Teledyne RD Instruments

StreamPro ADCP

Shallow Streamflow Measurement System

The StreamPro's transducer can be towed from the front or middle of the float, or can be removed and hand-held in the water for applications such as under-ice flow measurements.

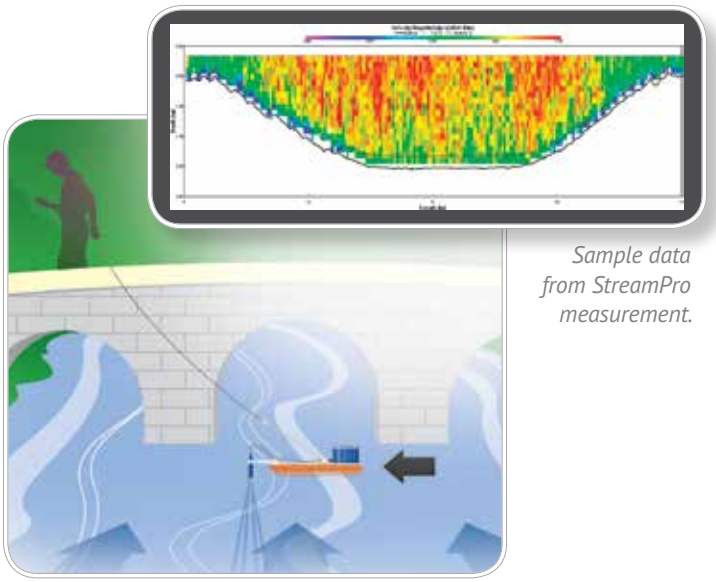
Your Shallow Water Solution

Teledyne RD Instruments' STREAMPRO ADCP (Acoustic Doppler Current Profiler) represents a revolutionary advancement in streamflow measurement. You can accurately measure discharge in shallow streams in a matter of minutes—a fraction of the time required using traditional hand-held devices. With StreamPro there's no need to move from station to station to obtain single-point velocity data or compute the discharge by hand; streamflow measurements are obtained in real-time.

Get out of the water: StreamPro can be tethered to be pulled from a bridge, cableway, or tagline pulley system. This greatly improves operator safety when compared to traditional wading techniques.

Collect high-accuracy data: This dramatic advancement in stream flow measurement is made possible by Teledyne RD Instruments' Broadband Doppler signal-processing technology, which achieves superior accuracy in velocity measurement.

Go right to work: StreamPro has been designed to allow any level of user to immediately begin collecting high-quality data. The simple and highly intuitive user interface has been designed to ensure proper operation.



Sample data from StreamPro measurement.

Teledyne RDI's StreamPro ADCP can simply be pulled across the stream as you walk across a bridge, or attached to a tagline to collect real-time data.

PRODUCT FEATURES

- **Quick:** Collect complete streamflow measurements in streams or canals in a matter of minutes.
- **Convenient:** No need to move from station to station. Simply cross a bridge or use a tagline to collect data.
- **Easy to Operate:** Data is conveniently acquired using a PocketPC or a laptop equipped with a highly intuitive user interface.
- **Reduced Disturbance:** Small transducer head, 3.5cm in diameter, for minimal flow disturbance.
- **Affordable:** Value-priced system designed to suit your budget.
- **Bottom Tracking:** Reliable bottom-tracking in 0.1m–7m depth.
- **Wireless:** Bluetooth communications utilized between electronics and PocketPC or laptop.
- **Low Power Consumption:** Full day of operation on 8 AA batteries.
- **Versatile:** Minimum cell size 2cm with up to 30 cells. Standard profiling range of up to 2m (6m with upgrade).
- **Flexible Data Format:** All acquired data is compatible with Teledyne RDI's WinRiver II software for data display and processing.

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TECHNICAL SPECIFICATIONS

Water Velocity Profiling	Profiling range	0.1m[1] to 2m standard or 6m[2] with upgrade
	Velocity range	±5m/s[3]
	Accuracy	±1% of water velocity relative to ADCP, ±2mm/s
	Resolution	1mm/s
	Number of cells	1–20 standard or 1–30 with upgrade
	Cell size	2cm to 10cm standard or 20cm with upgrade
	Blanking distance	3cm
	Data output rate	1Hz
Bottom Tracking	Depth range	0.1m–7m[2]
	Accuracy	±1.0% of bottom velocity relative to ADCP, ±2mm/s
	Resolution	1mm/s
Depth Measurement	Range	0.1m–7m[2]
	Accuracy	1%[4]
	Resolution	1mm

Sensors	Temperature (standard)	Tilt (pitch and roll) (optional)	Compass (heading) (optional)
Range	-4° to 40°C	±90°	0-360°
Accuracy	±0.5°C	±0.3°	±2°
Resolution	0.01°C	0.01°	0.01°

Operation Modes	Standard profiling (Broadband)	Mode 12
	High-precison profiling (included)	Mode 13
Transducer	Frequency	2MHz
	Configuration	Janus 4 beams at 20° beam angle
Software	• StreamPro Software for Pocket PC • WinRiver II (included) for moving-boat measurement • SxS Pro (optional) for stationary measurement (i.e., under-ice); comes with an uncertainty model for in situ quality evaluation and control	
Available Upgrades	• Extended profiling range to 6 meters • SxS Pro Software for stationary measurement. • Compass and tilt (pitch and roll) sensors • GPS • High-speed float	
Communications	Bluetooth wireless Baud rates: 115,200 bps	
Construction	Cast polyurethane with stainless hardware	
Power	Voltage	10–13.5VDC (8 AA batteries, alkaline or rechargeable NiMH)
	Battery capacity	7.5 hours continuous with 8 AA alkaline batteries; 12.75 hours continuous with 8 AA NiMH rechargeable batteries
Environmental	Operating temperature:	-5°C to 45°C
	Storage temperature:	-20°C to 50°C
Physical Properties	Weight in air	5 kg including electronics, transducer, float, and batteries
	Dimensions	Electronics housing: 15 x 20 x 10cm Transducer: 3.5cm diam. x 15cm length Float: 44 x 70 x 11cm *(line drawings available upon request)*

1 Assume one good cell (minimum cell size) with high precision profiling mode, range measured from the transducer surface.
2 Assume fresh water, actual range depends on temperature and suspended solids concentration.
3 2m/s for standard float; 3.5m/s for optional high-speed float.
4 Assume uniform water temperature and salinity profile

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www.rdinstruments.com

Specifications subject to change without notice.

Teledyne RD Instruments
14020 Stowe Drive, Poway, CA 92064 USA
Tel. +1-858-842-2600 • Fax +1-858-842-2822 • Email: rdisales@teledyne.com
Les Nertieres 5 Avenue Hector Pintus 06610 La Gaude France
Tel. +33-49-211-0930 • Fax +33-49-211-0931 • Email: rdie@teledyne.com