

User Manual



Liesenberg GmbH
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1. GENERAL INFORMATION

1.1. Information and Explanations for the Operating Instructions

This manual is intended to assist and familiarize you with your NMEA kit device and to provide you with the information needed for its safe and proper operation. Please read the entire manual before using your NMEA kit instrument for the first time.

To minimize the risk of injury and to avoid damaging the device, please do not use the NMEA kit 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 NMEA kit 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

The NMEA kit is an extension of the OpenWind instrument. This instrument was developed so that the data read from the OpenWind device can be displayed on the vessel's charterplotters and displays. It can only operate with the windmeter in range and with the use of a digital marine display or charterplotter. The device communicates with NMEA2000 or NMEA0183. Using the NMEA kit together with OpenWind avoids the need of running cables through the mast, providing simple installation and reducing the risk of damaging the boat's electronics system if hit by lightning.

1.3. Safety and Handling

1.3.1. Repair

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

1.3.2. Radio Frequencies

NMEAkit uses wireless signals(Bluetooth Low Energy) to connect to the OpenWind instrument. It was designed, tested and produced to be compliant with radio frequency emission and complies with all regulations.



2. TECHNICAL SPECIFICATIONS

2.1. OpenWind NMEA kit

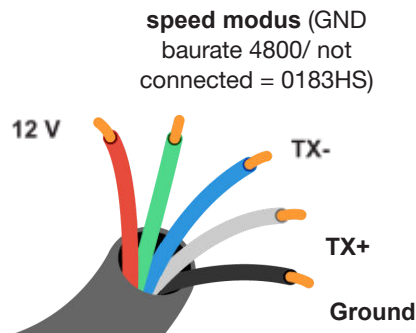
Dimensions	200x65x70mm
Weight	280 grams
Thread	1x14 (1" inch = 2,54cm)
Input	4,5 to 28V
Power consumption	30 mA
OpenWind Connection	Bluetooth version 4.2
OpenWind Connection Range	100 meters with no obstruction
Communication	NMEA2000 or NMEA0183
NMEA2000 Connector	Male Connector
NMEA 2000 Output Data	PGN 127257 (Atitude - Yall Pitch and Roll) PGN130306 (Wind data)
Data rate	10Hz
NMEA0183 Connector	Cable (Shield, TX, RX, GND, 12V)
NMEA 0183 Output Data	AWS / AWA
cable dimension	2, 3 or 5 meters
Water Resistance	Up to 1 meter below surface
Operating Temperature	-20 0 to 700 C



3. ASSEMBLY INSTRUCTIONS

3.1. NMEA 0183 cable assembly

Connect the cables according to the diagram below to achieve a successful NMEA0183 communication.



3.2. NMEA2000 cable assembly

Simply connect the NMEA2000 male connector to your vessel's NMEA2000 Network. In order to connect via SeaTalkNG, use the Adapter SeaTalk NMEA 2000 STNG-A06045. The process is pretty much plug and play, the data will be displayed in the monitor after a few seconds.

3.3. OpenWind connection

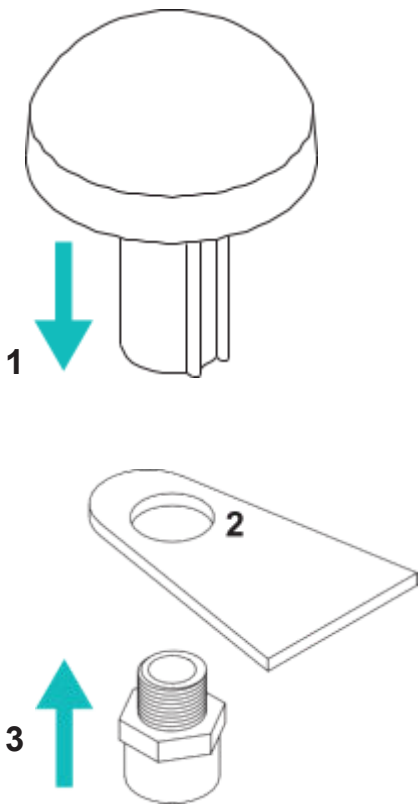
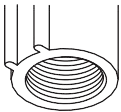
Make sure OpenWind is turned on (see the OpenWind User Manual for more instructions on how to set up the windmeter properly).

If a phone or tablet also uses OpenWind, switch on "Broadcast only" for OpenWind in that device's Devices tab, so NMEAkit can connect to OpenWind. The NMEA kit should connect instantly.



3.4. NMEA kit assembly

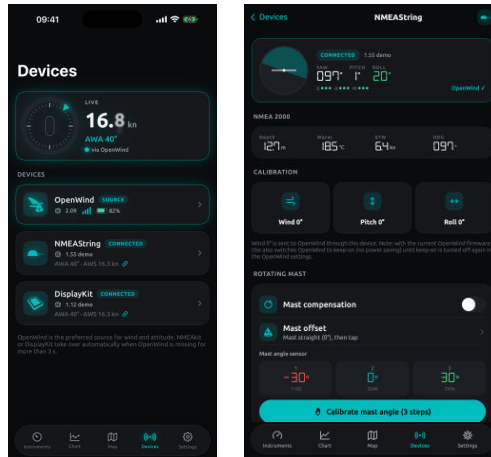
The device has a standard 1" - 14 thread which is compatible with most of the marine GPS and Antenna mounts available on the market.



In order to install it on a flat surface, simply place the NMEA kit device (1) over a 30mm diameter hole (2) and assemble the lower part (3) with it tightly.

4. APPLICATION

The NMEAkit is set up with the OpenWind app (version 6.0 or newer) for iOS and Android. The former NMEAkit app is no longer needed.



- iOS: open the App Store and search for “OpenWind”. Android: open Google Play and search for “OpenWind”. Allow Bluetooth and location when the app asks (Android: switch on location).
- Switch on the NMEAkit (it is powered from the NMEA network). The app finds it by itself; no pairing is needed. Open the Devices tab and tap NMEAkit.
- With the NMEAkit connected, the app can use the depth for the depth alarm and record your own depth along the track.

The NMEAkit page shows the live values from the NMEA 2000 network: depth, water temperature, speed through water and heading. Below them you find these sections:

- **Calibration:** “Wind 0°”, “Pitch 0°” and “Roll 0°”. They are sent to OpenWind through the NMEAkit. Note: with the current OpenWind firmware, “Wind 0°” via the NMEAkit also switches OpenWind to keep-on. It stays on until you switch keep-on off again in the OpenWind settings (Devices → OpenWind → “Keep OpenWind on”).
- **Rotating Mast:** “Mast compensation” on/off, “Mast offset” (“Mast straight (0°), then tap”), the status of the “Mast angle sensor” (NMEAString) and “Calibrate mast angle (3 steps)”. See the chapters Rotating Mast (Compass) and Rotating Mast (String).
- **Settings:** “Wind source for NMEA” (OpenWind, or External for the wind of another wind instrument on the NMEA 2000 network) and “NMEA 2000 output” (wind, compass, attitude).
- **Offsets:** yaw, pitch and roll offset of the NMEAkit sensor in degrees. Tap “Write to device” to store them in the NMEAkit.
- **Firmware:** installed version and “Update available” or “Firmware up to date”. To update, tap “Update firmware” and confirm. The NMEAkit restarts in update mode, and the app downloads and installs the newest firmware. Keep the app open and the phone close to the NMEAkit until “Update finished. The device restarts.” appears.



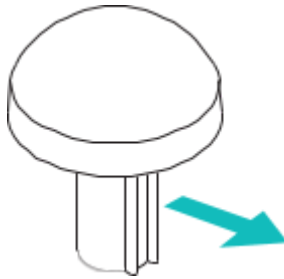
5. ROTATING MAST (COMPASS)

5.1. About

This function exists only for the units with in-built compass.

5.2. Assembly

On the shaft of the device, you will find a double railing marking. This will indicate the heading of the NMEA kit. You need to make sure that it is aligned with the boat's heading. The NMEA kit needs to be mounted and not loose around the deck, this will avoid magnetic field interference from the environment in the compass.



5.3. Calibration

Calibrate the compass of OpenWind and NMEAkit by doing random “figure 8” movements in the air, as instructed in the OpenWind user manual. It is recommended to calibrate at the same place where OpenWind and NMEAkit will be mounted. The sensor will take in consideration the magnet field environment in the calibration process.

Make sure OpenWind is connected to the NMEAkit. The LED of the OpenWind should be flashing green. You can check the connection status on the NMEAkit page of the OpenWind app (Devices → NMEAkit), and the information should be visible in the marine Display / Chartplotter via NMEA communication after a few seconds.

- Open the OpenWind app → Devices → NMEAkit.
- Under Rotating Mast, switch on “Mast compensation”.
- Put the mast in the 0° position (straight, aligned with the boat), tap “**Mast straight (0°), then tap**” under Mast offset and confirm.

The in-built compass of the OpenWind together with the in-built compass of the NMEAkit will compensate for the rotation angle of the mast. If any drift occurs in the compass / wind direction, set the mast 0° position again.

**** Changes in the magnetic field environment can cause the compass to drift. ****



6. ROTATING MAST (STRING)

1.1. About

The NMEAkit String was designed to achieve more accurate results and not rely on the magnetic field environment to determine mast rotation angles.

The wire coming out of the NMEAkit is attached to the mast. Once it rotates, the wire will then be pulled away or back inside the NMEAkit. This allows us to precisely measure the mast rotation angle.

1.2. Assembly

The wire length is about 1m and we recommend installing the NMEAkit String right next to the mast, but the location where the NMEAkit String will be installed is flexible. The wire can easily be extended with an additional rope and with the help of cable sheaves you can pretty much install wherever is more suitable for your boat.

1.3. Calibration

The calibration is done in the OpenWind app → Devices → NMEAkit → Rotating Mast → “Calibrate mast angle (3 steps)”. At each step, turn the mast to the position, drag the boom in the picture to the same angle and tap “Save point”:

- Step 1, Port: turn the mast all the way to port.
- Step 2, Centre: turn the mast straight (centre line).
- Step 3, Starboard: turn the mast all the way to starboard.

The app calculates the mast angle linearly from these points. The status of the NMEAString is shown under “Mast angle sensor”.



7. TRANSPORTATION AND PACKAGING

7.1. Transportation

Please make sure that the NMEA kit 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 NMEA kit packing material , please separate 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 NMEA kit 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's use.

8.3. 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 (eg. by presenting proof of purchase).

8.4. 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.

8.5. 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.

REGULATORY

1.1. 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.

1.2. 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.

1. SAFETY

1.1. Software safety

If in any case the NMEA kit 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 fails to work, disconnect the device to reboot the system manually.

1.2. Hardware safety

All assembly parts in the NMEA kit 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 NMEA kit were designed to be smoother and rounded.

1. EG DECLARATION OF CONFORMITY

EG Declaration of Conformity

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

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

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

The following standards have been applied:

EN 61000-6-4:2007: 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 05, 2022



Michael Liesenberg
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