

SuperSail

Yacht Monitoring

User's Manual SuperSail Monitoring System

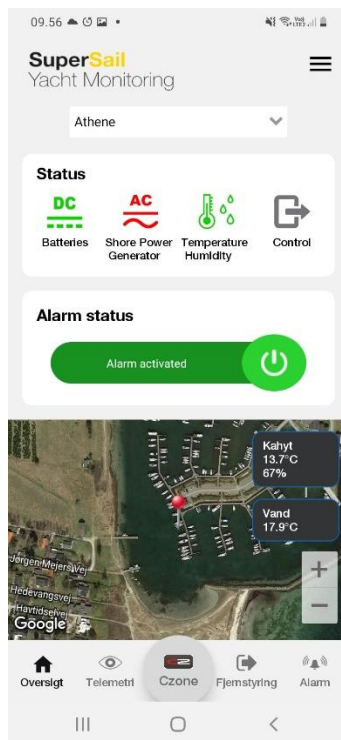


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1 Introduction

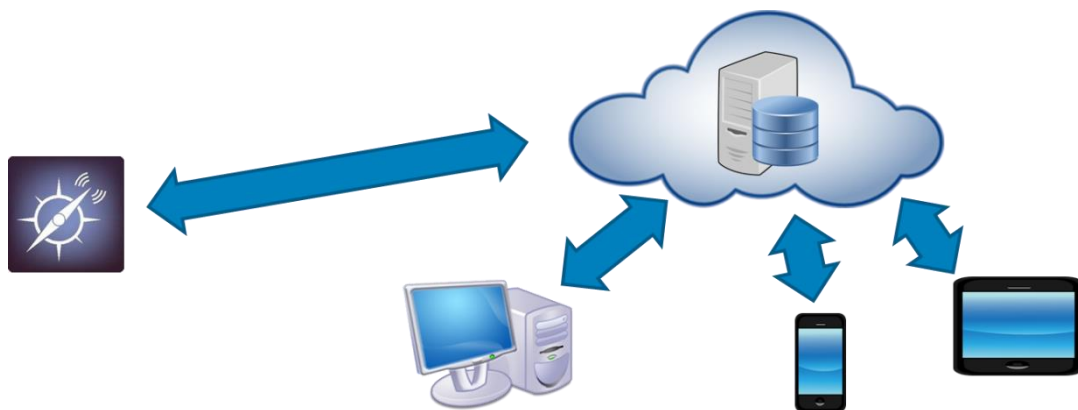
This User's Manual is about the daily use of the SuperSail Monitoring System. The system consist of GPS Trackers used for alarm systems and for data collection. Data are stored on a central hosted server and a mobile application (App) for accessing the trackers. The SuperSail mobile App is available for iOS (AppStore) and for Android (Google Play).

SuperSail Marine Alarm is developed for fixed installation in dry environment inside a larger boat. The SuperSail Marine Alarm must be connected to external power supply and the antenna must be placed where the best signal is achieved. Alarm sensors can be connected wired or wireless. A small internal battery ensures that the alarm continues operation if external power is interrupted.

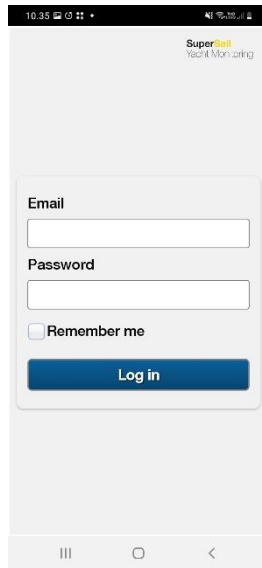
The SuperSail Alarm is delivered with the following configuration:

- SuperSail Marine Alarm is a complete alarm with GPS and sensor interfaces. The alarm has 2 special outputs which can be controlled automatically by the alarm (for connecting a siren and for immobilizer) or manually via the app. SuperSail Marine Alarm can control up to 50 wireless sensors, 8 cameras and 4 remote controllable relay outputs.

The system is operated via your Smartphone on Android or iOS (Apple).



2 Login Menu



As a user, you are setup with your email address as your user login and a personal password. Your email and password gives you access to the relevant features in the mobile app.

Key in your email address in the Email field. Touch the field to have the keyboard displayed.

When the email is typed in, press Ok or Enter on the Keyboard and the focus is moved to the Password field. Type in your personal password and press Ok or Enter on the Keyboard, which then disappears.

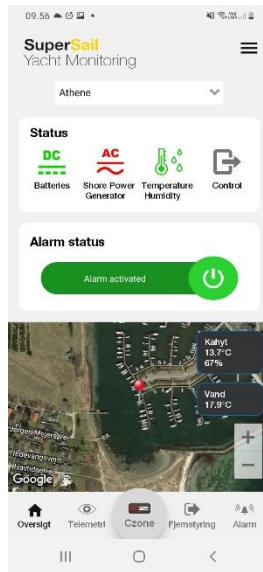
If you have typed something wrong, you only touch the field and start over again.

If you are using your own mobile phone, it is recommended to mark the field "Remember Me". Next time the app is started you don't have to type in the login information – unless you have logged out before closing the app.

This feature should only be used on a personal mobile phone, as it gives direct access to your system.

After having typed in the correct data, press "Log in", and the application will collect your data and start the application.


3 Main Menu



In the main menu you have access to all relevant functions.

At the top your name and your boats name are displayed. Your boats name is used in alarm SMS's, where it is included in the text.

Opening the dropdown will show the ID of the alarm and a list of all of your alarms if you have access to more than one.

The “Settings” button  should only be used if you want to leave the application and type in your email address and password again or if you want to change your personal settings.

The “Status” field gives you a quick overview of your Yacht. Green colored icon means that all measured values are within healthy values, Red colored icon means that one or more measured values are outside range and grey icon means that relevant sensors are not installed or not activated.

The “Alarm Status” field shows if the alarm is turned on, this will be indicated by green text and green slider.

At the bottom, a map is shown, showing the latest position of the alarm.

If temperature and/or humidity sensors are connected to the alarm system, latest measured values are shown in the map. Pushing one of the temperature/humidity fields change unit from Celsius to Fahrenheit.

If one or more cameras are connected, a camera icon is shown in the upper left corner of the small map. Pressing the camera icon, opens the camera image window.

Pushing the map shows the Full Screen Map as shown below.

3.1 Full Screen Map



All of you alarms are marked on the map, but tracking is only shown for the selected alarm.

The latest position of the alarm is shown by a pin in the location.

If dates are specified and “Show” is marked, the tracking for the period between the dates are shown.

If a period of several dates is selected, a pin is set in the first registered position for each day.

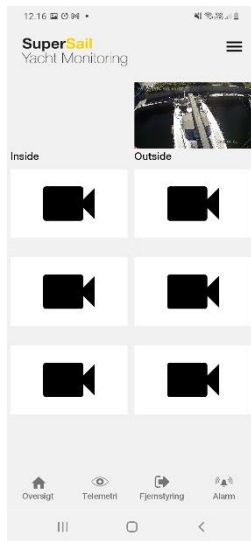
The Sail Period is the time from first to last registration within the selected dates.

If Start and End is set to the same day, the tracking's for this day is shown. The Sail Period will show the sailing time including stops.

The alarm will only register tracks when the boat is actually moving. If the boat is not moving for a day or more, no tracks will be registered.

It is possible to zoom and rotate the map, using your fingers.

3.2 Camera Window



Pressing the camera icon (if available), opens the Camera image window, which shows the current still picture for each camera connected.

If a camera is not connected or the login information is not valid, a standard camera icon is shown instead of a still picture from the camera.

When entering the window a “loading carroussel” is shown for each camera until the app has connected and retrieved a still picture. This might take several seconds depending on the data connection from the mobile phone.

Pressing one of the camera still images, open the full screen live streaming window.

3.3 Camera Full Screen Live Streaming



The Camera full screen live streaming window shows live streaming from the selected camera. The live streaming takes some bandwidth on the mobile network, so a good signal strength is required.

To ensure live streaming is not left on for longer periods, the live streaming automatically stops after 30 seconds.

4 Telemetry Status Menu

From the main menu it's possible to monitor the telemetry status, by selecting the "Telemetry" button.



At the bottom you find the "Restart Alarm" button, which executes a hard reset of the alarm. This is done by forcing the alarm to reset and restart. Your settings are NOT affected.

The boat name can be changed by selecting the "Name" field. When the field is selected, the keyboard is automatically displayed. The boat name is used to identify the boat in SMS's.

The Signal levels shows the actual measured GPS and GSM signals. When entering the menu, the fields will show "Measuring" for 15 seconds and then be blanked until the actual measured levels are reported by the alarm – this can take up to 30 seconds.

Battery level for the domestic/start battery is shown in the Domestic/Start Battery/etc. fields, and the battery level for the internal backup battery in the Alarm Battery field.

The internal Alarm battery level is divided into steps of 20%, where the level of the internal battery is considered critical if it drops below 20%.

Shore Power level is shown if a Voltage sensor is connected, otherwise if a basic ShorePower sensor is connected, only status is shown (red=No ShorePower connected, green=ShorePower connected)

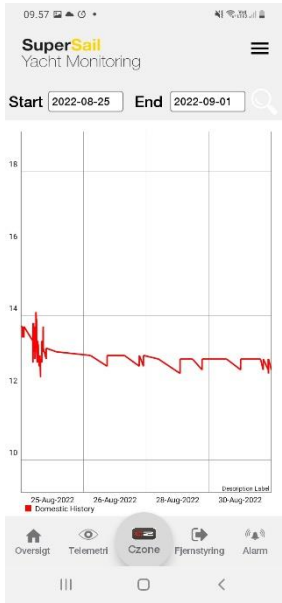
Engine- and Tank data is shown if a NMEA2000 interface is connected. The last registered value is shown, even that the NMEA2000 network is shut down.

Pressing the "Documents" link, opens the SuperSail documentation site.



History levels for battery can be shown in a graph, by pressing the graph icon.

The voltage graph for the battery shows:



5 Alarm Settings Menu

From the main menu it's possible to view/change current alarm settings.

When the alarm is activated, all sensors are monitored and alarm text messages will be sent if an event is triggered – when the alarm is turned on, no settings can be changed, this is only possible when the alarm is off.

The following alarms will automatically start the siren for 5 minutes:

- GPS Fence (movement outside of the GPS fence)
- Motion Sensor
- Door Sensor
- Input 1 and 2

The following alarm will be monitored (incl. alarm Text message) even that the alarm is not activated:

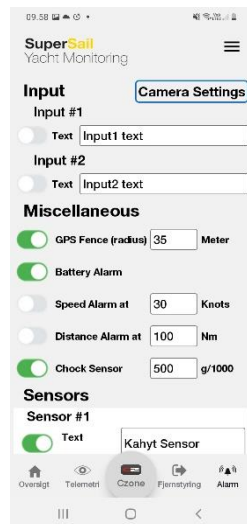
- Water Sensor (if connected)

The individual alarm sensors can be turned on/off independent of other functions, which enables you to use the alarm even if you are on-board, by only enabling the sensors required.

The alarm functions are a safety for you and your boat, where up to 4 mobile numbers can receive messages in case of alarms.

Your personal password can be changed in the “Settings” menu 

5.1 Functions



The Alarm Menu contains the following functions:

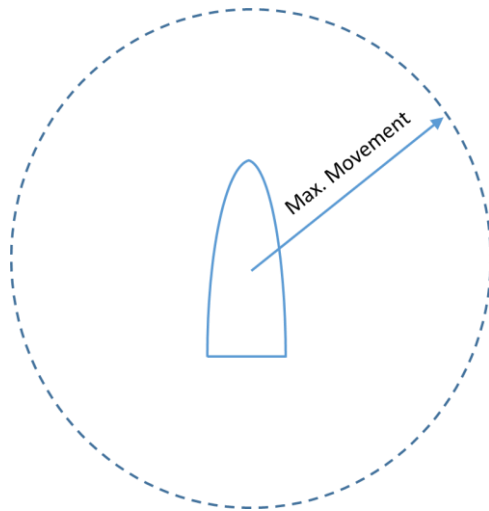
- Camera Setting, which opens the Camera Settings window
- Input alarms that can be activated individually
- Monitoring of GPS Fence (maximum movement) – e.g. theft or anchor guard
- Monitoring of Domestic battery
- Monitoring of maximum speed
- Monitoring of maximum distance
- Chock Sensor which monitors e.g. grounding, hitting the jetty, while moored or collision
- Temperature alarm if a temperature sensor is connected
- Wireless Sensors which can be activated individually

5.2 Inputs

SuperSail Marine Alarm has 2 configurable input. To the inputs external sensors like e.g. a smoke alarm or float switch can be connected, or a wire to an outboard engine can be connected for monitoring this. In the text field you can write a text that identifies the connected units. Same text is included in the SMS alarm text.

5.3 GPS Fence (Maximum Movement)

Maximum Movement Alarm with configurable alarm distance, which functions like a GPS fence. The function can be used as a theft monitoring or as an anchor guard.



The figure shows the principal in the maximum movement alarm, where the boat are in the center of a circle indicating the maximum movement before the alarm is activated.

A GPS which is steady will register some movement in all directions, caused by reflected signals from the satellites. Reflections occur when the signal from the satellite hits something in the way to the tracker.

Even that the GPS in the tracker is very precise, reflected signals will be received from time to time, which gives the tracker a wrong position for the boat.

To prevent wrong positions from activating a false alarm, it is recommended to set the Maximum

Movement distance to minimum 25-35 meters. Our experience is that this value prevents most false alarms in most harbors. If the boat is placed near buildings or other constructions creating reflections, it might be necessary to set a higher value for the Maximum Movement alarm.

It is recommended to test the value for some days to ensure that no false alarm are sent due to reflections form the surrounding environment.

5.4 12V or 24V Monitoring

Monitors if Domestic battery level drops (12V supply is interrupted or drops below 11V, or 24V supply drops below 22V).

5.5 Maximum Distance

Same function as described for Maximum Movement paragraph 5.3.

Typically used by charter boat companies or if your boat is being used by others than yourself. You can receive an alarm if the boat comes too far from the starting point.

5.6 Maximum Speed

Maximum speed with a configurable maximum speed in the unit of knots.

Typically used by charter boat companies or if your boat is being used by others than yourself. If the speed indicates that the boat are transported over land, you will be noticed by an alarm.

5.7 Chock Sensor

Maximum chock effects with a configurable alarm limit in unit 1/1000 g (g=gravity).

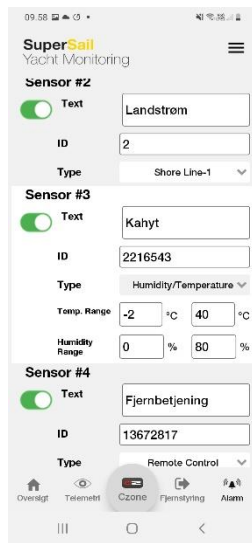
The Marine Alarm must be fixed installed in the boat, to register the chock effect correct.

Experience has shown that a value of 500 (500/1000 g ~ ½ of gravity) is normally suitable. This value will normally not activate the alarm when the boat is moored, but will activate the alarm if the boat hits the jetty.

The setting can be tested by activating the alarm and then bouncing on the deck. A strong bounce corresponds that the boat hits the jetty and will force the alarm to be set.

If the chock sensor is used for e.g., charter boats, the value can be set higher if you only want alarms in case of grounding.

5.8 Wireless Sensors



Up to 50 wireless sensors can be connected to the alarm system as needed. The following wireless sensors can be connected:

- Motion Sensor, which monitor the temperature difference in the environment. If a living creature enters the boat an alarm will be set.
- Water Sensor, which monitor water or moisture in the boat.
- Door Sensor, which monitor if a door/window is opened.
- Remote Control, which can turn the alarm on/off without using the mobile app.
- Shore Power Sensor, which monitor if the shore power is interrupted longer than 10 minutes.
- Temperature Sensor, which measures the temperature in the boat.
- Temperature/Humidity Sensor, which measures the temperature and humidity in the boat.

The wireless sensors are connected to the alarm system by entering their ID, choosing the sensor type and giving them a descriptive text.

The text will be included in the alarm SMS's, why it's important that it identifies the individual sensors.

The alarms are activated individually, by setting the slider to Green.

Activating the individual alarms is done by activating the alarm. Hereby all enabled alarms are activated.

When the alarm is turned on/off, an SMS Text message is sent to the alarm receivers, telling the status of the alarm – this normally takes a few seconds.

If external 12/24V power supply is lost while the alarm is active, the alarm system automatically enters energy mode to save the internal battery power. In this condition the alarm will continue at least 12 hours without external power supply. In energy mode, the alarm will monitor the alarm sensors every 15 minutes and sleep in-between. The alarm system automatically enters normal operation when external power is restored.

5.9 Camera Settings

The screenshot shows the 'Camera Settings' screen in the SuperSail Yacht Monitoring app. It displays configuration fields for three cameras:

- Camera #1:** Name: Inside, IP Address: 5.186.54.229, Port: 8000, UserName: admin, Password: [redacted]
- Camera #2:** Name: Outside, IP Address: ss296836070.dyn dns.org, Port: 8001, UserName: admin, Password: [redacted]
- Camera #3:** This section is partially visible at the bottom of the screen.

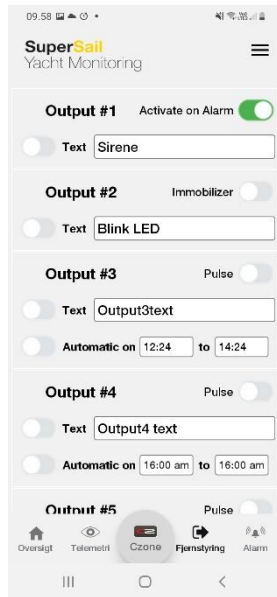
At the bottom of the screen, there is a navigation bar with icons for 'Overzicht', 'Telemetri', 'Flensstying', and 'Alarm'.

Up to 8 IP cameras can be configured into the Alarm system. For each camera the following data must be entered:

- Name of the camera – to remember the location
- The external IP Address of the camera in the router
- The external Port number of the camera connection in the router
- The UserName used to log into the camera for streaming
- The Password used to log into the camera

The above setting will be pre-set by SuperSail, so please do not change others than the Camera Name.

6 Remote Control Menu



SuperSail Marine Alarm has 2 (optional up to 6) configurable outputs, where e.g., switches to activate external units can be connected. The units can be activated independent and individually. In the text field you can write a text that identifies the unit connected.

If the “Activate on Alarm” check box is marked for Output #1, this indicates to the alarm system that e.g. a siren is connected to Output #1. The alarm system will automatically activate Output #1 if a theft alarm is activated. The Output #1 remains activated 5 minutes after the theft alarm is activated.

Turning off the alarm also turns off the Output #1.

Output #1 is activated by the following alarms:


- GPS Fence (Max. Movement) Alarm, which indicates that the boat is being moved.
- Motion Sensor which indicates intrusion into the boat
- Door Sensor which indicates break in to the boat
- Input 1 and 2 activation – Input 1 and 2 can e.g., be used to monitor fire sensor or an outboard engine.

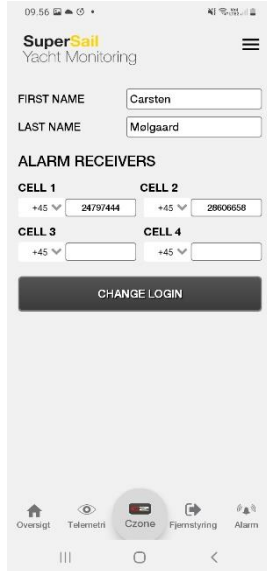
Setting the “Immobilizer” check box for Output #2, automatically sets Output #2 to 12/24V when the Alarm is turned on.

All Outputs can be used as manual activated Outputs by using the sliders to the left of each Output.

Output #3 to #6 can further be automatically controlled on timer basis. Setting a time interval and setting the slider next to “Automatic On”, will automatically turn the output on in the specified period. This can be useful to e.g. make the boat look manned, by automatically activating the cabin light in the evening.

7 User Settings Menu

From the main menu it's possible to change your user settings, by pushing the "Settings" button 



Changing your name will update the main menu, where your first name is shown.

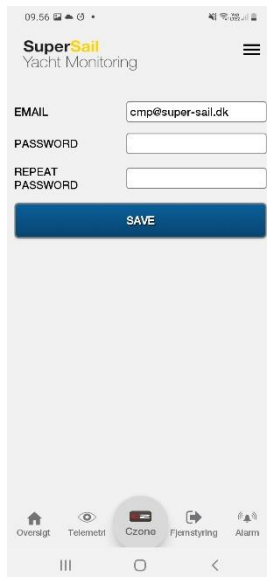
Up to 4 cell phones can be connected to the alarm, which makes all SMS Text status and alarms send to all cell phones.

The country code for the individual cell phones can be chosen between the countries included in your subscription.

If you want to delete a cell phone from the list, just delete the number and leave the country code unchanged.

Pushing the Change Login button opens the Change Login menu.

7.1 Change Login



In the Change Login menu, you can change your password used for logging in to the app.

Password must be entered twice, to be sure that it's correct.

Only when 2 equal passwords are entered, the Save button will accept the change.

The new login data will take effect next time you log in to the app.

8 Marine Alarm Hardware



SuperSail
Marine Alarm

8.1 *Charging*

The alarm system is available in a number of versions with different accessories used for larger boats. The alarm system must be connected to the power from the boat and is active as soon as it is connected. Charging of the internal battery is performed automatically to ensure full capacity. An intelligent internal charger ensures maximum life time for the internal battery.

8.2 *Operation*

The tracker is started by the SuperSail server, which means that the GSM network connection is always active.

If the external 12/24V supply for the alarm system is removed while the alarm is active it enters energy mode and reduces the monitoring of theft to 15 minutes' intervals. When the 12/24V supply is reestablished the alarm system automatically enters normal operation. In energy mode the alarm can operate on internal battery for at least 12 hours, where the position of the boat is monitored every 15 minutes and reported if changed.

8.3 *LED's in Unit*

On the front of the alarm system 2 blinking diodes are seen. One indicates communication on the GSM network and the other one indicates that the software is running correct. These are only to be used in case of service and troubleshooting.

The third diode under the GPS antenna connector, lights green or orange when the alarm system has a reliable GPS signal. If the diode do not light up it is recommended to move the GPS antenna to a place with more optimal reception.

Never place the antenna under a metal surface and make sure that it is mounted flat (horizontal) with the black top side up (please refer to the installation manual for correct installation).