

## SYSTEM CONFIGURATIONS

### Argonaut-SL

#### Side-Looking System

The Argonaut-SL is a side-looking Doppler current meter that precisely measures 2-D water velocity in a horizontal layer. Because it is easily installed on a riverbank, bridge abutment, or other vertical structure, it is the perfect choice for long-term current monitoring. Options for water level measurement, water quality, telemetry, and flow calculation extend the capability of the Argonaut SL to a wide variety of applications such as:



- River Discharge Monitoring
- Ship Berthing
- Water Supply
- Irrigation

### Argonaut-ADV

#### Accurate "Shallow-Water" System

Providing robust, laboratory-precision flow measurements in a compact and easy-to-use package, the Argonaut-ADV is the ultimate solution to shallow water flow monitoring. Ideal for low-flow applications, it is equally versatile in higher velocity environments and when precise water velocity is needed close to a boundary.



- Low flows down to 0.001 m/s
- Shallow water down to 2 cm
- Optional pressure sensors
- Ideal for marshes, streams and lakes

### Argonaut-XR

#### Bottom Mounted System

Designed specifically for mounting on the bottom and looking up, the low-profile Argonaut-XR is an advanced Doppler sonar for 3-D water velocity measurement. Because the Argonaut-XR vertically integrates water velocity from the bottom all the way to the surface, it is an ideal tool for sites where bi-directional flows are present. Optional CTDs and multiprobes can make it a complete environmental monitoring solution.



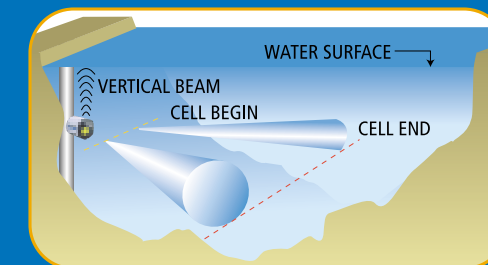
- Vessel Traffic
- Canals
- Environmental Studies
- Velocity Indexing



## PRODUCT ADVANTAGES

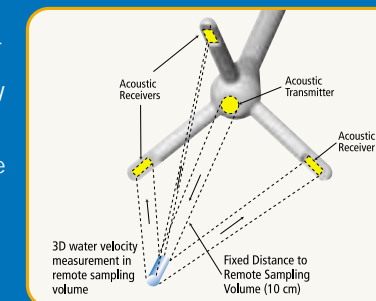
### Argonaut-SL

Featuring a user programmable cell extending up to 120 m horizontally (w/500 kHz model), flow disturbances caused by the mounting structure can be eliminated by beginning the measurement cell out past the turbulent zone. An optional profiling feature enables up to 5 equally spaced cells. The vertical beam option enables simultaneous water level measurement for accurate flow measurement.



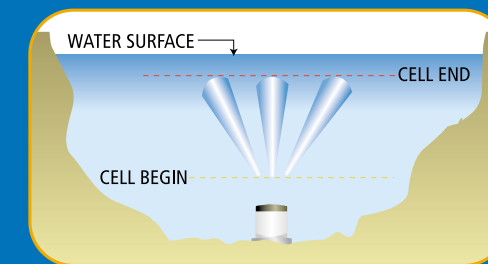
### Argonaut-ADV

Utilizing SonTek's exclusive ADV technology, precise 3D (2D optional) water velocity is measured within a small sampling point located 10 cm from the acoustic transmitter. This enables the user to measure natural flow that is free of any wake field caused by the instrument. With its standard 4 MB memory and rechargeable battery (optional) it is also ready for autonomous deployments.



### Argonaut-XR

The Argonaut-XR differs from other current meters in a very important way; the sampling volume size and location are adjustable. You program the size and vertical extent of the volume, which can extend out as far as 20 m from the transducer head. A special automatic mode can automatically adjust the measurement volume for changing water level. An optional multicell features allows for an additional 5 cells of current profiling.



## Argonaut Standard Specifications

### Standard Features to All Argonauts

- Flexible Sampling Strategies
- Robust Digital Signal Processing
- 4 MB Internal Recorder
- Windows 95/98/NT/2000/XP Software
- PDA (Windows CE) software for PDA's
- RS232/SDI-12 Communication
- 10m Power/Communications Cable
- Temperature Sensor

### Operational Limits

- Operating Temperature: -5 to 40°C
- Storage Temperature: -10 to 50°C
- Pressure Rating: 60 m for Argonaut-ADV; 200 m for Argonaut-XR and Argonaut-SL

### Optional Features to All Argonauts

- RS422/485 Communication
- 4-20 mA Output Module
- SonWave Non-Directional Wave Spectra Package
- Pressure Sensor
  - Strain Gage (0.1% Accuracy)
  - Resonance Pressure Sensor (RPT) (0.01% Accuracy)
- Integrated YSI Multi-Parameter Probe or SeaBird CTD

## Argonaut-SL, XR & ADV Specifications

### Argonaut-SL and Argonaut-XR Configurations

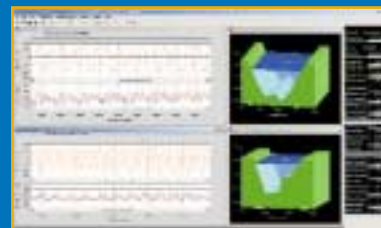
- 0.5 MHz transducer with sampling volume size from 1.5 m to 120.0 m (4.9 to 394.6 ft) from Sensor (SL Only)
- 1.5 MHz transducer with sampling volume size from 0.5 m to 20.0 m (1.6 to 65.8 ft) from Sensor
- 3.0 MHz transducer with sampling volume size from 0.2 m to 8.0 m (0.7 to 32.9 ft) from Sensor
- Special 'M' form factor configurations in 4" (10 cm) diameter casings for special application (not shown-call for details)
- Vertical Beam Option (Argonaut-SL only)
  - Minimum/Maximum Range 0.25 m (10")/11.0 m (35 ft)
  - Accuracy: ( $\pm 0.3$  cm/ $\pm 0.01$  ft) up to (3 m/10 ft),  $\pm 0.1\%$  of range beyond (3 m/10 ft)
  - Resolution: 0.1 cm/0.003 ft

### Argonaut-ADV Probe Configurations

- Fixed sampling volume of 0.25 cc located 10 cm from transducer for all configurations below:
- 3-D Probe (130 mm/5.1" Probe circumference)
- 2-D Side looking ADV Probe for shallow water deployments (as little as 2 cm) (147 mm/5.8" Probe circumference)
- 2-D/3-D Side Looking Probe for wider range of applications.
- Standard – ADV Probe mounted on 15 cm stem
- Optional – ADV Probe on 1 m flexible cable

## Argonaut Software ViewArgonaut Windows Software

SonTek has always strived to bring the highest quality hydraulic software to the marketplace and ViewArgonaut is no exception.



This windows-based software has all the necessary tools for you to manage, collect and maintain your data. Consisting of five program modules for diagnostics, deployment, data recovery, real-time data collection and post-processing, ViewArgonaut is designed to work with all instruments in the Argonaut family. A built-in Flow component makes measurement of river discharge/flow with an Argonaut-SL a snap.

## SonUtils(PDA) Windows CE



Why haul around those heavy laptop computers when everything you need to work with your SonTek system can be in your back pocket? SonUtils for the PDA has all the necessary capabilities to make your trips to the field easier. And just like ViewArgonaut, it is made up of program modules for diagnostics, deployment and data recovery. Working with your Argonaut could never be simpler.

## Flow Measurement

Whether you are out in the field or working hard in the office, your Argonaut-SL is tirelessly measuring the total discharge across the river, channel or stream cross-section where it is deployed.



Both the real-time data collection and post-processing modules of ViewArgonaut compute water level and discharge using a simple user-friendly interface and 3-D graphical display. An optional feature in the Argonaut-SL gives you the added benefit of discharge measurements calculated within the system. It's then a simple matter of connecting your system to a data logger or relay station and adding discharge to your data collection program.

## Other Great Products From SonTek:



**FlowTracker**  
Handheld Doppler current meter easily attaches to wading rods and features a built-in discharge measurement algorithm.



**RiverSurveyor**  
For real-time discharge measurement from a moving boat.



**RiverCAT**  
Complete integrated catamaran system for open channel discharge measurement with optional DGPS for bathymetric surveying.

# SonTek Argonauts<sup>®</sup> SL, XR and ADV<sup>®</sup> Acoustic Doppler Instruments For Velocity, Level And Flow.



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\* Applies to 1.5 and 3.0 MHz XR or SL in standard 'X' form factor. Contact SonTek/YSI for information about other form factors



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