

# EVOLUTION – A Quick Tour

This brief document will help you take your first steps in EVOLUTION without being on board.

We invite you to use the playback functions of recorded races. This way, you can see exactly what the navigator obtained from the system at each moment.

## Let's Start

Please install the latest version of EVOLUTION on any Windows computer. Now you can begin exploring its features.

When starting the system, you can review and accept the User's License Agreement. Remember that it applies, even if you are not using it on board.

Next, the system will show you the main screen, whose title contains the name of the “active” yacht. Remember that EVOLUTION allows you to keep several boat configurations on the computer.

You will find "ARG-5000 Fortuna 3" selected when installing the system, a demonstration boat with recordings of a few races.



At first glance, you will see that EVOLUTION has a classic structure of a Windows program. A general menu, tabbed pages, and each page can have some specific buttons.



Back in 2005, when it was born, EVOLUTION was supposed to work on 800x600 pixel deck displays. For example, the Panasonic CF-VDW07. Preserving space for information and functions resulted in this minimalist design. Even today, users are carrying these devices.

Below is a brief description of the system’s menu and the pages (tabs).

## Main Menu

Let's take a quick look at the main menu options.

Evolution	Create a new boat or select an existing one. Access all specific configurations for the active yacht. See the list of C-MAP charts installed. Adjust various system options.
Forecast	Create requests to download forecasts. View them on the chart. The document <a href="#">“EVOLUTION – Forecasts”</a> details how to use these functions.
Race	Options related to racing. Create and manage racecourses. Set the tactic mark. Check the <a href="#">“EVOLUTION - Routes, Marks and Waypoints”</a> manual for more information. Select the appropriate polar curves. Adjust the "measured" wind to "effective" wind.
Tools	Analysis tools for review of races and trials, replaying or extracting data from logs. Functions that add extra information to races and tests. Also, waypoint management and AIS settings.
MOB	Activates the position marking of a “Man Overboard”.
Help	Information about the system. Link to EVOLUTION’s website.

## The Pages (Tabs)

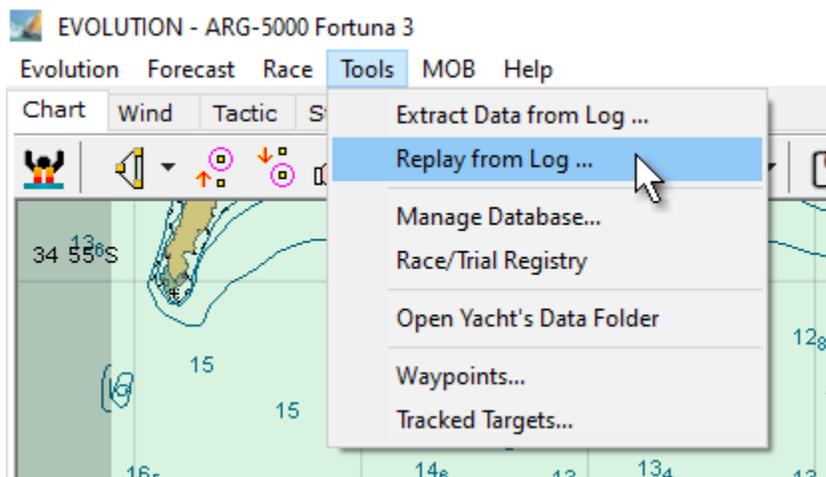
Each page includes information related to a specific topic:

Chart	Everything that can be displayed or acted upon on the nautical chart. Create or change courses. Set the tactic mark. View past trajectory and data towards this mark. Review forecasts. You can configure various display options and give them a name for later use. In the document <a href="#">“EVOLUTION – The Nautical Chart”</a> , you will find how to use this page.
Wind	The recent history of wind behavior, in graphical and numerical format. With various display options.
Tactic	The tactical calculator. It computes all the navigation target parameters between two points with a given wind and current. You can use it between the position of the boat and the tactic mark with the conditions of the moment. And you can also get the parameters for any leg of the racecourse using the actual or forecast wind and current.
Start	It displays valuable information for each possible start strategy. Allows you to set the start line and handle the start timer. In the manual <a href="#">“EVOLUTION – Start”</a> , you can find the use of this page in detail.
Data	Shows data obtained and processed by the EVOLUTION calculation engine. It is usually used to verify the correct operation of the system. It has no practical function while racing.

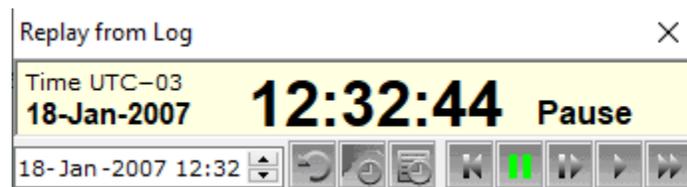
## Replay Mode

Our first step will be to use the replay function to explore some of the Fortuna 3 races.

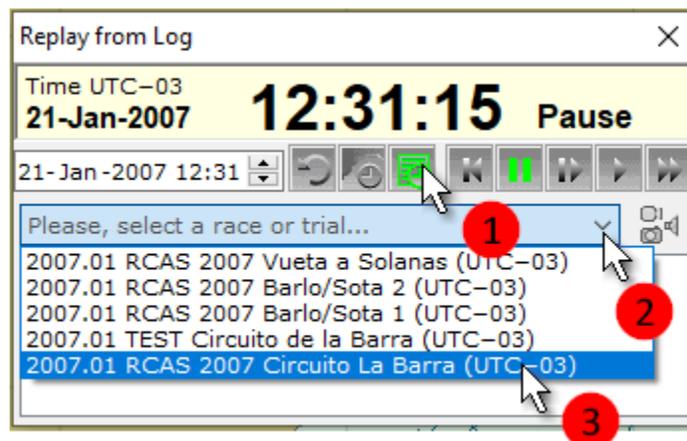
1. We use the menu option “Tools→Replay from Log” to put the system in replay mode.



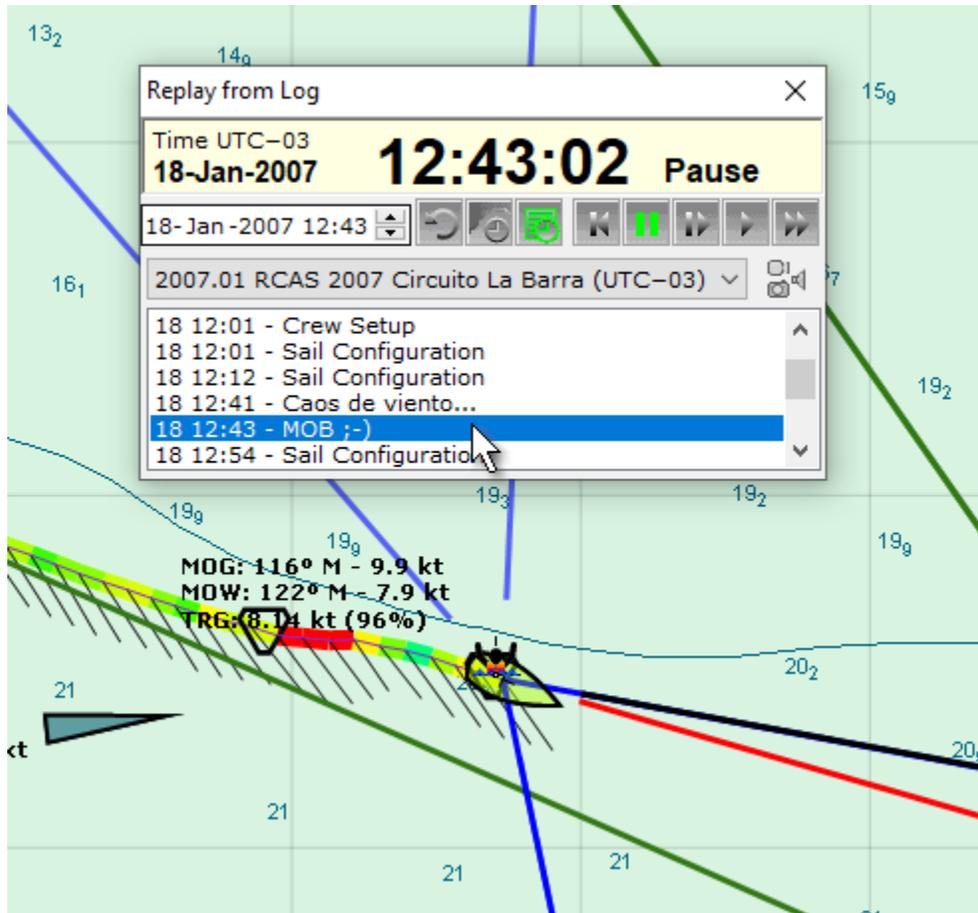
2. A form will open that controls the playback time and speed.



3. This control offers several options to position ourselves at a specific moment of the boat's sailing history. But, as these races are already cataloged, we can select them from the list.



- When you select a race or trial, you will see the boat track and its last position on the nautical chart. In the playback control, you will have a list of the events registered for that regatta. **Double-clicking** on an event will take you to the moment it occurred.



In this example, we select the event “MOB :-)” that occurred on the 18th at 12:43. After the double-click, the player stays at that moment.

- Now, use the buttons on the controller to play at the speed you prefer.



Go back 1-2 minutes.



Stop the playback.



Advance one second per click (frame by frame).



Play in real-time (second by second).

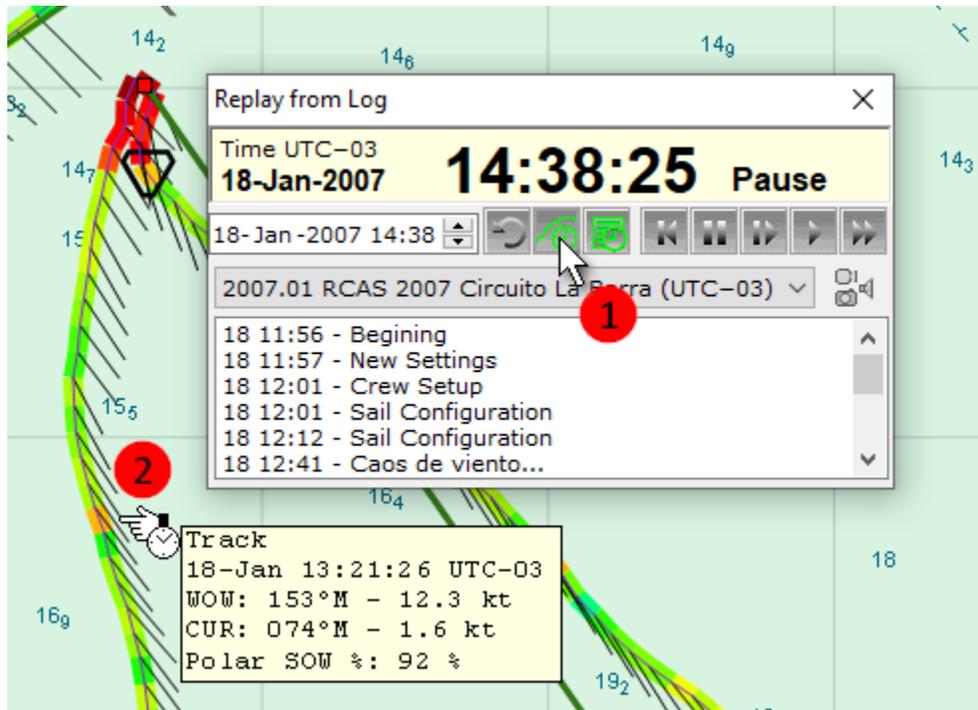


Speedup playback by doubling the speed per click, from x2 to x64.

6. You can also position the boat at some point (time) on the track.



Use the button indicated in (1) to put the system in the mode of selecting a moment on track (Track) on the nautical chart. Position the cursor (2), which now has a specific format, and do a **long click**.



Now the ship, and all playback, assume the time 18-Jan 13:21:26 UTC-3.

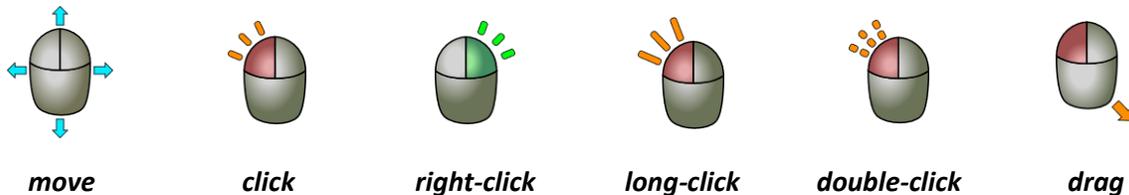


The play mode affects all pages of EVOLUTION. Use the nautical chart page (Chart) to visualize how you competed. The tactical page (Tactic) to see the ideal navigation numbers against the real ones. The wind page (Wind) to check its recent behavior. Also, you can use the "Data" page to verify that the data handled by the system is correct.

## Move and Scale of the Nautical Chart

You will find the description of different elements that you can display and control in the “Display Options” chapter of the manual. But here, we include the mouse actions to move and change the nautical chart scale.

The system allows various functions to be performed on the chart using a mouse or other device that controls the cursor on the chart. The possible actions are:



### Actions on the Nautical Chart

This section describes the different actions that the user can perform on the chart. For example, position the area of interest by changing the center and scale.

#### Change Center and Scale

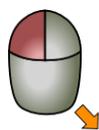
To move the chart to an area you want, you can use a combination of three basic functions: 1) Move or “Pan”, 2) Zoom in, and 3) Zoom out.

##### Pan



To move the chart, **click** on the position you want to center on the screen. To move the center of the chart to a non-visible point, you will need a few extra **clicks**.

##### Zoom-In



To zoom into an area of interest, create a window by moving the cursor with a **drag**. Hold down the left mouse button and move the mouse from one corner to the opposite corner.

The system will immediately center and change the chart scale. Now the area delimited by the window should show in the entire space reserved for the chart.



When doing a “Zoom-In”, keeping the chart's scale in mind is essential. If the original chart scale is small (wide area), excessive zooming in might result in low details and accuracy. This might cause errors when used to plot a course. This situation is known as “Over-Zoom”, a navigation hazard.

## Zoom-Out



To zoom out of the chart by enlarging the visible area, make a **“right click”** using the right mouse button. The system will respond by doubling the chart scale, thereby expanding the coverage of the viewable area.

Right-clicking can be difficult when the system operates from a touch screen on the deck. In these cases, to zoom out, use the following button, obtaining the same result as doing a **“right-click”**.



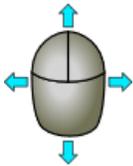
## Block Chart View



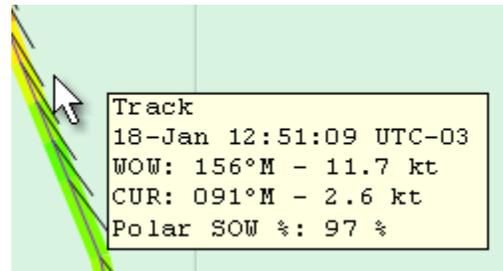
This button blocks changing the scale of the chart, inhibiting **“Zoom-In”**, **“Zoom-Out”**, and moving it, doing a **“Pan”**. You can use this function when operating the system from a touch tablet on deck. In this way, an accidental touch on the screen does not move the chart from the area of interest. While the system is in this mode, the button has the following appearance.



## Viewing Info Tags



Pointing at chart symbols with the cursor lets you get critical information about them. It works with cartographic objects, such as navigation aids, tides data, etc. Also, on tactical elements, for example, marks, routes, tracks, etc.



## Next Steps

Playback mode is excellent for exploring EVOLUTION. Check the features used during a race. Discover the possibilities of preliminary analysis using the track on the chart.

We also encourage you to use the forecast features to download and review available forecasts for your sailing area. You will find the functions under the **Forecast** menu options and consult the [“EVOLUTION – Forecast”](#) manual.

Remember that you can always contact us for a personalized presentation if you have questions.