# Velocitek Prism User Manual

Introduction

The Velocitek Prism is an electronic compass designed to meet the needs of racing sailors in the widest array of classes of any digital compass. The Prism uses only magnetic input as its heading reference, has no memory, no user inputs, and performs no arithmetic functions. It's legal in all classes that allow electronic compasses.

Prism Features

Solar Charging Indicator — Battery Indicator — Solar Panel — Button
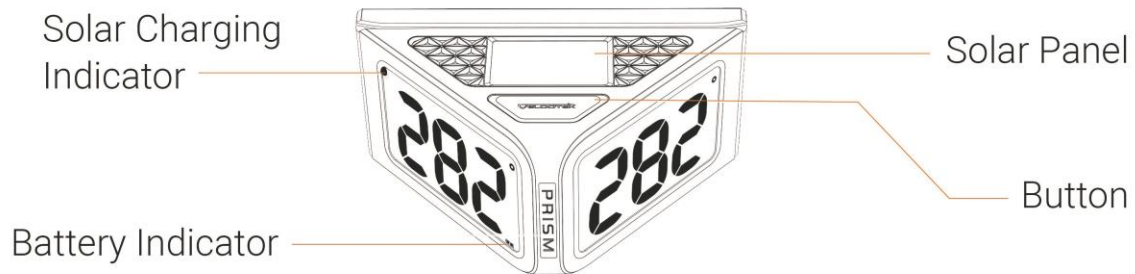
Mounting the Prism

Mount the Prism by installing the included cradle on your sailboat. The cradle should be perpendicular to the center line of the boat.

The Prism Cradle is compatible with the following Velocitek brackets:

- Mast Bracket
- W Bracket
- Deck Bracket
- Spinnaker Pole Mounting Bracket

The Prism Cradle can also be mounted using the Velocitek Mast Bracket Hardware Kit. The Prism Cradle is designed to accommodate M4 flat head countersunk machine screws. No. 6 flat head countersunk machine screws will work in place of M4 Metric fasteners. Always use non-magnetic fasteners when mounting the Prism Cradle and or Brackets.

The Prism should be installed at least 0.5m away from ferromagnetic metals and permanent magnets.

Battery

The Prism's battery is oversized compared to its power consumption and solar panel. This means the Prism has a long battery life and takes a long time to charge completely.

Battery Life

Full Battery   Half   Almost Empty

The battery indicator is located in the bottom right corner of the left LCD screen. When the battery is fully charged the device will last 40hrs in normal operation with no additional charge.

When the battery is empty the device will go into low battery mode and flash the battery icon. When the battery is exhausted, place the solar panel in the sun to recharge the battery.

Recharging the Battery

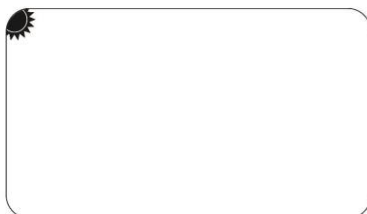Full Sun   Partial Sun   No Sun

To recharge the battery, place the solar panel in the sun. To achieve the best results place the solar panel perpendicularly to the sun. It takes approximately 80 hours of sun to fully charge the battery if the battery is empty.
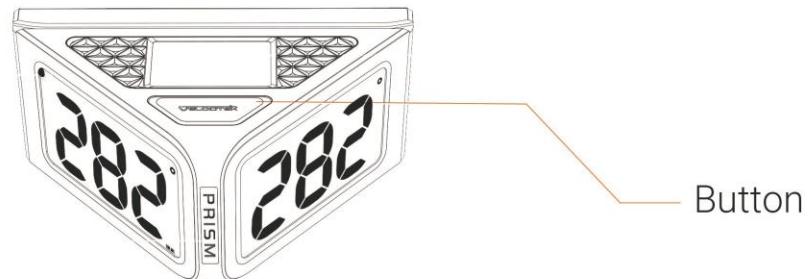
These sunlight icons are located in the upper left corner of the left LCD Screen:

Left Screen

Buttons & Operation

The Prism has one multi-function button located on the top of the product.

When the Prism is off, press the button once to turn the Prism on. The Prism also has an auto turn on feature when the solar panel is exposed to light.

When the Prism is on and in Compass Mode, press the button once to change from Compass Mode to Damping Mode.

When the Prism is on and in Damping Mode, press the button once to change from Damping Mode to Compass Mode. See Damping Mode in the next section for more details on setting the damping.

To turn the Prism off, press and hold the button for 3 seconds. The Prism also has an auto-shutoff if no motion is detected.

Modes

The Prism has two modes, Compass Mode and Damping Mode.

Compass Mode

In compass mode the Prism displays heading in degrees magnetic on both screens. Both screens will display the same heading so everyone on the boat will be looking at the same number even when reading different screens.

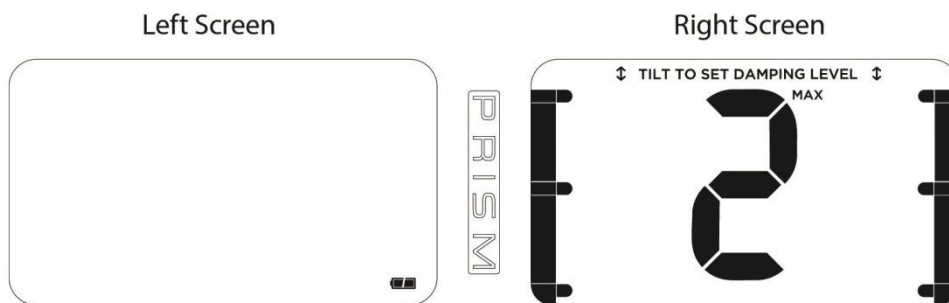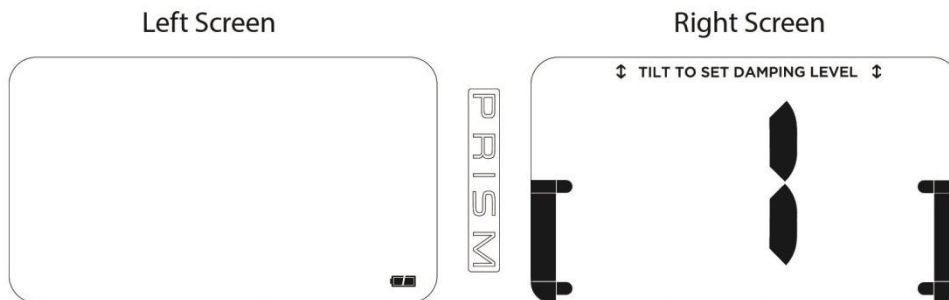Left Screen   Right Screen

Heading

Heading is magnetic heading of the device expressed in degrees with 360˚ being north.

Damping Mode

You can manually adjust the damping of the Prism.

The damping rate affects the response of the Prism to a change in heading. The greater the damping value the smoother the heading change will be, but the slower the response will be to a change in heading.

The Prism has three levels of damping 0 (no damping), 1 (low), and 2 (high). The factory default setting is 0 or no damping. To change the damping tilt the Prism until you reach the desired level of damping and then press the button once to set the damping.

Left Screen · Right Screen
⬍ TILT TO SET DAMPING LEVEL ⬍
0 OFF

Left Screen · Right Screen
⬍ TILT TO SET DAMPING LEVEL ⬍
1

Left Screen · Right Screen
⬍ TILT TO SET DAMPING LEVEL ⬍
MAX
[2]

While the Prism is in Damping Mode, the left screen will only display the battery meter and the right screen will display damping info.

Damping should not be confused with update rate or refresh rate, which is the number of times per second the LCD is updated. The update rate is fixed for the Prism.

Monitor Your Battery

The battery indicator is located on the left LCD screen:

Low Battery Mode

When low battery is detected nothing will be displayed on the LCD except the flashing battery icon.

To resume normal operation you must recharge the battery. When the battery is sufficiently charged the device will resume in Compass Mode.

Other Features

Auto-on

The Prism will turn on automatically when the solar panel is exposed to sun light. To turn the Prism on this way, cover the solar panel with your hand. Then remove your hand from covering the solar panel to expose the solar panel to sunlight.

Auto-off

To preserve the battery the Prism has an auto-shutoff feature. The Prism will automatically turn off after 30 seconds completely stationary (i.e. on land). The Prism will automatically turn off after 10 minutes if no change in heading is detected (i.e. tied to the dock).

Class Legal

The Prism uses only magnetic input as its heading reference, has no memory, no user inputs, and performs no arithmetic functions. It's legal in all classes that allow electronic compasses.

Tech Specs

- Weight: 4.8oz / 137 g
- Heading Repeatability: ±0.5°
- Display Update Rate: 2Hz (two times a second)
- Water Resistance: Complete immersion for 30 min. at 3m / 10ft (IPX8)
- Display: 29.8mm / 1.1" digit height 250° viewing cone
- Battery: 600mA

Warranty

Velocitek products are intended for use exclusively as tactical aids for inshore sailboat and SUP racing. Velocitek products should never be used for navigation.

Velocitek products and accessories are guaranteed against manufacturing defects for two years from the original date of purchase. This warranty is non-transferable and only applies to the original purchaser for new devices purchased from Velocitek or an authorized Velocitek reseller.

Velocitek's sole obligation in the event of such defects during this period is to repair or replace the defective part or product with a comparable part or product at Velocitek's sole discretion. Except for such repair or replacement, the sale, processing or other handling of this product is without warranty, condition or other liability even though the defect or loss is caused by negligence or other fault. Velocitek is not responsible for shipping costs associated with warranty returns. Velocitek assumes no liability for any accident, injury, death, loss, or other claim related to or resulting from the use of this product. In no event shall Velocitek be liable for incidental or consequential damages relating to or resulting from the use of this product or any of its parts.

Damage resulting from abuse, misuse, accident, or normal wear and tear is not covered by this or any warranty. The types of damage not covered by this warranty include, without limitation:

- Damage caused by a product being struck by a person or object.
- Damage caused by a product being dropped onto any surface from any height.
- Damage caused by line rubbing across the surface of a product.
- Water damage to electronics that occurs as a result of any of the above types of damage having compromised a product's waterproofness

Contact

Mail: Velocitek, Inc.
     126 N B Street
     San Mateo, CA 94401
     USA

Fax: +1-650-618-2679

Phone: Calls will be answered 9AM ~ 6PM, US Eastern Time
     US and Canada: +1-866-498-6737
     International: +1-650-529-4519

Email: support@velocitek.com

Website: http://www.velocitek.com

Support: http://www.velocitek.com/support

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.