



OceanTools

MA500D and MA850D

Single beam echo sounder altimeters

The **MA500D** and **MA850D** precision single beam echo sounder altimeters contain the latest DSP electronics to produce *subsea altitude measurement* with impressive accuracy and resolution.



## Overview

The **MA500D** utilises frequency swept CHIRP technology and advanced composite transducers.

To achieve its deeper depth rating, the **MA850D** uses a monolithic, rather than composite, transducer. It therefore doesn't chirp, but operates at a fixed 850kHz.

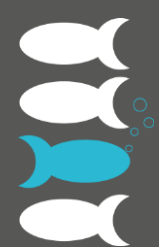
The altimeters provide numerous output formats, including RS232, RS485, NMEA-0183 and analogue.

The supplied Windows-based software allows the user to configure and control the altimeter, graphically displays altimeter data and offers full logging and replay of the data.

Echosounder altimeters are suited to shallow freshwater and deep seawater applications including:

- ROV and AUV altitude measurement
- Subsea lander altitude measurement
- Under-ice measurement
- Subsea surveying and depth sounding

Applications for multiple altimeters include safely lowering large items to the seabed, monitoring canal locks and hydro-electric plants for sediment build-up and assisting AUV navigation.



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## MA500D and MA850D

### Single beam echo sounder altimeters

#### Key Features

- CHIRP electronics (MA500D only)
- Simultaneous analogue and digital outputs
- NMEA-0183 output
- 9–36VDC operation
- Software allows log and replay of data
- User definable Velocity of Sound



#### Specifications

|                                | MA500D                 | MA850D     |
|--------------------------------|------------------------|------------|
| <b>Operating frequency</b>     | Chirp 480–520kHz       | 850kHz     |
| <b>Beamwidth</b>               | 6° conical             | 6° conical |
| <b>Range resolution</b>        | 1cm                    | 1cm        |
| <b>Maximum range</b>           | 30m                    | 5m         |
| <b>Minimum range</b>           | 0.5m                   | 0.2m       |
| <b>Transmit pulse length</b>   | 60µs                   | 10µs       |
| <b>Maximum diameter</b>        | 80mm                   | 80mm       |
| <b>Length (excl connector)</b> | 107mm                  | 90.5mm     |
| <b>Weight in air</b>           | 1.4kg                  | 2.0kg      |
| <b>Weight in water</b>         | 1.1kg                  | 1.6kg      |
| <b>Depth rating</b>            | 3000m                  | 4000m      |
| <b>Input voltage range</b>     | 9–36VDC                |            |
| <b>Operating current</b>       | 100mA @ 24VDC          |            |
| <b>Data output</b>             | RS232, RS485, Analogue |            |
| <b>Connector type</b>          | MCBH8M                 |            |

Product datasheets, GA drawings, case studies and other supporting documents are available to download from [data.oceantools.co.uk](http://data.oceantools.co.uk)

All specifications are subject to change without notice. E&OE.

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