DATASONICS PSA-900 PROGRAMMABLE SONAR ALTIMETER

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.

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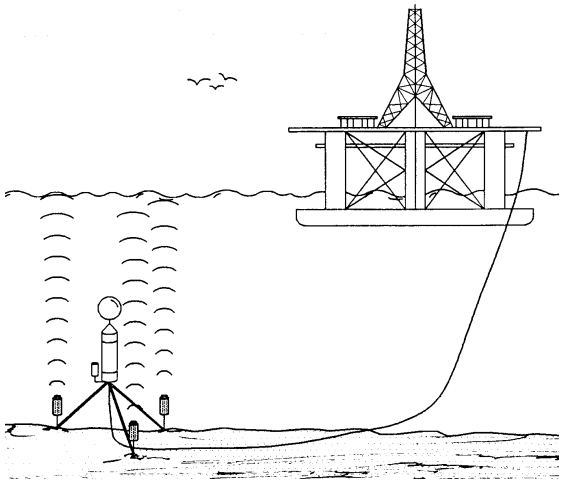
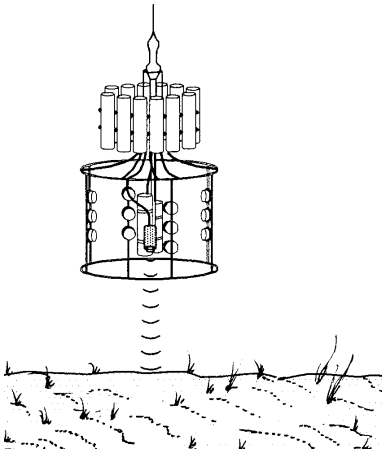
SPECIFICATIONS

Operating Frequency:	200 kHz (nominal)
Beam Width:	8° conical typical
Pulse Length:	350 µs standard
Repetition Rates:	10 pps, 1pps, .1pps, 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 50% duty cycle square wave proportional to full scale range selected
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 + 2 ∝ 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.

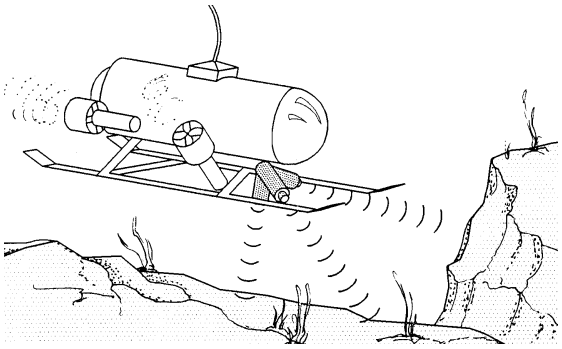
**Special configuration for 30cm min. range.*



Acoustic wave height measurement



Instrument altitude/depth measurement



ROV altitude/depth/ obstacle avoidance

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