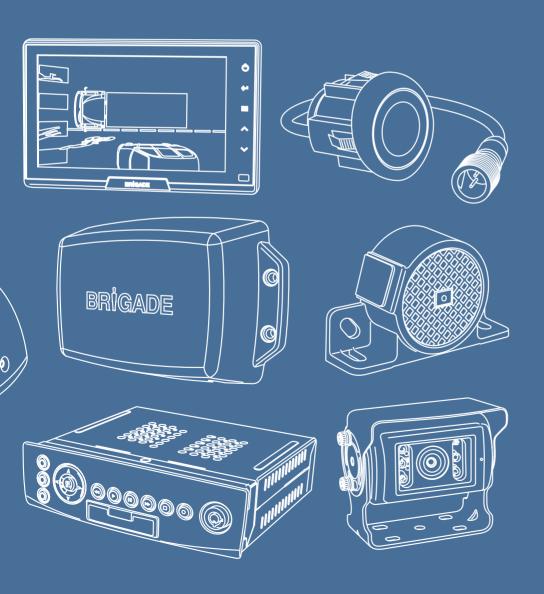


Vehicle Safety Solutions

Product Catalog 2015



Brigade

Brigade has been pioneering the cause of reversing safety since 1976, when we introduced the very first back-up alarm to Europe. We continue to lead the way in vehicle and plant safety, having extended our range to include all-round visibility, pioneering many products and developing and patenting new technology.

We rigorously test all products beyond industry standards to achieve quality and reliability. In fact we are so confident in our products that we can provide two year, three year and in the case of some products, lifetime warranties. The Brigade group is based in the UK, has subsidiary companies in the USA, Canada, Germany, Italy and The Netherlands, joint ventures in France and South Africa and is in partnership with over 50 specialist distributors worldwide, with current exports across all five continents.

Our wealth of experience has earned us a reputation for expertise. We act as an industry voice and are often called upon in an advisory capacity to sit on both legislative and international committees.

We understand your industry and the problems you face.



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Driving Global Safety

Vehicle Safety Solutions

Brigade understands the many and complex safety issues of mobile applications, resulting in a flexible product range offering safety solutions for vehicles and plant. Whether you are operating on- or off-road, vehicle or machine, large or small, we can help.

We strongly believe in a complementary range of passive and active systems to warn and assist the driver whilst protecting workers, pedestrians and cyclists. Not only this, our systems help increase efficiency and decrease vehicle downtime, saving operators thousands of dollars.

In terms of saving lives we believe the status quo is never enough. We are constantly researching the latest and developing technologies to see how they can be used to improve safety for different mobile applications.

Many of our product ranges were initially introduced to the UK, Europe and even the world by Brigade. Several of our products are patented and unique to us.

Accept no imitations.











Camera Monitor Systems

Backeye®

Camera monitor systems can help eliminate driver blind spots to prevent costly damage and ultimately save lives. Brigade's systems meet a host of on- and off- road health and safety and legislative requirements.





See pages 6-30

Mobile Digital Recording

Robust and reliable digital recording systems provide high quality video and data records. Ideally suited to large road going vehicles in the freight, waste, bus and coach industries. Add to your camera monitor system for a range of benefits.



See pages 31-33

Ultrasonic Obstacle Detection

Frontscan[®] Backscan[®] Sidescan[®] Cornerscan[™] Stepscan[™]

Sensor systems inform driver of distance between vehicle and any obstacles, whether moving or stationary. Perfect for road going commercial vehicles regularly operating in confined spaces or manoeuvring at low speeds.

See pages 34-37

Tel: +1 (260) 766-4343

E-mail: sales@brigade-inc.com

www.brigade-inc.com











White Sound Warning Alarms

hhs-tek®

Vital audible safety devices to warn that a vehicle is manoeuvring. Unique to Brigade, White Sound® alarms (bbs-tek®) are the safest in the world and do not cause a noise nuisance. Endorsed by the Noise Abatement Society and PIEK and have been awarded the Quiet Mark. Options include smart alarms, which adjust appropriately to the ambient noise level.



See pages 38-44

Radar Obstacle Detection

Backsense[™]

Robust long range sensor systems designed for harsh conditions. Inform driver of distance between vehicle and any obstacles, whether moving or stationary. Perfect for all machines working in construction, mobile plant and refuse.

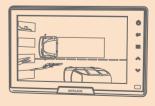


See pages 45-47

Camera Monitor Systems

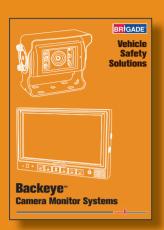
Backeye®360

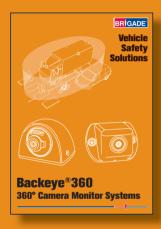
Intelligent camera monitor system that provides the driver with a bird's-eye view of the vehicle. Four camera images are processed into a single 360°, real-time picture on the driver's monitor.





See pages 8-11





Available Brochures

Backeye®

All-round visibility for commercial vehicles and mobile plant.

Which range is for you?

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.



Select

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



Essentia

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





camera monitor systems

Choosing your camera monitor system

Select from our range of popular complete standard systems featured on pages 21-25 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			
	√	= Compatible	ELITE		SELECT	
AC-0xx = Compatible with adapter(s) shown * Not compatible		exx = Compatible with adapter(s) shown	BE-970WFM BE-970WM BE-865DDM	BE-856GM	VBV-7104FM VBV-770FM VBV-750M VBV-750M	VBV-770M-S VBV-750M-S
	ELITE	BE-811C shutter camera	✓	SC-1000-ECU (Shutter module)	AC-007 + SC-1000-ECU	×
ERAS		All other Elite range cameras	✓	✓	AC-007	AC-007
CAMERAS	ECT	VBV-711C shutter camera	AC-035 + AC-006	AC-035 + AC-006	AC-035	✓
	SEL	All other Select range cameras	AC-006	AC-006	✓	✓

SELECT 360° CAMERA SYSTEMS



BN360-000 - Backeye 360 Select system

4483



IPX7 cameras

- 12-24Vdc

 Size (WxHxD) ECU 6.6 x 5 x 1.4"

Size (WxHxD) Camera 1.4 x 2.4 x 1.8"

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 cables not included

Features

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

Power

- Power consumption: 15 Watts
- · Current: 1.23 Amps

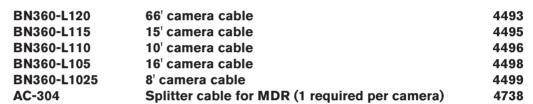
Durability & Standards

- Mechanical vibration: 1G
- Operating temperature: -22 to +167°F
- CE marked
- EMC approved: E
- HALT tested

Note: A calibration kit is required for installation.

SELECT 360° CABLES AND ADAPTERS





OPTIONAL MOUNTING BRACKETS



BN360-100C-BKT01 Adaptable mounting bracket - can be shaped to 4649 allow installation on non-vertical surfaces

BN360-100C-BKT02 Mounting bracket to adjust camera angle 4714 **BE360-CD Deflector to shield camera from knocks** 4701 (To be used with BN360-100C-BKT02 Mounting bracket)

BN360-100C-BKT03 Deflector to shield camera from knocks 4743



REQUIRED ADDITION FOR ARTICULATED VEHICLES

BN360-Enclosure IP66 Enclosure kit to enable ECU to be installed on outside of vehicle

Note: Coiled cable kit or wireless connector also required



SELECT RANGE 360° CAMERA MONITOR SYSTEMS

Complete kits including monitor, Select 360 camera system, cables and adapters



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

4618

4804

- 1 x VBV-7104FM 10.4" monitor
- 1 x BN360-000 360 system
- 1 x BN360-L110 33' camera cable
- 2 x BN360-L115 49' camera cables
- 1 x BN360-L120 66' camera cable
- 1 x BN360-VBV-L4015 video out cable

See individual products for detailed specifications

2 year system warranty



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

- 1 x VBV-770M 7" monitor
- 1 x BN360-000 360 system
- 1 x BN360-L110 33' camera cable
- 2 x BN360-L115 49' camera cables
- 1 x BN360-L120 66' camera cable
- 1 x BN360-VBV-L4015 video out cable

See individual products for detailed specifications

2 vear system warranty

360° camera systems

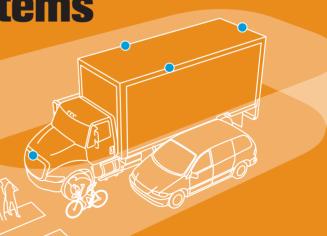
4 Cameras

1 Image

O Blind spots

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

Ultrawide-angle cameras mounted on the front, sides and rear of the vehicle capture the surrounding areas of the vehicle including all blind spots. Simultaneous digital images from these cameras are then processed and 'video stitched' resulting in a 360° birds-eye view within a single image. The software also instantly eliminates any fisheye camera distortion delivering a clear, real-time picture on the driver's monitor.



ELITE 360° CAMERA SYSTEMS

ASL360-SV - Backeye 360 Elite

4328



- 12-24Vdc
- Size (WxHxD) ECU8.8 x 1.4 x 4.7"
- Size (WxHxD) Camera
 2.7 x 1.9 x 2.4"
- 2 year warranty



Contents

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

Note: Monitor, camera cables and adapters NOT included

Features

- 360° single image
- Flexible blend widths and positioning
- Up to 30 frames per second
 Solf-manifering to aliminate fr
- 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: NTSC

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 +185°F
- CE marked
- EMC approved: E

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

CABLES AND ADAPTERS

ASL360-L120	66' camera cable	4333
ASL360-L115	49' camera cable	4334
ASL360-L110	33' camera cable	4335
ASL360-L1025	8' camera cable	4336
AC-054	8' 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



OPTIONAL MOUNTING BRACKET

BE360-CD Deflector to shield camera from knocks 4701

REQUIRED ADDITION FOR ARTICULATED VEHICLES

BN360-Enclosure IP66 Enclosure kit to enable ECU to be installed 4723

on outside of vehicle

Note: Coiled cable kit or wireless connector also required



ELITE RANGE 360° CAMERA MONITOR SYSTEMS

Complete kits including monitor, Elite 360 camera system, cables and adapters



4341

- 1 x BE-970WM 7" waterproof monitor
- 1 x ASL-360SV 360 system
- 1 x ASL-L110 33' camera cable
- 2 x ASL-L115 49' camera cables
- 1 x ASL-L120 66' camera cable
- 1 x AC-016 phono adapter cable
- 1 x AC-054 adapter cable

See individual products for detailed specifications

2 year system warranty



SE-870L-000 - 360 camera monitor system for large rigid vehicles

SE-970W-000 - 360 camera monitor system for large rigid vehicles

4342

- 1 x BE-870LM 7" monitor
- 1 x ASL-360SV 360 system
- 1 x ASL-L110 33' camera cable
- 2 x ASL-L115 49' camera cables
- 1 x ASL-L120 66' camera cable
- 1 x AC-016 phono adapter cable
- 1 x AC-054 adapter cable

See individual products for detailed specifications

• 2 year system warranty



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 33' camera cable
- 2 x ASL-L115 49' camera cables
- 1 x ASL-L120 66' 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



360° camera systems



To find out more information and to watch a video on Brigade's Backeye®360, please scan the QR code with your mobile device.

youtube.com/brigademarketing



BEST SELLER

ELITE CAMERA



Heated camera

 BE-801C
 1905

 BE-801C(40) - Narrow viewing angle: 33 x 25 x 40°
 2085

 BE-801C(78) - Narrow viewing angle: 64 x 47 x 78°
 2084

 BE-890C - Waterproof to IP69K, No audio (PAL ONLY)
 2871

- Viewing angle (HxVxD) 101 x 72 x 133°
- IP68
- Size (WxHxD)3.4 x 3 x 2.8"
- 3 year warranty



Features

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

Power

- Power consumption: 4 Watts
- Current: 0.33 Amps

Durability & Standards

- Mechanical vibration: 20G
- Mechanical shock: 50G
- Operating temperature: -22 to +176°F
- CE marked
- EMC approved: E
- HALT tested
- ISO 13766: 2006 (BE-890C only)

ELITE CAMERA

Viewing angle (HxVxD)

103 x 71 x 134°

Size (WxHxD)

4.8 x 3.3 x 3.1"

3 year warranty

IP69K



BE-811C - Heated shutter camera

- - 6 Infrared LEDs for ultra-low light performance
 - 5m illumination distanceShutter

Features

- Heater
- Audio
- Day / Night sensorMirror / Normal view
- 1/3" Sony CCD
- TV System: NTSC
- TV Lines: 400

Power

- Power consumption: 5 Watts
- Current: 0.4 Amps

Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 100G
- Operating temperature: -40 to +176°F

2914

2002

- CE marked
- EMC approved: E

SC-1000-ECU - Shutter camera module may be required to connect to Elite monitors (see intro) 3666

ELITE CAMERA



BE-821C - Mini camera (mirror image)

- Viewing angle (HxVxD) 111 x 87 x 129°
- IP68
- Size (WxHxD) 1.8 x 1.5 x 2"
- 3 year warrranty



Features

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

Power

- Power consumption: 1.5 Watts
- Current: 0.1 Amps

Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 100G
- Operating temperature: -4 to +158°F
- CE marked
- EMC approved: E
- HALT tested



ELITE CAMERA



DMC-1025 - Digital mini camera (internal use)

1529

- Viewing angle (HxVxD)
 73 x 51 x 89°
- IP66
- Size (WxHxD) 1.7 x 1.8 x 1.5"
- 3 year warranty



Features

- Mirror / Normal view
- 1/3" Sony CCD
- TV System: PAL ONLY
- TV Lines: 520

Powe

- Power consumption: 0.84 Watt
- Current: 0.07Amps

Durability & Standards

- Mechanical vibration: 10G
- Operating temperature: -4 to +158°F
- CE marked

ELITE CAMERA



MD-51 - Mini dome camera (internal use)

4049

- Viewing angle (HxVxD)73 x 51 x 89°
- IP66
- Size (Diameter x H)3 x 1"
- 3 year warranty



Features

- Mirror / Normal view
- 1/3" Sony CCD
- TV System: NTSC
- TV Lines: 520

Power

- Power consumption: 0.84W
- Current: 0.07 Amps

Durability & Standards

- Mechanical vibration: 10G
- Operating temperature: -4 to +158°F
- CE marked



OPTIONAL EXTRAS



MD-50SM - Surface mounting adapter (1.2" deep)

2582

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

BEST SELLER

SELECT CAMERA



VBV-701C

VBV-791C - Waterproof to IP69K, no audio

2575

2841

3708

2843

2842

- Viewing angle (HxVxD) 92 x 70 x 115°
- IP67
- Size (WxHxD) 3.1 x 2.8 x 2.7"
- 2 year warranty



Features

- 18 Infrared LEDs for ultra-low light performance
- 50' illumination distance
- Audio
- Day / Night sensor
- Mirror view
- 1/3" Sharp CCD
- TV System: NTSC
- TV Lines: 420

Power

- Power consumption: 2.4 Watts
- Current: 0.2 Amps

Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 100G
- Operating temperature: -4 to +158°F
- CE marked
- EMC approved: E
- HALT tested

SELECT CAMERA

Viewing angle (HxVxD)

90 x 70 x 110°

Size (WxHxD)

4.8 x 3.2 x 3.2"

2 year warranty

- IP69K



VBV-711C-Heated shutter camera

For connection to VBV-770M-S and VBV-750M-S 5-pin Select monitors Requires 5-pin 33' (VBV-L510) or 66' (VBV-L520) camera cable

VBV-711C(AC) - Heated shutter camera

Includes 5-pin to 4-pin adapter (AC-035) for connection to other Select monitors

Features

- 12 Infrared LEDs for ultra-low light performance
- 33' illumination distance

- Mirror / Normal view1/3" Sharp CCD
- TV Lines: 420
- CE Marked

Power

• EMC approved: E

• Current: 0.38 Amps

• Power consumption: 4.6 Watts

Durability & Standards

• Operating temperature: -4 to +158°F

• Mechanical vibration: 2.8G

Shutter

- Heater
- Audio
- Day / Night sensor
- TV System: NTSC

SELECT CAMERA



- Size (diameter x length) 1.4 x 2"
- 2 year warranty

88 x 64 x 112°



Features

- 9 LEDs for ultra-low light performance
- 8m illumination distance
- Mirror view
- 1/3" Sharp CCD
- TV System: NTSC
- TV Lines: 420

Power

- Power consumption: 2.3 Watts
- Current: 0.2 Amps

Durability & Standards

- Mechanical vibration: 10G
- Operating Temperature: -4 to +158°F
- CE marked





NEW

SELECT CAMERA



Compact flush mount eyeball camera

VBV-301C - Mirror view VBV-321C - Normal view 4611

4615

- Viewing angle (HXVXD) 102 x 78 x 145°
- IP69K
- Size (WxHxD) 2.2 x 1.6 x 2.7"
- 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
- 10-20" illumination distance
- Day / Night sensor
- 1/3" Sharp CCD
- TV System: NTSC 420 TV lines

Power

- Operating voltage: 12 Vdc
- Power consumption: 1.44 Watts
- Current consumption: 0.12 Amps

Durability & Standards

- Corrosion resistant: ISO9227 salt spray standard
- Mechanical vibration: 2.84G
- Operating temperature: -4 to +158°F
- CE marked
- EMC approved: E



OPTIONAL EXTRAS

SM-3XX-25 Surface mounting adapter (1" deep)

4596

THERMAL IMAGING CAMERAS



Brigade is an authorised distributor for Flir™ Thermal imaging Cameras. Please contact us for further information.

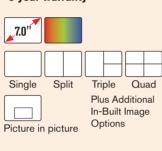
ELITE MONITOR



BE-970WFM - Waterproof multi-image 7" Digital LCD monitor

3560

- 12-24Vdc
- 4 camera inputs
- IP69K
- Size (WxHxD) 7.6 x 4.8 x 1.8"
- 3 year warranty



Features

- Shutter camera compatible
- 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 operate system or determine split screen display
- 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: min 2.15 Amps

Durability & Standards

- Aluminium die cast casing
- Mechanical vibration: 10G
- Mechanical shock: 100G
- Operating temperature: -40 to +167°F
- CE marked
- EMC approved: E
- ISO 16750
- ISO 20653: 2006
- HALT tested

ELITE MONITOR



BE-970WM - Waterproof 7" Digital LCD monitor

3351

- 12-24Vdc
- 2 camera inputs
- IP69K
- Size (WxHxD) 7.6 x 4.8 x 1.8"
- 3 year warranty



Features

- Shutter camera compatible
- 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 consumption: 11 Watts
- Current: 0.9 Amps

Durability & Standards

- Aluminium die cast casing
- Mechanical vibration: 20G
- Mechanical shock: 100G • Operating temperature: -40 to +158°F
- CE marked
- EMC approved: E
- ISO 16750
- ISO 13766: 2006
- HALT tested



ELITE MONITOR



BE-870LM - 7" Digital LCD monitor

2705

- 12-24Vdc
- 2 camera inputs
- Size (WxHxD) 7.7 x 5 x 1.1"
- 3 year warranty



Features

- · '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
- Shutter / Tilt camera compatible
- Audio
- Sun shield
- Auto-dimmer and keypad illumination
- 8 language 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 consumption: 10 Watts
- · Current: 1 Amp

Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 100G
- Operating temperature: -22 to +158°F
- CE marked
- EMC approved: E

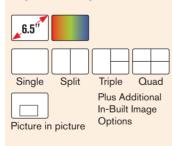
ELITE MONITOR



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

3935

- 12-24Vdc
- 4 camera inputs
- Size (WxHxD) Double DIN 7.4 x 4.5 x 4.5"
- 3 year warranty



Features

- Shutter / Tilt camera compatible
- Backlit touch screen button panel
- 'Button-lock' anti tamper feature • 5 Auto-triggers with option to select 3 triggers for split mode
- Mirror / Normal switching from menu
- On screen distance and vertical line markers
- Audio
- Speed switch trigger to operate system or determine split screen display
- 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 consumption: min 15.4 Watts
- · Current: min 1.4 Amps

Durability & Standards

- Mechanical vibration: 6G
- Operating temperature: -40 to +158°F
- CE marked
- EMC approved: e
- ISO 16750

ELITE MONITOR



BE-856GM - 5.6" Digital LCD monitor

3756

4070

- 12-24Vdc
- 2 camera inputs
- Size (WxHxD) 6.7 x 4.5 x 1.3"
- 3 year warranty



- 12Vdc

4.3"

1 camera input

Size (WxDxH)

10.1 x 3.4 x 0.9"

1 year warranty

Features

- 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 consumption: 11 Watts
- Current: 0.9 Amps

Durability & Standards

- Mechanical vibration: 10G
- Mechanical shock: 50G
- Operating temperature: -40 to +158°F
- CE marked
- EMC approved: e
- ISO 13766: 2006
- ISO 16750
- HALT tested

ESSENTIAL MONITOR



VBV-243M - 4.3" Digital mirror monitor

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

Picture Quality

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

- Power consumption: 4.95 Watts
- Current: 0.45 Amps

Durability & Standards

- · Vibration rating: 6G
- Operating temperature:
- -4 to +158°F
- CE marked





NEW

SELECT MONITOR

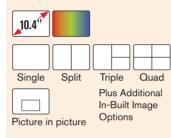


VBV-7104FM - Multi-image 10.4" Digital LCD Monitor

4474

3901

- 12-24Vdc
- 4 camera inputs
- Size (WxHxD) 10.5 x 7.5 x 1.2"
- 2 year warranty



Features

- · '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
- 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: 22 Watts
- Current: 2 Amps

Durability & Standards

- Mechanical vibration: 2.83G
- Operating temperature: -4 to +158°F
- CE marked
- EMC approved: E
- HALT tested

SELECT MONITOR



VBV-770FM - Multi-image 7" Digital LCD monitor

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

Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480
- Contrast ratio: 500:1
- Brightness: 400cd/m²
- Viewing angles: Side 70° x Top 50° x Bottom 70°

Power

- Power consumption: 25.5 watts
- Current: 2.1 Amps

Durability & Standards

- Mechanical vibration: 4G
- Operating temperature: -22 to +158°F
- CE marked
- EMC approved: E



7.0"

Single

Picture in picture

Split

Triple

Options

Plus Additional

In-Built Image

Quad

NEW

SELECT MONITOR

- 12-24Vdc

3 camera inputs

Size (WxHxD)

7.7 x 4.6 x 1"

7.0

- 12-24Vdc

3 camera inputs

Size (WxHxD)

5.8 x 3.9 x 0.8"

2 year warranty

2 year warranty



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

Includes 1 5-pin input for connection to VBV-711C shutter camera

4288 4697

Features

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

Picture Quality

- LED backlighting (gives 20,000 hours life)
- Anti-glare screen
- Resolution: 800 x 480

- Contrast ratio: 500:1
- Brightness: 400cd/m²
- Viewing angles: Side 70° x Top 50° x Bottom 70°

- Power consumption: 18 Watts
- Current: 1.5 Amps

Durability & Standards

- Mechanical vibration: 4G
- Mechanical shock: 100G
- Operating temperature: -22 to +158°F
- CE marked
- EMC approved: E
- HALT tested

NEW

SELECT MONITOR



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

Includes 1 5-pin input for connection to VBV-711C shutter camera

4287 4710

Features

- 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

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°

Power

- Power consumption: 11.5 Watts
- · Current: 0.95 Amps

Durability & Standards

- Mechanical vibration: 4G
- Mechanical shock: 100G
- Operating temperature: -22° to +158°F
- CE marked
- EMC approved: E
- HALT tested



RIGID VEHICLES

ELITE RANGE CAMERA MONITOR SYSTEMS

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

3131







- BE-870LM 7" monitor
- BE-801C heated camera
- BE-L120 66' cable

See individual products for detailed specifications

• 3 year system warranty

RIGID VEHICLES

SELECT RANGE CAMERA MONITOR SYSTEMS

VBV-770-301 - Single flush-mount camera monitor system for rigid vehicles 4779







- VBV-770M 7" monitor
- VBV-301C flush-mount camera
- VBV-L420 66' cable

See individual products for detailed specifications

• 2 year system warranty

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

4693







- VBV-770M 7" monitor
- VBV-701C camera
- VBV-L420 66' cable

See individual products for detailed specifications

• 2 year system warranty

VBV-770-100N - Single shutter camera monitor system for rigid vehicles 4770







- VBV-770M-S 7" monitor
- VBV-711C shutter camera
- VBV-L520 66' cable

See individual products for detailed specifications

• 2 year system warranty

RIGID VEHICLES (CONTINUED) SELECT RANGE CAMERA MONITOR SYSTEMS

VBV-750-301 - Single flush-mount camera monitor system for rigid vehicles 4778







- VBV-750M 5" monitor
- VBV-301C flush-mount camera
- VBV-L420 66' cable

See individual products for detailed specifications

2 year system warranty

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

4706







- VBV-750M 5" monitor
- · VBV-701C camera
- VBV-L420 66' cable

See individual products for detailed specifications

2 year system warranty

VBV-750-100N - Single shutter camera monitor system for rigid vehicles 4709







- VBV-750M-S 5" monitor
- VBV-711C shutter camera
- VBV-L520 -66' cable

See individual products for detailed specifications

• 2 year system warranty

RIGID VEHICLES

ESSENTIAL RANGE CAMERA MONITOR SYSTEM

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

4766







- VBV-650AM 5" monitor
- VBV-621C camera
- VBV-L420 66' cable
- 1 year warranty



Monitor

- 12-24Vdc
- 1 camera input
- Size (WxHxD) 5.8 x 4.3 x 1.2"

Camera

- Viewing angle (HxVxD) 81 x 59 x 106°
- IP67
- Size (WxHxD) 2.5 x 2.3 x 2.1"



SMALL RIGID VEHICLES AND VANS SELECT RANGE CAMERA MONITOR SYSTEMS

VBV-770-311 - Single flush-mount camera monitor system for vans

4783







- VBV-770M 7" monitor
- VBV-301C flush-mount camera
- VBV-L410 33' cable

See individual products for detailed specifications

• 2 year system warranty

VBV-770-010N - Single flush-mount camera monitor system for vans

4694







- VBV-770M 7" monitor
- VBV-701C camera
- VBV-L410 33' cable

See individual products for detailed specifications

• 2 year system warranty

VBV-750-311 - Single flush-mount camera monitor system for rigid vehicles 4782







- VBV-750M 5" monitor
- VBV-301C flush-mount camera
- VBV-L410 33' cable

See individual products for detailed specifications

2 year system warranty

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

4707







- VBV-750M 5" monitor
- · VBV-701C camera
- VBV-L410 33' cable

See individual products for detailed specifications

2 year system warranty

EXTEND YOUR SYSTEM

Add a front or side camera bundle to any Select range camera monitor kit:

VBV-301C-SB - Side view camera bundle (mirror image)

VBV-321C-SB - Side or front view camera bundle (normal view)

4786 4787





- VBV-301C or VBV-321C flush-mount camera
- VBV-405 16' cable

See individual products for detailed specifications

• 2 year system warranty

WIRELESS CAMERA MONITOR CONNECTION SYSTEM



DW-1001-TX - Digital Wireless Transmitter DW-1001-RX - Digital Wireless Receiver

4282 4283

Digital technology

- 12-24Vdc
- 1 camera input
- IP69K (Transmitter)
- Size (WxHxD) 4.4 x 4.4 x 1.2"
- 2 year warranty

Features

- Image Latency: 200 milliseconds
- Eliminates the need for retractable coiled cables
- Reduces installation time
- · Re-pair facility allows for interchangeable trailers
- · Compatible with Brigade's camera monitors
- Triggered by reverse gear
- TV System PAL/NTSC
- Secure connection
- Transmission frequency: 2.4 GHz
- Transmission power: 18 dBm

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 +158°F
- Mechanical vibration: 6G
- Mechanical shock: 20G
- CE marked
- FCC approved
- IC approved

ELITE TRUCK/TRAILER CABLE KIT

SK-31E - Cable kit for articulated trucks - unique pin layout SK-31E-T - Trailer only version



- BE-L110 10m cable for cab
- BE-X020 20m extension cable for trailer
- SP-7A 7-pin bulkhead socket for cab & cab-end camera connector (unique pin layout)

1143

- 0803 SP-7B 7-pin bulkhead socket for trailer & trailer-end camera connector (unique pin layout)
 - SC-7 Coiled cable with 7-pin plugs (unique pin layout)

1828 1829

1830

1886

ELITE TRUCK/TRAILER CABLE KIT

SK-30E - Cable kit for articulated trucks SK-30E-T - Trailer only version

1144 1885



- BE-L110 10m cable for cab
- BE-X020 20m extension for trailer
- SP-07C 7-pin bulkhead socket for cab & cab-end camera connector
- 1143
- 0803 SP-07T 7-pin bulkhead
 - socket for trailer & trailer-end camera connector
- SC-07 Coiled cable with 1140 7-pin plugs

1046



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

SC-15-01 - Coiled shielded 32 cable with 15-pin plugs

3268

3422

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 3956 socket for trailer & trailer-end camera connector plus stripped wires and display/buzzer connection for Ultrasonics

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

ELITE TRUCK/TRAILER CABLE KIT

SK-31E - Cable kit for articulated trucks - unique pin layout SK-31E-T - Trailer only version

1830 1886



BE-L110 - 10m cable for cab

cable for trailer

BE-X020 - 20m extension

. . . .

for trailer & trailer-end camera connector (unique pin layout)

0803 - SP-7B - 7-pin bulkhead socket

) 1828

 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)

SELECT TRUCK/TRAILER CABLE KIT

VSK-30E - Cable kit for articulated trucks **VSK-30E-T - Trailer only version**

2538 2542



VBV-L410 - 10m cable for cab

1386 • VSP-47B -7-pin bulkhead socket for trailer & trailer-end 1846

VBV-L420 - 20m cable for trailer 1380

camera connector

1847

VSP-47A - 7-pin bulkhead socket for cab & cab-end camera connector

SC-07-24S - Coiled cable with 1227 type 24S 7-pin plugs

ELITE CAMERA CABLE



BE-L130 - 98' cable 0800 BE-L120 - 66' cable 0801 BE-L115 - 49' cable 0802 BE-L110 - 33' cable 0803 BE-L105 - 16' cable 0804 BE-L1003 - 1.2' cable 2797

ELITE CAMERA EXTENSION CABLE



BE-X025 - 82' extension cable 1907 BE-X020 - 66' extension cable 1143 BE-X015 - 49' extension cable 2101 BE-X010 - 33' extension cable 2100 BE-X005 - 16' extension cable 2099 BE-X003 - 10' extension cable 0805

SELECT CAMERA CABLE



VBV-L430 - 98' cable	2108
VBV-L420 - 66' cable	1380
VBV-L415 - 49' cable	3150
VBV-L412 - 39' cable	3106
VBV-L410 - 33' cable	1386
VBV-L405 - 16' cable	1499
VBV-L4025 - 8' cable	1554
VBV-L520 - 66' 5-pin shutter camera cable	3664
VBV-L510 - 33' 5-pin shutter camera cable	3663
VBV-L505 - 16' 5-pin shutter camera cable	4001



	CAMERA MONITOR ADAPTER CABLES	
6 6	AC-006 - Connects Select series camera to Elite series cable	1983
	AC-007 - Connects Select series monitor to Elite series cable	1984
	AC-014 - Connects Extreme or Elite series camera to Select series cable	2094
	AC-016 - Connects AV to Camera input of Elite monitor	2150
	AC-019 - Connects Elite camera to male phono (video only)	2589
Control of the second	AC-020 - Connects Extreme or Elite series monitor to Select series cable	2590
	AC-024 - Connects phono to Select monitor	3183
	AC-035 - 5-pin to 4-pin 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
06	AC-044 - Connects Elite camera to Molex M12 (Fendt)	4279
	AC-045 - Connects Select camera to Molex M12 (Fendt)	4280
The same	AC-056 - Connects Select camera to Orlaco monitor	4401
	AC-062 - Connects Elite camera to Orlaco monitor	4691



CAMERA MONITOR ADAPTER CABLES

AC-24-12(001) - in-line 24/12v converter - Select camera to Elite monitor 4235

AC-24-12(002) - in-line 24/12v converter - Elite camera to Fakra monitor 4266

AC-24-12(003) - in-line 24/12v converter - 2 x Select cameras to M12 5-pin +power

AC-24-12(005) - in-line 24/12v converter - Select camera to M12 5-pin 4323

AC-24-12(006) - in-line regulator - Select camera to Volvo connector 4719

OEM CAMERA MONITOR ADAPTER CABLES

A further range of OEM specific adapters to connect Brigade cameras to factory fit monitors is available - Please contact us for details

CAMERA MONITOR SYSTEM ANCILLARIES



- 12-24Vdc

Single

4 camera inputs

Size (WxHxD)

6 x 1.1 x 4.1"

2 year warranty

Split

picture

Picture in

Plus Additional In-built Image Options

EDM-50 - Multi-camera module and screen splitter

Quad

Triple

Features
• Shutter camera compatible

- Tilt camera compatible
- 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

Durability & Standards

- Mechanical vibration: 5G
- Operating temperature: -13 to +158°F

4301

- CE marked
- EMC approved: e



CAMERA MONITOR SYSTEM ANCILLARIES



SS-002 - Twin camera screen splitter

3044

- 12-24Vdc
- 2 camera inputs
- Size (WxHxD) 5.8 x 1.4 x 3"
- 2 year warranty

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\bigcap	

In-Built Image Options

- Offers split screen option for monitors without in-built functionality
- 3 auto-triggers for each camera
- TV System: PAL / NTSC
- Manual Mirror / Normal switching
- · Compatible across Brigade camera monitor range (adapters required for Elite series)

Power

• Power Consumption: 10.8 Watts

Durability & Standards

- Mechanical vibration: 10G
- Operating temperature: -40 to +158°F
- EMC approved: e

CAMERA MONITOR SYSTEM ANCILLARIES



LS-20-A - Low speed trigger module (normally closed)

3177

- 12-24Vdc
- Auto-triggers safety equipment at the designated speed
- Size (WxHxD) 2.4 x 1.4 x 3.7"
- 2 year warranty

Features

- Simple to change triggering speed using DIP switch
- Normally closed safety device on by default, turning off at designated speed
- · Compatible with Brigade camera monitor systems

Power

- Power consumption: 0.1 Watts
- Current: 0.05 Amps

Durability & Standards

- Mechanical vibration: 10G
- Operating temperature: -40 to +158°F
- CE marked

CAMERA MONITOR SYSTEM ANCILLARIES



SC-1000-ECU - Shutter camera module

- Allows BE-811C shutter camera to function with any Elite range monitor (using Elite range cables).
- Use AC-007 adapter to connect to Select or Essential range monitor.
- CE marked
- EMC approved: e

mobile digital recording

BRIGADE Safety Solutions **Mobile Digital** Recording

Available Brochure

By recording footage from vehicle mounted cameras, mobile digital recording provides 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









Tel: +1 (260) 766-4343

E-mail: sales@brigade-inc.com



MOBILE DIGITAL RECORDER



MDR-304A-500 - 500GB hard disk with improved data download speed 3880

- 12-24Vdc
- 4 camera inputs
- 4 trigger/alarm inputs
- Lockable central caddy
- Fast, easily downloadable recordings and data
- Size (WxHxD)7 x 2 x 6.8"
- 3 year warranty



AC-301

Features

- Black box recorder with docking station and anti-vibration mounting
- Removable central caddy with integral hard disk and lockable keypad
- Up to 780 hours recording (based on 6 frames per second and standard image quality)
- Recording can be triggered by motion detection even when vehicle inactive
- Record images prior to alarm activation and after vehicle turned off
- Easy to use via 'DVD' style front panel
- Video and audio recordings saved on hard disk
- Download data to PC 10x faster than previous model via high speed USB 2.0 interface. Alternatively save data to removable SDHC card
- Simple to use HDD viewer software enables search of recorded video and export of critical moments to AVI video or static JPEG files

- 2 trigger / alarm outputs to trigger other devices
- Compatible with Brigade camera monitor systems
- Optional GPS sensor to record location, route and speed data
- Optional G sensor to record X, Y and Z impact data in the event of an accident
- Manually selectable PAL / NTSC

Picture Quality

- MPEG4 image compression allows high quality image resolution
- Choice of recorded image quality low to high resolution
- Record at between 2 and 30 frames per second per channel

Durability & Standards

- Mechanical vibration: 2G
- Mechanical Shock: 15G
- Operating temperature: -4 to +122°F
- · EMC approved: e

OPTIONAL EXTRAS





Connects Select camera to MDR & monitor



AC-006 Connects Select series camera cable to MDR 1983



RC-300-060 Remote control with 20' cable 2803



GPS-6015-050 GPS receiver (speed & location data) with 16' cable 2925

GS-6016-030 G sensor with 9' cable

4140

NEW

MOBILE DIGITAL RECORDER



EDR-101-008 - Event Data recorder

4505

- 12-24Vdc
- 1 in-built camera plus
 1 external camera input
- Fast, easily downloadable recordings and data
- Size (WxHxD)3.3 x 1.9 x 1"
- 1 year warranty



Contents:

- 1x Recorder
- 1x GPS Antenna
- 1 x power cable
- 1x Mounting Bracket & adhesive pad
- 1x 8GB Micro SD card
- 1x Micro SD to SD adaptor
- 1x Software CD
- 1x user manual

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
- Sotfware 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: 14 to 122°F
- CE self DofC

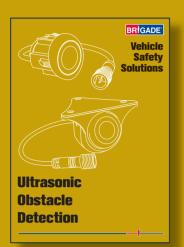


OPTIONAL EXTRAS

EDR-101-LOCK SD card security lock 4517

EDR-142C	Micro camera	4514
EDR-101-VC	V-out cable	4511

EDR-101-CPC Cigar lighter power cable 4510



Available Brochure

ultrasonic obstacle detection

Sensor systems inform driver of distance between vehicle and any obstacles, whether moving or stationary. Perfect for road going commercial vehicles regularly operating in confined spaces or manoeuvring at low speeds.

Which system do you need?

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.

SIDESCAN® ULTRASONIC DETECTION SYSTEM

SS-4000W - Sidescan sensor system

3711



- 4 sensor system
- 12-24 Volts
- 3/5' 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
- 33' buzzer cable
- 4 x 15' sensor cables
- 2 x 8' extension cables

Features

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

equipment that intrudes in the first 3' of the detection zone

Self-diagnostic function

Durability & Standards

- Operating temperature:
- -40 to +176°F

 Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- EMC approved: E

ADDITIONS FOR ARTICULATED VEHICLES

SK-15-04	Truck/trailer camera/sensor cable kit - see p25	3997
SK-UDS-05	Truck/trailer sensor only cable kit (required)	4219
UDS-10BC	33' display cable (required)	3716
SS-4000W	Additional Sidescan sensor system for cab (optional)	3711



RECOMMENDED EXTRA

LS-20-A	Low speed trigger module (enables sensors below designated speed)		
TS-001ECU	Turn indicator trigger for system activation	1362	

OPTIONAL EXTRA

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



BACKSCAN® ULTRASONIC DETECTION SYSTEM

BS-4000W - Backscan reversing sensor system

3744



- 4 sensor system
- 12-24 Volts
- 8' detection range outer sensors 8/2' (selectable via dip switch)
- Graduated visual and audible distance warning display
- Underslung and flush-mount fixings included
- 1.6" 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
- 49' display cable
- 4 x 8' 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 3' of the detection zone

- Self-diagnostic function
- 1 x Trigger output

Durability &

Standards • Operating tempe

- Operating temperature: -40 to +176°F
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- EMC approved: E
- 5' 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 p25	3997
SK-UDS-05	Truck/trailer sensor only cable kit	4219
UDS-10BC	33' Buzzer/display cable	3716

OPTIONAL EXTRA

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

CORNERSCAN™ ULTRASONIC DETECTION SYSTEM

CS-3000 - Cornerscan sensor system

3712



- 3 sensor system
- 12-24 Volts
- 2/3' 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
- 8' buzzer cable
- 3 x 8' sensor cables

Features

- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false

alarms from ancillary equipment that intrudes in the first 3' of the detection

· Self-diagnostic function

Durability & Standards

- Operating temperature: -40 to +176°F
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- EMC approved: E

RECOMMENDED EXTRA



LS-20-A

Low speed trigger module (enables sensors below designated speed) 3177

STEPSCAN™ ULTRASONIC DETECTION SYSTEM

ST-2000 - Stepscan sensor system

3742



- 2 sensor system
- 12-24 Volts
- 2/3' 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
- 8' buzzer cable
- 2 x 8' sensor cables

Features

- Obstacles detected in under 200 milliseconds
- Environment Learning Mode prevents false

- alarms from ancillary equipment that intrudes in the first 3' of the detection
- Self-diagnostic function

Durability & Standards

- Operating temperature: -40 to +176°F
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- EMC approved: E



FRONTSCAN® ULTRASONIC DETECTION SYSTEM

FS-4000W - Frontscan sensor system

3747



- 4 sensor system
- 12-24 Volts
- 7/3' detection range outer sensors can be reduced to 2' (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
- 8' buzzer cable

• 4 x 8' 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 3' of the detection zone
- Self-diagnostic function
- 1 x Trigger output

Durability & Standards

- Operating temperature: -40 to +176°F
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE marked
- EMC approved: E



RECOMMENDED EXTRA

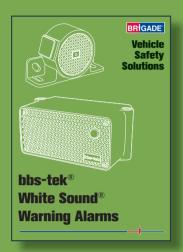
LS-20-A Low speed trigger module 3177 (enables sensors below designated speed)

OPTIONAL EXTRA

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

EXTENSION CABLES

UDS-2.5BC - Buzzer/display extension cable 8	3717
UDS-10BC - Buzzer/display extension cable 33'	3716
UDS-15BC - Buzzer/display extension cable 49'	3746
UDS-2.5SC - Sensor extension cable 8'	3719
UDS-4.5SC - Sensor extension cable 15'	3720



Available Brochure

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.



Vehicle specific

Petrol tanker (ADR) and electric forklift (High Voltage) options available.



back-up and warning alarms

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® smart back-up alarms

Continually adjust to 5-10 decibels above ambient so ideal in varying noise level environments.

bbs-tek® back-up alarms



Backchat®

Speaking warning alarms that reproduce real speech with unrivalled quality and clarity.

Bespoke speaking alarms

Define your own message as required.

Nightshift® speaking alarms

Include built-in alarm cut-out for night-time use.

Vehicle intercom

Two-way communication system provides clear, reliable communication between the driver and others not in the cab.

WHITE SOUND® SMART REVERSING ALARM



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

1400

1399

1398

0899

0898

- 12-24 Volts
- IP68
- Size (WxHxD)6.7 x 3.1 x 3.7"
- 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 centers: 6"

Power

• Current: Max 1 Amp

Durability & standards

- Mechanical vibration: 10G
- Operating temperature: -40 to +185°F
- CE marked
- SAE J994
- OSHA & MSHA compliant (providing appropriate unit correctly installed)

WHITE SOUND® BACK-UP ALARM



oos tek SA-BBS-97 - Self adjusting - medium duty - 77-97 Decibels SA-BBS-97HV - Self adjusting - electric forklift - 77-97 Decibels

- 12-24 Volts
- 36-80 Volts (HV)
- IP68
- Size (WxHxD)5 x 3 x 2.5"

- 12-24 Volts

Size (WxHxD)

6.7 x 3.1 x 3.7"

Lifetime warranty

- IP68

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 centers: 3.8-4.2"

Power

Current: Max 1 Amp

Durability & standards

- Mechanical vibration: 10G
- Operating temperature: -40 to +85°F
- CE marked
- SAE J994
- OSHA & MSHA compliant (providing appropriate unit correctly installed)

WHITE SOUND® BACK-UP ALARM





BBS-107 - Heavy duty - 107 Decibels BBS-102 - Heavy duty - 102 Decibels

- **Features**
- Multi frequency broadband sound
- Instantly locatable
- Instantly locatable
 Sound confined to danger area
- Eliminates noise nuisance
- Sounder unit: Driver
- Hole centers: 6"

Power

Current: Max 1 Amps

- Mechanical vibration: 10G
- Operating temperature: -40 to +815°F
- CE marked
- EMC approved: e
- SAE J994
- OSHA & MSHA compliant (providing appropriate unit correctly installed)



WHITE SOUND® BACK-UP ALARM



BBS-92HV - Electric forklift - 92 Decibels BBS-82HV - Electric forklift - 82 Decibels BBS-92ADR - Petrol tanker - 92 Decibels 1402 1322 2165

- 12-24 Volts
- 36-80 Volts (HV)
- IP68
- Size (WxHxD)5 x 3 x 2.5"
- Lifetime warranty

Features

- · Multi frequency broadband sound
- Instantly locatable
- Sound confined to danger area
- Eliminates noise nuisance
- · Sounder unit: Speaker
- Hole centers: 3.8-4.2"

Power

Current: Max 0.3 Amps

Durability & standards

- Mechanical vibration: 10G
- Operating temperature: -40 to +185°F
- CE marked
- EMC approved: e
- SAE J994
- OSHA & MSHA compliant (providing appropriate unit correctly installed)

BEST SELLER

WHITE SOUND® BACK-UP ALARM



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

BBS-77 - Medium duty - 77 Decibels

- Multi frequency broadband soundInstantly locatable
- · Sound confined to danger area
- Eliminates noise nuisance
- Sounder unit: Speaker
- Hole centers: 3'

Features

Power

Current: Max 0.5 Amps

Durability & standards

- Mechanical vibration: 10G
- Operating temperature: -40 to +185°F

0935

0934

0897

0896

1397

3989

- CE marked
- EMC approved: e
- SAE J994
- OSHA & MSHA compliant (providing appropriate unit correctly installed)

WHITE SOUND® BACK-UP ALARM



- 12-24 Volts

Size (WxHxD)

Lifetime warranty

4.1 x 2.6 x 1.5" (BBS-97/92)

4.1 x 2.6 x 1.3" (BBS-87/82/77)

- IP68

- 12-24 Volts
- IP67
- Size: 4" diameter
- Lifetime warranty

Features

BBS-97GM - Medium duty - Grommet mount - 97 Decibels

- Multi frequency broadband sound
- Instantly locatable
- Sound confined to danger area
- Eliminates noise nuisance
- Sounder unit: Speaker

Power

Current: Max 0.5 Amps

- Mechanical vibration: 10G
- Operating temperature: -40 to +185°F
- CE marked
- EMC approved: e
- SAF 1992
- OSHA & MSHA compliant (providing appropriate unit correctly installed).



SPEAKING ALARM



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

1199

1198

0079

0083

- 12-24 Volts
- IP68
- Size (WxHxD)4.5 x 4.5 x 4.7 inches
- 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 centers (inches): 4

Power

• Current: 0.5 Amps

Durability & standards

- CF marked
- EMC approved: e

NIGHTSHIFT® SPEAKING ALARM



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

- 12-24 Volts
- IP68
- Size (WxHxD)4.8 x 3.3 x 2"

• 12-24 Volts

Size (WxHxD)

4.8 x 3.3 x 2"
- 2 year warranty

- IP68

2 year warranty

Features

- Real speech alarm
- * BC-01(NS) message "Bleep! 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 centers: 4"

Power

• Current: 0.5 Amps

Durability & standards

- CE marked
- EMC approved: e

SPEAKING ALARM



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

Features

- Real speech alarm
- Bespoke message up to 8 seconds, under 4 seconds for best speech quality
- Sounder unit: Speaker
- Hole centers: 4'

Power

• Current: 0.5 Amps

- CE marked
- EMC approved: e



SPEAKING SIDE TURN WARNING ALARM



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

1334

1465

- 12-24 Volts
- IP68
- Size (WxHxD)4.8 x 3.3 x 2"
- 2 year warranty

- 12-24 Volts

Size (WxHxD)

4.5 x 4.5 x 4.7"

2 year warranty

- IP68

Features

- Real speech alarm
- * Message "Ssh! Caution. Truck turning left..."
- · Sounder unit: Speaker
- Hole centers: 4"

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(B) - Single bespoke message - 110 Decibels

Features

- Real speech alarm
- Activated by panic button, repeats continuously until deactivated by hidden switch
- Sounder unit: Speaker
- Hole centers: 2"

Power

• Current: 0.5 Amps

- CE marked
- EMC approved: e

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

Power

• Current: 0.5 Amps

Durability & standards

CE marked

- 12-24 Volts
- IP68
- Size (WxHxD) 4.8 x 3.3 x 2"
- 2 year warranty

Features

- Two-way communication system
- Master unit volume control: 80-95dB
- Includes master unit, slave unit and 82' cable
- · Sounder unit: Speaker
- Hole centers: 4"

ALARM ANCILLARIES

TCO-47 - Timed auto-reset Backalarm cut-out (dash mount) TCO-47-01 - Latched auto-reset Backalarm cut-out (dash mount)

- 12-24 Volts

2 year warranty

Features

- Single touch timed relay
- · Allows driver to cut-out Backalarm if reversing between 11.30pm-7.00am
- · Auto-resets after 3-4 mins delay

Durability and Standards

0663

4752

0334

0974

- CE marked
- EMC approved

ALARM ANCILLARIES



NS-2 - Nightshift Backalarm cut-out switch

NS-3 - Nightshift Backalarm cut-out switch (auto gear box)

- 12-24 Volts
- IP68
- 2 year warranty

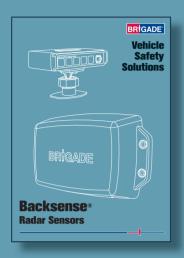
Features

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

Durability and Standards

- CE marked
- EMC approved

radar obstacle detection



Available Brochure

Backsense®

Robust, long-range, continuous wave radar sensor systems designed for harsh conditions. Informs driver of distance between vehicle and any obstacles, whether moving or stationary. Perfect for all machines working in construction, mobile plant and refuse.

Choosing your model

Programmable

Top of the range programmable system allowing bespoke detection areas up to 100' in length and 33' in width, with the ability to calibrate out fixed objects or bodywork.



Fixed

Fixed detection length and width. Ideal on machines where no calibration is required. Detection range of up to 20'.



NEW

PROGRAMMABLE BACKSENSE OBSTACLE DETECTION



4530

BS-8000 - Programmable detection range Sensor, AV display, 30' cable



Detection length: 1.2 to 98'

- Detection width: 6.5 to 33'

 Rugged design for harsh environmental conditions

Sensor size (WxHxD) 9.3 x 5 x 2"

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

Detection area
Blind zones - system ignores fixed objects

• CE marked
• EMC approved: E Trigger activation point Buzzer

• 5 stage audible and visual distance warning display

• Resistant to water, moisture, dust, vibration, heat, cold, mud and glare

Power

• Current: 0.6 Amps

Durability & Standards

- Mechanical shock: 100G
- Operating temperature: -40 to +185°F

- BS EN 13309: 2010
- ISO13766: 2006

EXTENSION CABLES

BS-05DCX - 16' extension cable BS-09DCX - 30' extension cable

4550

4551



In-cab display

OPTIONAL EXTRAS

BKT-017 - Adjustable radar bracket with 4" depth bracket mounting arms

4676

Tel: +1 (260) 766-4343

46

E-mail: sales@brigade-inc.com

www.brigade-inc.com



FIXED BACKSENSE OBSTACLE DETECTION NEW







 Maximum detection range of 20'

- Rugged design for harsh environmental conditions
- Size (WxDxH) 9.3 x 5 x 2"

- 12-24 Volts

- IP69K sensor
- 2 year warranty

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

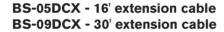
Power

• Current: 0.6 Amps

Durability & Standards

- Mechanical shock: 100G
- Operating temperature: -40 to +185°F
- CE marked
- EMC approved: E
- BS EN 13309: 2010
- ISO13766: 2006

EXTENSION CABLES



4550 4551



OPTIONAL EXTRAS

BKT-017 - Adjustable radar bracket with 4" deep bracket mounting arms

4676

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

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 (UNECE) standards e.g. ECE 10.03

е

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

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.

glossary

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 power needed to drive a product.

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 Warranty (covers the alarm for the life of the vehicle)

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



3 Year Warranty

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



2 Year Warranty

All other products.



1 Year Warranty

Essential camera monitor system.

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.

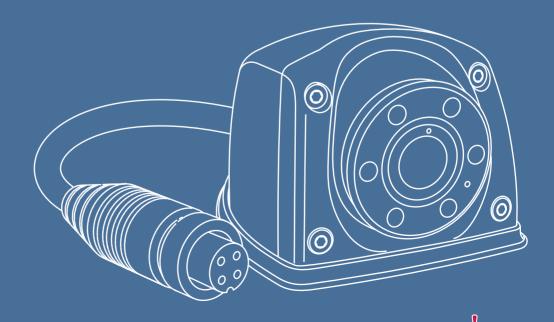
Brigade Electronics Group Plc reserves the right to change terms, conditions and specifications shown in this catalogue at any time.



To order or for more information on Brigade's vehicle safety solutions;

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or visit your local dealer



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