

# PC-ADP

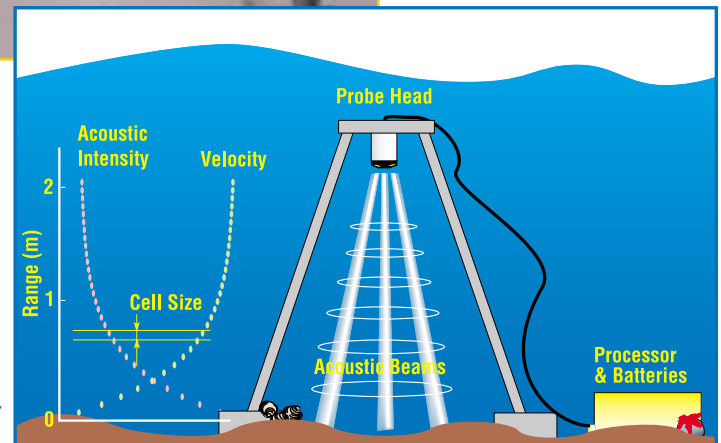
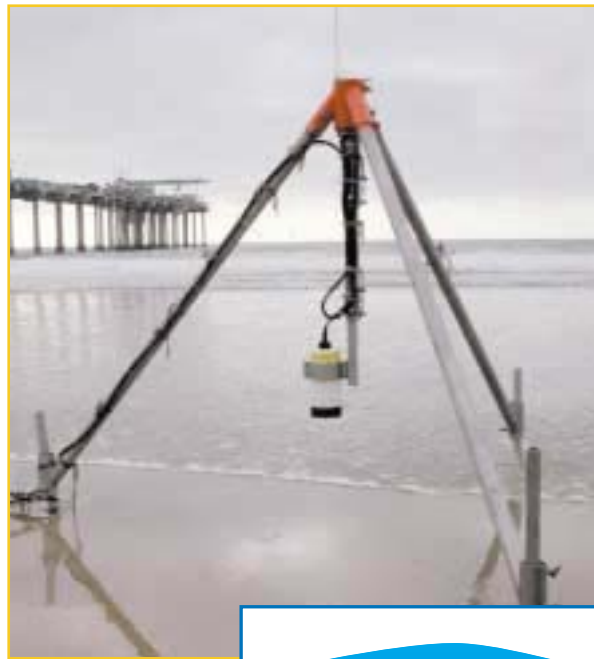
## FOCUS on the DETAILS!

An ADP™ optimized for high-resolution, short-range, boundary layer studies. The PC-ADP (Pulse-Coherent Acoustic Doppler Profiler) combines the precision of the ADV™ (Acoustic Doppler Velicometer) with the profiling capability of an ADP. The exceptionally small mini-ADP probe results in a much lower flow disturbance than a standard ADP head.

### FEATURES AND OPTIONS

- High Resolution Current Profiler for Boundary Layer Studies
- The Precision of Pulse Coherent Processing
- Acoustic Backscatter for Sediment Studies
- Three Beam Altimetry
- Directional Waves
- External Sensor Integration

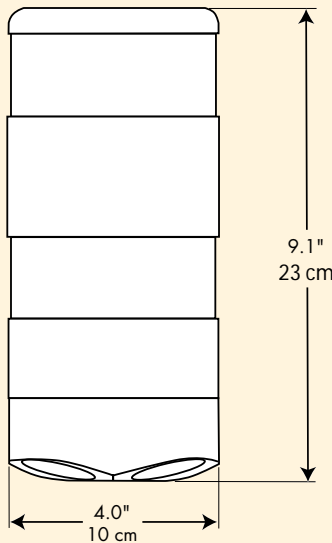
*Surf-zone study at Scripps Institution of Oceanography.*



*Typical deployment illustration.*

# SPECIFICATIONS

## Pulse-Coherent ADP



Mini-ADP Probe

### Standard Features

- Pulse-coherent and standard pulse-incoherent operating modes
- Mini-ADP probe for reduced flow disturbance
- Transducer shading for minimal sidelobes
- Optimized transducer slant angle of 15° for near boundary measurements and higher resolvable horizontal velocities
- Recessed wet-mateable connector
- Temperature sensor
- Up to 100 range cells (the number of cells depend on user setup)
- Underwater canister, 128 MB recorder, batteries, and DSP electronics

### Pulse-Coherent Mode

- Sampling rates up to 2 Hz
- Minimum vertical resolution: 1.6 cm
- Minimum blanking distance: 5 cm
- Maximum profiling range: 5 m for  $\pm 0.3$  m/s velocity range (Actual velocity range and maximum profiling range depend upon user-specified parameters. Please contact SonTek directly for details.)
- Maximum velocity range:  $\pm 2.5$  m/s for 0.5 m profiling range
- Velocity accuracy:  $\pm 1\%$  of the velocity range,  $\pm 0.1$  cm/s
- Velocity resolution: 0.01 cm/s

### Pulse-Incoherent Mode (Standard ADP)

- Sampling rates up to 1 Hz
- Minimum vertical resolution: 25 cm
- Minimum blanking distance: 40 cm
- Maximum profiling range: 10-14 m
- Velocity range: 10 m/s
- Velocity accuracy:  $\pm 1\%$  of measured velocity,  $\pm 0.5$  cm/s
- Velocity resolution: 0.1 cm/s
- Optional bottom track and Surveyor software

### Hardware options

- Internal recorder upgrade to 512 or 1024 MB
- Internal compass & two-axis tilt sensor
- Internal strain gauge pressure sensor (0.1% accuracy)
- Internal RPT pressure sensor (0.01% accuracy)

### Windows Software

- ViewADP for post-processing
- SonUtils universal utility program
- CurrentMonitor for real-time data acquisition
- Optional ViewADPro for directional wave spectra

### External Sensor Options

- SeaBird SBE-37 MicroCat
- D&A OBS turbidity probe
- Paroscientific Digiquartz pressure sensor
- For other sensor interfaces, please contact SonTek

### Power

- 1.0-2.0 W operating mode
- Less than 1 mW sleeping mode
- Total battery capacity (2 alkaline packs at 5° C): 1200 Wh
- 12-24 VDC optional external power

### Compass/Tilt Sensor

- Resolution: Heading, Pitch, Roll  $0.1^\circ$
- Accuracy: Heading  $\pm 2^\circ$
- Accuracy: Pitch, Roll  $\pm 1^\circ$

### Environmental Specifications

- Operating Temperature:  $-5^\circ\text{C}$  to  $45^\circ\text{C}$
- Storage temperature:  $-10^\circ\text{C}$  to  $60^\circ\text{C}$
- Depth rating: 500m
- Probe weight – in air: 2.2 kg, in water: 0.8 kg
- Housing weight – in air: 20 kg, in water: 3.9 kg



The PC ADP is available with a wide range of external sensor options



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