SAFETY – CAMERA SYSTEMS

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

Ultra wide-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 360° bird’s-eye view within a single image. This gives the driver or operator a quick and easy understanding of any potential hazard. The software also instantly eliminates any fisheye camera distortion delivering a clear, real-time picture on the driver's monitor.
SAFETY – CAMERA SYSTEMS

The Backeye® 360 Select is a bird's-eye camera monitor system suitable for standard on-road vehicles that do not require bespoke configuration.

- Four wide-angle camera lenses cover the entire vehicle perimeter and surroundings, including all blind spots
- Real-time video output
- Triggered views (rear, left & right) e.g. selecting reverse gear highlights rear view image
- Split-screen monitor view
- Configurable viewing distance to suit vehicle type and application
- Customisable on-screen vehicle icon and livery so the driver sees a recognisable vehicle on the monitor
- On-screen distance markers on rear view
- Reduces collisions with people and objects
- One view to see all surrounding areas
- No blind spots

No. LTMSSE/770D/100DV

Complete camera system
wgt. 4.70kg

- System consists of: 4 x BN360/000 Wide angle cameras
  Size: W35 x H60 x D45mm
- 4 x BN360/000 Electronic Control Units (ECU)
  Size: W170 x H126 x D36mm
- 1 x VBV/770DM 7" Monitor
  Size: W180 x H122 x D27mm

- Cables supplied separately dependant on vehicle size (see page 199)

Features

- 12-24Vdc
- 360° Single image
- Triggered views (rear, left & right)
- 4 x (IPX7) Ultra-wide viewing angle cameras (HxV) 185° x 142°
- 1/3.6" CMOS sensor
- TV System: NTSC
- 2 Year warranty

Power

- Power consumption: 15 Watts
- Current: 1.23 Amps

Durability and Standards

- Mechanical vibration: 1G
- Operating temperature: -30°C to +75°C
- CE Marked
- EMC Approved: E
- HALT Tested
SAFETY – CAMERA SYSTEMS

Side-Scan Ultrasonic Detection System
Suited to Rigid Vehicles

4 Sensor system fitted to the side of a vehicle, increasing safety when turning or low speed manoeuvring. Particularly relevant to near-side blind spot where cyclists or pedestrians can otherwise go undetected. The driver is warned by a cab mounted audible distance warning buzzer.

No. LTMSSS/4000W/DV
Complete side-scan system
wgt. 1.44kg

- Each system consists of:
  - 4 x Sensors
  - 1 x Buzzer
  - 4 x 0º Flush mount fixings
  - 4 x 11º Flush mounting fixings
  - 4 x Underslung fixings
  - 1 x Waterproof control box
  - 1 x 10m Buzzer cable
  - 4 x 4.5m Sensor cables
  - 2 x 2.5m Extension cables

- 4 Sensor system
- 12-24 Vdc
- 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

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 and Standards

- Operating temperature: -40ºC to +80ºC
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE Marked
- EMC Approved: E

Additional Hardware to Upgrade / Enhance System

No. LTMSSS/BC/08/DV
Backchat speaking alarm with side-turn warning for cyclists/pedestrians

Various additions are available for articulated vehicles. Details available upon request.
SAFETY – CAMERA SYSTEMS

Back-Scan Ultrasonic Detection System
Suited to Rigid Vehicles

4 Sensor system fitted to the rear of a vehicle, as an invaluable aid to safe reversing. Gives greater protection to pedestrians and workers, whilst minimising damage to the vehicle and other objects. Driver is warned by a cab mounted visual and audible distance warning display unit.

No. LTMSBS/4000W/DV
wgt. 1.34kg

Each system consists of:
- 4 x Sensors
- 1 x Visual and audible display
- 4 x 0° Flush mount fixings
- 4 x 11° Flush mounting fixings
- 4 x Underslung fixings
- 1 x Waterproof control box
- 1 x 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
- 1.5m Detection range also available – Please contact us for more details

Durability and Standards
- Operating temperature: -40°C to +80°C
- Waterproof sensors to IP68
- Waterproof control box to IP69K
- CE Marked
- EMC Approved: E

Various additions are available for articulated vehicles. Details available upon request.

A full range of electrical components can be found on P58-95 P58-62 P91-93 P88
# SAFETY – CAMERA SYSTEMS

## 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 reversing alarms

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

<table>
<thead>
<tr>
<th>No.</th>
<th>LTMS/BBS87/DV</th>
<th>87 Decibels</th>
<th>wgt. 0.19kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Size: W105 x H65 x D32mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>LTMS/BBS92/DV</td>
<td>92 Decibels</td>
<td>wgt. 0.21kg</td>
</tr>
<tr>
<td></td>
<td>Size: W105 x H65 x D37mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Power

- Current: Max 0.5 Amps

### Durability and Standards

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

### Features

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

### BACKCHAT Speaking Alarm

"Ssh! Stand well clear, vehicle reversing..."

<table>
<thead>
<tr>
<th>No.</th>
<th>LTMSBC/01/DV</th>
<th>90 Decibels</th>
<th>wgt. 0.50kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Size: W122 x H84 x D50mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Power

- Current: Max 0.5 Amps

### Durability and Standards

- CE Marked
- EMC Approved: E

### Features

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

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website www.cbf.uk.com e-mail: sales@cbf.uk.com
SAFETY – CAMERA SYSTEMS

**Camera Monitor System**

### Single Camera Monitor System for Rigid Vehicles

**Select Series**

No. LTMSVBV/770D/000DV

- Kit consists of: 1 x VBV/770DM - Monitor, 1 x VBV/700C - Camera, 1 x VBV/L420 - 20m Cable
- 2 Year warranty

**Monitor**

- 12-24Vdc
- 3 Camera inputs
- Size: W182 x H122 x D27mm

**Camera**

- Viewing angle (HxVxD) 92° x 70° x 115°
- IP67 Rated
- Size: W81 x H77 x D70mm

No. LTMSVBV/750D/000DV

- Kit consists of: 1 x VBV/750DM - Monitor, 1 x VBV/700C – Camera, 1 x VBV/L420 – 20m Cable
- 2 Year warranty

**Monitor**

- 12-24Vdc
- 3 Camera inputs
- Size: W148 x H110 x D30mm

**Camera**

- Viewing angle (HxVxD) 92° x 70° x 115°
- IP67 Rated
- Size: W81 x H77 x D70mm

No. LTMSVBV/750D/002DV

- Kit consists of: 1 x VBV/750DM - Monitor, 2 x VBV/700C – Camera’s, 1 x VBV/L420 – 20m Cable, 1 x VBV/L405 – 5m cable
- 2 Year warranty

**Select Camera Bracket Mounted**

**Select Series**

No. LTMSVBV/700C/DV

- Replacement or additional camera to suit the following camera monitor systems: LTMSVBV/770D/000DV, LTMSVBV/750D/000DV, LTMSVBV/750D/002DV
- Viewing angle (HxVxD) 92° x 70° x 115°
- Size: W81 x H77 x D70mm
- 2 Year warranty

**Features**

- 1/3" Sharp CCD
- TV System: PAL
- TV Lines: 420
- 18 Infrared LED's for ultra-low light
- Audio
- Day / Night sensor
- Mirror view

**Power**

- Power consumption: 2.4 Watts
- Current: 0.2 Amps

**Durability and Standards**

- Mechanical vibration: 10G
- Mechanical shock: 100G
- Operating temperature: -20°C to +70°C
- CE Marked
- EMC Approved: E
- HALT Tested

No. LTMSVBV/L405

- 5 Metre
- Suitable for use with all SELECT SERIES camera monitor systems (See page 201 for adapter cables)

No. LTMSVBV/L410

- 10 Metre

No. LTMSVBV/L420

- 20 Metre

- Other cables available upon request
SAFETY – CAMERA SYSTEMS

Elite Camera
Flush ‘Side’ Mounted
ELITE SERIES

No. LTMSBE/305C/LHDV
Left-side view (Nearside)
No. LTMSBE/306C/RHDV
Right-side view (Offside)

wgt. 0.38kg
● Viewing angle (HxVxD) 95° x 72° x 125°
● Size: W50 x H45 x D65mm
● 3 Year warranty
● Adjustable lens

Features
● 1/3" Sony CCD
● TV System: PAL
● TV Lines: 420
● Normal image

Power
● Power consumption: 1.2 Watts
● Current: 0.1 Amps

Durability and Standards
● Mechanical vibration: 20G
● Operating temperature: -30°C to +80°C
● CE Marked
● R46 and 2003/97/EC approved for indirect vision (with compliant monitors only)

Optional Extra
No. LTMSWE/3XX/15
Angled surface mounting adapter
● Adds 15°

Elite Mini Camera
Bracket Mounted – Forward Facing
ELITE SERIES

No. LTMSBE/822C/DV

wgt. 0.20kg
● Size: W47 x H40 x D50mm
● 3 Year warranty
● Viewing angle (HxVxD) 111° x 87° x 129°

Features
● 1/4" Sony CCD
● TV System: PAL
● TV Lines: 380
● Normal image

Power
● Power consumption: 1.5 Watts
● Current: 0.1 Amps

Durability and Standards
● Mechanical vibration: 10G
● Mechanical shock: 100G
● Operating temperature: -20°C to +70°C
● CE Marked
● EMC Approved: E
● HALT Tested

For use with all Brigade camera monitor systems.
Adapter cables may be required (P201)

For use with all Brigade camera monitor systems.
Adapter cables may be required (P201)

P132-137
P66-68
P260-264
P138-139

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## SAFETY – CAMERA SYSTEMS

### Multi-Camera Module & Screen Splitter

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Wgt.</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTMSEDM/50/DV</td>
<td>Digital wireless transmitter</td>
<td>0.91kg</td>
<td>W154 x H28 x D105mm</td>
</tr>
</tbody>
</table>

**Features**
- 12-24 Vdc
- 4 Camera inputs
- 2 Year warranty
- 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)

### 'Wireless' Camera Monitor Connection System

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Wgt.</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTMSDW/1000TX/DV</td>
<td>Digital wireless transmitter</td>
<td>0.31kg</td>
<td>W113 x H114 x D31mm</td>
</tr>
</tbody>
</table>

**Features**
- 12-24 Vdc
- 1 Camera input
- IP69K Rated (transmitter)
- 2 Year warranty
- Image latency: 200 milliseconds
- Eliminates the need for retractable coiled cables
- Re-pair facility allows for interchangeable trailers
- Triggered by reverse gear
- TV system: PAL/NTSC
- Secure connection

### Camera Monitor Adapter Cable

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Wgt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LTMSAC/006</td>
<td>Connects SELECT Series camera to ELITE Series cable</td>
<td>0.04kg</td>
</tr>
<tr>
<td>LTMSAC/007</td>
<td>Connects SELECT Series monitor to ELITE Series cable</td>
<td>0.03kg</td>
</tr>
</tbody>
</table>

### Power
- Power consumption: 20 Watts

### Durability and Standards
- Mechanical vibration: 5G
- Operating temperature: -25°C to +70°C
- CE Marked
- EMC Approved: E

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SAFETY – CAMERA SYSTEMS

Why fit a mobile digital recorder?

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

- Prevent false insurance claims such as ‘crash for cash’ scams
- Protection for drivers who may be wrongly accused
- Provides irrefutable evidence in the case of accidents and legal proceedings
- Encourages driver best practice, so less vehicle damage and accidents
- Enables more effective driver training
- Vandalism deterrent and perpetrator identification
- All of the above helps to lower insurance premiums
- Peace of mind for passengers and drivers

Event Recorder
Compact Mobile Digital Recording

A screen-mounted, high definition digital recorder for front view event capture. Continuous or event-triggered recordings are made to a lockable Micro SD card. A GPS receiver allows the location of events to be accurately monitored.

An optional second camera allows an additional view to be recorded.

No. LTMSEDR/101/008DV

Complete recorder system

wgt. 0.32kg

- 12-24Vdc

Kit consists of:
- 1 x HD Event recorder complete with wide angle camera
  - Size: W85 x H50 x D19mm
  - 1 x GPS Antenna
  - 1 x Mounting bracket
  - 1 x Direct power cable
  - 1 x 8GB SD card & software CD

Features

- High definition video capture for clear incident recording
- Wide angle camera lens for maximum view
- Fast frame rate for smooth images
- 3 Recording modes:
  - Normal
  - Event – shock sensor enables 10 seconds before and after an event to be recorded
  - Parking – movement engages event recording as above
- Optional audio recording for additional event information
- Micro SD card (with locking option)
- GPS Module for location 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
- Recording speed: Up to 30fps
- Camera: CMOS sensor
- Viewing angle (HxVxD) 100° x 85° x 120°
- Video resolution: HD & VGA,
  - Front: 1280 x 720 pixels
  - Aux: 640 x 480 pixels
- Viewing software: Compatible with Windows® from 98 to 7, links with Google maps
- 2 Year warranty

Optional Extras

<table>
<thead>
<tr>
<th>No.</th>
<th>LTMSEDR/142C</th>
<th>Additional camera</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>LTMSEDR/101LOCK</td>
<td>SD Card lock</td>
</tr>
</tbody>
</table>

Event recorder c/w wide angle camera

SD Card lock
SAFETY – CAMERA SYSTEMS

Mobile Digital Recorder
500GB Hard-Disk with Improved Data Download Speed

Brigade’s intuitive, affordable Mobile Digital Recorder captures real-time footage from up to four vehicle-mounted cameras. Optional GPS offers vital additional information such as vehicle location and speed. Simple to install, data access is simple yet secure. The lockable hard drive is easily removed by authorised personnel for connection to a PC or laptop for data download and interrogation.

No. LTMSMDR/304A/500DV  Size: W178 x H50 x D173mm
wgt. 3.54kg
- 12-24Vdc
- Suitable for use with camera monitor systems and cameras shown on pages 199-200. For further information please contact our sales team
- 2 Year warranty

Recording
- Records real-time footage from up to four cameras
- Optional G-force sensor provides useful impact data in case of collision
- Optional GPS logs time, date, location and speed
- useful evidential information in case of claim or incident
- Recording triggers:
  - Four trigger inputs (such as doors opening, selecting indicator or reverse gear) can either activate recording or flag the trigger input on the recording
  - Motion detection with selectable sensitivity can activate recording – useful for surveillance when vehicle is unmanned or driver sleeping in the cab
  - Internal camera can be added
  - 4 Selectable levels of image quality
  - Record at between 2 and 30 frames per second
  - MPEG4 image compression allows high quality image resolution
  - Hard disk records up to 780 hours of footage
  - Record images prior to trigger activation and after vehicle is turned off to ensure events are captured in full
  - Can record audio from auxiliary input

Data Download & Playback
- Data access is simple yet secure, meeting requirements of rules of evidence for legal use in court
- Easy playback:
  - In cab: If a monitor is present this can be useful for reviewing a recent incident or driver training
  - Externally: Having removed the caddy from the vehicle, footage can be viewed on a TV using video and audio inputs or on a PC using the USB2.0 connection
- No subscription fees for viewing software
- Simple to use HDD viewer software enables search of recorded video and export of critical moments to AVI video or static jpeg files
- Images, short video clips and information can be stored on an SDHC card, without removing the caddy from the vehicle