

REVOLVE

PPU HARDWARE



**Best Rate-of-Turn
Sensor Available**



The Bowditch Revolve is a rate of turn (ROT) sensor and automatic identification system (AIS) interface device for ship navigation. The Revolve integrates with a portable pilot unit via Bluetooth wireless or a USB cable.

FEATURES

- Robust, reliable sensor based upon professional grade gyro technology.
- Transmits ROT and AIS data via wireless data link with a range of up to 100 m (330 feet).
- Automatically correct wiring and baud rate errors on the AIS pilot plug.
- Accurate ROT – complies with accuracy requirements of ship gyro standards.
- Battery-powered (16+ hours) and completely isolated from the ship's power.
- Portable – set up in seconds.
- Self-monitoring and temperature compensated – no user calibration.
- Loss Prevention – on-board audio alarm for wireless link loss helps pilots to remember to stow it before leaving a ship.



Revised 9/24/2022. Photo Credit: Lou Vest

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PHYSICAL CHARACTERISTICS

SENSOR

Size	117 mm x 79 mm x 25 mm	4.6 in x 3.1 in x 0.98 in
Weight	186 g	6.5 oz

ENVIRONMENTAL

Operating Temperature:	4°C to 40°C	40°F to 104°F
Storage Temperature	-20°C to 50°C	-4°F to 122°F
Connectors	7-pin eSATA, female, Mini-B USB, and DC power jack	

PERFORMANCE

RATE OF TURN SENSOR

- Multiple gyros and internal ship model factors out roll and pitch for accurate rate-of-turn (ROT)
- Proprietary internal self-calibration process removes static bias (U.S. Patent #9,638,543)
- Accuracy complies with IMO Resolution A.526 (13) and ISO 20672:2007
- Interpolates heading to decimal degrees using high-accuracy ROT data

COMMUNICATIONS

- Auto-corrects for wiring errors on the pilot plug
- Scans for signals at 9600, 19200, and 38400 baud rates
- Class 1 Bluetooth radio with dynamic power management
- USB connector provides backup communications path

POWER

Battery	Rechargeable lithium ion battery
Operating Time at 75°F (24°C)	16 h
Charge Time	3-4 h
Input Voltage	100-240 VAC (47-63 Hz), max 10 W

SUPPORT

- 24/7 Text, Phone, and Internet support from Texas.
- On-site support available either full-time or upon request.
- Designed, assembled, and stocked in the United States.

COMPANY BACKGROUND

Bowditch Navigation is a leader in providing reliable, high-performance marine navigation aid systems, historically and today. We are focused on solutions for ship pilots. In 2001, Raven acquired Starlink, Inc., a company that pioneered many GPS technologies, including developing the industry's first MSK Beacon/DGPS receiver. Along with Raytheon Service Company and Capt. Joseph Bradley of The Pilot's Association for the Bay and River Delaware, Starlink developed the first GPS-based portable pilot unit in 1991. In 2017, Bowditch Navigation acquired the assets of the Raven Marine Navigation business. Today, Bowditch Navigation continues to foster Starlink's rich tradition of developing innovative GPS solutions for marine applications worldwide.



Revised 9/27/2022. Photo Credit: Lou Vest