Geo-Sense Mini-Streamers
Single Channel Arrays of 8 to 24+ Elements

Applications

- Specially designed for use with HF acoustic sources: Sparkers, Boomers or Pingers.
- Can also be used to capture the signal of LF sources: Air guns and Water guns

Operational Features

- Specifically designed to capture the high frequency spectrum emitted by our VHR sources (sparkers, boomers, pingers)
- The short 8-element array was used successfully in 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)

AQ-2000 Hydrophone

The AQ-2000 allows a stable performance over a wide range of water depths.
It has excellent acceleration-cancelling qualities and an exceptionally wide frequency bandwidth (see rear side)
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.

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, 16, 24 up to 48
Spacing of elements: 0.3 m standard
Length of active section: 2.4 m / 7.2 m (for 8 / 24 elements)
Length of jacket: 5.4 m / 11.2 m (approx.)
Jacket size ID & OD: 20.5 mm & 26.5 mm
Jacket material: Unreinforced polyurethane
Buoyancy: Slightly positive
Array fluid: Shell Sol T or Parafin oil

Power to Pre-amplifier

For streamers other than Geo-Sense, a standard battery box of 12 V DC from 8 penlight batteries can be used.

The streamer outrigger

A 6 m long outrigger remains one of the most important requirements to deploy the streamer out of the turbulence od the prop wash.
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

AQ-2000 Sensitivity vs Depth

AQ-2000 Sensitivity Response