Industrial Seismology, Inc.
Mini-Seis III Specifications

General
Channels
Three seismic channels and one acoustic channel.
Seismic
Range
Standard 260 mm/s (10.24 in/s). Other ranges may be customized at the factory.
Resolution
0.008 mm/s (0.0003 in/s) depending on the range.
Frequency Range (ISEE)
2 to 250 Hz at 1024 sample rate as per ISEE Seismograph Performance Specifications for Blasting Seismographs. The upper frequency limit is 1/4 the sample rate.
Frequency Range (DIN)
From 1 to 315 Hz.
Accuracy (ISEE)
Conforms with the ISEE Performance Specifications for Blasting Seismographs.
Accuracy (DIN)
DIN 45669-1 Standard.
Transducer Density
Approximately 2.01 g/cc (125 lb/ft³)
Accelerometers
Optional accelerometers allow the transducer to be oriented in any direction without leveling.

Acoustic
Weighting
Linear overpressure or A weighting if appropriate hardware is present.
Linear Range
0.0156 Pa (0.000156 Mb) depending on range.
Linear Frequency Range
2 to 250 Hz at 1024 sample rate as per ISEE Seismograph Performance Specifications for Blasting Seismographs. The upper frequency limit is 1/4 the sample rate.
Linear Accuracy
Conforms with the ISEE Performance Specifications for Blasting Seismographs.
A Weighting Range
50 to 120 dBA.
A Weighting Resolution
0.1 dBA.

Timer
Allows an instrument to be active only during selected times on a daily basis.

Communication
USB or serial. Serial baud rates from 1200 to 230400.

Internal Data Storage
Over 2000 waveform and histogram records. Optional 4000 record storage available.

External Data Storage
Write to USB thumb drive.

System Log
The system log tracks on/off times, changes to setup parameters and internal system operation.

Operating Modes
Waveform, histogram, histogram/waveform and manual.

Data Reporting
The seismograph can automatically report both waveform and histogram events without needing to deactivate the current operating mode.

Data Retrieval
Data can be downloaded without requiring deactivation of the current operating mode.

Waveform Modes
Waveform
Standard mode used for blast monitoring and discrete transient event monitoring.
Manual
Trigger from the keypad or an external switch.
Simultaneous Triggering
Using a combination of manual and triggered modes, multiple units can be connected in serial for simultaneous triggering.
Sample Rate
1024, 2048, 4096 or 16384 samples per second per channel.
Duration
1 to 120 seconds at 1024, 2048 or 4096. 1 to 7 seconds at 16384.
Pre-Trigger
1 second at 1024 sample rate. The pre-trigger time decreases proportional to the sample rate.

Minimum Trigger Level
Seismic
0.127 mm/s (0.005 in/s) depending on range.
Linear
88 dBL depending on range.

Downtime Between Events
None for sample rates less than 16384.

Dynamic Sensor Test
A dynamic sensor test is performed at the end of every event in waveform mode. This test will appear in the pre-trigger of continuous events.
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Histogram Modes

**Histogram**
Standard mode for recording discrete measurements from continuous and semi-continuous sources.

**Histogram/Waveform**
A waveform is recorded while the histogram is running when one of the trigger thresholds is met or exceeded.

**Sample Period**
1, 10, 20, 30, 40, 50 or 60 seconds.

**Data Stored**
Channel peaks, their frequencies and the vector sum.

**Histogram Interval**
The histogram interval determines how long a histogram will run before deactivating and starting a new histogram. From 1 to 12 hours or 0 which starts a new histogram at midnight.

**Histogram Storage**
The internal memory is sufficient to store over a year of histogram data using a 60 second period.

**Reporting**

**General**
Reporting requires an approved remote access device capable of port forwarding serial data. The reporting can be run through the White Reporting Service™ or handled by the user with the White AutoReceive™ software.

**Waveform Mode**
With reporting activated, after a recording, the seismograph will output a string of characters consisting of the unit serial number and other information.

**Histogram Mode**
With reporting activated, after a histogram is made inactive, the seismograph will output a string of characters consisting of the unit serial number and other information.

**Physical**

**Size**
Approximately 15 cm. x 11.5 cm. x 9 cm. (6 in. x 4.5 in. x 3.5 in.).

**Weight**
Approximately 1.6 Kg. (3.5 lbs.) without accessories.

**Battery**
Internal 6.0 volt rechargeable.

**Display**
The high contrast graphics display facilitates the instrument's setup. It also allows the operator to view operating parameters and summary data.

**Keypad**
The alphanumeric keypad can be used to supply comments and setup data.

**Clock**
A 24 hour clock maintains the date and time to the second, even if the primary power fails.

**Operating Time**
With a fully charged battery the unit will operate from 7 to 10 days at 1024 samples per second. Longer times may be obtained using the timer mode or external power from a solar panel or deep cycle battery.

**Charging**
An internal charging circuit allows charging with the supplied plug-in wall mount charger or available 10 to 15 volt DC supply. Power supplies for international use are available.

**Operating Temperature**
0 to 130 degrees F (-18 to 54 degrees C).