

INVICTA 212

PORTABLE BLUETOOTH GNSS RECEIVER



The Invicta 212 is designed exclusively for ship pilots.



The Invicta 212 GNSS receiver is a high performance GPS+GLONASS receiver and antenna. Counted on by pilots throughout the industry, Invicta receivers are manufactured in the U.S. by Bowditch Navigation, a leader in quality GPS receivers.

The Invicta 212 GNSS receiver supports both satellite-based corrections (e.g., WAAS or EGNOS) and multi-constellation solutions. Multi-constellation receivers track more satellites with a limited sky view than single constellation receivers. It is also a dual frequency (L1/L2) receiver.

Like the Invicta 211 DGPS, the Invicta 212 GNSS receiver is small and light with a form factor design for ship pilots. Though consuming more power, the battery life remains 16+ hours due to an upgraded battery and power management system. The new battery in the Invicta 212 GNSS receiver provides ample time for most pilots to do inbound and outbound trips without recharging.

FEATURES

- Sub-meter accuracy without differential corrections
- Waterproof enclosure
- Bluetooth Class 1 radio with range up to 100 m (330 ft)
- Includes both a clamp and a magnetic mount to support every situation
- Battery status displayed using LEDs and in software (not included)



PHYSICAL CHARACTERISTICS

RECEIVER

Size ^a	200 mm x 100 mm x 50 mm	8 in x 4 in x 1.5 in
Weight ^b	995 g	35 oz

ENVIRONMENTAL

Operating Temperature	-20°C to 50°C	-4°F to 122°F
Charging Temperature	0°C to 45°C	32°F to 113°F
Storing Temperature	-20°C to 50°C	-4°F to 122°F
Maximum Altitude	18,288 m	60,000 ft
Maximum Velocity	1,852 km/h	1,000 kts
Water Ingress	IP-66	

PERFORMANCE

POSITIONING

- Dual-frequency L1/L2 code/carrier tracking of GPS and GLONASS signals
- 132 hardware channels for simultaneous tracking of all visible satellites in GPS and GLONASS constellations
- < 2.4 m 2dRMS (standalone)
- < 60 cm 2dRMS with SBAS corrections (WAAS, EGNOS, MSAS)
- < 0.6 cm 2dRMS with RTK corrections (requires firmware unlock)

POWER

Battery	Rechargeable lithium ion battery
Operating Time at 75°F (24°C)	16 h
Recharge Time	2-3 h
Input Voltage	100-240 VAC (47-63 Hz), max 10 W

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.

^aSize and weight are approximate.

^bWeight includes all essential items, including mounting clamp (289 g/10 oz) and charger (89g/3 oz).