

# GECKO TREMOR

## 2Hz Seismograph



The Gecko is the 7th generation of Kelunji seismograph designed by the seismologists at the Seismology Research Centre (SRC), an earthquake observatory based in Melbourne, Australia. Established in 1976, the SRC began developing digital recorders for long term monitoring, using the best sensors from around the world to suit the varied applications.

The Gecko design allows us to combine some of these sensors with our recorder to create into all-in-one seismographs, reducing cabling complexity and simplifying setup. As with the rest of the Gecko range, the Tremor is affordable, compact, and easy to use; all in a beautiful, rugged, portable, waterproof housing.

The Gecko Tremor uses passive 2Hz geophone elements integrated under the recording system, with adjustable sensitivity in a tiny robust package that draws very little power.

Use the built-in amplifier to vary the clip levels and sensitivity to suit your application, e.g.:

- noisy environments      gain x1 for clip level about 254mm/s (10 inches per second)
- local earthquake networks      gain x8 for typical for seismometer sensitivity (32mm/s clip)
- micro-tremor surveys      gain x512 for high sensitivity (clipping at about 0.5mm/s)

See next page for technical specifications, and for more details email [sales@src.com.au](mailto:sales@src.com.au)

# KELUNJI GECKO TREMOR Triaxial 2Hz Seismograph

## Technical Specifications

### Recorder

Type	32-bit ADC
Data Channels	Three, synchronously sampled
Full-scale signal (standard)	40 Vpp (Volts peak-to-peak)
Sensitivity (standard)	419430.4 counts per Volt
Preamplifier gains available (user selectable)	x1, x2, x4, x8, x16, x32, x64, x128, x256, x512
Frequency response	DC to 1600Hz
Sampling rates available (samples per second)	40, 100, 200, 250, 400, 500, 800, 1000, 1600, 2000, 4000

### Sensor

Type	Triaxial Velocity (East-West, North-South, Up-Down)
Frequency response	2Hz to 1600Hz
Sensitivity at gain x1	78.74 V/m/s (for noisy environments)
Sensitivity at gain x8	630.0 V/m/s (equivalent to typical seismometers)
Sensitivity at maximum gain (x512)	40K+ V/m/s (for microtremor & noise floor monitoring)

### Timing

Reference	GPS; data is time stamped every second
Accuracy	RMS 30 nanoseconds

### Recording

File recording options	Continuous (always on)
Trigger/alarm algorithms	STA/LTA and Level (any/all channels), System (voltage, memory, temperature)
Storage memory type	SD card (SDHC or microSD using adaptor)
Included storage	32GB
Continuous triaxial recording capacity @100sps	Over 1 year of data stored in a ring buffer (oldest data overwritten when full)
File system format	FAT32, readable by Windows, Mac & Linux operating systems
Data format	MiniSEED (with companion text files containing station data)

### Power

DC voltage input range	7 to 32V DC
Consumption (when recording continuous data)	1W
Optional DC input range	11.5 to 24V DC (factory set for low voltage battery protection)

### Physical

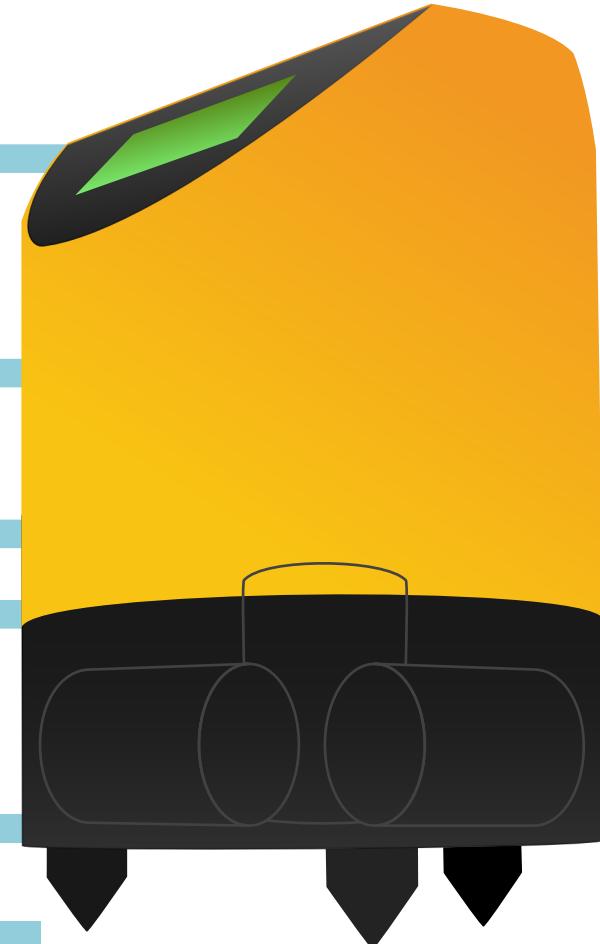
Housing	CNC milled from solid aluminium, hard anodised
Dust and Water Ingression Protection	IP67
Operating Temperature Range (up to 100% R/H)	-20 to +70 °C
Size (excluding connectors)	Ø 135mm, 220mm high
Weight	3 kg

### User Interface

Configuration Interface	In-built LCD with 4-line text display and 4-button input
Data Telemetry	IP streaming over optional Ethernet adaptor or 3G cellular modem
Remote setup and communications	via Live Stream application or eqServer web interface

### Connectors & Cables

Power	2-pin circular push/pull lock
On-Off Switch	External push button
Communications and Alarm	6-pin circular push/pull lock (3 pins comms, 3 pins alarm)
GPS	SMA coaxial threaded screw lock, magnetic patch antenna with 5m cable
Power cable	2m length with bare wire ends
Communications cable	Supplied with optional communications device, available separately
Maximum GPS cable length	80 metres (requires high gain GPS aerial)



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