MicroSearch®: A Closer Look

The MicroSearch® human presence detection system detects individuals hiding in vehicles or containers by sensing the subtle vibrations caused by the human heartbeat.

How it Works

MicroSearch® is a highly portable unit consisting of a laptop, a digital control box, three to five sensors, and cables. Patented magnetic seismic sensors, similar to those used to measure earthquakes, are placed on the vehicle frame to detect heartbeat vibrations. Ground sensors filter out environmental vibrations. Within seconds, MicroSearch detects if there is a person inside.

Red Light/Green Light Results

An easy to navigate touch screen with an intuitive display provides a visual and audible pass/fail alert locally or remotely.

Flexible Configurations for Maximum Customization

Ruggedized Hardware Options

MicroSearch® is available as a semi- or fully-ruggedized laptop or a fixed field unit to best suit your operational needs.

Standard or Enhanced Operating Mode

Both modes offer ground sensor technology. The enhanced mode contains additional ground sensors that cancel ground vibrations in the harshest environments, such as border crossings or ports.

What Sets Us Apart?


Since 1969, the ENSCO group of companies has been providing ingenious engineering, scientific and advanced technology solutions that guarantee mission success, safety and security to governments and private industries around the globe. We operate in the defense, transportation, aerospace, intelligence, and corrections arenas.

The ENSCO Difference

- We are the industry leader in providing heartbeat detection technology in the U.S. and internationally.
- We are elevating border and port security by leveraging our expertise in developing advanced DOD technology.
- We are the only company that holds a patent for this technology. That means, we are the only company that can offer our customers continuous upgrades, customization and advancements to the technology.
- Our technology relies on more than 45 years of signal processing and senior technology experience.
- We have hundreds of installations worldwide with authorized resellers in more than 20 countries.

For More Information

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Enhanced Border and Port Security

Thousands of vehicles cross borders every day. Border protection is at the forefront of global security challenges around the world.

Border and port security agencies are charged with the difficult task of keeping their nations safe from terrorists and preventing individuals from being smuggled in illegally. There is no single solution for border security challenges, but layers of defense, aided by new technology, can help better manage the challenges.

**MicroSearch® Heartbeat Detection**

- Exposes individuals hiding in vehicles at border and port security checkpoints
- Dramatically increases detection of individuals, not easily seen by staff, in vehicles and containers even with good visual inspection procedures
- Provides a proven technology-driven force multiplier to augment manual procedures and speed up inspection timeframes
- Visually and audibly alerts border officers to the presence of individuals hiding inside vehicles

**Why MicroSearch®?**

- **Cost-effective Tool to Improve Border Security**
  Affordable solution to enhance and upgrade current border security procedures

- **Accurate Results**
  The only product that offers breakthrough performance with patented ground sensors that filter out environmental vibrations for more precise results

- **Flexible and Portable**
  Compact portable units make it easy to move among multiple locations

- **Customized Audit Trail**
  Database stores details when vehicle inspections were conducted, by whom, and documents results

- **From Set Up to Accurate Test Results in Less Than Two Minutes**
  Faster than visual inspections of every vehicle, box and container; actual test time is less than one minute

- **Maximum Efficiency with No Extra Workload**
  Easier, quicker and more precise than visual inspections

- **Reliable in Extreme Conditions**
  Rugged weatherproof design allows accurate operation in extreme climates, including dry, dusty, wet and cold environments

- **Policy Compliance Monitoring**
  Logs and reports allow for easy tracking, analysis, retrieval, and archiving to document that policies and procedures were properly followed