WG Human Presence Detection Mobile System

Product Code: 2020-20

Key Features

- **Detects human heartbeats**
- **Speed - faster than conventional manual checks**
- **Safety - no risk to operator or detected persons**
- **Rapid deployable or fixed installation**
- **Low false alarm rate**

Overview

The WG Human Presence Detection Mobile System detects unauthorised individuals hiding in vehicles or containers by sensing the vibrations caused by the human heartbeat.

It provides a fast, highly accurate, non-intrusive system for the detection of hidden human presence in any type of road vehicle.

It is an ideal solution checking vehicles at Airports, Borders, Ports,, Prisons or any type of restrictive military, industrial, research or government area.

The system comprises; a ruggedised tablet with a detachable keyboard, four wireless sensors and a proprietary wind sensor, which together with the systems advanced signal processing software is able to remove the effect of the wind in open environments.

Features

Detects human heartbeat

Ideal for use at borders, prisons and high security facilities

Easy to operate

Automatic number plate recognition

Ruggedised construction

enquiries@wg-plc.com | www.wg-plc.com | +44 1295 756300

Westminster Group Plc, Westminster House, Blacklocks Hill, Banbury, Oxfordshire, OX17 2BS, United Kingdom

WG Human Presence Detection Mobile System

Features

High Accuracy: It uses advanced algorithms, signal processing and systems logic to eradicate any background interference such as vibration from passing traffic. This ensures that the readings are interpreted correctly, so any even the faintest noise or vibration, emanating from the vehicle, will be detected, such as an agitated heartbeat.

Ruggedised Durable Equipment: Designed to be used in 'harsh' outdoor conditions, e.g. encased in a protective metallic frame, and with MIL-Spec connectors.

Rapid Throughput Times: A complete 'sensory test' of a vehicle can be completed in approximately, only a minute, so the daily operations of the border controls and gate stations, particularly traffic flows, are not adversely impacted.

Ease of Use and Operation: The sensors are quickly and easily attached to the exterior of the vehicle, and with no further operator intervention, the system automatically executes a 'sensory test' of the vehicle, the Computer Terminal is menu-driven and intuitive, with very minimal data entry: it's automated from Start to Finish.

Multi-Vehicle Format Configuration: The system can be utilised for different types of heavy goods vehicles: trucks, roll-on/roll-off containers, coaches, cement mixers, tankers, etc.

Automatic Data Capture and Update: The results of the scan are automatically captured and processed, i.e., no manual input nor intervention required. Quick & Simple and Ready for the next vehicle.

Vehicle Number Plate Recognition: The number plates of all vehicles are automatically and instantly recorded on the system; this provides critical data for operational reports (vehicle tracking) and for auditing purposes.

Remote Data Management & Communications: The terminals can transfer data to and from head-office organisations via 4G networks, both nationally and internationally, this means a rapid and easy consolidation of up-to-date information into the head office host computers. It also enables the Head Office to access all Terminals remotely, for operational support and diagnostics.

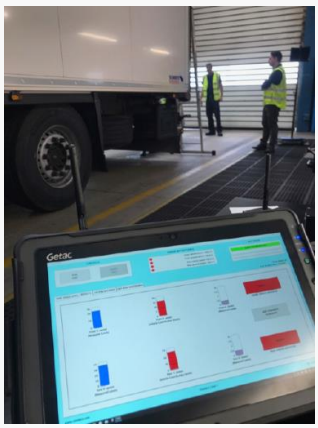
Multiple Vehicle Scanning: The system can provide for multi-vehicle scanning from a single terminal, particularly useful for the larger transport inspection bays.

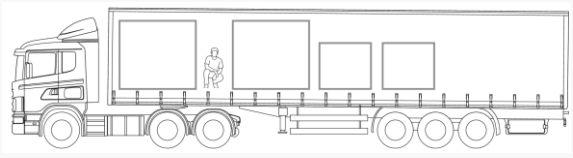
Multiple Language Capability: The system is available in most languages and is already deployed in multiple countries.

Sensor Health Check & Validation: The system provides for an automated sensor health check, with built-in alarm and audit reports, this ensures that the sensors are functioning correctly, and highlights any irregularities.

Geophone Testing Station (GTS) module: This is an additional terminal which manages and extends the life cycle of the sensors and cable components. This executes tests on the accuracy and throughput of the sensors, and provides management information data, highlighting any key performance issues.

CE Certified: The system has CE Certification, a key quality assurance





WG Human Presence Detection Mobile System

Detection Technolgy

The system goes way beyond the limitations of other forms of scanning technologies, which are inadequate in the application of the detection of humans in heavy goods vehicles.

Equally, manual searches of heavy goods vehicles are both impractical and inefficient, they involve too many people and would require the lengthy removal of the goods and cargo, it would take too much time to complete this for each vehicle, causing massive traffic hold ups and most important, manual searches are not thorough enough and will often miss hidden human presence.

How it works

The system works by the detection of any 'vehicle-induced' vibration, including even the faintest of movements, such as the agitated heartbeat of a human occupant.

The system can execute and complete a 'sensory test', which will detect a hidden intruder very quickly. The system is deployed and controlled by a ruggedised computer terminal, which is positioned in the inspection area for the vehicles. Highly sensitive sensors, normally 2 are attached to the side of the vehicle and perform a 'sensory test', if there is any sound and movement detected, the system provides an automated alert to conduct a search of the vehicle.

The whole process is automated: very fast and very simple, the software manages the processes, capturing and analysing the results of each 'sensory test', as well as compiling key data, such as vehicle number plates.

There is also the capability for online 4G connectivity to a remote host computer, for data consolidation and management information reporting.

Component Specifications

Case
Standards: MIL-STD-810F, FED-STD- 101C, ATA 300
IP Rating: IP67
Maximum Dimensions: W406 mm x L538 mm x H211 mm
Weight: 10 kg

Tablet / Laptop
Processor: Intel i5-1145G7, 4.2 GHz

Display
Size: 12.5" TFT
Resolution: 1920 x 1080

Touchscreen
Type: Projected Capacitive

Storage & Memory
Memory: 16GB DDR4 (32GB option)

Software
OS: Windows 10 Professional
Utility: V3 2022 (2-4 Vehicle options , ANPR Option).

Power Supply
AC Power Adapter: 100-240v, 50-60Hz
Battery: 2 c Li-ion 11.1v, 2,100 mAh
Vehicle Adaptor: 120w, 11-32 VDC

Rugged Features
Standards: MIL-STD-810H, MIL-STD 461G
IP Rating: IP66
Drop Resistance: 1.8 metres

I/O Interface (incl. keyboard)
1 x USB 3.2 Gen 2 Type -A
3 x USB 3.2 Gen 1 Type-A
1 x LAN (RJ-45)
1 x Thunderbolt 4
1 x HDMI

WG Human Presence Detection Mobile System

Wireless Sensors & Dongle

All sensors used with the V3m wireless system utilise the same basic sensing element, the only difference between the ground sensors and the vehicle sensors is that the element is inverted.

The antenna connection for the ground sensor sits on the top face and the antenna connection for the vehicle sensor sits on the bottom face.

The sensors have two magnet mounting positions so that the vehicle sensors can be attached to the side of the body for smaller vehicles or to the underside of the I-beam for heavy goods vehicles.

The ground sensors can be placed directly onto the ground or attached to a steel plate for greater stability in windy conditions.

If the system is used without a shelter and conditions are windy, or if there is significant airflow caused by passing large vehicles, then one of the ground sensors can be attached to the base of the optional wind frame to maximise accuracy.

The sensors use standard 1.2V AAA rechargeable batteries, when the sensors are not in use, they automatically go into sleep mode, maximising the battery life

Wireless Sensors & Dongle Specifications

Wireless Sensor
Power: 3 x 1.2v AAA rechargeable NiMh batteries
Battery Life: >24 hours
Quantity: 4 sensors per Single vehicle checking
Quantity: 8 sensors for Two vehicle checking
Dimensions: W63 mm x D63 mm x H76mm
Weight: 0.5 kg each

Dongle
Dimensions: 60 mm x 25 mm x 15 mm
Weight: 30 gms

Wind Frame (Option)

The wind frame has a integrated seismic sensor and anemometer, the anemometer serves only as a visual measure and the seismic measurement is obtained by attaching one ground sensor to the steel base frame, it requires no power or cables to be linked to the main unit.

The central shaft is telescopic and can be removed from the base plate for ready transportation, the base plate is also fitted with retractable castor wheels.

Wind Frame Specifications

Wind Pole Length: 1,040 – 1,900 mm
Base Plate: W680 mm x D600 mm x H40 mm