



Trimble Marine Construction Software for Positioning

The Trimble Marine Construction Software for Positioning provides contractors with the ability to perform their own pre-/post-construction hydrographic survey.

The system consists of Trimble Marine Construction software and a single beam echo sounder (SBES) for data acquisition, editing, plotting and dredge volume calculations. Contractors can reduce rework, increase productivity and improve site safety with a better understanding of the underwater environment.

The accuracy of the waterway bed survey is the combined accuracy of the GNSS position and the echosounder, which can be better than 10 cm (4 inches) vertically. The use of Trimble Marine Construction software real-time filters helps to create a clean surface that can be sent to the dredge or the office for analysis.

This well-featured, long-established software has been tested in the field on many sites. Functionality can be extended with a toolbox of associated software (e.g. Trimble Marine Construction Dredging and Placement) and sensors. It is well-supported by the global Trimble Marine dealer network, who will help select, install and train your team to reach your goals.

APPLICATIONS

The Trimble Marine Construction Software for Positioning is suitable for navigation tasks such as:

- ▶ Clear and precise survey boat, workboat or barge positioning and orientation at the dredge/construction site
- ▶ Aid to Navigation (ATON) buoys and anchor placement
- ▶ Dredging support for pre-/post-dredge surveys to identify high and low spots
- ▶ Calculate progress volumes and send grid model updates to both the office and the dredge vessel
- ▶ Aquaculture construction and navigation (e.g. oyster, mussel farms)

Key Features

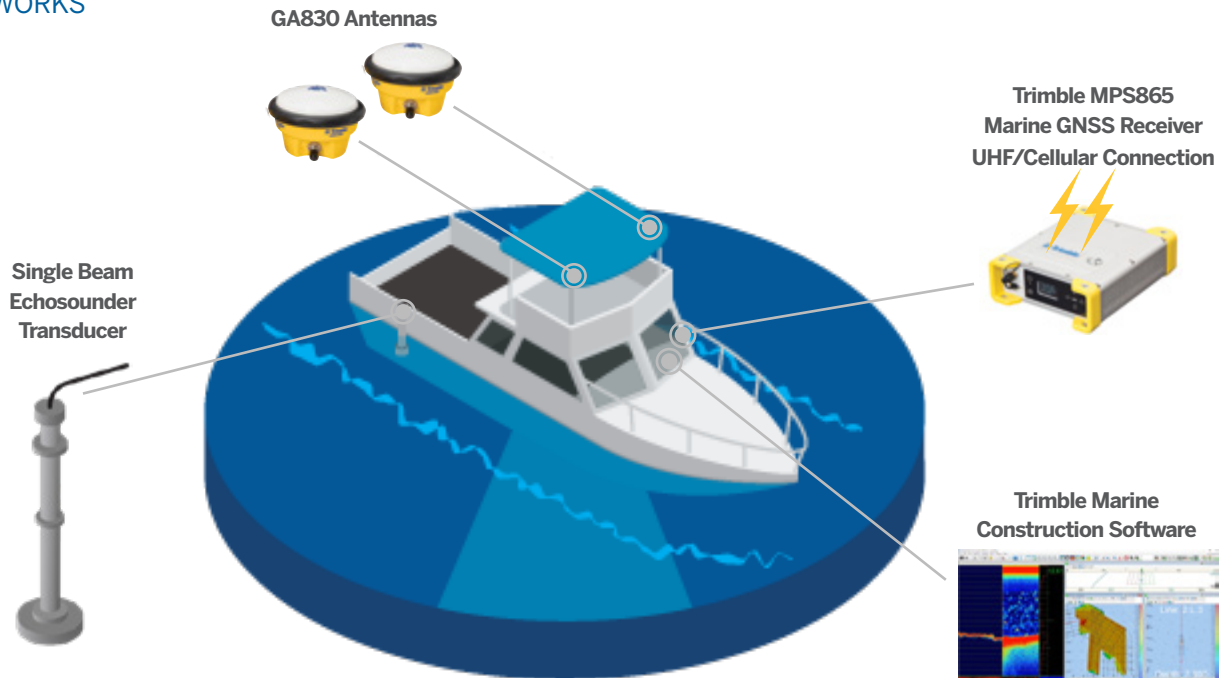
- ▶ Simple SBES data acquisition management, editing and plotting
- ▶ Accurate dredge volume calculations
- ▶ Supports subscription electronic charts, open-source charts and Automatic Identification Systems (AIS) for improved safety and navigation in congested waterways
- ▶ Compatible with a wide range of Trimble and third-party sensors (single beam echo sounders, Trimble GNSS receivers, attitude sensors, etc.)
- ▶ Quickly generate run-line patterns before or during a survey for precise navigation and greater efficiency
- ▶ Low cost, simple background charting Electronic Chart Display and Information System (ECDIS)
- ▶ Real-time echogram display for seabed/riverbed feature inspection and identification
- ▶ Reliable and stable solution suitable for the challenges of marine construction large data sets
- ▶ Offline echogram editing
- ▶ Innovative single beam interpolation in Digital Terrain Model (DTM) for better results
- ▶ Undo and redo editing functions
- ▶ Interactive graphical user interface with top, profile and 3D views and color-coded Digital Terrain Model (DTM)
- ▶ Apply Sound Velocity Profiles (SVP)
- ▶ Advanced plotting and reporting capabilities



Marine data collection and navigation for higher productivity, reduced over-dredging and rework

TRIMBLE MARINE CONSTRUCTION SOFTWARE FOR POSITIONING

HOW IT WORKS



General

- ▶ Complete software suite for acquisition and data editing
- ▶ Easy to adapt to your project's needs
- ▶ Integrates with Trimble Marine Construction Dredging and Placement applications
- ▶ Data can be exported to Trimble Business Center for sharing
- ▶ Wizard guides users through the setup
- ▶ Vessel shape file import (DXF or SketchUp models)
- ▶ Create track guidance lines, waypoints and routes

Accessory Interface Options

- ▶ Positioning systems
- ▶ Singlebeam echosounders
- ▶ Compass or dual GNSS heading
- ▶ Motion sensor
- ▶ Tide gauges
- ▶ Eventing to echosounder
- ▶ Acquisition, logging of all sensors in a single file

Data Acquisition

- ▶ Show charts, DXF and AIS vessel data as plan view background
- ▶ Digital Terrain Model (DTM) with corrected depths in color-coded cells
- ▶ Plan view with survey progress
- ▶ Status views of equipment, logging and alarms
- ▶ Online correction for:
 - Vessel roll, pitch and heave
 - Offsets
 - RTK height and tide
- ▶ Helmsman display with run-line guidance
- ▶ Echogram display

Processing

- ▶ Position editor shows position with DXF, Geotiff, S57, C-map and gridmodel in background
- ▶ Line-based editor shows data relative to sailed line
- ▶ Tidal data editor
- ▶ All editors show the original position together with edited and removed data
- ▶ All editors have the following functions:
 - Delete/Undelete function
 - Move/Smooth function
 - Interpolate/Find spikes function
 - Undo/Redo function
- ▶ Tide can be applied, reapplied and removed without data replay
- ▶ Generate new models quickly and direct from the data file
- ▶ Direct generation of 3D model from DTM
- ▶ Filter DTM data, view depths, standard deviations and hits per cell, interpolate functions

Charting

- ▶ Generate charts using administrator-defined and user templates
- ▶ Multiple plan-views and multiple profiles
- ▶ Depth contours, text and images
- ▶ Fast chart generation and printing

Volume Computation

- ▶ Compute volumes and generate reports from:
 - DTM grid model
 - Rapid grid model volumes and reporting
 - Volumes direct from data files using wizard
- ▶ Design modes by either:
 - Profile design
 - DTM model
 - Data export into XYZ Microsoft® Excel® sheets

For more information, visit trimble.com/marine or contact your local Trimble Authorized Marine dealer.

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