



USER MANUAL



Thank you for trusting our eSea® electric propulsion system. We offer you all our experience and technology so that you can enjoy one of the most innovative, compact, and lightweight water propulsion systems on the market.

Before starting to use your eSea®, it is essential to read carefully and understand all the aspects included in our manual. If you have any doubts or require further information about its use, maintenance, and care, please contact us.

Improper maintenance, use, or care can create risks or accidents for you and those around you. It will void your warranty and reduce the life of the drive. Therefore, it is required to read the manual completely and thoroughly.

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Get ready to enjoy the experience of our new eSea®!

eSea® is a compact personal watercraft propulsion system that integrates to the fin of your watercraft using an adapter. Its remote controller will allow you to control the right thrust and speed for the practice of your favorite sport in the water.

By combining eSea® with your paddling and skills, you can enjoy more time in the water. You will have a different experience, with a plus of security.

The use of eSea® is very intuitive. We'll give you some details so that you can take advantage of its full potential.

Read this manual carefully and have fun with your new eSea®.

IMPORTANT: eSea® is a complement that will assist you in your walks, routes, or sports practice in a light boat. Due to its design, eSea is not suitable for the practice of sports that require high speed or in extreme situations.

Components



eSea®

- 1x Propeller (consists of two blocks)
- 1x 9Ah Ion-Li Battery Module- 1x Engine (800W)
- 1x Standard charger 220V/3A
- 1x Allen Key 2,5mm
- 1x Replacement screws
- 1x Remote controller with standard GoPro type plug and 2x AAA bateries
- 1x General use manual
- 1x Fin adapter (chosen by customers)

eSea® PRO

- 1x Propeller (consists of two blocks)
- 1x 12Ah Ion-Li Battery Module
- 1x Engine (1.300W)
- 1x Standard charger 220V/3A
- 1x Allen Key 2,5mm
- 1x Replacement screws
- 1x Remote controller with standard GoPro type plug and 2x AAA bateries
- 1x General use manual
- 1x Transport Bag
- 1x Fin adapter (chosen by customers)
- APP: Access and performance control MODULE CONTROL: Available. Possibility of parameterizing the operation according to the sport and linking more controls to a thruster or several thrusters to a command.



Remote controller



Charger



Propeller



Allen key 2,5 mm + Set of screws

Connection and ignition

Your eSea® is activated by remote control exclusively using its corresponding remote controller. Each controller has a specific code. In case of loss or damage, you will always have a spare guaranteed.

Batteries

The eSea® case comes with the batteries integrated. They are not visible and cannot be modified. The battery life will depend on the power level you use it with and the water conditions - between half an hour and two hours of continuous use.

The propulsion system consists of 2 blocks:

- Front: containing the batteries.
- Rear: containing the motor, nozzle, propeller, and electronics. It has a water inlet grid.

Battery charging

Always use the charger provided in the eSea® pack.

Never charge the battery after using your eSea® continuously. We recommend that you wait an hour before recharging. This way, the battery will have a long-lasting life span of up to 1,000 cycles of use.

The battery has a charge indicator in the form of LED lights. When pressed, it will show you the level of charge (20% - 40% - 60% - 80% - 100%).

The charger displays a green light if the battery is already charged or a red light if the charge is still in process.

Adapters and use

eSea® provides the most used fin adapters on the market: use it in different watercraft.

eSea® is versatile. You can use it in:

Rowing sports (SUP or Kayak): a additional assistance while rowing.

- Dinghy sail: push for departure and in port.
- Kitesurf or Windsurf: it can help you to return to land.
- Dinghy: in short drives, you can use it without the need for the combustion engine.
- Accessory for swimming and shallow diving (apnea).

Because of its design, if you have it installed on your boat and you decide not to activate it, it allows you to continue with your sport in the usual way.



Adapter Fin
US fin Box



Adapter Fin
Surf



Adapter Fin
Kayak



Adapter
Decathlon



Adapter
JOBE



Adapter
snorkel

Remote controller

The remote controller comes with your eSea® package. This controller can only be used with your propeller and is the device that allows you to control the power delivered by the engine. It has four buttons: three correspond to the different power levels and one to stop.



Buttons

1. ASSISTANCE LEVEL 1.

- This is the level that provides the best autonomy and assists you in your paddling.
- Saves battery power (2 hours approx.).
- For your safety and battery optimization, this gear is programmed for a 6 minutes use. It is possible to turn it on again at any time.
-

2. ASSISTANCE LEVEL 2.

- Allows increasing the speed with higher thrust.
- Average battery consumption (1 hour approx.).
- For your safety and battery optimization, this gear is programmed for a 4 minutes use. It is possible to turn it on again at any time

3. H.SPEED.

- Corresponds to the third gear.
- It gives the maximum thrust and speed.
- High consumption of batteries (30 min approx).
- It allows us to overcome more demanding situations, such as currents or wind.
- For your safety and battery optimization, this gear is programmed for a 15 seconds use. Once elapsed, it will go to assist speed TWO automatically. You can press the HIGHSPEED button again at any time up to a maximum of 4 times.

4. POWER/STOP.

Stops the engine and is useful to stay in waiting position. **Off timer: For your safety, your eSea® has a timer that stops the engine automatically if six minutes run with the buttons unpressed in ECO MODE or four minutes in CRUISE and HIGH SPEED.**

Control electronics will automatically limit the engine power in the highest gears if they detect a rise in engine temperature due to the intense use of HIGH SPEED. Power remains limited until the temperature returns to normal parameters.

In case it is necessary to change the batteries of the remote control when pressing the button the LED light will blink red.

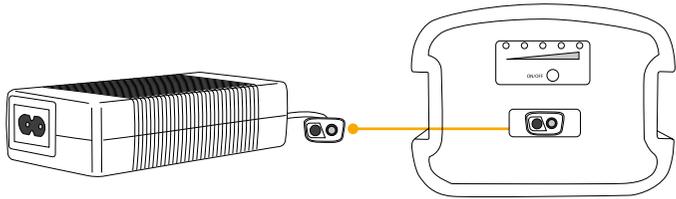
Important: speed may be reduced when the electronic control system detects low battery life



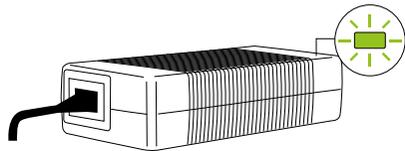
Quick Guide to Propeller Installation

Battery charge:

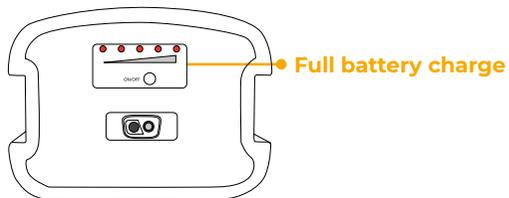
Use the charger cable and connect it properly to the battery.



Proceed to charge the battery until the charger indicator is green. A full charge takes approximately 3.5 hours.



Once the charger is disconnected, check that the battery is at its maximum charge.

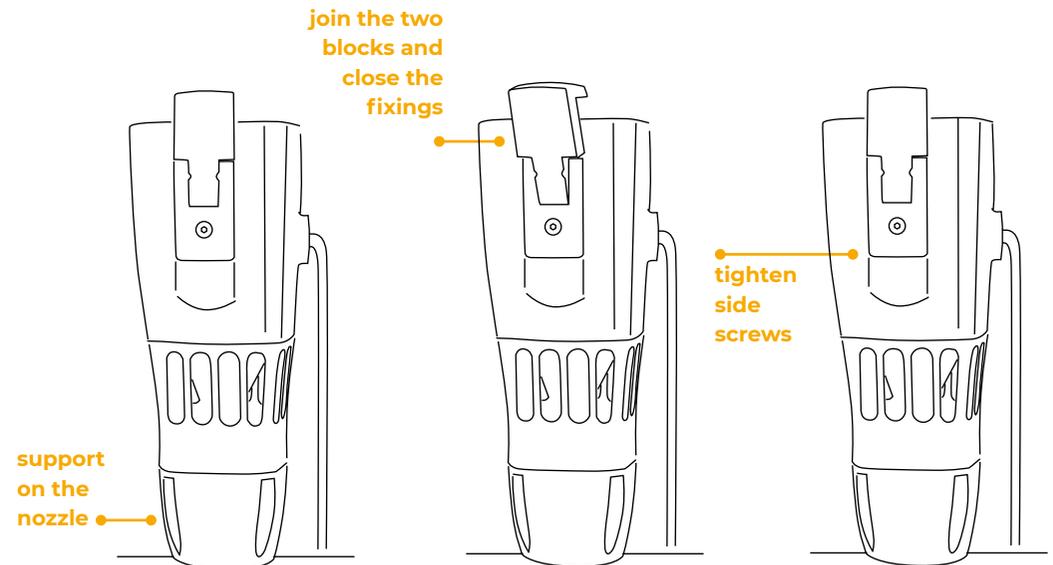


eSea® installation:

Vertically support the engine block on a flat surface. Snap the battery block onto the engine block.

Close the side fasteners to seal tightly.

Tighten the screws of the side fixings.



Maintenance

Heat exposure

Avoid exposure to high temperatures that can damage the eSea®. Never leave your eSea® inside the car on a hot day. The extreme heat can affect the integrity of the batteries.

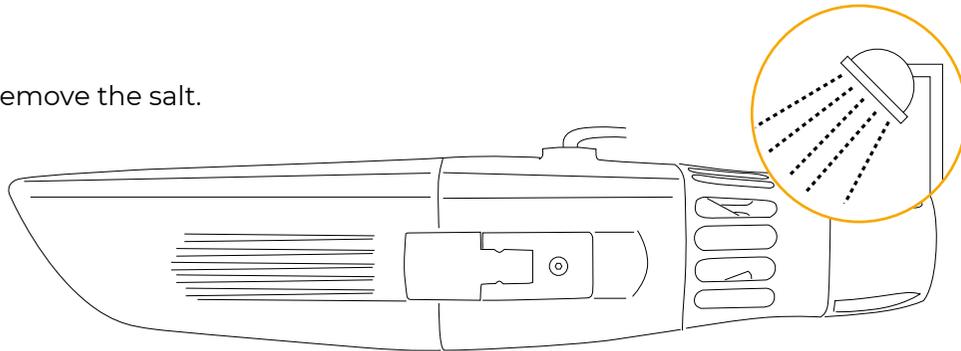
Cleaning

Once you use the eSea® propeller in saltwater, **you must always desalinate it with fresh water.** You must assemble it as if you were going to use it. It must never get wet if it is not adjusted as it could damage the connections between the two blocks.

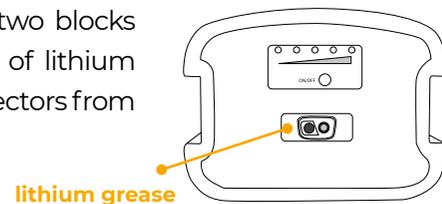
Propeller obstruction

eSea® has a grid to prevent floating objects from entering and clogging the propeller. The design and distances are optimized to avoid this problem. However, it is impossible to anticipate it completely, so it is advisable to check before and after use if there is any object stuck. If so, you must remove it. (See 'Propeller lock')

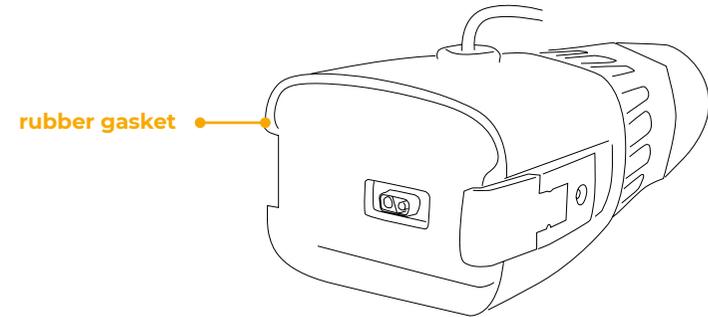
Remove the salt.



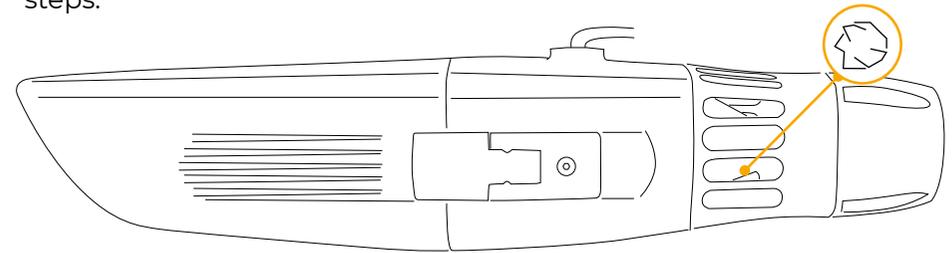
Check that the connector that joins the two blocks of the propeller always has a small layer of lithium grease on it. This will help protect the connectors from external items.



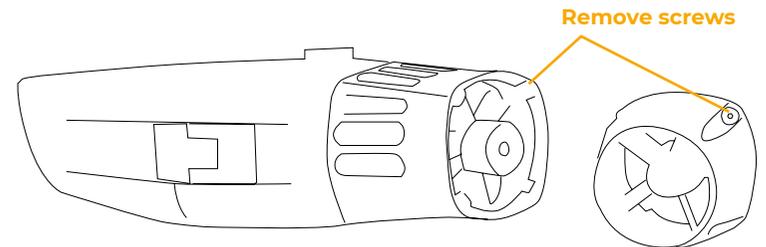
Check that the rubber gasket that joins the two blocks of the propeller together is clean and always has a small layer of Vaseline. Frequent maintenance of this seal will extend the life of your eSea®.



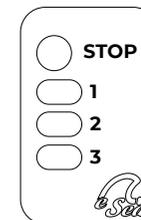
Check that nothing is obstructing the water inlet screen or the propeller. If that's the case, we will proceed to clean it by following these steps.



Change of the grid, nozzle, or propeller in case they are damaged.



Change the controller battery.
IMPORTANT: use alkaline batteries
AAA (not rechargeable).



Remove screws and replace battery with a new one.

Responsibility

The practice of any water sport with the help of a propeller can have certain unpredictable or incidental risks or dangers, such as damage or injury to both property and personal injury or even death.

That may be due to possible collisions with other users, objects, boats, or other elements that may be around us either by a loss of control or other unpredictable causes.

The use of eSea® by any person supposes the assumption on their part of all the risks it may entail.

It is necessary to apply the rules of safety in the water, attentive and responsible driving, correct maintenance, and proper use.

eSea® cannot detail or prevent all possible causes of risk since it is impossible to anticipate all situations or conditions that may occur both below and above the surface while the propeller is in use.

All of it means that eSea® cannot make any declaration or guarantee about the use and safety of its products in all situations or conditions. If you have an insurance policy, we recommend that you consult or check your coverage first.

By purchasing or using the various eSea® products, you acknowledge, accept, and understand the possible risks and hazards involved.

Warnings and safety

You need to read, understand, and remember all these warnings. We recommend that you keep them close to you and periodically review and update them.

Failure to use and care for any eSea® product safely may result in the loss of your warranty, as well as possible property damage, including serious injury or death.

Under no circumstances should you use eSea® to go further than your own ability to return. Either by using paddles, pedals, etc., or by swimming, and always using your own strength.

That way we avoid that if there is any problem with the use of the electric drive you can return by your own means.

If you identify a problem in the proper functioning or a mechanical failure, maintain the necessary precautions so that you do not put yourself or possible third parties in danger.

In this case, remove your eSea® from the water as soon as possible. Disconnect the battery module from the engine module according to the instructions in the manual.

In case of emergency, it is better to abandon the eSea® propulsion system than to incur health risks for yourself or others.

When using eSea®, follow the precautions listed below:

- Never turn on the engine out of the water.
- Never use under the influence of drugs or alcohol.
- Never use under medical treatment without prior consultation with your doctor
- If you do not feel well, do not use eSea®.

- In no case should it be used by children under 15 years old. For children over 15 years of age, use only under adult supervision.
- Be careful with long hair, clothing, and other possible personal items as they may become entangled in the propeller.
- You should always carry a current, certified life jacket or personal flotation device.
- Misuse of the eSea® propulsion system can result in severe injury or even death.
- Always clean the propeller with fresh water after use, following the instructions in the manual. Keep the eSea® propulsion system attached while you are performing these tasks.
- Thruster connectors should never be in contact with water.
- Always keep the connectors and seals clean and hydrated according to the instructions in the manual.
- The thruster must always remain uncoupled, both before use and after cleaning and maintenance. Following the instructions in the manual, we will separate the engine block and the battery block. In this way, we will avoid possible problems in the life of the battery.
- We recommend that in long-term storage, the battery should be no less than 30%. Please refer to the manual for verification.
- Maximum depth: We do not recommend its use below 2 meters (6.5 feet)
- Operate and store above 5°C (41°F) and below 45°C (113°F)
- Do not use any chemicals that the manual does not indicate under any circumstances.
- When cleaning the propeller or nozzle area, make sure to uncouple the battery unit from the propeller.
- Always use the safety cable that comes integrated into the thruster anchored to your boat. It will ensure that you do not lose your eSea® and will also allow you to improve communication with your remote control.
- Never manipulate or change any aspect of the thruster itself. You must only use the accessories or complements provided by eSea®. Any need for repair, change, or revision of any part, accessory or complement, must be provided by eSea® or approved distributors.

Warranty

eSea® warrants its hardware products against defects in materials and workmanship for the minimum period prescribed by law in each country or territory from the date of original purchase, provided that the purchase was made through an authorized eSea® dealer or directly through eSea®.

This warranty is void if the equipment is open in any of its components or parts, altered, with an appreciation of misuse, with excessive wear, or repair by any person not authorized by eSea®.

Our product is designed for consumer sports and recreational use. In no case are they guaranteed for intensive commercial or rental use. Our guarantee does not include transport costs.

eSea® reserves the right to make design changes and improve its products without obligation to install these improvements in any of its products previously manufactured and sold.

Important: before any shipment related to the warranty, please contact our customer service to review the case and confirm authorization. There are limitations on shipping lithium-ion batteries. And we will not accept service returns without notice. The way to communicate doubts or make any requests will be only through the eSea® website.

Faqs

1. What is the guarantee of my eSea®?

If you have any problem with your eSea® propulsion system, please contact us through our website to help you or through the official distributor where you made your purchase. This way we will try to solve your problem as soon as possible. Please check carefully the warranty section of the manual, where you will find more information.

2. I'm having trouble assembling the two blocks of my eSea® correctly. What should I do?

If you follow the installation instructions in the manual, there should not be any problem. You should always install the eSea® in a vertical position, on a flat surface where it will support the base of the nozzle (where the propeller is), and gently press down the other block (the one with the battery inside) following the pattern of the two connectors.

Then fit the safety flaps and screws that are part of the eSea® kit. Once connected, you will hear some sounds (beep) that will indicate that the connection has been successful. You should never force the process of fitting both blocks or their flaps and screws afterward. Always check that the thruster is correctly fitted. That way, it will be perfectly watertight, and you will prevent water or moisture from reaching both connectors. Remember to check the charge status of your battery before use and never turn on the eSea® out of water.

3. How fast can I get with eSea®?

Remember that the eSea® has the function of being an assistant to practice our favorite water sport. It is very complicated to determine the speed you will be able to experience with this aid.

There is a diversity of conditions and situations that do not allow us to answer this question precisely, such as the type of boat, the weight to be pushed, wind, possible currents, etc.

Your eSea® has three forward assistance speeds and a stop button. We recommend using the first assistance gear as the cruising speed. This way, you will have more autonomy during your practice.

4. Can I connect several eSea® thrusters to my kayak, SUP, or other boats?

Yes, although if you want to get more speed, it will depend a lot on the type of boat you use, and the result may not be the expected one. Depending on the type of hull/float, length, or beam, you may not achieve a very relevant speed increase even if we incorporate a more powerful engine.

You should also take into account other factors such as wind conditions, currents, water conditions, etc.

In any case, it is feasible for both propellers to operate with a single control if requested in the order.

5. What kind of maintenance does the eSea® water propulsion system require?

Always rinse it with fresh water after each use without uncoupling the two thruster blocks (engine and battery) while performing this task.

The connectors and rubber seals must be clean and hydrated (with neutral Vaseline). Please, follow the instructions in the manual.

You should never turn on the engine out of the water.

6. What type of battery does use, and when should I charge it?

The batteries used by eSea® are lithium-ion batteries.

Never charge the battery after using your eSea® continuously. We recommend that you wait one hour before recharging. It will allow you to enjoy a long-life battery for up to 1,000 use cycles.

During the process of charging your battery, you can check that the charger shows a green light if the battery is already charged or a red light if it is still charging.

7. How do I know the battery charge level?

Out of the water, you can check the charge level of the battery by pressing the button on the front of your battery block.

The charge indicator will show you with a red LED light which level of charge it has (20% - 40% - 60% - 80% - 100%).

8. What autonomy of use has eSea®?

The autonomy of use with the complete charge of the battery will be approximately two hours if you use the first assistance gear. This time may vary as it depends on different elements and the use of the other assistance gears.

For your safety while you are using your eSea®, we have designed some timers to stop the engine.

You can find more information in the user's manual.

If due to intensive use of the third speed or HIGH SPEED, the control electronics detect a rise in engine temperature, they will automatically limit the engine power in the highest gears until the engine temperature returns to normal parameters.

9. How do I attach an eSea® to my boat?

eSea® allows you to couple it to the different fin systems in the market through its adapters. In addition to having a universal adapter. You can find more information in the manual.

It is important to know which system your boat uses and to request in your order the adapter you need.

10. Can I cut or not use the safety cable that comes integrated into the thruster?

On the other hand, and very importantly, the cable also serves to ensure you proper connectivity with your remote control and, therefore, the command of your navigation.

11. What should I do if the propeller becomes clogged or breaks?

eSea® has a grid to prevent floating objects from entering and clogging the propeller. However, it is impossible to completely prevent it. So, it is advisable to check before and after use if there are any objects stuck.

In case of obstruction or breakage of the propeller, you must follow the instructions in the manual. You will see that it is not complicated at all. Using the thruster with a damaged propeller can permanently damage other components of the thruster and even the thruster itself.

12. Can I leave my eSea® in the water all the time?

No. Once you have finished using it, you should always take the engine out of the water and follow the cleaning and maintenance guidelines in the manual. It will extend the life of your eSea®.

13. How should I store my eSea® when it is not in use?

We recommend that you always keep your eSea® with its two blocks un-coupled. In case it has to remain unused for a long time, follow the maintenance and cleaning guidelines in the manual.

Also, check that the battery charge status is not below 30%. It will extend the life of your battery.

14. Can I travel with my eSea®?

Always check with your airline before you travel. The regulations depend on the country of origin/destination and the policy of each airline.

15. Where can I find help and installation guides?

All installation guides are available at www.electric-sea.com.

You can also access through the QR code that you will find inside the purchase package of your eSea®. Besides, there are videos available on our Video Channel.



www.electric-sea.com