



*Fusion 2 combines the world’s most popular Long Baseline (LBL) acoustic positioning system with our trusted INS architecture, thus removing the interfacing complexity of two separate systems. Fusion 2 utilises 6G+ and Wideband3® acoustic hardware and protocols and improves the efficiency of tracking a target by embedding sensor measurement updates into the ranging cycles. As well as improved conventional LBL calibration methods, Fusion 2 is also capable of indirect ranging or “Fast LBL”, significantly improving position updates for mobile transponders as used on structures.*

### COURSE OBJECTIVES

This course provides the basic theoretical knowledge together with a thorough practical understanding of the operation of Sonardyne’s Fusion 2 software utilising our 6G+ subsea acoustic positioning hardware. The course aims to teach the user the methodologies for operating and calibrating acoustic LBL in conjunction with hands-on scenarios using either simulators and/or in-water equipment operation (\*).  
(\* Plymouth training centre only)

### WHO SHOULD ATTEND?

- Hydrographic Surveyors
- Survey Engineers

### COURSE SYLLABUS

#### Theory

- Introduction to Sonardyne & Acoustic positioning systems.
- Long Baseline Positioning Principles
- Calibrations and Processing
- 6G+ Command Language & TS9 info
- Error Theory
- Sonar Equation & System Diagnostics

#### Practical

- Fusion 2 Hardware setup and Configuration (serial and acoustic testing)
- Fusion 2 Software configuration (LBL)
- Baseline Calibration and Boxins (conduct & QC)
- LBL & Fast LBL Tracking
- 6G+ Compatt setup and configuration
- Application of Sound Speed Profiles, Tidal Variation and Environmental Factors
- Tracking Diagnostic Tools (travel times)
- Application of Geodesy, Convergence and Scale Factor
- Troubleshooting and Support procedures

### COURSE TEACHING MEDIUM

The course theory presentations and the accompanying written material are in English.

### COURSE DURATION

The course is 3 days in duration.

### NUMBER OF PARTICIPANTS

Courses are for up to 6 participants. This instructor to participant ratio ensures good one-to-one support, during the hands-on sessions.

If required bespoke courses can be run for more than 6, contact us to discuss details.

### BOOKING AND CONFIRMATION

Details of course dates, training centre locations and current availability of places can be found at the Training Course section of Sonardyne’s website:  
[www.sonardyne.com/product/training/](http://www.sonardyne.com/product/training/)

To reserve a place on a course, please email:  
[training@sonardyne.com](mailto:training@sonardyne.com)

### TRAINING COURSE DELIVERABLES

- USB stick containing electronic course material and relevant product manuals
- Fusion 2 LBL competency certificate