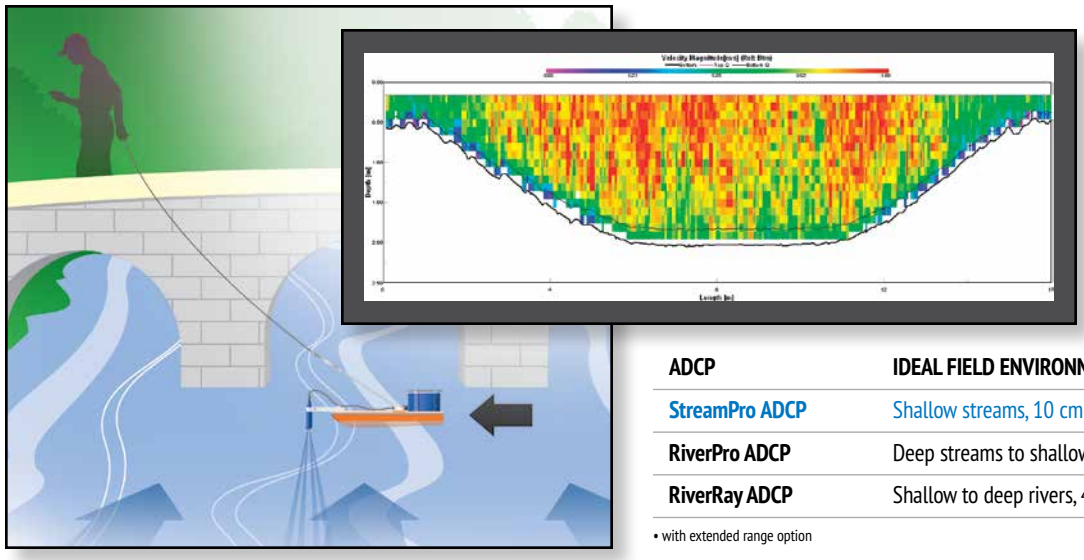
StreamPro ADCP

Shallow Streamflow Measurement System

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.

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 laptop equipped with a highly intuitive user interface.
- **Reduced Disturbance:** Small transducer head, 3.5 cm in diameter, for minimal flow disturbance.
- **Affordable:** Value-priced system designed to suit your budget.
- **Bottom Tracking:** Reliable bottom-tracking in 0.1 m–7 m depth.
- **Wireless:** Bluetooth communications used between electronics and 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.



Top right: 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.

ADCP	IDEAL FIELD ENVIRONMENT
StreamPro ADCP	Shallow streams, 10 cm - 6 m *
RiverPro ADCP	Deep streams to shallow rivers, 20 cm - 25 m
RiverRay ADCP	Shallow to deep rivers, 40 cm - 60 m

• with extended range option

Above right: Sample data from StreamPro measurement.

Above: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.

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TECHNICAL SPECIFICATIONS

Water Velocity Profiling	Profiling range	0.1 m[1] to 2 m standard or 6 m[2] with upgrade		
	Velocity range	±5 m/s[3]		
	Accuracy	±1% of water velocity relative to ADCP, ±2 mm/s		
	Resolution	1 mm/s		
	Number of cells	1–20 standard or 1–30 with upgrade		
	Cell size	2 cm to 10 cm standard or 20 cm with upgrade		
	Blanking distance	3 cm		
	Data output rate	1 Hz		
Bottom Tracking	Depth range	0.1 m–7 m[2]		
	Accuracy	±1.0% of bottom velocity relative to ADCP, ±2 mm/s		
	Resolution	1 mm/s		
Depth Measurement	Range	0.1 m–7 m[2]		
	Accuracy	1%[4]		
	Resolution	1 mm		
Sensors		Temperature	Tilt (pitch and roll)	Compass (heading)
	Range	-4° to 45°C	±90°	0-360°
	Accuracy	±0.5°C	±0.3°	±1°
Operation Modes	Standard profiling (Broadband)			
	High-precison profiling (included)			
Transducer	Frequency	2 Mhz		
	Configuration	Janus 4 beams at 20° beam angle		
Software (included)	**WinRiver II** (standard) for moving-boat measurement, **Q-View** (optional), **SxS Pro** (optional)			
Available Upgrades	• Extended profiling range to 6 meters • **SxS Pro** Software for Stationary Measurement • **QView** Software for quality assessment and reporting • GPS • **Riverboat SP** or **HSRB**			
Communications	Bluetooth wireless			
	Baud rates: 115,200 bps			
Construction	Cast polyurethane with stainless hardware			
Power	Voltage	10.5 –18 VDC (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	5.9 kg including electronics, transducer, float, and batteries		
	Dimensions	Electronics housing: 16 x 21 x 11 cm		
		Transducer: 3.5 cm diam. x 15 cm length; Float: 42 x 70 x 10 cm *(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 2 m/s for standard float; 3.5 m/s for optional high-speed float.
4 Assume uniform water temperature and salinity profile.

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