

New



A last word about Brigade Electronics

Brigade Electronics pioneered the use of reversing safety systems in Europe nearly 30 years ago and is renowned for leading the field in reversing safety advances.

Twenty-five percent of all fatalities involving vehicles at work occur during a reversing manoeuvre (UK Health & Safety Executive). Despite this astonishing statistic, a few major companies still operate vehicles or mobile plant which are not fitted with reverse-in-safety systems. A rarity these days, these are real hostages to fortune. Many such erstwhile gamblers in vehicle safety have discovered the massive cost of this illogical and false economy.

Brigade Electronics continues its pioneering role in communicating the benefits of fitting reversing safety equipment. It also continues to search for advances in design and technology to improve its product range to ensure that its customers worldwide reverse in safety!

It can claim a whole series of European firsts, including: BACKALARM back-up alarms; BACKEYE rear-view CCTV systems; BACKSCAN rear detection systems; BACKSENSE pulsed radar reversing systems; and now a worldwide first with the unique and highly innovative **bbs-tek** broadband sound back-up and movement alarms.

Brigade Electronics now has customers in more than 20 countries, including the majority of Europe, the USA, Australia, New Zealand, South Africa and India. The company has offices in the USA, the UK, Germany and Italy.



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Certificate No: 23874

Broadband sound back-up alarms and movement alarms



Shh...
Shh...
Shh...



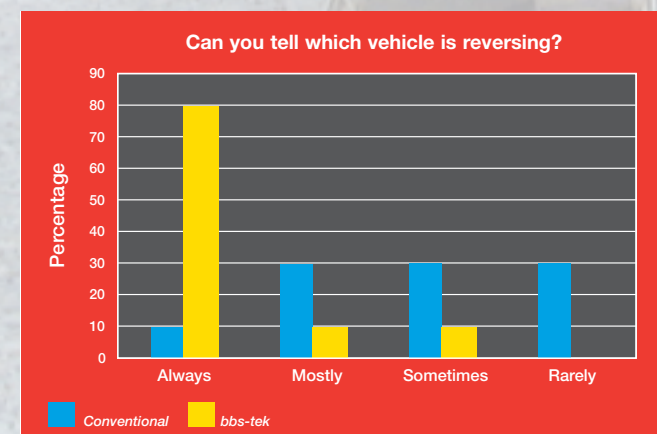
Introducing bbs-tek, a sound solution in reversing safety

- improved safety
- noise reduction
- reduced hearing damage

Back-up alarms need to provide a sense of urgency and clearly locate which vehicle is reversing, but conventional 'bleep' alarms have limited effectiveness. Conventional alarms breed complacency as the sound is not localised to the danger zone. And confusion is caused as the vehicle that is reversing is not instantly identifiable. They also cause a nuisance, through noise pollution.

But there's a revolutionary new answer to reversing safety that uses broadband sound technology and instantly removes the drawbacks associated with the conventional alarm.

The bbs-tek alarm uses broadband multi-frequency sound instead of the traditional narrow band frequency sound. Broadband sound is localised in the danger zone, and is locatable, which means that, especially in busy environments, you can tell where the sound is coming from and, therefore, which vehicle is reversing. Many operators have already experienced the unique benefits of the bbs-tek back-up alarm. It's suitable for use on all types of vehicles from road trucks to garbage vehicles, fork lifts to earth moving equipment. Bbs-tek is the safe solution.



Shh...Shh...Shh... reduces noise pollution

- less complaints

Broadband sound dissipates much quicker and, thanks to its localised nature, reduces noise pollution. Bbs-tek's broadband multi-frequency range spans 400Hz to 10,000Hz and dissipates sound at twice the rate of narrow-band 'pure-tone' sound, eliminating complaints.

Furthermore, because it is detected much more easily than pure tones, the bbs-tek alarm is equally effective at lower decibel ratings making it even less likely to cause any noise complaints. Equally important is the fact that broadband sound is 'gentler on the ear'. Research has indicated that long-term exposure to conventional back-up alarms can cause hearing damage. If, as is the case with broadband sound back-up alarms, the sound is only heard in the danger zone, then the potential for hearing damage is greatly reduced.

AS SEEN AND APPROVED BY
THE NOISE ABATEMENT SOCIETY



Big on safety,
small on noise
with Broadband
'Shh' sound.

bbs
tek



AS SEEN AND APPROVED BY
THE NOISE ABATEMENT SOCIETY



shh...shh... Small NOISE, BIG sound – Safety all round!

bbs-tek® Broadband Sound

Back-up alarms are vital for safety yet can cause noise nuisance and irritation to workers and to local residents. The bbs-tek back-up alarm emits a unique sound which solves this problem. Its world-wide patented “shh...shh...shh...” broadband sound (also known as ‘white sound’) is multi-frequency, replacing the narrow frequency band of conventional alarms.

The new bbs-tek back-up alarm

- eliminates noise nuisance – the sound is easy on the ear and dissipates fast
 - is safer
 - the sound is locatable so you can tell which vehicle is reversing
 - the sound is directional, concentrating the warning within the danger zone.
- This increases people’s response to the alarm and diminishes the chance of it being ignored.



Heavy Duty



Ideal for dump trucks, bulldozers, loading shovels and all heavy earthmoving machinery.

- Conform to SAE J994 environmental standards
- Tough, durable, guaranteed waterproof (IP68)
- Solid-state, spark-free electronics, epoxy-sealed against mud, water and vibration
- Can be steam-cleaned and pressure-hosed
- CE and ‘e’ marked (EMC)

STOCK CODE	MODEL	VOLTS DC	SOUND LEVEL dB(A)@1m	FREQUENCY KHZ	CURRENT AMPS	SOUNDER UNIT	SIZE mm (WxHxD)	HOLE CENTRES (mm)
A0899	BBS-107	24	107	Multi	1.0	Driver	173x80x95	152
A0898	BBS-102	24	102	Multi	1.0	Driver	173x80x95	152

Medium Duty



Ideal for trucks, buses and coaches, light mobile plant, forklift trucks and industrial vehicles.

- Conform to SAE J994 environmental standards
- Tough, durable, guaranteed waterproof (IP68)
- Solid-state, spark-free electronics, epoxy-sealed against mud, water and vibration
- Can be steam-cleaned and pressure-hosed
- CE and ‘e’ marked (EMC)

STOCK CODE	MODEL	VOLTS DC	SOUND LEVEL dB(A)@1m	FREQUENCY KHZ	CURRENT AMPS	SOUNDER UNIT	SIZE mm (WxHxD)	HOLE CENTRES (mm)
A0935	BBS-97	12-24	97	Multi	0.5	Speaker	127x65x76	98-108
A0934	BBS-92	12-24	92	Multi	0.5	Speaker	127x65x76	98-108

Light Duty



Ideal for forklift trucks, light commercial vehicles, MPVs and cars.

- Conform to SAE J994 environmental standards
- Tough, durable, guaranteed waterproof (IP68)
- Solid-state, spark-free electronics, epoxy-sealed against mud, water and vibration
- Can be steam-cleaned and pressure-hosed
- CE and ‘e’ marked (EMC)

STOCK CODE	MODEL	VOLTS DC	SOUND LEVEL dB(A)@1m	FREQUENCY KHZ	CURRENT AMPS	SOUNDER UNIT	SIZE mm (WxHxD)	HOLE CENTRES (mm)
A0897	BBS-87	12-24	87	Multi	0.5	Speaker	90x49x39	76
A0896	BBS-82	12-24	82	Multi	0.5	Speaker	90x49x39	76
A1397	BBS-77	12-24	77	Multi	0.5	Speaker	90x49x39	76



Electric Forklift Truck

Medium Duty



- Conform to SAE J994 environmental standards
- Tough, durable, guaranteed waterproof (IP68)
- Solid-state, spark-free electronics, epoxy-sealed against mud, water and vibration
- Can be steam-cleaned and pressure-hosed
- CE and ‘e’ marked (EMC)

STOCK CODE	MODEL	VOLTS DC	SOUND LEVEL dB(A)@1m	FREQUENCY KHZ	CURRENT AMPS	SOUNDER UNIT	SIZE mm (WxHxD)	HOLE CENTRES (mm)
A1323	BBS-87HV	36-80	87	Multi	0.15	Speaker	127x65x76	98-108
A1322	BBS-82HV	36-80	82	Multi	0.15	Speaker	127x65x76	98-108

bbs-tek® BACKCHAT® Speaking Back-up Alarms



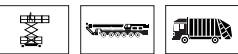
The back-up aid that speaks for itself! “Shh! Stand well clear, vehicle reversing...” Produces real speech with unrivalled quality and clarity. The voice is directional and commands attention, especially from children.

- Solid-state, spark-free electronics, epoxy-sealed against mud, water and vibration
- Dust/waterproof to IP68
- Can be steam-cleaned and pressure-hosed
- CE and ‘e’ marked (EMC)

STOCK CODE	MODEL	VOLTS DC	SOUND LEVEL dB(A) @1m	CURRENT AMPS	SOUNDER UNIT	SIZE mm (WxHxD)	HOLE CENTRES (mm)
B1396	BBS-BC-01	12-24	90	0.4	Speaker	122x84x50	102

Constant Tone Alarms – Ideal as Forward Horns, In-Cab Warnings and other specialist applications.

Medium Duty



Ideal for use as forward horn or other warning on a wide variety of specialist vehicles, forklift trucks and electric vehicles. Safer than a conventional horn, and eliminates noise nuisance and complaints.

- Conform to SAE J994 environmental standards
- Tough, durable, guaranteed waterproof (IP68)
- Solid-state, spark free electronics, epoxy-sealed against mud, water and vibration
- Can be steam-cleaned and pressure-hosed
- CE and ‘e’ marked (EMC)

STOCK CODE	MODEL	VOLTS DC	SOUND LEVEL dB(A)@1m	FREQUENCY KHZ	CURRENT AMPS	SOUNDER UNIT	SIZE mm (WxHxD)	HOLE CENTRES (mm)
A1393	CT-BBS-97	12-24	97	Multi	0.3	Speaker	127x65x76	98-108
A1392	CT-BBS-92	12-24	92	Multi	0.3	Speaker	127x65x76	98-108
HIGH VOLTAGE FORKLIFT TRUCK								
A1395	CT-BBS-97HV	36-80	97	Multi	0.3	Speaker	127x65x76	98-108
A1394	CT-BBS-92HV	36-80	92	Multi	0.3	Speaker	127x65x76	98-108

Broadband sound explained



Q Why is the bbs-tek alarm heard at lower source sound pressure levels than a conventional narrow-band alarm?

A A complex sound (broadband sound) produces a larger stimulus in the brain than a narrow-band sound – accentuated by the pulsed sound of the back-up alarm. Our threshold response to broadband sound is lower than to narrow-band tones and thus lower levels of broadband sound are detected more easily.

Q Why does bbs-tek broadband sound ‘dissipate’ more quickly (with increasing distance) than narrow-band tones at a similar decibel rating?

A For the same reason as there are ‘No stilettos please’ signs in rooms with wooden floors – because the woman’s weight is concentrated on a tiny surface area and dents the floor. With platform heels the woman’s weight is distributed over a surface area perhaps 100 times greater – result: 100 times less pressure

for the same downward force. Similarly, narrow-band frequency (pure tone) sound is penetrating and painful to the ear whilst multi-frequency (broadband) sound is dissipated and gentle on the ear. Both the stiletto and the platform support the woman’s weight; one painfully, the other acceptably.

Q Why is the bbs-tek broadband sound back-up alarm safer than an equivalent narrow-band back-up alarm?

A Two main reasons; firstly, the sound is instantly locatable so you can tell which vehicle is reversing; secondly, a narrow-band tone back-up alarm can usually be heard well outside the danger zone, leading to the risk that people will disregard it – even when in real danger.

The bbs-tek broadband sound alarm is both directional and localisable, concentrating the sound within the immediate danger zone. This increases people’s response to the alarm, and diminishes the chance of it being ignored.



bbs-tek back-up alarms in action



International aggregate and building materials group, **Aggregate Industries plc** has retrofitted its entire fleet with the bbs-tek back-up alarms – that’s 450 vehicles across 250 sites nationwide.

Dr Miles Watkins, Head of Quality and Environment at Aggregate Industries explains their decision: “We feel this will help us to maintain a good relationship with surrounding communities. Our sites start work very early in the morning, so the less intrusive we are to our neighbours the better. We did have a history of complaints with the beepers that were previously being used but these stopped when we switched to the bbs-tek.”



Nationwide timber and builders’ merchant **Travis Perkins** has fitted bbs-tek back-up alarms on its forklift trucks, following successful trials at two separate depots. Duncan McLean, Transport Manager specified bbs-tek units not only to replace older back-up alarms but also to be fitted as a standard requirement on all forklift trucks. He said: “After successful trials at a number of our depots, we have found that noise pollution was cut by the bbs-tek back-up alarm to the satisfaction of local residents and neighbours alike.”



Arriva Yorkshire, part of one of the UK’s largest bus operators, has invested in 400 bbs-tek back-up alarms. The company has chosen the alarms, as they are more environmentally friendly and less likely to cause a noise nuisance for neighbours. Managing Director, Ken Clarke, says: “For safety reasons, we need to ensure that there is an audible alert to warn people nearby that the bus is reversing. The bbs-tek will actually make it easier for people to tell which vehicle is moving whilst reducing noise nuisance both for residential neighbours and other businesses.”



John Hackling Transport has successfully tackled a longstanding noise problem caused by forklift back-up alarms by swapping over to bbs-tek alarms. Previously the company had relied on conventional back-up alarms and had received complaints from local residents, and from its own employees, and urgently needed a solution to the noise problem, which did not compromise its Health & Safety obligations. Mike Salf, Warehouse Manager and Health & Safety Representative at the company, said of the older alarms: “Because we load under a canopy, the high pitched and penetrating back-up alarms we had used prior to bbs-tek were heard way out in surrounding residential areas. Now, I am pleased to say we no longer have to worry about complaints from either our neighbours or from our own workers on site!”