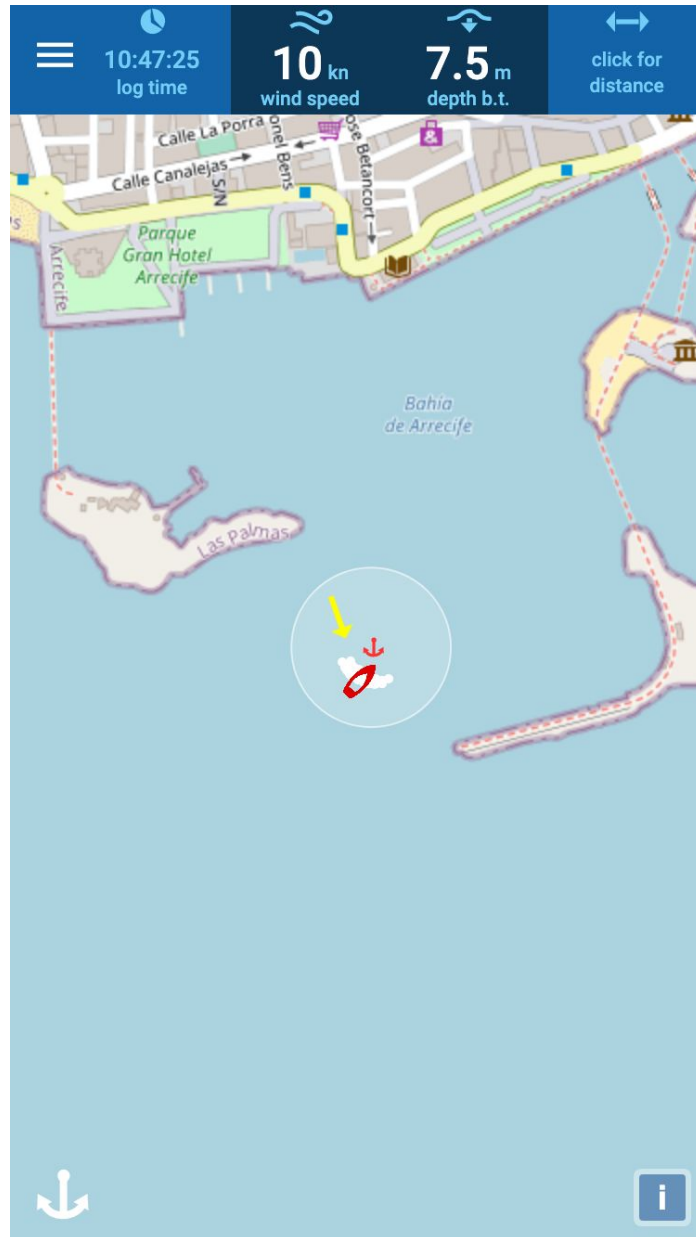


# My Yacht Live

Anchor watch  
Remote Yacht Monitoring



# Introduction

MyYachtLive idea started in 2019 while living on [eidos\\_cat](#) a Catana catamaran. I was looking for a simple way to monitor my boat while left at the anchor. I tested solutions based on mobile phones gps however I found them not reliable and I also wanted to see wind and depth remotely.

I also considered solutions to access my SignalK server remotely, or replicate the SignalK server in the cloud, however I found it less intuitive to use, expensive and difficult to maintain.

The Covid-19 lockdown early this year gave me the time to experiment with SignalK plugins, Angular Progressive Web Applications, Push notifications, Google Firebase and Open Layers Maps API that I am currently using.

The system is very simple and it is made of:

- A [Signalk](#) plugin that sends data to a cloud based repository
- The central repository based on Google Cloud Firebase
- A Progressive Web Application that is notified when new information is available

The application has been developed focusing on mobile devices and while it works also on desktop computers the UI may not look great on a desktop browser.

I have been regularly using it for the last few months and I thought of giving it for free to other users to collect initial feedback on current features and interest on possible additions. If there will be interest I may consider to develop a more complete version to offer with a small subscription fee.

## Register as new user

- Go to [www.myyachtlive.com](http://www.myyachtlive.com)
- Click "signup" link
- Fill the form and click "Signup" button
- You will receive an email with a confirmation link. Go to the email and click on the link.

## Test the application with demo data

The first time you login you will use test data, in order to see the data from your signalK server you need to change the Communication settings (see below)

You can use the test data to familiarize with the application if you have not installed yet your signalK plugin.

## Instal SignalK plug-in to receive data from your boat

You need a SignalK server running on your boat in order to work with live data.

If you do not have SignalK installed please read the official documentation at the following link: <http://signalk.org/> or search for youtube video on how to install SignalK and connect to your NMEA network.

If you have a SignalK server running, you need to install the signalk-myyachtlive plugin by going to the "appstore" from your server and select the signalk-myyachtlive plugin.

After installing the plugin you need to go to Server -> Plugin Config -> signalk-myyachtlive:

- Add your username and password
- Select Active
- Click the "submit" button

# Settings in the application

If you have your Signalk plugin running it is time to add some settings in the application:

- Go to the “hamburger/menu” icon on the top-left and select settings
- Add the information about your boat (consider that the application uses most of this to work properly)
- Go to “Communication”: select “Live: data in myyachtlive” this will show data coming from your signalk server, and select how frequently you want Signalk to send the data to the cloud.

## Anchor Watch function

If you can see your current position (or the position from the test data) you can now use the anchor watch function (or simulate it with test data).

Click the anchor icon located bottom-left of the screen



The following menu will open:



If you have the heading information available from Signalk you cannot modify the “hdg” field otherwise you can enter your heading manually. You can change the default chain length field and click “Drop”. The application will draw a circle based on the size of your boat, length of chain, position of your gps antenna on the boat, your position and your heading.

The yellow arrow indicates the direction of the wind recorded by your wind instruments and sent by Signalk plugin.



If you want to modify the circle you can click the anchor icon and the “edit” pen icon:



then move the center or change the radius. You will not be able to move the center to a position incompatible with the chain length declared and the boat position. The movement of the center is not very smooth and you need to zoom in to use it.

While I added the possibility to change the circle I never use it as the application should propose the correct position and size of it most of the time if you click on “drop anchor” immediately after testing that the anchor is holding (assuming that the boat is facing the anchor, the heading is correct, the chain is extended after you tested the anchor, and you entered the correct chain length).

If you want to change the chain length you need to “Pull” the anchor and “Drop” it again.

Please note that the anchor menu and the edit status will disable automatically after a few seconds.

At this point you will see a white breadcrumb added every time the Signalk server sends a new set of data. The boat icon follows the heading if available otherwise faces always north.

# Top dashboard

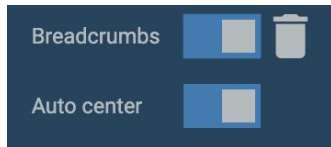


On the top you always see:

- Menu icon
- Time of last data sent by SignaK (or test data)
- Wind speed in knots
- Depth in meters (this is the depth below transducer from SignaK + depth of transducer you indicated in the settings-boat page)
- The last box on the right shows the distance of any point you click on the map from the boat. I recently also added the indication of the length on the map and by clicking in rapid sequence two points you get the distance on the map. In future I may change the use of the top-right space.

## Main Menu

If you click the main menu icon you access few other pages explained below and two general settings:



Breadcrumbs: you can turn it on/off and delete the existing white dots. Please note that you will always see not more than 10 breadcrumbs (up to last 10 positions arrived from SignaK)

Auto center: if on when you move the map to an area not including your position after few seconds it automatically recenter the view to your position

## Holding Model

This page is informative only. I developed it just for my personal use using information from the following sites:

[https://www.awelina.co.uk/anchor\\_rode/rode\\_length.html](https://www.awelina.co.uk/anchor_rode/rode_length.html)

<http://kb.rocna.com/kb/Chain>

The model is very approximate however I think it gives a general idea of how the anchor holding and the forces involved change with wind, chain scope and quality of the seabed.

I would never rely on the information calculated by this model to make decisions about an anchorage (position, scope, etc.). The skipper will always need to use his/her own experience and look at the specific environment and weather conditions (among others: type of boat, wind, wind gusts, waves, seabed, anchor used, chain used, etc.). Anyway I am interested in comments (e.g. not useful -> delete, or interesting -> how to eventually improve) and additional resources of alternative models.

## Settings

- Alarms: you can set alarms on depth, position, and wind. Alarms use push notifications that need to be allowed on your device
- Boat: Allows to enter the information about your boat. This is very important as most of them are used by the application.
- Communication: you can set the application to show data from your SignaK server or test data

# Usage

The application has some limit of usage in order to avoid the risk of excessive cost of the cloud based infrastructure. The limit is expressed in terms of number of requests per minute, hour, day or month. In this page you can see:

- The maximum allowed requests (I entered quite large numbers for now, however I will tune this based on more usage data)
- The current requests used
- Some additional information that may be useful in case you need to communicate a bug such as version number, deployment date and userId

# Row Data

There is no need to access this page unless:

- You are an advanced user and want to look at what data is transferred from the SignalK plugin to the application
- Debugging issues

This page shows the JSON object sent by the SignalK plugin to the cloud and then to the application. For advanced users it may be of interest to see the actual time a specific data was generated or if there is any missing information.

Notes:

- The time in the UI is the time when SignalK sent the data to the server
- The timestamp information for each data in this page is coming from SignalK and it should indicate when that data was generated by your sensor
- The data in this page are in the original units used by SignalK (e.g. wind speed is in m/s not knots, angles are in radians, etc. - see SignalK documentation for more details)

# Logout

To logout from the application.

# Application Installation on different platforms

**MyYachtLive** has been developed as a Progressive Web Application and can be used directly in the browser or installed on a mobile home screen (or desktop).

## Android mobile device

*The application has been only tested with Chrome browser on android 11.0.5.*

In order to install the application on your screen go to the top-right menu of Chrome and click “Add to Home screen”. You should also be asked if you want to add the Home screen the first time you go to [myyachtlive.com](http://myyachtlive.com). You will also be asked if you want to allow the application to send you push notifications, you need to accept it if you want to use the alarm function.

## iOS mobile device

*The application has been tested with Chrome and Safari (limited test on iPad and iPhone 11 - iOS 13.6).*

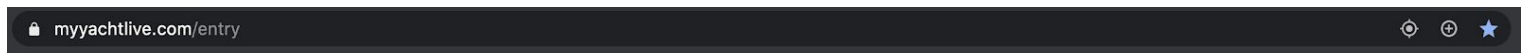
In order to install the application on your screen you need to connect to [www.myyachtlive.com](http://www.myyachtlive.com) with Safari, then click the share icon (top-right, third from right) and click “Add to Home screen”. At the moment Apple does not allow it from Chrome.

You will also be asked if you want to allow the application to send you push notifications, you need to accept it if you want to use the alarm function.

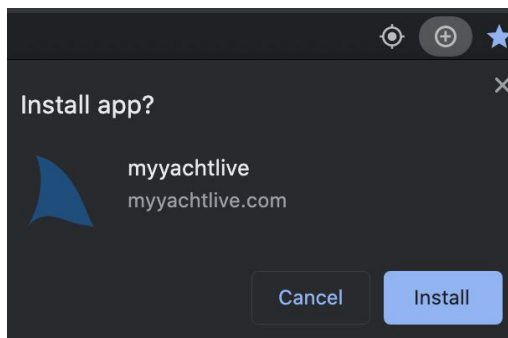
## MacOS laptop

*The application has been only tested with Chrome browser (limited test on MacBook Pro MacOS 10.15.7).*

In order to install the application on your screen Click on the second icon from the right in the url bar.



Then click Install



You will find the MyYachtLive icon in your Chrome Apps folder.

## Windows 10 computer

Not tested the desktop installation yet

## Raspberry Pi

Not tested the desktop installation yet