



# StrataVisor NZ

## Exploration Seismograph & Geode Module Controller

- Professional, ruggedized 24 bit seismic recorder suitable for reflection, refraction downhole, VSP or marine surveys, vibration and earthquake monitoring
- Crafted for rugged field use: reliable in harsh environments, survives shock, humidity and dust daylight visible color screen. Portable; system operates from 12V power
- Doubles as controller for Geode in-field modules to build up to 240 channel distributed systems with roll capability and aux
- Houses from 0 to 48 channels internally: easily connects to other StrataVisor NZ seismographs to build systems up to 480 channels
- Many quality control features: built-in geophone and line testing, full waveform noise monitor; optional automated internal in-field testing or use lab quality external test oscillator system
- 20 kHz real bandwidth (0.02 ms to 16 ms sampling) allows ultra-high resolution engineering surveys or low frequencies for earthquake monitoring

- High-speed hardware correlator means no delays using Vibroseis or pseudo-random Mini-Sosie sources
- Bundled professional software gives quick answers: Built-in first break picker and layer assignment Industry-standard refraction analysis (SIPQC). New refraction tomography (Optim). Reflection processing (WinSeis-Lite)

The StrataVisor NZ is a high-performance exploration seismic recorder with 3 to 48 channels in a ruggedized, weatherproof chassis. The NZ can operate either as a stand-alone instrument, connect to other StrataVisor NZ's or interface with remote seismic modules (Geodes) to expand your recording capability. This flexibility lets you collect data for all applications in all environments.

The StrataVisor NZ console includes a brilliant daylight-visible color screen, waterproof keypad and built-in printer. The NZs single or dual Pentium processors running under Windows NT, allow simultaneous data collection and processing to give you answers in the field - fast.

Need more channels? Connect to other StrataVisor NZs and build systems up to 480 channels, all controlled from one keypad. Or use 3 to 24 channel external Geode modules to build a flexible distributed system. Geodes eliminate cumbersome roll boxes that make high-resolution reflection and refraction surveys difficult to undertake. We bundle industry-standard reflection and refraction PC based software with every StrataVisor NZ, at no additional charge. This adds up to a system that is unparalleled in flexibility for all seismic surveys. And the StrataVisor NZ is backed by a no-questions 1 year parts and labor warranty.



*The rugged StrataVisor NZ operates stand-alone, with other NZ systems for more channels or with Geode 3 to 24 channel seismic modules. StrataVisor multi-tasking architecture lets you collect, QC and process data*

## Specifications:

### Configurations:

**Stand-Alone:** 3 to 48 channels in rugged, weatherproof chassis.

**Multiple System:** Two or more NZ chassis connected together to build an integrated system up to 480 channels.

**Semi-Distributed:** Connect external GEODE 3-24 channel modules that can be deployed on the ground near the geophones. Geodes are connected to NZ console by standard network cable.

**A/D Conversion:** 24 bit result using Crystal Semiconductor sigma-delta converters and Geometrics' proprietary oversampling.

**Dynamic Range:** 144 dB system, 105 dB (instantaneous, measured) at 2 ms, 0 dB.

**Distortion:** 0.002% @ 2 ms, 0.3 to 417 Hz.

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

**Common Mode Rejection:** > -110 dB at <= 100 Hz, 48 dB.

**Crosstalk:** -120 dB at 100 Hz, 0 dB.

**Noise Floor:** 0.23 uV, RFI at 2 ms, 36 dB, 0.3 to 417 Hz.

**Stacking Trigger Accuracy:** 1/32 of sample interval.

**Maximum Input Signal:** 2.8V PP.

**Input Impedance:** 20 kOhm, 0.02 uf.

**Preamplifier Gains:** Software selectable between 24 and 36 dB, or 12 and 36 dB. Can be jumpered to 0 dB for AUX channels.

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

### Acquisition and Display Filters:

**Low Cut:** OUT, 10, 15, 25, 35, 50, 70, 100, 140, 200, 280, 400 Hz, 24 or 48 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 or 48 dB/octave.

**Sample Interval:** 0.02, 0.3125, 0.0625, 0.125, 0.25, 0.5, 1.0, 2.0, 4.0, 8.0, 16.0 ms.

**Record Length:** 16,000 samples standard, 64,000 samples optional, independent of number of channels.

**Pre-trigger Data:** Up to 4,096 Samples.

**VibroSeis and MiniSosie:** High-speed hardware correlator operates either before or after stack for swept or pseudo-random source applications. Correlation time is independent of the number of channels.

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

**Line Testing:** Real time full waveform noise monitor, geophone pulse test. Noise monitor helps locate shorts, discontinuities in line.

### Instrument Tests:

**In-Field:** Optional internal oscillator measures full suite of daily and monthly tests.

**Laboratory:** Optional, factory verifiable, external high-quality oscillator measures dynamic range, cross talk, common mode, amplitude and phase similarity, filter tests and timing accuracy to factory specifications.

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

**System Software:** Full compliment of display, plotting, filtering and storage options are standard. Operates under Windows NT.

**Data Storage:** Operates with DAT, DLT, 3480, 3490, 3590, optical and hard disk storage through SCSI interface. Contact the factory for user specified media.

**Plotters:** Includes built-in 4 inch thermal printer. Drives a variety of NT compatible printers including Printrex 4, 8 and 12 inch plotters. Consult factory.

**Triggering:** Positive, negative or contact closure, software adjustable threshold.

**Delay:** 0 to 9999 ms in 1 ms steps.

**Power:** Draws 40W plus 0.65 watts/channel at 12V. Standby mode reduces power used by A/D circuitry by 700/o.

**Environmental:** Boots from +5 to 40 degrees C. Operates from -5 to 35 degrees C.

**Operating System:** Windows NT.

**Data Processing and Interpretation:** Includes software for refraction (SIPQC), reflection (WinSeis Lite), velocity determination (Optim) as well as built in filtering and QC functions. Consult factory for other data processing options.