



## SoundBar 2



The SoundBar 2 Digital Bar Checker is a specific configuration of our world-leading miniSVS product, allowing you to quickly and safely collect sound velocity profile data for the purpose of calibrating echo sounders. Simply lower the probe through the water column to get profile and mean sound velocity data. This simple process removes the need for the difficult and sometimes dangerous standard bar check procedure, and you can be confident that with the most accurate sound velocity sensor in the world, your calibration will be as good as it can be.

### Sensors

The SoundBar 2 is fitted with Valeport's digital time of flight sound velocity sensor and a strain gauge pressure transducer.

#### Sound Velocity

*Range:* 1375 - 1900 m/s  
*Resolution:* 0.001 m/s  
*Accuracy:* ±0.02 m/s

#### Pressure

*Range:* 5 or 10 Bar (50 or 100m)  
*Resolution:* 0.005% range  
*Accuracy:* ±0.1% range

### Data Acquisition

*Acoustic Frequency:* 2.5MHz  
*Sample Period:* Single pulse, maximum time of flight 145µs.  
*Sample Modes:* Continuous or pressure triggered  
*Output rate:* 1Hz, 2Hz, 4Hz or 8Hz raw data continuous. Pressure triggered data at 8Hz maximum.  
*Memory:* 128kbytes memory gives over 10,000 data points.

### Physical

#### Sensor

*Housing:* Acetal housing, polycarbonate, titanium & carbon composite transducer assembly.  
*Max Depth:* 100m, dependent on pressure sensor range  
*Size:* 40mm diameter by 363mm length  
*Weight:* Air, 1.0kg. Water, 0.5kg

#### Cable

*Type:* Polyurethane sheathed, kevlar strain member (100kg breaking strain)  
*Length:* Standard 20m Maximum 100m

#### Display

*Size:* 244 x 163 x 94mm  
*Weight:* 2kg  
*Protection:* IP67 (10 secs @ 0.3m)

### Power

*Internal:* 8 x 1.5v alkaline "C" cells  
*External:* 12vDC  
*Current:* Approx 0.25A

### Communications

*Output:* RS232 output from display  
*Protocol:* 2400 to 38400 baud 8 data bits, 1 stop bit, no parity, no flow control  
*Emulation:* AML SV Smart Sensor, SVP16, SVPlus, Odom Digibar Pro, NMEA, Hypack + others

### Ordering

- 0652014** SoundBar 2 system, comprising:
- Instrument with sound velocity & pressure sensors (50dBar unless specified)
  - 20m Signal cable
  - Control Display unit with batteries, 12vDC power lead and RS232 output lead
  - Operating Manual
  - Transit Case
- 0150047** Additional Signal Cable, max 100m total length.

**Note:** The sensor used in the SoundBar 2 System is also available for separate purchase as the miniSVS. The acetal housing is rated to a maximum depth of 500m, and pressure sensors suitable for this operating depth are available. A 6000m titanium version of the miniSVS is also available.