

# Warning Alarms

Model

Part No:

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, speaking alarms which provide a real speech warning of imminent danger and electric vehicle sounders.

## Which alarm is for you?

### Heavy duty

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



### Medium duty

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



### bbs-tek® white sound®

The safest alarms in the world due to their instant locatability and directional sound. The multi-frequency alarms are only heard in the danger zone, thus eliminating noise nuisance for local residents. bbs-tek® alarms are endorsed by PIEK and the Noise Abatement Society and have been awarded the Quiet Mark.

**bbs**  
**tek**

alarms are covered  
by the following patents:

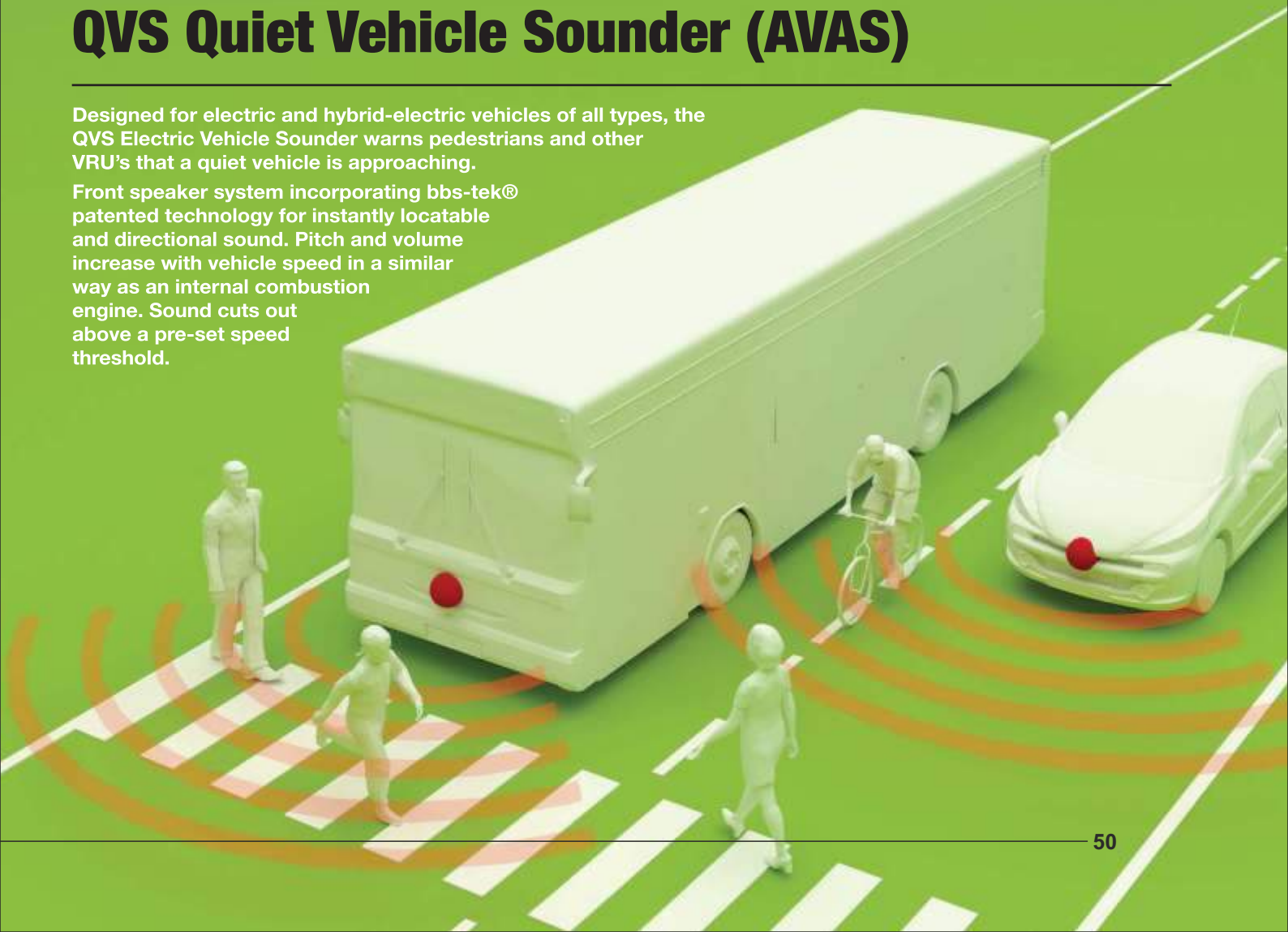
AU2007200517  
EP1289798B2  
CN100488807C  
JP4798474B2  
NZ522190  
GB2345392C  
USRE44912



## QVS Quiet Vehicle Sounder (AVAS)

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

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



**NEW QVS QUIET VEHICLE SOUNDER (AVAS)**

**QVS-001-75 - Quiet Vehicle Sounder**

**5385**



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



**Contents**

- 1 x speaker
- 1 x ECU

**Features**

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

**Power**

- Current: Max 0.1 Amps

**Durability & standards**

- Mechanical vibration: 10G
- Operating temperature: -3.0 to +70°C
- CE marked
- E-Marked: UNECE R10 compliant
- FCC approved
- IC Marked
- UNECE R138 compliant\*
- 49 CFR Part 571 and 585 Federal Motor Vehicle Safety Standards compliant\*

\* QVS helps achieve compliance for the vehicle.

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

## QVS Quiet Vehicle Sounder (AVAS)

- Warns pedestrians and other VRU's that a quiet vehicle is approaching.
- Incorporating bbs-tek® technology - Multi-frequency, directional and instantly locatable sound which is only heard in the hazard zone.
- Front speaker system.
- Pitch and volume increase with vehicle speed in a similar way as an internal combustion engine.
- Sound cuts out above a pre-set speed threshold.
- Designed for electric and hybrid-electric vehicles of all types.

Sound is an important contributor to road safety yet electric vehicles are almost silent; they are only audible once they have built up some speed. Studies by the Guide Dogs charity concluded that electric vehicles pose a danger to vulnerable road users (VRU) and increase the risk of incidents with pedestrians by up to 40%.

In order to protect VRU's, standards in both the US and EU have been introduced to ensure minimum sound requirements for electric vehicles. Sound generators will need to be fitted to make the engines "sound similar" to vehicles with combustion engines when travelling at low speed.

Since 2010, Brigade has been involved in the QRTV (Quiet Road Transport Vehicles) working group to establish requirements for the standard. We have developed a multi-frequency Quiet Vehicle Sounder, integrating our patented bbs-tek® technology. This gives greater directional information to the ear allowing the VRU to instantly locate where the sound is coming from and to take evasive action.

[www.brigade-electronics.com/qvs](http://www.brigade-electronics.com/qvs)



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

## WHITE SOUND® SMART REVERSING ALARM



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

**1400**

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

### Features

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

### Power

- Current: Max 1 Amp

### Durability & standards

- Mechanical vibration: 10G
- Operating temperature: -40 to +85°C
- CE marked
- E-Marked: UNECE R10 compliant
- SAE J994

## WHITE SOUND® SMART REVERSING ALARM



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

**1399**

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

**1398**

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

### Features

- Alarm continually adjusts to 5-10dB above ambient
- Multi-frequency white sound alarm
- Instantly locatable
- Sound confined to danger area
- Eliminates noise nuisance
- Sounder unit: Driver
- Hole centres (mm): 98-108

### Power

- Current: Max 1 Amp

### Durability & standards

- Mechanical vibration: 10G
- Operating temperature: -40 to +85°C
- CE marked
- E-Marked: UNECE R10 compliant
- SAE J994
- NAS/PIEK approved for night-time delivery

## WHITE SOUND® REVERSING ALARM



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

**0899**

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

**0898**

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

### Features

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

### Power

- Current: Max 1 Amps

### Durability & standards

- Mechanical vibration: 10G
- Operating temperature: -40 to +85°C
- CE marked
- E-Marked: UNECE R10 compliant
- SAE J994

## WHITE SOUND® REVERSING ALARM



**BBS-97 - Medium duty - 97 Decibels**

**0935**

**BBS-92 - Medium duty - 92 Decibels**

**0934**

**BBS-87 - Medium duty - 87 Decibels**

**0897**

**BBS-82 - Medium duty - 82 Decibels**

**0896**

- 12-24Vdc
- IP68
- Size (WxHxD)  
105x65x37mm (BBS-97/92)  
105x65x32mm (BBS-87/82/77)
- Lifetime warranty

### Features

- Multi-frequency broadband sound
- Instantly locatable
- Sound confined to danger area
- Eliminates noise nuisance
- Sounder unit: Speaker
- Hole centres (mm): 76

### Power

- Current: Max 0.5 Amps

### Durability & standards

- Mechanical vibration: 10G
- Operating temperature: -40 to +85°C
- CE marked
- E-Marked: UNECE R10 compliant
- SAE J994
- NAS/PIEK approved for night-time delivery (BBS-82 only)



ADR version



## WHITE SOUND® REVERSING ALARM

<b>BBS-92HV - Electric forklift - 92 Decibels</b>	<b>1402</b>
<b>BBS-82HV - Electric forklift - 82 Decibels</b>	<b>1322</b>
<b>BBS-92ADR - Petrol tanker - 92 Decibels</b>	<b>2165</b>

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

### Features

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

### Power

- Current: Max 0.3 Amps

### Durability & standards

- Mechanical vibration: 10G
- Operating temperature: -40 to +85°C
- CE marked
- E-Marked: UNECE R10 compliant
- SAE J994

## NIGHTSHIFT® SPEAKING ALARM



<b>BC-01(NS) - Single reversing message - Nightshift - 90 or 0 Decibels</b>	<b>0378</b>
<b>BC-01(NS-B) - Bespoke single message - Nightshift - 90 or 0 Decibels</b>	<b>1198</b>

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

### Features

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

### Power

- Current: 0.5 Amps

### Durability & standards

- CE marked
- E-Marked: UNECE R10 compliant

## SPEAKING ALARM



<b>BC-01 - Single reversing message - 90 Decibels</b>	<b>0077</b>
<b>BC-01(B) - Bespoke single message - 90 Decibels</b>	<b>0079</b>
<b>BC-02(B) - Bespoke dual message - 90 Decibels</b>	<b>0083</b>

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

### Features

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

### Power

- Current: 0.5 Amps

### Durability & standards

- CE marked
- E-Marked: UNECE R10 compliant

## SPEAKING ATTACK ALARM



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

**0064**  
**1465**

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

### Features

- Real speech alarm
- BC-AA(BUS) message "This bus is under attack, please dial 999"
- Activated by panic button, repeats continuously until deactivated by hidden switch
- Sounder unit: Speaker
- Hole centres (mm): 48

### Power

- Current: 0.5 Amps

### Durability & standards

- CE marked
- E-Marked: UNECE R10 compliant

## SPEAKING ALARM



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

**0665**  
**1199**

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

### Features

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

### Power

- Current: 0.5 Amps

### Durability & standards

- CE marked
- E-Marked: UNECE R10 compliant

## VEHICLE INTERCOM



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

**0815**  
**0875**

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

### Features

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

### Power

- Current: 0.5 Amps

### Durability & standards

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