

EVOLUTION 3.2.23 – June-2025

This version brings the addition of the mast angle (RAKE) and a few simple changes:

- The Leeway Angle table now features slightly different TWS interval spacing.
- The time to burn, when exported to the displays, is positive when you are early and negative when you are late.
- Our Sail database now uses a Sail Bag ID based on sail type, year of manufacture (2 digits), and an optional tag. For example, J1.5-25 or M1-23B, using 'B' as the tag.
- The \$xxVBW, Dual Ground/Water Speed, NMEA 0183 sentence can serve as input to the Speed through Water yacht data item.

EVOLUTION 3.2.22 – April-2025

The GFS Surface Flux forecasts are now included in NOAA's download options, offering a resolution of 13 km by 13 km (0.11° x 0.11°). For further details, refer to pages 2-3 to 2-5 of the EVOLUTION Forecast manual.

Compared to the resolution of 27 km by 27 km (0.25° x 0.25°), the downloaded GRIB files contain four times as many data points, resulting in larger file sizes and longer download times.

Consider using this option limited to the race areas, and the lower resolution GRIB files for larger areas.

EVOLUTION 3.2.21 – March-2025

Now, EVOLUTION reacts to PGN 127233 (Man Overboard) over an NMEA 2000 network. The **B&G MOB Remote Button** (SKU: 000-15940-001) or the **Yacht Devices Alarm Button YDAB-01** produce this PGN.

When receiving PGN 127233, EVOLUTION generates a MOB event and triggers an alarm on the onboard computer. You can test the sound of the alarm using the **Evolution→Global Options [Alarms]** menu option.

Once the MOB alarm is triggered, it will sound for 30 seconds and cannot be stopped.

In EVOLUTION, the man-overboard functionality operates identically, regardless of whether it is activated from a received PGN 127233, the system button, or the MOB menu option.

EVOLUTION 3.2.20 – March-2025

A new function for taking free-text notes is available in the **Tools→Notes** menu, which opens a simple text editor. The associated **<yacht ID>-Notes.txt** file in the yacht's folder can also be opened with Windows Notepad.exe.

The World Magnetic Model (WMM) coefficients for 2025-2030 have been incorporated.

EVOLUTION 3.2.19 – February-2025

The Data Export to the Instrument Displays feature has been reimplemented with additional options and more detailed documentation.

EVOLUTION 3.2.18 – November-2024

Fix: Correct use of magnetic variation for data in the "Wind" tab.

A new feature will automatically synchronize videos and images with the playback of recorded data. This feature only applies if the camera obtains the date and time from its internal GPS.

EVOLUTION 3.2.17 – October-2024

New Kalman Filter parameters for the Kalman Filter on the DSP function.

EVOLUTION 3.2.16 – October-2024

The DSP function to smoothen wind or boat speed sensor data now uses a Kalman Filter.

EVOLUTION 3.2.15 – September-2024

After pinging a starting line, it will be preserved and applied when you load a different race course.

EVOLUTION 3.2.14 – August-2024

Actisense W2K-1 N2K ASCII protocol was added to exchange data with an NMEA 2000 network.

EVOLUTION 3.2.12 / 3.2.13 – July-2024

Solves a rare error when extracting high-precision latitude and longitude data from PGN 129029, in which this data is occasionally misinterpreted. This applies to all NMEA 2000 instrument systems.

EVOLUTION 3.2.11 – June-2024

The rules for setting the starting line that enables calculations presented on the start page have been modified. The maximum length of the line has been increased from 1000 meters to 2000 meters, and the maximum distance from the yacht to either end of the line has increased from 1 nautical mile to 1.5 nautical miles.

EVOLUTION 3.2.10 – April-2024

Solution to the Maretron compass calibration tool on computers with number formats other than the invariant culture.

EVOLUTION 3.2.09 – April-2024

Solution for exporting data to remote displays in "Navico N2K Remotes" mode.

EVOLUTION 3.2.08 – April-2024

SHN oceanographic models' forecast download functions have been fixed. Due to this, WebFile forecast requests will be deleted and need to be re-entered.

EVOLUTION 3.2.07 – March-2024

Fix the NOAA GFS Atmosphere and Wave forecast download functions due to changes in the NOMAD server.

EVOLUTION 3.2.06 – March-2024

EVOLUTION's timer on the start page can now control the start timer for B&G H3000, Triton, and H5000 systems.

For B&G MFDs on NMEA 2000 networks, EVOLUTION's MOB feature should activate the instrument's MOB functionality.

EVOLUTION now exports its start-calculated Time-to-Line and Time-to-Burn metrics to Njord Analytic.

EVOLUTION 3.2.04 / 3.2.05 – January-2024

Improvements in data export to Navico remote displays via the NMEA 2000 networks. Layline times are now displayed in H.M. or M.S. format as appropriate. Forestay loads are shown in tons to 2 decimal places.

Other cosmetic improvements...

EVOLUTION 3.2.03 – September-2023

Export data items "Target HEEL" and "Live-Target HEEL Delta" can now be transmitted to the instrument system's displays.

EVOLUTION 3.2.00 / 3.2.02 – August-2023

Data items **Heel Angle Target** and **Forestay Upwind Load Target** added.

You can now also find these items under "Tools→Data Extract from Log" and "Tools→Race/Trial Registry [Export]."

EVOLUTION 3.1.05 – July-2023

Improved Wind Adjust tool in the Race menu.

EVOLUTION 3.1.04 – July-2023

Enhancements to the Njord Analytics export feature. Course, sail changes, comments, and active crew (helmsman, tactician, mainsail & foresail trimmers) are now exported in the JSON file.

EVOLUTION 3.1.03 – July-2023

The "Live Depth" data item can now be transmitted to the instrument system's displays. The option is available in meters and feet.

EVOLUTION 3.1.02 – July-2023

The heel angle "Live Heel" is now correctly transmitted to the instrument displays.

EVOLUTION 3.1.01 – June-2023

To ensure accuracy in terminology, all mentions of "Speed over Water" (SOW) have been updated to "Speed through Water" (STW), and "Motion over Water" (MOW) is now referred to as "Motion through Water" (MTW).

EVOLUTION 3.1.00 – June-2023

EVOLUTION now exports logged data in Njord Analytics compatible file format: CSV for metrics and JSON for sails and comments.

About Njord Analytics (<https://www.sailnjord.com/analytics/>)

Njord Analytics is a software company that provides data analysis and visualization tools for sailing teams. Their software allows teams to upload their boat data and then use Njord's analytics tools to gain insights into their performance. This can help teams identify areas for improvement, make better decisions during races, and learn from mistakes.

Here are some of the features of Njord Analytics:

- **Instant Gain/Loss Analysis:** This feature allows teams to compare their boat's performance against other yachts in the fleet or against their own performance on previous days.
- **Tactical Map:** This feature allows teams to visualize their boat's position on the racecourse and see how it changed over time.
- **Maneuver Analysis:** This feature allows teams to analyze their boat's performance during specific maneuvers, such as tacks and gybes.
- **Performance Database:** Njord Analytics maintains a database of performance data from thousands of boats, which teams can use to compare their performance against other boats in their class.

If you are a sailing team looking for ways to improve your performance, then Njord Analytics is a valuable tool to help you achieve your goals.

EVOLUTION 3.0.39 – May-2023

New variables BEAT.TWA and RUN.TWA can be used to extract data for analysis. They represent the upwind and downwind TWA Targets sailing at best VMG.

These TWAs are referenced to the boat's centerline and can be compared to the live TWA, which is also referenced to the centerline.

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On the other hand, the variables BEAT.PWA and RUN.PWA are both referenced to the course (heading plus leeway angle). PWA (Polar Wind Angle) can be used to adjust the polar curves since, in EVOLUTION, they also include the leeway angle.

EVOLUTION 3.0.38 – April-2023

We fixed a problem in the synchronization options of videos recorded in time-lapse.

EVOLUTION 3.0.37 – March-2023

New function to help synchronize videos with the track playback (Replay from Log with Media).

EVOLUTION 3.0.36 – February-2023

Improvements to the positions download function of the Yellow Brick tracking system.

Update the catalog of forecast files in the "Web File."

EVOLUTION 3.0.35 – February-2023

Update of the positions download function for the Yacht Club Argentino (YCA) tracking system.

EVOLUTION 3.0.34 – January-2023

Dynamic Predictive Smoothing filter option for raw wind and boat speed sensor data.

Cosmetic enhancement in the Data tab.

Fix on boat speed linearity correction checkbox "Apply Correction to Input".

EVOLUTION 3.0.33 – December-2022

Tracking for YCA, Blue Water, and Yellow Brick now accepts local files as competitors' fixes.

EVOLUTION 3.0.32 – October-2022

Improvement: This allows the copying of the databases for Sails, Crew, and Settings (SailDB, CrewDB, and SettingDB) in the Data Base folder from one boat to another.

EVOLUTION 3.0 – January-2022

Significant improvements were added to the system in 2020 and 2021, many of which were enhancements proposed by users. Other new functions are detailed below.

1 C-MAP MAX Cartography

EVOLUTION is now compatible with the C-MAP MAX charts format.

In 2017, the C-MAP firm stopped publishing and selling nautical charts in the traditional NT+ format. Today, they only continue to market charts in the MAX format.

EVO3 is essential for buying up-to-date cartography. Of course, it continues to be compatible with nautical charts in NT+ format that are still active on the computer.

2 Full compatibility with NMEA 2000

EVOLUTION 3 connects to the NMEA 2000 network to receive and send data in installations with state-of-the-art instrumentation.

On sailboats with instruments lacking advanced calibrations (i.e., B&G Triton, Garmin, Raymarine), EVOLUTION 3 gets data directly from the sensors, corrects it to high precision, and delivers it back to the rest of the instrumentation.

The calibrations are the same as those in the top-of-the-line processors for racing sailboats, such as the B&G H5000 Performance.

- TWA and TWS correction tables.
- Slide speed linearity correction table.
- Correction of AWA and AWS due to the movement at the top of the mast and list.
- Correction of residual compass deviations.

EVOLUTION always delivers precise performance and tactical data from the boat's specific polar curves. This information is viewed on any instrument display or mobile device on deck.

In other words, EVOLUTION 3 elevates simple cruising instrumentation to an advanced race information system for a fraction of the cost.

3 More and Better Forecasts

It is now possible to display theoretical radar reflectivity (dBZ) for forecasts originating from the GFS model, which indicates the position and forecast severity of frontal and convective storms.

EVOLUTION 3 now provides free access to new ARPEGE (Meteo France), ICON, and GWAM (Deutscher Wetterdienst, Germany) global forecasts and various regional weather, wave, and current models.

As always, you can access PredictWind's forecasts by subscription and use its service to obtain optimal routes and ocean currents forecasts.

4 Addition Race Information Registry

EVOLUTION 3 allows you to record each race, training session, or test the team conducts. At any moment, you can state the crew, sails, boat configuration, or notes.

These logs are then used as an index for automatic data recordings.

The crew, sails, and configurations can also add to the analysis in different sailing conditions.

5 Video, Images, and Audio

EVOLUTION allows you to include images, videos, and audio and synchronize them with data recordings (data logs).

Using this feature, you can visualize sail trim and crew performance against numeric data.

6 Competitors Tracking

Some regatta organizers may offer boat tracking. In such cases, with EVOLUTION 3, you can download the position of your competitors. This option is available if the boat has access to the internet through GSM or satellite communications (i.e., Iridium Go).

7 Waypoints and Racecourse Exchange in GPX Format

Now, you can import and export waypoints using the popular .gpx file format. You can also import routes from a chart plotter. This makes exchanging data with other computers or sites on the Internet accessible.

8 Activation via the Internet

EVOLUTION 3 no longer uses the USB key (dongle) to operate on board. Its activation is straightforward and only requires exchanging a couple of emails. The software license is for a single onboard computer.

Yet, you don't need this activation to download forecasts, review data recordings, create race courses, or manage waypoints.

This change also fixes the problem of the dongle not being recognized when waking up from a tablet using RDP. Launching EVOLUTION on the PC or notebook below the deck was necessary.

9 Optimal Routing using PredictWind Offshore

EVOLUTION 3 integrates the optimal routes offered by the PredictWind Offshore system. It is easy to create a racecourse from an optimal route. You can use Predictwind Offshore through home Internet, GSM, or Iridium Go.

EVOLUTION 2.0 – 2.12 (2005 to 2021)

EVOLUTION 2 includes 15 years of developing and refining all base system functions and the user interface.

Technical support and updates for EVOLUTION 2 were discontinued at the end of 2021 with the release of EVOLUTION 3.