



Handsfree Group Driven Technology.

TfL DVS PROGRESSIVE SAFE SYSTEM KIT



HANDSFREE
Vehicle Technology.

Call our Sales Team today to find out more
0161 864 6440

Kit Includes

- AI Side Pedestrian Camera
- AI Front Pedestrian Camera
- 7" AHD Display Monitor
- Left Turn Warning Alarm with Night Silence Switch
- CAN Bus Signal Module – Non Invasive
- Blind Spot Sticker - A3 size

Our Progressive Safe System (PSS) solution is designed for aftermarket application to a wide range of vehicle makes and models. In some cases, additional accessories in the form of brackets and camera spacers are required to allow for operational performance.

The core of the Blind Spot Information System and Moving Off Information System is based on using Edge Artificial Intelligence Video Analytics. Using edge AI technology allows for the detection of vulnerable road users (VRUs) whilst ignoring street side furniture locally without the delay associated with cloud-based AI systems.



AI Cameras are installed on the front and side of the vehicle. Configurable detection zones are set using a removeable USB tool once cameras have been positioned and angled correctly onto the vehicle based upon our method statement and installation guidance. We recommend taking photographic evidence of the detection zones, using markers on the ground, to prove that the cameras have been configured. In events of complete power loss to the vehicle, the configuration remains consistent without need for recalibration.



1080P AI Pedestrian
Detection Camera
Detection Zones



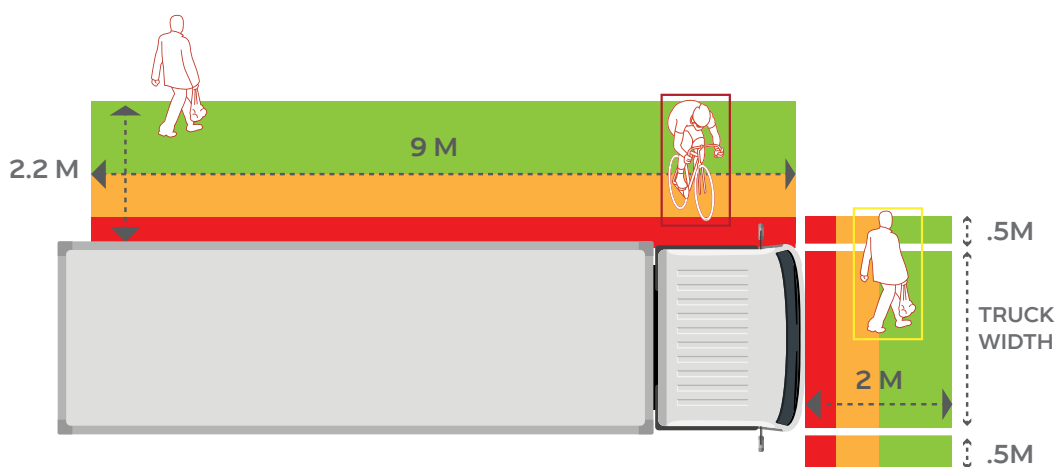
Product Testing & Approval

The system actively informs the driver of the presence of VRUs in close proximity to the vehicle and actively draws their attention to it.

The AI camera on the side of the vehicle (left hand side for right hand drive vehicles, right hand side for left hand drive vehicles) is also used for the Camera Monitoring System where the camera installation positioning allows the elimination of the blind spot. The in-cab monitor is designed to allow positioning close to the window edge, where a multitude of different brackets for optimal monitor location can be used for different vehicle types.

Visual warnings are displayed on the screen, with a coloured frame overlay which highlights the detected Vulnerable Road User (VRU). When a VRU is detected in a close proximity to the vehicle and where there is a possibility of an imminent collision, an audible warning alert will sound from the monitor. In conjunction with the audible warning, a red box frames the detected VRU, accompanied by a warning triangle with an animated figure in the top centre of the screen.

When stationary and the park brake is active, the monitor will display both MOIS and BSIS cameras simultaneously; there will be no audible alarms from the MOIS. This is known as the driver check phase, where a fault or a covering of the view of the camera/s will be made known visually to the driver. When the park brake is disengaged, the MOIS will no longer be forced in view. It will only present if a VRU is detected. The BSIS is held on the monitor at all times when the vehicle is below 20mph (30kph), regardless of VRU detection



Internal audio warning alerts the driver when a VRU is detected within close proximity to the side of the vehicle and where there is a consideration for an imminent collision. The audio emanates from the monitor. The monitor also displays visual information, which changes in colour from green to yellow then to red, depending on the proximity of the VRU to the vehicle.

The monitor also features dimming functionality, where screen brightness reduces in low light conditions. In some instances, the monitor may also be used for reversing and/or digital video recording equipment. However, their usage will not impact the triggering from the detection of VRUs onto the monitor providing that the installation method and guidance is followed.

Configuration changes of the AI cameras cannot be done without a specialist tool. Monitor button control is disabled after installation of equipment to ensure that the system cannot be interfered with.



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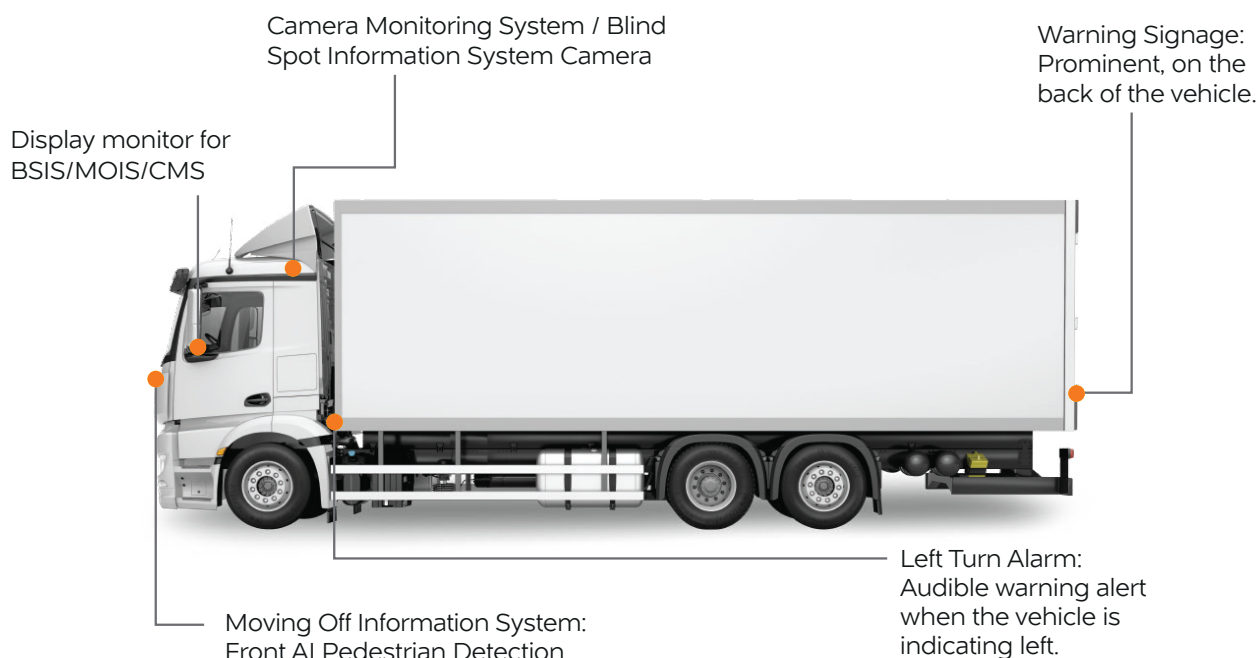
Our Solution

Externally, a Left Turn Alarm is installed which alerts VRUs of the vehicle's movements n.b. The alarm states "Warning, this vehicle is turning left". As part of this compliance, a manual Night Silent Switch is fitted for alarm deactivation between the hours of 23:30 – 07:00. The switch will automatically reset on ignition cycle to allow for driver change over. The alarm will also deactivate at speeds over 20 MPH, and activates on use of the indicator.

n.b A Right Turn Alarm is also available (for left-hand drive vehicles).

External A3 stickers are mounted on the rear of the vehicle. Side under run protection and class V/ VI mirrors are not provided as part of the system from Handsfree Group.

- **Camera Monitoring Systems (CMS) / Blind Spot Information System (BSIS)** – A Side AI Camera on the near side of the (RHD) vehicle aimed down to eliminate the blind spot, combined with a monitor situated by the passenger A-Pillar. Operational at all times under 20MPH.
- **Moving Off Information Systems (MOIS)** – An AI Camera is fitted to the front of the vehicle to allow detection of VRUs for safe moving off.
- **Left Turn Alarm** – Activated when the left turn signal is on. A Night Silent Switch is installed to deactivate the alarm during mandated hours manually by the driver.
- **Warning Signage** – Prominently displayed on the vehicle. A3 Size.



*for left hand drive vehicles, blind spot location and equipment positioning is adjusted accordingly