

# Diver Tracking System

MicronNav USBL Tracking and Positioning

**CUSTOM  
ENGINEERING**



*MicronNav system rigged to a diver tank.*

## Encompassing Proven Technology

The MicronNav USBL tracking system is from Trittech's range of navigation and data transfer systems.

The MicronNav can function as a stand-alone unit, utilising a small transponder powered by a subsea battery pack to track horizontal (H) ranges up to 500m and depths down to 150m vertical (V).

When integrated into an ROV, the MicronNav USBL system allows for monitoring of coordinated ROV/ diver operations in real-time. When utilised with geo-referenced charts or satellite images, the system can greatly enhance the overall situation awareness and diver safety.

## How the Technology Works

The system comprises a subsea MicronNav transponder/ responder, a surface USBL transducer with integral magnetic compass and pitch/ roll sensors as well as a surface MicronNav interface hub and operating software.

The MicronNav uses the very latest in spread spectrum acoustic technology to provide a robust method for communication between the dunking transducer and the subsea responder/ transponder as mounted for diver/ ROV tracking.

## Standard Trittech Product Adapted for Divers

Trittech's MicronNav system is an innovative Ultra-Short Base Line (USBL) positioning system, originally designed for use with smaller ROVs.

The system has now been developed for use in diving operations, to provide real-time geo-referenced bearing, range and depth information for up to 15 divers. The system also permits the addition of target markers to include diver navigational waypoints.



*Diver belt for mounting transponder.*

## Benefits

- Easy ROV/ AUV mountable
- Quick and easy to mobilise
- Real-time monitoring for up to 15 divers

## Features

- From Trittech's positioning product line
- Geo-referenced data
- Integrated motion sensor in dunking transducer
- Operatable via Trittech's Seanet Pro software

## Applications

- Diver/ ROV tracking
- Mini/ micro ROV navigation system

## Specifications

- |                        |                                       |
|------------------------|---------------------------------------|
| • Frequency band       | 20 – 28kHz                            |
| • Tracking range       | 500m (H), 150m (V)                    |
| • Range accuracy       | ±0.2m                                 |
| • Bearing accuracy     | ±3°                                   |
| • Position update rate | 0.5 – 10s                             |
| • DC Power             | 12V to 36V                            |
| • Weight               | 1.3kg                                 |
| • Depth rating         | 750m                                  |
| • Comms                | RS232 or RS485<br>(in responder mode) |

Ref: July 2016 V1

All specifications are subject to change in line with Trittech's policy of continual product development.

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