

# VEHICLE SAFETY SOLUTIONS

FOR ALL OF YOUR SAFETY AND COMPLIANCE NEEDS



VEHICLE RELATED SERVICES

# NATIONWIDE COVERAGE

## SCANIA SCOTLAND

- 1 Inverness  
01463 729400
- 2 Aberdeen  
01224 896312
- 3 Dundee  
01382 455556
- 4 Grangemouth  
01324 620620
- 5 Glasgow  
0141 886 5633
- 6 Edinburgh  
0131 333 2362
- 7 Bellshill  
01698 841994
- 8 Dumfries  
01387 250502

## ROAD TRUCKS LTD

- 9 Larne  
028 2827 9611
- 10 Omagh  
028 8225 9198

## GRANCO LTD

- 11 Newry  
028 3026 6335

## GRAHAM COMMERCIALS LTD

- 12 Carlisle  
01228 529149

## S.J BARGH SALES AND SERVICE LTD

- 13 Lancaster  
01524 770439

## SCANIA NORTH

- 14 Newcastle-Upon-Tyne  
0191 256 1900
- 15 Washington  
01914 188500
- 16 Darlington  
01325 480713
- 17 Thirsk  
01845 573500
- 18 Skipton  
01756 797197
- 19 Leeds  
01132 311411
- 20 Normanton  
01924 228800

## HAYDOCK COMMERCIAL VEHICLES LTD

- 21 Preston  
01772 698811
- 22 Haydock  
01942 714103
- 23 Deeside  
01244 547202
- 24 Ellesmere Port  
0151 355 0199
- 25 Widnes  
0151 423 8601

## WEST PENNINE TRUCKS LTD

- 26 Trafford Park  
0161 877 7708  
Manchester VRS  
0161 886 5700
- 27 Middleton  
0161 653 9700
- 28 Stoke-on-Trent  
01782 577955
- 29 Oswestry  
01691 671500
- 30 Knighton  
01547 528600

- 31 Telford  
01952 587222

## SCANIA EAST

- 32 Sheffield  
01142 626700
- 33 Scunthorpe  
01724 289088
- 34 Kingston-Upon-Hull  
01482 626880
- 35 Grimsby  
01472 346913
- 36 Lincoln  
01522 681222
- 37 Boston  
01205 460841
- 38 Spalding  
01775 713707

## KELTRUCK LTD

- 39 Worksop  
01909 500595
- 40 Newark  
01636 700203
- 41 Sutton-in-Ashfield  
01623 559559
- 42 Nottingham  
0115 986 5121
- 43 Burton-on-Trent  
01283 510011
- 44 Groby  
01530 243133
- 45 Lutterworth  
01455 550740
- 46 Tamworth  
01827 330100
- 47 Willenhall  
01902 637777
- 48 West Bromwich  
0121 525 7000
- 49 Coventry  
02476 644664
- 50 Rugby  
01788 571959
- 51 Droitwich  
01905 777060
- 52 Cheltenham  
01242 252140
- 53 Ross-on-Wye  
01600 891257
- 54 Caldicot  
01291 431715
- 55 Cardiff  
02920 224671
- 56 Cross Hands  
01269 844855

## TRUCK EAST LTD

- 57 Crick  
01788 823930
- 58 Corby  
01536 443883  
Corby VRS  
01536 203370
- 59 Wellingborough  
01933 303303
- 60 Milton Keynes  
01908 242448
- 61 Northampton  
01604 874747
- 62 Witham  
01376 503003
- 63 Ely  
01353 666503
- 64 Peterborough  
01733 555233
- 65 Kings Lynn  
01553 771877

- 66 Norwich  
01603 748995
- 67 Thetford  
01842 763400
- 68 Stowmarket  
01449 613553
- 69 Felixstowe  
01394 676625

## PIP BAYLEY TRUCK CENTRE

- 70 Bedford  
01767 641111

## SCANIA SOUTH EAST

- 71 Stansted  
01279 758088

- 72 Heathrow  
01784 240777
- 73 South Mimms  
01707 649955
- 74 Purfleet  
01708 257400
- 75 Maidstone  
01622 538555
- 76 Dover  
01304 831730
- 77 Lewes  
01273 479123
- 78 Lingfield  
01342 837373

## SCANIA SOUTH WEST

- 79 Fareham  
01489 886800
- 80 Southampton  
02380 734455
- 81 Newbury  
01635 871157
- 82 Abingdon  
01235 553596
- 83 Banbury  
01295 272857
- 84 Swindon  
01793 715100
- 85 Avonmouth  
01179 379800

- 86 Shepton Mallet  
01749 880088
- 87 Poole  
01202 533978
- 88 Bridgwater  
01278 685060
- 89 Exeter  
01392 824474
- 90 Redruth  
01209 310090

For more information call your local dealer or visit:  
[www.vehiclerelatedservices.co.uk](http://www.vehiclerelatedservices.co.uk)

# INTRODUCTION



## Vehicle Related Services (VRS)

Welcome to the First Edition of the VRS Vehicle Safety Solutions Catalogue. Inside, you'll find a comprehensive range of Brigade Electronics vehicle safety systems, designed to promote the safety of everyone who comes into contact with commercial vehicles, from site workers to pedestrians and cyclists.

All of these parts are supplied through the Scania UK network, and all come with the benefits associated with that, including high product availability, parts delivery service, and a comprehensive parts warranty.

Developed by Scania, VRS offers a market leading range of all makes truck and trailer parts, lubricants, chemicals and workshop consumables, all available through its UK Dealer Network. By accessing such an extensive range in one place you can save time, effort and money every time you order.

Contact your nearest Scania dealer or visit our website to find out more.

[www.vehiclerelatedservices.co.uk](http://www.vehiclerelatedservices.co.uk)

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## Brigade Electronics

Brigade pioneered the cause of reversing safety in 1976, when it introduced the very first reversing alarm to Europe.

Since then, Brigade has continued to lead the way in blind-spot safety solutions, extending its range to include products that give drivers visibility and sensing/warning of people in blind-spots around their vehicle.

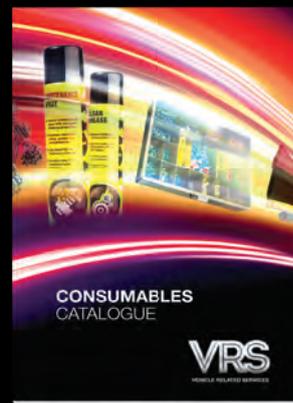
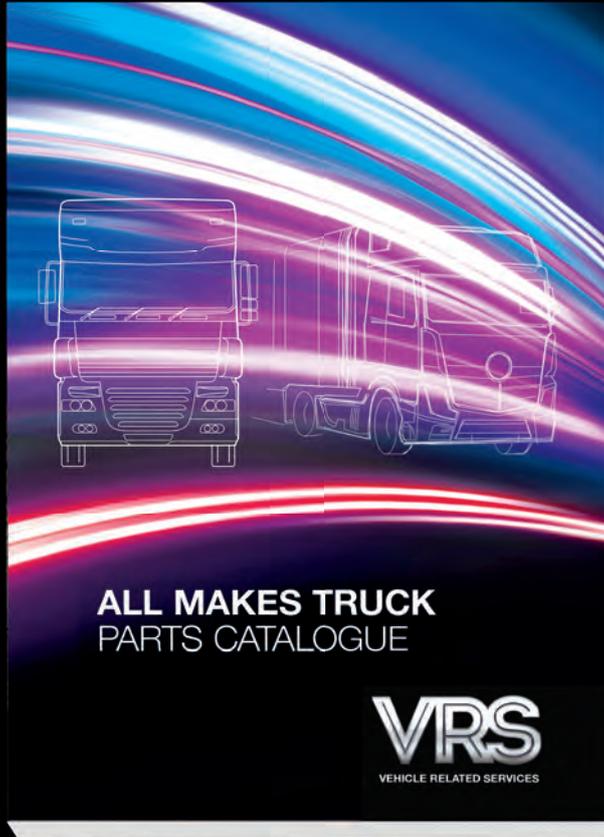
Brigade is passionate about helping road transport and mobile machine operators prevent collisions and save lives. They are also dedicated to using their 40 years' experience to help you make the most appropriate safety product choices for your vehicles and machines.

With 14 Brigade Group companies around the world and a global network of specialist distribution partners, Brigade are able to provide expert advice, sales, service and support for our customers on every continent.

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# OVER 50,000 PARTS

## COVERING ALL MAKES, ALL IN ONE PLACE



Searching for the right part across different suppliers can be time consuming and costly. VRS is a one-stop-shop for everything you need – making life a lot easier, especially if you run a multi-brand fleet.

We have an extensive range covering all makes of truck, trailer, tail lift and body – plus a market-leading selection of workshop consumables and lubricants.

To view our brochure online, please visit:  
[www.vehiclereLATEDservices.co.uk](http://www.vehiclereLATEDservices.co.uk)

**VRS**  
VEHICLE RELATED SERVICES

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# Which Products Do I Need?

To help you decide which products will be most suitable, we have created a series of guides featuring the Brigade safety equipment we recommend for specific applications. Each guide has been split into two or three levels: Minimum safety, increased safety and ultimate safety so that you can easily choose the level and products best suited to you.\*

## Safety Recommendations FORS Silver & CLOCS

Recommended standards required to achieve accreditation



Ultimate recommended safety specification

### Warning Alarms

**SA-BBS-97** bbs-tek® White sound® smart reversing alarm. 77-97 dB

Continually adjusts to 5-10 decibels above ambient so ideal in varying noise level environments and urban areas.



**SS-BC-08** Speaking alarm

Speaking alarm with side turn warning for cyclists/pedestrians. Activates on left turn indication and complements Sidescan sensor system.



### Camera Monitor Systems

**VBV-300C** Select range compact, flush-mount right side view camera



**DMC-1025** Elite range forward facing internal camera



### Digital Recording

**MDR-404-500**

Mobile digital recorder with 500GB hard disk. Records footage from up to four cameras. All channels can be viewed on the monitor in the cab, aiding all round visibility for the driver.



### Ultrasonic Obstacle Detection

**SS-4100W** Sidescan® sensor system

4 sensor system increases safety when turning or low speed manoeuvring.



### Camera Monitor Systems

**VBV-750M** Select range 5" Digital LCD Monitor



**VBV-700C** Select range Rear view camera



**VBV-300C** Select range compact, flush-mount left side view camera



Select series camera monitors are our best selling, mid-range systems that offer quality and features at a cost-effective price.

### Warning Alarm

**TCO-47-01** Latched auto-reset alarm cut-out (dash mount button)

Cut out switch for speaking alarm (SS-BC-08). Press to silence alarm. Press again to re-enable. Ignition reset.

**TCO-47** Latched auto-reset alarm cut-out (dash mount button)

Cut out switch for reversing alarm (SA-BBS-97). To silence the reverse alarm for 4 minutes.



For VRS part numbers please see index pages 58-59.

# Safety Recommendations Rigid on-road vehicle

Level 1 Minimum recommended safety specification	Level 2 + level 1 Increased safety specification	Level 3 + levels 1 & 2 Ultimate safety specification
<p><b>Camera Monitor Systems</b></p> <p><b>VBV-700C</b> Select range Rear view camera</p> <p><b>VBV-770M</b> Select range 7" Digital LCD Monitor</p> <p>or</p> <p><b>VBV-750M</b> Select range 5" Digital LCD Monitor</p> <p>Select series camera monitors are our best selling, mid-range systems that offer quality and features at a cost-effective price.</p> <p><b>Ultrasonic Obstacle Detection</b></p> <p><b>BS-4000W</b> Backscan® sensor system</p> <p>4 sensor system increases safety when reversing.</p> <p><b>Warning Alarm</b></p> <p>White sound alarms are the safest in the world due to their instant locatability and directional sound. The alarm is only heard in the danger zone, thus eliminating noise nuisance.</p> <p><b>SA-BBS-97</b> bbs-tek® white sound® smart reversing alarm. 77-97 dB</p> <p>Continually adjusts to 5-10 decibels above ambient so ideal in varying noise level environments and urban areas.</p> <p>or</p> <p><b>BBS-87</b> bbs-tek® white sound® standard reversing alarm. 87 dB</p>	<p><b>Ultrasonic Obstacle Detection</b></p> <p><b>SS-4100W</b> Sidescan® sensor system</p> <p>4 sensor system increases safety when turning or low speed manoeuvring.</p> <p><b>CS-3100</b> Cornerscan™ sensor system</p> <p>3 sensor system detects objects in front near side blind spot.</p> <p><b>Warning Alarm</b></p> <p><b>SS-BC-08</b> Speaking alarm</p> <p>Speaking alarm with side turn warning for cyclists/pedestrians. Activates on left turn indication and complements Sidescan sensor system.</p>	<p><b>Digital Recording</b></p> <p><b>MDR-404-500</b></p> <p>Mobile digital recorder with 500GB hard disk. Records footage from up to four cameras. All channels can be viewed on the monitor in the cab, aiding all round visibility for the driver.</p> <p><b>Camera Monitor Systems</b></p> <p><b>MD-50</b> Mini dome internal camera</p> <p><b>VBV-320C</b> Compact, flush mount eyeball camera</p> <p><b>BE-822C</b> Mini front view camera</p> <p>If installing an MDR, the choice of alternative cameras to connect include side (left and right), front and internal.</p> <p><b>Camera Monitor Systems</b></p> <p><b>SE-770-100</b> Backeye®360 360° 4-camera monitor system</p> <p>An intelligent camera monitor system that provides the driver with a bird's-eye, 360° view of the vehicle and surroundings within a single image. Replaces all individually listed cameras and monitor. Compatible with MDR-404-500 Digital recorder.</p>

# Safety Recommendations Articulated on-road vehicle

Level 1 Minimum recommended safety specification	Level 2 + level 1 Increased safety specification	Level 3 + levels 1 & 2 Ultimate safety specification
<p><b>Camera Monitor Systems</b></p> <p><b>BE-800C</b> Elite range Rear view camera</p> <p><b>BE-870LM</b> Elite range 7" Digital LCD Monitor</p> <p>Elite series cameras and monitors are a superior, high quality range for comprehensive blind spot coverage.</p> <p>or</p> <p><b>BE-865DDM</b> Elite range 6.5" Double-DIN Digital LCD Monitor</p> <p><b>Wireless camera monitor connection system</b></p> <p><b>DW-1000-TX</b> Digital wireless transmitter</p> <p><b>DW-1000-RX</b> Digital wireless receiver</p> <p>Secure connection that eliminates the need for retractable coiled cables. Allows for interchangeable trailers. For use with single reversing camera only.</p> <p><b>Warning Alarm for trailer</b></p> <p>White sound alarms are the safest in the world due to their instant locatability and directional sound. The alarm is only heard in the danger zone, thus eliminating noise nuisance.</p> <p><b>SA-BBS-97</b> bbs-tek® White sound® smart reversing alarm. 77-97 dB</p> <p>Continually adjusts to 5-10 decibels above ambient so ideal in varying noise level environments and urban areas.</p> <p>or</p> <p><b>BBS-92</b> bbs-tek® White sound® standard reversing alarm. 92 dB</p>	<p><b>Warning Alarm for cab</b></p> <p><b>SA-BBS-97</b> 77-97 dB or <b>BBS-92</b> 92 dB bbs-tek® White sound® warning alarm</p> <p><b>Camera Monitor Systems</b></p> <p><b>VBV-320C</b> Compact, flush mount eyeball camera</p> <p><b>Ultrasonic Obstacle Detection</b></p> <p><b>SS-4100W</b> Sidescan® sensor system</p> <p>4 sensor system increases safety when turning or low speed manoeuvring.</p> <p><b>Speaking Alarm</b></p> <p><b>SS-BC-08</b> Speaking alarm</p> <p>Side turn warning for cyclists/pedestrians.</p>	<p><b>Digital Recording</b></p> <p><b>MDR-408-1000</b></p> <p>Mobile digital recorder with 1TB hard disk. Records footage from up to eight cameras. All channels can be viewed on the monitor in the cab, aiding all round visibility for the driver.</p> <p><b>Camera Monitor Systems</b></p> <p><b>VBV-320C</b> Compact, flush mount eyeball camera</p> <p><b>BE-822C</b> Mini front view camera</p> <p>If installing an MDR, the choice of alternative cameras to connect include side (left and right), front and internal.</p> <p><b>Ultrasonic Obstacle Detection</b></p> <p><b>ST-2100</b> Stepscan™ sensor system</p> <p>2 sensor system fitted to near side cab step giving awareness to the driver of objects when turning and reversing.</p> <p><b>FS-4000W</b> Frontscan® sensor system</p> <p>4 sensor system covering the front blind-spot. Improves safety when manoeuvring at low speed.</p>

For VRS part numbers please see index pages 58-59.

\* This document is intended for information purposes only. Recommendations, products and specifications are subject to change.

# Which Products Do I Need?

## Safety Recommendations Refuse vehicle

Level 1 Minimum recommended safety specification	Level 2 + level 1 Increased safety specification	Level 3 + levels 1 & 2 Ultimate safety specification
<p><b>Camera Monitor Systems</b></p> <p><b>BE-800C</b> Elite range Rear view camera</p> <p><b>BE-970WFM</b> Extreme range 7" Digital LCD multi-image Monitor</p> <p>or</p> <p><b>BE-970WM</b> Extreme range 7" Digital LCD Monitor</p> <p>The Extreme range features robust camera monitor systems especially suited to heavy duty applications.</p> <p><b>Warning Alarm</b></p> <p>White sound alarms are the safest in the world due to their instant locatability and directional sound. The alarm is only heard in the danger zone, thus eliminating noise nuisance.</p> <p><b>SA-BBS-97</b> bbs-tek® White sound® smart reversing alarm. 77-97 dB</p> <p>Continually adjust to 5-10 decibels above ambient so ideal in varying noise level environments and urban areas.</p> <p>or</p> <p><b>BBS-87</b> bbs-tek® White sound® standard reversing alarm. 87 dB</p>	<p><b>Camera Monitor Systems</b></p> <p><b>VBV-320C</b> Compact, flush mount eyeball camera</p> <p><b>Vehicle Intercom</b></p> <p><b>BC-VI</b> Two way intercom</p> <p>Open channel rear to cab; Button press cab to rear.</p> <p><b>Ultrasonic Obstacle Detection</b></p> <p><b>CS-3100</b> Cornerscan™ sensor system</p> <p>3 sensor system detects objects in front near side blind spot.</p> <p><b>SS-4100W</b> Sidescan® sensor system</p> <p>4 sensor system increases safety when turning or low speed manoeuvring.</p>	<p><b>Radar Detection</b></p> <p><b>BS-8000</b> Programmable Backsense® rear obstacle detection</p> <p>or</p> <p><b>BS-7030</b> Fixed Backsense® rear obstacle detection</p> <p>Heavy duty sensors that detects stationary, moving and multiple objects.</p> <p><b>Digital Recording</b></p> <p><b>MDR-404-500</b></p> <p>Mobile digital recorder with 500GB hard disk. Records footage from up to four cameras. All channels can be viewed on the monitor in the cab, aiding all round visibility for the driver.</p> <p><b>Camera Monitor Systems</b></p> <p><b>VBV-320C</b> Compact, flush mount eyeball camera</p> <p><b>BE-822C</b> Mini front view camera</p> <p>If installing an MDR, the choice of alternative cameras to connect includes side (left and right), front and internal.</p> <p><b>Camera Monitor Systems</b></p> <p><b>SE-770-100</b> Backeye®360 360° 4-camera monitor system</p> <p>An intelligent camera monitor system that provides the driver with a bird's-eye, 360° view of the vehicle and surroundings within a single image. Replaces all individually listed cameras and monitor. Compatible with MDR-404-500 Digital recorder.</p>

## Safety Recommendations Coach

Level 1 Minimum recommended safety specification	Level 2 + level 1 Increased safety specification	Level 3 + levels 1 & 2 Ultimate safety specification
<p><b>Ultrasonic Obstacle Detection</b></p> <p><b>BS-4000W</b> Backscan® sensor system</p> <p>4 sensor system increases safety when reversing.</p> <p><b>Camera Monitor Systems</b></p> <p><b>VBV-770M</b> Select range 7" Digital LCD Monitor</p> <p><b>VBV-700C</b> Select range Rear-view camera</p> <p>Select series camera monitors are our best selling, mid-range systems that offer quality and features at a cost effective price.</p> <p><b>Warning Alarm</b></p> <p>White sound alarms are the safest in the world due to their instant locatability and directional sound. The alarm is only heard in the danger zone, thus eliminating noise nuisance.</p> <p><b>SA-BBS-97</b> bbs-tek® white sound® smart reversing alarm. 77-97 dB</p> <p>Continually adjusts to 5-10 decibels above ambient so ideal in varying noise level environments and urban areas.</p> <p>or</p> <p><b>BBS-87</b> bbs-tek® white sound® standard reversing alarm. 87 dB</p>	<p><b>Ultrasonic Obstacle Detection</b></p> <p><b>FS-4000W</b> Frontscan® sensor system</p> <p>4 sensor system covering the front blind spot. Improves safety when manoeuvring at low speed.</p> <p><b>SS-4000W</b> Sidescan® sensor system</p> <p>4 sensor system increases safety when turning or low speed manoeuvring.</p> <p><b>Camera Monitor Systems</b></p> <p><b>VBV-320C</b> Compact, flush mount eyeball camera</p> <p><b>MD-50</b> Mini dome internal camera</p>	<p><b>Digital Recording</b></p> <p><b>MDR-408-1000</b></p> <p>Mobile digital recorder with 1TB hard disk. Records footage from up to eight cameras. All channels can be viewed on the monitor in the cab, aiding all-round visibility for the driver.</p> <p><b>Camera Monitor Systems</b></p> <p><b>MD-50</b> Mini dome internal camera Additional internal camera.</p> <p><b>Camera Monitor Systems</b></p> <p><b>SE-770-100</b> Backeye®360 360° 4-camera monitor system</p> <p>An intelligent camera monitor system that provides the driver with a bird's-eye, 360° view of the vehicle and surroundings within a single image. Replaces all individually listed cameras and monitor. Compatible with MDR-408-1000 Digital recorder.</p>

For VRS part numbers please see index pages 58-59.

# Safety Recommendations Van

Level 1 Minimum recommended safety specification	Level 2 + level 1 Increased safety specification	Level 3 + levels 1 & 2 Ultimate safety specification
<p><b>Ultrasonic Obstacle Detection</b>  <b>BS-4000W</b> Backscan® sensor system                      4 sensor system increases safety when reversing.</p>  <p><b>Warning Alarm</b>                      bbs-tek, white sound alarms are the safest in the world due to their instant locatability and directional sound. The alarm is only heard in the danger zone, thus eliminating noise nuisance.</p> <p><b>SA-BBS-97</b>                      bbs-tek® white sound® smart reversing alarm. 77-97 dB                      Continually adjusts to 5-10 decibels above ambient so ideal in varying noise level environments and urban areas.</p> <p>or</p> <p><b>BBS-82</b>                      bbs-tek® white sound® standard reversing alarm. 82 dB</p> 	<p><b>Camera Monitor Systems</b></p> <p><b>VBV-750M</b> Select range                      5" Digital LCD Monitor</p> <p><b>VBV-300C</b> Compact, flush mount eyeball camera</p> <p>Select series camera monitors are our best selling, mid-range systems that offer quality and features at a cost-effective price.</p>   <p><b>Camera Monitor Systems</b></p> <p><b>VBV-320C</b> Compact, flush mount eyeball camera</p> 	<p><b>Ultrasonic Obstacle Detection</b>  <b>FS-4000W</b> Frontscan® sensor system                      4 sensor system covering the front blind spot. Improves safety when manoeuvring at low speed.</p>   <p><b>Digital Recording</b>  <b>MDR-404-500</b>                      Mobile digital recorder with 500GB hard disk. Records footage from up to four cameras. All channels can be viewed on the monitor in the cab, aiding all-round visibility for the driver.</p> <p><b>Camera Monitor Systems</b></p> <p><b>VBV-320C</b> Compact, flush mount eyeball camera</p> <p><b>BE-822C</b> Mini internal or front-view camera</p> <p>If installing an MDR, the choice of alternative cameras to connect include side (left and right), front and internal.</p>  

# Safety Recommendations Medium off-road machine

Level 1 Minimum recommended safety specification	Level 2 + level 1 Increased safety specification	Level 3 + levels 1 & 2 Ultimate safety specification
<p><b>Camera Monitor Systems</b></p> <p><b>BE-800C</b> Elite range rear view camera</p> <p>or</p> <p><b>BE-810C</b> Elite range rear view shutter camera</p> <p><b>BE-870LM</b> Elite range 7" Digital LCD Monitor                      Elite series cameras and monitors are a superior, high quality range for comprehensive blind spot coverage.</p> <p>or</p> <p><b>VBV-770M</b> Select range                      7" Digital LCD Monitor                      Features multiple camera inputs</p>  <p><b>Warning Alarm</b>                      White sound alarms are the safest in the world due to their instant locatability and directional sound. The alarm is only heard in the danger zone, thus eliminating noise nuisance.</p> <p><b>SA-BBS-107</b> bbs-tek® White sound® heavy duty smart reversing alarm. 87-107 dB                      Continually adjusts to 5-10 decibels above ambient so ideal in varying noise level environments and urban areas.</p> <p>or</p> <p><b>BBS-107</b> bbs-tek® White sound® heavy duty reversing alarm. 107 dB</p> 	<p><b>Camera Monitor Systems</b></p> <p><b>VBV-320C</b> Compact, flush mount eyeball camera</p>  	<p><b>Camera Monitor Systems</b></p> <p><b>SE-770-100</b> Backeye®360                      360° 4-camera monitor system</p> <p>An intelligent camera monitor system that provides the driver with a bird's-eye, 360° view of the vehicle and surroundings within a single image. Replaces all individually listed cameras and monitor. Compatible with MDR-408-1000 Digital recorder.</p>  <p><b>Radar Detection</b></p> <p><b>BS-8000</b> Programmable Backsense® rear obstacle detection</p> <p>or</p> <p><b>BS-7045</b> or <b>BS-7060</b> Fixed Backsense® rear obstacle detection</p> <p>Heavy duty sensors that detects stationary, moving and multiple objects.</p> 

For VRS part numbers please see index pages 58-59.

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# Backeye®360° Camera Systems

**4 cameras**  
**1 image**  
**0 blind spots**



Actual Backeye®360 images



This exciting new development provides drivers with a single clear view image of all near-field blind spots around the vehicle – which is a massive leap forward in vehicle safety!

Ultrawide-angle cameras mounted on the front, sides and rear of the vehicle capture the surrounding areas of the vehicle, including blind spots. The digital images from these cameras are processed and ‘video stitched’ together to produce a top-down 360° ‘birds eye view’ of the vehicle and surrounding areas in a single image.

The software also removes the fisheye camera effect, so that the driver is presented with a clear and undistorted image.

Backeye®360 Systems are compatible with Brigade MDR digital recorders, providing you with footage that can help make major cost savings by refuting bogus claims, and providing evidence in the event of any accident or incident.

- **Eliminates blind spots, improves safety**
- **Comprehensive view of the surrounding area in a single image**
- **Reduces collisions with people and objects**

Features	Benefits	Backeye®360 ASL360	Backeye®360 BN360
Customisable triggers	Best view of each manoeuvre	Bespoke views 8 triggers	Fixed views 3 triggers
Dual views on monitor	View the most critical areas	Bespoke image views	Fixed dual views
Customised joins between camera images	Seamless surround image optimised for your vehicle	✓	✓
Flexible camera positioning	Backeye®360 System will still be accurate if cameras installed off-centre	✓	✓
Full-screen 360° view	Entire screen can be devoted to the 360° view	✓	✓
Automatic light balancing between camera images	Easy to view, balanced image	✓	✗
'Pie dish' effect	Reduced image stretch, so that distant people and objects appear recognisable	✓	✗
R46 Approved	Suitable to replace Class V and Class VI mirrors	✗	✓

## Which system is for you?

### Backeye®360 BN360

Regulation 46 approved.

Full screen 360 or a twin image split screen view.

In split screen mode, the 360 'birds eye view' is permanently displayed together with the blind spot to the front, rear, left or right of the vehicle – auto-switching between these according to vehicle manoeuvre.

This means that the driver always has both the 360 'birds eye view' plus a conventional view of the area into which the vehicle is moving.



### Backeye®360 ASL360

Suitable for most vehicle and mobile plant machines.

Full screen 360 plus a flexible and wide range of bespoke split screen viewing options.

'Pie Dish' image correction feature allows a wider area around the machine to be displayed to the driver, and provides a more natural view of objects that are at some distance from the vehicle.

Automatic light balancing between camera images makes for easier viewing on days when one side of the vehicle is bathed in bright sunlight and the other is in shadow.



Model

Part No:

## 360° CAMERA SYSTEM

BN360-000 – Backeye®360 system

GB9090885



- IP69K cameras
- 12-24Vdc
- Size (WxHxD) ECU  
170 x 126.4 x 36mm
- Size (WxHxD) Camera  
35.4 x 60.7 x 45.8mm
- 2 year warranty

### Contents

- 1 x BN360-ECU-10
- 4 x BN360-100C cameras
- 1 x BN360-VBV-L4015 Video-out cable to connect to SELECT range monitor.

**Note: Monitor and camera extension cables not included**

### Features

- 360° single image
- Triggered views (rear, left and right)
- 4 x ultra-wide viewing angle cameras (HxV) 185° x142°
- 1/3.6" CMOS sensor
- TV system: NTSC

### Power

- Power consumption: 15 Watts
- Current: 1.23 Amps

### Durability & Standards

- Mechanical vibration: 1G
- Mechanical shock: 50G
- Operating temperature: -30 to +75°C
- CE marked
- EMC approved: E
- HALT tested

**Note: A calibration kit is required. Please contact your local Scania dealer for details.**

## BN360 CABLES AND ADAPTERS

BN360-L120	20m camera cable	GB9090889
BN360-L115	15m camera cable	GB9090888
BN360-L110	10m camera cable	GB9090887
BN360-L105	5m camera cable	GB9090886
BN360-L1025	2.5m camera cable	GB9091154
AC-305	Splitter cable for MDR (1 required per camera)	GB9090940

## MOUNTING BRACKETS



BN360-100C-BKT01	<b>Adaptable mounting bracket</b> Can be shaped to allow installation on non-vertical surfaces	GB9090891
BN360-100C-BKT02	<b>Mounting bracket to adjust camera angle</b>	GB9090892
BE360-CD	<b>Deflector to shield camera from knocks</b> (To be used with BN360-100C-BKT02 Mounting bracket)	GB9091167
BN360-100C-BKT03	<b>Deflector to shield camera from knocks</b>	GB9090893

## REQUIRED FOR ARTICULATED VEHICLES



BE360-Enclosure	<b>IP66 Enclosure kit to enable ECU to be installed on outside of vehicle</b> Note: Coiled cable kit or wireless connector also required	GB9091171
SK-15-05	<b>3-camera Backeye®360 cable kit for articulated vehicles</b>	GB9091033

# OVER 50,000 PARTS IN THE VRS RANGE



AXLE



BRAKING



AIR BRAKING



SUSPENSION



FILTRATION

For more information, please visit: [www.vehiclereLATEDservices.co.uk](http://www.vehiclereLATEDservices.co.uk)

**360° CAMERA SYSTEM**

ASL360-SV – Backeye®360

GB9091148



- IP68 cameras
- 12-24Vdc
- Size (WxHxD) ECU  
225 x 35 x 120mm
- Size (WxHxD) Camera  
70 x 50 x 62mm
- 2 year warranty

**Contents**

- 1 x ASL360-ECU
- 4 x ASL360-CM2 cameras

**Note: Monitor, camera cables and adapters NOT included**

**Features**

- 360° single image
- Flexible blend widths and positioning
- Up to 30 frames per second
- Self-monitoring to eliminate frozen images
- Triggered views
- 4 x ultra-wide viewing angle cameras (HxV) 185 x 180°
- 1/4" CMOS sensor
- TV system: PAL

**Power**

- Power consumption:  
Camera: 0.5 Watts  
ECU: 5.0 Watts
- Current:  
Camera: 0.04 Amps  
ECU: 0.4 Amps

**Durability & Standards**

- Operating temperature:  
-40 to +85°C
- CE marked
- EMC approved: E

**Note: A calibration kit is required. Please contact your local Scania dealer for details.**

**ASL360 CABLES AND ADAPTERS**

ASL360-L120	20m camera cable	GB9091149
ASL360-L115	15m camera cable	GB9091150
ASL360-L110	10m camera cable	GB9091151
ASL360-L1025	2.5m camera cable	GB9091152
AC-054	2.5m adapter cable to connect ECU to monitor via AC-016/AC-024 (BNC B to Phono A)	GB9091222
AC-016	Adapter cable to connect AV/Phono to Elite monitor	GB9091089
AC-024	Adapter cable to connect AV/Phono to Select monitor	GB9090794



**MOUNTING BRACKET**

BE360-CD	Deflector to shield camera from knocks	GB9091167
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**REQUIRED FOR ARTICULATED VEHICLES**

BE360-Enclosure	IP66 Enclosure kit to enable ECU to be installed on outside of vehicle	GB9091171
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Note: Coiled cable kit or wireless connector also required

HIGH QUALITY PARTS  
AS STANDARD

ELECTRICAL

CHEMICALS

LUBRICANTS

**VRS**  
VEHICLE RELATED SERVICES

**Model**

**Part No:**

## BN360 360° CAMERA MONITOR SYSTEMS

Complete kits including monitor, Backeye®360 camera system, cables and adapters

**SE-7104F-100 – 360 camera monitor system for large rigid vehicles** **GB9091162**



- 1 x VBV-7104FM – 10.4" monitor **GB9091153**
- 1 x BN360-000 360 system **GB9090885**
- 1 x BN360-L110 – 10m camera cable **GB9090887**
- 2 x BN360-L115 – 15m camera cables **GB9090888**
- 1 x BN360-L120 – 20m camera cable **GB9090889**

See individual products for detailed specifications  
 • 2 year system warranty

**SE-770-100 – 360 camera monitor system for large rigid vehicles** **GB9091182**



- 1 x VBV-770M – 7" monitor **GB9090784**
- 1 x BN360-000 360 system **GB9090885**
- 1 x BN360-L110 – 10m camera cable **GB9090887**
- 2 x BN360-L115 – 15m camera cables **GB9090888**
- 1 x BN360-L120 – 20m camera cable **GB9090889**

See individual products for detailed specifications  
 • 2 year system warranty  
 • R46 Approved



## ASL360 360° CAMERA MONITOR SYSTEMS

Complete kits including monitor, Backeye®360 camera system, cables and adapters

**SE-770-000 – 360 camera monitor system for large rigid vehicles** **GB9091181**



- 1 x VBV-770M – 7" monitor **GB9090784**
- 1 x ASL360-SV 360 system **GB9091148**
- 1 x ASL360-L110 – 10m camera cable **GB9091151**
- 2 x ASL360-L115 – 15m camera cable **GB9091150**
- 1 x ASL360-L120 – 20m camera cable **GB9091149**
- 1 x AC-024 – phono adapter cable **GB9090794**
- 1 x AC-054 – adapter cable **GB9091222**

## Which range is for you?

### Backeye® Elite

Top of the range systems for comprehensive blind-spot coverage. Suitable for large road-going vehicles, specialist applications, heavy duty off-road machines or where the cab is exposed to the elements.



### Backeye® Select

Mid-range systems suitable for medium to large road-going vehicles.



### Backeye® Essential

Entry level reversing solution ideally suited to light commercial vehicles and vans.



# Camera Monitor Systems

## Choosing your Backeye® camera monitor system

Select from our range of popular complete standard systems featured on pages 24–27 or build your own system referring to the camera monitor compatibility chart below, adding cables, adapters and ancillaries to connect and upgrade your system.

## Camera/monitor compatibility for building your own system

✓ = Compatible AC-0xx = Compatible with adapter(s) shown ✗ = Not compatible			MONITORS			
			ELITE		SELECT	
			BE-970WFM BE-970WM BE-865DDM BE-870LM	BE-856GM	VBV-7104FM VBV-770FM VBV-770M VBV-750M	VBV-770M-S VBV-750M-S
CAMERAS	ELITE	BE-810C shutter camera	✓	✓ SC-1000-ECU	✓ AC-007 + SC-1000-ECU	✗
		All other Elite range cameras	✓	✓	✓ AC-007	✓ AC-007
	SELECT	VBV-710C shutter camera	✓ AC-035 + AC-006	✓ AC-035 + AC-006	✓ AC-035	✓
		All other Select range cameras	✓ AC-006	✓ AC-006	✓	✓
FLIR	PathFindIR II	✓ AC-016 + AC-065	✓ AC-016 + AC-065	✓ AC-024 + AC-065	✓ AC-024 + AC-065	

## Camera/monitor combinations approved to R46

UN ECE Regulation No 46 (R46) is a regulation which covers devices for indirect vision and their installation.

R46 is widely recognised as a mark of exceptional performance, reliability and quality. In order to comply with the R46 regulation, the components of a camera monitor system must reach specified performance standards and be installed within pre-defined guidelines. See [brigade-electronics.com](http://brigade-electronics.com) for further information.

An R46 approved camera monitor system can be used instead of a conventional mirror for the Class V and Class VI areas.

✓ = Compatible ✗ = Not compatible			MONITORS		
			ELITE BE-870LM	SELECT VBV-770M	SELECT VBV-750M
CAMERAS	ELITE	BE-800C	✓ Plus full or half screen with SS-002 screen splitter	✗	✗
		BE-890C	✓ Plus full or half screen with SS-002 screen splitter	✗	✗
		BE-850C	✓ Plus full or half screen with SS-002 screen splitter	✗	✗
	SELECT	VBV-300C	✓ Plus full or half screen with SS-002 screen splitter	✓ Plus full or half screen with SS-002 screen splitter	✓
		VBV-320C	✓ Plus full or half screen with SS-002 screen splitter	✓ Plus full or half screen with SS-002 screen splitter	✓
	360	BN360-000	✗	✓ Full screen and standard split screen	✗

For VRS part numbers please see index pages 58–59.

Model

Part No:

**ELITE CAMERA**



<b>BE-800C</b>	– PAL	<b>GB9091069</b>
<b>BE-800C(40)</b>	– Narrow viewing angle: 33 x 25 x 40° PAL	<b>GB9091066</b>
<b>BE-800C(78)</b>	– Narrow viewing angle: 64 x 47 x 78° PAL	<b>GB9091064</b>
<b>BE-890C</b>	– Waterproof to IP69K, No audio PAL	<b>GB9091103</b>
<b>BE-850C</b>	– 12/24Vdc Waterproof to IP69K PAL	<b>GB9091195</b>
<b>BE-801C</b>	– NTSC	<b>GB9091079</b>
<b>BE-801C(40)</b>	– Narrow viewing angle: 33 x 25 x 40° NTSC	<b>GB9091085</b>
<b>BE-801C(78)</b>	– Narrow viewing angle: 64 x 47 x 78° NTSC	<b>GB9091084</b>

- Viewing angle (HxVxD)  
101 x 72 x 133° PAL  
100 x 69 x 133° NTSC
- IP68
- Size (WxHxD)  
86 x 72 x 80mm
- 3 year warranty + optional 2 further years on registration



**Features**

- 5 Infrared LEDs for ultra-low light performance
- 5m illumination distance
- Heater
- Audio
- Day/Night sensor
- Mirror/Normal view
- 1/3" Sony CCD
- TV System: PAL or NTSC
- TV lines: 450

**Power**

- Power consumption: 4 Watts
- Current: 0.33 Amps (0.33–2.63 Amps BE-850C)

**Durability & Standards**

- Mechanical vibration: 20G (HALT)
- Mechanical shock: 100G
- Operating temperature: -40 to +85°C
- CE marked
- FCC approved
- EMC approved: E
- HALT tested
- ISO 13766: 2006
- BN EN13309
- Corrosion Test – ISO 16750-4

**ELITE CAMERA**



**BE-810C – Shutter camera**

**GB9091058**

- Viewing angle (HxVxD)  
103 x 71 x 134°
- IPX9K
- Size (WxHxD)  
123 x 86 x 80mm
- 3 year warranty + optional 2 further years on registration



**Features**

- 6 Infrared LEDs for ultra-low light performance
- 5m illumination distance
- Shutter
- Heater
- Audio
- Day/Night sensor
- Mirror/Normal view
- 1/3" Sony CCD
- TV System: PAL
- TV Lines: 400

**Power**

- Power consumption: 7 Watts
- Current: 0.4 Amps

**Durability & Standards**

- Mechanical vibration: 7G
- Mechanical shock: 100G
- Operating temperature: -40 to +70°C
- CE Marked
- EMC approved: E

**ELITE CAMERA**



**BE-820C – Mini camera (mirror image)**

**GB9091081**

**BE-822C – Mini camera (normal image)**

**GB9090873**

- Viewing angle (HxVxD)  
111 x 87 x 129°
- IP68
- Size (WxHxD)  
47 x 40 x 50mm
- 3 year warranty

**Features**

- 1/4" Sony CCD
- TV System: PAL
- TV Lines: 380

**Power**

- Power consumption: 1.5 Watts
- Current: 0.1 Amps

**Durability & Standards**

- Mechanical vibration: 10G
- Mechanical shock: 100G
- Operating temperature: -20 to +70°C
- CE marked
- EMC approved: E
- HALT tested

**Camera icons**



Infrared LEDs for ultra-low-light performance



Day/night sensor



Audio



Heater



Normal/mirror view

**Model**

**Part No:**

## ELITE CAMERA



**DMC-1025 – Mini camera (internal use) PAL**  
**DMC-1021 – Mini camera (internal use) NTSC**

**GB9090783**  
**GB9091034**

- **Viewing angle (HxVxD)**  
69 x 54 x 90° PAL  
76 x 55 x 98° NTSC
- **IP30**
- **Size (WxHxD)**  
43 x 45 x 37.5mm
- **3 year warranty**



### Features

- Mirror/Normal view
- Backlight compensation
- Automatic white balance
- 1/3" Sony CCD
- TV System: PAL or NTSC
- TV Lines: 550 PAL/400 NTSC

### Power

- Power consumption: 1.0 Watt
- Current: 0.07Amps

### Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 50G
- Operating temperature: -30 to +60°C
- CE marked
- EMC Approved: E
- FCC Approved

## ELITE CAMERA



**MD-50 – Mini dome camera PAL**  
**MD-51 – Mini dome camera NTSC**

**GB9090903**  
**GB9091035**

- **Viewing angle (HxVxD)**  
69 x 54 x 90° PAL  
76 x 55 x 98° NTSC
- **IP66**
- **Size (Diameter x H)**  
76 x 59.2mm
- **3 year warranty**



### Features

- Dome camera with 150° movement range in all directions
- Can be used internally or externally
- Mirror/Normal view
- Backlight compensation
- Automatic white balance
- 1/3" Sony CCD
- TV System: PAL or NTSC
- TV Lines: 550 PAL/400 NTSC

### Power

- Power consumption: 1.0W
- Current: 0.07 Amps

### Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 50G
- Operating temperature: -30 to +60°C
- CE marked
- EMC Approved: E
- FCC Approved



## OPTIONAL EXTRAS

**MD-50SM-30 – Surface mounting adapter (30mm deep)**

**GB9090934**

**MD-50AM-15 – Angled surface mounting adapter (adds 15°)**

**GB9091200**

**MD-50AM-25 – Angled surface mounting adapter (adds 25°)**

**GB9091201**

### Camera icons



Infrared LEDs for ultra-low-light performance



Day/night sensor



Audio



Heater



Normal/mirror view

**SELECT CAMERA**



**VBV-700C – PAL**

**GB9090779**

**VBV-790C – Waterproof to IP69K, no audio PAL**

**GB9090973**

- **Viewing angle (HxVxD)**  
88 x 68 x 115° PAL  
86 x 72 x 122° NTSC
- **IP67**
- **Size (WxHxD)**  
81 x 77 x 70mm
- **2 year warranty**



**Features**

- 4 high-power Infrared LEDs for ultra-low light performance
- 7m illumination distance
- Audio
- Day/Night sensor
- Mirror view
- 1/3" Sharp CCD
- TV Lines: 620 PAL / 750 NTSC

**Power**

- Power consumption: 3 Watts
- Current: 0.2 Amps

**Durability & Standards**

- Mechanical vibration: 10G
- Mechanical shock: 51G
- Operating temperature: -30 to +70°C
- CE marked
- EMC approved: E
- FCC approved

**SELECT CAMERA**



**VBV-710C – Shutter camera**

**GB9091102**

Direct connection to VBV-770DM-S and VBV-750DM-S 5-pin monitors via 5-pin 10m (VBV-L510) or 20m (VBV-L520) camera cable. Use AC-035 5-pin to 4-pin adapter for connection to other Select monitors

- **Viewing angle (HxVxD)**  
90 x 70 x 110°
- **IP69K**
- **Size (WxHxD)**  
122 x 85 x 82mm
- **2 year warranty**



**Features**

- 12 Infrared LEDs for ultra-low light performance
- 10m illumination distance
- Shutter
- Heater
- Audio
- Day/Night sensor
- Mirror/Normal view
- 1/3" Sharp CCD
- TV System: PAL
- TV Lines: 420

**Power**

- Power consumption: 4.6 Watts
- Current: 0.38 Amps

**Durability & Standards**

- Mechanical vibration: 2.8G
- Operating temperature: -20 to +70°C
- CE Marked
- EMC approved: E

**SELECT CAMERA**



**VBV-300C – Compact flush-mount eyeball camera – Mirror view**

**GB9090781**

**VBV-320C – Compact flush-mount eyeball camera – Normal view**

**GB9090780**

- **Viewing angle (HxVxD)**  
102 x 78 x 145°
- **IP69K**
- **Size (WxHxD)**  
57 x 41 x 68mm
- **2 year warranty**



**Features**

- Lens swivel adjustment: 35° (Top) x 5° (Bottom) x 8° (Left) x 8° (Right)
- Lens rotation adjustment: ±180°
- 5 infrared LEDs for ultra-low light performance
- 3-6m illumination distance
- Day/Night sensor
- 1/3" Sharp CCD
- TV System: PAL
- 420 TV lines

**Power**

- Power consumption: 1.2 Watts
- Current consumption: 0.14 Amps

**Durability & Standards**

- Corrosion resistant: ISO9227 salt spray standard
- Mechanical vibration: 4G
- Operating temperature: -30 to +70°C
- CE marked
- EMC approved: E

**OPTIONAL EXTRAS**



**SM-3XX-25 Surface mounting adapter (25mm deep)**

**GB9090782**

**Model**

**Part No:**

## SELECT CAMERA

**VBV-485C – Cylinder camera**

**GB9091092**



- Viewing angle (HxVxD)  
90 x 69 x 117°
- IP67
- Size (Diameter x Length)  
35 x 50mm
- 2 year warranty



### Features

- 9 LEDs for ultra-low light performance
- 10m illumination distance
- Mirror view
- 1/3" Sharp CCD
- TV System: PAL
- TV Lines: 420

### Power

- Power consumption: 2.4 Watts
- Current: 0.2 Amps

### Durability & Standards

- Mechanical vibration: 10G
- Operating Temperature: -30 to +70°C
- CE marked

## THERMAL IMAGING CAMERA

**PF-30N-500 – PathFindIR II with automatic detection 30Hz**

**GB9091202**

**PF-075N-540 – PathFindIR II with automatic detection 7.5Hz**

**GB9091204**



- 12Vdc
- Viewing angle (HxV)  
24 x 18°
- IP69 (Camera)
- Size (WxHxD)  
Camera: 60 x 86 x 82mm  
ECU: 148 x 110 x 24mm
- 1 year warranty



### Contents

- Camera, ECU, Camera to ECU cable and power cable

### Features

- Automatic detection and alerts of pedestrians and animals
- Produces a clear image, even in total darkness.
- See through smoke, dust and light fog
- Automatic Heated Element
- See past the glare of oncoming headlights
- Sees up to 4 times further than vehicle headlights

### Image

- 320 x 240 Uncooled Microbolometer
- Spectral range: 8–14µm
- Image Frequency: 7.5/30Hz (NTSC)

### Power

- Power consumption: 6 Watts

### Durability & Standards

- IP69
- Operating Temperature: -40 to 80°C

## THERMAL IMAGING CAMERA

**PF-30N-520 – PathFindIR II 30Hz**

**GB9091203**

**PF-075N-560 – PathFindIR II 7.5Hz**

**GB9091205**



- 12Vdc
- Viewing angle (HxV)  
24 x 18°
- IP69 (Camera)
- Size (WxHxD)  
Camera: 60 x 86 x 82mm  
ECU: 148 x 110 x 24mm
- 1 year warranty



### Contents

- Camera, ECU, Camera to ECU cable and power cable

### Features

- Produces a clear image, even in total darkness.
- See through smoke, dust and light fog
- Automatic Heated Element
- See past the glare of oncoming headlights
- Sees up to 4 times further than vehicle headlights

### Image

- 320 x 240 Uncooled Microbolometer
- Spectral range: 8–14µm
- Image Frequency: 7.5/30Hz (NTSC)

### Power

- Power consumption: 6 Watts

### Durability & Standards

- IP69
- Operating Temperature: -40 to 80°C

## OPTIONAL EXTRAS

**PFM-0001 PathFindIR II mounting bracket**

**GB9091198**

**Model**

**Part No:**

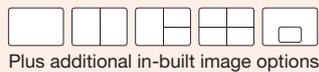
## ELITE MONITOR



**BE-970WFM – Waterproof 7” Quad digital LCD monitor**

**GB9091112**

- 12-24Vdc
- IP69K
- Size (WxHxD)  
194 x 124 x 48mm
- 3 year warranty + optional 2 further years on registration



Plus additional in-built image options

### Features

- 4 camera inputs
- Shutter camera compatible (inputs 1 & 2)
- Backlit touch screen button panel
- 'Button-lock' anti-tamper feature
- 5 Auto-triggers
- Mirror/Normal switching from menu
- On screen distance and vertical line markers
- Audio
- Speed switch trigger to turn monitor on/off or trigger a split screen
- Sun shield
- Multi-lingual menus
- Auto-switching PAL/NTSC

### Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 500cd/m<sup>2</sup>
- Viewing angles:  
Side 65° x Top 50° x Bottom 60°

### Power

- Power consumption: min 28 Watts
- Current: min 2.15 Amps

### Durability & Standards

- Aluminium die-cast casing
- Mechanical vibration: 10G
- Mechanical shock: 100G
- Operating temperature: -40 to +75°C
- CE marked
- EMC approved: E
- ISO 16750
- ISO 20653: 2006
- HALT tested

## ELITE MONITOR



**BE-970WM – Waterproof 7” Digital LCD monitor**

**GB9091108**

- 12-24Vdc
- IP69K
- Size (WxHxD)  
194 x 124 x 48mm
- 3 year warranty + optional 2 further years on registration



### Features

- 2 Camera inputs
- Shutter camera compatible – both inputs
- Backlit touch screen button panel
- 'Button-lock' anti-tamper feature
- 2 Auto-triggers
- Mirror/Normal switching from menu
- On screen distance and vertical line markers
- Audio
- Sun shield
- Multi-lingual menus
- Auto-switching PAL/NTSC

### Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 500cd/m<sup>2</sup>
- Viewing angles:  
Side 65° x Top 50° x Bottom 60°

### Power

- Power consumption: 11 Watts
- Current: 0.9 Amps

### Durability & Standards

- Aluminium die-cast casing
- Mechanical vibration: 20G
- Mechanical shock: 100G
- Operating temperature: -40 to +70°C
- CE marked
- EMC approved: E
- ISO 16750
- ISO 13766: 2006
- HALT tested

**Model**

**Part No:**

## ELITE MONITOR

**BE-870LM – 7” Digital LCD monitor**

**GB9091100**



- 12-24Vdc
- **Size (WxHxD)**  
197 x 128 x 34mm
- **3 year warranty + optional 2 further years on registration**

7.0"



### Features

- 2 Camera inputs
- Shutter camera compatible – both inputs
- 'Button-lock' anti tamper feature
- 2 Auto-triggers with configurable trigger-off delays
- Mirror/Normal switching from menu
- On-screen distance and vertical line markers
- Audio
- Sun shield
- Auto-dimmer and keypad illumination
- Multi-lingual menus
- Auto-switching PAL/NTSC

### Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 400cd/m<sup>2</sup>
- Viewing angles:  
Side 70° x Top 50° x Bottom 70°

### Power

- Power consumption: 12 Watts
- Current: 1 Amp

### Durability & Standards

- Mechanical vibration: 2.5G
- Mechanical shock: 51G
- Operating temperature: -30 to +70°C
- CE marked
- EMC approved: E

## ELITE MONITOR

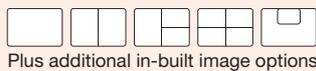
**BE-865DDM – Double DIN 6.5” Digital LCD Monitor**

**GB9091127**



- 12-24Vdc
- IP69K
- **Size (WxHxD)**  
188 x 116 x 142mm
- **3 year warranty + optional 2 further years on registration**

6.5"



### Features

- 4 camera inputs with independent control
- Shutter camera compatible (all inputs)
- Backlit touch screen button panel
- 'Button-lock' anti-tamper feature
- 5 Auto-triggers
- Mirror/Normal switching from menu
- On screen distance and vertical line markers
- Audio
- Speed switch trigger to turn monitor on/off or trigger a split screen
- Sun shield
- Multi-lingual menus
- Audio/video inputs/output
- Auto-switching PAL/NTSC

### Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 500cd/m<sup>2</sup>
- Viewing angles:  
Side 70° x Top 50° x Bottom 70°

### Power

- Power consumption: min 15.4 Watts
- Current: min 1.4 Amps

### Durability & Standards

- Mechanical vibration: 6G
- Operating temperature: -40 to +70°C
- CE marked
- EMC approved: E
- ISO 16750

### Monitor icons



Number of camera inputs



Number of auto-triggers



Audio



'Button-lock' anti-tamper feature



On-screen distance and vertical line markers



Normal/mirror view – switching from menu

**ELITE MONITOR**



**BE-856GM – 5.6” Digital LCD monitor**

**GB9091123**

- 12-24Vdc
- Size (WxHxD)  
172 x 115 x 32mm
- 3 year warranty + optional 2 further years on registration

5.6"



**Features**

- 2 camera inputs
- 2 Auto-triggers
- Mirror/Normal switching from menu
- On screen distance and vertical line markers
- Audio
- Sun shield
- Auto-dimmer
- Multi-lingual menus
- Auto-switching PAL/NTSC

**Picture Quality**

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 640 x 480
- Contrast ratio: 500:1
- Brightness: 350cd/m<sup>2</sup>
- Viewing angles:  
Side 70° x Top 50° x Bottom 70°

**Power**

- Power consumption: 11 Watts
- Current: 0.9 Amps

**Durability & Standards**

- Mechanical vibration: 10G
- Mechanical shock: 50G
- Operating temperature: -40 to +70°C
- CE marked
- EMC approved: E
- ISO 13766: 2006
- ISO 16750
- HALT tested

**SELECT MONITOR**



**VBV-7104FM – 10.4” Digital LCD Monitor**

**GB9091153**

- 12-24Vdc
- Size (WxHxD)  
267 x 193 x 30mm
- 2 year warranty

10.4"



Plus additional in-built image options

**Features**

- 4 camera inputs
- 'Button-lock' anti-tamper feature
- 5 Auto-triggers
- Configurable trigger delay
- Mirror/Normal switching from menu
- On-screen distance markers
- Built-in speaker
- Sun shield
- Multi-lingual menus
- Auto-switching PAL/NTSC

**Picture Quality**

- LED backlighting (gives 30,000 hours life)
- Anti-glare screen
- Resolution: 1024 x 768
- Contrast ratio: 500:1
- Brightness: 400cd/m<sup>2</sup>
- Viewing angles:  
Side 70° x Top 60° x Bottom 60°

**Power**

- Power consumption: 31 Watts
- Current: 2.8 Amps

**Durability & Standards**

- Mechanical vibration: 4G
- Mechanical shock: 50G
- Operating temperature: -20 to +70°C
- CE marked
- EMC approved: E
- HALT tested



**HIGH QUALITY PARTS**  
AS STANDARD



## ALL MAKES BRAKE PADS

All VRS branded brake pads are approved to ECE regulation 90, E4 and E11.

Please contact your local Scania dealer to find out about our comprehensive range of truck and trailer pads.

**Model**

**Part No:**

## SELECT MONITOR



**VBV-770FM – 7” Digital LCD monitor**

**GB9090902**

- 12-24Vdc
- **Size (WxHxD)**  
182 x 122 x 27mm
- 2 year warranty



Plus additional in-built image options

### Features

- 4 camera inputs
- 'Button-lock' anti-tamper feature
- 5 Auto-triggers
- Mirror/Normal switching from menu
- On-screen distance markers
- Audio
- Sun shield
- Multi-lingual menus
- Auto-switching PAL/NTSC

### Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 400cd/m<sup>2</sup>
- Viewing angles:  
Side 70° x Top 50° x Bottom 70°

### Power

- Power consumption: 27 watts
- Current: 2.1 Amps

### Durability & Standards

- Mechanical vibration: 4G
- Operating temperature: -30 to +70°C
- CE marked
- EMC approved: E

## SELECT MONITOR



**VBV-770M – 7” Digital LCD monitor**

**GB9090784**

**VBV-770M-S – 7” Digital LCD monitor**

**GB9091166**

Includes 1 x 5-pin input for connection to VBV-710C shutter camera

- 12-24Vdc
- **Size (WxHxD)**  
196 x 118 x 26mm
- 2 year warranty



### Features

- 3 camera inputs
- 3 Auto-triggers
- Mirror/Normal switching from menu
- 'Button lock' anti-tamper feature
- On-screen distance markers
- Audio
- Sun shield
- Auto-dimmer
- Multi-lingual menus
- Auto-switching PAL/NTSC

### Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 400cd/m<sup>2</sup>
- Viewing angles:  
Side 70° x Top 50° x Bottom 70°

### Power

- Power consumption: 18 Watts
- Current: 1.5 Amps

### Durability & Standards

- Mechanical vibration: 4G
- Mechanical shock: 100G
- Operating temperature: -30 to +70°C
- CE marked
- EMC approved: E
- HALT tested

### Monitor icons



Number of camera inputs



Number of auto-triggers



Audio



'Button-lock' anti-tamper feature



On-screen distance and vertical line markers



Normal/mirror view – switching from menu

Model

Part No:

### SELECT MONITOR



**VBV-750M – 5” Digital LCD monitor**  
**VBV-750M-S – 5” Digital LCD monitor**

**GB9090693**  
**GB9091169**

Includes 1 x 5-pin input for connection to VBV-710C shutter camera

- 12-24Vdc
- Size (WxHxD)  
149.5 x 99 x 22mm
- 2 year warranty



#### Features

- 3 camera inputs
- 3 Auto-triggers
- Mirror/Normal switching from menu
- On-screen distance markers
- 'Button lock' anti-tamper feature
- Audio
- Sun shield
- Auto-dimmer
- Multi-lingual menus
- Auto-switching PAL/NTSC

#### Power

- Power consumption: 11.5 Watts
- Current: 0.95 Amps

#### Durability & Standards

- Mechanical vibration: 4G
- Mechanical shock: 100G
- Operating temperature: -30 to +70°C
- CE marked
- EMC approved: E
- HALT tested

#### Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 350cd/m<sup>2</sup>
- Viewing angles:  
Side 70° x Top 50° x Bottom 70°

### ESSENTIAL MONITOR



**VBV-243M – 4.3” Digital Mirror monitor**

**GB9091136**

- 12Vdc
- Size (WxDxH)  
259 x 88 x 22mm
- 1 year warranty



#### Features

- On screen display menu
- Digital LCD panel
- 1 Auto-trigger
- TV system: PAL/NTSC

#### Power

- Power consumption: 4.95 Watts
- Current: 0.45 Amps

#### Durability & Standards

- Vibration rating: 6G
- Operating temperature: -20 to +70°C
- CE marked

#### Picture Quality

- Resolution: 480 x 272
- Contrast ratio: 500:1
- Brightness: 200cd/m<sup>2</sup>
- Viewing angles:  
Side 50° x Top 60° x Bottom 55°



**HIGH QUALITY PARTS**  
AS STANDARD



## LUBRICANTS RANGE

A comprehensive range of universal lubricants to suit the UK HGV market – now available!

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Model

Part No:

## RIGID VEHICLES ELITE RANGE CAMERA MONITOR SYSTEMS

BE-870L-000 – Single camera monitor system for rigid vehicles

GB9091223



- BE-870LM – 7" monitor GB9091100
- BE-800C – heated camera GB9091069
- BE-L120 – 20m cable GB9091042

See individual products for detailed specifications  
• 3 year system warranty

BE-870L-100 – Single shutter camera monitor system for rigid vehicles

GB9091135



- BE-870LM – 7" monitor GB9091100
- BE-810C – heated shutter camera GB9091058
- BE-L120 – 20m cable GB9091042

See individual products for detailed specifications  
• 3 year system warranty

BE-856G-000 – Single camera monitor system for rigid vehicles

GB9091133



- BE-856GM – 5.6" monitor GB9091123
- BE-800C – heated camera GB9091069
- BE-L120 – 20m cable GB9091042

See individual products for detailed specifications  
• 3 year system warranty

## RIGID VEHICLES SELECT RANGE CAMERA MONITOR SYSTEMS

VBV-770-300 – Single flush-mount camera monitor system for rigid vehicles GB9091178



- VBV-770M – 7" monitor GB9090784
- VBV-300C – flush-mount camera GB9090781
- VBV-L420 – 20m cable GB9090795

See individual products for detailed specifications  
• 2 year system warranty  
• R46 Approved

**R46**

VBV-770-000 – Single camera monitor system for rigid vehicles

GB9090956



- VBV-770M – 7" monitor GB9090784
- VBV-700C – camera GB9090779
- VBV-L420 – 20m cable GB9090795

See individual products for detailed specifications  
• 2 year system warranty

Model

Part No:

## RIGID VEHICLES SELECT RANGE CAMERA MONITOR SYSTEMS

**VBV-770-100 – Single shutter camera monitor system for rigid vehicles** **GB9091165**



- **VBV-770M-S – 7" monitor** **GB9091166**
- **VBV-710C – shutter camera** **GB9091102**
- **VBV-L520 – 20m cable** **GB9091114**

See individual products for detailed specifications  
• 2 year system warranty

**VBV-750-300 – Single flush-mount camera monitor system for rigid vehicles** **GB9091177**



- **VBV-750M – 5" monitor** **GB9090693**
- **VBV-300C – flush-mount camera** **GB9090781**
- **VBV-L420 – 20m cable** **GB9091042**

See individual products for detailed specifications

- 2 year system warranty
- R46 Approved

**R46**

**VBV-750-000 – Single camera monitor system for rigid vehicles** **GB9090692**



- **VBV-750M – 5" monitor** **GB9090693**
- **VBV-700C – camera** **GB9090779**
- **VBV-L420 – 20m cable** **GB9090795**

See individual products for detailed specifications

- 2 year system warranty

**VBV-750-100 – Single shutter camera monitor system for rigid vehicles** **GB9091168**



- **VBV-750M-S – 5" monitor** **GB9091169**
- **VBV-710C – shutter camera** **GB9091102**
- **VBV-L520 – 20m cable** **GB9091114**

See individual products for detailed specifications

- 2 year system warranty

## RIGID VEHICLES ESSENTIAL RANGE CAMERA MONITOR SYSTEM

**VBV-650-000 – Single camera monitor system for rigid vehicles** **GB9091173**



- **VBV-650AM – 5" monitor**
- **VBV-620C – camera**
- **VBV-L420 – 20m cable**
- 1 year warranty

5.0"

1

### Monitor

- 12-24Vdc
- 1 camera input
- Size (WxHxD)  
148 x 110 x 30.2mm

### Camera

- Viewing angle (HxVxD)  
81 x 59 x 106°
- IP67
- Size (WxHxD)  
64.5 x 59 x 55mm

Individual parts not sold separately.

# Backeye® Camera monitor systems

**Model**

**Part No:**

## SMALL RIGID VEHICLES AND VANS SELECT RANGE CAMERA MONITOR SYSTEMS

**VBV-770-310 – Single flush-mount camera monitor system for vans**

**GB9091180**



- VBV-770M – 7" monitor GB9090784
- VBV-300C – flush-mount camera GB9090781
- VBV-L410 – 10m cable GB9090974

See individual products for detailed specifications

• 2 year system warranty

**VBV-750-310 – Single flush-mount camera monitor system for vans**

**GB9091179**



- VBV-750M – 5" monitor GB9090693
- VBV-300C – flush-mount camera GB9090781
- VBV-L410 – 10m cable GB9090974

See individual products for detailed specifications

• 2 year system warranty

## ARTICULATED VEHICLES ELITE RANGE CAMERA MONITOR SYSTEMS

**BE-870L-001 – Single camera monitor system for articulated vehicles**

**GB9091106**



- BE-870LM – 7" monitor GB9091100
- BE-800C – camera GB9091069
- BE-L110 – 10m cable for cab GB9091044
- SP-7A – 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout) GB9091071
- SC-7 – Coiled cable with 7-pin plugs (unique pin layout) GB9091073
- BE-X020 – 20m extension cable for trailer GB9091055
- SP-7B – 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout) GB9091072

See individual products for detailed specifications

• 3 year system warranty

**BE-870L-101 – Single shutter camera monitor system for articulated vehicles** GB9091134



- BE-870LM – 7" monitor GB9091100
- BE-810C – shutter camera GB9091058
- BE-L110 – 10m cable for cab GB9091044
- SP-7A – 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout) GB9091071
- SC-7 – Coiled cable with 7-pin plugs (unique pin layout) GB9091073
- BE-X020 – 20m extension cable for trailer GB9091055
- SP-7B – 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout) GB9091072

See individual products for detailed specifications

• 3 year system warranty

Model

Part No:

### ARTICULATED VEHICLES SELECT RANGE CAMERA MONITOR SYSTEMS

VBV-770-001DW – Single wireless camera monitor system for articulated vehicles GB9091183



- VBV-770M – 7” monitor GB9090784
- VBV-700C – camera GB9090779
- VBV-L420 – 20m cable GB9090795
- DW-1000-TX – digital wireless transmitter GB9090875
- DW-1000-RX – digital wireless receiver GB9090874
- AC-006 – camera adapter GB9091082
- AC-007 – monitor adapter GB9091083

See individual products for detailed specifications  
• 2 year system warranty

VBV-770-001 – Single camera monitor system for articulated vehicles GB9090953



- VBV-770M – 7” monitor GB9090784
- VBV-700C – camera GB9090779
- VBV-L410 – 10m cable for cab GB9090974
- VSP-47A – 7-pin bulkhead socket for cab & cab-end camera connector GB9090847
- SC-07-24S – Coiled cable with type 24S 7-pin plugs GB9090846
- VBV-L420 – 20m extension cable for trailer GB9090795
- VSP-47B – 7-pin bulkhead socket for trailer & trailer-end camera connector GB9091075

See individual products for detailed specifications  
• 2 year system warranty

VBV-770-101 – Single shutter camera monitor system for articulated vehicles GB9090942



- VBV-770M-S – 7” monitor GB9091166
- VBV-710C – shutter camera GB9090779
- VBV-L510 – 10m cable for cab GB9091113
- VBV-L520 – 20m cable for trailer GB9091114
- VSP-57A – 7-pin bulkhead socket for cab & cab-end camera connector GB9091124
- VSP-57B – 7-pin bulkhead socket for trailer & trailer-end camera connector GB9091125
- SC-07-24S – Coiled cable with 7-pin sockets GB9090846

See individual products for detailed specifications  
• 2 year system warranty

### VEHICLES WITH DRAWBAR TRAILERS SELECT RANGE CAMERA MONITOR SYSTEMS

VBV-770-004 – Twin-camera monitor system for vehicles with drawbar trailers GB9091176



- VBV-770M – 7” monitor GB9090784
- 2 x VBV-700C – cameras GB9090779
- VBV-L420 – 20m cable for truck GB9090795
- VBV-L405 – 5m camera cable for truck camera GB9090796
- VCS-020 – Two-way camera selector GB9090849
- 1 x VSP-47A – 7-pin camera bulkhead socket for truck rear GB9090847
- SC-07-24S – Coiled cable with 7-pin sockets GB9090846
- VBV-L420 – 20m cable for trailer GB9090795
- VSP-47B – 7-pin camera bulkhead socket for trailer GB9091075

# Truck and trailer connection

Model

Part No:

## ELITE WIRELESS CONNECTION SYSTEM



DW-1000-TX – Digital Wireless Transmitter  
DW-1000-RX – Digital Wireless Receiver

GB9090875  
GB9090874



Transmitter



Receiver

- Digital technology
- 12-24Vdc
- 1 camera input
- IP69K (Transmitter)
- Size (WxHxD)  
113 x 114 x 31mm
- 2 year warranty

### Features

- Image Latency: 200 milliseconds
- No need for retractable coiled cables
- Reduces installation time
- Re-pair facility allows for interchangeable trailers
- Triggered by reverse gear
- TV System PAL/NTSC
- Secure connection

### Power

- Maximum Current Amps:  
TX: 0.85 RX: 0.17
- Power consumption:  
TX: 9.8 Watts RX: 2.2 Watts

### Durability & Standards

- Operating temperature:  
-40 to +70°C
- Mechanical vibration: 6G
- Mechanical shock: 20G
- CE marked
- EMC approved: E

AC-006 & AC-007 adapter cables are required to connect to Select range camera and monitor – see page 34.

## ELITE TRUCK/TRAILER CABLE KIT

SK-31E – Cable kit for articulated trucks – unique pin layout

GB9091074

Inclusive of SK-31E-T – Trailer only kit



SC-7



SP-7A



SP-7B

- BE-L110 – 10m cable for cab GB9091044
- SP-7A – 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout) GB9091071
- SC-7 – Coiled cable with 7-pin plugs (unique pin layout) GB9091073

SK-31E-T – Trailer only kit GB9091078

- BE-X020 – 20m extension cable for trailer GB9091055
- SP-7B – 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout) GB9091072

## ELITE TRUCK/TRAILER CABLE KIT

SK-30E – Cable kit for articulated trucks – unique pin layout

GB9090901

Inclusive of SK-30E-T – Trailer only kit



SC-07



SP-07C



SP-07T

- BE-L110 – 10m cable for cab GB9091044
- SP-07C – 7-pin bulkhead socket for cab & cab-end camera connector GB9090921
- SC-07 – Coiled cable with 7-pin plugs GB9090920

SK-30E-T – Trailer only kit GB9091077

- BE-X020 – 20m extension cable for trailer GB9091055
- SP-07T – 7-pin bulkhead socket for trailer & trailer-end camera connector GB9091054

## ELITE TRUCK/TRAILER CABLE KIT

SK-15-01 – Three camera cable kit for articulated trucks

GB9091111



SP-15A-01



SP-15B-01



SC-15-01

- SP-15A-01 – 15-pin bulkhead socket for cab & 3 cab-end camera connectors GB9091110
- SP-15B-01 – 15-pin bulkhead socket for trailer & 3 trailer-end camera connectors GB9091109
- SC-15-01 – Coiled shielded cable with 15-pin plugs GB9091107

Model

Part No:

### ELITE TRUCK/TRAILER CABLE KIT

**SK-15-04 – Single camera & single buzzer Ultrasonic Detection System cable kit for articulated trucks**

**GB9091130**



- SP-15A-04 – 15-pin bulkhead socket for cab & cab-end camera connector plus stripped wires and display/buzzer connection for Ultrasonics **GB9091128**

- SP-15B-04 – 15-pin bulkhead socket for trailer & trailer-end camera connector plus stripped wires and display/buzzer connection for Ultrasonics **GB9091129**

- SC-15-01 – Coiled shielded cable with 15-pin plugs **GB9091107**

### ELITE TRUCK/ DRAWBAR TRAILER CABLE KIT

**SK-50E – Twin camera cable kit with unique pin layout for truck with drawbar trailer**

**GB9091067**

Inclusive of SK-50E-A Truck only kit and SK-31E-T trailer only kit



**SK-50E-A – Truck only kit **GB9091076****

**SK-31E-T – Trailer only kit **GB9091078****

- BE-L115 – 15m cable for truck **GB9091043**
- BE-X005 – 5m extension cable for truck camera **GB9090797**
- CS-020 – Two way camera selector **GB9091068**
- SP-7A – 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout) **GB9091071**
- SC-7 – Coiled cable with 7-pin plugs (unique pin layout) **GB9091073**

- BE-X020 – 20m extension cable for trailer camera **GB9091055**
- SP-7B – 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout) **GB9091072**

### SELECT TRUCK/TRAILER CABLE KIT

**VSK-31E – Cable kit for articulated trucks – unique pin layout**

**GB9090946**

Inclusive of VSK-31E-T – Trailer only kit



- VBV-L410 – 10m cable for cab **GB9090974**
- SP-7A – 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout) **GB9091071**
- AC-014 – Adapter cable **GB9090905**
- SC-7 – Coiled cable with 7-pin plugs (unique pin layout) **GB9091073**

**VSK-31E-T – Trailer only kit **GB9091096****

- VBV-L420 – 20m cable for trailer **GB9090795**
- AC-006 – Adapter cable **GB9091082**
- SP-7B – 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout) **GB9091072**

# Truck and trailer connection / cables

**Model**

**Part No:**

## SELECT TRUCK/TRAILER CABLE KIT

**VSK-30E – Cable kit for articulated trucks – unique pin layout**

**GB9090813**

Inclusive of SK-30E-T – Trailer only kit



- **VBV-L410 – 10m cable for cab** GB9090974
- **VSP-47A – 7-pin bulkhead socket for cab & cab-end camera connector** GB9090847
- **SC-07-24S – Coiled cable with type 24S 7-pin plugs** GB9090846

**VSK-30E-T – Trailer only kit** GB9090975

- **VBV-L420 – 20m extension cable for trailer** GB9090795
- **VSP-47B – 7-pin bulkhead socket for trailer & trailer-end camera connector** GB9091075

## SELECT TRUCK/TRAILER CABLE KIT

**VSK-305E – Cable kit for articulated trucks – Shutter camera**

**GB9091126**



- **VBV-L510 – 10m cable for cab** GB9091113
- **VBV-L520 – 20m cable for trailer** GB9091114
- **VSP-57A – 7-pin bulkhead socket for cab & cab-end camera connector** GB9091124
- **VSP-57B – 7-pin bulkhead socket for trailer & trailer-end camera connector** GB9091125
- **SC-07-24S – Coiled cable with type 24S 7-pin plugs** GB9090846

## SELECT TRUCK/TRAILER CABLE KIT

**SK-15-05 – 3-camera Backeye®360 cable kit for articulated vehicles**

**GB9091033**



- **SP-15A-05 – 15-pin bulkhead socket for cab & cab-end connector plus 3x connections for Backeye®360 Select** GB9091031
- **SP-15B-05 – 15-pin bulkhead socket for trailer & trailer-end connector plus 3x connections for Backeye®360 Select** GB9091032
- **SC-15-01 – Coiled shielded cable with 15-pin plugs** GB9091107

## SELECT TRUCK/ DRAWBAR TRAILER CABLE KIT

**VSK-50E – Twin camera cable kit for truck with drawbar trailer**

**GB9091094**

Inclusive of VSK-50E-A Truck only kit and VSK-30E-T Trailer only kit



**VSK-50E-A – Truck only kit** GB9091095

- **VBV-L420 – 20m cable for truck** GB9090795
- **VBV-L405 – 5m camera cable for truck camera** GB9090796
- **VCS-020 – Two-way camera selector** GB9090849
- **1 x VSP-47A – 7-pin camera bulkhead socket for truck rear** GB9090847
- **SC-07-24S – Coiled cable with 7-pin sockets** GB9090846

**VSK-30E-T – Trailer only kit** GB9090975

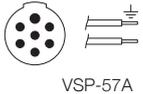
- **VBV-L420 – 20m cable for trailer** GB9090795
- **VSP-47B – 7-pin camera bulkhead socket for trailer** GB9091075

**Model**

**Part No:**

**SELECT TRUCK/DRAWBAR TRAILER CABLE KIT**

**VSK-505E – Twin shutter camera cable kit for truck with drawbar trailer GB9091132**



- VBV-L420 – 20m cable for truck GB9090795
- VBV-L520 – 20m camera cable for truck camera GB9091114
- VBV-L505 – 5m camera cable for cab GB9091131
- VCS-020 – Two-way camera selector GB9090849
- 2 x AC-035 – 5-pin to 4-pin shutter camera adapter GB9091116
- VSP-57A – 7-Pin bulkhead socket for cab & cab-end camera connector GB9091124
- VSP-57B – 7-pin bulkhead socket for trailer & trailer-end camera connector GB9091125
- SC-07-24S – Coiled cable with 7-pin plugs GB9090846

**ELITE CAMERA CABLES**



- BE-L130 – 30 metre cable GB9091041
- BE-L120 – 20 metre cable GB9091042
- BE-L115 – 15 metre cable GB9091043
- BE-L112 – 12 metre cable GB9091008
- BE-L110 – 10 metre cable GB9091044
- BE-L108 – 8 metre cable GB9091007
- BE-L105 – 5 metre cable GB9091045
- BE-L101 – 1 metre cable GB9091026
- BE-L1003 – 0.3 metre cable GB9091101

**ELITE CAMERA EXTENSION CABLES**



- BE-X025 – 25 metre extension cable GB9091080
- BE-X020 – 20 metre extension cable GB9091055
- BE-X015 – 15 metre extension cable GB9091087
- BE-X010 – 10 metre extension cable GB9091086
- BE-X005 – 5 metre extension cable GB9090797
- BE-X003 – 3 metre extension cable GB9091046

**SELECT CAMERA CABLES**



- VBV-L430 – 30 metre cable GB9091088
- VBV-L425 – 25 metre cable GB9091011
- VBV-L420 – 20 metre cable GB9090795
- VBV-L415 – 15 metre cable GB9090981
- VBV-L412 – 12 metre cable GB9091104
- VBV-L410 – 10 metre cable GB9090974
- VBV-L407 – 7 metre cable GB9091009
- VBV-L406 – 6 metre cable GB9091010
- VBV-L405 – 5 metre cable GB9090796
- VBV-L403 – 3 metre cable GB9091023
- VBV-L4025 – 2.5 metre cable GB9090818
- VBV-L520 – 20 metre 5-pin shutter camera cable GB9091114
- VBV-L510 – 10 metre 5-pin shutter camera cable GB9091113
- VBV-L505 – 5 metre 5-pin shutter camera cable GB9091131

# Adapter cables

Model

Part No:

## CAMERA MONITOR ADAPTERS



AC-006 – Connects Select camera (not shutter) to Elite cable

GB9091082



AC-007 – Connects Select monitor to Elite cable

GB9091083



AC-014 – Connects Elite camera to Select cable

GB9090905



AC-014(5M) – Connects Elite camera to Select cable, 5m long

GB9091030



AC-016 – Connects AV to Camera input of Elite monitor

GB9091089



AC-019 – Connects Elite camera to male phono (video only)

GB9091097



AC-020 – Connects Elite monitor to Select cable

GB9091098



AC-021 – Connects FLIR PathFindIR camera to Elite cable

GB9091099



AC-024 – Connects phono to Select cable  
(video & audio input, 12Vdc output)

GB9090794



AC-035 – 5-pin to 4-pin shutter camera adapter

GB9091116



AC-041 – Connects Elite camera to John Deere 7-pin amp output

GB9091141



AC-042 – Connects Select camera to John Deere 7-pin amp output

GB9091142



AC-044 – Connects Select camera to Molex M12 (Fendt)

GB9091144



AC-045 – Connects Elite camera to Molex M12 (Fendt)

GB9091145



AC-056 – Connects Select camera to Orlaco monitor

GB9090811



AC-062 – Connects Elite camera to Orlaco monitor

GB9091164



AC-063 – Connects Elite camera to Orlaco monitor, screw fit

GB9091196

	Model	Part No:
	 AC-065 – Connects FLIR PathFindIR camera (BNC) to RCA input	GB9091199
	 AC-066 – Connects Orloco camera to Elite monitor	GB9091024
	 AC-067 – Connects Orloco camera to Select monitor	GB9091025
	 AC-068 – Connects select camera to MAN Harman unit	GB9091302
	 AC-069 – Connects select camera to Scania/MAN Harman unit	GB9091303

### CAMERA MONITOR IN-LINE ADAPTERS

AC-24-12(001) – in-line 24/12Vdc converter – Select camera to Elite connector	GB9091140
AC-24-12(002) – in-line 24/12Vdc converter – Elite camera to Daimler monitor	GB9091143
AC-24-12(004) – in-line 24/12Vdc converter – Select camera to MAN MMT HSD	GB9091146
AC-24-12(006) – in-line 24/12Vdc converter – Select camera to Volvo FH(4) & FM(4)	GB9091170
AC-24-12(007) – in-line 24/12Vdc converter – Select camera to Iveco connect system	GB9091172
AC-24-12(008) – in-line 24/12Vdc converter – Select camera to Mercedes sprinter	GB9091014
AC-24-12(009) – in-line 24/12Vdc converter – Elite camera to Mekra 507405 monitor	GB9091197

### OEM CAMERA MONITOR ADAPTER CABLES

A further range of OEM specific adaptersto connect cameras to factory fit monitors is available. For details please contact your local Scania dealer.

### CAMERA MONITOR SYSTEM ANCILLARIES



LS-60-A – Low speed trigger mode (normally closed)	GB9090788
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- 12-24Vdc
- Auto-triggers safety equipment at the designated speed
- Size (WxHxD)  
44 x 16 x 64mm
- 2 year warranty

- Features**
- Normally closed – safety device on by default, turning off at designated speed
  - 10 speed threshold settings
  - Compact size
  - Easy to install and set up
  - Short circuit protection on camera inputs
  - Reverse polarity protected
  - Compatible with Brigade products

- Power**
- Power consumption: 21.6 Watts
  - Max current: 1.8 Amps
  - Switch Output max. current: 1.2 Amps
- Durability & Standards**
- Mechanical vibration: 10G
  - Mechanical shock: 50G
  - Operating temperature: -40 to +85°C
  - CE marked
  - EMC approved: E
- Note:** A relay is required if connected to a device that is higher than 1.2 Amps

**Model**

**Part No:**

## CAMERA MONITOR SYSTEM ANCILLARIES



**SC-1000-ECU – Shutter camera module**

**GB9091115**

- Allows BE-810C shutter camera to function on non-shutter enabled inputs on Elite range monitors (using Elite range cables).
- **Current: 2A**
- **CE marked**
- **EMC approved: E**

Use AC-007 adapter to connect to Select monitor.

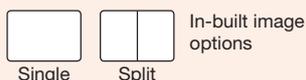
## CAMERA MONITOR SYSTEM ANCILLARIES



**SS-002 – Twin camera screen splitter**

**GB9090898**

- **12-24Vdc**
- **2 camera inputs**
- **Size (WxHxD)**  
147 x 37 x 78mm
- **2 year warranty**



### Features

- Offers split-screen option for monitors without in-built functionality
- 3 auto-triggers for each camera
- Shutter camera compatible
- TV System: PAL/NTSC
- Manual Mirror/Normal switching – choose from horizontal normal/mirror or vertical normal/flip
- Short circuit protection on camera inputs
- Reverse polarity protected
- Compatible with Brigade's camera monitors (adapters required for Elite)

### Power

- Power Consumption: 8.4 Watts
- Current: 0.7 Amps

### Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 50G
- Operating temperature: -30 to +70°C
- CE marked
- EMC approved: E

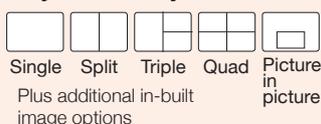
## CAMERA MONITOR SYSTEM ANCILLARIES



**EDM-50 – Multi-camera module and screen splitter**

**GB9091090**

- **12-24Vdc**
- **4 camera inputs**
- **Size (WxHxD)**  
154 x 28 x 105mm
- **2 year warranty**



### Features

- Shutter camera compatible (inputs 1,2&3)
- AV input to accept DVD, sat nav or other add-ons
- 5 manual or auto-triggers for each camera
- On screen distance markers
- Mirror/Normal image switch for each camera
- Selectable camera audio
- Auto-scanning function
- Compatible across Brigade camera monitor range (adapters required for Select series)

### Power

- Power consumption: 20 Watts
- Current: 2 Amps

### Durability & Standards

- Mechanical vibration: 5G
- Operating temperature: -25 to +70°C
- CE marked
- EMC approved: E

## CAMERA MONITOR SYSTEM ANCILLARIES



**CS-020 – Two-way camera selector (Elite range)**

**GB9091068**

- Allows a 2nd Select range camera to be connected to a Select range monitor
- 2nd camera view selected by trigger wire
- Full screen view only



## CAMERA MONITOR SYSTEM ANCILLARIES

**VCS-020 – Two-way camera selector (Select range)**

**GB9090849**

- Allows a 2nd Select range camera to be connected to a Select range monitor
- 2nd camera view selected by trigger wire
- Full screen view only

# Mobile Digital Recording

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By capturing footage from vehicle mounted cameras, mobile digital recorders provide an accurate witness, giving irrefutable evidence in the case of false claims, crash for cash incidents or vandalism. Disproving these claims means companies can make major cost savings, whilst importantly supporting their drivers, who are often the subject of increased scrutiny.

- **False claim prevention**
- **Protection for drivers who may be wrongly accused**
- **Provides irrefutable evidence in the case of accidents and legal proceedings**
- **Useful in reducing shrinkage and catching perpetrators**
- **Driver training and best practice**
- **Peace of mind for passengers and drivers**



## New!

### WiFi and 3G Connectivity

Brigade's new range of digital recorders now include models with WiFi and/or 3G connectivity capabilities. Wirelessly connecting an MDR to a secure server can save many man-hours, as data can be obtained from the recorder without needing to access the vehicle.

**In order to set up and use the WiFi and/or 3G MDR models, IT infrastructure, services and dedicated hardware such as servers will be required.**

Model

Part No:

## MOBILE DIGITAL RECORDER



MDR-408-1000	– 8 channel 1TB hard disk recorder	GB9090978
MDR-408GW-1000	– 8 channel 1TB hard disk recorder with WiFi and 3G	GB9091021
MDR-408G-1000	– 8 channel 1TB hard disk recorder with 3G	GB9091019
MDR-408W-1000	– 8 channel 1TB hard disk recorder with WiFi	GB9091020

- 9-32Vdc
- 8 camera inputs
- 8 trigger/alarm inputs
- Lockable and removable Mobile Caddy Unit
- Fast, easily downloadable recordings and data
- Size (WxHxD) 215 x 78 x 292mm
- 3 year warranty

### Main Contents

- Mobile Digital Recorder with 2.5" 1TB SATA HDD
- Remote control
- Trigger cable loom
- GPS antenna
- Security key
- 64GB SD card
- Mounting bracket and screws
- Installation guide & CD
- 3G antenna (GB9091020 & GB9091021)
- WiFi antenna (GB9091019 & GB9091021)

### Features

- Remotely access MDR units using wireless (WiFi models only) and/or Mobile network (3G models only)
- Mobile apps for remote view (WiFi/3G models only)
- Robust aluminium housing
- Anti-vibration mounting allows for installation at any angle
- Built-in GPS
- Internal G-sensor
- Up to 1164 hours recording
- Recordings saved to hard disk (protected by non-visible digital watermark) and in-built Mirror recording onto SD card
- Recording modes: normal, alarm and timer
- Configurable alarm trigger settings (speed, optional G-force, motion detection, video loss, voltage)

- Record images prior to alarm activation and after vehicle switched off
- MDR-Dashboard (full player) and MDR-Player (portable) with Google and MS Bing maps (English only)
- Search by date, time or triggered events
- Multi-level password protected access
- Mobile Caddy Unit directly pluggable to PC via USB-B port
- Remote control
- 8 x trigger Inputs, 2x trigger outputs and 1x12V power output
- Built-in HDD heater
- TV System: PAL/NTSC

### Image and Audio Quality

- High quality H.264 image compression
- ADPCM – audio compression
- Choice of 8 low to high resolution settings
- Record at between 1 and 25 frames per second, per channel

### Power

- Power consumption: 12 Watts
- Current: 5.5 Amps

### Durability & Standards

- Mechanical vibration: 1G
- Mechanical shock: 40G
- Operating temperature: -25 to +60°C
- EMC approved: E
- CE certified
- RoHS2 Compliant

## OPTIONAL EXTRAS



AC-306	Connects 1 Select camera to MDR and monitor	GB9090931
AC-307	Connects 1 Elite camera to MDR and monitor	GB9090932
MDR-400-RP01	Remote status & interface panel with panic button	GB9091186
MDR-06RPC	6m cable for Remote status & interface panel	GB9091187
MDR-400-GS01	External G-sensor	GB9091185
MDR-03GSC	3m G-sensor cable	GB9091188
MDR-408-1000-MCU	8 channel caddy with 1tb hdd	GB9091224
SD-32GB-IND	32GB industrial grade Class 10 SD card	GB9091189
SD-64GB-IND	64GB industrial grade Class 10 SD card	GB9091190
MDR-400-FPB-32	External SD Mirror-recorder in fireproof housing with 32Gb industrial grade Class 10 SD card	GB9091191

## 3G/WI-FI UPGRADES FOR MDR-408-1000

MDR-408GW-EXP-0	WiFi & 3G Expansion Module for MDR-408-1000 SD card not included	GB9091027
MDR-408G-EXP-0	3G Expansion Module for MDR-408-1000 SD card not included	GB9091028
MDR-408W-EXP-0	WiFi Expansion Module for MDR-408-1000 SD card not included	GB9091029

**MOBILE DIGITAL RECORDER**



<b>MDR-404-500</b>	<b>- 4 channel 500Gb hard disk recorder</b>	<b>GB9090791</b>
<b>MDR-404GW-500</b>	<b>- 4 channel 500Gb hard disk recorder with WiFi and 3G</b>	<b>GB9091018</b>
<b>MDR-404G-500</b>	<b>- 4 channel 500Gb hard disk recorder with 3G</b>	<b>GB9091016</b>
<b>MDR-404W-500</b>	<b>- 4 channel 500Gb hard disk recorder with WiFi</b>	<b>GB9091017</b>

- **9-32Vdc**
- **4 camera inputs**
- **8 trigger/alarm inputs**
- **Lockable and removable Mobile Caddy Unit**
- **Fast, easily downloadable recordings and data**
- **Size (WxHxD) 190 x 75 x 212mm**
- **3 year warranty**

**Main Contents**

- 1 x Mobile Digital Recorder with 2.5" 500Gb SATA HDD
- 1 x Remote control
- 1 x Trigger cable loom
- 1 x GPS antenna
- 1 x Security key
- 1 x 32Gb SD card
- 1 x Mounting bracket and screws
- 3G antenna (GB9091018 & GB9091017)
- WiFi antenna (GB9091016 & GB9091018)

**Features**

- Remotely access MDR units using wireless (WiFi models only) and/or Mobile network (3G models only)
- Mobile apps for remote view (WiFi/3G models only)
- Robust aluminium housing
- Anti-vibration mounting allows for installation at any angle
- Built-in GPS
- Up to 1164 hours recording
- Recordings saved to hard disk (protected by non-visible digital watermark) and in-built Mirror recording onto SD card
- Recording modes: normal, alarm and timer
- Configurable alarm trigger settings (speed, optional G-force, motion detection, video loss, voltage)

- Record images prior to alarm activation and after vehicle switched off
- MDR-Dashboard (full player) and MDR-Player (portable) with Google and MS Bing maps (English only)
- Search by date, time or triggered events
- Multi-level password protected access
- Mobile Caddy Unit directly pluggable to PC via USB-B port
- Remote control
- 8 x trigger Inputs, 2x trigger outputs and 1x12V power output
- Built-in HDD heater
- TV System: PAL/NTSC

**Image and Audio Quality**

- High quality H.264 image compression
- ADPCM – audio compression
- Choice of 8 low to high resolution settings
- Record at between 1 and 25 frames per second, per channel

**Power**

- Power consumption: 12 Watts
- Current: 6.9 Amps

**Durability & Standards**

- Mechanical vibration: 1G
- Mechanical shock: 40G
- Operating temperature: -25 to +60°C
- EMC approved: E
- CE certified
- RoHS2 Compliant

**OPTIONAL EXTRAS**



**AC-306** Connects 1 Select camera to MDR and monitor **GB9090931**

**AC-307** Connects 1 Elite camera to MDR and monitor **GB9090932**

**MDR-400-RP01** Remote status & interface panel with panic button **GB9091186**

**MDR-06RPC** 6m cable for remote status & interface panel **GB9091187**



**MDR-400-GS01** External G-sensor **GB9091185**

**MDR-03GSC** 3m G-sensor cable **GB9091188**

**MDR-404-500-MCU** 4 channel cady with 500GB HDD **GB9090937**

**SD-32GB-IND** 32Gb industrial grade Class 10 SD card **GB9091189**

**SD-64GB-IND** 64Gb industrial grade Class 10 SD card **GB9091190**



**MDR-400-FPB-32** External SD Mirror-recorder in fireproof housing with 32Gb industrial grade Class 10 SD card **GB9091191**

**Model**

**Part No:**

## EVENT DATA RECORDER

**EDR-101-008 – Event Data Recorder**

**GB9090810**



- 12-24Vdc
- 1 in-built camera
- 1 external camera input
- 1 video output
- Fast, easily downloadable recordings and data
- Size (WxHxD)  
85 x 49.5 x 25.5mm
- 1 year warranty

**Contents:**

- 1x Recorder
- 1x GPS Antenna
- 1x Power cable
- 1x Mounting Bracket & adhesive pad
- 1x 8Gb Micro SD card
- 1x Micro SD to SD adaptor

**Features**

- High definition video capture for clear incident recording
- 112° wide-angle camera lens
- 4 recording modes:
  - Normal
  - Event – shock sensor enables 10 seconds before and after an event to be recorded
  - Parking – movement engages event recording as above
  - Emergency – driver presses the function button
- Up to 4 hours recording on supplied micro SD card (supports up to 32Gb)
- Simultaneous normal and event recording
- Continuous recording with automatic overwriting of oldest data

- Audio function for additional event information
- GPS module for locating tracking
- Viewing software allows two cameras to be viewed, alongside speed, G-force levels and location
- Software allows still images (jpeg) to be created with embedded date and time

**Picture Quality**

- CMOS sensor
- Video resolution: HD + VGA 1280 x 720 pixels
- MPEG4 image compression allows high quality image resolution
- Choice of recorded image quality – low to high resolution
- Fast frame rate, 30 frames per second, for smooth images

**Durability & Standards**

- Mechanical vibration: 2.5G
- Operating temperature: -10 to +60°C
- CE self DoC

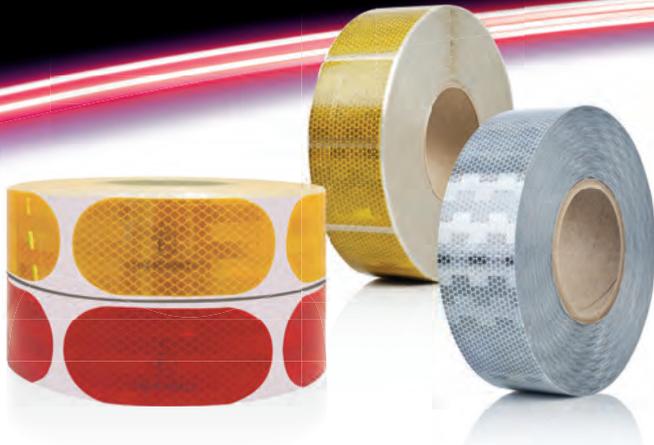
## OPTIONAL EXTRAS



<b>EDR-101-LOCK</b>	<b>SD card security lock</b>	<b>GB9090879</b>
<b>EDR-142C</b>	<b>Micro camera</b>	<b>GB9091155</b>
<b>EDR-101-VC</b>	<b>Video out cable</b>	<b>GB9090918</b>
<b>EDR-101-CPC</b>	<b>Cigar lighter power cable</b>	<b>GB9090919</b>



**HIGH QUALITY PARTS  
AS STANDARD**



## BE SAFE BE SEEN – CONSPICUITY TAPE

- Increases visibility and safety of vehicles.
- Visible for up to 1,000 metres at night.
- Helps to reduce accidents.
- Meets the regulatory requirements of ECE104 since July 2011.

Please contact your local Scania dealer for more details.

# Ultrasonic Obstacle Detection

Sensor systems to inform driver of obstacles within close proximity, whether moving or stationary. Perfect for road going commercial vehicles regularly operating in confined spaces or manoeuvring at low speeds.

## Which system is for you?

**Sidescan**<sup>®</sup> – 4 sensor system 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.

**Backscan**<sup>®</sup> – 4 sensor system 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.

**Cornerscan**<sup>™</sup> – 3 sensor system fitted to near side corner of vehicle cab detects objects in front near side blind spot. Minimises the risk of damage to the vehicle cab whilst manoeuvring at low speed.

**Frontscan**<sup>®</sup> – 4 sensor system 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.

**Stepscan**<sup>™</sup> – 2 sensor system fitted to near side cab step giving awareness to the driver of objects to the side when turning and reversing. Minimises the risk of damage to the vehicle cab from otherwise unseen objects.



# Ultrasonic obstacle detection

**Model**

**Part No:**

## BACKSCAN® ULTRASONIC DETECTION SYSTEM

**BS-4000W – Rear reversing sensor system**

**GB9091013**



- 4 sensor system
- 12-24Vdc
- 2.5m detection range – outer sensors 2.5m/0.6m (selectable via dip switch)
- Graduated visual and audible distance warning display
- Underslung and flush-mount fixings included
- 50cm compensation range for sensors fitted inboard of vehicle rear (selectable via dip switch)
- 2 year warranty

### Contents

- 4 x sensors
- Visual and audible display
- 4 x 0° flush mount fixings
- 4 x 11° flush mount fixings
- 4 x underslung fixings
- Waterproof control box
- 15m display cable
- 4 x 2.5m sensor cables

### Features

- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false alarms from tow-hooks and other ancillary equipment that intrudes in the first 100cm of the detection zone
- Self-diagnostic function
- 1 x Trigger output

### Durability & Standards

- Operating temperature: -30 to +80°C
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- EMC approved: E

### Power

- Power consumption: 2.4 Watts
- Current: 200mA
- 1.5m detection range model also available – Please contact us for details

## REQUIRED ADDITIONS FOR ARTICULATED VEHICLES

SK-15-04	Truck/trailer camera/sensor cable kit – see p31	GB9091130
SK-UDS-05	Truck/trailer sensor only cable kit	GB9090812
UDS-10BC	10m Buzzer/display cable	GB9091118

## OPTIONAL EXTRA

UDS-RELAY-24	Trigger-out diode protected relay 24Vdc	GB9091137
UDS-RELAY-12	Trigger-out diode protected relay 12Vdc	GB9091138

## CORNERSCAN® ULTRASONIC DETECTION SYSTEM

**CS-3100 – Corner sensor system**

**GB9091273**



- 3 sensor system
- 12-24Vdc
- 0.6/1.0m detection range – (selectable via dip switch)
- Audible distance warning
- Flush-mount
- 2 levels of sensitivity – (selectable via dip switch)
- 2 year warranty

### Contents

- 3 x sensors
- Buzzer
- 3 x 11° flush mount fixings
- 3 x 18° flush mount fixings
- 3 x 26° flush mount fixings
- Waterproof control box
- 2.5m buzzer cable
- 3 x 2.5m sensor cables

### Features

- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false alarms from ancillary equipment that intrudes in the first 100cm of the detection zone
- Self-diagnostic function

- Mute function – buzzer silences if detected object is stationary

### Durability & Standards

- Operating temperature: -30 to +80°C
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- EMC approved: E

### Power

- Power consumption: 2.4 Watts
- Current: 200mA

## RECOMMENDED EXTRA

LS-60-A	Low speed trigger module (enables sensors below designated speed)	GB9090788
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Model

Part No:

### SIDESCAN® ULTRASONIC DETECTION SYSTEM

SS-4100W – Side sensor system

GB9091272

SS-4100W-000 – Side sensor system low speed trigger module and turn indicator sensor kit

GB9091281

Includes LS-60-A low speed trigger module and TS-001ECU turn indicator sensor



- 4 sensor system
- 12-24Vdc
- 1.0/1.5m detection range – (selectable via dip switch)
- Audible distance warning
- Underslung and flush-mount fixings included
- 2 levels of sensitivity – (selectable via dip switch)
- 2 year warranty

#### Contents

- 4 x sensors
- Buzzer
- 4 x 0° flush mount fixings
- 4 x 11° flush mount fixings
- 4 x underslung fixings
- Waterproof control box
- 10m buzzer cable
- 4 x 4.5m sensor cables
- 2 x 2.5m extension cables

#### Features

- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false alarms from ancillary equipment that intrudes in the first 100cm of the detection zone
- Self-diagnostic function

- Mute function – buzzer silences if detected object is stationary

#### Durability & Standards

- Operating temperature: -30 to +80°C
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- EMC approved: E

#### Power

- Power consumption: 2.4 Watts
- Current: 200mA

### ADDITIONS FOR ARTICULATED VEHICLES

SK-15-04	Truck/trailer camera/sensor cable kit - see p31	GB9091130
SK-UDS-05	Truck/trailer sensor only cable kit (required)	GB9090812
UDS-10BC	10m display cable (required)	GB9091118
SS-4000W	Additional Sidescan sensor system for cab (optional)	GB9090785

### RECOMMENDED EXTRA



LS-60-A	Low speed trigger module enables sensors below designated speed	GB9090788
TS-001ECU	Turn indicator trigger for system activation	GB9090787

### OPTIONAL EXTRA

SS-BC-08	Backchat speaking alarm with side turn warning for cyclists/pedestrians Note: TS-001ECU Turn indicator trigger is required	GB9090786
TCO-47-01	Latched auto-reset Backalarm cut-out (dash mount)	GB9090673

### EXTENSION CABLES

UDS-2.5BC	Buzzer/display extension cable 2.5m	GB9091119
UDS-10BC	Buzzer/display extension cable 2.5m	GB9091118
UDS-15BC	Buzzer/display extension cable 15m	GB9091121
UDS-2.5SC	Sensor extension cable 2.5m	GB9090984
UDS-4.5SC	Sensor extension cable 4.5m	GB9090952

# Ultrasonic obstacle detection

**Model**

**Part No:**

## FRONTSCAN® ULTRASONIC DETECTION SYSTEM

**FS-4000W – Front sensor system**

**GB9091122**



- 4 sensor system
- 12-24Vdc
- 2.1m/1.0m detection range – outer sensors can be reduced to 0.6m (selectable via dip switches)
- Audible distance warning
- Flush-mount
- 2 year warranty

**Contents**

- 4 x sensors
- Buzzer
- 4 x 11° flush mount fixings
- 4 x 18° flush mount fixings
- 4 x 26° flush mount fixings
- Waterproof control box
- 2.5m buzzer cable
- 4 x 2.5m sensor cables

**Features**

- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false alarms from tow-hooks and other ancillary equipment that intrudes in the first 100cm of the detection zone
- Self-diagnostic function
- 1 x Trigger output

**Durability & Standards**

- Operating temperature: -30 to +80°C
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- EMC approved: E

**Power**

- Power consumption: 2.4 Watts
- Current: 200mA



### RECOMMENDED EXTRA

**LS-60-A**

**Low speed trigger module**

(enables sensors below designated speed)

**GB9090788**

### OPTIONAL EXTRA

**UDS-RELAY-24**

**Trigger-out diode protected relay 24Vdc**

**GB9091137**

**UDS-RELAY-12**

**Trigger-out diode protected relay 12Vdc**

**GB9091138**

## STEPSCAN™ ULTRASONIC DETECTION SYSTEM

**ST-2100 – Step sensor system**

**GB9091274**

**ST-2100-60-A – Step sensor system and low speed trigger module**

**GB9091282**

Includes UDS-4.5SC 4.5m extension cable



- 2 sensor system
- 12-24Vdc
- 0.6/1.0m detection range – (selectable via dip switch)
- Audible distance warning
- Flush-mount
- 2 levels of sensitivity – (selectable via dip switch)
- 2 year warranty

**Contents**

- 2 x sensors
- Buzzer
- 2 x 11° flush mount fixings
- 2 x 18° flush mount fixings
- 2 x 26° flush mount fixings
- Waterproof control box
- 2.5m buzzer cable
- 2 x 2.5m sensor cables

**Features**

- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false alarms from ancillary equipment that intrudes in the first 100cm of the detection zone
- Self-diagnostic function

- Mute function – buzzer silences if detected object is stationary

**Durability & Standards**

- Operating temperature: -30 to +80°C
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- EMC approved: E

**Power**

- Power consumption: 2.4 Watts
- Current: 200mA



### RECOMMENDED EXTRA

**LS-60-A**

**Low speed trigger module**

enables sensors below designated speed

**GB9090788**

# Radar Obstacle Detection

Informs driver of distance between vehicle and obstacles, whether moving or stationary.

## Which model is for you?

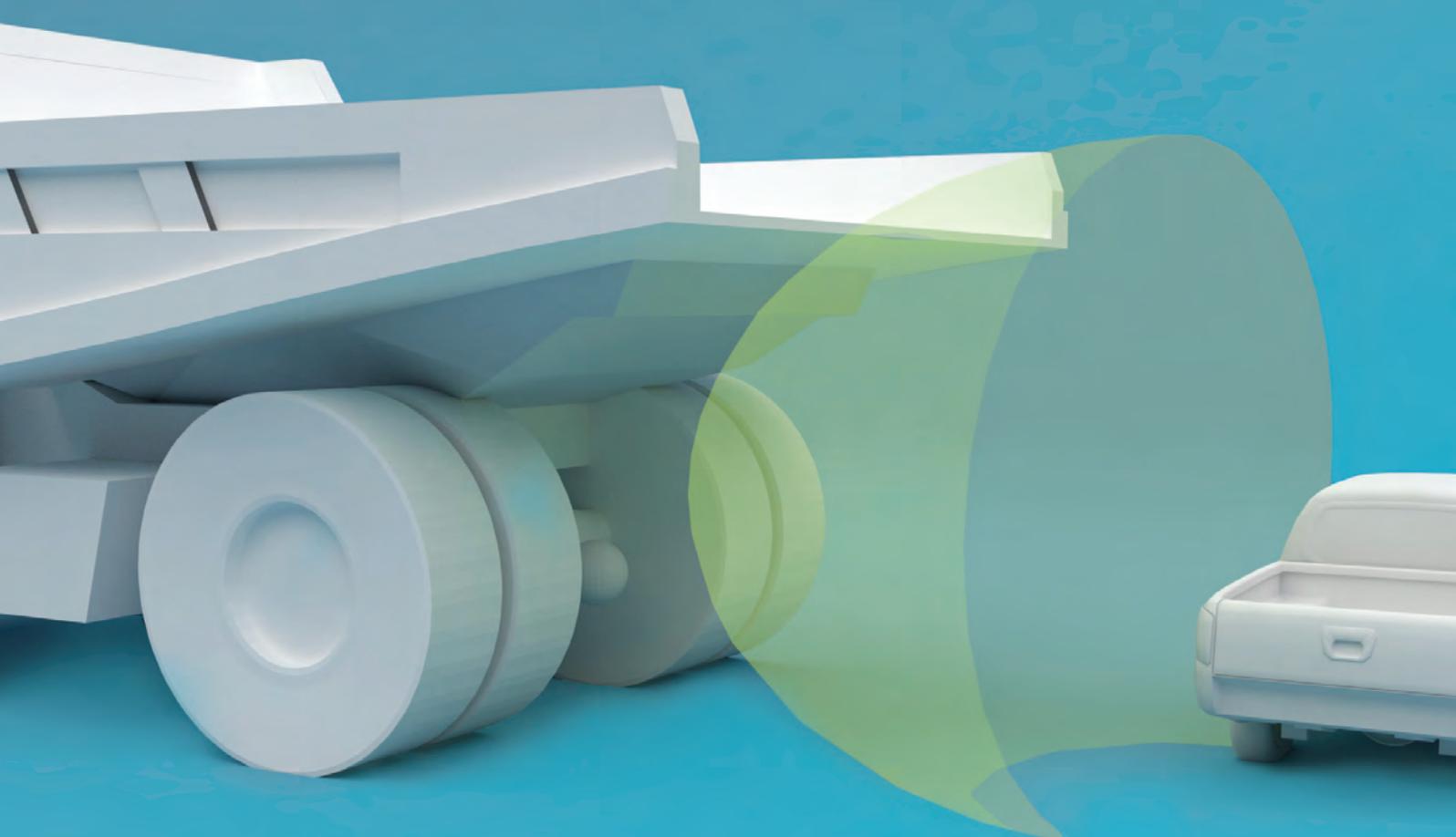
### Programmable

Top of the range programmable system allowing bespoke detection areas up to 30m in length and 10m in width, with the ability to calibrate out fixed objects or bodywork.



### Fixed

Fixed detection length and width. Ideal on machines where no calibration is required. Detection range of up to 6 metres.



# Backsense® Radar obstacle detection

Model

Part No:

## PROGRAMMABLE BACKSENSE® OBSTACLE DETECTION

**BS-8000 – Programmable detection range**

Sensor, AV display, 9m cable

**GB9091159**



In-cab display

- 12-24Vdc
- **Detection length: 3 to 30m**
- **Detection width: 2 to 10m**
- **Rugged design for harsh environmental conditions**
- **Sensor size (WxHxD)  
217 x 129 x 50mm**
- **IP69K sensor**
- **2 year warranty**

### Features

- Frequency modulated continuous wave (FMCW) radar technology
- Effectively detects stationary, moving and multiple objects
- 1 activation input
- 1 trigger output
- Programmable:
  - Detection area
  - Blind zones - system ignores fixed objects
  - Trigger activation
  - Buzzer
- 5 stage audible and visual distance warning display
- Resistant to water, moisture, dust, vibration, heat, cold, mud and glare

### Power

- Current: 0.8 Amps
- Power consumption: 8 Watts

### Durability & Standards

- Mechanical shock: 100G
- Mechanical vibration: 8.3G
- Operating temperature: -40 to +85°C
- CE marked
- EMC approved: E
- BS EN 13309: 2010
- ISO13766: 2006

## FIXED BACKSENSE® OBSTACLE DETECTION

**BS-7030 – 3m detection range, 2.5m width**

Sensor, AV display, 9m cable

**GB9091156**

**BS-7045 – 4.5m detection range, 3.5m width**

Sensor, AV display, 9m cable

**GB9091157**

**BS-7060 – 6m detection range, 4.5m width**

Sensor, AV display, 9m cable

**GB9091158**



In-cab display

- 12-24Vdc
- **Maximum detection range of 6m**
- **Rugged design for harsh environmental conditions**
- **Sensor size (WxHxD)  
217 x 129 x 50mm**
- **IP69K sensor**
- **2 year warranty**

### Features

- Frequency modulated continuous wave (FMCW) radar technology
- Effectively detects stationary, moving and multiple objects
- 1 activation input
- 1 trigger output
- 5 stage audible and visual distance warning display
- Resistant to water, moisture, dust, vibration, heat, cold, mud and glare

### Power

- Current: 0.6 Amps

### Durability & Standards

- Mechanical shock: 100G
- Mechanical vibration: 8.3G
- Operating temperature: -40 to +85°C
- CE marked
- EMC approved: E
- BS EN 13309: 2010
- ISO13766: 2006

## EXTENSION CABLES

**BS-05DCX – 5m extension cable**

**GB9091160**

**BS-09DCX – 9m extension cable**

**GB9091161**

**BS-25DCS – 25m extension cable (Display end connector supplied loose)**

**GB9091022**

## OPTIONAL EXTRAS

**BKT-017 – Adjustable radar bracket**

with 105mm depth bracket mounting arms

**GB9091163**

**BKT-018 – Low-profile adjustable radar bracket**

**GB9091015**



# Reversing & Warning Alarms

## Reversing & Warning Alarms

Vital safety devices needed to warn workers and pedestrians that a vehicle is manoeuvring. Our range includes bbs-tek® white sound® alarms; smart alarms which adjust to the ambient noise level; and speaking alarms, which provide a real speech warning of imminent danger.

### Which alarm is for you?

#### Heavy duty

For plant, quarry and construction machines or environments with high ambient noise.



#### Medium duty

Ideal for commercial road going vehicles and environments with mid-level ambient noise.



#### bbs-tek® white sound®

The safest alarms in the world due to their instant locatability and directional sound. The multi-frequency alarms are only heard in the danger zone, thus eliminating noise nuisance for local residents.



**Model**

**Part No:**

## WHITE SOUND® SMART REVERSING ALARM

**SA-BBS-107 – Self-adjusting heavy-duty – 87-107 Decibels**

**GB9091062**



- 12-24Vdc
- IP68
- Size (WxHxD)  
172 x 79 x 95mm
- Lifetime warranty

**Features**

- Alarm continually adjusts to 5-10dB above ambient
- Multi-frequency broadband sound
- Instantly locatable
- Sound confined to danger area
- Eliminates noise nuisance
- Sounder unit: Driver
- Hole centres (mm): 153

**Power**

- Current: Max 1 Amp

**Durability & standards**

- Mechanical vibration: 10G
- Operating temperature: -40 to +85°C
- CE marked
- EMC approved: E
- SAE J994

## WHITE SOUND® SMART REVERSING ALARM

**SA-BBS-97 – Self adjusting – medium duty – 77-97 Decibels**

**GB9090789**

**SA-BBS-97HV – Self adjusting – electric forklift – 77-97 Decibels**

**GB9091061**



- 12-24Vdc
- 36-80Vdc (HV)
- IP68
- Size (WxHxD)  
127 x 76 x 65mm
- Lifetime warranty

**Features**

- Alarm continually adjusts to 5-10dB above ambient
- Multi-frequency white sound alarm
- Instantly locatable
- Sound confined to danger area
- Eliminates noise nuisance
- Sounder unit: Driver
- Hole centres (mm): 98-108

**Power**

- Current: Max 1 Amp

**Durability & standards**

- Mechanical vibration: 10G
- Operating temperature: -40 to +85°C
- EMC approved: E
- SAE J994
- NAS/PIEK approved for night-time delivery

## WHITE SOUND® REVERSING ALARM

**BBS-107 – Heavy duty – 107 Decibels**

**GB9091052**

**BBS-102 – Heavy duty – 102 Decibels**

**GB9091051**



- 12-24Vdc
- IP68
- Size (WxHxD)  
172 x 79 x 95mm
- Lifetime warranty

**Features**

- Multi-frequency broadband sound
- Instantly locatable
- Sound confined to danger area
- Eliminates noise nuisance
- Sounder unit: Driver
- Hole centres (mm): 153

**Power**

- Current: Max 1 Amps

**Durability & standards**

- Mechanical vibration: 10G
- Operating temperature: -40 to +85°C
- CE marked
- EMC approved: e
- SAE J994

Model

Part No:

### WHITE SOUND® REVERSING ALARM



- BBS-97 – Medium duty – 97 Decibels**
- BBS-92 – Medium duty – 92 Decibels**
- BBS-87 – Medium duty – 87 Decibels**
- BBS-82 – Medium duty – 82 Decibels**

- GB9009021**
- ST10071850**
- GB9090841**
- GB9091050**



- 12-24Vdc
- IP68
- Size (WxHxD)  
105x65x37mm (BBS-97/92)  
105x65x32mm (BBS-87/82)
- Lifetime warranty

**Features**

- Multi-frequency broadband sound
- Instantly locatable
- Sound confined to danger area
- Eliminates noise nuisance
- Sounder unit: Speaker
- Hole centres (mm): 76

**Power**

- Current: Max 0.5 Amps

**Durability & standards**

- Mechanical vibration: 10G
- Operating temperature: -40 to +85°C
- CE marked
- EMC approved: E
- SAE J994
- NAS/PIEK approved for night-time delivery (BBS-82 only)

### WHITE SOUND® REVERSING ALARM



ADR version



- BBS-92HV – Electric forklift – 92 Decibels**
- BBS-82HV – Electric forklift – 82 Decibels**
- BBS-92ADR – Petrol tanker – 92 Decibels**

- GB9091063**
- GB9091059**
- GB9091091**

- 12-24Vdc
- 36-80Vdc (HV)
- IP68
- Size (WxHxD)  
127 x 76 x 65mm
- Lifetime warranty

**Features**

- Multi-frequency broadband sound
- Instantly locatable
- Sound confined to danger area
- Eliminates noise nuisance
- Sounder unit: Speaker
- Hole centres (mm): 98–108

**Power**

- Current: Max 0.3 Amps

**Durability & standards**

- Mechanical vibration: 10G
- Operating temperature: -40 to +85°C
- CE marked
- EMC approved: E
- SAE J994



HIGH QUALITY PARTS  
AS STANDARD



## LIGHT BARS, BEACONS AND WARNING LIGHTS

VRS offer a comprehensive range of automotive light bars, flashing beacons and warning lights.

Please contact your local Scania dealer for more details.

# Speaking alarms

Model

Part No:

## SPEAKING ALARM

BC-01HP – Single reversing message – 110 Decibels  
 BC-01HP(B) – Bespoke single message – 110 Decibels

GB9091040  
 GB9091057



- 12-24Vdc
- IP68
- Size (WxHxD)  
116 x 115 x 117.5mm
- 2 year warranty

### Features

- Real speech alarm
- \* BC-01HP message "Ssh! Stand well clear, vehicle reversing..."
- Bespoke message up to 8 seconds, under 4 seconds for best speech quality
- Sounder unit: Speaker
- Hole centres (mm): 102

### Power

- Current: 0.5 Amps

### Durability & standards

- CE marked
- EMC approved: E

## NIGHTSHIFT® SPEAKING ALARM

BC-01(NS) – Single reversing message – Nightshift – 90 or 0 Decibels  
 BC-01(NS-B) – Bespoke single message – Nightshift – 90 or 0 Decibels

GB9091038  
 GB9091056



- 12-24Vdc
- IP68
- Size (WxHxD)  
122 x 84 x 50mm
- 2 year warranty

### Features

- Real speech alarm
- \* BC-01(NS) message "Ssh! Stand well clear, vehicle reversing..."
- Bespoke message up to 8 seconds, under 4 seconds for best speech quality
- Double engage reverse to cut-out or reduce sound
- Sounder unit: Speaker
- Hole centres (mm): 102

### Power

- Current: 0.5 Amps

### Durability & standards

- CE marked
- EMC approved: E

## SPEAKING ALARM

BC-01 – Single reversing message – 90 Decibels  
 BC-01(B) – Bespoke single message – 90 Decibels  
 BC-02(B) – Bespoke dual message – 90 Decibels

GB9090790  
 GB9090917  
 GB9091036



- 12-24Vdc
- IP68
- Size (WxHxD)  
122 x 84 x 50mm
- 2 year warranty

### Features

- Real speech alarm
- \* BC-01 message "Ssh! Stand well clear, vehicle reversing..."
- Bespoke message up to 8 seconds, under 4 seconds for best speech quality
- Sounder unit: Speaker
- Hole centres (mm): 102

### Power

- Current: 0.5 Amps

### Durability & standards

- CE marked
- EMC approved: E

## ALL MAKES PARTS, ALL IN ONE PLACE

Extensive range covering truck and trailer – plus a market-leading selection of workshop consumables and lubricants.

- Over 50,000 parts in range
- Nationwide coverage
- Parts delivery service available
- Comprehensive warranty cover
- Industry leading service levels

For more information, please visit: [www.vehiclerelatedservices.co.uk](http://www.vehiclerelatedservices.co.uk)

**SPEAKING HANDBRAKE WARNING ALARM**



2 wire version

**BC-01(H/Brake) – Single message 2 wire – 90 Decibels**  
**BC-01(4W)(H/Brake) – Single message 4 wire – 90 Decibels**

**GB9091048**  
**GB9090925**

- 12-24Vdc
- IP68
- Size (WxHxD)  
122 x 84 x 50mm
- 2 year warranty

**Features**

- Real speech alarm
- \* Message "Bleep! Handbrake not applied..."
- Sounder unit: Speaker
- Hole centres (mm): 102

**Power**

- Current: 0.5 Amps

**Durability & standards**

- CE marked
- EMC approved: E

**SPEAKING SIDE TURN WARNING ALARM**



**SS-BC-08 – Single side-turn message – 90 Decibels**

**GB9090786**

- 12-24Vdc
- IP68
- Size (WxHxD)  
122 x 84 x 50mm
- 2 year warranty

**Features**

- Real speech alarm
- \* Message "Ssh! Caution. Truck turning left..."
- Sounder unit: Speaker
- Hole centres (mm): 102

**Power**

- Current: 0.5 Amps

**Durability & standards**

- CE marked
- EMC approved: E

Note: TS-001ECU Turn indicator trigger is required GB9090787

**SPEAKING ATTACK ALARM**



**BC-AA(BUS) – Single bus specific message – 110 Decibels**  
**BC-AA(B) – Single bespoke message – 110 Decibels**

**ST10077130**  
**GB9091065**

- 12-24Vdc
- IP68
- Size (WxHxD)  
116 x 115 x 117.5mm
- 2 year warranty

**Features**

- Real speech alarm
- Activated by panic button, repeats continuously until deactivated by hidden switch
- Sounder unit: Speaker
- Hole centres (mm): 48

**Power**

- Current: 0.5 Amps

**Durability & standards**

- CE marked
- EMC approved: E



**HIGH QUALITY PARTS**  
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**VRS**  
VEHICLE RELATED SERVICES

**Model**

**Part No:**

## VEHICLE INTERCOM



**BC-VI – Normally open channel rear to cab; button press cab to rear**  
**BC-VI-2 – Normally closed channel; button press communication**

**GB9091047**  
**GB9091049**

- 12-24Vdc
- IP68
- Size (WxHxD)  
122 x 84 x 50mm
- 2 year warranty

**Features**

- Two-way communication system
- Master unit volume control: 80–95dB
- Includes master unit, slave unit and 25m cable
- Sounder unit: Speaker
- Hole centres (mm): 102

**Power**

- Current: 0.5 Amps

**Durability & standards**

- CE marked

## ALARM ANCILLARIES



**TCO-47 – Timed auto-reset Backalarm cut-out (dash mount)**

**GB9090941**

- 12-24Vdc
- 2 year warranty

**Features**

- Single touch timed relay
- Allows driver to cut-out alarm if reversing between the hours of 11.30pm–7.00am
- Auto-resets after 3–4 mins delay

**Durability and Standards**

- CE marked
- EMC approved

## ALARM ANCILLARIES



**TCO-47-01 – Latched Side-turn alarm cut-out (dash mount)**

**GB9090673**

- 12-24Vdc
- 2 year warranty

**Features**

- Single touch timed relay
- Allows driver to cut-out alarm between the hours of 11.30pm–7.00am
- Resets by switch or ignition

**Durability and Standards**

- CE marked
- EMC approved

## ALARM ANCILLARIES



**NS-2 – Nightshift Backalarm cut-out switch**

**GB9091037**

**NS-3 – Nightshift Backalarm cut-out switch (auto gearbox)**

**GB9091053**

- 12-24Vdc
- IP68
- 2 year warranty

**Features**

- Double engage reverse to cut-out alarm
- Resets when reverse gear disengaged (longer time delay for NS-3)
- No wiring necessary to cab

**Durability and Standards**

- CE marked
- EMC approved

## Which kit is for you?

### FORS and CLOCS Compliant Kits\*

The Construction Logistics of Community Safety (CLOCS) and Fleet Operator Recognition Scheme (FORS) are nationwide vehicle specifications that encourage best practice and require the fitment of vehicle safety devices.

FORS is an accreditation scheme for commercial vehicle operators with three levels; Bronze, Silver and Gold. Safety equipment is a requirement at Silver and Gold level.

CLOCS is aligned with FORS at Silver level.



### Backeye®360 kits

Brigade's recordable and non-recordable Backeye®360 kits for rigid and tipper vehicles are designed to eliminate blind spots. With additional components these kits can be made FORS/CLOCS\* compliant.



\*Recommendations, products and specifications are subject to change.

# FORS & CLOCS Compliance Kits

Model

Part No:

## RIGID AND TIPPER VEHICLES FORS SILVER AND CLOCS COMPLIANT KIT

FORS Silver and CLOCS compliance kit – Non Recordable

GB9091277



- 1 x SS-4100W – side sensor system GB9091272
- 1 x SS-BC-08 – side turn warning alarm GB9090786
- 1 x TCO-47/1 – latched auto reset switch GB9090673
- 1 x TS-001ECU – turn indicator control unit GB9090787
- 1 x LS-60-A – low speed trigger module GB9090788
- 1 x TCO-47 – auto reset switch GB9090941
- 1 x SA-BBS-97 – smart bbs® reversing alarm GB9090789
- 1 x VBV-L405 – 5m camera cable GB9090796
- 1 x VBV-300C – side camera GB9090781
- 1 x SM-3XX-25 – surface mounting adaptor GB9090782
- 1 x VBV-770-000 – reverse camera, 7" digital LCD monitor, 20m cable GB9090956

If the customer intends to upgrade to a 4 camera recordable system in the future, please order kit number GB9091280 which contains the above contents with a VBV-320C rather than a VBV-300C.

## RIGID AND TIPPER VEHICLES FORS GOLD COMPLIANT KIT

FORS Gold compliance kit – Recordable

GB9091276



- 1 x SS-4100W – side sensor system GB9091272
- 1 x SS-BC-08 – side turn warning alarm GB9090786
- 1 x TCO-47/1 – latched auto reset switch GB9090673
- 1 x TS-001ECU – turn indicator control unit GB9090787
- 1 x LS-60-A – low speed trigger module GB9090788
- 1 x TCO-47 – auto reset switch GB9090941
- 1 x SA-BBS-97 – smart bbs® reversing alarm GB9090789
- 1 x MDR-404-500 – mobile digital recorder GB9090791
- 3 x AC-306 – adaptor cables GB9090931
- 1 x AC-014 – forward camera adaptor cable GB9090905
- 1 x VBV-XM003 – monitor extension lead GB9090798
- 3 x VBV-L405 – 5m camera cable GB9090796
- 1 x DMC-1025 – forward facing camera GB9090783
- 2 x VBV-320C – side camera GB9090780
- 2 x SM-3XX-25 – surface mounting adaptor GB9090782
- 1 x VBV-770-000 – reverse camera, 7" digital LCD monitor, 20m cable GB9090956

**ARTICULATED VEHICLES  
FORS SILVER AND CLOCS COMPLIANT KIT**

FORS Silver and CLOCS compliance kit – Non Recordable

GB9091279



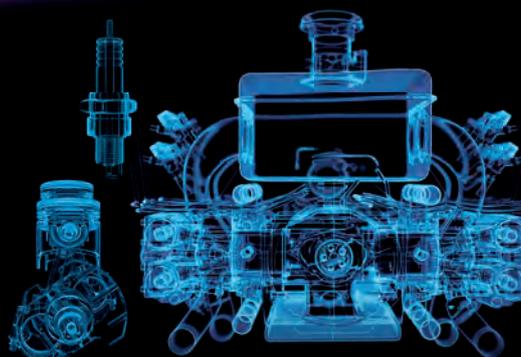
- 1 x CS-3100 – corner sensor system GB9091273
- 1 x SS-BC-08 – side turn warning alarm GB9090786
- 1 x TCO-47/1 – latched auto reset switch GB9090673
- 1 x TS-001ECU – turn indicator control unit GB9090787
- 1 x LS-60-A – low speed trigger module GB9090788
- 1 x TCO-47 – auto reset switch GB9090941
- 3 x UDS-4.5SC – 4.5m extension cable GB9090952
- 3 x UDS-00SS – zero degree insert GB9090929
- 2 x UDS-00SM – sensor mount GB9090930
- 2 x UDS-00SMP – sensor mount pad GB9091290
- 1 x SA-BBS-97 – smart bbs® reversing alarm GB9090789
- 1 x VBV-L405 – 5m camera cable GB9090796
- 1 x VBV-320C – side camera GB9090780
- 1 x VBV-L410 – 10m cable for cab GB9090974
- 1 x VSP-47A – 7-pin bulkhead socket GB9090847
- 1 x SC-07-24S – coiled cable GB9090846
- 1 x VSP-47B – 7-pin bulkhead socket GB9091075
- 1 x SM-3XX-25 – surface mounting adaptor GB9090782
- 1 x VBV-770-000 – reverse camera, 7" digital LCD monitor, 20m cable GB9090956



**HIGH QUALITY PARTS  
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NATIONWIDE COVERAGE



**Model**

**Part No:**

## TIPPER VEHICLES BACKEYE® 360 CAMERA KIT

**Backeye®360 Recordable Camera Monitor Kit**

**GB9090880**



• 1 x BN360-000 – Backeye®360 System	GB9090885
• 1 x BN360-L105 – 5m camera cable	GB9090886
• 2 x BN360-L110 – 10m camera cable	GB9090887
• 3 x BN360-L115 – 15m camera cable	GB9090888
• 1 x VBV-770M – 7" digital LCD monitor	GB9090784
• 1 x VBV-XM003 – monitor extension lead	GB9090798
• 1 x MDR-404-500 – mobile digital recorder	GB9090791
• 4 x AC-305 – adaptor cable	GB9090940
• 1 x BN360-100C-BKT01 – mounting bracket	GB9090891
• 2 x BN360-100C-BKT02 – adjustable bracket	GB9090892
• 2 x BN360-100C-BKT03 – camera deflector	GB9090893

**Backeye®360 Non-Recordable Camera Monitor Kit**

**GB9090881**



• 1 x BN360-000 – Backeye®360 System	GB9090885
• 1 x BN360-L105 – 5m camera cable	GB9090886
• 2 x BN360-L110 – 10m camera cable	GB9090887
• 3 x BN360-L115 – 15m camera cable	GB9090888
• 1 x VBV-770M – 7" digital LCD monitor	GB9090784
• 1 x VBV-XM003 – monitor extension lead	GB9090798
• 1 x BN360-100C-BKT01 – mounting bracket	GB9090891
• 2 x BN360-100C-BKT02 – adjustable bracket	GB9090892
• 2 x BN360-100C-BKT03 – camera deflector	GB9090893

## ADDITIONAL COMPONENTS FOR FORS SILVER AND CLOCS

The below component kit (GB9091278) in addition to the above (GB9090880 and GB9090881) forms a FORS Silver and CLOCS compliant package.

**Backeye®360 Compliance Kit**

**GB9091278**



• 1 x SS-4100W – side sensor system	GB9091272
• 1 x SS-BC-08 – side turn warning alarm	GB9090786
• 1 x TCO-47-1 – latched auto reset switch	GB9090673
• 1 x TS-001ECU – turn indicator control unit	GB9090787
• 1 x LS-60-A – low speed trigger module	GB9090788
• 1 x TCO-47 – auto reset switch	GB9090941
• 1 x SA-BBS-97 – smart bbs® reversing alarm	GB9090789

**RIGID VEHICLES  
BACKEYE®360 CAMERA KIT**

**Backeye®360 Recordable Camera Monitor Kit**

**GB9090882**



- 1 x BN360-000 – Backeye®360 System GB9090885
- 1 x BN360-L105 – 5m camera cable GB9090886
- 2 x BN360-L115 – 15m camera cable GB9090888
- 1 x BN360-L120 – 20m camera cable GB9090889
- 1 x VBV-770M – 7” digital LCD monitor GB9090784
- 1 x VBV-XM003 – monitor extension lead GB9090798
- 1 x MDR-404-500 – mobile digital recorder GB9090791
- 4 x AC-305 – adaptor cable GB9090940
- 2 x BN360-100C-BKT02 – adjustable bracket GB9090892
- 2 x BN360-100C-BKT03 – camera deflector GB9090893

**Backeye®360 Non-Recordable Camera Monitor Kit**

**GB9090883**



- 1 x BN360-000 – Backeye®360 System GB9090885
- 1 x BN360-L105 – 5m camera cable GB9090886
- 2 x BN360-L115 – 15m camera cable GB9090888
- 1 x BN360-L120 – 20m camera cable GB9090889
- 1 x VBV-770M – 7” digital LCD monitor GB9090784
- 1 x VBV-XM003 – monitor extension lead GB9090798
- 2 x BN360-100C-BKT02 – adjustable bracket GB9090892
- 2 x BN360-100C-BKT03 – camera deflector GB9090893

**ADDITIONAL COMPONENTS FOR FORS SILVER AND CLOCS**

The below component kit (GB9091278) in addition to the above (GB9090882 and GB9090883) forms a FORS Silver and CLOCS compliant package.

**Backeye®360 Compliance Kit**

**GB9091278**



- 1 x SS-4100W – side sensor system GB9091272
- 1 x SS-BC-08 – side turn warning alarm GB9090786
- 1 x TCO-47-1 – latched auto reset switch GB9090673
- 1 x TS-001ECU – turn indicator control unit GB9090787
- 1 x LS-60-A – low speed trigger module GB9090788
- 1 x TCO-47 – auto reset switch GB9090941
- 1 x SA-BBS-97 – smart bbs® reversing alarm GB9090789

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## Peace of mind from Brigade

The quality of our product range is the cornerstone on which the continuing relationship with our customers is built. To reflect our confidence in the reliability of our products, some have a lifetime warranty. Many others have a 3 year warranty and the rest have a 2 or 1 year warranty. The following quick reference chart indicates the warranty available on Brigade products.



### Lifetime Warranty (covers product for the life of vehicle)

bbs-tek® reversing alarms (all models featured in this catalogue)  
Self-adjusting Backalarms (SA-range)



### 5 Year Warranty

Selected Elite camera monitor products are eligible for a free extended warranty of an additional two years, taking the total warranty to five years.

In order to take advantage of the additional two year warranty, each qualifying Elite CMS product will need to be registered on the Brigade website:

[brigade-electronics.com/extendedwarranty](http://brigade-electronics.com/extendedwarranty)

Offer excludes onsite warranty and is an extension of the standard three year warranty on selected Elite products.

Exclusions apply; see T&C for further details.



### 3 Year Warranty

Elite CMS range (all monitors and cameras with a BE prefix)  
MDR digital recorders



### 2 Year Warranty

All products aside those specifically listed



### 1 Year Warranty

Essential camera monitor range  
EDR digital recorder

## Warranty Terms and Conditions

Brigade warrants all goods to be free from defect in material and workmanship in normal use provided that they have been installed and operated in accordance with the instructions supplied. The commencement date of all warranties is the date of delivery to the purchaser unless otherwise agreed in writing by Brigade. The period during which the warranty applies is stated above. Brigade make no other warranty, express or implied, with respect to the goods, their marketability, quality or fitness for any particular use or purpose. In particular, but without prejudice to the general provisions of the conditions of sale, no responsibility is assumed for incidental or consequential loss by reason of any warranty express or implied.

Full details of Brigade's Terms and Conditions are contained in the Price List.

Brigade Electronics Group Plc reserves the right to change terms, conditions and specifications shown in this catalogue at any time.

**Amp**

Unit of electric current.

**Approved for indirect vision**

Product meets directives (e.g. 2003/97/EC, 2007/38/EU) or standards (e.g. Regulation 46) with regard to its use on vehicles for indirect vision e.g. giving visibility in otherwise blind spots.

**Auto-trigger**

Enables automatic triggering of an action i.e. display of rear camera view when reverse gear engaged.

**A/V input/output**

Communication connection between electronic devices.

**Input**

Receives audio/visual signals such as from DVD or satellite navigation.

**Output**

Sends audio/visual signals to other devices such as to mobile digital recorder.

**Brightness**

Brightness of the picture displayed on a monitor, measured in candelas per square metre (cd/m<sup>2</sup>). Higher the measure the brighter the picture.

**CCD (Charged-Coupled Device)**

A tiny photocell used in cameras to convert light into a digital signal.

**Contrast**

Light intensity ratio of a display device between darkest and lightest colour produced.

**CE mark**

Confirmation that a product is in conformity with the essential requirements of any applicable directives e.g. 2004/108/EC (relating to Electromagnetic Compatibility).

**Decibel (dB)**

Unit of measure of the pressure (intensity) of sound. The higher the rating the more intense the sound.

**EMC (Electro-magnetic compatibility)**

A test to determine the unwanted effects of electromagnetic interference.

**E**

Complies to United Nations Commission for Europe (UN ECE) standards e.g. ECE 10.03

**e**

Complies to Council of the European Union standards e.g. 2006/28/EC, 2009/19/EC

**FCC mark**

Certification for electromagnetic interference on products manufactured or sold in the United States which comply with the Federal Communications Commission.

**Frequency**

Number of times a sound source vibrates per unit of time, measured in hertz (Hz). The higher the rating the higher the pitch.

**GPS (Global Positioning System)**

Global satellite system providing positioning and timing services to worldwide users on a continuous basis.

**HALT (Highly Accelerated Life Test)**

A comprehensive stress test applied to electronic equipment to identify design weakness.

**IC (Industry Canada)**

Certification for electromagnetic interference on products manufactured or sold in Canada which comply with the Bureau of Innovation, Science & Economic Development

**Illumination distance (camera)**

Distance a camera with infrared LEDs can see in ultra-low light conditions, measured in metres.

**IP## (Ingress Protection)**

An international classification for the sealing of electrical equipment against the intrusion of solid objects (digit 1) and liquids (digit 2). Higher the rating the better protection in each case.

**ISO 13766:2006**

Specific standard for earthmoving equipment, includes requirements for some additional tests that are not covered in the tests for 'E' or 'e' under EMC.

**ISO 15008:2003**

Standard relating to the specifications and compliance procedures for in-vehicle visual presentation i.e. in relation to monitors.

**ISO 16750**

Standard providing guidance regarding environmental conditions commonly encountered by electrical and electronic systems installed in vehicles.

**LCD (Liquid Crystal Display)**

Thin, flat display device made up of any number of colour or monochrome pixels i.e. monitor screen.

**LED (Light Emitting Diode (camera))**

Emits infrared light for high efficiency and performance in ultra-low light.

**LED (Light Emitting Diode (monitor))**

Used to backlight the monitor display for crisp images and superior image quality.

**Mechanical shock**

Level of sudden acceleration or deceleration, such as impact or being dropped, to which product will still perform. Measured in gravitational force (G).

**Mechanical vibration**

Level of continuous or repetitive motion, such as engine vibration, to which product will still perform. Measured in gravitational force (G).

**NAS-PIEK**

The standard for quiet delivery vehicles in the UK, certified by the Noise Abatement Society.

**NTSC (National Television Systems Committee)**

TV colour encoding standard.

**PAL (Phase Alternating Line)**

TV colour encoding standard.

**Resolution (RGB)**

Number of pixels used to display an image. Measured in Width x 3 channels (Red, Green, Blue) x Height.

**SAE J994**

Performance testing for electrically operated reversing alarms primarily intended for use on off-road, self-propelled construction and industrial machines.

**SD Card**

Small portable memory card to store digital data.

**Sounder unit**

Unit which produces the sound of an alarm.

**TV Lines**

Number of horizontal lines used to create an image.

**USB port**

Communication connection between electronic devices i.e. to download data from mobile digital recorder.

**Viewing angles (camera)**

The maximum angle of vision.

**Viewing angles (monitor)**

The maximum angle at which an image can be successfully viewed. Measured from the centre point on the monitor.

**Watt**

A measure of the electrical power needed to drive a product.

**WiFi**

A facility allowing devices to communicate wirelessly. A wireless network creates a small, localised area within which your devices can receive signal.

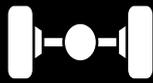
**3G**

A cellular data service available from mobile network providers.



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