

## Fusion USBL

Fusion USBL is designed to accurately position multiple subsea targets relative to a surface vessel. The system is particularly suited to tracking ROVs, AUVs and towfish or as a position reference input for vessels equipped with a Dynamic Positioning (DP) system.

### APPLICATIONS:

#### DP Reference

A common application for a USBL system is as a reference input to a Dynamic Positioning (DP) system. The dynamic positioning of a vessel removes the need to set up an anchor pattern that is both a time consuming and costly exercise.

#### Tracking ROVs and other Targets

In this application, a beacon is placed on an ROV, drill string or any other mobile target. The USBL system will then track the position of the mobile (in terms of depth and bearing) relative to the vessel.

#### Long BaseLine Operations

Fusion USBL hardware is fully compatible with Sonardyne's LBL hardware. By utilising a common topside processor platform, the Data Fusion Engine, for both USBL and LBL applications a USBL system can be upgraded to an LBL system simply by installing an additional software application. In this way the vessel's permanently installed USBL transceiver becomes an LBL transceiver that can be positioned in LBL mode and used to control and configure an LBL array.

#### USBL Positioning

The Ultra-Short-Baseline (USBL) acoustic positioning method, also referred to as Super Short Baseline (SSBL), involves measuring the range and bearing from a vessel based transceiver to a single, subsea transponder.



### A TYPICAL FUSION USBL COMPRISES OF THE FOLLOWING MAIN SUB-SYSTEMS:

#### Data Fusion Engine

The Data Fusion Engine is the heart of the system and is an integrated Navigation Controller Unit, display and Navigation Computer.

#### Fusion Software

Fusion USBL software allows a single surface vessel and multiple subsea targets to be tracked simultaneously as part of a sequential interrogation cycle.

#### CASIUS Calibration Software

CASIUS is an independent Sonardyne software package for the calibration of the attitude of the Sonardyne USBL transceivers.

#### USBL Transceiver

The Types 8021 and 8023 are the latest Ultra-Short Baseline (USBL) transceivers from Sonardyne.

#### Transponders

Fusion USBL is compatible with the vast majority of Medium Frequency (MF) transponders that are currently in use world-wide including Sonardyne's own 'Compatt Compatt' transponders and Super Sub-Mini (SSM).nhj