



Industrial Seismology, Inc.

Mini-Seis Seismograph Specifications

General

Channels	3 mutually orthogonal seismic and one acoustic.
Seismic Range	Three component mounted geophones or accelerometers Standard 2.5 in/s (63.5 mm/s), 5.0 in/s (127 mm/s), 10 in/s (254 mm/s) based on X2 transducer gain.
Resolution	Standard 0.005 in/s (0.127 mm/s), 0.01 in/s (0.254 mm/s), 0.02 in/s (0.508 mm/s) depending on the selected range, and based on X2 transducer gain.
Accuracy (ISEE/DIN)	+/- 5% or 0.02 in/s (0.5 mm/s), whichever is larger between 4 and 125 Hz / DIN 45669-1 standard.
Frequency Range (ISEE/DIN)	2 to 250 Hz, within zero to -3 dB of an ideal flat response (varies with the sample rate) / 1 to 315 Hz.
Acoustic Range	Ceramic element rated to at least 160 dB Standard 142 dB (0.0365 psi, 252 Pa), 148 dB (0.072 psi, 500 Pa), Optional 160 dB (0.29 psi, 2000 Pa), Optional 185 dB (5.0 psi, 34,500 Pa).
Resolution	Standard 100 dB (0.00029 psi, 2.0 Pa), 106 dB (0.00058 psi, 40 Pa).
Accuracy (ISEE)	+/- 10% or +/- 1 dB, whichever is larger between 4 and 125 Hz.
Frequency Range (ISEE)	2 to 250 Hz, within -3 dB at the end points.

Waveform Mode

Modes	Triggered and Manual.
Trigger Levels	Standard Seismic 0.005 to 10 in/s (0.125 to 254 mm/s) depending on the selected range, based on X2 transducer gain. Standard Acoustic 100 to 148 dB (0.00029 to 0.072 psi, 2.0 to 500 Pa) depending on the selected range.
Sample Rate	32 to 2048 samples per second per channel.
Record Duration	2 to 12 seconds at 1024 sample rate, duration changes proportionally with the sample rate.
Storage Capacity	0.5 Meg Memory (average of 200 events of 3 to 5 seconds duration). 1.0 Meg Memory (up to 340 events of 3 to 5 seconds duration).
Manual Mode	Allows triggering from the keyboard or by an external input.
Sensor Test	A dynamic transducer and microphone test is performed automatically after each event or manually on command. The test is stored in the summarized data and may be downloaded as an event.
84 Hour Test	In a remote installation, an automatic sensor test will occur if no event has been recorded for 84 hours.
Auto-Report	After receiving a trigger, the instrument will automatically send out a report indicating that one or more records need to be downloaded. This report can be sent directly through the serial connector or through a modem. When received, the White AutoReceive™ Software will process the data and automatically download the events.

Web: www.whiteseis.com

Email: info@whiteseis.com

Phone: 1-417-624-0164

Fax: 1-417-624-9416

(Specifications May Be Subject To Change)



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Bargraph Mode

Interval	1, 10, 20, 30, 40, 50 or 60 seconds.
Data Stored	Peak acoustic, seismic and vector sum.
Storage Capacity	Up to 84 days, depending on memory and sample interval.

Physical

Memory	Solid State with all summary data, setup parameters, and recorded waveform and bargraph data retained with the power off. A lithium backup battery retains data if primary power fails.
Clock	A 24 hour clock maintains the date and time even if the primary power fails.
Timer Mode	Allows an instrument to be active only during selected hours on a daily basis.
Display	The high contrast LCD has two lines of 40 characters to facilitate the instrument's setup. It also allows the operator to view the operating parameters and summary data.
Keypad	Contains 6 keys for entering setup data and operating commands.
Power on Log	A log is kept in memory to indicate the active monitoring periods. If the timer is used, the log is updated each time it activates. The log also tracks changes to the trigger settings.
Internal Battery	6 volt rechargeable.
Operating Time	With a fully charged battery all models will operate from 7 to 10 days at a sample rate of 1024 samples/sec (Waveform Mode).
External Battery	A deep cycle battery will keep the internal battery at full charge for several months at moderate temperatures.
Charging	An internal charging circuit allows charging with the supplied plug-in wall-mount charger, or a 10 to 15 volt DC Power Supply. Power supplies for international use are available.
Operating Temperature	0 to 130 degrees F (-18 to 54 degrees C).
Case	Heavy gauge aluminum for effective electrical shielding and rugged protection.
Size	Approximately 7.5 in. x 4.5 in. x 2.5 in. (190 mm. x 114 mm. x 64 mm.).
Weight	Weight (without Accessories) Approximately 3.5 lbs. (1.6 Kg.) . Weight (with Accessories) Approximately 6 lbs. (2.7 Kg.) including the storage case.
Summary Data	Summarized data includes the event time, date, battery voltage, peak measurements, unit serial number and frequencies (Waveform Mode).
RS232 Serial Port	Data can be downloaded and setup commands can be uploaded directly by computer or remotely by modem at baud rates from 1200 to 38.4K baud.
Remote Access	Cellular TCP/IP, dial-up cell modem, dial-up satellite modem, hard line modem, and RF.