StrataVisor™ NZXP Exploration Seismograph

- **Get the best data: professional, ruggedized 24 bit seismic recorder suitable for all seismic surveys: reflection, refraction, downhole, VSP, marine or monitoring.**
- **Flexible configurations: houses from 3 to 64 channels. Expands seamlessly up to 1000 channels by connecting Geode in-field distributed modules or connecting other NZs.**
- **Works in all conditions: Military-grade CPU, shock-mounted chassis, reliable in harsh environments, operates in extreme temperatures, humidity and dust. Exceeds MIL 810E vibration spec.**
- **Widest bandwidth: 20 kHz bandwidth (0.02 μs to 16 ms sampling) for ultra-high resolution engineering surveys or recording low frequencies for earthquake monitoring.**
- **Field friendly: brilliant full-sun-visible color screen and built-in plotter - available also as rugged field computer without seismic channels.**
- **Put your client at ease: built-in geophone and line testing, full waveform noise monitor. Optional automated internal in-field instrument testing and enhanced geophone and line diagnostics.**
- **Use any source: Sub-sample trigger ensures accurate stacking; hardware correlator elimin–ates delays with Vibroseis or pseudo-random Mini-Sosie sources.**
- **Built-in software to facilitate ALL applications:**
  - Reflection (included)
  - Refraction (included)
  - Downhole, crosshole, vertical seismic profiling
  - Event triggering for earthquakes, microseismic, blast monitoring and surveillance
  - Marine survey management
  - Continuous recording, GPS synchronization
  - Vibroseis, pseudo-random sources
  - Passive and active surface-wave surveys

NEW!

- ***Windows XP***
- ***USB ports***
- ***Faster CPU***
- ***New printer***
- ***More memory***
- ***2-year warranty***
- ***Built-in networking***
- ***Temperatures to 60°C***
- ***Low-power color screen***
- ***Enhanced line and geophone testing***

The StrataVisor NZXP is a high-performance exploration seismic system in a compact, weatherproof chassis. The NZXP can operate as a field PC, as a stand-alone seismic recorder with 3 to 64 internal channels. The NZXP expands easily to larger channel systems by connecting other NZ seismographs or lightweight Geode modules. This flexibility lets you collect data for all applications in all environments – you can even rent extra channels when needed.

Examine your data at all phases of acquisition to ensure data quality. Customizable windows show real-time noise monitor, amplitude spectra and seismic traces so you see problems instantly. A log file keeps track of all parameter changes and customizable alarms alert you to critical issues. You can even do preliminary processing in the field with industry-leading reflection, refraction and tomography software included with every system.

The StrataVisor NZXP console includes a brilliant daylight-visible color screen, waterproof keypad and built-in printer. Low-power circuitry and a standby mode extend battery life and reduce weight.

The StrataVisor NZ is backed by a 2 year parts and labor warranty. All this from a company with factory trained service centers world wide and over 35 years of superior support to geoscience professionals.

Configurations:
- Lightweight field-rugged PC with no seismic channels for use as a stand-alone field computer or controller for Geode distributed modules
- Integrated seismic recorder - add 3, 6, 8, 12 or 16 to 64 built-in channels (in 8 channel increments)
- Connect multiple NZ's and operate from a single keypad

Runs Windows ™ XP operating system and includes all software for controlling internal channels and up to 4 lines of Geode modules. Total number of channels limited only by practical survey requirements.

A/D Conversion: 24-bit result using Crystal Semiconductor sigma-delta converters and Geometrics proprietary over-sampling.

Dynamic Range: 144 dB (system), 110 dB (instantaneous) at 2 ms, 24 dB.

Distortion: 0.0005% @ 2 ms, 1.75 to 208 Hz.

Bandwidth: 1.75 Hz to 20 kHz. Low corner frequency option available.

Common Mode Rejection: > 100dB at <= 100 Hz, 36 dB.

Cross Talk: -125 dB at 23.5 Hz, 24 dB, 2 ms.

Noise Floor: 0.20 μV, RFI at 2 ms, 36 dB, 1.75 to 208 Hz.

Stacking Trigger Accuracy: 1/32 of sample interval.

Maximum Input Signal: 2.8V PP, 0 dB, 177 mV PP, 24 dB.

Input Impedance: 20 kOhm, 0.02 μf.

Preamplifier Gains: Standard factory configuration is 24 and 36 db, selectable in software. Optionally, can be jumpered for software selectable 12 and 24 dB or can be jumpered in four channel blocks as a single fixed gain of 0 dB for high-voltage devices.

Anti-alias Filters: Set automatically, -3 dB at 83% of Nyquist down 90 dB.

Acquisition Filters:
Low Cut: OUT, 10, 15, 25, 35, 50, 70, 100, 140, 200, 280, 400 Hz, 24 dB/ octave, Butterworth.
Notch: 50, 60, 150, 180 Hz and OUT, with the 50 dB rejection bandwidth 2% of center frequency.
High Cut: OUT, 250, 500 or 1000 Hz, 24 dB/ octave.
Customer filter frequencies available as an option.
Display filters can also be applied to the data with any user-defined corner frequency, but do not affect the recorded results.

Sample Interval: 0.02, 0.03125, 0.0625, 0.125, 0.25, 0.5, 1.0, 2.0, 4.0, 8.0, 16.0 ms.

Correlation: Built-in high-speed hardware correlator for Vibroseis. Optional pilot conditioning for acquisition of pseudo-random (MiniSosie) sources.

Record Length: 16,384 samples standard, 65,536 samples optional.

Pre-trigger Data: Up to full record length.

Intelligent Self-Trigger: Available for earthquake and vibration monitoring.

Continuous Recording: Available for vibration monitoring.

Delay: 0 to 100 sec in 1 sample steps.

Auxiliary Channels: All channels can be programmed as either AUX or DATA.

CDP Roll Along: Software selectable channels can be rolled through total channels.

Instrument Tests (Requires internal test oscillator): Noise, DC offset, gain and phase similarity, distortion, bandwidth, timing accuracy, crossfeed.

Line and Geophone Tests:
- Built-In: natural frequency, damping and line resistance. Full waveform waterfall-style noise monitor displays real-time output from geophones.
- Optional (requires internal test-oscillator: phase similarity, cross-talk, impedance, distortion and leakage (leakage may require separate ground).

Data Formats: SEG-2, SEG-D and SEG-Y.

System Software: Runs under Windows ™ XP operating system. Uses Geometrics MGOS software to control acquisition on internal channels and up to 4 lines of external channels housed in Geode distributed modules. System includes the following 2nd party applications software:

- SIPQC refraction software from Rimrock Geophysics
- SeisImager refraction modeling and analysis software from OYO
- WinSeis-Turbo reflection software from the Kansas Geological Survey
- SeisImager SW surface wave software from Geometrics

Refraction software packages installed on instrument are configured for in-field analysis and may require attaching a keyboard and mouse. Full desktop versions of these packages are available either from Geometrics. See separate publications for more detail on software packages.

Data Storage: Stores data on internal hard drive or external USB or network devices. Records in SEG2, SEGY or SEGD.

Plotters: Built-in 4" thermal plotter. Drives a variety of NT compatible plotters including Printrex 4, 8 and 12 inch continuous thermal plotters.

Triggering: Positive TTL, negative TTL or contact closure, software adjustable threshold. Will also trigger on events in the data in real time.

Power: 30W plus 0.65W/channel during acquisition. Standby mode reduces channel power consumption by 70%. Requires external 12V supply.

Environmental: Boots from +5°C to 40°C. Operates from –5°C to 40°C. Extended temperature version available to +60°C. Operates in a light rain, water resistant with cover closed. Passes MIL810E/F vibration test.

Physical:
Field PC with no seismic channels: 10.5"L x 18"W x 13"D (27cm L x 45.7 cm W x 46 cm D), weighs 27 lb (12.3 kg)
Seismic recorder with 3-64 internal channels: 10.5"L x 18"W x 21 "D (26.7cm L x 34 cm W x 33 cm D), weighs 38 lb (18 kg)

Warranty: Two year parts and labor. Extended warranty available.

NZ7.pub 9/1/05

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