

Datasheet

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, Mini-Ranger 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.

Mini-Ranger 2 is a compact, easily installed system, so it's the ideal choice for temporary installation on small survey vessels, as well as uncrewed surface vessels (USVs). It's built around the same market-leading 6G hardware and Wideband 2 digital acoustic technology you'll find in our entire family of USBL systems – even the software is the same.

HPT 3000

At the heart of the system is HPT 3000, a highly capable surface-deployed 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 tough-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. Mini-Ranger 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 Mini-Ranger 2, allowing you to select the most appropriate model for each task. If you're tracking divers, man-portable 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.

See the Sonardyne website for more information on [Mini-Ranger 2](#).

Specifications

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Feature	Specification
Design	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
Performance	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
Acoustics	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
Ownership	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