Vehicle Safety Solutions

Ultrasonic Obstacle Detection
The cost of turning a blind eye

Even a relatively small accident can be immensely costly to a fleet operator. Apart from repairs to the damaged vehicle, there is downtime and replacement vehicle hire costs to consider and this doesn’t take into account any insurance or legal expenses.

Typical damage costs based on a Mercedes Actros:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost of replacement</th>
</tr>
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<tbody>
<tr>
<td>Step (bottom part moulded)</td>
<td>£295 - £585</td>
</tr>
<tr>
<td>Bumper - two corners and centre</td>
<td>£248</td>
</tr>
<tr>
<td>Under run bars (box section welded)</td>
<td>£385</td>
</tr>
<tr>
<td>Whole Front light cluster</td>
<td>£246</td>
</tr>
<tr>
<td>Rear light</td>
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Yet the consequences can be even more severe. A company was fined £105,000 in September 2009 after an employee was killed by a reversing lorry at the skip waste site where he worked. The man was in the lorry’s mirror blind spot when he was struck by the rear of the lorry and run over.

“By fitting Brigade’s Ultrasonic sensors, we are achieving a very high standard of health and safety on public highways both for Keltbray and other road users.”

Adrian Scott, Haulage Operations Director, Keltbray

Ultrasonic Obstacle Detection

How Brigade can help

Brigade’s ultrasonic detection and warning systems alert the driver of potential danger. An audible warning informs the driver of the distance between vehicle and obstacle, minimising both vehicle damage and collisions with pedestrians, cyclists or objects. Activation triggers (e.g., reverse gear, left indicator) ensure the system is only operational when it is needed and an optional speaking alarm can be added to alert cyclists and pedestrians of the vehicle’s path.

Brigade’s range of ultrasonic sensor systems includes Backscan®, Frontscan®, Sidescan®, Cornerscan® and Stepscan® and provide the following benefits.

✓ Gives peace of mind to the driver, greater protection to pedestrians, cyclists and workers
✓ Minimises damage to vehicle, property and other objects
✓ Can be used in conjunction with Brigade’s camera monitor system for comprehensive all round blind spot coverage

The cost of turning a blind eye

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Online at brigade-electronics.com Call on +44 (0)1322 420300 or visit your local stockist

Ghost Bikes are becoming an increasingly common sight worldwide, a sombre memorial for a cyclist killed on the road. A bicycle is painted white and placed near the crash site, accompanied by a small plaque.

To view the Keltbray video case study on Sidescan, visit: brigade-electronics.com
**Ultrasonic Obstacle Detection**

Two, three or four sensor ultrasonic sensor systems inform driver of distance between vehicle and any obstacles, whether moving or stationary. Perfect for road going commercial vehicles regular operating in confined spaces or manoeuvring at low speed.

**Features of all systems:**
- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false alarms from permanent bodywork that intrude in the first 100cm of the detection zone
- Self diagnostic function
- Fixings included for all bodywork types
- Three stage audible distance warning to driver with adjustable volume
- 1 trigger output
- 2 year warranty

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**Backscan®**

Fitted to rear of vehicle as an invaluable aid to safe reversing. Gives greater protection to pedestrians and workers, whilst minimising damage to vehicle and other objects.

- 4 sensor system
- Underslung or flush mount sensors
- 1.0 or 1.5m detection range
- Two levels of detection sensitivity

**Options:**
- System activated below designated speed
- System activated by turn indicator
- External speaking alarm with side turn warning for cyclists/pedestrians
- Can be fitted to articulated vehicles with additional suzie cables

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**Frontscan®**

Fitted to front of vehicle improving safety when manoeuvring at low speed. Particularly relevant for front blind spot on high cabs where low objects or pedestrians can be hidden.

- 4 sensor system
- Flush mount sensors
- 2.0 or 1.0m detection range - outer sensors can be reduced to 0.6m

**Options**
- System activated below designated speed

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**Cornerscan™**

Fitted to near side corner of vehicle cab to detect objects in front near side blind spot. Minimises the risk of damage to the vehicle cab whilst manoeuvring and turning whilst reversing.

- 3 sensor system
- Flush mount sensors
- 0.6 or 1.0m detection range
- Two levels of sensitivity

**Options**
- System activated below designated speed

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**Sidescan®**

Fitted to side of vehicle increasing safety when turning or low speed manoeuvring. Particularly relevant for near side blind spot where cyclists or pedestrians can otherwise go undetected.

- 4 sensor system
- Underslung or flush mount sensors
- 1.0 or 1.5m detection range
- Two levels of detection sensitivity

**Options:**
- System activated below designated speed
- System activated by turn indicator
- External speaking alarm with side turn warning for cyclists/pedestrians
- Can be fitted to articulated vehicles with additional suzie cables

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**Stepscan™**

Fitted to nearside cab step giving awareness to the driver of objects when turning and reversing. Minimises the risk of damage to the vehicle from otherwise unseen objects.

- 2 sensor system
- Flush mount sensors
- 0.6 or 1.0m detection range
- Two levels of detection sensitivity
- System activated by reverse gear

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Two, three or four sensor ultrasonic sensor systems inform driver of distance between vehicle and any obstacles, whether moving or stationary. Perfect for road going commercial vehicles regular operating in confined spaces or manoeuvring at low speed.

**Features of all systems:**
- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false alarms from permanent bodywork that intrude in the first 100cm of the detection zone
- Self diagnostic function
- Fixings included for all bodywork types
- Three stage audible distance warning to driver with adjustable volume
- 1 trigger output
- 2 year warranty

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**Backscan®**

Fitted to rear of vehicle as an invaluable aid to safe reversing. Gives greater protection to pedestrians and workers, whilst minimising damage to vehicle and other objects.

- 4 sensor system
- Underslung or flush mount installation
- 2.5m detection range - outer sensors can be reduced to 0.6m
- System activated by reverse gear
- 50cm compensation range for sensors fitted inboard of vehicle rear

**Options:**
- Can be fitted to articulated vehicles with additional suzie cables
- 3 stage visual distance warning display

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Fitted to near side corner of vehicle cab to detect objects in front near side blind spot. Minimises the risk of damage to the vehicle cab whilst manoeuvring and turning whilst reversing.

- 3 sensor system
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- 0.6 or 1.0m detection range
- Two levels of sensitivity

**Options**
- System activated below designated speed

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**Sidescan®**

Fitted to side of vehicle increasing safety when turning or low speed manoeuvring. Particularly relevant for near side blind spot where cyclists or pedestrians can otherwise go undetected.

- 4 sensor system
- Underslung or flush mount sensors
- 1.0 or 1.5m detection range
- Two levels of detection sensitivity

**Options:**
- System activated below designated speed
- System activated by turn indicator
- External speaking alarm with side turn warning for cyclists/pedestrians
- Can be fitted to articulated vehicles with additional suzie cables

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The convenience and popularity of internet shopping has led to a sharp growth in home delivery. However, the increase in number of large cars in small residential streets coupled with the rear blind spot has made reversing and parking manoeuvres very difficult.

Damage to property and parked cars is costly and many operators can ill afford vehicle downtime for repairs. More startling is the real threat of collisions with pedestrians. According to the Health and Safety Executive (HSE) 25% of all workplace fatalities are caused by reversing vehicles.

Tesco.com is the largest online grocery store in the world. Drivers were experiencing problems reversing due to the huge blind spot at the rear of the vehicle and were also reporting damage from overhanging trees, especially in rural areas.

Brigade solved the problem by fitting upper Backscan sensors to protect the Mercedes Sprinters from overhanging branches. In addition, lower Backscan sensors were fitted to the bottom of the delivery vans to detect people and objects in the blind spot when reversing.

“We are very pleased with the performance of Brigade’s Backscan which enables home delivery drivers to reverse into tight spaces. This ensures the safety of pedestrians and property, thus reducing damage to the vehicle.”

Duncan Vavangas, Fleet Engineer, Tesco.
To order or for more information on Brigade’s vehicle safety solutions; 
 brigade-electronics.com
 +44 (0)1322 420300
 or visit your local stockist

Brigade’s extensive portfolio of machine safety systems includes:

- Camera monitor systems
- ‘White sound’ reversing and warning alarms
- Pulsed radar obstacle detection systems
- Mobile digital recording
- Ultrasonic obstacle detection systems