MicroSearch®: A Closer Look

MicroSearch® human presence detection system detects inmates 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’s 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 fixed field unit to best suit your operational needs.

• Standard Versus Enhanced Operating Mode: Both modes offer ground sensor technology. The enhanced mode goes a step further with additional ground sensors that cancel ground vibrations in the harshest environments.

What Sets Us Apart?


Since 1969, the ENSCO group of companies has been providing ingenious engineering, science 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 for corrections in the U.S. and internationally.

• We are elevating correctional safety by leveraging our expertise in developing advanced DOD technology.

• We are the only company that holds the patent for this technology. This 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 sensor technology experience.

• We have hundreds of installations worldwide.

For More Information

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Close the Gap in Perimeter Security

More than 20,000 vehicles enter and exit prisons every day, compromising sallyport perimeters.

Mitigate Sallyport Vulnerabilities

The external perimeter is the greatest protection against escapes. Facilities invest a great deal in complex detection systems to fortify the perimeter and alert staff to breaches. Yet the vehicle entrance is the most vulnerable link and needs the most protection.

Prevent Escapes

The corrections industry’s number one priority is to protect the public, and it starts with keeping inmates in. Preventing escapes means preventing crime and violence. An escape from a secure facility is the ultimate security breach and failure—you can't afford an escape that could have been prevented.

MicroSearch® Heartbeat Detection: The Industry Solution

- Exposes escape attempts by inmates hiding in vehicles BEFORE they can breach the perimeter
- Dramatically increases detection of inmates in vehicles and containers not easily seen by staff, even with good visual inspection procedures
- Provides a proven technology-driven force multiplier to augment manual procedures
- Visually and audibly alerts officers to the presence of inmates hiding inside vehicles

Why MicroSearch®?

√ Cost-effective Tool to Protect Against Sallyport Breaches
   Affordable solution to closing the gap in the most vulnerable link in the perimeter

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

√ Protects Multiple Sites and Sallyports
   Compact portable units make it easy to accommodate facilities with more than one sallyport, off-site warehouses, and industries buildings

√ Customized Audit Trail
   Leaves no question if thorough vehicle inspections were conducted and by whom, and documents results

Why MicroSearch®?

√ Goes From Set Up to Accurate Results in Less than Two Minutes
   Faster than visual inspections of every vehicle, box and container

√ Maximizes 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 prove that industry standards were met