



Product Catalogue 2017



**Preventing collisions
and saving lives!**

Brigade

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

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

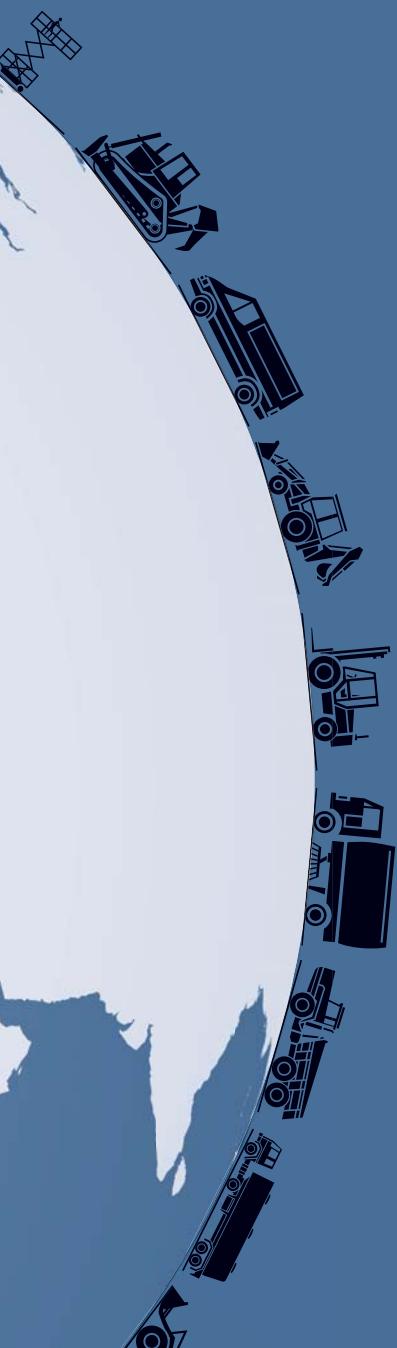
We are passionate about helping road transport and mobile machine operators prevent collisions and save lives. We are also dedicated to using our 40 years experience to help you make the most appropriate safety product choices for your vehicles and machines.

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



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Driving Global Safety

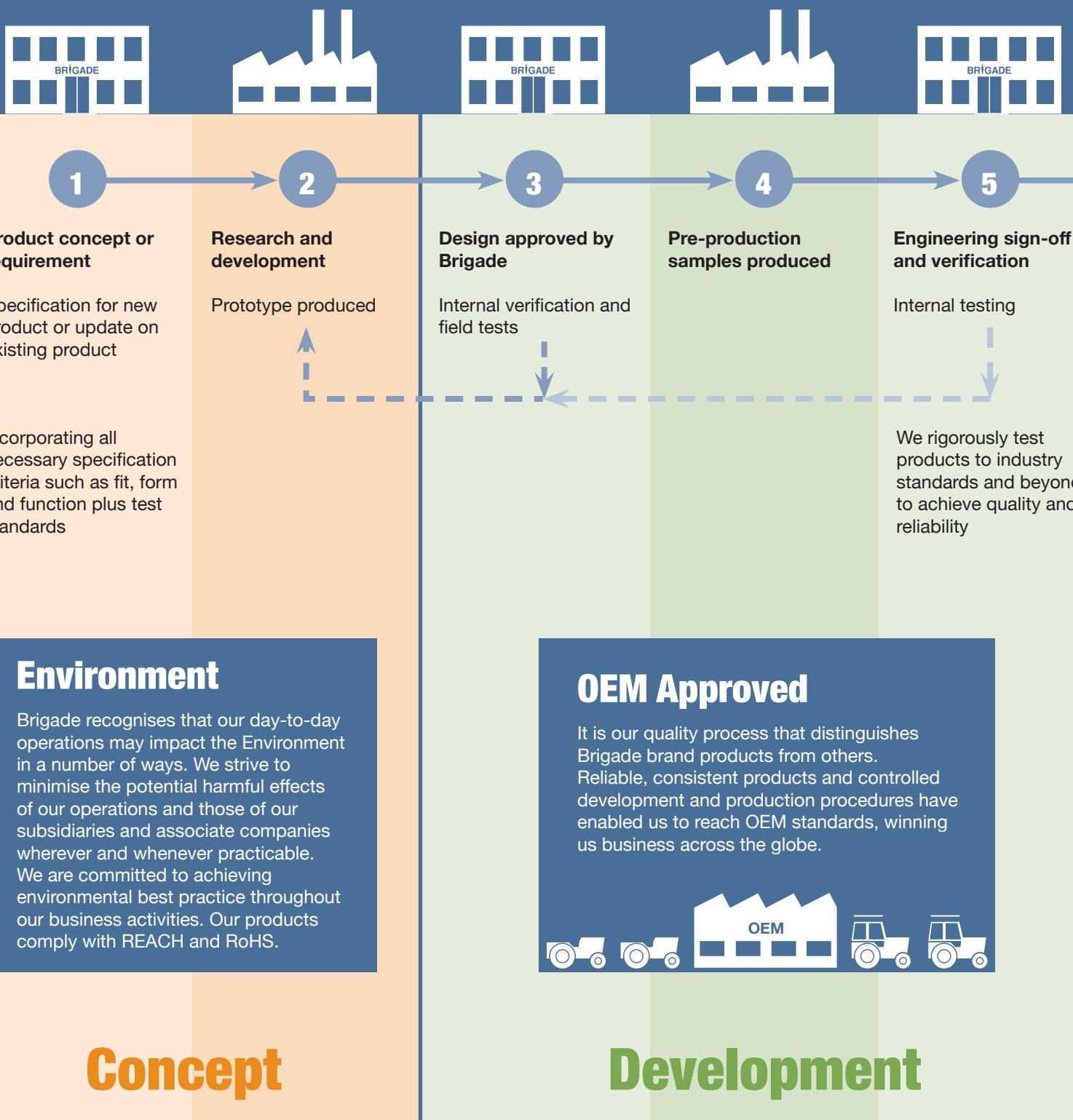
Why Brigade?

We understand that safety and efficiency can only be achieved with high quality, reliable products, which is why we go the extra mile in product development and testing of Brigade brand products; to make sure that safety is not compromised.

We believe it is more important for you that we deliver reliable quality assured products that are fit for purpose than it is for us to be first to market (though we frequently are!).

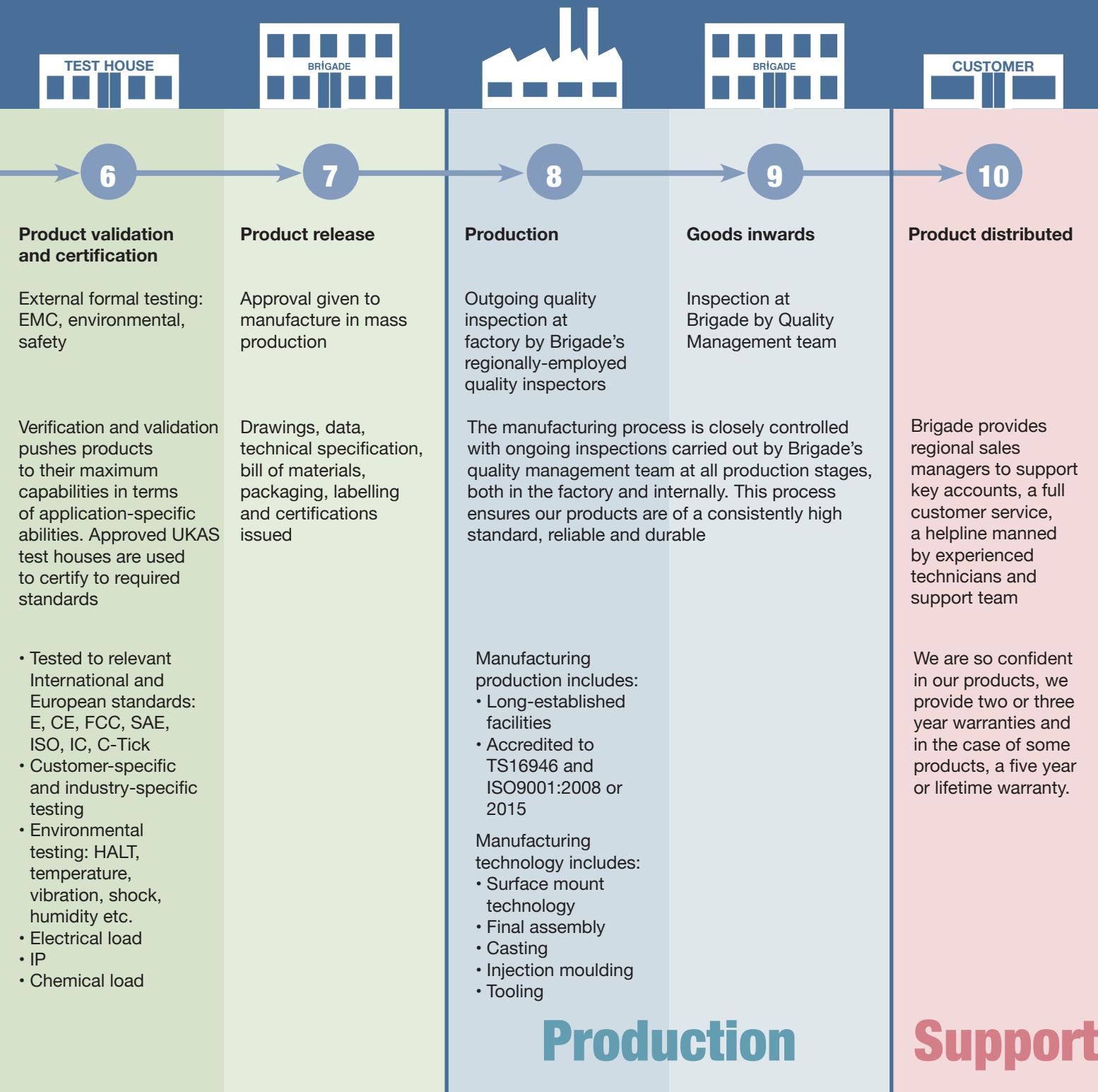
Products are only released once we are confident they are fit for purpose. It would be easy to forget this with the lure of new technologies, but this is not the Brigade way. Whatever the product or technology, it has to pass rigorous and comprehensive testing before we consider it suitable to be included in our portfolio.

A closely controlled design and manufacturing process plus in-house Research and Development is all managed by a proficient engineering team that sets us apart from the competition.





- Brigade Electronics Group Plc management systems meet the ISO9001:2008 standard
- Our manufacturing facilities work to the highest automotive quality standard ISO/TS16949:2009.
- All our applicable products have CE-marking in Europe and FCC approval in North America.
- The majority of our products comply with UN ECE Regulation 10 (EMC)
- Combinations of camera monitors comply with Regulation 46 (Indirect Vision) required for vehicle type approval. (see page 14)



Safety Recommendations Rigid on-road vehicle

BRIGADE®

Level 1	Level 2 + level 1	Level 3 + levels 1 & 2
<p>Camera Monitor Systems VBV-700C Select range Rear view camera VBV-770M Select range 7" Digital LCD Monitor or VBV-750M Select range 5" Digital LCD Monitor</p> <p>Ultrasonic Obstacle Detection BS-4000W Backscan® sensor system</p> <p>Warning Alarm SA-BBS-97 bbs-tek® white sound® smart reversing alarm. 77-97 dB or BBS-87 bbs-tek® white sound® standard reversing alarm. 87 dB</p>	<p>Ultrasonic Obstacle Detection SS-4000W Sidescan® sensor system CS-3000 Cornerscan™ sensor system</p> <p>Warning Alarm SS-BC-08 Speaking alarm</p>	<p>Digital Recording MDR-404-500</p> <p>Camera Monitor Systems MD-50 Mini dome internal camera VBV-320C Compact, flush mount eyeball camera BE-822C Mini front view camera</p> <p>Camera Monitor Systems SE-770-000 Backeye®360 360° 4-camera monitor system</p>

Safety Recommendations Articulated on-road vehicle

BRIGADE®

Level 1	Level 2 + level 1	Level 3 + levels 1 & 2
<p>Camera Monitor Systems BE-800C Elite range Rear view camera BE-870LM Elite range 7" Digital LCD Monitor or BE-865DDM Elite range 6.5" Double-DIN Digital LCD Monitor</p> <p>Wireless camera monitor connection system DW-1000-TX Digital wireless transmitter DW-1000-RX Digital wireless receiver or Cable kit for articulated trucks</p> <p>Warning Alarm for trailer SA-BBS-97 bbs-tek® White sound® smart reversing alarm. 77-97 dB or BBS-92 bbs-tek® White sound® standard reversing alarm. 92 dB</p>	<p>Warning Alarm for cab 5 SA-BBS-97 77-97 dB or BBS-92 92 dB bbs-tek® White sound® warning alarm</p> <p>Camera Monitor Systems VBV-320C Compact, flush mount eyeball camera</p> <p>Ultrasonic Obstacle Detection SS-4000W Sidescan® sensor system</p> <p>Speaking Alarm 8 SS-BC-08 Speaking alarm</p>	<p>Digital Recording MDR-408-1000</p> <p>Camera Monitor Systems VBV-320C Compact, flush mount eyeball camera BE-822C Mini front view camera</p> <p>Ultrasonic Obstacle Detection ST-2000 Stepscan™ sensor system FS-4000W Frontscan® sensor system</p>

Which products do I need?

Safety Recommendations Refuse vehicle

BRIGADE®

Level 1	Level 2 + level 1	Level 3 + levels 1 & 2
<p>Camera Monitor Systems BE-800C Elite range Rear view camera BE-970WFM Extreme range 7" Digital LCD multi-image Monitor or BE-970WM Extreme range 7" Digital LCD Monitor</p> <p>Warning Alarm SA-BBS-97 bbs-tek® White sound® smart reversing alarm. 77-97 dB or BBS-87 bbs-tek® White sound® standard reversing alarm. 87 dB</p>	<p>Camera Monitor Systems VBV-320C Compact, flush mount eyeball camera</p> <p>Vehicle Intercom 5a 5b BC-VI Two way intercom</p> <p>Ultrasonic Obstacle Detection CS-3000 Cornerscan™ sensor system SS-4000W Sidescan® sensor system</p>	<p>Radar Detection BS-8000 Programmable Backsense® rear obstacle detection or BS-7030 Fixed Backsense® rear obstacle detection</p> <p>Digital Recording 9 MDR-404-500</p> <p>Camera Monitor Systems VBV-320C Compact, flush mount eyeball camera BE-822C Mini front view camera</p> <p>Camera Monitor Systems SE-770-000 Backeye®360 360° 4-camera monitor system</p>

Safety Recommendations Medium off-road machine

BRIGADE®

BRIGADE®

Level 1

Minimum recommended safety specification

Camera Monitor Systems
BE-800C Elite range rear view camera



or
BE-810C Elite range rear view shutter camera

BE-870LM Elite range 7" Digital LCD Monitor

or

VBV-770DM Select range 7" Digital LCD Monitor



Warning Alarm

SA-BBS-107 bbs-tek®

White sound®
heavy duty smart reversing
alarm. 87-107 dB

or

BBS-107 bbs-tek®

White sound®
heavy duty reversing alarm.
107 dB



To help you decide, we have created a series of guides featuring the Brigade safety products we recommend for specific applications.

Each guide has been split into three levels: Minimum safety, increased safety and ultimate safety so that you can easily choose the level and products best suited to you.

To see our full range of guides, including CLOCS and FORS requirements, please visit our website at:

brigade-electronics.com

Level 2 + level 1

Increased safety specification

Camera Monitor Systems

VBV-320C Compact,
flush mount eyeball camera



or

Level 3 + levels 1 & 2

Ultimate safety specification

Radar Detection

BS-8000 Programmable
Backsense®
rear obstacle detection

or

BS-7045 or BS-7060 Fixed
Backsense®
rear obstacle detection



Safety Recommendations Coach

BRIGADE®

Level 1

Minimum recommended safety specification

Ultrasonic Obstacle Detection

BS-4000W Backscan®
sensor system



Camera Monitor Systems

VBV-770M Select range
7" Digital LCD Monitor

VBV-700C Select range
Rear-view camera



Warning Alarm

SA-BBS-97

bbs-tek® white sound®
smart reversing alarm. 77-97 dB

or

BBS-87

bbs-tek® white sound®
standard reversing alarm. 87 dB



Level 2 + level 1

Increased safety specification

Ultrasonic Obstacle Detection

FS-4000W Frontscan®
sensor system

SS-4000W Sidescan®
sensor system



Camera Monitor Systems

MD-50 Mini dome internal camera

Additional internal camera.



Level 3 + levels 1 & 2

Ultimate safety specification



Digital Recording

MDR-408-1000

Camera Monitor Systems

MD-50 Mini dome internal camera

Additional internal camera.



Camera Monitor Systems

SE-770-000 Backeye®360

360° 4-camera monitor system

Safety Recommendations Articulated on-road vehicle

BRIGADE®

Level 1

Minimum recommended safety specification

Camera Monitor Systems

BE-890C Elite range
IP69K cameras
Rear view and Front view



BE-970WFM Extreme range
7" Digital LCD multi-image
Monitor



Warning Alarm

SA-BBS-107 bbs-tek®

White sound®
heavy duty smart reversing
alarm. 87-107 dB

BBS-107 bbs-tek®

White sound®
heavy duty reversing alarm.
107 dB



or

BE-890C Elite range
IP69K cameras
Left side view and right side view

Level 2 + level 1

Increased safety specification

Radar Detection

BS-8000 Programmable
Backsense®
rear obstacle detection



or

Level 3 + levels 1 & 2

Ultimate safety specification

Radar Detection

BS-8000 Programmable
Backsense®
front obstacle detection



Digital Recording

MDR-408-1000

Camera Monitor Systems

SE-970W-000 Backeye®360

360° 4-camera monitor system

or

BE-890C Elite range
IP69K cameras
Left side view and right side view



Backeye®360° Camera Systems

**4 cameras
1 image
0 blind spots**

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

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

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

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

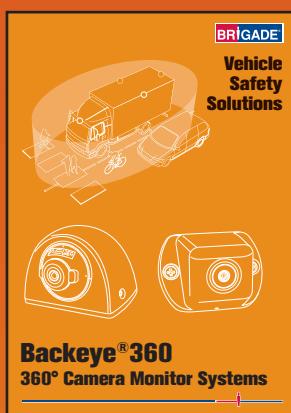


Actual Backeye®360 images



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

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



[Available Brochure](#)

Which system is for you?

Backeye®360 BN360

Regulation 46 approved.

Full screen 360 or a twin image split screen view.

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

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



Backeye®360 ASL360

Suitable for most vehicle and mobile plant machines.

Full screen 360 plus a flexible and wide range of bespoke split screen viewing options. 'Pie Dish' image correction feature allows a wider area around the machine to be displayed to the driver, and provides a more natural view of objects that are at some distance from the vehicle.

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



Model	Part No:
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360° CAMERA SYSTEM

BN360-000 - Backeye®360 system

4483



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

Contents

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

Note: Monitor and camera extension cables not included

Features

- 360° full screen image or split screen option
- Triggered views (rear, left and right)
- 4 x ultra-wide viewing angle cameras (HxV) 185° x142°
- 1/3" CMOS sensor
- TV system: NTSC

Power

- Power consumption: 15 Watts
- Current: 1.23 Amps

Durability & Standards

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

Note: A calibration kit is required for installation.

BN360 CABLES AND ADAPTERS

BN360-L120	20m camera cable	4493
BN360-L115	15m camera cable	4495
BN360-L110	10m camera cable	4496
BN360-L105	5m camera cable	4498
BN360-L1025	2.5m camera cable	4499
AC-305	Splitter cable for MDR (1 required per camera)	4903

MOUNTING BRACKETS



BN360-100C-BKT01	Adaptable mounting bracket	4649
	Can be shaped to allow installation on non-vertical surfaces	
BN360-100C-BKT02	Mounting bracket to adjust camera angle	4714
BE360-CD	Deflector to shield camera from knocks (To be used with BN360-100C-BKT02 Mounting bracket)	4701
BN360-100C-BKT03	Deflector to shield camera from knocks	4743

REQUIRED FOR ARTICULATED VEHICLES



BN360-Enclosure	IP66 Enclosure kit to enable ECU to be installed on outside of vehicle	4723
SK-15-05	Note: Coiled cable kit or wireless connector also required 3-camera Backeye®360 cable kit for articulated vehicles	5066

Model	Part No:
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360° CAMERA SYSTEM

ASL360-SV - Backeye®360

4328



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

Contents

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

Note: Monitor, camera cables and adapters NOT included

Features

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

Power

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

Durability & Standards

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

**Note: A calibration kit is required for installation.
Available to Brigade trained fitters only**

ASL360 CABLES AND ADAPTERS

ASL360-L120	20m camera cable	4333
ASL360-L115	15m camera cable	4334
ASL360-L110	10m camera cable	4335
ASL360-L1025	2.5m camera cable	4336
AC-054	2.5m adapter cable to connect ECU to monitor via AC-016 / AC-024 (BNC B to Phono A)	4340
AC-016	Adapter cable to connect AV/Phono to Elite monitor	2150
AC-024	Adapter cable to connect AV/Phono to Select monitor	3183



MOUNTING BRACKET

BE360-CD	Deflector to shield camera from knocks	4701
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REQUIRED FOR ARTICULATED VEHICLES

BN360-Enclosure	IP66 Enclosure kit to enable ECU to be installed on outside of vehicle	4723
Note: Coiled cable kit or wireless connector also required		

BN360 360° CAMERA MONITOR SYSTEMS

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



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

4618



- 1 x VBV-7104FM - 10.4" monitor
- 1 x BN360-000 360 system
- 1 x BN360-L110 - 10m camera cable
- 2 x BN360-L115 - 15m camera cables
- 1 x BN360-L120 - 20m camera cable

See individual products for detailed specifications

- 2 year system warranty



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

4804



- 1 x VBV-770M 7" monitor
- 1 x BN360-000 360 system
- 1 x BN360-L110 - 10m camera cable
- 2 x BN360-L115 - 15m camera cables
- 1 x BN360-L120 - 20m camera cable

See individual products for detailed specifications

- 2 year system warranty
- R46 Approved

R46

ASL360 360° CAMERA MONITOR SYSTEMS

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



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

4803

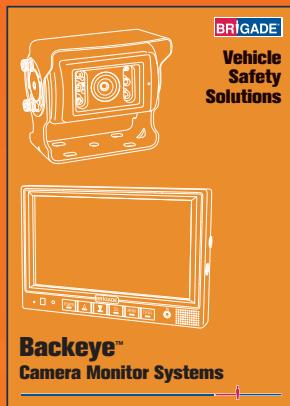


- 1 x VBV-770M - 7" monitor
- 1 x ASL-360SV 360 system
- 1 x ASL-L110 - 10m camera cable
- 2 x ASL-L115 - 15m camera cables
- 1 x ASL-L120 - 20m camera cable
- 1 x AC-024 - phono adapter cable
- 1 x AC-054 - adapter cable

See individual products for detailed specifications

- 2 year system warranty

Camera Monitor Systems



Which range is for you?

Backeye® Elite

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



Available Brochure

Backeye® Select

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



Backeye® Essential

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



Camera Monitor Systems

Choosing your Backeye® camera monitor system

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

Camera/monitor compatibility for building your own system.

		MONITORS				
		ELITE		SELECT		
		BE-970WFM BE-970WM BE-865DDM BE-870LM	BE-856GM	VBV-7104FM VBV-770FM VBV-770M VBV-750M	VBV-770M-S VBV-750M-S	
CAMERAS	ELITE	BE-810C shutter camera	✓	✓ SC-1000-ECU	✓ AC-007 + SC-1000-ECU	✗
	SELECT	All other Elite range cameras	✓	✓	✓ AC-007	✓ AC-007
	SELECT	VBV-710C shutter camera	✓ AC-035 + AC-006	✓ AC-035 + AC-006	✓ AC-035	✓
	SELECT	All other Select range cameras	✓ AC-006	✓ AC-006	✓	✓
FLIR		PathFindIR II	✓ AC-016 + AC-065	✓ AC-016 + AC-065	✓ AC-024 + AC-065	✓ AC-024 + AC-065

Camera/monitor combinations approved to R46

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

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

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

		MONITORS		
		ELITE BE-870LM	SELECT VBV-770M	SELECT VBV-750M
CAMERAS	ELITE	BE-800C ✓ Plus full or half screen with SS-002 screen splitter	✗	✗
	ELITE	BE-890C ✓ Plus full or half screen with SS-002 screen splitter	✗	✗
	ELITE	BE-850C ✓ Plus full or half screen with SS-002 screen splitter	✗	✗
	SELECT	VBV-300C ✓ Plus full or half screen with SS-002 screen splitter	✓ Plus full or half screen with SS-002 screen splitter	✓
	SELECT	VBV-320C ✓ Plus full or half screen with SS-002 screen splitter	✓ Plus full or half screen with SS-002 screen splitter	✓
360		BN360-000 ✗	✓ Full screen and standard split screen	✗

Model

Part No:

ELITE CAMERA



BE-800C	- PAL	1623
BE-800C(40)	- Narrow viewing angle: 33 x 25 x 40° PAL	1559
BE-800C(78)	- Narrow viewing angle: 64 x 47 x 78° PAL	1426
BE-890C	- Waterproof to IP69K, No audio PAL	2871
BE-850C	- 12/24Vdc Waterproof to IP69K PAL	4924
BE-801C	- NTSC	1905
BE-801C(40)	- Narrow viewing angle: 33 x 25 x 40° NTSC	2085
BE-801C(78)	- Narrow viewing angle: 64 x 47 x 78° NTSC	2084

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



Features

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

Power

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

Durability & Standards

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

ELITE CAMERA



BE-810C - Shutter camera

1242

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



Features

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

Power

- Power consumption: 7 Watts
- Current: 0.4 Amps

Durability & Standards

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

ELITE CAMERA



BE-820C - Mini camera (mirror image) BE-822C - Mini camera (normal image)

1927
2151

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

Features

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

Power

- Power consumption: 1.5 Watts
- Current: 0.1 Amps

Durability & Standards

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

Backeye® Cameras

Model

Part No:

ELITE CAMERA



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

4910
5163

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



Features

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

Durability & Standards

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

Power

- Power consumption: 1.0 Watt
- Current: 0.07 Amps

ELITE CAMERA



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

4909
5164

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



Features

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

Power

- Power consumption: 1 Watt
- Current: 0.07 Amps

Durability & Standards

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

OPTIONAL EXTRAS



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

5003

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

5004

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

5005

Camera icons



Infrared LEDs for ultra-low-light performance



Day/night sensor



Audio



Heater



Normal/mirror view

ModelPart No:**SELECT CAMERA**

VBV-700C	- PAL	1379
VBV-701C	- NTSC	2575
VBV-790C	- Waterproof to IP69K, no audio PAL	2724
VBV-791C	- Waterproof to IP69K, no audio NTSC	2842

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

**Features**

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

Power

- Power consumption: 3 Watts
- Current: 0.2 Amps

Durability & Standards

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

SELECT CAMERA**VBV-710C - Shutter camera**

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

2808

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

**Features**

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

Power

- Power consumption: 4.6 Watts
- Current: 0.38 Amps

Durability & Standards

- Mechanical vibration: 2.8G
- Mechanical shock: 50G
- Operating temperature: -20 to +70°C
- CE Marked
- EMC approved: E

SELECT CAMERA

VBV-300C - Compact flush-mount eyeball camera - Mirror view
VBV-320C - Compact flush-mount eyeball camera - Normal view

4604
4613

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

**Features**

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

Power

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

Durability & Standards

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

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

4596

Backeye® Cameras

Model

Part No:

SELECT CAMERA



VBV-485C - Cylinder camera

2199

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



Features

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

Power

- Power consumption: 2.4 Watts
- Current: 0.2 Amps

Durability & Standards

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

THERMAL IMAGING CAMERA



FLIR™

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

334-0050-00

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

334-0054-00

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



Contents

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

Features

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

Image

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

Power

- Power consumption: 6 Watts

Durability & Standards

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

THERMAL IMAGING CAMERA



FLIR™

PF-30N-520 - PathFindIR II 30Hz

334-0052-00

PF-075N-560 - PathFindIR II 7.5Hz

334-0056-00

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



Contents

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

Features

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

Image

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

Power

- Power consumption: 6 Watts

Durability & Standards

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

OPTIONAL EXTRAS

PFM-0001 PathFindIR II mounting bracket

4692

Model

Part No:

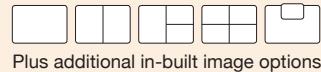
ELITE MONITOR



BE-970WFM - Waterproof 7" Quad digital LCD monitor

3560

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



Plus additional in-built image options

Features

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

Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 500cd/m²
- 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
- EMC approved: E
- ISO 16750
- ISO 200653: 2006
- HALT tested

ELITE MONITOR



BE-970WM - Waterproof 7" Digital LCD monitor

3351

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



Features

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

Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 500cd/m²
- Viewing angles:
Side 65° x Top 50° x Bottom 60°

Power

- Power consumption: 11 Watts
- Current: 0.9 Amps

Durability & Standards

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

Backeye® Monitors

Model

Part No:

ELITE MONITOR



BE-870LM - 7" Digital LCD monitor

2705

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



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
- EMC approved: E

ELITE MONITOR



BE-865DDM - Double DIN 6.5" Digital LCD Monitor

3935

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



Plus additional in-built image options

Features

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

Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 500cd/m²
- Viewing angles:
Side 70° x Top 50° x Bottom 70°

Power

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

Durability & Standards

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

Monitor icons



Number of camera inputs



Number of auto-triggers



Audio



'Button-lock' anti-tamper feature



On-screen distance and vertical line markers

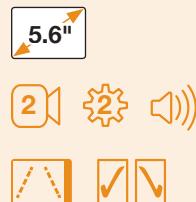


Normal/mirror view - switching from menu

ELITE MONITOR

BE-856GM - 5.6" Digital LCD monitor
3756

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


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
- EMC approved: E
- ISO 13766: 2006
- ISO 16750
- HALT tested

SELECT MONITOR

VBV-7104FM - 10.4" Digital LCD Monitor
4474

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



Plus additional in-built image options

Features

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

Picture Quality

- LED backlighting (gives 30,000 hours life)
- Anti-glare screen
- Resolution: 1024 x 768
- Contrast ratio: 500:1
- Brightness: 400cd/m²
- Viewing angles:
Side 70° x Top 60° x Bottom 60°

Power

- Power consumption: 31 Watts
- Current: 2.8 Amps

Durability & Standards

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

Backeye® Monitors

Model

Part No:

SELECT MONITOR



VBV-770FM - 7" Digital LCD monitor

4982

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

7.0"



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
- EMC approved: E

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°

SELECT MONITOR



VBV-770M - 7" Digital LCD monitor

4288

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

4697

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

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

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

Power

- Power consumption: 18 Watts
- Current: 1.5 Amps

Durability & Standards

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

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°

Monitor icons



Number of camera inputs



Number of auto-triggers



Audio



'Button-lock' anti-tamper feature



On-screen distance and vertical line markers



Normal/mirror view - switching from menu

Model
Part No:
SELECT MONITOR

VBV-750M - 5" Digital LCD monitor
4287
VBV-750M-S - 5" Digital LCD monitor
4710

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

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


Features

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

Power

- Power consumption: 11.5 Watts
- Current: 0.95 Amps

Durability & Standards

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

Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 350cd/m²
- Viewing angles:
Side 70° x Top 50° x Bottom 70°

ESSENTIAL MONITOR

VBV-243M - 4.3" Digital Mirror monitor
4070

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


Features

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

Power

- Power consumption: 4.95 Watts
- Current: 0.45 Amps

Durability & Standards

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

Picture Quality

- Resolution: 480 x 272
- Contrast ratio: 500:1
- Brightness: 200cd/m²
- Viewing angles:
Side 50° x Top 60° x Bottom 55°

Backeye® Camera monitor systems

Model

Part No:

RIGID VEHICLES ELITE RANGE CAMERA MONITOR SYSTEMS

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

3231



- BE-870LM - 7" monitor
- BE-800C - heated camera
- BE-L120 - 20m cable

See individual products for detailed specifications

• 3 year system warranty

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

4032



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

See individual products for detailed specifications

• 3 year system warranty

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

4012



- BE-856GM - 5.6" monitor
- BE-800C - heated camera
- BE-L120 - 20m cable

See individual products for detailed specifications

• 3 year system warranty

RIGID VEHICLES SELECT RANGE CAMERA MONITOR SYSTEMS

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

4777



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

R46

See individual products for detailed specifications

• 2 year system warranty

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

4692



- VBV-770M - 7" monitor
- VBV-700C - camera
- VBV-L420 - 20m cable

See individual products for detailed specifications

• 2 year system warranty

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

4695



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

See individual products for detailed specifications

• 2 year system warranty

Model
Part No:
VBV-750-300 - Single flush-mount camera monitor system for rigid vehicles
4776


- VBV-750M - 5" monitor
- VBV-300C - flush-mount camera
- VBV-L420 - 20m cable

R46

See individual products for detailed specifications

• 2 year system warranty

VBV-750-000 - Single camera monitor system for rigid vehicles
4705


- VBV-750M - 5" monitor
- VBV-700C - camera
- VBV-L420 - 20m cable

See individual products for detailed specifications

• 2 year system warranty

VBV-750-100 - Single shutter camera monitor system for rigid vehicles
4708


- VBV-750M-S - 5" monitor
- VBV-710C - shutter camera
- VBV-L520 - 20m cable

See individual products for detailed specifications

• 2 year system warranty

RIGID VEHICLES ESSENTIAL RANGE CAMERA MONITOR SYSTEM

VBV-650-000 - Single camera monitor system for rigid vehicles
4765


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


Monitor

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

Camera

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

Backeye® Camera monitor systems

Model

Part No:

SMALL RIGID VEHICLES AND VANS SELECT RANGE CAMERA MONITOR SYSTEMS

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

4781



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

See individual products for detailed specifications

• 2 year system warranty

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

4780



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

See individual products for detailed specifications

• 2 year system warranty

ARTICULATED VEHICLES ELITE RANGE CAMERA MONITOR SYSTEMS

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

3232



• BE-870LM - 7" monitor	2705	• BE-X020 - 20m extension cable for trailer	1143
• BE-800C - camera	1623	• SP-7B - 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout)	1828
• BE-L110 - 10m cable for cab	0803		
• SP-7A - 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout)	1827		
• SC-7 - Coiled cable with 7-pin plugs (unique pin layout)	1829		

See individual products for detailed specifications
• 3 year system warranty

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

4016



• BE-870LM - 7" monitor	2705	• BE-X020 - 20m extension cable for trailer	1143
• BE-810C - shutter camera	1242	• SP-7B - 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout)	1828
• BE-L110 - 10m cable for cab	0803		
• SP-7A - 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout)	1827		
• SC-7 - Coiled cable with 7-pin plugs (unique pin layout)	1829		

See individual products for detailed specifications
• 3 year system warranty

Model
Part No:
**ARTICULATED VEHICLES
SELECT RANGE CAMERA MONITOR SYSTEMS**

VBV-770-001DW - Single wireless camera monitor system for articulated vehicles 4843



• VBV-770M - 7" monitor	4288
• VBV-700C - camera	1379
• VBV-L420 - 20m cable	1380
• DW-1000-TX - digital wireless transmitter	4043
• DW-1000-RX - digital wireless receiver	4044
• AC-006 - camera adapter	1983
• AC-007 - monitor adapter	1984

VBV-770-001 - Single camera monitor system for articulated vehicles 4767



• VBV-770M - 7" monitor	4288	• SC-07-24S - Coiled cable with type 24S 7-pin plugs	1227
• VBV-700C - camera	1379	• VBV-L420 - 20m extension cable for trailer	1380
• VBV-4110 - 10m cable for cab	1386	• VSP-47B - 7-pin bulkhead socket for trailer & trailer-end camera connector	1846
• VSP-47A - 7-pin bulkhead socket for cab & cab-end camera connector	1847		

See individual products for detailed specifications
• 2 year system warranty

VBV-770-101 - Single shutter camera monitor system for articulated vehicles 4772



• VBV-770M-S - 7" monitor	4697	• VSP-57B 7-pin bulkhead socket for trailer & trailer-end camera connector	3870
• VBV-710C - shutter camera	1379	• SC-07-24S - Coiled cable with 7-pin sockets	1227
• VBV-L510 - 10m cable for cab	3663		
• VBV-L520 - 20m cable for trailer	3664		

See individual products for detailed specifications
• 2 year system warranty

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

VBV-770-004 - Twin-camera monitor system for vehicles with drawbar trailers 4774



• VBV-770M - 7" monitor	4288	• 1 x VSP-47A - 7-pin camera bulkhead socket for truck rear	1847
• 2 x VBV-700C - cameras	1379	• SC-07-24S - Coiled cable with 7-pin sockets	1227
• VBV-L420 - 20m cable for truck	1380	• VBV-L420 - 20m cable for trailer	1380
• VBV-L405 - 5m camera cable for truck camera	1499	• VSP-47B - 7-pin camera bulkhead socket for trailer	1846
• VCS-020 - Two-way camera selector	1844		

See individual products for detailed specifications
• 2 year system warranty

Truck and trailer connection

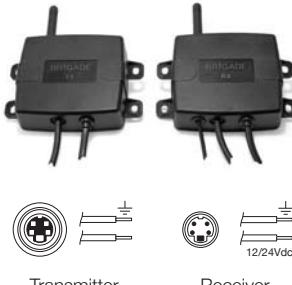
Model

Part No:

ELITE WIRELESS CONNECTION SYSTEM

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

4043
4044



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

Features

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

Power

- Maximum Current Amps:
TX: 0.85 RX: 0.17

- Power consumption:
TX: 9.8 Watts RX: 2.2 Watts

Durability & Standards

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

AC-006 & AC-007 adapter cables are required to connect to Select range camera and monitor - see page 32

ELITE TRUCK/TRAILER CABLE KIT

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

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

1830



- BE-L110 - 10m cable for cab 0803
- SP-7A - 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout) 1827
- SC-7 - Coiled cable with 7-pin plugs (unique pin layout) 1829

SK-31E-T - Trailer only kit

1886

- BE-X020 - 20m extension cable for trailer 1143
- SP-7B - 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout) 1828

ELITE TRUCK/TRAILER CABLE KIT

SK-30E - Cable kit for articulated trucks

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

1144



- BE-L110 - 10m cable for cab 0803
- SP-07C - 7-pin bulkhead socket for cab & cab-end camera connector 1140
- SC-07 - Coiled cable with 7-pin plugs 1046

SK-30E-T - Trailer only kit

1885

- BE-X020 - 20m extension cable for trailer 1143
- SP-07T - 7-pin bulkhead socket for trailer & trailer-end camera connector 1142

ELITE TRUCK/TRAILER CABLE KIT

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

3427



- SP-15A-01 - 15-pin bulkhead socket for cab & 3 cab-end camera connectors 3423

- SP-15B-01 - 15-pin bulkhead socket for trailer & 3 trailer-end camera connectors 3422
- SC-15-01 - Coiled shielded cable with 15-pin plugs 3268

Model
Part No:
ELITE TRUCK/TRAILER CABLE KIT

SK-15-04 - Single camera & single buzzer Ultrasonic Detection System (new generation) cable kit for articulated trucks

3997



• SP-15A-04 - 15-pin bulkhead socket for cab & cab-end camera connector plus stripped wires and display/buzzer connection for Ultrasonics 3955

• SP-15B-04 - 15-pin bulkhead socket for trailer & trailer-end camera connector plus stripped wires and display/buzzer connection for Ultrasonics 3956



SP-15A-04



SP-15B-04



SC-15-01

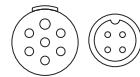
• SC-15-01 - Coiled shielded cable with 15-pin plugs 3268

ELITE TRUCK/DRAWBAR TRAILER CABLE KIT

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

1570

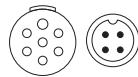
Inclusive of SK-50E-A - Truck only kit and SK-31E-T - trailer only kit



SP-7A



SC-7



SP-7B

SK-50E-A - Truck only kit

1879

- BE-L115 - 15m cable for truck 0802
- BE-X005 - 5m extension cable for truck camera 2099
- CS-020 - Two way camera selector 1571
- SP-7A - 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout) 1827
- SC-7 - Coiled cable with 7-pin plugs (unique pin layout) 1829

SK-31E-T - Trailer only kit

1886

- BE-X020 - 20m extension cable for trailer camera 1143
- SP-7B - 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout) 1828

SELECT TRUCK/TRAILER CABLE KIT

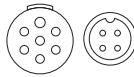
VSK-31E - Cable kit for articulated trucks - unique pin layout

2539

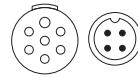
Inclusive of VSK-31E-T - Trailer only kit



SC-7



SP-7A



SP-7B

VSK-31E-T - Trailer only kit

2543

- VBV-L410 - 10m cable for cab 1386
- SP-7A - 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout) 1827
- AC-014 - Adapter cable 2094
- SC-7 - Coiled cable with 7-pin plugs (unique pin layout) 1829

VSK-31E-T - Trailer only kit

2543

- VBV-L420 - 20m cable for trailer 1380
- AC-006 - Adapter cable 1983
- SP-7B - 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout) 1828

Truck and trailer connection / cables

Model

Part No:

SELECT TRUCK/ TRAILER CABLE KIT

VSK-30E - Cable kit for articulated trucks

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

2538



VSP-47A

VSP-47B

SC-07-24S

- VBV-L410 - 10m cable for cab 1386
- VSP-47A - 7-pin bulkhead socket for cab & cab-end camera connector 1847
- SC-07-24S - Coiled cable with type 24S 7-pin plugs 1227

VSK-30E-T - Trailer only kit

2542

- VBV-L420 - 20m extension cable for trailer 1380
- VSP-47B - 7-pin bulkhead socket for trailer & trailer-end camera connector 1846

SELECT TRUCK/ TRAILER CABLE KIT

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

3871



VSP-57A

SC-07-24S

- VBV-L510 10m cable for cab 3663
- VBV-L520 20m cable for trailer 3664
- VSP-57A 7-pin bulkhead socket for cab & cab-end camera connector 3869
- VSP-57B 7-pin bulkhead socket for trailer & trailer-end camera connector 3870
- SC-07-24S - Coiled cable with type 24S 7-pin plugs 1227

SELECT TRUCK/ TRAILER CABLE KIT

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

5066



SP-15A-05

SC-15-01

- SP-15A-05 - 15-pin bulkhead socket for cab & cab-end connector plus 3x connections for Backeye®360 Select 5066
- SP-15B-05 15-pin bulkhead socket for trailer & trailer-end connector plus 3x connections for Backeye®360 Select 5065

- SC-15-01 Coiled shielded cable with 15-pin plugs 3268

SELECT TRUCK/ DRAWBAR TRAILER CABLE KIT

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

2540

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



VSP-47A

VSP-47B

SC-07-24S

VSK-50E-A - Truck only kit

2541

- VBV-L420 - 20m cable for truck 1380
- VBV-L405 - 5m camera cable for truck camera 1499
- VCS-020 - Two-way camera selector 1844
- 1 x VSP-47A - 7-pin camera bulkhead socket for truck rear 1847
- SC-07-24S - Coiled cable with 7-pin sockets 1227

VSK-30E-T - Trailer only kit

2542

- VBV-L420 - 20m cable for trailer 1380
- VSP-47B - 7-pin camera bulkhead socket for trailer 1846

Model
Part No:
SELECT TRUCK/DRAWBAR TRAILER CABLE KIT
VSK-505E - Twin shutter camera cable kit for truck with drawbar trailer
4005


• VBV-L420 - 20m cable for truck	1380	• VSP-57A 7-Pin bulkhead socket for cab & cab-end camera connector	3869
• VBV-L520 - 20m camera cable for truck camera	3664	• VSP-57B 7-pin bulkhead socket for trailer & trailer-end camera connector	3870
• VBV-L505 - 5m camera cable for cab	4001		
• VCS-020 - Two-way camera selector	1844		
• 2 x AC-035 - 5-pin to 4-pin shutter camera adapter	3702	• SC-07-24S - Coiled cable with 7-pin plugs	1227

ELITE CAMERA CABLES


BE-L130	- 30 metre cable	0800
BE-L120	- 20 metre cable	0801
BE-L115	- 15 metre cable	0802
BE-L112	- 12 metre cable	3008
BE-L110	- 10 metre cable	0803
BE-L108	- 8 metre cable	3007
BE-L105	- 5 metre cable	0804
BE-L101	- 1 metre cable	5042
BE-L1003	- 0.3 metre cable	2797

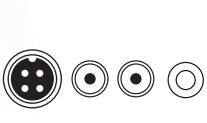
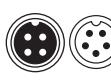
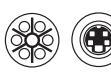
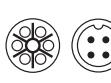
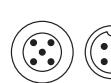
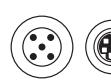
ELITE CAMERA EXTENSION CABLES

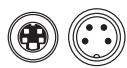

BE-X025 - 25 metre extension cable	1907
BE-X020 - 20 metre extension cable	1143
BE-X015 - 15 metre extension cable	2101
BE-X010 - 10 metre extension cable	2100
BE-X005 - 5 metre extension cable	2099
BE-X003 - 3 metre extension cable	0805

SELECT CAMERA CABLES


VBV-L430 - 30 metre cable	2108
VBV-L425 - 25 metre cable	3513
VBV-L420 - 20 metre cable	1380
VBV-L415 - 15 metre cable	3150
VBV-L412 - 12 metre cable	3106
VBV-L410 - 10 metre cable	1386
VBV-L407 - 7 metre cable	3151
VBV-L406 - 6 metre cable	3152
VBV-L405 - 5 metre cable	1499
VBV-L403 - 3 metre cable	4977
VBV-L4025 - 2.5 metre cable	1554
VBV-L520 - 20 metre 5-pin shutter camera cable	3664
VBV-L510 - 10 metre 5-pin shutter camera cable	3663
VBV-L505 - 5 metre 5-pin shutter camera cable	4001

Adapter cables

Model	Part No:
CAMERA MONITOR ADAPTERS	
	AC-006 - Connects Select camera (not shutter) to Elite cable 1983
	AC-007 - Connects Select monitor to Elite cable 1984
	AC-014 - Connects Elite camera to Select cable 2094
	AC-014(5M) - Connects Elite camera to Select cable, 5m long 5049
	AC-016 - Connects AV to Camera input of Elite monitor 2150
	AC-019 - Connects Elite camera to male phono (video only) 2589
	AC-020 - Connects Elite monitor to Select cable 2590
	AC-021 - Connects FLIR PathFindIR camera to Elite cable 2704
	AC-024 - Connects phono to Select cable (video & audio input, 12Vdc output) 3183
	AC-035 - 5-pin to 4-pin Select shutter camera adapter 3702
	AC-041 - Connects Elite camera to John Deere 7-pin amp output 4245
	AC-042 - Connects Select camera to John Deere 7-pin amp output 4246
	AC-044 - Connects Elite camera to Molex M12 (Fendt) 4279
	AC-045 - Connects Select camera to Molex M12 (Fendt) 4280
	AC-056 - Connects Select camera to Orlaco monitor 4401
	AC-062 - Connects Elite camera to Orlaco monitor 4691

Model	Part No:
	AC-063 - Connects Elite camera to Orlaco monitor, screw fit 4925
	AC-065 - Connects FLIR PathFindIR camera (BNC) to RCA input 4963
	AC-066 - Connects Orlaco camera to Elite monitor 5027
	AC-067 - Connects Orlaco camera to Select monitor 5028

CAMERA MONITOR IN-LINE VOLTS CONVERTER/ADAPTERS

AC-24-12(001) - in-line 24/12Vdc converter - Select camera to Elite connector	4235
AC-24-12(002) - in-line 24/12Vdc converter - Elite camera to Daimler monitor	4266
AC-24-12(004) - in-line 24/12Vdc converter - Select camera to MAN MMT HSD	4281
AC-24-12(006) - in-line 24/12Vdc converter - Select camera to Volvo FH(4) & FM(4)	4719
AC-24-12(007) - in-line 24/12Vdc converter - Select camera to Iveco connect system	4762
AC-24-12(008) - in-line 24/12Vdc converter - Select camera to Mercedes sprinter	4763
AC-24-12(009) - in-line 24/12Vdc converter - Elite camera to Mekra 507405 monitor	4926

OEM CAMERA MONITOR ADAPTER CABLES

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

CAMERA MONITOR SYSTEM ANCILLARIES



LS-60-A - Speed switch

4851

- 12-24Vdc
- Auto-triggers safety equipment at the designated speed
- Size (WxHxD) 44 x 16 x 64mm
- 2 year warranty

Features

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

Power

- Power consumption: 21.6 Watts
- Max current: 1.8 Amps
- Switch Output max. current: 1.2 Amps

Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 50G
- Operating temperature: -40 to +85°C
- CE marked
- EMC approved: E

Note: A relay is required if connected to a device that is higher than 1.2 Amps

CAMERA MONITOR SYSTEM ANCILLARIES



SC-1000-ECU - Shutter camera module

3666

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

Use AC-007 adapter to connect to Select monitor.

- Current: 2A
- CE marked
- EMC approved: E

Ancillaries

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

CAMERA MONITOR SYSTEM ANCILLARIES

SS-002 - Twin camera screen splitter

3044



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



Single



Split

In-built image options

Features

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

Power

- Power Consumption: 8.4 Watts
- Current: 0.7 Amps

Durability & Standards

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

CAMERA MONITOR SYSTEM ANCILLARIES

EDM-50 - Multi-camera module and screen splitter

2152



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



Single



Split



Triple



Quad



Picture in picture

Plus additional in-built image options

Features

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

Power

- Power consumption: 20 Watts
- Current: 2A

Durability & Standards

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

CAMERA MONITOR SYSTEM ANCILLARIES

CS-020 - Two-way camera switcher (Elite range)

1571



- Allows a 2nd Select range camera to be connected to a Select range monitor

- 2nd camera view selected by trigger wire
- Full screen view only

CAMERA MONITOR SYSTEM ANCILLARIES

VCS-020 - Two-way camera switcher (Select range)

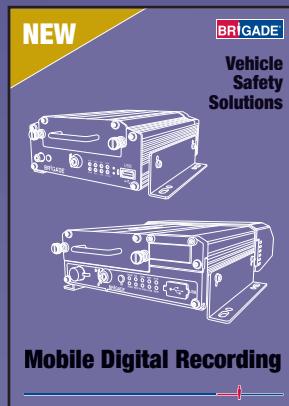
1844



- Allows a 2nd Select range camera to be connected to a Select range monitor

- 2nd camera view selected by trigger wire
- Full screen view only

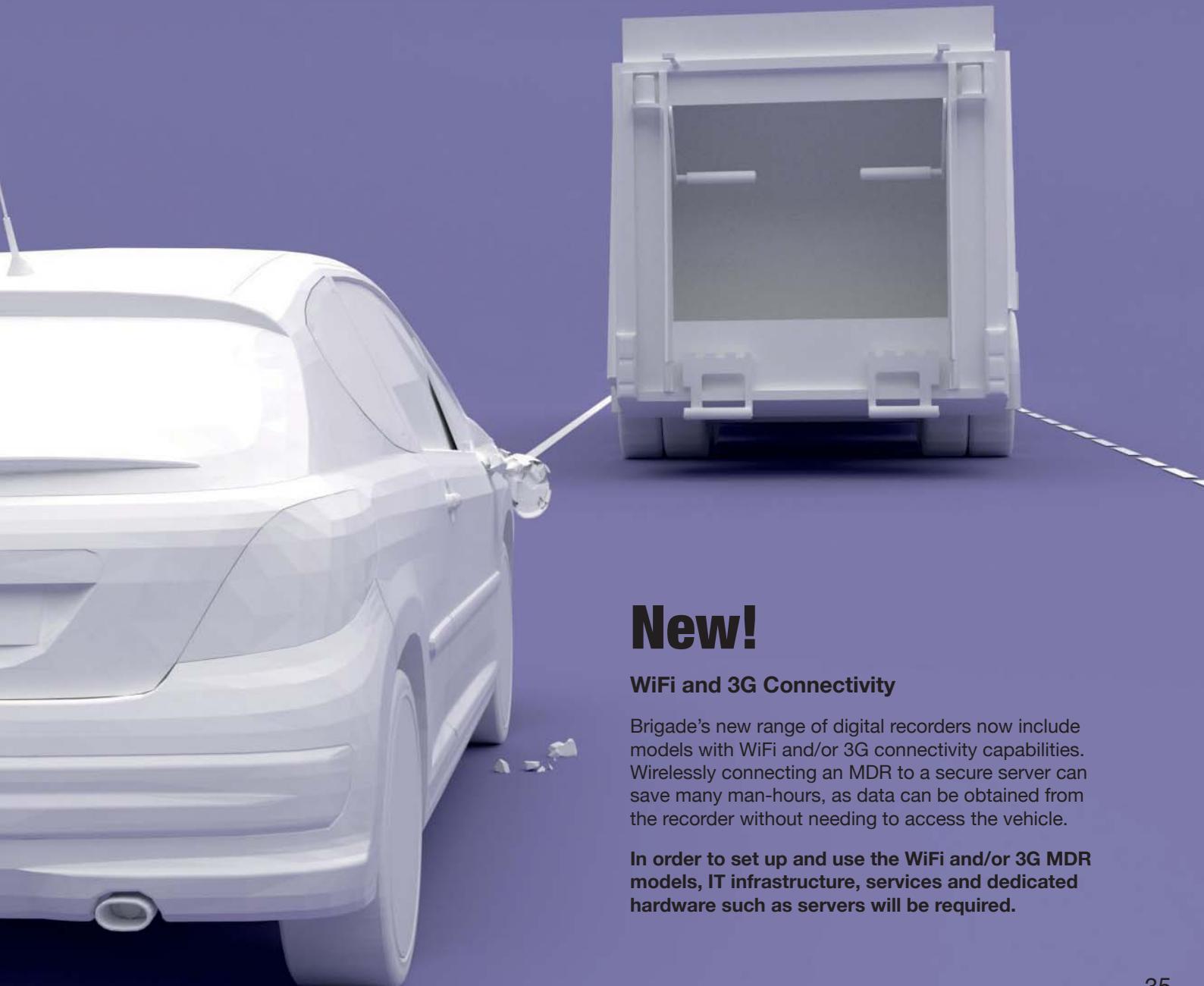
Mobile Digital Recording



Available Brochure

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

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



New!

WiFi and 3G Connectivity

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

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

Digital recording

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



MOBILE DIGITAL RECORDER

MDR-408-1000	- 8 channel 1TB hard disk recorder	4869
MDR-408GW-1000	- 8 channel 1TB hard disk recorder with Wi-Fi and 3G	4944
MDR-408G-1000	- 8 channel 1TB hard disk recorder with Wi-Fi	4942
MDR-408W-1000	- 8 channel 1TB hard disk recorder with 3G	4943

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

Main Contents

- Mobile Digital Recorder with 2.5" 1TB SATA HDD
- Remote control
- Trigger cable loom
- GPS antenna
- Security key
- 64GB SD card
- Mounting bracket and screws
- 3G antenna (4943 & 4944)
- Wi-Fi antenna (4942 & 4943)

Features

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

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

Image and Audio Quality

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

Power

- Power consumption: 12 Watts
- Current: 5.5 Amps

Durability & Standards

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

OPTIONAL EXTRAS



AC-306	Connects 1 Select camera to MDR and monitor	4904
AC-307	Connects 1 Elite camera to MDR and monitor	4905
MDR-RP01	Remote status & interface panel with panic button	4872
MDR-06RPC	6m cable for Remote status & interface panel	4873
MDR-400-GS01	External G-sensor	4871
MDR-03GSC	3m G-sensor cable	4874
MDR-408-1000-MCU	8 channel caddy with 1TB HDD	4900
SD-32GB-IND	32GB industrial grade Class 10 SD card	4875
SD-64GB-IND	64GB industrial grade Class 10 SD card	4876
MDR-400-FPB-32	External SD Mirror-recorder in fireproof housing with 32GB industrial grade Class 10 SD card	4896

3G/Wi-Fi UPGRADES FOR MDR-408-1000

MDR-408GW-EXP-0	Wi-Fi & 3G Expansion Module for MDR-408-1000 SD card not included	5044
MDR-408G-EXP-0	3G Expansion Module for MDR-408-1000 SD card not included	5045
MDR-408W-EXP-0	Wi-Fi Expansion Module for MDR-408-1000 SD card not included	5046

Model

Part No:



MOBILE DIGITAL RECORDER

MDR-404-500	- 4 channel 500GB hard disk recorder	4868
MDR-404GW-500	- 4 channel 500GB hard disk recorder with Wi-Fi and 3G	4941
MDR-404G-500	- 4 channel 500GB hard disk recorder with Wi-Fi	4939
MDR-404W-500	- 4 channel 500GB hard disk recorder with 3G	4940

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

Main Contents

- 1 x Mobile Digital Recorder with 2.5" 500GB SATA HDD
- 1 x Remote control
- 1 x Trigger cable loom
- 1 x GPS antenna
- 1 x Security key
- 1 x 32GB SD card
- 1 x Mounting bracket and screws
- 3G antenna (4941 & 4940)
- WiFi antenna (4939 & 4941)

Features

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

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

Image and Audio Quality

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

Power

- Power consumption: 12 Watts
- Current: 6.9 Amps

Durability & Standards

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

OPTIONAL EXTRAS



AC-306	Connects 1 Select camera to MDR and monitor	4904
AC-307	Connects 1 Elite camera to MDR and monitor	4905
MDR-RP01	Remote status & interface panel with panic button	4872
MDR-06RPC	6m cable for Remote status & interface panel	4873
MDR-400-GS01	External G-sensor	4871
MDR-03GSC	3m G-sensor cable	4874
MDR-404-500-MDU	4 channel caddy with 500GB HDD	4888
SD-32GB-IND	32GB industrial grade Class 10 SD card	4875
SD-64GB-IND	64GB industrial grade Class 10 SD card	4876
MDR-400-FPB-32	External SD Mirror-recorder in fireproof housing with 32GB industrial grade Class 10 SD card	4896

Digital recording

Model

Part No:

EVENT DATA RECORDER

EDR-101-008 - Event Data Recorder

4505



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

Contents:

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

Features

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

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

Picture Quality

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

Durability & Standards

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

OPTIONAL EXTRAS



EDR-101-LOCK SD card security lock

4517

EDR-142C Micro camera (5m built-in cable)

4514

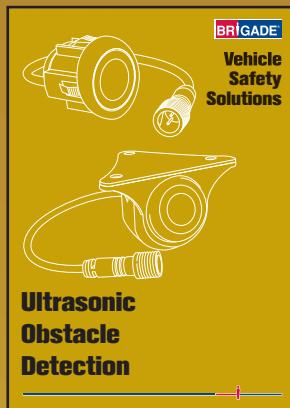
EDR-101-VC Video out cable

4511

EDR-101-CPC Cigar lighter power cable

4510

Ultrasonic Obstacle Detection



Available Brochure

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

Which system is for you?

Sidescan® - 4 sensor system fitted to side of vehicle increasing safety when turning or low speed manoeuvring. Particularly relevant for near side blind spot where cyclists or pedestrians can otherwise go undetected.

Backscan® - 4 sensor system fitted to rear of vehicle as an invaluable aid to safe reversing. Gives greater protection to pedestrians and workers, whilst minimising damage to vehicle and other objects.

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

Frontscan® - 4 sensor system fitted to front of vehicle improving safety when manoeuvring at low speed. Particularly relevant for front blind spot on high cabs where low objects or pedestrians can be hidden.

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



Ultrasonic obstacle detection

Model

Part No:

BACKSCAN® ULTRASONIC DETECTION SYSTEM

BS-4000W - Rear reversing sensor system

3744



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

Contents

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

Features

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

Durability & Standards

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

Power

- Power consumption: 2.4 Watts
- Current: 200mA

• 1.5m detection range model also available - Please contact us for details

REQUIRED ADDITIONS FOR ARTICULATED VEHICLES

SK-15-04	Truck/trailer camera/sensor cable kit - see p29	3997
SK-UDS-05	Truck/trailer sensor only cable kit	4219
UDS-10BC	10m Buzzer/display cable	3716

OPTIONAL EXTRA

UDS-RELAY-24	Trigger-out diode protected relay 24Vdc	4215
UDS-RELAY-12	Trigger-out diode protected relay 12Vdc	4216

CORNERSCAN® ULTRASONIC DETECTION SYSTEM

CS-3000 - Corner sensor system

3712



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

Contents

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

Features

- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false alarms from ancillary equipment that

intrudes in the first 100cm of the detection zone

- Self-diagnostic function

Durability & Standards

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

Power

- Power consumption: 2.4 Watts
- Current: 200mA

RECOMMENDED EXTRA



LS-60-A

Low speed trigger module

(enables sensors below designated speed)

4851

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

SIDESCAN® ULTRASONIC DETECTION SYSTEM

SS-4000W - Side sensor system	3711
SS-4000W-000 - Side sensor system low speed trigger module and turn indicator sensor kit	4321

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



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

Contents

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

Features

- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false alarms from ancillary equipment that

intrudes in the first 100cm of the detection zone
• Self-diagnostic function

Durability & Standards

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

Power

- Power consumption: 2.4 Watts
- Current: 200mA

ADDITIONS FOR ARTICULATED VEHICLES

SK-15-04	Truck/trailer camera/sensor cable kit - see p29	3997
SK-UDS-05	Truck/trailer sensor only cable kit (required)	4219
UDS-10BC	10m display cable (required)	3716
SS-4000W	Additional Sidescan sensor system for cab (optional)	3711

RECOMMENDED EXTRA



LS-60-A	Low speed trigger module enables sensors below designated speed	4851
TS-001ECU	Turn indicator trigger for system activation	1362

OPTIONAL EXTRA



SS-BC-08	Backchat speaking alarm with side turn warning for cyclists/pedestrians Note: TS-001ECU Turn indicator trigger is required	1334
TCO-47-01	Latched auto-reset Backalarm cut-out (dash mount)	4752

EXTENSION CABLES

UDS-2.5BC - Buzzer/display extension cable 2.5m	3717
UDS-10BC - Buzzer/display extension cable 10m	3716
UDS-15BC - Buzzer/display extension cable 15m	3746
UDS-2.5SC - Sensor extension cable 2.5m	3719
UDS-4.5SC - Sensor extension cable 4.5m	3720

Ultrasonic obstacle detection

Model

Part No:

FRONTSCAN® ULTRASONIC DETECTION SYSTEM

FS-4000W - Front sensor system

3747



- 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
- 2 year warranty

Contents

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

Features

- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false alarms from tow-hooks and other ancillary equipment that intrudes in the first 100cm of

- the detection zone
- Self-diagnostic function
- 1 x Trigger output

Durability & Standards

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

Power

- Power consumption: 2.4 Watts
- Current: 200mA

RECOMMENDED EXTRA

LS-60-A



Low speed trigger module

(enables sensors below designated speed)

4851

OPTIONAL EXTRA

UDS-RELAY-24

Trigger-out diode protected relay 24Vdc

4215

UDS-RELAY-12

Trigger-out diode protected relay 12Vdc

4216

STEPSCAN™ ULTRASONIC DETECTION SYSTEM

ST-2000 -

Step sensor system

3742

ST-2000-20-A - Step sensor system and low speed trigger module

4231

Includes UDS-4.5SC 4.5m extension cable



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

Contents

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

Features

- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false alarms from ancillary equipment that

- intrudes in the first 100cm of the detection zone
- Self-diagnostic function

Durability & Standards

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

Power

- Power consumption: 2.4 Watts
- Current: 200mA

RECOMMENDED EXTRA

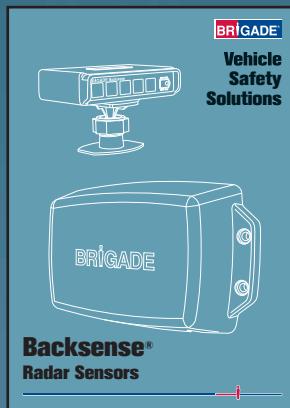
LS-60-A

Low speed trigger module

enables sensors below designated speed

4851

Radar Obstacle Detection



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

Which model is for you?

Programmable

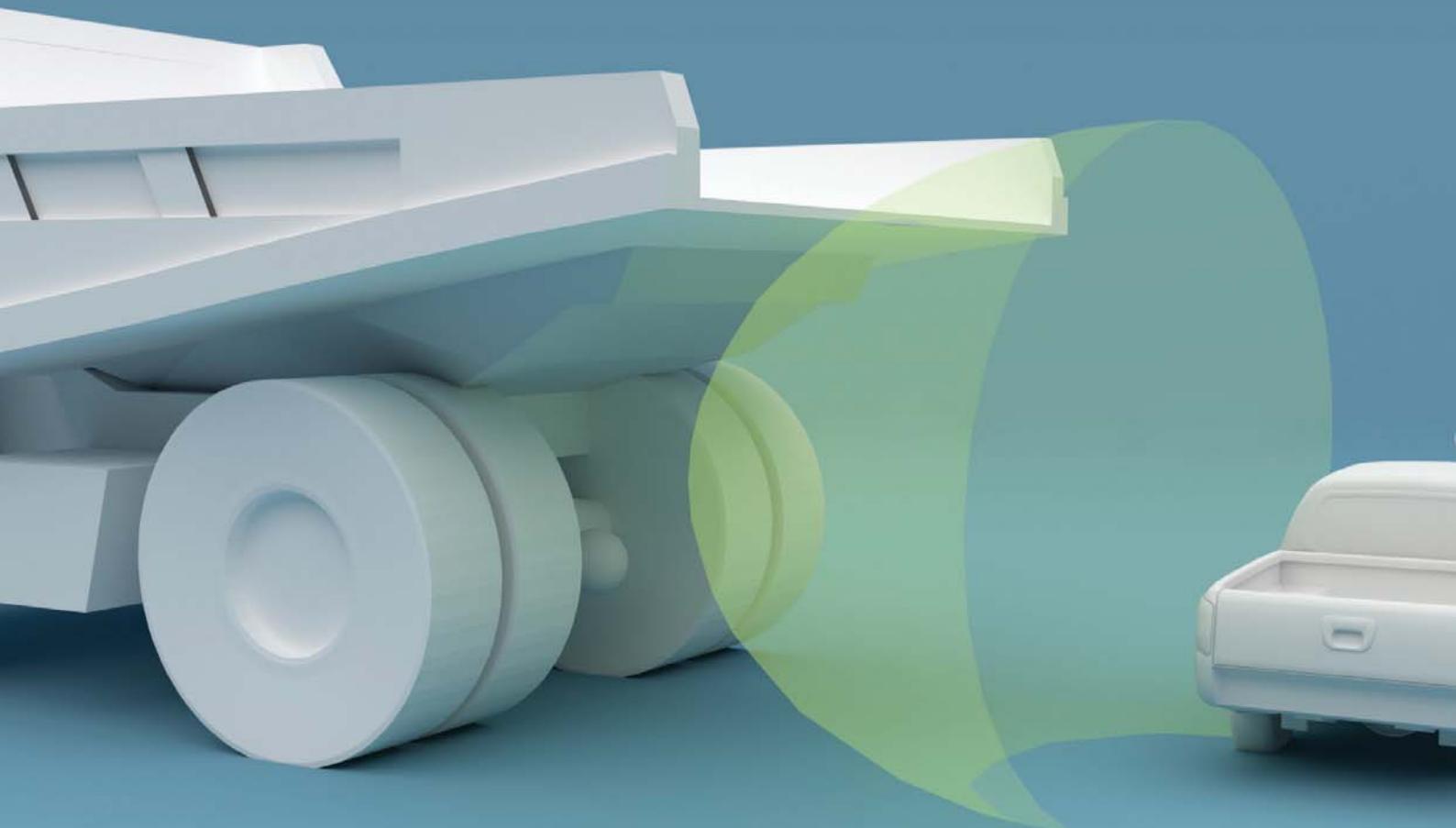
Top of the range programmable system allowing bespoke detection areas up to 30m in length and 10m in width, with the ability to calibrate out fixed objects or bodywork.



Available Brochure

Fixed

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



Backsense® Radar obstacle detection

Model

Part No:

PROGRAMMABLE BACKSENSE® OBSTACLE DETECTION



BS-8000 - Programmable detection range

Sensor, AV display, 9m cable

4530

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

Features

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

Power

- Current: 0.8 Amps
- Power consumption: 8 Watts

Durability & Standards

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

FIXED BACKSENSE® OBSTACLE DETECTION



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

Sensor, AV display, 9m cable

4527

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

Sensor, AV display, 9m cable

4528

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

Sensor, AV display, 9m cable

4529

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

Features

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

Power

- Current: 0.8 Amps
- Power consumption: 8 Watts

Durability & Standards

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

EXTENSION CABLES

BS-05DCX - 5m extension cable

4550

BS-09DCX - 9m extension cable

4551

BS-25DCX - 25m extension cable (Display end connector supplied loose)

4975

OPTIONAL EXTRAS

BKT-017 - Adjustable radar bracket

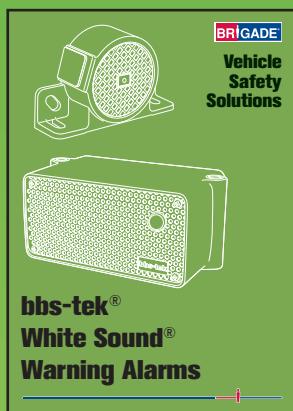
with 105mm depth bracket mounting arms

4676

BKT-018 - Low-profile adjustable radar bracket

4758

Reversing & Warning Alarms



Available Brochure

Reversing & Warning Alarms

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

Which alarm is for you?

Heavy duty

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



Medium duty

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



bbs-tek® white sound®

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



bbs-tek® reversing alarms

Model

Part No:

WHITE SOUND® SMART REVERSING ALARM

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

1400



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

Features

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

Power

- Current: Max 1 Amp

Durability & standards

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

WHITE SOUND® SMART REVERSING ALARM

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

1399

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

1398



- 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
- EMC approved: E
- SAE J994
- NAS/PIEK approved for night-time delivery

WHITE SOUND® REVERSING ALARM

BBS-107 - Heavy duty - 107 Decibels

0899

BBS-102 - Heavy duty - 102 Decibels

0898



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

Features

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

Power

- Current: Max 1 Amps

Durability & standards

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

Model
Part No:
WHITE SOUND® REVERSING ALARM



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

0935
0934
0897
0896

- 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
- EMC approved: E
- SAE J994
- NAS/PIEK approved for night-time delivery (BBS-82 & BBS-77 only)

WHITE SOUND® REVERSING ALARM



ADR version

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

1402
1322
2165

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

Features

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

Power

- Current: Max 0.3 Amps

Durability & standards

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



bbs tek alarms are covered by the following patents:

AU2007200517
EP1289798B2
CN100488807C
JP4798474B2
NZ522190
GB2345392C
USRE44912

Speaking alarms

Model

Part No:

SPEAKING ALARM



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

**0665
1199**

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

Features

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

Power

- Current: 0.5 Amps

Durability & standards

- CE marked
- EMC approved: E

NIGHTSHIFT® SPEAKING ALARM



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

**0378
1198**

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

Features

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

Power

- Current: 0.5 Amps

Durability & standards

- CE marked
- EMC approved: E

SPEAKING ALARM



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

**0077
0079
0083**

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

Features

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

Power

- Current: 0.5 Amps

Durability & standards

- CE marked
- EMC approved: E

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

SPEAKING HANDBRAKE WARNING ALARM



2 wire version

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

0849
1715

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

Features

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

Power

- Current: 0.5 Amps

Durability & standards

- CE marked
- EMC approved: E

SPEAKING SIDE TURN WARNING ALARM



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

1334

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

Features

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

Power

- Current: 0.5 Amps

Durability & standards

- CE marked
- EMC approved: E

Note: TS-001ECU Turn indicator trigger is required 1362

SPEAKING ATTACK ALARM



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

0064
1465

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

Features

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

Power

- Current: 0.5 Amps

Durability & standards

- CE marked
- EMC approved: E

Ancillaries

Model	Part No:
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VEHICLE INTERCOM



BC-VI - Normally open channel rear to cab; button press cab to rear	0815
BC-VI-2 - Normally closed channel; button press communication	0875

<ul style="list-style-type: none">• 12-24Vdc• IP68• Size (WxHxD) 122 x 84 x 50mm• 2 year warranty
--

Features

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

Power

- Current: 0.5 Amps

Durability & standards

- CE marked

ALARM ANCILLARIES



TCO-47 - Timed auto-reset Backalarm cut-out (dash mount)	0663
--	------

<ul style="list-style-type: none">• 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)	4752
--	------

<ul style="list-style-type: none">• 12-24Vdc• 2 year warranty
--

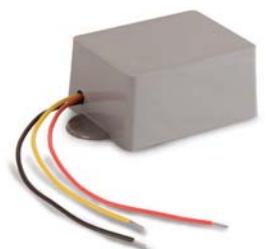
Features

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

Durability and Standards

- CE marked
- EMC approved

ALARM ANCILLARIES



NS-2 - Nightshift Backalarm cut-out switch	0334
NS-3 - Nightshift Backalarm cut-out switch (auto gearbox)	0974

<ul style="list-style-type: none">• 12-24Vdc• IP68• 2 year warranty

Features

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

Durability and Standards

- CE marked
- EMC approved

Warranties

Peace of mind from Brigade

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

LIFETIME

Lifetime Warranty (covers product for the life of vehicle)

bbs-tek® reversing alarms (all models featured in this catalogue)

Self-adjusting Backalarms (SA-range)

5
YEAR

5 Year Warranty

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

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

brigade-electronics.com/extendedwarranty

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

Exclusions apply; see T&C for further details.

3
YEAR

3 Year Warranty

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

MDR digital recorders

2
YEAR

2 Year Warranty

All products aside those specifically listed

1
YEAR

1 Year Warranty

Essential camera monitor range

EDR digital recorder

Warranty Terms and Conditions

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

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

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

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1242	BE-810C	15	3151	VBV-L407	31	4495	BN360-L115	10	4940	MDR-404W-500	37
1322	BBS-82HV	47	3152	VBV-L406	31	4496	BN360-L110	10	4941	MDR-404GW-500	37
1334	SS-BC-08	49	3183	AC-024	32	4498	BN-360-L105	10	4942	MDR-408G-1000	36
1362	TS-001-ECU	42	3232	BE-870L-001	26	4499	BN360-L1025	10	4943	MDR-408W-1000	36
1379	VBV-700C	17	3268	SC-15-01	28	4505	EDR-101-008	38	4944	MDR-408GW-1000	36
1380	VBV-L420	31	3351	BE-970WM	19	4510	EDR-101-CPC	38	4962	PMF-0001	18
1386	VBV-L410	31	3422	SP-15B-01	28	4511	EDR-101-VC	38	4963	AC-065	33
1397	BBS-97	47	3423	SP-15A-01	28	4514	EDR-142C	38	4975	BS-25DCS	44
1398	SA-BBS-97HV	46	3427	SK-15-01	28	4517	EDR-101-LOCK	38	4977	VBV-L403	31
1399	SA-BBS-97	46	3513	VBV-L425	31	4527	BS-7030	44	5003	MD-50SM-30	16
1400	SA-BBS-107	46	3560	BE-970WFM	19	4528	BS-7045	44	5004	MD-50AM-15	16
1402	BBS-92HV	47	3663	VBV-L510	31	4529	BS-7060	44	5005	MD-50AM-25	16
1426	BE-800C(78)	15	3664	VBV-L520	31	4530	BS-8000	44	5027	AC-066	33
1465	BC-AA(B)	49	3666	SC-1000-ECU	33	4550	BS-05DCX	44	5028	AC-067	33
1499	VBV-L405	31	3702	AC-035	32	4551	BS-09DCX	44	5042	BE-L101	31
1554	VBV-L4025	31	3703	VBV-710C(AC)	17	4596	SM-3XX-25	17	5042	BE-L101	31
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1828	SP-7B	28	3744	BS-4000W	40	4692	VBV-770-000	24	5066	SK-15-05	10
1829	SC-7	28	3746	UDS-15BC	42	4695	VBV-770-100	25	5066	SK-15-05	30
1830	SK-31E	28	3747	FS-4000W	41	4697	VBV-770M-S	23	5163	DMC-1021	16
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BBS-97	1397	47	BS-4000W	3744	40	SK-15-05	5066	30	VBV-L407	3151	31
BC-01	0077	48	BS-7030	4527	44	SK-30E	1144	28	VBV-L410	1386	31
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Alarms

Camera Monitors

Ultrasonic Sensors

Digital Recording

Radar Sensors

Glossary

Amp

Unit of electric current.

Approved for indirect vision

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

Auto-trigger

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

A/V input/output

Communication connection between electronic devices.

Input

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

Output

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

Brightness

Brightness of the picture displayed on a monitor, measured in candelas per square metre (cd/m²). Higher the measure the brighter the picture.

CCD (Charged-Coupled Device)

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

Contrast

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

CE mark

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

Decibel (dB)

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

EMC (Electro-magnetic compatibility)

A test to determine the unwanted effects of electromagnetic interference.

E

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

e

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

FCC mark

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

Frequency

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

GPS (Global Positioning System)

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

HALT (Highly Accelerated Life Test)

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

IC (Industry Canada)

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

Illumination distance (camera)

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

IP## (Ingress Protection)

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

ISO 13766:2006

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

ISO 15008:2003

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

ISO 16750

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

LCD (Liquid Crystal Display)

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

LED (Light Emitting Diode (camera))

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

LED (Light Emitting Diode (monitor))

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

Mechanical shock

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

Mechanical vibration

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

NAS-PIEK

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

NTSC (National Television Systems Committee)

TV colour encoding standard.

PAL (Phase Alternating Line)

TV colour encoding standard.

Resolution (RGB)

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

SAE J994

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

SD Card

Small portable memory card to store digital data.

Sounder unit

Unit which produces the sound of an alarm.

TV Lines

Number of horizontal lines used to create an image.

USB port

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

Viewing angles (camera)

The maximum angle of vision.

Viewing angles (monitor)

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

Watt

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

WiFi

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

3G

A cellular data service available from mobile network providers.

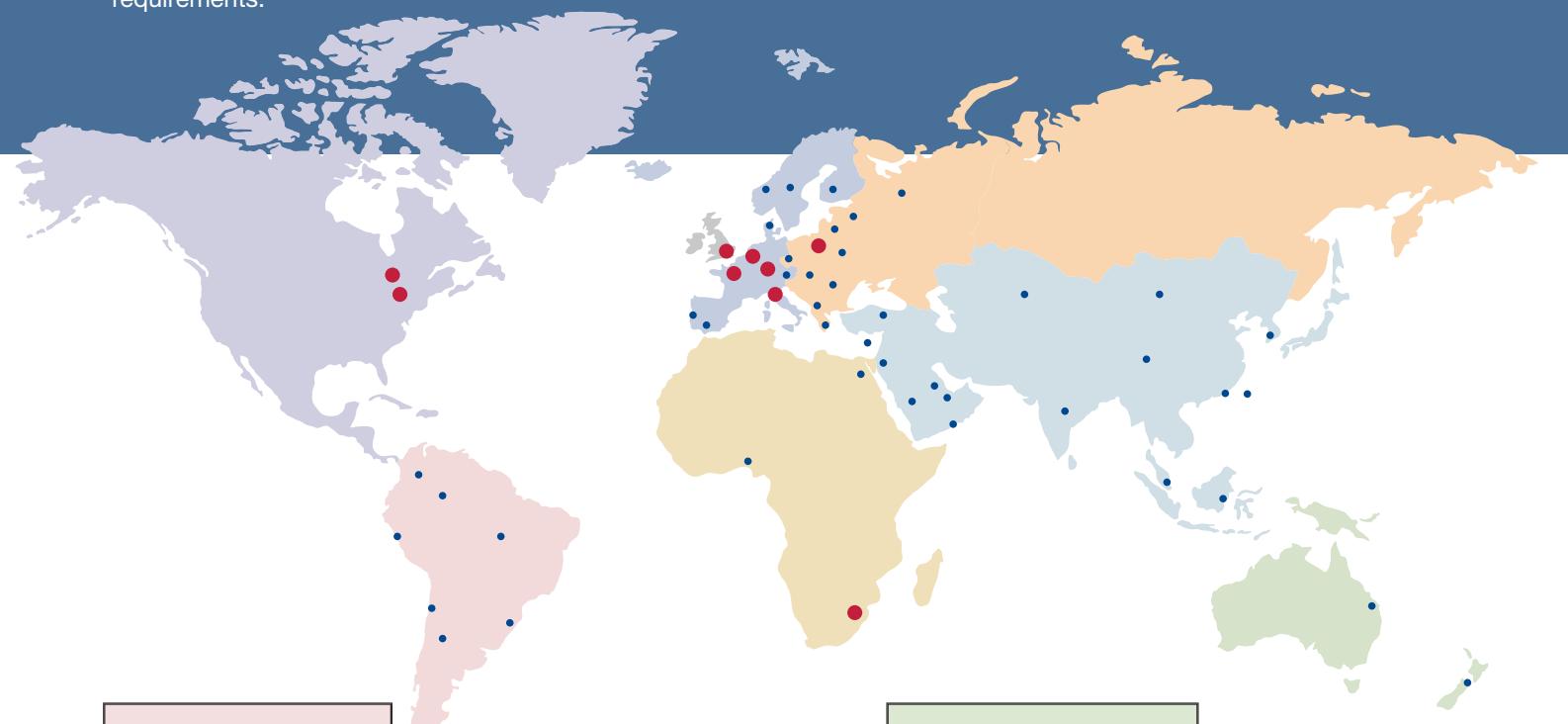
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Brigade is committed to making roads and worksites safer for all. From our humble beginnings in the UK, we now have a network of overseas subsidiaries, joint venture companies and partnerships with over 80 approved international distributors, all chosen for their high level of service and expertise in vehicle safety.

Whether you operate an international, multi-vehicle fleet or a small business in a remote corner of the globe, Brigade has a local specialist to help with your safety requirements.

We can provide a solution for a specific problem or offer friendly advice and support if you are new to vehicle safety systems.

Wherever you are in the world, large road-going vehicles and mobile plant continue to be a danger. Thankfully, Health & Safety culture is gradually improving to help combat these dangers, but whatever the local obligation, there is no excuse for compromising on safety. Stay safe, fit Brigade.



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- National Distributors in India, Pakistan, Mongolia, Hong Kong/China, Indonesia

Africa

- Joint venture company in South Africa that also covers Congo, Zimbabwe, Angola and Zambia
- National Distributors in Egypt, UAE, Oman, Israel

United Kingdom

- Brigade Electronics Group Plc
- Subsidiary in UK
- Brigade Service Partners:
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