

**User Guide** 

Version from: June 2023

For the latest version visit: http://www.sifly.global/support

## Introduction

Congratulations on the purchase of your new SiFly eFoil! The eFoil is an innovative battery powered electric surfboard that allows users to fly above water silently and emissions-free. Like all watercraft, the SiFly eFoil requires riders to take specific precautions during its use. For this reason, we urge you to read through the User Manual carefully before operating – in particular, the safety information, the instructions for assembly, and the set-up guide.

It is important to note that SiFly AI Ltd. shall not bear any legal responsibility and liability against damage to the user, their property or third parties due to use of its products. By handling a SiFly product, you agree you are doing so at your own risk.

Get ready to fly into a fascinating new world. We wish you many hours of fun with SiFly!

# **Table of Contents**

Introduction	1
Table of Contents	2
1. Safety and Disclaimer 1.1. Warning 1.2. Proper Use 1.3. Riding Safely 1.4. SiFly PowerCell LR 1.4.1. Charging 1.4.2. Storage 1.4.3. Transportation 1.4.4. Disposal	4 4 5 5 6 7 8 8
<ul><li>2. Warranty Conditions</li><li>2.1. Warranty coverage period</li><li>2.2. 14-day Free Return policy</li><li>2.3. NOT covered by the SiFly warranty policy</li><li>2.4. How will SiFly honor your warranty?</li></ul>	10 10 11 11 13
3. Service	15
4. Included in delivery	16
5. Getting Started 5.1. Unpacking the battery 5.2. Charging the Battery 5.2.1. Recovery Charging Mode 5.3. How to Assemble your eFoil 5.3.1. Inserting the mast 5.3.2. Installing the wings 5.3.3. Installing the battery	18 18 20 21 21 21
6. How to use the Remote controller	24

6.1. Charging	24
6.2. Operation of the Remote controller	24
6.3. Pairing	25
6.4. Riding	27
6.5. Backlight	28
6.6. Calibration	30
7. Mobile app	32
7.1. Creating an account	32
7.2. Adding your device	34
7.2.1. Activating your device	35
7.2.2. Device settings	36
7.3. Sessions	41
7.4. Timed sessions for boards in business accounts	42
7.5. My SiFly Cloud WebApp	44
8. How to eFoil	50
8.1. Get to know your board	50
8.2. Foiling on all fours	51
8.3. Foiling upright on your knees	52
8.4. Stand up on the board	53
8.5. Foiling upright	53
9. Maintenance and Storage	55
10. Troubleshooting	56
11. Technical specifications	58
11.1. Boards	58
11.2. Hydrofoils	58
11.3. Battery	59
12. EC - Declaration of Conformity	60
13. Imprint	61

## 1. Safety and Disclaimer

All information within this guide is subject to change at the discretion of SiFly. For the latest product details and our complete USER MANUAL visit our website www.sifly.global.

## 1.1 Warning

All SiFly products conform with the current safety standards and are especially designed to operate safely.

Nevertheless, always wear an impact vest and helmet and ride far away from swimmers and other watercraft. Never ride further away from shore than you can swim back and always let somebody know of your plans.

Children under 12 years of age should ride under adult supervision.

Do not use incompatible components or alter this product in any way different from the instructions and documents provided by SiFly.

Use of the SiFly eFoil by pregnant women is not permitted.

Never use the SiFly eFoil while under the influence of alcohol, medication or drugs.

Use the SiFly eFoil only if you are completely healthy.

It may be necessary to obtain a license to use a SiFly eFoil or register it in certain areas. Get informed about the local regulations and legislations in your region before using it.

## 1.2. Proper Use

Generally, the eFoil can be used in areas where the use of watercraft powered by combustion engines is not permitted. However, you should not ride wherever the use of watercraft or electric-powered watercraft is prohibited by local laws, community regulations, nature conservation laws or other provisions.

Before using the board, always inquire about the local regulations which may be in force in the area where you wish to ride. SiFly does not assume any responsibility for obtaining such information.

## 1.3. Riding Safely

Take your time to learn how to use the SiFly eFoil properly. We recommend learning to eFoil with an instructor or at an authorized SiFly school. If you don't have access to any of those, please, follow the steps in our How to eFoil video to ensure you learn the basics safely.

Always climb on the board from the side and make sure you keep your hands and feet away from the sharp edges of the wings.

Only attempt difficult manoeuvres such as high speed turns after you have mastered the basics.

Limit your speed so that you are in complete control of the SiFly eFoil at all times. Gradually increase the power while operating the craft so that you can familiarise yourself with the handling of the SiFly eFoil. It is important that you are in control of the board at all times.

The SiFly eFoil is not equipped with lights and, for this reason, is not suitable for riding at night.

Do not ride the craft after sunset or before sunrise.

Do not operate the SiFly eFoil in bad weather or impaired visibility. Never use the SiFly eFoil during a thunderstorm!

The SiFly eFoil should be used in sheltered waters such as bays, lakes, rivers and canals.

Make sure you are accompanied by others or under the constant supervision of another person who can provide immediate assistance in case of emergency. Arrange to have a boat accompany you if you wish to operate the craft further away from shore.

Do not ride in shallow waters with depth of less than 1 m, crowded areas, rocky banks and in extreme weather conditions. Be very careful of rocky bottoms, reefs and stones. Stay away from the immediate shore, and never attempt to steer the SiFly eFoil onto the beach, shore or onto land of any kind.

Stay away from aquatic plants and floating objects such as pieces of string, rope, plastic or wood to prevent the motor, propellor, wing and stabiliser from being damaged or their function inhibited.

Make sure that no sand, dirt, stones, rope or other foreign objects get into the propellor and duct. Never remove foreign objects from the propellor and/or duct while the board is switched on.

Always supervise children to ensure that they do not attempt to reach into the duct. The rotating propellor may cause injury!

## 1.4. SiFly PowerCell LR

The battery casing of the PowerCell is durable and completely watertight. Despite that, never submerge the battery in water. If you have subjected it to

salty water or debris, turn it off by removing the magnet key, wait for the LED to switch off and gently clean it with a damp cloth. Never open the battery casing. Never drop or puncture. Never burn the battery.

#### 1.4.1. Charging

Always charge the SiFly PowerCell LR under supervision and follow the instructions contained in this User Manual.

Only use chargers supplied by SiFly. Third party chargers may not be compatible with your battery and could damage it.

Never use the charger if the connectors are damaged.

Ensure that there is no dried salt, water or debris on the contacts of the connection port or connector. Salt deposits can inhibit the flow of electricity during charging and cause electrical contacts to overheat, resulting in irreparable damage to the contacts or even fires affecting the contacts or cable.

While charging, do not place any objects on the battery or charger to ensure that heat created during the charging process is dissipated properly. Ensure that air can circulate freely.

Carry out charging in a place in the shade that is dry, cool and well ventilated.

Caution! The charger and connector may get hot while charging. Let the charger and connectors cool down before you attempt to touch them.

Always disconnect the mains plug from the mains before you touch the charger or connector after charging.

#### 1.4.2. Storage

Never expose the SiFly PowerCell LR to high temperatures (max.  $60 \, ^{\circ}\text{C}$  /  $140 \, ^{\circ}\text{F}$ ) caused by external heat sources, direct sunlight or by storage inside a closed motor vehicle.

Store the SiFly PowerCell LR in a place that is cool, dry, well ventilated and frostproof, and ensure that it is protected from irreparable total discharge.

Never store the battery at temperatures below 0  $^{\circ}$ C / 32  $^{\circ}$ F. Failure to do so may damage the cells and reduce the battery life.

#### 1.4.3. Transportation

Never transport a fully charged SiFly PowerCell LR by aircraft or over long distances. The battery should only be partially charged during transport (maximum 30% capacity).

The PowerCell LR is UN 3480 certified and is considered a dangerous good. Always revert to a shipping specialist when transporting a SiFly battery. You will be required to present a Material Safety Data Sheet (MSDS) prior to transportation.

For further information, please contact SiFly or your local distributor.

#### 1.4.4. Disposal

Never discard the battery or battery cells as household waste or into a fire or water.

Used batteries (batteries which are damaged or no longer provide adequate power) are to be disposed of in accordance with statutory regulations in order to protect the environment and health.

End users are obliged by law to return used batteries.

Powercell LR batteries which are used up or damaged may be returned free of charge to SiFly for proper disposal and recycling or at other battery recycling sites.

For further information on Disposal, please see the battery MSDS.

# 2. Warranty Conditions

Sifly or any authorized reseller warrants that the products sold are free from manufacturing defects and damages for the coverage period stated below.

To file a claim, you should contact our support team at support@sifly.global.

SiFly might request pictures, videos or any other files that would help process the warranty claim. You will have to present the original invoice for the purchase of the product.

SiFly will cover the reasonable costs for shipping a defect product to and from the nearest service center. If after evaluation of the claim a fault is found due to misuse, SiFly will ask you to pay the shipping cost towards the service center and back as well as the repair costs, if they are accepted.

You can make a Warranty claim if you are the original or secondary owner of the product. The warranty is transferable. Even if you are not the original owner and have not purchased directly from us or from an authorized SiFly reseller you are entitled to make use of the SiFly Warranty, if you are in possession of the original invoice for the purchase.

## 2.1. Warranty coverage period

#### Within EU:

The warranty of the SiFly board is valid for 2 years in case of a manufacturing defect.

The warranty of the battery is valid for 2 years or 300 battery cycles – whichever event occurs first.

The warranty of the SiFly eFoil is valid for 2 years or 300 hours of motor

function – whichever event occurs first.

The wings, remote controller and charger are warranted for the period of 2 years.

#### **Outside of EU:**

The warranty of the SiFly board is valid for 1 year in case of a manufacturing defect.

The warranty of the battery is valid for 1 year or 300 battery cycles – whichever event occurs first.

The warranty service of the SiFly eFoil is valid for 1 year or 300 hours of motor function – whichever event occurs first.

The wings, remote controller and charger are warranted for the period of 1 year.

Note: A battery cycle involves consecutive or multiple partial discharges of a total of 100% capacity.

## 2.2. 14-day Free Return policy

If you have purchased a Sifly product in the EU for non-commercial use, you have the right to return it within 14 days of delivery, provided that the product is in the original package and is in near perfect condition as expected. The shipping costs are covered by the customer. Sifly will reimburse the purchase within 30 days.

## 2.3. NOT covered by the SiFly warranty policy

The following events are not covered by the warranty:

Damage caused by normal wear and tear

Punctures and/or previously repaired damage to the board

Damage due to excessive heat exposure including direct sunlight or extended amount of time left in a car on a hot day.

Damage due to improper care, usage, storage, or operation in unsafe locations, and/or use in any other unsafe conditions not in accordance with the user manual.

Damage due to abuse, misuse, accidents, or collisions of the eFoil against hard objects or in shallow waters.

Damages due to climbing on and off the eFoil while it is not floating and is sitting on the bottom in shallow waters or on solid ground.

Damage due to failure to properly maintain the SiFly eFoil and its components in accordance with the instructions found within the User manual.

Damages due to disassembling the motor, ESC, Board controller units, the remote controller, charger or battery.

Damages due to unauthorized modifications in the eFoil or use of 3rd party components, including, but not limited to, modification of its internal circuitry, components, battery, battery cells, connectors, connector cables, etc.

Damages due to unauthorized repairs and maintenance.

Damage or defects caused by usage of the SiFly eFoil after a warranty issue is reported, or when a customer should have reasonably made a warranty claim.

Personal injury or death, property damage or financial loss, however caused.

Damage caused by anything other than manufacturing defects.

Damage caused by failure to install a critical firmware update, when prompted to do so by the mobile app, and using the product.

Damage in the battery casing or internal components due to sustained physical impact, drop or puncture.

Exposure to abnormal conditions, including prolonged storage at temperatures beyond the recommended range. For additional information see *Maintenance* and *Storage*.

Usage of unauthorized 3rd party parts and modifications, including 3rd party chargers, connectors, and connector cables.

Usage of the battery for unauthorized purposes and with unauthorized devices.

Unauthorized disassembly of the battery.

Seals leading to ingression of water in the battery compartment are not a major concern and are not a reason for a warranty claim.

Note: Firmware updates can be critical or recommended. Critical updates must be installed when pushed to the eFoil for the warranty to be valid.

## 2.4. How will SiFly honor your warranty?

When a Warranty claim for a defect part is accepted, SiFly will take one of the following actions within 60 days:

- 1. Send you a replacement part;
- 2. Repair the defective part; or
- 3. Pay for the cost of repairing the part or supplying the replacement part

by the customer.

All information within this guide is subject to change at the discretion of SiFly. For the latest product details and our complete Warranty Conditions visit our website www.sifly.global

## 3. Service

For service or repairs, please contact SiFly by e-mail at **hello@sifly.global** (Mon-Fri, 9:00 a.m. to 6:00 p.m. CET, except on public holidays) or your local dealer.

Please have the following information ready:

- 1. Model name
- 2. Board serial number
- 3. Hydrofoil serial number
- 4. SiFly PowerCell LR serial number
- 5. Service / error messages (if present)
- 6. Exact description of the malfunction or damage

A specialist will assist you in identifying the cause of the error and take further action if necessary.

Never open the electronics box or motor by yourself. Repairs and maintenance work on the SiFly that go beyond the procedures described in this User Guide may only be carried out by an authorised technician.

Never alter or modify any part of the SiFly eFoil, PowerCell LR battery, Remote control or charger. If you detect any damage to the SiFly eFoil, immediately stop operating the device and remove the board from water to prevent further damage. Contact SiFly or your local distributor immediately.

Only use replacement parts and accessories supplied by SiFly.

If subjected to damage, the composite construction boards can be repaired by your local surfboard repair specialist. The inflatable models may be repaired using the included repair kit.

Service 15

# 4. Included in Delivery

The following equipment is included in the standard delivery of the SiFly eFoil:

#### **Box 1: SiFly Board**

SiFly E / R / S Board
SiFly E / R / S Board Bag
or
SiFly Rider+ / Rider Board
SiFly Rider+ / Rider Board Bag\*
or
SiFly Lite Board
SiFly Lite Board
Bag
Hard Central Unit
Air Pump

#### Box 2: SiFly PowerCell LR Rechargeable Battery

SiFly Powercell LR Battery
SiFly Powercell LR Transportation Bag

#### Box 3: Hydrofoil, Wings, RC set and Charger

Hydrofoil Unit: 55 cm or 75 cm Hydrofoil Unit Transportation Bag\*

SiFly PowerCell LR Smart Charger

Wing(s): Cruiser 1900 / Cruiser 1300 / Sport 700

Stabiliser(s): CR 340 / CR300 / SP240

Propeller Guard Cap

RC set:

Remote Controller

RC Wireless Charger

Charging Cable with Adapter

#### Screws:

Wings	Front Screw	Rear Screws
Cruiser 1900	1 x M6x40	2 x M6x35
Cruiser 1300	1 x M6x35	2 x M6x30
Sport 700	1 x M6x30	2 x M6x25
CR340/CR300/SP240	1 x M6x20	1 x M6x20

Foil	Screws
Mast plate	4 x M6x25

#### Toolkit:

Hex Key

Battery magnetic key

TefGel

Dielectric Gel

Plastic Shims for Stabiliser

Front Wing Plastic Pad

#### User Manual

Check to make sure that all components have been included in delivery. Should this not be the case, please contact SiFly Al Ltd. immediately.

<sup>\*</sup>Depending on the order configuration

# 5. Getting Started

## 5.1. Unpacking the battery

Take the PowerCell LR rechargeable battery and the battery charger out of the packaging, and place them on a dry surface. Do not throw away the packaging. It can be used later (for example, when sending the device in for service).

The PowerCell LR is delivered in a partially charged state. To avoid total discharge, you should charge the battery immediately after delivery. Use only the charger supplied by SiFly. Charge the battery after each use and during longer periods of storage.

## 5.2. Charging the Battery

For your safety and convenience, we highly recommend watching our step-by-step video guide to ensure the correct charging of your SiFly PowerCell LR.



To charge the PowerCell LR, proceed in the following steps:

- 1. Place the battery and charger on a flat dry surface that will not damage it.
- 2. Dry the area around the connection port using a soft, clean cloth.
- 3. Check that the insides of the connection ports are perfectly clean and dry.
- 4. Check that each of the two connectors of the battery charger are perfectly clean and dry.
- 5. Attach the black power cable by pushing the plug connector onto the black socket connector of the battery until you hear a click. The positive (red) connector has a unique key so that it can't be attached to the wrong terminal. Align it sideways to the battery with its top pointing outwards and push it in until you hear a click.

Note: To remove the connector plug, push the little button on its side and pull it out gently.

6. Once the magnet is placed on the battery, it is activated. The LED will blink in green to show the current state of charge. Each blink of the LED accounts for 20% of capacity. 1 blink – 0-20%, 2 blinks – 21-40%, 3 blinks – 41-60%, 4 blinks – 61-80%, 5 blinks – 81-96%, solid green – 96-100%. The state of charge percentage is an algorithmically calculated value, that is calibrated with the battery's usage. It is normal for the battery to sometimes finish charging a few points bellow 100%.

While charging, the battery's LED will blink in blue colour between each capacity reading. Use the Sifly APP to view detailed information on the battery's charge and temperature.

Note: For Firmware version older than 2.2-365: When the battery capacity is between 0-20%, the LED will flash RED. Between 16%-30%, the LED will flash YELLOW. Between 31%-99%, the LED will flash GREEN. When the battery is fully charged, the LED will remain solid GREEN. The current software version of the device is visible under the "Specifications" tab in the SiFly App.

7. Once the battery is charged up, its LED will show solid green and the charger's fan will stop spinning. Remove the magnet key from the battery, then unplug the charger from the socket and finally pull the connectors from the connection ports on the battery. Never attempt to remove the connectors by twisting or pulling on the cable. Always hold on to the base of the connectors in hand.

**Caution!** The charger and connectors may heat up while charging. After you have finished charging, let the charger and connectors cool down before you touch them.

**Caution!** When not in use for prolonged times (longer then 3 weeks) the battery should be charged between 70% and 30%. Storage at capacity outside of this range may lead to faster battery cell degradation and reduced performance. Always check up on your battery at least once a month, to make sure it is still in the healthy storage range.

Note: The Sifly Powercell is the only battery in the industry charged by a smart charger. The battery communicates with charger and dynamically adjusts the charging current depending on various parameters like voltage, temperature, age, to ensure the quickest and healthiest charging process. It is normal for the charger to sometimes stop spinning its fan and continue charging later.

Note: The Sifly PowerCell features an intelligent Smart Battery Management System that connects to the MySifly cloud server and to your mobile phone. In the Mobile App you can always check the current capacity, temperature and health state of you battery. If the BMS has reported an error, you will see a message with the error code and short tip on how to handle the error. If you need help, don't hesitate to contact our support team.

#### 5.2.1. Recovery Charging Mode

Connect your charger to the Mobile app and use the Recovery Charging Mode from the list of options to safely raise the voltage back to safety. You should keep your phone with the app open



next to the charger while doing so. A few minutes should be enough to be able to switch to the normal charging procedure.

For more information on how to update your battery, check the Mobile App – Device Update section.

## 5.3. How to Assemble your eFoil

For your safety and in order to maximize your eFoiling experience, make sure you watch our step-by-step guide to correctly assemble your eFoil.



#### 5.3.1. Inserting the mast

- 1. Lay the board upside down on its board bag or a soft surface. Make sure that there are no debris or sand on its bottom and in the cable tube.
- 2. Use the provided teflon gel and apply it in the stainless steel inserts in the board to prevent oxidation.
- 3. Lubricate the O-ring at the mast plate with the provided dielectric gel.
- 4. Carefully run the connectors through the cable hole one by one, ensuring that no cable is stuck and compressed in the process.
- 5. Gently push the hydrofoil in its place with a slight twisting motion.
- 6. Tighten it diagonally with the provided screws: 4x M6x25.

Foil	Screws
Mast plate	4 x M6x25

#### 5.3.2. Installing the wings

- 1. Apply some teflon gel to the 5 threaded inserts holding the wings in place.
- 2. Tighten the wings with the corresponding screws.

Wings	Front Screw	Rear Screws
Cruiser 1900	1 x M6x40	2 x M6x35
Cruiser 1300	1 x M6x35	2 x M6x30
Sport 700	1 x M6x30	2 x M6x25
CR340/CR300/SP240	1 x M6x20	1 x M6x20

**Caution!** Always use the correct screw size. Using longer screws can damage your fuselage!

Note: To adjust the riding balance of the foil, you can use the provided plastic shims. Positive numbers will increase the front foot pressure and will generally make the foil more stable. Negative numbers will have an opposite effect and allow for greater speed and manoeuvrability.

If you want to remove the prop guard, you have to remove the propellor first.

- 1. Unscrew the safety nut (M8), gently pull the propellor out of the shaft and remove the pin.
- 2. Unscrew the screws (M4x25) holding the propellor guard and replace it with the alternative cap.
- 3. Install the propellor by following the steps in reverse order.

Note: It is a good idea to carry the eFoil and battery apart closer to the water before assembling them. If you are alone, you can grab the handle on the board's rail with one hand and hold the mast or fuselage with the other. Alternatively, you can hold the top of the hydrofoil at the mast with one hand over your shoulder.

Caution! DO NOT hold or carry the eFoil by the stabiliser rod!

#### 5.3.3. Installing the battery

- 1. Turn the eFoil upright, making sure that you don't put pressure on the tips of the wings while doing so.
- 2. Open the lid of the battery compartment.

Note: Make sure that the compartment and the battery are both clean and dry. The rubber gasket and lid surface should be free from sand and debris to prevent water ingression.

3. Lubricate all connectors with the provided dielectric gel to avoid oxidation.

4. Locate the communication connectors. Align the arrows on both ends and push them together. You will hear a clicking sound when the connectors are locked. To detach them, rotate the grey ring in the shown direction and pull them apart. Not all models feature a communication cable.

Note: If you are not going to disassemble the efoil between sessions, do not detach the communication connector to prevent water ingression. If you ever get the pins wet, wait until they are completely dry before connecting them to prevent pin oxidation.

- 5. Carefully place the battery into its compartment and lock it by rotating the knob 90 degrees
- 6. Attach the black power cable by pushing the plug connector onto the black socket connector of the battery until you hear a click. The positive (red) connector has a unique key so that it can't be attached to the wrong terminal. Align it sideways to the battery with its top pointing outwards and push it in.

Note: To remove the connector plug, push the little button on its side and pull it out gently.

7. Close the lid and lock it in place with the latches. The magnet incorporated in the lid will activate the battery and that will turn on the system. Once you hear the beeping tone from the motor, your eFoil is ready to ride.

**Caution!** Never spin the propellor for more than approx. 2 seconds out of the water! The seals of the motor and the hard-coated motor shaft are designed exclusively for use in the water. The generated heat can cause irreparable damage to the water seals and compromise the motor.

Note: Use the mobile app for Android and iOS to pair the remote control with your board for the first time. For further information, see Mobile App.

# 6. How to Use the SiFly Remote Controller

## 6.1. Charging

The Remote controller is charged wirelessly. To charge it, connect the supplied Wireless charging pad with the provided cable and adapter. Simply place the Remote controller on the pad and it will start charging. It will turn on automatically and the battery indicator on the top left corner of the display will show the battery state.



Note: After 5 minutes of no user input or motion detection, the display will shut down to preserve power, but the charging will continue.

## 6.2. Operation of the Remote Controller

- 1. To turn on the Remote controller (RC), press and hold the "-" and "F" buttons for 4 seconds.
- 2. To turn it off, press and hold the "-" and "F" buttons for 7 seconds.

Note: The SiFly RC is equipped with an auto-power-off feature that will turn it off if there is no user input or motion detected for 5 minutes.

Note: When on, the Remote controller is in disarmed mode (locked icon on the display). This feature is a safety measure to prevent accidental propellor spinning while swimming and climbing on the board.

3. To arm the motor, press the "X" button, followed by a press of the "F" button within 1 sec. That opens a 5-second window within which you can apply the throttle. If you don't, it will disarm again.

## 6.3. Pairing

The Remote controller can only be paired to one board at a time. For your convenience, you can also watch our step by step guide how to pair your Remote Controller.



Go into the Menu and choose the Pair option. While the RC is in disarmed mode, you can access the menu by long pressing the "+" button (hold for 3 sec) and then long pressing the "F" button (hold for 3 sec). Use the "-" and "+" buttons to navigate up and down the list, "X" to go back and "F" to confirm.

#### **OLDER FIRMWARE VERSIONS:**

Version v2.0-273 or lower: While the RC is in disarmed mode, you can access the menu by long pressing the "F" button (hold for 3 sec). Use the "-" and "+" buttons to navigate up and down the list, "X" to go back and "F" to confirm. The current software version of the device is visible under the "Specifications" tab in the SiFly App.

- 2. Open the SiFly Mobile app
- 3. Select the board from the list of devices that you like to pair it with.

Note: The board has to be added prior to pairing the remote (see Mobile app).

- 4. Click on the "Pair Remote" tab.
- 5. Click on the RC found on the list of devices in range.
- 6. Success! Now your RC is paired to the desired board.

Note: If you fall off the board and the RC submerges in water, it is possible that the connection with the board may be lost. You can identify this by observing the message on the screen and the absence of the battery percentage reading in the RC's status bar. Once you get back up on the board, the RC will automatically reconnect with the board within a few seconds. During the reconnection period, you won't be able to unlock the RC. The riding screen can only be accessed when the RC is actively connected to the board.



**Devices** Paired devices 4352727 BGT Battery 2 ☐ 5% 』 54°C

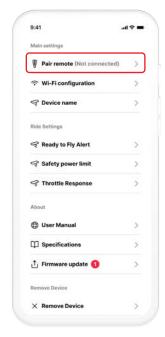


Step 1: Select Pair from Menu

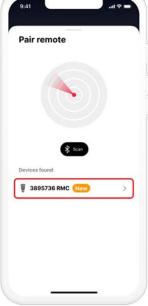
Step 2: Open the Mobile App

Pair remote Devices found ₩ 3895736 RMC (New)

Step 3: Select Device



Step 4: Press Pair Remote



Step 4: Scan & Select Remote



Step 6: Success

## 6.4. Riding

The Remote controller lets you adjust the RPM of the motor and view live telemetry data. Furthermore, with its patent pending ergonomic design, it can be used as a handle to lean on when standing up on the board.



The status bar is positioned on the top side of the screen:

- 1. The battery indicator of the RC is positioned in the left corner.
- The second icon in the row is a bluetooth sign. When blinking, the RC is looking for its paired board. When solid, the RC is connected to its paired board.
- 3. The third icon in the row is a GPS sign. It indicates when the board has established a GPS fix.
- 4. The fourth icon in the row is either the letter "E" or "D". It indicates the riding mode: "Easy" or "Dynamic".
- 5. The battery capacity percentage of the PowerCell is visualised in the top right corner of the display.

Caution! Never go eFoiling with less than 2 bars of battery capacity of the RC!

The largest field in the middle of the screen dispays your current speed in km/h. If your GPS coverage is poor, or the board is currently underwater, it may show unrealistic values.

The field bellow visualizes the the current "Gear"

The bottom-most field may visualize different information depending on the usage profile of the board:

1. If you have activated the board under a "Business account", the field will show the remaining time of a configured session with timer.

2. If you have activated the board under a "Private account", the field will show various live parameters from you ride. You can cycle through voltage, current, power, consumption, total distance, top speed, average speed, and total ride time with the press of the "F" button.

After arming the motor, hold the trigger of the Remote controller and the motor will start running. There are 20 virtual power limiting steps (Gears) that will help you control the throttle better.

Increase and decrease the gears by using the "-" and "+" buttons. Don't increase the gears too quickly! That will help you accelerate the board faster, without making your balance uncomfortable.

You can choose 2 different Riding modes from the Menu of the RC:

- Easy mode: In Easy mode the trigger acts like an "ON/OFF" switch. You
  won't have fine control of the power on your finger tip. Although limiting,
  this will help you learn how to control the hydrofoil with your body faster.
- **2. Dynamic mode**: In Dynamic mode you can adjust the power by moving the trigger between fully pressed and fully depressed positions.

## 6.5. Backlight

If you are riding in low light conditions, make use of the backlight! Go into Backlight in the Menu. Use the "-" and "+" buttons to adjust the brightness level and go back with "X".



Note: In periods when no motion is detected in the RC, the backlight will shut off to save energy.



### 6.6. Calibration

In rare situations, when the trigger is not responding in the expected way, you may need to calibrate it. To do that, choose the Calibrate option from the Menu and follow the instructions on the screen.



Each calibration step begins with the press of "F" and ends with a vibration of the RC. A progress bar lets you follow the process.

- 1. Start of the calibration process by pressing "F"
- 2. Release the trigger and press "F" to confirm.
- 3. Release the trigger and press "F" to confirm.
- 4. Squeeze the trigger and hold it. Press "F" to confirm.
- 5. Release the trigger and press "F" to confirm.
- 6. Squeeze the trigger and hold it. Press "F" to confirm.
- 7. Once the calibration process is finished successfully, you will receive a "Done" message.

In the case of a "Calibration ERROR", you are probably not following the steps above. Try again and make sure you keep the trigger squeezed or released for the entire period of each step until the RC vibrates.

#### **OLDER FIRMWARE VERSIONS:**

Version v2.0-292 or lower:

- 1. In the first step, release the trigger and wait for a few seconds.
- 2. You will be notified when to squeeze and hold the trigger for another few seconds.
- 3. You will receive a confirmation sign.

The current software version of the device is visible under the "Specifications" tab in the SiFly App.

Note: For information on how to update your RC, check the Mobile App – Device update section, or watch this video tutorial.



# 7. Mobile app

The Mobile App takes the eFoiling experience to a whole new level. You can use it to monitor in real time the parameters of your eFoil and Battery, Set up and Update your Devices, Pair remotes and review your GPS tracks from your rides.

To download the Mobile App for Apple or Android, scan the QR code:



## 7.1. Creating an account

You will need to create an account with your details:

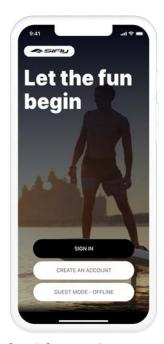
Step 1: Open the Mobile app and press "Create an Account"

Step 2: Choose your account type. You can either create a private account if you are a private customer or a business account if you are a business owner or the manager of a watersports center.

Step 3: You will have to fill in your email in order to receive an authentication code. The code expires after 4 hours.

Step 4 & 5: Once you receive the authentication code, you can fill in your details.

Step 6: Press create account. When you are all set, you are ready to start using the app!



Create an account Select account type O Private Business For personal use, create a Private account, If you intend to use the board commercially and want to make use of its Renting features, create a Business account. NEXT CANCEL



Step 1: Create an Account



Step 4: Recieve Code

Step 2: Select Account Type



Step 5: Fill in your Details



Step 3: Fill in your Email



Step 6: Press Create Account

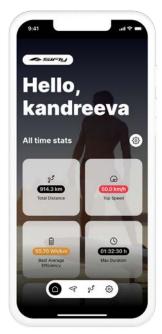
33

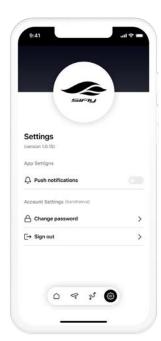
Mobile App

Sign in using your username and password.

You will be redirected to the central menu, where you can choose the stats you would like to view. By clicking on the app settings you can turn on push notifications.



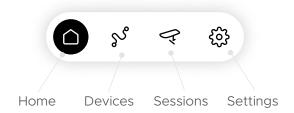




Sign in Menu & Stats Enable Notifications

## 7.2. Adding your device

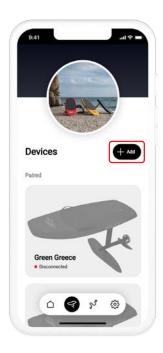
A small dock will be visible on the lower part of your screen. On it are several icons.

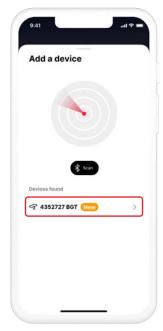


34 Mobile App

Click on the board which is the second icon on the left. You will see the option to add your device:

- 1. Click on +Add
- 2. Press Scan and choose the board you would like to add
- 3. The device will be added to your list.







1. Press +Add

2. Scan & Select Board

3. Device Added

Note: A Sifly device can be paired (added) to multiple phones but can establish an active connection with one phone at a time. If you have paired your device, but you can't connect to it, there is most likely another phone connected to it at that moment.

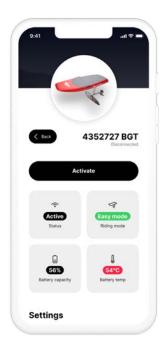
#### 7.2.1. Activating your device

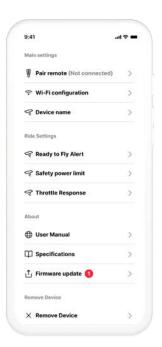
Your board is recording each session on the water by storing riding parameters and GPS tracks. After the session, the built in LTE modem or a connection to a WiFi network allows that data to be transmitted to the MySifly cloud server. To access the data of your board, you need to activate it (register it)

under your account. To do that, simply press on the "activate" button that will appear on the top of the screen in your board's device page. Once activated, you will be able to find the board in "Your devices" in the Mobile app and in the web app at www.my.sifly.global.

Note: You can activate a board to one account at a time. If your board is already activated under another account you won't succeed in activating it, unless the other user deactivates it from his account first.

Note: Depending on the type of account — business or private, the board will automatically enter the corresponding usage mode. In business mode you will have to configure the duration of each session with a timer. (See page 42)





Activate Board and Stats

Settings

#### 7.2.2. Device Settings

When you click on the board, you will be redirected to the stats page of this specific device. You can see the status, the battery capacity and temperature

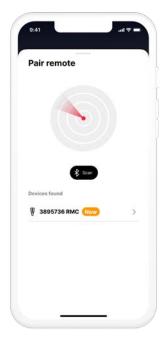
(in case the device is within range, turned on and connected).

If you scroll down, you will be able to see the board settings. Under Settings, you have several options:

- Pair remote enables a Bluetooth search for any remote controller switched on, put in pairing mode, and in range. Turn on Bluetooth and location service on your mobile phone to be able it to scan for devices. Once a device is located, click on it to begin pairing. (See page 25)
- 2. Wi-Fi configuration allows you to connect your device to a Wi-Fi network, which is useful when updating or syncing the sessions from your rides.



3. **Device name** — enter the preferred name for your device.







1. Pair Remote

2. WiFi Configuration

3. Device Name

4. Ready to Fly Alert — notifies the rider on the Remote's screen once the board is ready to pop up and start foiling.

Use the drop-down menu to select a Take Off speed, depending on the weight of a person, as well as the size of



the wings he is using. Switch on the activation toggle and click on the Configure button to confirm.

Note: With the largest Cruiser 1900 wings, an average-weight rider can pop up at speeds as low as 14 kph or 8.7 mph. A heavier rider with smaller wings should select a higher Take Off speed.

5. Safety Power Limit — allows you to select the highest gear which will be accessible to the rider, thus limiting the maximum speed to which the board can accelerate. To activate, select the gear from the drop-down menu, switch on the activation toggle, and click on the Configure button. We greatly recommend activating the SPL if you are planning on teaching children or lightweight inexperienced riders on your board.

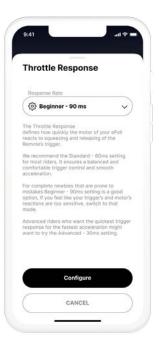
Note: Rider weight and wing size are crucial factors when determining the gear. Lightweight riders will reach higher speeds with lower gears, so choose the gear limit accordingly. A good gear limit for a child weighing up to 50 kg or 110 pounds is 7 or 8.

**6. Throttle response** — defines how quickly the motor of your eFoil reacts to squeezing and releasing of the Remote's trigger.

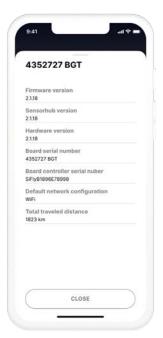
Note: We recommend the Standard - 60ms setting for most riders. It ensures a balanced and comfortable trigger control and smooth acceleration. For complete newbies that are prone to mistakes the Beginner - 90ms setting is a good option. If you feel like your trigger's and motor's reactions are too sensitive, switch to that mode. Advanced riders who want the quickest trigger response for the fastest acceleration might want to try the Advanced - 30ms setting.







4. Ready to Fly Alert



5. Safety Power Limit



6. Throttle Response



39

7. Specifications 8. Firmware Update

9. Remove Device

#### 7. **Specifications** — shows you the details of your device.

#### 8. Firmware update

#### Firmware version 2.2-365 and above.

The current software version of the device is visible under the "Specifications" tab. If your devices (board, battery, remote controller) have version 2.2-365 and above, you have to update only your board. The remote controller and battery will update automatically from the board.

The Sifly boards are updated through our server. Your board will notify you in the app when a new update is available. To start the process, you need to connect the board to a WiFi network. Once you have connected your board to a stable network it will automatically start downloading the 2 update files needed. You can follow the progress on the screen.

You can either wait for both Firmware A and Firmware B to be downloaded first and hit the install button, or you can install the first one that downloads and then follow the steps again to download and install the second one. Make sure that both updates are installed, before heading off to the water.

Note that a stable and fast WiFi network is required to download the updates quickly. If your connection is poor or the board is at the edge of the WiFi range, the downloading might fail.

You can verify that both updates have been successfully installed in the Specifications section of your board. The Firmware and Sensorhub fields should show the same version number.

Once your board has successfully installed the update, it will automatically send the file to the battery in the board and the installation process will start immediately. When you connect your Remote controller to the board, the same process will be repeated, and you will see a progress bar

on the display loading. In about 5 minutes, you should have both devices updated and ready to go.

During updates the motor on your hydrofoil might beep several times. This is normal and will stop after all processes are completed.

If you have difficulties with the update process, do not hesitate to contact our support team.

#### Firmware version 2.0.

If your battery and remote controller have firmware version 2.0-350 or bellow they won't be able to update automatically from your board. You will have to update them manually from the app.

Remote Controller — Enter Pairing mode of the RC and add it as a new device in the app. Click on the Configure WiFi network tab and connect it to a wifi network in range. Then navigate to the update tab and click Update. Don't close the APP or move the RC away from the WiFi range until the Success screen is shown on the screen.

Battery — Place the magnet on the battery pad, wait 30 seconds and add the device to the app. Click on the Configure WiFi network tab and connect it to a wifi network in range. Then navigate to the update tab and click Update. Don't close the APP or move the battery away from the WiFi range until the Success screen is shown on the screen.

9. Remove Device — allows you to remove the device if you are no longer using it. You will be asked for an additional confirmation, after which you will no longer be able to see the device or access the stats.

#### 7.3. Sessions

The third icon on the dock is the sessions tracker. When you click on it, you

will be redirected to the sessions page, where you can filter which sessions you would like to see.



Once you are in the session log, you will be able to see the key elements from your session:

- 1. Top speed
- 2. Average speed
- 3. Distance total for the session
- 4. Duration total for the session
- 5. Average efficiency
- 6. Average movement Speed
- 7. Your maximum distance that you have ridden without stopping
- 8. The maximum duration of your ride without stopping

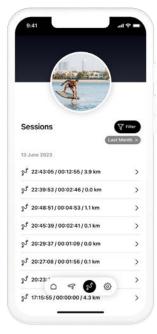
If you click on the map, you will be able to see your exact route.

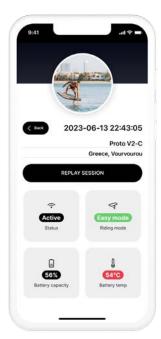
Note: A session stops recording if the board is left idle for more than 2 minutes without the motor being engaged or if you open and close the lid, restarting the battery.

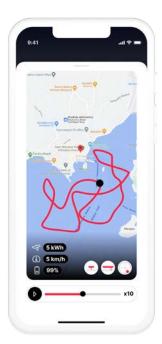
# 7.4. Timed sessions for boards in business accounts

If your board is activated to a business account, a "Configure session" button will appear inside the board page. You can choose the duration of the session and hit the "Configure" button. A timer will appear on the RC display and will count down the time until the end of the session. Once it is over, the board will enter Limited power mode and will reduce its maximum power output.

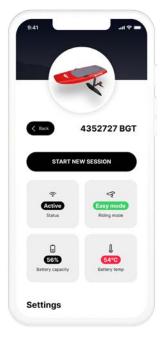
This feature is handy for renting purposes.







Sessions Page with Filter



Press "Start New Session"

Session Log with Stats



Configure Session

Exact Route on Map



Sucessful Configuration

43

### 7.5. My SiFly Cloud WebApp

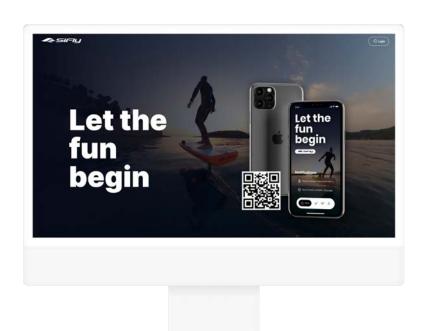
If you haven't already signed up from the SiFly App, you can create an account in the MySiFly cloud server directly from the WebApp: https://my.sifly.global

The SiFly Cloud service offers session information, although there are many additional details that are not visible on the SiFly App.

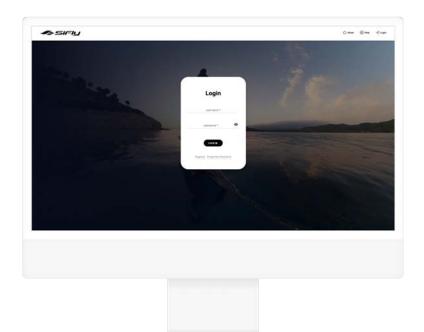
1. Log in with your username and password.

On the white ribbon above, you will see the following icons:

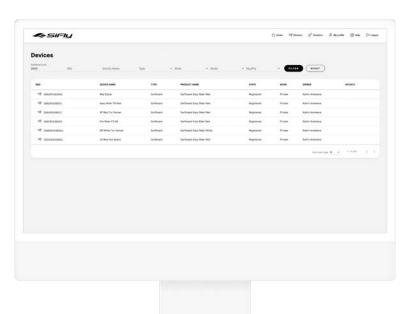




1.1. Click Login (Top Right)



1.2. Enter Login Details



2. Devices Page

45

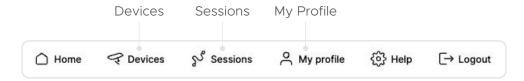
Click on **Devices** to see all the devices that have been activated on your account.

Note: The MySifly WebApp will only show you devices and sessions of devices that have been activated through the Mobile app or remotely by a Sifly administrator.

3. Click on the small board icon under the SNO (Serial number) section to see your device's details.



3. SNO Section Device Details



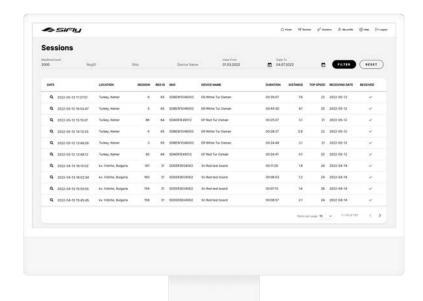
4. Click on **Sessions** to see a detailed list of all of your devices' sessions.

Note: Click on the magnifying glass in order to view the particular session details. (4.2.)

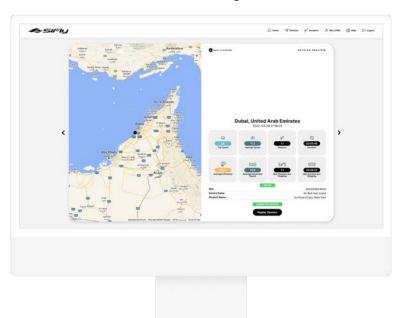
5. Click on Replay Session to view the live metrics of your board.

Note: You can also change your layout by clicking on the session detail arrow in the top left corner of your screen. (5.2.)

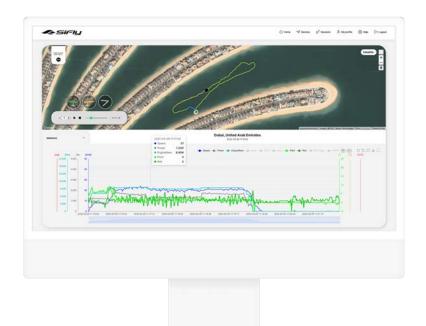
6. Click on My profile to see your profile details.



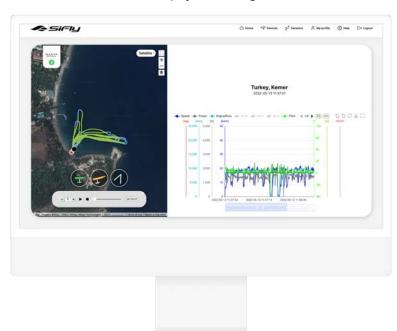
4.1. Sessions Page



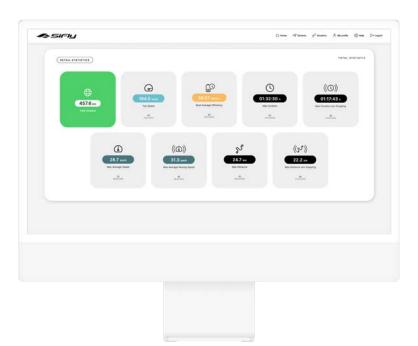
4.2.. Session Details Page



5.1. Replay Session Page



5.2. Alternative Replay Session Page Layout



6. My Profile Page

# 8. How to eFoil

For your safety and that of others, please ensure that you obtain proper training or practice before operating a SiFly eFoil. Failure to do so may cause damage to the user, their property or third parties.

You will find our 5-step guide to eFoiling on the QR code below:



### 8.1. Get to know your board

- Always climb on the board from the side to avoid kicking the propeller or stabiliser. Be mindful of their sharp edges and keep your feet away from them to avoid cuts and injuries.
- 2. Position yourself in the middle of the board standing on your knees and hands.
- 3. Engage the motor and get going.
- 4. Play with the power levels, moving them up and down with the + & buttons one or two steps, to get a feeling of the motor thrust.

Note: If the nose of the board is pointing too high or is submerged in the water you are probably standing too much in the back or the front of the board respectively. Move your body to the sweet spot where you feel comfortable and the board is levelled. Try steering the board left and right by shifting your body weight slightly to either side. Moving your weight over each arm will make the board lean sideways and will initiate the turn. Once you are

comfortable with the basics of controlling the board, you can proceed to the second step of the learning process and make your first flights.

## 8.2. Foiling on all fours

- 1. Position yourself on the board on all fours and get going.
- 2. Keep your body weight above your hands to push the nose down.
- 3. Gradually increase the speed, moving up the power levels until you feel the board getting lighter and more responsive. On the Easy Rider eFoil, that would be around power level 5 and 15 km/h. At that point you have reached the planning speed and are ready to pop up.
- 4. Very slowly move your hips and body backwards until you feel the board lifting from the water.
- 5. Once that happens move your weight forward immediately and land on the water.
- 6. Repeat those short foiling flights and slowly increase their distance until you acquire the feeling of how the wings react to shifts of your weight.
- 7. To turn around, safely land on the water and steer the board with your hands.

Note: While accelerating, if the nose of the board shoots up uncontrollably to the sky, then your centre of mass is too far back. Try moving your body weight over your arms. If that's not enough you'll need to move your knees a small step forward.

If you keep increasing the speed, but the board won't lift off, your centre of mass is too far in the front. Bring your weight further back or if needed, move

your knees a small step backwards. Soon you will be able to foil for long distances without touching the water. When you reach that point, you could try initiating wide foiling turns by shifting your body weight slightly to the side.

Your movement has to be precise and slow. If you overdo it, you'll likely lose your balance and fall to the side.

**Caution!** When losing control and crashing, always try to jump to the side and away from the board. That will minimise the chance of colliding with the foil.

### 8.3. Foiling upright on your knees

- 1. Get on the board and place your knees slightly more forward than when foiling on all fours.
- 2. Keep your upper body upright.
- 3. Accelerate gradually to planning speed. Spreading your arms will help your balance.
- 4. Slowly move your weight backwards by trying to sit on your heels.
- 5. When the board pops up, move your weight forwards by standing up from the knees to land on the water

Note: If you lose your balance, rest your hands on the board and when you are ready, stand up on your knees again. If you feel that the board's nose is rising uncontrollably, you probably have to move your knees a small step forward. If you keep increasing the speed, but the board won't lift off, you are standing too far forward and have to move a bit backwards.

Practice the Touch & Go exercise until you can ride on the foil for longer distances. In the beginning, steer the board on the water. When you get

comfortable foiling you can try doing wide turns in the air.

### 8.4 Stand up on the board

- 1. Climb on the board and position yourself in the middle on all fours.
- 2. Accelerate to around 10 km/h.
- 3. Move your front foot between your hands and move your weight over it.
- 4. Slowly stand up, keeping your weight in the front.
- 5. Position your back foot slightly towards the rail of the board.

Note: Unlike surfing your feet should be slightly offset from the central line, to help you balance sideways. Spreading your arms and bending your knees will help as well. Steer the board left and right by transferring your weight slightly to the respective foot. Once you feel comfortable, you are ready to start eFoiling!

### 8.5. Foiling upright

If you can already foil on your knees, foiling upright will be a natural and fast progression.

- 1. Stand up on the board and accelerate to planning speed.
- 2. Carefully release some weight from your front foot, moving your hips backwards and the board will pop up.
- 3. Move your hips forward immediately and land safely.
- 4. Practice the Touch & Go exercise and gradually increase the length of the

foiling flights. Soon you will be able to foil for long distances.

Note: Until you get comfortable, you can always land on the water before a turn. Turning while foiling requires precise weight transfers and balance. Don't lean too much out of the board, or you will crash. With time and practice you will be able to carve hard and lean close to the water or do 360 turns.

**Caution!** The operating time of the SiFly PowerCell LR battery is limited. When the battery is discharged to 8% as indicated on the Remote Controller, the board enters Limited Power Mode and reduces the motor's maximum power. This is done to ensure that there is sufficient reserve capacity to reach the shore. In this mode, the power is gradually reduced to a certain threshold and the restriction is only released when the connected battery is charged above 8%.

Always monitor the remaining battery capacity when timing your return to the shore or boat. You must always be able to return to the shore or boat unassisted.

# 9. Maintenance and Storage

After each session rinse the board and foil thoroughly with fresh water. Pay attention to the motor and rubber seals. Crystallised salt can damage both of them. In case of water ingression in the battery compartment, clean it with fresh water and let it dry out before use.

It is important to visually inspect all elements of your SiFly before and after each session for any damage or water ingression. Make sure that all connectors are clean and free from corrosion and damage after each use. Check that the battery is not cracked and that the pressure valve is not compromised. A damaged battery that comes into contact with water may result in internal damage and eventually lead to corrosion or even an explosion. A cracked battery that comes into contact with water should be immediately left in an open area and observed from a safe distance until it is completely dry. Do NOT use a damaged battery. Contact the Sifly Support Team immediately or dispose of it as described in *Disposal*.

Do not leave your Board, eFoil, Remote controller or Battery under direct sunlight or excessive heat for prolonged periods! These conditions can lead to severe damage of the composite parts, battery cells and electronics. Never leave your eFoil and battery in the car on a hot sunny day!

If you store your SiFly assembled for longer times, make sure to disassemble it every 3-4 week and apply TefGel to the screws and inserts, to avoid oxidation processes. Additionally, apply some dielectric gel to the communication and power connectors every once in a while to prevent electrolysis. Use the same gel to lubricate the O-ring on the top of the mast plate to ensure a good seal.

Note: Every once in a while, the battery cells will need balancing. The BMS in the battery will start the process automatically when connected to a Sifly Smart Charger and will notify you through the Mobile app.

# 10. Troubleshooting

Repairs and maintenance work on the SiFly eFoil, SiFly PowerCell LR rechargeable battery, charger and RC that go beyond the procedures described in this chapter may only be carried out by an authorised technician. Work of this type is dangerous and may cause damage to the components if not carried out by an authorised technician. Never alter or modify any part of the SiFly eFoil, battery, charger and RC .

Note: Be aware that components such as battery cells, seals, EVA pad and propellor are wearing parts. Signs of wear and use may also appear on the housing, surface finish, display screen, etc.

Event	Reason	Action
Hydrofoil is beeping continuously.	There is no connection between the hydrofoil and the board.	Check whether you have connected the communication cables in the battery compartment to the hydrofoil
The battery is not charging	The magnet key is not positioned on its pad	Place the magnet key on its pad
Efoil does not power up battery LED is functional	The battery's BMS has been tripped.	Make sure that the battery is within operational conditions (temperature, voltage, etc). After staying for 2 hours at room temperature, connect it to the charger.
Trigger does not function properly	Due to magnetic disturbances, the RC sensors need calibration	Calibrate the trigger of the RC by following the Calibration procedure in the menu.

56 Troubleshooting

Event	Reason	Action
Moisture present in connection port	The connector has been attached in a wet environment.	Dry out the connector completely and apply some dielectric gel before reconnecting it.
Battery has been plugged to the charger, but is not charging fast	If the battery was too warm or you plugged it in directly following a long ride, the BMS automatically stops the charging	In the APP check the temperature of the battery. If it's below 40 C, plug the battery in again. If it's too warm, wait for it to cool down and then plug it in.

# 11. Technical Specifications

All specifications are only intended for use in describing the products. They are not to be construed as guaranteed properties. The specifications provided here do not represent absolute values, since certain deviations may occur as a result of manufacturing-related tolerances. Specifications may be changed without notice to take into account new technical advances. As a result, actual product properties may differ from the ones described here.

#### 11.1. Boards

Model	Volume [I]	Length [cm]
SiFly E	170	191
SiFly R	120	171
SiFly S	98	161
SiFly Rider	110	161
SiFly Lite	170	200

## 11.2. Hydrofoils

Model	Length [cm]	Motor Power [kW]
Hydrofoil unit 55	55	8
Hydrofoil unit 75	75	8

# 11.3. Battery

Model	SiFly Powercell LR
Max continuous current [A]	100
Nominal Voltage [V]	52
Capacity [Ah]	44.8
Operating temperatures [°C]	5 - 55
Charging time [h]	< 3 hours with Fast Charging
Dimensions [mm]	300 x 390 x 80
Weight [kg]	12.5

# 12. EC Declaration of Conformity

Manufacturer: SiFly Ai Ltd. Tintyava 15-17 str. 1113 Sofia

The manufacturer bears sole responsibility for issuing this declaration of conformity.

We hereby declare that the model series listed below comply with the essential requirements of the EU directives and standards.

Model name: SiFly eFoil

Year of manufacture: 2022/2023

Alexander Bachev (CEO)

# 13. Imprint

SiFly Al Ltd. Tintyava 15-17 str. 1113 Sofia Bulgaria hello@sifly.global

As of 2022

Copying, transmitting, storing or translating this User Manual in any shape or form, whether in part or whole, is not permitted without the prior written consent of SiFly AI Ltd.

Copyright 2022 | All rights reserved | SiFly

Imprint 61

