The MAVS Current Meter is a true 3 axis Acoustic Current Meter which employs a differential travel time measurement technique. The current meter takes measurements across 4 acoustic axes to provide a true vector averaged velocity measurement. Programmable burst mode and triggered sampling provide the most flexible current meter available.

The combination of small sensor geometry and differential travel time technique provide unsurpassed resolution and accuracy. The small transducer size significantly reduces the disturbance to water flow. While the standard range of measurement is 200 cm/sec, low speed measurement accuracy in the 0.03 cm/sec to 10 cm/sec range is preserved.

MAVS-3 includes MAVSOFT Win95, Win98, WinNT user interface. Standard, commercially available software such as Hyperterminal or Crosscut may be used to communicate with the MAVS-3 for getting real time data or for downloading and archiving recorded data to a PC. Software such as MATLAB, Excel, Quattro Pro and Lotus 123 may be used for tabular display and graphing data.

Features:
- Unsurpassed Resolution and accuracy
- True 3 axis acoustic velocity measurement
- Field proven sensor technology
- No moving parts to foul
- Multi-mode operation, Vector averaging or event driven sampling
- Excellent vertical cosine response
- Differential travel time measuring technique
- Internal recording or direct reading
- Accuracy unaffected by instrument tilt or mooring motion
- Internal real time clock
- Digital communication via 5 Volt TTL, RS-232 or RS-485
- Temperature measurement

The MAVS-3 employs a faired sensor head design with central strut and a 9.5 cm acoustic path length. The controller is an Onset Tattletale 8 which is mounted by a connector beneath the main circuit board. A battery pack comprising 18 AA alkaline cells provides all the necessary power to the instrument. A 4 pin connector mounted on the top end cap permits external power to be applied and provides TTL level, RS-232 or RS-485 communication capability.

OPTIONS:
- Tilt sensor
- Temperature sensor
- Conductivity sensor
- Pressure sensor
- Turbidity
- Compact Flash logging memory available from 8 to 300 Mbyte
- Deep water housing

NOBSKA
Innovation In Acoustic Current Measurements

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SPECIFICATIONS:

Parameter | Accuracy | Resolution | Range
---|---|---|---
Speed | 0.3 cm/sec | 0.03 cm/sec | 200 cm/sec (optional ranges available)
Direction | +/- 2 deg | 1 deg | 360 deg
Temperature | 0.1 deg C | 0.03 deg C | -5 to 45 deg C
Conductivity | 0.2 mS/cm | 0.02 mS/cm | 0 to 75 mS/cm
Pressure | 0.05% F.S. | 0.024% F.S. | 15, 30, 60, 450, 3,000, 7,500 & 10,000 PSI
| 0.04% optional | 0.08% optional |
Tilt | 2 deg | 0.1 deg | 20 deg, 45 degree optional

Drift: 0.15 cm/sec per month

Measurement Technique: Differential travel time, 3 axis

Acoustic Paths: 4 measured, 4 used

Power:
- Internal Recording: 13.5 VDC, 18 AA Alkaline batteries, @ 4.8 Ah, optional lithium thionyl chloride 14.4 VDC @ 8.8 Ah
- Direct Reading: External 12-15 VDC
- Current Drain: 23 ma. Measuring
  0.6 ma. Sleep Mode

Internal Recording Memory: 16, 32, 48, 64, 96, 128, 160, 192, 256, 300, 512 Mbyte compact flash card

Memory Usage: Dependent on sampling method and size of memory installed

Communications: TTL, RS-232 or RS-485 @ 38,400 baud maximum 115.2 K baud

Depth: 2,000 m. or 6,000 m.

Dimensions:
- Cylinder Diameter: 3.25 in.
- Overall Length: 25 in.

Weight:
- Water: 2.6 lbs.
- Air: 5 lbs.

Mooring Frame: 2000 lbs. Optional 10,000 lbs. available

Sampling Rates: 10 Hz in Earth Coordinates (resolved to Ve, Vn, Vup) or
15 Hz in instrument coordinates
25 Hz Raw Data, No Compass, No Options

Sea Cable: RS-485 or RS-232 4 wire (inquire for other communication protocols)

Data Record Size: Standard Instrument: 32 bytes per record for Day, Hour, Min, Sec, T, Tilt, Ve, Vn, Vu
Recorded as Binary and transmitted as ASCII Comma separated variables with CR LF

Operating Modes: Vector Averaging
Burst Mode (programmed for timed sampling)
Externally Triggered Sample
Continuous Sampling

Software: MAVSOFT Windows95, Windows98, Windows XP/NT user interface
Terminal Emulator: Hyperterminal, Crosscut or Tattleterm
Optional Graphical Software available upon request