PRODUCT DESCRIPTION

The new Battlefield Anti-Intrusion System (BAIS) AN/PRS-9A, is an upgrade to the U.S. Army’s AN/PRS-9 BAIS type standard Unattended Ground Sensor (UGS) System. The new AN/PRS-9A provides improved early warning intrusion detection and threat classification of vehicles and personnel. The system supports small Tactical Units up to company level forward operating base security by Mounted and Dismounted Units to establish defensive positions and by Military Police Units for security of personnel and assets.

The AN/PRS-9A comprises one Hand Held Monitor/Transmitter (HHM/T) and a set of three Seismic/Acoustic Sensors, known as Sensor/Transceivers (S/T). The upgraded system provides two-way RF communication to allow local and remote wireless programming. Remote programming can be performed while the sensors are deployed. Each S/T can be configured as a standalone sensor, a radio repeater or a combined sensor/repeater. The radio repeater capability eliminates the need for a separate, standalone repeater unit, and allows users to overcome radio line-of-sight obstacles, extending the RF range for longer-range communications and remote programming capability.

The basic set of three Seismic/Acoustic S/Ts retain the ability to accept Infrared or Magnetic Detection sensors to provide additional information such as target count and direction of travel.

The system is small, weighs less than 10 lbs. and is easily transported by a single warfighter in ALICE or MOLLE mission equipment packs.

This Program of Record (PoR) is sponsored by the U.S. Army Product Manager-Force Protection Systems (PM-FPS), Ft. Belvoir, VA.

FEATURES

- A compact, lightweight UGS System, consisting of:
  - (3) Seismic/Acoustic Sensor/Transceiver (S/T)
  - (1) Hand Held Monitor/Transmitter (HHM/T)
- MIL-Qualified
- Small & Lightweight
- Long Mission Life
  - 130 Days @ 1000 Alarms/Day (S/T)
  - 19 Days (HHM/T)
- Flexible Configuration
  - 599 RF Channels
  - 255 Sensor IDs
  - Target Masking
- Two Way RF Communications
  - SEIWG-005C Compliant
  - 138 MHz to 153 MHz Band
  - Wireless Local and Remote Programming
  - S/T Configurable as Radio Repeater
- Built-in Tests and Alarms
- Anti-Tamper
- Low False Alarm Rate
- Software Upgradable
- Simple Operation & Integration into Higher Echelon Situational Awareness Platforms
- Internal Battery Power
  - Commercial 9V
- S/T can be powered from an external source for long duration missions

APPLICATIONS

- ISR Operations
- Special Operation Missions
- Intrusion Detection
- UAV, UGV & Imager Cueing
- Force Protection
- Border Surveillance
- Counter Drug Missions
- Homeland Security
**AN/PRS-9A Battlefield Anti-Intrusion System (BAIS)**

### Performance

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Length</th>
<th>Width</th>
<th>Depth</th>
<th>Weight</th>
<th>Batteries</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/T</td>
<td>7.6 in</td>
<td>4.2 in</td>
<td>2.1 in</td>
<td>1.5 lbs</td>
<td>(4) 9V Lithium Batteries</td>
</tr>
<tr>
<td>HHM/T</td>
<td>6.5 in</td>
<td>4.2 in</td>
<td>2.2 in</td>
<td>1.5 lbs</td>
<td>(4) 9V Lithium Batteries</td>
</tr>
</tbody>
</table>

**Detection Range**

<table>
<thead>
<tr>
<th>Target Class</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracked</td>
<td>0-450 m</td>
</tr>
<tr>
<td>Wheeled</td>
<td>0-350 m</td>
</tr>
<tr>
<td>Personnel</td>
<td>0-75 m</td>
</tr>
</tbody>
</table>

**Message Type**

- BAIS (SAS & S/T) (29-bit)
- BAIS (S/T) (101-bit)
- TRSS (29-bit, 285-bit)
- REM/IREM/REM-II (29-bit, 101-bit)
- EMIDS & MIDS
- LKMD Alarms

**Environment**

- **High Temp**
  - Operating: +71°C
  - Non-Operating: +71°C

- **Low Temp**
  - Operating: -40°C (-20°C for HHM/T)
  - Non-Operating: -46°C

- **Altitude**
  - Operating: 15,000 ft
  - Non-Operating: 35,000 ft

- **Humidity**
  - Operates in 95% relative humidity

- **Immersion**
  - Survives 1 hour in 1 meter of H₂O with 27°C differential

- **Sand/Dust**
  - Resistant to 20 mph winds (Dust)
  - 40 mph winds (Sand)

- **Salt Fog**
  - Resistant per MIL-STD-810F, Method 509.4

- **Shock**
  - Resistant to 1 meter drop

- **Vibration**
  - Loose Cargo per MIL-STD-810F, Method 514.5 Procedure II, Category 5 Minimum Integrity per MIL-STD-810F, Method 514.5 Procedure I, Category 5

- **EMI/EMC**
  - Tested to MIL-STD-461E, Level RE102, RS103, CS114, CS115 and CS116

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Cleared for Public Release by U.S. Army ACC-APG dated 21 August 2013, by email from the cognizant Contracting Officer