

# Mini-Ranger 2



Mini-Ranger 2 is our mid-level USBL system that's also able to support data harvesting, using USVs, from seabed-deployed instruments or communicating with underwater assets such as AUVs. With a 995 m operating range, extendable to 4,000 m, MiniRanger 2 can track up to 10 underwater targets simultaneously, including divers, towed instruments, ROVs and AUVs.

Opt for the Marine Robotics software pack and it will communicate with subsea robotic platforms; sharing position and allowing you to exchange data. Expected system accuracy is 0.2–1.3% of slant range depending on system configuration. If you need higher precision or looking for a USBL that you can use as a dynamic positioning reference, then take a look at our top performing USBL, Ranger 2 Standard, or Ranger 2 Survey

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## Specifications

<b>Product</b>	Mini - Ranger 2
<b>Country of origin</b>	UK
<b>Manufacturer</b>	Sonardyne International Ltd

HPT 3000 At the heart of the system is HPT 3000, a highly capable surfacedeployed USBL transceiver which is optimised for; performance in shallow water, high elevation and long lay back operating scenarios, as well data telemetry.

It's typically deployed over the side of a vessel on a simple pole arrangement or under the hull of a USV. If the system is going to be permanently deployed, a through-hull deployment setup is possible.

HPT 3000 is connected to the system's 1U-high Ethernet Serial Hub (ESH) and your PC running the Ranger 2 software application. Fit a transponder to each target you want to track and you're ready to go. MiniRanger 2 is simple to configure and easy to use, even with no experience of acoustic tracking technology. As standard HPT 3000 enables data harvesting from seafloor instruments using a crewed or uncrewed vessel.

Transponder options A wide range of Sonardyne 6G transponders can be used with MiniRanger 2, allowing you to select the most appropriate model for each task. If you're tracking divers, manportable AUVs and micro-class ROVs, Nano is a popular choice. When tracking larger targets such as; a towfish, a crane wire lowering a structure, or an observation-class ROV, WSM 6+ will meet your requirements.

And if you're looking for a combined tracking and acoustic release transponder, RT 6 is now available. It allows you to deploy, track and recover seafloor equipment, all using the same instrument.

## Specifications

Feature	Specification
<b>Design</b>	Powerful features for commercial users Easy to transport, hardware comes in one shipping box Configurable for manned or uncrewed vessel operations Quick to mobilise, configure and uninstall Shares common platform with other Sonardyne USBLs
<b>Performance</b>	0.2% positioning repeatability using external MRU 1.3% positioning repeatability using internal MRU Up to 10 targets tracked, simultaneously 995 m tracking range; extendable to 4,000 m Up to 3 Hz position update rate
<b>Acoustics</b>	MF frequency (20–34 kHz) Supports Sonardyne Messaging Service for data exchange Sonardyne Wideband 2 digital acoustic for reliable performance in both shallow and deep environments Transceiver optimised for high elevation tracking
<b>Ownership</b>	What's in the box: HPT 3000, ESH, deck cables, software, manual Warranty: 1 year return to Sonardyne service centre ITAR Controlled: No UK Export License: Not required for 995 m version. Required for extended range (4,000 m) version