



Handheld Metal Detector Precision Deployment Assembly (HHMD PDA)

Precision deployment handheld metal detector reduces false positives and improves scanning efficiency in crowded venues.

Researchers at Purdue University have developed a new handheld metal detector with a precision deployment assembly (HHMD PDA). The new device can be implemented in security settings such as scanning of patrons in events venues with large crowds including but not limited to concerts, sporting arenas, airports, prisons, nightclubs, courthouses, hospitals, and schools. The system provides for a processing advantage saving time by allowing security officials to maintain appropriate distance between the scanner and the individuals during scanning. Maintaining the proper distance from the target creates fewer false positives that reduce processing rates for guests. The device also provides for improvements in training security staff on the need to maintain an appropriate distance from the guests subject to security screening HHMD PDA's sleek panel-style design allows for ease of portability and deployment. In testing, HHMD PDA was able to detect items often missed by walk-through metal detectors.

Advantages:

- Accurate
- Reliable
- New Employee-Training Aid
- Allows Safe Scanning Distance
- Reduces False Positive Detection Alarms

Potential Applications:

- Law Enforcement
- Security and Public Safety

Technology ID
2021-DIET-69182

Category

Aerospace & Defense/Defense
Electronics & Surveillance
Technologies
Robotics &
Automation/Perception &
Sensing

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Technology Validation:

HHMD PDA was implemented for detection of small objects and its accuracy and reliability were compared with that of traditional walk-through metal detectors.

TRL: 2

Intellectual Property:

Provisional-Patent, 2020-12-29, United States

Utility Patent, 2021-12-28, United States

Keywords: Airport Safety, Detection, detector, Law Enforcement, Mechanical Engineering, Metals, Physical Security, Public Safety, Security