



GAPS

PORTABLE, CALIBRATION FREE USBL

The calibration free Global Acoustic Positioning System (GAPS) combines USBL, INS and GPS technologies. The most accurate USBL in its category, it works in deep or extremely shallow water and difficult environments where other systems have failed.

FEATURES

- Calibration free
- 4,000 m range, accuracy 0.2% of the slant range*, 200 deg coverage
- All-in-one system, simple to use
- Provides absolute position as well as surface GPS-robust position

*Performance depends on environment/noise conditions

BENEFITS

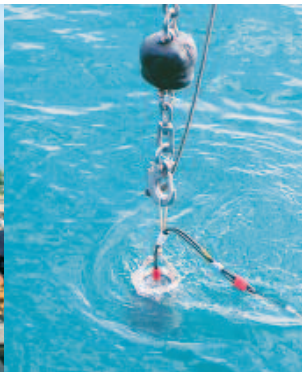
- No mobilization/demobilization: fully operational in less than 1 hour
- Adapted to all applications: shallow and deep water, and noisy environments
- Easily transferrable from one vessel to another
- Robust to acoustic and GPS hazard



Courtesy of Seatronics
& Von Oord



Courtesy of US navy



APPLICATIONS • Towfish tracking • AUV, ROV and any subsea vehicle • Diver tracking

GAPS

TECHNICAL SPECIFICATIONS



PERFORMANCE

Subsea positioning⁽¹⁾

Positioning accuracy	0.2% of slant range
Operating range	4,000 m
Coverage	200 deg below acoustic array
Operating frequency	20 to 30 kHz MFSK CHIRP modulation technique

Surface positioning and attitude

Heading / Roll / Pitch	0.01 deg ⁽²⁾
Position	2 to 5 cm (external RTK receiver) 0.5 to 3 m (supplied DGPS or accurate GPS receiver)
Position drift (GPS drop out)	2 m / 2 minutes

OPERATING / ENVIRONMENT

Power supply / consumption	24 VDC / 50 W
Operating temperature	-5 °C to 35 °C
Storage temperature	-10 °C to + 70 °C

PHYSICAL CHARACTERISTICS

Housing material	Carbon composite
Weight in air / water	15 kg / -3 kg (positive buoyancy)
Housing dimensions (Ø x H)	295 mm x 638 mm
Array depth-rating	20 m

INTERFACES

Protocols	Industry standards (NMEA 0183, binary...)
Fully compatible	Any external GPS, DGPS and RTK receivers

Automatic sound velocity corrections (ray bending & velocity error)
10 Hz output rate for subsea positioning data (irrespective of depth)
100 Hz output rate for surface positioning data

(1) Performance depends on environment / noise conditions

(2) Heading, Roll, Pitch figures are RMS values