

VELOCITEK RTK

ACCURACY MATTERS



VELOCITEK

System components



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System components

PROSTART



Mast mounted display with two modes:

- **Start Mode:** Countdown timer & Distance to Line
- **Race Mode:** Course Over Ground & Speed Over Ground

RTK PUCK



Transom mounted race management sensor:

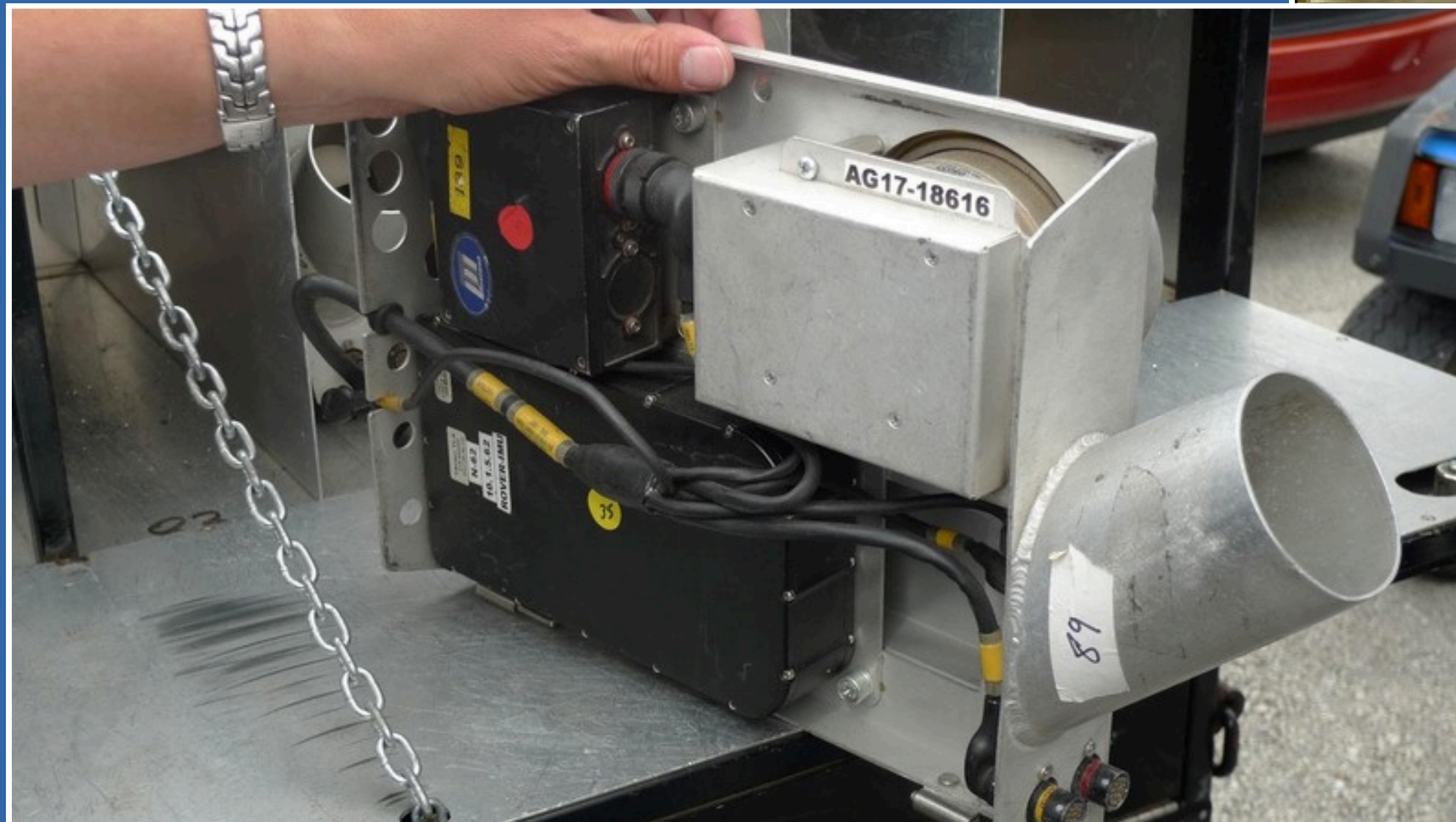
- RTK GPS receiver with sub-2 centimeter accuracy
- High-accuracy solid-state, electronically gimballed, compass
- Race Management communications

System components



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RTK in NASCAR



RTK GPS in Sailing - AC34



RTK GPS Accuracy

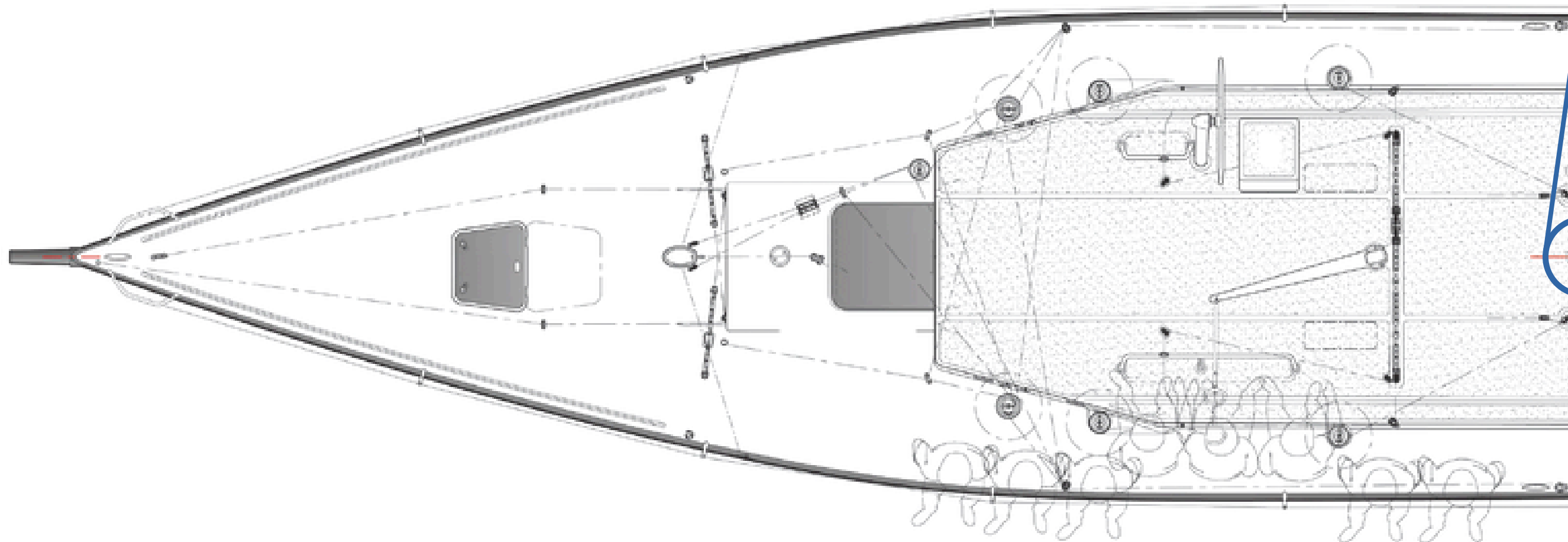
RTK GPS – the same technology used in the America’s Cup and SailGP.

By applying real-time corrections from a local base station, **Velocitek RTK delivers centimeter-level accuracy.**

RTK GPS: R95 = 0.045m
95% of measurements within the **light blue circle**

RTK GPS: CEP50 = 0.018m
50% of measurements within the **dark blue circle**

600% Magnification



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RTK GPS Accuracy



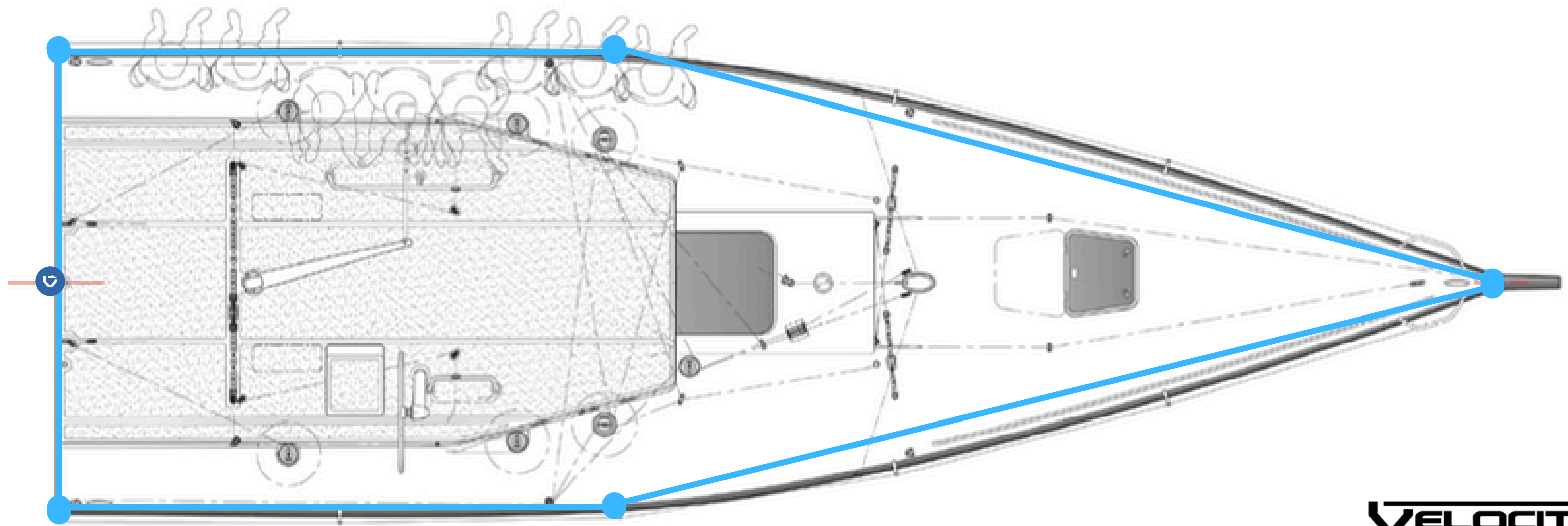
50% of RTK GPS measurements fall within the radius of a Ping Pong ball



95% of RTK GPS measurements fall within the radius of a Talenti gelato lid

Hull data points

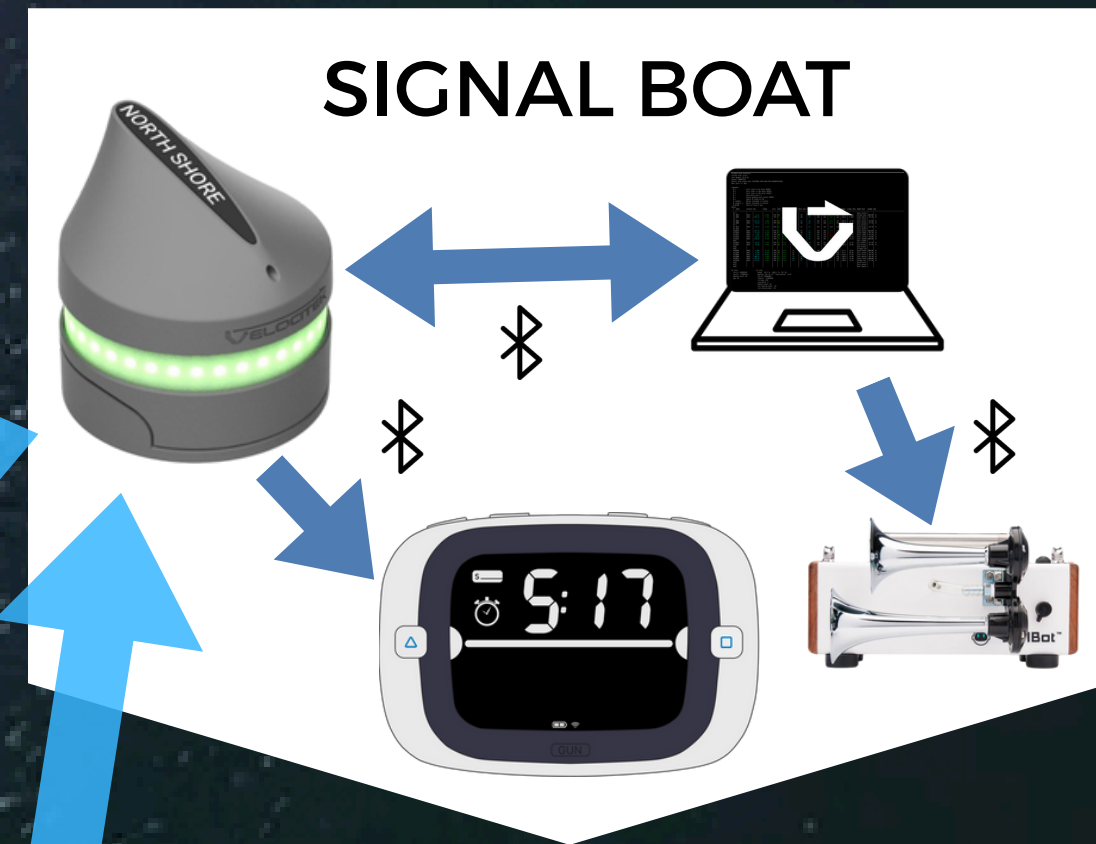
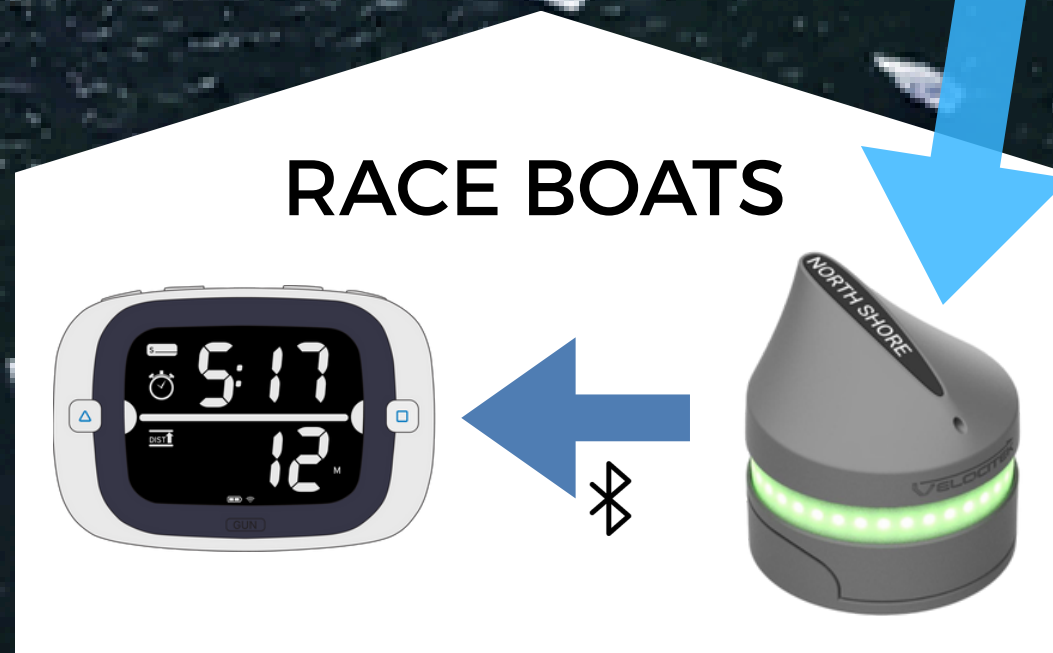
Velocitek RTK uses a five-point model of the boat, based on fixed offsets from the sensor location. Using the sensor's RTK GPS position, compass heading, and this model, the system calculates Distance to Line by measuring the closest point of the hull to the start line.



System Schematic



•))) RTK Pucks communicate via proprietary spread spectrum wireless protocol



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Sailor experience

IN SEQUENCE

Before every warning signal, your ProStart will automatically switch into Start Mode and the timer section will display an active countdown to your start.

Start Mode: Countdown timer & Distance to Line

Note: Negative Distance to Line means you are on course side



Sailor experience - OCS

PROSTART



- Top line shows “OCS”
- Bottom line shows Distance to Line in real time so competitors can use it to clear themselves (Note: Negative DtL = OCS)

RTK PUCK



Red means restart!

- The LED strip on the RTK Puck will be lit red on boat which are OCS



Sailor experience - Clear

PROSTART



The ProStart will automatically switch to Race Mode on boats that are clear at the start:

Race Mode: Course Over Ground & Speed Over Ground

The ProStart on boats which have restarted will switch from OCS to Race Mode

RTK PUCK



Green means go!

- The LED strip on the RTK Puck will be lit green
- The LED strip on boats which have restarted will change from red to green



VIGILANT
NEWPORT, RI

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Where do we get our gear?

At the Invitational Cup RTK Pucks and ProStarts will be handed out and returned under the tent daily.

Contact



email: sales@velocitek.com



WhatsApp:

(Velocitek @ Invitational Cup Group)



Thank you

We are grateful to the New York Yacht Club for their partnership and support in developing and refining this technology.



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