

Easy and inexpensive to operate

All software and hardware operate from an inexpensive laptop or desktop PC. Separate, sizeable windows show shots, gathers, noise graphs, spectra, media status and quality control measures. Positioning in formation is integrated with the data.

On-the-fly spectra alerts operator to changes in data quality

Trigger timing and gun energy bar graph shows missed shots and source problems

RMS bar graph alerts you when noise levels get excessive

Operator-defineable alarms warn of changes in system status or data quality

Real-time semblance analysis helps you optimize velocities for on-the-fly brute stack

Plots up to three separate common offset gathers in real time

Multiple shot windows let you view different depths and offsets with varied scaling and filters

Real-time brute stack lets you see your data in near-final form

Detailed observer's log is kept with GPS location, parameter changes, exceeded thresholds and errors

Robust storage management writes multiple disk and tape files simultaneously, buffers data if any media fails or goes off line. Switches automatically between devices

Communicates with shipboard PC controller via industry standard, low cost Ethernet

Programmable elements let you select hydrophones for larger group intervals

Thick, 1/8-inch polyurethane skin resists cuts and tears

Filled with inert silicone fluid: environmentally friendly, non-toxic, no fines if spilled

38mm (1.5-inch) diameter active sections can be handled by one person on deck and shipped by air freight

8 kHz bandwidth lets you search for oil and gas, do engineering surveys, even sub-bottom profiling

8 channels per module, up to 240 channels per line

Sealed to 1000m

Fully testable

Specifications:

A/D Converter Modules

Number of channels per active section : 8
Sample Rates: 1/16 ms, 1/8 ms, 1/4 ms, 1/2 ms, 1 ms, 2 ms, 4 ms
Bandwidth: 5 Hz to 8 kHz
Programmable Gain: 0 dB, 12 dB, 24 dB, 36 dB, 42 dB
Maximum Input Range : $\pm 2.25V$
Resolution: 24 bits including sign
Dynamic Range: 120dB Typical @ 1ms, 70dB typical @ 1/16 ms
QC Tests: Leakage and capacitance of hydrophone elements, pulse, oscillator, timing.
Power Consumption: Approximately 100 mA at 48 VDC
Calibration Oscillator: 10 Hz to 2 kHz, 1 μV to 100 mV AC RMS
Dimensions: 44 mm diameter x 33 cm long (1.75" by 11"). 19.28" unbendable length when attached to active sections.
Weight: 900 grams (2.0 lbs)
Packaging Material : Titanium body
Connectors: Waterproof high density stainless steel, 41 pin digital and analog, 19 pin digital

Hydrophone Array

Active Section:

Number of Channels: 8 maximum per section
Number of Sections: Array dependent, 12 for 96 channels
Hydrophones per group: User option, 10 typical at 12.5m
Hydrophone Type: Benthos RDA Geopoint
Jacket Material: Clear polyurethane, 70 Duro, 3.18mm (1/8 inch) wall thickness
Outer Diameter : 38 mm (1.5 inches)
Ballast Fluid: Inert, non-polluting silicone oil, 100 cSt
Weight: ~135 kg (300 lbs) / 8 channels @ 12.5 meter group
Break Strength: over 1250 kg (2750 lbs), Vectran strain members
Maximum Tow Speed: ~8 knots recording, ~10 knots steaming, depending on configuration and sea state
Maximum Bend Radius: 60 cm (24 inches)
Compass/Bird Coil: IO Model 587, mounted at start of section

Stretch Section:

Length: 10, 25 or 50 meters standard
Outer Diameter: 38mm, 1.5 inch
Compass/Bird Coil: IO Model 587, mounted at start of section
Jacket Material: Clear polyurethane, 70 Duro, 3.18mm (1/8 inch) wall thickness
Ballast Fluid: Inert, non-polluting silicone oil, 100 cSt
Weight: ~ 67 Kg for 50 meter section
Break strength: over 1250 kg (2750 lbs), Vectran strain members

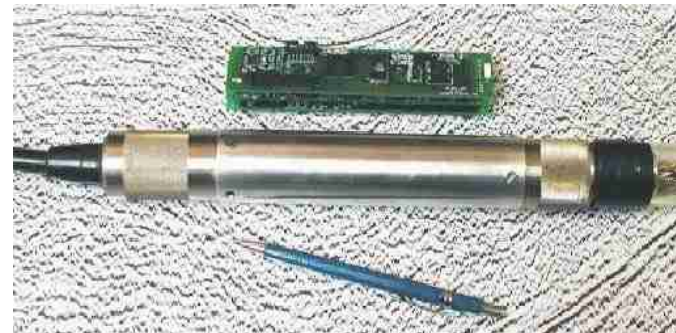
GeoEel Digital Marine Streamer

Tow Cable

Electrical conductors: 10 twisted pair shielded
Weight: Dependent on length, ~ 25 kg (55 lbs) for 50 meters
Strain member: Kevlar
Break strength over 1250kg (2750 lbs)
Maximum Diameter: 25 mm

Streamer Power Supply Unit (SPSU):

Power Requirements: 115/230 VAC, 3/1.5 Amp max, 50/60 Hz
Voltage to Streamer: 36 72 VDC
I/O Communications: 100Base TX Fast Ethernet, IEEE 802.3 compliant
Trigger Requirements: Isolated Input, Positive or Negative TTL, software selectable
Testing:
Continuous monitoring of cable condition for leakage
Continuous monitoring of Ethernet for faults and collisions
Optional Auxiliary Inputs: 8 analog channels with 24-bit resolution
Ethernet Connection: RJ-45
Trigger Connection: BNC



PC Based Controller System:

PC-based running Geometrics CNT-1 software. Multiple shot and gather windows, bar graph noise displays, windows for shot timing, gun energy, brute stack, tape status, spectral analysis. Sure-save software protects against data loss even with total storage device failure. Files automatically kept in sequential order. Auto-switching between storage device, dual tape writing. Supports multiple printers. Full log kept of all parameter changes. Integrates navigation, gun, bird parameters into SEG-D, SEG-Y or SEG-2 header.



GeoEel Digital Marine Streamer

Flexible configuration: 1 to 240 channels in 8 channel sections

Digital streamer means better quality data, less deployment and troubleshooting

Ships by air, packs in crates, only 38mm (1.5 inch) diameter

Wide bandwidth means more applications: 1/16 to 4 ms for petroleum, engineering or sub-bottom profiling

No special environmental requirements; filled with inert silicone oil

Rugged 1/8 inch wall thickness: can be used in transition zones, ocean bottom

Deployable as multiple streamers for 3-D

No costly controller required: uses laptop and industry standard Ethernet



The GeoEel digital towed hydrophone streamer is the first small diameter array with the performance of larger systems. With a diameter of only 38mm, the GeoEel is easy to deploy, easy to transport and can be shipped by air. Separate 8 channel modules employing advance circuitry are largely immune from the noise, leakage and ground loops that plague the installation of analog streamers.

The GeoEel is filled with inert silicone oil which makes it environmentally safe. Thick 1/8 inch abrasion resistant polyurethane makes the streamer extremely rugged but still flexible enough to deploy by hand or mount on small winches. And the GeoEel is easy to repair - no fragile fiber optics to break or go bad.



The GeoEel communicates via fast Ethernet to Geometrics CNT-1 controller, running field-proven software that is used on over 40 installations. And the GeoEel is built entirely by Geometrics, known for over 35 years as an industry leader in rugged, reliable and well supported instrumentation.

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