

HPT 3000 USBL transceiver



The HPT 3000 Ultra-Short BaseLine (USBL) is a new smaller, lighter, highperformance Ethernet interfaced transceiver supporting Sonardyne's Wideband®2 6G® instruments. This smaller HPT offers significant improvements for survey positioning for coastal and near shore operations where high elevation tracking is required in low noise environments.

The advanced multi-element processing enables transponders to be positioned more precisely, more quickly and more robustly due to improvements in signal processing algorithms. When used as part of a complete Mini-Ranger 2 USBL system, heading and inertial navigation sensor, class leading performance is achieved.

Specifications

Product	HPT 3000 USBL Transceiver
Country of origin	UK
Manufacturer	Sonardyne International Ltd

Key features

- Built in health checks including array and electronics diagnostics
- True simultaneous tracking of multiple transponders providing high update rates
- Internal “Xsens” sensor magnetic compass for quick operation.
- Compatible with the Sonardyne 6G suite of products.
- Upgradable to Long BaseLine (LBL) and Modem
- Enhanced USBL array design for shallow water high elevation tracking.
- High performance USBL transceiver utilising Wideband 2 ranging and telemetry offer improved USBL precision and robustness
- Discovery mode allows users to automatically scan for transponders deployed within acoustic range
- Waterfall plot for enhanced ambient noise monitoring.

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The internal MTi-30 Xsens sensor provides pitch, roll and heading data for search and salvage applications which are time critical, requiring turn on and track functionality. Shallow water operations and pipelay from anchor barges also benefit from the internal sensor being calibration free.

‘Discovery Mode’ enables users to automatically detect previously deployed transponders including their configured address and channel, making the system easier to use.

The HPT 3000 is a highly capable acoustic transceiver. Its multiple simultaneous channels enable robust tracking of 10 targets.

Manufactured in aluminium bronze, the HPT 3000 is intended to be fitted temporarily or permanently to a vessel’s through-hull or overthe-side pole.

The full hemispherical coverage optimises performance in shallow water environments boosting transmissions and receive sensitivity in the horizontal axis. Ethernet connectivity enables the system to function over existing ship network wiring for rapid installation.

Feature

Feature	Type 8212	
Operational frequency	MF (20–34 kHz)	
Transceiver performance	Operating range	Restricted to 995 m with Mini Ranger 2 system (4000 m with extended range version)
	Acoustic cover	Full 180°
	Range precision	Better than 15 mm
	Positioning repeatability external MRU	All transceivers tested to better than 0.2% of slant range 1 Drms / 0.14% 1 Sigma
	Positioning repeatability internal Xsens pitch and roll	All transceivers tested to better than 1.3% of slant range 1 Drms / 0.9% 1 Sigma
Transmit source level (dB re 1 µPa @ 1 m)	194 dB	
Tone equivalent energy (TEE)¹	200 dB (3 JA)	
Electrical	48 V dc (±10%), typical 15 W, maximum 120 W	
Communication	Ethernet 100 Mbps	
Operating temperature	-5 to 40°C	
Storage temperature	-20 to 45°C	
Mechanical construction	Aluminium bronze	
Dimensions (height x diameter)	310 x 234 mm	
Weight in air/water	19.4/9.5 kg	

