

## MODEL GEO-StreamPro ADCP

### RIVER DISCHARGE, CURRENT PROFILE AND BATHYMETRIC MEASUREMENTS ALL IN ONE

The **GEO-StreamPro** ADCP represents a revolutionary advancement in velocity and discharge measurements in shallow streams, irrigation canals, water supply, and storm water channels.

Now you can accurately measure discharge in a matter of minutes—a fraction of the time required using traditional hand-held devices. With **GEO-StreamPro** there's no need to move from station to station to obtain single-point velocity data or compute the discharge by hand; discharge measurements are obtained in real-time.

**GEO-StreamPro's** unique design allows you to take measurements without even entering 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.

Data is collected in real-time and transmitted via a wireless data link to a convenient palm PC loaded with a user friendly software.



*The GEO-StreamPro's transducer can be towed from different points on-board the platform, or can be removed and hand held in the water for applications such as under ice flow measurements.*

#### System Components

Transducer Head  
Electronics case  
Float  
Bluetooth wireless  
Data collection processing software



#### Product Features

- **Quick:** Collect complete velocity and discharge measurements in streams from 15 -225cm deep in a matter of minutes.
- **Convenient:** No need to move from station to station. Simply wade across the stream or cross a bridge to collect data.
- **Easy to Operate:** Data is conveniently acquired using a PocketPC equipped with a highly intuitive user interface.
- **Affordable:** Value-priced system designed to suit your budget.
- **Bottom Tracking:** Reliable bottom-tracking in 10cm - 7m water depth.
- **Wireless:** Bluetooth communications utilized between electronics and PocketPC or laptop.
- **Reduced Disturbance:** Small transducer head, 3.5cm in diameter, for minimal flow disturbance.
- **Low Power:** Full day of operation on 8 AA batteries.
- **Versatile:** Min. cell size 2cm with up to 30 cells. Standard profiling range of up to 2 meters (6 meters with upgrade).

Technical Specifications

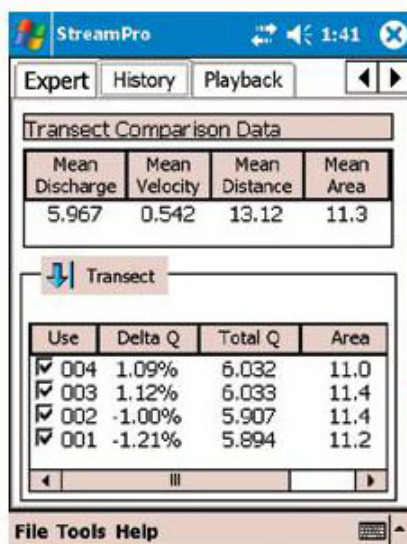
Velocity Profiling	
Number cells	1-20 standard; 1-30 with upgrade
Min. cell size	2cm
Max. cell size	10cm standard; 20cm with upgrade
Max. range	2m standard; 6m with upgrade
1st cell start	7-30cm (from transducer); depends on cell size
Accuracy (cell = 1/2 max.)	±1.0%±0.2cm/s
Resolution	0.1cm/sec
Velocity range	±5m/sec (±2m/sec on standard float)

Transducer	
Frequency	2.0MHz
Geometry	4 beams, 20° beam angle
Beam width	3°
Material	Polyurethane

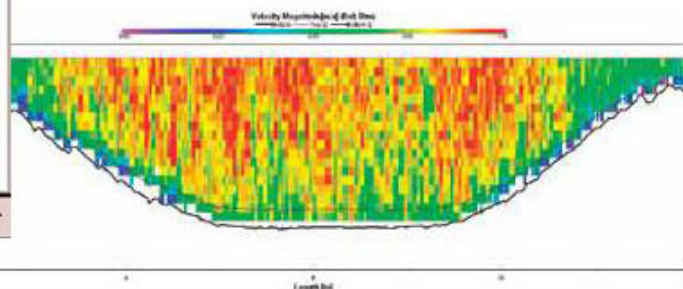
Temperature (Standard Sensors)	
Range	-4° to 40°C
Accuracy	±0.5°C
Resolution	0.01°
Thermistor in metallic housing in direct contact with water	

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

Power	
Voltage	10-13.5VDC (8 AA batteries, alkaline or rechargeable NiMH)
Electronics Energy Consumption	10 hours continuous with 8 AA alkaline batteries; 12 hours continuous with 8 AA NiMH rechargeable batteries



Sample data using GEO-StreamPro ADCP standard IPAQ software



## Upgrades Available

- Firmware to extend profiling range to 6 meters
- SxS Pro Software for Section-by-Section method
- Compass; includes pitch and roll sensors
- GPS
- High-speed float

### Compass Option

The **GEO-StreamPro** ADCP is now available with an optional compass upgrade. The compass, part of a 6 axis sensor assembly, is mounted in the GEO-StreamPro Electronics. Modifications have been made to the transducer, mounting arm assembly and float to precisely align the transducer at a known orientation. Existing StreamPro owners can factory upgrade to this option without the need to purchase a new instrument.

#### FEATURES

- **Full attitude output** (i.e., pitch and roll)
- **Full 360 degree operation** on all axes
- **Full featured passive Built-in-Test** to ensure data integrity
- **Flexible magnetic field calibration.** User gets feedback on the input and output data quality via software. User is not restricted to limited orientations during the calibration. Calibration is verified to prevent a bad calibration from being retained.
- **Magnetic saturation compensation.** After a calibration procedure, this allows the sensor to still measure heading even with magnetic material mounted on the StreamPro that would otherwise saturate the sensor.
- **High sample rate** – keeps the ping rate fast.
- **High precision:** Heading is less than 0.25 deg standard deviation; pitch/roll is less than 0.1 deg.

Parameter	Specification
Accuracy after Field calibration	±2°
Precision	±0.25°
Resolution	0.1°
Maximum tilt	±45°
Pitch Range	±90°
Roll Range	±180°
Accuracy	±0.3°
Precision	0.1°
Resolution	0.06°