



## Seismic Guard System SGS.

### *High Performance Geophone Sensors*

Geophone seismic intrusion detection systems offer a reliable and cost-effective solution. Sensor lines follow the terrain with no need for line of sight. Where heavy landscaping, hilly terrain, and inconsistent perimeter shapes make other systems costly and impractical, seismic performs.

The basic components of the seismic system are the geophone sensors and the seismic signal processor.

Geophones are placed in or on earth, asphalt or concrete to detect low-level intruder vibrations. These signals are processed and analyzed to selectively discriminate between actual intruders and natural disturbances.

Two types of geophone lines can be included in the system: a detector line and a discriminator line. In areas where vehicular traffic is not anticipated, the detector line and the signal processing capabilities provide the necessary protection while filtering out nuisance alarms. When the seismic system is installed near highways, railroads, or other vibration sources, discriminator lines are required.

The seismic signal processors compare signals generated by the geophones to a user adjustable threshold. As each signal crosses this threshold, it is scanned for timing, count and other criteria. It also compares detector line inputs to discriminator line inputs to filter out ambient disturbances. When all criteria are met, the logic system generates an alarm condition.

Each processor may be easily interconnected to standard security monitoring systems via normally closed or open alarm relay contacts or Laser Guard [Integrated Security System Control \(ISSC\)](#).

## **SGS-103**

### System Specifications

#### DESCRIPTION

The Seismic IDS consists of the following items:

#### **SGS-103**

##### **Zone Processor**

Built to length. Maximum of 25 sensors on a line

#### SPECIFICATIONS

<p><b>Detector Sensor Lines</b>  <b>SGS-103</b>  <b>Typical Detection Range</b>            7 ft. radius (2.5m)  <b>Maximum Sensors</b>            25 per Processor  <b>Recommended Spacing</b>            10 ft.(3m)  <b>Discriminator Sensor Lines</b>  <b>SGS-401, SGS-404</b>  <b>Maximum Sensors</b>            25 per Processor  <b>Recommended Spacing</b>            40 ft.  <b>Cable Type S-908</b>            shielded, 0.5 in. diameter  <b>Input Voltage</b>            14-18 volts AC, 20 VA min.  <b>Battery</b>            12VDC, 2.6 AH or higher, lead acid or gel cell</p>	<p><b>Audio output signal</b>            600 ohm output impedance  <b>Processor operating temperature range</b>            -40° C to +70° C  <b>Frequency range</b>            Geophones respond to low frequencies between 5 and 20Hz  <b>Type and number of zones</b>            1 zone/processor  <b>Alarm relay ratings</b> 12V,5 amps  <b>Charging circuit type</b>            13.5 volt constant charge  <b>Standard Part Numbers:</b>  <b>1 zone processor</b> SGS-103-017  <b>Detector lines &amp; sensors for soil</b> SGS-202  <b>Discriminator lines &amp; sensors for soil</b> SGS-401  <b>Home run cable for sensor &amp; discriminator lines</b> S-908</p>
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