General

Channels

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 2017 Edition. The upper frequency limit is 1/4 the sample rate.
- Frequency Range (DIN): From 1 to 315 Hz.
- Accuracy (DIN): DIN 45669-1 Standard.
- Transducer Density: Approximately 2.01 g/cc (125 lb/ft³)

Acoustic
- Weighting: Linear overpressure.
- Range: 0.0156 Pa (0.000156 Mb) depending on range.
- Frequency Range: 2 to 250 Hz at 1024 sample rate as per ISEE Seismograph Performance Specifications for Blasting Seismographs 2017 Edition. The upper frequency limit is 1/4 the sample rate.

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

Communication
- High speed USB or serial.

Storage Capacity
- Up to 4096 waveform and histogram records of any duration.

External Data Storage
- Write to USB thumb drive.

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

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

Data Reporting
- Waveform and histogram events can be reported without needing to deactivate the current operating mode.

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

GPS
- Optional integrated GPS stores location information in the record summary.

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.

Multi-Level Triggering
- Three trigger levels allow for the use of warning lights and sounds.

Sample Rate
- 1024, 2048, 4096, 8192, 16384 samples per second per channel over 8 channels. Also 65536 and 131072 samples per second over 1 channel.

Duration
- 1 to 120 seconds at all sample rates.

Pre-Trigger
- 1 second at 1024 sample rate. The pre-trigger time decreases proportional to the sample rate.

Minimum Trigger Level
- Seismic: 0.254 mm/s (0.01 in/s) depending on range.
- Linear Acoustic: 88 dBAL depending on range.

Downtime Between Events
- None at all sample rates.

Dynamic Sensor Test
- With the exception of the single channel and non-standard sensors, a dynamic sensor test is performed at the end of every event in waveform mode.
### Histogram Modes

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Histogram</td>
<td>Standard mode for recording discrete measurements from continuous and semi-continuous sources.</td>
</tr>
<tr>
<td>Histogram/Waveform</td>
<td>A waveform is recorded while the histogram is running when one of the trigger thresholds is met or exceeded.</td>
</tr>
</tbody>
</table>

### Sample Rate

- 1024, 2048 or 4096 samples per second over 8 channels.

### Sample Period

- 1, 10, 20, 30, 40, 50, 60 seconds and 15 minutes.

### Data Stored

- Channel peaks, their frequencies and optionally 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.

### Reporting

**General**

Reporting requires an approved remote access device capable of port forwarding TCP data. The reporting can be provided by the White Reporting Service™ or handled by the user with the appropriate version of 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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>Approximately 15 cm. x 11.5 cm. x 9 cm. (6 in. x 4.5 in. x 3.5 in.).</td>
</tr>
<tr>
<td>Weight</td>
<td>Approximately 1.6 Kg. (3.5 lbs.) without accessories.</td>
</tr>
<tr>
<td>Battery</td>
<td>Internal 6.0 volt rechargeable.</td>
</tr>
<tr>
<td>Display</td>
<td>The high contrast graphics display facilitates the instrument’s setup. It also allows the operator to view operating parameters and summary data.</td>
</tr>
<tr>
<td>Keypad</td>
<td>The keypad can be used to navigate screens and modify setup data.</td>
</tr>
<tr>
<td>Clock</td>
<td>A 24 hour clock maintains the date and time to the second, even if the primary power fails.</td>
</tr>
<tr>
<td>Operating Time</td>
<td>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.</td>
</tr>
<tr>
<td>Charging</td>
<td>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.</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 to 130 degrees F (-18 to 54 degrees C).</td>
</tr>
</tbody>
</table>