# SeaMODE<sup>TM</sup> Speed Lab Ver. 2.1.0



Measurement System and Trip Computer for Sailing Performance Assessment

- · Get the most out of your yacht, gear and high-tech sails
- · Achieve results faster by systematic learning
- Measure, analyse and improve
- Dependable measurement due to versatile calibration and motion compensation



## Speed and Performance Analysis System

SeaMODE<sup>™</sup> Speed Lab is a performance analysis system designed for the best yachts and racing crews. SeaMODE<sup>™</sup> has comparable measurement features, accuracy and credibility as in systems found in extreme racing yachts.

### Systematic Training Brings Rewards

Do you spend thousands on sails and gear on a regular basis? How do they benefit you on the race course? With SeaMODE<sup>™</sup> you can get faster results by systematic elimination of bottlenecks in your yacht's and crew's performance.

### More Exact Speed and Wind Information

Many types of motion also affect other on-board measurement such as speed and wind. Often these effects are large, yet their measurement is undermined. Speed and wind sensors connected to SeaMODE<sup>™</sup> are automatically motion compensated.

### SeaMODE<sup>™</sup> Speed Lab contains:

- Two MD100 motion detectors
- a GPS designed for racing
- the SeaMODE™ Speed Lab software

### **Optional extras:**

- · a speed and depth sensor
- a wind sensor
- a rudder sensor
- a barometer





The SeaMODE<sup>™</sup> Speed Lab software collects the data from the SeaMODE<sup>™</sup> MD100 motion detectors, processes the data and presents it as graphical information. Here is one of the dashboards available. The Multi-view dashboards display four user-selected data views.

# System Components

### Hardware

The SeaMODE<sup>™</sup> MD100 motion detector is based on the company's proprietary patented technology. The detector is specifically designed for demanding maritime conditions. The SeaMODE<sup>™</sup> Speed Lab system uses two MD100 motion detectors.

Each detector:

- · provides accurate motion measurement
- has low power consumption
- · is light weight
- is water-tight, shock-proof, EMI resistant
- is easy to install, align, remove and re-install



The SeaMODE<sup>™</sup> Speed Lab system is connected to two SeaMODE<sup>™</sup> MD100 motion detectors.

### Software

SeaMODE<sup>™</sup> software is preferably installed on a fixed onboard Windows<sup>™</sup> computer. If a laptop or tablet is used, a 12 VDC battery charger is required.

### **Unique Dashboards**

SeaMODE<sup>™</sup> is easy to use. In on-line mode, simply click "Start" to record, and then "Stop". Stored log files are easily available for replay.

SeaMODE<sup>™</sup>'s copyrighted dashboards are unique, intuitive and easy to understand. Performance information and boat motions are clearly visible on the dashboards in both on-line and off-line modes.

### Analyse

In off-line mode, logged data can be replayed in order to analyse the boat's performance, steering characteristics, route selection and the efficiency of tacks, gybes, and both upwind and downwind legs.

Bottlenecks that require improvement can be identified with this information. Subsequent recordings prove whether corrective action has improved your sailing performance.

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### New Features of Version 2.1.0

When SeaMODE<sup>™</sup> Speed Lab was launched in 2014, it was mainly intended for recording and post analysis. In 2017, some new dashboards were introduced, also for on-line use. In 2022, the new 2.1.0 version has even more on-line features. These include the Steering indicator of the new Momentary Values dashboard, and the TWD arrow and Tack line functionalities of the BoatTrack dashboard. To further support On-line use, SeaMODE<sup>™</sup> Speed Lab can now also output calibrated and motion compensated measurement data to external instruments such as plotters, MFDs, tablets and phones. The data can be sent by wire or wirelessly.

### Dashboards available

- Main
- Boat3D
- Boat Track
- Momentary Values
- Tacks & Gybes
- Leg Efficiency
- Wind Graph
- Weather
- Roll Graph
- Depth Graph
- Center of Motion
- · G-force Graph
- Numbers dashboards (6 different)
- Multi view dashboards (8 different)

### PC requirements for the SeaMODE™ Speed Lab software

- · i5 or i7 or similar processor
- MS Windows<sup>™</sup> 10 or 11
- Minimum 8 Gb RAM
- 1 Gb display memory
- SSD hard drive
- Minimum logging memory 16 Gb
- Minimum 2 USB ports

### Specifications SeaMODE™ Motion Detector

- Very accurate 3D motion measurement
- · Optimized for boating
- Water tight (XP67)
- Durable, but still light weight
- · Low energy consumption
- Easy to install, remove and re-install
- -5°C....+60°C (operational)
- -30°C....+70°C (storage)
- 10....100 %RH, condensing conditions
- Thoroughly tested (water ingress, EMC)
- CE marked



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