Geo-Sense Mini-Streamers

Single Channel Arrays of 8 to 24+ Elements

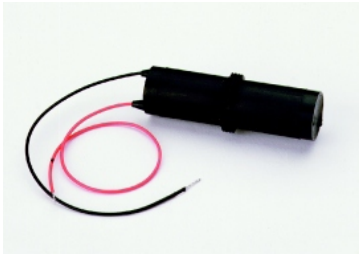
Applications

For use with our VHR single channel data acquisition systems: Geo-Trace, Mini-Trace, or any other recording system

- **Site and route surveys**
- **Sand searches**
- **Oceanographic research**

AQ-2000 Hydrophone

Geo-Sense streamers are equipped with the AQ-2000 hydrophones - the latest innovative acoustic sensor technology for both shallow and deep water exploration.



The AQ-2000 is well suited for applications that require stable performance over a wide range of water depths.

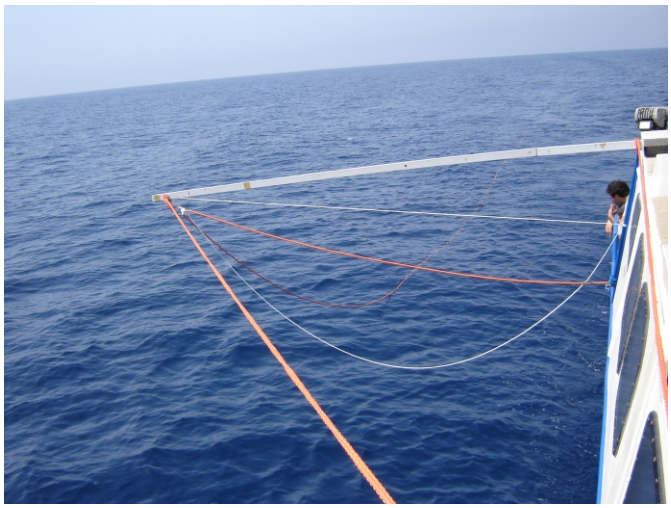
It has excellent acceleration-cancelling qualities and an exceptionally wide frequency bandwidth.

The AQ-2000 can be installed into standard array configurations or integrated into custom-moulded packages.

Every hydrophone is tested for sensitivity, capacitance and insulation to ensure the highest quality product for all very high resolution seismic operations.

Operational Features

- **Specifically designed for the high frequency spectrum emitted by VHR sources (sparkers, boomers, pingers)**
- **The short 8-element array has proven successful down to 4500 m water depths**
- **The active length and number of elements can be configured to your requirements**
- **Can be used with any Third Party recording system (in combination with the Geo-Sense Filter/Gain Interface)**



Tow Cable

Length:	Standard 50 m to 100 m
Diameter:	11 mm
Type:	3 x 2 x 24 AWG screened twisted pair
Insulation:	Polyurethane
Strain member:	Double reverse spiral Kevlar

Active Section & Jacket

Number of elements:	8 to 24+
Spacing of elements:	0.4 m standard
Length of active section:	2.8 m / 9.2 m (for 8 / 24elements)
Length of jacket:	4.8 m / 11.2 m (approx.)
Jacket size ID & OD:	20.5 mm & 26.5 mm
Jacket material:	Unreinforced polyurethane
Buoyancy:	Slightly negative
Array fluid:	Shell Sol T/ Isopar

Power to Preamplifier

For streamers other than Geo-Sense, a standard battery box of 12 V DC from penlight batteries can be used.

Geo-Sense Mini-Streamers
Technical Specifications

AQ-2000 Hydrophone

Electrical Specifications

Leads:	Two 28 AWG stranded conductors (red and black), Hytrel® insulation, 12.7 cm length each
Connector:	None
Polarity:	A positive increase in acoustic pressure generates a positive voltage on the red conductor
Capacitance:	4.5 nF +/- 25% at 20°C and 1 kHz
Resistance:	500 MΩ minimum across leads or to sea water at 20°C and
100%	relative humidity, 50 V DC
Dissipation:	0.02 typical

Performance

Sensitivity @ 100 Hz
Free-field voltage:
-201 dB re 1 V/µPa +/- 1.5 dB

Sensitivity Change
Versus frequency: +/- 0.25 dB from 1 Hz to 1 kHz
(+/-2.0 dB from 1 kHz to 10 kHz)
Versus depth : < 0.5 dB to 1000 m
Versus temperature: < 0.03 dB per 1°C change

Acceleration Sensitivity
Output is <1.5 mV/g due to acceleration in any of the three major axes at 20 Hz

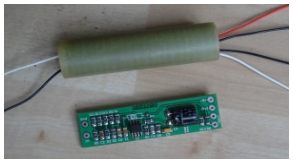
Mechanical
Resonance typically 20 kHz in water
Maximum operating depth of 2000 m
Destruction depth of more than 7000 m

Physical Specifications

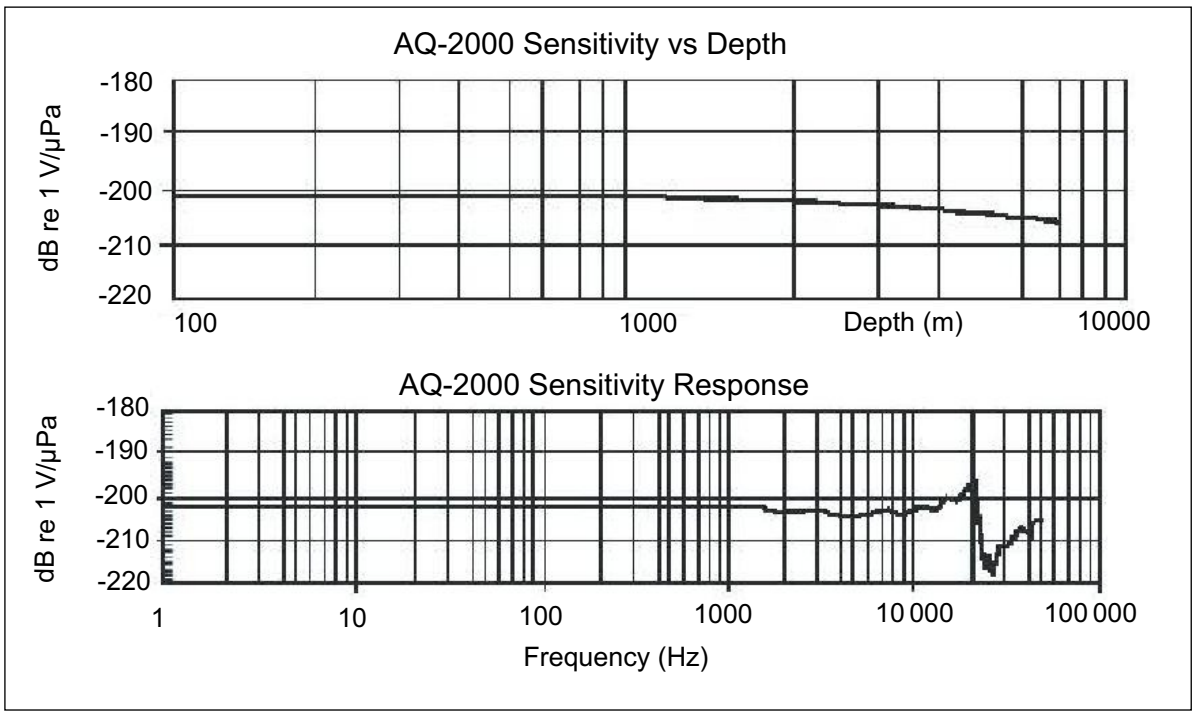
Materials:	Fluoroelastomer, high strength epoxy, Hytrel® insulated leads
Weight in air:	14 grams
Size:	4.56 cm long x 1.32 cm diameter
Displacement:	6.24 cc
Temperature:	Operating: -10°C to 50°C
	Storage: -40°C to 60°C

Pre-Amplifier

Size: 60 x 16 mm
Gain: 26 dB
Ground reference:
Single-ended



Power : 9 -12 V DC (polarity protected)
High-pass: -3 dB: 3 Hz
Low-pass: -3 dB:13 kHz
Output impedance: 60 Ω



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