

Teledyne RD Instruments

StreamPro ADCP

Shallow Streamflow Measurement System

Your Shallow Water Solution



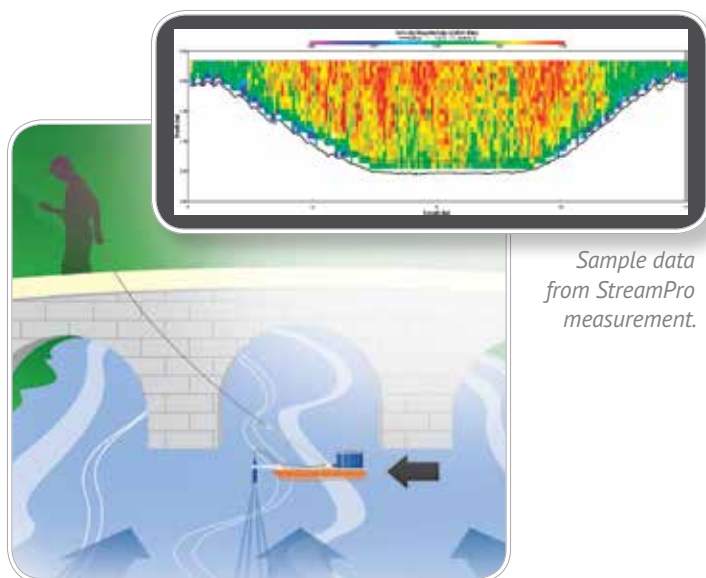
The StreamPro's transducer can be towed from the front or middle of the float, or can be removed and hand-held in the water for applications such as under-ice flow measurements.

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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Shallow Streamflow Measurement System



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 | ±90° | 0–360° | |
| | Accuracy | ±0.3° | ±1° | |
| Operation Modes | Standard profiling (Broadband) High-precision profiling (included) | | | |
| 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 | <ul style="list-style-type: none"> • 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 | 5.9 kg including electronics, transducer, float, and batteries | | |
| | Dimensions | Electronics housing: 16 x 21 x 11cm | | |
| | | Transducer: 3.5cm diam. x 15cm length Float: 42 x 70 x 10cm <i>(line drawings available upon request)</i> | | |

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

Specifications subject to change without notice.

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