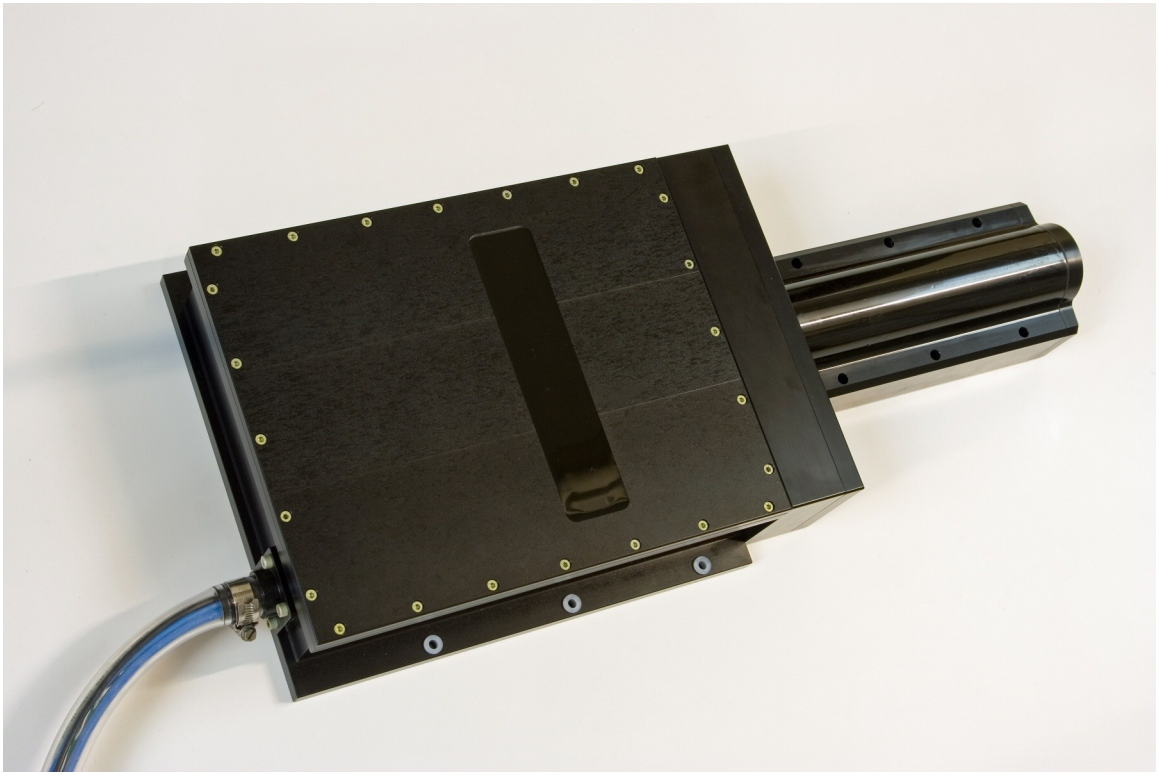
See - Bed

Multibeam Echosounder



The See-Bed Multibeam Echosounder is based on Marine Electronics digital range of electronically scanning multibeam sonar's utilising an improved wide band technique.

Measuring 64 or 128 soundings in a single swath the sonar head can be mounted from any small craft, towed underwater platform or ROV / AUV.

The 64 or 128 beams combine to give a 90 / 120 degree by 1.5 degree simultaneous sonar cross section below the vessel working at speeds in excess of 10 knots.

Using wide band technology the system can accurately measure a profile of the seabed / river bed that is 3.5 times the measured water depth.

This digital technique also allows high accuracy of the outer beams when combined with the advanced bottom detection algorithm that combines both phase and amplitude detection methods.

FEATURES INCLUDE

- **Real time display**
- **Up to 30 frames per second**
- **Choice of operating frequency from 100Khz to 500Khz**
- **Optional 3000m version**
- **Choice of 64 or 128 beams**
- **MRU interface for data stability**
- **D-GPS interface for accurate chart display**
- **Standard data formats**
- **"Windows" based display software**
- **Moveable "camera" viewpoint**
- **Chart overlay**

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The Transmit and Receive Transducer arrays are arranged in an inverted “T” configuration. The transmitter and receive electronics are mounted within the arrays with the digital sonar data being transferred to the control / display computer over a fiber optic link.

Operating at up to 30 swaths per second data is collected and displayed in real time the data being corrected with the addition of an external motion reference unit and GPS.

The sonar housing is manufactured of aluminium and hard anodised to allow the unit to be operated to 500m depth. An optional 3000m depth unit is available manufactured in stainless steel.

Data collected by the sonar head is transferred to the operating PC, running under windows, over a video link and connected to the computer via the USB interface unit supplied.

The data can also be output to most software packages used to display bathymetry data. Command and control data to the sonar head can be either RS232 or RS485 at 19200 baud.

The user friendly PC software running under windows provides all the controls for the sonar on screen and displays the sonar image plus history of the selected white line trace.

Specification

Operating Frequency	*100 - 500kHz*
No. of Beams	*64 or 128*
Angular Swath Width	*90º or 120º*
Receive Beamwidth Along Track	*1.5º for 64 beams, 1º for 128 beams*
Receive Beamwidth Across Track	*1.5º*
Transmit Beamwidth Along track	*128º*
Transmit Beamwidth Across Track	*1.5º*
Range Resolution @ 10m	*35mm*
Transmit Pulse	*42us to 1ms range dependant*
Range settings	*5 – 100 meters*
Update Rate	*30fps @ 10m, 7fps @ 100m*
Power Requirement	*18V DC to 36V DC*
Communication uplink	*Fiber Optic*
Communication down link	*RS485 19200 baud*
Dimensions	*640 x 260 x 90mm (64 beams)*
Weight in air	*18Kg*
Operating Depth	*500m (3000m optional)*

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