

The **ONLY CHOICE** for reliable measurements of sound velocity profiles.

# SV Plus Sound Velocimeter

The SV Plus sound velocimeter is a lightweight, rugged, intelligent profiler which records high resolution sound velocity profiles of a water column to depths of 5000 metres. Sound velocity is measured directly using an acoustic time of flight sensor rather than calculated from CTD measured parameters.

The SV Plus offers the options of logging data continuously, at user selected depth increments, time increments, sound velocity increments, or upon request. The output format can be configured for "real" computed engineering values or "raw" integers for post processing.

A standard feature of every SV Plus is AML's powerful, user friendly MS Windows' Compatible "Integrated Systems Software." ISS allows for viewing, editing, printing and graphing of data logged by the instrument.

## Features

- Direct measurement of sound velocity
- High accuracy sound velocity, pressure and temperature measurements
- Non-volatile memory to 200 Mbytes
- Compact and battery powered for easy handling
- Windows™ compatible software
- Optically isolated autobauding communications to 19.2 Kbaud
- Profiling to 5000 m depths
- Programmable sampling parameters of time, depth and sound velocity
- One year warranty

## Applications

- Hydrography
- Anti-submarine warfare
- Cable laying and location surveys
- Mine countermeasures
- Geophysical exploration
- Acoustic positioning systems
- Acoustic tomography ground truthing
- Water column microstructure analysis



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# SV Plus

## Sound Velocimeter

### Electrical

- Non-volatile 128K RAM expandable to 200 Mbytes
- 4 1/2 digit analog to digital converter (40,000 counts resolution)
- Up to 8 scans per second of sound velocity, pressure, temperature and battery level
- Real time clock
- Optically isolated autobaud RS-232 port
- Supports four additional analog channels
- Auto shut-down in low battery conditions

### Power

- Alkaline (9 x "D" cell) 10 A-H
- 80 mA sampling
- 5 mA standby
- 0.04 mA sleep mode

### Battery Options

- Lithium (3 x "D" cell) 14 A-H
- Nicad (9 x "D" cell) 4.4 A-H
- External power (8 to 16 volts DC)

### Software

- Real time graphing & tables
- Instrument setup
- Downloading data
- Exporting data
- Windows™ 95/98/NT compatible

### Mechanical

- Weight: 9.1 kg (20 lbs) in air  
3.5 kg (7.7lbs) in water
- Dimensions: 675 mm (26.5") x 102 mm (4.0") Ø
- Construction: Hard anodized 6061-T6 aluminum; rated to 5000 metres  
Optional: 7075-T6: rated to 8000 metres
- Connectors: IMPULSE Wet Pluggable™ series
- Environmental: Operating: -20° to 50°C  
Storage: -40° to 70°C

### Sensors

- Sound Velocity: Proprietary acoustic time of flight sensor
- Temperature: Pressure protected, aged thermistor
- Pressure: Semiconductor strain gauge (optional temperature compensation)

### Accessories

- Protection cage
- Radio modem
- Suspension bar
- Additional cable

Sensor Specifications		Range	Response	Accuracy	Resolution
Standard Sensors	Sound Velocity	1400 to 1550 m/s	145 µs	±0.05 m/s	0.015 m/s
	Temperature	-2° to 32°C	1.5 s	± 0.05°C	0.001°C
	Pressure	Assorted to 5000 dbar	10 ms	±0.15% FS	0.005% FS
Calculated	Salinity	0 to 40 psu	via software	±0.035 psu	
Options	Temperature				
	Option 1	-2° to 32°C	350 ms	±0.02°C	0.001°C
	Option 2	-2° to 32°C	85 µs	±0.005°C	0.001°C
Temperature Compensated Pressure		Assorted to 5000 dbar	10 ms	±0.05% FS	0.005% FS

Accuracies based upon RMS errors.

All specifications subject to change without notice.

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