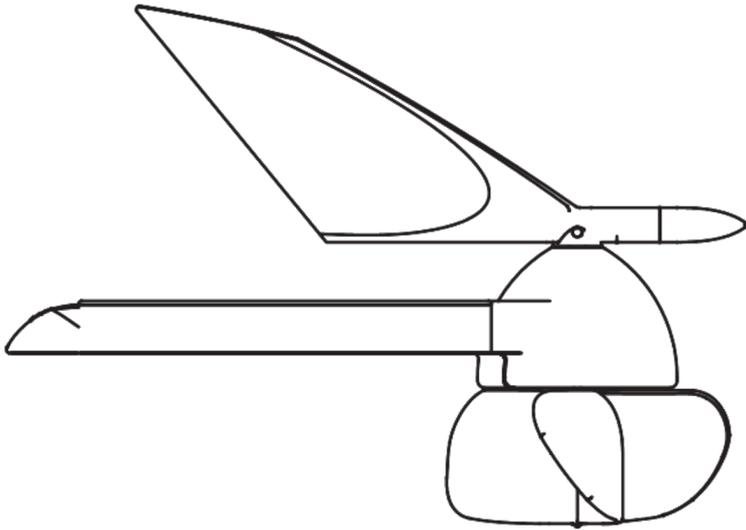




OpenWind

User Manual



Liesenberg GmbH
Am Buchberg 7
82335 - Berg
Germany

1. GENERAL INFORMATION

1.1. Information and Explanations for the Operating Instructions

This manual is intended to assist and familiarize you with your OpenWind device and to provide you with the information needed for its safe and proper operation. Please read the entire manual before using your OpenWind instrument for the first time. To minimize the risk of injury and to avoid damaging the device, please do not use the OpenWind until you are sure that you have fully understood this manual. We are not liable for personal injury, property damage, damage to the device caused by improper handling or incorrect use of the OpenWind Instrument or injury resulting from failure to comply with the safety regulations contained in this manual. Please contact our support team with any questions.

1.2. Device Description

OpenWind is a wind instrument designed to measure wind direction as well as wind speed. The application uses an advanced algorithm to calculate the true wind speed and true wind direction in any environmental condition (e.g.: boat drift, current). OpenWind was designed to provide sailors with accurate and precise measurements and to be easily installed on a wide variety of vessels. Due to the innovative design of the anemometer cups, OpenWind delivers the correct wind speed, regardless of the boat heel. It also provides the sailor with information on pitch and roll as well as the compass direction. The innovative wind cup design is used under license from SailTimer Inc. www.SailTimer.co

OpenWind is powered by solar energy which charges the built-in battery. The sailor is not required to change batteries or charge the device manually. The OpenWind application is available in iOS, Android, WatchOS and AndroidWear.

1.3. Safety and Handling

1.3.1. Repair

Do not attempt to open and repair the OpenWind on your own. Disassembling the device will void the warranty and can cause permanent damage and personal injury. Contact support if your OpenWind is damaged or malfunctioning.

1.3.2. Battery

Do not attempt to replace the battery yourself. The battery can be damaged in the process which could result in overheating, fire and injury. The in-built lithium-ion battery in your OpenWind should be serviced or recycled by Liesenberg GmbH and must be recycled or disposed of separately from household waste.

1.3.3. Radio Frequencies

OpenWind uses wireless signals (Bluetooth 4.1 Low Energy) to connect to mobile devices or smartwatches. It was designed, tested and produced to be compliant with radio frequency emission, which complies with all regulations.

2. TECHNICAL SPECIFICATIONS

2.1. Device

Solar Panel	0.8W polycrystalline
Dimensions	200x65x70mm
Weight	280 grams
Water Resistance	up to 1 meter below surface
Connectivity	Bluetooth version 4.2
Application	IOS, Watch OS, Android, Android Wear
Operating Temperature	-20 0 to 800 C

2.2. Indicators

Wind speed units	knot, mph, km/h, m/s
Maximal wind speed	100 kts
Wind speed / Pitch and Roll precision	0.1 digits, requires calibration
compass precision	2.5 to 5 digits, requires calibration
LED Green	paired
LED Red	low battery or error
LED Blue	ready to pair

2.3. Battery

Capacity	1200 mAh
Charge	Sunlight / daylight
Voltage	3.7 V
Standby mode and no sunlight	Up to 2560 hours
Normal mode and no sunlight	Up to 91 hours

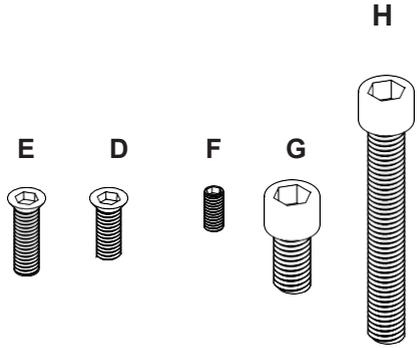
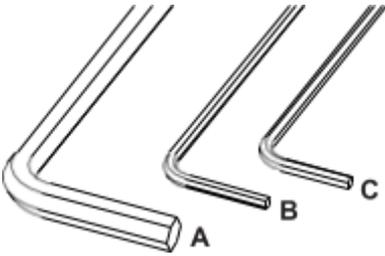
2.4. In the Box

OpenWind instrument device
Aluminium extender
Documentation
1x hexagon socket screw key 4mm, 1x 2mm key and 1x 1,5 key
2 times M5x35 screw for railmount, 2 times M3x10 screw for base, 3 times M3x12 screw for OW

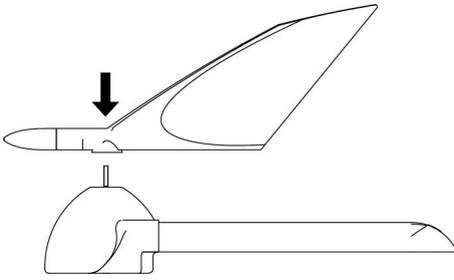


3. ASSEMBLY INSTRUCTIONS

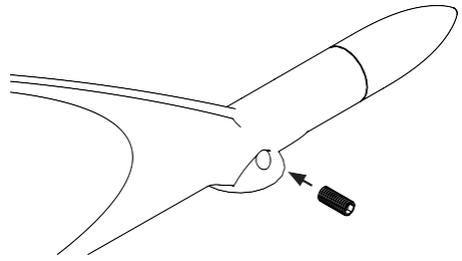
3.1. Prepare all your tools for assembly



3.2. Spare part Wind vane assembly

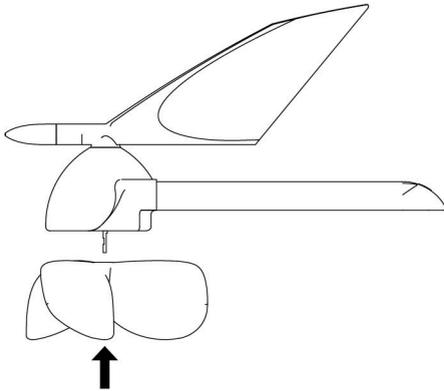


Insert the wind vane on the top of the main body part of the device.

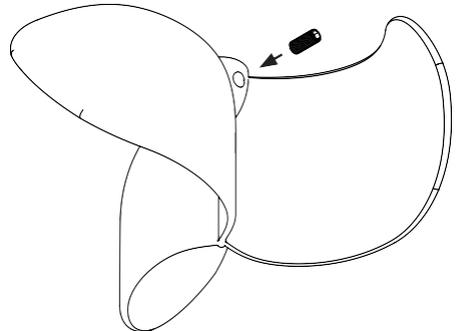


Screw (F) tightly with the help of the 1,5 mm allen key (C) provided in the box

3.3. Spare part Anemometer assembly



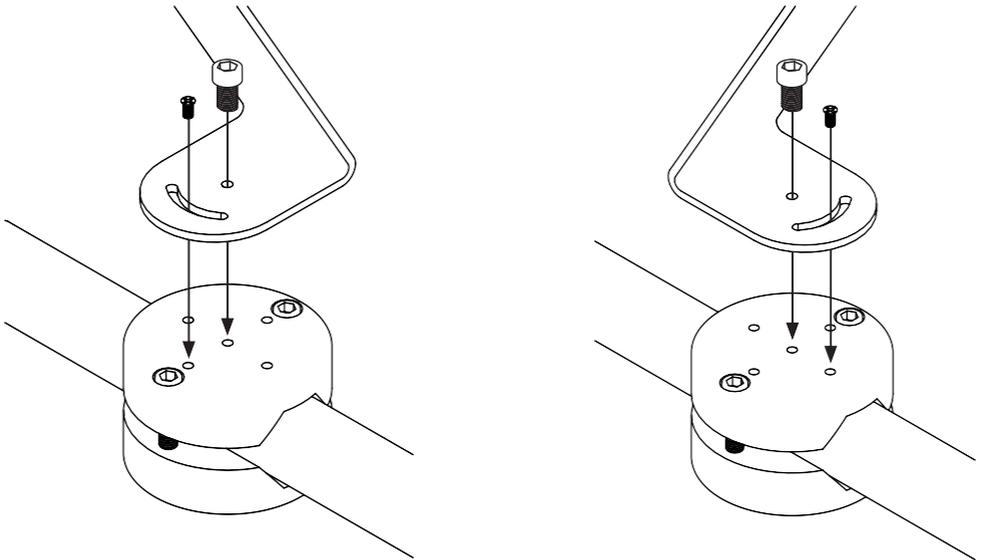
Insert the anemometer at the bottom of the main body part of the device.



Screw tightly (F) with the help of the 1,5mm allen key (C) provided in the box.

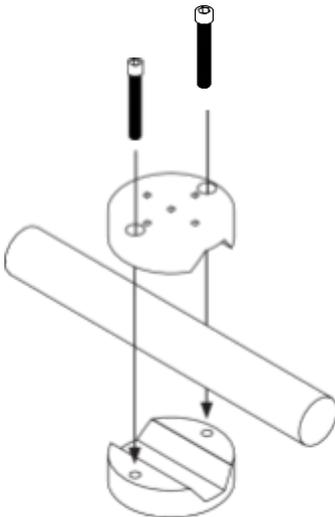


3.4. Aluminum extender assembly



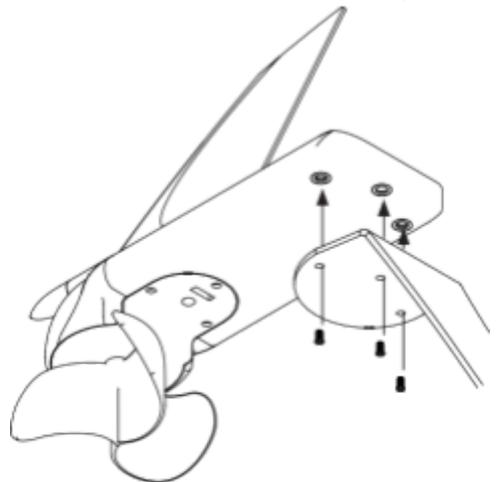
Attach the aluminum extender according to your preferred angle, tight the M5 center screw (**G**) using the 4mm allen key **A**, pivot it according to the boat's heading and tight the M3x10mm screw (**D**) using the 2mm allen key (**B**).

3.5. Rail Mount assembly



Fix the mount to any rail of the vessel using the 2x M5 screws (**G**) with the help of the 4mm allen key (**A**).

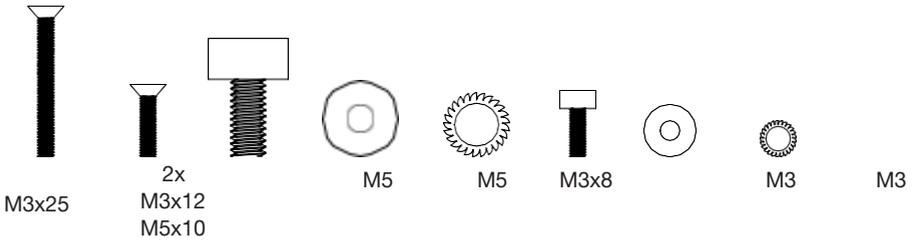
3.6. OpenWind assembly



Fix the 3x M3-12 (**E**) screws to the bottom with the help of the 2mm allen key (**B**).

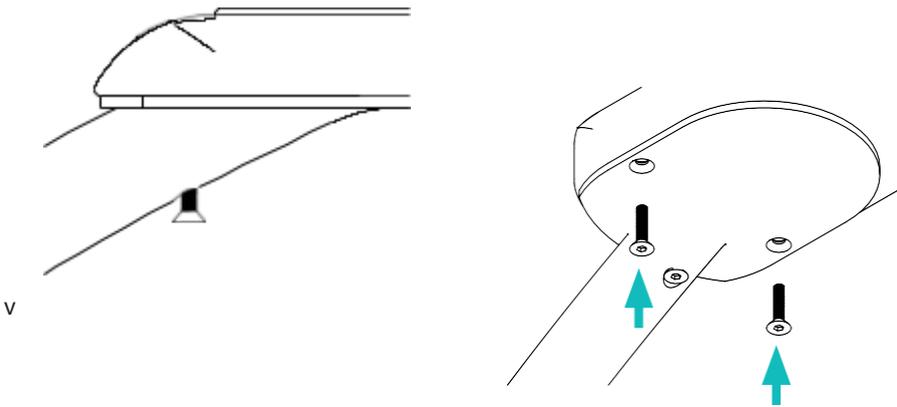


3.7. Carbon extender set up

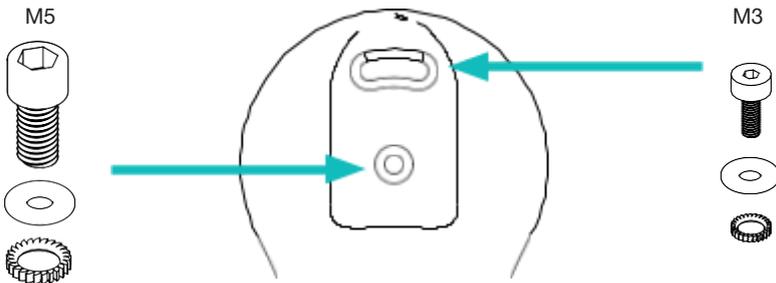


screw the M3x25 halfway in the rear thread of the openwind

screw both M3x12 screws and complete the M3x25 all the way.

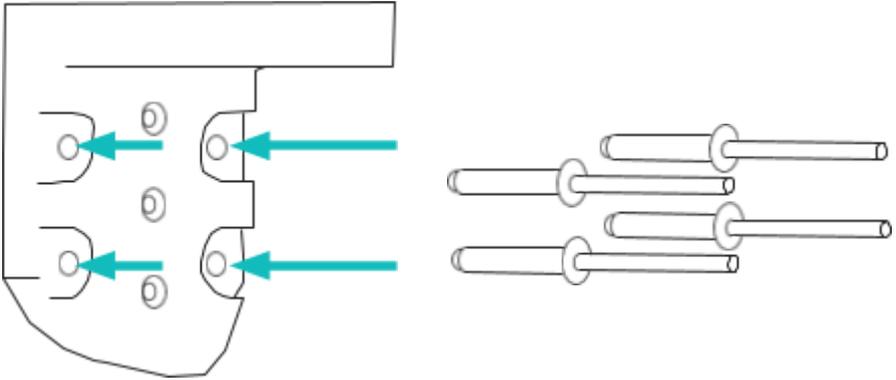


fix both M5x10 and M3x8 screws with the washer and teeth washer. You can adjust the heading by pivoting the carbon extender.



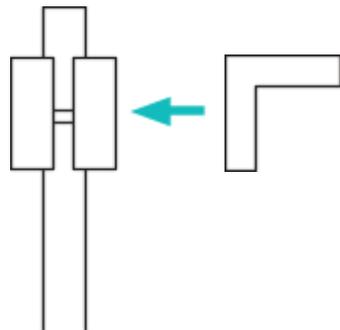
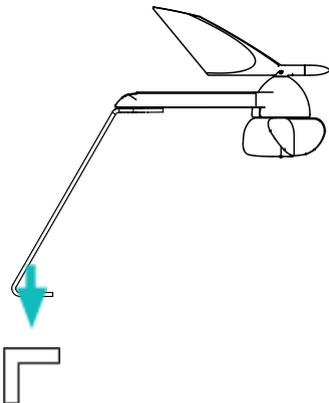
3.8. Mast mount set up

Align the Mast mount to the bow side of the mast and mark the holes that will be drilled. Drill all four holes in the mast using a 3mm drill. Fix the mast mount using the river nuts with the help of a hand or power tool.



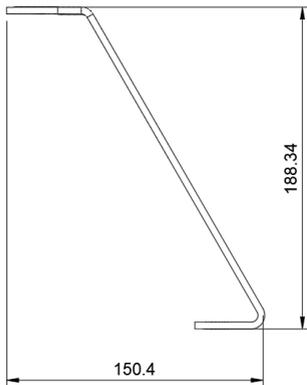
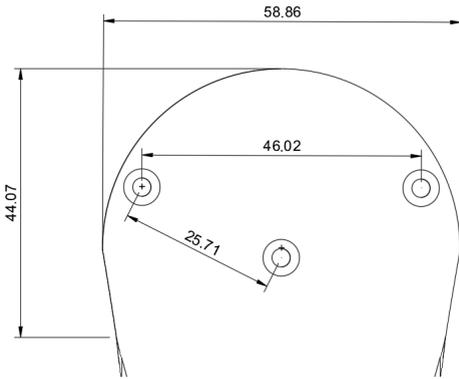
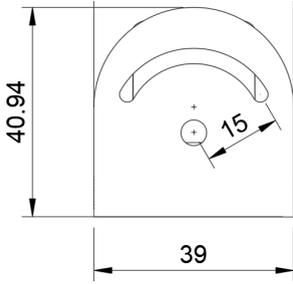
After setting up, the base of the aluminum extender or carbon extender can be fixed on the top of the mast mount.

Another alternative is using the rail mount in conjunction with the mast mount to install it on a vertical pole.

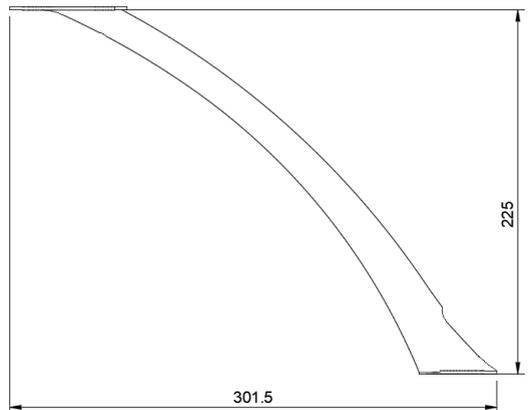
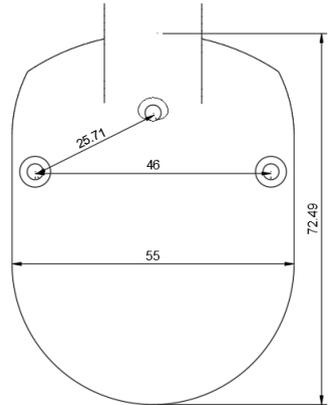
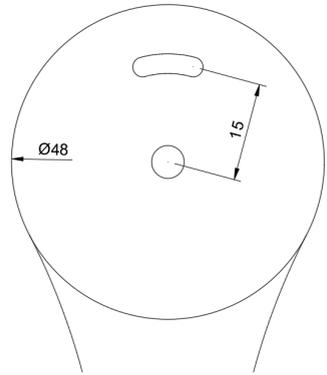


3.9. Dimensions board

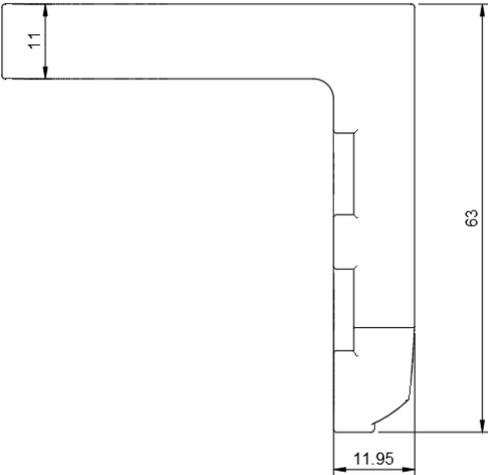
Aluminum



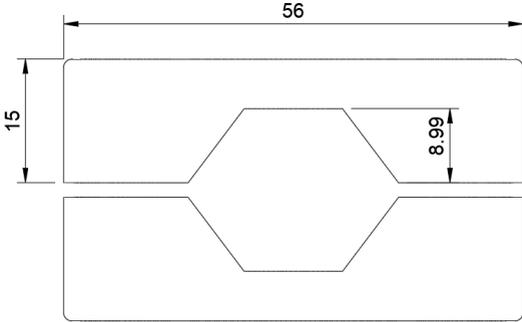
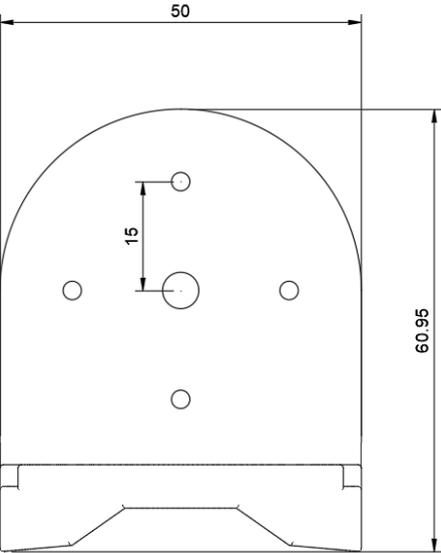
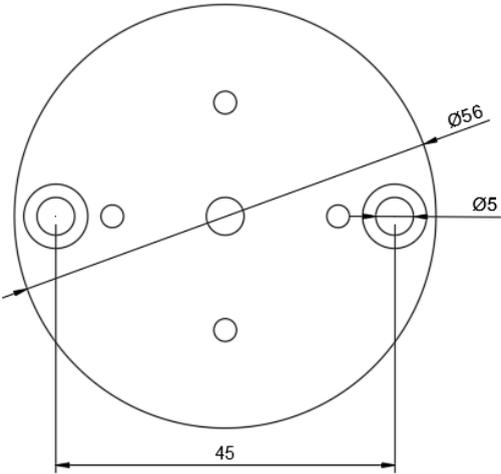
Carbon



Mast Mount



Rail Mount



4. SOFTWARE

4.1. IOS Application

OpenWind is compatible with any IOS, WatchOS, Android and Android Wear device. To profit from all OpenWind's features, it is recommended that your device has integrated GPS.

4.1.1. OpenWind Installation



- From your iPhone or iPad, go to the App Store and search for the OpenWind application.
- Download and install the OpenWind application.
- Before you launch the OpenWind application, make sure the bluetooth is enabled.
- The OpenWind application will ask for bluetooth permissions. Please accept, and it will search and connect to the OpenWind device automatically.

4.2. Android Application

4.2.1. OpenWind installation



- From your android phone, go to the Google play Store and search for the OpenWind application.
- Download and install the OpenWind application.
- Before you launch the OpenWind application, make sure the bluetooth is enabled.
- The OpenWind application will ask for bluetooth permissions. Please accept, and it will search and connect to the OpenWind device automatically.



5. APPLICATION

5.1. Connection

Once the application is launched, it will automatically search for a connection to the device.

Please make sure that the OpenWind application has permission to use Bluetooth, location and storage from your phone at all times. Make sure GPS and Bluetooth from your phone is enabled. Switch the button ON, it should blink red first and after 10 seconds it will start blinking blue and it will automatically look for a connection. Once it is connected it will blink green. Switch the button OFF only if you keep the device inside away from sunlight.

Be aware that for a successful connection you need to be within a maximum of 50 meters range between the OpenWind device and your phone or tablet. Avoid obstructions and hard casings for best connectivity.

OpenWind uses Bluetooth 4.2 and the estimated range is a maximum of 50 meters considering mild obstruction. The Bluetooth sensor is oriented downwards from the device, meaning it will give better range if mounted higher in comparison to a horizontal line. Older smartphone models and hard casings will affect connectivity range.

If the device is to be mounted on the mast, it is best that the mast is not right below the device to not reflect the signal elsewhere. If the device is mounted on the deck, we recommend to mount it higher as possible for better range and to avoid wind turbulence.

5.2. Broadcast

Only one device can connect to the OpenWind instrument at a time, which will be able to send data back and calibrate the sensors. However, multiple devices can read broadcast signals simultaneously. With the OpenWind broadcast signal you and your crew will be able to read the wind data on a smartphone, tablet, smartwatch and NMEAKit™ simultaneously. Depending on the device, Broadcast reading may not be possible. We recommend recent models of smartphones, tablets and smartwatches.

5.3. UDP

Many sailing applications offer a way to communicate with wind instruments. Via UDP you can read the data of OpenWind as NMEA0183 wind sentences in third party applications such as iSailor, iRegatta, NKE and OpenCPN. Any application that can read NMEA 0183 wind sentences data via UDP is compatible with OpenWind.



5.4. Wind instrument

The wind instrument interface displays the data collected by the OpenWind device. The first screen shows wind direction and compass direction relative to the boat. The wind direction is represented by a blue arrow that moves around the boat, and the corresponding wind angle relative to the boat is displayed in the middle. The wind speed is displayed at the bottom. Both wind speed and direction can be switched between apparent and true wind angle at the bottom of the screen, The compass is represented by a dark wheel which moves relative to the vessel. Touching the Boat button displays the Course Over Ground (COG) and the Speed Over Ground (SOG) of the boat. In this setting, the compass remains fixed and the boat graphic rotates to indicate the compass course of the vessel. The blue arrow will also circle freely around the boat indicating the wind direction (true or apparent as selected).

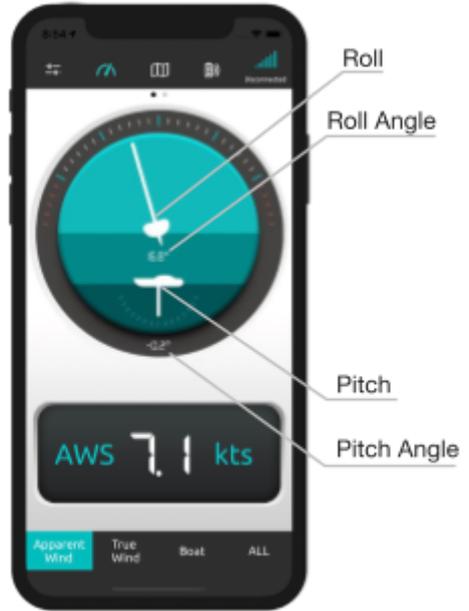


5.5. Instrument Position

Swipe the first view to the right to display the boat position interface.

The boat roll and pitch angles are displayed with 0.1° precision.

Apparent wind speed (AWS), true wind speed (TWS) and boat speed (SOG) are still visible at the bottom and can be used simultaneously with pitch and roll.



Heading Reference



5.6. Boat SOG and COG

- Speed over ground is the speed of the vessel in relation to the ground or an object fixed to the ground. It needs GPS for it to work.
- Course over ground is the actual direction of progress of a vessel, between two points, in relation to the surface of the earth. It needs GPS for it to work.



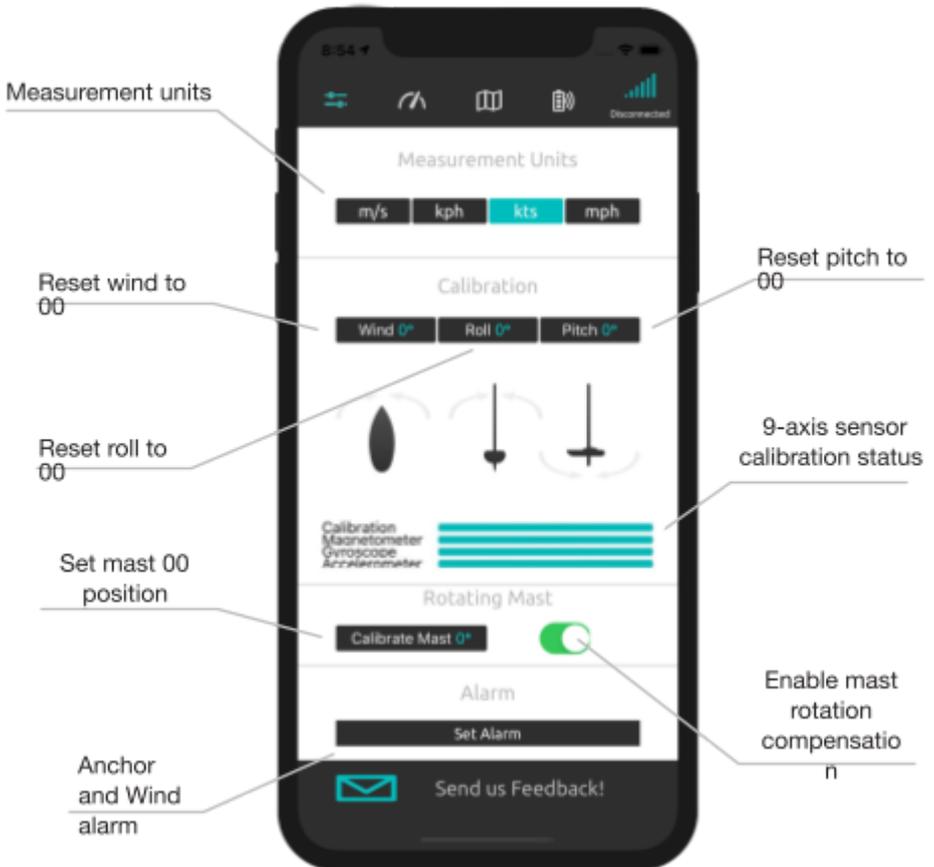
5.7. Settings

The measurement units for the wind speed (AWS/TWS) and boat speed (SOG) can be changed in the settings.

The calibration section is only needed during initial setup to store the information on the device.

- Wind 0°: set the wind direction angle to 0°
- Roll 0°: set the roll angle to 0°
- Pitch 0°: set the pitch angle to 0°
- Compass 0°: will calibrate the compass for better precision

(optional) In case of any issues or questions, please contact our support team.

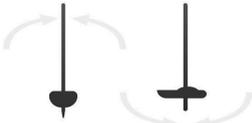


5.7.1. Wind Direction Calibration



This setting is designed to calibrate the 00 wind position to the front of the boat. To calibrate, maneuver the bow directly into the wind, and press the “Wind 00” button to set the 00 position.

5.7.2. Pitch and Roll Calibration



This setting is designed to calibrate the 00 Roll and 00 Pitch position of the boat. To calibrate, avoid areas with waves and try to balance the boat keeping it as still and upright as possible. Make sure the OpenWind device is also aligned with the boat. Press the “Roll 00” to set the roll position to 00. Press the “Pitch 00” button to set the pitch position to 00.

5.7.3. Rotating Mast

The OpenWind application can compensate the mast rotation. It calculates the offset between the in-built compass of the OpenWind device and the compass of the phone or tablet.

In order to work, the phone's compass will be the reference for the boat's heading. The phone has to be mounted on the boat and aligned with the boat's heading.

To activate mast rotation compensation, follow these simple steps:



5.7.4. All tab and value Filtering

All the calculations done by OpenWind and the Application can be found and customized under the ALL tab on the bottom right corner.

Pressing the yellow + sign on the top of the page will open the customization tab.



Here you can enable and disable the data you wish to see in the “All” tab.

At the bottom of the page, you will find a filter for the wind direction. This filter can ease the movement of the arrow in the wind interface and also the constant changing of numbers in the “All” tab, smoothing out the values to be more pleasant for the eyes to read.



If the filter is at zero, the sampling rate is RAW and 5 times a second, you will see that the values will change very fast and the wind indicator will respond very fast as well. 30% will downsample it to 2 a second, above 50% will downsample the data to 1 a second.

The “back” button will send you back to the wind interface.

5.8. Compass Calibration

The compass sensor used is the BOSCH BNO055, a smart sensor combining accelerometer, gyroscope, magnetometer and orientation software.

OpenWind 9 Axis Sensor calibrates in the background on its own and we read the status and values for magnetometer, accelerometer and gyroscope. Every time the calibration status is full, it will save the values in its memory and will use these values until the next full calibration status. The normal swing of a sailboat should be enough to maintain good calibration status.

To achieve full calibration in the 9 axis sensor, follow the instructions in the following page:



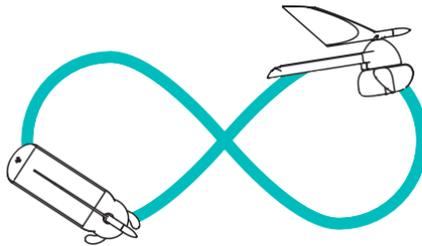
5.8.1. Gyroscope:

Place the device in a single stable position for a period of few seconds to allow the gyroscope to calibrate.



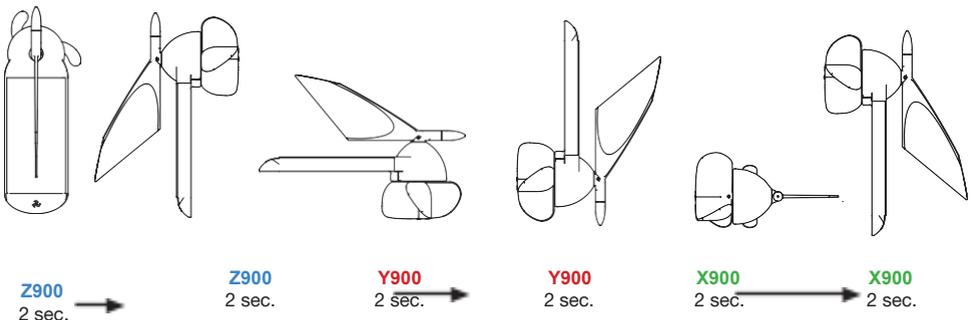
5.8.2. Magnetometer:

Random movements, like figure 8 in the air or full rotation from north to south. This is the most important calibration for the compass. If eventually the calibration is lost and the device is already mounted on the mast, simple circular movements with the boat should help achieve a full calibration status on the magnetometer.



5.8.3. Accelerometer:

Place the device in 6 different stable positions for a period of few seconds to allow the accelerometer to calibrate. Make sure that there is no movement between 2 stable positions. The 6 stable positions could be in any direction, but make sure the device is laying at least once perpendicular to the x, y, and z axis.



5.9. Map

In order to use the map the user must have mobile coverage and GPS enabled.

The data information displayed at the bottom is the one selected on the Wind instrument Interface, in this case, AWA and AWS.



5.10. Battery status Tab

The estimated life of a Lithium-Ion battery is calculated by the charge cycle. OpenWind was designed to minimize the possibility of the battery to complete a single full discharge cycle, therefore maximizing the longevity of the battery.

We have designed it so the unit never runs out of battery. The solar plate and battery are larger than it needs to be and the OpenWind device consumes very little energy.

The total capacity of the battery is 1260 mAh. OpenWind consumes about -13mA if it is connected in the dark.

On a partially cloudy day it consumes about 0mA to +30mA. On a heavy cloudy day it will consume about -7 to 0mA. On a sunny day it can go up to +80mA of consumption. The positive values illustrate that the battery is charging and negative values indicate that it is discharging/consuming.

If the device is not connected and the LED is blinking blue, it will enter a sleeping mode and shut down everything not necessary



The device battery information is displayed on the connectivity page. The battery data will be updated every second. The bluetooth strength is measured in RSSI and the bluetooth range is maximum 50 meters considering mild obstructions.



5.11. Android special settings

If you are using more than one Android at the same time, make sure that the second device has “Read broadcast only” enabled.

In the Info button at the Battery tab, you can select landscape mode.

In the All tab settings you can change the source compass for the orientation, between OpenWind compass and the Android compass.



5.12. iWatch App



5.12.1. Connectivity

The OpenWind application on the iWatch runs independently from the iPhone. To connect to the OpenWind device, press the "Connect" button on the first page.



5.12.2. Instrument Wind

The second page displays the wind direction in degrees and wind speed in kts.



5.12.3. Instrument Position

The third page displays the pitch and roll angle in degrees.



5.12.4. Instrument Compass

The fourth page displays the boat direction in degrees (COG) and boat speed in knots (SOG).



5.12.5. Battery

The last page displays all the battery information. The data is updated every second.



5.13. Garmin Watch



5.13.1. Menu

The OpenWind application on the Garmin Watch runs independently from the Smartphone. Scan to connect to the OpenWind device and navigate through the Menu to read the Data displayed.



5.13.2. Wind Interface

This page displays the wind direction in degrees and wind speed in kts.



5.13.3. Move ment Interface

This page displays the pitch and roll angle in degrees.



5.13.4. Instrument Compass

This page displays the boat direction in degrees (COG) and boat speed in knots (SOG).



5.13.5. Battery

This page displays all the battery information. The data is updated every second.

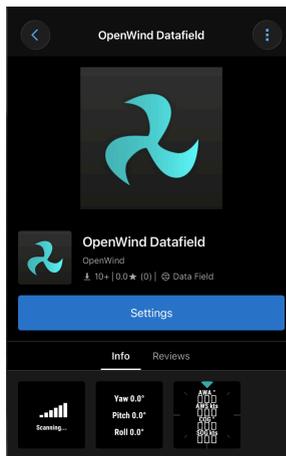


5.14. Garmin OpenWind Datafield Application

Installation & Initial Setup

Before configuring SailRace, you must ensure the bridge between the wind sensor and your watch is installed.

- **Download:** Open the Garmin **ConnectIQ Store** on your smartphone.
- **Install:** Search for and install the **OpenWind Datafield** app.
- **Sync:** Ensure your Garmin device syncs successfully to finalize the installation.



Adding OpenWind to SailRace

To view your wind data while racing, you must manually add the field to your SailRace layout:

1. Open the **SailRace** app on your Garmin device.
2. Enter the **Settings** menu.
3. Navigate to **Edit Data Fields**.
4. Select the specific screen and slot where you want the wind data to appear.
5. Choose **OpenWind** from the list of available data fields.

Connection Behavior

- **Search Mode:** Upon activation, OpenWind will display a **Connection View** page while it searches for your wind sensor.
- **Automatic Navigation:** Once the connection is established, the display will automatically jump to the page you have designated within the OpenWind settings on your mobile device (iOS/Android).



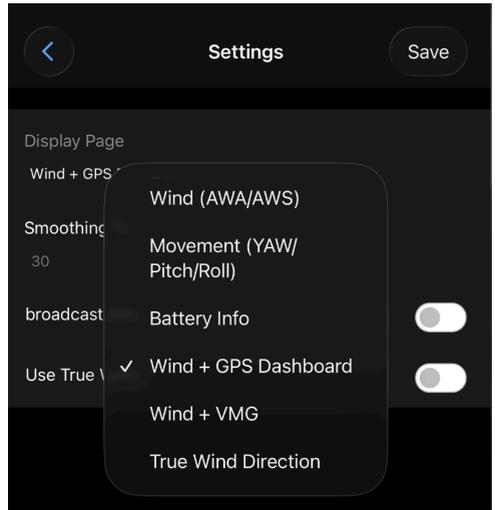
Advanced Settings & Calibration

All sensor behavior and data processing are managed via the ConnectIQ Store app on your smartphone.

Smoothing Factor Adjust the damping/averaging of wind shifts in the mobile ConnectIQ settings.

Broadcast Mode Enable "Only Receive Broadcast Data" in the mobile app if using a shared sensor.

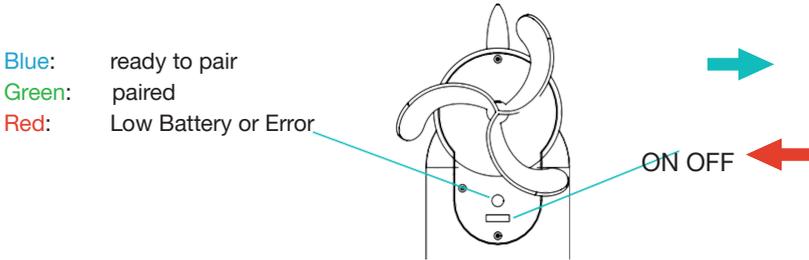
Wind Calculation Toggle between Apparent Wind (AW) and True Wind (TW) within the mobile interface.



6. TROUBLESHOOTING

6.1. Connection

The windmeter is designed to never run out of battery, so there is no need to turn it back off if you leave it outside where it can get sunlight. For a successful connection, make sure Bluetooth is enabled and the OpenWind application has all the access to all the permissions at all times.



6.1.1. If the OpenWind application does not find the device:

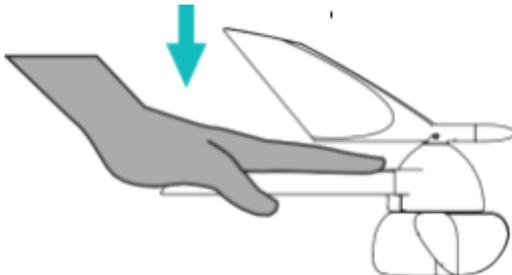
Make sure you turn the power switch on and the OpenWind instrument is flashing the blue LED every 10 seconds.

Make sure bluetooth is enabled on your mobile or smartwatch device.

Make sure GPS is enabled on Android phones.

Close the application, and switch bluetooth off and then back on, then restart the application.

If none of the instructions above work, cover the Solar panel with your hand, switch it OFF and then back ON again. The switch button only connects and disconnects the battery from the electronics, but the solar panel is connected at all times. This process will make sure it can be shut down completely.



6.1.2. If the OpenWind device does not flash any light:

If your device has been left for a long period away from a light source, leave it charging in the sun for 1/2 hour or until there is enough power to start the device again. You can check the battery status through your OpenWind App. If this doesn't work, please contact support. Make sure the device is switched ON, it will not charge the battery if the button is set to OFF.

If you recently mounted the device on the mast and the connection is established only on sunny days, most likely that the button is switched OFF and the device is running only on the solar panel. In this scenario it is normal behaviour that it blinks red or blue under the sun, and without sun the LED indicators will stop flashing.

The LED indicator flashes every 10 seconds, it can be difficult to see if the sun is really bright and the best way to notice the LED indicator is at night time.

If the device has always been working normally but eventually stopped working and the LED indicator is not flashing any light, contact our support at:

info@openwind.de

6.1.3. Android phones:

Android requires special attention. The Bluetooth and GPS are on the same sensor in these devices, therefore Bluetooth can only work if location is enabled and the application has permission to use it.

Android requires constant cache memory clearing from bluetooth. If the application is not connecting, try shutting down the application, disable and enable bluetooth or manually clearing out cache memory from the settings.

Make sure you have the latest application and system update and that the application has all the permissions running at all times.

If you are using Android to read broadcast signals, make sure the "read broadcast only" is enabled in the battery status tab.



7. TRANSPORTATION AND PACKAGING

7.1. Transportation

Please make sure that the OpenWind instrument is not subjected to impact during transport. This can damage the device. If necessary, transport the device in the original box or in a suitable container.

7.2. Packaging

If you do not wish to keep the original OpenWind packing material, please dispose of it according to the disposal requirements in your community for proper disposal and recycling.

8. MANUFACTURER WARRANTY

8.1. What is covered by this warranty

Liesenberg GmbH, Berg, Bavaria, Germany warrants the OpenWind hardware product contained in the original packaging against defects in materials and workmanship when used normally in accordance with Liesenberg GmbH's published guidelines for a period of two (2) years from the date of original retail purchase by the end-user purchaser ("Warranty Period").

8.2. What is not covered by this warranty

This Warranty does not apply to any non-Liesenberg GmbH branded hardware products or any software, even if packaged or sold with Liesenberg hardware. Manufacturers, suppliers or publishers, other than Liesenberg GmbH, may provide their own warranties to you – please contact them for further information. Liesenberg GmbH does not warrant that the operation of the Liesenberg GmbH's Product will be uninterrupted or error-free. Liesenberg GmbH is not responsible for damage arising from failure to follow instructions relating to the Liesenberg GmbH Product use.

8.2.1. This Warranty does not apply:

- (a) to consumable parts, such as batteries or protective coatings that are designed to diminish over time, unless failure has occurred due to a defect in materials or workmanship;
- (b) to cosmetic damage, including but not limited to scratches, dents and broken plastic on ports unless failure has occurred due to a defect in materials or workmanship;
- (c) to damage caused by use with a third party component or product that does not meet the Liesenberg GmbH Product's specifications;
- (d) to damage caused by accident, abuse, misuse, fire, liquid contact, earthquake or other external cause;
- (e) to damage caused by operating the Liesenberg GmbH's Product outside Liesenberg GmbH's published guidelines;
- (f) to damage caused by service (including upgrades and expansions) performed by anyone who is not a representative of Liesenberg GmbH;



(g) to an Liesenberg GmbH's Product that has been modified to alter functionality or capability without the written permission of Liesenberg GmbH; (h) to defects caused by normal wear and tear or otherwise due to the normal aging of the Liesenberg GmbH Product; (i) if any serial number has been removed or defaced from the Liesenberg GmbH Product; or (j) if Liesenberg GmbH receives information from relevant public authorities that the product has been stolen and you cannot prove in any way that you are the authorized user of the product (e.g. by presenting proof of purchase).

8.3. What will Liesenberg GmbH do in the event the warranty is breached

If during the Warranty Period you submit a claim to Liesenberg GmbH in accordance with this warranty, Liesenberg GmbH will, at its option:

(i) repair the Liesenberg GmbH Product using new or previously used parts that are equivalent to new in performance and reliability, (ii) replace the Liesenberg GmbH Product with the same model (or with your consent a product that has similar functionality) formed from new and/or previously used parts that are equivalent to new in performance and reliability, or (iii) exchange the Liesenberg GmbH Product for a refund of your purchase price. Liesenberg GmbH may request that you replace certain user-installable parts. A replacement part or Liesenberg GmbH' Product, including a user-installable part that has been installed in accordance with instructions provided by Liesenberg GmbH, assumes the remaining term of the Warranty or ninety (90) days from the date of replacement or repair, whichever provides longer coverage for you. When an Liesenberg GmbH's Product or part is replaced or a refund provided, any replacement item becomes your property and the replaced or refunded item becomes Liesenberg GmbH's property.

8.4. Limitation of liability

Except as provided in this warranty and to the maximum extent permitted by law, Liesenberg GmbH is not responsible for direct, special, incidental or consequential damages resulting from any breach of warranty or condition, or under any other legal theory, including but not limited to loss of use; loss of revenue; loss of actual or anticipated profits (including loss of profits on contracts); loss of the use of money; loss of anticipated savings; loss of business; loss of opportunity; loss of goodwill; loss of reputation; loss of, damage to, compromise or corruption of data; or any indirect or consequential loss or damage howsoever caused including the replacement of equipment and property, any costs of recovering, programming, or used with the Liesenberg GmbH's product or any failure to maintain the confidentiality of information stored on the Liesenberg GmbH's product.

The foregoing limitation shall not apply to death or personal injury claims, or any statutory liability for intentional and gross negligent acts and/or omissions. Liesenberg GmbH disclaims any representation that it will be able to repair any Liesenberg GmbH's product under this warranty or replace the Liesenberg GmbH's product without risk to or loss of information stored in the Liesenberg GmbH's product.



9. REGULATORY

9.1. EU Compliance Statement



Liesenberg GmbH declares that this wireless device is in compliance with the essential requirements, Radio Equipment Directive 2014/53/EU and Electromagnetic Compatibility 2014/30/EU as applicable.

9.2. European Union—Disposal Information



The symbol above means that according to local laws and regulations your product and/ or its battery shall be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. The separate collection and recycling of your product and/or its battery at the time of disposal will help conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

10. SAFETY

10.1. Software safety

If in any case the OpenWind Instrument firmware encounters a persistent issue on standby or in normal operation, it will automatically reset and boot itself.

This extra feature increases the device stability and makes it tougher for every environment or in any stress conditions. If this feature failed to work, the switch button located at the bottom of the device, could be used to manually reboot the system.

10.2. Hardware safety

OpenWind has an independent battery management system from the firmware that monitors the Lithium Ion battery to prevent over and under charging. If in any case the battery reaches a critical state, the device reverts to low power mode. It will then return to standby mode, once the battery leaves its critical state. This safety feature increases battery life and avoids battery damage. All assembly parts in the OpenWind instrument are stainless steel or corrosion free to make it more durable in harsh environments. To avoid injury during installation or maintenance, all edges of OpenWind were designed to be smoother and rounded.

11. EG DECLARATION OF CONFORMITY

EG Declaration of Conformity

Manufacturer: Liesenberg GmbH
Address: Am Buchberg 7, 82335 Berg, Germany
Product name: OpenWind

We declare under our sole responsibility that the above referenced product complies with the following:

Electromagnetic Compatibility 2014/30/EU
Radio Equipment Directive 2014/53/EU
Restriction of certain Hazardous Substances 2011/65/EU
Low Voltage 2014/35/EU

The following standards have been applied:

EN 61326-1:2013
EN 301-489-1 V2.1.1
EN 301-489-17 V3.1.1

Electromagnetic compatibility (EMC) - Generic standards - Emission standard for residential, commercial and light-industrial environments.

EN 62368-1:2016-05

Audio/video, information and communication technology equipment Part1: Safety requirements.

Berg, June 15, 2022



Michael Liesenberg
Head of Engineer



Matthias Liesenberg
Head of Visual Development