User's Guide

Avalon Offshore V7
Avalon Navigation V1

iOS and Android versions

July 2025 edition

A. Introduction

1. Important Notice

Avalon Navigation Systems is not responsible for any damages that may occur as a result of using this software. The skipper remains entirely responsible for the navigation on his boat.

With respect to nautical charts, whether provided free of charge or purchased as an in-app purchase within the software, Avalon Navigation Systems has not verified the accuracy of the information contained in such charts and assumes no responsibility for it.
These charts should not be used in navigation. Use of this product for cruising plans and while cruising does not comply with SOLAS criteria.

Possession of these derivative products does not exempt you from the obligation to use the appropriate nautical documents provided for by national or international regulations

Note to readers: We are in the process of updating most of our videos that relate to Version 5 and before.

2. Document Scope

This document covers Avalon Offshore and Avalon Offshore Basic on Apple and Google platforms.
However some functionalities are not available in Avalon Navigation. Please refer to comparison table on:

https://www.avalon-routing.com/en/products-prices-e-shop/

3. Purchasing and Installing

a. Supported hardware platforms

We recommend installing the app on a device with a 10-inch screen for better readability. However, the application will work on devices with smaller screens (6 inches minimum)

Avalon Offshore works on the following platforms
- iPad and iPhone with at least iOS 10
- Android (minimum version 5)
- MacBook (Air and Pro) next generation (M1/M2 chip)
- Chromebook and Chromebox

Avalon Offshore does not run on Windows. (PC or Surface tablet)

b. Application purchase

The application can be purchased directly from the Apple and Google stores
- **Apple:**

https://apps.apple.com/fr/app/avalon-offshore/id975313021
- **Google:**

https://play.google.com/store/apps/details?id=com.avalon.avalonoffshore.app&gl=US

Once purchased, the application can be installed free of charge on all the devices (tablets, telephones or computers) you have provided that:

- These devices are registered with the same Apple or Google ID
- No mixing between Apple and Google. If you purchased Avalon Offshore from the Appstore, you can only install it on Apple devices. Same for Google.

Avalon Offshore is also eligible to Apple and Google Family programs

The application is purchased "for life". You can uninstall and reinstall it at any time and you benefit from all new versions.

This is also valid for map purchases (SHOM or UKHO packs). Maps, like the app, can be installed on multiple tablets at no additional cost.

The Premium subscription must be renewed every year but a single subscription is sufficient for all of your devices (of the same type). In case of automatic renewal, initial purchase price is applicable to all renewal subscription.

However, you will need to "restore purchases" to activate the subscription or retrieve your map packs on another tablet.

4. Tablet Settings

In order to work, certain permissions must be granted to Avalon Offshore in the tablet settings..

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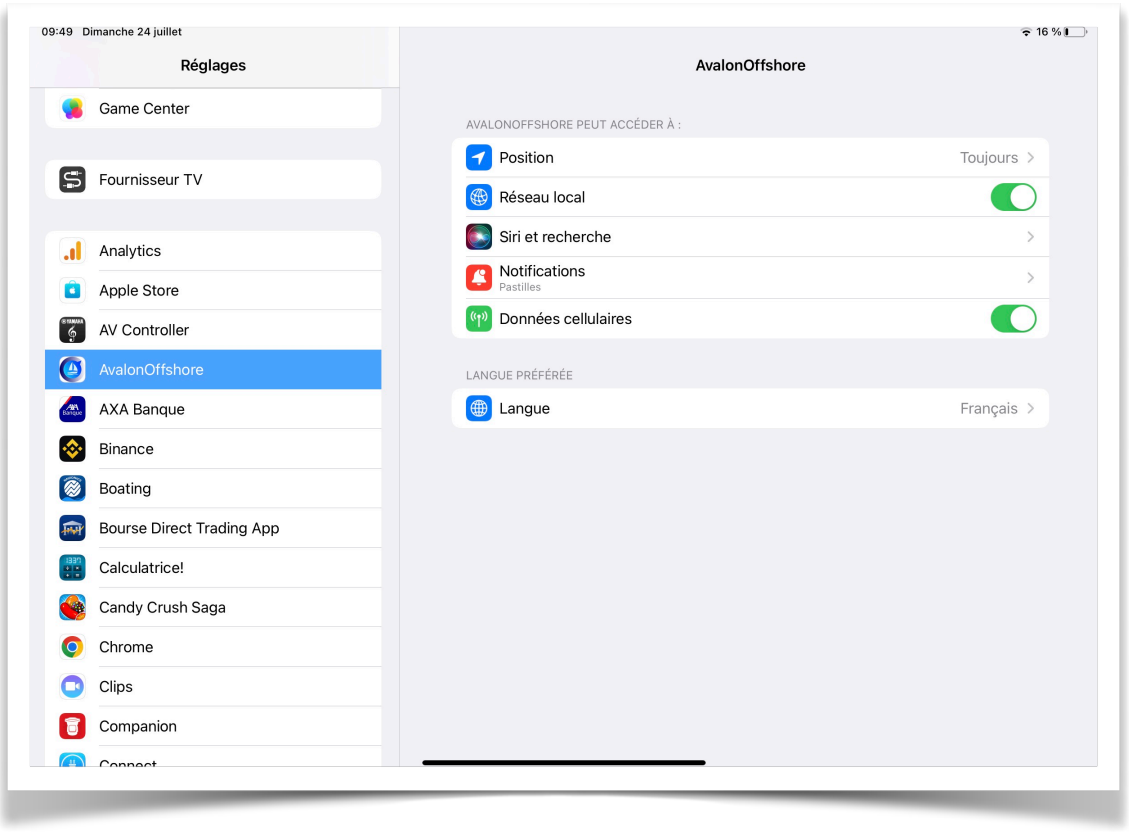
a. Apple

Avalon Offshore must also be able to access your position in the settings of the tablet to be able to position your boat in navigation:

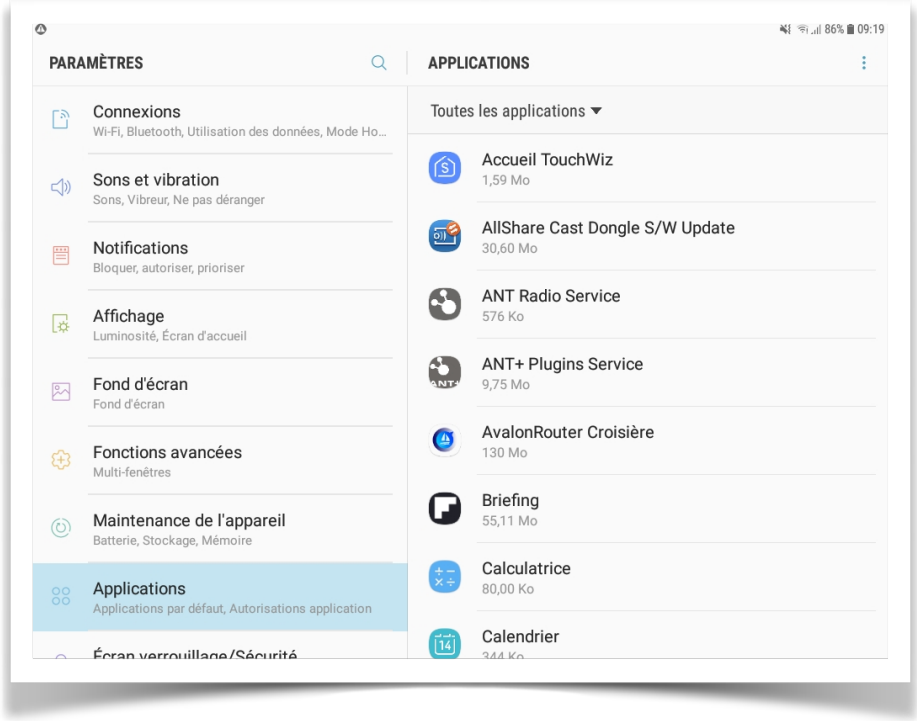
- **When the app is active:** The built-in GPS will only work if the app is in the foreground. Recording the route will require the app to remain in the foreground.
- **Always:** GPS works even when the app is in the background. Route recording is not interrupted.

Avalon must also have access to the boat's local area networl to be able to connect to the onboard NMEA network.

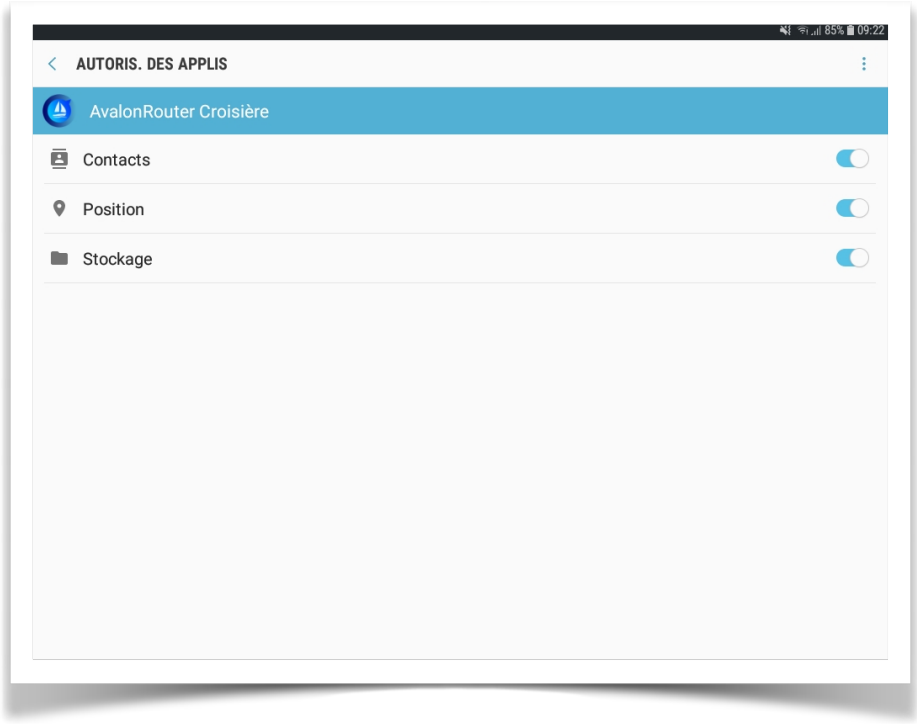


b. Google

Go to tablet settings then Applications.



Avalon Offshore access must be validated for:



- Position: To know the position of the boat with the GPS of the tablet
- Contacts: Avalon does not access your contacts but this access is necessary to allow you to keep your in-app purchases (for free) in case of installation on another tablet
- Storage: To be able to export and import data (routes, winds, maps, etc.)

5. In-App Purchases: Premium Membership, Maps and Courses

Premium Weather yearly subscription is made directly from the tablet from the main menu by clicking on the STORE icon.

Maps and the race option can be purchased from the Avalon Shop on our website. An Avalon Cloud account is required.

Premium weather (1 year usage) can also be purchased from the Avalon Shop.

6. Termination of Weather Premium Membership

If Premium Weather is purchased on the Avalon e-shop, it is a usage right that expires after one year. There is no need to cancel it. If you go on a cruise during the validity period, you can purchase it again. 365 days of use will be automatically added.

If you purchased the Premium weather subscription on AppStore or Google Play, it is valid for one year and is automatically renewed each year.
To terminate it, you must:

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a. Apple:

- Go to tablet settings
- Then on "My name" Apple ID, iCloud, media and purchases.
- Then go to subscriptions
- Terminate Premium subscription.
- You can also go to your Apple account on the web.

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b. Google

- Go to play.google.com.
- At the top right, click your profile icon.
- Click Payments & Subscriptions.
- Next to the subscription you want to cancel, select **Manage.**
- In the confirmation window, click **Cancel Subscription**.

Important: We guarantee price stability for auto-renewing subscriptions at the original price at which the subscription was purchased. Once the subscription has been terminated and in the event that you wish to re-subscribe, the price in force at the time of the new subscription will apply.

5. Install Avalon Offshore on another device

If you want to install Avalon for free on another tablet, phone or computer, this new device must be connected to the same Apple or Google account. Same principle if you replace your tablet or phone.

Important: If you purchased Avalon Offshore on Apple and want to install it on Google, you will need to repurchase the application because the Apple and Google “stores” are competitors and the applications they offer are different, even if Avalon functionalities are the same.

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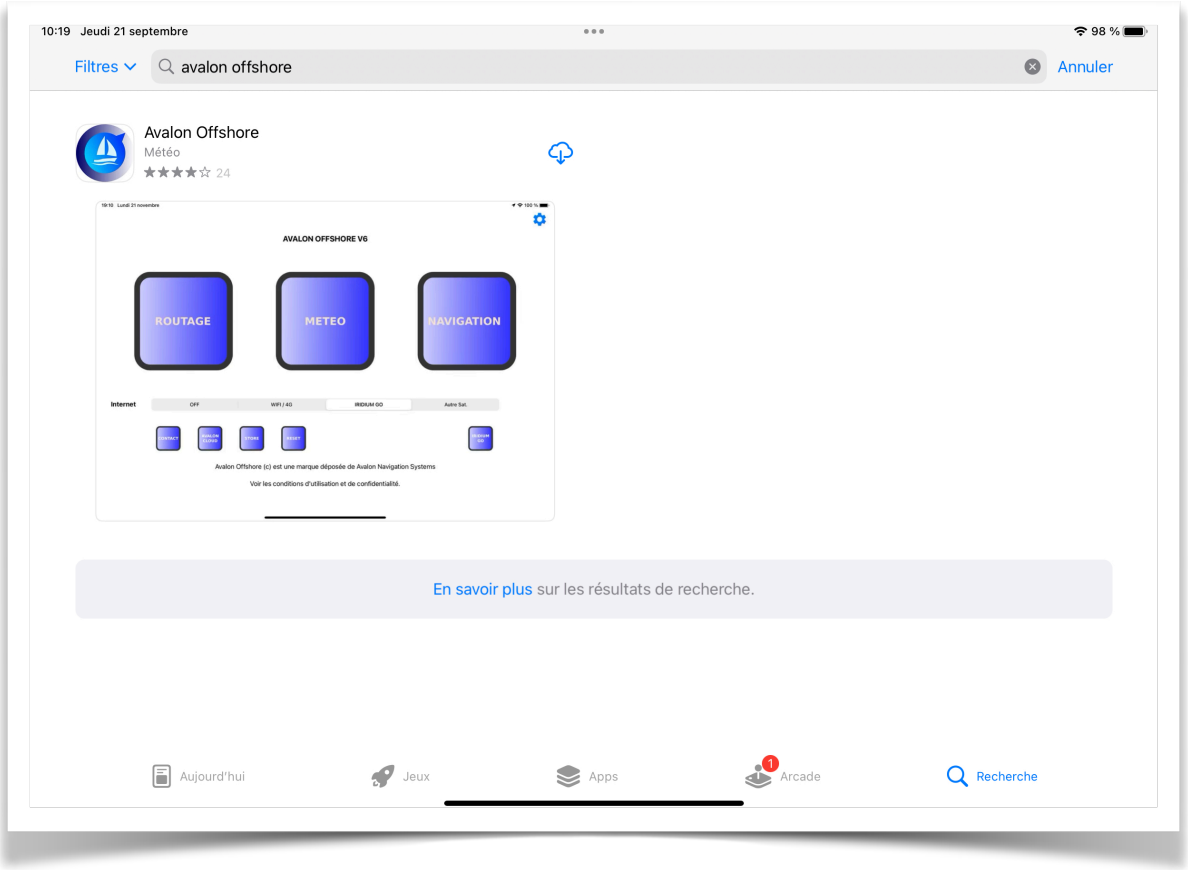
a. Apple

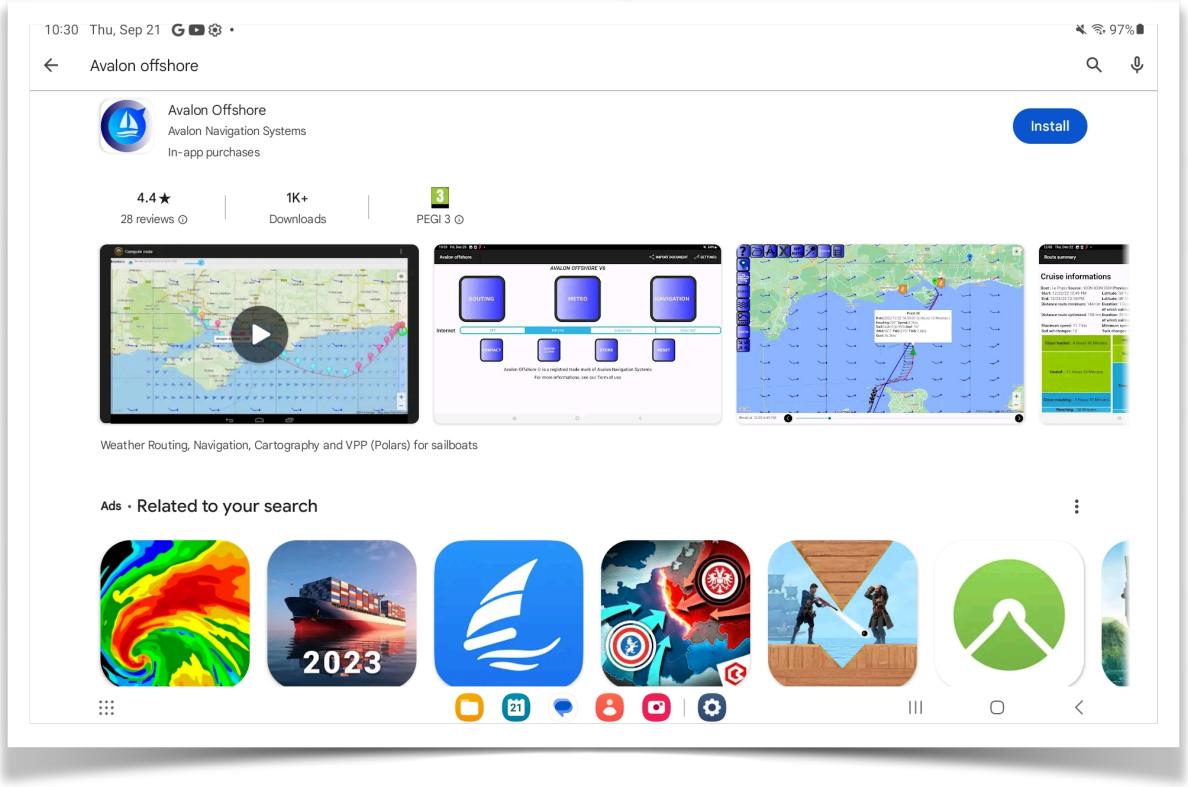
- Go to the AppStore and search for Avalon Offshore
- You will then see a “cloud with a down arrow” icon (if you are logged in with the same Apple ID. This cloud guarantees free installation.



- Click on the “cloud” icon and Avalon will install on your device for free.
- Once Avalon Offshore is installed, go to the tablet settings in the Application section and give Avalon the right to access:
  - Position (if you have built-in GPS)
  - Local Network (necessary to access the on-board NMEA network via WiFi)
  - Cellular data, if you have a device with a SIM card to be able to download the winds in 4G

b. Google

- Go to “Play Store” and search for Avalon Offshore
- Click on Install (or Install)
- The application will install for free, if you are on the same Google ID.



- Once installed, go to the tablet settings in the Apps section and give Avalon permission to access to
  - GPS, to be able to use the tablet's GPS
  - Contacts, to allow you to recharge your Avalon cards on the new tablet

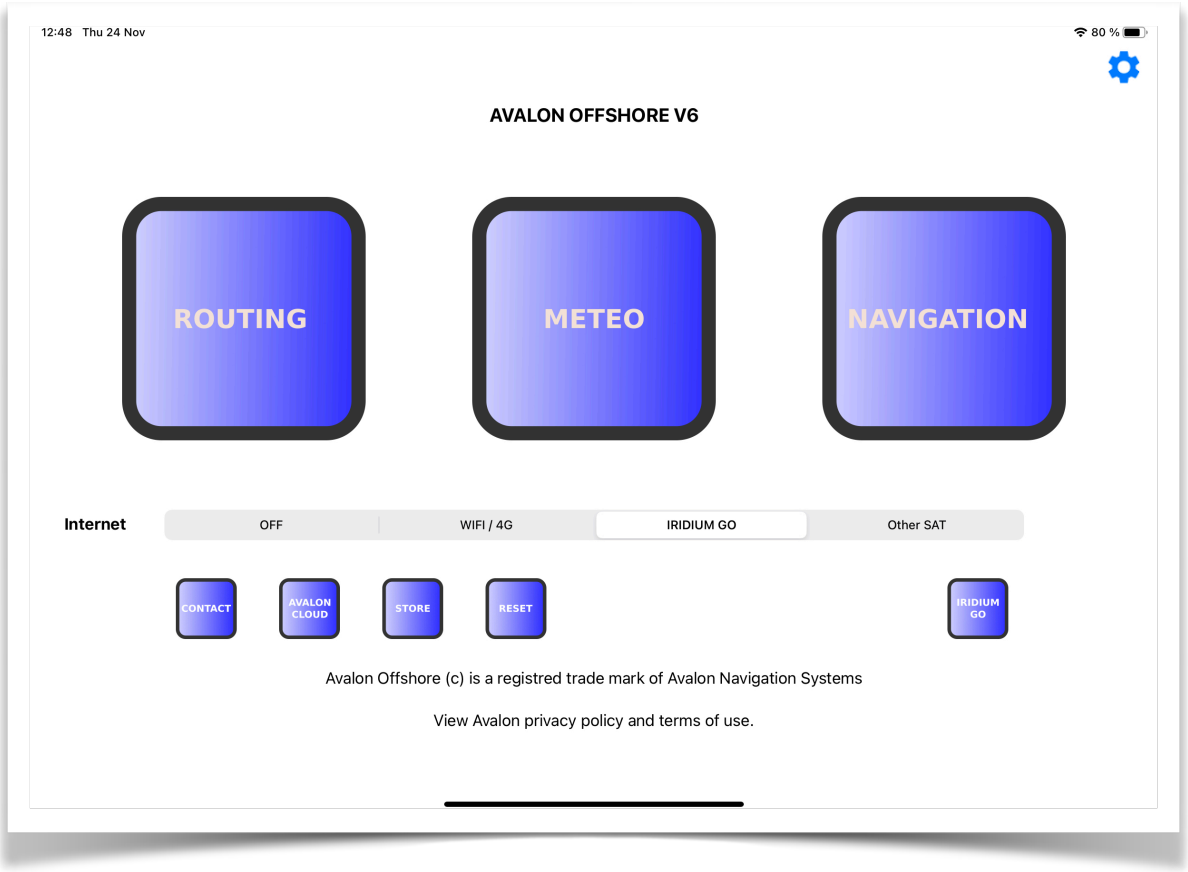
c. Recovery of in-app purchases (subscription and maps)

To recover your Premium subscription for free on your new device, go to the “STORE” menu and click on “Restore subscriptions”.
To retrieve your card packs purchased on Avalon, you must go to “Manage (my maps)” then “SHOM or UKHO packs” or vector maps. Avalon will propose to reload the cards you purchased previously.

d. Recovery of your data stored on Avalon Cloud

If you use Avalon Cloud, connect the new device (“Avalon Cloud” menu with your username and password.
Then do a synchronization and your important data (polar, exclusion zones, POIs, Racing Option, Weather Premium, etc.) will be transferred to your new device

B. Main Menu



1. Modules

In the main menu, you will find 3 main interconnected modules which represent the 3 main functions expected from a complete navigation system:

- **Routing:** To calculate a route based on the forecast weather.
- **Weather:** To display the weather in your navigation area, without necessarily recalculating a route.
- **Navigation:** To follow its route once at sea.

You will also be able to choose your Internet connection mode.

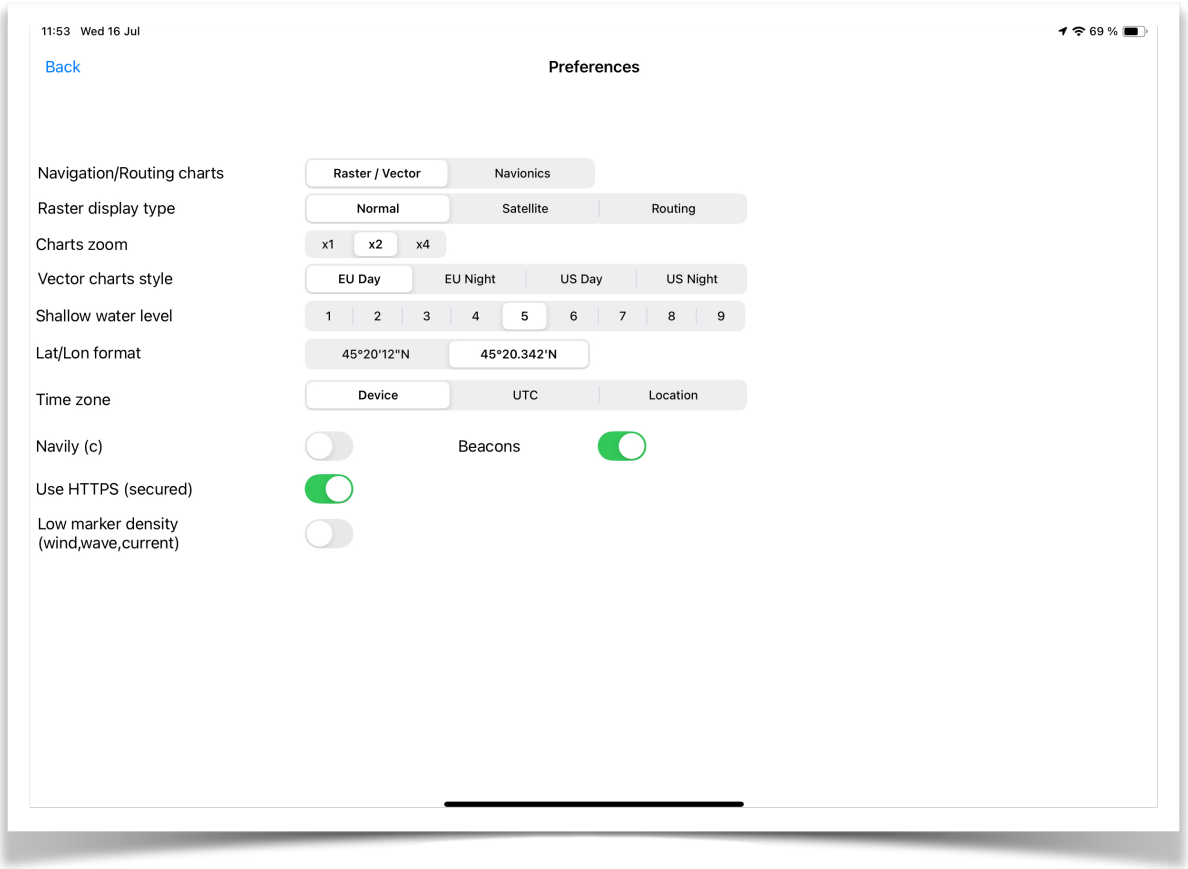
You will also find 4 additional functions:

- **Contact:** To send us question, comments, improvements suggestions, bug reports.
- **Avalon Cloud:** To manage the connection to your web space and the synchronization between Avalon Offshore and Avalon Cloud.
- **Store:** To manage your in-app purchases and restore purchases.
- **Reset:** To reset the application (or just certain functions) to their original state without having to reload the application.

Compared to version 5 and earlier, some modules have been moved into one or more of the 3 main modules:

- **Help:** In each of the 3 main modules described above.
- **Boat Setup:** In the parameters of the ROUTING module.
- **Weather sources: I**n the WEATHER module and also in the ROUTE CALCULATION settings.
- **Logbook:** In the NAVIGATION module.
- **Nautical charts:** In the parameters of the ROUTING and NAVIGATION modules. Purchases can also be made from the STORE menu.

2. Main Menu Preference



- **Navigation/Routing Charts:** Navionics if you subscribe to Boating, Raster/Vector otherwise.
- **Raster display type:** Normal or Satellite for default Google map, Routing to view Avalon engine internal map
- **Charts zoom:** With a high definition raster map (300 DPI) like the SHOM, you can zoom x4. For UKHO (120 DPI) we recommend to zoom only x1 or x2
- **Vector Chart Style**: If you're using Avalon vector charts, you can choose the display style for these charts: EU for "SHOM appearance" or US for "NOAA appearance" in day or night versions.
- **Shallow Water:** With Avalon vector charts, you can choose a different display color for your shallow water definition.
- **Lat/Lon format:** Allows you to choose between Degrees, Minutes, Seconds or Degrees, Decimal Minutes. Decimal Minutes Degrees are generally used to place buoys or gates in regattas.
- **Time zone;** By default we use the time of the tablet but we can prefer the UTC time (GMT) or choose a time zone in case of transoceanic crossing.
- **Navily**: Display the ports and anchorages of Navily or not.
- **Beacons:** To display the beacons and their associated details

Compared to version 5:

- **Minimum sounding:** Moved to ROUTING settings.
- **Connect:** Transferred to AVALON CLOUD.
- **Delete Avalon Cloud Account:** Moved to AVALON CLOUD.

3. Internet Connection

It is imperative to know the type of Internet connection you have when browsing. Indeed, your tablet connection can be set up to:

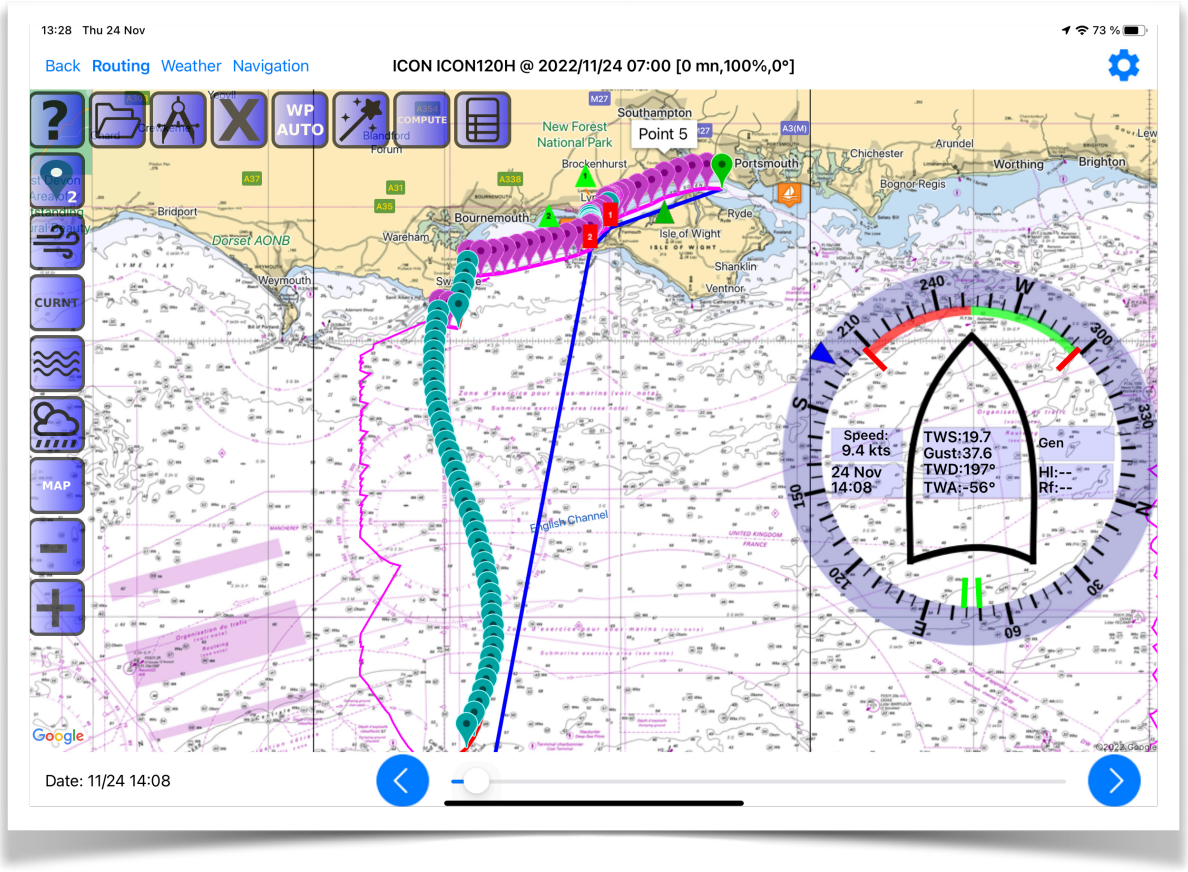
- **WIFI/4G:** To be connected directly (or with a connection sharing) in WIFI or to the 4G network (on land or near the coast). Select this option if you use Starlink.
- **OFF:** If your tablet is not connected or just to the on-board WIFI network (without Internet access)
- **IRIDIUM GO:** If you are on the Iridium WIFI network
- **Other SAT:** If you use another type of satellite connection: Inmarsat, Iridium Standard, etc… Useful when you want to know the volume of data transmitted.

C. Weather Routing

1. Introduction

Avalon allows routing to be calculated in 3 ways:

- « **Beginner** » mode for skippers new to weather routing with few options and possible settings. This option only calculates a route between 2 pre-registered ports.
- The "**advanced user**" mode that allows you to use the full power of Avalon. After some routing in "beginner" mode, we recommend switching to "advanced" routing
- The « **expert** » mode (included with the race option), allows a comparative route analysis according to several scenarios: route options, weather models, sensitivity to polar, wind, etc…



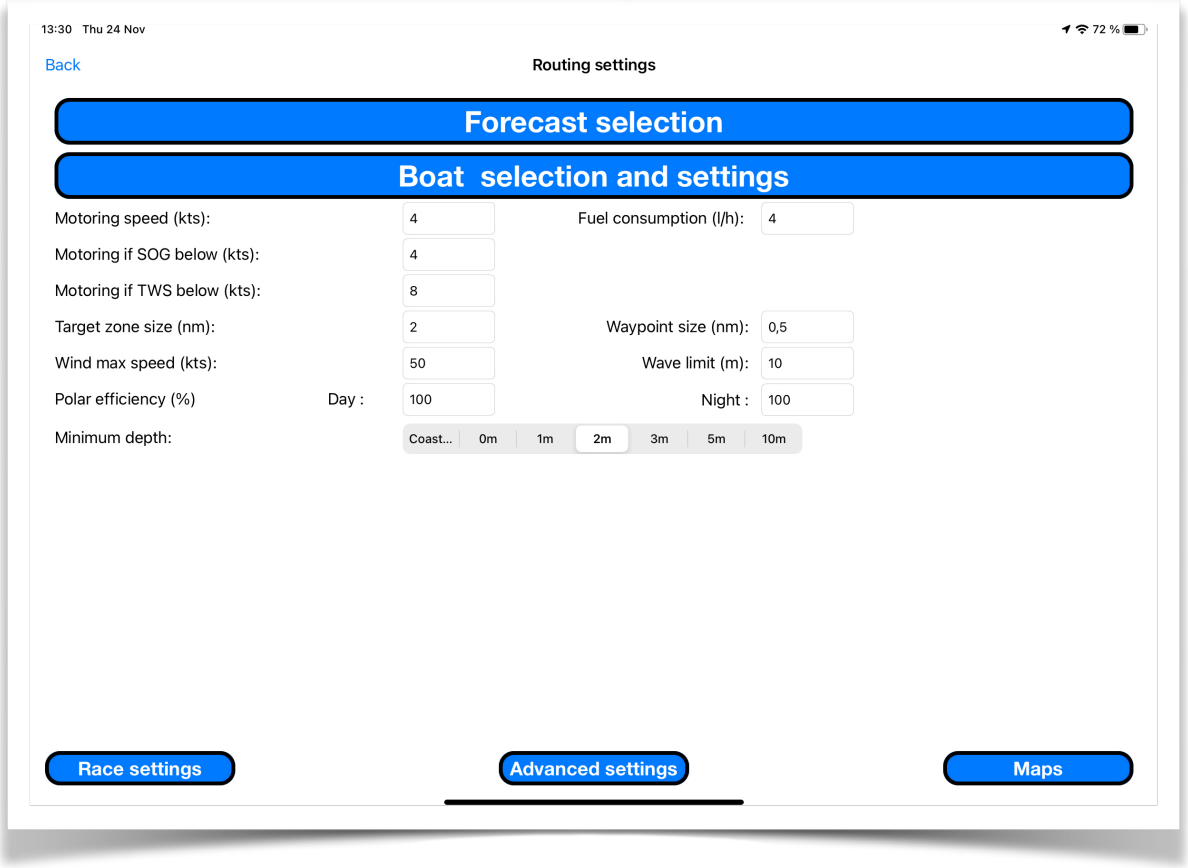
2. Meaning of the icons

	Help
	Tap on the icon to change the display of the route: simple line, barbules or compass
	To zoom out
	To zoom in
	Route management, wind file export, new rate creation (erase current route)
	Compass
	Navigation exclusion zones (line or polygon
	To automatically place waypoints on the route
	Guided harbor to harbor routing. Ideal for getting started quickly.
	Start route calculation
	Access the cruise summary and route chart
	Show winds. White = yes, Black = no
	Show currents. White = yes, Black = no
	Show waves. White = yes, Black = no
	Displays general weather. White = yes, Black = no
	Displays the nautical chart (raster)
	Enter the Navionics® connection parameters. The Navionics chart must be enabled in the main menu settings.

	Full screen mode (Android only): white=yes, black=no

3. Routine module settings

a. Default settings



We have grouped here the parameters that do not change with each routing.

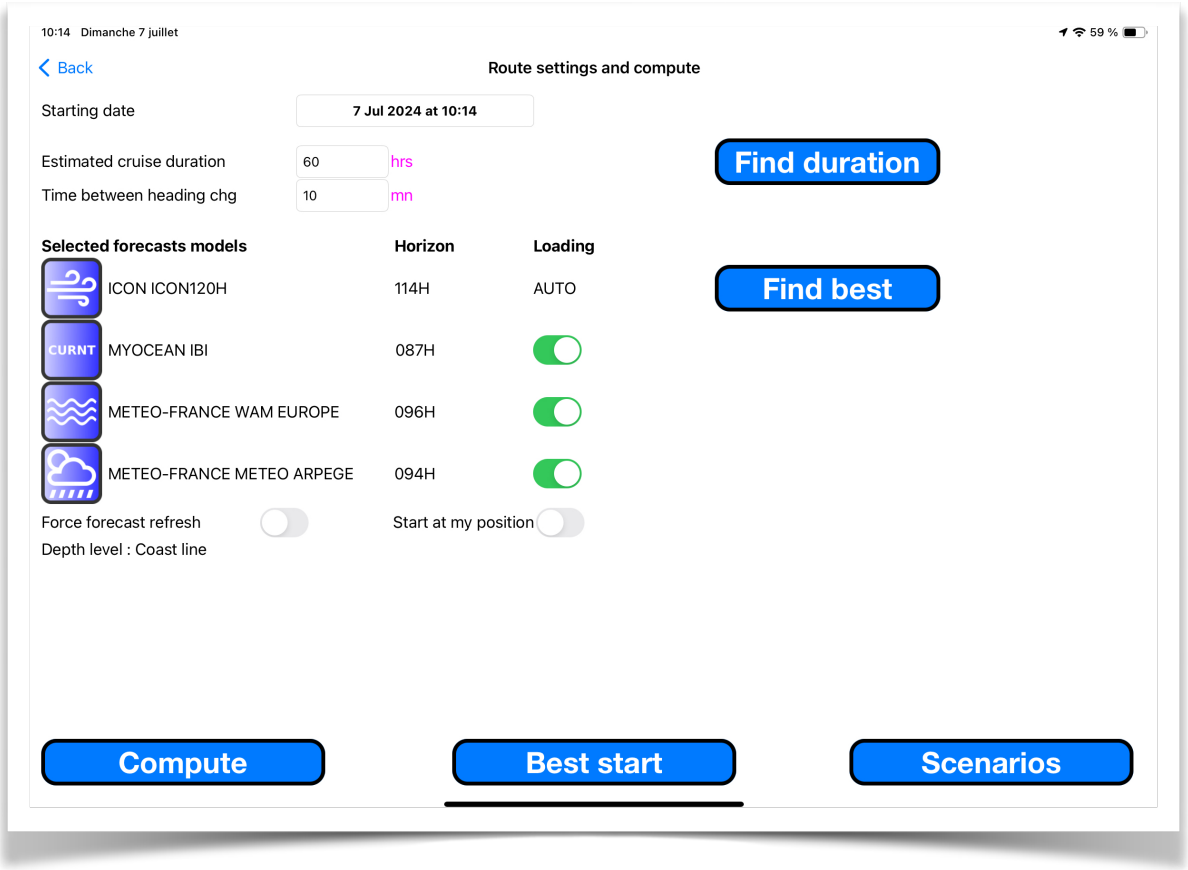
- **Forecast selection:** To choose your weather models (corresponds to WEATHER SOURCES in version 5
- **Boat selection and settings:** To choose the boat, the polars, the sails, etc… (Corresponds to CHOICE OF THE BOAT in version 5

- **Motoring speed:** To indicate the preferred engine speed. Put 0 if you are 100% under sail. This data is useful in case of hybrid routing (sail and engine)
- **Fuel consumption:** In liters per hour, Avalon will be able to tell you your expected consumption and also the gain in consumption by following the route calculated by Avalon. (this can be very important)
- **Motoring if SOG below:** Threshold for triggering the motor in the event of speed (approach) too low.
- **Motoring if TWS lower below:** Engine triggering threshold in case of insufficient wind. Sometimes you have enough wind and time and you don't want Avalon to start the engine. We will then make more sail by tacking.
- **Target zone size:** Size of the arrival circle in miles. Avalon will consider that we have arrived when the calculated route is inside this zone (recommendation: 0.5 or 1 nautical mile. Below, Avalon may not find a correct solution.
- **Waypoint size:** Size of waypoints circle in miles or distance from gate. As soon as Avalon enters this circle or passes the gate, it will use a center heading to the next waypoint or the finish.

- **Wind max speed:** The calculated route will avoid too strong winds. Be careful because, in this case, Avalon may not find a road at all. (same for the waves)
- **Wave limit:** The calculated route will avoid waves that are too high. This calculation is done on the combined waves, but the route details will also give you information on the swell waves and the wind waves (height, duration and periodicity)
- **Polar efficiency factor:** reduce this parameter if the boat is not at 100% of its capabilities (sail, crew, weather). It is preferable to set the polars sail by sail in CHOICE OF BOAT
- **Night efficiency:** If you sail at night with reduced sail, you can decrease this value. The “night” period is automatically determined by the system.
- **Minimum depth:** In some regions (metropolitan France and southern England for now), you can choose the minimum navigation depth. The start and finish must be defined in an area with enough water.
-
- **Race settings:** To access the Race settings
- **Advanced settings:** To access Race settings
- **Maps:** To access the CHOICE OF MAPS menu and confirm the map you wish to use in your navigation area.

b. Calculation Parameters

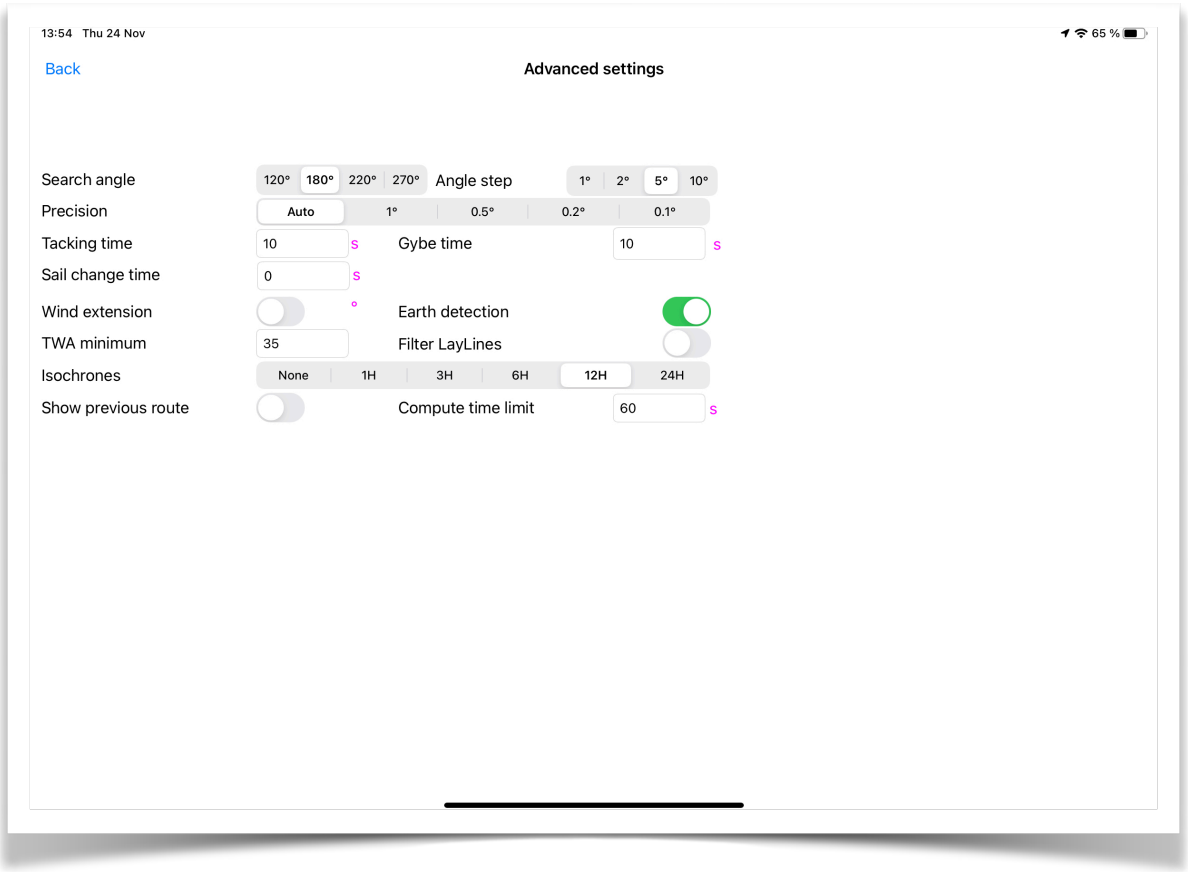
The parameters that are likely to change frequently are grouped together when the routing calculation is launched.



- **Starting date:** Desired time and day of departure. Be careful that the chosen wind model has the necessary forecast horizon.
- **Estimated cruise duration:** This approximate data is required to allow Avalon to download the required wind forecast horizon. Press “Find duration” for an automatic estimate.
- **Time between heading chg:** Time in minutes between each course change. It may be necessary to decrease this value in a narrow bay, for example. In long crossing, it is better to take a value of 30 or 60. This is also known as isochronic steps.
- **Selected weather models:** Indicates the weather models you have chosen in the general parameters of the ROUTING module or in those of the WEATHER model.
- **Horizon:** indicates the duration of forecasts available on our servers.
- **Loading (off/auto):** To specify if you want to disable the loading of certain weather data.
- **Start at my position:** To be able to restart a routing very easily when you are at sea.

- **Find best:** Avalon will select the most suitable weather models for your cruise based on sailing area, cruise duration and scheduled departure date.
- **Compute:** Launches the calculation of the route.
- **Best start:** Allows you to calculate multiple routes based on different departure times
- **Scenarios:** To access route analysis based on several assumptions: weather patterns, sail and crew efficiency, route alternatives, etc.

c. Advanced settings

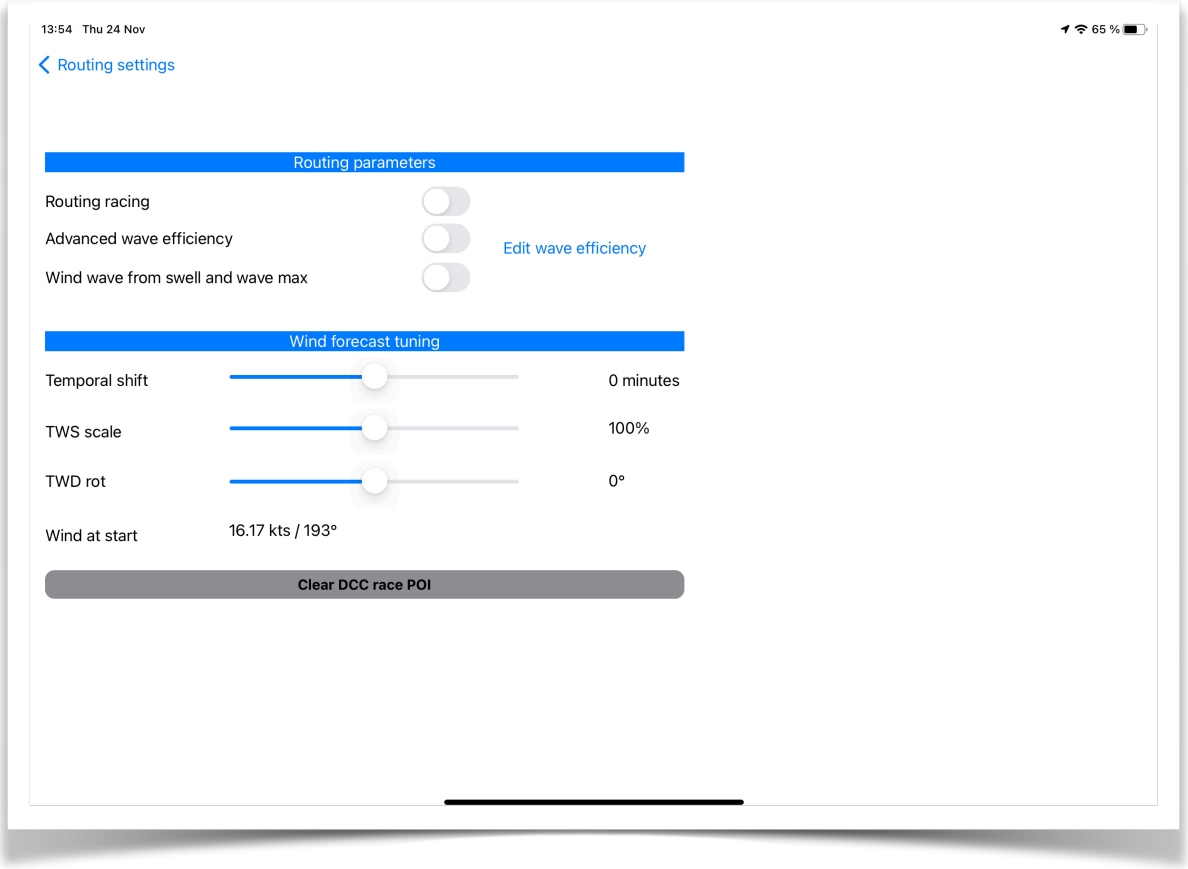


- **Search angle:** Increasing the angle can avoid laying waypoints but will increase the calculation time. On tablet, do not exceed 220 degrees. On a MacBook M1, you can go up to 270 degrees.
- **Angular step:** 5 seems good values. It may be necessary to reduce these values in a narrow bay, for example, which would require very rapid course changes.
- **Precision:** The further the routing horizon, the greater the accuracy requested from Avalon. This value is managed automatically but it can be managed manually (only for users experienced in routing techniques).
- **Tacking time:** Time lost when changing tack from luff to luff. Be careful, this time must not exceed the time between course changes.
- **Gybe Time:** Time lost during a jibe. Be careful, this time must not exceed the time between course changes.
- **Sail change time:** Time lost during a sail change. Be careful, this time must not exceed the time between course changes.
- **Wind extension:** Avalon can provide up to 394 hours of wind forecast with the NOAA GFS 0.25 or 1 degree source. You can however calculate a longer routing (up to 500 hours) by checking this option. Avalon will then use the last available wind forecast to calculate the route beyond the last available wind forecast.
- **Earth detection:** Allows deactivating land detection. The route found by Avalon will then be able to cross the earth
- **Minimum TWA:** Allows you to define a minimum upwind angle. Be careful, setting an angle that is too high may prevent Avalon from “finding” a route.
- **Filter laylines:** If yes, prevents Avalon from searching routes outside laylines. Warning, it may be necessary not to respect laylines when sailing in a narrow area.
- **Isochrones:** Displays routing isochrones every xx hours.

- **Show previous route:** Avalon may or may not display the previously calculated route for comparison between 2 routes.
- **Compute time limit:** After this value, Avalon considers that it has not found a route and stops the calculation.

Click on “Save” and return to the previous screen.

d. Race settings



- **Routing racing:** allows you to launch a more sophisticated routing algorithm, but a little longer in computation time.
- **Advance wave efficiency:** To enable impact on boat speed created by waves
- **Use the wave parameters:** to activate the detection of "crossed seas" and the influence of the sea state on the polars of the boat. (not available on Android)
- **Edit wave efficiency:** to manage the coefficients of increase/reduction of the speed of the boat according to the state of the sea. (not available on Android)
- **Wind waves from the swell and waves max:** allows to recalculate the wind waves in the areas (very wide) where these wind waves are not calculated by FNMOC. (not available on Android). This problem does not exist with Météo France WAM.
- **Temporal:** to shift the wind forecast in time
- **TWS scale**: to adjust the wind strength
- **TWD rot.:** Angle: to vary the wind angle (TWD)
- **Clear DCC race POI:** erase competitor positions received by dcc position files

4. Speed Prediction Polars and Boat Settings

With version 6, the application is reloaded with the polars of a standard boat (Monohull 37 footer) to allow you to use the software as easily as possible.

You will have to go to the ROUTING module then settings to choose your boat and its speed polars.

There are 4 methods to load or refine your boat's polars:

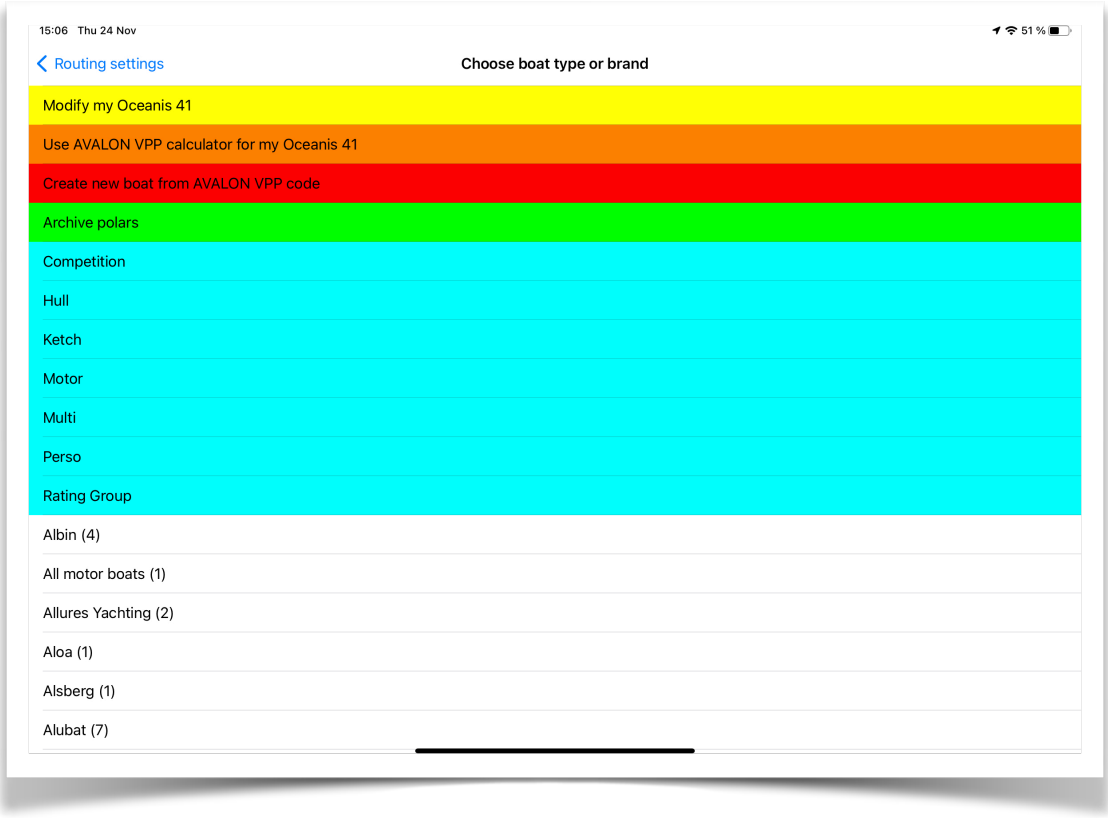
1. Calculate them with our Avalon VPP custom polar calculation system
2. Use your own polar file in ".pol" or ".csv" format. If your file is in csv format, you must rename it to .pol so that it is automatically recognized and loaded into Avalon.
3. Choose a standard polar from our library of around 450 boats.
4. Refine your polar by acquiring speed data while navigating.

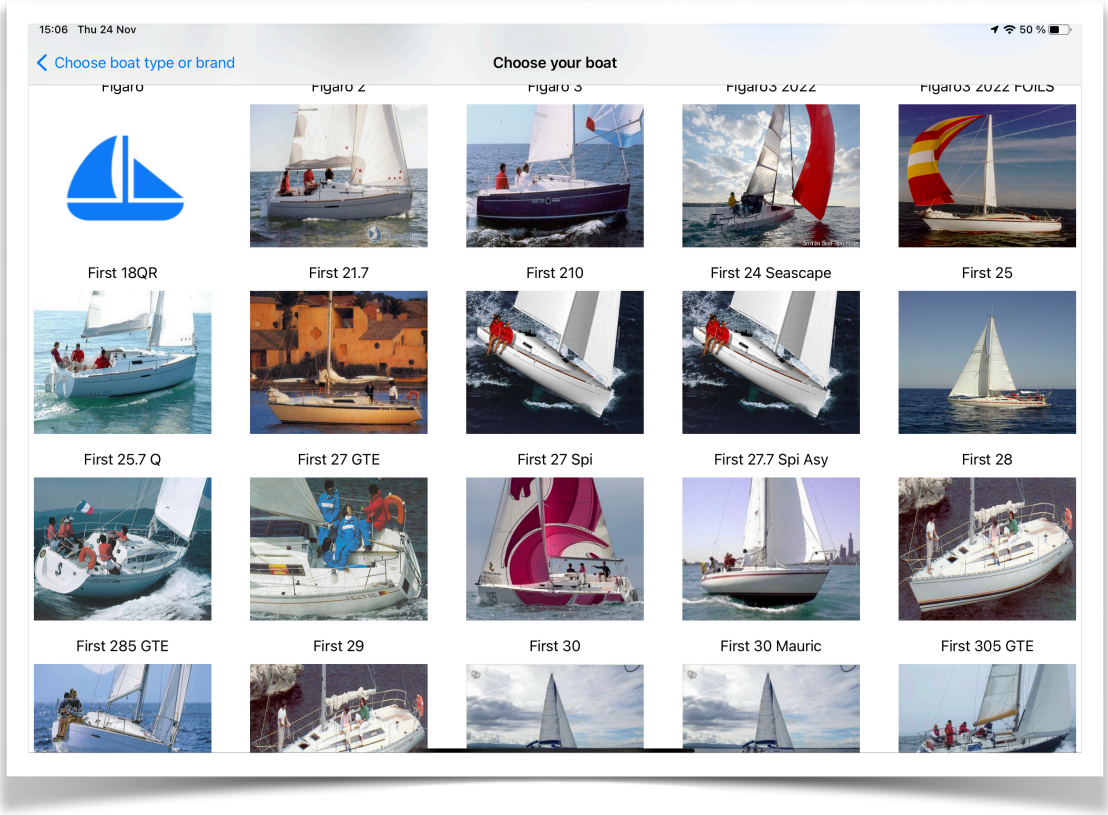
Regardless of the type of VPP used, you can adjust the efficiency and range of use of each sail.

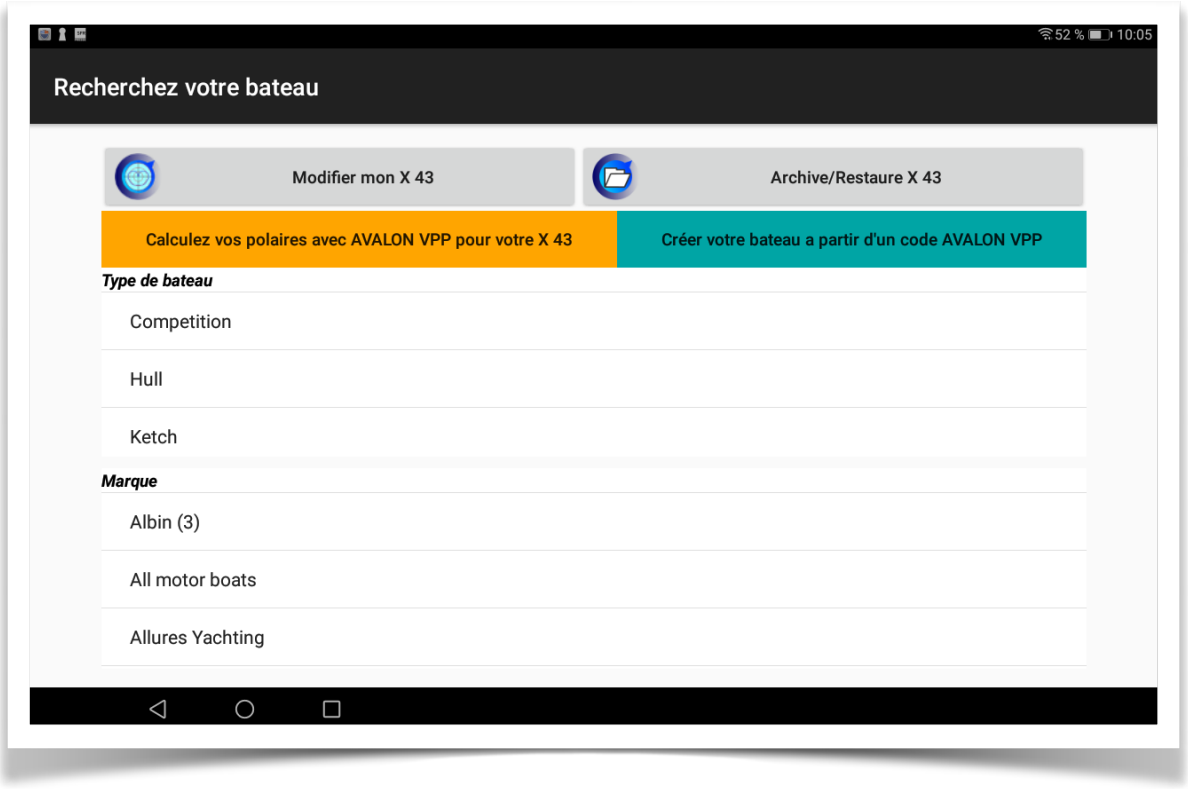
a. Library of standard Velocity Prediction Polars.

Avalon has approximately 450 boats in a database available to Avalon users.
Click on "Select boat". You can then select a boat from our database. You can also access your customised polars.

The boats are sorted by shipyard.



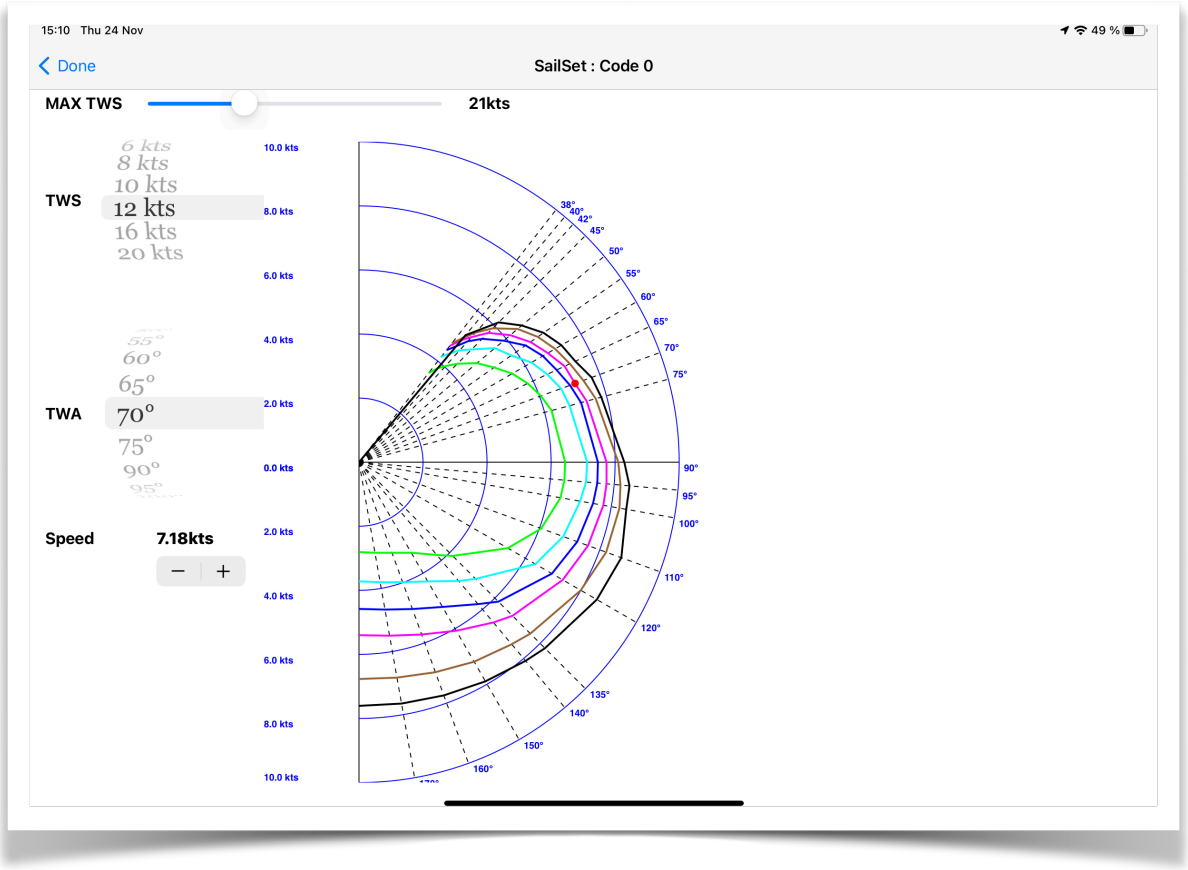



52 % 10:05
Recherchez votre bateau
Modifier mon X 43
Archive/Restaure X 43
Calculez vos polaires avec AVALON VPP pour votre X 43
Créer votre bateau a partir d'un code AVALON VPP
Type de bateau
Competition
Hull
Ketch
Marque
Albin (3)
All motor boats
Allures Yachting

Select your boat to view the available sail sets. The function is similar on Android.

Check the sails you have.

Each sail set can be turned on or off depending on the cruise.



To adjust the efficiency and operating ranges of each sail, see the chapter “Adjusting the efficiency and operating ranges of each sail”

b. Custom velocity prediction polars

We recommend that you use our Avalon VPP polar calculation system to calculate your own personalized polars taking into account your additional load, the condition of your sails, your type of propeller, the maximum heel acceptable for the crew, etc. …).

This solution will give much better results than the standard polars that you can find at shipyards, rating organizations, or in our polar database … because they are perfectly adapted to your sailing conditions.

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Knowing precisely the speed characteristics of your boat is essential to calculate a route as precise as possible.
Unfortunately, the polars that can be found on the web, from architects or other sources never correspond to the use that one makes of his boat. Indeed, these polars are very often calculated in optimal conditions: new sails, unloaded boat, folding propeller, number of crew, etc...

In addition, these "ready to wear" VPPs (Velocity Prediction Polars) are not suitable for the expected sailing conditions: regatta, weekend outing, long cruise... They must constantly be reduced (very often) or increased (very rarely).

We have therefore implemented this “Avalon VPP” software, the objective of which is to provide polar sets corresponding to your way of sailing. You can also create different sets of polars if you practice regatta and cruising.

The system allows you to calculate your own polars and then send them to your tablet to integrate them directly into Avalon Offshore for Android or for iOS.

This system currently works for any monohull: sloop, ketch, skiff, and some schooners.

It allows to establish the speed characteristics for the following sets of sails:

Mainsail +
- Jib, Genoa or Staysail
- Symmetrical spinnaker
- Asymmetric spinnaker
- Code 0
- Optional: Mizzen Sail

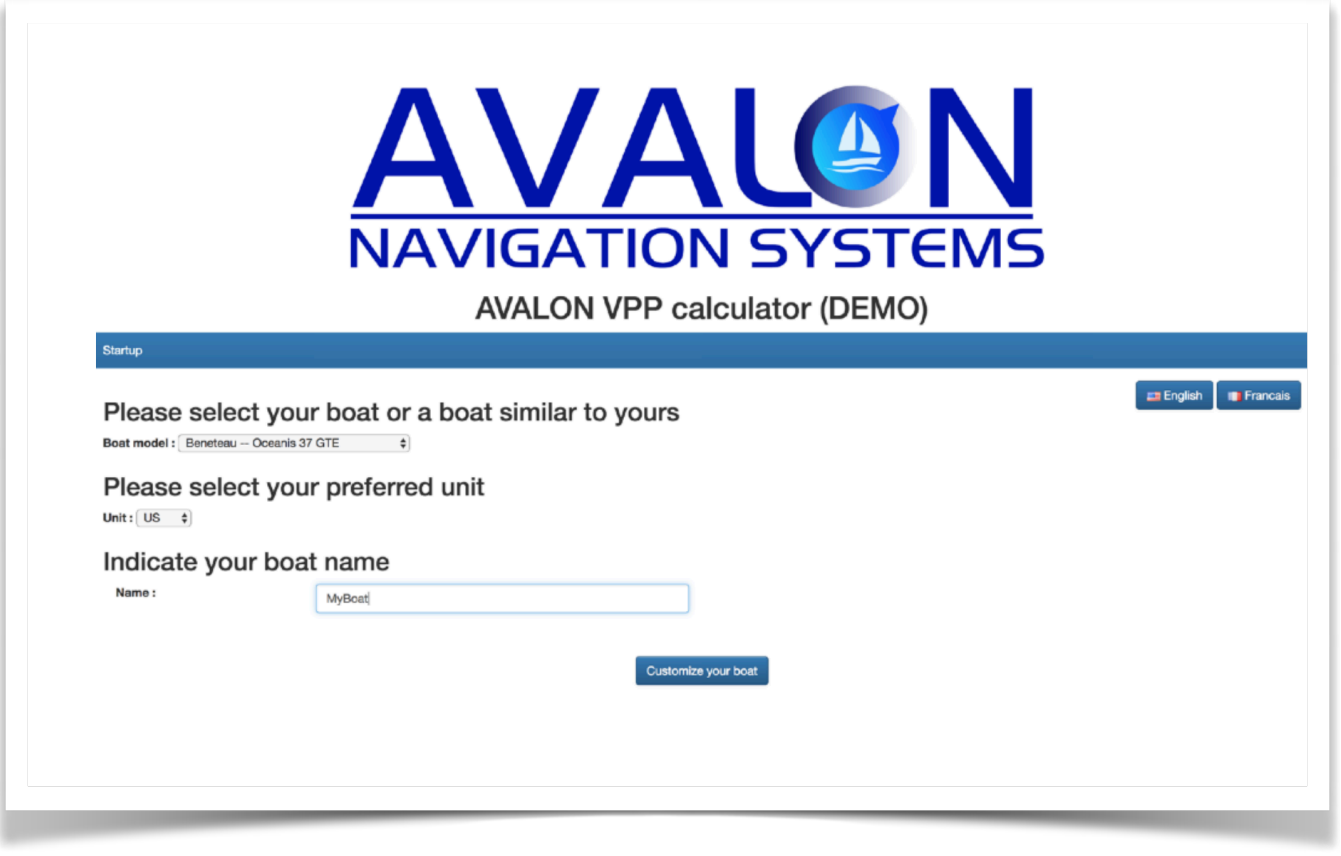
Go to the website www.avalon-routing.com then to the “polar” chapter. You then arrive on a first screen where you need:

Select a boat from the proposed list. If you can't find your boat, pick one that's close enough. You will be able to modify its characteristics and then save it with the name of your own boat.

Choose the metric or Anglo-Saxon system.

Enter the name of your boat with possibly an indicator to locate you if you wish to create several sets of polars.

Click on “customise my polars” to continue.

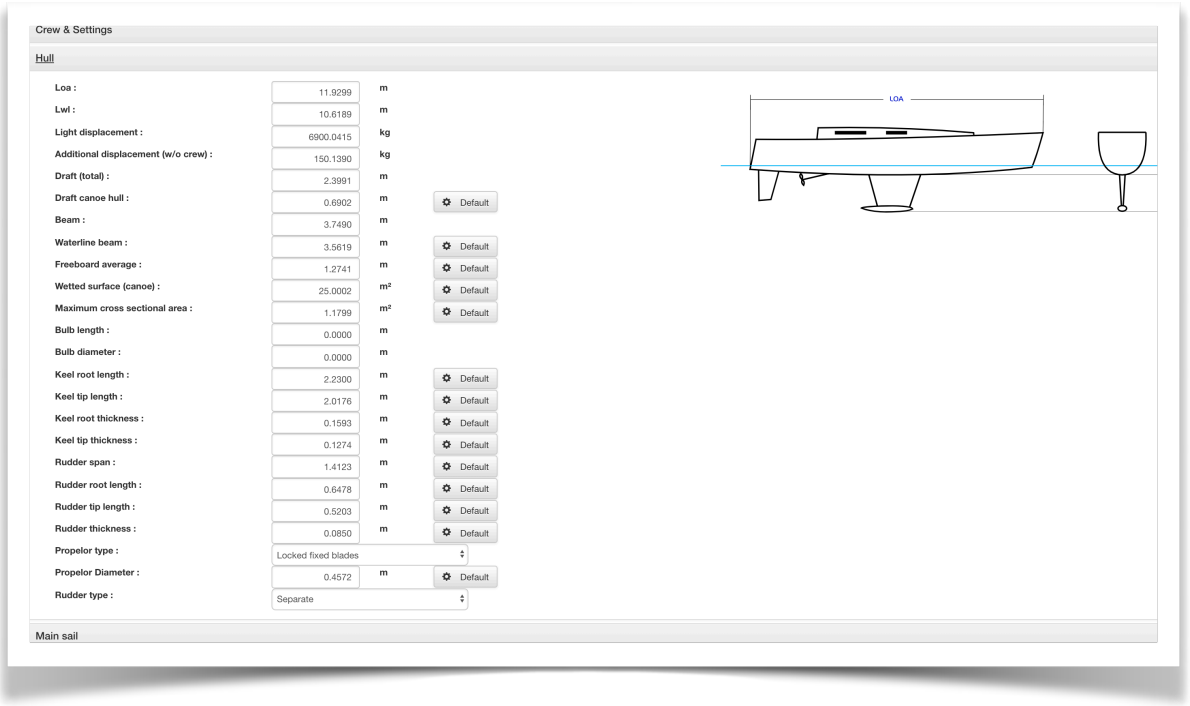


Input your crew data, specify max heel angle acceptable.Hull

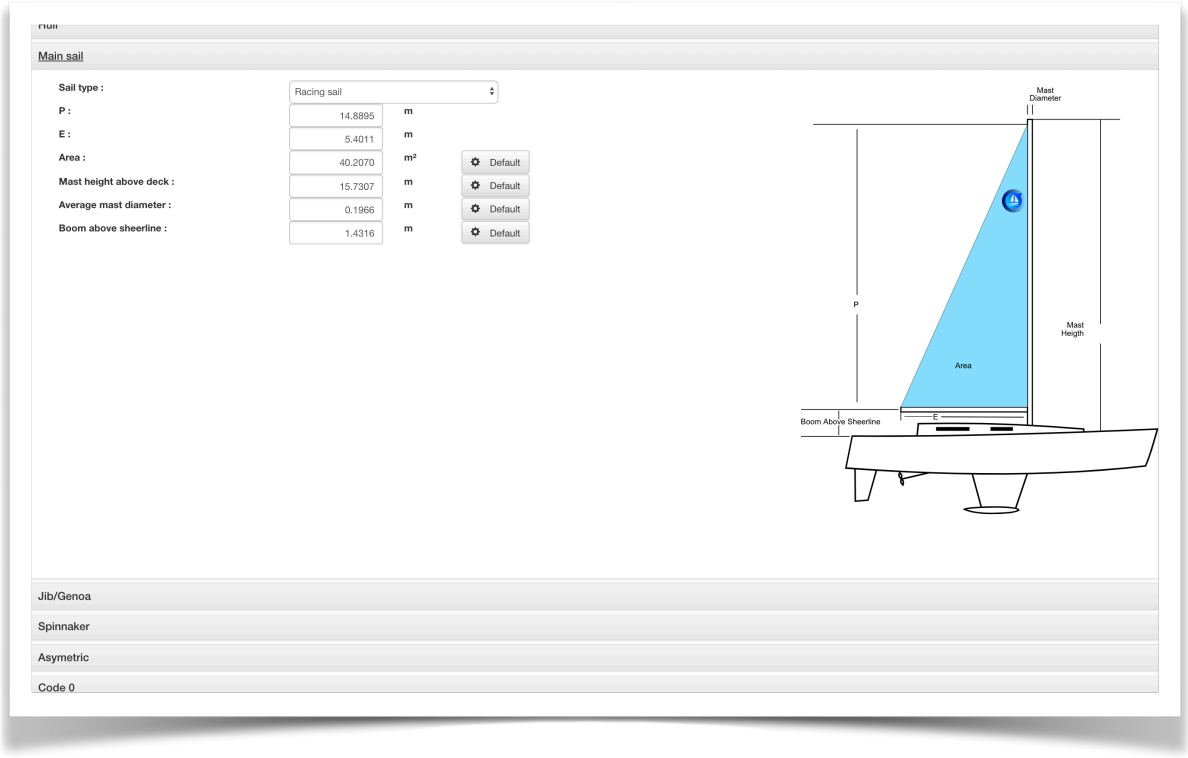
You must then check the pre-filled information and modify it if necessary. If you do not know some data of your boat, you can click on "default" and default data will be calculated.
During the next refit of your boat, you can complete this table with the missing information, most often the measurements of the rudder and the keel.

The more exact data you provide, the more accurate the calculated polars will be.

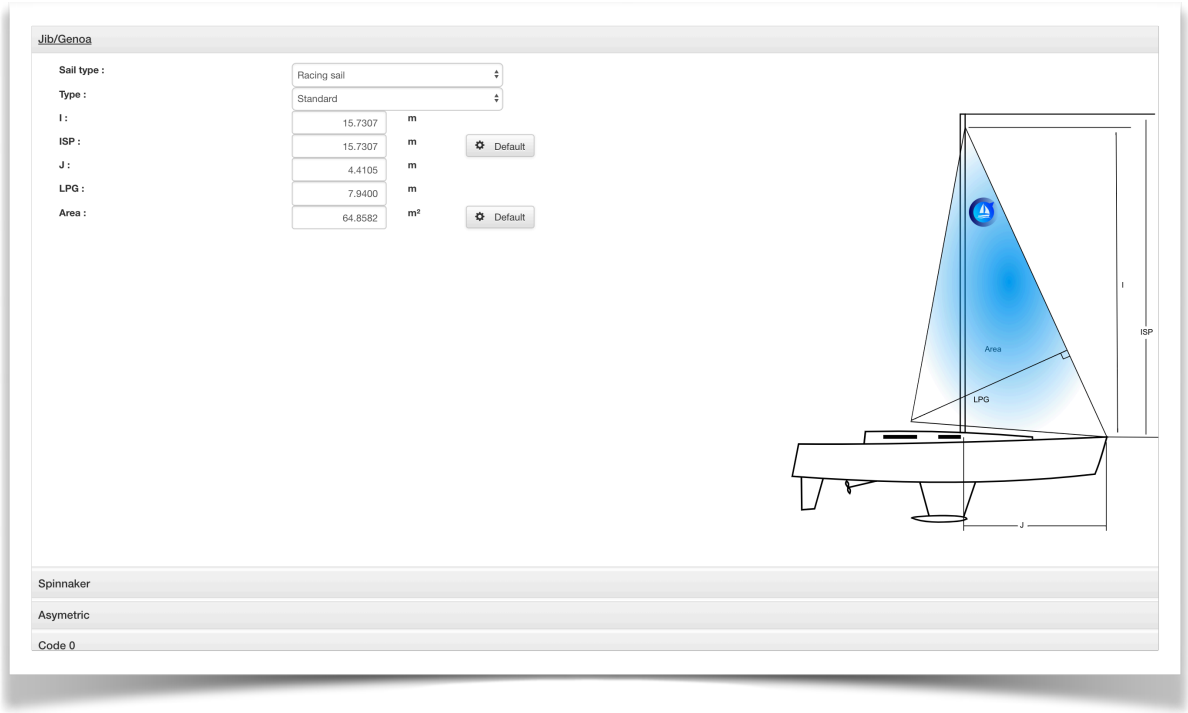
To help you, diagrams representing the requested data will be displayed when you hover your cursor over the data entry fields.



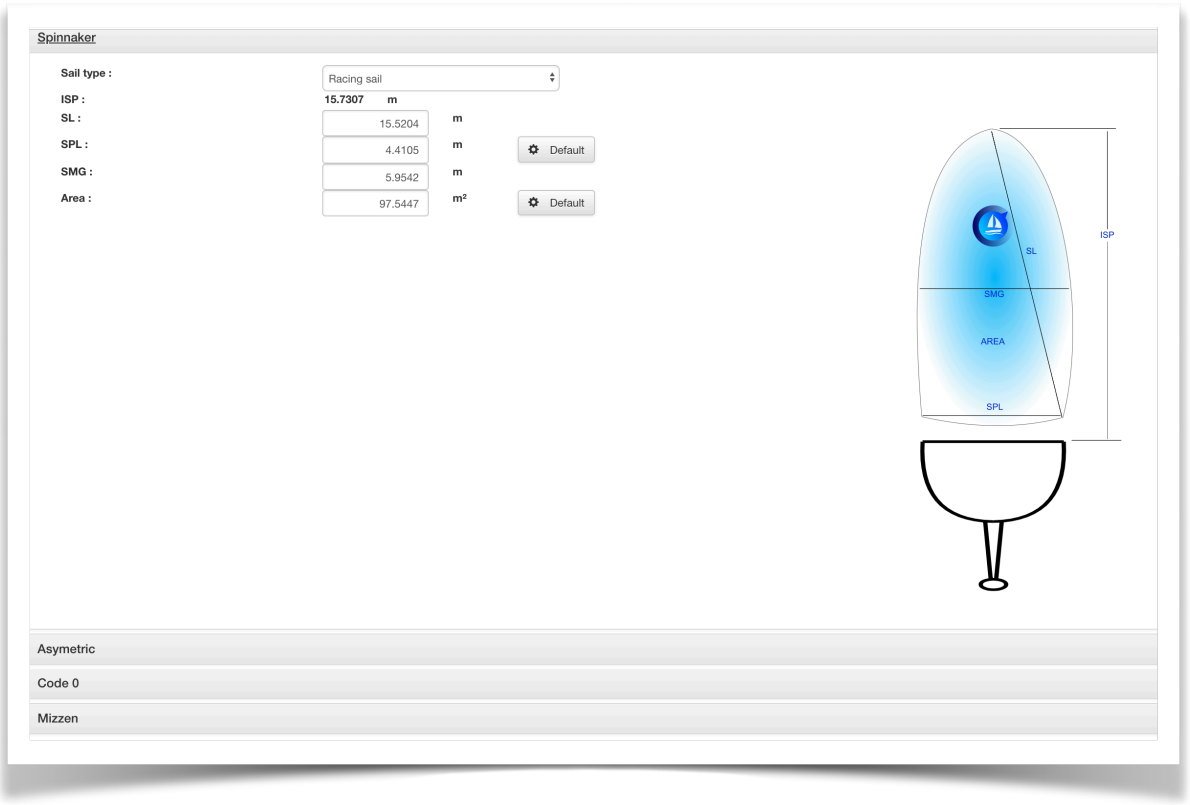
Main Sail



Gib / Genoa / Staysail



Spinnaker



Asymetric Spinnaker

Code 0

Mizzen sail

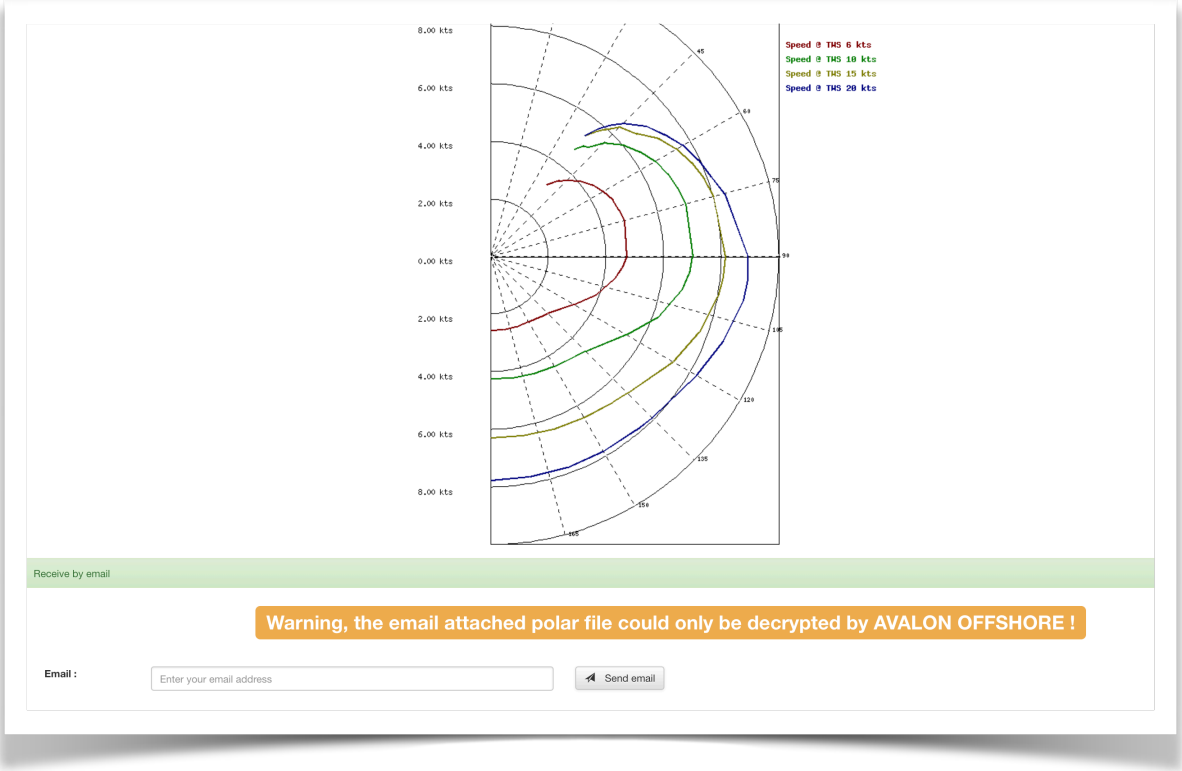
VPP calculation

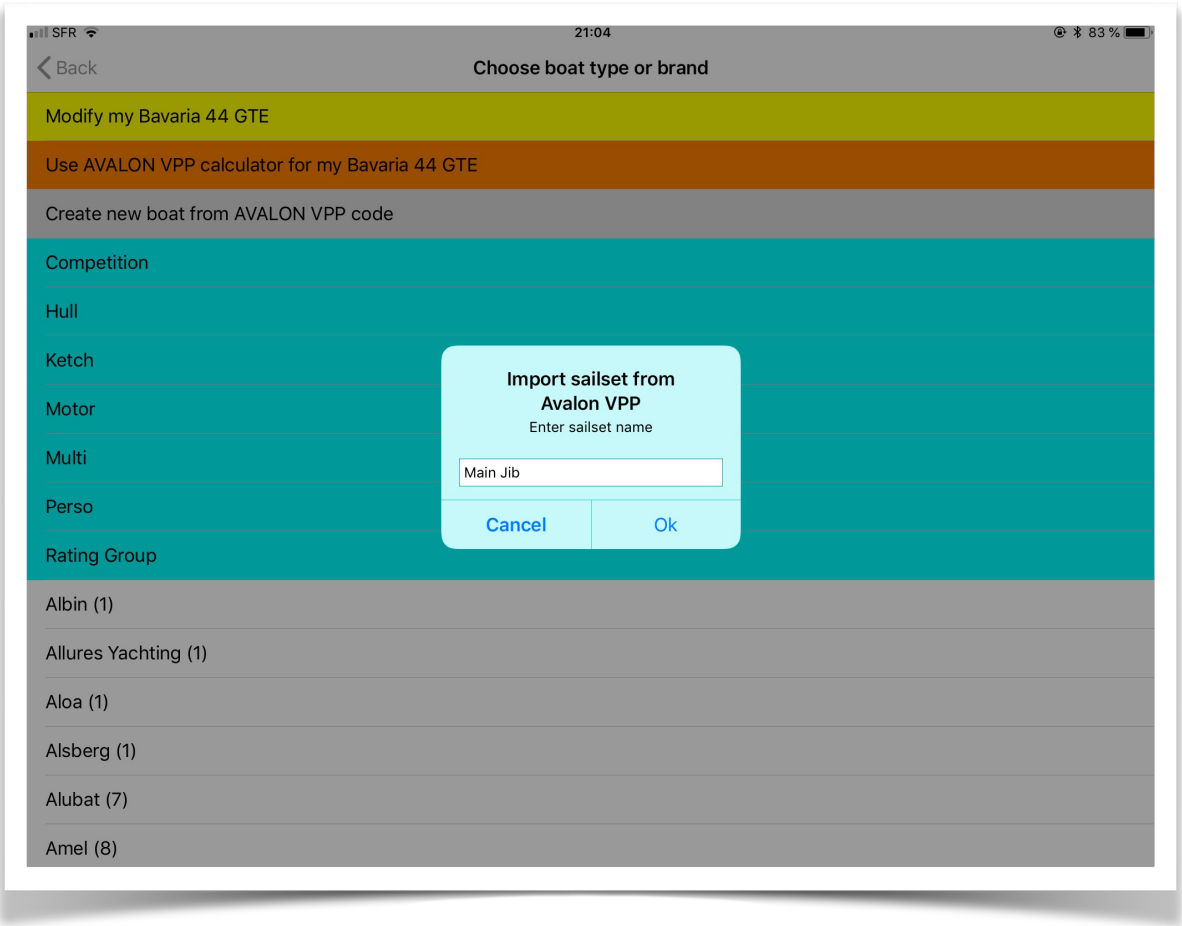
When the parameters of your sails are entered in the system, you can start the calculation. This calculation must be done for each set of sails you have because Avalon Offshore then manages your different sets of sails in the route calculation.

Launch the calculation for the first set of sails, then the second, etc. .... and this for as many navigation configurations as you need.
The calculation of the polars is very consuming in server resources. It takes about 15-20 seconds for the system to do the calculations and display the results.

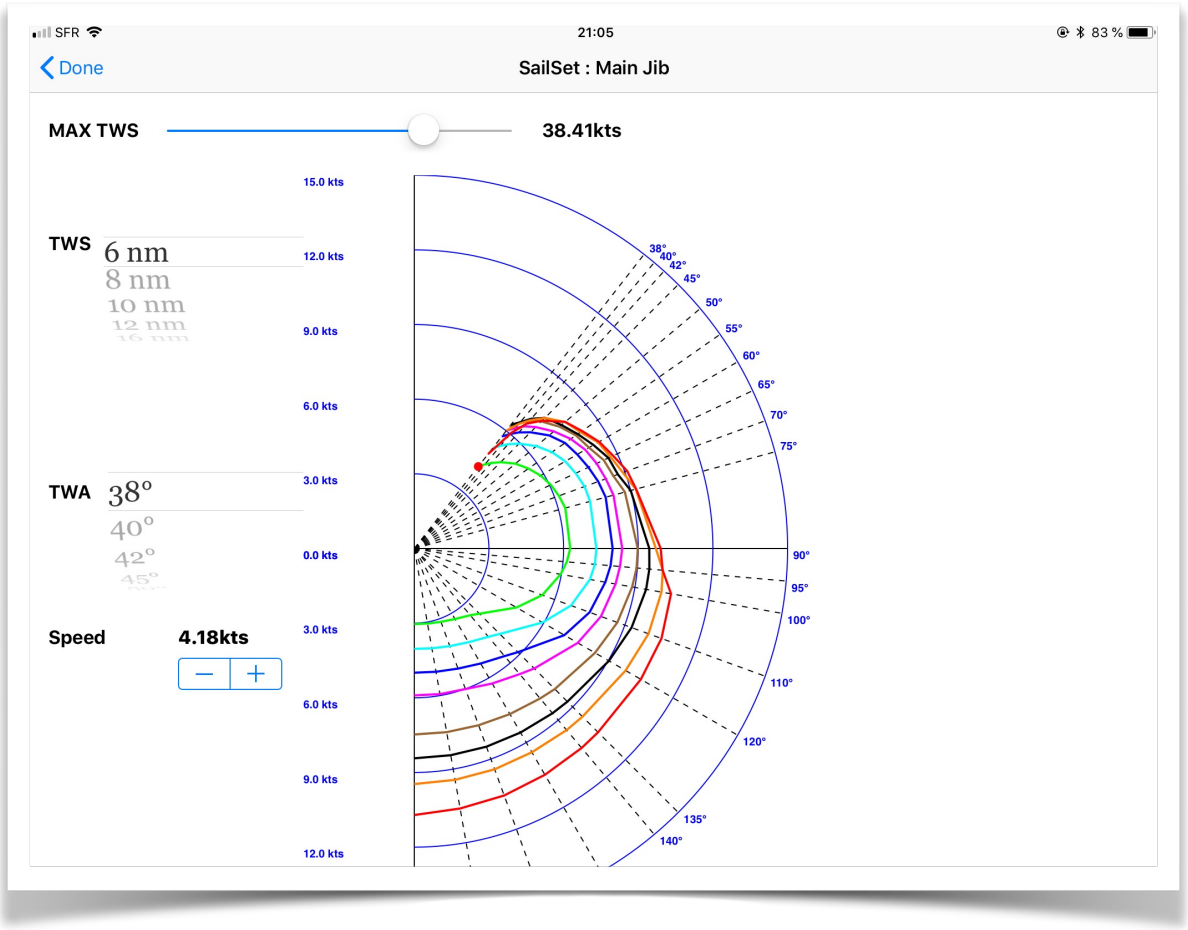
Integration of polars in Avalon Offshore

Once the calculation is done, you must send the polars to your email. Fill in the eMail field and click on "Receive mail".

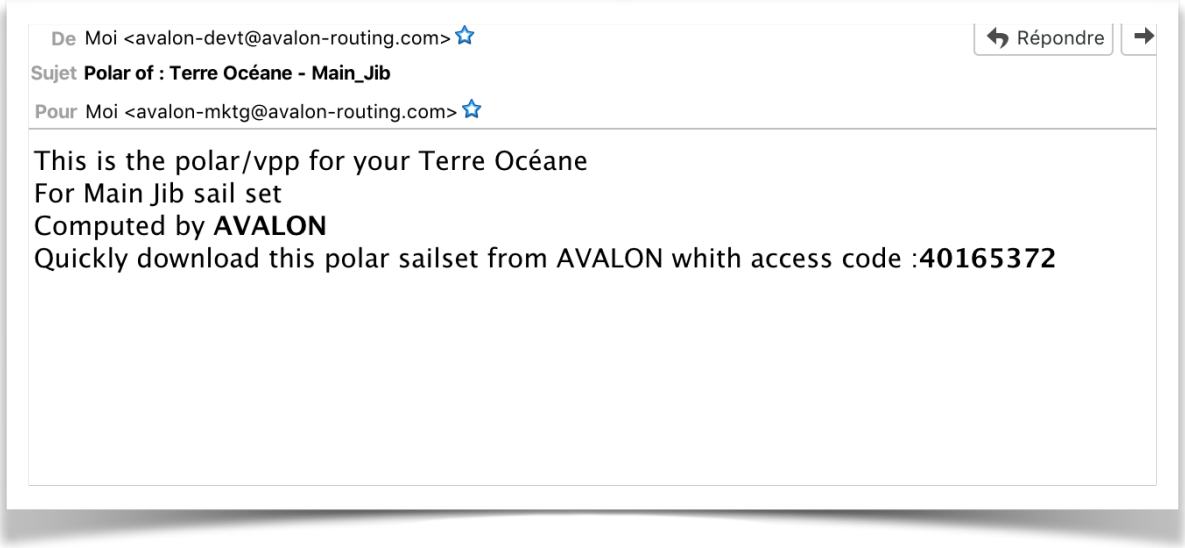




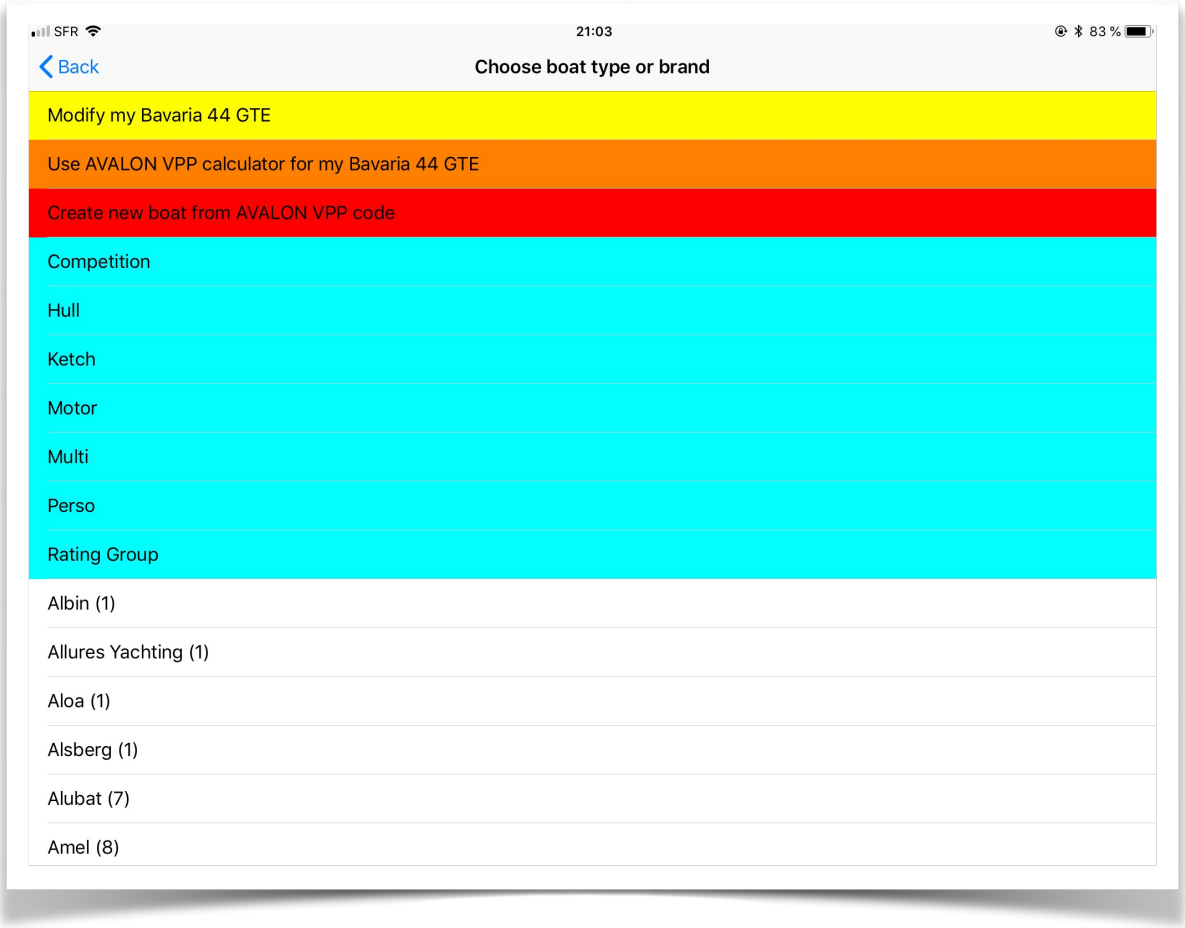
Repeat the operation for each sail set.

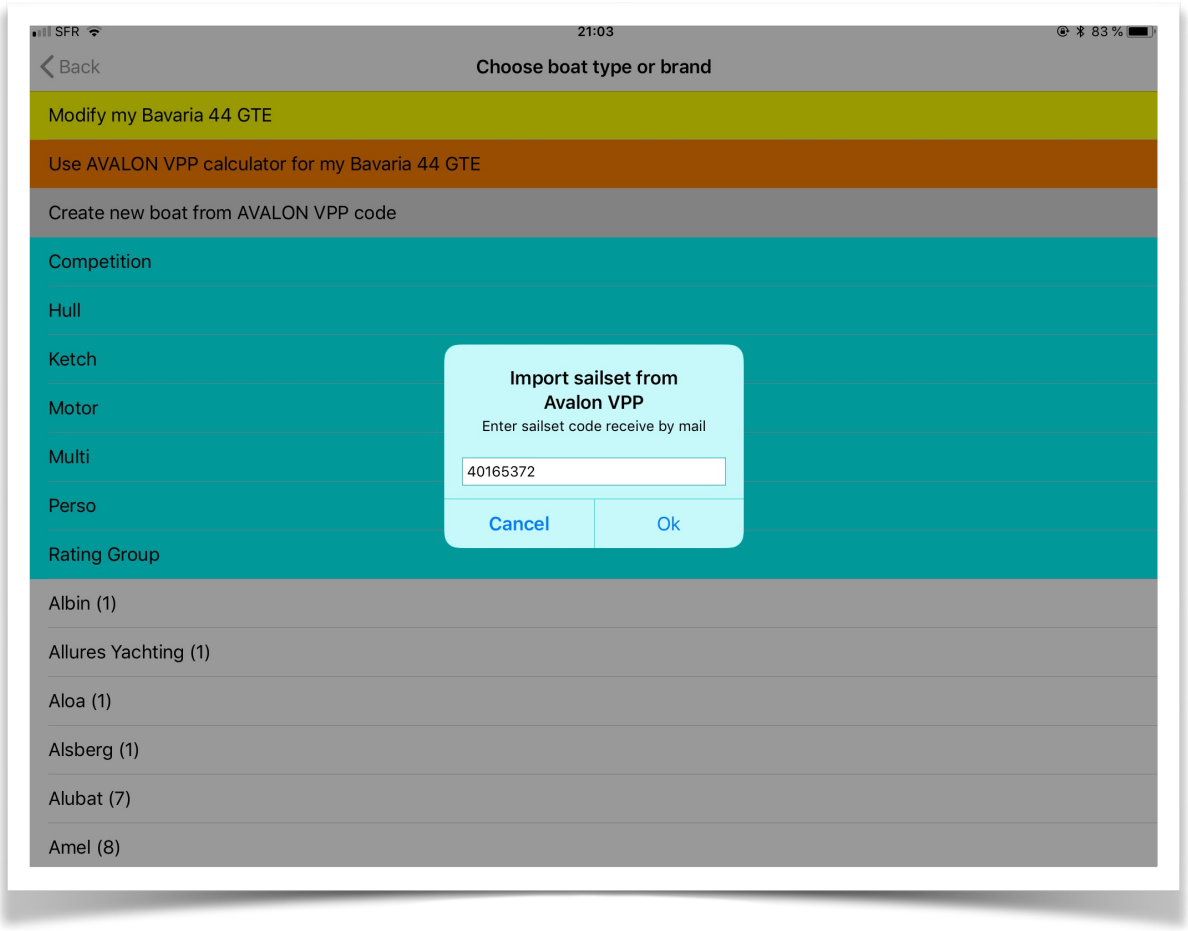


You will receive in the seconds that follow an email containing a 6-digit code which will allow you to read then load these polars in Avalon Offshore.



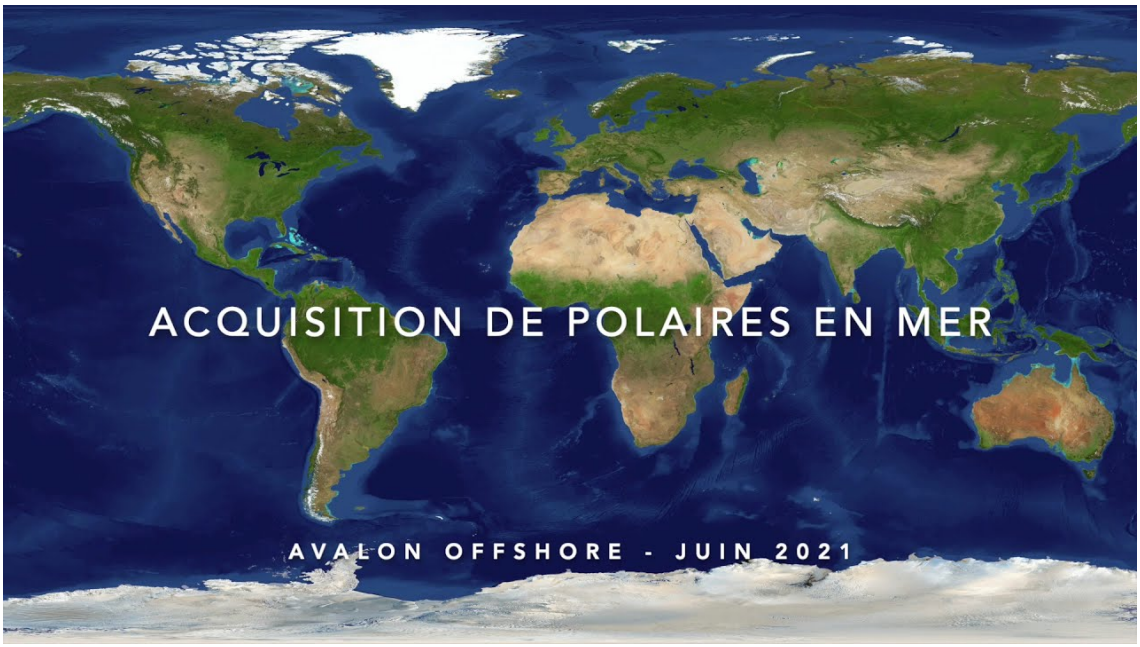
Then go to Avalon Offshore, then to "boat selection"
Then create your boat, or add a new sail from an Avalon code.





Once loaded, you can modify the polar curve via our VPP editor.
You can also fix a maximum acceptable TWS for every sail set.

c. Acquisition of polars at sea



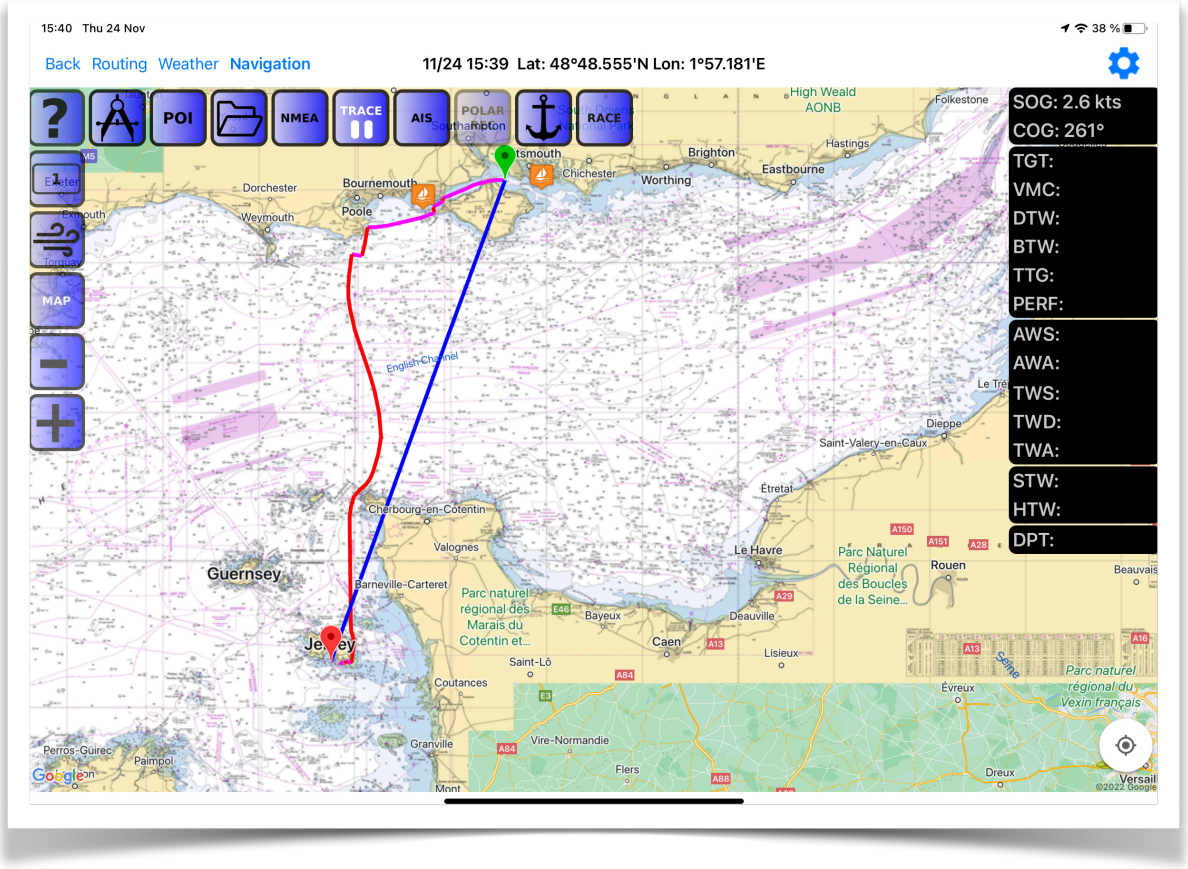
Video V5 (à mettre à jour avec la V6)

The establishment of polars from navigation data is broken down into 4 steps:

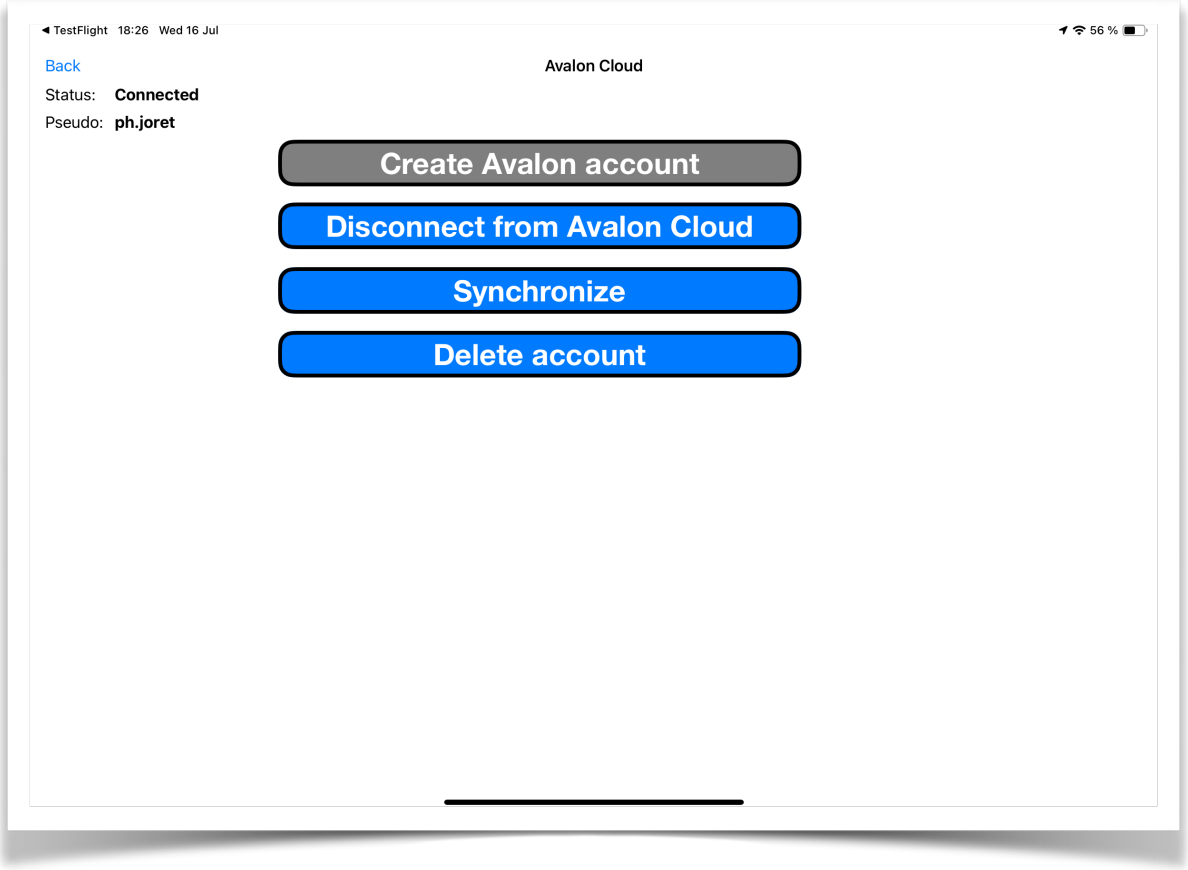
- Acquire your speed data while sailing (you must have an NMEA connection and a working log)
- Transfer data to Avalon Cloud by synchronizing the tablet
- Comparison of the data acquired with the current polar and modify if necessary
- Transfer Data to Avalon Offshore

It is recommended to archive your current polars before in the module "choice of the boat"

Make sure Avalon is connected to the NMEA network. The AIS icon should be white and the NMEA record icon should be showing « paused » (ready to record.
Click on NMEA Record to switch to recording. The icon turns red…
To close the session and start a new sequence, for example for another sail: click for green then click for red.
Note: take note of the time and the sail in place to find your way around later.



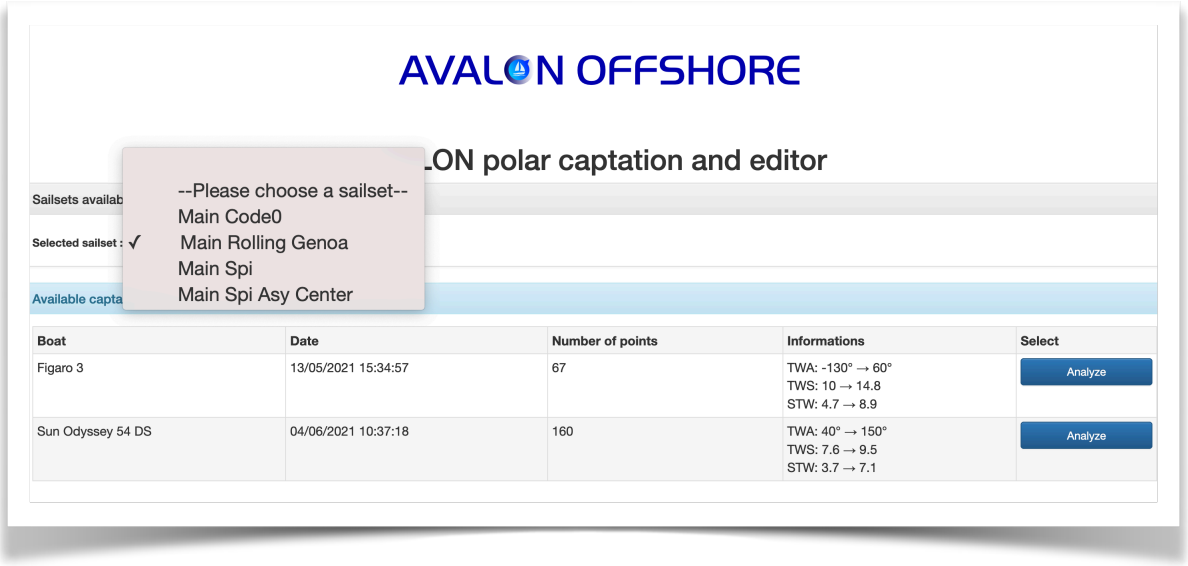
When the recordings are finished and you have a good network, synchronize Avalon Offshore with Avalon Cloud.



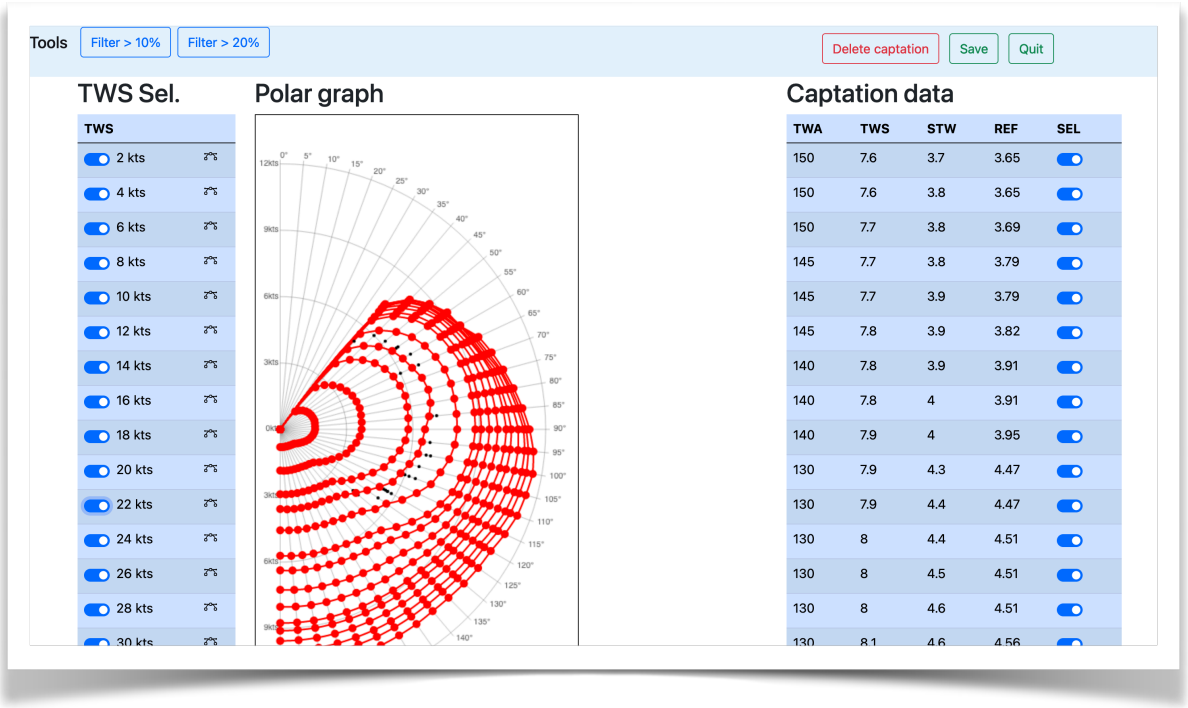
Then go to your Avalon Cloud space to process the acquired data and modify your polars sail by sail to match your acquisition. Click on VPP (Polars).

Refer to Avalon Cloud chapter.

Select the sail you wish to modify
Then the acquired data sequence. Filter data if necessary.



Edit the polar points by dragging them to "stick" to the acquired data points.



Save the modified polar.

Then transfer the modified polar by synchronising Avalon Offshore with Avalon Cloud

d. Private Polar in .pol format

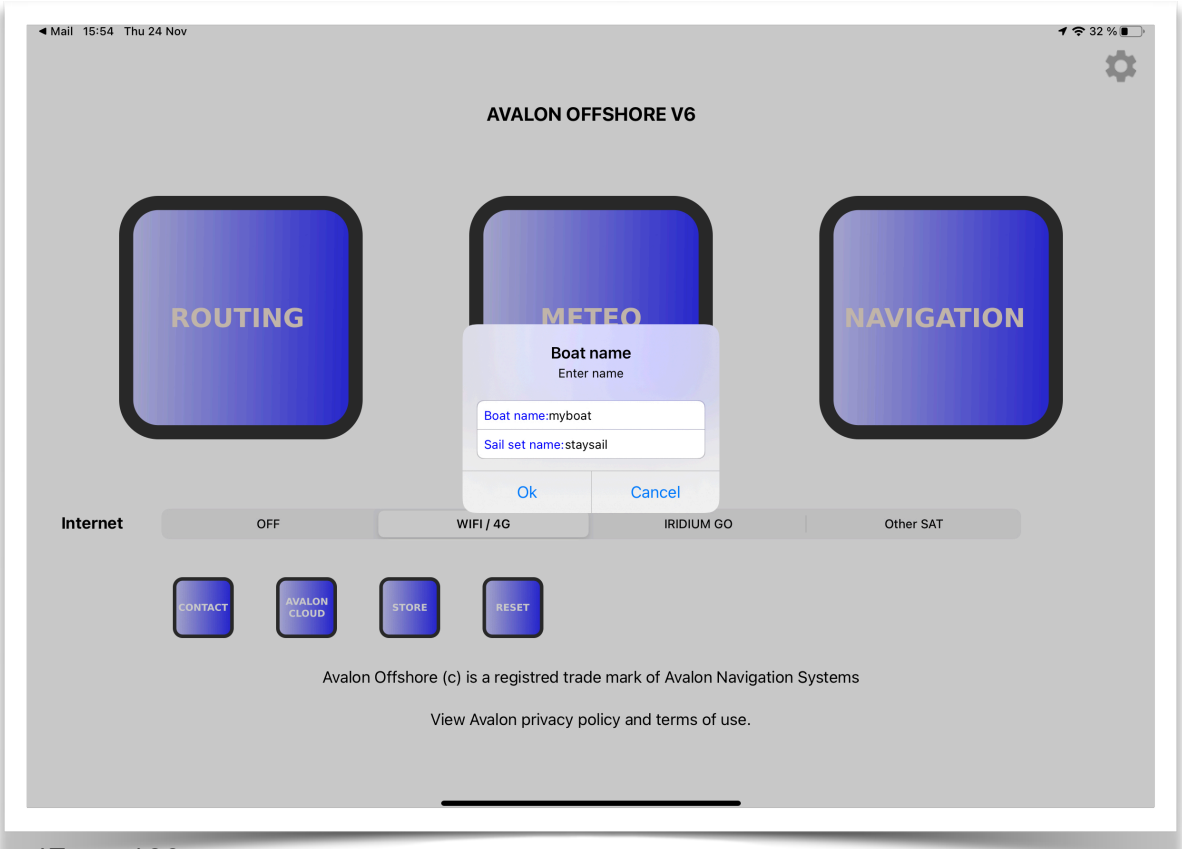
To create a polar file in the correct format, you must create a table of the following form in excel or any other spreadsheet:
Wind forces should be in columns and wind angles in line. You can have as many rows and columns as you want. Start with a TWA line at 0 degrees and a TWS column at 0 knots
You can create as many rows and columns as you want, but all boxes must be filled with numeric values

Avalon also supports csv format in American format: commas as separator and decimal point for values after the comma. However, the file trucmuche.csv must be renamed to myboat.pol to be recognized and loaded in Avalon.

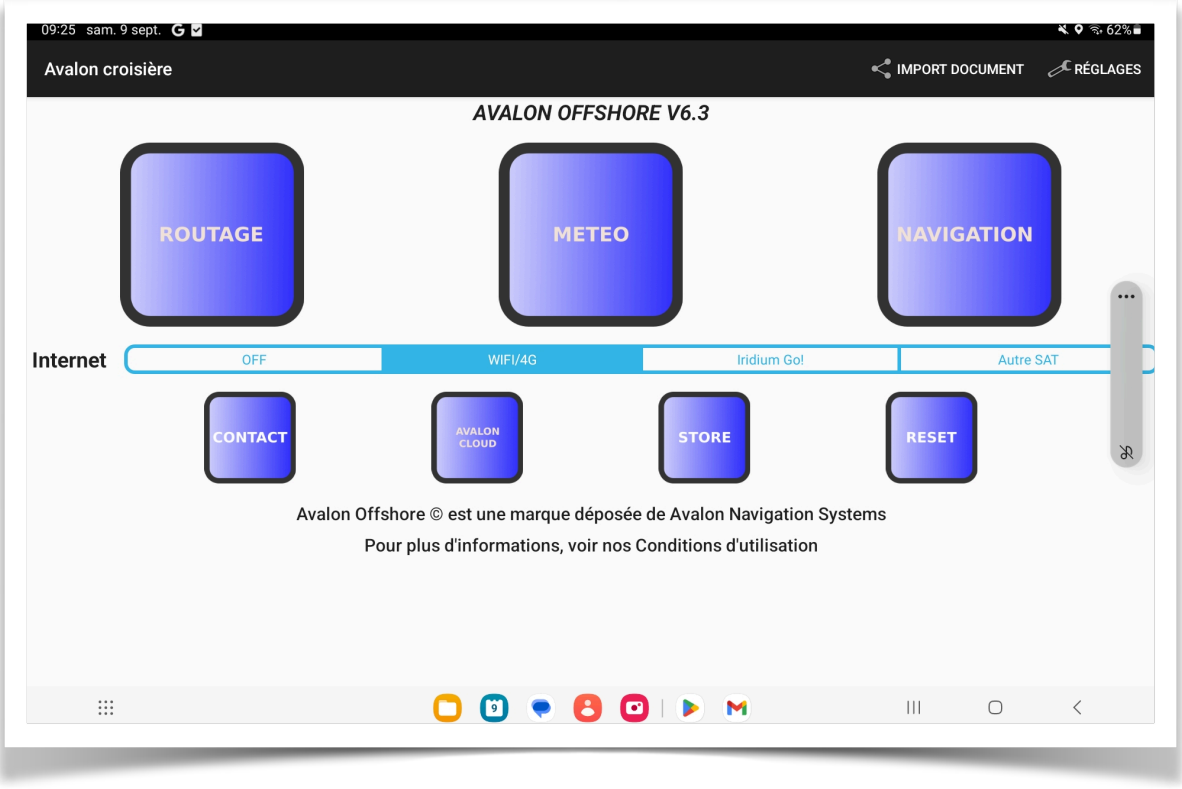
TWA/TWS	0	4	6	8	12	16	etc....	etc....	50
0									
30									
40									
45									
50									
60									
etc....									
etc....									
etc....									
180									

- This csv file must be renamed in pol format before sending it to Avalon.
- You can then import them into Avalon.
- via iTunes file transfer or email to iOS tablet
- via Google Drive, email or transfer to the downloads directory on an Android tablet

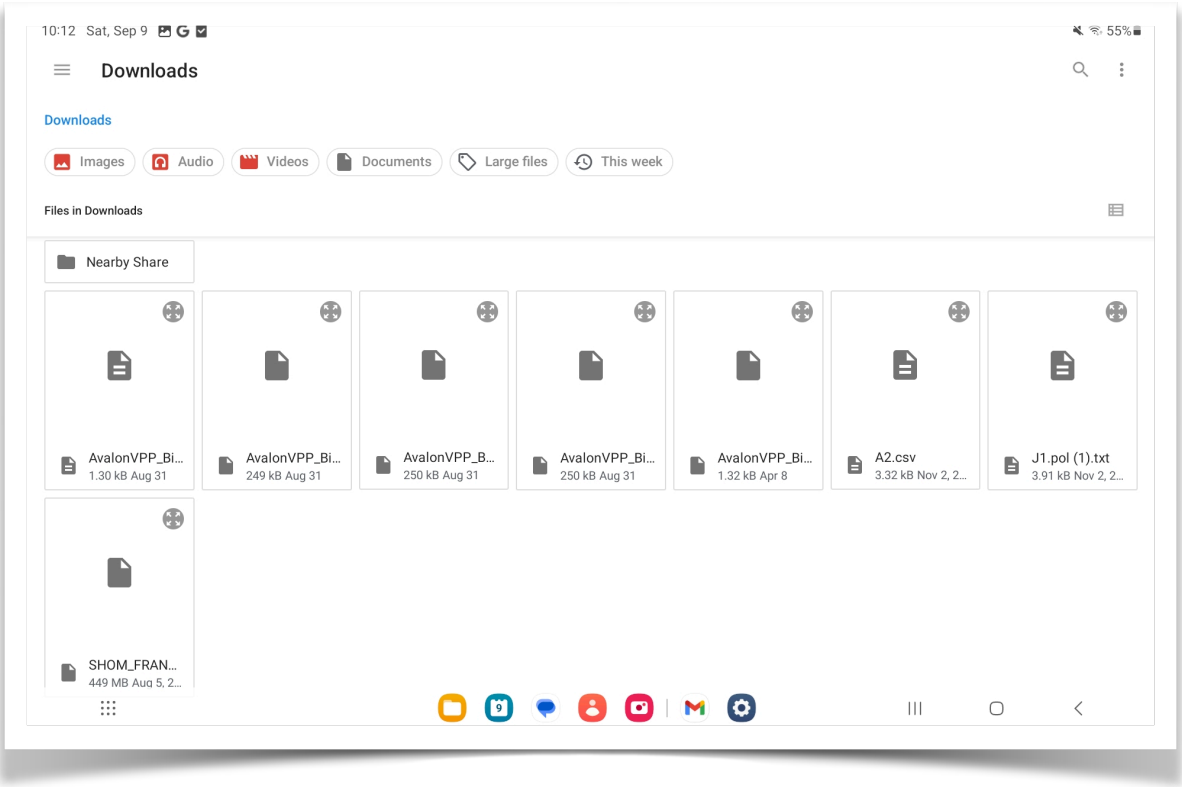
When you open Avalon, Avalon will detect the presence of a file and offer to integrate it into Avalon.



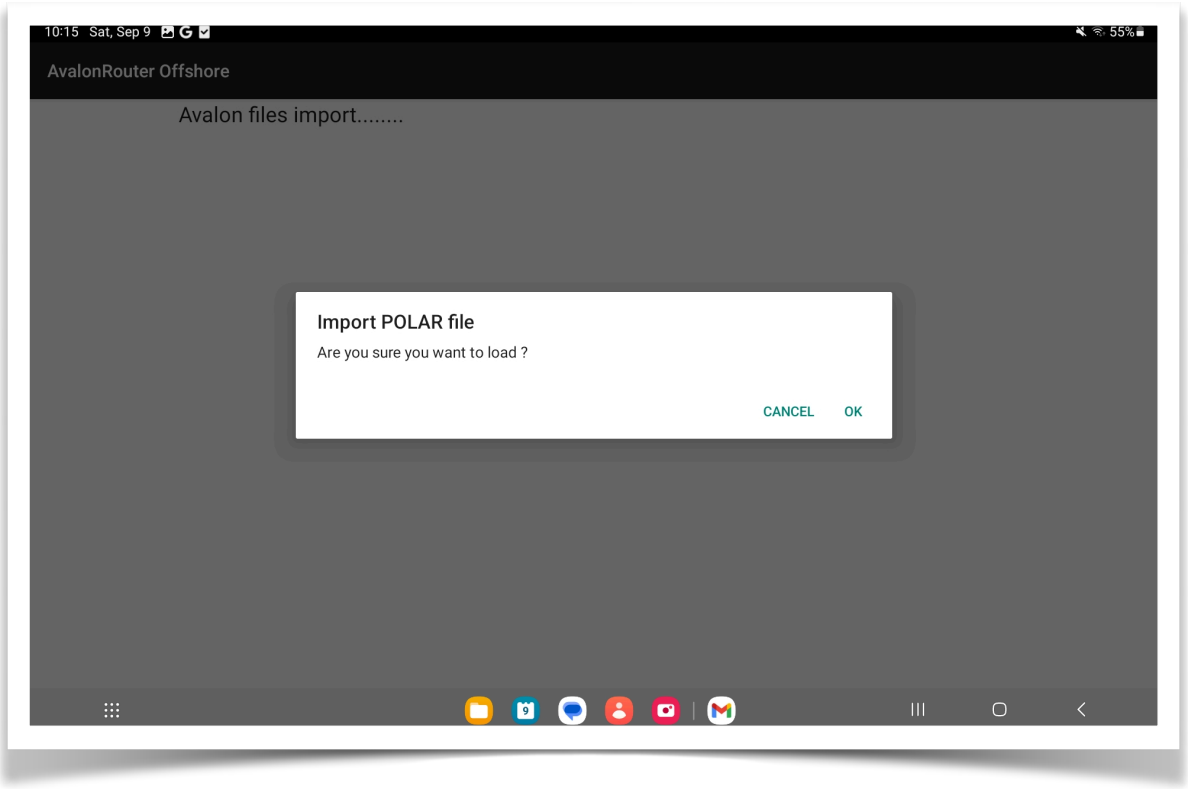
On Android, the principle is different. please click on « IMPORT DOCUMENT » on the main menu.



Avalon will search your “downloads” folder for the file to import.



Select the file and confirm then that you import a VPP file. On Android, Avalon accepts both .pol and .csv file.



It is the same procedure for weather grib files (grib1 and grib2) or map files (mbtiles, kap, …).

From this step, the process is the same as the Apple one.

e. SailSelect: Composite Polar to multi sails Polars

This function allows you to transform a composite polar (a polar combining all the sails) into multiple polars (one per sail).

The objective of the SailSelect program is to cut a single polar (composite) into as many polar files as there are sails on board the boat.

The advantage is then to be able to have a forecast analysis of the use of each set of sails during the regatta.

You need to provide the system with:
Your composite polar file in csv format (decimal points and comma separators).
A file in csv format indicating the name of the sail used for each wind force (TWS) and wind angle (TWA).

You can use as many TWS and TWA values as you want. You can use and modify the templates provided below as examples.

TWA and TWS columns and rows are very flexible. For example, you can use variable pitches: TWA of 5 in 5 degrees from 30 to 40, then 1 in 1 degree from 40 to 50, then 10 in 10 degrees from 50 to 180.

Example of a composite polar.

TWA\TWS	0	4	6	8	10	12	14	16	20	25	30	35	40	45	50	55	60	70
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SailSelect Example:
Important; First line and first column should be the same as the composite polar table.

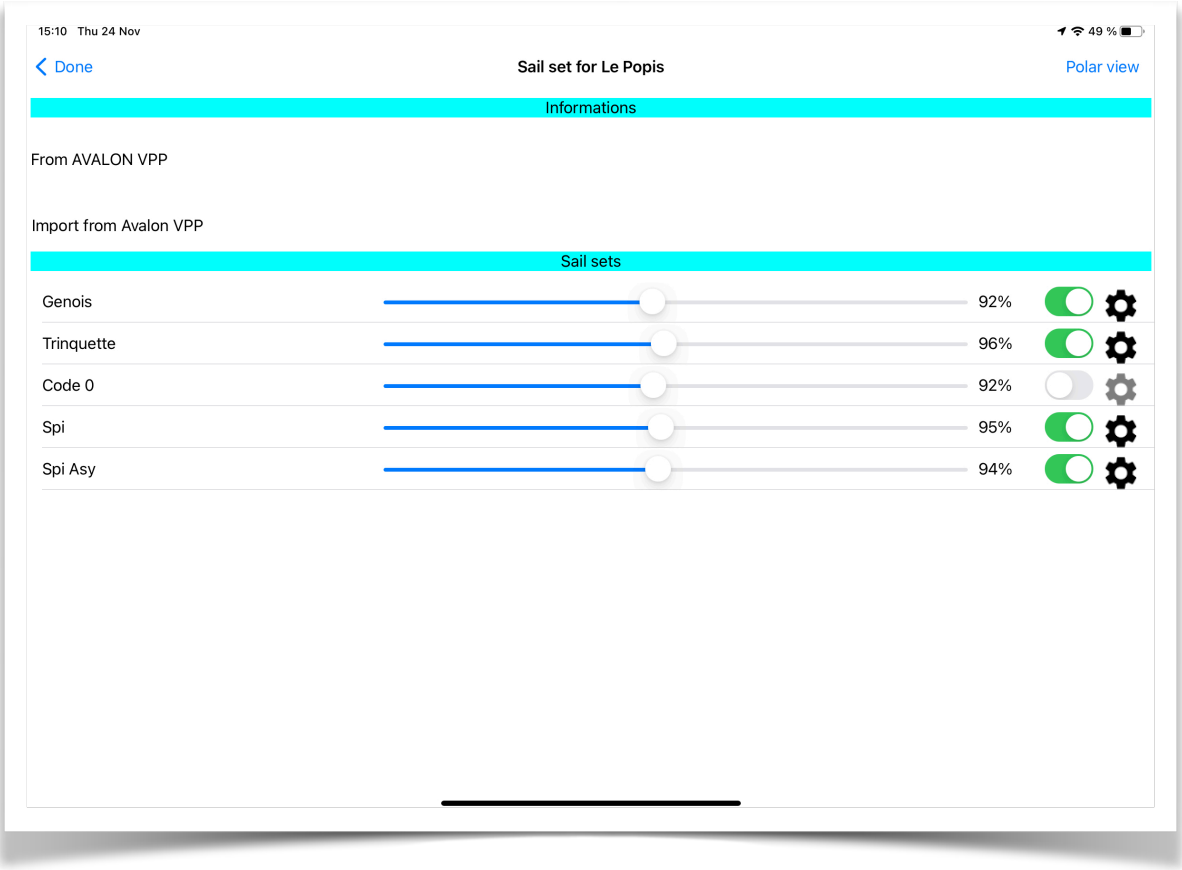
TWA/TWS	0	4	8	10	12	16	18	20	24	28	32	40	50	60	70
0	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
30	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
45	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
50	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
60	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
70	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
80	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
90	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
100	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
110	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
120	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
130	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
140	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
150	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
160	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
170	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu
180	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu	inconnu

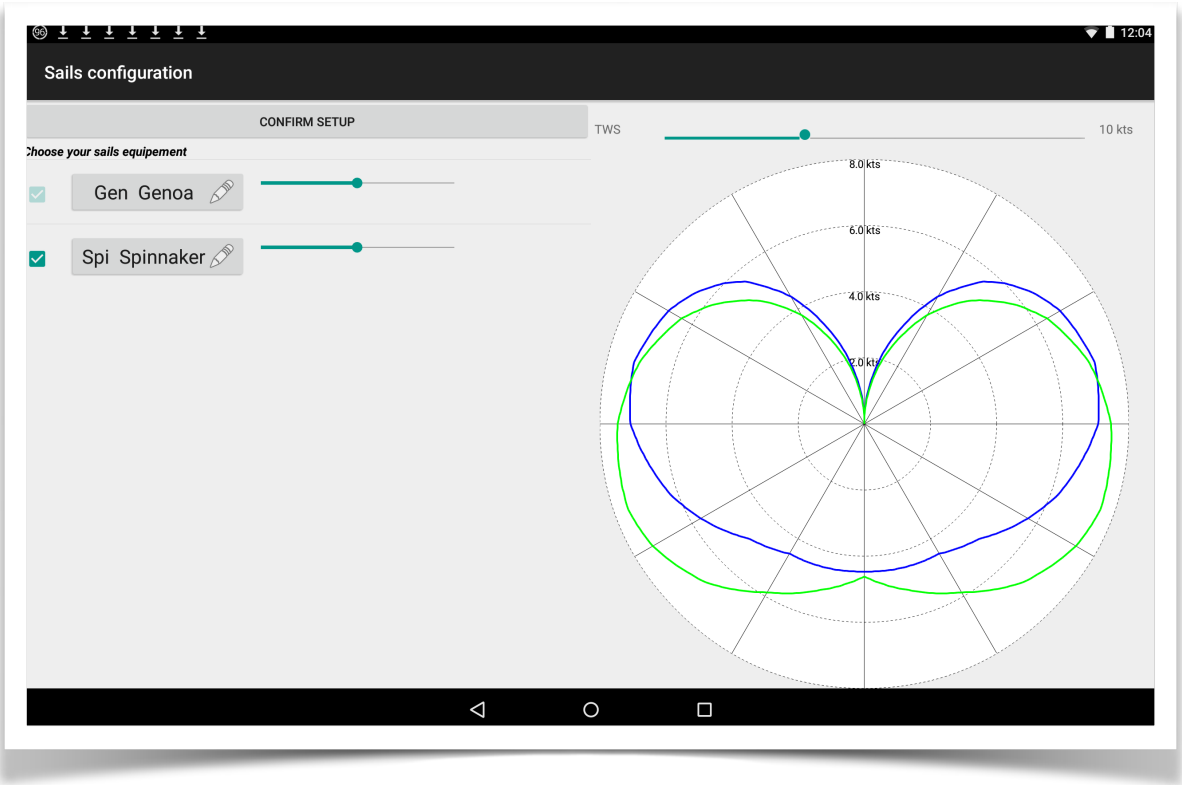
Fill in the 2 files, then upload to the web and you will get one polar file per sail.
Then simply rename these ".csv" and ".pol" files and upload them to Avalon as personal polars.
(see section "loading personal polars" above.

f) Adjusting the efficiency and operating ranges of each sail

Go to the "Routing" menu, then "Boat Selection and Setup."

Check the sails you have. Only the selected sails will be used to calculate the route.

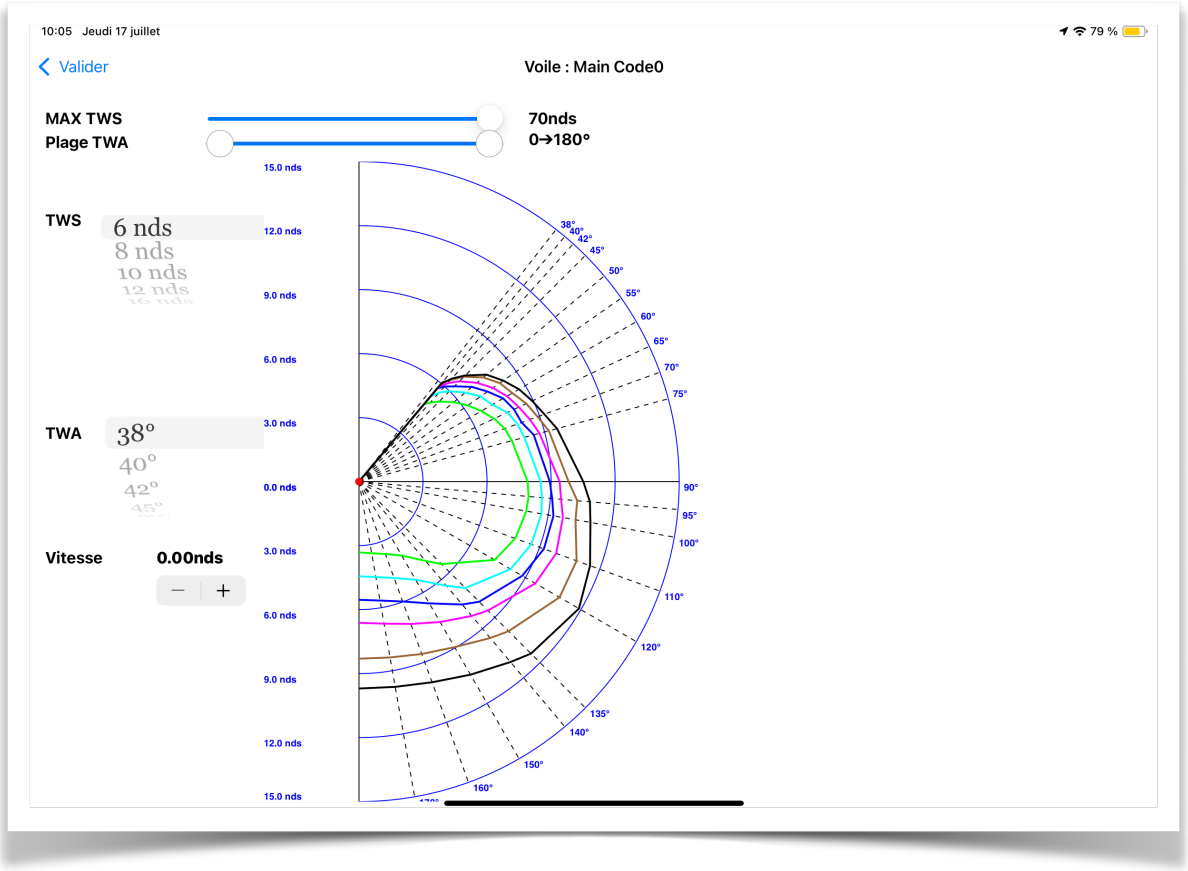




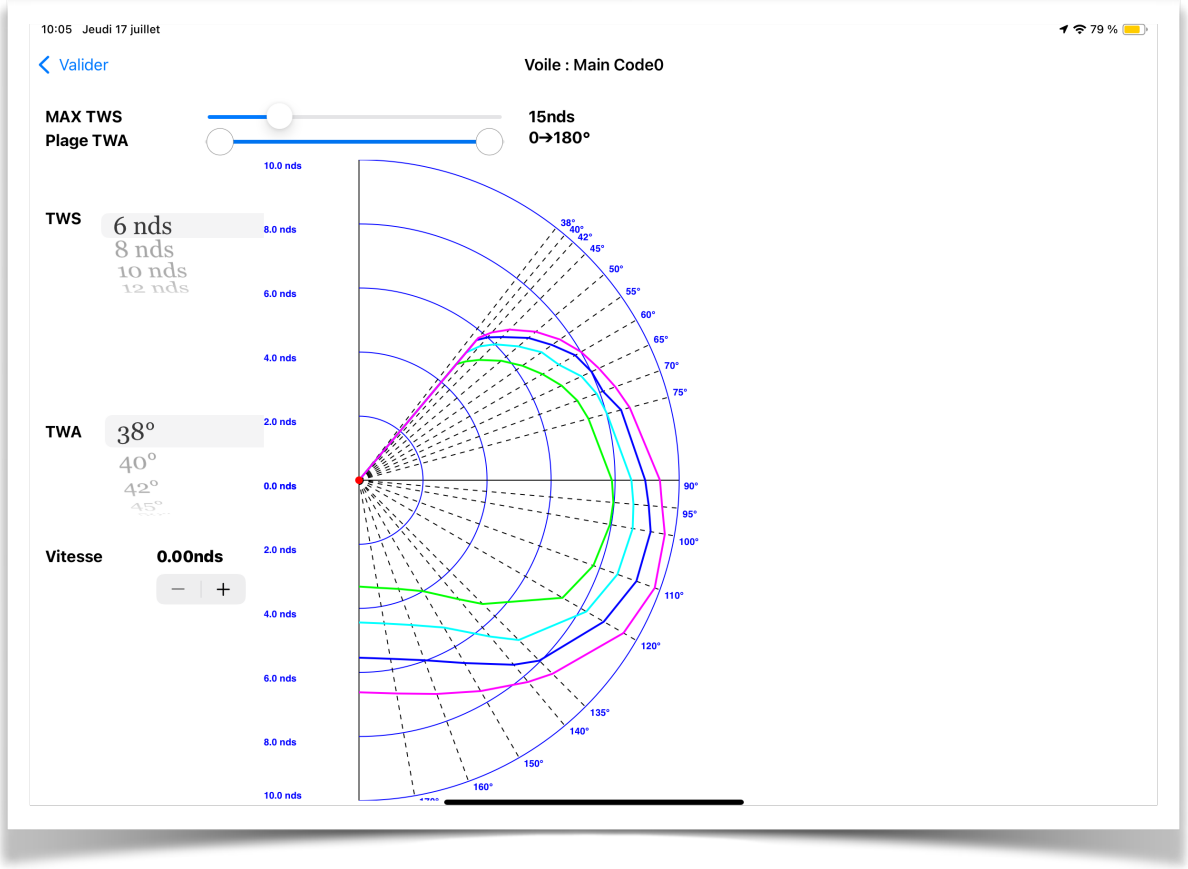
You can adjust the polar efficiency for each sail if you have "performance" sails or if some sails are worn.
You can also view the speed polars (theoretical speed of the boat based on wind strength and your angle to the wind).
Each set of sails can be activated or deactivated depending on the cruise.

The efficiency of each sail can be adjusted using a slider. A sail can also be activated or deactivated on demand, for example, in the case of a damaged sail while sailing.

The gear box (on Apple) or the pencil (on Android) directs you to a polar editor for the set of sails in question. You can view your polars with great precision. You can correct certain values, which may be necessary if Avalon VPP has calculated an impossible value (this can happen for a code 0 or a spinnaker. Adjusting the sails in crosswinds above 25 knots of wind).

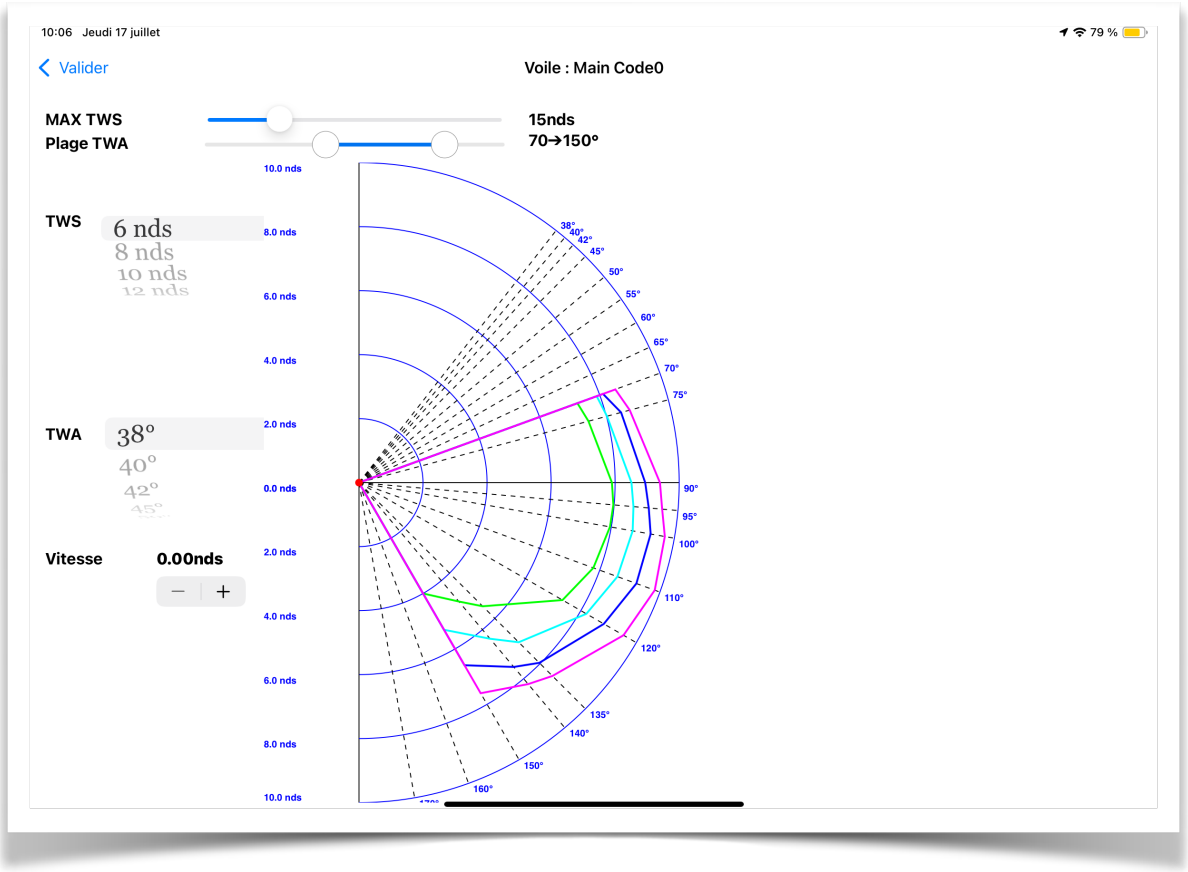


You can choose the maximum acceptable TWS (true wind) speed per sail, for example 15 knots for a code 0.



You can also choose the minimum and maximum TWA for each set of sails. Be careful, however, because imposing too many constraints on Avalon can prevent it from finding a route. In this case, you should calculate an "unlimited" route to temporarily remove all constraints: wind, waves, TWA, etc.

Below, we have limited the use of code 0 to a maximum wind speed of 15 knots and a TWA between 70 and 150 degrees off the wind.



5. Quick Start

)

Just tap on the "magic wand" icon 
Using the knobs, then select:

- Departure port
- Port of arrival
- Rated motor speed and motor tripping threshold
- Predicted duration of the cruise (which allows Avalon to load only the necessary weather)
- Departure date and time

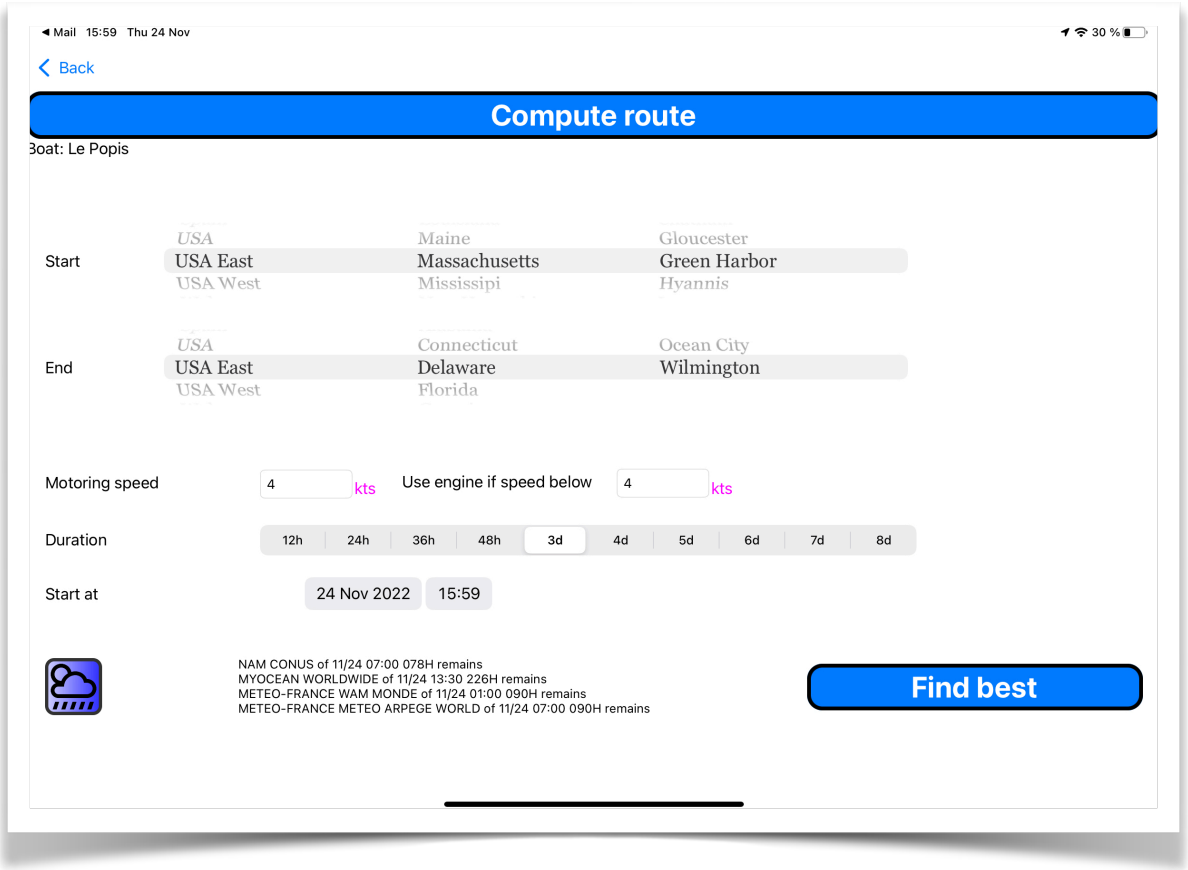
Optionally tap on « find best » and Avalon will propose the most appropriate weather models for your cruise, based on navigation area, departure time and estimated cruise duration.

Then start the calculation by tapping on "Route calculation". Waypoints will be placed automatically, weather data is downloaded automatically and the route is calculated.

The list of ports is updated regularly. If we have omitted a port where you would like us to cover a new navigation region, please let us know.

The route calculated in "beginner" mode can be modified by following the waypoint manipulations of the traditional routing method.

Attention: The "beginner" mode does not take into account the draft of the boat.

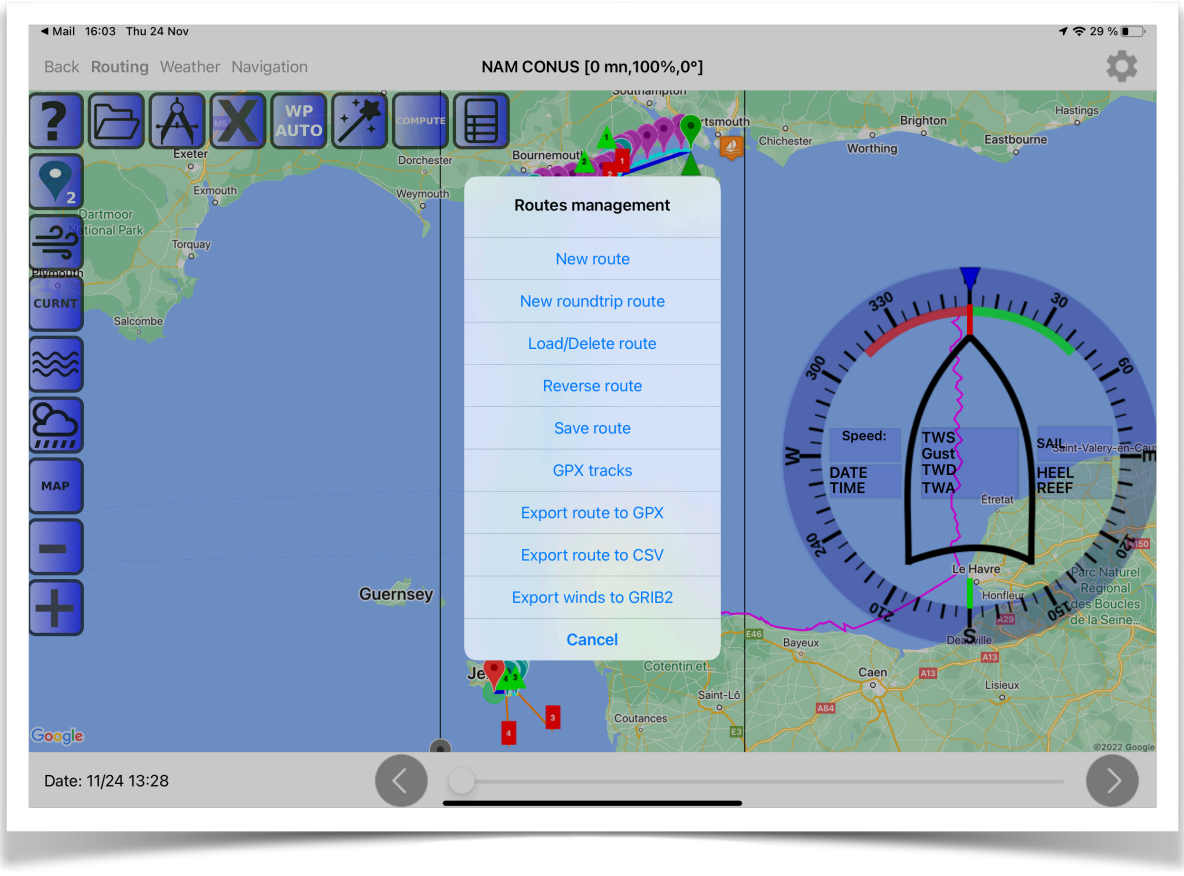


6. Handling Route Points

- Creation of a new route: Click on “folder” then new route
- Creation of the point of departure and arrival: Long click on the map
- Moving the start or end point: Long click on the point. The icon moves up and the point is dragged to the desired position.
- Modification of the parameters of the starting and ending point: Short click on the point then short click on the information of this point or on the point itself. You can then change latitude, longitude and time between course changes from that point.
- Creation of a waypoint or a stopover: zoom on the blue line then short click
- Moving the waypoint: Long click on the point. The icon moves up and the point is dragged to the desired position.
- Modification of the parameters of a waypoint or a stopover: Short click on the point then short click on the information of this point or on the point itself. You can then modify latitude, longitude, size of the arrival zone at this point, time between changes of course from this point as well as the duration in hours of this stopover.
- Deleting a waypoint or a stopover: Short click on the point, then a second short click. You can then delete this stitch in the settings window for this stitch which appears on the screen.

7. Route calculation

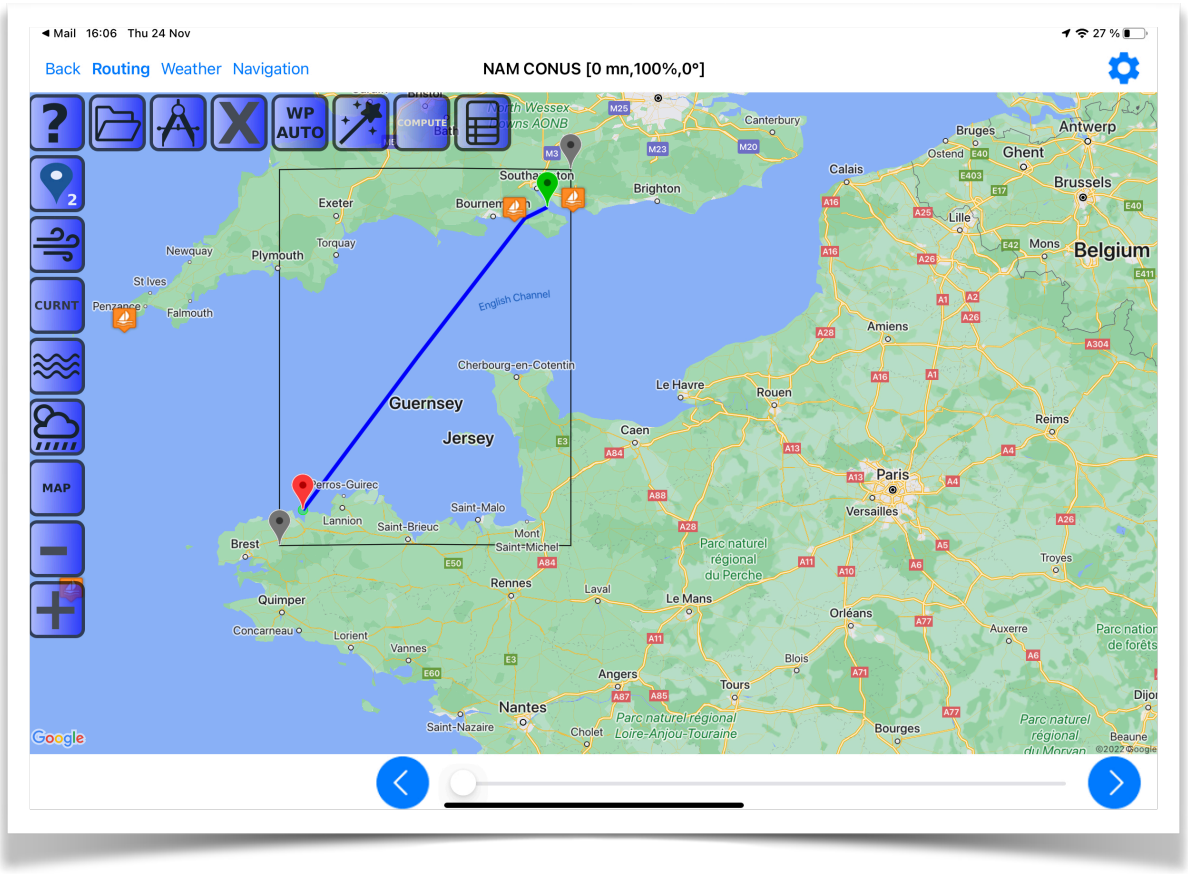
The "folder" icon  is used to create and manage routes:



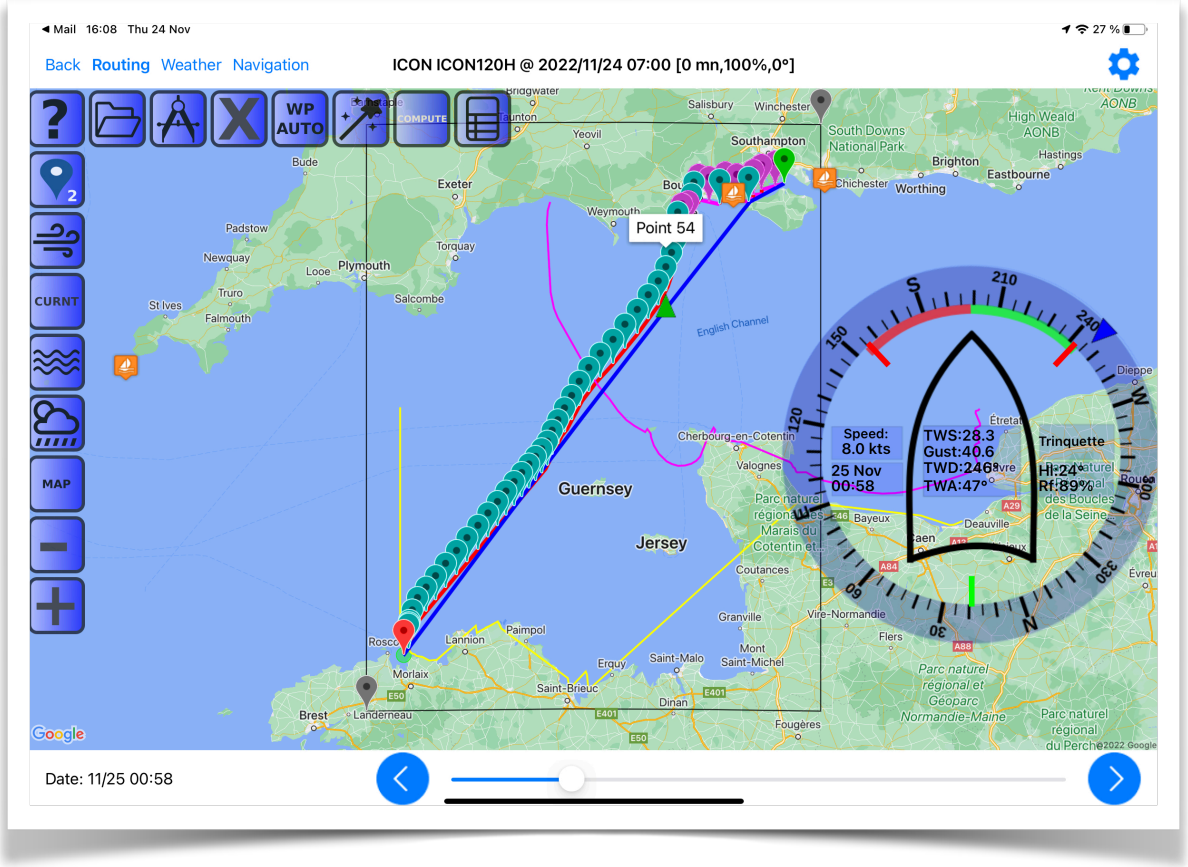
- **New Route:** Clears the current route and allows a new route to be created. Save the current route before if you want to reuse it.
- **New roundtrip route:** Creates a start and end point at the same location as well as a waypoint or stopover.
- **Load/Delete route:** Restores a previously saved route. To clear, swipe the road to the left.
- **Reverse route:** Turns departure into arrival, arrival into departure, saves waypoints to easily calculate a return route.
- **Save route:** Saves the current route departure, arrival, waypoints and navigation exclusion areas . Give it a clear name to find it later.
- **GPX tracks**: Manages routes in GPX format imported from other navigation systems, especially "auto routing" paths calculated by Navionics.
- **Export route to GPX:** Exports an Avalon route to other systems that support the standard GPX format.
- **Export route to CSV:** Exports an Avalon route in csv format for sharing with the crew
- **Export winds to Grib 2:** Allows you to export the winds retrieved by Avalon to another routing or weather system.
- **Cancel:** Exits this menu

Tap on "new route" to create a route:

- We set the starting position (long click) then the end point (long click). If you want to move the starting point, arrival point or any other waypoint, long click on the point and drag this point to the desired position.
- A blue line made up of straight line segments is automatically created between the start and the finish. This blue line roughly defines the "minimum distance" route between start and finish.
- A rectangle defining the navigation area is also displayed. This navigation zone is calculated by Avalon according to the departure and arrival points and any waypoints. This area is used to define the weather data to be downloaded automatically.
- You can define a waypoint for each line segment by clicking on the WP icon. This makes it possible to define waypoints automatically, but which can then be moved, in the case of a road that crosses a lot of land…. or more simply to get out of a very closed bay.
- You can also define a waypoint (or a stopover in a "circle" or "gate" form by making a short tap on the blue line. Then position this waypoint where you want. (caution: you must have zoomed in on the line blue
- The calculation of the route is triggered by clicking on the "compute" icon:



We arrive at a screen of routing parameters to which we will return later. We launch the routing by clicking on "calculation" again.
The route is calculated and then displayed.

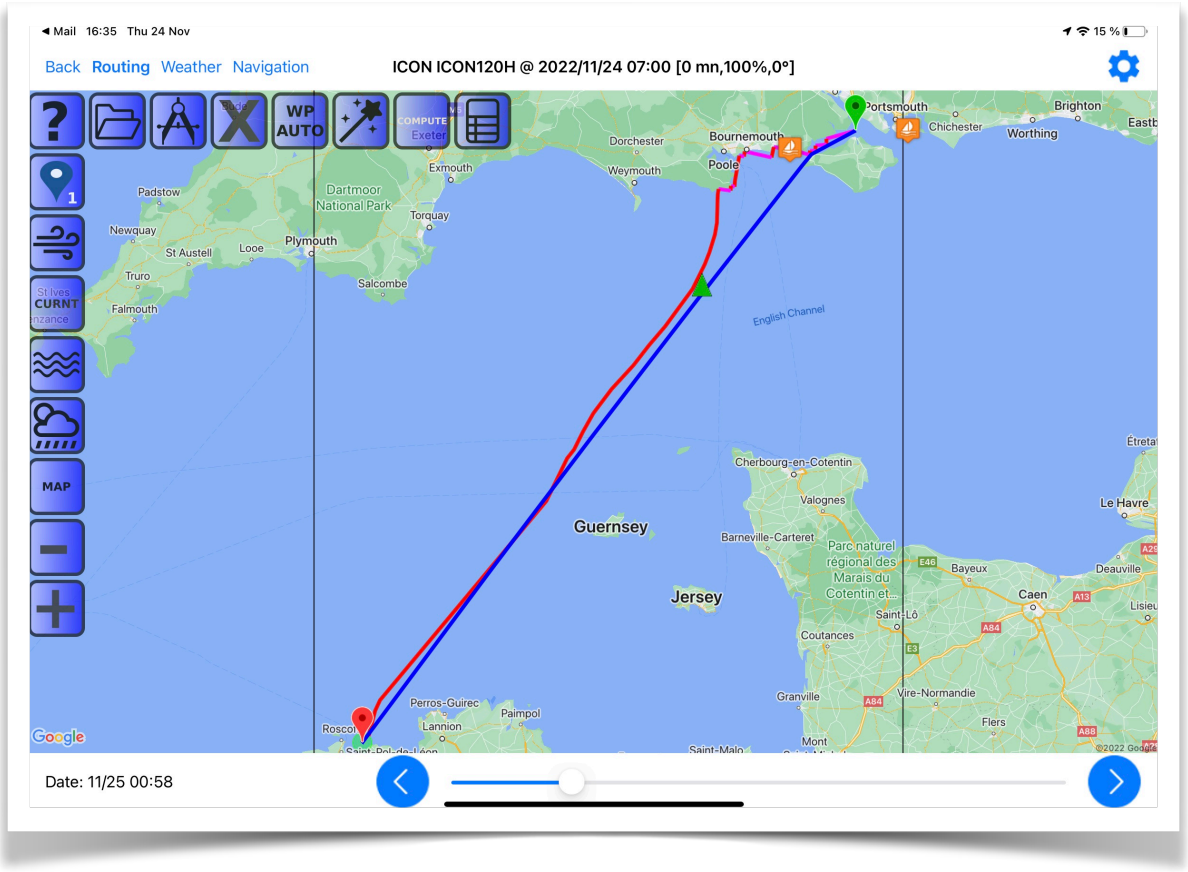


8. Viewing route points

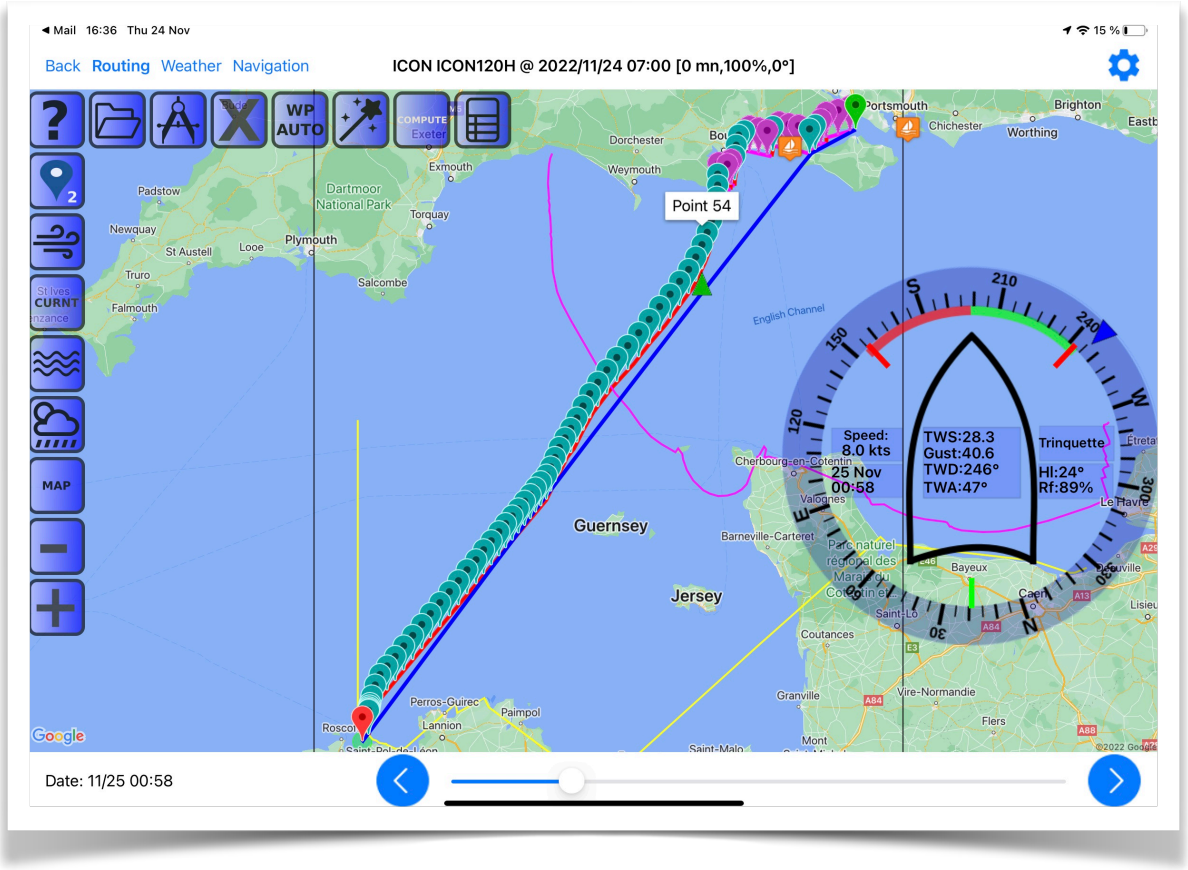
There are 3 ways to view the calculated route with waypoints.

Select the type of visualization by tapping on the icon 

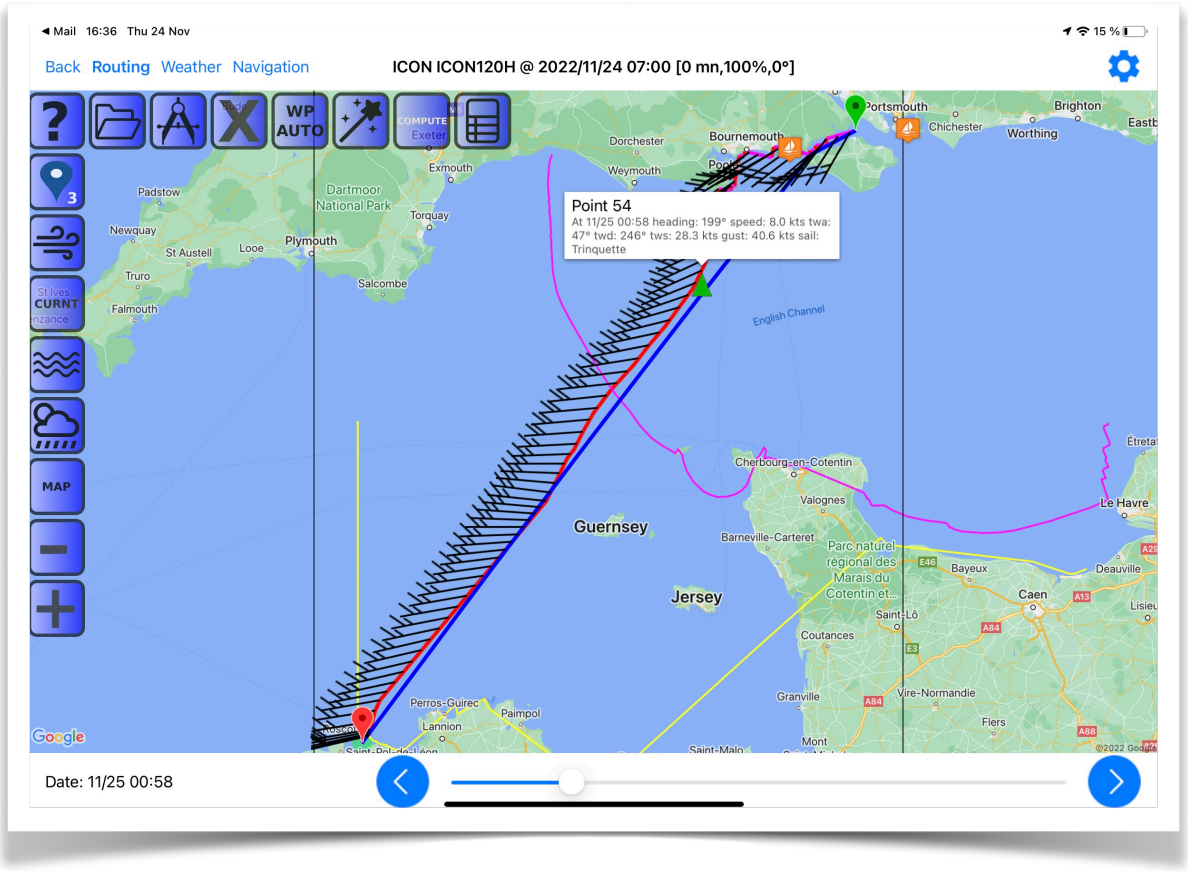
1. Icon 1: We only visualize the course line with the current point which materializes the position of the boat.



2. Icon 2: (1 tap): Waypoints are displayed as a marker and selected point info (by a tap) is displayed as a compass:

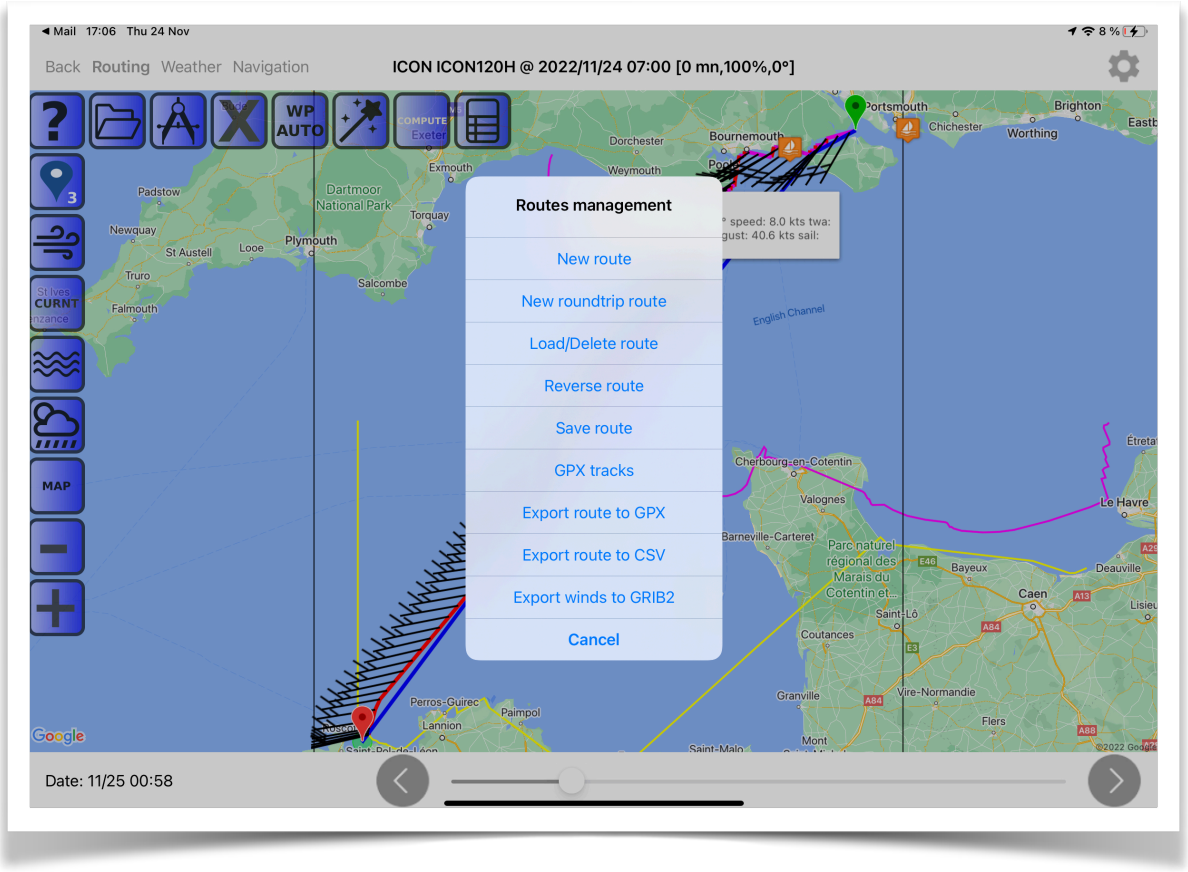


3. Icon 3 (second tap): The waypoints are displayed in the form of barbules and the information of the point selected (by a tap) is displayed in a window



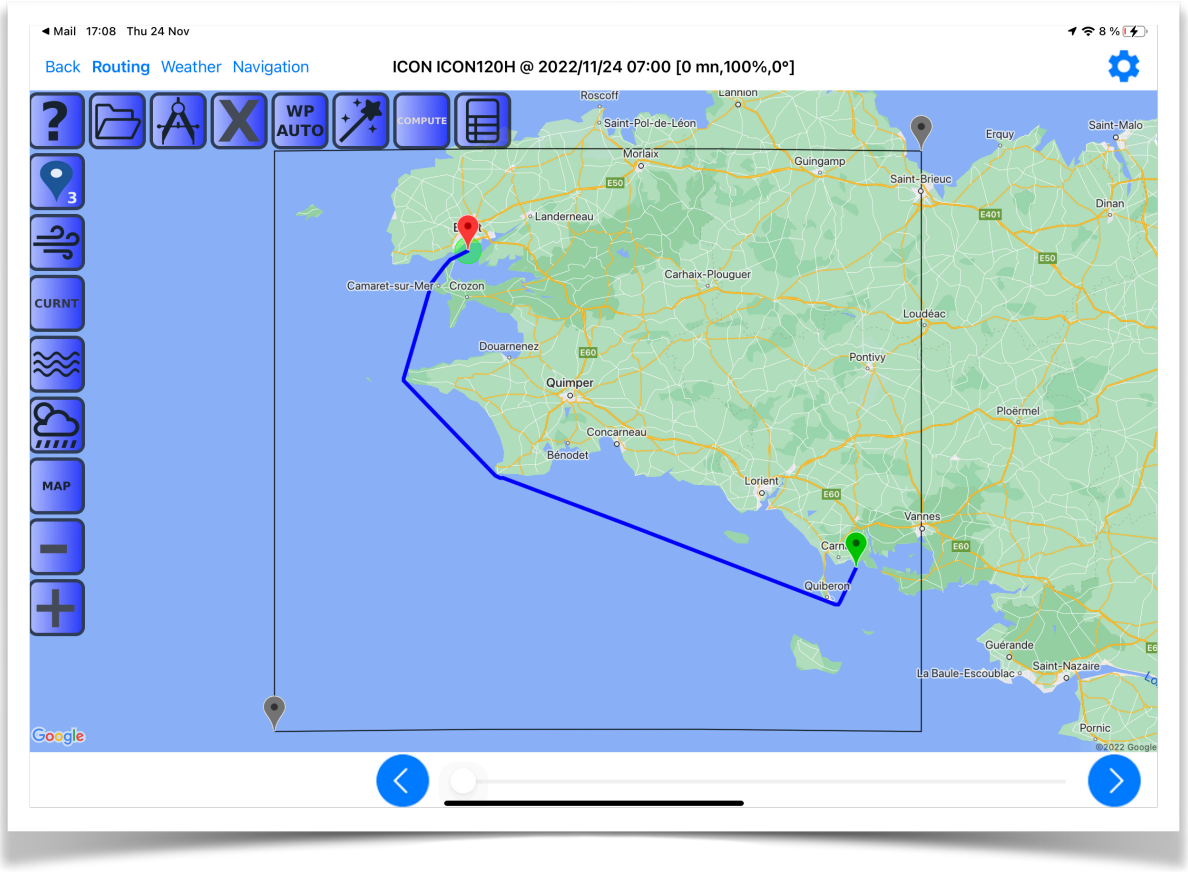
4. Example of routing: from La Trinité sur Mer to Brest

- Enter the routing module:
- To create a new route, tap on the "folder" icon 
- Select "New Route »
- and confirm clearing of current route.



- Long tap to place the starting point.
- Long tap to place the end point.
- After positioning these 2 points, you can move them. Refer to chapter 'Handling Waypoints'

As soon as the start and finish are positioned, the approximate direct route is materialized by a broken blue line



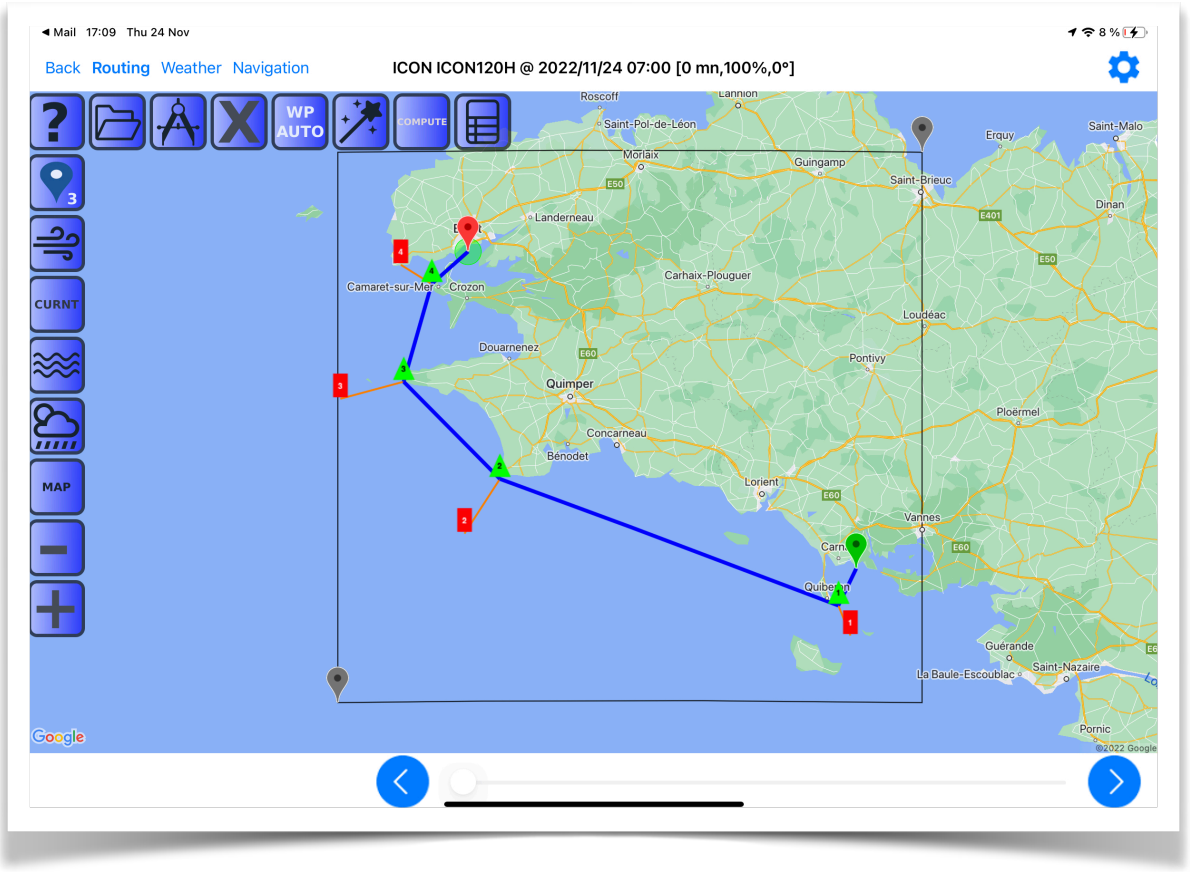
(note: you can see the ports and anchorages from Navily by zooming in on an area, if Navily is activated in the general settings of the app).)
If a "cross" appears on the start or finish, it means that it is not at sea (from the point of view of internal Avalon cartography), or the depth is not sufficient given your transducer minimum.

For a complex route like this, it is necessary to place waypoints.

These waypoints can be placed automatically by pressing 

These waypoints can be edited, moved or deleted,
or transformed into stopovers.

Since version 3.8, automatic waypoints have been transformed into gates defined by a starboard and a port beacon. These 2 beacons can be moved at will.

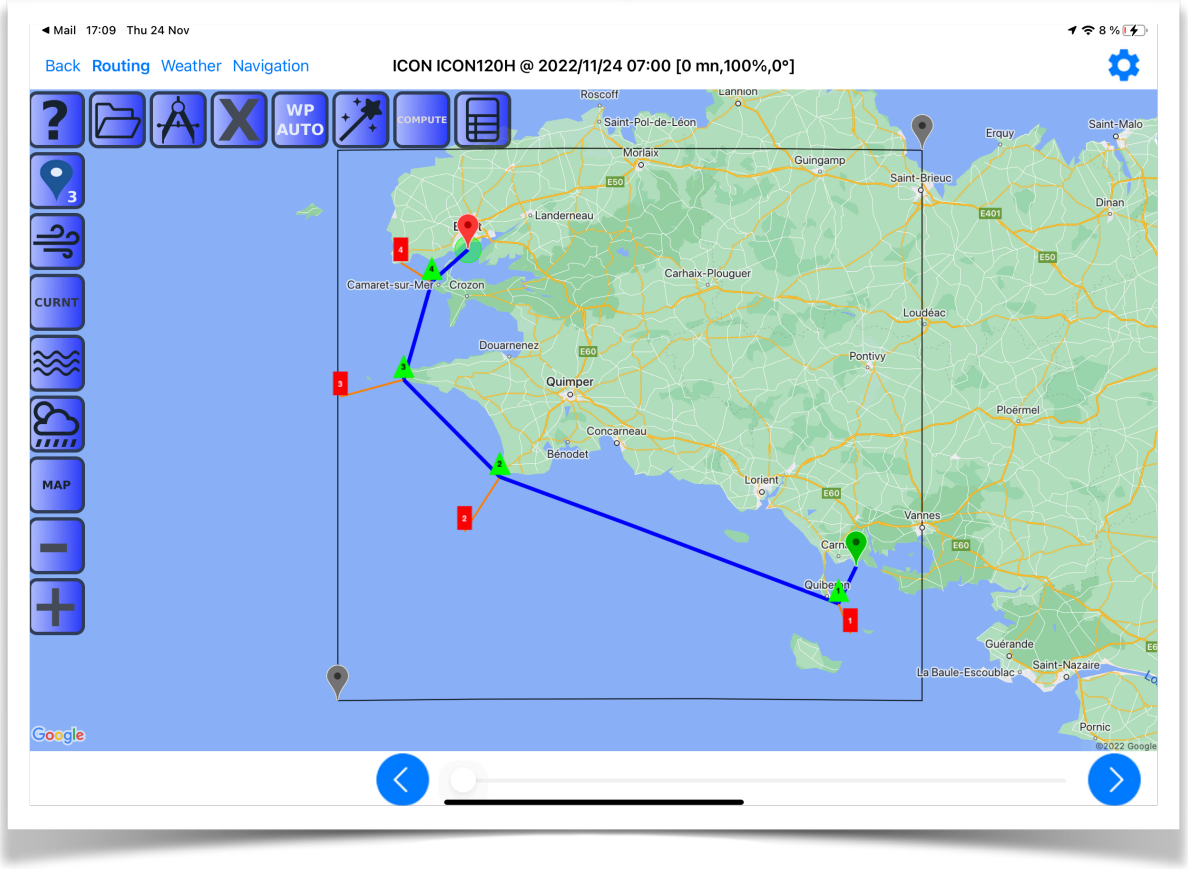


We have kept the circular areas for the arrivals areas and stopovers. When creating a new waypoint/stopover, the system gives you the choice between a gate or a circular area.

The positioning of the automatic waypoints takes into account the draft of your boat, defined in the preferences of Avalon (parameters of the main screen). It is therefore important that Avalon's internal mapping is up to date ("Reload Routing Mapping" in the "Help" menu).

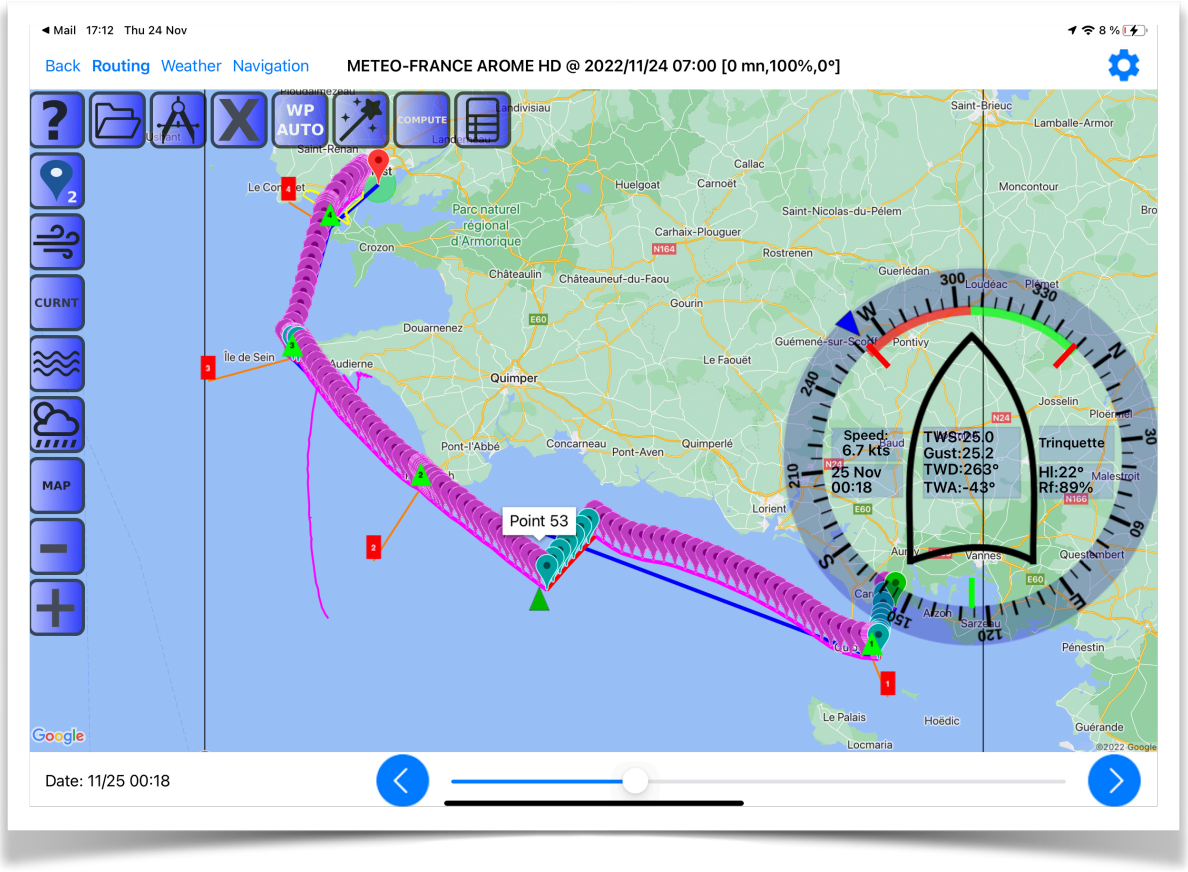
Start routing by pressing the icon 

The routing settings screen appears. After having checked its parameters, we click on "calculate the route"
The weather data is loaded automatically then the route is calculated very quickly.

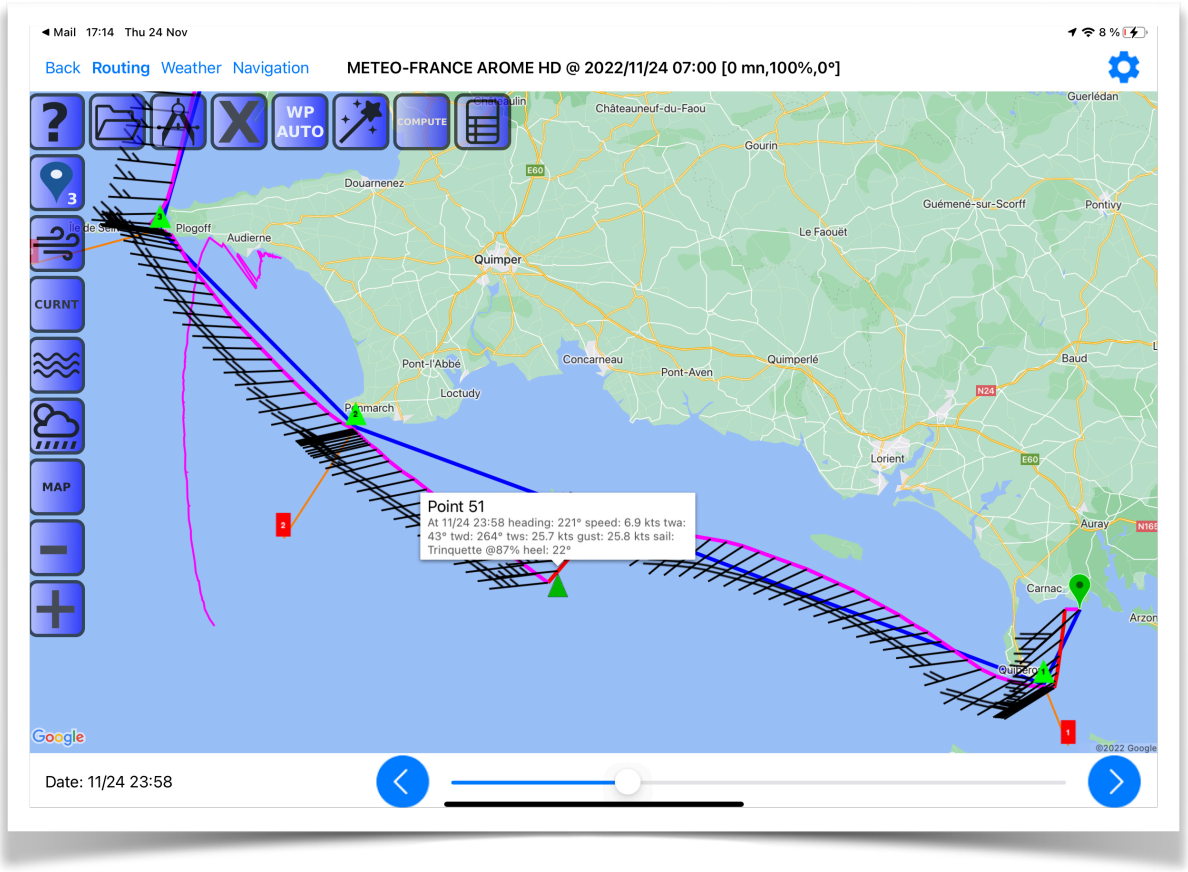


You can display the route in 3 ways by clicking several times on the icon 

1 = single line (see above)
2 = waypoints and compass for information related to the selected point



3 = Wind barbules (at the moment we are at the selected point) and point info



You can display on this screen winds, weather, currents, waves as well as activated nautical charts by activating the appropriate icon(s). (see chapter "meaning of routing icons)

The color of the points represents:
A) If the point was calculated on a real wind forecast:
Magenta: Port tack
Red: Starboard tack
Black: Motor Navigation

B) If the point was calculated with the “wind extension” option
Cyan: Port tack
Yellow: Starboard tack
White: Motor navigation

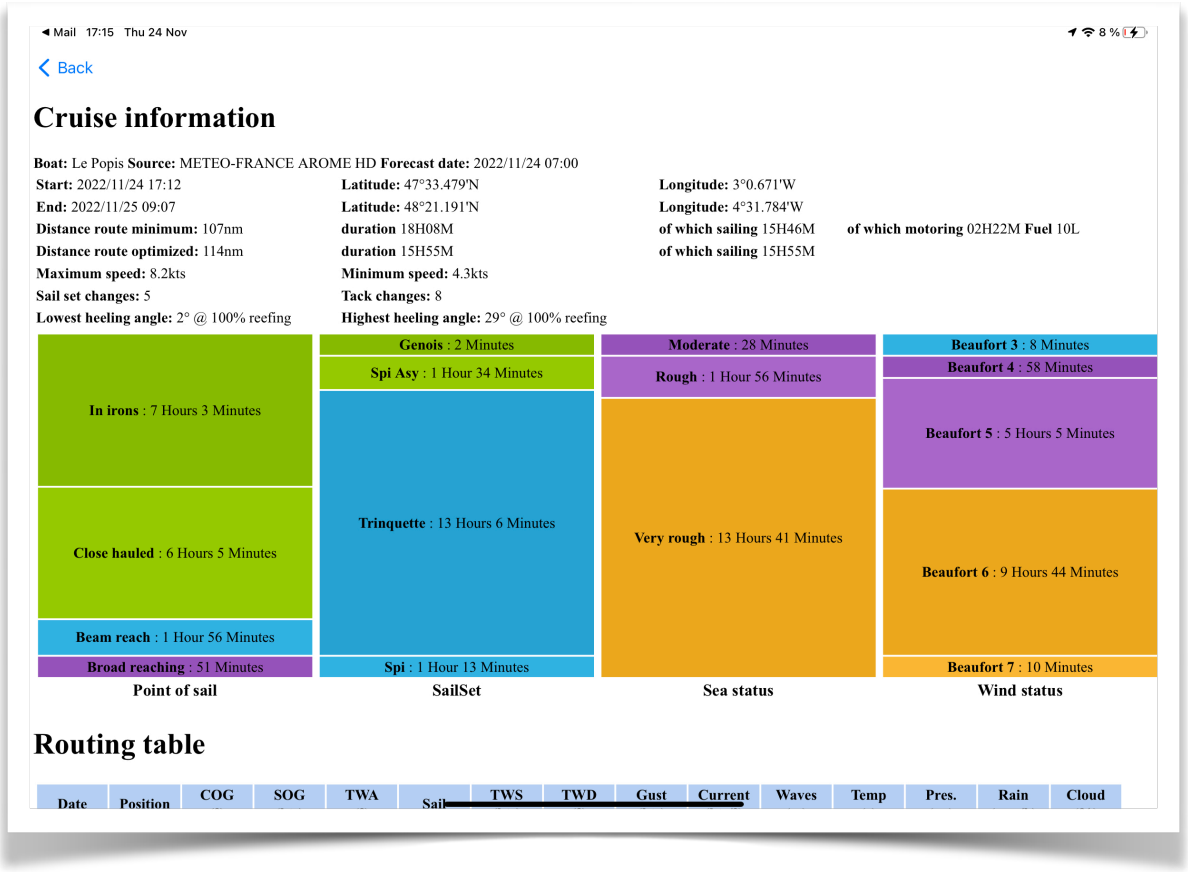
From the advanced settings, you can display the isochrones, very useful for identifying alternative route options in regattas.
In this case, the yellow line represents the last isochrone, i.e. all the points that the boat can reach at the same time as the finish.
I remind you that the isochrones represent all the points you want to reach in a defined time.
You can choose to display isochrones every hour, 3 hours, 6 hours, 12 hours or 24 hours.

5. Visualization of the calculated route

Video V5 (à mettre à jour avec la V6)

6. Cruising summary and route chart

Tap on  to see the cruise summary and route details.



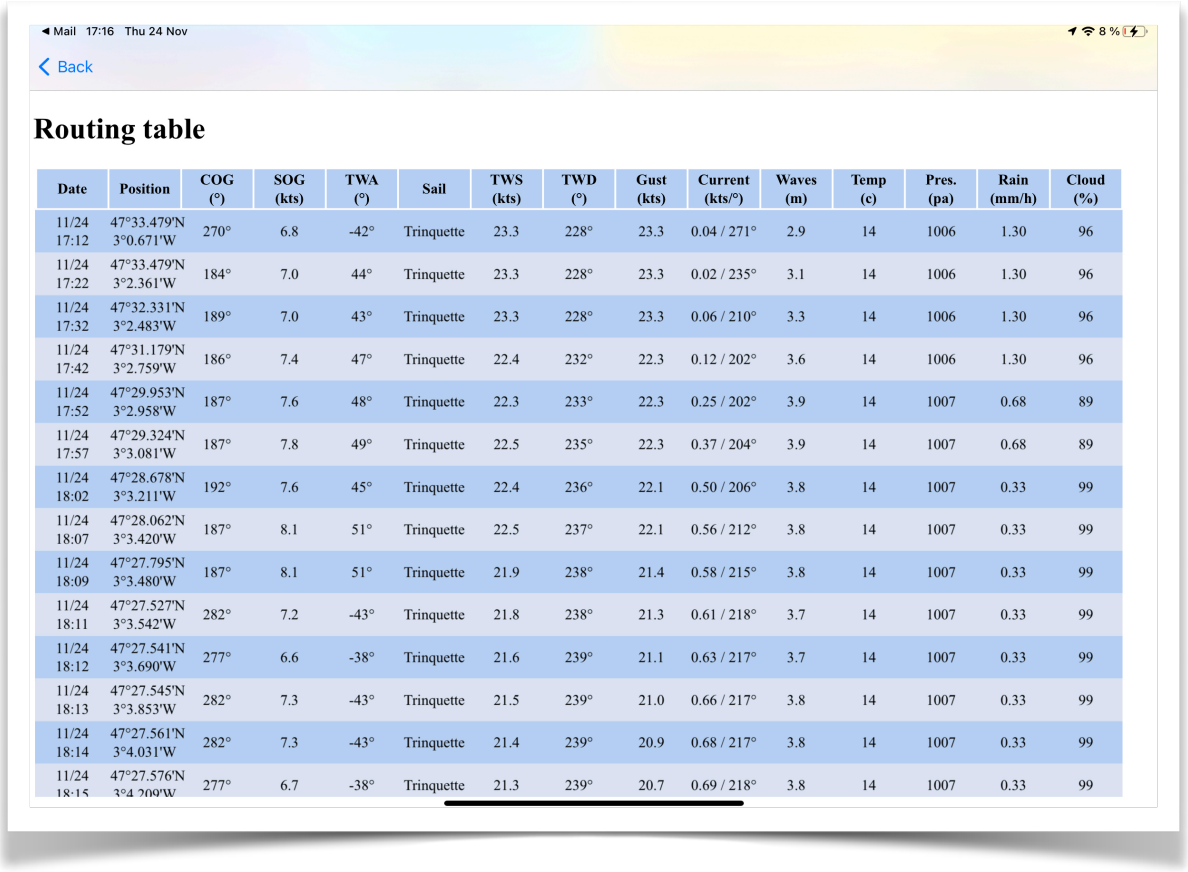
The "Cruise" page gives you a summary of your cruise:

Apple. Idem sous Android

- Total time, motor time and sailing time
- Number of sail changes and tack changes
- Comparison between the minimum distance route and the route optimized by Avalon
- Fuel consumption in the case of hybrid routing.
- Histogram of cruise duration by:
  - TWA
  - Sails used: If you only have one composite polar (i.e. grouping together all the sails), you can recreate one polar per sail using the "SailSelect" function from our website.
  - Wind force
  - sea state
  - Wind force

The "Previous Cruise" page presents the same information previously calculated in order to compare two hypotheses: different weather, different boats, different waypoints, etc. To make comparisons easier, we recommend using the "multi-scenario" feature included in the race option. In addition, the 2 traces appear on the routing screen. Simply touch a waypoint of the last calculated route to show the position of the boat on the previous route.

Move down to bring up the route table



Routing table

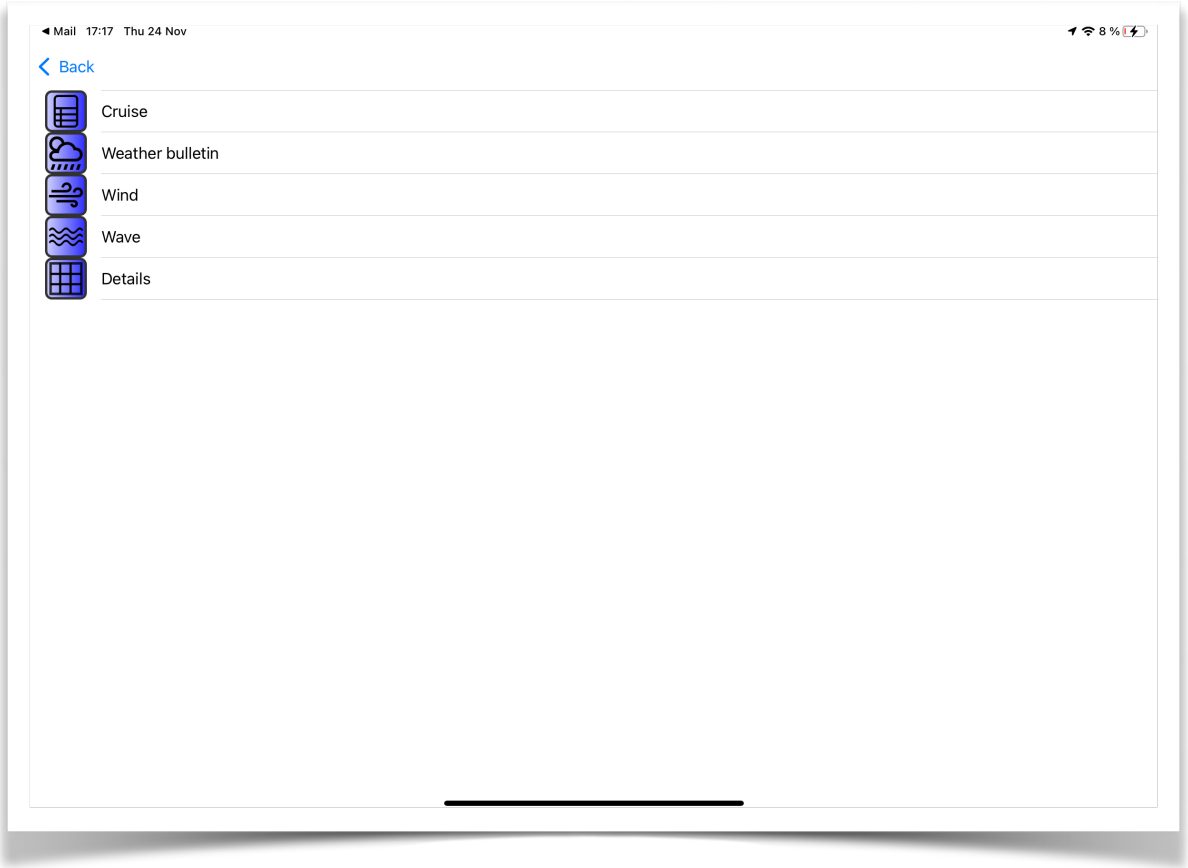
Date	Position	COG (°)	SOG (kts)	TWA (°)	Sail	TWS (kts)	TWD (°)	Gust (kts)	Current (kts/°)	Waves (m)	Temp (c)	Pres. (pa)	Rain (mm/h)	Cloud (%)
11/24 17:12	47°33.479'N 3°0.671'W	270°	6.8	-42°	Trinquette	23.3	228°	23.3	0.04 / 271°	2.9	14	1006	1.30	96
11/24 17:22	47°33.479'N 3°2.361'W	184°	7.0	44°	Trinquette	23.3	228°	23.3	0.02 / 235°	3.1	14	1006	1.30	96
11/24 17:32	47°32.331'N 3°2.483'W	189°	7.0	43°	Trinquette	23.3	228°	23.3	0.06 / 210°	3.3	14	1006	1.30	96
11/24 17:42	47°31.179'N 3°2.759'W	186°	7.4	47°	Trinquette	22.4	232°	22.3	0.12 / 202°	3.6	14	1006	1.30	96
11/24 17:52	47°29.953'N 3°2.958'W	187°	7.6	48°	Trinquette	22.3	233°	22.3	0.25 / 202°	3.9	14	1007	0.68	89
11/24 17:57	47°29.324'N 3°3.081'W	187°	7.8	49°	Trinquette	22.5	235°	22.3	0.37 / 204°	3.9	14	1007	0.68	89
11/24 18:02	47°28.678'N 3°3.211'W	192°	7.6	45°	Trinquette	22.4	236°	22.1	0.50 / 206°	3.8	14	1007	0.33	99
11/24 18:07	47°28.062'N 3°3.420'W	187°	8.1	51°	Trinquette	22.5	237°	22.1	0.56 / 212°	3.8	14	1007	0.33	99
11/24 18:09	47°27.795'N 3°3.480'W	187°	8.1	51°	Trinquette	21.9	238°	21.4	0.58 / 215°	3.8	14	1007	0.33	99
11/24 18:11	47°27.527'N 3°3.542'W	282°	7.2	-43°	Trinquette	21.8	238°	21.3	0.61 / 218°	3.7	14	1007	0.33	99
11/24 18:12	47°27.541'N 3°3.690'W	277°	6.6	-38°	Trinquette	21.6	239°	21.1	0.63 / 217°	3.7	14	1007	0.33	99
11/24 18:13	47°27.545'N 3°3.853'W	282°	7.3	-43°	Trinquette	21.5	239°	21.0	0.66 / 217°	3.8	14	1007	0.33	99
11/24 18:14	47°27.561'N 3°4.031'W	282°	7.3	-43°	Trinquette	21.4	239°	20.9	0.68 / 217°	3.8	14	1007	0.33	99
11/24 18:15	47°27.576'N 3°4.209'W	277°	6.7	-38°	Trinquette	21.3	239°	20.7	0.69 / 218°	3.8	14	1007	0.33	99

Sail and tack changes are shown in bold.

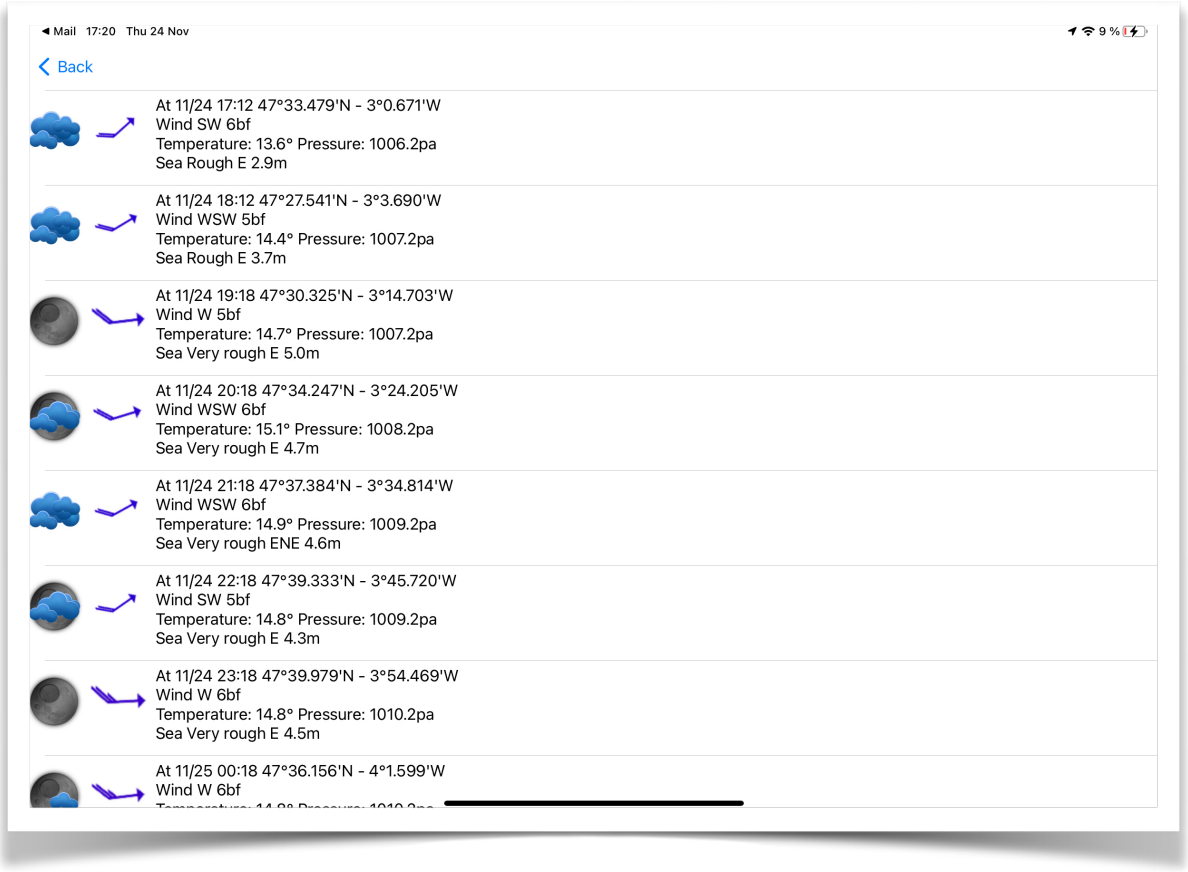
Other detailed information contained in the "Summary" menu are:

- Cruise
- Previous cruise (previously calculated), to compare 2 route hypotheses.
- Weather report
- Wind (detail)
- Waves (detail)
- Details

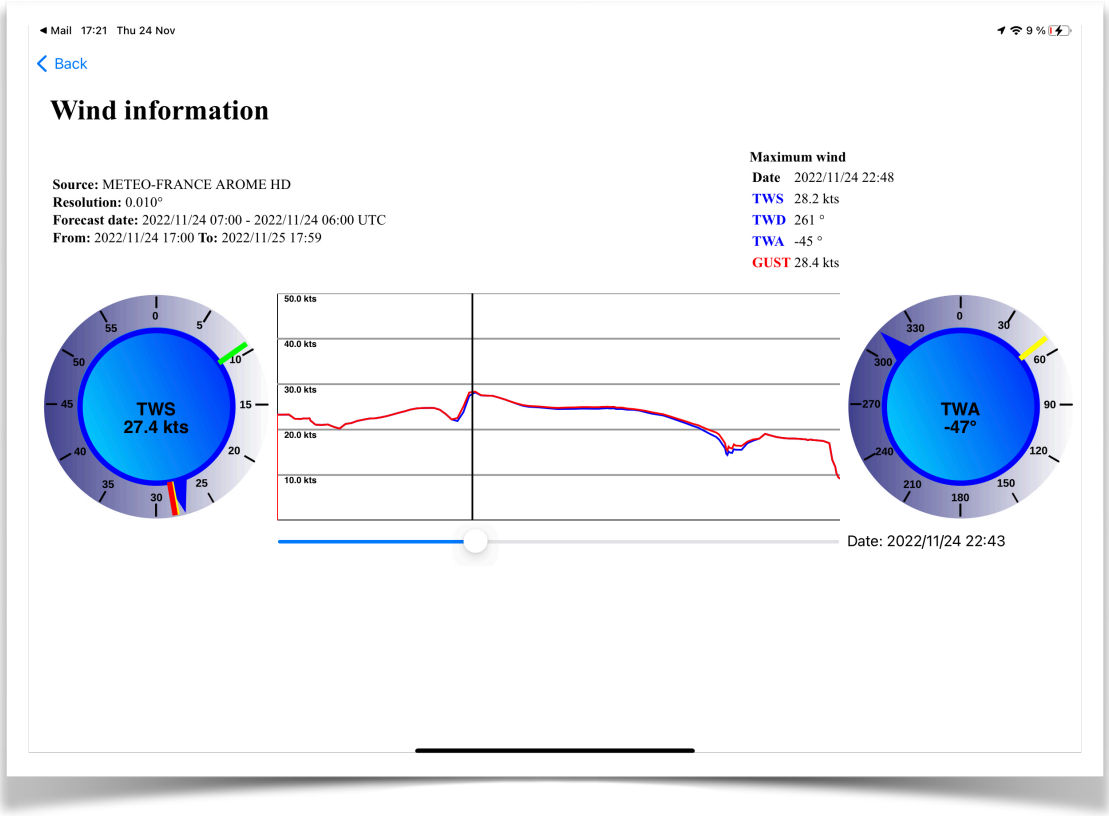
On iOS, these submenus appear as a list. On Android, you have to swipe the pages laterally to reveal the different information pages.



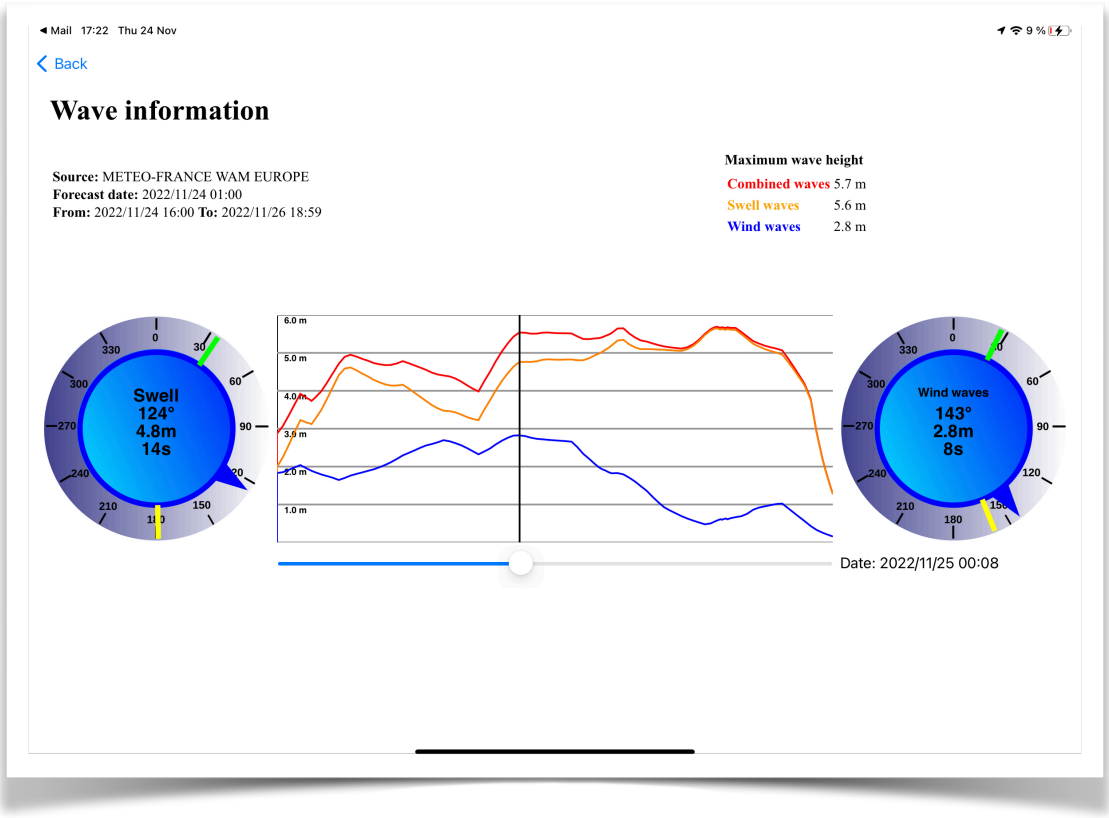
Weather bulletin will give you general weather info hour per hour.



The "wind" page will give you details of winds and gusts. To have the detail of the winds at a given moment, drag the elevator bar at the bottom of the page. The TWS (true wind speed) as well as the TWA (wind angle to the boat) will be displayed in the instruments.



Same thing for the "waves" page which will give you, for the swell and the wind waves: height of the waves, direction in relation to the boat and periodicity of the waves.



7. Bathymetric Routing

Avalon takes water depth into account when calculating the route to provide you with a theoretical route, calculated by routing, that closely matches the actual navigation route.

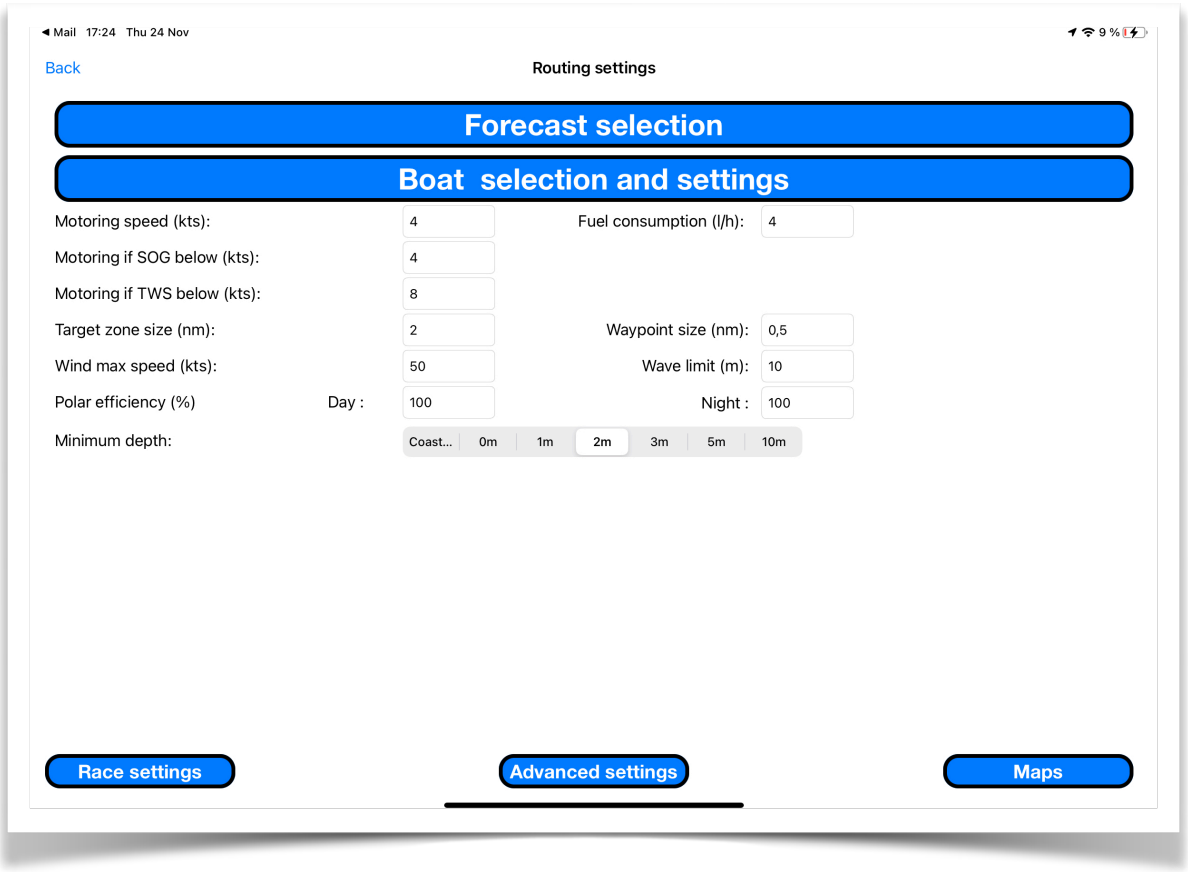
This feature is available in all navigation areas covered by Avalon vector charts.

- Mainland France (incl Corsica)
- England and Ireland
- Belgium
- Holland
- Spain
- Portugal
- North Atlantic Islands (Madeira, Canary Islands, Cape Verde, Bermuda, Azores)
- Lesser Antilles
- Continental USA (excluding Alaska)
- Hawaii
- Polynesia
- New Caledonia
- Madagascar, Comoros, Seychelles

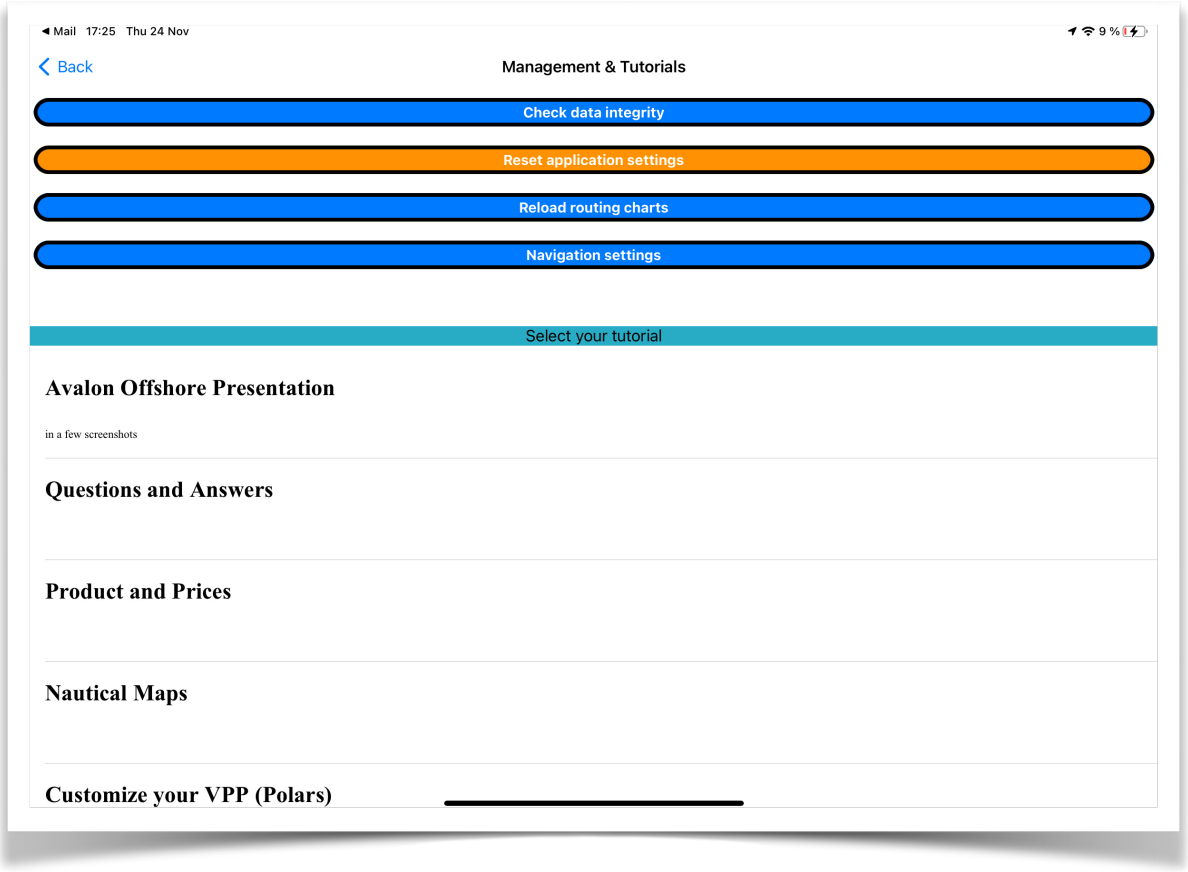
We've added a "minimum depth" setting in the app preferences (from the main menu) where you can choose the minimum depth needed for your boat.
This bathymetric mapping is internal. It is used by Avalon in calculating the route. It is compatible with any cartography chosen by the user: SHOM, Navionics, Google, Open Sea Map, MbTiles, etc.

Caution: Avalon does not guarantee the accuracy of this data. It is the responsibility of the skipper to check his navigation route on official charts.

The desired minimum depth is set in the routing module settings. It is calculated in relation to level 0 of a tide of 120.



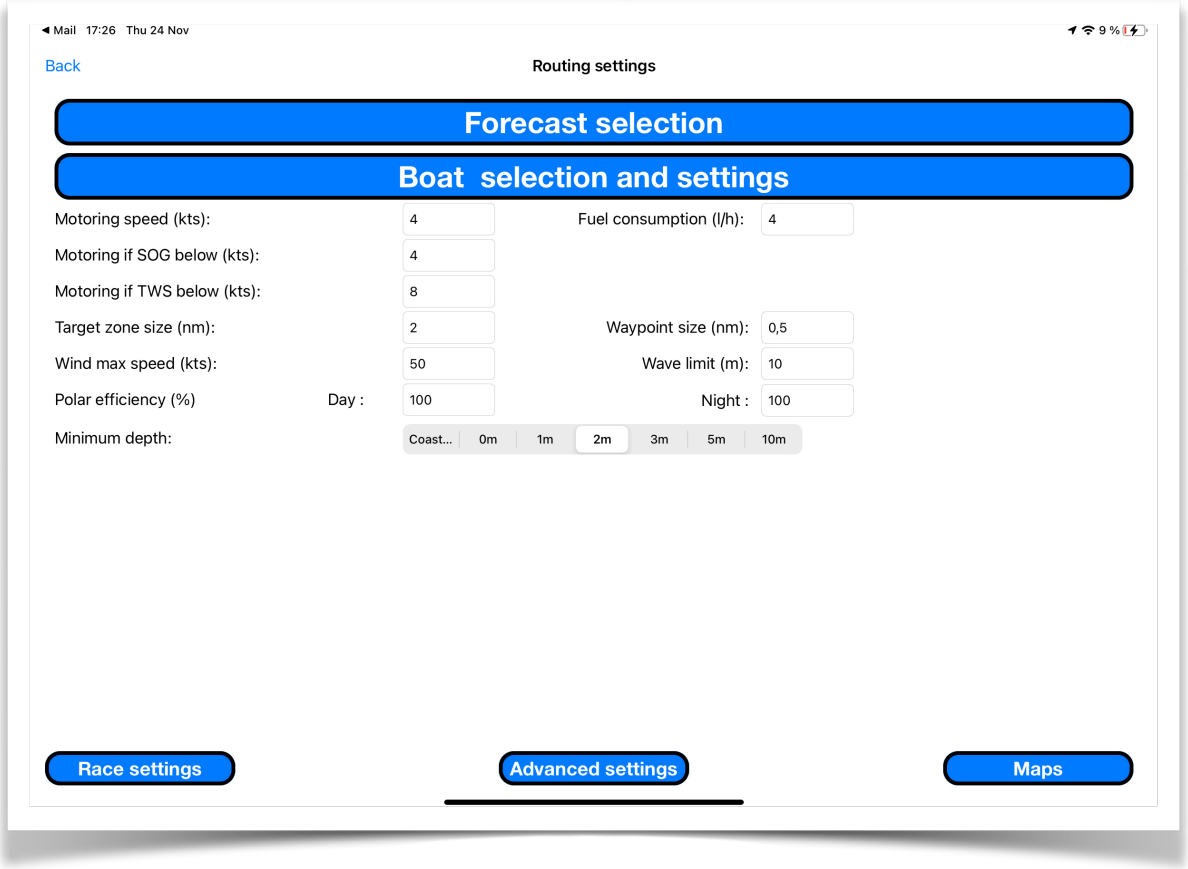
The bathymetric cartography is permanently stored on the tablet after an initial routing using it for a given area and depth. To reset this map, go to "reset" from the main screen and click on "reload routing maps."



8. Weather Sources

Refer to the "Weather" chapter

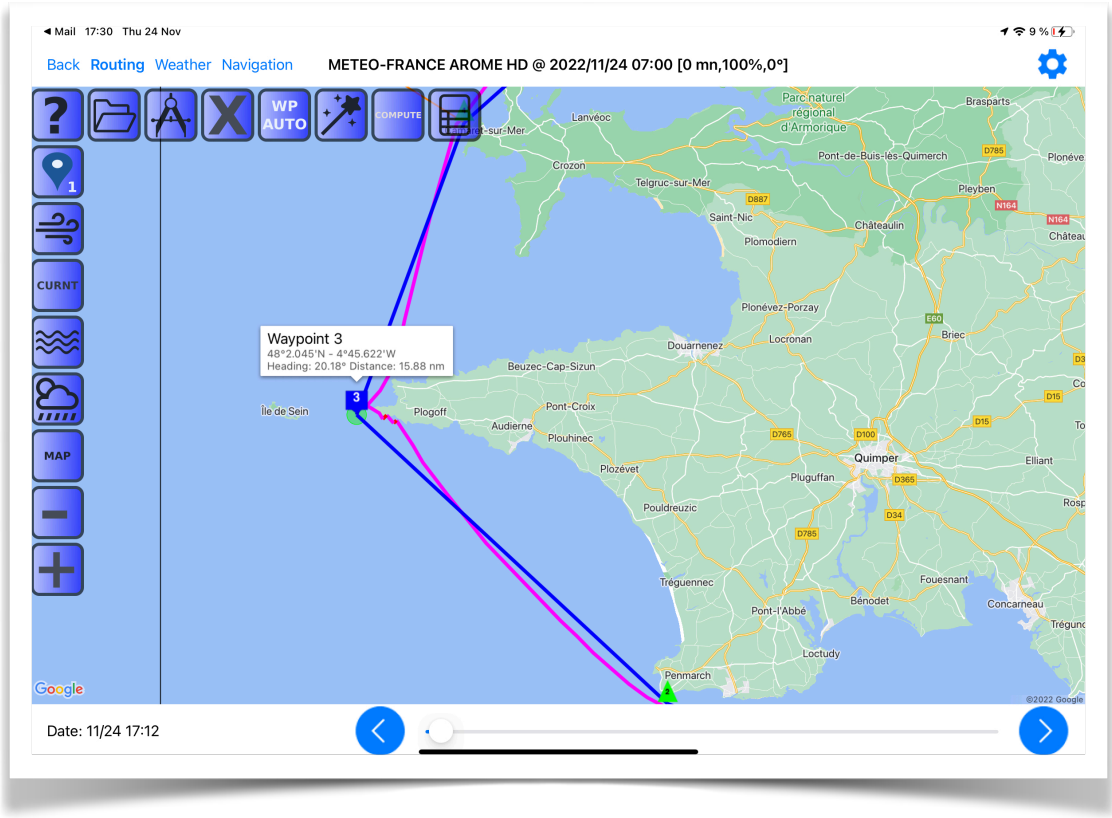
You can set them in the ROUTING or WEATHER module settings.



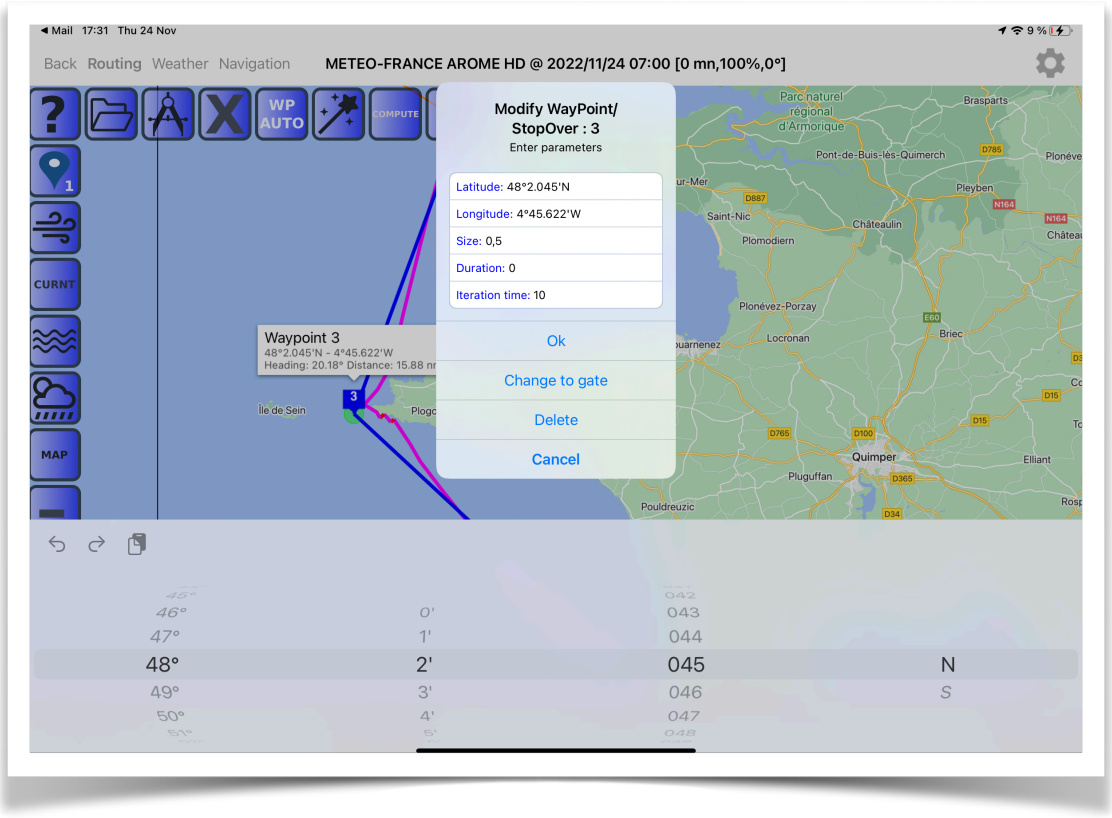
Avalon can also select them automatically in the calculation parameters just before starting the actual calculation of the route.

9. Waypoints and Stopovers

Short tap on the waypoint number to modify. the waypoint coordinates are displayed.



Then second short tap on the text of the waypoint to display the parameters.

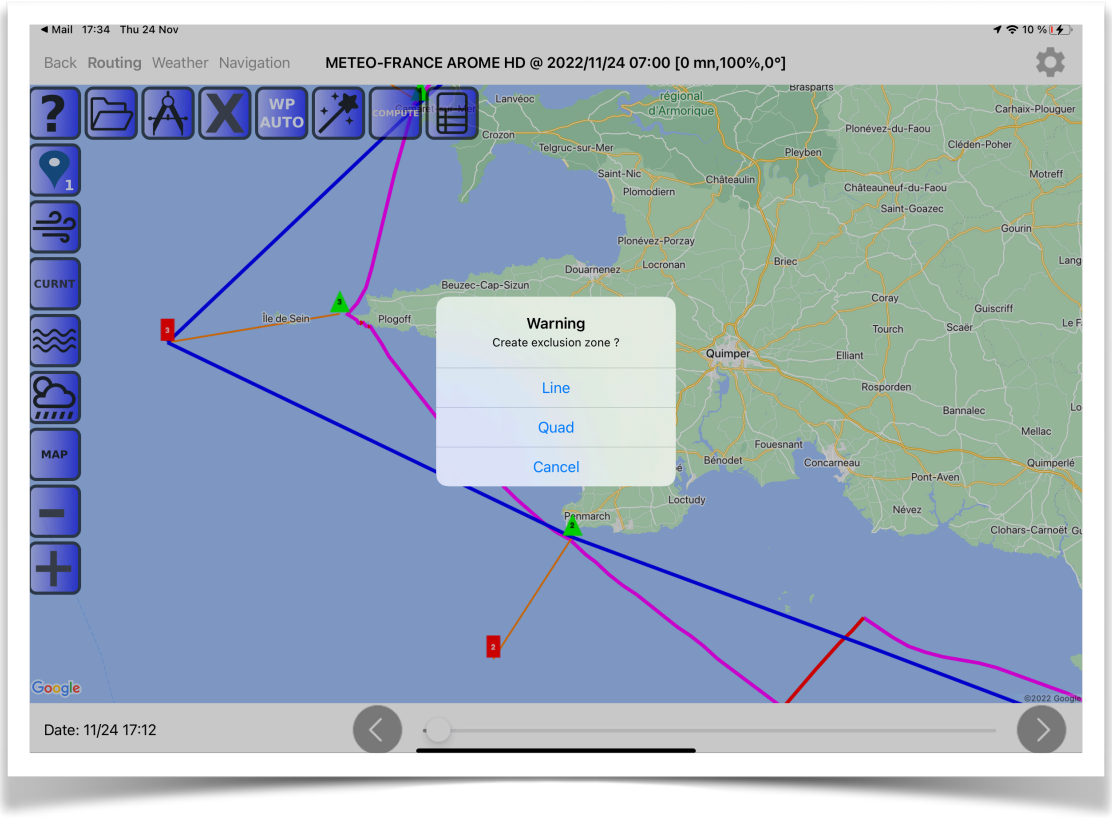


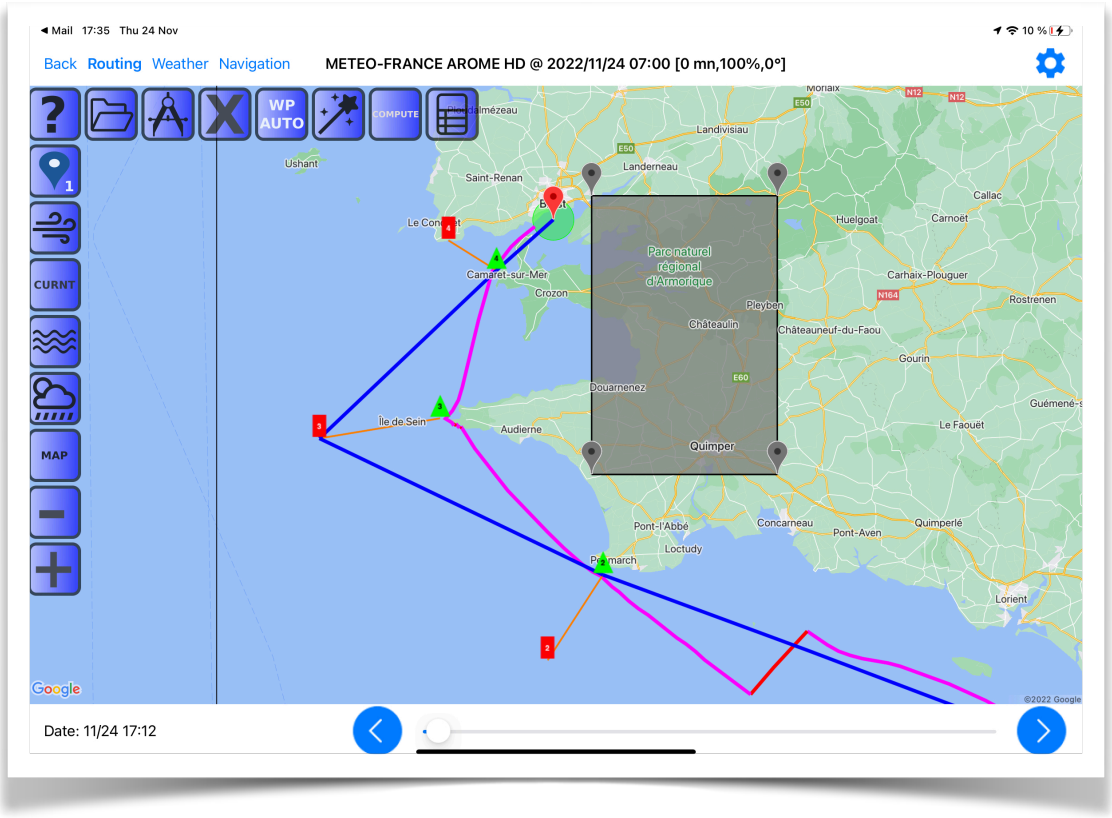
You can then adjust the waypoint parameters. You can choose the format between Degree, Decimal Minutes or Degrees, Minutes, Seconds in the application preferences (settings on the main screen).
Exact latitude and longitude
Waypoint area size in nautical miles
The duration of the stopover in hours. Leave at 0 if it is just a waypoint
The time between heading changes from this waypoint. This parameter can be very useful, for example, to leave the Gulf of Morbihan with tacks every minute and switch to course changes every 15 minutes once out of the gulf.
You can also transform a circle waypoint into a gate and vice versa

The system is the same with "gate" waypoints. You can access the data of the port door and the starboard door

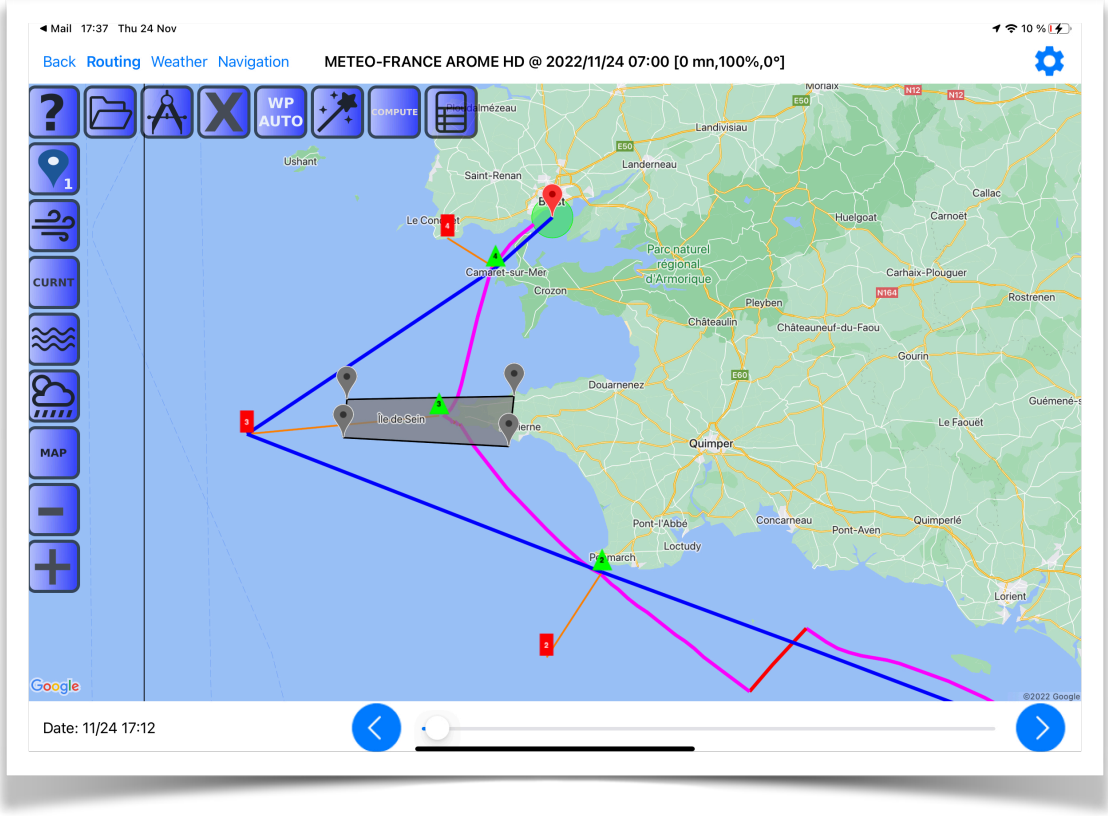
10. Navigation exclusion zones

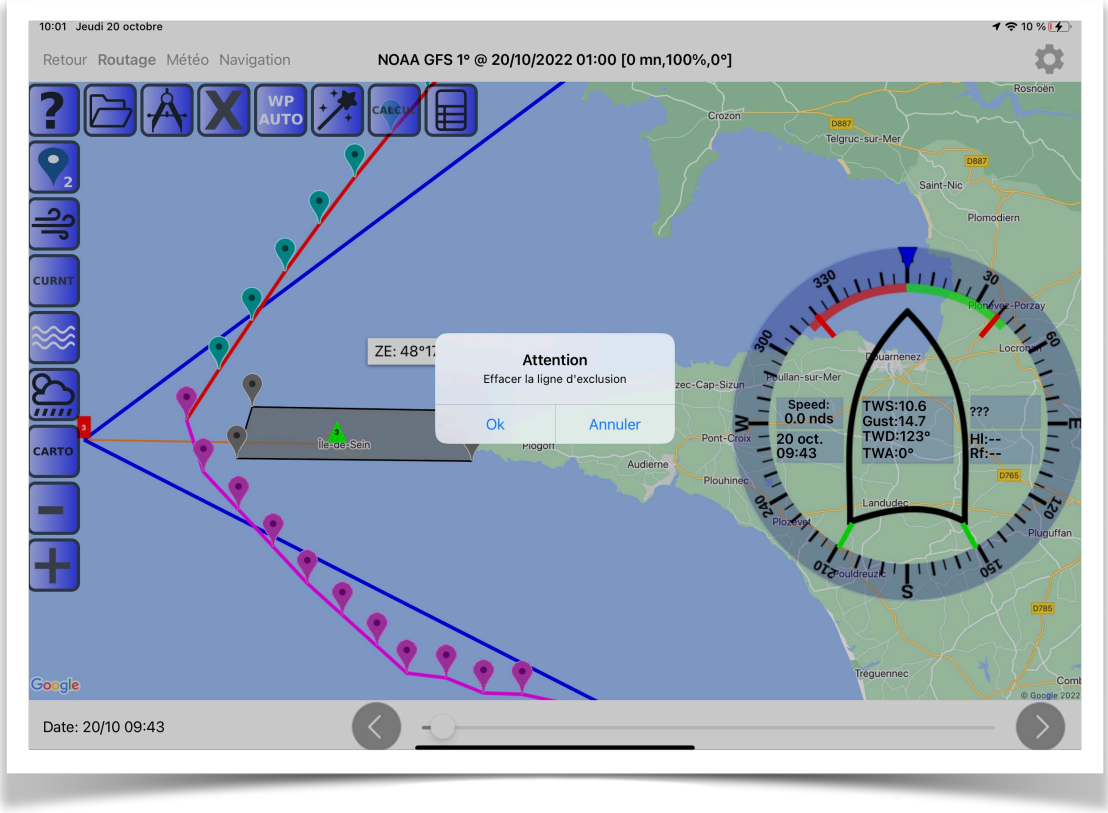
Tap on  to create an exclusion line or zone.





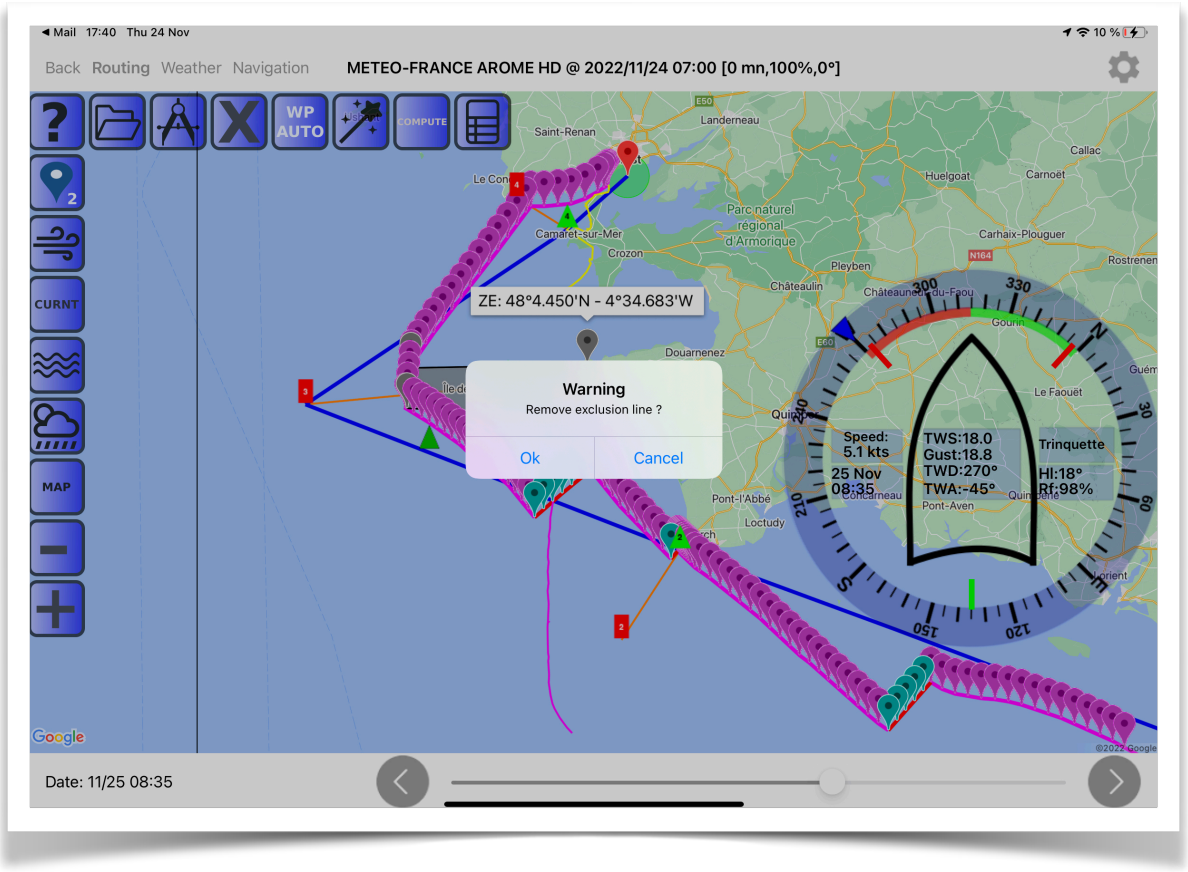
Move the points (4 for a quadrilateral, 2 for a line) so as to trace the zone to be excluded on a nautical chart. In our example, we want to pass off the Raz de Sein.





Future routings will avoid this area (or exclusion line). Areas are saved together with routes.

To erase an area, click on one of its points to display the coordinates, then click on these coordinates and confirm the erasure.



Notes:

- If you want to memorize exclusion zones, you can save them in a "template" route that you will recall and modify to create a new route. In a future release, Avalon Cloud will be used to store and synchronize exclusion zones.
- If we need a polygon with more than 4 sides, we can use several quadrilaterals.

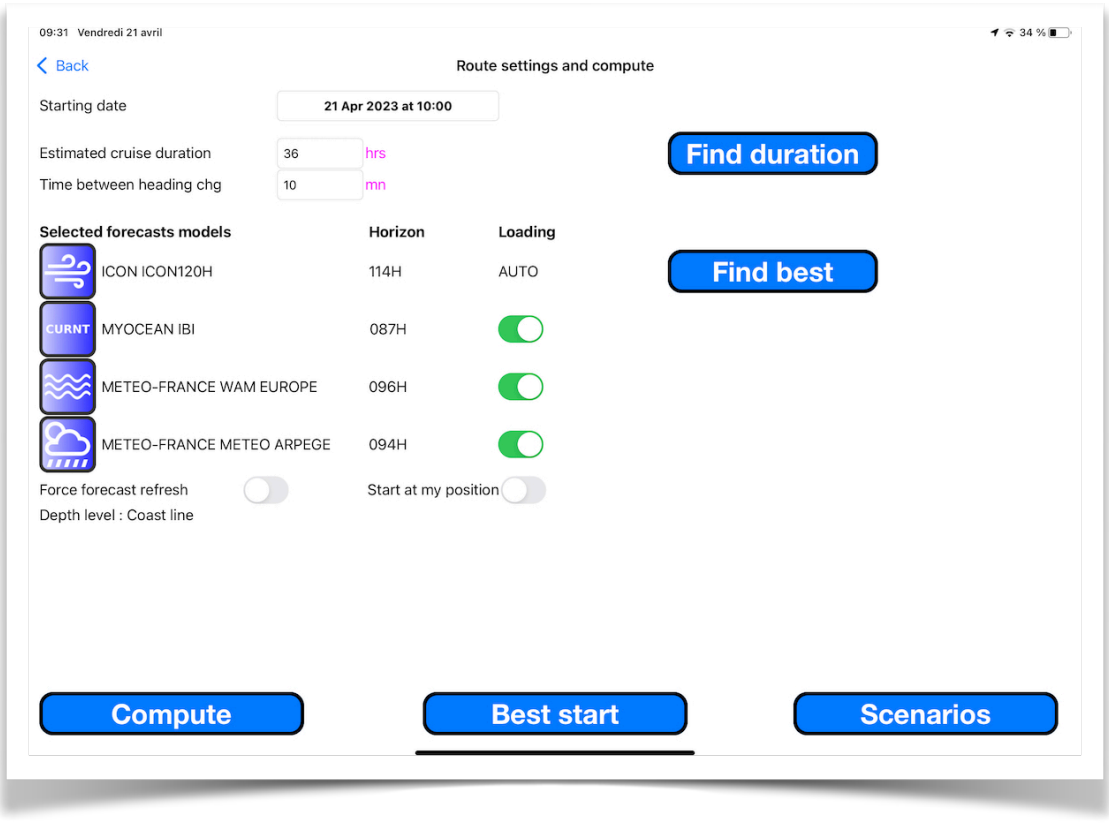
11. Display lighthouses and beacons

In France, it is possible to display lighthouses and beacons and their detailed information on all the maps available in Avalon. This facility will be extended to other countries where this information is public. If the "beacons" option is checked in the system's general preferences, the headlights and beacons will be displayed from a certain zoom level.

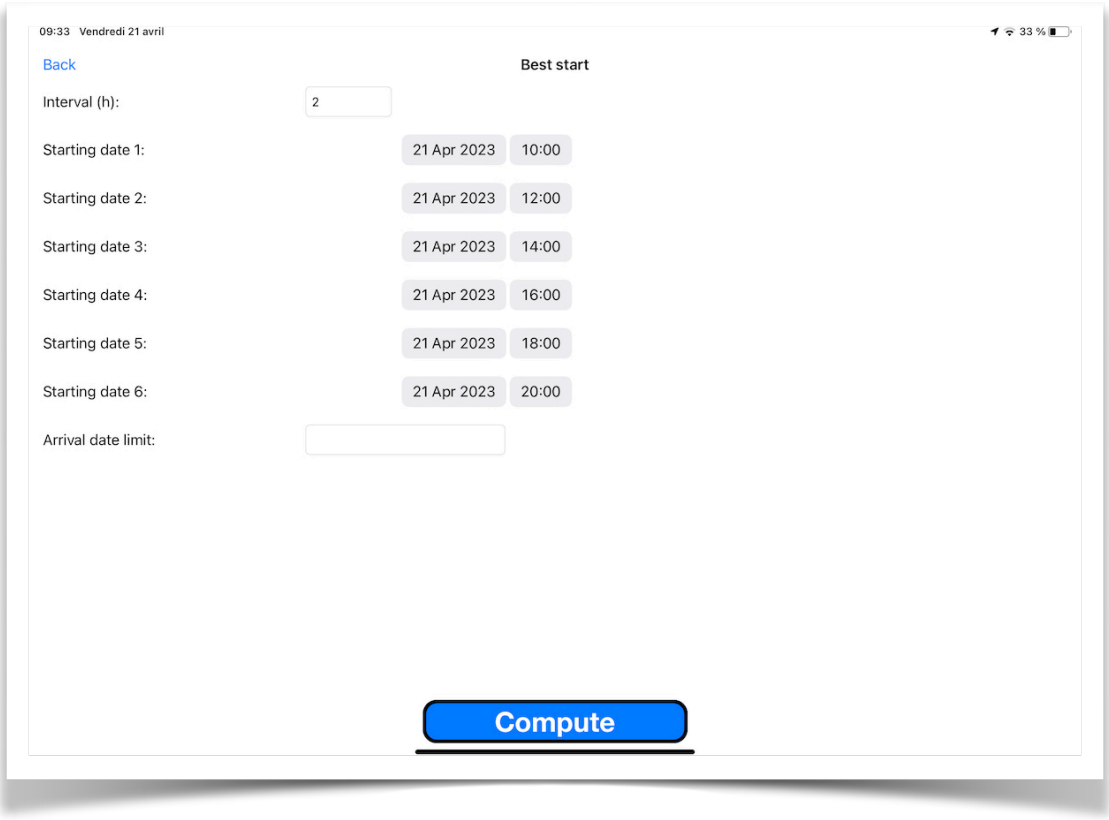
12. Best start calculation

In this example, we have defined a route between Saint Malo and Cherbourg and we want to calculate the best departure time given the strong tidal currents in this navigation area.

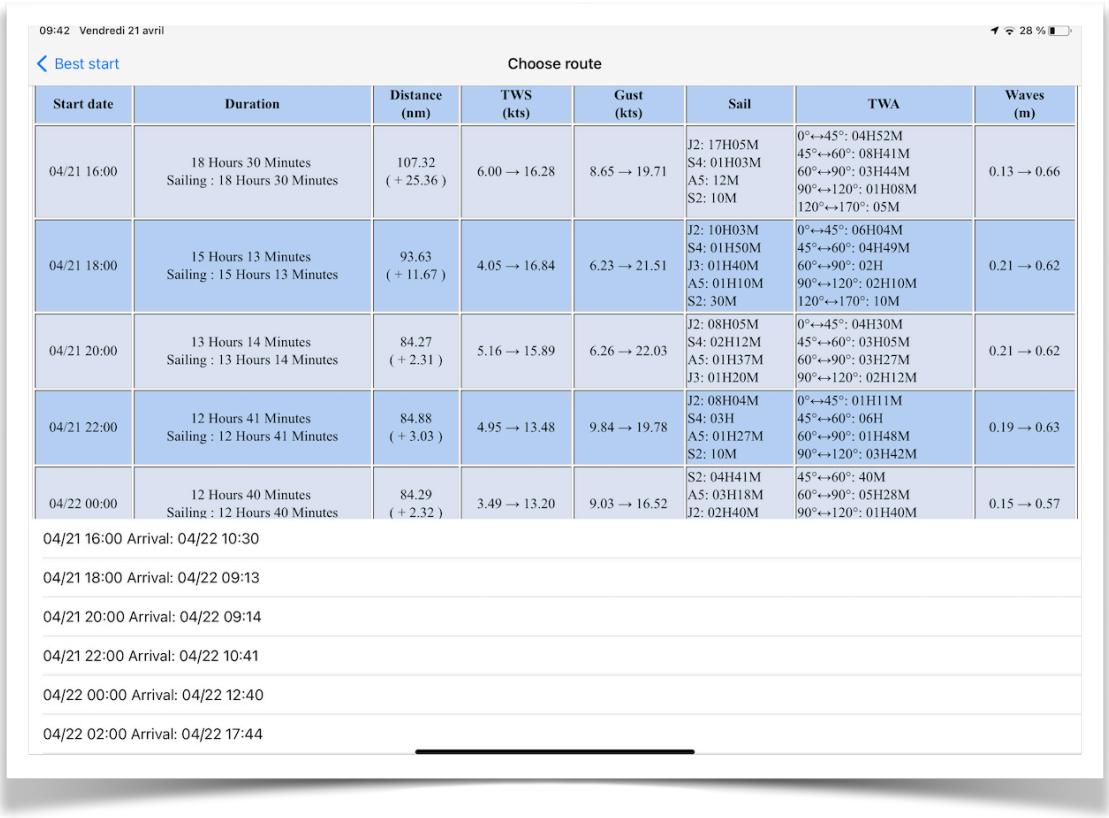
The calculation of the best start is accessed from the calculation parameters.
Attention: Weather models must have the necessary forecast horizon.



Click on « Best Start »

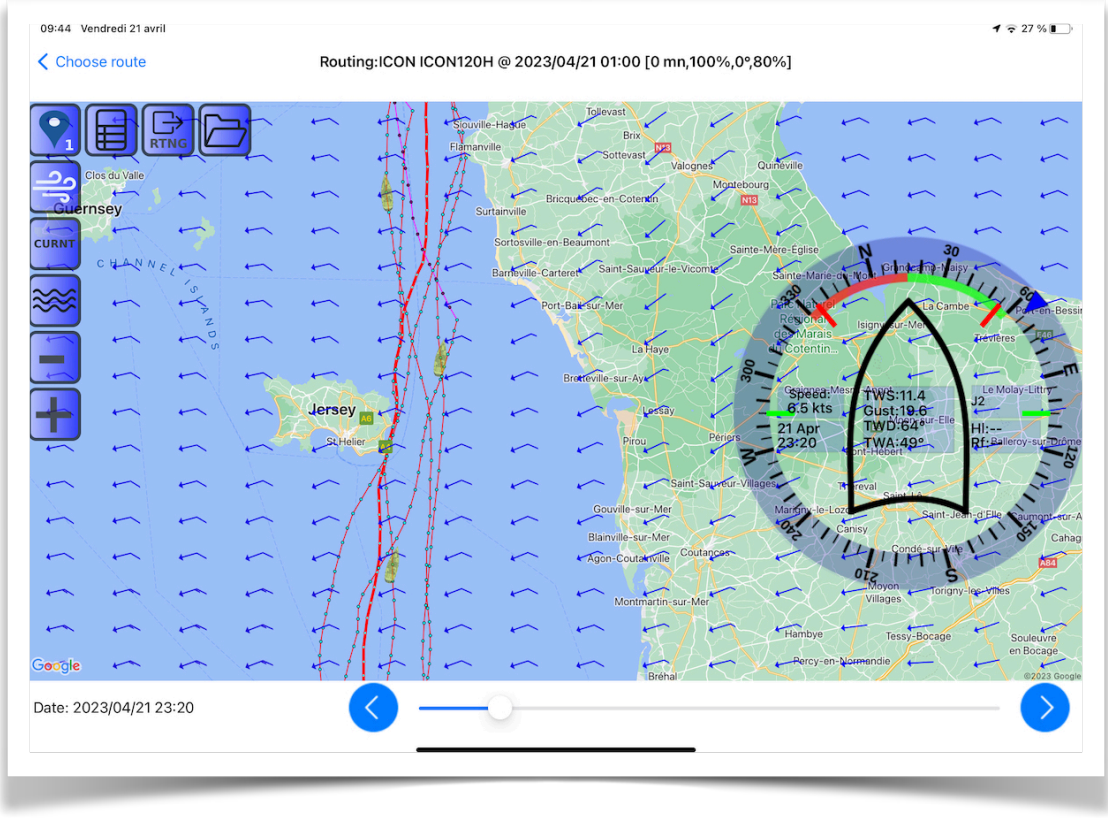


To compute routes for the 6 starting times, tap on Compute. A table summarizing the routes appears:

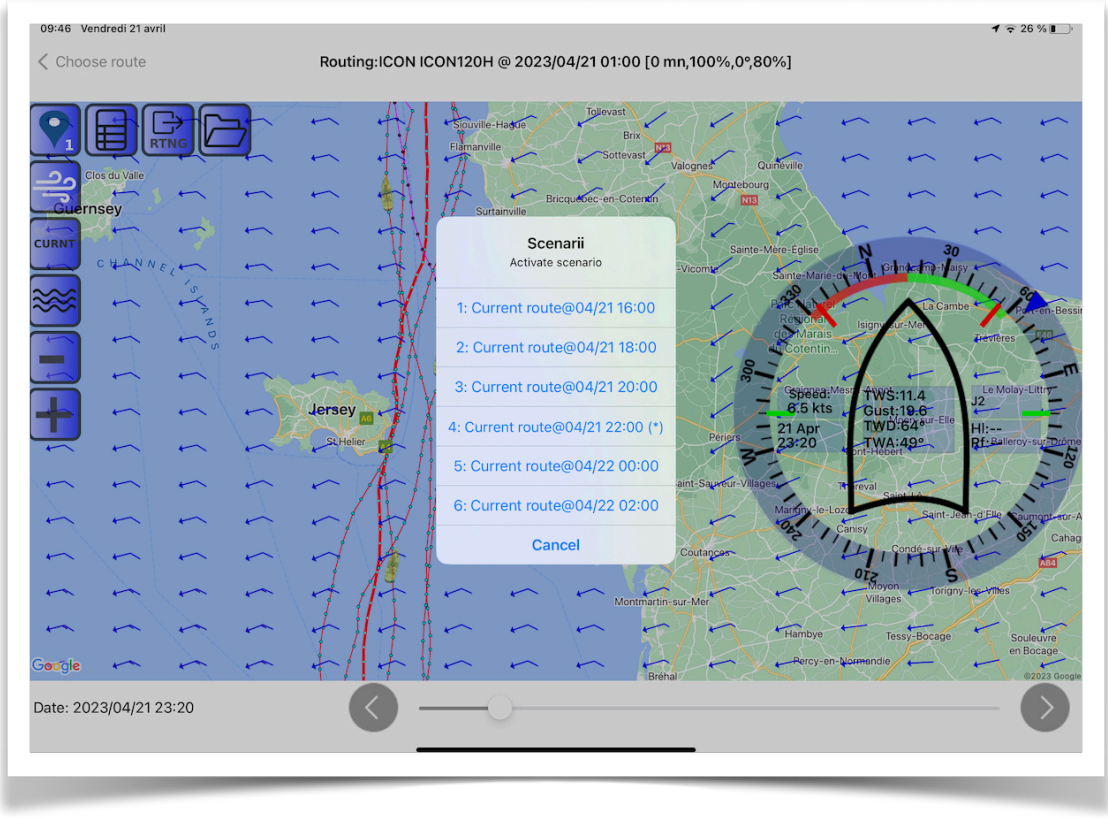


Start date	Duration	Distance (nm)	TWS (kts)	Gust (kts)	Sail	TWA	Waves (m)
04/21 16:00	18 Hours 30 Minutes Sailing : 18 Hours 30 Minutes	107.32 (+ 25.36)	6.00 → 16.28	8.65 → 19.71	J2: 17H05M S4: 01H03M A5: 12M S2: 10M	0°↔45°: 04H52M 45°↔60°: 08H41M 60°↔90°: 03H44M 90°↔120°: 01H08M 120°↔170°: 05M	0.13 → 0.66
04/21 18:00	15 Hours 13 Minutes Sailing : 15 Hours 13 Minutes	93.63 (+ 11.67)	4.05 → 16.84	6.23 → 21.51	J2: 10H03M S4: 01H50M J3: 01H40M A5: 01H10M S2: 30M	0°↔45°: 06H04M 45°↔60°: 04H49M 60°↔90°: 02H 90°↔120°: 02H10M 120°↔170°: 10M	0.21 → 0.62
04/21 20:00	13 Hours 14 Minutes Sailing : 13 Hours 14 Minutes	84.27 (+ 2.31)	5.16 → 15.89	6.26 → 22.03	J2: 08H05M S4: 02H12M A5: 01H37M J3: 01H20M	0°↔45°: 04H30M 45°↔60°: 03H05M 60°↔90°: 03H27M 90°↔120°: 02H12M	0.21 → 0.62
04/21 22:00	12 Hours 41 Minutes Sailing : 12 Hours 41 Minutes	84.88 (+ 3.03)	4.95 → 13.48	9.84 → 19.78	J2: 08H04M S4: 03H A5: 01H27M S2: 10M	0°↔45°: 01H11M 45°↔60°: 06H 60°↔90°: 01H48M 90°↔120°: 03H42M	0.19 → 0.63
04/22 00:00	12 Hours 40 Minutes Sailing : 12 Hours 40 Minutes	84.29 (+ 2.32)	3.49 → 13.20	9.03 → 16.52	S2: 04H41M A5: 03H18M J2: 02H40M	45°↔60°: 40M 60°↔90°: 05H28M 90°↔120°: 01H40M	0.15 → 0.57

Select the chosen departure by clicking on the list under the table. The route in bold appears as the main calculated route, the other routes also appear in transparency.

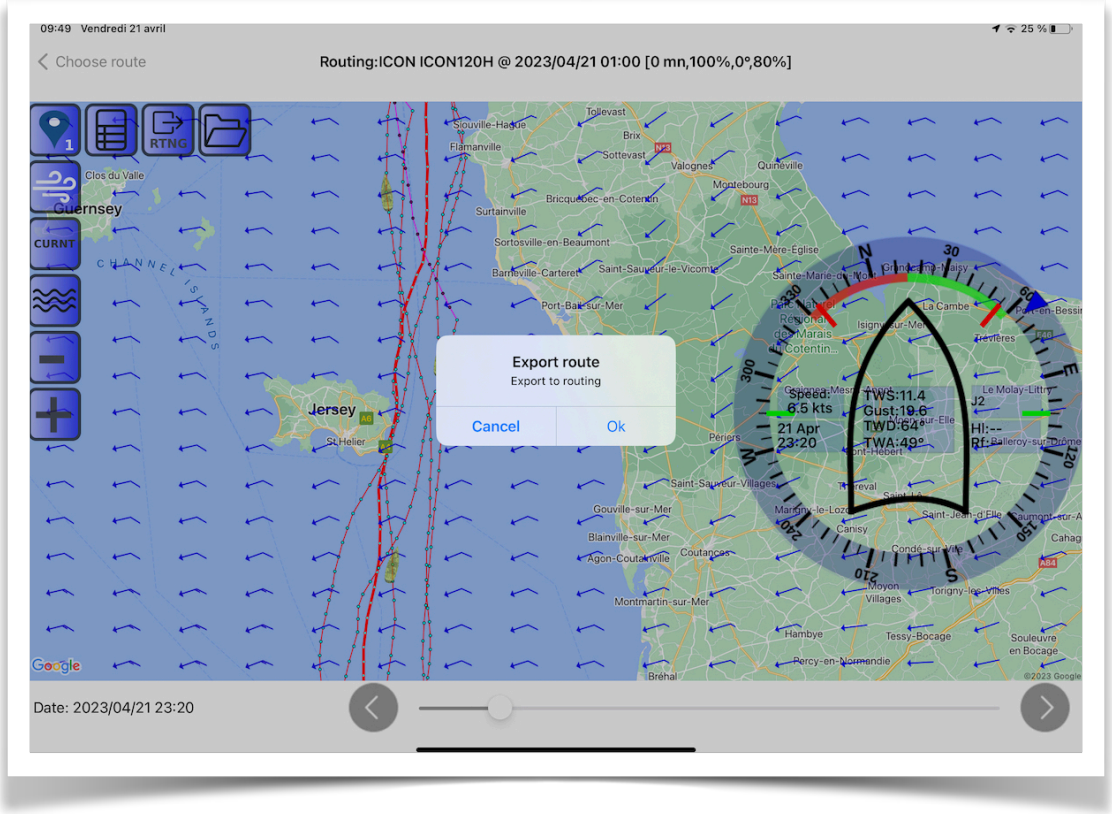


You can change the main route by clicking on the folder icon. The newly selected route is now in bold.



When you have chosen your departure time, export the chosen route to the routing by clicking on the "RTNG" icon.

Then you are in standard route calculation and have access to all details of the route, weather, sails, etc…



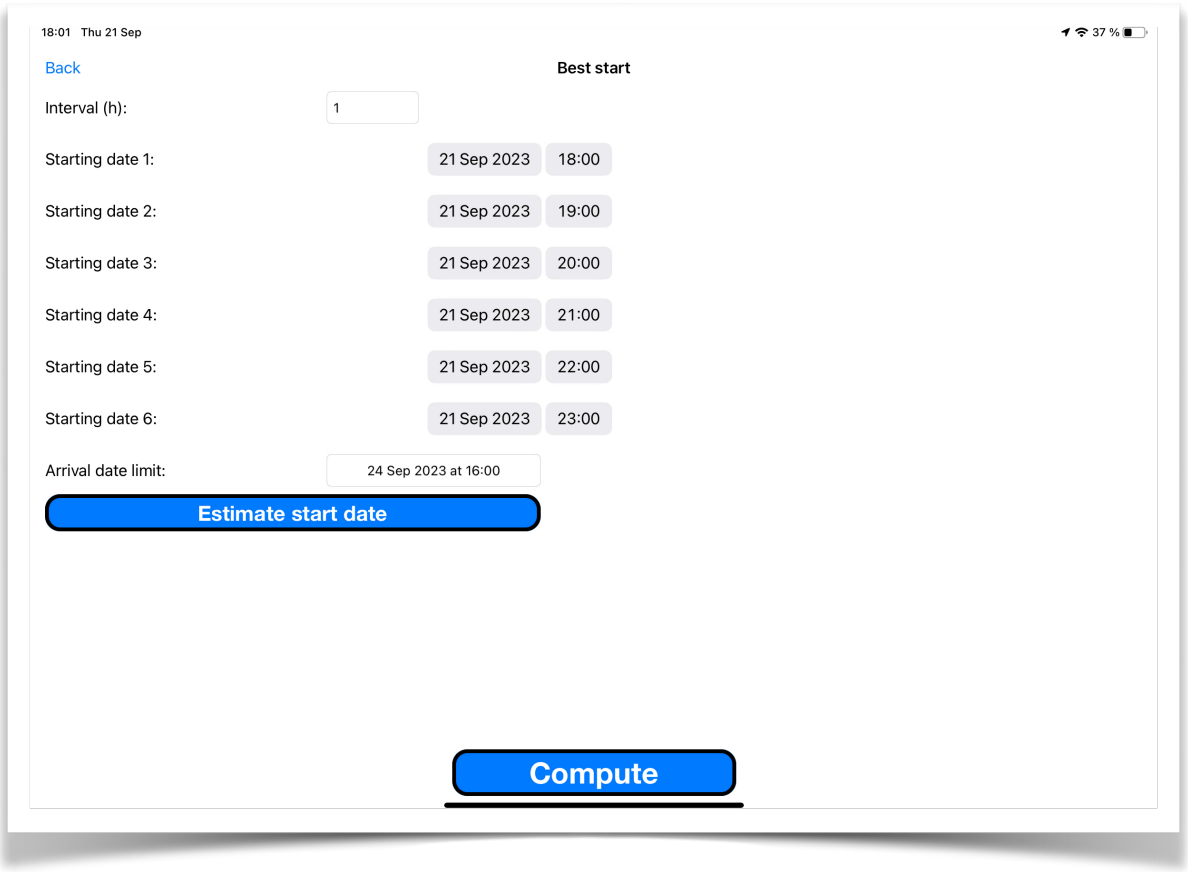
13. ETA Driven Route calculation

ETA = Estimated Time of Arrival

When you have to arrive at a certain time in a port because of a threshold or a lock or you want to arrive in a daytime anchorage, Avalon allows you to calculate the departure time which allows you to arrive at the desired time.

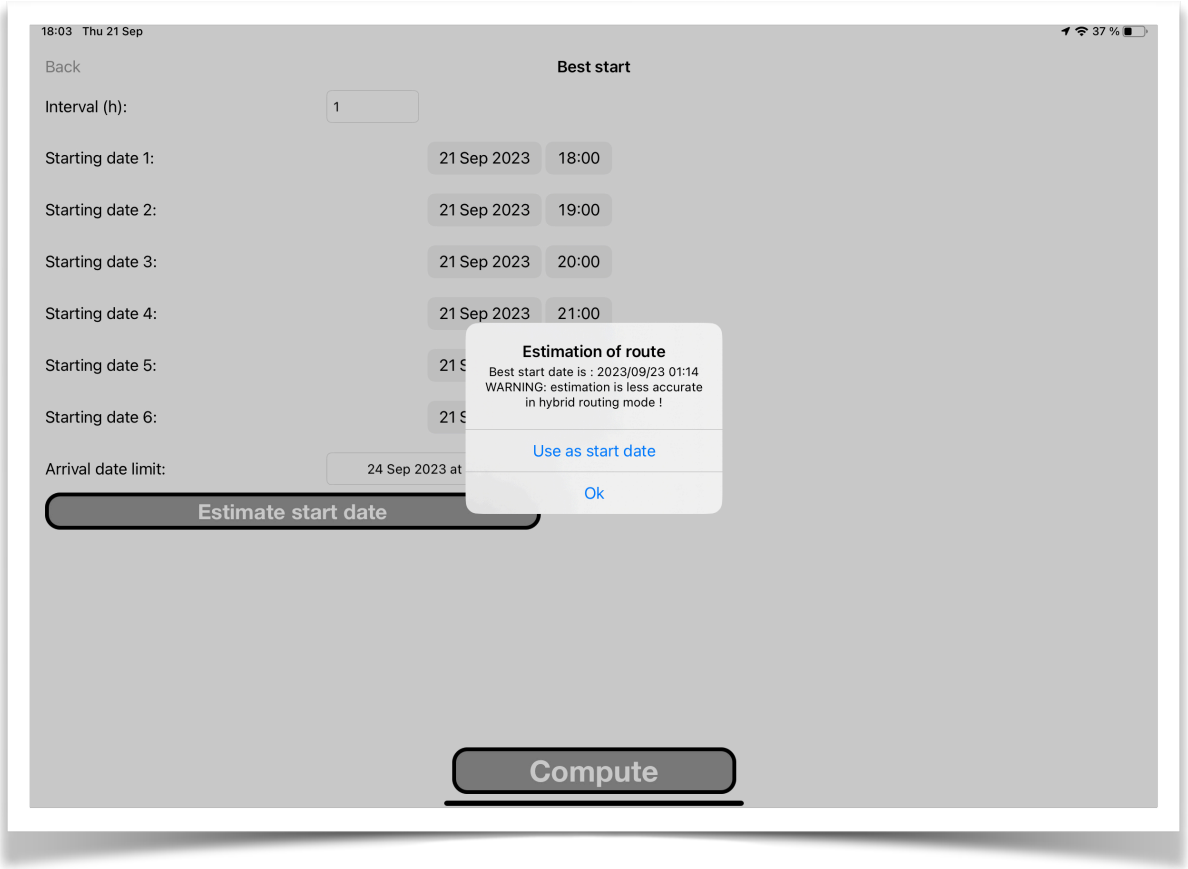
To do this, you must go to the “best departure” module (explained previously) and set an arrival time compatible with the boat’s capabilities.

Then set the desired arrival time and Avalon offers to estimate the departure time.



Tap sur « Estimer heure départ » pour lancer le calcul.

Avalon then tells you what time to leave. However, allow for a margin to take into account weather hazards.
You can then use this date as your departure time and calculate your route as usual.
A gap of around ten minutes is acceptable.



14. Alternative routes and multi-scenario analysis

This function being more complicated to use, it is included in the race option. Refer to the "Multi Scenario Route Analysis" video below:

Video V5 (à mettre à jour avec la V6)

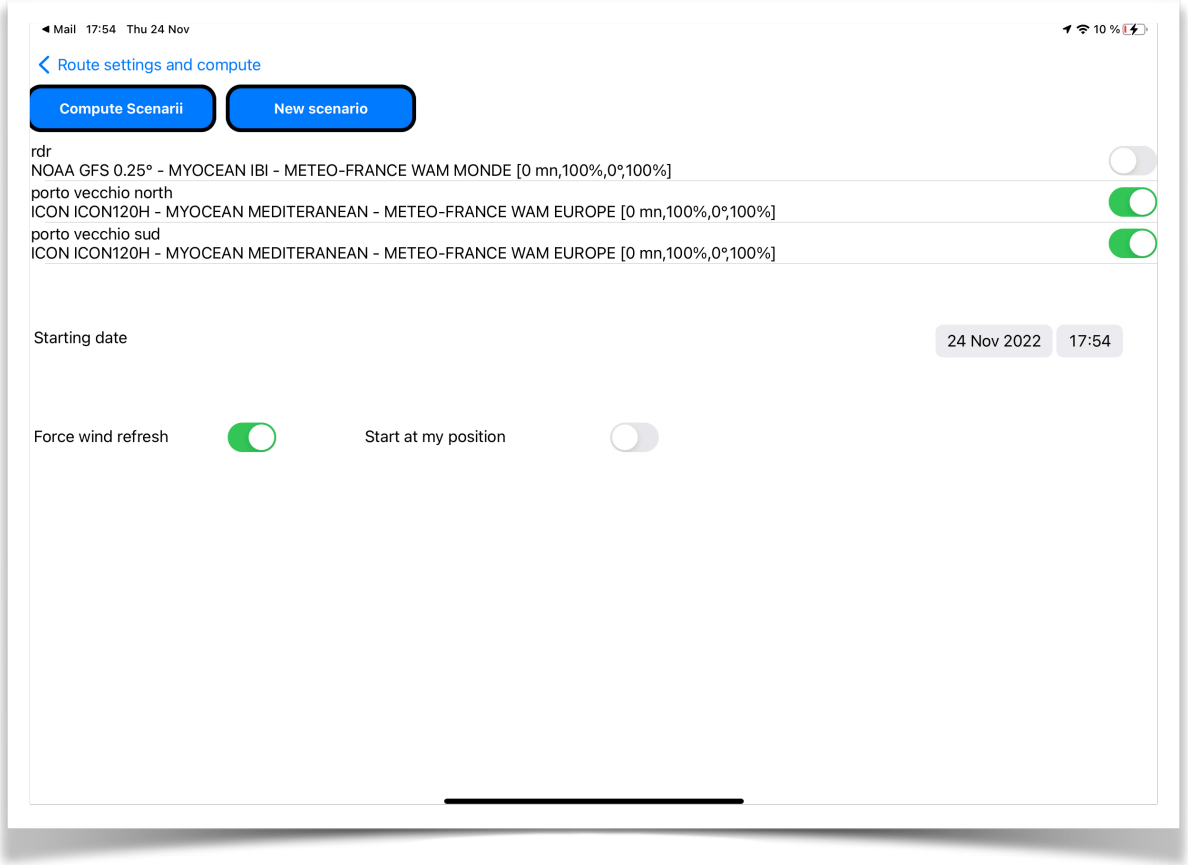
The multi-scenario analysis makes it very easy to compare:

- Several route options
- Several weather models on the same route to validate the stability of the weather
- Wind shift assumptions
- Boat and crew (sensitivity to VPP %)

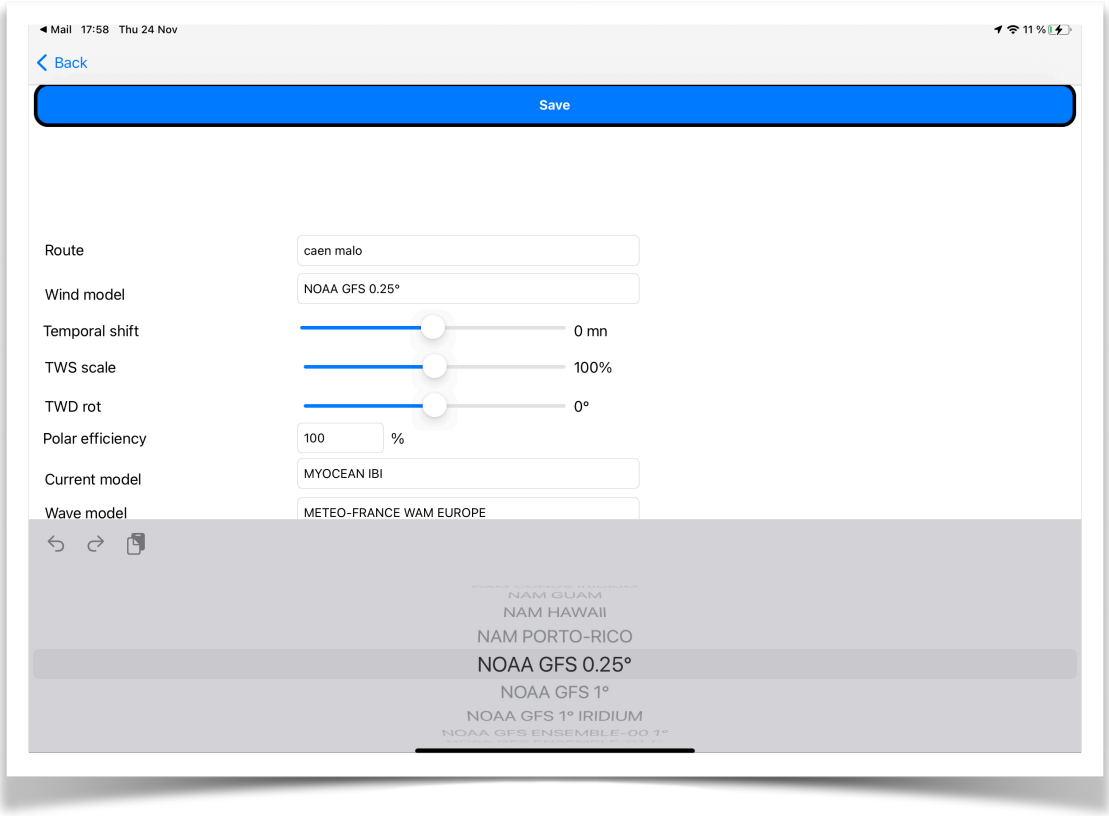
At the end of the calculation, a summary table of the scenarios tested makes it possible to choose the best route, display it on the map with the other scenarios and then transform it into routing and then into navigation.

Example: We want to compare a route from St Raphael to Porto Vecchio via Cap Corse or Bouches de Bonifacio

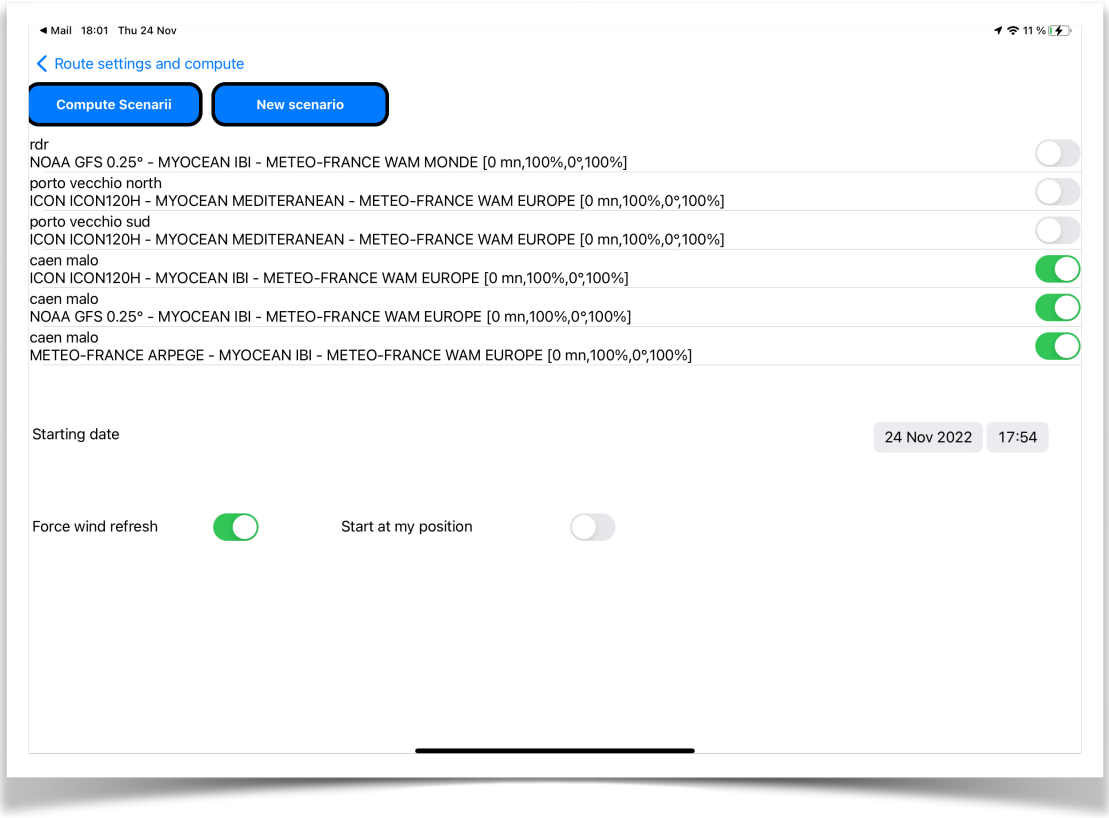
- Step 1: We create the route in the routing module. The shortest route is through the south. We add the necessary waypoints and save it
- Step 2: We erase the waypoints, we add a waypoint to the corse course to force the route by the north and we save it.
- We enter the routing calculation, then click on « Scenarios".
- We arrive on the list of previously created scenarios.



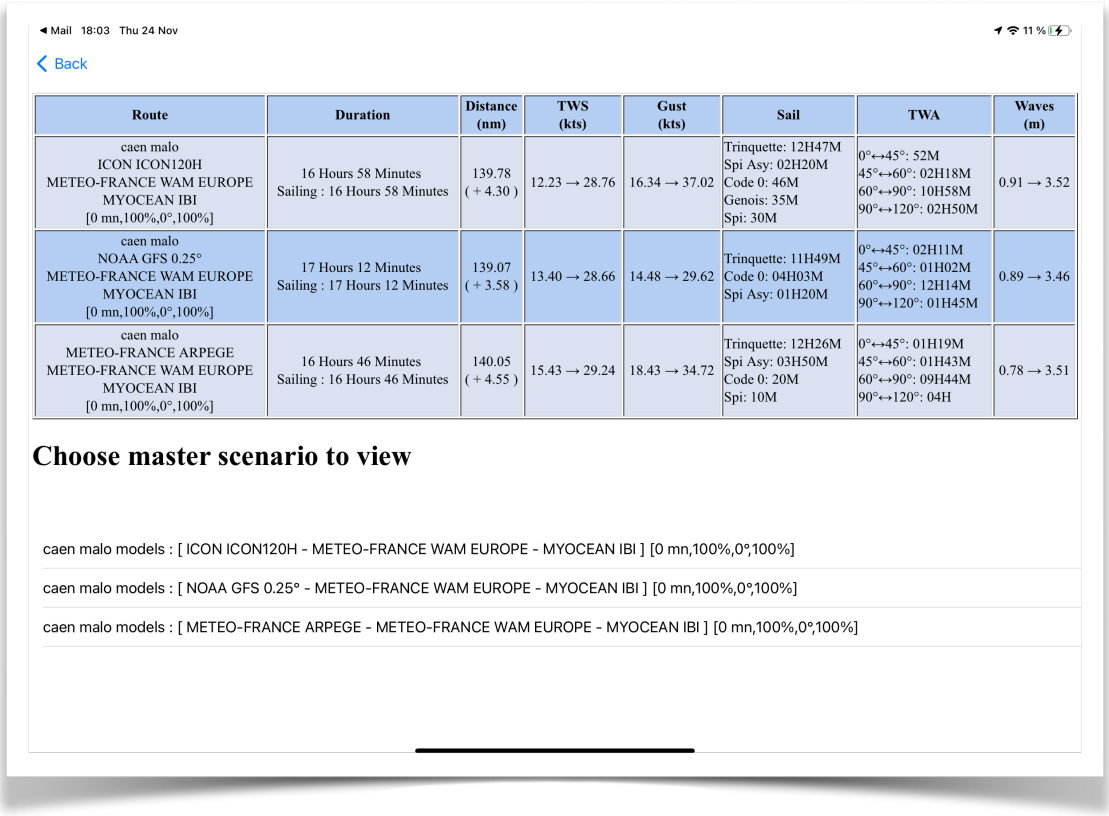
- To create a scenario, click on “new scenarios”
- Create the scenario, by choosing the route, the winds, currents, waves.
- Eventually you can vary the wind
- You can also vary polar efficiency to see if the route is sensitive to boat and crew efficiency



- Save, then create and save the other scenarios
- Then return to return to the table of available scenarios.



- Activate the scenarios you want to calculate, then click on “calculate scenarios” at the top of the screen.
- The summary table is then displayed, allowing easy comparison.



Route	Duration	Distance (nm)	TWS (kts)	Gust (kts)	Sail	TWA	Waves (m)
caen malo ICON ICON120H METEO-FRANCE WAM EUROPE MYOCEAN IBI [0 mn,100%,0°,100%]	16 Hours 58 Minutes Sailing : 16 Hours 58 Minutes	139.78 (+ 4.30)	12.23 → 28.76	16.34 → 37.02	Trinquette: 12H47M Spi Asy: 02H20M Code 0: 46M Genois: 35M Spi: 30M	0°↔45°: 52M 45°↔60°: 02H18M 60°↔90°: 10H58M 90°↔120°: 02H50M	0.91 → 3.52
caen malo NOAA GFS 0.25° METEO-FRANCE WAM EUROPE MYOCEAN IBI [0 mn,100%,0°,100%]	17 Hours 12 Minutes Sailing : 17 Hours 12 Minutes	139.07 (+ 3.58)	13.40 → 28.66	14.48 → 29.62	Trinquette: 11H49M Code 0: 04H03M Spi Asy: 01H20M	0°↔45°: 02H11M 45°↔60°: 01H02M 60°↔90°: 12H14M 90°↔120°: 01H45M	0.89 → 3.46
caen malo METEO-FRANCE ARPEGE METEO-FRANCE WAM EUROPE MYOCEAN IBI [0 mn,100%,0°,100%]	16 Hours 46 Minutes Sailing : 16 Hours 46 Minutes	140.05 (+ 4.55)	15.43 → 29.24	18.43 → 34.72	Trinquette: 12H26M Spi Asy: 03H50M Code 0: 20M Spi: 10M	0°↔45°: 01H19M 45°↔60°: 01H43M 60°↔90°: 09H44M 90°↔120°: 04H	0.78 → 3.51

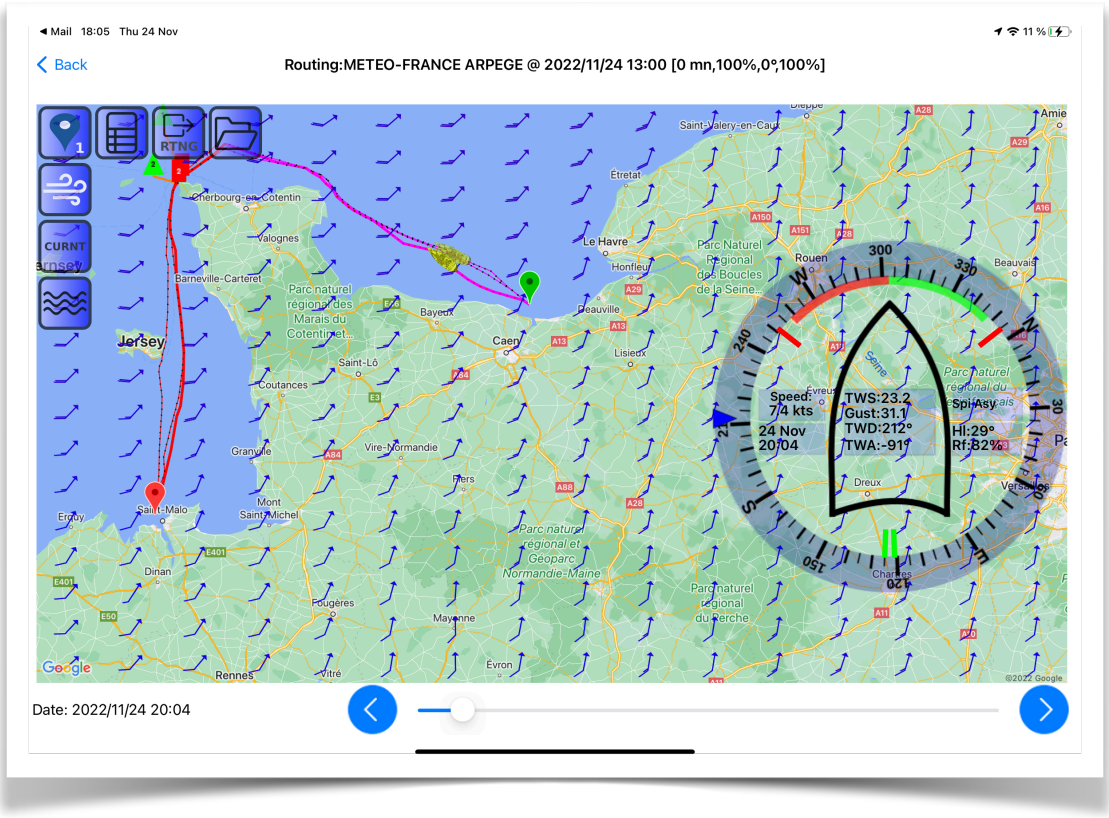
Choose master scenario to view

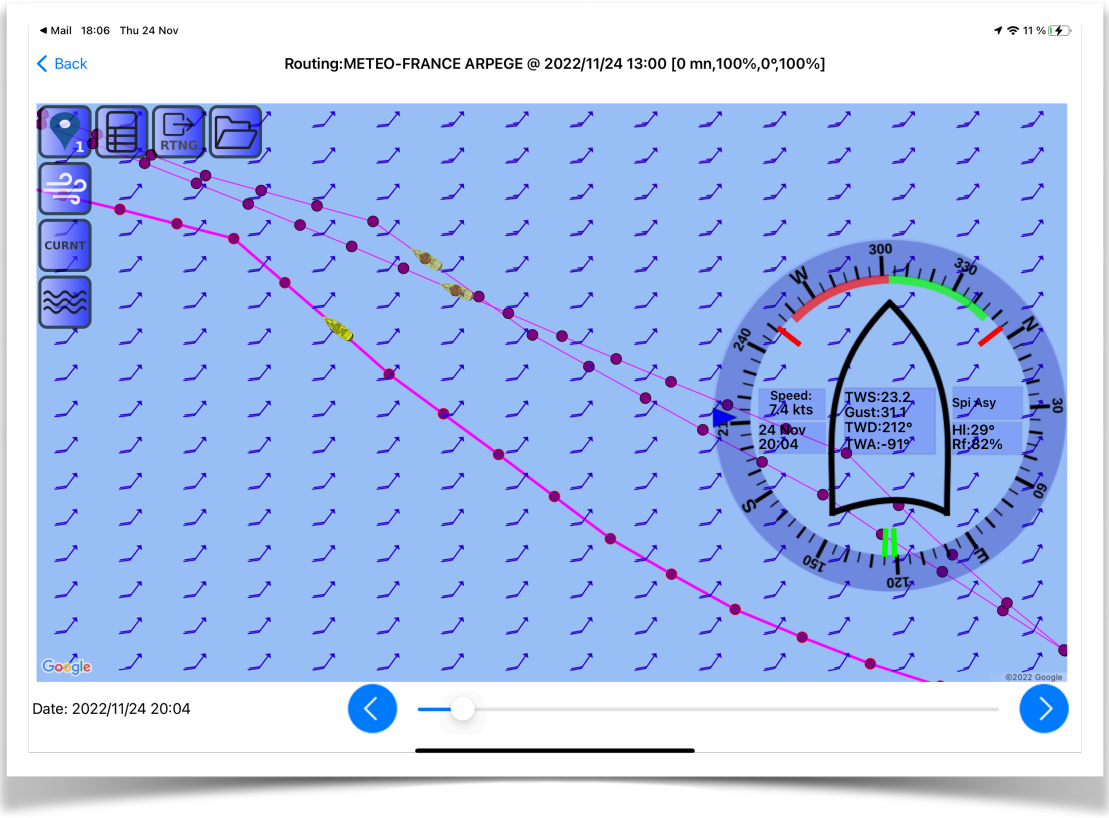
caen malo models : [ICON ICON120H - METEO-FRANCE WAM EUROPE - MYOCEAN IBI] [0 mn,100%,0°,100%]

caen malo models : [NOAA GFS 0.25° - METEO-FRANCE WAM EUROPE - MYOCEAN IBI] [0 mn,100%,0°,100%]

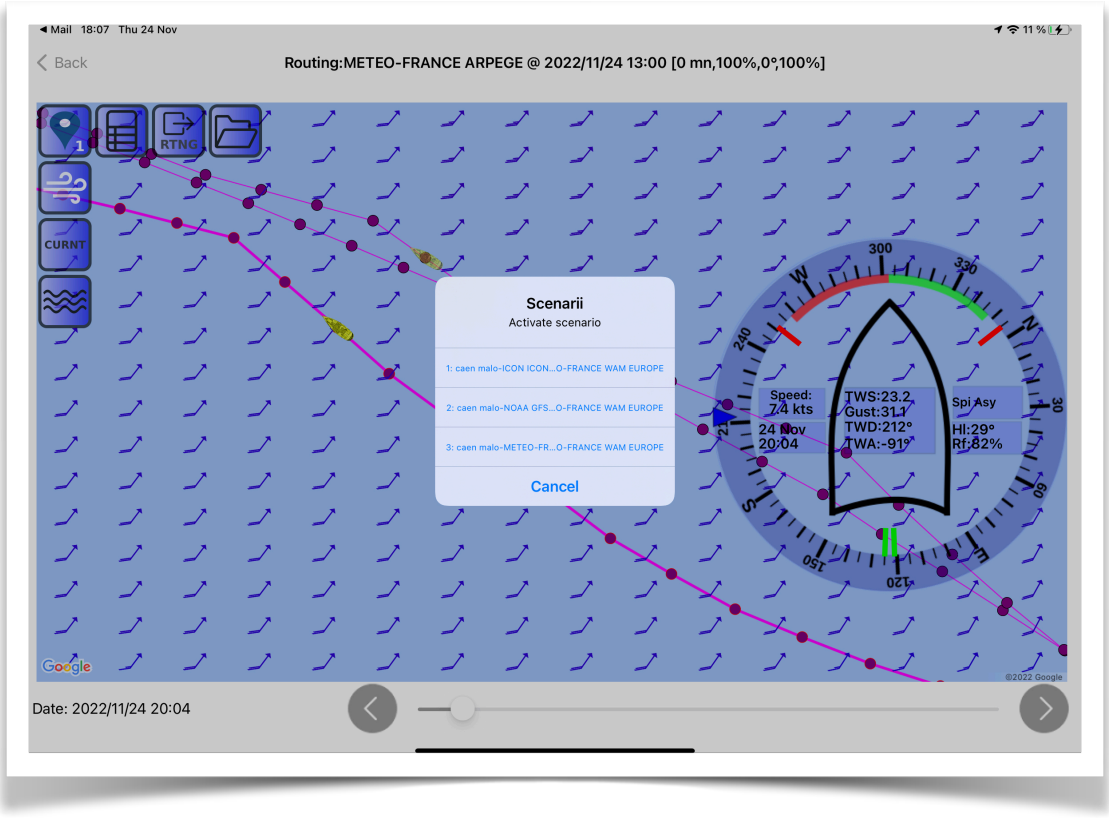
caen malo models : [METEO-FRANCE ARPEGE - METEO-FRANCE WAM EUROPE - MYOCEAN IBI] [0 mn,100%,0°,100%]

- To view the routes, click on the route you prefer. The other roads are also displayed in finer lines.
- You can visualize the position of the boats on the different routes simultaneously. By clicking on "back", you can change the master scenario

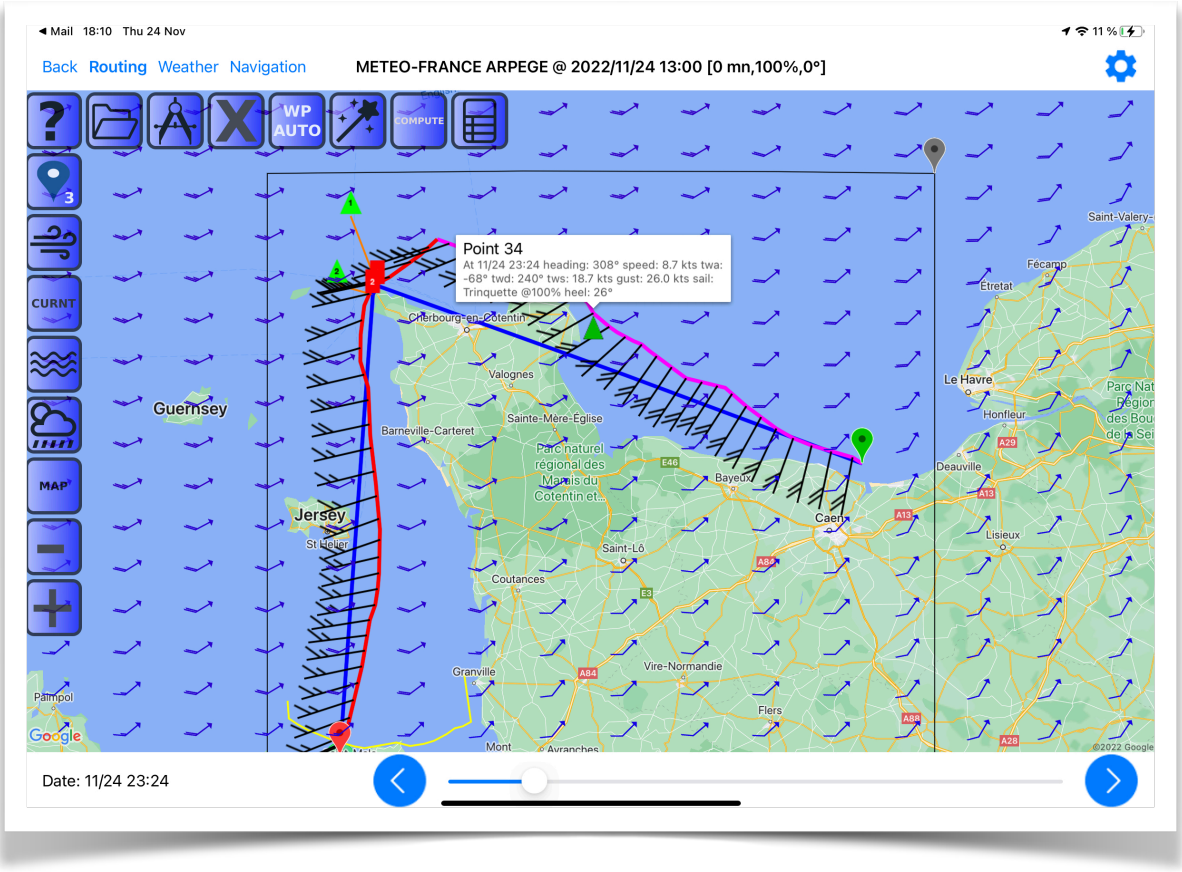


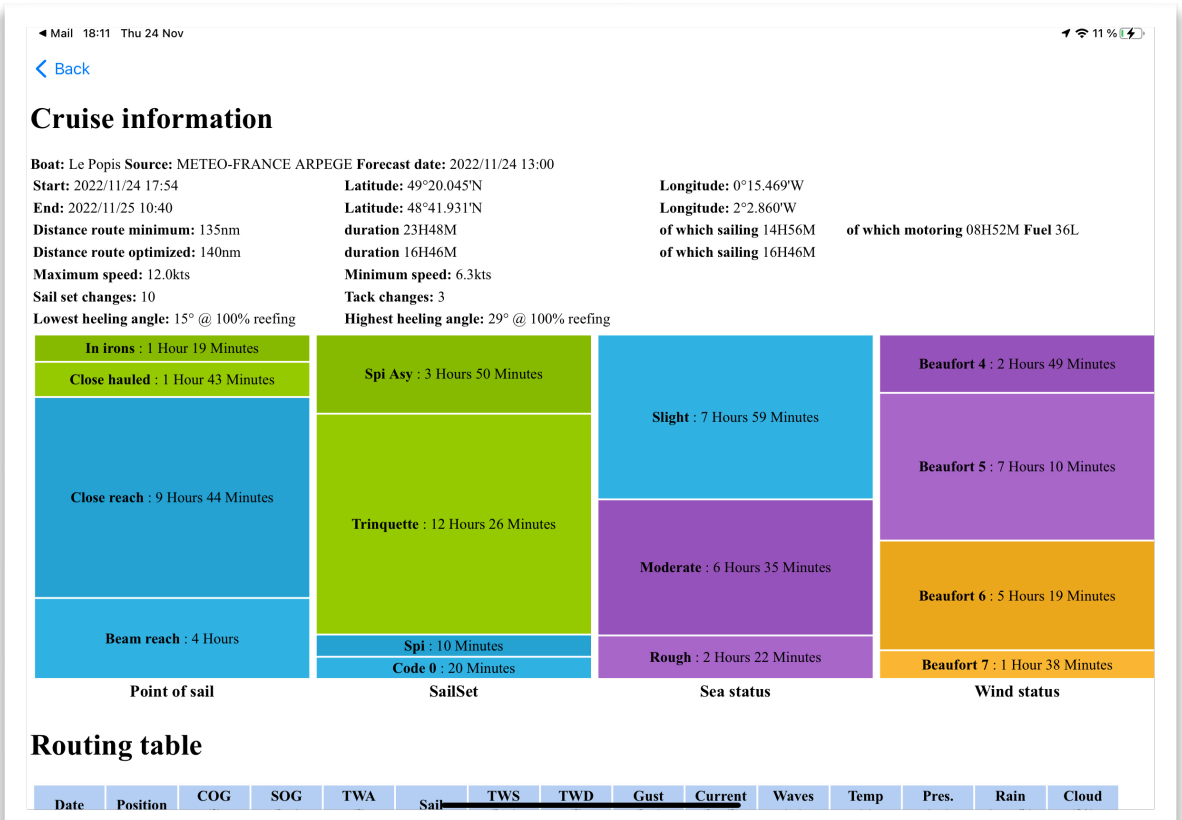


- You can also change the main scenario by clicking on the folder icon.



- Once the scenario is chosen, just click on the « export to RTNG" icon to transform the scenario into a route and have access to detailed route information: weather, route table, etc.





15. Use pre-saved waypoints

It is possible to create as many waypoints as you wish to memorize frequent waypoints (or regatta buoys) in your navigation area. This is done by placing POIs in the Navigation menu.

An explanatory video is available below:

Video V5 (à mettre à jour avec la V6)

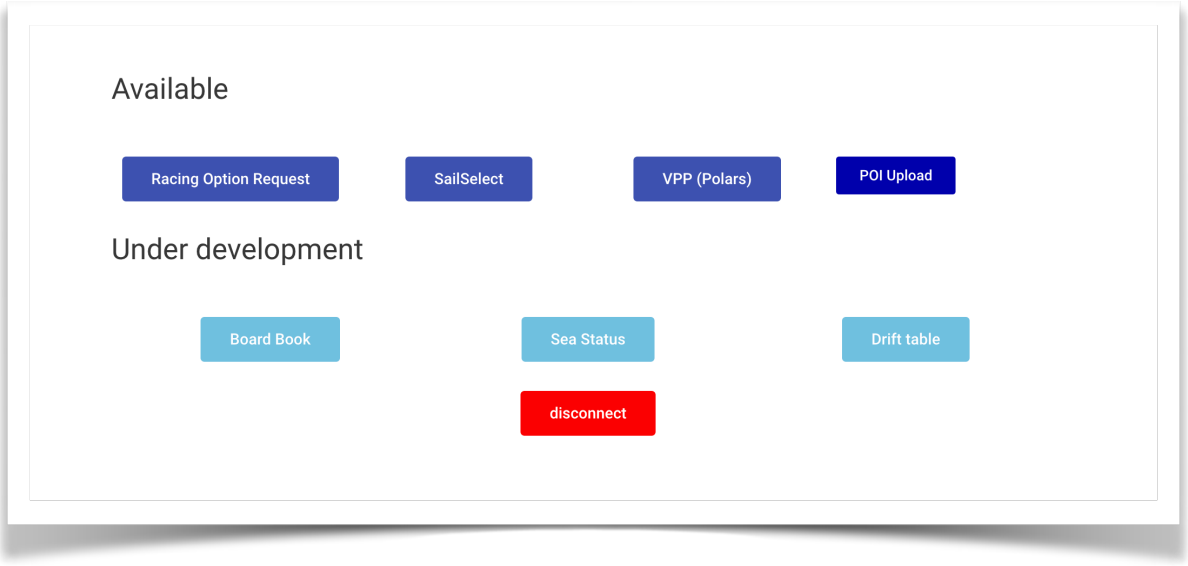
For example, a POI is placed between the Giraglia and Cape of Corsica.

When defining the route, all you have to do is create a waypoint and bring it closer to the POI. It will be magnetized by the POI and your waypoint will position itself very easily and exactly on the coordinates of the POI.
This is very useful in regattas for example to pre-define all the "possible" buoys for the course and allows the route to be defined and calculated very quickly and very easily in a few minutes before the start.
We added this feature to Avalon at the demand of a racer of « Les Voiles de St Tropez » where the buoys are defined by the committee at the last moment among 15 buoys. Having all of them pre-positioned reduces the stress of the crew.
Those POIs can be entered in batch via Avalon Cloud and shared with friends or members of your yacht club.

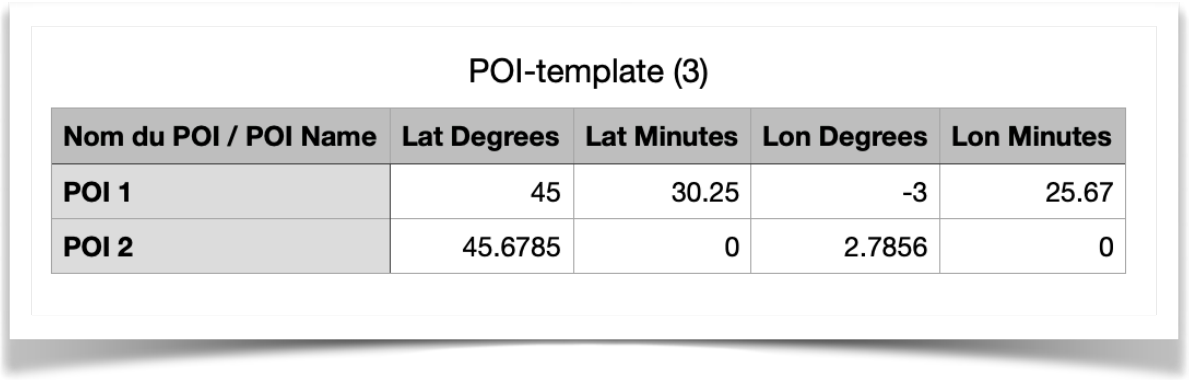
16. Enter POIs/Waypoints in batch

Video V5 (à mettre à jour avec la V6)

From your Avalon Cloud space on the web, you can add POIs (points of interest) in batch. It's easier than entering them one by one and you can share them with your yacht club members and friends.



Click on "Add your POIs"
Download the input template.



POI-template (3)

Nom du POI / POI Name	Lat Degrees	Lat Minutes	Lon Degrees	Lon Minutes
POI 1	45	30.25	-3	25.67
POI 2	45.6785	0	2.7856	0

Enter all your POIs: name, latitude and longitude (1 line per POI).
Upload the completed file to your web space in csv format.

Then simply sync Avalon Offshore with Avalon Cloud to see your POIs in Avalon, and then use them as course/cruise markers.

17. Satellite weather data reception

a. Iridium Go

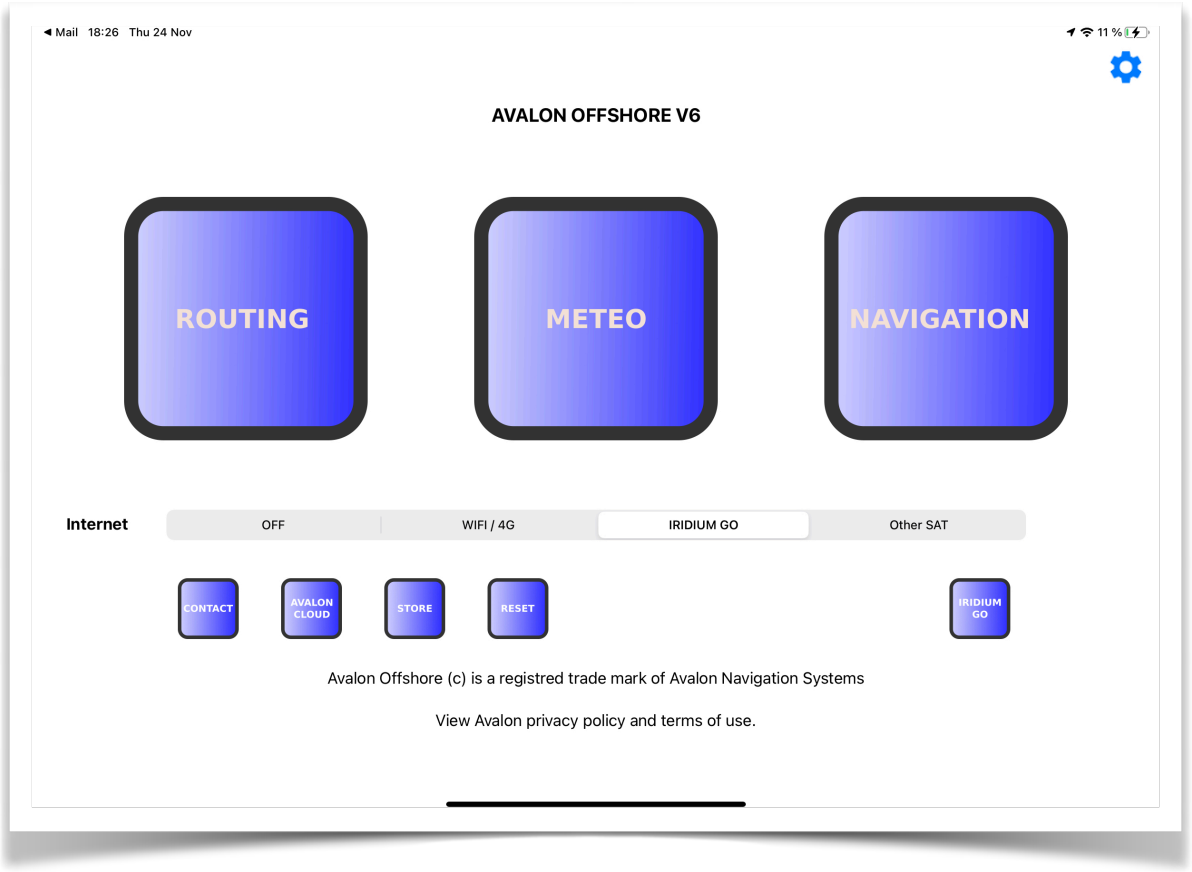
Video V5 (à mettre à jour avec la V6)

From version 5.5, we have completely automated the connection procedure between Avalon Offshore and an Iridium Go to be able to download winds as simply as with a WiFi or 3/4G connection.

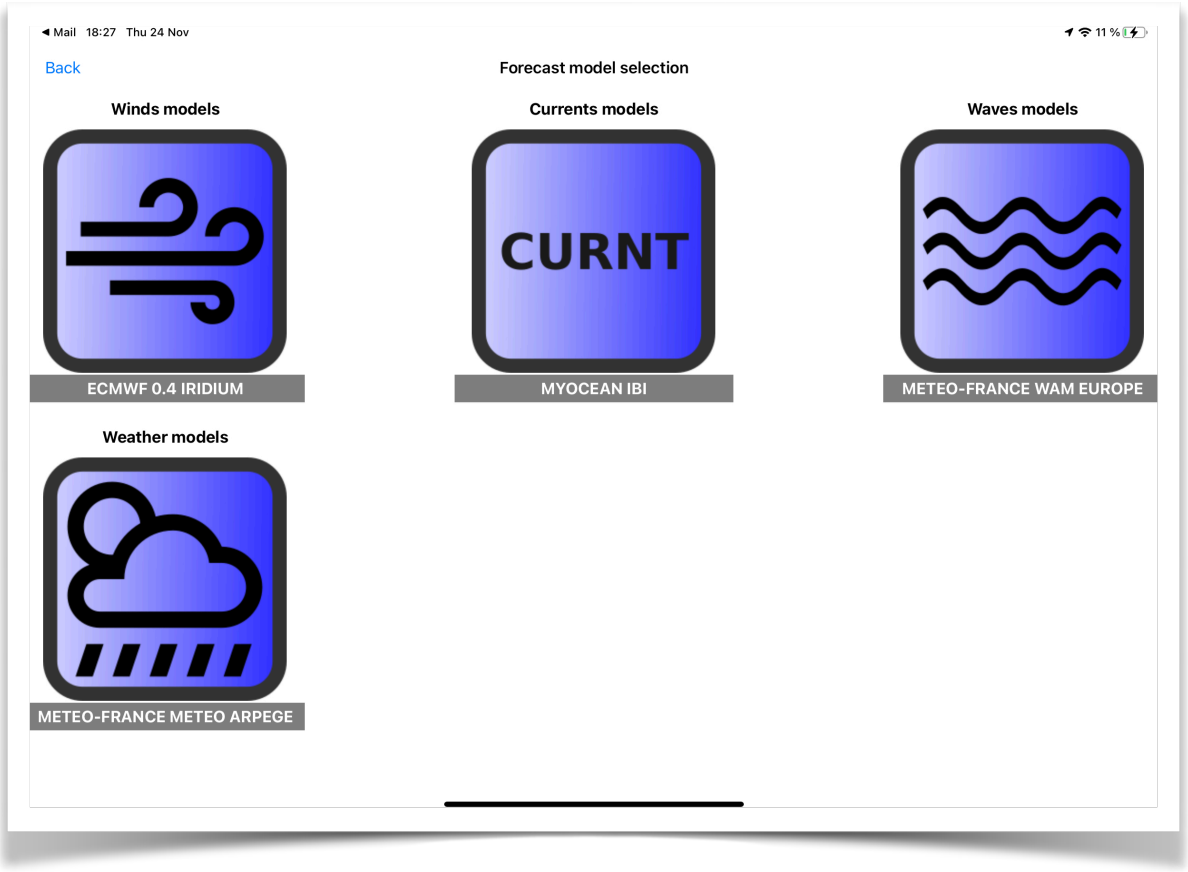
This procedure works on Apple iOS and Android.

At sea, choose the “Iridium” connection mode on the main menu. If this option is left on “Wifi/ 4G”, Avalon will attempt to connect to the Internet when the Iridium connection is not yet activated, and will therefore not be able to load certain pages, including the weather source page.
If the “Iridium” option is enabled, Avalon will display cached loaded weather source pages in the app.

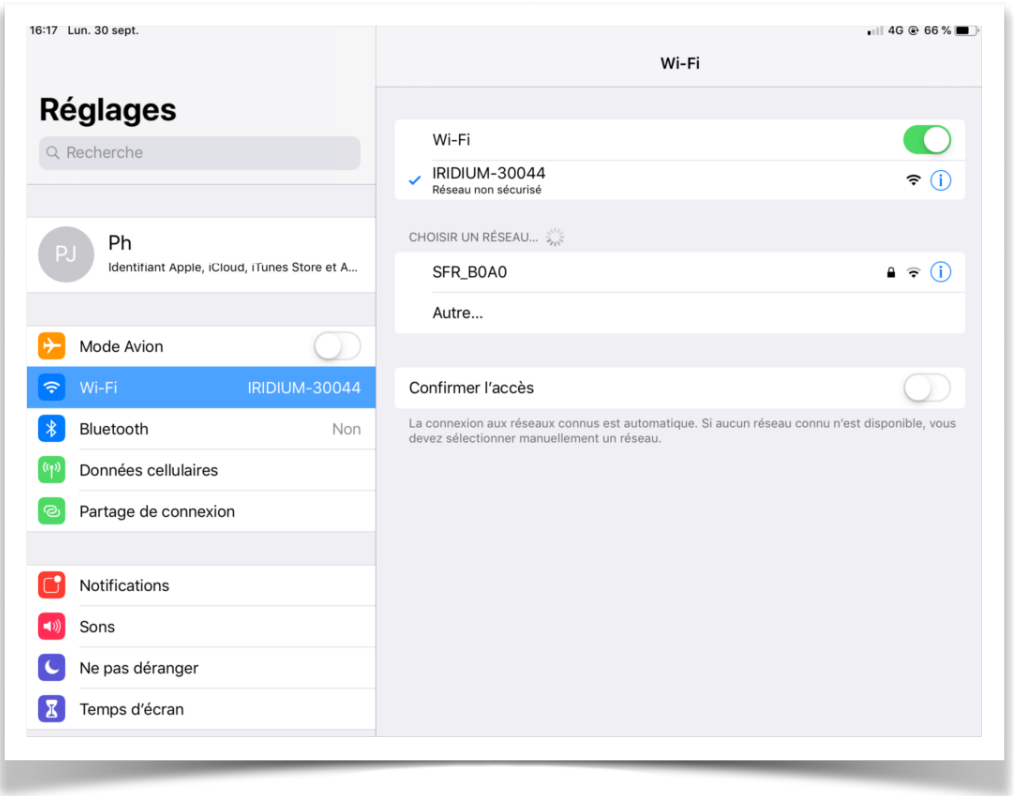
For other Satellite system, choose "Other Sat". If you want to know ashore the volume of data transmitted, you must also choose "Other sat" because Avalon will not find an Iridium Go connected.



1. Choose a “Special Iridium” compressed wind source in Avalon. Refer to the "weather sources" chapter in this document.



2. Connect your tablet to "Iridium Go" wifi



3. Go to routing and start the calculation.
   - The system performs the following tasks: Connect Avalon to Iridium Go
   - Connects the Iridium Go to the Internet
   - Tells you how much data to download. Allow 1 minute per 10kb.
   - If you approve, download the data and calculate the route.

En cas de perte de satellite, Avalon tentera de se reconnecter après 90 secondes. Le téléchargement reprendra alors la ou il a été interrompu sans perte de données.

At the end of the transmission, Avalon automatically disconnects the Iridium

When you choose "Iridium" or "Other sat" Avalon disables loading of currents, and waves to limit the amount of data transmitted.

For general weather, we recommend only selecting isobars (pressure lines) in standard definition and over a duration of 72 hours in the weather module settings. Disable everything else: rainfall, stormy areas, clouds, etc…. which would be too expensive in terms of downloading time. You can load the isobars for about 5O ko for your extended navigation area (North Atlantic, Europe, etc.)

If, despite everything, the download volume seems too high, limit the cruise time to 72 hours. After 72h, the forecasts become more random anyway.

---

b. Other Satellite system (Inmarsat, etc)

We cannot then connect to the WiFi network of the Iridium Go. Avalon will have to connect to a wifi box connected to the reception system.

Select "Other Sat" from the main menu. This selection leads to:
Automatic disabling of data downloading other than wind data.
The display of the volume of data to be downloaded which you must confirm to start the download.

Avalon will be able to download the winds as soon as satellite communication allows an Internet session. Be careful to unblock the ports of the Avalon servers in the possible firewall of the Wifi connection boxes

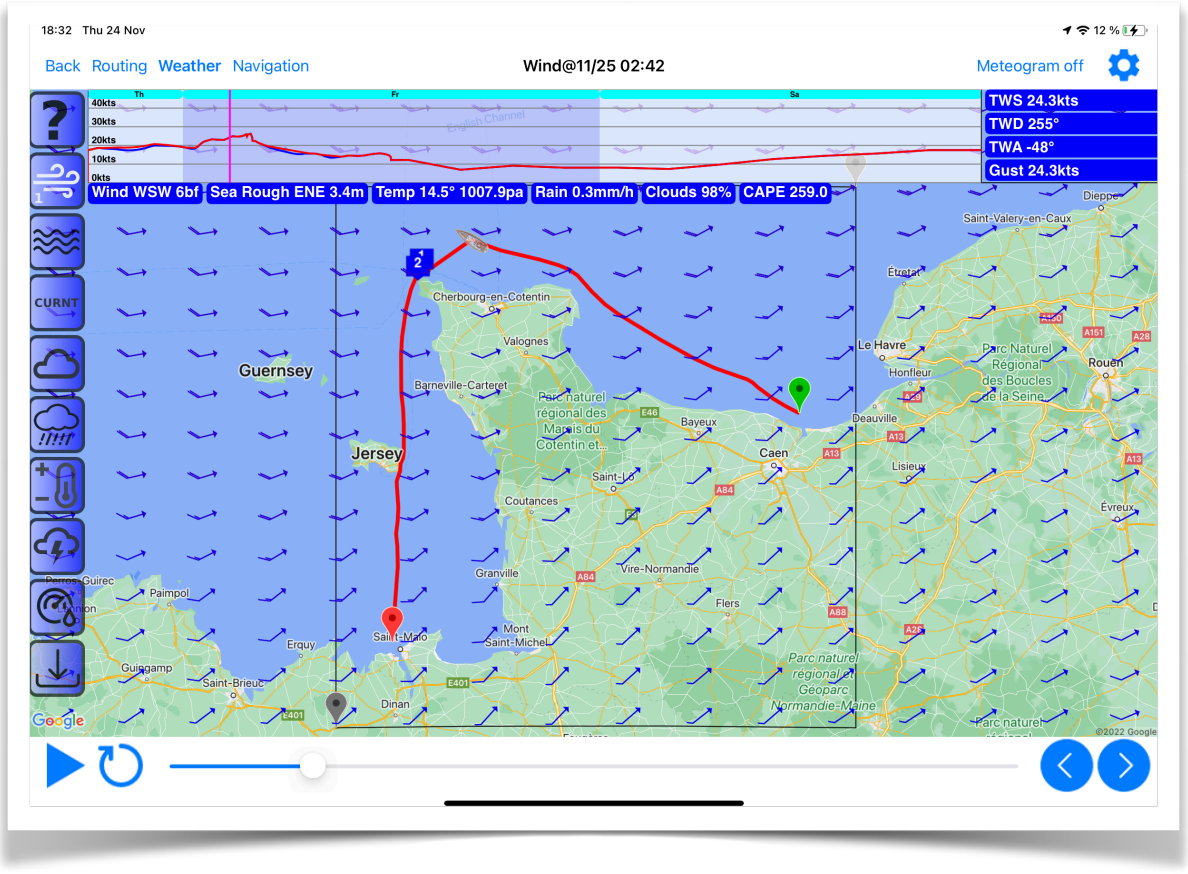
There are three exceptions to add to the firewall:
- 198.100.144.78
- 91.121.30.95
- 193.70.80.130

Choose "all ports" and "TCP" protocol.

D. Weather

Video V5 (à mettre à jour avec la V6)

After having calculated its route, we now look at the evolution of the weather in relation to the planned progress of the boat. This analysis is done in the WEATHER module.
Warning: To initialize the weather forecast, you must have calculated a route at least once.



1. Meaning of the icons

	Help
	Displays wind forecast. White = yes. Tap on the icon to display the different visualizations.
	Displays the swell forecast. Tap 1 = total swell. Tap 2 = swell. Tap 3 = wind waves.
	Displays current forecast. Tap on the icon to display the different visualizations.
	Displays cloud cover
	Shows the rain forecast
	Displays the temperature
	Displays storm risks
	Displays pressure and isobars
	Zoom -
	Zoom +
	Download the weather forecast

2. Weather Models

a. Introduction

Some users may have problems using Avalon. These difficulties are very often due to a poor choice of weather source.

With Avalon Offshore, there is no longer a need to load "gribs" files like in traditional routing software. The weather data needed to calculate the route is downloaded automatically depending on:

- Weather sources selected in the "weather sources" menu
- The navigation area, determined by the start and end points and any waypoints. This area can be changed by moving the corners of the navigation rectangle on the tablet.
- From the cruise duration defined in the routing parameters. If your approximate cruise duration is 72 hours, Avalon will only load 72 hours of weather from the scheduled departure date. If the chosen weather source does not have a sufficient forecast horizon, Avalon will let you know and calculate a partial route with the available wind data.

The selected wind source must therefore:

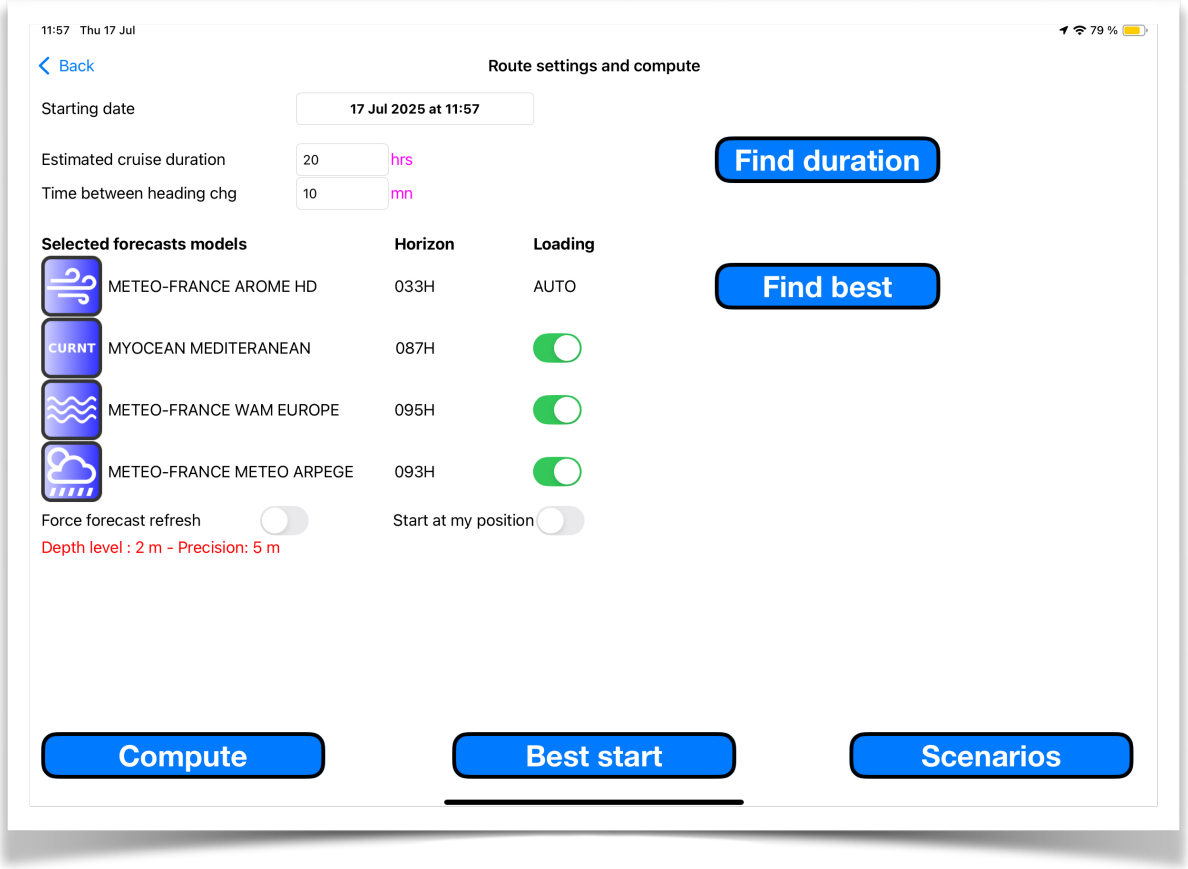
- Be wide enough to encompass the navigation area.
- Have sufficient forecasts available given the planned cruise duration and the planned departure date. If you are planning a coastal outing in France, you can use NOAA GFS 2 weeks before departure, then Météo France Arpège 4 or 5 days before, then switch to Arôme just before departure.
- Take into account the navigation area. For coastal navigation, a very fine source such as Arôme or Arôme HD can be very effective. For offshore navigation, it is necessary to favor a source of wind with a larger mesh such as Arpège, CEP, NOAA GFS, … because the side effects will no longer impact the route..

The different types of weather sources are:

- Winds and gusts, with satellite transmission version)
- Currents (tidal and oceanic)
- Waves (swell and wind waves)
- General weather
- Pressure
- Rainfall
- Temperature
- Storm indicator
- Cloud cover
- Isobar curves (wide coverage), with satellite transmission version

Avalon offers the possibility to automatically select weather sources in the calculation parameters based on:

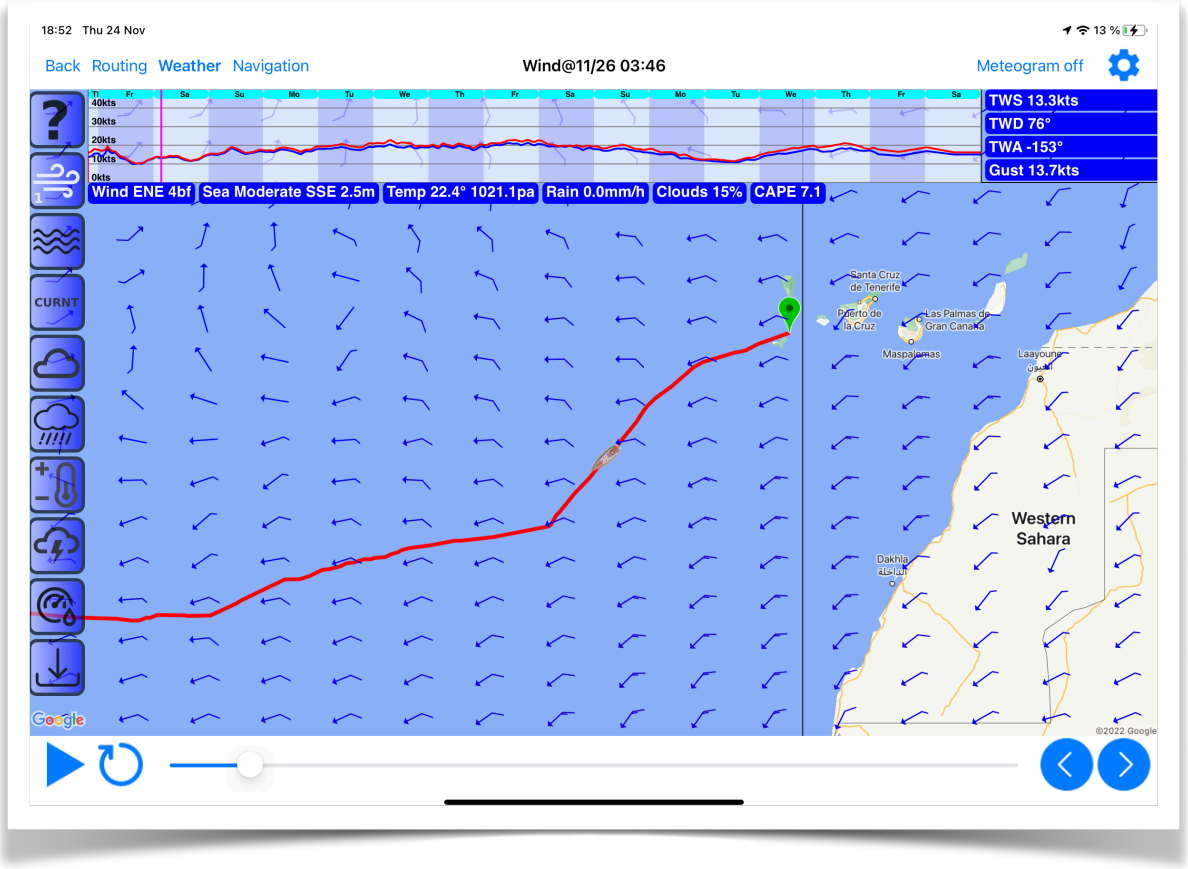
- The navigation area, defined by the start, the finish and the waypoints.
- The estimated cruise duration.
- The scheduled departure date.



Below are the tables to help you select the weather model suitable for your navigation area and the desired forecast horizon, if you wish to choose your weather models without going through automatic selection.

a. Wind and Gust

Zone de Navigation	Modèle	Pas	Horizon	Prods / Jour	Maillage
Monde	NOAA GFS 0.25 deg	3h	400 h	4	0.25 Degré
Monde	NOAA GFS 1 deg	3h	400 h	4	1 Degré
Monde	NOAA GFS ENS (30 modeles)	3h	400 h	1	1 Degré
Monde	ECMWF	3h	400 h	2	0.4 Degré
Europe	Arpege	1h	112 h	4	0.1 Degré
Europe	Icon	1h	120 h	4	0.07 Degré
Europe	Icon 30	1h	30 h	8	0.07 Degré
USA/Caraibes	NAM Conus	1h	84 h	4	0.15 Degré
USA/Caraibes	NAM Caraibes	3h	84 h	4	0.15 Degré
France	Arome	1h	35 h	4	0.025 Degré
France	Arome HD	1h	35 h	4	0.010 Degré
France	Open WRF	3h	120 h	1	0.1 Degré
Hawai	NAM Hawai	1h	84 h	2	0.05 Degré
Porto Rico	NAM Porto Rico	1h	84 h	2	0.05 Degré
Guam	NAM Guam	1h	84 h	2	0.05 Degré
Italie	Open WRF	3h	120 h	1	0.010 Degré
Italie	Open WRF Thyreneene	1h	48 h	1	0.035 Degré
Italie	Open WRF Sicile	1h	48 H	1	0.035 Degré
Espagne	Open WRF	1h	120 h	1	0.010 Degré
Grece	Open WRF Ioniennes	1h	120 h	1	
Grece	Open WRF Ioniennes HD	1h	48 h	1	0.035 Degré
Grece	Open WRF Egée NW	1h	48 h	1	0.035 Degré
Grece	Open WRF Egée NE	1h	48 h	1	0.035 Degré
Grece	Open WRF Egée SW	1h	48 h	1	0.035 Degré
Grece	Open WRF Egée SE	1h	48 h	1	0.035 Degré
Grece	Open WRF Patras	3h	48 h	1	0.035 Degré



Zone de Navigation	Modèle	Pas	Horizon	Prods / Jour	Maillage
Est Med	Open WRF Croisade	3h	120 h	1	0.010 Degré
Est Med	Open WRF Taurus		120 h	1	0.010 Degré

b. Vents compressés « Iridium Go» et autres Satellites

Zone de Navigation	Modèle	Pas	Horizon	Prods / Jour	Maillage
Monde	NOAA GFS 1 deg	3h	400 h	4	1 Degré
Monde	ECMWF	3h	240 h	2	0.4 Degré
Monde	Arpege	1h	112 h	4	0.5 Degré
Europe	Arpege	1h	112 h	4	0.1 Degré
Europe	Icon	1h	120 h	4	0.07 Degré
Europe	Icon 30	1h	30 h	8	0.07 Degré
USA/Caraibes	NAM Conus	1h	84 h	4	0.15 Degré
USA/Caraibes	NAM Caraibes	3h	84 h	4	0.15 Degré

b. Courants

Zone de Navigation	Modèle	Pas	Horizon	Prods / Jour	Maillage
Monde	Copernicus Marine	1h	240 h	1	0.25 Degré
Ouest Europe	Copernicus Marine IBI	1h	120 h	1	0.03 Degré
Mediterranee	Copernicus Marine Med	1h	120 h	1	0.063 Degré
Baltique	Copernicus Marine Baltic	futur			
USA East	NCOM	3h	72 h	1	0.033 Degré
Caraibes	NCOM	3h	72 h	1	0.033 Degré
Sud Californie	NCOM	3h	72 h	1	0.033 Degré
Hawaii	NCOM	3h	72 h	1	0.033 Degré
Alaska	NCOM	futur			

c. Vagues

Zone de Navigation	Modèle	Pas	Horizon	Prods / Jour	Maillage
Monde	Météo France WAM	3h	114 h	1	0.5 Degré
Monde	FNMOC	3h	186 h	1	1 Degré
Monde	NOAA				
Europe	Météo France WAM	3h	114 h	1	0.1 Degré
France	Météo France WAM	futur			

d. Météo Générale

Zone de Navigation	Modèle	Pas	Horizon	Prods / Jour	Maillage
Monde	NOAA	3h	400 h	4	1 Degré
Monde	Météo France Arpège				
Monde	ECMWF	1h	240 h	4	0.4 Degree
Europe	Météo France Arpège	1h	96 h	4	0.5 Degré

Pour la liste complète des modèles météo avec leur couverture, horizon de prévisions, granularité, heures de production, se reporter à notre document référence « sources météo »

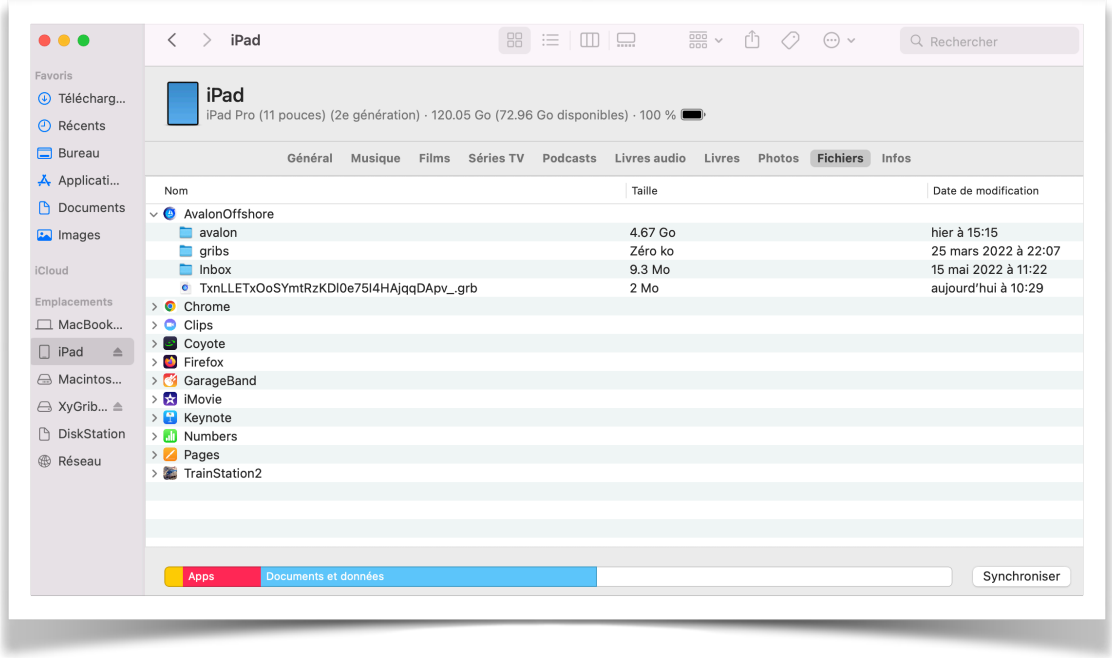
https://www.avalon-routing.com/fr/guide-utilisateur-et-annexes/

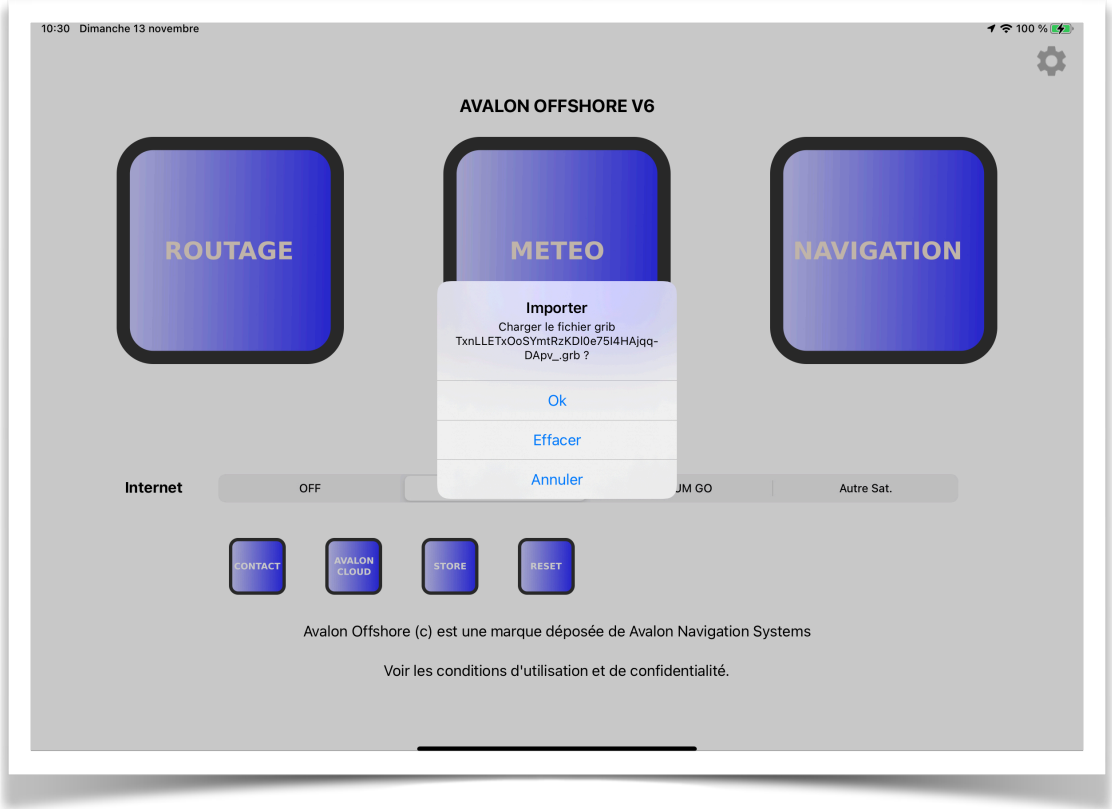
3. Loading an "External" Grib file

For example Great Circle, Skiron, Weather Consult, etc.

Attention: Each weather model provider has its own way of encoding data. Avalon has been tested with NOAA, Skiron, Weather Circle and Great Circle gribs. If you have problems loading an external grib, you can contact us by sending us the grib in question and we will modify our grib reader accordingly.

Transfer your file via email, file transfer, or airdrop on Apple to the Avalon directory.





On Android, by email, drive or in the downloads directory.

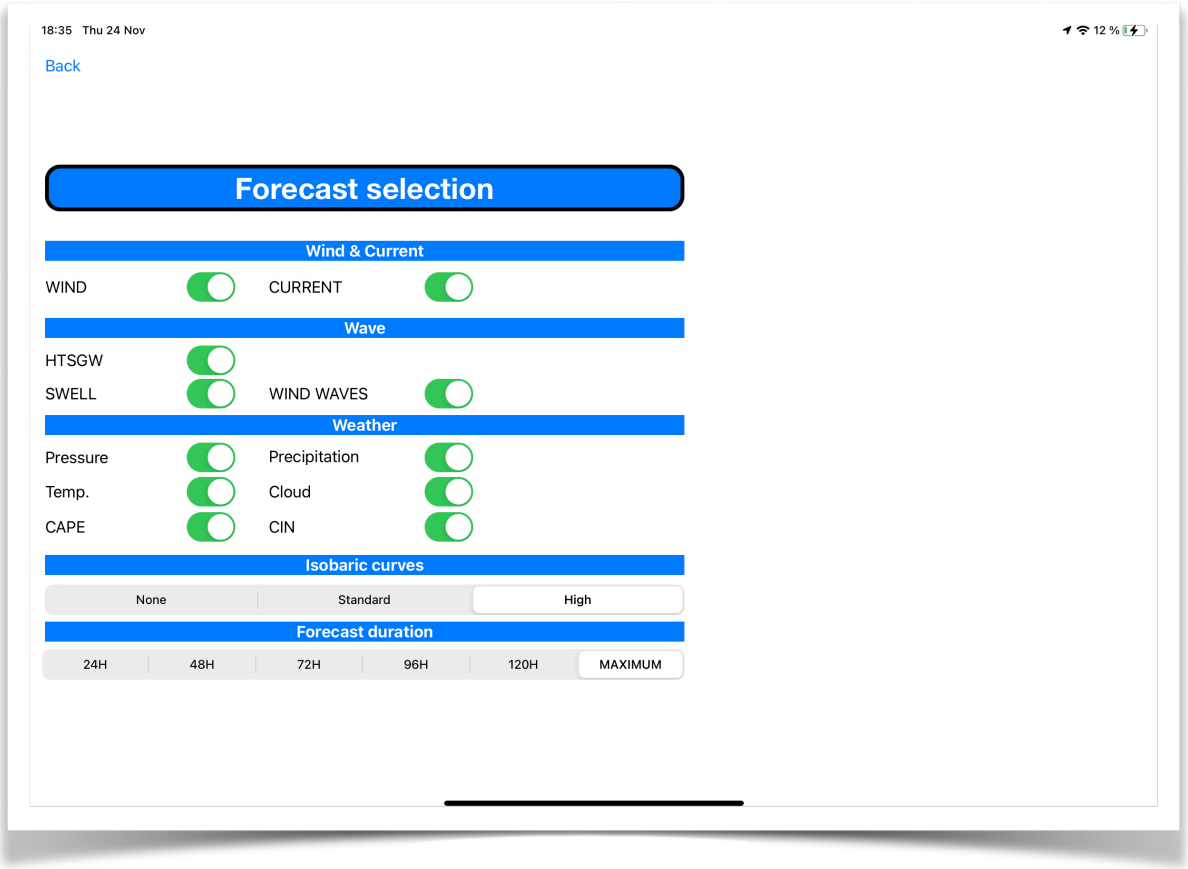
If the file is contained in an email, opening that email will allow you to copy that file into Avalon.
If the file is in the Avalon directory (iOS) or in the downloads directory, it is when Avalon is opened that this file will be integrated into Avalon.
Below is an example of loading weather grib from MétéoConsult®.

On Android, you have to put the file in the "downloads" directory, send it by email or transfer it from a drive.
Then you have to tell Avalon what type of file it is: Polar Weather Grib or Mbtiles Map.

4. Weather Module Settings

The old "Choice of weather sources" module is now available from the WEATHER module settings

It is also in these parameters that we choose the weather data to download. With a good network (WIFI or 4G) we recommend selecting everything.

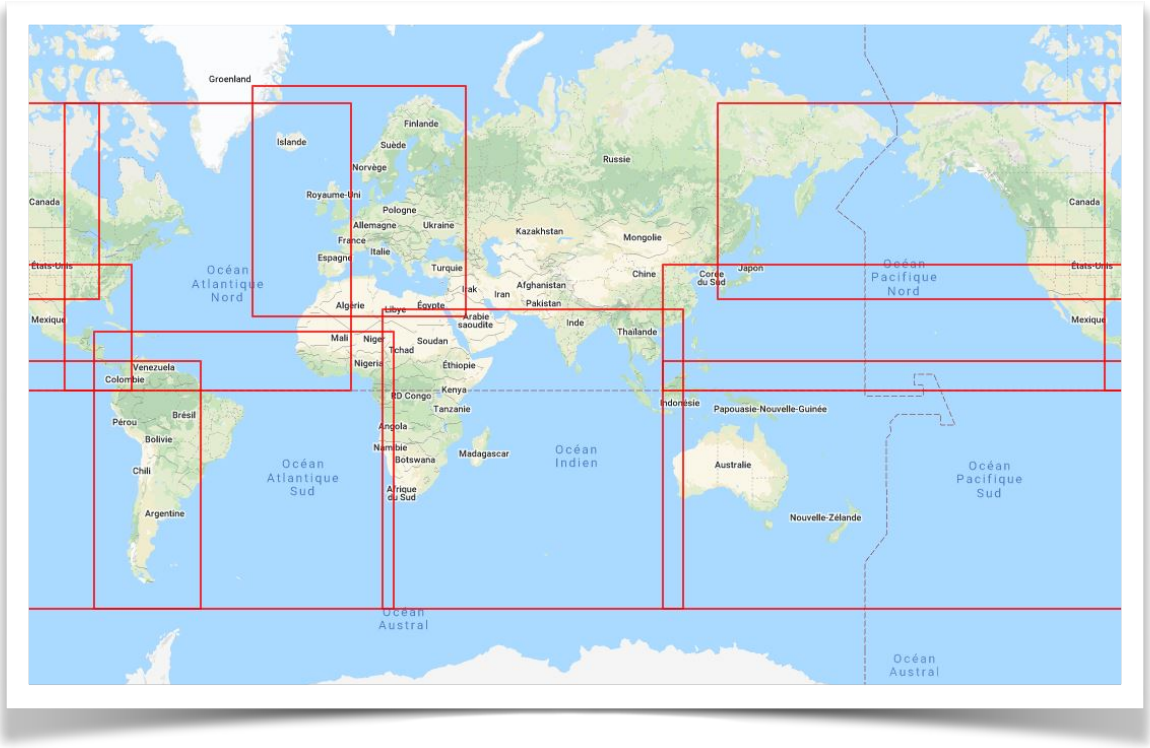


With a satellite connection, we advise to only load the wind and the isobaric curves (72 hours max and standard accuracy)

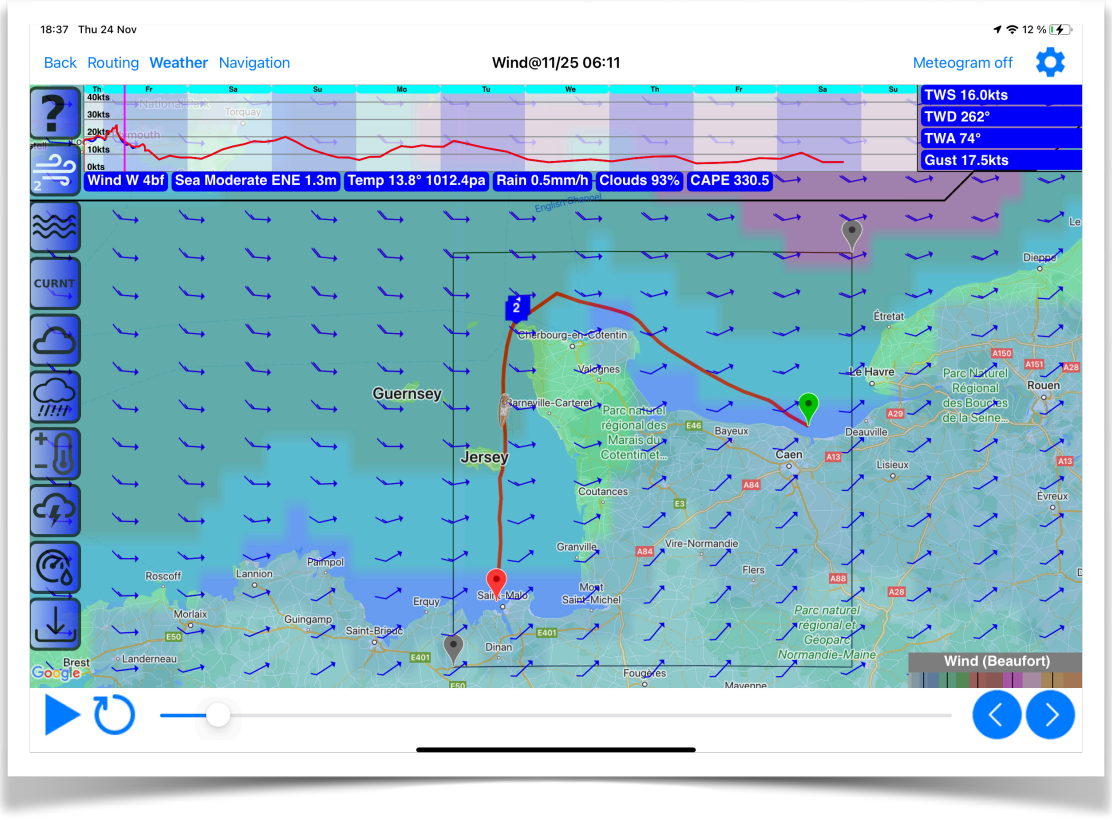
The areas covered by the Isobar curves are:Atlantique Nord

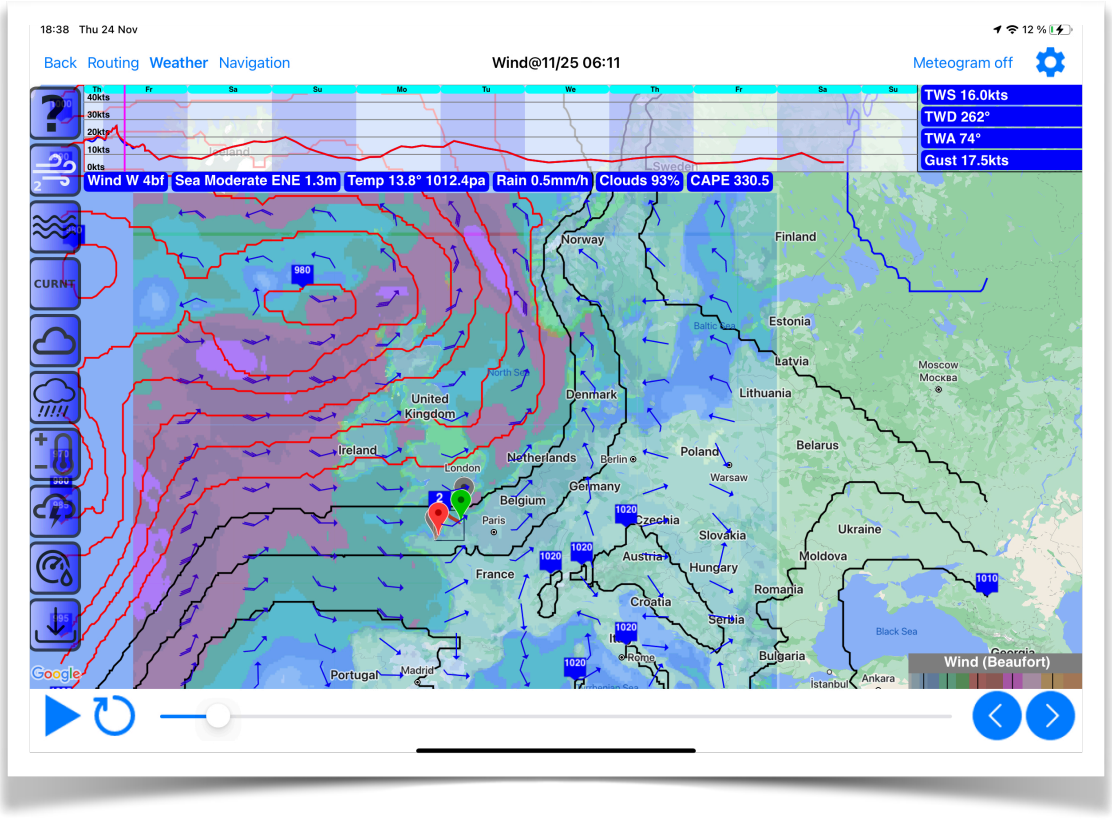
- Western Europe
- South Atlantic
- Indian
- North Pacific
- Central Pacific
- South Pacific

The downloaded Isobar area is automatically selected based on the route points.



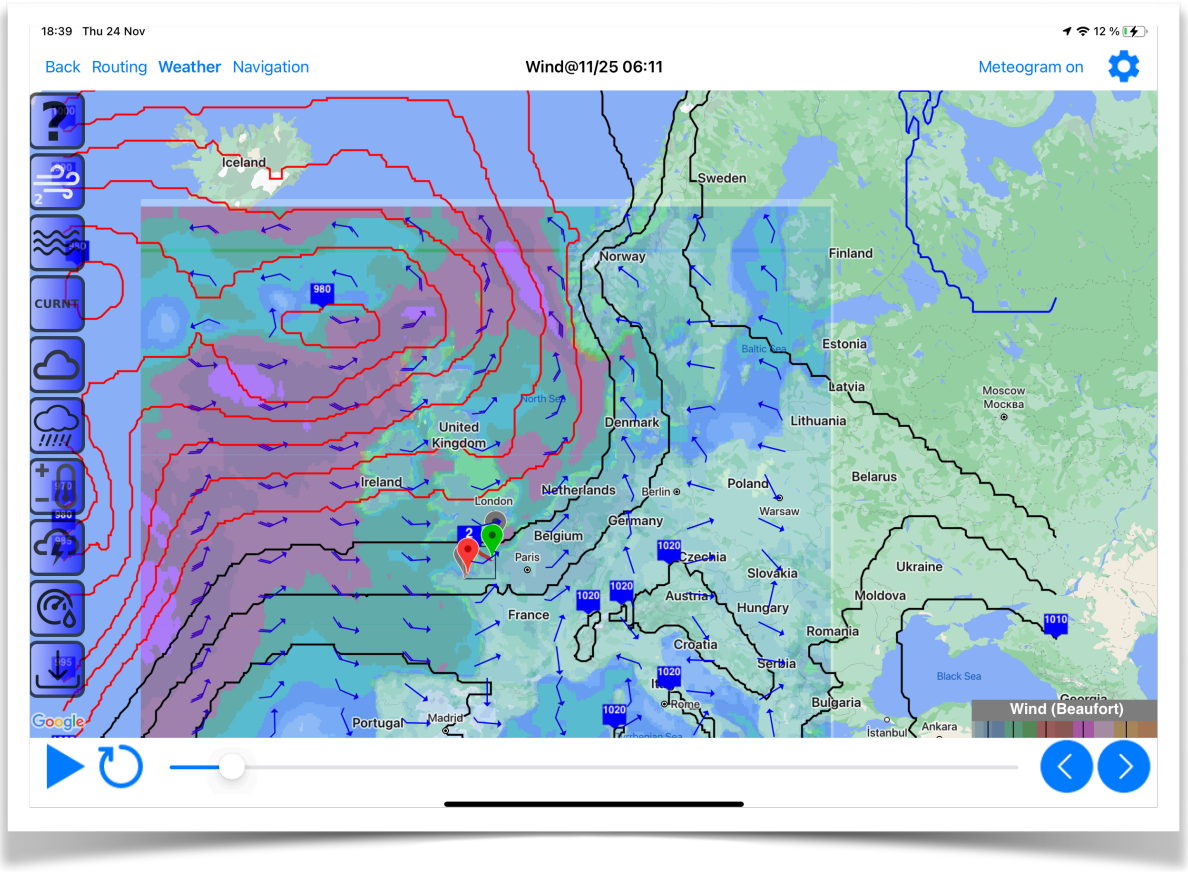
To download the isobaric zone or reload the weather, click on the "down arrow" icon in the weather module.





The data selected in the weather module settings will be downloaded.

If you want to see the map without the meteogram, you have to press meteogram off at the top and right of the screen.



If you are in "Iridium Go" or "Other sat" mode. Avalon tells you how much data to download.
If you are on land without Iridium Go, choose "Other sat" to see the volume of this data.

In the case above, we download the isobars over the entire North Atlantic over 72 hours for 53 KB, or 5 minutes you download with an Iridium Go.

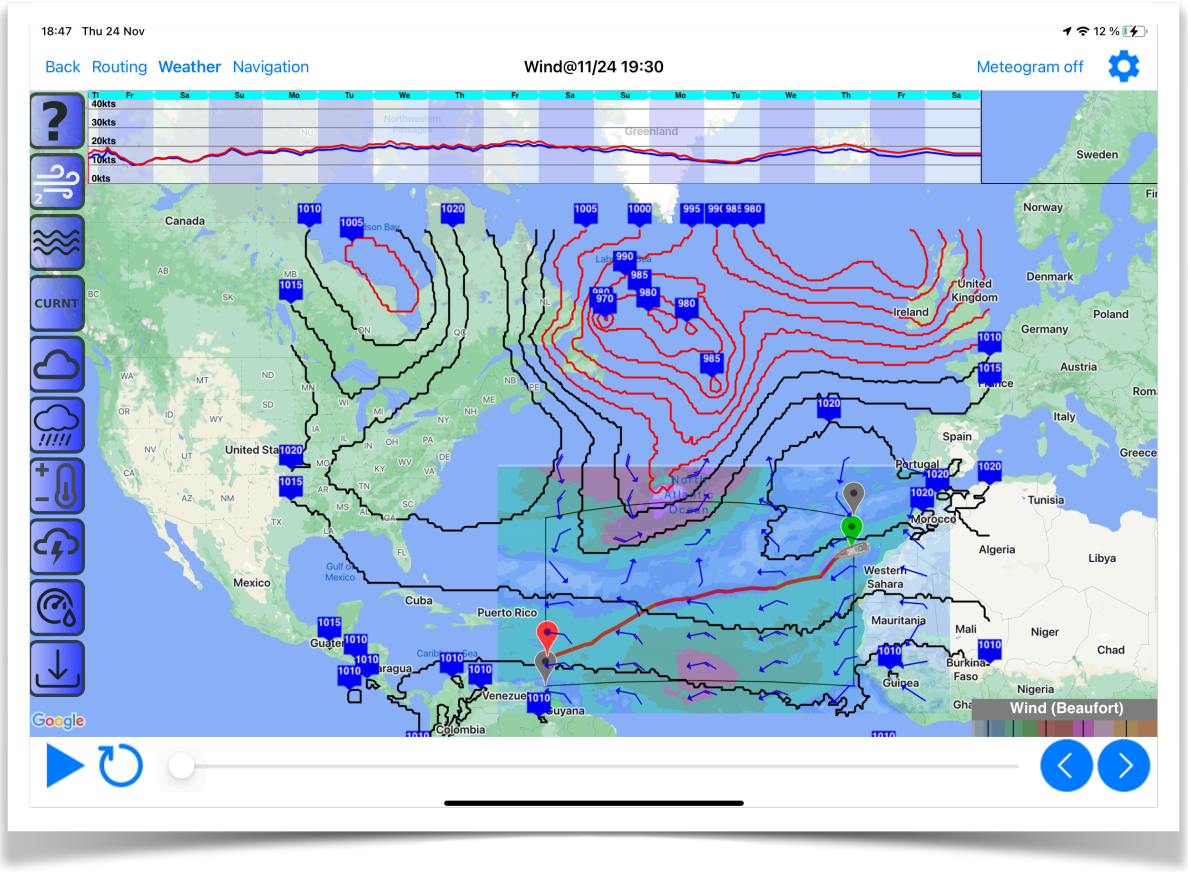
The volume of isobaric data on the North Atlantic over 72 hours with a step of 3 hours may vary depending on the meteorological situation which includes the number of isobars to download. There is an average of 50k or 5 minutes of Iridium Go connection to charge all the isobars over 72 hours in 3-hour steps.

Once the download is complete, click twice on the wind icon (in the weather menu) to display simultaneously:

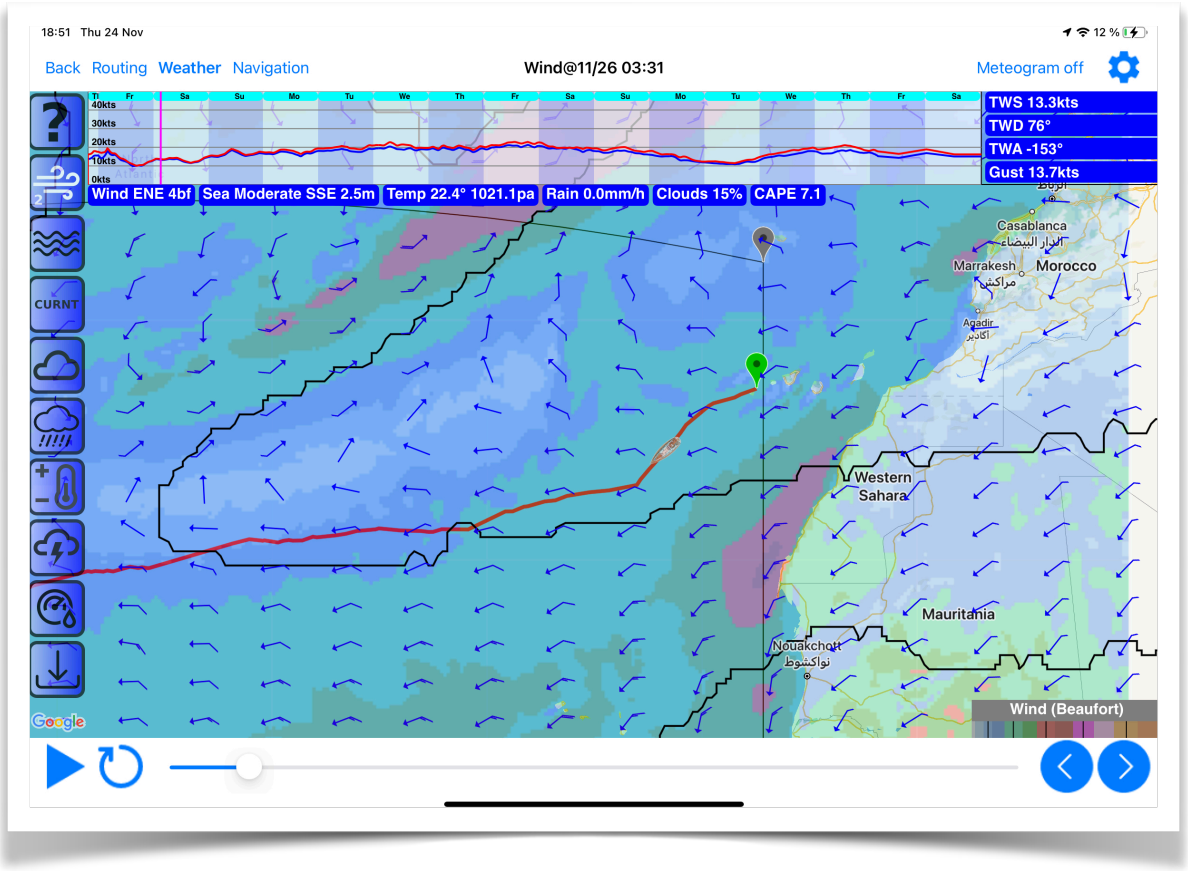
- The position of the boat
- The winds
- Beaufort areas
- Isobars (note: unlike winds which are interpolated, isobaric curves are fixed in 3-hour steps)

It is possible to reload all the weather data on the navigation area without having to recalculate a route. To do this, simply click on the "down arrow" icon at the bottom left of the screen.

The downloaded area will cover at least the rectangle defined on the screen.

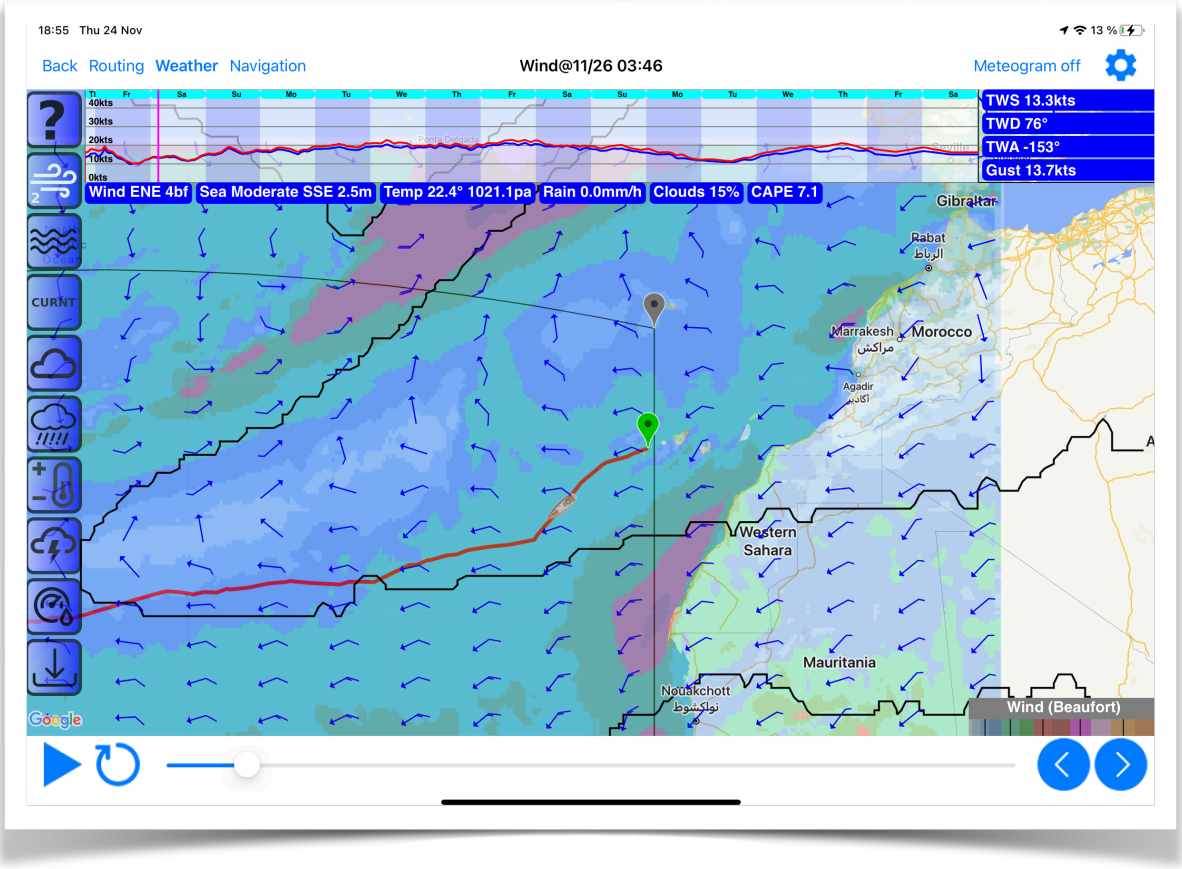


The advance arrow at the top left allows you to scroll the weather forecast at the same time as the forecast position of the boat.

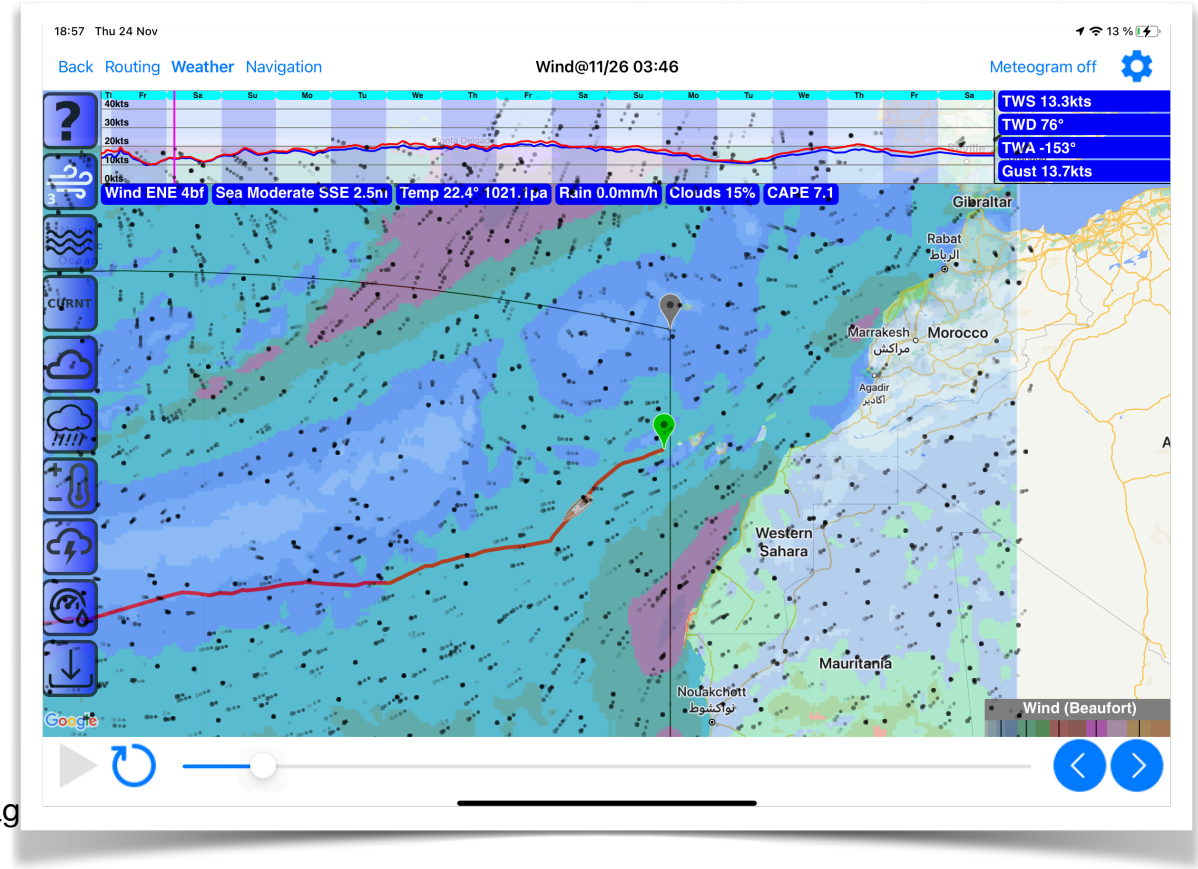


By clicking several times on the "wind" icon, several visualizations of the winds are possible

- Tap 1: Barbules only
- Tap 2: Barbules, Beaufort and isobaric zones (over a very large zone)



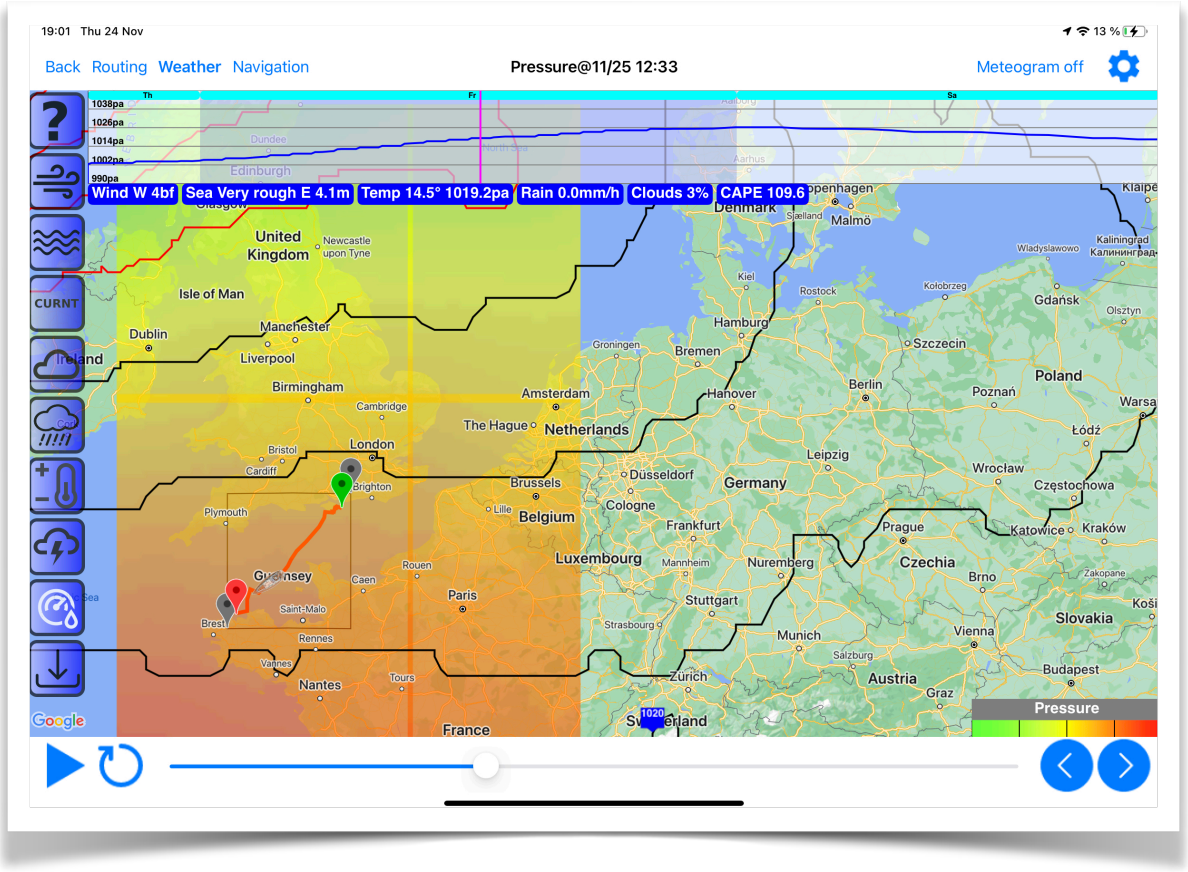
- Tap 3: « windy like" visualization (on iOS only)



Selecting the icon on the left of the screen will display the meteogram for:

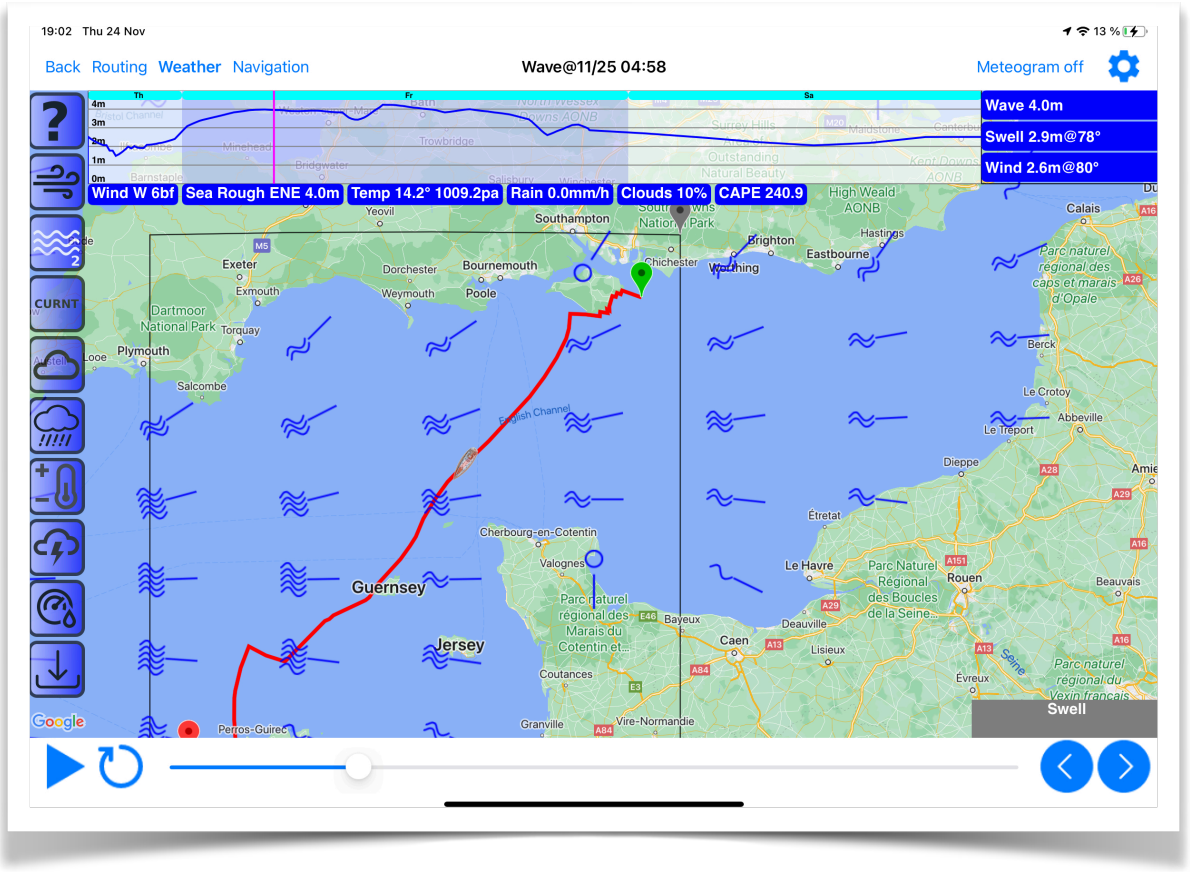
- Winds, beaufort and isobaric zones
- Currents
- Rainfall
- Pressures and isobars
- Temperature
- Cloud cover
- Waves
- Stormy areas

For example, visualization of pressures and isobars below



From version 5.5.2, the weather menu has been improved to allow better visualization of the swell and the wind wave in height and direction. This visualization also makes it possible to know in advance the direction of the swell at the anchorage and therefore to choose the right anchorage accordingly.

We change views by tapping on the "swell" icon 



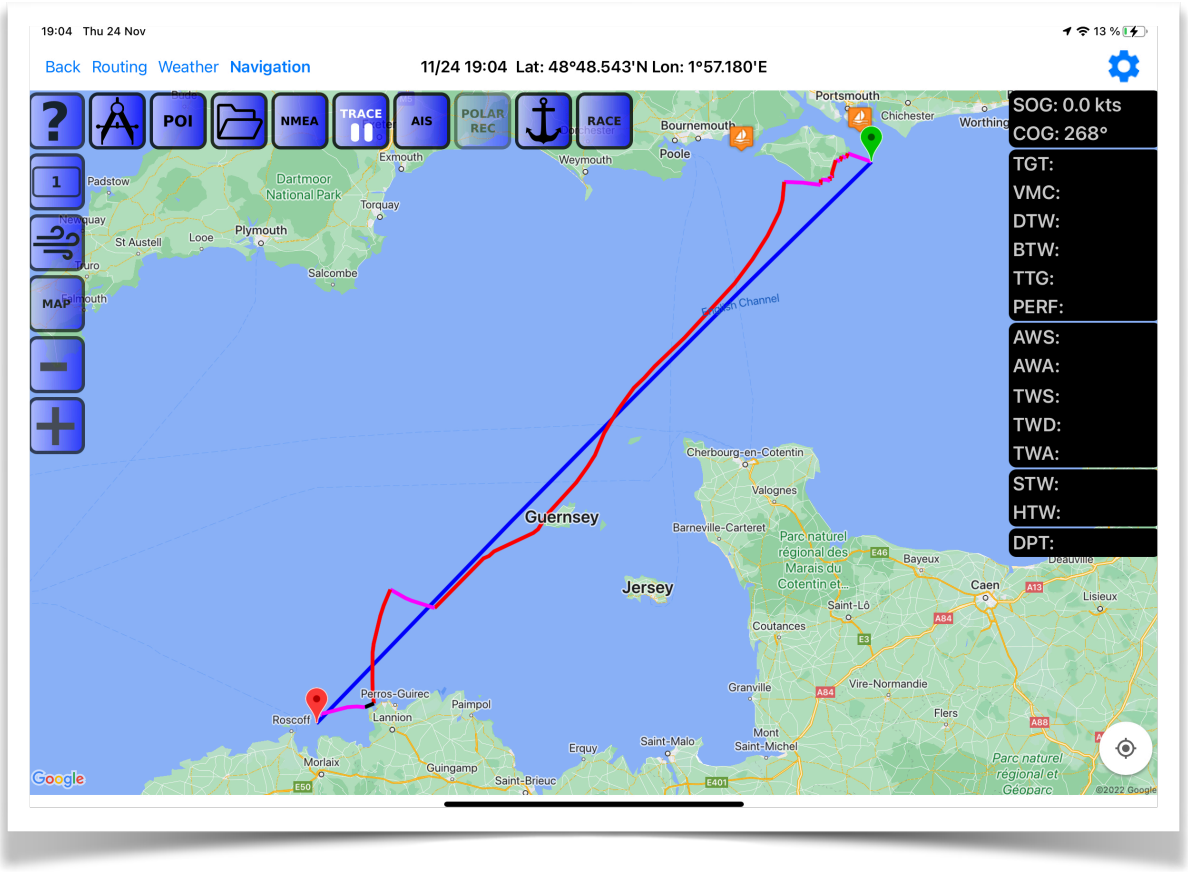
By successive taps, we will be able to display the total wave, the swell or the wind wave (direction and strength).

E. Navigation

1. Introduction

The route calculated by the routing is only a route "strategy", entirely based on the weather forecast and boat speed predictions.
In actual navigation, the route followed will be slightly different from the calculated route. It will depend on the weather conditions actually observed.
This is the objective of the NAVIGATION module:

1. Define the route you really want to follow, by defining it on a nautical chart and taking all the necessary safety precautions (shoals, beacons, etc.)
2. To be able to follow its route on a nautical cartography.
3. Be informed of the risks of collision thanks to the AIS alarm
4. Capture the actual track of the boat.
5. Acquire data to refine your polars
6. Benefit from an anchorage alarm
7. And for the sailors, better manage the start and optimize their tacks according to the laylines.

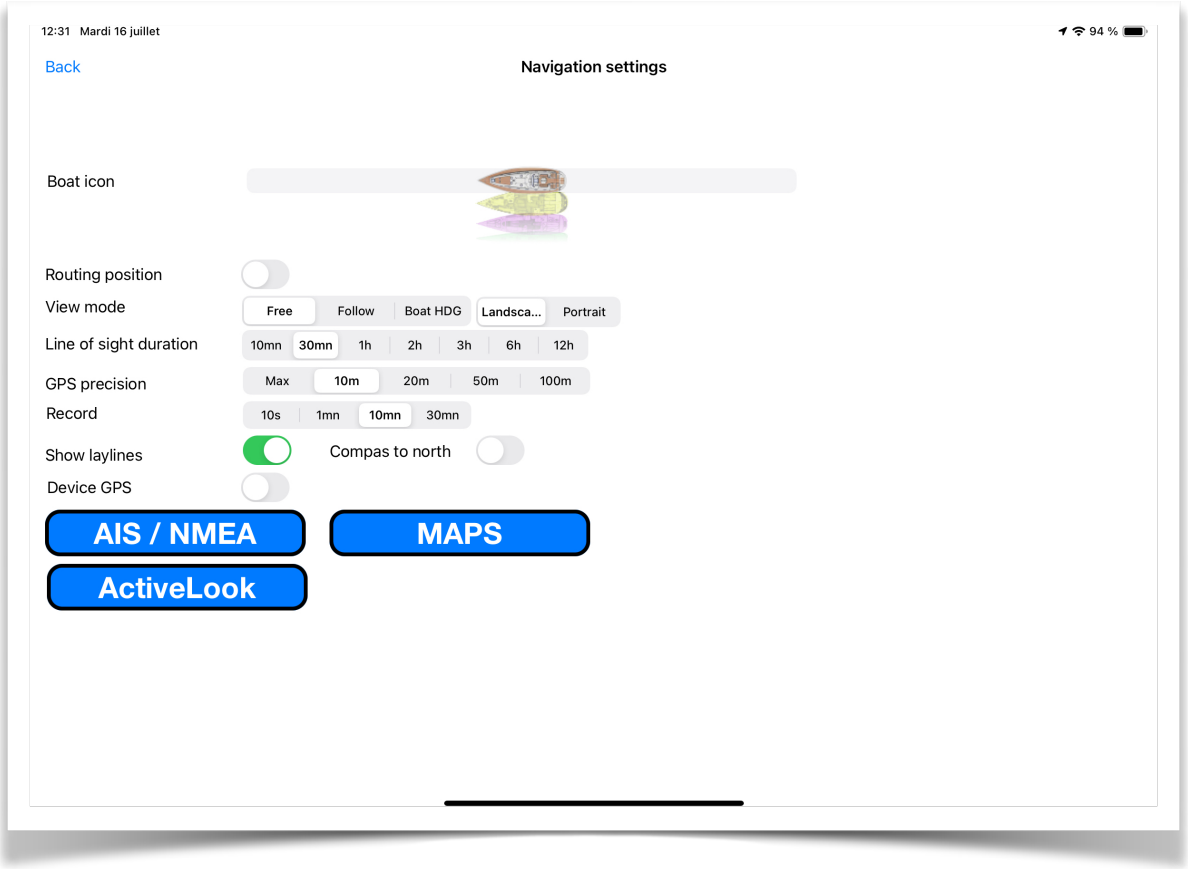


2. Meaning of the icons

	Help
	Tap on the icon to change the display mode
	Zoom out
	Zoom in
	Displays wind forecast
	Display tides and water levels
	Compass
	Management of POIs (points of interest) and route markers.
	Management of recorded routes and logbook (future)
	AIS connection indicator White = connected). Tap to display the list of detected boats.
	NMEA connection indicator (White = connected). Tap to display NMEA indicators.
	Cruise registration indicator. Black = No, "Paused" = Ready to record, Red = recording.
	Polar recording indicator. Black = No, "Paused" = Ready to record, Red = recording.
	Anchor alarm.
	Regatta module. Start management and laylines.
	Displays the nautical chart (raster)
	Enter the Navionics® connection parameters. The Navionics chart must be enabled in the main menu settings.

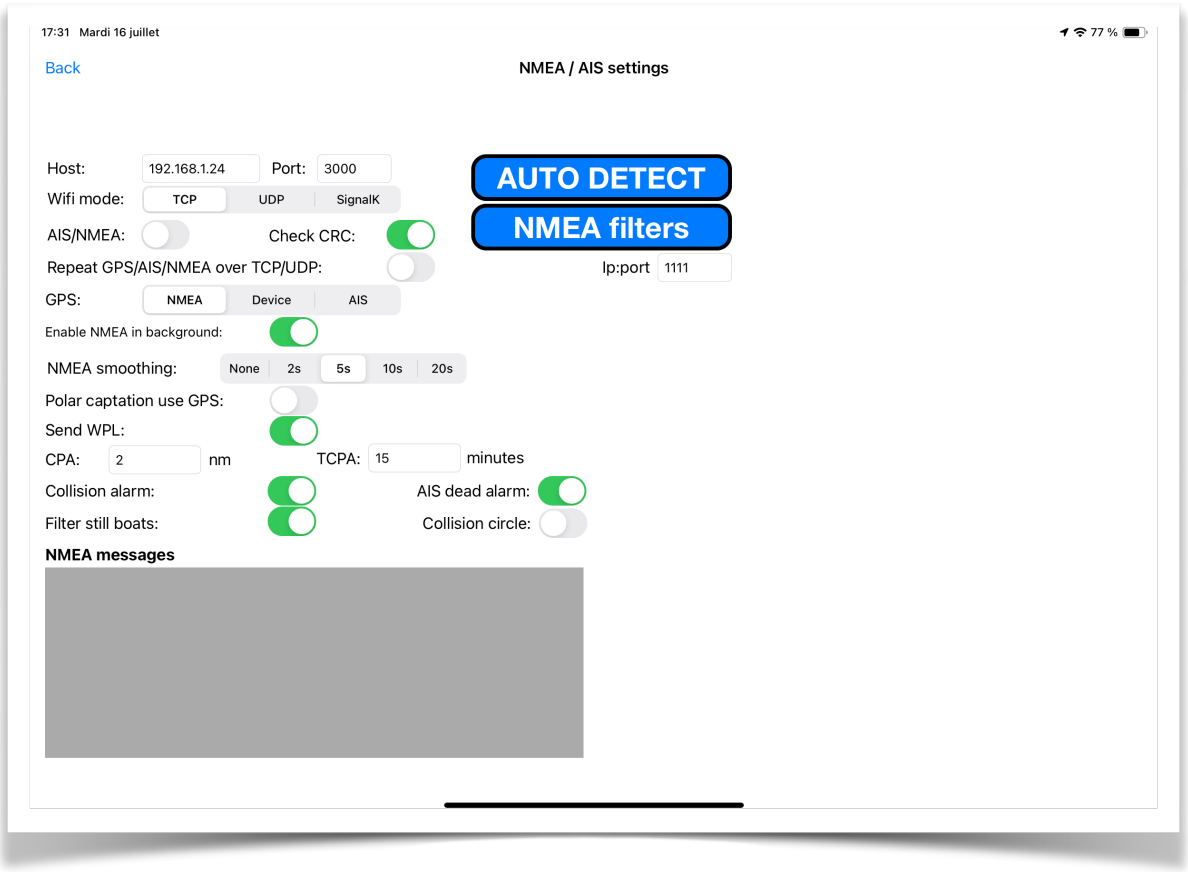
	Full screen mode (Android only): white=yes, black=no

3. Navigation module settings



- **Boat icon:** Choose the color of the boat on the map
- **Routing position:** Displays the theoretical position of the boat as calculated by the routing
- **View mode:** Centered to keep the boat in the center of the screen, free otherwise.
- **View mode:** Landscape or Portait (easier to monitor the navigation on a smartphone)
- **Line of sight duration:** sets the length of the vector at the point of the boat to the desired duration
- **GPS precision:** The maximum is 5m. On low-end Android tablets, it is preferable to set the GPS accuracy to 10m to display the position of the boat.
- **Record:** Saves the actual route at the specified frequency (, no recording, 10s, 1mn, 10mn, 1h or 3h. Be careful to leave the GPS active even when the app is in the background. If you use a connection NMEA, you must also leave the NMEA connection permanently active (see AIS/NMEA page)
- **Show Laylines:** Whether or not to display the laylines while sailing to optimize upwind or downwind legs. If a target is specified (waypoint, arrival, compass, POI) Avalon then indicates the distance and time to the next tack (for the port and starboard edges)
- **Compass to north:** Orients the map towards the boat's heading (does not work on Navionics map)
- **Device GPS:** Use the tablet's GPS. Imperative to know the position of the boat if you do not have access to the GPS on board by the NMEA

AIS/NMEA: To access the AIS and NMEA settings screen (see next page)
MAPS: To select, activate or deactivate the raster maps loaded on the tablet.
ActiveLook: To configure the Augmented Reality glasses



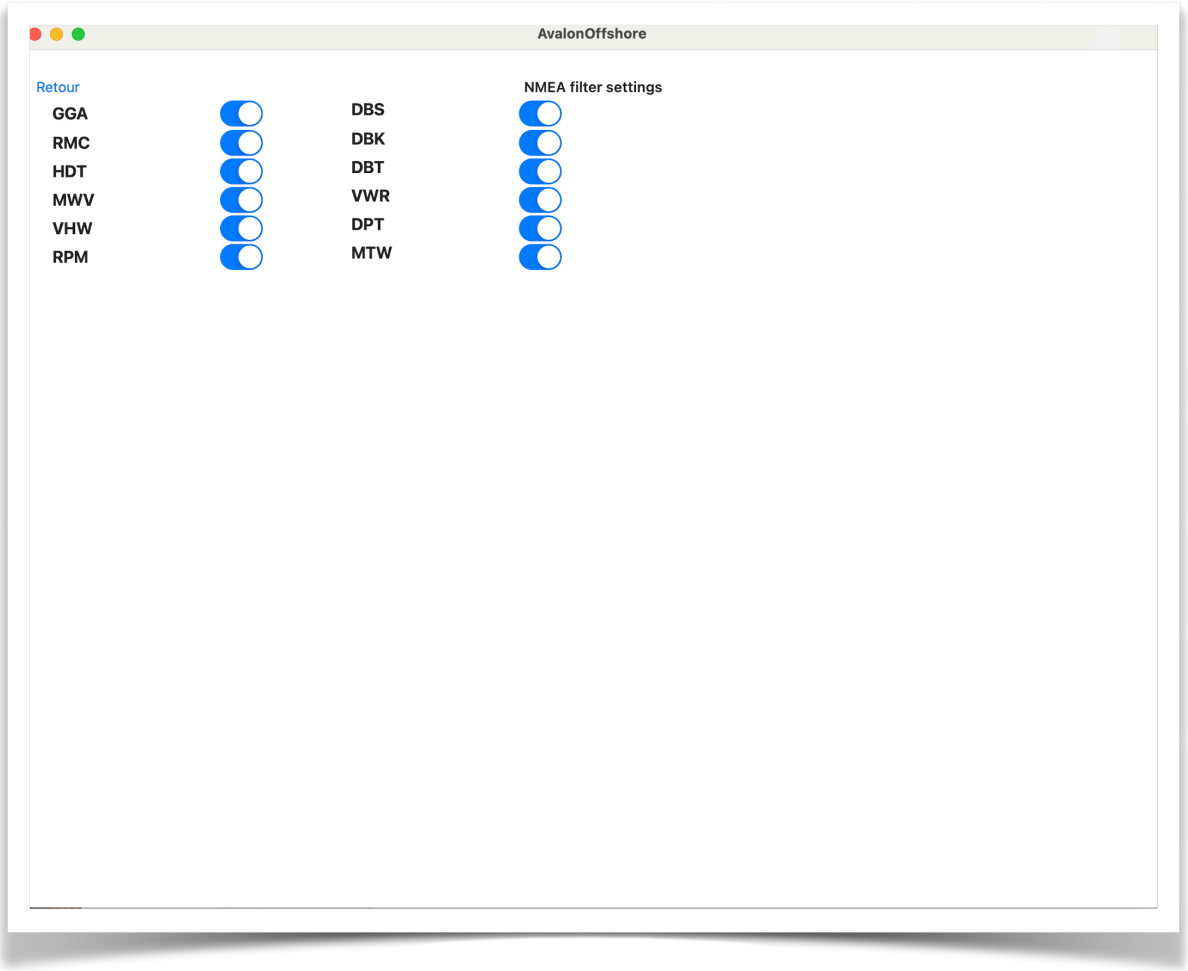
AUTO DETECT: If your WIFI multiplexer is known to AVALON, the connection parameters (server and port) will be automatically selected.
Attention: The tablet must be connected to the WIFI on board

NMEA Filters: To select NMEA messages accepted by Avalon (see below)

- **Host:** Enter here the server address specified in the documentation of your WIFI router.
- **Port:** Enter here the server address specified in the documentation of your WIFI router.
- **WIFI mode:** Choose between TCP, if you only connect one tablet to the WiFi router on board or UDP if you have several tablets connected
- **AIS/NMEA:** Connection of the tablet to the NMEA or AIS Wifi router on board. Allows the display of boats equipped with an AIS transponder if the tablet is connected to an NMEA or AIS Wifi port. Also allows the reading of NMEA instruments under Avalon, for example to have a "depth" anchor alarm in addition to the "distance" alarm.
- **Check CRC:** To set to off with some models that were not fully compliant with NMEA 0183.
- **Repeat GPS/AIS/NMEA (Android only):** Sends AIS, NMEA and GPS information to other tablets on the specified port in UDP mode.
- **GPS:** Choose a single GPS to avoid conflicts.
- **Disable NMEA in Background:** Yes if you want to continue recording your route even when Avalon is no longer in the foreground.
- **NMEA smoothing:** The data transmitted by the control panel can vary a lot. It is then preferable to average them over 2, 5, 10 or 20 seconds.
- **Polar capture use GPS:** To choose between STW (log) or SOG (speed over ground). It is better to use STW.
- **Send WPL:** To send the waypoints of the Avalon navigation route to the on-board display. Requires a central wifi 0183 (B&G) or a two-way WIFI multiplexer.

- **CPA:** Closest Point of Approach = Minimum Point of Approach
- **TCPA:** Time to CPA = Time before reaching the minimum approach point.
- **Collision Alarm:** Triggers an alarm when a boat is going to pass your boat within “x” miles (CPA) within “y” minutes (TCPA)
- **AIS Dead Alarm:** Triggers when AIS signal is lost over WIFI.
- **Filter still boats:** Displays or not boats that are not underway
- **Collision circle:** Allows to display or not the circle of collision (CPA) when a boat presents a risk
- **NMEA Messages**: Displays NMEA messages received by Avalon.

NMEA Filters: to selected NMEA messages accepted by Avalon. Please refer to your NMEA navigation system for more info.



4. Vidéos

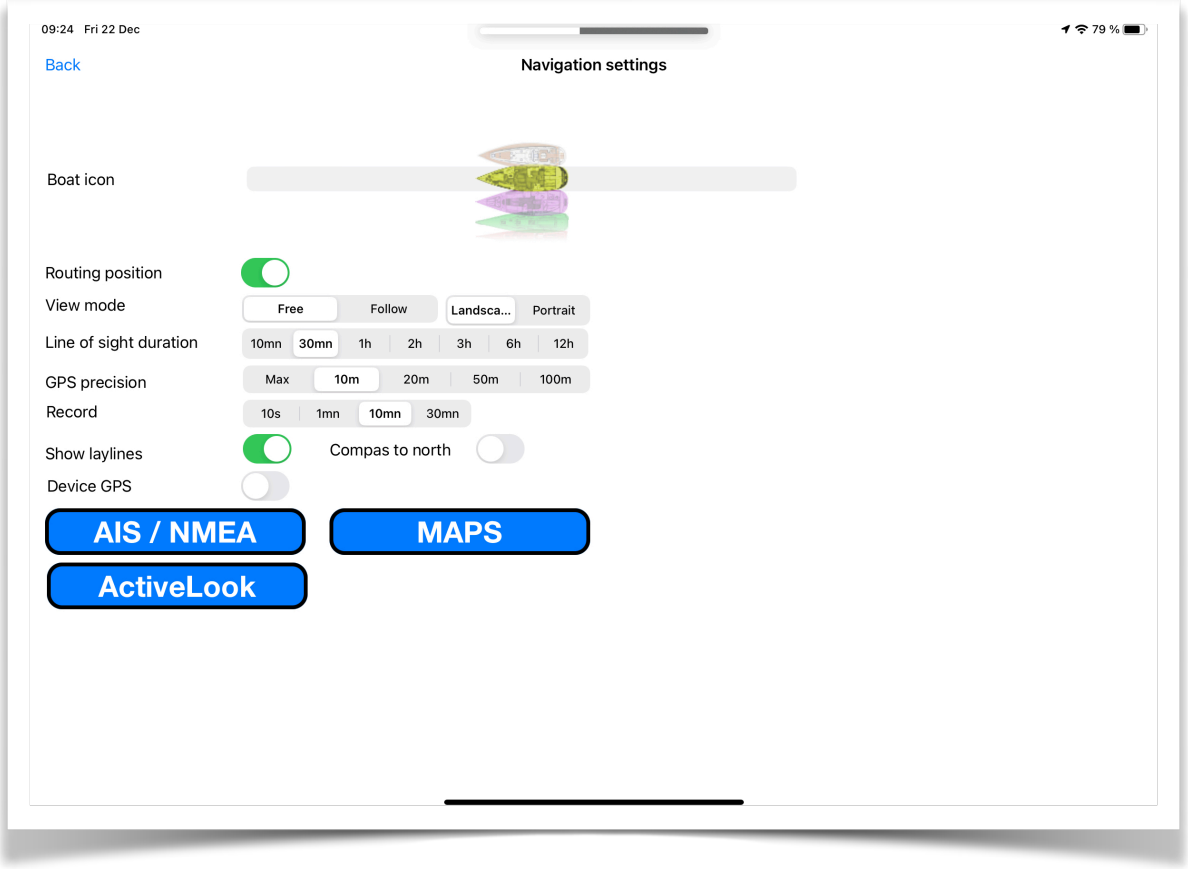

AVALON OFFSHORE
UTILISER AVALON EN NAVIGATION


AVALON OFFSHORE
ACTIVER UN WAYPOINT EN NAVIGATION

5. ActiveLook® Augmented Reality Glasses settings

The glasses are connected to Avalon via Bluetooth. It is therefore necessary that Avalon be authorized to use the tablet's Bluetooth.

Go to the Navigation module settings. An “ActiveLook” button has been added.



Click on this button to arrive at the glasses configuration page.

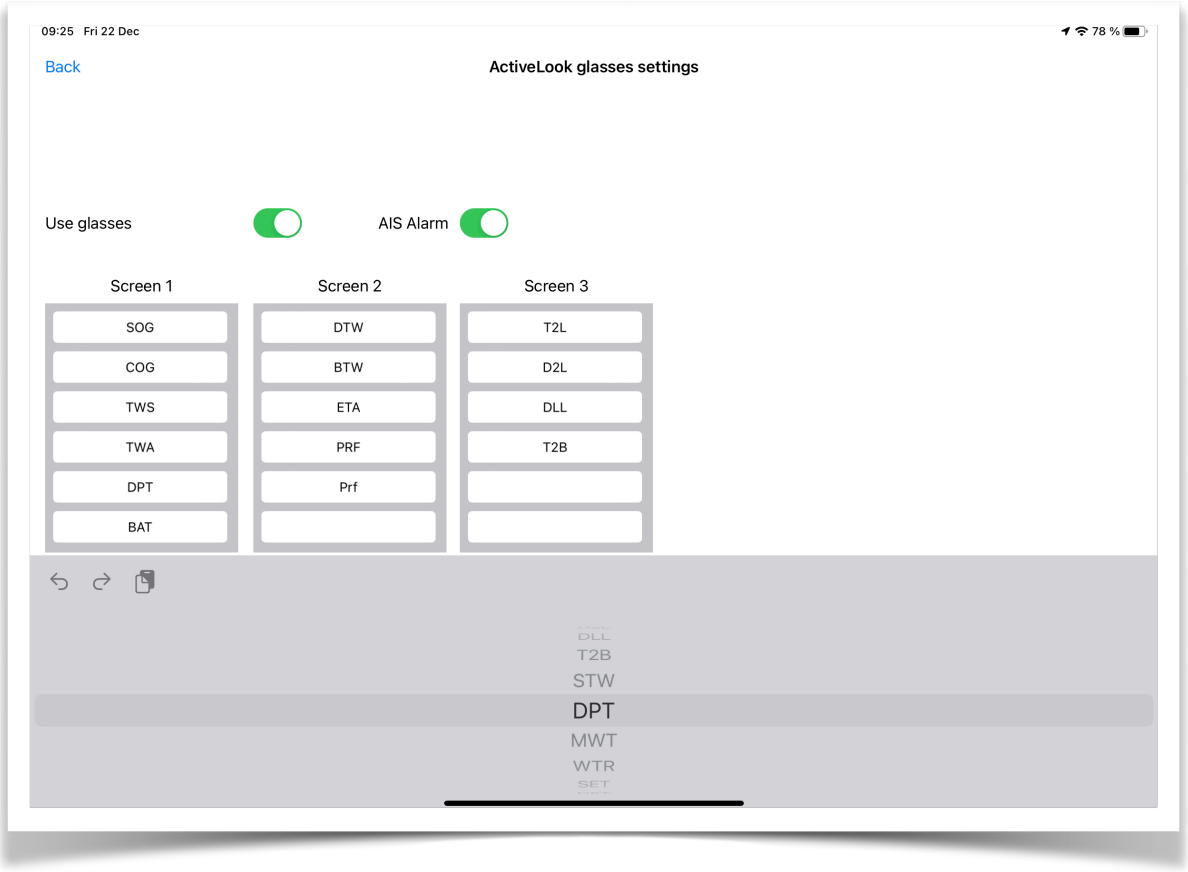
3 screens are available.
In navigation, you go from one screen to the next by passing your hand in front of the glasses.

Up to 6 data can be displayed per screen. The display font size is automatically adjusted according to the amount of information to be displayed on the screen.

To change information, tap on the data to modify or delete and choose another NMEA/AIS data. All NMEA data as well as “regatta” data are available. It is also possible to display the status of the battery integrated into the glasses.

Save by hitting return.

The glasses will automatically connect to the tablet's Bluetooth and display the requested data, provided that the tablet is connected to the on-board WiFi and that Avalon receives the NMEA data.



6. Navigation Route

a. Handling Waypoints

- Creation of a navigation route from a route calculated by routing: Click on the “export” icon. The departure, arrival and routing waypoints as well as the theoretical route are displayed on the map. In this mode, the departure and arrival cannot be modified.
- Added a “navigation waypoint”. Short click on a blue line segment. You must have zoomed in on the blue line before clicking. Waypoints are re-numbered automatically.
- Moving a navigation waypoint: Long click on the point. The icon moves up and the point is dragged to the desired position.
- Deleting a navigation waypoint: Short click on the navigation waypoint, the point information is displayed. Short click again on the point information. A message appears and offers to delete the point.
- In Navigation mode, the Avalon icon at the bottom of the right page must be lit (white) to be able to add or modify waypoints

7. From routing to navigation

To create your navigation route from the ROUTING module, click on "navigation" at the top of the screen. :

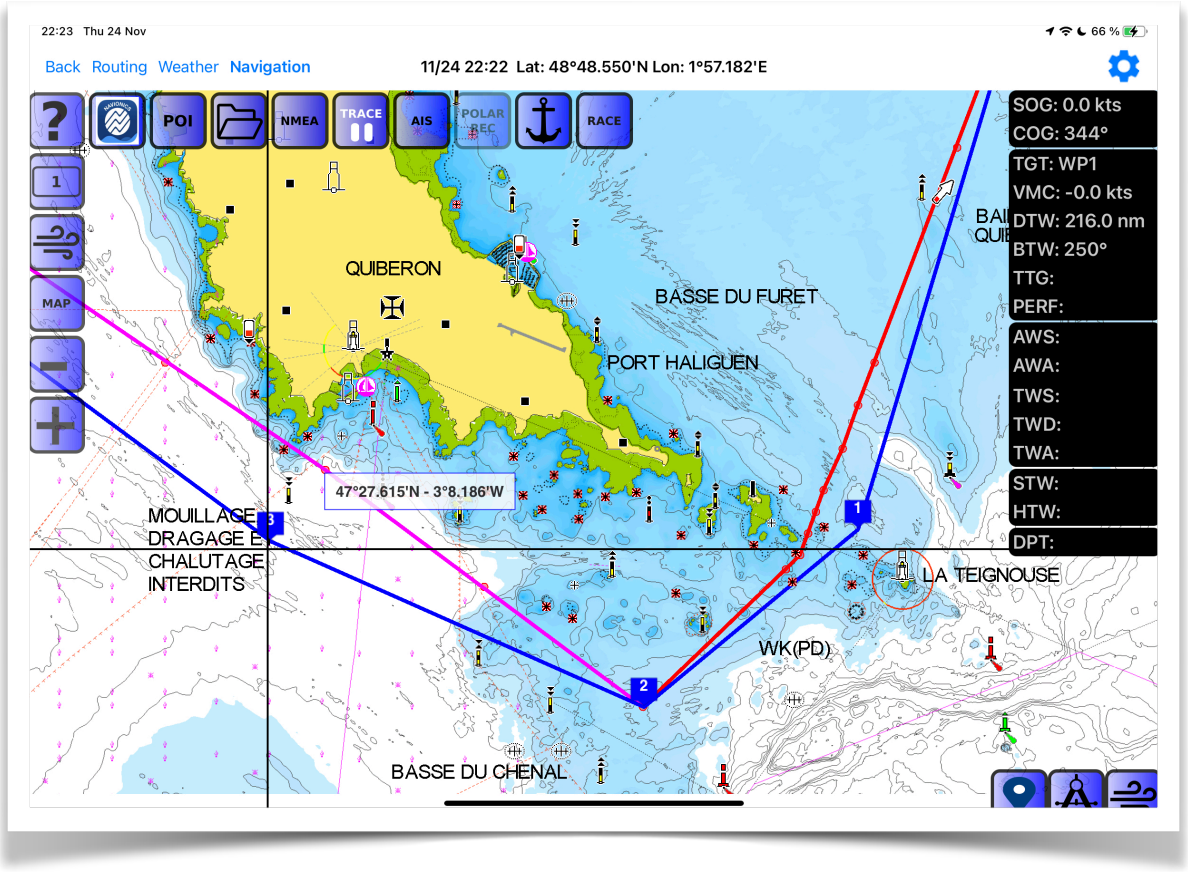
We then arrive on the navigation screen.

In navigation mode, I can refine the route by adding waypoints to avoid dangerous areas, or simplify routing by reducing the number of turns, for example.
The new bathymetric cartography greatly simplifies this task.
.

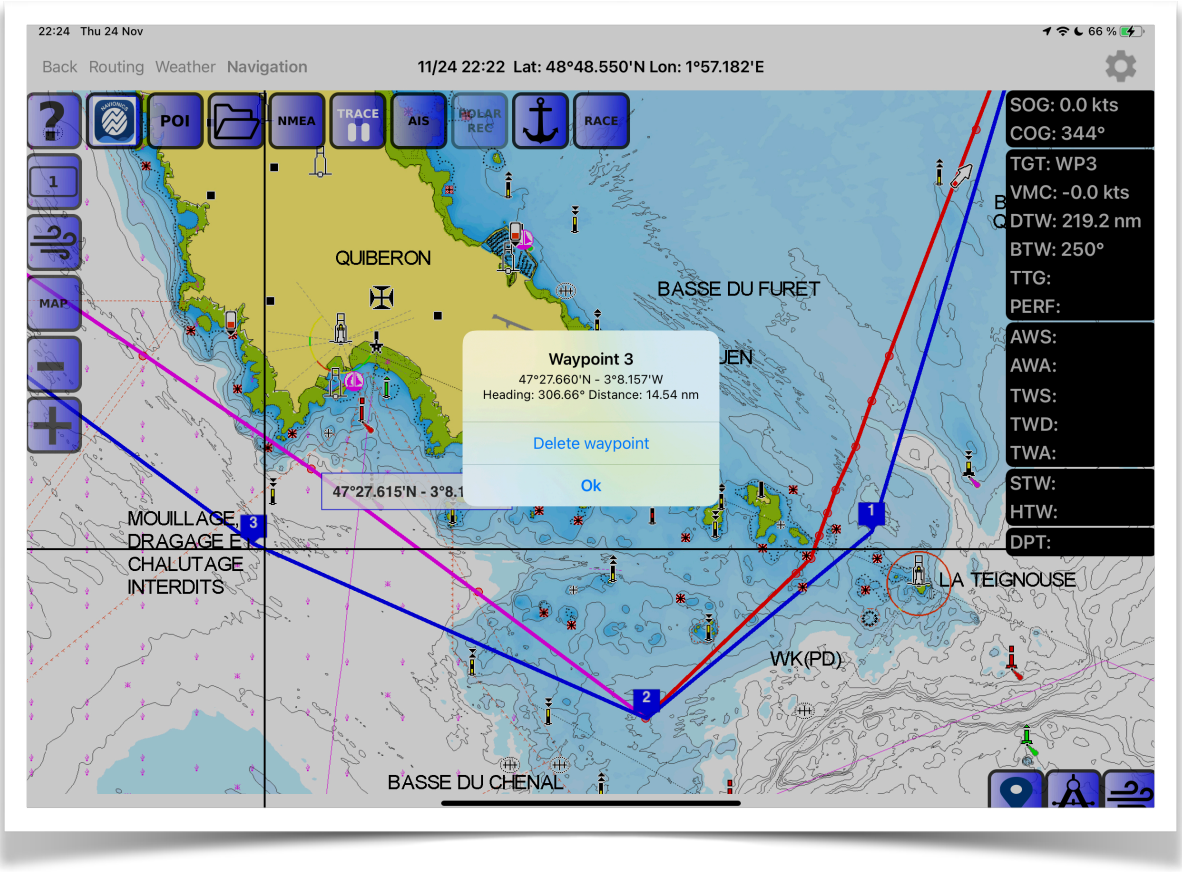
At sea, all you have to do is select the active waypoint to see all the important information appear: Course and distance to the waypoint, VMC (Velocity Made to Course, sometimes incorrectly called VMG), duration, etc. on the map background SHOM, other raster chart or Navionics chart

You can add, move or delete waypoints as in routing mode:

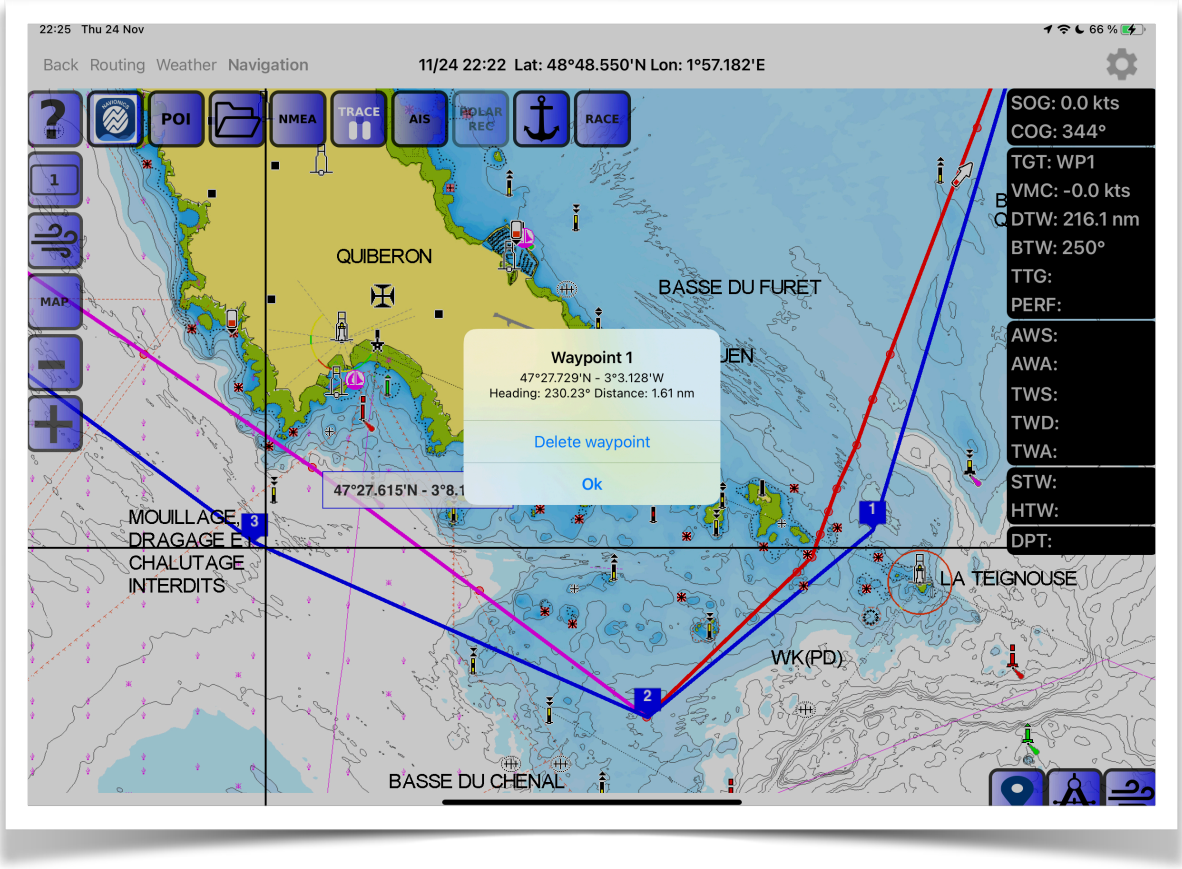
- Short click on the straight blue line to create a waypoint.
- Long click to select the waypoint. The number moves slightly upwards. Drag to desired position.



- Short click on the waypoint. The information is displayed. Then short click again to be able to delete it.

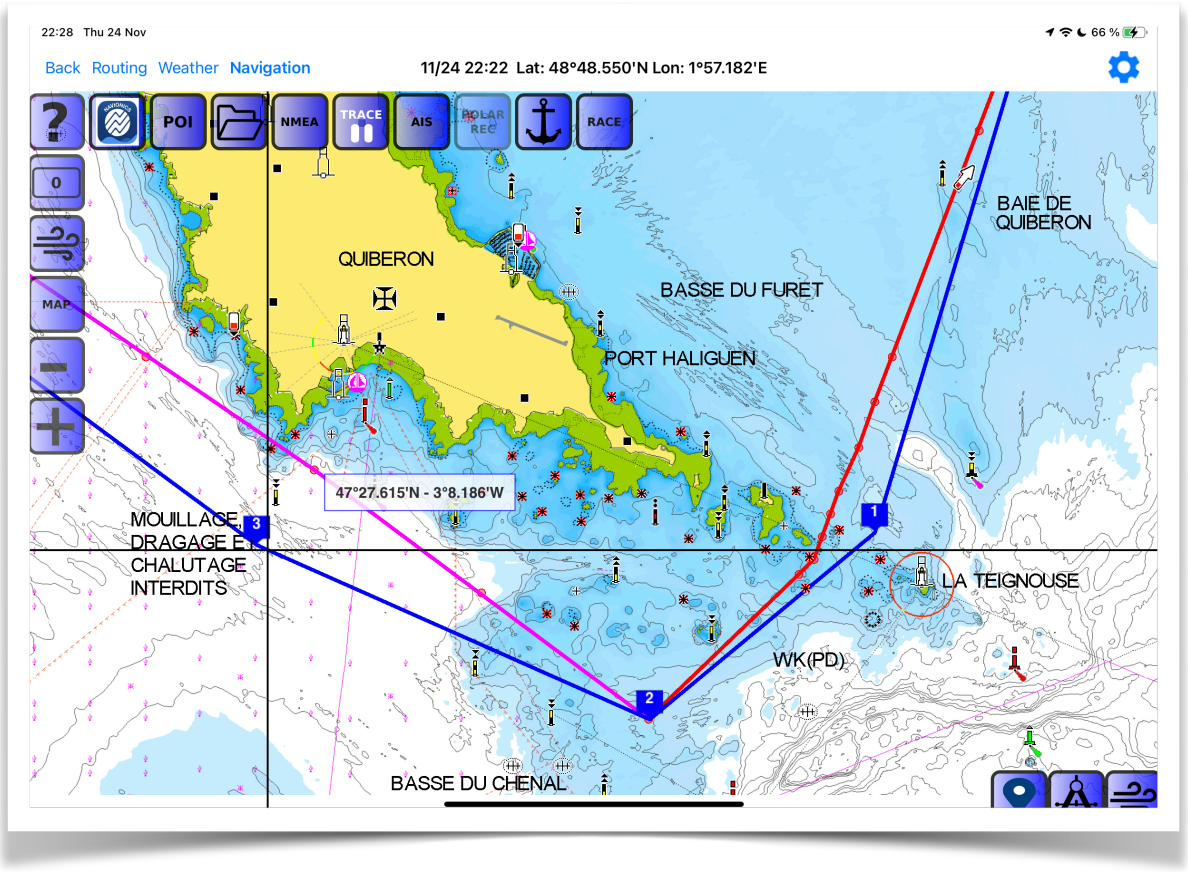


In navigation, the next waypoint will be selected by making a short click on it.



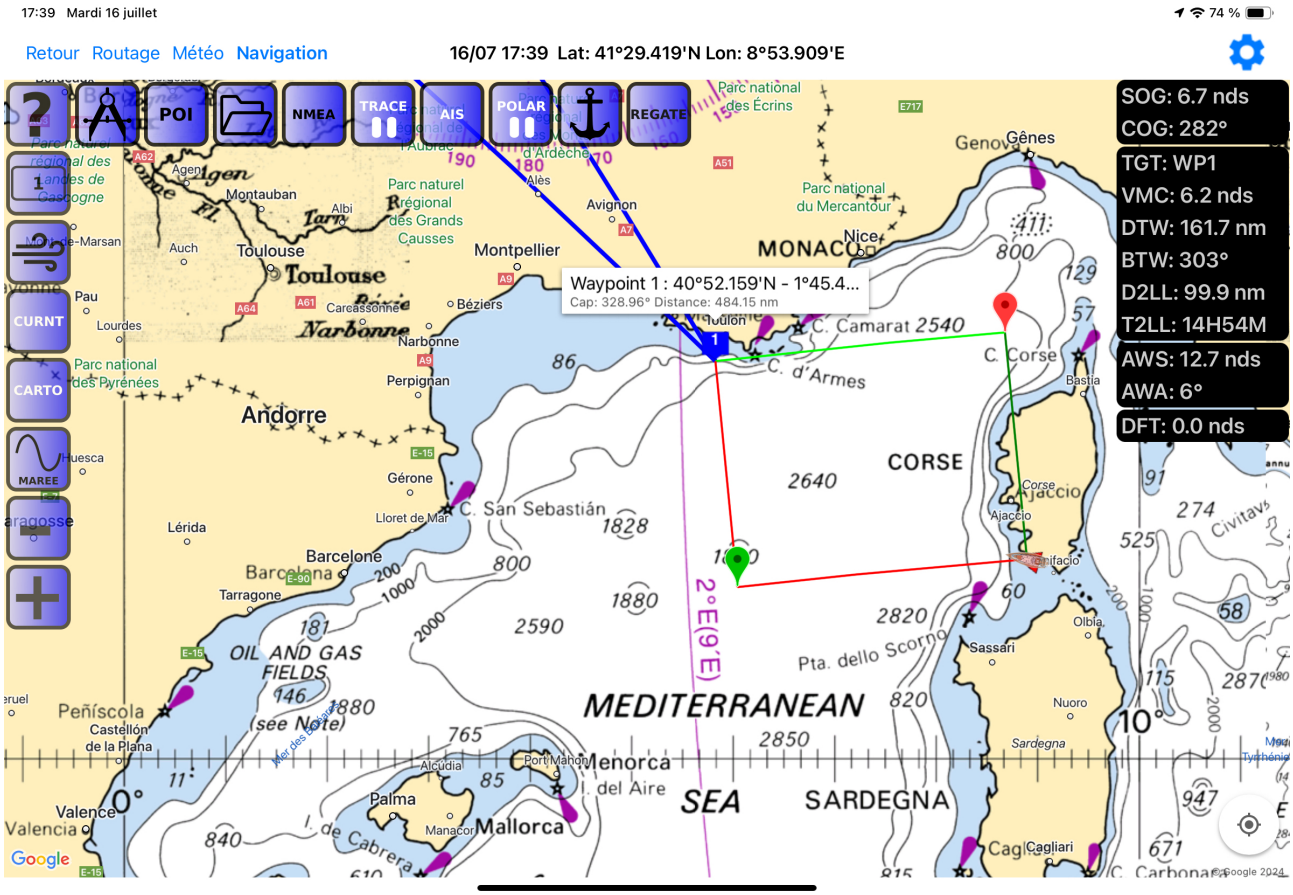
The Avalon navigation screen has 3 different formats that can be chosen by pressing the icon: 

Position 0: No instruments display

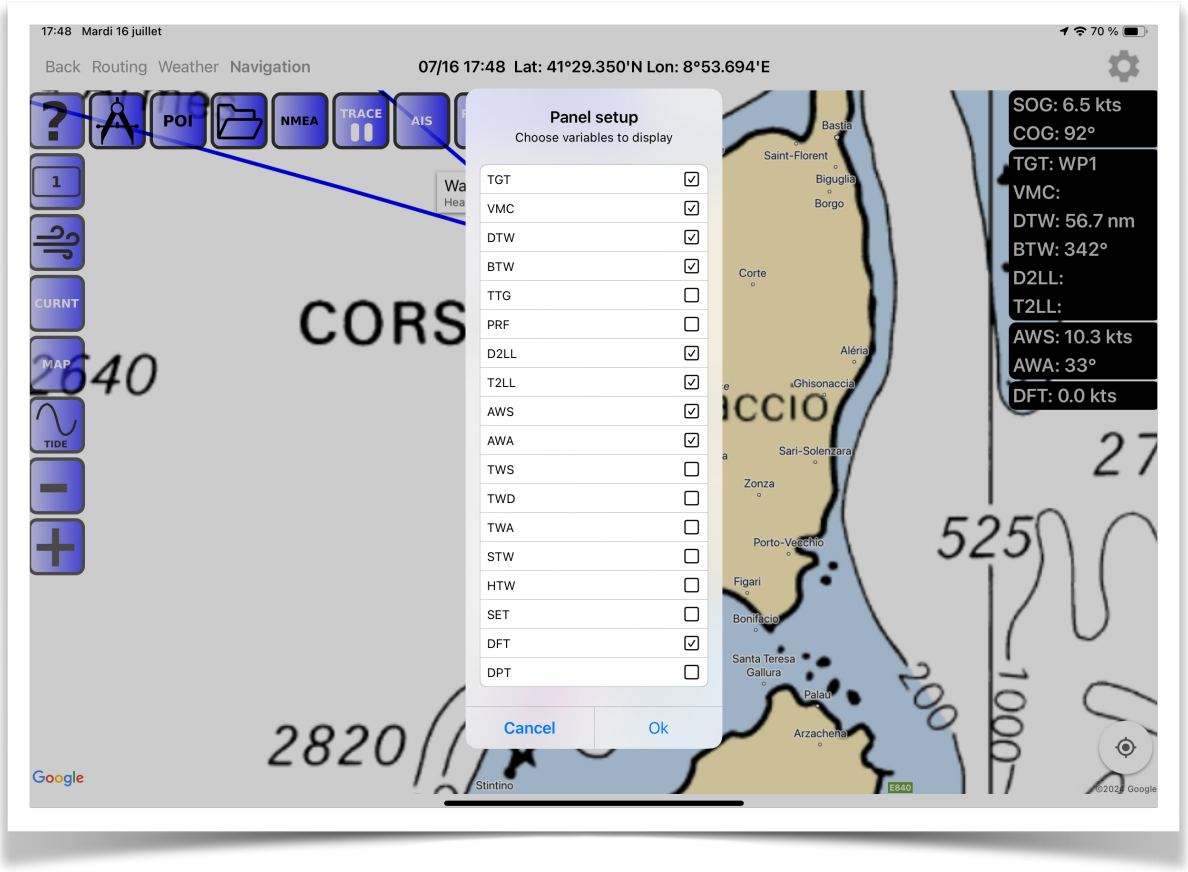


Position 1: Digital instruments display

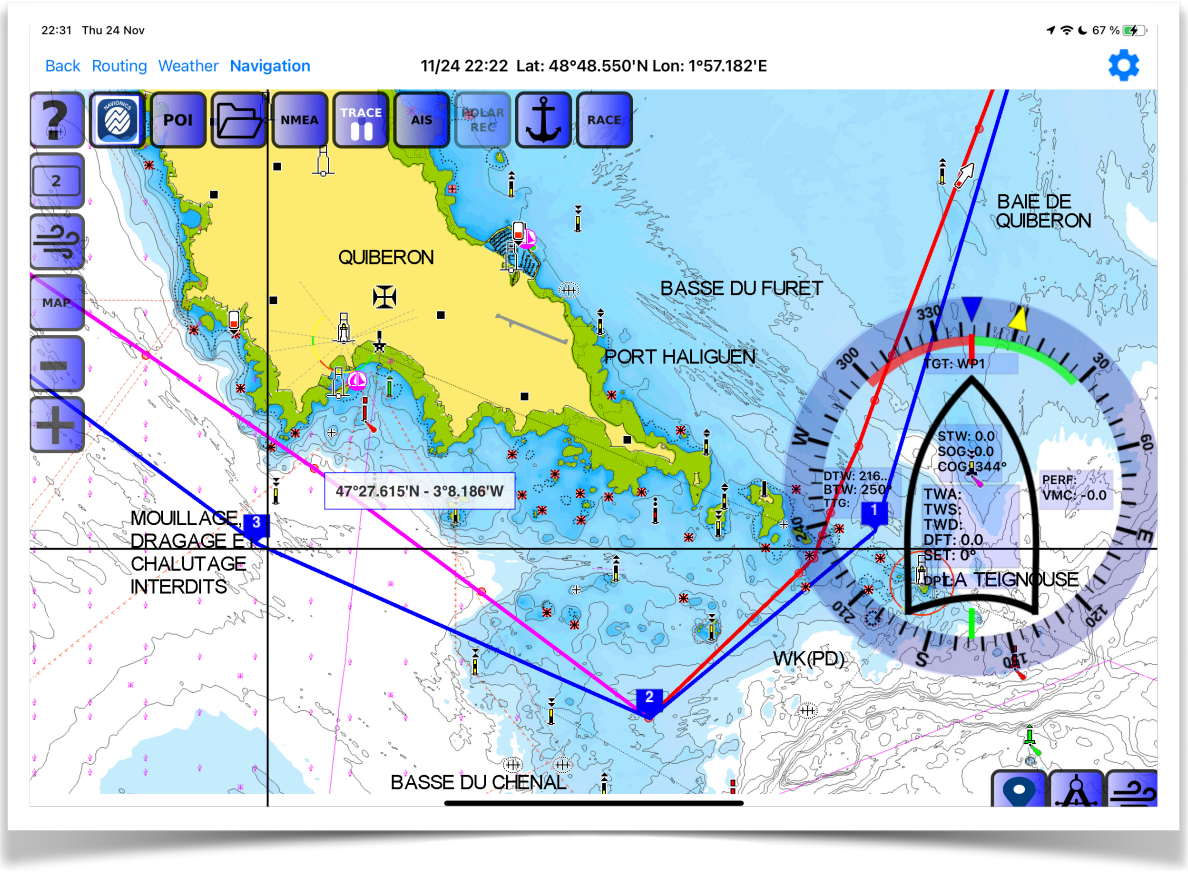
From version 6.8, you can select the information that you want to display



Click on the COG and SOG area to select the desired data:



Position 2: Instruments display in a compass

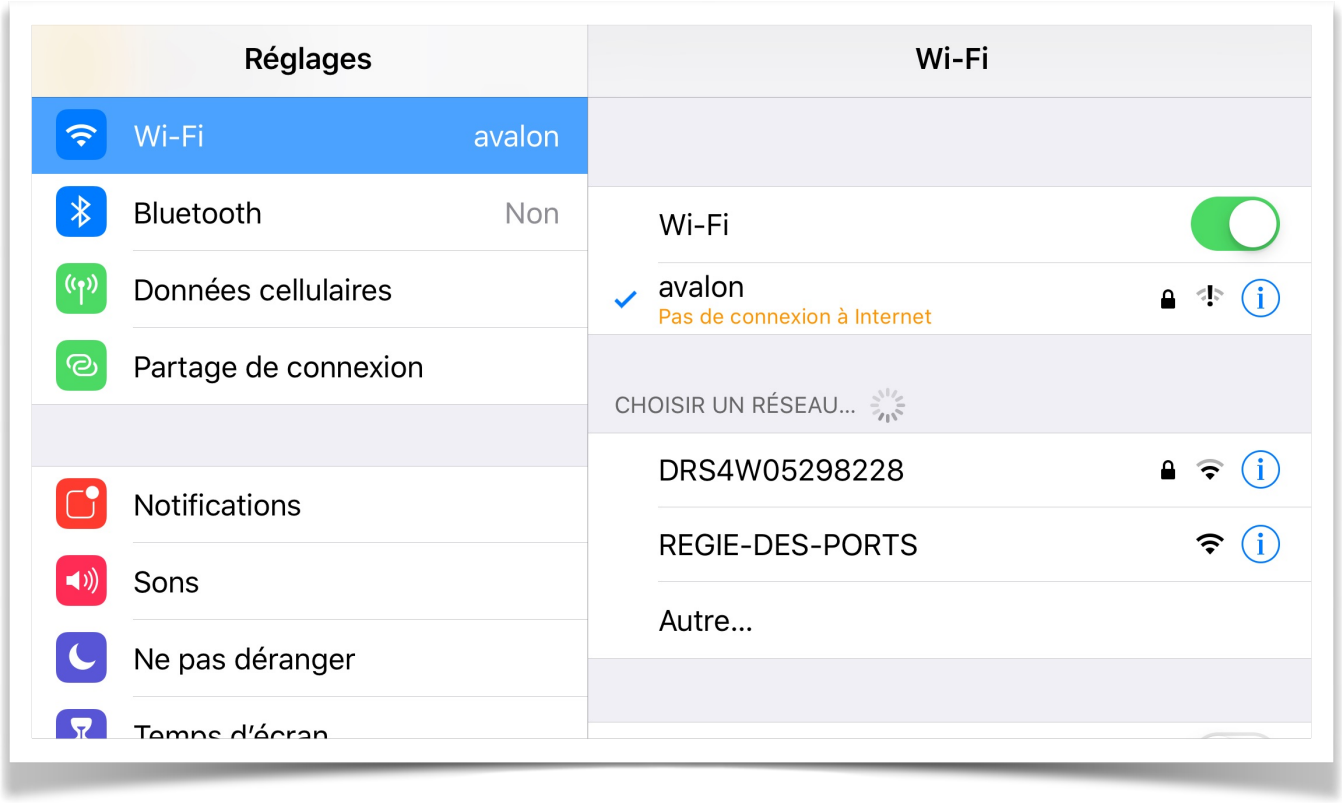


The software works the same way on Navionics or raster charts.charts.

8. AIS and NMEA connection

To take full advantage of the possibilities of Avalon Offshore in Navigation (AIS and NMEA) you must connect your tablet/telephone(s) to the Wifi network. The purpose of this document is to explain to you step by step how to proceed.

Step 1: Connect your tablet or phone to the on-board wifi network



Step 2: Launch Avalon and go to "Navigation" menu settings

Go to the AIS/WIFI screen then tap on auto connection.
If your WIFI router is known to Avalon, the connection parameters will update.

Otherwise, you will have to look in the documentation of your WiFi router for the server address and the port.

You can also refer to the equipment chapter of our website.

Then activate AIS/NMEA

If the parameters are correct, the AIS and NMEA messages will then be displayed in the gray window. AIS targets will appear on the navigation screen as soon as you "return". The AIS/NMEA icon will turn white in the navigation screen.

9. GPS Tablet or NMEA connection

For tablets with the GPS function, the Navigation module makes it possible to establish a real navigation route from the theoretical routing and to follow this route once at sea.

It is essential to have a GPS to follow your navigation at sea. This GPS can be that of the tablet or that of the edge, if you connected Avalon to the NMEA of the edge by Wifi.

The choice of GPS is made in the parameters of the NAVIGATION module.

Warning: If you are using the tablet GPS, you must ensure that Avalon has been authorized to access the GPS in the tablet settings.

10. Signification des indicateurs de l’écran navigation

GPS functions

- COG: Course Over Ground
- SOG: Speed Over Ground
- TGT: Active waypoint number
- VMC: Velocity Made to Course
- BTW: Bearing To Waypoint
- DTW: Distance To Waypoint
- TTG: Time To Go
- D2LL: Distance to LayLine (tack/gybe) with Racing Option
- T2LL: Time to LayLine (tack/gybe) with Racing Option

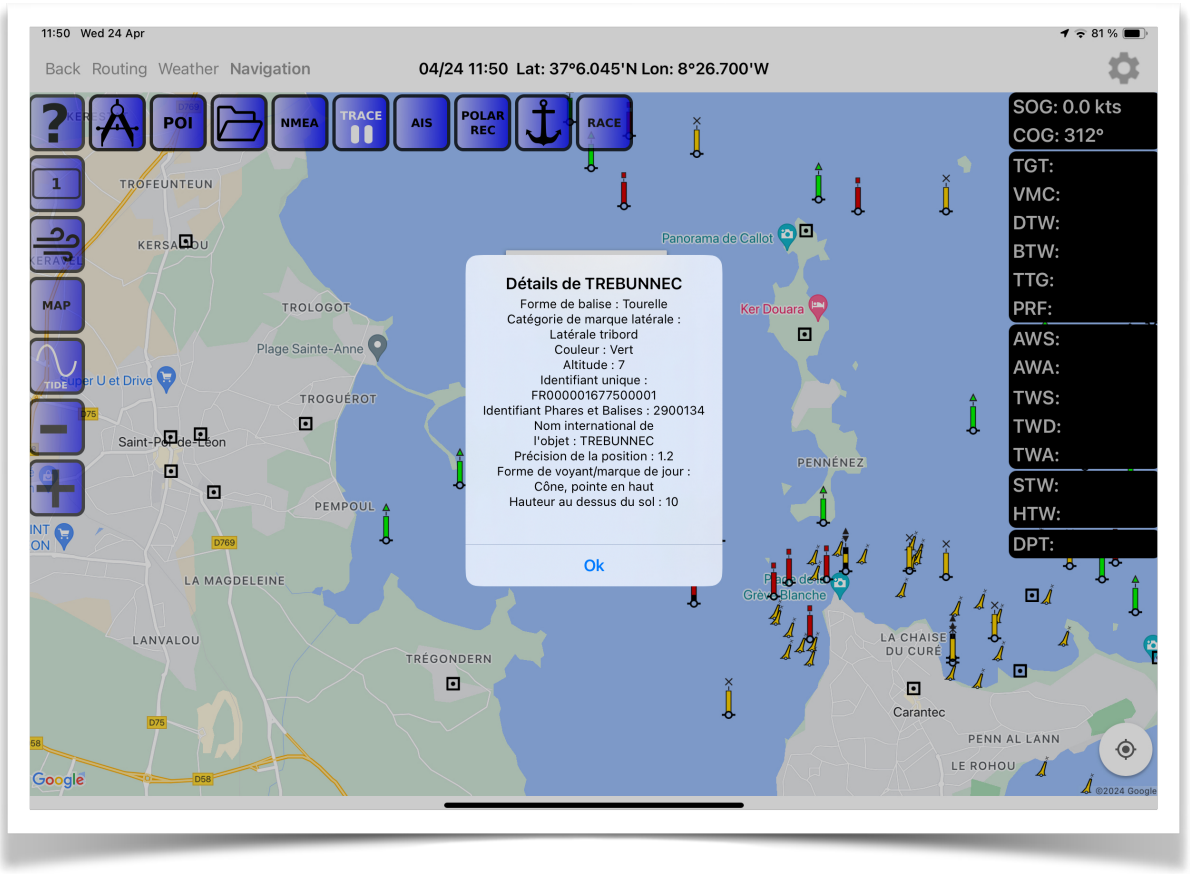
NMEA 0183 fonctions NMEA

- PERF: Performance indicator. Real speed compared to the theoretical speed of the polars. Can be very accurate if you calculated your polars with Avalon VPP.
- AWS: Apparent Wind Speed
- AWA: Apparent Wind Angle
- TWS: True Wind Speed
- TWD: True Wind Direction
- TWA: True Wind Angle
- STW: Speed Thru Water
- DFT: Drift Speed
- SET: Drift Direction

11. Display lighthouses and beacons

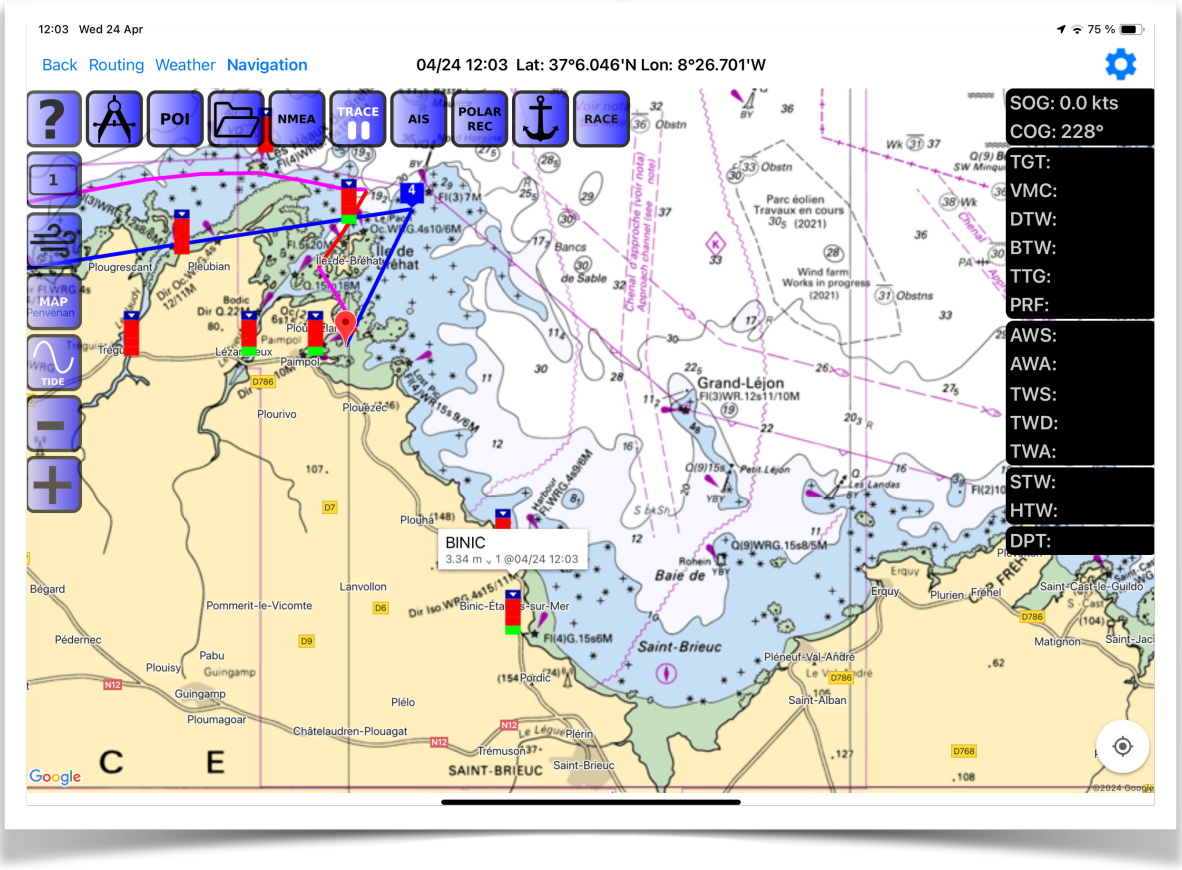
In France, it is possible to display lighthouses and beacons and their detailed information on all the maps available in Avalon. This facility will be extended to other countries where this information is public. If the "beacons" option is checked in the system's general preferences, the headlights and beacons will be displayed from a certain zoom level.

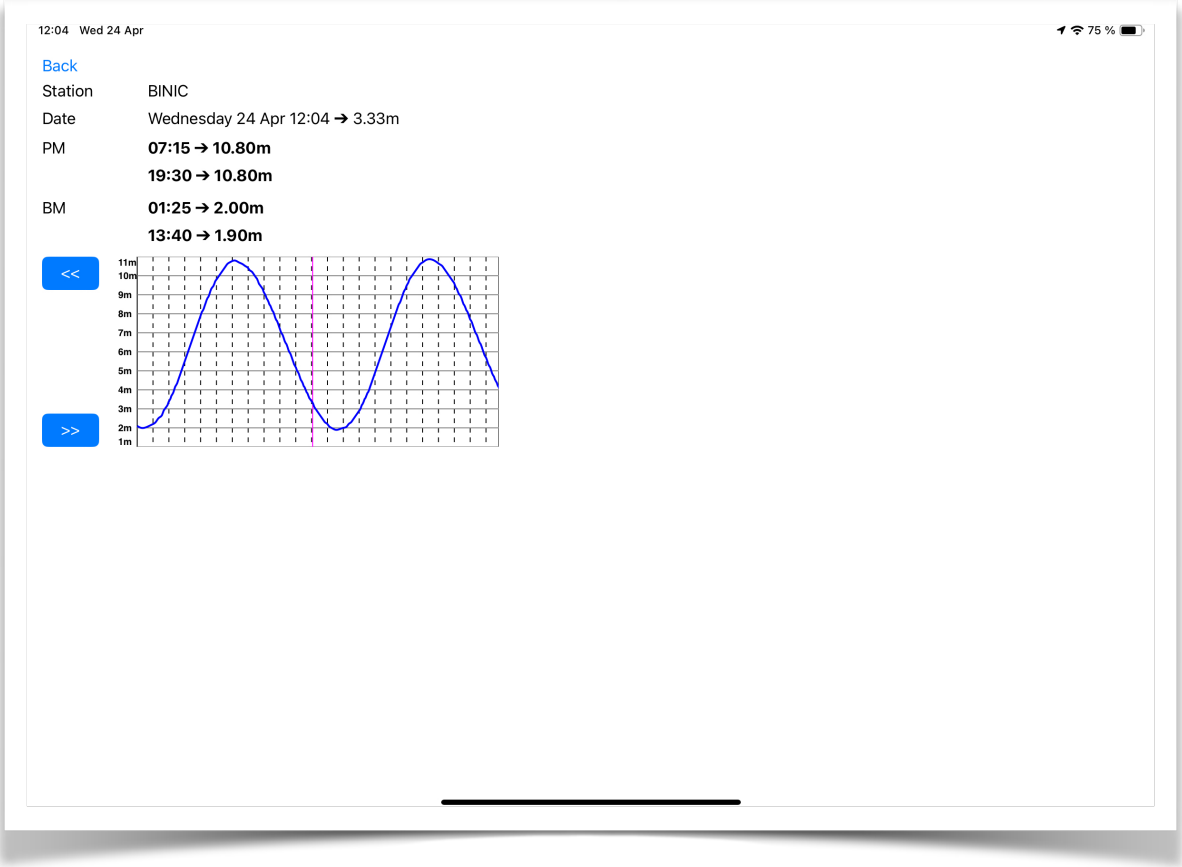
This function is of course available with Avalon vector charts, in all navigation areas covered by these charts.



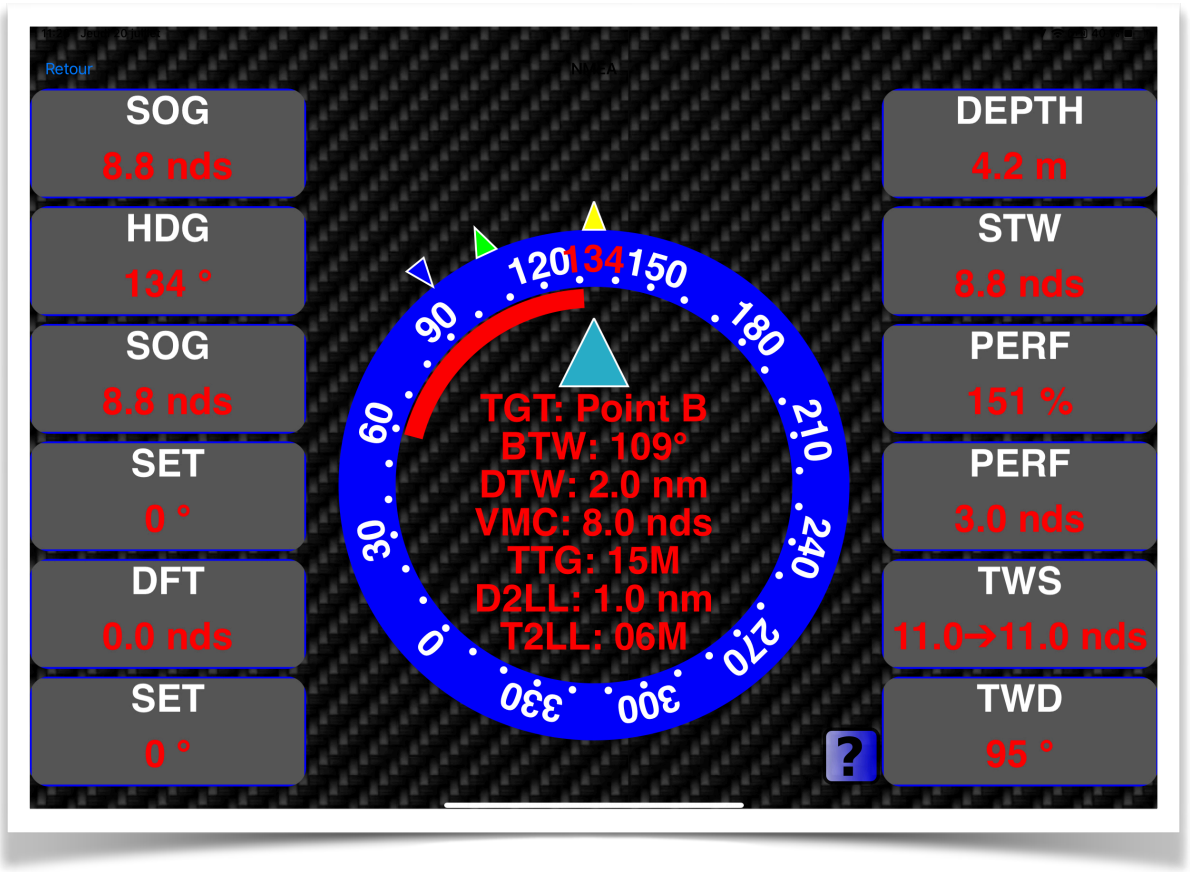
12. Display tides data

Tide and water level information is available in the Navigation module on all charts compatible with Avalon: Google, SHOM Raster, Navionics, mbtiles. Tide information is displayed on the navigation module area only. Tap on the "Tide" icon on the left side of the screen.





13. NMEA instruments display screen



The center compass is set. The 3 tabs rotating around the screen represent:
Wind direction (where the wind is coming from)
The direction of the current (where the current is pushing)
The course towards the next target (waypoint or arrival) defined in the navigation screen
Angular arcs represent laylines and are dynamically calculated

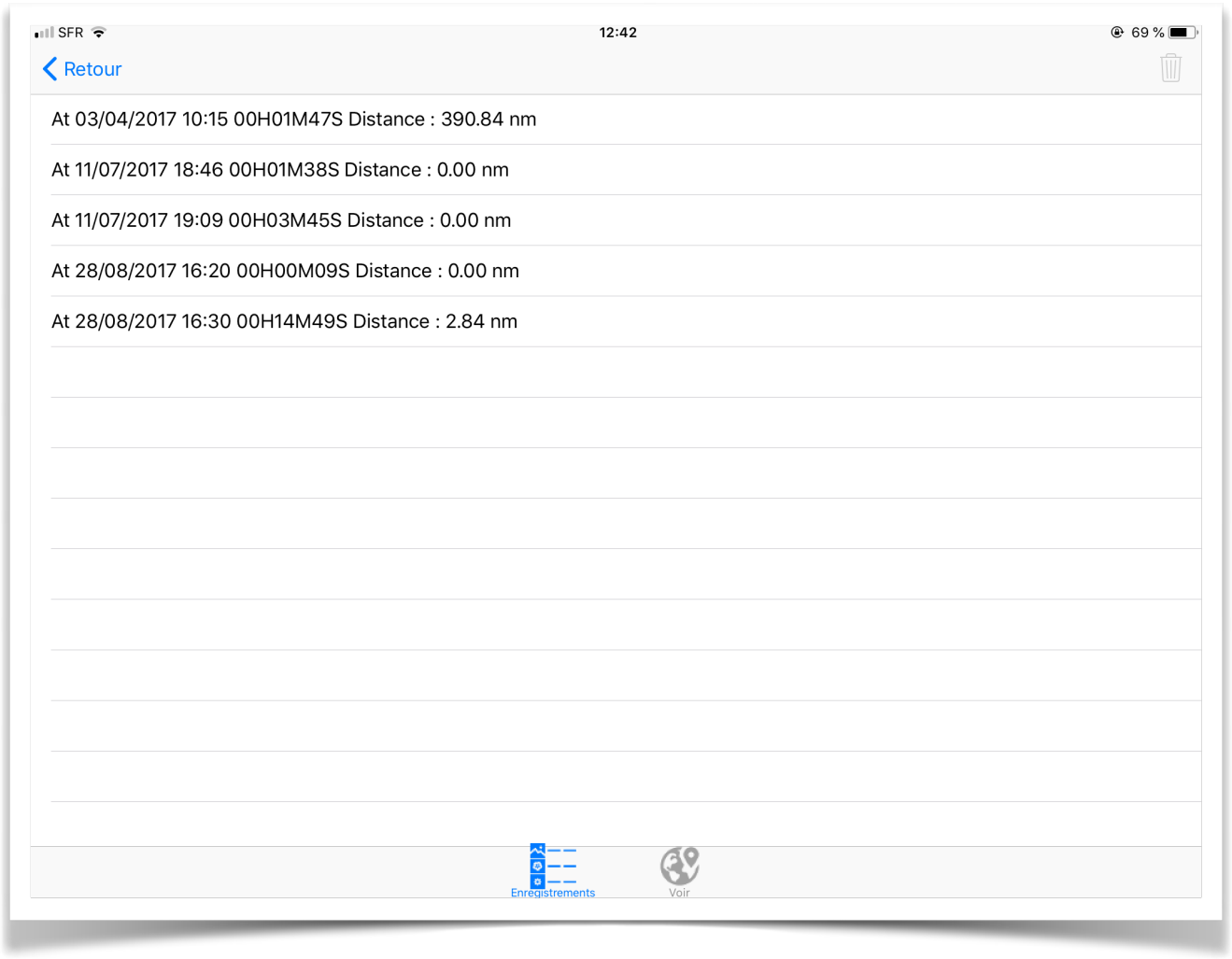
The 16 side displays (8 on a phone) are fully customizable. This screen is fully customizable. A long tap on the center of a dial allows you to choose the data to display in this dial from:

- TWS True Wind Speed
- TWD Trues WInd Direction
- TWA: True Wind Angle
- Course thru water
- STW: Speed Thru Water
- RPM
- Depth (meters)
- Depth (feet)
- Perf: Boat efficiency vs polar speed
- AWS: Apparent Wind Speed
- AWD: Apparent Wind Direction
- AWA: Apparent Wind Angle
- GWD Ground Wind Speed
- GWD Ground Wind Direction
- DFT Drift Speed
- SET Drift Direction
- D2LL: Distance to LayLine (next tack/gybe) with Racing Option)
- T2LL: Distance to LayLine (next tack/gybe) with Racing Option)

14. Board Book

The logbook is now integrated into the NAVIGATION module.
It allows you to view the traces of your recorded cruises.

Select a route then tap "view" to view it. This function will be improved with the possibility of storing routes with the main NMEA data as well as the possibility of editing a logbook in pdf format.

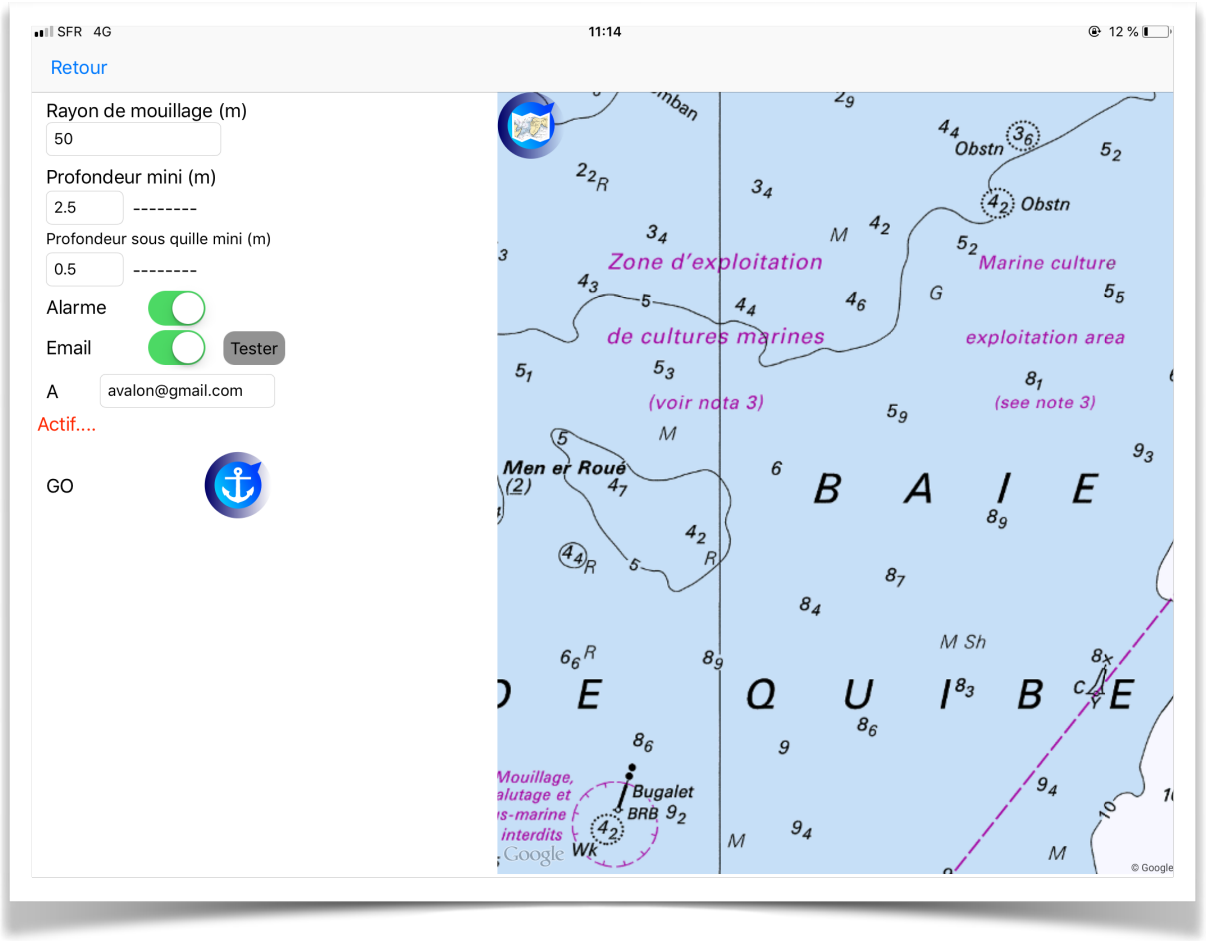


Apple

15. Anchor alarm

We consider fairground anchoring to be an integral part of navigation and therefore preferred to integrate the anchor alarm directly into the "navigation" menu of Avalon Offshore rather than creating a specific application.

Tap on  to enter the anchor alarm screen.



This system combines a distance alarm and a depth alarm. The depth alarm requires sonar data to be received by Avalon through a NMEA wifi router.

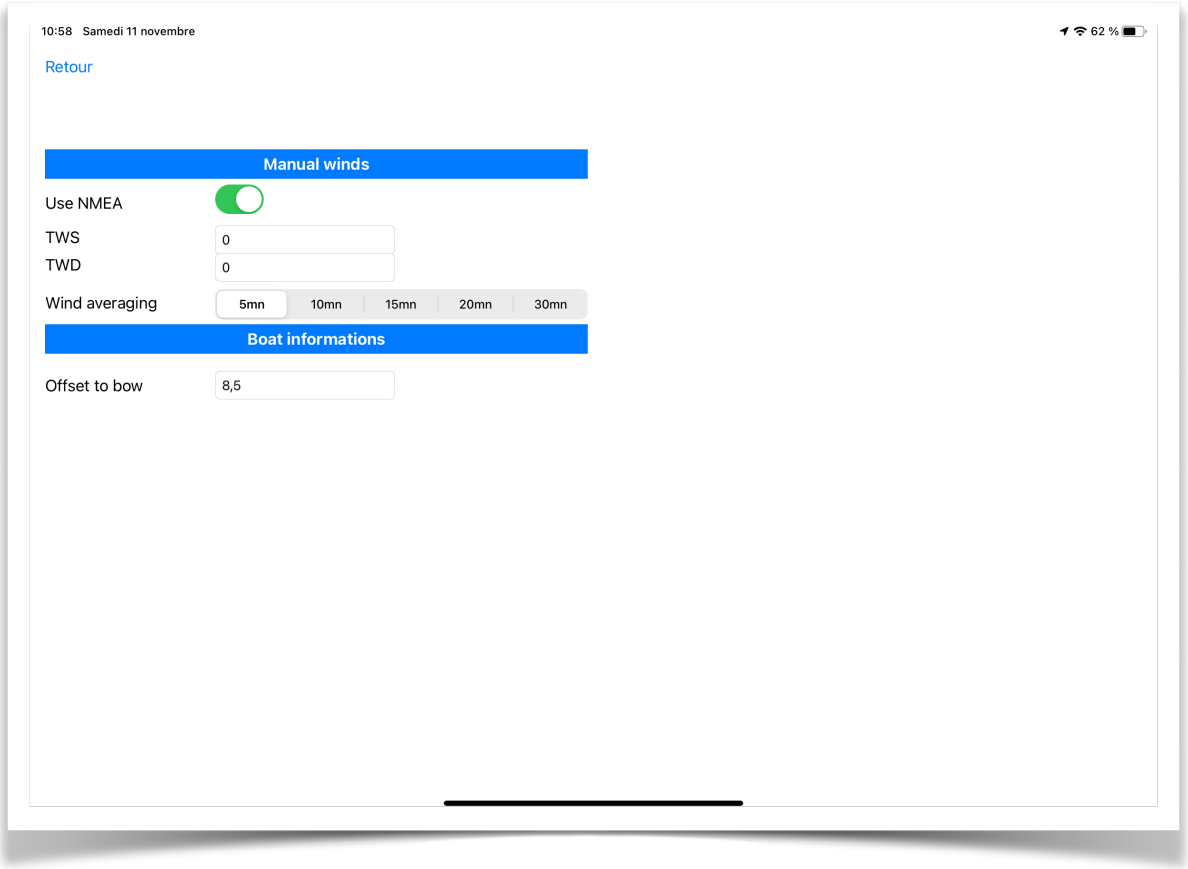
Tap on the screen to fix the position of the anchor.
Possibly change the limits of distance around the anchor and depth.
If you wish to receive an alarm on your phone, specify your email address. With this in mind, it may be interesting to have a tablet with a SIM map.

To activate the alarm, tap on: 

It turns white as soon as the alarm is on.

16. Regatta optimization

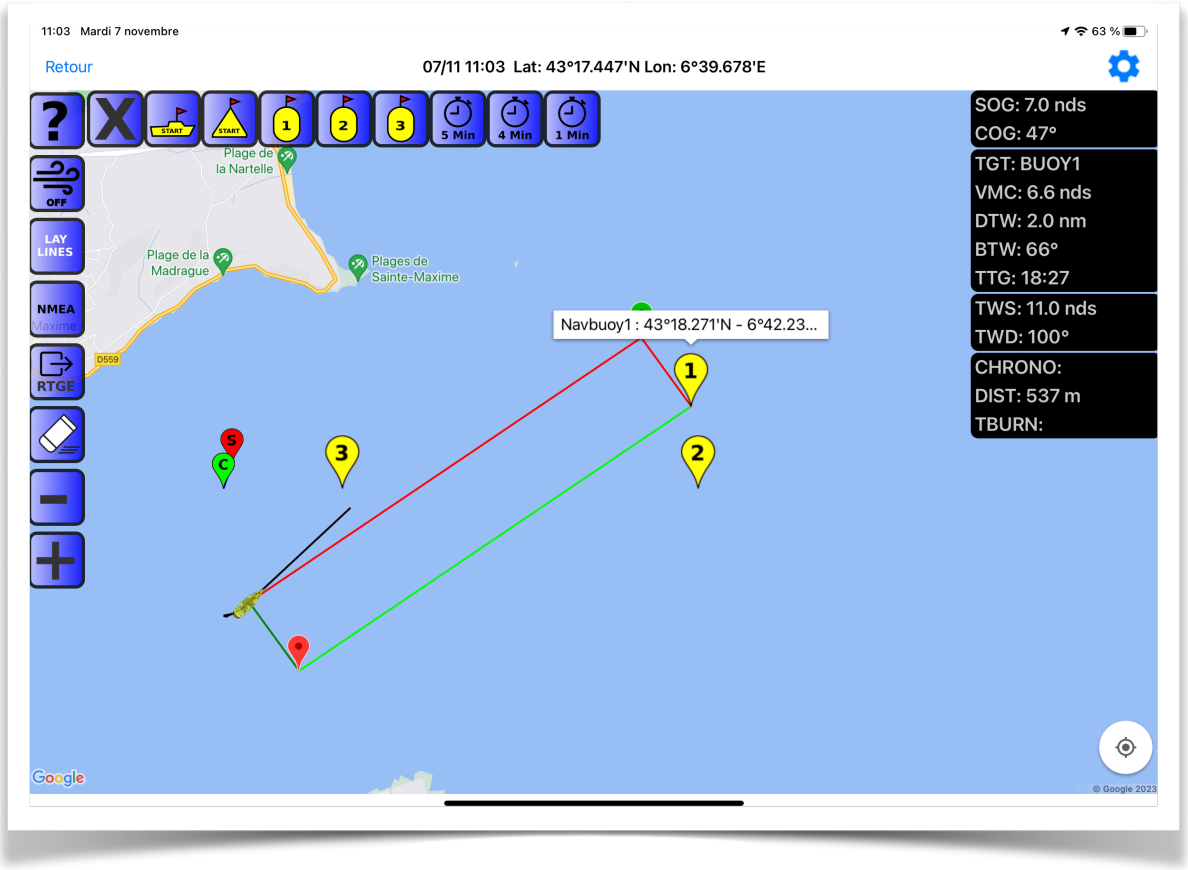
a. Settings



Tap on the blue gear box to display the settings panel:

- Use NMEA: Check this box if Avalon is connected to NMEA by wifi, otherwise set the wind (TWS and TWS) manually
- WInd average: allows you to display the average wind over the last 5, 10, 15, 20 or 30 minutes. This makes it possible to judge whether the wind is giving in or refusing
- Offset to bow: to set the distance between the tablet and the bow of the boat to be sure of the position of the bow at the start point.

b. Meaning of the icons



Display meaning of the icons

No wind display

Instant wind

Average wind over the last x minutes

Display lay lines

Go to NMEA instruments screen

Export the start and the buoys to the routing module

Erase boat trace

Unzoom

 Zoom

 Erase regatta

 Record committee boat

 Record start buoy

 Position buoy 1

 Position buoy 2

 Position buoy 3

 5 minutes signal

 4 minutes signal

 1 minutes signal

q. Manual

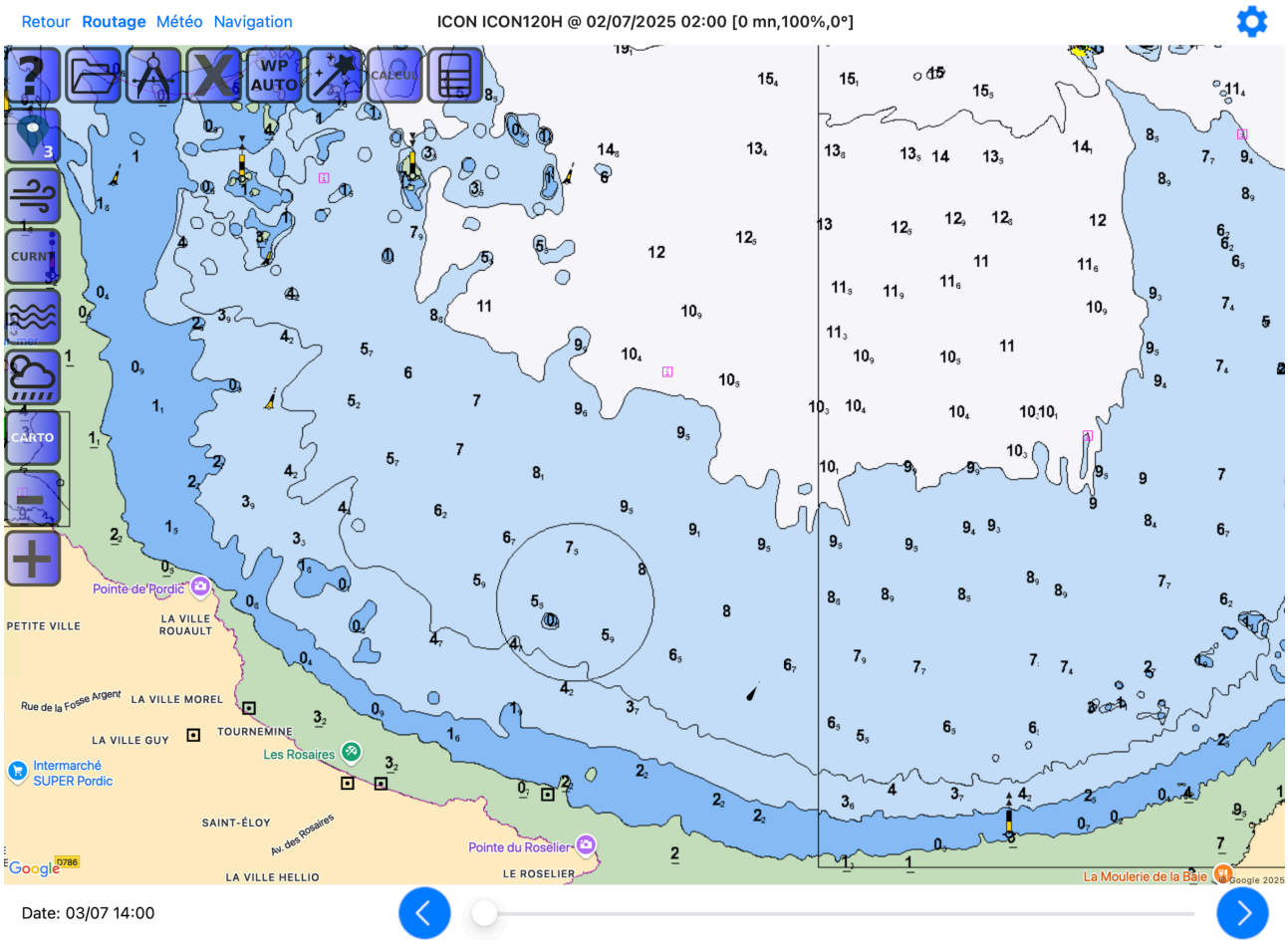
- Go to the committee boat to record its position
- Do the same with the starting buoy to mark the starting line
- Position the course buoys with the bearing and distance from the committee boat
- Choose the starting tack. Comparing the average wind and the instantaneous wind can help.
- Start the 5 minute timer at the top. Do the same every 4 minutes then every minute
- Monitor the position of the bow planned for the start signal.
- Monitor the “Time to burn” up to the start so as to keep it at 0 (better with a small margin)
- Point to buoy 1 and display the lay lines (port and starboard).
- Avalon will tell you the time and distance to the lay line on the chosen edge.

F. Marine Charts

Avalon is compatible with any map in raster format: mbtiles, kap, tiff or geotiff,
Avalon allows you to load your personal maps if they are in a format listed above

1. Packs of Avalon vector maps

.Given the gradual disappearance of master charts from the main national hydrographic services (SHOM, UKHO, NOAA, etc.), we have decided to replace our chart packs, which were created from raster charts from the various hydrographic services, with vector chart packs.
These packs are created from the S-57 digital objects included in the S-57 charts from the main national providers.



a. Available Packs

The available packages are:

- Mediterranean France
- Western Mediterranean (includes French coasts)
- Western France (Atlantic and French Channe coasts)

- English and French Channel
- Portugal and Atlantic Spain
- Great Britain and Ireland
- Belgium, Holland, and Eastern England
- Transatlantic Islands (Azores, Madeira, Canarias, Cabo Verde, Bermudas)
- West Indies
- USA Northeast Coast
- USA Southeast Coast
- USA Gulf of Mexico
- USA Great Lakes
- USA West Coast
- Hawaii
- Polynesia
- New Caledonia
- Indian Ocean

Details of these packages can be viewed here:
https://www.avalon-routing.com/wp-content/uploads/2025/01/Carto-Avalon-2025-ENC.pdf

Three packages are available for free 15-day evaluation:
- Mediterranean France
- Western France
- USA Northeast

---

b. Purchasing Avalon maps

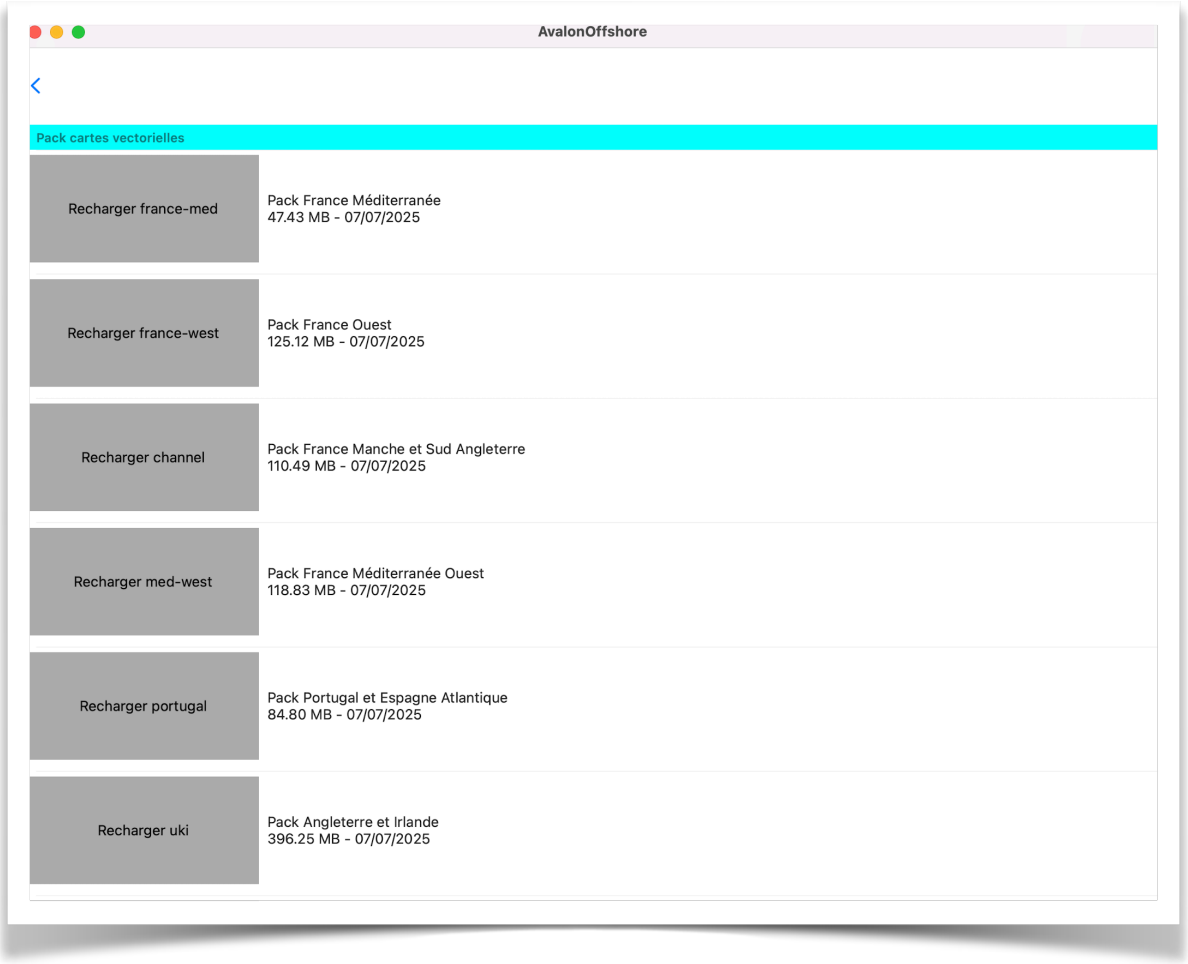
Vector map packs are only available on the Avalon Store. They are sold for use for one year. They can be installes on Apple and Google platforms.

You must have an Avalon Cloud account and be logged in to this account on our website to purchase the packs.

---

c. Downloading Avalon Vector Packs

In the "Avalon Cloud" module, ensure that the tablet is connected to Avalon Cloud with the same account used to purchase the pack.
Go to STORE then MANAGE (maps).
Go to "Vector Map Packs."
The purchased map will appear. Click Load/Reload to install it on the tablet.



The recently installed map is displayed by default. If you want to view a different map, go to "My Maps" and select the map you want to display.

In the Routing and Navigation modules, the "CARTO" icon must be white for the map to display.

Zoom in to view map details.

3. Cartography Raster (private and public charts)

Avalon is compatible with any raster map format: mbtiles, kap, tiff, or geotiff.
Avalon allows you to load your own maps if they are in one of the formats listed above.
Freely available maps provided by certain organizations are preloaded in the app and therefore free to download to your tablet.
The countries covered are:

- United States
- New Zealand
- Brazil
- Argentina

Raster chart packs based on SHOM, UKHO, and NOAA raster charts were discontinued in early 2025.

Packs purchased in 2024 were updated in April 2025 but will no longer be updated. Users who purchased a "Lifetime" pack can reload them at will from the "Reload SHOM/UKHO Derived Pack" menu.

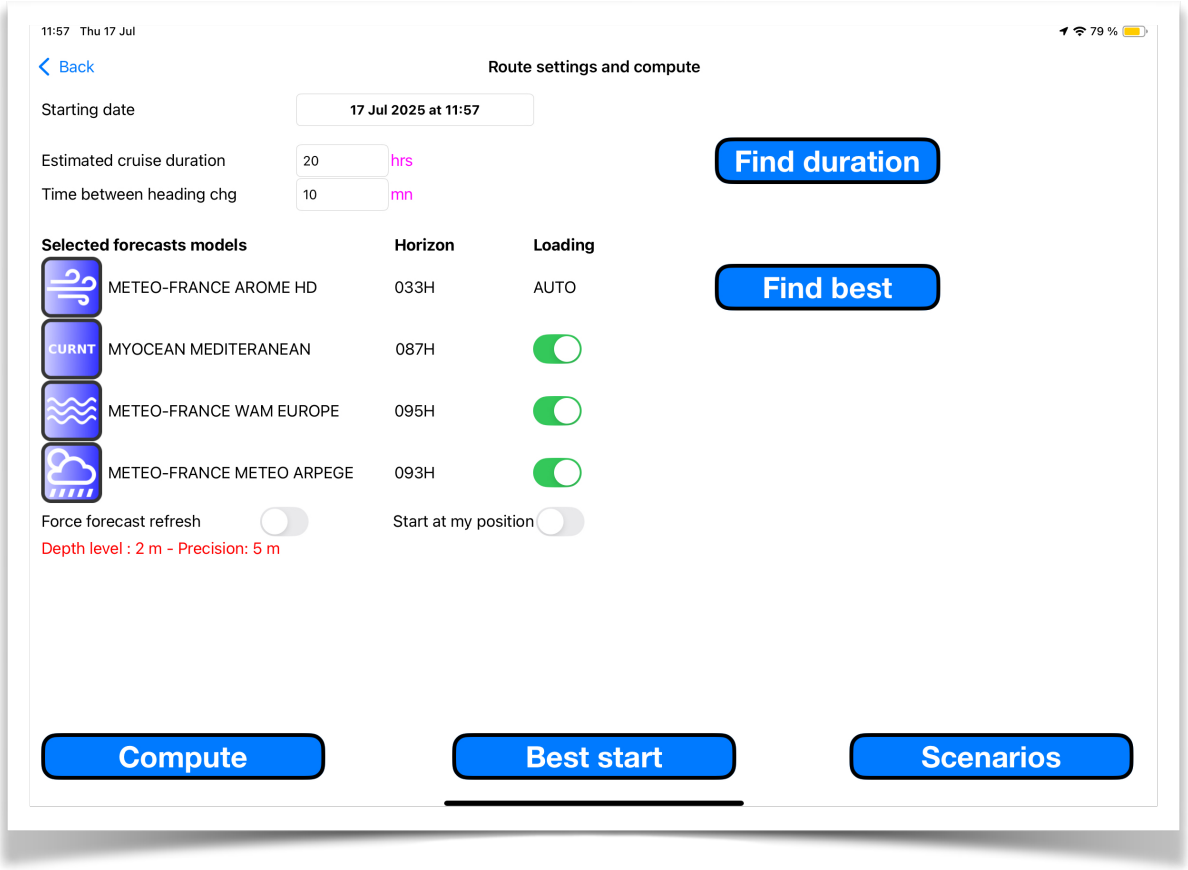
4. Cartography ©Navionics Boating

You can also use your Navionics charts for free in Avalon if you have a Boating subscription with Navionics.

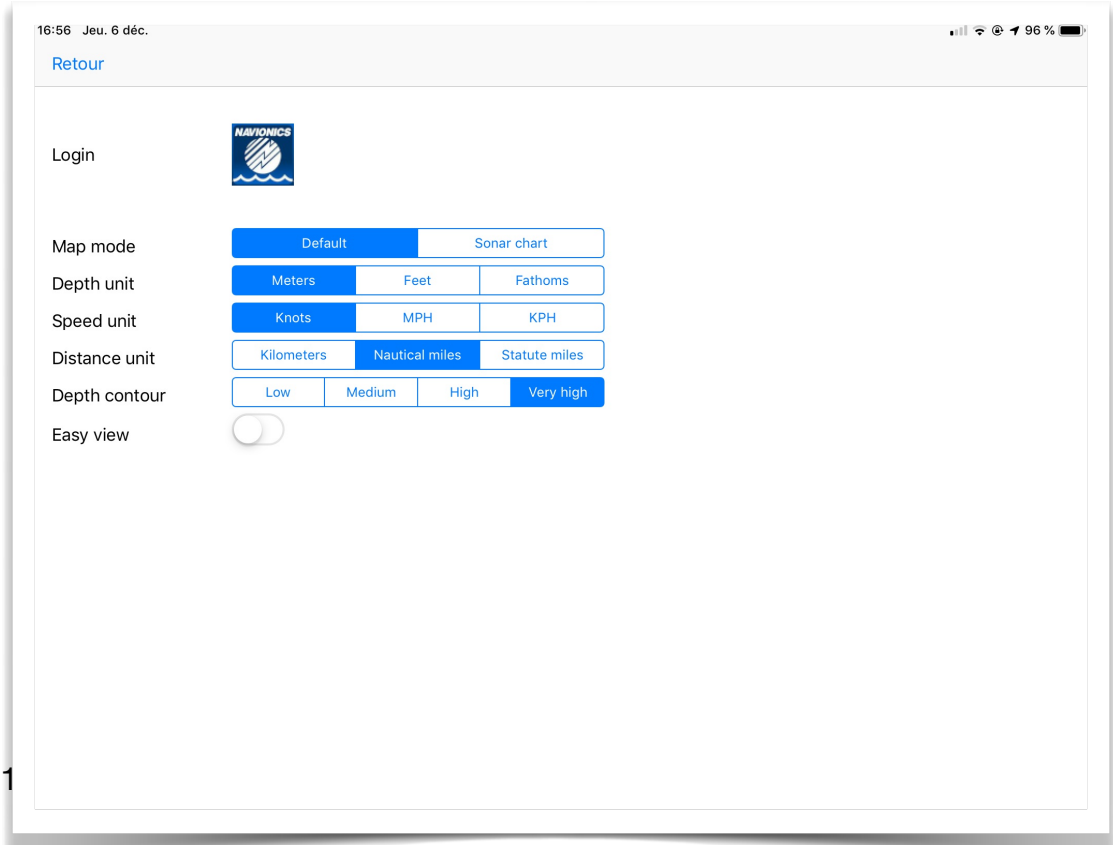
From version 3.7, Avalon Offshore allows users subscribed to Boating or Boating HD to use their Navionics cartography under Avalon in Navigation mode and Routing mode.

Note: You can use Google mapping because you don't need high precision in routing mode.

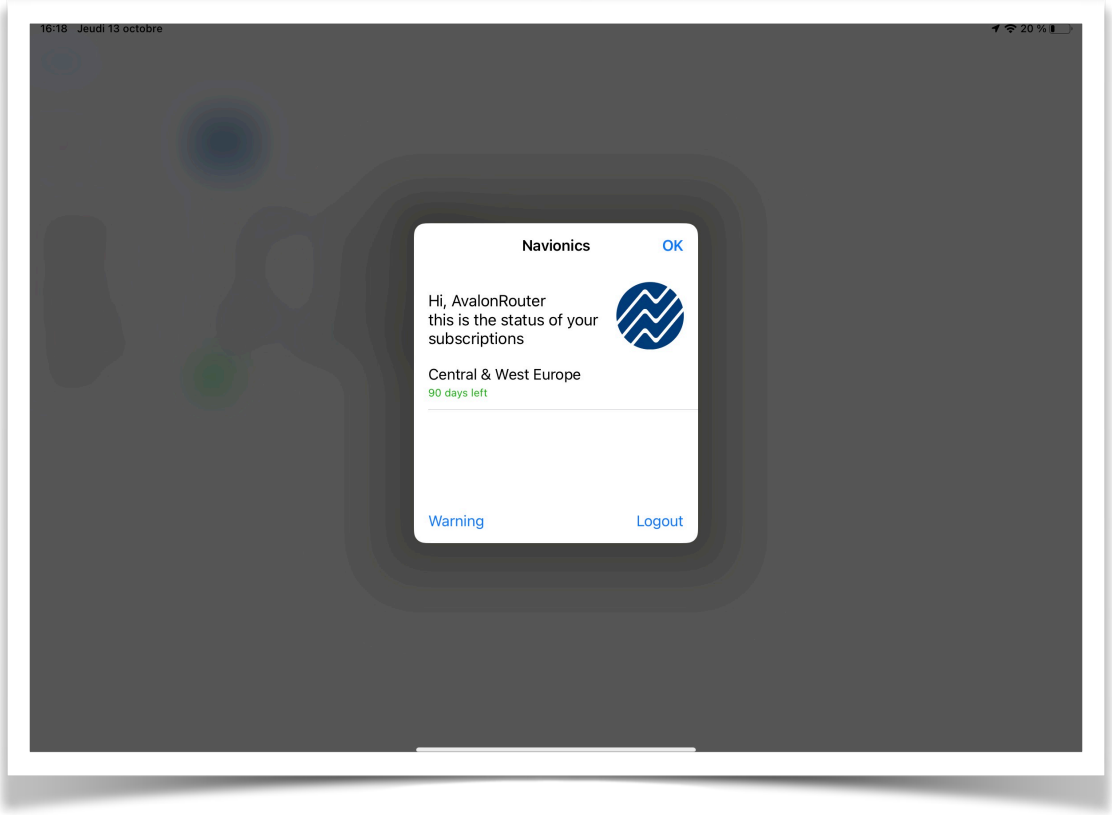
Step 1: Go to settings from the main screen and choose Navionics., instead of raster.



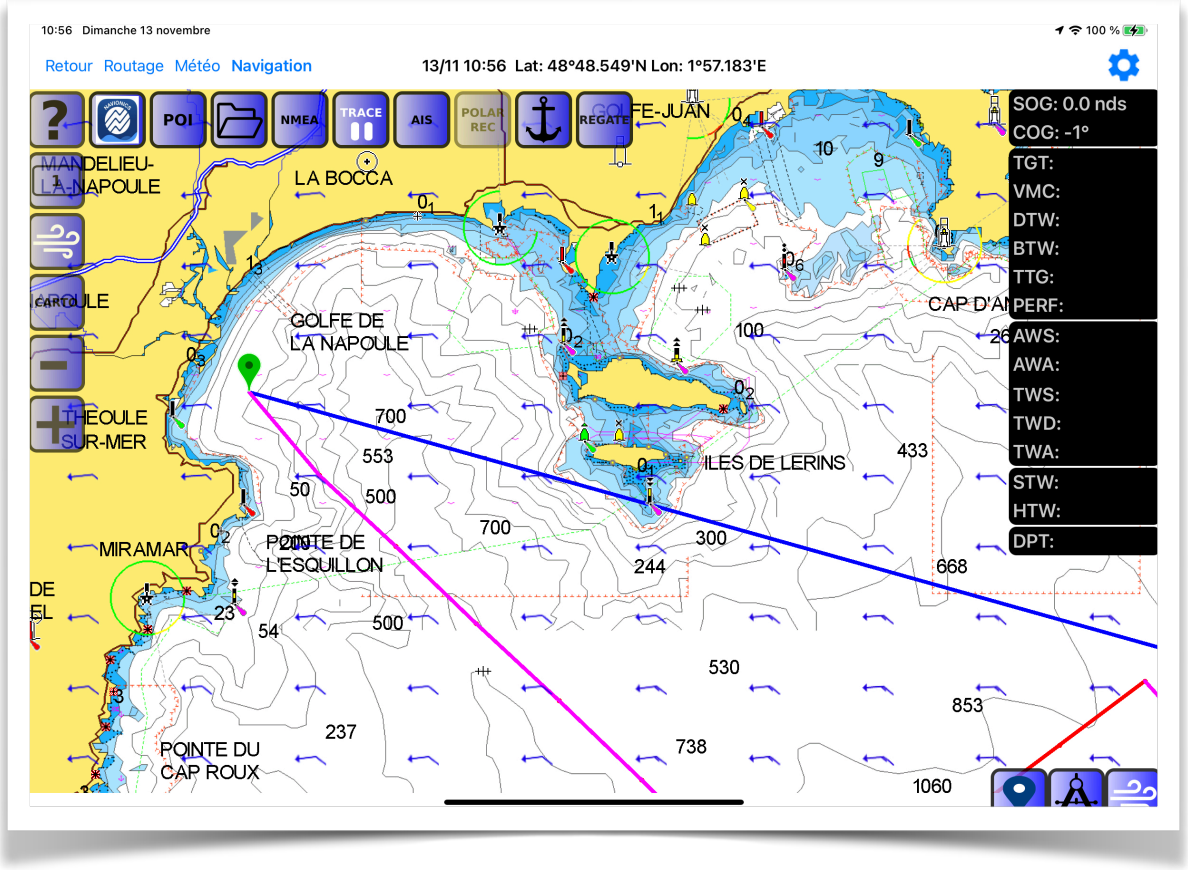
Step 2: Go to navigation, adjust its settings and enter its Navionics identifier ("Login").
Remember to set the Navionics precision (Depth contour) to "Very high ».
You can also save your Navionics identifiers in the Routing screen.



After entering your Navionics credentials, confirmation of your subscription should appear on the screen.
If this confirmation does not appear, you must reset your Navionics® identifiers because they are not recognized by the Navionics map server



Return to the Navigation or Routing screen, then zoom to the area of maps to download in Avalon. It is better to have a good network. Depending on the area to download, it may take more or less time. Please be patient as the loading time largely depends on the Navionics chart server. Areas permanently downloaded to the tablet appear in clear text. Do not forget to load your navigation area before going to sea.

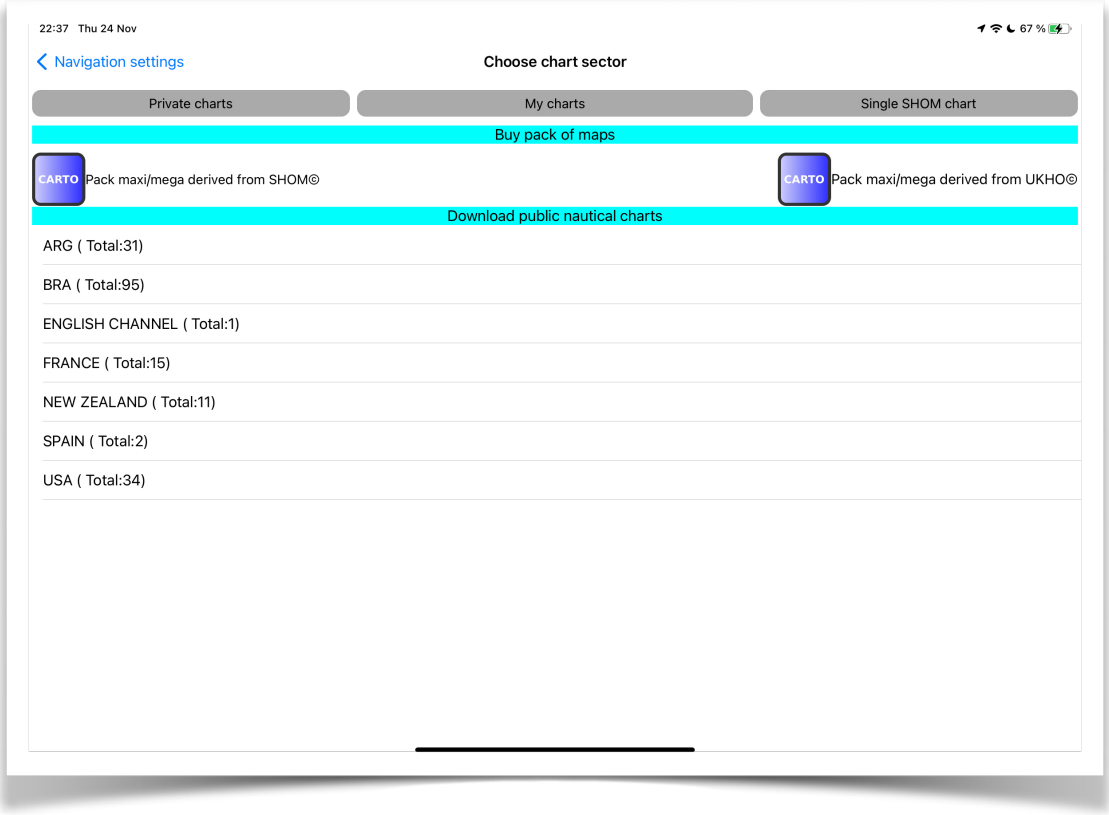


Go to the "routing" screen then calculate its routing... as usual. Then export this routing to Navigation.

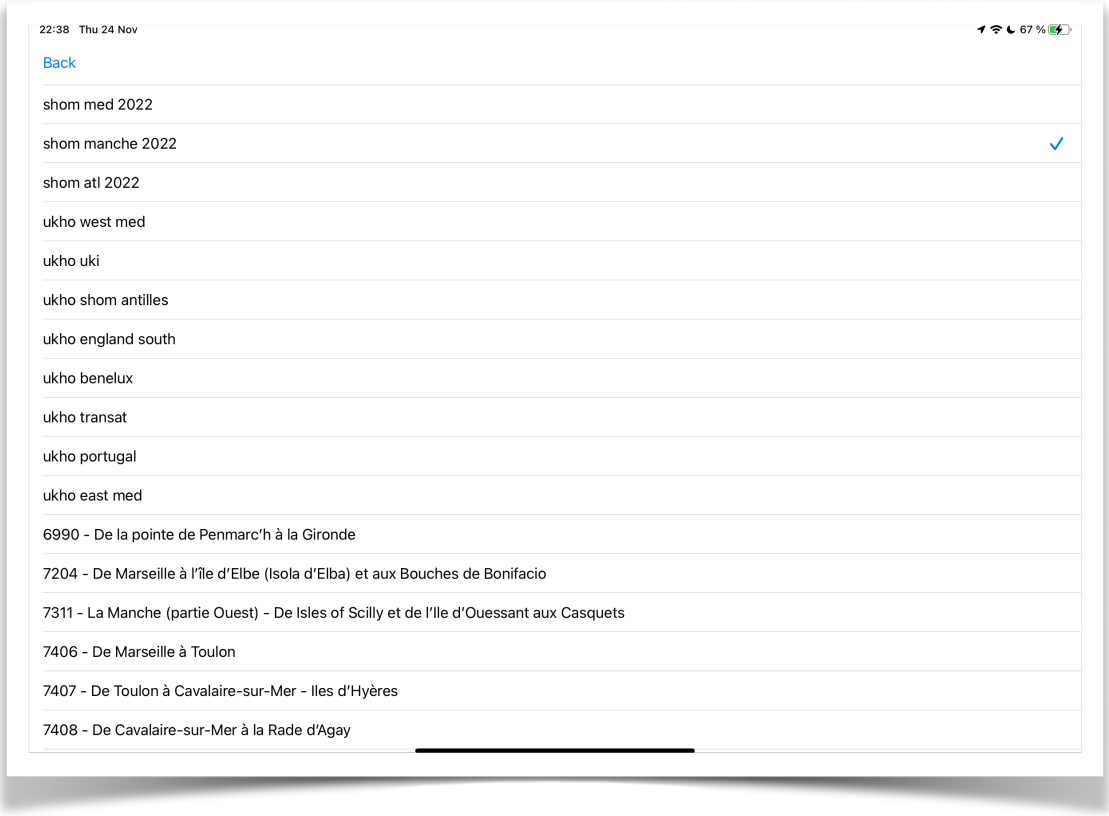
Note that to interact with the waypoints, you must activate the Avalon icon (white icon) at the bottom right of the screen.
(Screenshots are similar on Android)

5. Manage maps downloaded to the tablet

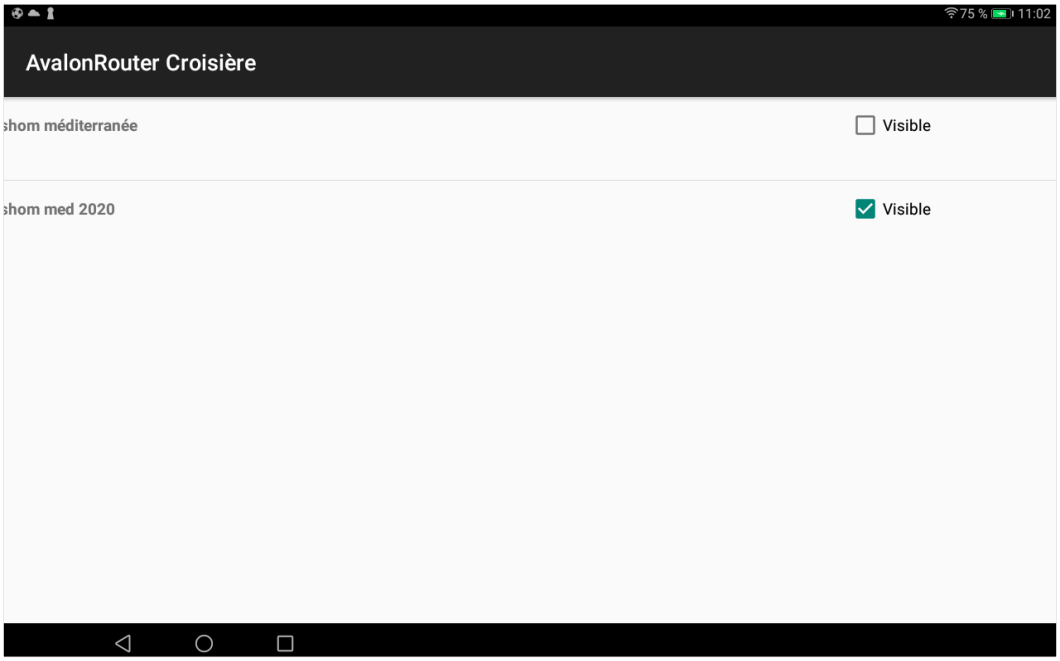
Depending on the planned cruise, you do not necessarily need to see all the charts available on your tablet. You can make some maps "active" and others "inactive". To do this, go to the "nautical charts" menu then "my charts" (grey rectangle at the top and in the middle).



It is strongly recommended to activate only one map (which can be a mega map) to avoid display conflicts between maps.« My charts »will list all the maps already loaded. All you have to do is tick the maps you want to make visible and untick the others.




19:40
MES CARTES
CHARGER UNE CARTE PERSONNELLE
PACK CARTES SHOM©
Achat de pack de cartes
PACK DÉRIVÉ DU SHOM ©
PACK DÉRIVÉ DE UKHO ©
Télécharger des cartes nautiques publiques
Rechercher ..
ecteur de la carte
artes personnelles
Charts: 0
RG
Charts: 31
RA
Charts: 95
NGLISH CHANNEL
Charts: 1
RANCE
Charts: 12
EW ZEALAND
Charts: 11
PAIN
Charts: 2
SA
Charts: 34


75 % 11:02
AvalonRouter Croisière
shom méditerranée
Visible
shom med 2020
Visible

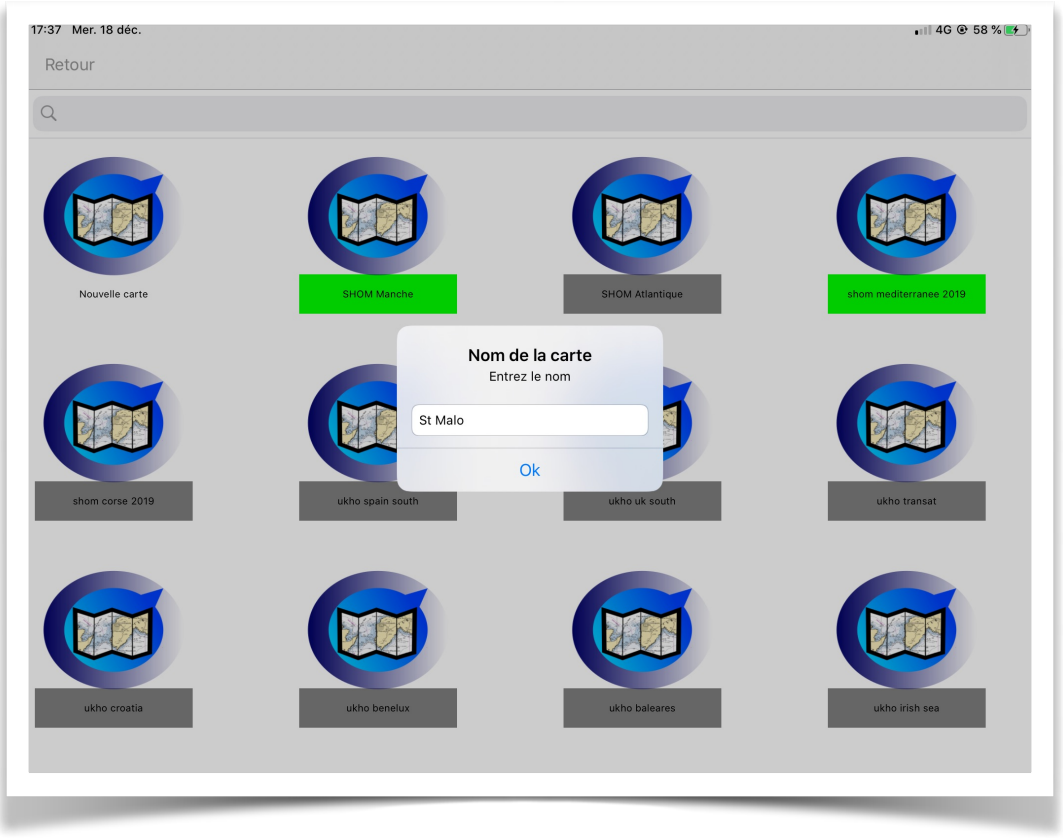
6. Load personal maps

You can load your personal maps under Avalon. These maps must be in raster or mbtile format. They can come from different sources: purchased from a hydrographic organization such as SHOM or UKHO or have been downloaded from the Internet.
These maps must be in “.kap”, “.tif” or “.mbtiles” format.

Several maps can be compressed and grouped together in a file in “.zip” or “.7z” format. In this case, there is a limit of 10 maps per zip or 7z file.

Apple

1. Avalon supports maps in geotiff, kap and mbtiles format. The loading procedure is the same as loading a grib or polar file.
2. Place the map in the Avalon folder using file transfer; see chapter I. Transfer Personal Files into Avalon
3. Start AvalonGo to the "Nautical Charts" menu
4. Then in "Private Maps"
5. Select "New Map"
6. Choose the map from the list of transferred maps
7. Then enter the name of the map in order to locate yourself in the "my maps" folder.



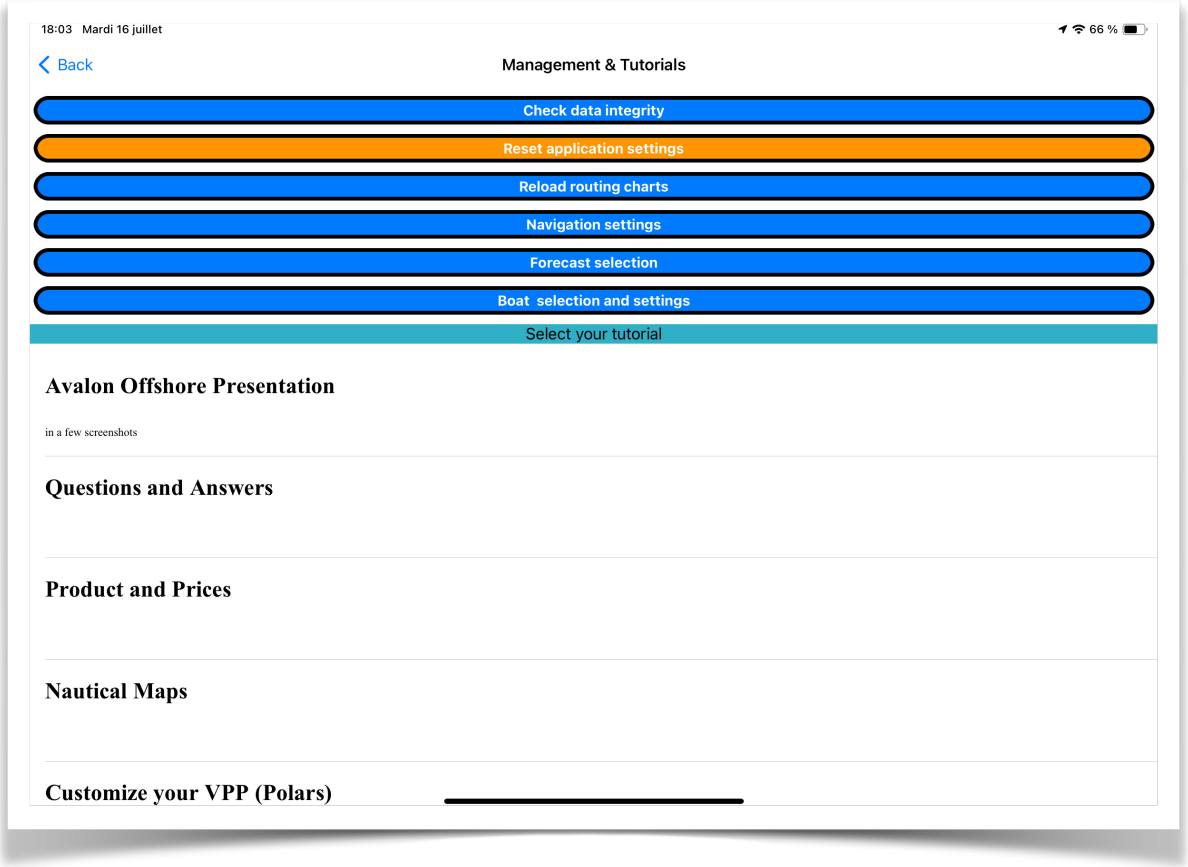
Android

Place the map in the download folder (also possible by email for small maps)

Avalon launches and asks you for the name of the map to then find it in the loaded maps folder and then be able to select the maps you need for the cruise.

D. Application reset

Allows you to reset the settings and database of the application without having to reinstall it completely.



- **Check data integrity:** Performs a general check of the app.
- **Reset application settings:** Returns the application to its original state without having to install it again
- **Reload routing charts:** Forces the download of previously installed internal maps. This is done automatically in the routing module.
- **Navigation settings:** In the event of an error in the Wifi/NMEA parameters, etc., this function allows you to re-enter the Navigation module without having to reinstall.
- **Forecast selection:** To select weather forecast models
- **Boat selection and settings:** Access to boat selection module

E. Avalon Cloud and Synchronization with Avalon Offshore

1. Registration and synchronization

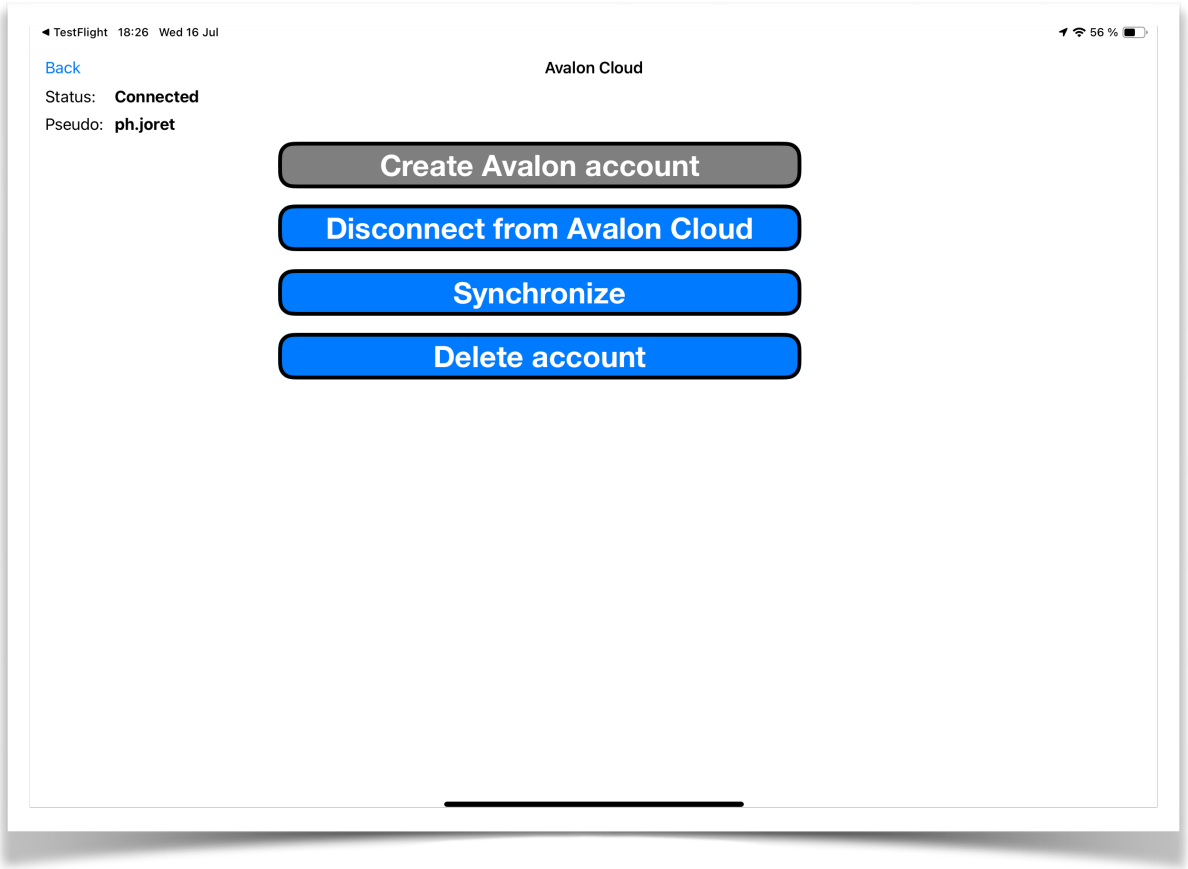
Avalon Cloud is one of the standard features of Avalon Offshore which allows you to:

- Synchronize routes between multiple devices of the same type (iOS or Android).
- Synchronize your polars
- Compare your polars with your real navigation data and modify them if necessary
- Turning a "composite" fleece into sail-by-sail fleeces (SailSelect)
- Enter your POIs (points of interest) in batch so that you can then use them during your routings.
- Request access to the regatta option
- And to make you benefit from possible promotions.

Avalon Cloud is available on Android and iOS: Tablets, phones, MacBooks (ARM) and Chromebook's..

To create an Avalon Cloud account (free) and be able to synchronize multiple data with your web space, you must start by creating an account on the Avalon site in the "connection" section.

Since version 7.1, you can also create the Avalon Cloud account from Avalon Offshore itself.



It is IMPORTANT to make any purchases on the Avalon store STRICTLY using the same email address.

If you created your Avalon Cloud account on your tablet, you will need to log in to the website with the same credentials.

If you created your Avalon Cloud account on the website, you will need to log in to Avalon Offshore with the same credentials. Don't hesitate to synchronize your account to verify the connection.

Log in with the username and password created on the web.
Then synchronize Avalon Offshore with Avalon Cloud by clicking SYNCHRONIZE.

The synchronization between Avalon Offshore and Avalon Cloud will transfer:
- Routes
- Polar
- POIs and route markers
- Performance data acquired at sea
- Purchases from the Avalon e-Shop: maps and Premium Weather

Synchronization allows you to very easily transfer your data between several Android and/or iOS tablets and phones.

2. VPP (Polars) transfer

Avalon Cloud will be very useful for you to transfer your speed polars between several tablets and phones, whether Apple or Google.
It is of course necessary to have created an Avalon Cloud account and that the different tablets are connected to this account:

Example: To transfer the active polar from tablet A to tablet B.

- Connect both tablets to the same Avalon Cloud account.
- Synchronize tablet A to transfer the active polar from tablet A to Avalon Cloud.
- Synchronize tablet B to transfer the polar from Avalon Cloud to tablet B.
-

Note: For the transfer to be successful, the date of the last polar modification on tablet A must be later than the date of the polar in Avalon Cloud. If this is not the case, go to "Edit My Boat" on tablet A, view a sail, and then confirm to update the polar modification date.

We advise to save (archive) the active polar on the original tablet
Sync the original tablet with Avalon Cloud from the "Avalon Cloud" menu on the main page
Go to the target tablet and perform a synchronization

Your VPPs will now be on both tablets/phones

3. Transfer of polar data acquired at sea

After having acquired performance data during navigations, it must be transferred to your Avalon Cloud space on the web in order to be able to refine your existing polars.

- We advise to save (archive) the active polar on the original tablet
- Sync the original tablet with Avalon Cloud from the "Avalon Cloud" menu on the main page.
- The data acquired at sea is transferred, as well as your active polar on the web.
- Go to the "Acquisition of Polar" module on your web space
- Modify and save your polars (see chapter 4.c Acquisition of polars at sea)
- Go back to your tablet and sync again.

4. SailSelect to transform a composite polare into polars per sail

Avalon VPP allows you to calculate your speed polars sail by sail. This then allows you to directly calculate a routing that always takes into account the best sail.

Some prestigious PC software is content with a composite polar and ranges of use of the sails.

If you are in this case and have your composite polar and your ranges of use of each of your sails according to the force of the wind (TWS) and the angle to the wind (TWA), you can recreate your polar sails by sailing using SailSelect on your Avalon Cloud space.
(refer to chapter 4.f Sailselect: Composite Fleece -> Multi Sails)

5. Course Option Request

You can buy this option from the Avalon e-shop on our web site.

6. Enter Points of Interest in batch in csv format

If you frequently use the same brands of cruises or regatta courses, you can enter them into your Avalon Cloud space by filling out a csv file.
Once loaded, the sync between your tablet and Avalon Cloud will transfer these frequently used points into Avalon Offshore.

You can do this at your yacht club or nautical society so that your friends can benefit from your work by sending them the csv file you have prepared. They can then upload it to their Avalon Cloud space and synchronize it with their tablet.

7. Transfer your navigation exclusion zones to multiple tablets

These exclusion zones can be local, i.e. for a single route, or global to apply to several routes, for example traffic separation zones or wind turbines.

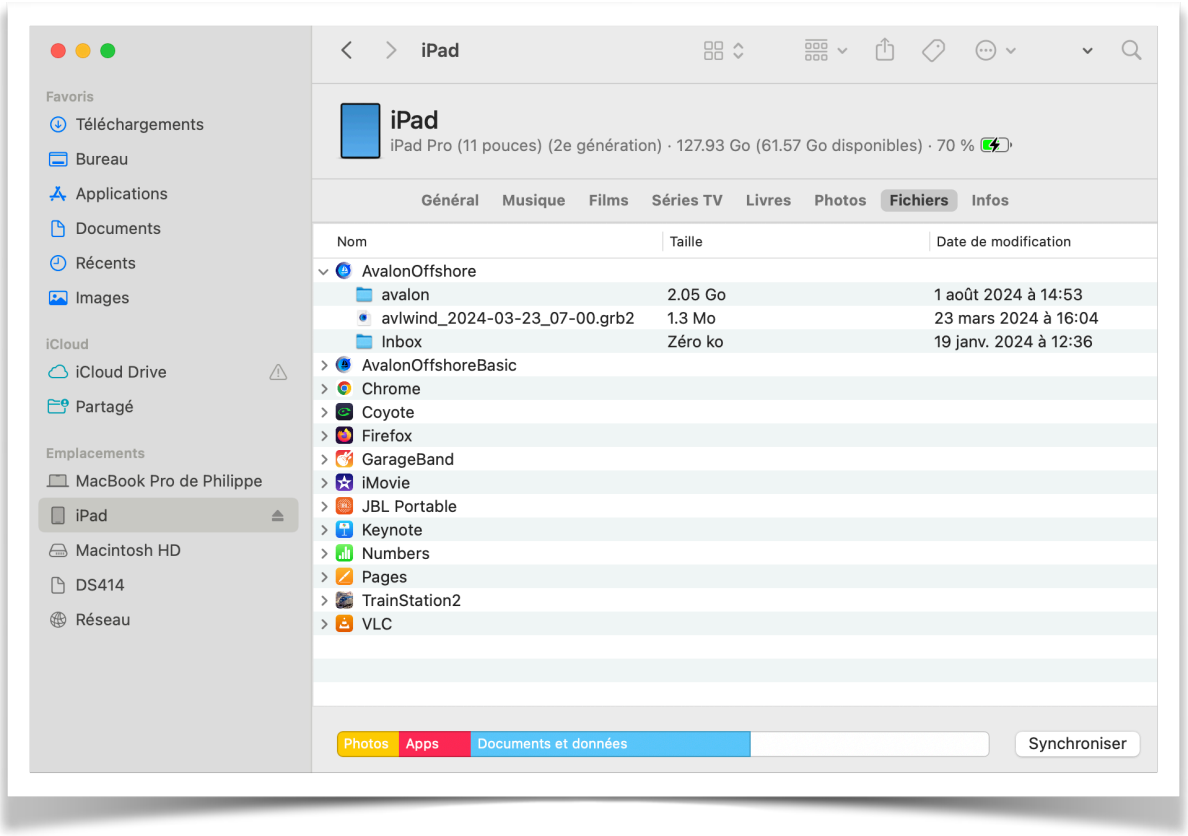
F. Transfer personal files into Avalon

You may wish to transfer your maps, polars or external weather files (wind gribs) into Avalon. To do this, the procedure will be similar.
Once these files are transmitted into the application, Avalon will integrate them if they comply with the formats recognized by Avalon.
The procedure may vary depending on the platform used:

- iOS on iPad/iPhone
- iOS on MacOs
- Android

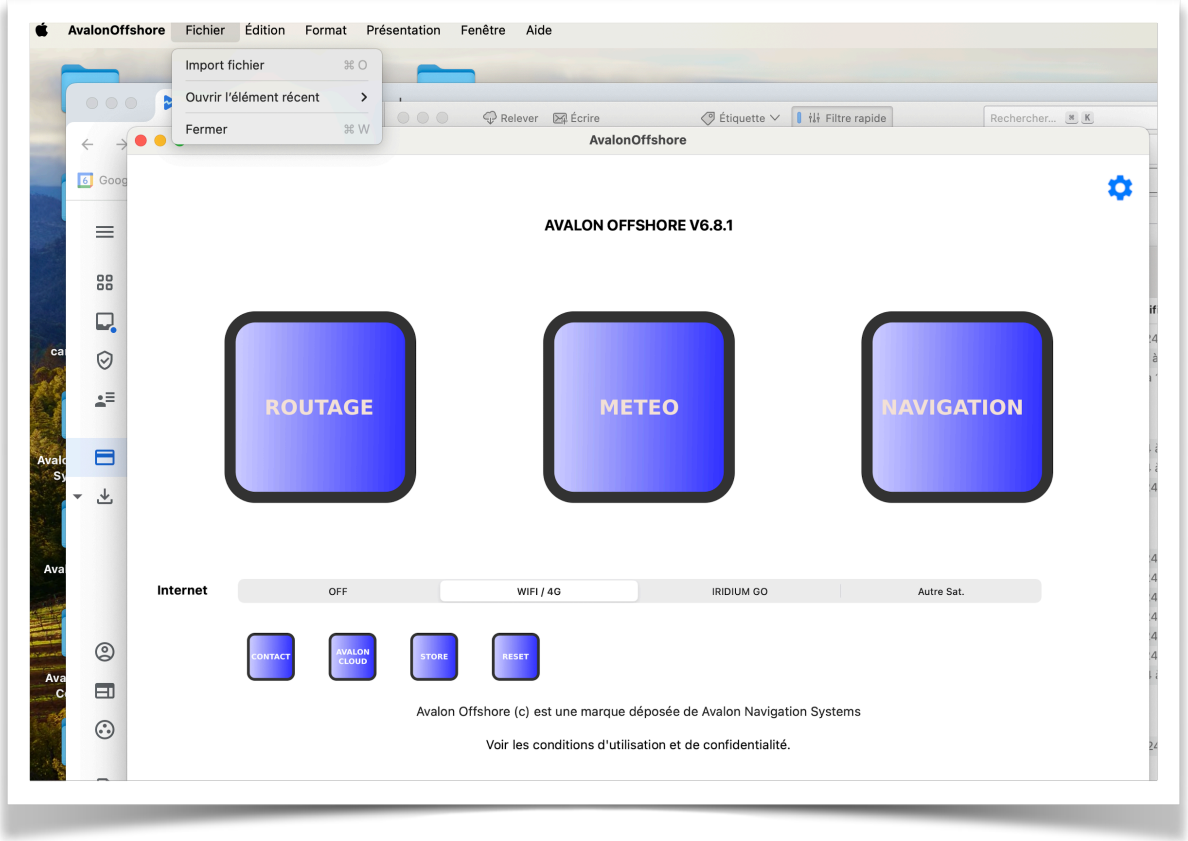
1. iOS on iPad/iPhone

1. Connect the iPad/iPhone to your computer
2. Drag the file(s) into the Avalon Offshore directory on the iPad/iPhone
3. Synchronize
4. When Avalon is opened, the file will be incorporated after possible processing on our server (case of maps purchased directly from SHOM or UKHO for example)



2. iOS on MacBook (M1 and following)

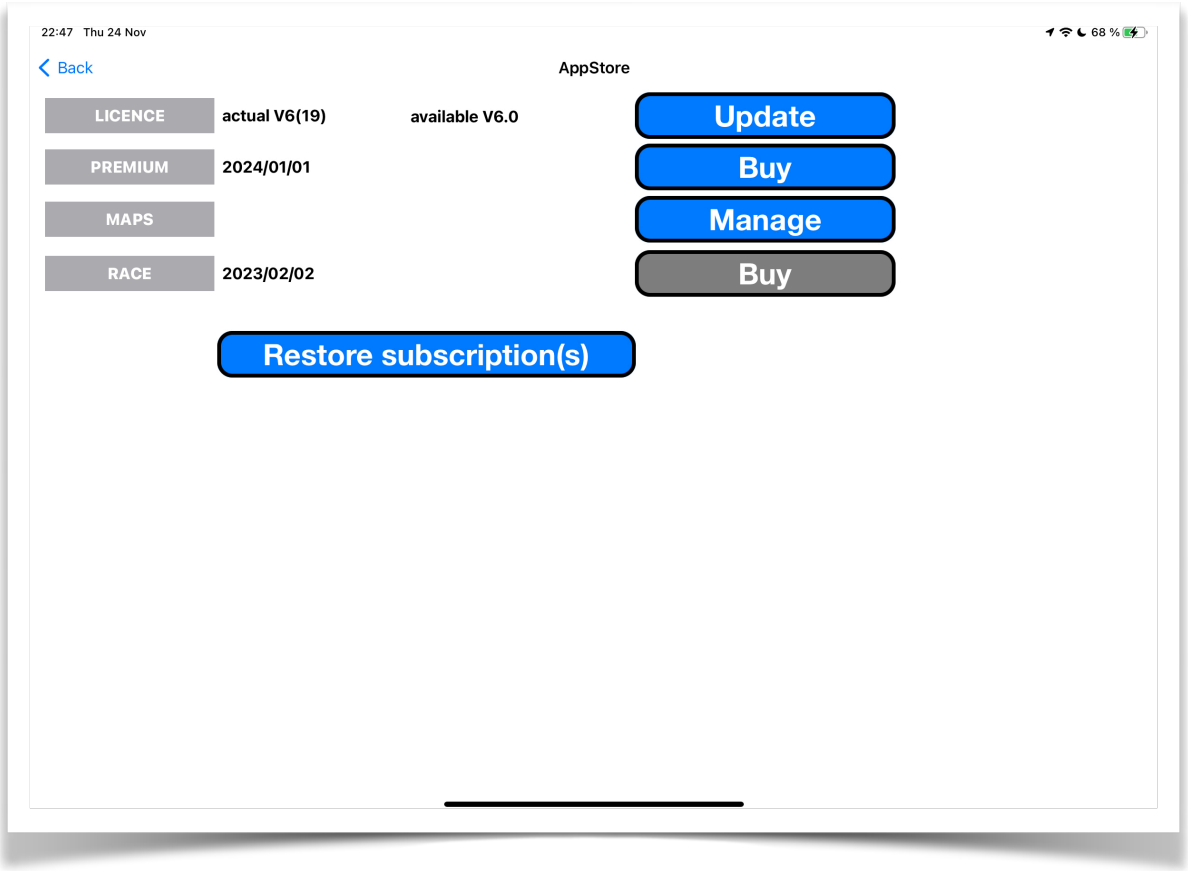
1. Click on files from the menu then choose the file



3. Android

1. Place the file in the download folder (or send by email (for small files))
2. The file will be integrated into the application when Avalon Offshore is opened.

C. Store



The "STORE" menu contains all of your Avalon purchases and subscriptions made on the AppStore or Google Play

- **LICENSE** allows you to check if you are using the most recent version of Avalon and possibly update it if this is not the case.
- **PREMIUM** allows you to check the status of the annual Premium weather subscription, to subscribe if necessary.
- **MAPS** allows you to manage your maps, buy new maps and recharge them as needed.
- **RACE:** This option is available in the Avalon Shop. It is free for one year if you request it before the end of 2023.
- **Restore subscription(s)**: allows you to reset your Premium and Map subscription if you change your tablet or install Avalon on an additional tablet or phone.

J. Racing Option

The racing option is intended for sailors and boaters experienced in weather routing.
It includes::

- Regatta start management (navigation)
- Regatta optimization: laylines, time and distance to laylines, Time to Burn before the start
- Multi-scenario analysis (routing)
  - Different weather pattern
  - Route comparisons
  - Road Sensitivity to Performance vs. Polar
  - Road sensitivity to (force, angle, time lag.
  - The impact of the state of the sea on the polars of the boat (routing)
  - The ability to offset weather data (routing)
    - In time
    - In strength
    - Inn angle

To obtain access to the race option (free in 2022), you must request it from your Avalon Cloud space on the web. See Avalon Cloud chapter in this document.

1. Multi scenarios analysis

Refer to the “Route and multi-scenario analyses” chapter in the “Routing” chapter of this guide

K. Related documents

For reasons of space, we have kept 2 documents in the appendices:

- Details of weather sources
- Map pack details

These documents can be consulted in the support section of our site, in the appendix section.