



NOVASAIL
NS100

Operating Manual

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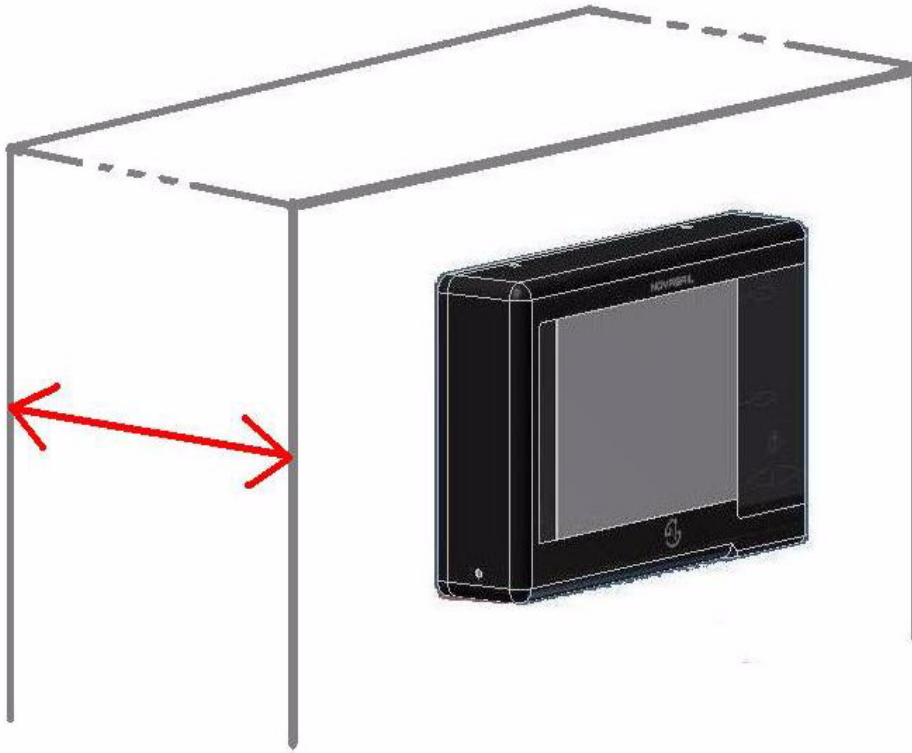
The *NS100* has been designed to provide essential information with a very simple and user friendly interface. Speed, heading, GPS coordinates and man overboard (MOB) functions are all accessible at the push of a button and clearly displayed on the backlit LCD, ideal for a night sailing and making your sailing safer. This new version offers better speed accuracy, a new screen with improved contrast and readability, and features a new waypoint management.

Compact (125 mm x 80 mm x 26 mm) and intuitive, the *NS100* is a light, portable device, which is completely waterproof, ultra robust, and made of bombproof polycarbonate and anodized aluminium.

Powered by only one AA battery, the *NS100* gives sailors accurate information for over 36 hours. It can be installed in minutes and there is no need to drill a hole in the hull or use a wired connection.

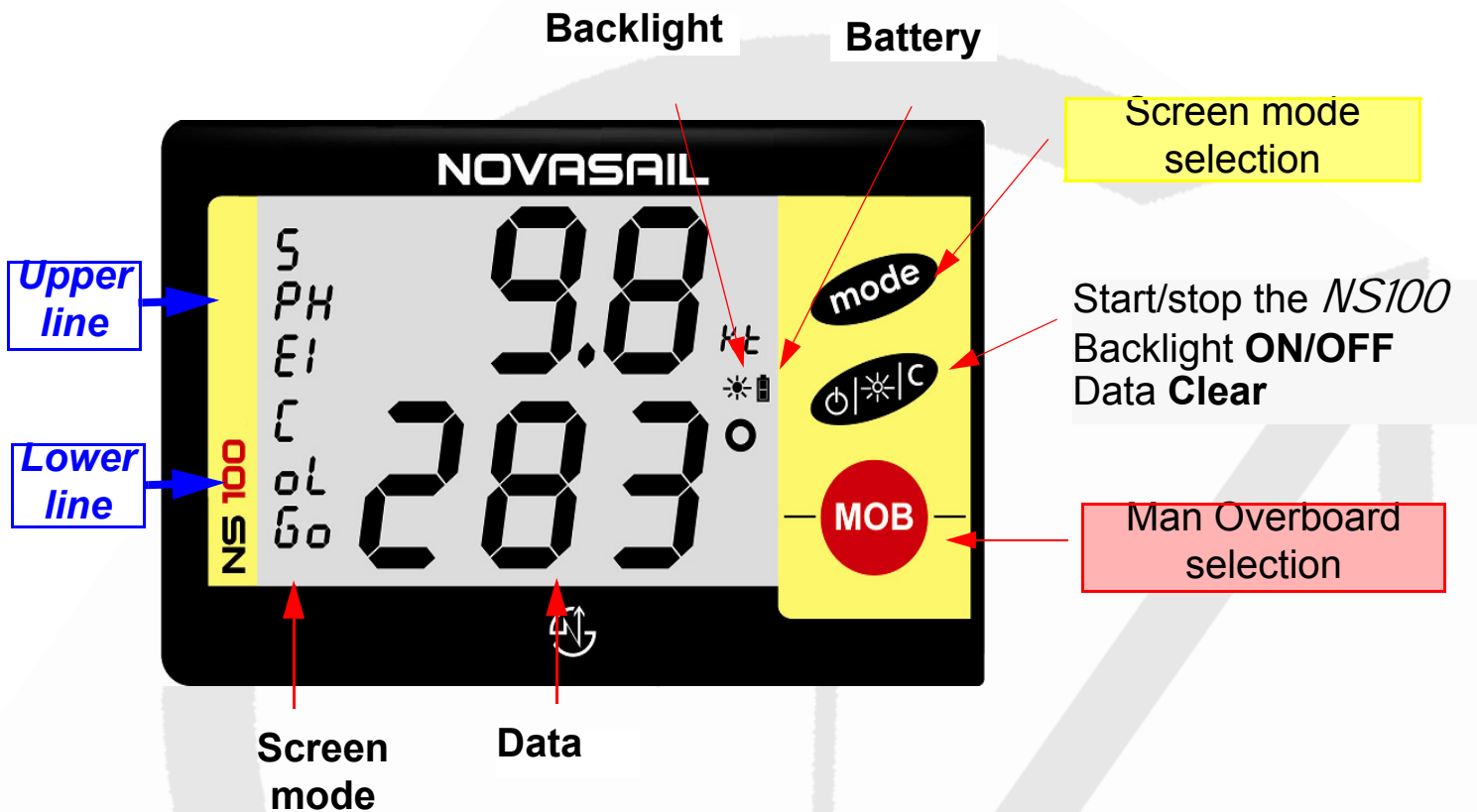
We hope you enjoy sailing with the *NS100*. We encourage you to read this manual thoroughly to learn about the many features of your exciting new Novasail product.

Installation



Wherever you mount the *NS100*, it shouldn't be flush to any thick surface, such as the hull, so that the sensitivity of the embedded GPS receiver is not affected. Also a direct mount on a metal surface will reduce the receiver sensitivity.

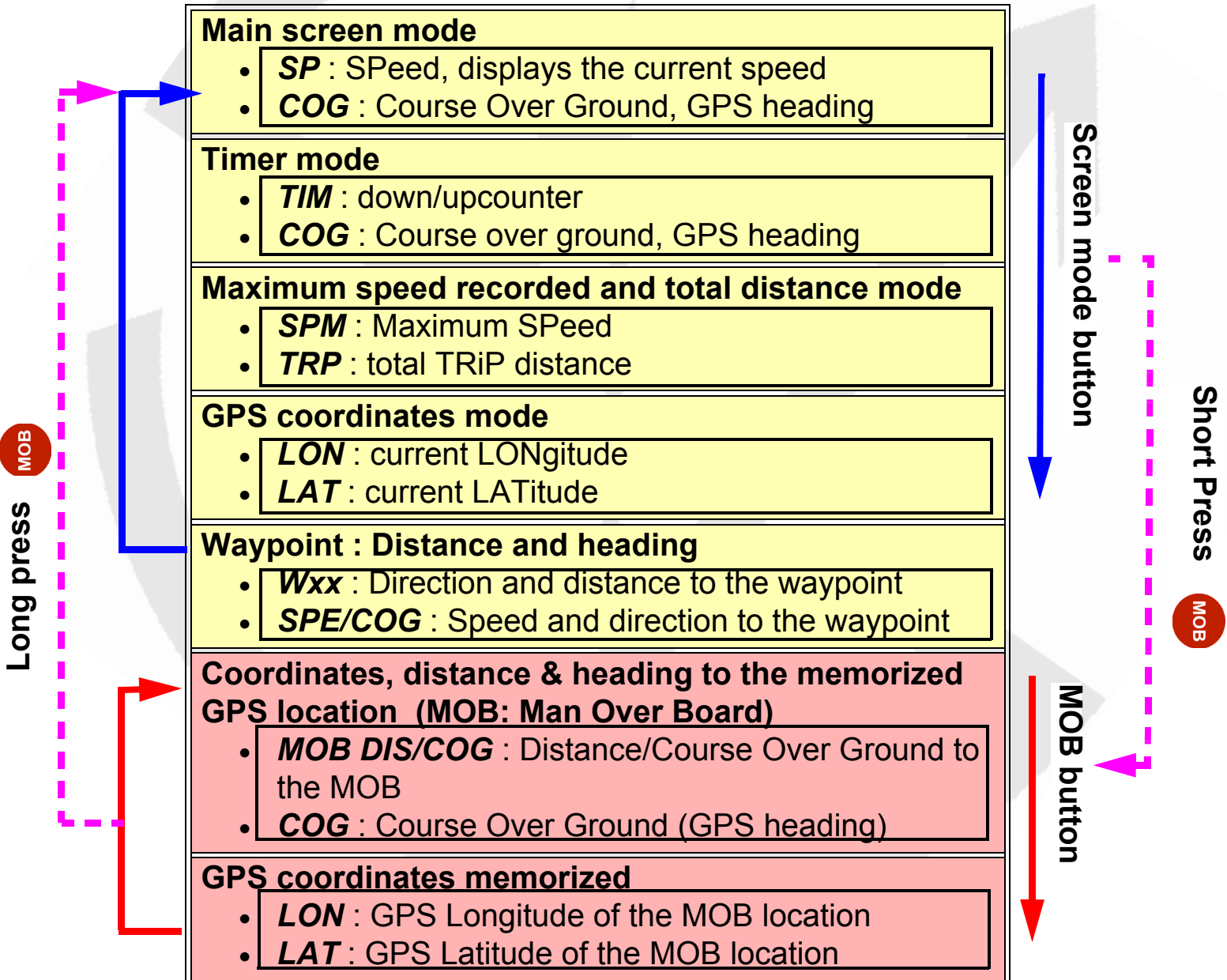
Buttons & display



The *NS100* has several modes of operation, each mode is based on information that is displayed on the upper and the lower line. The selection of the different mode functions is made according to the screen mode **mode** and the man overboard **MOB** buttons. The **mode** button allows the modification of data displayed in the selected operation mode.

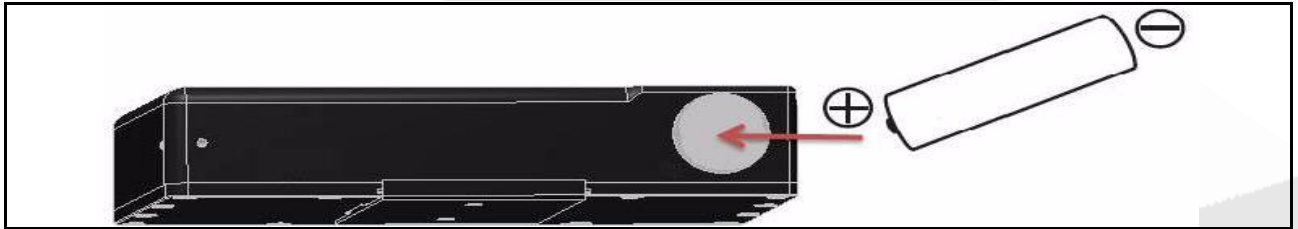
Screen modes



The following table is a summary of the different modes (upper and lower lines).



Switching power on and off

- Make sure the battery is installed with the correct polarity and has enough remaining power (positive pole inserted first).



- Press  to start the device. A beep will be emitted.
- Press and hold  for more than 4 seconds until the screen displays OFF and the sequence “3”, “2”, “1” is finished. A beep will be emitted when the device turns off.






Note: If the device does not turn on, you need to check if the battery is fully charged, that the battery compartment is dry, and the polarity is correct.

Note: Until enough satellites are locked, the NS100 is not ready to use. For all the modes requiring the GPS data, the screen will display “---” until it is ready. If the number of satellites is low, the display will blink.

Note: Alkaline batteries should be used in order to result in a maximum lifespan of 36 hours. When using a disposable battery, it is also recommended to remove it if the device is not used for a prolonged period of time (in order to avoid a possible leakage inside the battery compartment).

If using rechargeable batteries, low self discharge rate battery types are preferred, because normal rechargeable batteries lose their stored energy more quickly. Recommended batteries are SANYO ENELOOP, GP RECYKO+ or UNIROSS HYBRIO. These kinds of rechargeable battery will last for approximately 25 hours.

Switching backlight on and off

- Press and hold  for more than 1 second until the icon  is displayed on the screen. If the OFF sequence starts, simply release the button  before the sequence “3”, “2”, “1” is finished.
- To turn off the backlight, press and hold  for more than 1 second until the icon  disappears from the screen.

Note : When you press and hold the  button to switch on/off the backlight, you will not make any selection and therefore will not change any parameter.

Main screen


This mode provides the speed and heading of the vessel.



SPE, Upper Line: The speed over ground is displayed with a resolution of 0.1 knots (KT). The minimum speed is 1 knot, the maximum speed is 99.9 knots. The value displayed can be averaged; see “Speed sensitivity: SPE”, page 14.

COG, lower line: The course over ground (heading in degrees) as measured by the GPS receiver is displayed. The value displayed can be averaged; see “GPS Heading sensitivity: COG”, page 14.

Timer mode



This mode provides an adjustable downcounter and an upcounter timer with the heading of the vessel on the lower line.

TIM, upper Line: The timer starts in downcounting mode; the starting value can be adjusted to count down from 5, 4 or 1 minutes by a long press on the  button.

A short press on  starts the downcounter. It can be re-adjusted to 5/4/1 minutes by a long press on , whether it is stopped or still running.

When the timer reaches 0:00 it will start upcounting ('TIM up') and will indicate the time elapsed (hours/minutes).

Note: When the timer reaches 0:00, the display will automatically switch to the main screen mode (unless the MOB mode is already engaged).

A short press on  will stop or restart the downcounter. To reset the timer and restart in downcounting mode, a long push must be applied on  when the timer is stopped.

Note: In downcounting mode, the timer will emit a beep every minute; every 10 seconds below 1 minute, every second below 10 seconds.

COG, lower line: The course over ground as measured by the GPS receiver is displayed. The value displayed can be averaged; see "GPS Heading sensitivity: COG", page 14.


GPS coordinates

This mode provides the current GPS coordinates as measured by the GPS receiver (degrees/minutes decimal).


Maximum speed and total distance

This mode provides the maximum speed recorded and the total distance.

SPM, upper Line: Speed Max

The maximum speed is displayed in knots (KT). This value is saved when the device is turned OFF. It can be reset by pushing the  button.

TRP, Lower line: TRiP distance


The total distance in nautical miles (NM) is displayed. This value is saved when the device is turned OFF. It can be reset by pushing the  button.

Note: Both the TRP and SPM value blink until enough satellites are detected.



Waypoint mode: Wxx

This mode allows the direction and distance to reach the 20 memorized waypoints to be displayed: W00 to W19. Each time a waypoint is selected, the direction and distance needed to reach it are displayed sequentially.

To use a waypoint

- By default, W00 is displayed on the mode line.
- Press and hold  to select the required waypoint, from W00 to W19. The name of the waypoint is displayed with 3 characters.
- The direction and distance are displayed sequentially.

To Memorize a waypoint while sailing


- Press and hold  to select the waypoint (from W00 to W19).
- Press  to memorize the current position into the selected waypoint. The previous coordinates are automatically overwritten by the new ones.
- The direction and distance to the waypoint are displayed sequentially.

MOB: Man Over Board

This mode provides the coordinates, the distance in meters and the heading to a GPS location recorded when the MOB button is pushed.

Note: The MOB mode can be entered only if enough satellites are locked, otherwise the NS100 will emit 5 beeps and the display will remain unchanged.

To memorize the current GPS coordinates

- From any mode push the  button, the device enters the MOB screen mode. The current GPS position is automatically memorized and the display will be as follows:



MOB DIS/COG, upper Line (*blinking*) : Man Over Board

This line displays sequentially the distance in meters ('DIS') and the heading ('COG') to track back to the memorized GPS location.


COG, lower line : Course Over Ground

The course over ground as measured by the GPS receiver is displayed.

To display the GPS coordinates memorized

- When the MOB screen mode is engaged, the memorized GPS coordinates can be displayed by pushing  again. The device will display the longitude then the latitude (lon/lat blink). Another push on  will return the device to the MOB screen mode.

To return to the main screen mode

- The MOB screen mode can only be exited by a long push on . The device will return to the main screen mode and a new GPS location for the MOB position can be recorded afterwards; the previous MOB position is lost.

Operations

Note : While using the MOB screen mode, you can still switch on/off the backlight or turn off the *NS100*.







SET mode

The **SET** mode allows the adjustment of your *NS100* parameters sequentially as follows :

- Speed sensitivity
- GPS heading sensitivity
- Screen contrast

To enter the SET mode :

- Your device must be switched OFF.
- Press first  then  simultaneously. The device will enter the setup menu: **SET** will be displayed on the upper line.
- Each parameter is displayed on the lower line (line or column). The required value is adjusted by the button .
- The parameter is memorized when  is pushed.
- The **SET** mode is exited automatically at the end of the sequence or by switching off the device.

Name	Display	Description
Speed sensitivity	SPE	<ul style="list-style-type: none">• Hi: High sensitivity• Md: Medium sensitivity• Lo: Low sensitivity
GPS heading sensitivity	COG	<ul style="list-style-type: none">• Hi: High sensitivity• Md: Medium sensitivity• Lo: Low sensitivity
LCD contrast level	LCD CON	- level 1 to 7 (default level: 5)
Firmware version	VER	Firmware version number

Advanced Operations

The *NS100* will automatically exit the SET mode upon completion of all parameters.

Note : You can also exit the SET mode any time by switching off and on the product.

Speed sensitivity: SPE

- **Hi: High sensitivity**

The high sensitivity speed allows a very sensitive reading of any speed variation.

- **Md: Medium sensitivity**

This sub-mode provides an average speed of the boat over a short period of time. This is particularly useful when sailing with big waves upwind or downwind.

- **Lo: Low sensitivity**

This sub-mode provides an average speed of the boat over a longer period of time. This is particularly useful in rough conditions with lots of speed changes.

GPS Heading sensitivity: COG

- **Hi: High sensitivity**

When sailing with light winds and flat seas, high sensitivity allows you to appreciate very small wind variations.

- **Md: Medium sensitivity**

Medium sensitivity is more suitable for race boats under medium wind and sea conditions. Dinghy racers will appreciate this mode.

- **Lo: Low sensitivity**

Under low sensitivity more subtle variations due to big waves and sudden gusts are filtered.

LCD contrast adjustment: LCD CON

The LCD contrast level can be set from 1 to 7 (the level 5 default value is applied when the SET mode is entered).

Firmware version: VER

The firmware version of the *NS100* is displayed (for example: 1.0).

Waypoint mode

Mode Waypoint (WAY)

The **WAY** mode allows waypoints in your *NS100* to be memorized with a name (3 characters) and the geographical coordinates.

Note : The maximum distance to a waypoint displayed is 999 nautical miles.

To enter the WAY mode:

- When the *NS100* is off, press first **mode** then **mode** simultaneously.
- The waypoint number and name (3 characters) are displayed in the mode lines of the upper screen.
- The geographical coordinates are displayed in the lower screen.

Note: You can only exit the **WAY** mode by switching off the *NS100* (long press **mode** until "OFF" is displayed).

How to input the name and coordinates of a waypoint

- The **mode** and **MOB** buttons allow the value from 0 to 9 for numbers and from 'a' to 'z' for letters to be changed.
- The **mode** button switches to the next character.

Memorization of a waypoint

- First select the waypoint number: W00 to W19
- Enter a name (3 characters).
- Select 'NOR' (North) if the longitude is in the northern hemisphere or 'SOU' (South) if it is in the southern hemisphere.
- Memorize the longitude coordinate: for example 45'36.222.
- Select 'EAS' if the latitude is east or 'WES' if west.
- Memorize the latitude coordinate, for example: 23'46.345.
- When the latitude coordinate is completed, it rolls back to the selection of the waypoint number.

Limited warranty

This product meets or exceeds all of Novasail's rigorous quality controls and inspection standards. Complete services will be provided in accordance with the statement of warranty set forth below if any manufacturing defect or natural failure occurs within the warranty period.

Warranty Terms and Conditions

- If any defect arises under normal conditions of use within the warranty period, our customer service center or specified partner will provide the required repair services at no charge, or legally applicable services according to the appropriate consumer protection laws and regulations of the country in which the product was purchased by the warranty holder.
- The product has to be registered using the online service available on the Novasail web site: www.nova-sail.com
- Please submit the proof of purchase (Invoice) when requesting service.
- The actual cost of repair may be charged to the customer or the performance of warranty service may be rendered impossible, even within the warranty period, under the following circumstances:
 - Product failure caused by accident or carelessness
 - Disassembly or modification for purposes other than it was originally intended for
 - Failure caused by a fire, earthquake or flood
 - Damage/failure caused by an impact
 - Failure caused by inappropriate services performed by anyone other than Novasail's customer service center or one of Novasail's service specified partners
- For assistance in obtaining service, please contact Novasail service center:

E-mail: contact@nova-sail.com

www.nova-sail.com

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