The Datasonics Model PSA-900 Programmable Sonar Altimeter from Benthos is a precision instrument used to measure underwater ranges acoustically. This unit is microprocessor controlled, with range resolution of 1 cm. The PSA-900 is completely self-contained and requires only external DC power for operation.

Benthos offers a full line of underwater acoustic altimeters, one of which is sure to meet your unique requirements.

**FEATURES**
- Analog and digital outputs. Data includes range, temperature and (optional) pressure.
- Outputs include range, temperature and pressure in analog, RS-232, RS-422 (optional) or voltage to frequency format.
- Time varied gain.
- External key.
- 2000 meter depth standard (6000 meter depth optional).
- Remote transducer available.

**APPLICATIONS**
- Sediment transfer studies.
- ROV/instrument altitude/depth measurement.
- Bridge scour studies.
- Obstacle avoidance.
- Acoustic wave height measurement.
- Dry docking assistance.
- CTD.
**SPECIFICATIONS**

Operating Frequency: 200 kHz (nominal)
Beam Width: 8° conical typical
Pulse Length: 350 µs standard
Repetition Rates: 10 pps, 1 pps, .1 pps, or external user selectable
Range*: .75-30 meters with 1 cm resolution or .75-100 meters with 10 cm resolution (user selectable)
Range Output: 0-5, 0-10 volts DC or 1-11 kHz
Depth Pressure Output: 0-5 volts DC or 1-11 kHz represents zero to full scale
RS-232 Output: 2400 Baud ASCII output of temperature, depth, range and error signal in engineering units. Can be interfaced directly to a PC computer or printer.

Temperature
Sensing Range: -4° to +47°
Temperature Output: 0-5 VDC
Temperature Resolution: ±0.2° C
TVG Control: 60 db compensation to 20 LOG 2 R + 20 LOG R
Error Flag: 0-5 volts TTL error signal on missed echo or over range
Operating Depth: 2000 meters (standard) or 6000 meters (optional)

Power Required: 15-28 volts at 100 ma DC

Dimensions
PSA 900: 11.5" height; 4" diameter tube
PSA 900D: 12.125" height; 5" diameter tube

Weight
PSA 900: In air: 7 lbs.; in water: 2.5 lbs.
PSA 900D: In air: 13 lbs.; in water: 6 lbs.

*Special configuration for 30cm min. range.

Acoustic wave height measurement

Instrument altitude/depth measurement

ROV altitude/depth/obstacle avoidance