

# VEHICLE SAFETY SOLUTIONS

FOR ALL OF YOUR SAFETY AND COMPLIANCE NEEDS



VEHICLE RELATED SERVICES

# BRANCH LOCATOR

## SCANIA SCOTLAND

Aberdeen	01224 896312
Bellshill	01698 841994
Dumfries	01387 250502
Dundee	01382 455556
Edinburgh	0131 333 2362
Glasgow	0141 886 5633
Grangemouth	01324 620620
Inverness	01463 729400

## SCANIA NORTH

Darlington	01325 480713
Leeds	01132 311411
Newcastle-upon-Tyne	0191 256 1900
Normanton	01924 228800
Thirsk	01845 573500
Washington	01914 188500

## SCANIA EAST

Boston	01205 460841
Grimsby	01472 346913
Hull	01482 296640
Lincoln	01522 681222
Scunthorpe	01724 289088
Sheffield	01142 626700
Spalding	01775 713707

## SCANIA SOUTH-WEST

Abingdon	01235 553596
Avonmouth	01179 379800
Banbury	01295 272857
Bridgwater	01278 685060
Exeter	01392 824474
Fareham	01489 886800
Redruth	01209 310090
Shepton Mallet	01749 880088
Southampton	02380 734455
Swindon	01793 715100

## SCANIA SOUTH-EAST

Gatwick	01293 305230
Heathrow	01784 240777
Maidstone	01622 538555
Purfleet	01708 257400
South Mimms	01707 649955
Stansted	01279 758088

## HAYDOCK COMMERCIAL VEHICLES

Deeside	01244 547202
Ellesmere Port	0151 355 0199
Haydock	01942 714103
Preston	01772 698811
Widnes	0151 423 8601

## KELTRUCK

Burton-on-Trent	01283 510011
Caldicot	01291 431715
Cardiff	02920 224671
Cheltenham	01242 252140
Coventry	02476 644664
Cross Hands	01269 844855
Droitwich	01905 777060
Groby	01530 243133
Hereford	01432 803540
Lutterworth	01455 550740
Newark	01636 700203
Nottingham	0115 986 5121
Sutton-in-Ashfield	01623 559559
Tamworth	01827 330100
West Bromwich	0121 525 7000
Willenhall	01902 637777
Worksop	01909 500595

## ROAD TRUCKS

Larne	028 2827 9611
Omagh	028 8225 9198

## TRUCKEAST

Corby	01536 443883
Crick	01788 823930
Ely	01353 666503
Felixstowe	01394 676625
King's Lynn	01553 771877
Milton Keynes	01908 242448
Northampton	01604 874747
Norwich	01603 748995
Peterborough	01733 555233
Stowmarket	01449 613553
Thetford	01842 763400
Wellingborough	01933 303303
Witham	01376 503003

## PIP BAYLEY'S

Bedford	01767 641111
---------	--------------

## WEST PENNINE TRUCKS

Knighton	01547 528600
Middleton	0161 653 9700
Oswestry	01691 671500
Stoke-on-Trent	01782 577955
Telford	01952 587222
Trafford Park	0161 877 7708

## GRAHAM COMMERCIALS

Carlisle	01228 529149
----------	--------------

## S. J. BARGH SALES & SERVICE

Lancaster	01524 770439
-----------	--------------

## GRANCO LTD

Newry	028 30821115
-------	--------------



# INTRODUCTION

*Welcome to the Second 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)**



## 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.

# CONTENTS

<b>Safety System Kits</b>	<b>6</b>
Compliance Kits (DVS, FORS)	6
Camera Recorder Kits	8
<b>Backeye®360</b>	<b>12</b>
<b>Backeye® Camera Monitor Systems</b>	<b>16</b>
Cameras	20
Monitors	29
Complete Systems	32
Adapter Cables	38
Cables	40
Truck and Trailer Connection	41
Ancillaries	44
<b>Mobile Digital Recording</b>	<b>46</b>
BRIDGE 4G Hosted Service	48
Digital Recorders	49
Dash Cam Recorders	52
IP Cameras	54
<b>Ultrasonic Obstacle Detection</b>	<b>56</b>
<b>Backsense® Radar Obstacle Detection</b>	<b>64</b>
<b>Reversing and Warning Alarms</b>	<b>70</b>
bbs-tek® White Sound Alarms	72
Speaking Alarms	74
Ancillaries	75
<b>Index by Model number</b>	<b>76</b>
<b>Glossary</b>	<b>80</b>
<b>Warranties</b>	<b>82</b>

# Compliance kits

## Are you compliant?

Legislation, regulation and certification heavily influences the automotive industry at all levels.

We aim to provide high quality safety solutions that surpass requirements, because that is the best way to keep drivers and vulnerable road users safe.

Model	Quantity	Part No:
-------	----------	----------

### FLEET OPERATOR RECOGNITION SCHEME (UK)



The Fleet Operator Recognition Scheme (FORS) is a voluntary accreditation scheme in the UK for fleet operators which aims to raise the level of quality within the transport business, and demonstrate which operators are achieving exemplary levels of best practice in safety, efficiency and environmental protection.

### DIRECT VISION STANDARD (Safe System)



The Direct Vision Standard (DVS) is the first legislation of its kind. From 26th October 2020, ALL goods vehicles over 12 tonnes will require a HGV safety permit to drive into Greater London, including vehicles from outside of the UK.

### DIRECT VISION STANDARD SAFE SYSTEM KIT

DVS kit for rigid vehicles with Brigade Monitor

AM BRIG6197

DVS kit for rigid vehicles with adapter to Scania Monitor

AM BRIG6195



1a. VBV-770M - Select 7" digital LCD monitor (AM BRIG6197 ONLY)	1	AM BRIG4288
1b. AC-069 - Adapter to connect to Scania Monitor/Infotainment system (AM BRIG6195 ONLY)*	1	AM BRIG5318
2. VBV-300C - Select side view camera - mirror view PAL	1	AM BRIG5211
3. SM-3XX-25 - Surface mounting adapter - 25mm deep	1	AM BRIG4596
4. VBV-L405 - Select 5m camera cable	1	AM BRIG1499
5. SS-4100W-000 - Sidescan® sensor system with mute function	1	AM BRIG5344
6. SS-BC-08 - Left side-turn external warning alarm - 90dB	1	AM BRIG1334
7. TCO-47(01) - Latched Side-turn Alarm Cut-Out	1	AM BRIG4752
8. Blind spot take care vehicle sticker	1	AM BRIGLIT0402

### ADDITIONAL COMPONENTS FOR FORS SILVER COMPLIANCE

The below components in addition to the above DVS kit form a FORS Silver compliant package.

VBV-700C - Select Camera - PAL	AM BRIG1379
VBV-L420 - 20 metre cable	AM BRIG1380
SA-BBS-97 - Self-adjusting reversing alarm - 77-97 Decibels	AM BRIG1399
TCO-47 - Timed auto-reset reversing alarm cut-out (dash mount)	AM BRIG0663

\*1b. AC-069 (AM BRIG5318) Adapter connects to Scania Infotainment System on Next Generation Scania vehicles produced after July 2016 (excluding: Scania XT and Scania PGRT series vehicles produced before July 2016)

Dependent on vehicle and application, additional components may be required. If in doubt, please contact us.

## DIRECT VISION STANDARD SAFE SYSTEM KIT

DVS kit for articulated vehicles with Brigade Monitor

AM BRIG6196

DVS kit for articulated vehicles with adapter to Scania Monitor

AM BRIG6198



1a. VBV-770M - Select 7" digital LCD monitor (AM BRIG6196 ONLY)	1	AM BRIG4288
1b. AC-069 - Adapter to connect to Scania Monitor/Infotainment system (AM BRIG6198 ONLY)*	1	AM BRIG5318
2. VBV-300C - Select side view camera - mirror view PAL	1	AM BRIG5211
3. SM-3XX-25 - Surface mounting adapter - 25mm deep	1	AM BRIG4596
4. VBV-L405 - Select 5m camera cable	1	AM BRIG1499
5. CS-3100 - Cornercan® sensor system with mute function	1	AM BRIG5261
6. UDS-005HK - Sensor mount and pad kit	2	AM BRIG3733
7. UDS-4.5SC - Sensor extension cable 4.5m	3	AM BRIG3720
8. UDS-00SS - Sensor sleeve 0°	3	AM BRIG3721
9. LS-60-A - Low speed trigger module	1	AMBRIG4851
10. TS-001ECU - Turn indicator trigger for system activation	1	AMBRIG1362
11. SS-BC-08 - Left side-turn external warning alarm - 90dB	1	AM BRIG1334
12. TCO-47(01) - Latched Side-turn Alarm Cut-Out	1	AM BRIG4752
13. Blind spot take care vehicle sticker	1	AM BRIGLIT0402

## ADDITIONAL COMPONENTS FOR FORS SILVER COMPLIANCE

The below components in addition to the above DVS kit form a FORS Silver compliant package.



VSK-30E - Truck and trailer cable kit

AM BRIG2538

SA-BBS-97 - Self-adjusting reversing alarm – 77-97 Decibels

AM BRIG1399

TCO-47 - Timed auto-reset reversing alarm cut-out (dash mount)

AM BRIG0663

## Add a Mobile Digital Recorder



Make your compliance kits recordable with the addition of a Mobile Digital Recording (MDR) system, now capable of capturing vehicle data and footage from up to 16 vehicle-mounted cameras. The MDR range includes models with 4G and WiFi connectivity capabilities, allowing data to be accessed from the recorder without having to physically go to the vehicle.

See pages 47-51 for more information and full specification.

\*1b. AC-069 (AM BRIG5318) Adapter connects to Scania Infotainment System on Next Generation Scania vehicles produced after July 2016 (excluding: Scania XT and Scania PGRT series vehicles produced before July 2016)

Dependent on vehicle and application, additional components may be required. If in doubt, please contact us.

# Camera Recorder kits

## Build your recordable kit - Rigid Vehicles

Choosing safety equipment for your vehicle can be a challenge with many products and accessories available. VRS has put together four camera recorder kits; two for rigid vehicles and two for articulated vehicles to help make your selection easier. Simply choose the most appropriate camera kit for your vehicle and then add on any one of Brigade's Digital Recorders.

NB: Order both the camera kit and the recording device.

**Model**

**Quantity**

**Part No:**

## Step 1: Select your rigid vehicle camera kit

Articulated vehicle kits on page 10.

### 4 CAMERA KIT FOR RIGID VEHICLES

4 camera kit for rigid vehicles with Brigade Monitor

AM BRIG6398

4 camera kit for rigid vehicles with adapter to Scania Monitor

AM BRIG6397



1a. VBV-770M - Select 7" digital LCD monitor (AM BRIG6398 ONLY)	1	AM BRIG4288
1b. Adapter to connect to Scania Monitor/Infotainment system (AM BRIG6195 ONLY)*	1	AM BRIG5318
2. VBV-300C - Select side view camera - mirror view PAL	2	AM BRIG5211
3. DMC-1035 - High definition mini camera - 720p-PAL	1	AM BRIG5721
4. VBV-700C - Select rear view Camera	1	AM BRIG1379
5. SS-4100W-000 - Sidescan® sensor system with mute function	1	AM BRIG5344
6. SS-BC-08 - Left side-turn external warning alarm - 90dB	1	AM BRIG1334
7. TCO-47(01) - Latched Side-turn Alarm Cut-Out	1	AM BRIG4752
8. SA-BBS-97 - Self-adjusting reversing alarm - 77-97 Decibels	1	AM BRIG1399
9. VBV-L405 - Select 5m camera cable	2	AM BRIG1499
10. VBV-L406 - Select 6m camera cable	1	AM BRIG3152
11. VBV-XM003 - Monitor extension cable (AM BRIG6398 ONLY)	1	AM BRIG4193
12. VBV-L420 - Select 20m camera cable	1	AM BRIG1380
13. AC-306 - Splitter Cable	2	AM BRIG4904

\*1b. AC-069 (AM BRIG5318) Adapter connects to Scania Infotainment System on Next Generation Scania vehicles produced after July 2016 (excluding: Scania XT and Scania PGRT series vehicles produced before July 2016)

## Step 2: Add your Mobile Digital Recorder

### Considerations when choosing a Mobile Digital Recorder (MDR):

- **Number of camera channels required.** How many cameras do you have on your vehicle? Are you likely to add more in the future? 4 and 8 channel standard units available.
- **Hard Disk storage.** The bigger the hard disk storage, the more data it can hold. High definition (HD) cameras take up more storage space as they produce a higher quality recorded image. If you have multiple AHD or HD cameras a bigger hard disk will enable you to record and store data for longer.
- **Hard Disk Technology.** HDD CMR Vs SSD technology
  - Conventional Magnetic Recording (CMR) is the standard technology behind hard drive data storage. It contains a spinning disk where data is stored magnetically and an arm that moves transducers across the surface of the disk to read/write data.
  - Solid State Drive (SSD) hard drives contain no physical moving parts. Data is stored in integrated circuits using flash memory. SSDs are more robust, perform faster, run cooler and use less energy.
- **Connectivity.** Is remote access to the recording unit required? If yes, what is the most appropriate method of connection for your fleet:
  - 4G Connectivity (accessible anytime via the mobile network),
  - WiFi Connectivity (accessible when the vehicle is connected to a dedicated MDR wireless network).

### 4 Camera Channel Models

MDR Model	Part no.	Hard Disk Storage	Hard Disk Technology	Connectivity	
				4G	WiFi
MDR-504-1-G2-CMR	AM BRIG6257	1TB	CMR		
MDR-504G-1-G2-CMR	AM BRIG6259	1TB	CMR	✓	
MDR-504GW-1-G2-CMR	AM BRIG6261	1TB	CMR	✓	✓
MDR-504-2000*	AM BRIG5563	2TB	CMR		
MDR-504G-2000*	AM BRIG5571	2TB	CMR	✓	
MDR-504-2-G2-SSD**	AM BRIG6432	2TB	SSD		
MDR-504G-2-G2-SSD**	AM BRIG6433	2TB	SSD	✓	
MDR-504GW-2-G2-SSD**	AM BRIG6434	2TB	SSD	✓	✓

\* 2TB Generation-1 models to be discontinued late 2021

\*\* 2TB Generation-2 SSD models to be introduced late 2021. Please contact us for further details

### 8 Camera Channel Models

MDR Model	Part no.	Hard Disk Storage	Hard Disk Technology	Connectivity	
				4G	WiFi
MDR-508-1-G2-CMR	AM BRIG6244	1TB	CMR		
MDR-508G-1-G2-CMR	AM BRIG6245	1TB	CMR	✓	
MDR-508GW-1-G2-CMR	AM BRIG6246	1TB	CMR	✓	✓
MDR-508-2-G2-SSD	AM BRIG6437	2TB	SSD		
MDR-508G-2-G2-SSD	AM BRIG6438	2TB	SSD	✓	
MDR-508GW-2-G2-SSD	AM BRIG6439	2TB	SSD	✓	✓

See MDR pages (47-53) for detailed specifications and more information.

# Camera Recorder kits

## Build your recordable kit - Articulated Vehicles

Choosing safety equipment for your vehicle can be a challenge with many products and accessories available. VRS has put together four camera recorder kits; two for rigid vehicles and two for articulated vehicles to help make your selection easier. Simply choose the most appropriate camera kit for your vehicle and then add on any one of Brigade's Digital Recorders.

NB: Order both the camera kit and the recording device.

**Model**

**Quantity**

**Part No:**

## Step 1: Select your articulated vehicle camera kit

Rigid vehicle kits on page 8.

### 3 CAMERA KIT FOR ARTICULATED VEHICLES

3 camera kit for articulated vehicles with Brigade Monitor

AM BRIG6400

3 camera kit for articulated vehicles with adapter to Scania Monitor

AM BRIG6399



1a. VBV-770M - Select 7" digital LCD monitor (AM BRIG6400 ONLY)	1	AM BRIG4288
1b. AC-069 - Adapter to connect to Scania Monitor/Infotainment system (AM BRIG6195 ONLY)*	1	AM BRIG5318
2. VBV-300C - Select side view camera - mirror view PAL	2	AM BRIG5211
3. DMC-1035 - High definition mini camera - 720p-PAL	1	AM BRIG5721
4. CS-3100 - Cornercan® sensor system with mute function	1	AM BRIG5261
5. UDS-005HK - Sensor mount and pad kit	2	AM BRIG3733
6. UDS-4.5SC - Sensor extension cable 4.5m	3	AM BRIG3720
7. UDS-00SS - Sensor sleeve 0°	3	AM BRIG3721
8. LS-60-A - Low speed trigger module	1	AM BRIG4851
9. TS-001ECU - Turn indicator trigger for system activation	1	AM BRIG1362
10. SS-BC-08 - Left side-turn external warning alarm - 90dB	1	AM BRIG1334
11. TCO-47(01) - Latched Side-turn Alarm Cut-Out	1	AM BRIG4752
12. SA-BBS-97 - Self-adjusting reversing alarm - 77-97 Decibels	1	AM BRIG1399
13. VBV-L405 - Select 5m camera cable	2	AM BRIG1499
14. VBV-L406 - Select 6m camera cable	1	AM BRIG3152
15. VBV-XM003 - Monitor extension cable (AM BRIG6400 ONLY)	1	AM BRIG4193
16. AC-306 - Splitter Cable	2	AM BRIG4904

\*1b. AC-069 (AM BRIG5318) Adapter connects to Scania Infotainment System on Next Generation Scania vehicles produced after July 2016 (excluding: Scania XT and Scania PGRT series vehicles produced before July 2016)

## Step 2: Add your Mobile Digital Recorder

### Considerations when choosing a Mobile Digital Recorder (MDR):

- **Number of camera channels required.** How many cameras do you have on your vehicle? Are you likely to add more in the future? 4 and 8 channel standard units available.
- **Hard Disk storage.** The bigger the hard disk storage, the more data it can hold. High definition (HD) cameras take up more storage space as they produce a higher quality recorded image. If you have multiple AHD or HD cameras a bigger hard disk will enable you to record and store data for longer.
- **Hard Disk Technology.** HDD CMR Vs SSD technology
  - Conventional Magnetic Recording (CMR) is the standard technology behind hard drive data storage. It contains a spinning disk where data is stored magnetically and an arm that moves transducers across the surface of the disk to read/write data.
  - Solid State Drive (SSD) hard drives contain no physical moving parts. Data is stored in integrated circuits using flash memory. SSDs are more robust, perform faster, run cooler and use less energy.
- **Connectivity.** Is remote access to the recording unit required? If yes, what is the most appropriate method of connection for your fleet:
  - 4G Connectivity (accessible anytime via the mobile network),
  - WiFi Connectivity (accessible when the vehicle is connected to a dedicated MDR wireless network).

### 4 Camera Channel Models

MDR Model	Part no.	Hard Disk Storage	Hard Disk Technology	Connectivity	
				4G	WiFi
MDR-504-1-G2-CMR	AM BRIG6257	1TB	CMR		
MDR-504G-1-G2-CMR	AM BRIG6259	1TB	CMR	✓	
MDR-504GW-1-G2-CMR	AM BRIG6261	1TB	CMR	✓	✓
MDR-504-2000*	AM BRIG5563	2TB	CMR		
MDR-504G-2000*	AM BRIG5571	2TB	CMR	✓	
MDR-504-2-G2-SSD**	AM BRIG6432	2TB	SSD		
MDR-504G-2-G2-SSD**	AM BRIG6433	2TB	SSD	✓	
MDR-504GW-2-G2-SSD**	AM BRIG6434	2TB	SSD	✓	✓

\* 2TB Generation-1 models to be discontinued late 2021

\*\* 2TB Generation-2 SSD models to be introduced late 2021. Please contact us for further details

### 8 Camera Channel Models

MDR Model	Part no.	Hard Disk Storage	Hard Disk Technology	Connectivity	
				4G	WiFi
MDR-508-1-G2-CMR	AM BRIG6244	1TB	CMR		
MDR-508G-1-G2-CMR	AM BRIG6245	1TB	CMR	✓	
MDR-508GW-1-G2-CMR	AM BRIG6246	1TB	CMR	✓	✓
MDR-508-2-G2-SSD	AM BRIG6437	2TB	SSD		
MDR-508G-2-G2-SSD	AM BRIG6438	2TB	SSD	✓	
MDR-508GW-2-G2-SSD	AM BRIG6439	2TB	SSD	✓	✓

See MDR pages (47-53) for detailed specifications and more information.



# Backeye®360

## 360° Camera Monitor System

### How it works

Backeye®360 is an intelligent camera monitor system designed to assist low-speed manoeuvring by providing the driver with a complete 'bird's-eye' surround view of the vehicle in real time.

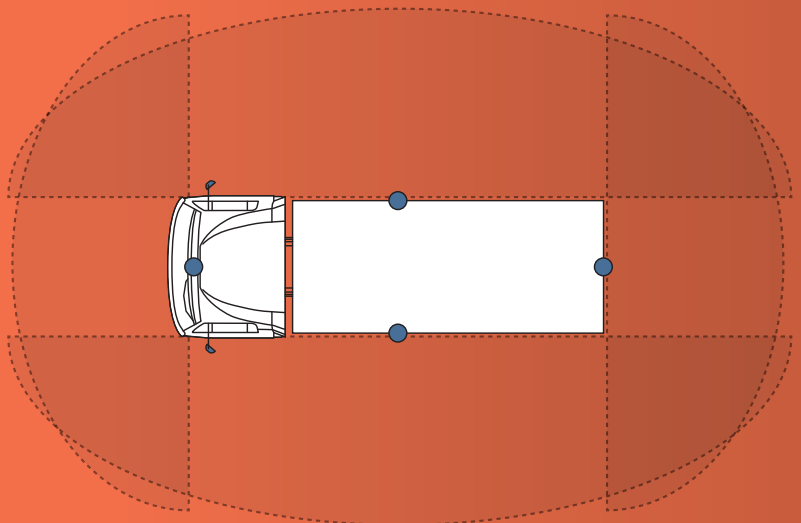
360° technology works with four ultra wide-angle cameras, each covering one full side of the vehicle with a viewing angle of over 180°.

High-mounted on the front, rear and sides, the calibrated cameras capture all of the surrounding area including the blind spots of the vehicle or machine.

The four live images are simultaneously sent to an electronic control unit (ECU) where they are instantly

processed, combined, blended and stitched. The distortion from the wide-angle camera lens is also corrected so that a clear, real-time view of all around the vehicle is provided to the driver in a single image on the monitor.

Backeye®360 will work on most vehicles and machines, large or small. Our expert team of Applications Engineers can advise on installation to everything from a van to a 200 tonne dump truck, including rigid and articulated trucks and buses, loading shovels, excavators, lift trucks, straddle carriers and many others.



Model

Part No:

NEW

## AHD 360° CAMERA SYSTEM

HD

BN360-300 - High Definition Backeye®360 system

AM BRIG5800



- IP69K cameras
- 12-24Vdc
- Size (WxHxD) ECU  
178 x 113 x 26mm
- Size (WxHxD) Camera  
61 x 50 42mm
- 5 year warranty

### AHD

See page 29 for more information on AHD technology.

#### Contents

- 1 x ECU
- 4 x BN360-1000C cameras
- 1 x Video output cable to connect to SELECT range monitor.
- 1 x set-up/view-select button
- 1 x ECU power harness
- 1 x ECU interface/video input harness

#### Features

- 720p HD 360° image
- 15 different view modes (10 x landscape & 5 x portrait configurations)
  - Front & rear crossing-traffic
  - Customisable vehicle position
- 2 pre-defined configuration groups
- Configure & customise set up via PC calibration software
- Left, right, reverse & speed signal triggers
- Configurable on-screen parking markers
- Customisable overlay guidelines per camera view
- 2 x video outputs
- Ultra-wide viewing angle cameras (HxV) 182° x 118°
- 1/4" CMOS sensor
- Video output: AHD 1.0 and NTSC

#### Power

- Power consumption: 15 Watts
- Current: 1.22 Amps

#### Durability & Standards

- Mechanical vibration: 8.5G
- Mechanical shock: 51G
- Operating temperature: -30 to +75°C
- IP30 ECU
- CE marked
- E-Marked: UNECE R10 compliant
- FCC Approved
- IC Approved
- ISO 20653:2006
- ISO 13766-1:2018

#### NOTES:

- Calibration kit is required for installation.
- Monitor and camera extension cables not included
- Individual cameras not recordable on MDR - monitor output only.

NEW

## BN360-300 CABLES

HD

BN360-H320  
BN360-H315  
BN360-H310  
BN360-H305  
BN360-H3025

HD 20m camera cable  
HD 15m camera cable  
HD 10m camera cable  
HD 5m camera cable  
HD 2.5m camera cable

AM BRIG5809  
AM BRIG5810  
AM BRIG5811  
AM BRIG5812  
AM BRIG5813

NEW

## BN360-300 360° CAMERA MONITOR KIT

HD

Complete 360 AHD camera monitor system for large rigid vehicles



SE-770H-300 - 360 AHD camera system with VBV-770HM - 7" AHD monitor

AM BRIG6114

- |                                      |             |
|--------------------------------------|-------------|
| • 1 x VBV-770HM AHD Monitor          | AM BRIG5611 |
| • 1 x BN360-300 AHD 360 system       | AM BRIG5800 |
| • 1 x BN360-H310 - 10m camera cable  | AM BRIG5811 |
| • 2 x BN360-H315 - 15m camera cables | AM BRIG5810 |
| • 1 x BN360-H320 - 20m camera cable  | AM BRIG5809 |

See individual products for detailed specifications and warranties



## BN360-200/BN360-300 MOUNTING BRACKETS

BN360-100C-BKT01 Adaptable mounting bracket

AM BRIG4649

Can be shaped to allow installation on non-vertical surfaces

BN360-100C-BKT02 Mounting bracket to adjust camera angle

AM BRIG4714

BE360-CD

Deflector to shield camera from knocks

AM BRIG4701

(To be used with BN360-100C-BKT02 Mounting bracket)

BN360-100C-BKT03 Deflector to shield camera from knocks

AM BRIG4743

## 360° CAMERA SYSTEM

BN360-200 - Backeye®360 system

AM BRIG5200



- IP69K cameras
- 12-24Vdc
- Size (WxHxD) ECU  
174 x 101 x 30mm
- Size (WxHxD) Camera  
61 x 46 x 36mm
- 5 year warranty

MDR  
COMPATIBLER46  
APPROVED\*

Make this system recordable,  
see pages 49-50 for more  
information.

### Contents

- 1 x ECU
- 4 x BN360-100C cameras
- 1 x Video output cable to connect to SELECT range monitor.
- 1 x set-up/view-select button
- IR receiver & remote control
- 1 x ECU power harness
- 1 x ECU interface harness

### Features

- 360° image
- 19 different view modes (max 10 views per chosen configuration group) including:
  - Landscape or portrait configurations
  - Front & rear crossing-traffic
  - Left & right lane changing assist
  - Customisable vehicle position
- 4 pre-defined configuration groups
- Configure & customise set up via monitor and IR remote control
- Left, right, reverse & speed signal triggers
- Configurable on-screen parking markers
- 3 x video outputs
- Ultra-wide viewing angle cameras (HxV) 185° x 142°
- 1/3.7" CMOS sensor
- TV system: NTSC or PAL via switch on ECU (cameras NTSC only)

### Power

- Power consumption: 8 Watts
- Current: 0.65 Amps

### Durability & Standards

- Mechanical vibration: 8.5G
- Mechanical shock: 51G
- Operating temperature: -30 to +75°C
- IP30 ECU
- CE marked
- E-Marked: UNECE R10 compliant
- FCC Approved
- IC Approved
- ISO 20653:2006
- ISO 13766:2006
- EN 13309:2010
- \*Camera monitor system R46 approved

### NOTES:

- **calibration kit is required for installation.**
- **Monitor and camera extension cables not included**

## BN360-200 CABLES AND ADAPTERS



BN360-L120	20m camera cable	AM BRIG4493
BN360-L115	15m camera cable	AM BRIG4495
BN360-L110	10m camera cable	AM BRIG4496
BN360-L105	5m camera cable	AM BRIG4498
BN360-L1025	2.5m camera cable	AM BRIG4499
AC-305	Splitter cable for MDR (1 required per camera)	AM BRIG4903

## BN360-200 REQUIREMENTS FOR ARTICULATED VEHICLES

BN360-Enclosure	IP66 Enclosure kit to enable ECU to be installed on outside of vehicle	AM BRIG4723
SK-15-05	Articulated vehicle cable kit for BN360-200 (3-camera)	AM BRIG5066

## BN360-200 360° CAMERA MONITOR KIT

Complete 360 camera monitor system for large rigid vehicles



SE-7104F-100	360 camera system with VBV-7104FM - 10.4" monitor	AM BRIG5378
SE-770-100	360 camera system with VBV-770M - 7" monitor	AM BRIG5379

• 1 x VBV-710FM (AM BRIG5378)	AM BRIG4982
• 1 x VBV-770M (AM BRIG5379)	AM BRIG4288
• 1 x BN360-200 360 system	AM BRIG5200
• 1 x BN360-L110 - 10m camera cable	AM BRIG4496
• 2 x BN360-L115 - 15m camera cable	AM BRIG4495
• 1 x BN360-L120 - 20m camera cable	AM BRIG4493

See individual products  
for detailed specifications  
and warranties



# Backeye®

# Camera Monitor

# Systems

## A Winning Range

Camera monitor systems are used in a wide range of on and off-road applications to meet a host of health and safety and legislative requirements.

Brigade's camera monitor systems enable drivers and operators to manoeuvre and drive safely. Vehicle-mounted cameras can help the driver to see blind spots by delivering a live feed on the monitor of everything in the camera view, including people or obstacles.

Whether you need an entry-level reversing camera or full-vehicle camera system, we can help. With single-to-multiple camera inputs and auto-triggers, Brigade cameras and monitors will work on any application in any industry.

Brigade's camera monitor systems are compatible with its range of Mobile Digital Recorders (MDR).

### ELITE

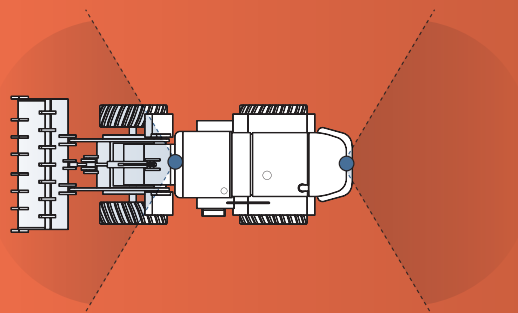
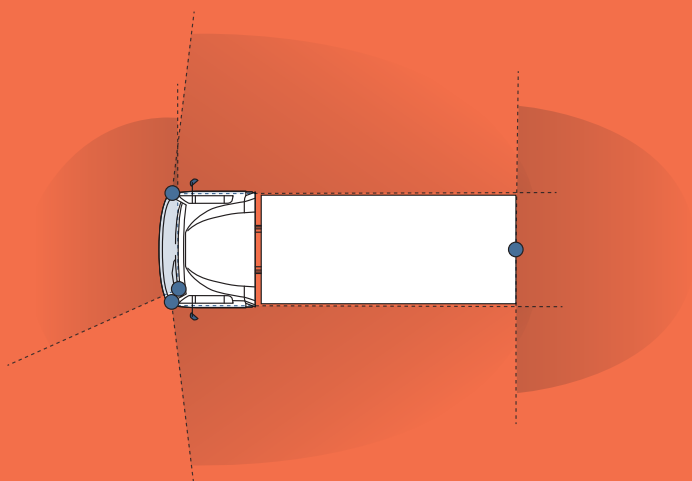
Top of the range systems that are the first choice for Original Equipment Manufacturers (OEMs) and Bodybuilders. Exceptional quality and consistent performance in the harshest conditions. Rigorously tested to higher standards, the superior components and build quality are reflected in the Elite series' 5 year warranty. Ideal for heavy duty applications including N2 and N3 Heavy Goods Vehicles (HGVs), on/off-highway vehicles, agricultural machinery and mobile plant used on Construction, Civil Engineering, Quarry and Mine sites.

### SELECT

High quality, reliable, best-selling mid-range systems. First choice in the Aftermarket and popular also with OEMs and Bodybuilders. 3 year warranty. Ideal for medium to large on-highway vehicles and smaller off-highway mobile plant.

### ESSENTIAL

Entry level reversing solution for cost-conscious Aftermarket customers. Ideally suited for on-highway applications.



# R46 for Indirect Vision

## R46 for Indirect Vision

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

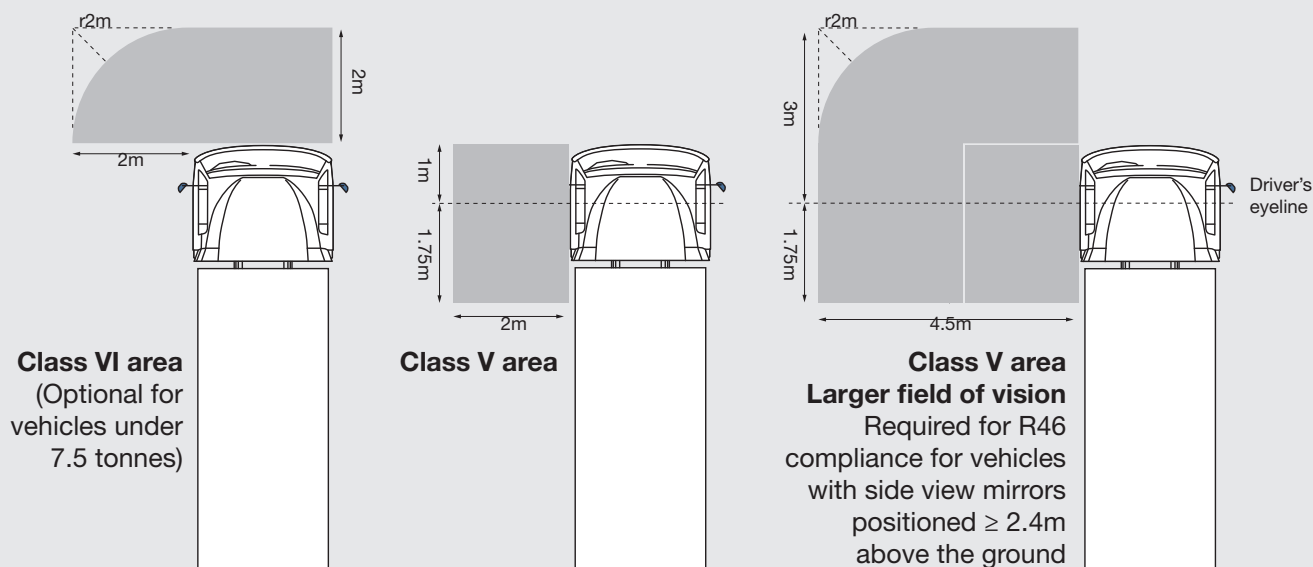
R46 is widely recognised as a mark of exceptional performance, reliability and quality. In order to comply with the R46 regulation, the components of a camera monitor system must reach specified performance standards and be installed within pre-defined guidelines.

The following Brigade camera/monitor combinations are approved to UNECE Regulation No 46 for areas Class V and Class VI. If correctly installed, an R46 approved camera monitor system can replace a conventional mirror.

See [brigade-electronics.com/R46](http://brigade-electronics.com/R46) for further information.

Camera/monitor combinations approved to R46			MONITORS		
			ELITE	SELECT	
			AM BRIG2705	AM BRIG4288	AM BRIG4474
CAMERAS	ELITE	AM BRIG1623 AM BRIG2871 AM BRIG4924	✓ plus full and split screen using SS-002 screen splitter	✗	✗
	SELECT	AM BRIG5211 AM BRIG5215	✓ plus full and split screen using SS-002 screen splitter	✓ plus full and split screen using SS-002 screen splitter	Single, split and quad screen ✓
		AM BRIG1379 AM BRIG2724	✗	✓ plus full and split screen using SS-002 screen splitter	Single, split and quad screen ✓
	360	AM BRIG5200	✗	✓ Full screen and standard split screen	✓ Standard 360 view in both landscape and portrait on single, split and quad screens. Full 360 view in portrait on single, split and quad screens.

European Directives 2003/97/EC and 2007/38/EC (Class areas V and VI) for vehicles over 3.5 tonnes to be retrofitted with devices in order to improve the driver's field of vision and increase vehicle safety.



## Camera/monitor compatibility

<div> <div>✓ = Compatible</div> <div>✓ AM BRIGXXXX = Compatible with adapter(s) shown</div> <div>✗ = Not compatible</div> </div>			MONITORS			
			ELITE		SELECT	
			AM BRIG3560 AM BRIG3351 AM BRIG2705 AM BRIG2146	AM BRIG3756	AM BRIG4474 AM BRIG4982 AM BRIG4288 AM BRIG4287	AM BRIG4697 AM BRIG4710
CAMERAS	ELITE	AM BRIG1242	✓	✓ AM BRIG3666	✓ AM BRIG1984 & AM BRIG3666	✗
		All other Elite cameras	✓	✓	✓ AM BRIG1984	✓ AM BRIG1984
	SELECT	AM BRIG2808	✓ AM BRIG3702 & AM BRIG1983	✓ AM BRIG3702 & AM BRIG1983	✓ AM BRIG3702	✓
		All other Select cameras	✓ AM BRIG1983	✓ AM BRIG1983	✓	✓

### Camera icons



Infrared LEDs for ultra-low-light performance



Day/night sensor



Audio



Heater



Normal/mirror view

**WDR**

Wide Dynamic Range

**DWDR**

Digital Wide Dynamic Range

### 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

### Cable icons

(Black = solid/pins)



Male connector Select



Female connector Select



Male screw fit connector Elite



Female screw fit connector Elite



Male push fit connector Elite



Female push fit connector Elite



Male shutter connector Select



Female shutter connector Select



Male Backeye@360 connector



Female Backeye@360 connector

## What is WDR?

Wide Dynamic Range (WDR) automatically balances lighting in a camera image for improved detail in highlights and shadows.

This is particularly useful when working in environments where lighting quickly changes, for example; reversing into a dark loading bay on a sunny day. The transition from bright light to shadow will cause cameras that do not feature WDR to fail to pick up fine details. Areas of the picture will be bright and other areas extremely dark.

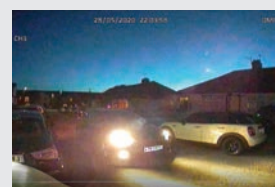
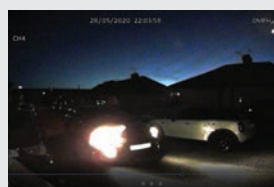
WDR Cameras balance lighting so no areas are under or over exposed, improving clarity and detail in the image.



Standard camera



WDR camera



Model

Part No:

### CAMERA WITH DWDR

### ELITE



- BE-900C - Integrated fisheye correction - PAL
- BE-990C - Integrated fisheye correction - PAL - No audio
- BE-901C - Integrated fisheye correction - NTSC
- BE-991C - Integrated fisheye correction - NTSC - No audio

- AM BRIG5277
- AM BRIG5279
- AM BRIG5278
- AM BRIG5280

- Viewing angle (HxVxD)  
96 X 64 X 110° PAL  
100 X 65 X 106° NTSC
- IP69K/IP68
- Size (WxHxD)  
86 x 72 x 80mm
- 5 year warranty



DWDR

#### Features

- Integrated image correction for wide viewing angle (fisheye) lens distortion
- Digital Wide Dynamic Range for improved detail in shadows and highlights
- 5 Infrared LEDs for ultra-low light performance
- Day / Night sensor
- Heater
- Microphone (BE-900C & BE-901C)
- Mirror / Normal view
- Automatic white balance
- Sony CMOS sensor
- TV lines: PAL: 400 NTSC: 350

#### Power

- Power consumption: 4.5 Watts
- Current: 0.36 Amps

#### Durability & Standards

- Mechanical vibration: 8.5G
- Mechanical shock: 51G
- Operating temperature: -40 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC Approved
- ISO 20653:2006
- ISO 16750-4

### SHUTTER CAMERA WITH WDR

### ELITE



BE-810C - Shutter camera

AM BRIG1242

- Viewing angle (HxVxD)  
103 x 71 x 134°
- IP68 / IP69K
- Size (WxHxD)  
123 x 86 x 80mm
- 5 year warranty



WDR

#### Features

- Wide Dynamic Range for improved detail in shadows and highlights
- 5 Infrared LEDs for ultra-low light performance
- Day / Night sensor
- Automatic shutter
- Heater
- Microphone
- Mirror / Normal view
- Backlight compensation
- Automatic white balance
- Sony CMOS sensor
- TV System: PAL
- TV Lines: 450

#### Power

- Power consumption: 5.4 Watts
- Current: 0.45 Amps

#### Durability & Standards

- Mechanical vibration: 8.5G
- Mechanical shock: 51G
- Operating temperature: -40 to +70°C
- CE Marked
- E-Marked: UNECE R10 compliant
- FCC approved
- IC approved
- ISO 13766-1:2018

## CAMERA WITH WDR

## ELITE



BE-800C	- PAL	AM BRIG1623
BE-801C	- NTSC	AM BRIG1905
BE-800C(40)	- Narrow viewing angle: 32 x 24 x 41° PAL	AM BRIG1559
BE-801C(40)	- Narrow viewing angle: 33 x 25 x 42° NTSC	AM BRIG2085
BE-800C(78)	- Narrow viewing angle: 69 x 51 x 92° PAL	AM BRIG1426
BE-801C(78)	- Narrow viewing angle: 71 x 52 x 94° NTSC	AM BRIG2084
BE-890C	- Waterproof to IP69K, No microphone, PAL	AM BRIG2871
BE-891C	- Waterproof to IP69K, No microphone, NTSC	AM BRIG5426
BE-850C	- 12/24Vdc, waterproof to IP69K, PAL	AM BRIG4924
BE-800C-NIR	- No LEDs, PAL	AM BRIG4247

- Viewing angle (HxVxD)  
102 x 76 x 132° PAL  
108 x 80 x 136° NTSC

- IP68

- Size (WxHxD)  
86 x 72 x 80mm

- 5 year warranty



**R46 WDR**  
APPROVED\*

## Features

- Wide Dynamic Range for improved detail in shadows and highlights
- 5 Infrared LEDs for ultra-low light performance (except BE-800C-NIR)
- Day / Night sensor
- Heater
- Microphone
- Mirror / Normal view
- Automatic white balance
- Sony CMOS sensor
- TV lines: 600

## Power

- Power consumption: 4.5 Watts
- Current: 0.33 Amps  
(0.37 - 2.63 Amps BE-850C)

## Durability &amp; Standards

- Mechanical vibration: 8.5G
- Mechanical shock: 51G
- Operating temperature: -40 to +85°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC Approved
- IC Approved
- ISO 13766:2006
- ISO 20653:2006
- EN13309:2010
- \*Camera monitor system R46 approved BE-800C, BE-890C & BE-850C only

## MINI CAMERA

## ELITE



BE-820C	- Mini camera (mirror image) PAL	AM BRIG1927
BE-821C	- Mini camera (mirror image) NTSC	AM BRIG2002
BE-822C	- Mini camera (normal image) PAL	AM BRIG2151
BE-823C	- Mini camera (normal image) NTSC	AM BRIG5100

- Viewing angle (HxVxD)  
115 x 92 x 140° PAL  
113 x 90 x 136° NTSC

- IP68

- Size (WxHxD)  
47 x 40 x 50mm

- 5 year warranty

## Features

- Backlight compensation
- Automatic white balance
- 1/4" Sony CCD
- TV System: PAL or NTSC
- TV Lines: 600

## Power

- Power consumption: 0.9 Watts
- Current: 0.1 Amps

## Durability &amp; Standards

- Mechanical vibration: 10G
- Mechanical shock: 100G
- Operating temperature: -40 to +80°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved (NTSC models only)
- IC approved (NTSC models only)
- HALT tested
- ISO 20653:2006

Model

Part No:

NEW

AHD CAMERA 1080p

SELECT



- VBV-7100C - High definition (1080p-PAL)
- VBV-7101C - High definition (1080p-NTSC)
- VBV-7190C - No audio. High definition (1080p-PAL)
- VBV-7191C - No audio. High definition (1080p-NTSC)

- AM BRIG5466
- AM BRIG5467
- AM BRIG5470
- AM BRIG5471

- Viewing angle (HxVxD)  
110° x 60° x 127°

- IP69K

- Size (WxHxD)  
81 x 77 x 70mm

- 3 year warranty



#### Features

- 4 high-power Infrared LEDs for ultra-low light performance
- Day / Night sensor
- Microphone
- Mirror view
- \* Backlight compensation
- Automatic white balance
- Sony CMOS 1/3" & Nextchip ISP
- TV System: AHD 1.0 (1080p)
- TV Lines: 800

#### Power

- Power consumption: 3 Watts
- Current: 0.2 Amps

#### Durability & Standards

- Mechanical vibration: 8.5G
- Mechanical shock: 51G
- Operating temperature: -30 to +80°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- IC approved

NEW

AHD CAMERA 720p

SELECT



- VBV-7000C - High definition (720p-PAL)
- VBV-7001C - High definition (720p-NTSC)
- VBV-7090C - No audio. IP69K High definition (720p-PAL)
- VBV-7091C - No audio. IP69K High definition (720p-NTSC)

- AM BRIG5464
- AM BRIG5465
- AM BRIG5468
- AM BRIG5469

- Viewing angle (HxVxD)  
107° x 64° x 126°

- IP67

- Size (WxHxD)  
81 x 77 x 70mm

- 3 year warranty



#### Features

- 4 high-power Infrared LEDs for ultra-low light performance
- Day / Night sensor
- Microphone
- Mirror view
- \* Backlight compensation
- Automatic white balance
- Sony CMOS 1/3" & Nextchip ISP
- TV System: AHD 1.0 (720p)
- TV Lines: 600

#### Power

- Power consumption: 3 Watts
- Current: 0.2 Amps

#### Durability & Standards

- Mechanical vibration: 8.5G
- Mechanical shock: 51G
- Operating temperature: -30 to +80°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- IC approved

## CAMERA

## SELECT



- VBV-700C** - PAL  
**VBV-701C** - NTSC  
**VBV-790C** - Waterproof to IP69K, no audio PAL  
**VBV-791C** - Waterproof to IP69K, no audio NTSC

- AM BRIG1379**  
**AM BRIG2575**  
**AM BRIG2724**  
**AM BRIG2842**

*Also available in High Definition (720p & 1080p) models*

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



## Features

- 4 high-power Infrared LEDs for ultra-low light performance
- Day / Night sensor
- Microphone
- Mirror view
- \* Backlight compensation
- Automatic white balance
- 1/3" Sharp CCD
- TV Lines: 620 PAL / 750 NTSC

## Power

- Power consumption: 3 Watts
- Current: 0.2 Amps

## Durability &amp; Standards

- Mechanical vibration: 10G
- Mechanical shock: 51G
- Operating temperature: -30 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- HALT tested
- \*Camera monitor system R46 approved  
VBV-700C & VBV-790C only

## SHUTTER CAMERA

## SELECT



- VBV-710C - Shutter camera**  
 Direct connection to VBV-770M-S and VBV-750M-S monitors  
 via 5-pin 10m (VBV-L510) or 20m (VBV-L520) camera cable.

- AM BRIG2808**

- Viewing angle (HxVxD)  
98 x 73 x 108°
- IP68 / IP69K
- Size (WxHxD)  
122 x 85 x 82mm
- 3 year warranty



## Features

- 4 high power infrared LEDs for ultra-low light performance
- Day / Night sensor
- Automatic Shutter
- Heater
- Microphone
- Mirror / Normal view
- Backlight compensation
- Automatic white balance
- 1/3" Sharp CCD
- TV System: PAL
- TV Lines: 580

## Power

- Max Power consumption: 6 Watts
- Max Current: 0.5 Amps

## Durability &amp; Standards

- Mechanical vibration: 10G
- Mechanical shock: 50G
- Operating temperature: -30 to +70°C
- CE Marked
- E-Marked: UNECE R10 compliant

Model

Part No:

NEW

## AHD EYEBALL CAMERA

SELECT



VBV-3000C	- High Definition flush-mount eyeball camera Mirror view - (720p-PAL)	AM BRIG5454
VBV-3001C	- High Definition Flush-mount eyeball camera Mirror view - (720p-NTSC)	AM BRIG5455
VBV-3020C	- High Definition Flush-mount eyeball camera Normal view - (720p-PAL)	AM BRIG5456
VBV-3021C	- High Definition Flush-mount eyeball camera Normal view - (720p-NTSC)	AM BRIG5457

- Viewing angle (HxVxD)  
110 x 82 x 152° (25fps)  
111 x 80 x 153° (30fps)
- IP69K
- Size (WxHxD)  
57 x 42 x 70mm
- 3 year warranty



### Features

- 5 high power infrared LEDs for ultra-low light performance
- Day / Night sensor
- Lens swivel adjustment: 26° (Top) x 4° (Bottom) x 4° (Left) x 4° (Right)
- Lens rotation adjustment: ±180°
- Microphone
- Backlight compensation
- Automatic white balance
- 1/3" Sony CMOS
- TV System: AHD 1.0 (720p)
- TV lines: 600

### Power

- Power consumption: 1.5 Watts
- Current consumption: 0.16 Amps

### Durability & Standards

- Mechanical vibration: 8.5G
- Mechanical shock: 51G
- Operating temperature: -30 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved

## EYEBALL CAMERA

SELECT



VBV-300C	- Flush-mount eyeball camera - Mirror view - PAL	AM BRIG5211
VBV-301C	- Flush-mount eyeball camera - Mirror view - NTSC	AM BRIG5213
VBV-320C	- Flush-mount eyeball camera - Normal view - PAL	AM BRIG5215
VBV-321C	- Flush-mount eyeball camera - Normal view - NTSC	AM BRIG5217

Also available in High Definition (720p) models

- Viewing angle (HxVxD)  
110 x 82 x 152° PAL  
111 x 80 x 153° NTSC
- IP69K
- Size (WxHxD)  
57 x 42 x 70mm
- 3 year warranty



### Features

- 5 high power infrared LEDs for ultra-low light performance
- Day / Night sensor
- Lens swivel adjustment: 26° (Top) x 4° (Bottom) x 4° (Left) x 4° (Right)
- Lens rotation adjustment: ±180°
- Microphone
- Backlight compensation
- Automatic white balance
- 1/3" Sharp CCD
- TV System: PAL or NTSC
- TV lines: 780 PAL, 600 NTSC

### Power

- Power consumption: 2.3 Watts
- Current consumption: 0.16 Amps

### Durability & Standards

- Mechanical vibration: 8.5G
- Mechanical shock: 51G
- Operating temperature: -30 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- \*Camera monitor system R46 approved VBV-300C & VBV-320C only

## OPTIONAL EXTRAS

SM-3XX-25 Surface mounting adapter (25mm deep)	AM BRIG4596
--	-------------



**AHD DOME CAMERA****SELECT**

MD-60	- High definition dome camera (720p-PAL)	AM BRIG5737
MD-61	- High definition dome camera (720p-NTSC)	AM BRIG5738
MD-60(SW)	- High definition dome camera - Superwide view angle (720p-PAL)	AM BRIG5688
MD-61(SW)	- High definition dome camera - Superwide view angle (720p-NTSC)	AM BRIG5690
MD-60(W)	- High definition dome camera - Wide view angle (720p-PAL)	AM BRIG5696
MD-61(W)	- High definition dome camera - Wide view angle (720p-NTSC)	AM BRIG5698

- Viewing angle (HxVxD)  
68° x 38° x 80°  
(SW) 150° x 85° x 180°  
(W) 93° x 51° x 110°
- IP68
- Size (Diameter x H)  
76 x 59.5 mm
- 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
- CMOS - 1/3" ON-Semi ISP - Nextchip
- TV System: AHD 1.0 (720p)
- TV Lines: 900
- TV Lines: 600 (SW & W)

**Power**

- Power consumption: 1 Watt
- Current: 0.57 Amps

**Durability & Standards**

- Mechanical vibration: 10G
- Mechanical shock 51G
- Operating temperature: -30 to +85°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC Approved
- IC Approved

**DOME CAMERA****SELECT**

MD-50	- Mini dome camera PAL	AM BRIG5735
MD-51	- Mini dome camera NTSC	AM BRIG5736
MD-50(SW)	- Dome camera - Superwide view angle PAL	AM BRIG5683
MD-51(SW)	- Dome camera - Superwide view angle NTSC	AM BRIG5686
MD-50(W)	- Dome camera PAL	AM BRIG5692
MD-51(W)	- Dome camera NTSC	AM BRIG5694

*Also available in High Definition (720p) models*

- Viewing angle (HxVxD)  
(SW) 150° x 85° x 180°  
(W) 93° x 51° x 110°
- IP68
- Size (Diameter x H)  
76 x 59.5 mm
- 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
- CMOS - 1/3" ON-Semi ISP - Nextchip
- TV System: PAL or NTSC
- TV Lines: 600

**Power**

- Power consumption: 1 Watt
- Current: 0.57 Amps

**Durability & Standards**

- Mechanical vibration: 10G
- Mechanical shock 51G
- Operating temperature: -30 to +85°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC Approved
- IC Approved

**OPTIONAL EXTRAS**

MD-50SM-30	- Surface mounting adapter (30mm deep)	AM BRIG5003
MD-50AM-15	- Angled surface mounting adapter (adds 15°)	AM BRIG5004
MD-50AM-25	- Angled surface mounting adapter (adds 25°)	AM BRIG5005



# Backeye® Cameras / Monitors

Model

Part No:

## AHD MINI CAMERA

SELECT



**DMC-1035 - High definition mini camera (internal use) (720p-PAL)**  
**DMC-1031 - High definition mini camera (internal use) (720p-NTSC)**

**AM BRIG5721**  
**AM BRIG5719**

- Viewing angle (HxVxD)  
68 x 38 x 80°
- IP30
- Size (WxHxD)  
43 x 45 x 37.5mm
- 3 year warranty



### Features

- Mirror / Normal view
- Backlight compensation
- Automatic white balance
- CMOS - 1/3" ON-Semi ISP - Nextchip
- TV System: AHD 1.0 (720p)
- TV Lines: 900

### Power

- Power consumption: 1.0 Watt
- Current: 0.55 Amps

### Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 51G
- Operating temperature: -30 to +85°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- IC approved

## MINI CAMERA

SELECT



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

**AM BRIG5717**  
**AM BRIG5715**

*Also available in High Definition (720p) models*

- Viewing angle (HxVxD)  
68 x 38 x 80°
- IP30
- Size (WxHxD)  
43 x 45 x 37.5mm
- 3 year warranty



### Features

- Mirror / Normal view
- Backlight compensation
- Automatic white balance
- CMOS - 1/3" ON-Semi ISP - Nextchip
- TV System: PAL or NTSC
- TV Lines: 600

### Power

- Power consumption: 1.0 Watt
- Current: 0.55 Amps

### Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 51G
- Operating temperature: -30 to +60°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- IC approved

## CYLINDER CAMERA

SELECT



**VBV-485C - Cylinder camera PAL**  
**VBV-481C - Cylinder camera NTSC**

**AM BRIG2199**  
**AM BRIG2843**

- Viewing angle (HxVxD)  
91 x 77 x 123° PAL  
96 x 71 x 126° NTSC
- IP69K/IP68
- Size (Diameter x Length)  
35 x 50mm
- 3 year warranty



### Features

- 9 LEDs for ultra-low light performance
- Day/night sensor
- Mirror view
- Backlight compensation
- Auto white balance
- 1/3" Sharp CCD
- TV Lines: 680 PAL  
800 NTSC

### Power

- Power consumption: 1.9 Watts
- Current: 0.2 Amps

### Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 50G
- Operating Temperature: -30 to +70°C
- E-Marked: UNECE R10 compliant
- CE marked
- FCC approved VBV-481C only
- IC approved VBV-481C only

**7" IP69K MONITOR****ELITE****BE-970WM - Waterproof 7" Digital LCD monitor****AM BRIG3351**

- 12-24Vdc
- IP69K
- Size (WxHxD)  
194 x 124 x 48mm
- 5 year warranty

**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**

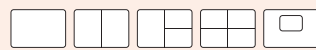
- Power consumption: min 11 Watts
- Current: max 0.9 Amps

**Durability & Standards**

- Aluminium die-cast casing
- Mechanical vibration: 20G
- Mechanical shock: 100G
- Operating temperature: -40 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- ISO 16750
- ISO 20653: 2006
- HALT tested

**7" IP69K QUAD MONITOR****ELITE****BE-970WFM - Waterproof 7" Quad digital LCD monitor****AM BRIG3560**

- 12-24Vdc
- IP69K
- Size (WxHxD)  
194 x 124 x 48mm
- 5 year warranty



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: max 2.15 Amps

**Durability & Standards**

- Aluminium die-cast casing
- Mechanical vibration: 10G
- Mechanical shock: 100G
- Operating temperature: -40 to +75°C
- CE marked
- E-Marked: UNECE R10 compliant
- ISO 16750
- ISO 20653: 2006
- HALT tested

Model

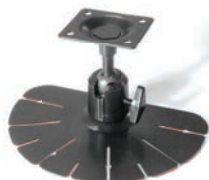
Part No:

## 7" QUAD MONITOR

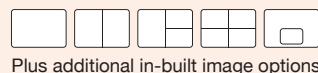
ELITE

BE-870FM - 7" Digital LCD monitor

AM BRIG2146



- 12-24Vdc
- Size (WxHxD)  
197 x 135 x 30mm
- 5 year warranty



Plus additional in-built image options

### Features

- 4 camera inputs
- 5 Auto-triggers
- Shutter camera compatible
- 'Button-lock' anti-tamper feature
- Mirror / Normal switching from menu
- On-screen distance & 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: 800 x 480
- Contrast ratio: 500:1
- Brightness: 400cd/m²
- Viewing angles:  
Side 70° x Top 50° x Bottom 70°

### Power

- Power consumption: 21 Watts
- Current: 1.9 Amps

### Durability & Standards

- Mechanical vibration: 6G
- Mechanical shock: 100G
- Operating temperature: -40 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- HALT tested

## 7" MONITOR

ELITE

BE-870LM - 7" Digital LCD monitor

AM BRIG2705



- 12-24Vdc
- Size (WxHxD)  
197 x 128 x 34mm
- 5 year warranty



### 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/m²
- 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
- E-Marked: UNECE R10 compliant
- \*Camera monitor system R46 approved

## 5.6" MONITOR

ELITE

BE-856GM - 5.6" Digital LCD monitor

AM BRIG3756



- 12-24Vdc
- Size (WxHxD)  
172 x 115 x 32mm
- 5 year warranty



### Features

- 2 camera inputs
- 2 Auto-triggers
- Mirror / Normal switching from menu
- On-screen distance & 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/m²
- 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
- E-Marked: UNECE R10 compliant
- ISO 13766: 2006
- ISO 16750
- HALT tested

## What is AHD?

An Analogue High Definition (AHD) camera monitor system is an analogue system that supports High Definition video resolutions. The resolution of HD & AHD systems is measured in pixels per square inch (p). AHD 1.0 supports 720p HD resolution and AHD 2.0 supports 1080p HD resolution.

### What about PAL and NTSC formats?

HD cameras operating at 25Hz (25frames per second) are compatible with PAL format (so we call them PAL). HD cameras operating at 30Hz (30 frames per second) are compatible with NTSC format (so we call them NTSC).

### What should I consider when choosing between AHD and traditional CVBS systems?

There are many factors to consider when choosing between AHD and traditional CVBS, including compatibility with other systems and bandwidth/memory capacity if connecting to a mobile digital recorder. (AHD systems will use more bandwidth for transmission and will take up more memory for the same time period). For the best HD quality results, all parts of the system should be AHD.



AHD camera image



Traditional CVBS camera image

### Compatibility with existing traditional CVBS systems:

- Brigade HD cables can be used instead of traditional CVBS cables for all Brigade SELECT camera monitor systems.
- Brigade HD cameras can be used with our MDR-500 series Mobile Digital Recorders (MDR),
- Brigade's traditional CVBS cameras can be used with our new HD monitors (camera image will not be HD).
- Brigade's traditional CVBS monitors are not compatible with HD cameras.

Model

Part No:

NEW

**AHD 10.4" QUAD MONITOR**

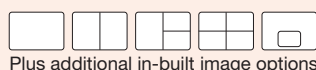
SELECT

**VBV-7104HFM - 10.4" High Definition LCD Monitor**

**AM BRIG6057**



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



Plus additional in-built image options

#### Features

- AHD and CVBS compatible
- High-definition, high contrast, wide view angle
- 4 camera inputs
- Configurable split screen option for Backeye360
- '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 AHD 1.0 / AHD 2.0 / PAL / NTSC

#### Picture Quality

- LED backlighting (gives 30,000 hours life)

- Anti-glare screen
- Resolution: 1024 x 768
- Contrast ratio: 900:1
- Brightness: 500cd/m<sup>2</sup>
- Viewing angles:  
Side 85° x Top 85° x Bottom 85°

#### Power

- Power consumption: 31 Watts
- Current: 2.6+ Amps

#### Durability & Standards

- Mechanical vibration: 4G
- Mechanical shock: 51G
- Operating temperature: -20 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- HALT tested
- FCC Approved
- IC Approved

**ORDER TODAY CALL YOUR LOCAL SCANIA DEALER (SEE INSIDE FRONT COVER)**

Model

Part No:

NEW

AHD 7" MONITOR

SELECT



VBV-770HM - 7" High Definition LCD monitor

AM BRIG5611

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

7.0"



#### Features

- AHD and CVBS compatible
- High-definition, high contrast, wide view angle
- 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 AHD 1.0 / AHD 2.0 / PAL / NTSC

#### Picture Quality

- LED backlighting  
(gives 20,000 hours life)

- Anti-glare screen
- Resolution: 1024 x 600
- Contrast ratio: 700:1
- Brightness: 500cd/m<sup>2</sup>
- Viewing angles:  
Side 85° x Top 85° x Bottom 85°

#### Power

- Power consumption: 10 Watts
- Current: 0.8 Amps

#### Durability & Standards

- Mechanical vibration: 4G
- Mechanical shock: 51G
- Operating temperature: -30 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- HALT tested
- FCC approved
- IC approved

7" MONITOR

SELECT

VBV-770M - 7" Digital LCD monitor

AM BRIG4288

VBV-770M-S - 7" Digital LCD monitor

AM BRIG4697

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

*Also available in High Definition model*



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

7.0"



#### 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
- E-Marked: UNECE R10 compliant
- HALT tested
- \*Camera monitor system R46 approved VBV-770M only

**5" MONITOR****SELECT****VBV-750M - 5" Digital LCD monitor****AM BRIG4287****VBV-750M-S - 5" Digital LCD monitor****AM BRIG4710**

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



- 12-24Vdc
- Size (WxHxD)  
149.5 x 99 x 22mm
- 3 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**

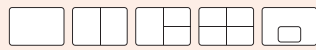
- Mechanical vibration: 4G
- Mechanical shock: 100G
- Operating temperature: -30 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- HALT tested

**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°

**7" QUAD MONITOR****SELECT****VBV-770FM - 7" Digital LCD monitor****AM BRIG4982**

- 12-24Vdc
- Size (WxHxD)  
182 x 122 x 27mm
- 3 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

**Power**

- Power consumption: 27 watts
- Current: 2.2 Amps

**Durability & Standards**

- Mechanical vibration: 4G
- Mechanical shock: 50G
- Operating temperature: -30 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant

**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°

**CAMERA MONITOR SYSTEM ANCILLARIES****SELECT****BMM-019-ARM - 68mm replacement arm (Select range)****AM BRIG3348**

- 68mm mounting bracket arm
- Allows monitor to be dash-mounted in portrait position

A further range of camera/monitor brackets and mounting adapters is available. Please contact us for details

# Backeye® Camera Monitor Kits

Model

Part No:

## CAMERA MONITOR SYSTEMS

ELITE

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

AM BRIG3231



- BE-870LM - 7" monitor AM BRIG2705
- BE-800C Camera AM BRIG1623
- BE-L120 - 20m cable AM BRIG0801

See individual products for detailed specifications and warranties

**R46**  
APPROVED

BE-870L-100 - Single shutter camera monitor system for rigid vehicles AM BRIG4032



- BE-870LM - 7" monitor AM BRIG2705
- BE-810C Shutter camera AM BRIG1242
- BE-L120 - 20m cable AM BRIG0801

See individual products for detailed specifications and warranties

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

AM BRIG4012



- BE-856GM - 5.6" monitor AM BRIG3756
- BE-800C Camera AM BRIG1623
- BE-L120 - 20m cable AM BRIG0801

See individual products for detailed specifications and warranties

## OPTIONAL EXTRA

Add VBV-300C (low mount) or VBV-320C (high mount) side view camera + BE-L105 (5m cable) + AC-006 Adapter to spot cyclists.



## CAMERA MONITOR SYSTEMS

## SELECT

**VBV-770-310 - Single flush-mount camera monitor system for small rigid vehicles**

**AM BRIG4781**



- VBV-770M - 7" monitor **AM BRIG4288**
- VBV-300C - flush-mount camera **AM BRIG5211**
- VBV-L410 - 10m cable **AM BRIG1386**

See individual products for detailed specifications and warranties

**R46**  
APPROVED

**VBV-750-310 - Single flush-mount camera monitor system for small rigid vehicles**

**AM BRIG4780**



- VBV-750M - 5" monitor **AM BRIG4287**
- VBV-300C - flush-mount camera **AM BRIG5211**
- VBV-L410 - 10m cable **AM BRIG1386**

See individual products for detailed specifications and warranties



**HIGH-QUALITY PARTS  
AS STANDARD**

## VRS ALL MAKES TRUCK THE febi RANGE

- New brochure available now
- Highlights of our febi All Makes Programme
- Range by Range Guide
- Key product overview



# Backeye® Camera Monitor Kits

Model

Part No:

NEW

## AHD CAMERA MONITOR SYSTEMS

SELECT

**VBV-770H-3000 - Single AHD flush-mount camera monitor system for rigid vehicles**

**AM BRIG6112**



- VBV-770HM - 7" AHD monitor AM BRIG5611
- VBV-3000C AHD Camera AM BRIG5454
- VBV-H420 - AHD 20m cable AM BRIG5513

See individual products for detailed specifications and warranties

**VBV-770H-7000 - Single AHD camera monitor system for rigid vehicles** AM BRIG6111



- VBV-770HM - 7" AHD monitor AM BRIG5611
- VBV-7000C AHD Camera AM BRIG5464
- VBV-H420 - AHD 20m cable AM BRIG5513

See individual products for detailed specifications and warranties

**VBV-770H-3100 - Single AHD camera monitor system for small rigid vehicles**

**AM BRIG6113**



- VBV-770HM - 7" AHD monitor AM BRIG5611
- VBV-3000C AHD Camera AM BRIG5454
- VBV-H420 - AHD 10m cable AM BRIG5516

See individual products for detailed specifications and warranties

## OPTIONAL EXTRA

Add VBV-3000C (low mount) or VBV-3020C (high mount) side view camera + VBV-H405 (5m cable) to spot cyclists.



## CAMERA MONITOR SYSTEMS

## SELECT

## VBV-770-300 - Single flush-mount camera monitor system for rigid vehicles AM BRIG4777



- VBV-770M - 7" monitor AM BRIG4288
- VBV-300C - flush-mount camera AM BRIG5211
- VBV-L420 - 20m cable AM BRIG1380

See individual products for detailed specifications and warranties

**R46**  
APPROVED

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

AM BRIG4692



- VBV-770M - 7" monitor AM BRIG4288
- VBV-700C - camera AM BRIG1379
- VBV-L420 - 20m cable AM BRIG1380

See individual products for detailed specifications and warranties

**R46**  
APPROVED

## VBV-770-100 - Single shutter camera monitor system for rigid vehicles

AM BRIG4695



- VBV-770M-S - 7" monitor AM BRIG4697
- VBV-710C - shutter camera AM BRIG2808
- VBV-L520 - 20m cable AM BRIG3664

See individual products for detailed specifications and warranties

## VBV-750-000 - Single camera monitor system for rigid vehicles

AM BRIG4705



- VBV-750M - 5" monitor AM BRIG4287
- VBV-700C - camera AM BRIG1379
- VBV-L420 - 20m cable AM BRIG1380

See individual products for detailed specifications and warranties

## OPTIONAL EXTRA

Add VBV-300C (low mount) or VBV-320C (high mount) side view camera + VBV-L405 (5m cable) to spot cyclists.



# Backeye® Camera Monitor Kits

Model

Part No:

## CAMERA MONITOR SYSTEMS

## SELECT

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

**AM BRIG4843**



- VBV-770M - 7" monitor **AM BRIG4288**
- VBV-700C - camera **AM BRIG1379**
- VBV-L420 - 20m cable **AM BRIG1380**
- DW-1000-TX - digital wireless transmitter **AM BRIG4043**
- DW-1000-RX - digital wireless receiver **AM BRIG4044**
- AC-006 - camera adapter **AM BRIG1983**
- AC-007 - monitor adapter **AM BRIG1984**

See individual products for detailed specifications and warranties

**VBV-770-001 - Single camera monitor system for articulated vehicles** **AM BRIG4767**



- VBV-770M - 7" monitor **AM BRIG4288**
- VBV-700C - camera **AM BRIG1379**
- VBV-410 - 10m cable for cab **AM BRIG1386**
- VSP-47A - 7-pin bulkhead socket for cab & cab-end camera connector **AM BRIG1847**
- SC-07-24S - Coiled cable with type 24S 7-pin plugs **AM BRIG1227**
- VBV-L420 - 20m extension cable for trailer **AM BRIG1380**
- VSP-47B - 7-pin bulkhead socket for trailer & trailer-end camera connector **AM BRIG1846**

See individual products for detailed specifications and warranties

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

**AM BRIG4772**



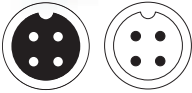
- VBV-770M-S - 7" monitor **AM BRIG4697**
- VBV-710C - shutter camera **AM BRIG2808**
- VBV-L510 - 10m cable for cab **AM BRIG3663**
- VBV-L520 - 20m cable for trailer **AM BRIG3664**
- VSP-57A 7-pin bulkhead socket for cab & cab-end camera connector **AM BRIG3869**
- VSP-57B 7-pin bulkhead socket for trailer & trailer-end camera connector **AM BRIG3870**
- SC-07-24S - Coiled cable with 7-pin sockets **AM BRIG1227**

See individual products for detailed specifications and warranties

**NEW****CAMERA MONITOR SYSTEM****ESSENTIAL**

**VBV-670-000 - PAL Camera monitor system**  
**VBV-671-000 - NTSC Camera monitor system**

**AM BRIG5774**  
**AM BRIG5816**



- **Camera Viewing angle (HxVxD)**  
89 x 65 x 115° PAL  
89 x 65 x 114° NTSC
- **IP67**
- **Camera Size (WxHxD)**  
76 x 59 x 52mm
- **Monitor Size (WxHxD)**  
205 x 126 x 26mm
- **1 year warranty**

**Contents**

- 1 x VBV-670M monitor
- 1 x monitor sunshield
- 1 x monitor bracket
- 1 x VBV-63XC camera
- 1 x 20m VBV-L4020 extension cable
- Fitting kit

**Camera Features**

- Normal view
- 1/3" PixelPlus CMOS
- TV Lines: 425

**Monitor Features**

- 2 camera inputs
- 1 auto trigger
- Sun shield
- Multi-lingual menus
- Normal/Mirror via OSD menu

**Picture Quality**

- Monitor resolution: 800x400
- Contrast ratio: 500:1
- Brightness: 250 cd/m²
- Monitor viewing angles:  
Side 70° x Top 45° Bottom 65°

**Power**

- Power consumption: 4.2 Watts
- Current: 0.4 Amps

**Durability & Standards**

- Mechanical vibration:  
Camera: 8.5G Monitor: 4G
- Operating temperature: -30 to +70°C
- CE marked
- FCC approved

**TO CONNECT AN ADDITIONAL CAMERA**

**VBV-630C - Essential Camera - PAL**  
**VBV-631C - Essential Camera - NTSC**

**AM BRIG5772**  
**AM BRIG5817**

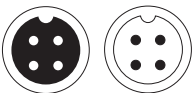
**VBV-L4020 - 20m Essential extension cable**

**AM BRIG5773**

**CAMERA MONITOR SYSTEM****ESSENTIAL**

**VBV-650-000 - PAL Single-camera monitor system**  
**VBV-650-000N - NTSC Single-camera monitor system**

**AM BRIG4765**  
**AM BRIG4766**



- **Camera Viewing angle (HxVxD)**  
81 x 59 x 106° PAL  
81 x 59 x 108° NTSC
- **IP67**
- **Camera Size (WxHxD)**  
65 x 59 x 55mm
- **Monitor Size (WxHxD)**  
150 x 99 x 31mm
- **1 year warranty**

**Contents**

- 1 x VBV-650M monitor
- 1 x monitor bracket
- 1 x VBV-620C camera PAL or VBV-621C camera NTSC
- 1 x 20m VBV-L4020 extension cable
- Fitting kit

**Camera Features**

- Mirror view
- CMOS
- TV Lines: 420

**Monitor Features**

- 1 camera input

**Picture Quality**

- Monitor resolution: 640x480
- Monitor viewing angles:  
Side 70° x Top 50° Bottom 70°

**Power**

- Power consumption: 2 Watts

**Durability & Standards**

- Operating temperature: -10 to +70°C


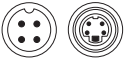
































# Adapter Cables






















Model

Part No:

## BRIGADE CAMERA MONITOR ADAPTERS

	 	AC-006 - Connects Select camera (not shutter) to Elite cable	AM BRIG1983
	 	AC-007 - Connects Select monitor to Elite cable	AM BRIG1984
	 	AC-014 - Connects Elite camera to Select cable	AM BRIG2094
	 	AC-014(5M) - Connects Elite camera to Select cable, 5m long	AM BRIG5049
	 	AC-020 - Connects Elite monitor to Select cable	AM BRIG2590
	 	AC-035 - 5-pin to 4-pin Select shutter camera adapter	AM BRIG3702
	 	AC-055(5M) - 5-pin to 4-pin Select cable, 5m long	AM BRIG4267
	  	AC-305 - Splitter cable connects 1 x BN360-200 camera to MDR & ECU	AM BRIG4903
	  	AC-306 - Splitter cable connects 1 x (Non HD) Select camera to MDR & monitor	AM BRIG4904
	  	AC-307 - Splitter cable connects 1 x Elite camera to MDR & Monitor	AM BRIG4905

## MISCELLANEOUS CAMERA MONITOR ADAPTERS

	 	AC-056 - Connects Select camera to Orlaco monitor	AM BRIG4401
	 	AC-062 - Connects Elite camera to Orlaco monitor	AM BRIG4691
	 	AC-063 - Connects Elite camera to Orlaco monitor, screw fit	AM BRIG4925
	 	AC-066 - Connects Orlaco camera to Elite monitor	AM BRIG5027
	 	AC-067 - Connects Orlaco camera to Select monitor	AM BRIG5028
	 	AC-24-12(009) - In-line 24/12Vdc converter - Select camera to Mekra 507405 monitor	AM BRIG4926
	 	AC-308 - Splitter cable connects MDR to Mekra 507405 CMS	AM BRIG4949

### OEM CAMERA MONITOR ADAPTERS

		<b>AC-041</b> - Connects Elite camera to John Deere 7-pin amp output	AM BRIG4245
		<b>AC-042</b> - Connects Select camera to John Deere 7-pin amp output	AM BRIG4246
		<b>AC-044</b> - Connects Select camera to Molex M12 (Fendt)	AM BRIG4279
		<b>AC-045</b> - Connects Elite camera to Molex M12 (Fendt)	AM BRIG4280
		<b>AC-068</b> - Connects Select camera to MAN Harman unit with camera prep	AM BRIG5234
		<b>AC-069</b> - Connects Select camera to MAN/Scania Harman unit without camera prep	AM BRIG5318
		<b>AC-24-12(002)</b> - In-line 24/12Vdc converter - Elite camera to Mercedes monitor	AM BRIG4266
		<b>AC-24-12(004)</b> - In-line 24/12Vdc converter - Select camera to MAN MMT HSD	AM BRIG4281
		<b>AC-24-12(006)</b> - In-line 24/12Vdc converter - Select camera to Volvo FH(4) & FM(4)	AM BRIG4719
		<b>AC-24-12(007)</b> - In-line 24/12Vdc converter - Select camera to Iveco connect system	AM BRIG4762
		<b>AC-24-12(008)</b> - In-line 24/12Vdc converter - Select camera to Mercedes Sprinter	AM BRIG4763

A further range of OEM-specific adapters to connect Brigade cameras to factory-fit monitors is available

### GENERAL CAMERA MONITOR ADAPTERS

		<b>AC-016</b> - Connects AV to Camera input of Elite monitor	AM BRIG2150
		<b>AC-019</b> - Connects Elite camera to male phono (video only)	AM BRIG2589
		<b>AC-021</b> - Connects BNC/FLIR PathFindIR camera to Elite cable	AM BRIG2704
		<b>AC-024</b> - Connects AV to Select monitor (video & audio input, 12Vdc output)	AM BRIG3183
		<b>AC-028</b> - Connects AV to Select cable	AM BRIG3335
		<b>AC-064</b> - Connects Elite camera to BNC adapter cable	AM BRIG4948

# Cables / Truck and Trailer Connection

Model

Part No:

## ELITE CAMERA CABLES

## ELITE



BE-L130	- 30 metre cable
BE-L120	- 20 metre cable
BE-L115	- 15 metre cable
BE-L112	- 12 metre cable
BE-L110	- 10 metre cable
BE-L108	- 8 metre cable
BE-L105	- 5 metre cable
BE-L101	- 1 metre cable
BE-L1003	- 0.3 metre cable

AM BRIG0800
AM BRIG0801
AM BRIG0802
AM BRIG3008
AM BRIG0803
AM BRIG3007
AM BRIG0804
AM BRIG5042
AM BRIG2797

## ELITE CAMERA EXTENSION CABLES

## ELITE



BE-X025	- 25 metre extension cable
BE-X020	- 20 metre extension cable
BE-X015	- 15 metre extension cable
BE-X010	- 10 metre extension cable
BE-X005	- 5 metre extension cable
BE-X003	- 3 metre extension cable

AM BRIG1907
AM BRIG1143
AM BRIG2101
AM BRIG2100
AM BRIG2099
AM BRIG0805

## NEW

## SELECT AHD CAMERA CABLES

## SELECT



VBV-H420	- 20 metre cable
VBV-H415	- 15 metre cable
VBV-H410	- 10 metre cable
VBV-H405	- 5 metre cable
VBV-H4025	- 2.5 metre cable

AM BRIG5513
AM BRIG5514
AM BRIG5516
AM BRIG5519
AM BRIG5522

## SELECT CAMERA CABLES

## SELECT



VBV-L430	- 30 metre cable
VBV-L420	- 20 metre cable
VBV-L415	- 15 metre cable
VBV-L412	- 12 metre cable
VBV-L410	- 10 metre cable
VBV-L407	- 7 metre cable
VBV-L406	- 6 metre cable
VBV-L405	- 5 metre cable
VBV-L403	- 3 metre cable
VBV-L4025	- 2.5 metre cable

AM BRIG2108
AM BRIG1380
AM BRIG3150
AM BRIG3106
AM BRIG1386
AM BRIG3151
AM BRIG3152
AM BRIG1499
AM BRIG4977
AM BRIG1554



VBV-L520	- 20 metre 5-pin shutter camera cable
VBV-L510	- 10 metre 5-pin shutter camera cable
VBV-L505	- 5 metre 5-pin shutter camera cable

AM BRIG3664
AM BRIG3663
AM BRIG4001

**TRUCK/TRAILER CABLE KIT****ELITE****SK-31E - Truck and trailer cable kit - unique pin layout****AM BRIG1830**

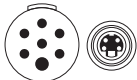
Inclusive of SK-31E-T - Trailer kit



SP-7A



SC-7



SP-7B

- BE-L110 - 10m cable for cab AM BRIG0803
- SP-7A - 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout) AM BRIG1827
- SC-7 - Coiled cable with 7-pin plugs (unique pin layout) AM BRIG1829

**SK-31E-T - Trailer only kit AM BRIG1886**

- BE-X020 - 20m extension cable for trailer AM BRIG1143
- SP-7B - 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout) AM BRIG1828

**TRUCK/TRAILER CABLE KIT****ELITE****SK-30E - Truck and trailer cable kit****AM BRIG1144**

Inclusive of SK-30E-T - Trailer kit



SP-07C



SC-07



SP-07T

- BE-L110 - 10m cable for cab AM BRIG0803
- SP-07C - 7-pin bulkhead socket for cab & cab-end camera connector AM BRIG1140
- SC-07 - Coiled cable with 7-pin plugs AM BRIG1046

**SK-30E-T - Trailer only kit AM BRIG1885**

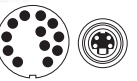
- BE-X020 - 20m extension cable for trailer AM BRIG1143
- SP-07T - 7-pin bulkhead socket for trailer & trailer-end camera connector AM BRIG1142

**TRUCK/TRAILER CABLE KIT****ELITE****SK-15-01 - Truck and trailer cable kit for three cameras****AM BRIG3427**

SP-15A-01



SC-15-01



SP-15B-01

- SP-15A-01 - 15-pin bulkhead socket for cab & 3 cab-end camera connectors AM BRIG3423

- SP-15B-01 - 15-pin bulkhead socket for trailer & 3 trailer-end camera connectors AM BRIG3422

- SC-15-01 - Coiled shielded cable with 15-pin plugs AM BRIG3268

**TRUCK/TRAILER CABLE KIT****ELITE****SK-15-04 - Truck and trailer cable kit for single camera & single buzzer ultrasonic detection system****AM BRIG3997**

SP-15A-04



SC-15-01



SP-15B-04

- SP-15A-04 - 15-pin bulkhead socket for cab & cab-end camera connector plus stripped wires and display/buzzer connection for Ultrasonics AM BRIG3955

- SP-15B-04 - 15-pin bulkhead socket for trailer & trailer-end camera connector plus stripped wires and display/buzzer connection for Ultrasonics AM BRIG3956

- SC-15-01 - Coiled shielded cable with 15-pin plugs AM BRIG3268

# Truck and Trailer Connection

Model

Part No:

## TRUCK/DRAWBAR TRAILER CABLE KIT

ELITE

**SK-50E - Truck and drawbar trailer cable kit for two cameras**  
- unique pin layout

AM BRIG1570

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



SP-7A



SC-7



SP-7B

**SK-50E-A - Truck only kit** AM BRIG1879

- BE-L115 - 15m cable for truck AM BRIG0802
- BE-X005 - 5m extension cable for truck camera AM BRIG2099
- CS-020 - Two way camera selector AM BRIG1571
- SP-7A - 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout) AM BRIG1827
- SC-7 - Coiled cable with 7-pin plugs (unique pin layout) AM BRIG1829

**SK-31E-T - Trailer only kit** AM BRIG1886

- BE-X020 - 20m extension cable for trailer camera AM BRIG1143
- SP-7B - 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout) AM BRIG1828

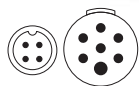
## TRUCK/TRAILER CABLE KIT

SELECT

**VSK-31E - Truck and trailer cable kit - unique pin layout**

AM BRIG2539

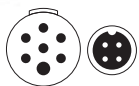
Inclusive of VSK-31E-T - Trailer kit



SP-7A



SC-7



SP-7B

(Select connector via supplied adapter cables)

- VBV-L410 - 10m cable for cab AM BRIG1386
- SP-7A - 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout) AM BRIG1827
- AC-014 - Adapter cable AM BRIG2094
- SC-7 - Coiled cable with 7-pin plugs (unique pin layout) AM BRIG1829

**VSK-31E-T - Trailer only kit** AM BRIG2543

- VBV-L420 - 20m cable for trailer AM BRIG1380
- AC-006 - Adapter cable AM BRIG1983
- SP-7B - 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout) AM BRIG1828

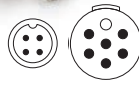
## TRUCK/TRAILER CABLE KIT

SELECT

**VSK-30E - Truck and trailer cable kit**

AM BRIG2538

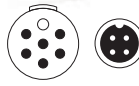
Inclusive of VSK-30E-T - Trailer only kit



VSP-47A



SC-07-24S



VSP-47B

- VBV-L410 - 10m cable for cab AM BRIG1386
- VSP-47A - 7-pin bulkhead socket for cab & cab-end camera connector AM BRIG1847
- SC-07-24S - Coiled cable with type 24S 7-pin plugs AM BRIG1227

**VSK-30E-T - Trailer only kit** AM BRIG2542

- VBV-L420 - 20m extension cable for trailer AM BRIG1380
- VSP-47B - 7-pin bulkhead socket for trailer & trailer-end camera connector AM BRIG1846

**Model****Part No:****TRUCK/TRAILER CABLE KIT****SELECT****VSK-305E - Truck and trailer cable kit for Select shutter camera****AM BRIG3871**

VSP-57A



SC-07-24S



VSP-57B

- VBV-L510 10m cable for cab AM BRIG3663
- VBV-L520 20m cable for trailer AM BRIG3664
- VSP-57A 7-pin bulkhead socket for cab & cab-end camera connector AM BRIG3869

- VSP-57B 7-pin bulkhead socket for trailer & trailer-end camera connector AM BRIG3870
- SC-07-24S - Coiled cable with type 24S 7-pin plugs AM BRIG1227

**TRUCK/TRAILER CABLE KIT****SELECT****SK-15-05 - Truck and trailer cable kit for 3-camera Backeye®360****AM BRIG5066**

SP-15A-05



SC-15-01



SP-15B-05

- SP-15A-05 - 15-pin bulkhead socket for cab & cab-end connector plus 3x connections for Backeye®360 Select AM BRIG5064
- SP-15B-05 15-pin bulkhead socket for trailer & trailer-end connector plus 3x connections for Backeye®360 Select AM BRIG5065

- SC-15-01 Coiled shielded cable with 15-pin plugs AM BRIG3268

**TRUCK/ DRAWBAR TRAILER CABLE KIT****SELECT****VSK-50E - Truck and drawbar trailer cable kit for two cameras****AM BRIG2540**

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



VSP-47A



SC-07-24S



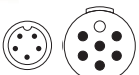
VSP-47B

**VSK-50E-A - Truck only kit AM BRIG2541**

- VBV-L420 - 20m cable for truck AM BRIG1380
- VBV-L405 - 5m camera cable for truck camera AM BRIG1499
- VCS-020 - Two-way camera selector AM BRIG1844
- 1 x VSP-47A - 7-pin camera bulkhead socket for truck rear AM BRIG1847
- SC-07-24S - Coiled cable with 7-pin sockets AM BRIG1227

**VSK-30E-T - Trailer only kit AM BRIG2542**

- VBV-L420 - 20m cable for trailer AM BRIG1380
- VSP-47B - 7-pin camera bulkhead socket for trailer AM BRIG1846

**TRUCK/DRAWBAR TRAILER CABLE KIT****SELECT****VSK-505E - Truck and drawbar trailer cable kit for two Select shutter cameras****AM BRIG4005**

VSP-57A



SC-07-24S



VSP-57B

- VBV-L420 - 20m cable for truck AM BRIG1380
- VBV-L520 - 20m camera cable for truck camera AM BRIG3664
- VBV-L505 - 5m camera cable for cab AM BRIG4001
- VCS-020 - Two-way camera selector AM BRIG1844
- 2 x AC-035 - 5-pin to 4-pin shutter camera adapter AM BRIG3702

- VSP-57A 7-Pin bulkhead socket for cab & cab-end camera connector AM BRIG3869
- VSP-57B 7-pin bulkhead socket for trailer & trailer-end camera connector AM BRIG3870
- SC-07-24S - Coiled cable with 7-pin plugs AM BRIG1227

Model

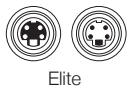
Part No:

## DIGITAL WIRELESS CONNECTION SYSTEM



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

AM BRIG4043  
AM BRIG4044



Elite



Select

- Digital technology
- 12-24Vdc
- 1 camera input
- IP69K (Transmitter)
- Size (WxHxD)  
113 x 114 x 31mm
- 3 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
- E-Marked: UNECE R10 compliant

Includes connectors/adapters for both Elite and Select range cameras and monitors. Not AHD compatible

## CAMERA MONITOR SYSTEM ANCILLARIES



Elite



Select



CS-020 - Two-way camera selector (Elite range connectors) AM BRIG1571  
VCS-020 - Two-way camera selector (Select range connectors) AM BRIG1844

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

Not AHD compatible

## CAMERA MONITOR SYSTEM ANCILLARIES



LS-60-A - Speed switch

AM BRIG4851

- 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

### 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
- E-Marked: UNECE R10 compliant

### Notes:

- A relay is required if connected to a device that is higher than 1.2 Amps
- Not compatible with HD systems

## CAMERA MONITOR SYSTEM ANCILLARIES

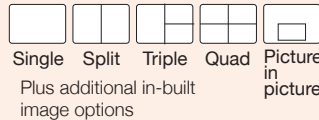
## ELITE

EDM-50 - Multi-camera module and screen splitter  
(Elite range connectors)

AM BRIG2152



- 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
- Adapter required for Select range monitors

**Power**

- Power consumption: 20 Watts
- Current: 2A

**Durability & Standards**

- Mechanical vibration: 5G
- Operating temperature: -25 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant

Not AHD compatible

## CAMERA MONITOR SYSTEM ANCILLARIES

## ELITE

## SC-1000-ECU - Shutter camera module

AM BRIG3666



- Allows BE-810C shutter camera to function on non-shutter enabled inputs on Elite range monitors (using Elite range cables)
- Adapter required for Select range monitors

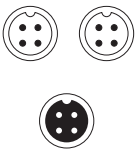
- Current: 2A
- CE marked
- E-Marked: UNECE R10 compliant
- 2 year warranty

## CAMERA MONITOR SYSTEM ANCILLARIES

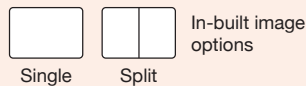
## SELECT

## SS-002 - Twin camera screen splitter (Select range connectors)

AM BRIG3044



- 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 trigger inputs per camera
- Shutter camera compatible with adapters (Elite - AC-035) (Select - TS-1000-ECU)
- 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

**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
- E-Marked: UNECE R10 compliant
- FCC approved
- IC approved

Adapter required for Elite range monitors  
Not AHD compatible



# MDR

# Mobile Digital Recording

## Providing your witness

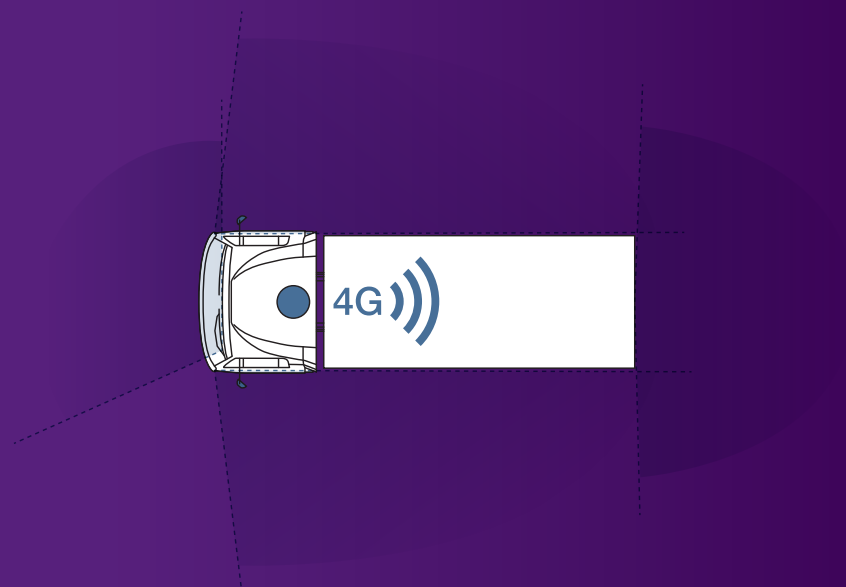
Brigade's Mobile Digital Recording (MDR) systems are now capable of capturing vehicle data and footage from up to 16 vehicle-mounted cameras. The MDR range includes models with 4G and WiFi connectivity capabilities, allowing data to be accessed from the recorder without having to physically go to the vehicle.

To take full advantage of the benefits of 4G connectivity, Brigade provide Bridge, a fully managed service for 4G enabled systems so that operators do not have to set up and maintain their own servers and manage SIMs and mobile data.

New IP Cameras and Network Expansion Modules mean that up to 6 cameras can be connected to our 4-channel MDR and up to 16 cameras can be connected to our 8-channel MDR.

MDRs are compatible with all Brigade Backeye® camera monitor systems, including Backeye®360.

MDRs are compatible with Brigade's Backeye® camera monitor systems, IP cameras and Backeye®360 - BN360-200.



# Mobile Digital Recorders

## BRIDGE MDR 4G Hosted Service

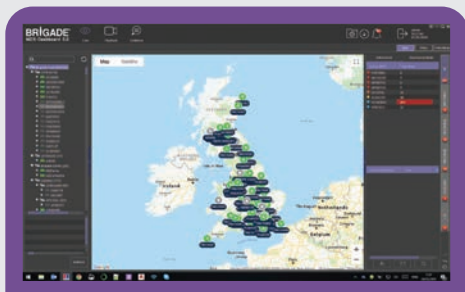
The MDR range includes models with 4G connectivity capabilities, allowing data to be accessed from the recorder without having to physically go to the vehicle.

In order to take full advantage of the benefits of 4G connectivity, Brigade now provide Bridge, a fully managed service for 4G enabled systems so that operators do not have to set up and maintain their own servers and manage SIMs and mobile data.



### Benefits of having remote access to the MDR can include:

- **Playback of historical footage and metadata from MDR or server** - Metadata includes: GPS location, speed, G-force, events and alarms.
- **Vehicle tracking** - Includes: GPS location, speed and alarms. Dual-screen support with dedicated location map.
- **Live view of vehicle cameras and metadata** - Metadata includes: GPS location, speed and alarms. Up to 64 cameras can be viewed from multiple MDRs on one screen.
- **Download footage**
  - **Scheduled:** one-off download to the server that will commence once vehicle is online.
  - **Automatic:** Pre-alarm and post-alarm footage (e.g. 30 seconds) will automatically save to the server.
  - **Manual:** Download historical footage from the MDR to local storage.
- **Geo-fencing** - Easily set up geographical boundaries to know when your vehicle enters and/or leaves areas.



Vehicle Tracking on MDR Dashboard  
PC software and MDR App



Example of 4-channel playback  
MDR Dashboard PC software

### All Bridge packages include

- 4G connection
- Competitively-priced 12 month contract, rolling thereafter
- SIM card
- Remote access to MDR via secure cloud server
- Technical helpline and online tutorials
- Access to data via MDR Apps for iOS and Android systems
- Access to data via MDR Dashboard PC software: Windows OS required (minimum Windows 7)

For further information, visit [brigade-electronics.com/bridge](http://brigade-electronics.com/bridge)

At the time of print, 4G Hosted Services only available in selected countries.

## HDD CMR Vs SSD technology:

**Conventional Magnetic Recording (CMR)** is the standard technology behind hard drive data storage. It contains a spinning disk where data is stored magnetically and an arm that moves transducers across the surface of the disk to read/write data.

**Solid State Drive (SSD)** hard drives contain no physical moving parts. Data is stored in integrated circuits using flash memory. SSDs are more robust, faster in performance, run cooler and use less energy.

### Model

### Part No:

## 8 CHANNEL MOBILE DIGITAL RECORDER

**NEW**

<b>MDR-508-1-G2-CMR</b>	<b>- 8 channel 1TB hard disk recorder</b>	<b>AM BRIG6244</b>
<b>MDR-508G-1-G2-CMR</b>	<b>- 8 channel 1TB hard disk recorder - 4G</b>	<b>AM BRIG6245</b>
<b>MDR-508GW-1-G2-CMR</b>	<b>- 8 channel 1TB hard disk recorder - WiFi/4G</b>	<b>AM BRIG6246</b>

1TB and 500GB SSD Hard disk models are available on special order. Please contact us for further details

**NEW**

<b>MDR-508-2-G2-SSD</b>	<b>- 8 channel 2TB hard disk recorder</b>	<b>AM BRIG6437</b>
<b>MDR-508G-2-G2-SSD</b>	<b>- 8 channel 2TB hard disk recorder - 4G</b>	<b>AM BRIG6438</b>
<b>MDR-508GW-2-G2-SSD</b>	<b>- 8 channel 2TB hard disk recorder - WiFi/4G</b>	<b>AM BRIG6439</b>



- 9-32Vdc
- 8 camera inputs - Supports AHD High definition cameras
- 8 trigger/alarm inputs
- Lockable and interchangeable Hard Drive Unit
- Fast, easily downloadable recordings and data
- Size (WxHxD)  
224 x 85 x 221mm
- 3 year warranty

**Note:**  
G2 MDR-500 Series hard drives and SD cards are NOT interchangeable with previous MDR-500 Series models unless a firmware and software update has been carried out. See website for further details



#### Main Contents

- Mobile Digital Recorder with hard disk caddy unit
- Wired Mouse
- 64Gb industrial grade Class 10 SD card
- Input / Output Cable
- Power Cable
- GPS Antenna
- 4G Antenna (G and GW models)
- Wi-Fi Antenna (W and GW models)
- USB A to B Cable (3.0)
- Security Key
- Bracket and Fixings

#### Features

- Remotely access MDR units using wireless (WiFi models only) and/or Mobile network (4G models only)
- Mobile apps for remote view (WiFi/4G models only)
- Geo-fencing (WiFi/4G models only)
- Mobile Standards: 2G/3G/4G
- Audio (cameras must have microphones)
- Robust aluminum housing
- Anti-vibration mounting allows for installation at any angle
- Built-in GPS
- Internal G-sensor and built-in buzzer
- Recordings saved to hard disk (protected by non-visible digital watermark) and in-built Mirror recording onto 64Gb SD card
- Recording modes: normal, alarm and timer (all watermarked)
- Configurable alarm trigger settings (speed, 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 GDPR compliant password protected access
- Hard drive unit directly pluggable to PC via USB port
- 8 x trigger Inputs, 2x trigger outputs and 1x12V power output
- Built-in HDD heater
- MDR Control using USB Mouse or optional IR remote control
- USB 3.0 connection
- TV System: PAL/NTSC/AHD
- Compatible with Brigade's vehicle CCTV camera monitor systems, IP cameras and Backeye@360 systems

#### 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

- Max power consumption: 80 Watts
- Current: 6.6 Amps

#### Durability & Standards

- Mechanical vibration: 1G
- Mechanical shock: 51G
- Operating temperature: -40 to +70°C
- E-Marked: UNECE R10 compliant
- CE marked
- FCC approved
- IC approved
- RoHS2 Compliant

## OPTIONAL EXTRA

Expand the channel capability of the MDR with the addition of an Expansion Module and IP cameras:

IP-EM4 - Expansion Module adds 4 channels to MDR-508 = 12 channels

IP-EM8 - Expansion Module adds 8 channels to MDR-508 = 16 channels



# Mobile Digital Recorders

Model

Part No:

## 4 CHANNEL MOBILE DIGITAL RECORDER

NEW

<b>MDR-504-1-G2-CMR</b>	<b>- 4 channel 1TB hard disk recorder</b>	<b>AM BRIG6257</b>
<b>MDR-504G-1-G2-CMR</b>	<b>- 4 channel 1TB hard disk recorder - 4G</b>	<b>AM BRIG6259</b>
<b>MDR-504GW-1-G2-CMR</b>	<b>- 4 channel 1TB hard disk recorder - WiFi/4G</b>	<b>AM BRIG6261</b>

1TB and 500GB SSD Hard disk models are available on special order. Please contact us for further details

<b>MDR-504-2000*</b>	<b>- 4 channel 2TB hard disk recorder</b>	<b>AM BRIG5563</b>
<b>MDR-504G-2000*</b>	<b>- 4 channel 2TB hard disk recorder - 4G</b>	<b>AM BRIG5571</b>

\* 2TB Generation-1 models to be discontinued mid 2021

NEW

<b>MDR-504-2-G2-SSD**</b>	<b>- 4 channel 2TB hard disk recorder</b>	<b>AM BRIG6432</b>
<b>MDR-504G-2-G2-SSD**</b>	<b>- 4 channel 2TB hard disk recorder - 4G</b>	<b>AM BRIG6433</b>
<b>MDR-504GW-2-G2-SSD</b>	<b>- 4 channel 2TB hard disk recorder - WiFi/4G</b>	<b>AM BRIG6434</b>

\*\* 2TB Generation-2 SSD models to be introduced mid 2021. Please contact us for further details



- 9-32Vdc
- 4 camera inputs - Supports AHD High definition cameras
- 8 trigger/alarm inputs
- Lockable and interchangeable Hard Drive Unit
- Fast, easily downloadable recordings and data
- Size (WxHxD) 190 x 75 x 222mm
- 3 year warranty

**Note:**  
G2 MDR-500 Series hard drives and SD cards are NOT interchangeable with previous MDR-500 Series models unless a firmware and software update has been carried out. See website for further details



### Main Contents

- Mobile Digital Recorder with hard disk caddy unit
- Wired Mouse
- 32Gb industrial grade Class 10 SD card
- Input / Output Cable
- Power Cable
- GPS Antenna
- 4G Antenna (G and GW models)
- Wi-Fi Antenna (W and GW models)
- USB A to B Cable (3.0)
- Security Key
- Bracket and Fixings

### Features

- Remotely access MDR units using wireless (WiFi models only) and/or Mobile network (4G models only)
- Mobile apps for remote view (WiFi/4G models only)
- Geo-fencing (WiFi/4G models only)
- Mobile Standards: 2G/3G/4G
- Audio (cameras must have microphones)
- Robust aluminum housing
- Anti-vibration mounting allows for installation at any angle
- Built-in GPS
- Internal G-sensor and built-in buzzer
- 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 (all watermarked)
- Configurable alarm trigger settings (speed, 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 GDPR compliant password protected access
- Hard drive unit directly pluggable to PC via USB port
- 8 x trigger Inputs, 2x trigger outputs and 1x12V power output
- Built-in HDD heater
- MDR Control using USB Mouse or optional IR remote control
- USB 3.0 connection
- TV System: PAL/NTSC/AHD
- Compatible with Brigade's vehicle CCTV camera monitor systems, IP cameras and Backeye@360 systems

### 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

- Max power consumption: 60 Watts
- Current: 5 Amps

### Durability & Standards

- Mechanical vibration: 1G
- Mechanical shock: 51G
- Operating temperature: -40 to +70°C
- E-Marked: UNECE R10 compliant
- CE marked
- FCC approved
- IC approved
- RoHS2 Compliant

## OPTIONAL EXTRA

Expand the channel capability of the MDR with the addition of an Expansion Module and IP cameras:



IP-EM4 - Expansion Module adds 2 channels to MDR-504 = 6 channels

### 500 SERIES MOBILE DIGITAL RECORDER ACCESSORIES



**AC-305** - Splitter cable connects 1 x Backeye®360 BN360-200 camera to MDR & ECU **AM BRIG4903**

**AC-306** - Connects 1 x Select camera to MDR and monitor **AM BRIG4904**

**AC-307** - Connects 1 x Elite camera to MDR and monitor **AM BRIG4905**

**MDR-RP-02** - Remote status & interface panel with panic button **AM BRIG6016**

**MDR-06RPC** - 6m cable for Remote status & interface panel **AM BRIG4873**



**MDR-GS-02** - External G-sensor **AM BRIG4988**

**MDR-03GSC** - 3m G-sensor cable **AM BRIG4874**

**SD-32GB-IND** - 32GB industrial grade Class 10 SD card **AM BRIG4875**

**SD-64GB-IND** - 64GB industrial grade Class 10 SD card **AM BRIG4876**



**MDR-FPB32-01** - External SD Mirror-recorder in fireproof housing with 32GB industrial grade Class 10 SD card **AM BRIG4896**

# Dash Cam Recorders

Model

Part No:

NEW

## DASH CAM RECORDER

DC-101 - Dash Cam

AM BRIG6290



- 12-24Vdc
- In-built camera
- 1 video output
- Fast, easily downloadable recordings and data
- Size (WxHxD) 78 x 34.6 x 31.5mm
- 1 year warranty

### Contents:

- 1x Dash Cam Recorder
- 1x GPS Antenna
- 1x 3m Hardwire cable
- 1x Mounting Bracket, adhesive pads and clips
- 1x 16Gb Micro SD card
- 1x Micro SD to SD adapter
- 1x Quick start guide

### Features

- 1080p High definition video capture
- Wide-angle camera lens 140°
- Wide dynamic range for improved detail in shadow and highlights
- Up to 4 hours recording on supplied micro SD card (supports up to 64Gb)
- Continuous recording with automatic overwriting of oldest data
- Audio
- External GPS receiver
- FAT (File Allocation Table) system eliminates the need for manual formatting of video files
- Front Vehicle departure warning

### 4 recording modes:

- Continuous - Records in 1min segments
- Incident - Records 10 seconds before and after an incident
- Manual - Records 10 seconds before and 50 seconds after manually starting recording
- Parking mode - Requires hard wiring

### Picture Quality

- Sensor: 2.1 M Pixel 1/2.7" CMOS
- Video resolution: FHD 1920 x 1080
- MP4 image compression
- Fast frame rate, 30 frames per second

### Durability & Standards

- Operating temperature: -10 to +60°C
- CE marked

NEW

## DASH CAM RECORDER

DC-102-RVC - Dash Cam and rear-view camera

AM BRIG6395



- 12-24Vdc
- In-built camera
- 1 external camera input
- 1 video output
- Fast, easily downloadable recordings and data
- Dash Cam Size (WxHxD) 78 x 34.6 x 31.5mm
- Rear-view Camera size (WxHxD) 61 x 30.5 x 25mm
- 1 year warranty

### Contents:

- 1x Dash Cam Recorder
- 1x Rear-view camera & 6m camera cable
- 1x GPS Antenna
- 1x 3m Hardwire cable
- 1x Mounting Bracket, adhesive pads and clips
- 1 x 32Gb Micro SD card
- 1x Micro SD to SD adapter
- 1x Quick start guide

### Features

- 1080p High definition video capture
- Wide-angle camera lens 140°
- Wide dynamic range for improved detail in shadow and highlights
- Up to 4 hours recording on supplied micro SD card (supports up to 64Gb)
- Continuous recording with automatic overwriting of oldest data
- Audio
- External GPS receiver
- FAT (File Allocation Table) system eliminates the need for manual formatting of video files
- 4 recording modes:

### Continuous - Records in 1min segments

- Incident - Records 10 seconds before and after an incident
- Manual - Records 10 seconds before and 50 seconds after manually starting recording
- Parking mode - Requires hard wiring
- Adjustable camera angle (rear-view camera only)

### Picture Quality

- Sensor: 2.1 M Pixel 1/2.7" CMOS
- Dash Cam video resolution: FHD 1920 x 1080
- Rear-view camera video resolution: HD 1280x720
- MP4 image compression
- Fast frame rate, 30 frames per second

### Durability & Standards

- Operating temperature: -10 to +60°C
- CE marked

**NEW****DASH CAM RECORDER****DC-102-IRC - Dash Cam and internal Infrared LED camera****AM BRIG6396**

- 12-24Vdc
- In-built camera
- 1 external camera input
- 1 video output
- Fast, easily downloadable recordings and data
- Dash Cam Size (WxHxD) 78 x 34.6 x 31.5mm
- Infrared Camera size (WxHxD) 61 x 30.5 x 25mm
- 1 year warranty

**Contents:**

- 1x Dash Cam Recorder
- 1x Infrared LED Camera & 0.5m camera cable
- 1x GPS Antenna
- 1x 3m Hardwire cable
- 1x Mounting Bracket, adhesive pads and clips
- 1 x 32Gb Micro SD card
- 1x Micro SD to SD adapter
- 1x Quick start guide

**Features**

- 1080p High definition video capture
- Wide-angle camera lens 140°
- Wide dynamic range for improved detail in shadow and highlights
- Up to 4 hours recording on supplied micro SD card (supports up to 64Gb)
- Continuous recording with automatic overwriting of oldest data
- Audio
- External GPS receiver
- FAT (File Allocation Table) system eliminates the need for manual formatting of video files
- 4 recording modes:

- Continuous - Records in 1min segments
- Incident - Records 10 seconds before and after an incident
- Manual - Records 10 seconds before and 50 seconds after manually starting recording
- Parking mode - Requires hard wiring
- Infrared LEDs for ultra-low light performance (Infrared camera only)
- Adjustable camera angle (Infrared camera only)

**Picture Quality**

- Sensor: 2.1 M Pixel 1/2.7" CMOS
- Dash Cam video resolution: FHD 1920 x 1080
- Infrared camera video resolution: HD 1280x720
- MP4 image compression
- Fast frame rate, 30 frames per second

**Durability & Standards**

- Operating temperature: -10 to +60°C
- CE marked

**DASH CAM ACCESSORIES****DC-1XX-LOCK - Dashcam Locking Box****AM BRIG6296****DC-1XX-DPC7 - Power Cable (7m)****AM BRIG6323**

# IP Cameras & Expansion Modules

## What are IP cameras & Expansion Modules?

An Internet Protocol (IP) camera is a high-definition digital camera with its own IP address. Instead of transmitting video over a video cable to a monitor or MDR, the IP camera transmits digital video to the MDR over a data connection (ethernet cable) where the images are saved to the HDD memory.

Brigade Expansion Modules use Power Over Network (PON) Switch technology to expand the channel capability of the MDR by transmitting digital video images from IP cameras over the top of existing analogue video cables/signals. The MDR on-screen display allows easy camera set up without need for specific IP camera knowledge

**Benefit:** Connecting IP cameras increases the number of channels available on the MDR:

MDR-504	- 4 x Analogue channels plus 1 x IP channel	= 5 channels
MDR-504 and PON switch	- 4 x Analogue channels plus 2 x IP channels	= 6 channels
MDR-508	- 8 x Analogue channels plus 1 x IP channel	= 9 channels
MDR-508 and PON switch	- 8 x Analogue channels plus up to 8 x IP channels	= 16 channels

**Model**

**Part No:**

**NEW**

**IP CAMERA**



**IP-1000C - Internal forward-facing camera**

**AM BRIG5935**

- Viewing angle (HxVxD)  
87 x 48 x 95°
- IP20
- Size (WxHxD)  
75 x 122 x 40mm
- 3 year warranty



### Features

- High-definition picture quality
- Windscreen flush-mounted to avoid reflections
- Microphone
- Normal view - mirror view via OSD settings or IP web interface
- Backlight compensation
- Automatic white balance
- Supports web browser access
- Fast setup feature in MDR 500 series to auto-assign camera IP address
- Picture Elements: 1920(H) x 1080(V)
- Imaging device: CMOS
- TV Lines: 800

### Power

- Power consumption: 2.5 Watts
- Current: 0.2 Amps

### Durability & Standards

- Mechanical vibration: 4.7G
- Mechanical shock: 51G
- Operating temperature: -40 to +70°C
- Video output signal: H264 or H.265
- Network protocol: MDR5, ONVIF, TCP/IP, HTTP, DHCP, NTP, FTP
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- IC approved

**Note:** For use with MDR only

**NEW**

**IP CAMERA**



**IP-1200C - Surface-mount dome camera**

**AM BRIG5937**

- Viewing angle (HxVxD)  
94 x 53 x 95°
- IP65
- Size (WxHxD)  
102 x 55 x 96 mm
- 3 year warranty



### Features

- High-definition picture quality
- Surface mount
- Heater
- Normal view
- Backlight compensation
- Automatic white balance
- Supports web browser access
- Fast setup feature in MDR 500 series to auto-assign camera IP address
- Picture Elements: 1920(H) x 1080(V)
- Imaging device: CMOS
- TV Lines: 700

### Power

- Power consumption: 3.5 Watts
- Current: 0.3 Amps

### Durability & Standards

- Mechanical vibration: 4.7G
- Mechanical shock: 51G
- Operating temperature: -40 to +70°C
- Video output signal: H264 or H.265
- Network protocol: MDR5, ONVIF, TCP/IP, HTTP, DHCP, NTP, FTP
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- IC approved

**Note:** For use with MDR only

## NEW

## IP CAMERA

## IP-1100C - Surface-mount camera

AM BRIG5936



- Viewing angle (HxVxD)  
84 x 46 x 103°
- IP67
- Size (WxHxD)  
96 x 52 x 58mm
- 3 year warranty



## Features

- High-definition picture quality
- Surface mount
- Built-in G-sensor for automatic image orientation
- High power infrared LED for low-light performance
- Day/night sensor
- Normal view
- Backlight compensation
- Automatic white balance
- Supports web browser access
- Fast setup feature in MDR 500 series to auto-assign camera IP address
- Imaging device: CMOS
- Picture elements: 1920 x 1080
- TV Lines: 800

## Power

- Power consumption: 5 Watts
- Current: 0.2 Amps

## Durability &amp; Standards

- Mechanical vibration: 8.5G
- Mechanical shock: 51G
- Operating temperature: -40 to +70°C
- Video output signal: H264 or H.265
- Network protocol: MDR5, ONVIF, TCP/IP, HTTP, DHCP, NTP, FTP
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- IC approved

**Note:** For use with MDR only

## NEW

## IP EXPANSION MODULES

## IP-EM4 - PON 4-channel switch

AM BRIG5860

## IP-EM8 - PON 8-channel switch

AM BRIG5861



- 12-24Vdc
- 4 or 8 IP camera inputs
- Size (WxHxD)  
IP-EM4: 149 x 44 x 127mm  
IP-EM8: 174 x 54 x 129.5mm
- 3 year warranty

## Features

- Expands the channel capability of the MDR by enabling the addition of IP cameras:
- IP-EM4 - adds 2 channels to MDR-504
- IP-EM4 - adds 4 channels to MDR-508
- IP-EM8 - adds 8 channels to MDR-508
- IP-EM8 not compatible with MDR-504

## Power

- Power consumption: 3 Watts

## Durability &amp; Standards

- Mechanical vibration: 2.3G
- Mechanical shock: 150G
- Operating temperature: -40 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- IC approved

## NEW

## IP CAMERA ACCESSORIES

## IP-EC-1 - CAT5E Ethernet cable 1 metre

AM BRIG5865

## IP-EC-5 - CAT5E Ethernet cable 5 metre

AM BRIG5866

## IP-EM-PC - MDR-PON Power cable

AM BRIG5864

## IP-L601 - IP Camera extension cable 1 metre

AM BRIG5867

## IP-L603 - IP Camera extension cable 3 metre

AM BRIG5902

## IP-L605 - IP Camera extension cable 5 metre

AM BRIG5903

## IP-L610 - IP Camera extension cable 10 metre

AM BRIG5982

## IP-L615 - IP Camera extension cable 15 metre

AM BRIG5904

## IP-L620 - IP Camera extension cable 20 metre

AM BRIG5983

## IP-L630 - IP Camera extension cable 30 metre

AM BRIG5984

## IP-1XXX-PC - IP Power and Ethernet cable -

AM BRIG5985

To connect a single camera to an MDR without the PON Switch



**WARNING:** There is a latency (time lag) in all digital video transmission, including IP Cameras. Although this time lag is small (~800ms), it is unacceptable for a camera that a driver is using as a safety and manoeuvring aid. Brigade IP cameras are an excellent choice for general monitoring (eg bus interior, doors, luggage compartment) and recording purposes, but should not be used as a driver aid for manoeuvring or blind-spot monitoring. Analogue cameras are still the best choice for safety critical manoeuvring and blind spot monitoring applications

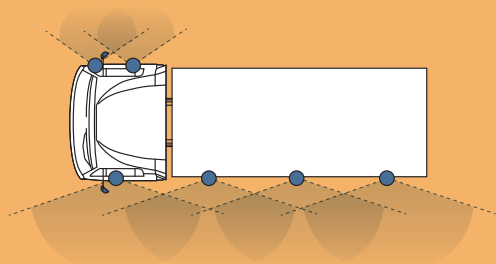


# Ultrasonic Object Detection Systems

## Sensor Systems

Reducing blind spots and improving driver visibility are important issues for operators of road-going vehicles. Brigade's ultrasonic detection sensors minimise both vehicle damage and collisions with pedestrians, cyclists or objects. Perfect for road-going commercial vehicles operating in confined spaces or manoeuvring at low speed.

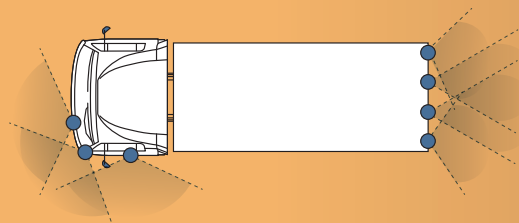
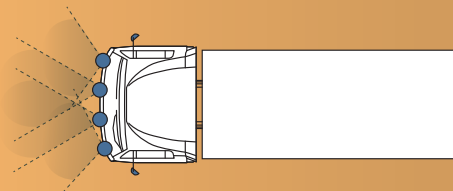
The detection system alerts the driver of objects close to the vehicle, whether moving or stationary. An in-cab warning informs of distance whilst an optional external speaking alarm can be added to alert cyclists and pedestrians that the vehicle is turning.



## On-Screen Display

Working in conjunction with a camera monitor system and up to two ultrasonic detection systems, the on-screen display module warns the driver of obstacles close to the vehicle by overlaying 3-stage audible and visual ultrasonic data onto the camera image on the vehicle's monitor.

- **Integration of Brigade's ultrasonic obstacle detection systems and camera monitor systems**
- **Ultrasonic detection warnings overlaid onto camera image on in-cab monitor**
- **Reduced driver stress and distractions as all information is in one view**



# Ultrasonic Object Detection

## Ultrasonic Detection On-Screen Display Module

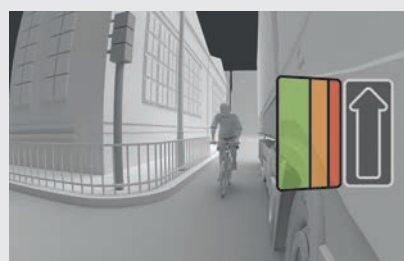
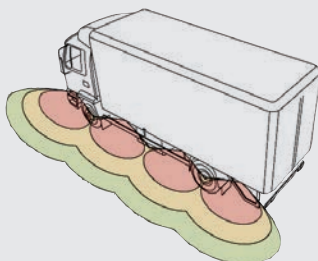


- Integration of Brigade's ultrasonic obstacle detection systems and Backeye® camera monitor systems
- Ultrasonic detection warnings overlaid onto camera image on in-cab monitor
- Reduced driver stress and distractions as all information is in one view

### Sensor data and camera image combined

Brigade's ultrasonic proximity sensors minimise both vehicle damage and collisions with pedestrians, cyclists or objects. Perfect for road-going commercial vehicles operating in confined spaces or manoeuvring at low speed.

Working in conjunction with a Backeye® camera monitor system and up to two ultrasonic detection systems, the on-screen display module warns the driver of obstacles close to the vehicle by overlaying 3-stage audible and visual ultrasonic data onto the camera image on the monitor.



**Model**

**Part No:**

### ULTRASONIC ON-SCREEN DISPLAY MODULE

UDS-OSD20-ECU - On-screen display module PAL  
UDS-OSD21-ECU - On-screen display module NTSC

AM BRIG5099  
AM BRIG5347



- Allows 3-stage audible and visual Ultrasonic data to be overlaid onto camera image on vehicle monitor
- 12-24Vdc
- 2 camera inputs
- 2 trigger inputs
- 2 UDS inputs
- 2 UDS outputs
- 2 year warranty

#### Contents

- OSD ECU
- Power cable
- Splitter cable
- Trigger cable

#### Features

- Overlay on monitor of vehicle icon and detection data from up to 2 x ultrasonic detection systems
- Compatible with 1x Sidescan® Frontscan® and Backscan®
- UDS overlay will appear on a black background if no cameras installed
- Graphics can be overlaid left or right on the monitor
- Audible warning via monitor
- Ultrasonic system fault displayed on monitor
- Compatible with MDR

#### Durability & Standards

- Mechanical vibration: 5G
- Mechanical shock: 10G
- Operating temperature: -30 to +70°C +22 to +158°F
- IP30
- Dimensions: 74 x 118 x 28 mm (WxDxH) 2.9 x 4.6 x 1.1"
- CE marked
- E-Marked: UNECE R10 compliant
- FCC Approved
- IC Approved

#### Power

- Power consumption: 1.7 Watts
- Current: 140mA

**Note: Not compatible with HD camera monitor systems**

**BACKSCAN® ULTRASONIC DETECTION SYSTEM****BS-4000W - Backscan® Rear reversing sensor system****AM BRIG3744**

- 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)
- 3 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**

- Mechanical vibration: 5G
- Mechanical shock: 10G
- Operating temperature: -30 to +80°C
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved

**Power**

- Power consumption: 2.4 Watts
- Current: 200mA

**ADDITIONS FOR ARTICULATED VEHICLES**

SK-15-04	Truck/trailer camera/sensor cable kit	AM BRIG3997
SK-UDS-05	Truck/trailer sensor only cable kit	AM BRIG4219
UDS-10BC	10m Buzzer/display cable	AM BRIG3716

**OPTIONAL EXTRA**

UDS-RELAY-24	Trigger-out diode protected relay 24Vdc	AM BRIG4215
UDS-RELAY-12	Trigger-out diode protected relay 12Vdc	AM BRIG4216

To power a device switched by the output trigger

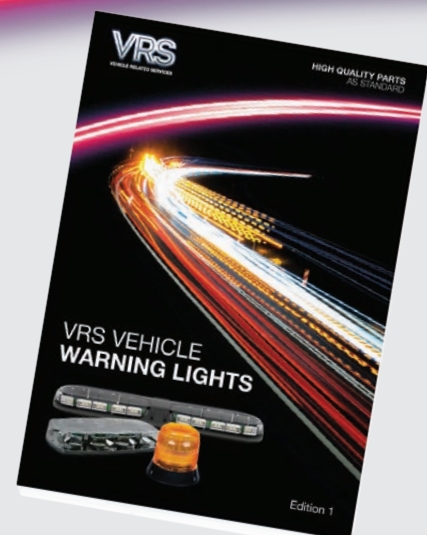


VEHICLE RELATED SERVICES

**ORDER TODAY**  
CALL YOUR SCANIA BRANCH

## VRS VEHICLE WARNING LIGHTS BROCHURE

PICK UP A COPY FROM YOUR  
LOCAL SCANIA BRANCH NOW.



# Ultrasonic Object Detection

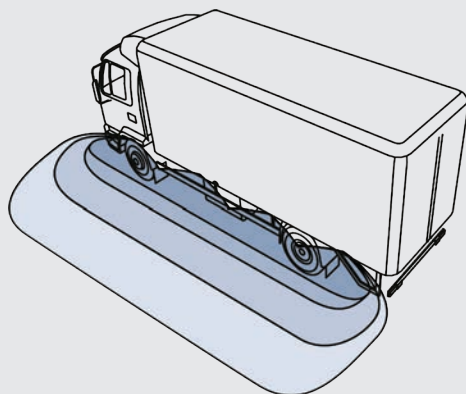
## Sidescan®Flex

### Flexible side detection

Sidescan®Flex is a four-sensor system fitted to the side of a vehicle to detect objects in the nearside blind spot, where cyclists or pedestrians can otherwise go undetected.

An advancement to the standard Sidescan® system, Sidescan®Flex allows the operator to choose from four detection configurations, each with different detection distances and audible and visual alerts (see table).

Sidescan® Flex has an increased maximum detection range of 2.5 metres.



Detection distance		Config 1	Config 2	Config 3	Config 4
0 - 0.6m	Beeps per second	Constant	Constant	Constant	Constant
	Flashes per second	8	8	8	8
0.6 - 0.9m	Beeps per second	Constant	4	4	4
	Flashes per second	8	8	8	8
0.9 - 1.5m	Beeps per second	4	-	-	1
	Flashes per second	4	4	4	4
1.5 - 2.5m	Beeps per second	1	-	-	-
	Flashes per second	1	1	-	-

Model

Part No:

NEW

## SIDESCAN®FLEX ULTRASONIC DETECTION SYSTEM

SS-4200W - Sidescan®Flex sensor system with mute function **AM BRIG5916**  
 SS-4200W-000 - Sidescan®Flex sensor system with mute function, **AM BRIG6075**  
 low speed trigger module and turn indicator sensor kit  
 Includes LS-60-A low speed trigger module and TS-001ECU turn indicator sensor



- 4 sensor system
- 12-24Vdc
- Detection zones - 0 - 2.5m (4 audible/visual configurations, selectable via dip switches)
- Underslung and flush-mount fixings included
- 1 Output trigger
- 3 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
- Buzzer with audible distance warning, LED & adjustable volume control
- Buzzer will silence after 4 seconds if there is no movement from detected object or vehicle
- Self-diagnostic function

- Environment Learning Mode prevents false alarms from ancillary equipment that intrudes in the first 100cm of the detection zone

### Durability & Standards

- Mechanical vibration: 5G
- Mechanical shock: 10G
- Operating temperature: -30 to +80°C
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved

### Power

- Power consumption: 2.4 Watts
- Current: 200mA

## OPTIONAL EXTRA



UDS-RELAY-24 Trigger-out diode protected relay 24Vdc

**AM BRIG4215**

UDS-RELAY-12 Trigger-out diode protected relay 12Vdc

**AM BRIG4216**

To power a device switched by the output trigger

## SIDECAN® ULTRASONIC DETECTION SYSTEM

SS-4100W -	Sidescan® Side sensor system with mute function	AM BRIG5257
SS-4100W-000 -	Sidescan® Side sensor system with mute function, low speed trigger module and turn indicator sensor kit	AM BRIG5344

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)
- 3 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
- Buzzer with audible distance warning, LED & adjustable volume control
- Buzzer will silence after 4 seconds if there is no movement from detected object or vehicle
- Environment Learning Mode prevents false alarms from ancillary equipment that intrudes in the first 100cm of the detection zone
- Self-diagnostic function

### Durability & Standards

- Mechanical vibration: 5G
- Mechanical shock: 10G
- Operating temperature: -30 to +80°C
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved

### Power

- Power consumption: 2.4 Watts
- Current: 200mA



## SIDECAN®/SIDECAN®FLEX ADDITIONS FOR ARTICULATED VEHICLES

SK-15-04	Truck/trailer camera/sensor cable kit	AM BRIG3997
SK-UDS-05	Truck/trailer sensor only cable kit (required)	AM BRIG4219
UDS-10BC	10m display cable (required)	AM BRIG3716
SS-4100W	Additional Sidescan sensor system for cab (optional)	AM BRIG5257

## SIDECAN®/SIDECAN®FLEX RECOMMENDED EXTRAS

LS-60-A	Low speed trigger module Enables sensors below designated speed	AM BRIG4851
TS-001ECU	Turn indicator trigger for system activation	AM BRIG1362

## SIDECAN®/SIDECAN®FLEX OPTIONAL EXTRA

SS-BC-08	Backchat speaking alarm with side turn warning for cyclists/pedestrians Note: TS-001ECU Turn indicator trigger is required	AM BRIG1334
TCO-47-01	Latched auto-reset Backalarm cut-out (dash mount)	AM BRIG4752



# Ultrasonic Object Detection

Model

Part No:

## FRONTSCAN® ULTRASONIC DETECTION SYSTEM

FS-4000W - Frontscan® Front sensor system

AM BRIG3747



- 4 sensor system
- 12-24Vdc
- 2.0m/1.0m detection range - outer sensors can be reduced to 0.6m (selectable via dip switches)
- Audible distance warning
- Flush-mount
- 3 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
- E-Marked: UNECE R10 compliant

### Power

- Power consumption: 2.4 Watts
- Current: 200mA

## RECOMMENDED EXTRA

LS-60-A

Low speed trigger module

Enables sensors below designated speed

AM BRIG4851

## OPTIONAL EXTRA

UDS-RELAY-24

Trigger-out diode protected relay 24Vdc

AM BRIG4215

UDS-RELAY-12

Trigger-out diode protected relay 12Vdc

AM BRIG4216

To power a device switched by the output trigger

## CORNERSCAN® ULTRASONIC DETECTION SYSTEM

CS-3100 - Cornerscan® Corner sensor system with mute function

AM BRIG5261



- 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)
- 3 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
- Buzzer with audible distance warning, LED & adjustable volume control
- Buzzer will silence after 4 seconds if there is no movement from detected object or vehicle
- Environment Learning Mode prevents false alarms

- from ancillary equipment within the first 100cm of the detection zone
- Self-diagnostic function

### Durability & Standards

- Mechanical vibration: 5G
- Mechanical shock: 10G
- Operating temperature: -30 to +80°C
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved

### Power

- Power consumption: 2.4 Watts
- Current: 2 Amps

## RECOMMENDED EXTRA

LS-60-A

Low speed trigger module

Enables sensors below designated speed

AM BRIG4851

## STEPSCAN™ ULTRASONIC DETECTION SYSTEM

ST-2100 - Stepscan™ Step sensor system with mute function

AM BRIG5262

ST-2100-60-A - Stepscan™ Step sensor system with mute function and low speed trigger module

AM BRIG5345

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)
- 3 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
- Buzzer with audible distance warning, LED & adjustable volume control
- Buzzer will silence after 4 seconds if there is no movement from detected object or vehicle
- Environment Learning Mode prevents false alarms from

ancillary equipment that intrudes in the first 100cm of the detection zone

- Self-diagnostic function

### Durability & Standards

- Mechanical vibration: 5G
- Mechanical shock: 10G
- Operating temperature: -30 to +80°C
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved

### Power

- Power consumption: 2.4 Watts
- Current: 200mA



## RECOMMENDED EXTRA

LS-60-A

Low speed trigger module

Enables sensors below designated speed

AM BRIG4851

## EXTENSION CABLES



UDS-2.5BC - Buzzer/display extension cable 2.5m

AM BRIG3717

UDS-10BC - Buzzer/display extension cable 10m

AM BRIG3716

UDS-15BC - Buzzer/display extension cable 15m

AM BRIG3746

UDS-2.5SC - Sensor extension cable 2.5m

AM BRIG3719

UDS-4.5SC - Sensor extension cable 4.5m

AM BRIG3720

UDS-7.0SC - Sensor extension cable 7.0m

AM BRIG5623

## ADDITIONAL COMPONENTS



UDS-000HSS - UDS High Sensitivity Individual Sensor

AM BRIG3718

UDS-005HK - UDS Sensor Mount & Pad Kit

AM BRIG3733

UDS-00SK - UDS Sensor Housing Kit (4 x 0° & 4 x 11° Sleeves)

AM BRIG4029



# Backsense®

# Radar Object Detection Systems

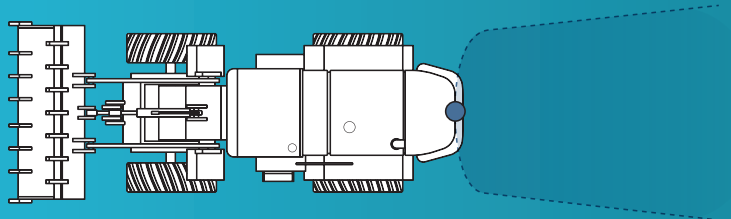
## FMCW technology

Backsense® heavy-duty radar sensor systems are designed for heavy-duty machines to detect people and objects in blind spots. They detect stationary and moving objects, providing the driver with in-cab visual and audible warnings – alerting the operator whose attention cannot be focused on all danger areas.

Backsense® radar uses Frequency Modulated Continuous Wave (FMCW) technology, transmitting a continuously varying radar frequency signal with unique time stamps to each instance of the wave. The time of the returning wave is referenced to the stamp without the radar needing to pause transmitting. This gives more accurate detection than alternative radar products using Pulsed Radar technology that transmit a burst of radar and listen for the returning wave.

## Radar Models

- **Backsense®** systems are available with fixed and programmable detection ranges and a programmable model with an IP69K in-cab display. Bespoke detection areas can be programmed to calibrate-out fixed objects or bodywork.
- **Backsense® Network radar** allows you to link up to eight radar sensors. The system provides object detection in CAN message format which may be processed to display data on control panels/ displays on the vehicle or used to control aspects of the machine.
- **Backsense® on-screen display** works in conjunction with Backeye® camera monitor systems and up to two radar sensors. It warns the driver of objects in the danger zone by overlaying 5-stage audible and visual radar data onto the camera image on the monitor.



# Backsense® Radar Object Detection

Model

Part No:

**NEW**

## IP69K PROGRAMMABLE BACKSENSE® OBJECT DETECTION SYSTEM

**BS-9000-WD - Waterproof display - Programmable detection range**

**AM BRIG5713**



- 9-32Vdc
- Detection length: up to 30m (minimum programmable distance 0-3m)
- Detection width: 2m to 10m
- Rugged design for harsh environmental conditions
- Sensor size (WxHxD) 217 x 129 x 50mm
- Display size without bracket (WxHxD) 118 x 97 x 55 mm
- IP69K sensor
- IP69K display
- 3 year warranty

### Contents

- 1 x BS-9000 Radar sensor
- 1 x IP69K audible and visual display with mounting bracket
- 1 x 9m extension cable
- 1 x Network Y Cable
- 1 x Network terminator
- 1 x Mini USB cable

### Features

- Frequency modulated continuous wave (FMCW) radar technology
- Effectively detects stationary, moving and multiple objects
- 1 activation input
- 1 trigger output
- 2nd trigger output for optional external alarm
- Programmable:
  - Detection area
  - Blind zones - system ignores fixed objects
  - Trigger activation
  - Buzzer
- 5 stage audible and visual distance warning display

- 3 set volume levels (maximum 95dB) with volume lock
- AMPS hole pattern for alternative mounting with industry-standard bracket
- Resistant to water, moisture, dust, vibration, heat, cold, mud and glare

### Power

- Current: 0.9 Amps
- Power consumption: 8 Watts

### Durability & Standards

- Mechanical shock- sensor: 100G
- Mechanical shock- display: 50G
- Mechanical vibration: 8.3G
- Operating temperature: -40 to +85°C
- CE marked
- E-Marked: UNECE R10 compliant
- BS EN 13309: 2010
- ISO13766: 2006

### Configuration Software

- \*Available via Brigade website or USB (purchased separately)

## OPTIONAL EXTRAS

**CT-470 - Constant tone external alarm - 102dB**

**AM BRIG1346**

**\*BS-WD-USB - USB -programming software, port driver and operating guide**

**AM BRIG5637**

## PROGRAMMABLE BACKSENSE® OBJECT DETECTION SYSTEM

**BS-8000 - Standard display - Programmable detection range**

**AM BRIG4530**



- 9-32Vdc
- Detection length: up to 30m (minimum programmable distance 0-3m)
- Detection width: 2 to 10m
- Rugged design for harsh environmental conditions
- Sensor size (WxHxD) 217 x 129 x 50mm
- Display size with bracket 101 x 71 x 70mm (WxHxD)
- IP69K sensor
- 3 year warranty

### Contents

- 1 x Configurable radar sensor
- 1 x Audible and visual display with USB socket and mounting bracket
- 1 x 9m extension cable
- 1 x Mini USB cable
- 1 x Software CD

### 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 adjustable audible and visual distance warning display
- Sensor 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
- E-Marked: UNECE R10 compliant
- BS EN 13309: 2010
- ISO13766: 2006

## FIXED BACKSENSE® OBJECT DETECTION SYSTEMS



BS-7030 - Standard display - 3m length x 2.5m width detection range	AM BRIG4527
BS-7045 - Standard display - 4.5m length x 3.5m width detection range	AM BRIG4528
BS-7060 - Standard display - 6m length x 4.5m width detection range	AM BRIG4529

- 9-32Vdc
- Maximum detection range of either 3m, 4.5m or 6m
- Rugged design for harsh environmental conditions
- Sensor size (WxHxD)  
217 x 129 x 50mm
- Display size with bracket  
101 x 71 x 70mm (WxHxD)
- IP69K sensor
- 3 year warranty

### Contents

- 1 x Non-configurable radar sensor
- 1 x Standard audible and visual display with mounting bracket
- 1 x 9m extension cable

### Features

- Frequency modulated continuous wave (FMCW) radar technology
- Effectively detects stationary, moving and multiple objects
- 1 activation input
- 1 trigger output
- 5 stage adjustable audible and visual distance warning display
- Sensor 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
- E-Marked: UNECE R10 compliant
- BS EN 13309: 2010
- ISO13766: 2006

## BACKSENSE® RADAR OBJECT DETECTION ACCESSORIES



BS-02DCX - 2m extension cable	AM BRIG5272
BS-05DCX - 5m extension cable	AM BRIG4550
BS-09DCX - 9m extension cable	AM BRIG4551
BS-25DCSX - 25m extension cable (Female end connector supplied loose)	AM BRIG4975
BS-00NYC - Network Y Cable for 9000 series radar	AM BRIG5270
BS-02PIC - Network power input cable for 9000 series radar	AM BRIG5271
BS-00NT - 120 Ohms Network Terminator for 9000 series radar	AM BRIG5291
BKT-017 - Adjustable radar bracket with 105mm depth bracket mounting arms	AM BRIG4676
BKT-018 - Low-profile adjustable radar bracket	AM BRIG4758

# Backsense® Radar Object Detection

## Backsense® Radar On-Screen Display

- Integration of Brigade's Backsense® radar detection and Backeye® camera monitor systems
- Up to 2 Radar detection warnings overlaid onto camera image on in-cab monitor
- Reduced driver stress and distractions as all information is in one place



### Radar sensor data and camera image combined

Working in conjunction with a Backeye® camera monitor system and up to two Backsense® Network radar detection systems, the on-screen display module warns the driver of obstacles in the danger zone by overlaying 5-stage audible and visual radar data onto the camera image on the monitor.

**Model**

**Part No:**

## BACKSENSE® RADAR ON-SCREEN DISPLAY KIT

**BS-9001-OSD - Radar sensor & On-screen display module**

**AM BRIG5658**



- Allows 5-stage audible and visual radar data to be overlaid onto camera images on in-cab monitor
- 12-24Vdc
- Detection length: up to 30m (minimum programmable distance 3m)
- Detection width: 2 to 10m
- Sensor size (WxHxD) 217 x 129 x 50mm
- OSD ECU size (WxHxD) 195 x 120 x 35mm
- 2 camera inputs
- 2 BS-9000 Backsense® inputs
- 3 trigger inputs
- 3 trigger outputs
- 3 year warranty

### Contents

- 1 x OSD Radar ECU
- 1 x BS-9000 Radar sensor
- 1 x Network power cable
- 1 x Extension cable 9m
- 3 x Network Y-cable
- 2 x Network terminator

### Features

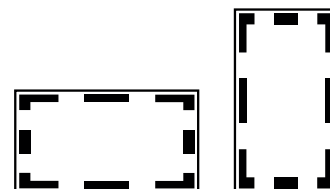
- Frequency modulated continuous wave (FMCW) radar technology
- Overlay on monitor of detection data from up to 2 BS-9000 radar sensors
- Each radar can be shown in one of 8 positions around the monitor/vehicle
- Compatible with Backsense® BS-9000 Network radar sensors only
- Programmable:
  - Detection area
  - Blind zones - system ignores fixed objects
  - Overlay transparency level
- Radar system fault displayed on monitor
- USB connection for configuration via PC
- Compatible with MDR, non-HD Backeye®360 & Elite range camera monitor systems (Select range via adapters)
- Audible warning via monitor or optional internal buzzer
- Supports external warning alarm

### Durability & Standards

- Operating temperature: -40 to +85°C
- OSD: IP30
- CE marked
- E-Marked: UNECE R10 compliant
- FCC Approved
- IC Approved

### Configuration Software

- \*Available via Brigade website or USB (purchased separately)



To not obstruct camera views, each radar can be shown in one of eight positions around the edge of the monitor

Camera monitor system not included

## TO ADD AN ADDITIONAL RADAR SENSOR:

- 1 x BS-9000 - Network Radar sensor
- 1 x BS-00NYC - Network Y Cable
- 1 x Extension cable

**AM BRIG5266**

**AM BRIG5270**

## OPTIONAL EXTRAS

- \*BS-9001-USB - USB -programming software, port driver and operating guide

**AM BRIG5656**

- AC-007 - Adapter cable to connect a Select range monitor

**AM BRIG1984**

- AC-020 - Adapter cable to connect a Select range camera

**AM BRIG2590**

## Backsense® CAN Radar

For OEM and specialist application markets, Brigade's Network Radar allows you to connect and link up to 8 sensors to cover large, sometimes complex blind spot zones around a vehicle or machine.

The system provides object detection in CAN (Controller Area Network) message format which may be processed to display data on control panels/displays on the vehicle or used to interact with aspects of the machine.

Each connected radar sensor is allocated a unique ID and will transmit data for up to 8 closest objects. With a detection range of up to 30m length and 10m width, it provides a flexible system to meet customer specific requirements.

- Provides object detection in CAN message format
- Independent CAN Bus may communicate with existing CAN network via CAN Gateway
- Separate CAN message & ID for each object detected (up to 8 per sensor)

**Model**

**Part No:**

### NETWORK BACKSENSE® OBJECT DETECTION

**BS-9000 - Backsense® CAN object detection radar**

**AM BRIG5266**



- 12-24 Vdc
- Detection length: up to 30m
- Detection width: up to 10m
- Sensor size (WxHxD) 217 x 129 x 50mm
- IP69K sensor
- 3 year warranty

#### Contents

- 1 x BS-9000 Radar sensor

#### Features

- Frequency modulated continuous wave (FMCW) radar technology
- Network up to 8 sensors
- Extremely rugged design for severe weather conditions and all terrains
- Communication via CAN Gateway
- Configurable CAN ID
- Complies with CAN2.0A Base Frame Format
- Separate CAN message & ID for each object detected (up to 8 closest objects per sensor)

#### Power

- Current: 0.4 Amps
- Power consumption: 4 Watts

#### Durability & Standards

- Mechanical shock: 100G
- Operating temperature: -40 to +85°C
- CE marked
- E-Marked: UNECE R10 compliant
- BS EN 13309: 2010
- ISO13766: 2006

**Note: For CAN message format, refer to user manual at [brigade-electronics.com](http://brigade-electronics.com)**



# Warning Alarms & Quiet Vehicle Sounder

## Warning and Reversing Alarms

Vital safety devices needed to warn workers and pedestrians that a vehicle is manoeuvring.

**bbs-tek® white sound®** are 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. bbs-tek® alarms are endorsed by PIEK and the Noise Abatement Society and have been awarded the Quiet Mark.



**bbs-tek® white sound® Smart alarms** auto-adjust to 5-10dB above ambient.

### Heavy duty

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

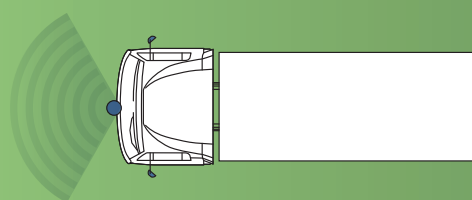
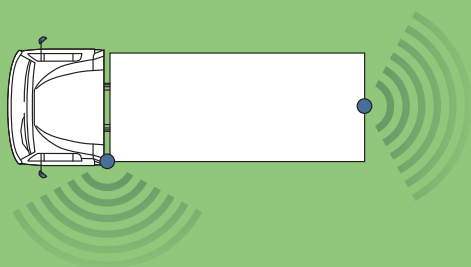
### Medium duty

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

## Quiet Vehicle Sounder

Designed for electric and hybrid-electric vehicles of all types, the QVS Electric Vehicle Sounder warns pedestrians and other vulnerable road users that a quiet vehicle is approaching.

Front speaker system incorporating bbs-tek® patented technology for instantly locatable and directional sound. Pitch and volume increase with vehicle speed in a similar way as an internal combustion engine. Sound cuts out above a pre-set speed threshold.



# bbs-tek® White Sound® Alarms

**Model**

**Part No:**

## WHITE SOUND® SMART REVERSING ALARM



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

**AM BRIG1400**

- 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
- E-Marked: UNECE R10 compliant
- SAE J994



noise abatement society



## WHITE SOUND® SMART REVERSING ALARM

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

**AM BRIG1399**

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

**AM BRIG1398**

- 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
- CE marked
- E-Marked: UNECE R10 compliant
- SAE J994
- NAS/PIEK approved for night-time delivery

## WHITE SOUND® REVERSING ALARM



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

**AM BRIG0899**

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

**AM BRIG0898**

- 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
- E-Marked: UNECE R10 compliant
- SAE J994



ADR version



## WHITE SOUND® REVERSING ALARM

**BBS-82HV - Electric forklift - 82 Decibels**

**AM BRIG1322**

**BBS-92ADR - Petrol tanker - 92 Decibels**

**AM BRIG2165**

- 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
- E-Marked: UNECE R10 compliant
- SAE J994

## 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

AM BRIG0935  
 AM BRIG0934  
 AM BRIG0897  
 AM BRIG0896

- 12-24Vdc
- IP68
- Size (WxHxD)  
 105x65x37mm (BBS-97/92)  
 105x65x32mm  
 (BBS-87/82/77)
- 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
- E-Marked: UNECE R10 compliant
- SAE J994
- NAS/PIEK approved for night-time delivery (BBS-82 only)

## WHITE SOUND® SIDE TURN WARNING ALARM



bbs-TI - Turn indicator alarm - 90 Decibels

AM BRIG6235

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

### Features

- Multi-frequency broadband sound
- Activates on side turn indication
- Sound synchronises with vehicle indicator flash
- Built-in turn indicator trigger
- Built-in timed and latched alarm cut out functions (dashboard switch is required)
- Sounder unit: Speaker
- Hole centres (mm): 102

### Power

- Current: 0.5 Amps

### Durability & standards

- CE marked
- E-Marked: UNECE R10 compliant

## QVS QUIET VEHICLE SOUNDER (AVAS)



QVS-001-75 - Quiet Vehicle Sounder

AM BRIG5385

- 12-24Vdc
- IP68 Speaker
- IP30 ECU
- Size Speaker (WxHxD)  
 120 x 135 x 120mm
- Size ECU (WxHxD)  
 93 x 26 x 185mm
- 2 year warranty



### Contents

- 1 x Speaker
- 1 x ECU

### Features

- Warns pedestrians and other VRU's that a quiet vehicle is approaching
- Combined multi-frequency bbs-tek® technology and tonal sounds
  - Multi-frequency sound
  - Directional and locatable - The sound is only heard in the hazard zone.
- Front speaker system
- Pitch and volume increase with vehicle speed to mimic an internal combustion engine
- Operational below speeds of 20MPH
- Front sounder operational when ignition activated (silenced when parking brake applied)
- Uses Tachograph speed signal\*\*
- Sounder unit: Speaker

### Power

- Current: Max 0.1 Amps

### Durability & standards

- Mechanical vibration: 10G
- Operating temperature: -30 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- IC Marked
- UNECE R138 compliant\*
- 49 CFR Part 571 and 585 Federal Motor Vehicle Safety Standards compliant\*

\* QVS helps achieve compliance for the vehicle.

\*\* If your vehicle is not equipped with a Tachograph, please contact us for alternative installation methods

# Speaking Alarms

**Model**

**Part No:**

## NIGHTSHIFT® SPEAKING ALARM



**BC-01(NS) - Single reversing message - Nightshift - 90 or 0 Decibels** **AM BRIG0378**  
**BC-01(NS-B) - Bespoke single message - Nightshift - 90 or 0 Decibels** **AM BRIG1198**

- 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
- E-Marked: UNECE R10 compliant

## SPEAKING ALARM



**BC-01 - Single reversing message - 90 Decibels** **AM BRIG0077**  
**BC-01(B) - Bespoke single message - 90 Decibels** **AM BRIG0079**  
**BC-02(B) - Bespoke dual message - 90 Decibels** **AM BRIG0083**

- 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
- E-Marked: UNECE R10 compliant

## SPEAKING HANDBRAKE WARNING ALARM



2 wire version

**BC-01(H/Brake) - Single message - 2 wire - 90 Decibels** **AM BRIG0849**  
**BC-01(4W)(H/Brake) - Single message 4 wire - 90 Decibels** **AM BRIG1715**

- 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
- E-Marked: UNECE R10 compliant

## SPEAKING SIDE TURN WARNING ALARM



**SS-BC-08 - Single side-turn message - 90 Decibels** **AM BRIG1334**

- 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
- E-Marked: UNECE R10 compliant

Note: TS-001ECU Turn indicator trigger is required **AM BRIG1362**

**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**

**AM BRIG0815**  
**AM BRIG0875**

- 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
- E-Marked: UNECE R10 compliant
- FCC Approved
- IC Approved

## ALARM ANCILLARIES



**TCO-47 - Timed auto-reset reversing alarm cut-out (dash mount)**

**AM BRIG0663**

- 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)**

**AM BRIG4752**

- 12-24Vdc
- 2 year warranty

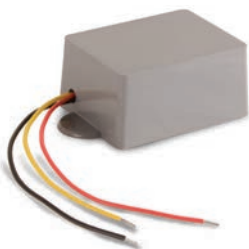
### Features

- 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 reversing alarm cut-out switch**

**AM BRIG0334**

**NS-3 - Nightshift reversing alarm cut-out switch (auto gearbox)**

**AM BRIG0974**

- 12-24Vdc
- IP68
- 2 year warranty

### Features

- Double engage reverse to cut-out alarm
- Resets when reverse gear disengaged
- No wiring necessary to cab

### Durability and Standards

- CE marked
- EMC approved

# Index by Model Number

Model No:	Brigade Part No:	VRS Part No:	Page No:	Model No:	Brigade Part No:	VRS Part No:	Page No:
AC-006	1983	AM BRIG1983	38	BE-800C	1623	AM BRIG1623	21
AC-007	1984	AM BRIG1984	38	BE-800C(40)	1559	AM BRIG1559	21
AC-007	1984	AM BRIG1984	68	BE-800C(78)	1426	AM BRIG1426	21
AC-014	2094	AM BRIG2094	38	BE-800C-NIR	4247	AM BRIG4247	21
AC-014 (5M)	5049	AM BRIG5049	38	BE-801C	1905	AM BRIG1905	21
AC-016	2150	AM BRIG2150	39	BE-801C(40)	2085	AM BRIG2085	21
AC-019	2589	AM BRIG2589	39	BE-801C(78)	2084	AM BRIG2084	21
AC-020	2590	AM BRIG2590	38	BE-810C	1242	AM BRIG1242	20
AC-020	2590	AM BRIG2590	68	BE-820C	1927	AM BRIG1927	21
AC-021	2704	AM BRIG2704	39	BE-821C	2002	AM BRIG2002	21
AC-024	3183	AM BRIG3183	39	BE-822C	2151	AM BRIG2151	21
AC-028	3335	AM BRIG3335	39	BE-823C	5100	AM BRIG5100	21
AC-035	3702	AM BRIG3702	38	BE-850C	4924	AM BRIG4924	21
AC-041	4245	AM BRIG4245	39	BE-856G-000	4012	AM BRIG4012	32
AC-042	4246	AM BRIG4246	39	BE-856GM	3756	AM BRIG3756	28
AC-044	4279	AM BRIG4279	39	BE-870FM	2146	AM BRIG2146	28
AC-045	4280	AM BRIG4280	39	BE870L-000	3231	AM BRIG3231	32
AC-055(5M)	4267	AM BRIG4267	38	BE-870L-100	4032	AM BRIG4032	32
AC-056	4401	AM BRIG4401	38	BE-870LM	2705	AM BRIG2705	28
AC-062	4691	AM BRIG4691	38	BE-890C	2871	AM BRIG2871	21
AC-063	4925	AM BRIG4925	38	BE-891C	5426	AM BRIG5426	21
AC-064	4948	AM BRIG4948	39	BE-900C	5277	AM BRIG5277	20
AC-066	5027	AM BRIG5027	38	BE-901C	5278	AM BRIG5278	20
AC-067	5028	AM BRIG5028	38	BE-970WFM	3560	AM BRIG3560	27
AC-068	5234	AM BRIG5234	39	BE-970WM	3351	AM BRIG3351	27
AC-069	5318	AM BRIG5318	39	BE-990C	5279	AM BRIG5279	20
AC-24-12(002)	4266	AM BRIG4266	39	BE-991C	5280	AM BRIG5280	20
AC-24-12(004)	4281	AM BRIG4281	39	BE-L1003	2797	AM BRIG2797	40
AC-24-12(006)	4719	AM BRIG4719	39	BE-L101	5042	AM BRIG5042	40
AC-24-12(007)	4762	AM BRIG4762	39	BE-L105	804	AM BRIG804	40
AC-24-12(008)	4763	AM BRIG4763	39	BE-L108	3007	AM BRIG3007	40
AC-24-12(009)	4926	AM BRIG4926	38	BE-L110	803	AM BRIG803	40
AC-305	4903	AM BRIG4903	15	BE-L112	3008	AM BRIG3008	40
AC-305	4903	AM BRIG4903	38	BE-L115	802	AM BRIG802	40
AC-305	4903	AM BRIG4903	51	BE-L120	801	AM BRIG801	40
AC-306	4904	AM BRIG4904	38	BE-L130	800	AM BRIG800	40
AC-306	4904	AM BRIG4904	51	BE-X003	805	AM BRIG805	40
AC-307	4905	AM BRIG4905	38	BE-X005	2099	AM BRIG2099	40
AC-307	4905	AM BRIG4905	51	BE-X010	2100	AM BRIG2100	40
AC-308	4949	AM BRIG4949	38	BE-X015	2101	AM BRIG2101	40
BBS-102	898	AM BRIG898	72	BE-X020	1143	AM BRIG1143	40
BBS-107	899	AM BRIG899	72	BE-X025	1907	AM BRIG1907	40
BBS-82	896	AM BRIG896	73	BKT-017	4676	AM BRIG4676	67
BBS-82HV	1322	AM BRIG1322	72	BKT-018	4758	AM BRIG4758	67
BBS-87	897	AM BRIG897	73	BMM-019-ARM	3348	AM BRIG3348	31
BBS-92	934	AM BRIG934	73	BN360-100C-BKT01	4649	AM BRIG4649	14
BBS-92ADR	2165	AM BRIG2165	72	BN360-100C-BKT02	4714	AM BRIG4714	14
BBS-97	935	AM BRIG935	73	BN360-100C-BKT03	4743	AM BRIG4743	14
BBS-TI	6235	AM BRIG6235	73	BN360-200	5200	AM BRIG5200	15
BC-01	77	AM BRIG77	74	BN360-300	5800	AM BRIG5800	14
BC-01(4W)(H/BRAKE)	1715	AM BRIG1715	74	BN360-ENCLOSURE	4723	AM BRIG4723	15
BC-01(B)	79	AM BRIG79	74	BN360-H3025	5813	AM BRIG5813	14
BC-01(H/BRAKE)	849	AM BRIG849	74	BN360-H305	5812	AM BRIG5812	14
BC-01(NS)	378	AM BRIG378	74	BN360-H310	5811	AM BRIG5811	14
BC-01(NS-B)	1198	AM BRIG1198	74	BN360-H315	5810	AM BRIG5810	14
BC-02(B)	83	AM BRIG83	74	BN360-H320	5809	AM BRIG5809	14
BC-VI	815	AM BRIG815	75	BN360-L1025	4499	AM BRIG4499	15
BC-VI-2	875	AM BRIG875	75	BN360-L105	4498	AM BRIG4498	15
BE360-CD	4701	AM BRIG4701	14	BN360-L110	4496	AM BRIG4496	15

<b>Model No:</b>	<b>Brigade Part No:</b>	<b>VRS Part No:</b>	<b>Page No:</b>
BN360-L115	4495	AM BRIG4495	15
BN360-L120	4493	AM BRIG4493	15
BS-00NT	5291	AM BRIG5291	67
BS-00NYC	5270	AM BRIG5270	67
BS-02DCX	5272	AM BRIG5272	67
BS-02PIC	5271	AM BRIG5271	67
BS-05DCX	4550	AM BRIG4550	67
BS-09DCX	4551	AM BRIG4551	67
BS-25DCSX	4975	AM BRIG4975	67
BS-4000W	3744	AM BRIG3744	59
BS-7030	4527	AM BRIG4527	67
BS-7045	4528	AM BRIG4528	67
BS-7060	4529	AM BRIG4529	67
BS-8000	4530	AM BRIG4530	66
BS-9000	5266	AM BRIG5266	69
BS-9000-WD	5713	AM BRIG5713	66
BS-9001-OSD	5658	AM BRIG5658	68
BS-9001-USB	5656	AM BRIG5656	68
BS-WD-USB	5637	AM BRIG5637	66
CS-020	1571	AM BRIG1571	44
CS-3100	5261	AM BRIG5261	62
CT-470	1376	AM BRIG1376	66
DC-101	6290	AM BRIG6290	52
DC-102-IRC	6396	AM BRIG6396	53
DC-102-RVC	6395	AM BRIG6395	52
DC-1XX-DPC7	6323	AM BRIG6323	53
DC-1XX-LOCK	6296	AM BRIG6296	53
DMC-1021	5163	AM BRIG5163	26
DMC-1025	4910	AM BRIG4910	26
DMC-1031	5303	AM BRIG5303	26
DMC-1035	5304	AM BRIG5304	26
DW-1000RX	4044	AM BRIG4044	44
DW-1000TX	4043	AM BRIG4043	44
EDM-50	2152	AM BRIG2152	45
FS-4000W	3747	AM BRIG3747	62
IP-1000C	5935	AM BRIG5935	54
IP-1100C	5936	AM BRIG5936	55
IP-1200C	5937	AM BRIG5937	54
IP-1XXX-PC	5985	AM BRIG5985	55
IP-EC-1	5865	AM BRIG5865	55
IP-EC-5	5866	AM BRIG5866	55
IP-EM4	5860	AM BRIG5860	55
IP-EM8	5861	AM BRIG5861	55
IP-EM-PC	5864	AM BRIG5864	55
IP-L601	5867	AM BRIG5867	55
IP-L603	5902	AM BRIG5902	55
IP-L605	5903	AM BRIG5903	55
IP-L610	5982	AM BRIG5982	55
IP-L615	5904	AM BRIG5904	55
IP-L620	5983	AM BRIG5983	55
IP-L630	5984	AM BRIG5984	55
LS-60-A	4851	AM BRIG4851	44
LS-60-A	4851	AM BRIG4851	61
MD-50	4909	AM BRIG4909	25
MD-50(SW)	5683	AM BRIG5683	25
MD-50(W)	5692	AM BRIG5692	25
MD-50AM-15	5004	AM BRIG5004	25
MD-50AM-25	5005	AM BRIG5005	25
MD-50SM-30	5003	AM BRIG5003	25

<b>Model No:</b>	<b>Brigade Part No:</b>	<b>VRS Part No:</b>	<b>Page No:</b>
MD-51	5164	AM BRIG5164	25
MD-51(SW)	5686	AM BRIG5686	25
MD-51(W)	5694	AM BRIG5694	25
MD-60	5305	AM BRIG5305	25
MD-60(SW)	5688	AM BRIG5688	25
MD-60(W)	5696	AM BRIG5696	25
MD-61	5306	AM BRIG5306	25
MD-61(SW)	5690	AM BRIG5690	25
MD-61(W)	5698	AM BRIG5698	25
MDR-03GSC	4874	AM BRIG4874	51
MDR-06RPC	4873	AM BRIG4873	51
MDR-504-1-G2-CMR	6257	AM BRIG6257	50
MDR-504-2000	5563	AM BRIG5563	50
MDR-504-2-G2-SSD	6432	AM BRIG6432	50
MDR-504G-1-G2-CMR	6259	AM BRIG6259	50
MDR-504G-2000	5571	AM BRIG5571	50
MDR-504G-2-G2-SSD	6433	AM BRIG6433	50
MDR-504GW-1-G2-CMR	6261	AM BRIG6261	50
MDR-504GW-2-G2-SSD	6434	AM BRIG6434	50
MDR-508-1-G2-CMR	6244	AM BRIG6244	49
MDR-508-2-G2-SSD	6437	AM BRIG6437	49
MDR-508G-1-G2-CMR	6245	AM BRIG6245	49
MDR-508G-2-G2-SSD	6438	AM BRIG6438	49
MDR-508GW-1-G2-CMR	6246	AM BRIG6246	49
MDR-508GW-2-G2-SSD	6439	AM BRIG6439	49
MDR-FPB32-01	4896	AM BRIG4896	51
MDR-GS-02	4988	AM BRIG4988	51
MDR-RP-02	6016	AM BRIG6016	51
NS-2	334	AM BRIG334	75
NS-3	974	AM BRIG974	75
QVS-001-75	5387	AM BRIG5387	73
SA-BBS-107	1400	AM BRIG1400	72
SA-BBS-97	1399	AM BRIG1399	72
SA-BBS-97HV	1398	AM BRIG1398	72
SC-07	1046	AM BRIG1046	41
SC-07-24S	1227	AM BRIG1227	42
SC-1000-ECU	3666	AM BRIG3666	45
SC-15-01	3268	AM BRIG3268	41
SC-7	1829	AM BRIG1829	41
SD-32GB-IND	4875	AM BRIG4875	51
SD-64GB-IND	4876	AM BRIG4876	51
SE-7104F-100	5378	AM BRIG5378	15
SE-770-100	5379	AM BRIG5379	15
SE-770H-300	6114	AM BRIG6114	14
SK-15-01	3427	AM BRIG3427	41
SK-15-04	3997	AM BRIG3997	41
SK-15-04	3997	AM BRIG3997	57
SK-15-05	5066	AM BRIG5066	15
SK-15-05	5066	AM BRIG5066	43
SK-30E	1144	AM BRIG1144	41
SK-30E-T	1885	AM BRIG1885	41
SK-31E	1830	AM BRIG1830	41
SK-31E-T	1886	AM BRIG1886	41
SK-31E-T	1886	AM BRIG1886	42
SK-50E	1570	AM BRIG1570	42
SK-50E-A	1879	AM BRIG1879	42
SK-UDS-05	4219	AM BRIG4219	57
SM-3XX-25	4596	AM BRIG4596	24
SP-07C	1140	AM BRIG1140	41

# Index by Model Number

Model No:	Brigade Part No:	VRS Part No:	Page No:	Model No:	Brigade Part No:	VRS Part No:	Page No:
SP-07T	1142	AM BRIG1142	41	VBV-7100C	5466	AM BRIG5466	22
SP-15A-01	3423	AM BRIG3423	41	VBV-7101C	5467	AM BRIG5467	22
SP-15A-04	3955	AM BRIG3955	41	VBV-7104HFM	6057	AM BRIG6057	29
SP-15A-05	5064	AM BRIG5064	43	VBV-710C	2808	AM BRIG2808	23
SP-15B-01	3422	AM BRIG3422	41	VBV-7190C	5470	AM BRIG5470	22
SP-15B-04	3956	AM BRIG3956	41	VBV-7191C	5471	AM BRIG5471	22
SP-15B-05	5065	AM BRIG5065	43	VBV-750-000	4705	AM BRIG4705	35
SP-7A	1827	AM BRIG1827	41	VBV-750-310	4780	AM BRIG4780	33
SP-7B	1828	AM BRIG1828	41	VBV-750M	4287	AM BRIG4287	31
SS-002	3044	AM BRIG3044	45	VBV-750M-S	4710	AM BRIG4710	31
SS-4100W	5257	AM BRIG5257	61	VBV-770-000	4692	AM BRIG4692	35
SS-4100W-000	5344	AM BRIG5344	61	VBV-770-001	4767	AM BRIG4767	36
SS-4200W	5916	AM BRIG5916	60	VBV-770-001DW	4843	AM BRIG4843	36
SS-4200W-000	6075	AM BRIG6075	60	VBV-770-100	4695	AM BRIG4695	35
SS-BC-08	1334	AM BRIG1334	61	VBV-770-101	4772	AM BRIG4772	36
SS-BC-08	1334	AM BRIG1334	72	VBV-770-300	4777	AM BRIG4777	35
ST-2100	5262	AM BRIG5262	63	VBV-770-310	4781	AM BRIG4781	33
ST-2100-60-A	5345	AM BRIG5345	63	VBV-770FM	4982	AM BRIG4982	31
TCO-47	663	AM BRIG663	75	VBV-770H-3000	6112	AM BRIG6112	34
TCO-47-01	4752	AM BRIG4752	61	VBV-770H-3100	6113	AM BRIG6113	34
TCO-47-01	4752	AM BRIG4752	75	VBV-770H-7000	6111	AM BRIG6111	34
TS-001ECU	1362	AM BRIG1362	61	VBV-770HM	5611	AM BRIG5611	30
UDS-000HSS	3718	AM BRIG3718	63	VBV-770M	4288	AM BRIG4288	30
UDS-005HK	3733	AM BRIG3733	63	VBV-770M-S	4697	AM BRIG4697	30
UDS-00SSK	4029	AM BRIG4029	63	VBV-790C	2724	AM BRIG2724	23
UDS-10BC	3716	AM BRIG3716	59	VBV-791C	2842	AM BRIG2842	23
UDS-10BC	3716	AM BRIG3716	63	VBV-H4025	5522	AM BRIG5522	40
UDS-15BC	3746	AM BRIG3746	63	VBV-H405	5519	AM BRIG5519	40
UDS-2.5BC	3717	AM BRIG3717	63	VBV-H410	5516	AM BRIG5516	40
UDS-2.5SC	3719	AM BRIG3719	63	VBV-H415	5514	AM BRIG5514	40
UDS-4.5SC	3720	AM BRIG3720	63	VBV-H420	5513	AM BRIG5513	40
UDS-7.0SC	5623	AM BRIG5623	63	VBV-L4020	5773	AM BRIG5773	37
UDS-OSD20-ECU	5099	AM BRIG5099	58	VBV-L4025	1554	AM BRIG1554	40
UDS-OSD21-ECU	5347	AM BRIG5347	58	VBV-L403	4977	AM BRIG4977	40
UDS-RELAY-12	4216	AM BRIG4216	57	VBV-L405	1499	AM BRIG1499	40
UDS-RELAY-24	4215	AM BRIG4215	57	VBV-L406	3152	AM BRIG3152	40
VBV-3000C	5454	AM BRIG5454	24	VBV-L407	3151	AM BRIG3151	40
VBV-3001C	5455	AM BRIG5455	24	VBV-L410	1386	AM BRIG1386	40
VBV-300C	5211	AM BRIG5211	24	VBV-L412	3106	AM BRIG3106	40
VBV-301C	5213	AM BRIG5213	24	VBV-L415	3150	AM BRIG3150	40
VBV-3020C	5456	AM BRIG5456	24	VBV-L420	1380	AM BRIG1380	40
VBV-3021C	5457	AM BRIG5457	24	VBV-L430	2108	AM BRIG2108	40
VBV-320C	5215	AM BRIG5215	24	VBV-L505	4001	AM BRIG4001	40
VBV-321C	5217	AM BRIG5217	24	VBV-L510	3663	AM BRIG3663	40
VBV-481C	2843	AM BRIG2843	26	VBV-L520	3664	AM BRIG3664	40
VBV-485C	2199	AM BRIG2199	26	VCS-020	1844	AM BRIG1844	44
VBV-630C	5772	AM BRIG5772	37	VSK-305E	3871	AM BRIG3871	43
VBV-631C	5817	AM BRIG5817	37	VSK-30E	2538	AM BRIG2538	42
VBV-650-000	4765	AM BRIG4765	37	VSK-30E-T	2542	AM BRIG2542	42
VBV-650-000N	4766	AM BRIG4766	37	VSK-31E	2539	AM BRIG2539	42
VBV-670-000	5774	AM BRIG5774	37	VSK-31E-T	2543	AM BRIG2543	42
VBV-671-000	5816	AM BRIG5816	37	VSK-505E	4005	AM BRIG4005	43
VBV-7000C	5464	AM BRIG5464	22	VSK-50E	2540	AM BRIG2540	43
VBV-7001C	5465	AM BRIG5465	22	VSK-50E-A	2541	AM BRIG2541	43
VBV-700C	1379	AM BRIG1379	23	VSP-47A	1847	AM BRIG1847	42
VBV-701C	2575	AM BRIG2575	23	VSP-47B	1846	AM BRIG1846	42
VBV-7090C	5468	AM BRIG5468	22	VSP-57A	3869	AM BRIG3869	43
VBV-7091C	5469	AM BRIG5469	22	VSP-57B	3870	AM BRIG3870	43

# Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## **ADPCM**

An audio file format, optimized for storing digitised data at a low sampling rate.

## **AHD**

Analogue high definition video standard that uses standard cable to transmit HD video from cameras to Monitor/DVR

## **Amp**

Unit of electric current.

## **Auto-trigger**

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

## **AVAS**

Acoustic Vehicle Alert System (AVAS) automatically emits an external synthesized sound to enable pedestrians to be audibly aware of the vehicle's presence.

## **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.

## **CAN bus**

Controller Area Network is a robust vehicle standard designed to allow microcontrollers and devices to communicate with each other without a host computer.

A Controller Area Network (CAN bus) is a robust vehicle bus standard designed to allow microcontrollers and devices to communicate with each others' applications without a host computer.

## **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).

## **CVBS**

Composite Video Blanking and Sync. An analogue video signal format that carries standard-definition video as a single channel.

## **Decibel (dB)**

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

## **DWDR (Digital Wide Dynamic Range)**

Digitally Produces a greater dynamic range of luminosity for improved detail in highlights and shadows.

## **EMC (Electro-magnetic compatibility)**

Regulation concerning the type-approval tests for European automotive electronics.

### **- E**

United Nations mark for approved vehicle components sold into the EU. And in some other countries under UN-ECE Regulation 10

## **EN 13309:2010**

Construction machinery. Electromagnetic compatibility of machines with internal power supply

## **FCC mark**

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

## **FMCW**

Frequency-Modulated Continuous Wave radar. A known stable frequency continuous wave is transmitted and then received from any reflecting objects.

## **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**

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 16750**

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

**ISO 20653: 2006**

Road vehicles — Degrees of protection (IP-Code) of electrical equipment against foreign objects, water and access

**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 back light 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.

**Quiet Mark**

An international approval associated with the UK Noise Abatement Society. It encourages companies worldwide to prioritise noise reduction.

**R46**

UN ECE Regulation No 46 covers devices for indirect vision and their installation.

**R118**

UN ECE Regulation No 118 determines the burning behaviour (ignitibility, burning rate and melting behaviour) of materials.

**R138**

UN ECE Regulation concerning the approval of Quiet Road Transport Vehicles with regard to their reduced audibility.

**Resolution (RGB)**

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

**RoHS 2**

The restriction of the use of certain hazardous substances in electrical and electronic equipment

**SAE J994**

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

**Sounder unit**

Unit which produces the sound of an alarm.

**TV Lines**

Number of horizontal lines used to create an image.

**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.

**Vulnerable road user**

Road users most at risk in traffic – such as pedestrians, cyclists and public transport passengers. Children, older people and disabled people may also be included in this category.

**Watt**

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

**WDR (Wide Dynamic Range)**

Produces a greater dynamic range of luminosity for improved detail in highlights and shadows.

**WiFi**

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

**4G**

A cellular data service available from mobile network providers.

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

# Brigade Warranties

**LIFETIME**

## **Lifetime New-For-Old Warranty (covers product for the life of vehicle)**

bbs-tek® White sound® reversing alarms  
Self-adjusting backalarms

**5  
YEARS**

## **5 Year New-For-Old Warranty**

Backeye®360 camera system  
ELITE range camera monitor systems

**3  
YEARS**

## **3 Year New-For-Old Warranty**

SELECT range camera monitor systems  
MDR mobile digital recorders, IP cameras and accessories  
Ultrasonic object detection systems  
Backsense® radar object detection systems  
Digital wireless camera monitor connection

**2  
YEARS**

## **2 Year New-For-Old Warranty**

Camera monitor system ancillaries  
Ultrasonic object detection on-screen display  
Ultrasonic object detection ancillaries and extras  
Alarm ancillaries  
Backchat® Speaking alarms  
Vehicle intercom  
QVS Quiet vehicle sounder

**1  
YEAR**

## **1 Year New-For-Old Warranty\***

ESSENTIAL camera monitor systems  
ZoneSafe® RFID systems  
All products aside those specifically listed

## **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. Normal wear-and-tear excluded. 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 can be found at [brigade-electronics.com](http://brigade-electronics.com).

# EXPECT THE BEST LEVEL OF SUPPORT

WE'RE BACKED BY SCANIA

VRS is your one-stop shop for truck parts, with all makes in one place. And because we are part of the Scania family, you can trust us to deliver the same great level of services care and support.

We can also offer the same level of reassurance. When VRS parts are fitted in a Scania approved workshop, it will be covered by our comprehensive 24 month warranty\*.



\* This offer is valid for parts sold on or after 01/01/2020 (invoice date) until end of offer, please refer to full warranty terms and conditions and our standard terms and conditions of sale on our website [www.scania.co.uk/business-with-scania](http://www.scania.co.uk/business-with-scania)

**VRS**  
VEHICLE RELATED SERVICES

**VRS is a trademark of Scania (Great Britain) Limited,**  
Delaware Drive, Tongwell, Milton Keynes,  
Buckinghamshire MK15 8HB  
(Registered office); Registered in England Number 831017 ('Scania').  
+44 01908 210210  
[www.scania.co.uk](http://www.scania.co.uk)