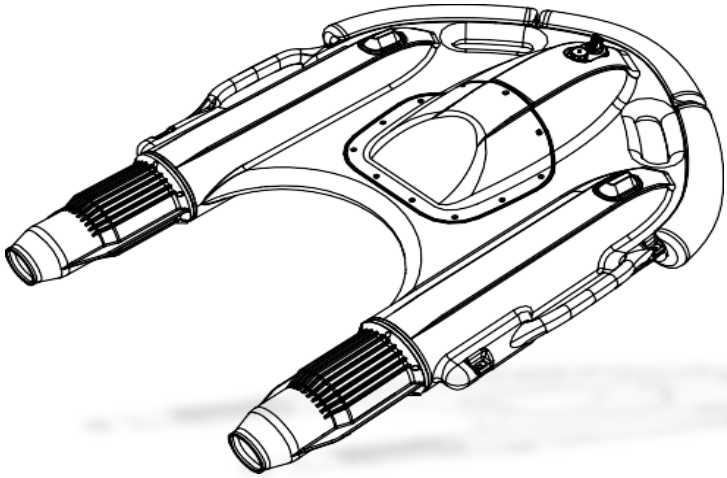
Water Rescue

INTERNATIONAL ARMOUR™

www.armour.gr



HS CODE 9506290000

Smart Remote Controlled Lifebuoy

CE
EUROPEAN CONFORMITY

A World Leader In Unmanned Surface Vehicles

The first remote-controlled Lifebuoy to be available in Europe.

A global unmanned surface vehicle (USV) provider for various customers and sectors, including rescue services, water environment sampling operations, hydrographic surveying, oceanographic surveys, nuclear radiation monitoring, and water surface cleaning.

Manufacturers provide assets to government and commercial entities across the globe, including custom-designed products for special operations, and currently hold 92 USV Patents for current and future developments.

Remote Controlled Lifebuoy

TOP 100 INNOVATORS
MTR 2018
ROHS CERTIFIED
IEC CERTIFIED
FCC CERTIFIED
CE CERTIFIED
QMS CERTIFIED
ISO 9001 CERTIFIED
INTERNATIONAL STANDARDS CERTIFIED

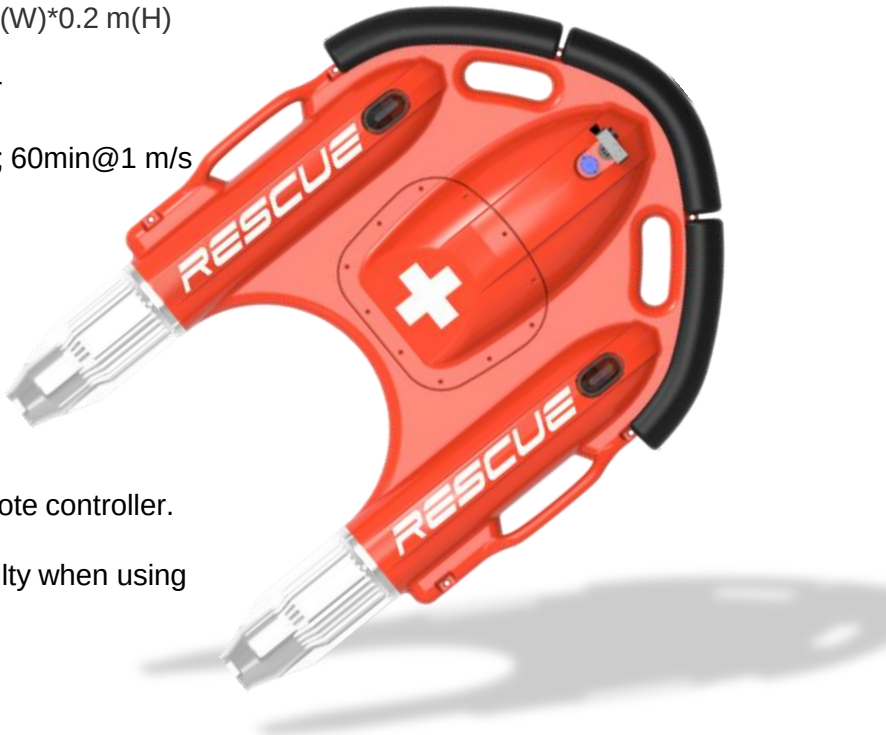
Lifebuoy is operated by Remote Control and can be used across a range of weather conditions in all types of waters, with its impressive 500 meter range is able to carry out a rescue operation without the need to commit a rescue swimmer to water.

It takes seconds to deploy and enables rescue teams or crews to maintain their visual of the casualty at all times.

Innovative technology to save lives

The Smart Lifebuoy is a life-saving device with propellers and a smart remote control system.

Hull Material: PE plastic
Dimension: 1.19 m(L) *0.85 m(W)*0.2 m(H)
Weight: 13kg
Propulsion: Water-jet Thruster
Max. Speed: 12km/h(3.3m/s)
Battery Life: 30 mins@3.3m/s; 60min@1 m/s
Floatability: 225 kg
Buoyancy: 32 kg
Control Range: 800 m
Thruster Power: 1800 w
IP Rating: IP67



Controlled by a simplified remote controller.

Users have reported no difficulty when using it for the first time.

Powerful propeller & strong buoyancy

The two propellers can drive the lifebuoy
to 10kn at highest.

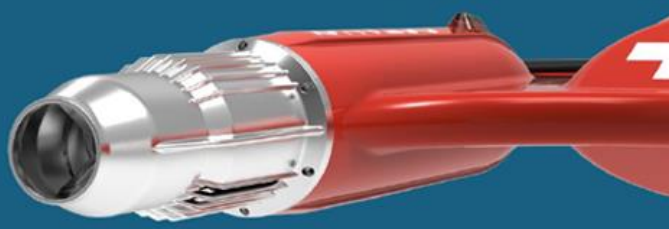
The lifebuoy provide buoyancy as large as 1.5 regular buoy to carry two person in a time

Public Safety & Water Rescue
Offshore Oil & Gas Platforms
Coast guards / Lifeguards
Lakes, Rivers, Reservoirs
Ships & Yachts
Sea Fire Rescue

www.armour.gr

Injury free & tangling free

The propeller is wrapped by a metal shell so as to protect the user from injury and avoid the propellers entangling with water plants.



MAINTAIN VANTAGE POINT

The Smart LifeBuoy bright color and flash lights make it eminently noticeable in water and reduce the risk of the rescuer losing sight of the victim.

LOW RESCUE COSTS

Reduces rescue costs because it is battery powered and remotely navigable requiring less in the way of fuel costs.

ADVERSE WEATHER OPERATION

The Smart LifeBuoy rescue robot is a weather neutral platform that operates equally well in adverse weather and swift water.

OPERATIONAL SAFETY

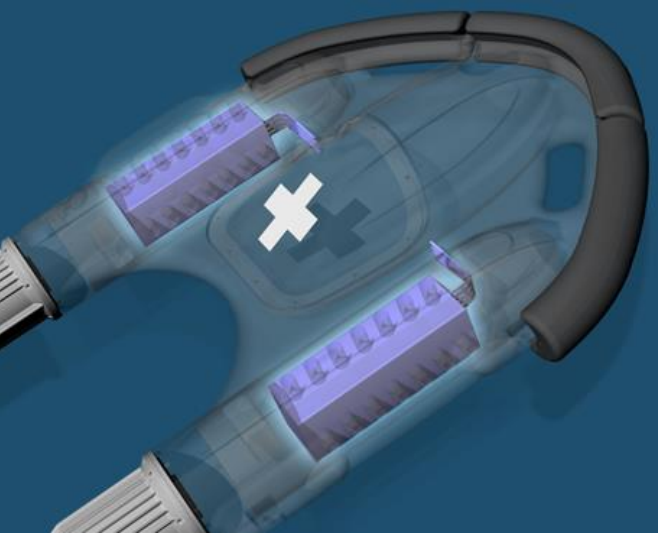
Remote control rescue reduces risks such as panicking victims and/or adverse water conditions leading to the rescuer becoming an additional victim.

DEPLOY FASTER

Smart LifeBuoy is quicker to deploy within minutes than other rescue vehicles like small vessels, Zodiacs, jet skis, etc.

COMPLEMENTARY ASSET

Every water rescue is different and those charged with rescue should have as many effective tools at their disposal to tailor the quickest, safest response to each scenario to give every potential victim the best chance to be rescued.



Reliable and safe

The battery is stored in an independent cabin so that the Dolphin 1 can keep functioning, even if the hull is damaged.

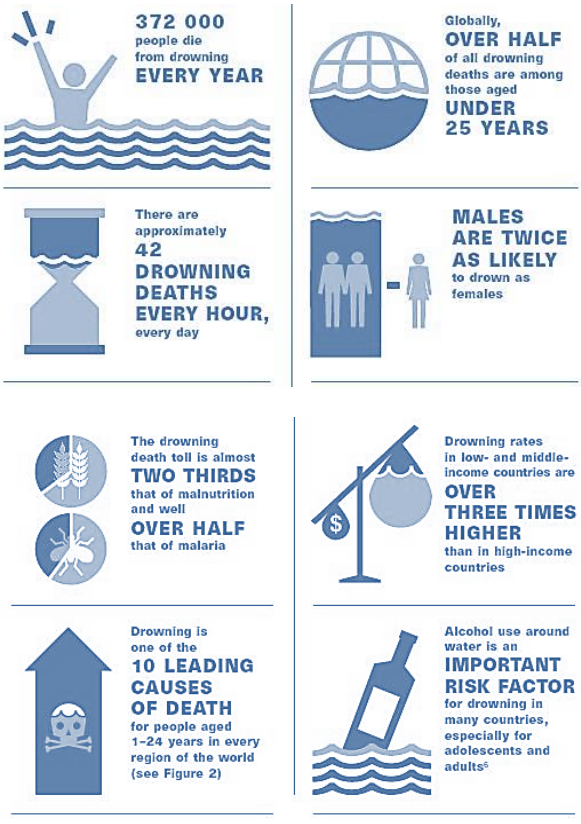
Solves the number one pain point of water rescues – panicking victims and the risk that they represent to another person attempting to rescue them in the water – by offering a remotely navigable, buoyant platform that has lights that can be seen at night and is much more resistant to adverse water conditions than other options.

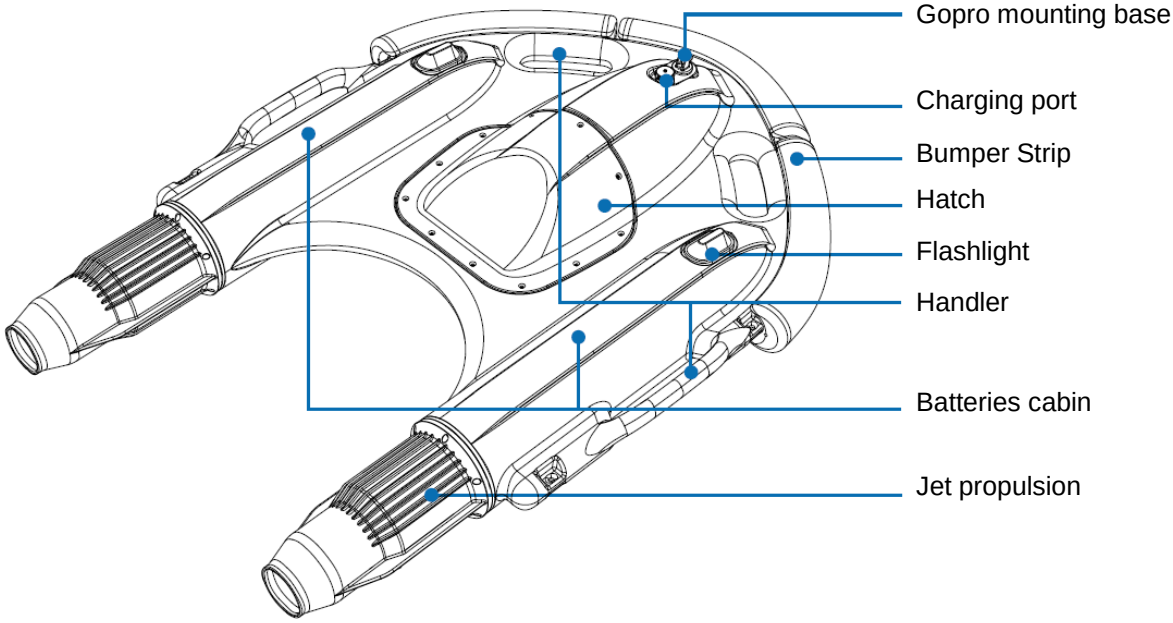
Augments existing vehicular assets such as Zodiacs, jet skis, and other small rescue vessels by decreasing cost and increasing the efficiency of rescue missions.

Supplements existing water rescue equipment such as ropes, rescue lines, and ring buoys with a fast device that offers maximum assistance to swimmers.

The Smart LifeBuoy can operate in harsh environments surrounding offshore platforms, which commonly experience high seas and conditions unfavorable to rapidly deploying manned assets.

Unlike existing indirect rescue systems and assets, the Smart LifeBuoy deploy quickly and directly – reducing the heavy burden of costs (insurance, etc) associated with deploying rescue and recovery operations by platform staff or government response.





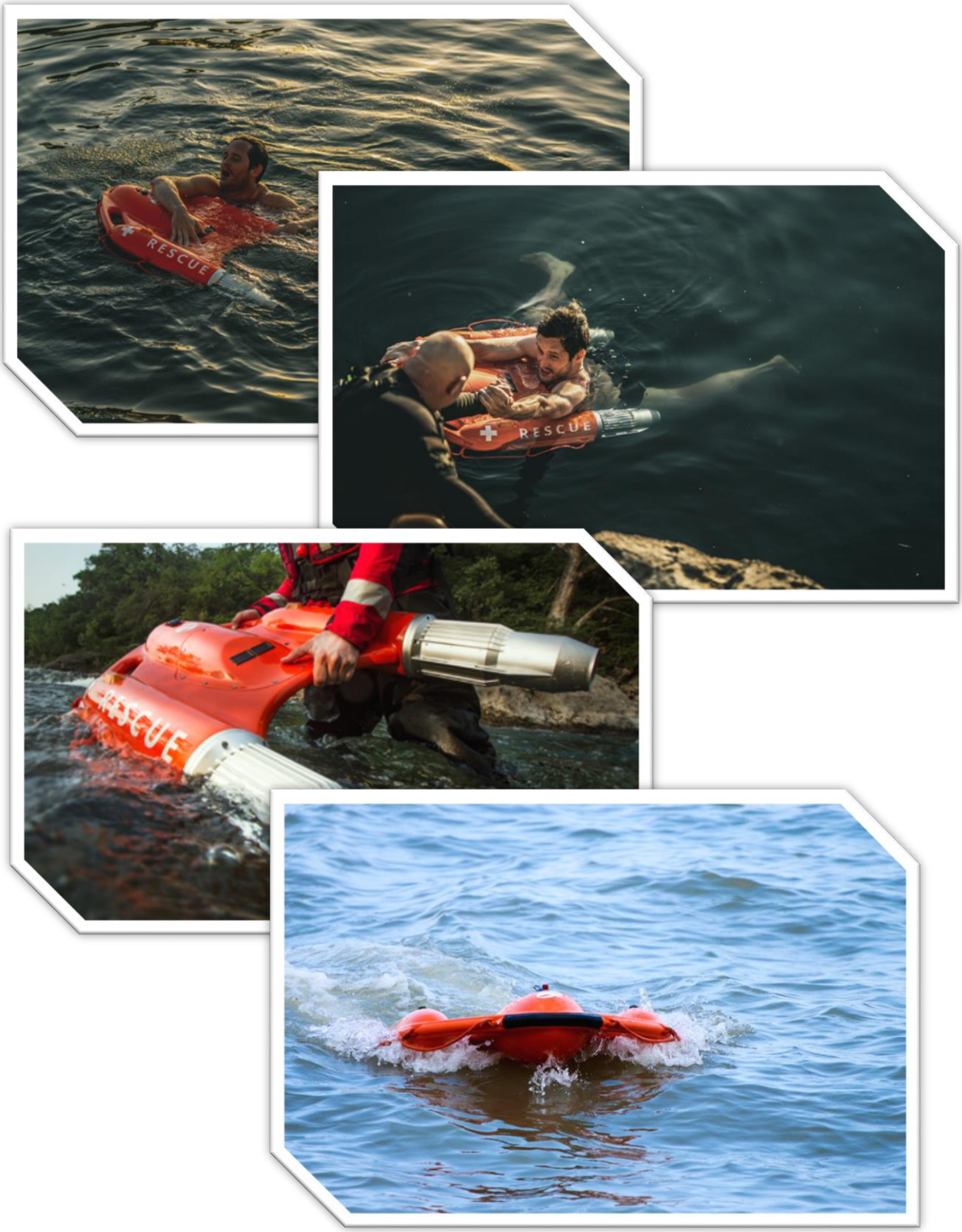
Fast Launch in second

Efficient 80% better chance than lifebuoy to reach victim

Safety Make rescuer in safety place

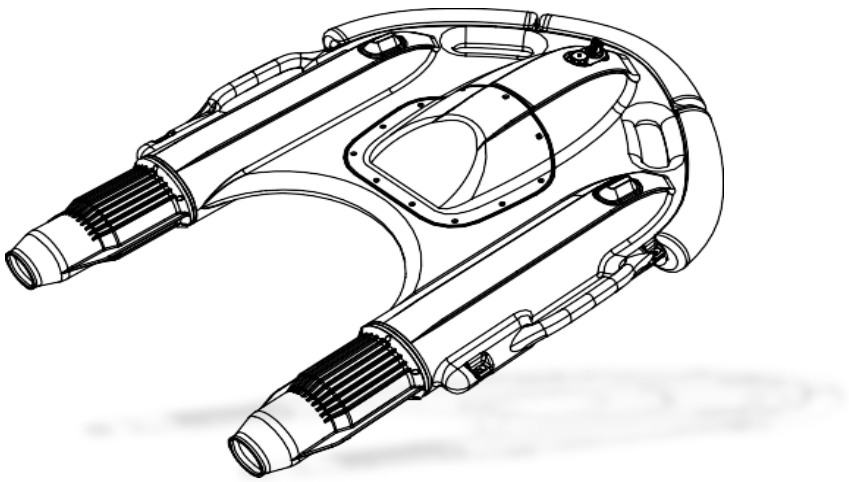
www.armour.gr

Gallery

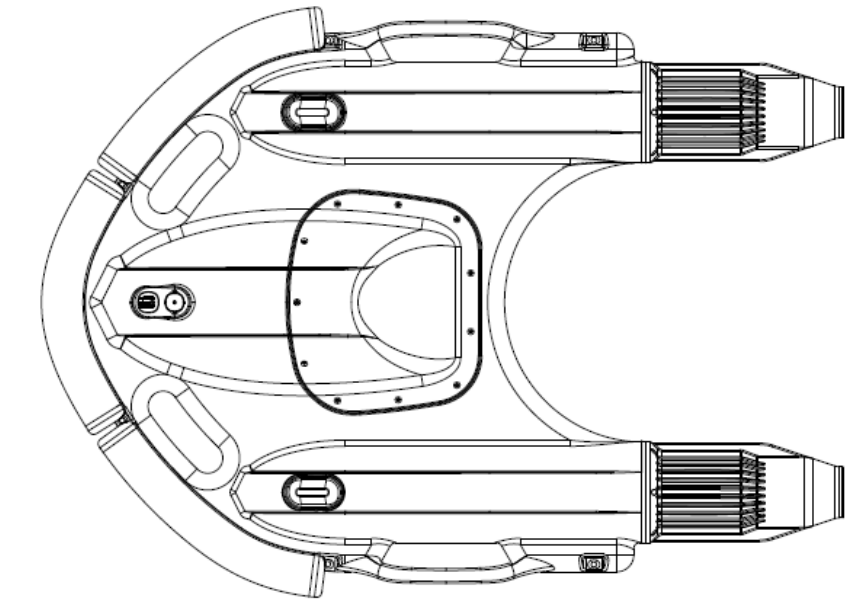


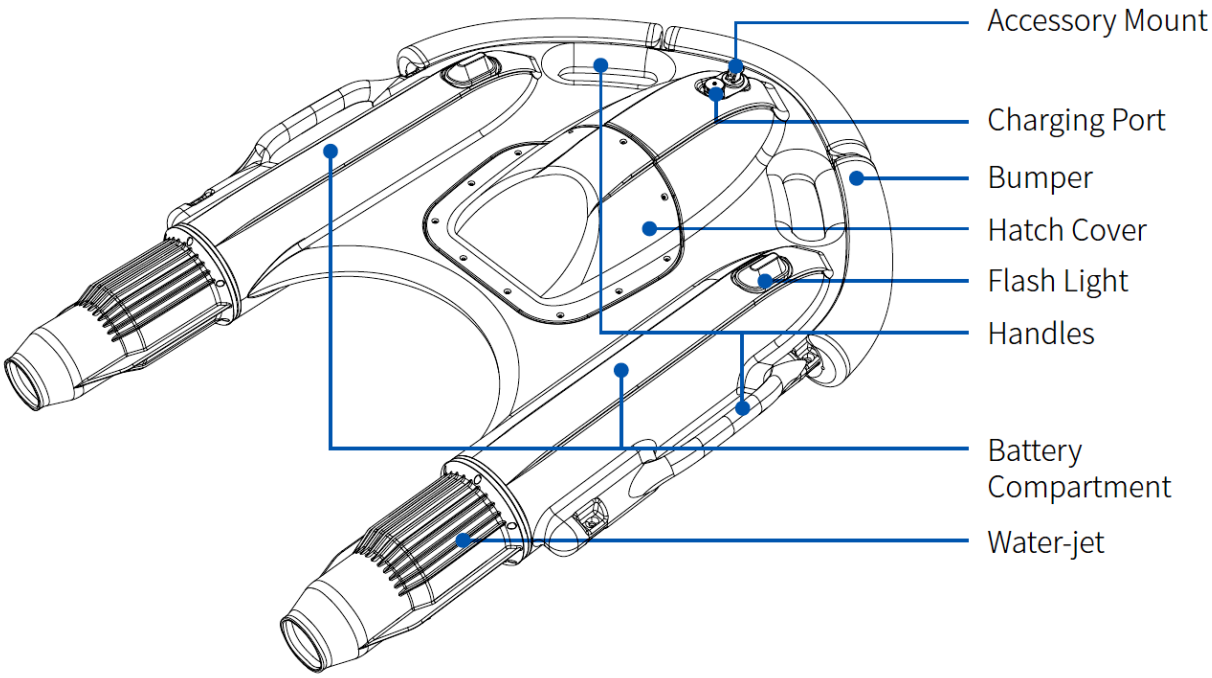
DOLPHIN 1+

Quick Start Guide



Dimension 1190mm x 850mm x 200mm
Weight: 13kg
Charging Time: 3h
IP Rating: IP67
Propelling system: Water-Jet Thruster

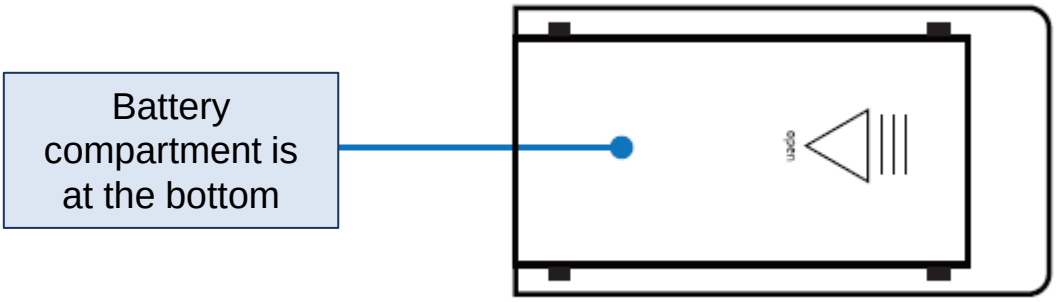




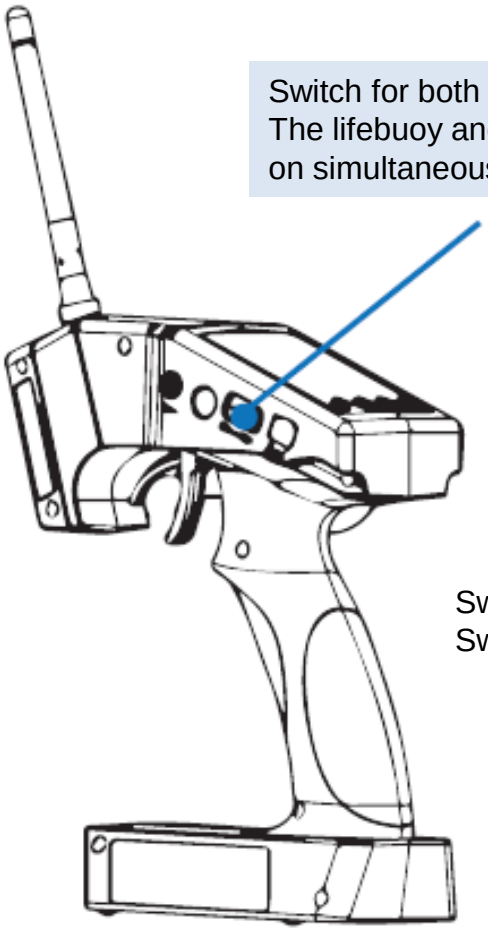
Note: Please keep the side with flash lights facing upward.

Step 1 : Install Battery to Controller

Note: Push cover towards the direction to open.
Insert six AA batteries



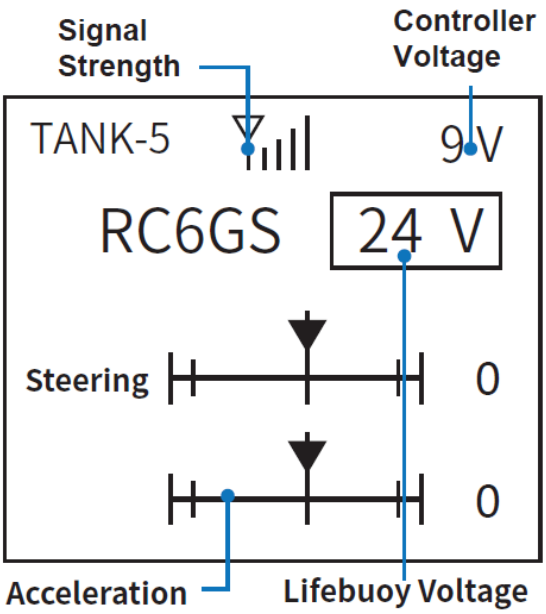
Step 2 : Power on Controller and Lifebuoy



Switch for both controller and lifebuoy.
The lifebuoy and the controller will be powered on simultaneously when the switch is on

Switch to ON to power on
Switch to OFF to power off

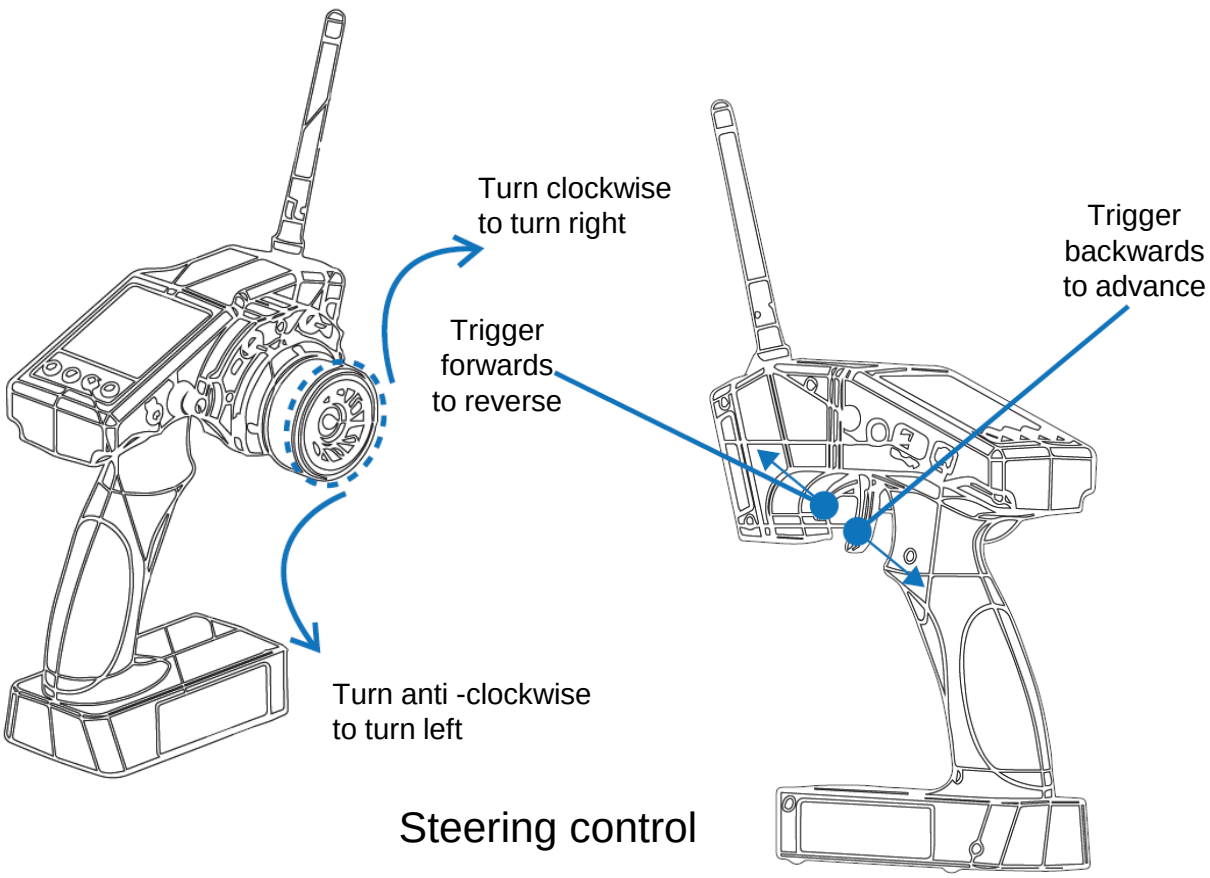
Step 3: Check Connectivity between Controller and Lifebuoy



Note: The controller display will show the lifebuoy's status:

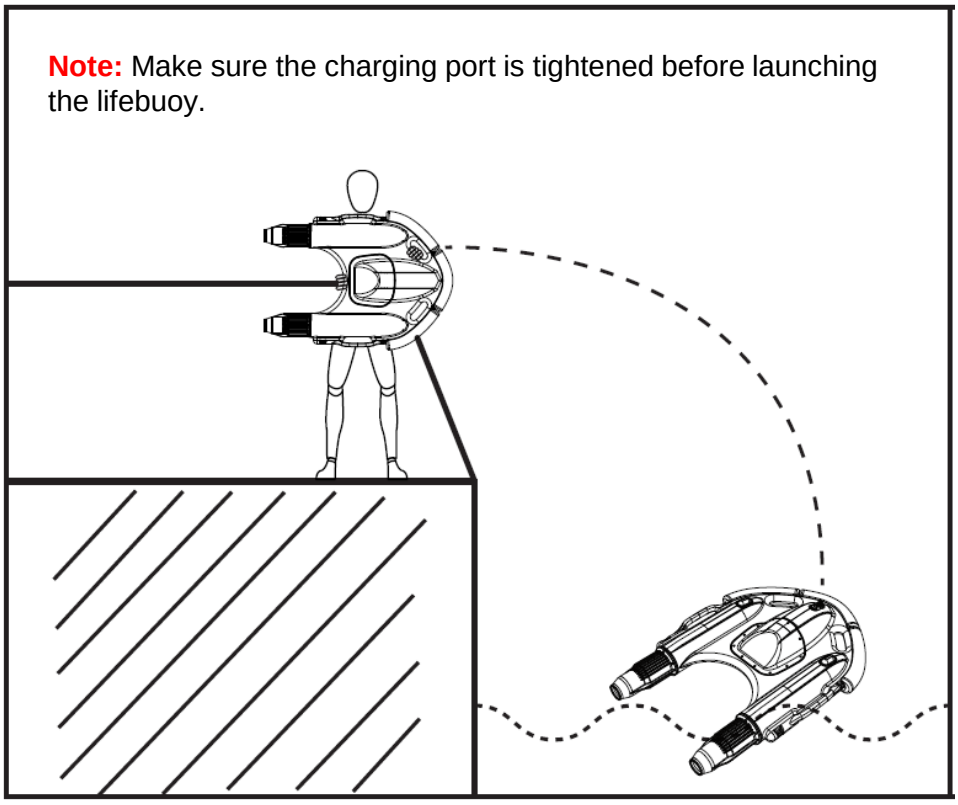
- When the remote control's display is shown below with a flashing light and beeping sound, it indicates a successful connection between the controller and the buoy.
- The lifebuoy should be charged immediately when its voltage is lower than 22V (as shown on the display of the controller),
- The controller's batteries should be replaced when its voltage goes below 7.5V.

Step 4: Testing before Launching the Lifebuoy



Steering control

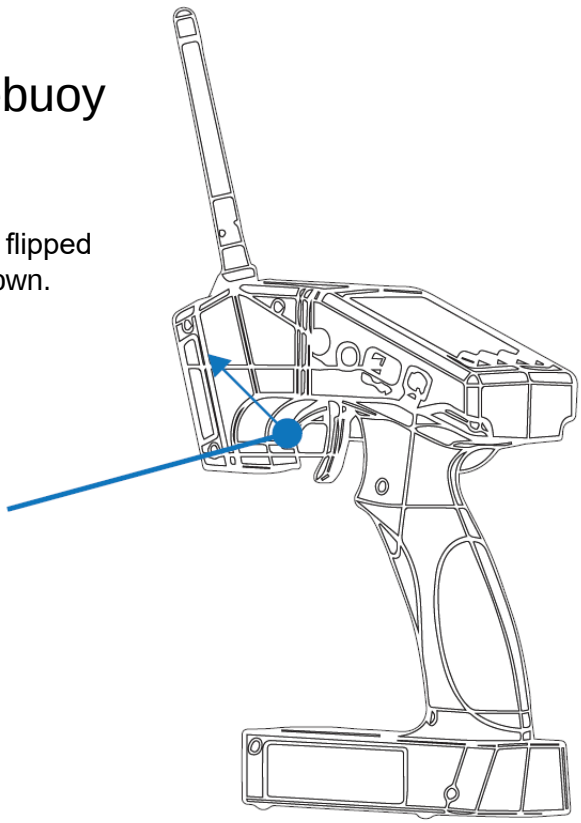
Step 5: Launching the Lifebuoy



Step 6: Flipping the Lifebuoy

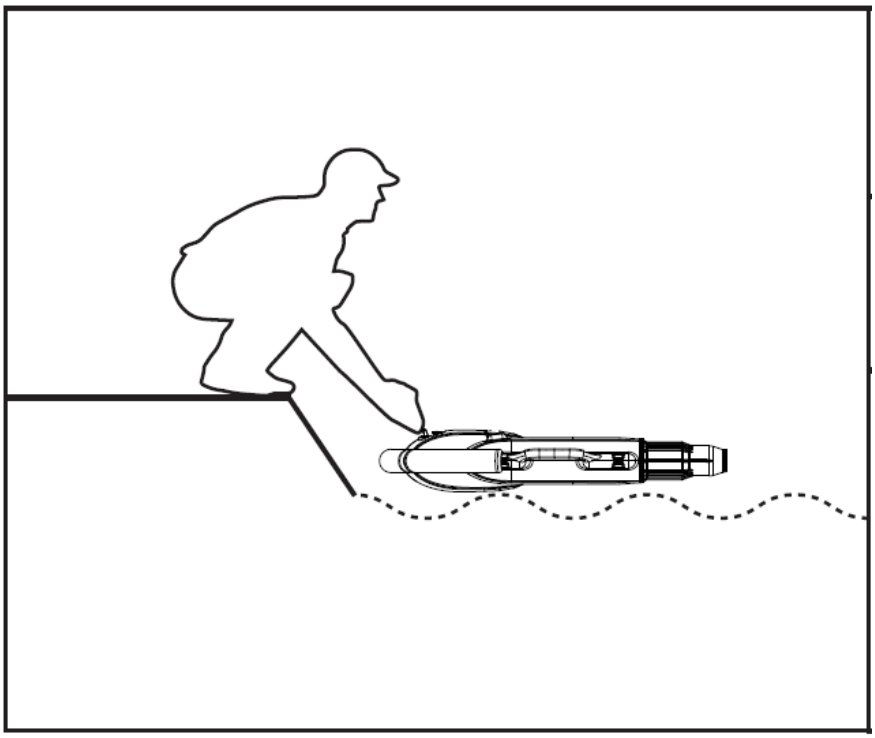
Note: The lifebuoy should be flipped over only when it is upside-down.

Hold reverse until the flashing light side is facing upward

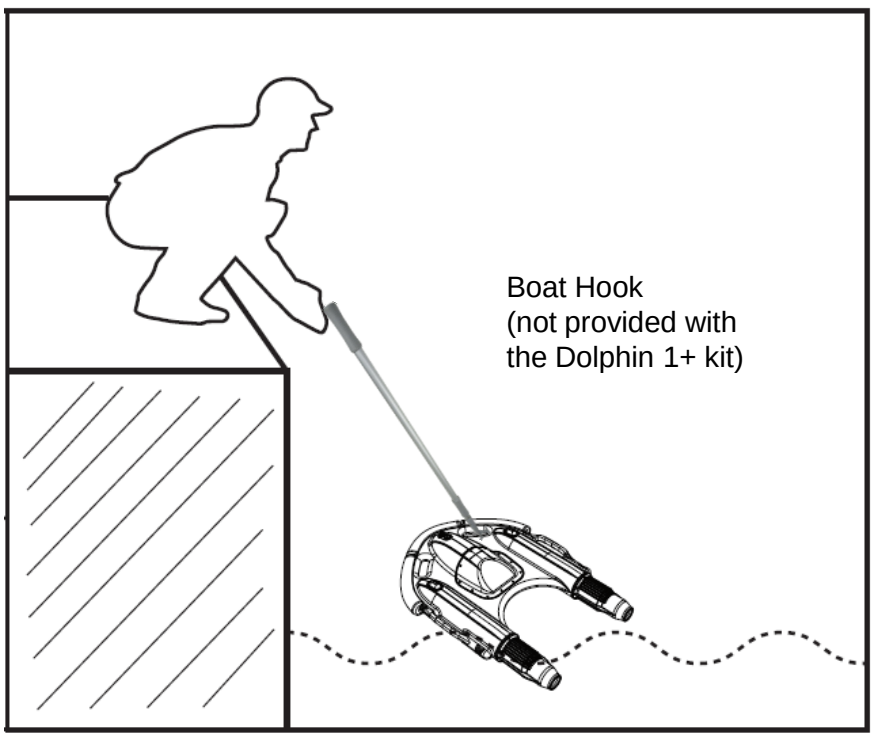


Step 7: Recovering

Recover the lifebuoy by hand

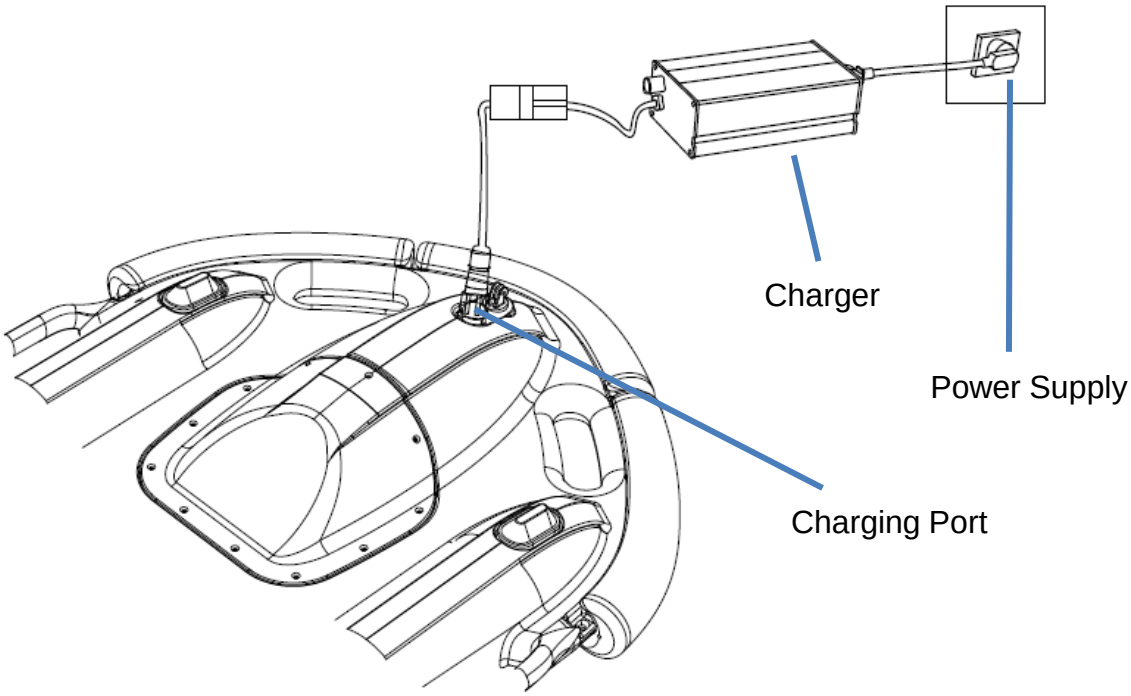


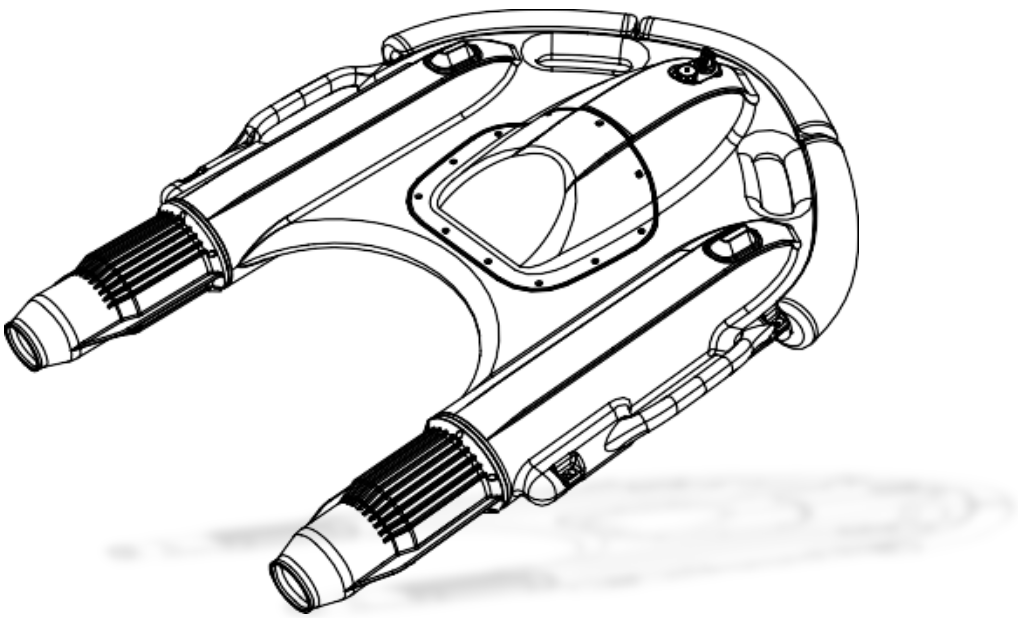
Recover the lifebuoy with tool



Step 8: Charging

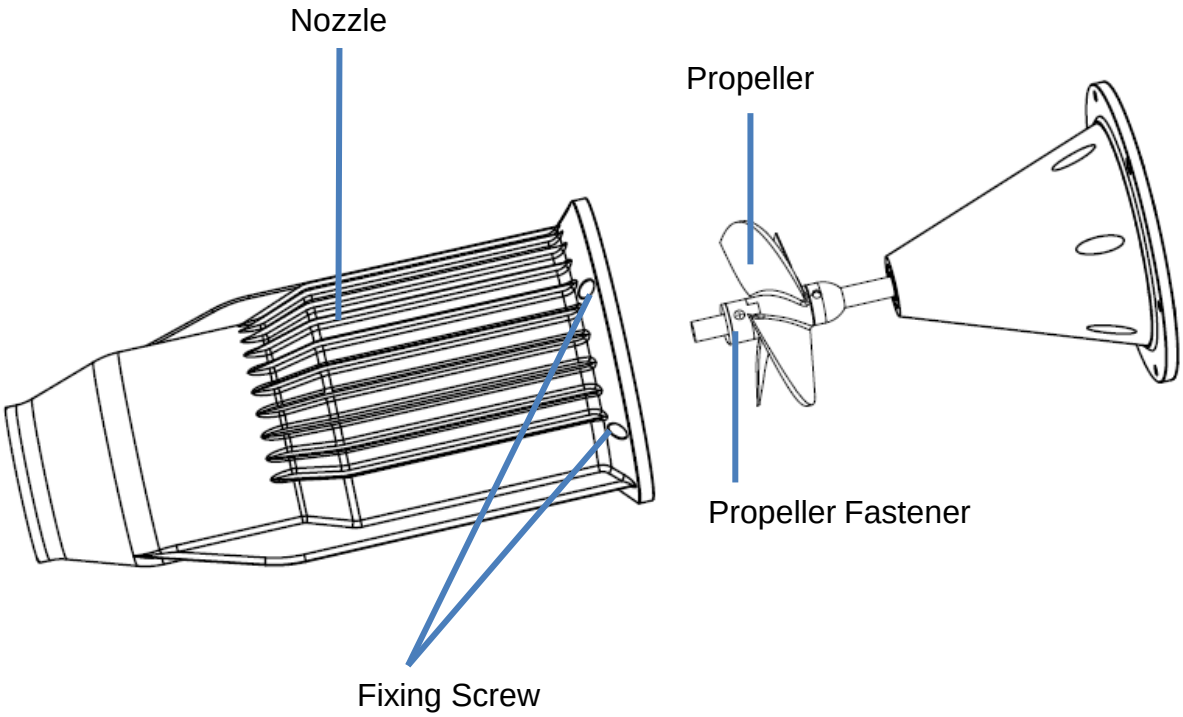
Note: Please clean and dry the lifebuoy, and let it sit for 30 mins before charging.



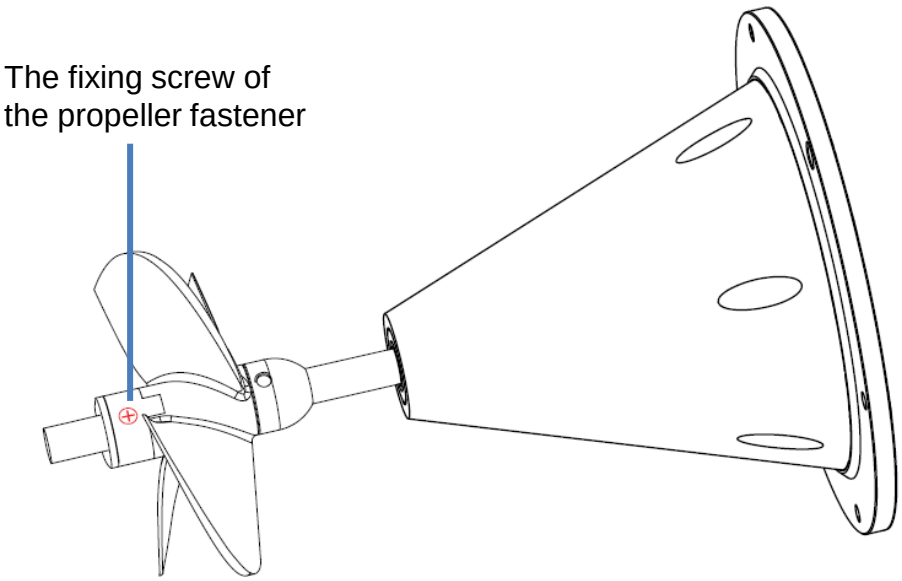


Propeller Replacement

1. Remove the six screws on the nozzle with the Allen wrench, and then remove the nozzle

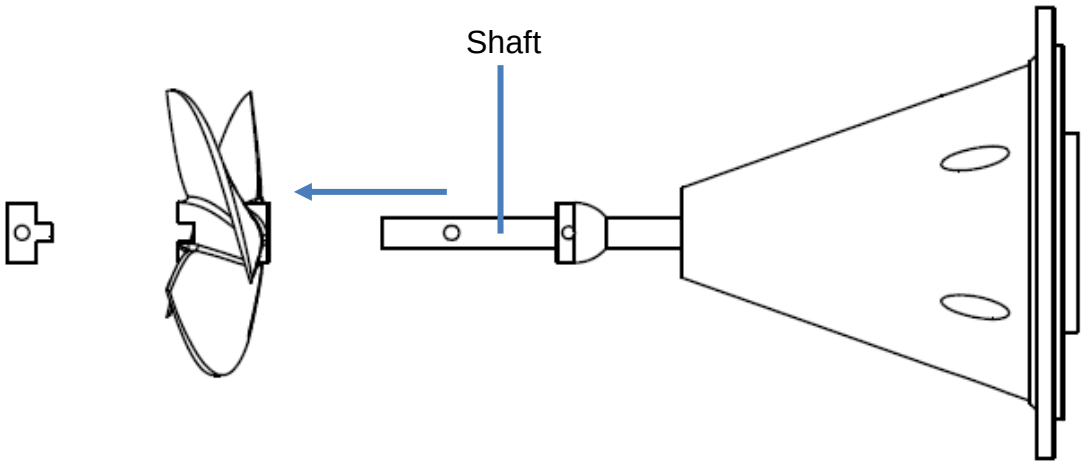


2. Remove the fixing screws on both sides of the propeller fastener



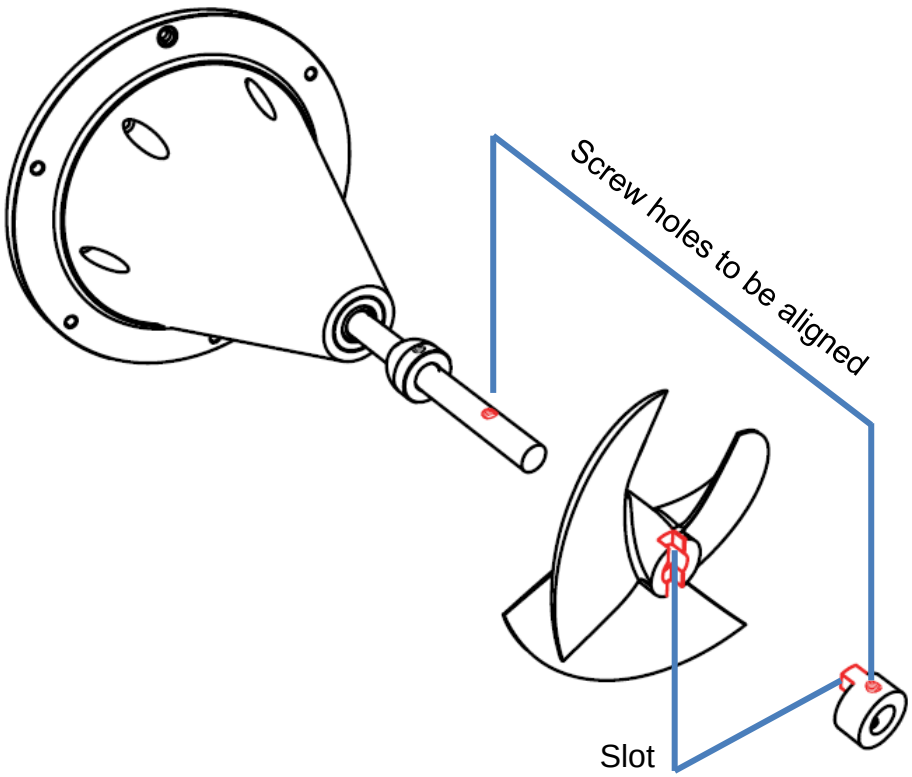
Propeller Replacement

3. Remove the fastener and the propeller from the shaft in the order indicated below



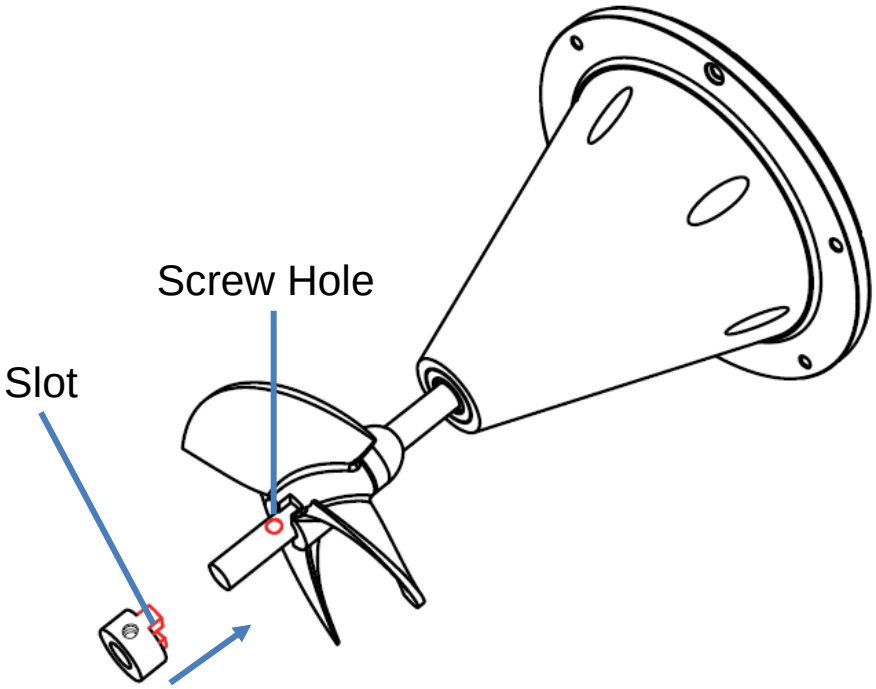
4. Replace with new propeller (slot facing outward

Note: The propeller slot should be perpendicular to the shaft and aligned with the screw hole

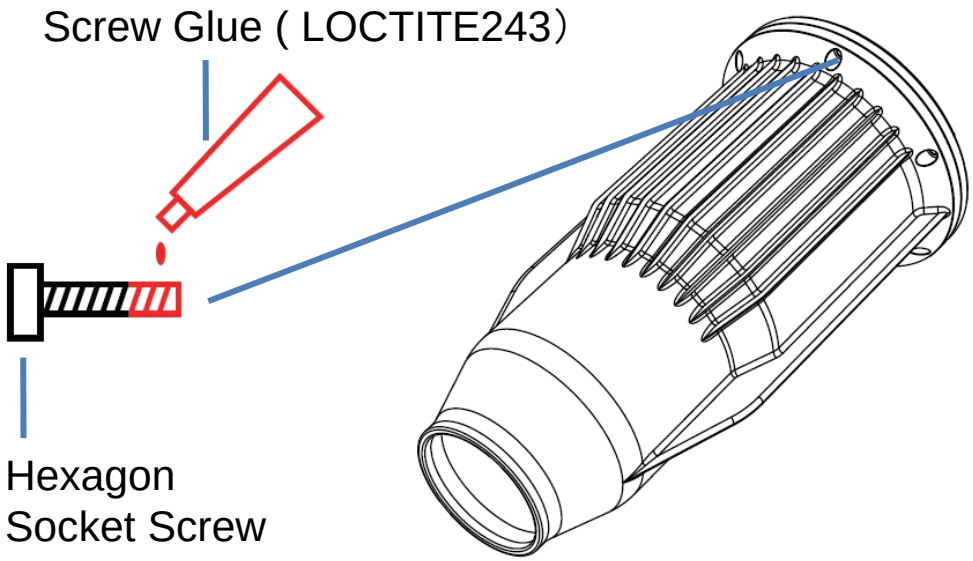


Propeller Replacement

5. Attach the fastener (with its slot facing inward) and tighten the fixing screws on both sides. Before screwing, apply screw glue on the first one-third of the screw



6. Install the nozzle (with its outlet grille facing downward). Before screwing, apply screw glue on the first one-third of the screw. Tighten the fixing screw, and the propeller replacement is completed.



KP BATTERY CHARGER

Output 300Watts-900Watts

Suitable for lead-acid type & lithium type batteries

Features:

1. Standard KP chargers are configured with reverse polarity, over-current, over-voltage, and short-circuit protections.

2. Reverse polarity protection via the relay is a standard A/E/F series KP charger feature. Depending on customer choice, reverse polarity protection can be implemented by three alternative means (relay, diode, or P-MOSFET).
For chargers that use a relay for reverse polarity protection, correct connection and a chargeable battery are the prerequisites for the charger to have an output. If the battery was discharged beyond the recommended end-voltage, the battery may not be rechargeable.
This is not the fault of the charger. Please get in touch with your battery provider for assistance.
For chargers without relay or P-MOSFET, the battery connection and state do not affect the DC output from the charger.

3. Standard KP chargers have three stages of automatic charging, configured to specific customer requirements.
A custom charging curve can be implemented with an additional IC microcontroller.

4, KP charger can be used as an adapter or switching power device to supply constant DC power.

5. Duo LED display:
- LED1 displays red only; LED2 displays red or green.
- LED1 is indicative of AC input; LED2 is indicative of DC output. LEDl red shows AC power is on; LED1 off shows AC power is off.
- LED2 red shows the battery being charged; green shows either the DC load is not connected or the charger is complete (i.e. Float stage for lead acid type batteries; cut-off for lithium batteries).

6. Due to the cautions necessary with charging lithium batteries, standard KP chargers are configured with a cut-off at 5% constant current by default unless otherwise requested. Once the charger has entered into cut-off, manual reconnection of AC power is necessary to wake up the standard KP charger.
For systems where the charger is permanently connected to the battery or when battery leakage is undesirable, KP chargers can be configured with an automatic recharge function via either IC micro controller or analogue mini-PCB. Don't hesitate to get in touch with the manufacturer for more information.

KP-J Series
300W/360W
180(200)*90*50(63)

KP-A Series
450W/600W
210(220)*100*68

KP-F Series
700W/900W
245*120(135)*70

KP BATTERY CHARGER MANUAL

Operations:

1. Check the parameters of the charger and the battery's manual to ensure the appropriateness of the charger for a particular battery.

2. Confirm the charger's AC input voltage level conforms to the local central/grid/ AC voltage level. Then, the charger system must be connected firmly to a wall socket. When the LED l is red, it means the power is on.

3. The standard KP chargers are configured with an ON/OFF switch. If there is a switch, turn it on. When the LED displays red, it means the AC power is on.

4. Connect the DC cables (or connectors according to further directions) to battery terminals.
The red/brown cable should connect with the battery's positive terminal; the black/blue cable should connect with the battery's negative terminal.
LED 2 turns red in color as charging commences.

5. Standard F series KP chargers have over-temperature protection, which shuts down the charger when the internal temperature is above 75°C In extreme heat conditions of equatorial countries, the charger could enter into a perpetual cycle of suspension (5-10 seconds) and restart.
In such cases, it is necessary to take additional measures to reduce environmental heat if delay in charge completion is to be avoided.

Notices:

1. KP chargers are configured for specific batteries as per customer requirements. The charging curves of both lead acid-type batteries and lithium batteries are attached.

2. If the battery has been charged longer than usual, but LED2 does not turn green, this may indicate that the battery is faulty and should not be used without repair.

3. The standard fans-cooled chargers should be used in a well-ventilated, dry, particle-free environment.
Use in a damp, dusty, or non-ventilated environment could cause damage to the charger and battery. Do not use if the operating environment temperature is beyond -10°C~45°C

4. The aluminum case is an important means of heat dissipation and thus should not be covered. Do not obstruct the wind/cooling channels.

5. Standard KP chargers use an intelligent fans controlling system.
For A and E series, the fans only start when LED 2 turns red (charging battery).
After LED2 turns red, if the fans do not start, please disconnect AC power for inspection.
If the fans cannot start, do not charge batteries under any circumstance.
For F series, the fans only operate when the housing internal temperature is above 40°C.

6. Should the charger not work properly, please follow this checklist:
- Are the battery and charger connected correctly?
- Is the voltage level appropriate?
- Is the charger in a protected state? Has the charger entered into protection mode?
After troubleshooting and fixing the problem, disconnect the power for a few seconds, then reconnect to the mains.
If the charger still does not work correctly, contact the manufacturer immediately.
Do not attempt to fix the charger without technical support from the manufacturer.

Precautions

1. The lifebuoy and remote controller must be stored ventilated and dry. The lifebuoy should be placed on a dedicated rack and in a ready-to-use state.

2. The remote controller should avoid getting wet or being exposed to rain.

3. The hatch cover should only be removed by the authorized technician. Otherwise, the warranty would be voided.

4. Do not use any charger other than the one provided by the manufacturer.

5. Battery charging ambient temperature: 0°C - 45°C, battery discharging ambient temperature: -10°C - 60°C.

6. Storage temperature: 0°C - 50°C

7. Keep away from magnetic equipment.

8. Stop using the lifebuoy immediately if a strange smell or high temperature is detected.

9. When using on a beach, carefully avoid propellers from being clogged by sand or other foreign objects.

10. Rinse the hull and propellers with fresh water after use to prevent clogging and ensure the charging port is dry.

11.Do not damage the hull with sharp objects.

12. Do not touch propellers.

Battery

1. Let the lifebuoy sit for 30 mins after each use before recharge. Make sure it is powered off when charging. Do not expose it to direct sun or rain during recharge.

2. Do not completely discharge the battery before recharge. Stop use immediately when the low battery alarm is on. Recharge monthly when the lifebuoy is not used for a long period.

Disclaimer

This product is not for recreational purposes and is unsuitable for minors under 18. Be very cautious when operating around children.

Our Company does not assume any responsibility for accidents, injuries, or equipment damage caused by failure to follow the instructions or warning signs.