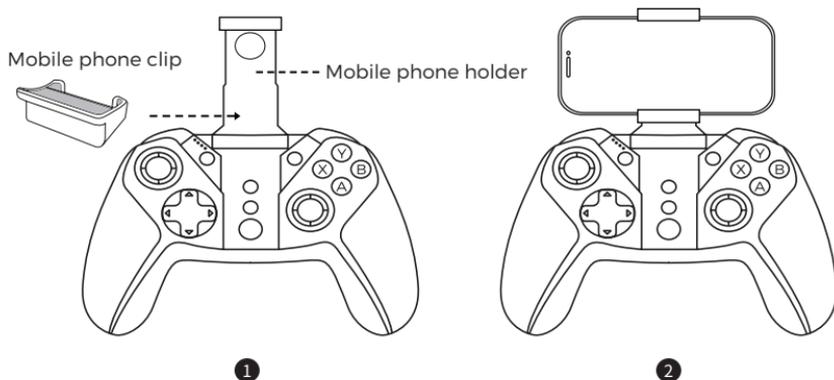
open "Settings", find "Applications and Services" - "Application Management" - "Oceanye" - "Permissions", open the permissions of Oceanye APP, and open the positioning service for Oceanye in "Positioning".

**【For iOS phones】**

open "Settings", enter "Privacy" settings, click "Location Services", find Oceanye APP, select "during APP use", and enable location services.

## How to Fix your Phone on the Mount

1. Pull out the phone holder, put the phone clip into the bottom of the holder.
2. Fix the mobile phone on the holder.

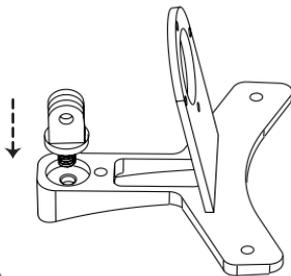


# Installation and Use of the Mechanical Arm

## Install the mechanical arm

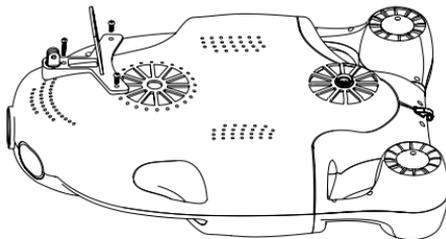
### 1. Install the mechanical arm

Rotate and fix the adapter on the base.



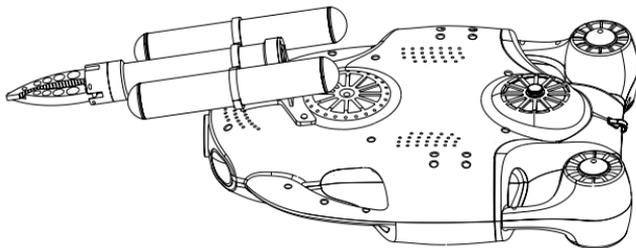
### 2. Install the fixed base

Use M4\*10 (2 pieces) and M4\*14 (1 piece) to fix the base on the bottom of BW Space Pro Max.



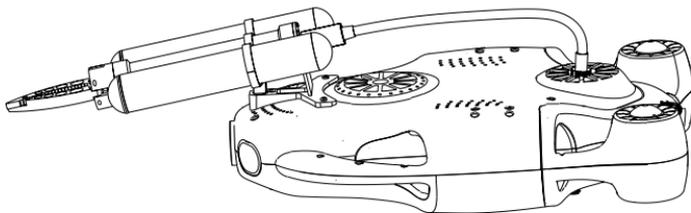
### 3. Install the manipulator module

Install the manipulator module on the fixed seat, align it first, then fix the rear end with M3\*6 screws (4 pieces), and then fix the front end with M4\*12 screws and M4 nuts.



#### 4. Install the cable

Align the cable with the power/communication ports at the bottom of the drone and the machine respectively, and tighten the nuts clockwise.



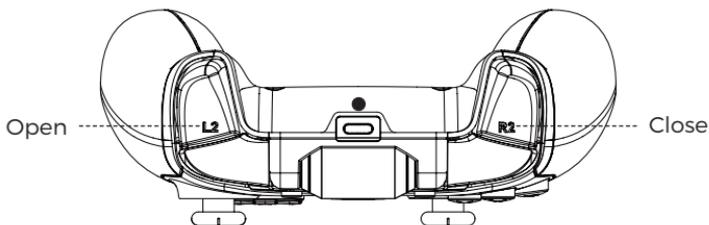
### How to Control the Mechanical Arm

#### 【 APP Control】

Click on the Oceaneye interface  , and the opening  and closing  buttons of the mechanical arm will pop up. Long press the button, the mechanical arm will open or close continuously; release the button, the mechanical arm will pause to open or close.

#### 【Remote Controller】

L2 controls the opening of the mechanical arm, and R2 controls the closing of the mechanical arm.



## Technical Specifications

### • Machine

Dimensions	16 x 12 x5 in
Weight	10.1lb
Waterproof Cover	Glass
Operating Temperature	-10~40°C
Max. Speed	3 kts
Max. Rated Depth	328 ft
Max. Flow Speed Resistance	3 kts
Rated Capacity	9000 mAh / 97.2 Wh
Working time (still water, low energy consumption mode)	7 hours
Charging Time	5 hours
Input	DC12.6V; 2.5A±0.2A

### • Thrusters

Thrusters	2 * Horizontal, 3 * Vertical
Max. Forward Thrust	6.0 kgf
Max. Reverse Thrust	5.0 kgf
Max. Power	156 W

### • BW Space Pro MAX: 4K UHD Fixed Camera

Sensor	1/2.7" CMOS
Effective Pixels	8 MP
Aperture	F2.0
Focus Length	4.0 mm
Shutter	1/50 (1/60) to 1/10000 seconds
Image Format	JPEG
Video Format	MP4
Max.Video resolution	4K(3840x2160)
Min. Object Dimension	0.6 m
Field Angle	D:108.73°, H:90.84°, V:48.8°
SD Cards Storage	64GB

### • BW Space Pro MAX Zoom: 4K UHD Zoom Camera

Sensor	1/1.8" CMOS
Effective Pixels	8 MP
Aperture	F1.4-F2.9
Focus Length	3.8mm-11.4mm
Image Format	JPEG
Video Format	MP4
Max.Video resolution	4K(3840x2160)
Min. Object Dimension	0.6 m
Field Angle	D:141°,H:120.1°,V:64.6°
SD Cards Storage	64GB

### • Lights

Lighting Intensity	0-1500lmx2
Color	90-CRI White
CCT Range	2600-3200 K

### • Tether

Optional Length	328 ft
Outer Diameter	0.17 in
Buoyancy	Neutral
Breaking Strength	330 kfg
Weight	3.5 lb

### • WiFi

Operating Frequency	2.4 GHz / 5.0 GHz
Operating Temperature	-20~70°C
Rated Capacity	2600mAh/28.08Wh
Transmission Standard	802.11b/g/n
Transmission Rate	Max. 300Mbps/2.4GHz Max. 433Mbps/5.0GHz

### • 3D Attitude System

YAW	Range -180° ~ 180°,Resolution:1°
Pitch Range	Range -90°~90°,Resolution:1°
Roll	Range -90°~90°,Resolution:1°
Compass	Resolution:1°

## • Mechanical Arm

Weight	1.63 lb
Length	350 mm
Maximum Diameter	44 mm
Supply Voltage	20-25.2 v
Operating Current	0.4 A (maximum)
Maximum Clamping Diameter	96 mm
Clamping Force	90-150 N
Open and Close Time	3 s
Shell Material Aluminum Alloy 6061	Aluminum Alloy 6061 (hard anodized surface)

## • Remote Controller

Support System	iOS / Android
Tensile Elongation	2.2-3.3 in
Connection Mode	Bluetooth 2.0 SPP protocol (Android) Bluetooth 4.0 BLE protocol (iOS)

## • Environmental Sensing System

Pressure/depth Sensor	Range 0-100 m, accuracy $\pm 0.5$ m
Temperature Sensor	Range - 20 ° - 85 ° C, accuracy $\pm 1$ ° C

## • YoucanDive APP

iOS Version	Requires iOS 10.3 or later
Android Version	Android version 6.0 or later

## Maintenance and Care



After use,  
rinse with fresh water to  
prevent salt crystallization



Please avoid using  
the drone in the waters  
with too much water plants



WiFi Repeater,  
DO NOT wash  
with water



WiFi Repeater  
DO NOT throw it  
into the water



Make sure the tether is securely connected to avoid short circuit



Wipe the water stain around the connector in time to keep it dry



Do not use heavy force or pulling hard on cables and connectors



Attach the cable securely onto the drone's Safety Bolt



Operating temperature is  $-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$



Minors should be accompanied by parents

## Contact Us

### Youcan Robotics(Shanghai) Co.,Ltd.

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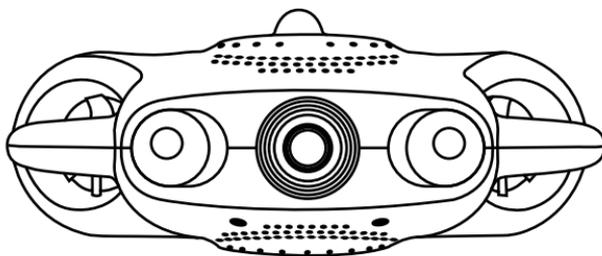
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Check the latest version of the User Manual at :

<https://www.youcanrobot.com/servicesupport>

For after-sales service policy, visit <https://www.youcanrobot.com>.

For further information, visit [www.youcanrobot.com](http://www.youcanrobot.com).



## **BW Space Pro Max**

**User Manual** V1.0