SAILTECK®

Sail to win

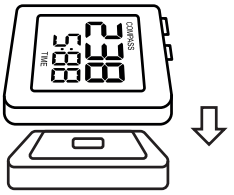
GPS COMPASS USER GUIDE

TO KEEP YOUR SAILTECK UP
TO DATE WITH FREE SOFTWARE UPGRADES,
SCAN HERE

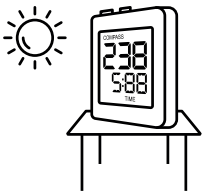
GETTING STARTED

Once in use, your GPS Compass is designed to maintain a heathy state of charge from the integrated solar panel, however from the factory the GPS Compass is part-charged. Before using, please charge in one of the following ways:

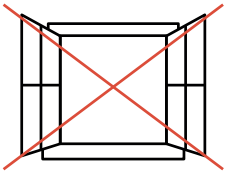
Place on an inductive charging pad



Place outside with the solar panel facing the sun



Never attempt to charge indoors or behind a window



GPS COMPASS USER GUIDE

(For other languages see www.sailteck.com)

SAILTECK®

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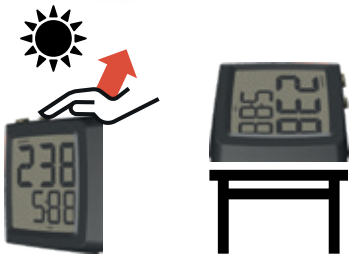
WELCOME TO SAILTECK

Congratulations on purchasing the ultimate GPS compass

Features :

- Speed, Compass, Heel, Trim, Max speed
- Time of day (GPS atomic time) and countdown
- Line distance to hundredth of a second
- Twin displays providing 180° field of view
- Super-bold 30mm characters
- Corrosion and zip free soft pack
- Triple shock protected
- Optimised for polaroid sunglasses
- Floats and submersible indefinitely to 20m
- Track file export including position, speed
- Upgradable software
- Track sharing*
- Bluetooth sensor support *
- Solar powered with 200 hours battery backup



ON OFF

OFF

** Upcoming features available through free software upgrade. Track sharing will be available first in Europe and North america. For availability in other regions see sailteck.com*

Sailteck powers up in OUTDOOR daylight when you UNCOVER the solar panel (if indoors, light the solar panel with a lamp or phone at maximum brightness). Place on a table to turn off. Power-off is automatic when there is no motion for 2 minutes. The battery percentage state of charge is displayed at power down.

TECHNOLOGY

Solar powered
With its large efficient panel, Sailteck is unique in offering the simplicity of solar power.

Triple shock protection
Sailteck's electronics are fully encapsulated inside the plastic housing and mounted on rubber shock absorbers. There is no exposed glass. The mechanics provide a triple shock protection, first the bezel, then the inner plastics, then the rubber mounts.

Easy to use
It all happens fast on the water and the proven Sailteck 3-button system is easy to use. Getting a good start, keeping on the pace, and picking the shifts has never been so easy.

Totally waterproof
Sailteck uses optical switching and so has no moving parts to seal. With just one seal and no breather membranes or buttons that pierce the case, Sailteck has no weak points and is completely waterproof.

Floats
Sailteck floats in salt and fresh water.

The ultimate GPS receiver
Sailteck's receiver works with over 30 satellites from 5 independent constellations and uses multiple frequencies. Unlike other receivers which have to use a thin chip-antenna to fit into their housing, Sailteck's twin displays allow room for a large sky-facing patch antenna giving Sailteck far more sensitivity. This increases the numbers of usable satellites and that means superior accuracy and positioning reliability.

Compass accurate to 1° with no recalibration needed
Sailteck's factory calibration is second-to-none. Other manufacturers claim a precision of 1°, which simply means their displays repeat the

same reading. Accuracy, however, means the reading is actually correct – that the heading you see is the heading you're sailing. Inside each Sailteck, the magnetic sensor has a separation barrier from the battery so that magnetisation during transport does not affect the factory calibration. This means that there is no need to recalibrate a Sailteck.

Two keypads for simple class rule compliance

The GPS compass is supplied with two keypads, red and grey :

- For classes that allow GPS while racing, the red keys provide full functionality including the display of speed and line distance.
- For other classes, the grey keys provide the same functionality as the universally class-legal Race Compass, whilst enabling GPS track logging, track sharing, and more.

Simply swap the keypads to comply with class rules, see www.sailteck.com/GPS COMPASS for instruction video.

Upgradable over Bluetooth

The GPS compass can be upgraded free of charge over Bluetooth from Sailteck's website. This means you are part of an evolving story as new features become available. The following are examples of features which will be available by free software upgrade.

- **Track sharing** Sailboat racing is all about competition, your individual performance is more meaningful when you compare it with your competitors. Logging and replaying your own track becomes truly informative when you overlay the tracks of the others. In the past, this has involved uploading multiple tracks to a computer or the cloud in order to combine them. With Sailteck, tracks can be shared live on the water so that when you use the Sailteck webapp to download your day's racing over bluetooth, you can see the tracks of other Sailteck's overlaid on your own track. For teams training and racing together track sharing makes data-driven learning more accessible than ever.

- **Sensor support** Sailteck's Bluetooth connection provides compatibility with sensors (wind speed, through water speed, rig tension etc) and with mobile devices for downloading logs for race replay. To find out more about the Sailteck Bluetooth features, see www.sailteck.com.

THE RACE

The upper display is the primary reference and you choose what's right for you using the UPPR setting in SETUP.

At the gun, the lower display will automatically switch to your preferred racing display and you can choose what's right for you using the LOWR setting in SETUP.

The time is synchronized to the GPS atomic-clock and you correct for your time zone by adjusting the universal time offset (UTC) in Setup.

Main key functions

Key	**Function**
< or >	Cycle throughpages of the lower display
GO	Start or resynchronize the countdown
GO 2 seconds	Setup and Stats (Max Speed & Trip)
< 2 seconds	Ping start-line left end (Red Keys only)
> 2 seconds	Ping start-line right end (Red Keys only)
< and > together	Adjust Countdown minutes

THE COUNTDOWN

To catch the start, you need to be in the GO: 5 display. Use the < and > keys to cycle the lower display, once you see GO: 5 press GO to start the sequence.

Press < or > to display GO:5		To adjust the start time for this day's racing, press the < and > keys briefly together, then adjust up or down with > or <
Press GO at the Gun		The countdown appears on the upper display and the compass on the lower display
Press GO to synchronise (seconds reset to zero)		To adjust the minutes for this start whilst the countdown is running, press the < and > keys briefly together, then adjust up or down with > or <

The display can be configured to change automatically at time zero, see SETUP for details.

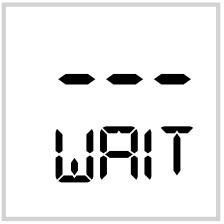
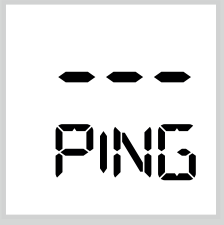
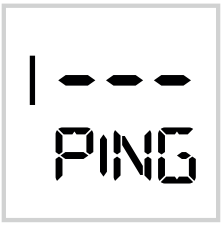
Tip: if your committee uses atomic time, you can view the time of day in minutes and seconds:

- Press the < or > key to access TIME
- Immediately press GO to see MIN:SEC
- When your start time is a few seconds off, press GO for the GO:5 display
- Press GO at the gun

LINE DISTANCE (REQUIRES RED KEYS)

Before using the LINE feature on the water, you should read the setup section below and configure the units of distance, bow offset (distance from the bow of the boat to the Sailteck), and boat beam (width).

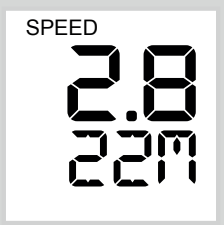
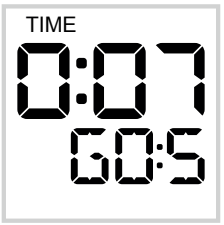
To see the LINE distance you first need to PING both ends of the line. You can ping either inside or outside of the line ends since Sailteck considers the line to be infinate in length. To ping, you press and hold the < button for the left end or press and hold the > button for the right end. The line-end position is stored at the instant you press the button.

Press and hold < or > to ping a line end		For optimal line distance accuracy (see FAST MODE below), wait until the display changes to PING.
Press and hold < or > to ping a line end		You see a line horizontal line representing the start line. You are now in FAST MODE and can ping both ends of the line.
		You have pinged the LEFT end, now sail to the other end of the line and PING again.

Once you have pinged both end of the line, Sailteck will add two new pages to your chosen lower displays: LINE and PERP. The LINE display indicates distance to the line (or OVER if you are over the line) and the PERP page helps you to determine the favoured end of the line, known as the line bias.

LINE DISTANCE

The line distance is shown on your lower display with the distance units (M for meters, F for feet, Y for yards). The upper display will show the countdown if it is running. You can setup an automatic transition to the LINE display a minute before the start, see SETUP for more details.

Re-ping if the line changes		The distance to the line shows on the lower display.
Start the countdown from GO:5		To access GO:5, use the < or > button. It doesn't matter whether you ping the line or start the countdown first.

LINE BIAS

The PERP page shows the line perpendicular direction on the lower display and the Angle between the heading and the line perpendicular on the upper display. Reading the Angle whilst close hauled tells you about the line bias.

Sailing on starboard tack, if you see an Angle smaller than on port tack then the line is starboard biased which favours starting at the committee end on starboard tack.

FAST MODE

If you cross the start line at 10 knots, you cover 5m in one second, so line distance accuracy depends on timing accuracy. GPS receivers have an inherent delay of up to one second even when they are producing a position fix 10 times a second. Without compensation for the GPS lag, your start-line position can be up to 5m out and conventional starting systems do not make timing corrections.

In FAST MODE, Sailteck computes line distance every hundredth of a second.

The switch to fast mode takes up to one minute and whilst Sailteck is establishing fast mode you will see WAIT. When fast mode is ready you will see PING. It is possible to ping early but you will not fully benefit from fast mode. If you see a flashing line indicator or flashing distance units then you are not in fast mode or did not ping in fast mode and will not benefit from Sailteck's enhanced line distance accuracy.

SETUP AND STATS

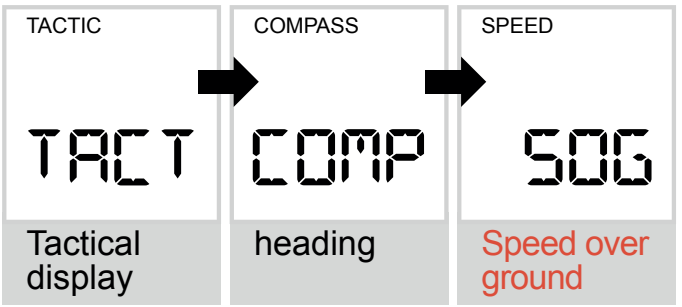
To access statistics and setup, press and hold the GO key.
Statistics include maximum speed and trip distance.

SETUP SHOULD BE COMPLETED ASHORE BEFORE YOU GO SAILING

Press GO 2s to enter setup,
Press < or > to move along the menu.
To change a value press GO, then < or > to edit, then GO to save
Press GO 2s to exit setup

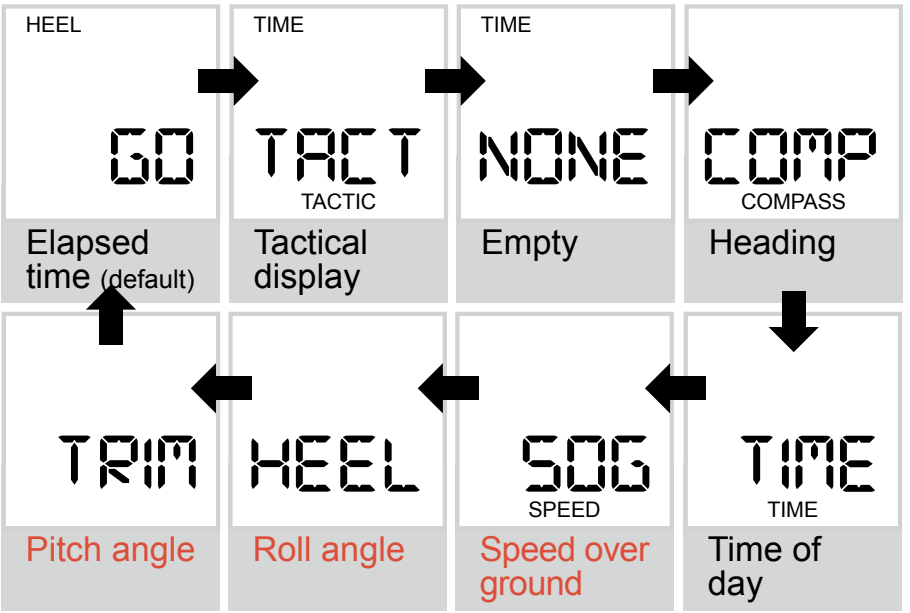
Max speed		The maximum speed. Press GO to clear. Automatically cleared at midnight
Trip distance		The distance travelled. Press GO to clear. Automatically cleared at midnight.
Time offset from universal time		Remember to change the UTC hour offset when you change time zone. The range is -12 to +14 hours.

Set the upper display



Tactical display | heading | Speed over ground

Set the lower display



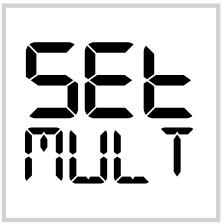
Elapsed time (default) | Tactical display | Empty | Heading

Pitch angle | Roll angle | Speed over ground | Time of day

The selected upper display will not appear in the list.

Displays marked in red are only available with red keys. If you change the keypad then the setup automatically changes. Red keypad settings are independent of grey keypad settings.

Step size		You don't generally want to tack on small wind shifts and the step size lets you choose more or less compass sensitivity. From the factory the STEP is 2°.
Angle of heel (or roll)		From factory, HEEL is set to On which means it is part of the lower displays. If you do not anticipate using HEEL then select OFF to shorten the list of lower displays.
Angle of trim (or pitch)		Sailteck is rarely mounted to the exact vertical so there is a trim angle offset. When TRIM is switched from OFF to On, the offset is automatically corrected so you need to install your Sailteck and have your boat sitting level when your set Trim to On.
Speed over ground		The units for speed can be set to KTS (knots), M/S (meters per second), MPH (miles per hour), or KPH (kilometers per hour). If you do not anticipate using SOG then select OFF to shorten the list of lower displays.
Line units		The line units can be meters (M), feet (FT), or yards (YD)
Automatic change to LINE display		You can program Sailteck to change automatically to the LINE distance display at a set time before the gun. The time setting is in seconds and the factory setting is OFF.
Distance from Sailteck to bow		The line distance is measured from the bow of the boat so you need to set the offset to the Sailteck mounting position. The distance is set in meters.
Maximum boat width		To determine the line distance, Sailteck takes into account the boat's angle to the line and so needs to know the boat's maximum beam in meters. The beam is set in meters.

Multi-hull		For multihulls, the line distance calculation assumes a rectangular hull shape. If you sail a catamaran or trimaran, set MULT to YES.

SOFTWARE VERSION NUMBER AND COMPASS CALIBRATION

To see the software version number, press and hold < and > keys for 2s. To exit, wait 5s.

The compass can be calibrated to your boat, though this is not usually necessary since sailboats are not made from iron (which creates magnetic interference). If you have an inboard engine close to the compass then you may need to calibrate the compass for the hard-iron effect of the engine. To do this, first fix the Sailteck in its normal position onboard and head out onto the water under engine power, you will need a clear space of calm water (minimal waves or marine traffic) :

- Head straight at 3 or 4 knots
- Press and hold < and > keys for 2s, you will see the software version number
- Press GO to start the calibration procedure
- Hold your heading for the time indicated by the HOLD instruction
- Then perform 1 to 1½ turns, always turning the same direction at a steady rate, each 90° segment of your continuous turn must take between 15 seconds and 20 seconds.

RACE REPLAY

To view your sailing history go to www.sailteck.com and follow the instructions. You will need to have your Sailteck with you since the log file is stored in the memory of the Sailteck. The log is uploaded over Bluetooth.

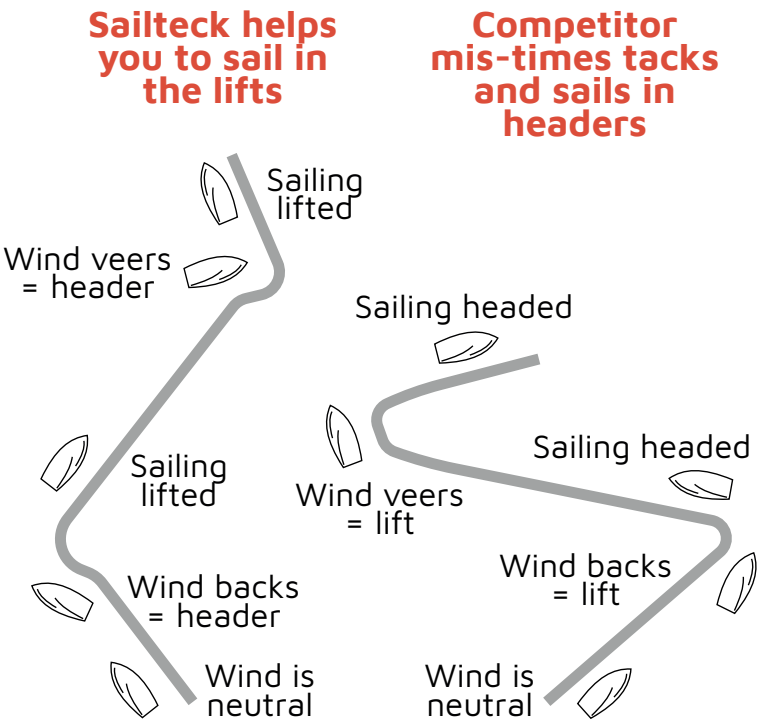
The upload tool, like all tools on Sailteck.com, runs directly on a Chrome web browser without needing to download an app. Sailteck is continually improving its WebApp tools, please consult www.sailteck.com.

DETECTING WINDSHIFTS

You can configure your Sailteck to display the Compass, the Tactic display, or both, depending on your preference.

TACTIC DISPLAY

The heading is offset by half the tack angle, which means that when beating to wind, you can directly read the wind direction. This means that you only need to work with one number, the wind direction. You enter an estimate of the tack angle and for boats where the tack angle changes with wind speed, you should adjust the tack angle to suit the conditions. This display is useful for upwind sailing.



Tip: To adjust your tack angle, first sail on port tack and note the displayed wind direction. Now tack onto starboard and note the new wind direction, if the starboard wind direction is 10° less than the port wind direction then you need to add 10° to the TACK angle.

To adjust the tack angle, press GO, then use the < and > keys to edit the flashing value. Press GO again to save.

MAINTENANCE AND STORAGE

Fix the cradle to a bulkhead or a bracket then clip the Race Compass into the cradle each time you sail. To avoid damage and prevent turn-on from stray light sources, always store in the soft pack.

Any attempt to disassemble will invalidate the warranty. Clean with fresh water and a damp soft cloth, never use detergent, solvents, or abrasive cleaners.

The Race Compass is designed to leisure marine industry standards and is intended for day-racing **not for navigation or night use**.

The warranty period is two years from date of purchase receipt. For warranty and service contact your reseller.

SPECIFICATION

Shock proofing : Triple shock protected
Waterproofing : IPX 8 and submersible indefinitely to 20m
Floatability : Floats in salt and fresh water
Static heading accuracy : 1° Does not need to be recalibrated
Heel and Trim accuracy : 1° Does not need to be recalibrated
GPS Antenna : Ceramic patch dual band
Line distance accuracy : Sub-meter*
Timing accuracy : Hundreths of a second
Display update : Two to eight times per second
Display : 30mm primary and 23mm secondary
Dimensions : 120 x 95 x 65mm
Weight : 270g
Operating temperature : 0 to 55 °C
Storage temperature : -30°C to +70°C
Bluetooth : v5.0 or above
Power supply : Solar with 200 hours backup battery

This product is protected by patents, design patents, patents pending, or design patents pending, for details see www.sailteck.com.

** 50% CEP, open water clear sky*

COMPLIANCE

FCC Compliance Statement
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions :
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
NOTE : This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :
• Reorient or relocate the receiving antenna
• Increase the separation between the equipment and receiver
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
• Consult the dealer or an experienced radio/TV technician for help
Canadian Compliance Statement
This Class B digital apparatus complies with Canadian ICES-003.
European Community Compliance Statement
The equipment complies with The EMC Directive 2004/108/EC

FCC ID: YCP-32WBA5MMG01 - IC: 8976A-32WBA5MMG01