



## MIDAS Surveyor Echo Sounder

The MIDAS Surveyor is a revolution in small boat survey work. With an integral GPS receiver and Valeport's unique "fuzzy logic" digital echo sounding technology, the Surveyor is quick to deploy, rugged and reliable, and boasts many features to make your work as easy as possible. Valeport also offers a range of tide gauge & sound velocity products to compliment the Surveyor - see the separate brochures.

### Echo Sounder

Single (210kHz) or dual (210 / 33kHz) channel input, using unique "fuzzy logic" DSP to give accurate readings and reliable performance, even in shallow water. Data may be logged and output either raw (as measured) or corrected for tide and heave.

Range: 0.3 - 100m (210kHz), 1.8 - 100m (33kHz)  
 Accuracy: greater of  $\pm 0.01\text{m}$  or  $\pm 0.02\%$   
 Resolution: 0.01m (210kHz), 0.04m (33kHz)  
 Sample Rate: 6Hz

### Position

MIDAS Surveyor logs and displays DGPS position data in WGS84 or Local Grid. User has full control over spheroid and projection constants for Local Grid setup.

**Standard:** Integral 12 channel GPS/SBAS receiver with combined antenna:  
 $\pm 4\text{m}$  (CEP), with no correction  
 $\pm 2\text{m}$  (CEP), with SBAS correction

**Option:** Surveyor also accepts user's own differential, GPS or RTK data input.

### Other Inputs

The Surveyor will accept data input from all the additional sensors listed below. All data may be logged and output in real time on a single RS232 channel, and tide & heave data may be used to provide real time corrections to depth data.

**Tide:** RS232 text data from tide gauge or RTK.  
**Heave:** RS232 data from heave sensor (up to 60Hz).  
**Sound Speed:** Continuous or spot readings from Valeport Sound Velocity Sensors may also be logged.  
**Gyro/Auxiliary:** RS232 input of vessel heading or any other text string may be logged with the survey data.  
**Event Marker:** Surveyor is supplied with remote event marker

### Data Outputs

Real Time RS232 output on a single channel of any, some or all of the active data inputs, in choice of industry standard formats.

### Memory

16Mb internal FLASH memory provides nominal 32 hours of data logging. An optional 32Mbyte memory is available at time of order.

### Data Display

240 x 128 pixel graphics LCD display, providing numerical and graphical depth display, position data (WGS84 or Local Grid) and all other incoming parameters. On screen help and simple menu-driven setup functions allow full system control.



### Electrical

**Internal:** 8.4Ah sealed lead acid battery pack  
**External:** 12 – 24vDC  
**Power:** 3W (sampling), 25W (max when recharging)  
**Battery Life:** Nominal 24hours working time (Recharge using external power)  
**Connector:** Fischer

### Software

Surveyor is supplied with SurveyLog, a Windows based software package, allowing data extraction & display. All data is presented in ASCII format, and may easily be exported for use in industry standard hydrographic survey software packages, or simple XYZ format data.

### Physical

**Surveyor:** Rugged IP67 case, 35 x 33 x 16cm, 9kg  
**Accessories:** IP67 case, 41 x 33 x 18cm, 9kg  
**Dual Tdx:** Combined 210/33kHz, 30 x 30 x 10cm, 12kg  
**Shipping:** 62 x 44 x 38cm, 18kg (basic set)

### Ordering

#### Basic

0420001 MIDAS Surveyor logging unit with 16Mb memory, internal battery pack, DC power lead, RS232 output lead, event marker, operating manual & SurveyLog software  
 0420002 210kHz transducer with 10m cable and mounting spigot  
 0420005 Integral 12 channel GPS/SBAS receiver with antenna, 5m cable and mounting spigot.

#### Options

0420003 33kHz transducer with 10m cable and mounting spar  
 0420004 33/210kHz transducer with 10m cable and mounting spar  
 0420EA12 RS232 input lead for external data input (tide, heave etc.)  
 0420EA13 RS232 output cable  
 0420EA1 AC/DC adaptor  
 0420009 Memory upgrade to 32Mbyte

Datasheet Reference: MIDAS Surveyor version 2B, June 2013