



## MIDAS Surveyor



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 1:** Additional IALA Marine Beacon antenna & receiver, use with 12 channel GPS:  
 $\pm 1.5\text{m}$  (CEP)
- Option 2:** Integral 16 channel GPS/SBAS/IALA Beacon receiver with combined antenna:  
 $\pm 3\text{m}$  (CEP), with no correction  
 $\pm 1.8\text{m}$  (CEP), with SBAS correction  
 $<0.4\text{m}$  (CEP), with Beacon/DGPS correction
- Option 3:** 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.

### Power

**Internal:** 8.4Ah sealed lead acid battery gives nominal 24hrs

working time. Recharge using external power.

**External:** 12 - 24VDC. 3W when running, 25W max when recharging.

### 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.

### Software

Surveyor is supplied with SurveyLog windows based software, 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, 13kg  
**Accessories:** IP67 case, 41 x 33 x 18cm, 9kg  
**Dual Tdx:** Combined 210/33kHz, 30 x 30 x 10cm, 12kg

### 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
- 0420006 Integral 16 channel GPS/SBAS/Beacon receiver with antenna, 5m cable and mounting spigot
- 0420007 IALA Beacon antenna/receiver, 5m cable and mounting spar (use with 12 channel GPS receiver only)
- 0420008 RS232 input lead for external data input (tide, heave etc.)
- 0420009 Memory upgrade to 32Mbyte

As part of our policy of continuing development, we reserve the right to alter at any time, without notice, all specifications, designs, prices and conditions of supply of all equipment.

Datasheet Reference Number: Surveyor v1A

# 수중 센서 부착 및 설치 도면

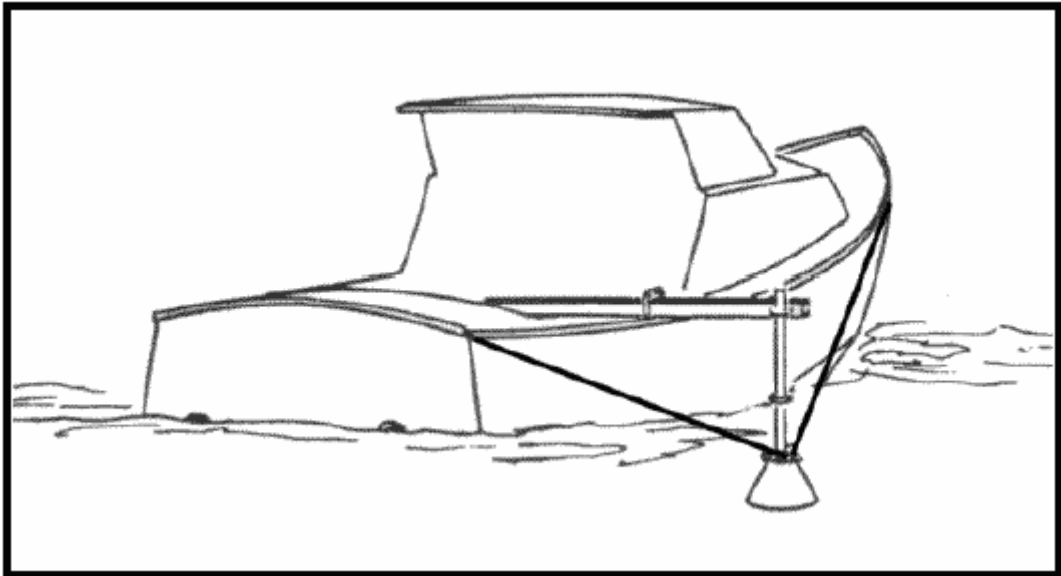


그림 1. 조사 선박의 측면 부착시 참조 도면

측면 부착시 수중 센서는 선박의 흘수선 아래에 위치



수중 센서를 실제 부착시, 항해시 뒤편을 고려하여 수중 센서는 선박의 머리 쪽으로 약 1° 정도 앞쪽으로 기울게 설치할 수 있다.

그림 2. 실제 부착 사진 ( 상부에는 GPS 수신 안테나 설치 )