



# 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 $\pm 0.01m$ 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: $\pm 4m$ (CEP), with no correction $\pm 2m$ (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.

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 - 24V DC
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 and DC power lead • RS232 output lead, • Event marker • Operating manual & SurveyLog software
0420002	210kHz transducer 10m cable and mounting spigot
0420005	Integral 12 channel GPS/SBAS receiver Antenna, 5m cable and mounting spigot.

#### Options

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