eFoil Instrument Manual





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Manual Overview

Safety Warnings & Disclaimers

USE OF THIS PRODUCT AND PARTICIRATION IN THE SPORT INVOLVES INHERENT RISKS OF INJURY OR DEATH. BY USING THE PRODUCT, THE USR ACCEPTS THE INHERENT RISKS OF ITS USE. FULLY READ THIS MANUAL BEFORE USE. THE WATER DEPTH IS AT LEAST 1.5 METERS, 150 METERS AWAY FROM THE SWIMMER

The information contained in this User Manual represents the most up-to-date product data available at the time of printing. Pulseer Foils is committed to continuous product improvements and advancement of technology and company reserves the right to change the product, components, specification of other aspects of the Pulseer board without advance notice. The most current information can be found on the Pulseer Foils website (www.pulseersport.com).

Warranty

The Pulseer is subject to a one year manufacturers limited warranty, Tne manufacturer's limited warranty covers any defects in materials or workmanship under normal use during the warranty period. For full details, please refer Pulseer Foils website **www.pulseersport.com**.

General Warnings

DANGER

FAILURE TO COMPLY WITH THESE WARNINGS MAY RESULT IS SERIOUS BODILY INJURY OR DEATH TO YOU OR OTHERS,

- Contact with the product's spinning propeller can cause serious injury
 or death
- Keep your body, fingers, and toes away from the propeller.
 Never handle the propeller while the battery is connected to the system.
- Never handle the propeller while the battery is connected to the system.
 Disconnect the power source before servicing your propeller.
 Do not service your propeller in the water.
- Do not service your propeller in the water.
 Do not remove the propeller guard unless in stric compliance with the Operator's Manual's instructions that cover servicing the propeller.
- Never operate toward a person in the water.
 Do not attempt to open the waterproof hatch compartment while in the water
- for any reason. • The fin or fins can be and/or become

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The fin or fins can be and/or become sharp and/or dangerous and can cause serious injuries or death to you and/or others.





To reduce risks

• Always inspect the product prior to use to ensure it is undamaged, that the battery hatch seals tightly, that the controlleris in proper working order, and that the product is otherwise fit for use. NEVER use a damaged product.

 \cdot Do not allow others to operate the craft without making them fully aware of the proper procedures and risks of the craft.

• NOT FOR USE BY CHILDREN. This product is a powerful water device and should not be operated by anyone under the age of 16.

Propulsion System

🛕 DANGER

- Contact with the product's spinning propeler can cause serious in Jury or death :
- Keep your body, fingers, and toes away from the propeler,
- Never handle the propeller while the battery is connected to the system,
- Do not service your propeler in the water, Do not remove the propeler guard.

· CONTACT WITH THE PRODUCT'S SPINNING PROPELLER WILL CAUSE SERIOUS INJURY OR DEATH.

- · KEEP BODY, FINGERS, AND TOES COMPLETELY AWAY FROM THE PROPELLER.
- NEVER HANDLE THE PROPELLER WHILE THE BATTERY IS CONNECTED TO THE BATTERY SYSTEM.

Disconnect the power source before servicing the propeller. Do not service the propeller in the water.

· DO NOT REMOVE THE PROPELLER GUARD

Unless in strict compliance with the Operator's Manual instructions that cover servicing the propeller.

 \cdot NEVER OPERATE TOWARD A PERSON IN THE WATER.

Battery





DO NOT ATTEMPT TO OPEN THE WATERPROOF HATCH COMPARTMENT WHILE IN THE WATER FOR ANY REASON.

• **DO NOT** disassemble or attempt to modify or service. No serviceable parts inside. DO NOT use for any purpose other than that intended.

• DO NOT mishandle, drop, or damage in any way.

- DO NOT puncture the battery.
- DO NOT expose the battery to fire or elevated temperatures (>60 deg C).

• Inspect the battery before every use. If damaged, do not use. Exposure of a damaged pack to water could result in shock,

fire, arc flash, serious injury, or death. Transport this unit in accordance with al applicable laws.

 \cdot DO NOT dispose of this unit. Recycling or disposal of lithium ion batteries requires specialized facilities.

 \cdot Only charge using the unit provided.

- **DO NOT** leave the battery unattended while charging.
- DO NOT handle the battery and electronics with wet hands.

• **DO NOT** drop the battery. Do not use the products battery if it is damaged. Damage to the battery may result in a fire.

• **DO NOT** connect the battery or any electronics while in the water. Assemble all items on shore in a dry environment.

Battery







- · Main power connector port
- · Data connector port
- · LED indicators
- · Blinking green when inactive (Indicates state of charge, no lights =<10%)
- \cdot Solid green when charging. (Indicates state of charge while charging)
- \cdot Blue when running systems check and connected to the drive train. Temperature Tape Strip
- \cdot Battery Serialization ID
- · Battery Warranty One year or 300 charge cycles , whichever comes first
- The average battery charging time is less than 2 hours for a ride time of 40-60 minutes.

• The battery has a battery management system that is continuously monitoring over one hundred parameters and can automatically regulate and disconnect if necessary.

Hand Controller

The hand controller comes with two replaceable AA batterles that will last for about 50 hours + of ride time.







Power On and Off button

The power button is above the screen. One click turns the controller on and off.



Home screen battery fully charged



Governor " set " button is directly below screen (+) & (-) buttons (pictured)



Pairing Hand Controller via Bluetooth

If the screen on the hand controller is indicating "no signal", the hand controller is not paired with the board if the board is turned off. Ensure that the board is on and pair the hand controller to the board by following these steps

- \cdot Confirm the receiver box is turned on.
- \cdot Turn off the hand controller.
- \cdot Press and hold the (-), (+) buttons simultaneously and turn on the hand controller.

• The hand controller screen will show a Bluetooth pairing logo with two directional arrows. If this screen does not appear,

turn off the hand controller and repeat the process above to enter into pairing mode.

 \cdot Press and hold he relay button on the electrical box for up to 4 seconds, the blue start up button will flash, and the home screen on the hand controller will show check mark on home screen.

Governor Mode

· The governor mode limits the maximum throttle output, which allows riding at reduced Speeds.

 \cdot To set the governor, make sure the hand controller is powered on and then press the " Set "

button just below the screen. Three black lighting bolt icons will appear on the screen.

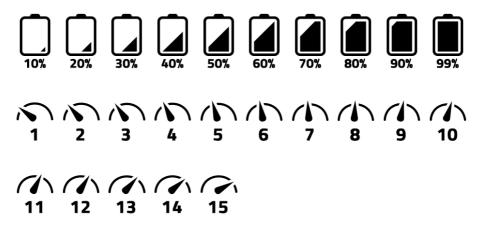
 \cdot Press the (+) or (-) button to select a power level, and confirm the action by hitting the " Set " button again

 \cdot One lighting bolt limits the throttle to 50%

 \cdot Two lighting bolts limits the throttle to 70%

 \cdot Three solid lighting bolts allows for full power

 \cdot The home screen will display the battery level and will indicate that the governor mode is active.





 \cdot The home screen of the hand controller displays the battery level of the main battery inside the board, indicating how much ride is remaining.

• Caution : The Pulseer will automatically reduce power and enter into a "limp mode" at a low battery level, indicating the need to return back to shore and the need to recharge the battery. Be aware of the the screen for low battery, hot batery, hot motor hot electrical contacts, low hand controller battery and other warnings.



Serialization

 \cdot The serial number of the Pulseer is located in the compartment hatch, on the left side of compartment.

- \cdot The serial number of the receiver box is located under the white phase connectors.
- \cdot The battery serial number is located near the batery handle.

Charging the Battery





- \cdot ldentify the main power connector port on the battery
- \cdot ldentify the data connector port and remove cap.
- \cdot ldentify the batteries charger main power connector and "cam" locking system

• When handling the battery, always lay it flat and handle with care. Have both the battery and the battery charger facing each other (male & female) to allow for an easier connection.





 \cdot ldentify the battery chargers main power connection and "cam" locking system , slide into the batteries main connector port

- \cdot Apply forward pressure into the battery and rotate the "cam" lock l clockwise
- Caution : Be careful to not force the connection , which can result in damaging the pins on the power connector panel of the battery.

 \cdot Plug the data connector into the data port , by matching the red dots on both connectors and make sure to feel the connector "click " into place.

• Caution : Be very careful with the 8 data pins of the data connector and ensure that they remain free of damage and corrosion. Take care of the data connectors!



 \cdot Plug the battery charger into a wall outlet AFTER both main power connector and data connector have been connected

Note : This is a high energy charger and should not share a power receptacle with other appliances . Make sure that the power source for charging can handle up to 1200 watts.

- The battery and charger will make an audible clicking noise as the connection has been made.
- \cdot The lightning bolt icon on the charger indicates that charging has begun.



 \cdot The green LED lights on the battery will indicate the charging progress.

 \cdot Charging is recommended in a cool and dry environment .

 \cdot Do not cover up the charger while in use . The aluminum heat sinks are designed to allow airflow and cooling of the charger.

 \cdot The charger fan will come on automatically if and when necessary . It's OK if the fan does not turn on while charging.

 \cdot The battery is fully charged when the lightning bolt icon turns off . Charging should take up to 2 hours .

• Note : It is not necessary to fully discharge the battery before putting it to charge.



Disconnecting the Battery

Once the battery is fully charged , disconnect the charger from the wall outlet, unplug the data connector, then unplug the main power connector by rotating the "cam" lock counterclockwise. **Note : After disconnecting the battery, the electrical pins of the power Connector are live until the green LEDs change from a solid state to blinking**





 \cdot Find the mast and the board.

• The top of the mast has a rubber seal on the surface with 3 phase connectors and one blue water tube with l connector.



• Next, locate the four threaded inserts on the bottom of the board. This is where the mast will connect.

Steady the mast and feed the cables through the port in the bottom of the board.
Pro Tip : Arrange the cables so there is a nice smooth curve, guiding the tips of the cables towards the front of the board.



• Next, use both hands to secure the mast and press down firmly as the rubber seal seats into position.

• While holding the mast in place with one hand , find the M8 screws and start threading them in by hand. Make sure all four M8 screws are threaded by hand before tightening with the 5mm hex key.





· Continue to hold the mast in place and tighten the bolts with the 5mm hex key.

• Tighten the M8 bolts firmly and cycle through each one at least twice to ensure a secure connection and seal. Be sure that all edges of the mast base are seated firmly against the bottom of the board.

Install the Wing



Remove the wing from the wing bag Install the wing to the mast by using the M6 screws.

After assembly, put the wing cover back on for protection.

Once the mast and the wing are securely installed, flip the board over and open the hatch.

Connect the Electronics



Open the compartment hatch by identifying the hatch compartment compression latches, pressing down on the top of the hatch, lift the latches up and rotate to open.

Caution : DO NOT adjust the tension on the latches adjusting a latch can break the waterproof seal!





Find the three phase connectors and the blue water tube that were fed into the board when connecting the mast.

Connect both open ends of the blue water tubing leaving from the mast to the electrical box .

Note : There is a distinct feeling and sound when the blue water cables connect. This is critical to keep the electrical box running cool. Water will not flow if the connectors are not properly mated.



Next, insert the phase connectors by matching the colors and pressing firmly.

Note : Apply a drop of ReelX to the phase connector electrical contacts.

The connection points are double sealed for water protection, so there might be slight resistance which guarantees a waterproof seal. Ensure that both o rings are fully inserted.

Caution : If the phase connectors are not fully connected and water enters the hatch compartment, it will result in an electrical shock.

Note : Plug red, green and yellow connectors into the right connection points. If a cable is put in the wrong port, the prop will spin in reverse.



Open the battery hatch in a clean area free from water or sand, and

place the fully charged battery inside with the stickers facing up using the rubber bumpers as a guide.

Push the battery firmly against the front wall of the compartment. Immediately secure the battery with the strap and tighten it so it can' t move during riding and setup.





Make sure the electrical box is turned off by viewing the "start" button on the left hand side. The button will be a solid blue ring when on , and no color when off.

Connect the power connector by sliding the cam lock slip over the pin;

apply forward pressure and twist the cam lock connector 90 degrees to engage.

Note : Use the ReelX to lubricate the rubber seals on the main power connector for a smooth fit. Note : Apply a drop of ReelX to the contacts inside the power connector.

Remove the protective cover from the data port on the battery and carefully plug in the data cable. Make sure to feel and hear the data connector " click " into place.

Caution : This data cable uses sensitive electrical contacts to relay critical information to the electronics box. It is important to keep this connector and its 8 pins clean and free of debris and salt water.

Take care of the data connector!



Once the electrical connections are made, make sure the propellor is clear of any debris. Press the power button one time to boot up the system. The power button on the electrical box will flash blue as it goes through its system check. It will turn solid blue when the startup is complete. The battery LED bar will also show blue indicating its connection to the system.

There will be an audible "click" inside the battery as the internal battery turns on. This is the internal battery contact closing l the circuit and applying voltage to the system.



After a few seconds, there will be a chime from the motor confirming the startup sequence of the motor.

Note : The startup procedure can take up to 12 seconds for a comprehensive system check. Lights on the battery wil turn from green to blue as it enters "startup" mode Note : It is important to be familiar with this startup sequence as it is how the rider can tell the Pulseer is ready to ride. Power on the hand controller by pressing the power button above the screen.

The Pulseer logo will appear followed by a battery icon which wil appear on the hand controller's screen confirming the hand controller and board are properly paired.



Note : The Pulseer must be turned on to confirm connection and activate functions of the hand controller. Note : If the hand controller screen indicates " no signal " then the board and hand controller have become disconnected. Please review the trouble shooting portion of the manual.

Once pairing has been confirmed, make sure the propeller is free and clear, and give the controller a small amount of throttle to spin the propelor.

Note : The propellor should be rotating counter clockwise when facing the front of the board. If it is not, check the phase connector plugs to make sure the colors match.

Once the propeller is confirmed to be spinning counter - clockwise, press the power button on the hand controller to turn it off.

Caution : Do no transport the board with the hand controller turned on. Always turn off the hand controller in any instance where the are NOT riding the Pulseer.

Ensure the board compartment is sealed.

Finally, inspect the board compartment seals to ensure that it is free from damage and debris. Carefully close the lid and fasten the latches

Riding

Please watch the instructional videos to learn how to ride. Remember always ride safely and respectfully. Always make sure the hand controller is off when carrying the Pulseer.

Make sure to establish a comfortable method for carrying the Pulseer or get help from a friend. Get accustomed to the trigger and the power settings.

Caution : Do not squeeze the trigger fully or quickly.

Beginners should use the governor feature in the hand controller.

Select governor setting one and begin learning the basics and getting comfortable handling the Pulseer.



Learning Progression

• One hand holding the controller, the other hand holding the nose of the board. Remember, keep the nose out of the water, begin applying the throttle by pressing the trigger and lean forward.

 \cdot Start in the prone position on the board, make some turns, and get used to the throttle actuation.

Notice : At a higher speed around 10 miles per hour the board becomes more stable

 \cdot Once comfortable in the prone, transition to the kneeling position. Keep a consistent throttle and make a few turns and get comfortable.

 \cdot Maintain consistent throttle and slowly transition from kneeling to standing.

• Adopt a wide stance square with the front of the board for additional stability. It's critical to shift the rider's weight forward as the board accelerates. This is true for any riding position prone, kneeling, or standing.

 \cdot Do not rush foiling - this process takes practice and wiping out is common to the learning process.

 \cdot While the throttle effects speed, weight distribution controls the Pulseer's elevation.

• Practice doing "Touch and Go's" by easing onto the Pulseer and shifting weight back while at sufficient speed, and then slightly letting off the throttle while shifting weight forward to bring the board back down to the surface of the water.

• Bailing is a critical part of learning to foil. There's a big difference between purposefully bailing out which puts distance between the rider and the Pulseer and uncontrollably falling which can lead to injury.

 \cdot When losing control of the board , use the last bit of balance to bail out and create distance between the rider and the board.

Warning : Always bail to the sides or back of the Pulseer, NEVER towards the front.

• Always turn off the hand controller while swimming back to the board to avoid pressing the trigger. Once safely back on the board, turn the hand controller back on.

 \cdot Always keep al body parts clear from the propeller. Never open the hatch compartment when in the water.

This practice takes times to master, so take time to learn and have fun and be safe.

Powering down

 \cdot As soon as the ride is over, turn off the hand controller by pressing the top power button.

• Once the Pulseer is completely out of the water and on land, open the hatch and simply push the power button to shut the Pulseer off. The power button will go from blue to flashing blue to off. Note : It's normal for some water to get into the hatch when opening. Remember, all of these components are completely waterproof.

 \cdot Disconnect the data cable by pulling it from the metal housing.

 \cdot Disconnect the main power connector by twisting the " cam " lock counter clockwise and release the connection. \cdot Unbuckle the strap holding the battery in place and remove the battery.



What are the precautions when using an efoil?

1. Look for an open water area. Please ensure the water depth is more than meters. Do not use this product in crowded water areas. Please wear life jackets, helmets and other protective equipment before entering the water

2. Check whether the battery is sufficient before surfing

3. When falling into the water, remember to fall down along the side in the direction of the surfboard. After falling into the water, do not panic. Release the trigger of the remote control and keep your hands and feet away from the propeller

4. Don't surf near the moving ship

What should I pay attention to in the daily storage of efoil batteries?

1. After each use, please take the battery out of the surfboard and put it in a safe storage environment

2. The ideal storage temperature range of the battery is 0-25 degrees, which should be kept away from the fire source and high temperature

3. The environment where the battery is stored should be kept cool and dry. Do not expose to the sun or rain

4. For batteries that need long-term storage (more than 30 days), please charge or discharge them to $45\% \sim 50\%$ of the electricity to keep the battery active

5. During the storage period, the battery shall be charged and maintained every 3 months, and the charged power shall reach 45% ~ 50%

What should I pay attention to when charging the efoil battery?

1. The special charger provided by the official must be used for charging. We will not be responsible for any consequences caused by charging with an unofficial charger

2. When charging, please place the charger and battery in a stable, dry place without inflammables and explosives

3. Do not charge the damaged battery

4. Do not charge under unattended condition

5. The charging ambient temperature range is 5 \sim 40 $^{\circ}\mathrm{C}$

6. It is forbidden to charge the battery immediately after using Jiedong

After using Jiedong, the battery is in a high temperature state. It is recommended to continue charging after cooling to room temperature

7. Charge the battery at rest for a long time. After charging, please disconnect the charger from the battery



What are the precautions when using the efoil battery?

- 1. Handle with care. Place the battery on a flat surface to avoid damage to the battery shell
- 2. Do not disassemble, refit or change this battery
- 3. Avoid collision, impact or physical damage
- 4. Please check the battery before use:
- a. Loose connector
- b. Shell cracking
- c. Deformation
- d. Acid odor from the battery
- e. Extremely high temperature during charging (60 degrees or higher)

5. The static use of wires or other metal conductive materials causes short circuit between the positive and negative electrodes of the battery

6. Do not install the battery in the water. Please complete the installation of all components in a dry and dry environment on the shore

7. Do not plug or unplug the battery when the battery power is on, otherwise the power interface may be damaged. Before installing or unplugging the battery, please keep the power off.

8. The ambient temperature range of the battery is 0-40 degrees. Too high a temperature may cause ignition or even explosion of the battery. If the temperature is too low (below - 10 °C), the battery performance will be seriously reduced and cannot meet the use requirements.

9. After the battery is turned on, there is a high voltage between the electrodes. Do not touch the battery connector directly.

Maintenance

What are the cleaning and maintenance actions of the efoil after use every day?

The cleaning and curing actions are as follows:

- 1. Rinse every part of the plate with fresh water
- 2. Fresh water flushing battery, battery connector and propeller
- 3. Make sure to flush to each part
- 4. After washing, fully dry the board and battery

5. The battery connector terminal shall be dried with a cold fan. Note: high pressure water gun shall not be used for fresh water flushing; Carry out the cleaning action after launching and using the plate every day



What are the regular deep maintenance actions?

1. Regularly clean the rust and crystal on the power module and the battery connector. The steps are as follows:

a. Rinse the connector with fresh water for 2-3 minutes, and brush the connector with a brush. The surface of each terminal of the connector is free of white scale and metal corrosion green spots
b. After the connector is dried, spray the terminal with WD-40 for further cleaning. Note:
Each terminal of the battery connector shall be cleaned and maintained until

If there is rust and crystal on the power module and battery connector, please clean it in time 2. Regularly apply rust remover to the battery lock, all external screws and battery connectors to prevent corrosion

3. After the surfboard is used for $60 \sim 100$ times, the sealing ring on the power module terminal connector needs to be replaced

Safety warning and Disclaimer

This product is a powerful water sports equipment, not a toy. It is strictly prohibited to use by people under 16 years old.

Please read this manual carefully before using this product, and do not operate until you are familiar with the functions of the product. To operate this product

If you have any questions, please contact our technical support or authorized agent. Improper operation may cause product damage and property loss, or even cause serious injury or death to oneself or others.

This product can only be used safely after a period of practice, and it needs to have some basic knowledge and strong safety awareness. The user will be fully responsible for all behaviors of using this product, and the company will not bear any responsibility for the consequences caused by violating this manual or other relevant policies or guidelines.

Please ensure that you use this product for a reasonable and legitimate purpose. In some countries and regions, a license may be required to use this product. During the use of this product, the user shall bear the legal responsibility for any improper behavior in violation of local laws, regulations, public order or public safety caused by the user himself.

We do not provide any technical support and safety commitment for the following situations:

1. Units or individuals who obtain this product through informal agents or abnormal channels;

2. Unauthorized modification, commissioning and replacement of parts.

Once you use this product, you shall be deemed to have understood, recognized and accepted all the terms and contents of this manual. The user promises to be responsible for his own behavior and all consequences arising therefrom. The company has the right to update, revise or terminate this user manual and the above-mentioned relevant policies or guidelines. The company will not notify you otherwise. Please visit the company's website www.pulseersport.com to get the latest version.



Operator requirements

1. This product is a water sports equipment with full power, not a toy. It is strictly prohibited to use it by people under 16 years old;

2. People who are unable to engage in intense physical activities due to illness, extremely tired people and pregnant women are not allowed to control this product;

3. The operator shall not use this product under the condition of drug abuse, alcohol consumption, drug paralysis, dizziness or other physical discomfort or poor mental state;

4. Be sure to wear certified life jackets and helmets when using this product;

5. Please carefully read all instructions and warnings in this manual before using this product;

6. The user shall understand and abide by local laws and regulations related to the use of this product, abide by public order, ensure public safety, and be responsible for all his / her actions.

Operating environment requirements

1. When using this product, ensure that the water depth exceeds 1.5m;

2. Foreign matters may entangle the propeller, causing damage to the propeller and injury to personnel. Therefore, when using this product, it is necessary to ensure that there are no aquatic plants or other floating objects nearby;

3. It is strictly prohibited to use this product in the water area where there are underwater obstacles such as rocks, branches, dams, buoys, fishing nets, etc. the impact will cause serious damage or even death to the operator;

4. It is strictly prohibited to use this product in bad weather and at night, including but not limited to windy, rainy, foggy, big wave, night and other weather affecting the operator's sight or control safety;

5. Please do not use this product in the water near other people in the water, including but not limited to swimming, surfing, diving and other people;

6. Please do not use this product in the waters close to water vehicles, including but not limited to motorboats, boats, etc;

7. Please do not use this product in the waters with special marks, including but not limited to diving marks, operation marks, shark marks, environmental protection marks and other safety marks.

Pre use inspection

1. Ensure that all products and components used are produced by pulseer company, and ensure that all components are in good working condition. Do not use damaged products;

2. Please ensure that the board battery and remote controller are fully charged before using this product;

3. Please ensure that the operator has read this manual before using this product or handing it over to others. You are responsible for ensuring the safety of the new operator.



Operation requirements

 It is strictly prohibited to approach the rotating propeller with fingers, toes and other body parts, and do not repair the propeller in water. Touching the rotating propeller may cause serious injury;
 Keep clothes and hair away from the propeller. If clothes or hair are entangled in the propeller, it may cause casualties;

3. Do not wear loose and tied clothes to prevent the edge or belt of clothes from winding into the propeller;

4. During navigation, please always pay attention to the surroundings, especially swimmers, boats, obstacles, etc. in the movement direction of this product. Collision may cause serious injury or death;5. During the navigation, please always keep a controllable speed to avoid obstacles in the water, such as buoys or other vessels;

6. When the operator falls into the water, please release the accelerator trigger of the remote control immediately, which will cut off the power of the propeller and prevent the product from hitting other swimmers or boats;

7. This product can only be controlled by one person. If two or more people use it at the same time, it will cause safety accidents.









* Specifications and product models may change without further notice.

