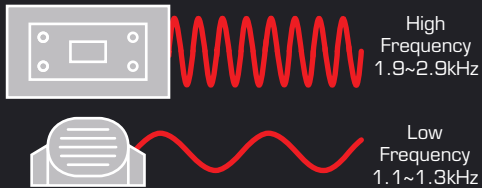


Tonal Alarms

The traditional reversing alarm 'bleep, bleep, bleep' sound is also known as a 'Tonal' alarm.

Tonal alarms operate at one fixed frequency (kHz).

The frequency output is different for each model and can be important in the effectiveness of the alarm in differing workplace environments.



Self Cleaning Ports

Reversing alarms can be used in hostile environments and suffer from debris, water and dust ingress.

Brigade Heavy Duty reversing alarm models use a double reflex horn and patented self-cleansing Pressure Port System™.

This feature uses pressure created by the dome speaker to pump mud, dust and water out of the sound chamber. The result is an increased reliability when used in hostile environments.



Sounder Units

Not all reversing alarms are built the same. Each model in the Brigade range uses a different type of sounder unit appropriate for its application.

Dome Speaker

Ideal option for high sound pressure level (SPL) models. The Dome Speaker utilises a large magnet, voice coil with a conventional Cone Speaker mated to an acoustically designed true-horn. This generates high SPL with superb sound quality from a relatively small unit.

Brigades Dome Speakers are tough, durable, and guaranteed waterproof (IP68), so can be steam-cleaned and pressure washed. Working life and sound quality are unimpaired by extremes of temperature and other adverse conditions.

Conventional Cone Speaker

A good option for medium and low SPL models, subject to design and materials used. *Not suitable for high SPL models over 102 dB(A) due to cone speaker over stress.*

Brigade's cone speakers are tough, durable and fully waterproof (IP68), so can be stream-cleaned, pressure washed and offer long life in extreme conditions. Great sound quality, even under extremes of temperature and other adverse conditions.



Tonal Reversing Alarms

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Tonal Reversing Alarms

Tonal Self-Adjusting



SA800



SA400

- Continuously self-adjusts to 5–10dB above ambient sound pressure levels.
- Frequency optimised for construction equipment in heavy duty models.
- Patented 'Dome Speaker' technology.
- TE DEUTSCH connector on IDC model.
- Environmentally sealed – IP68.
- Epoxy filled for maximum vibration resistance.
- Can be steam & pressure cleaned.
- Multi-voltage.
- Lifetime warranty.



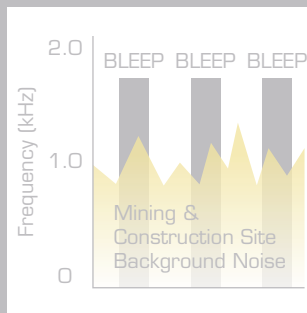
Voltage :	12–24V
Body :	SA400 AES
	SA800, SA917 Glass Reinforced Nylon
Vibration :	10G
EMC :	CE, C-Tick & 'e' marked
Standards :	Conforms to SAE J994 environmental
Operating Temperature :	-40°C to 85°C
Ingress Protection :	IP68

Frequency for HD Models

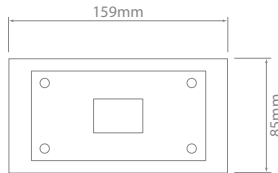
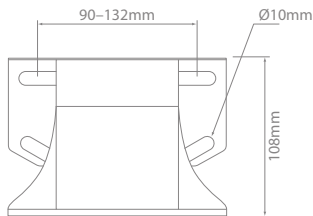
A 'Heavy Duty' tonal reversing alarm doesn't just mean it is built to withstand the rigours of a harsh environment, it must also perform at it's best for the task at hand.

Carefully optimised frequency characteristics make the Heavy Duty range clearly audible under the typical working conditions found in mining, construction and urban/highway environments.

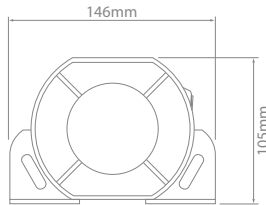
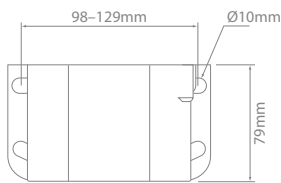
Heavy Duty models use a frequency of 1.9kHz, optimised for construction equipment, as lower frequencies are likely to be masked by construction site noise, which is typically around 1.0kHz.



Tonal Reversing Alarms



SA800, SA800IDC

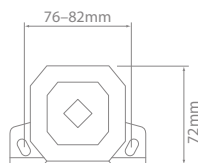
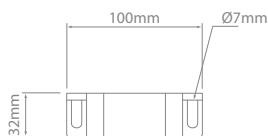


SA917

Tonal Self-Adjusting – Heavy Duty

Part No.	SPL – dB(A) @ 1m	Frequency – kHz	Current Draw (A)	Sounder Unit	Self Cleaning Port	Cable Length (mm)
SA800	87 – 112	1.9	0.3	Dome Speaker	•	300
SA800IDC	87 – 112	1.9	0.3	Dome Speaker	•	135
SA917	87 – 112	0.7 – 2.8	0.6	Speaker	—	150

SA917 is not a Brigade product.



Tonal Self-Adjusting – Medium Duty

Part No.	SPL – dB(A) @ 1m	Frequency – kHz	Current Draw (A)	Sounder Unit	Self Cleaning Port	Cable Length (mm)
SA400	87 – 102	1.25	0.2	Speaker	—	1000



Tonal Reversing Alarms

Tonal Manual-Adjusting



- Mute function.
- Environmentally sealed – IP68.
- Epoxy filled for maximum vibration resistance.
- Can be steam & pressure cleaned.
- Multi-voltage.
- 2 year warranty.



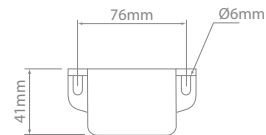
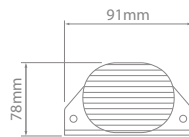
Voltage : 12–24V
Body : AES
Vibration : 10G
EMC : CE, C-Tick & 'e' marked
Standards : Conforms to SAE J994 environmental
Operating Temperature : -40°C to 60°C
Ingress Protection : IP68

Self-Adjusting vs Manual-Adjusting

Self-Adjusting reversing alarms utilise a small hidden and highly robust microphone to measure ambient SPL. They then self-adjust their own SPL, up or down, to maintain an output of just 5–10dB louder than the surrounding environment.

Manual-Adjusting reversing alarms temporarily mute the output when the operator double engages reverse gear. The alarm will reset automatically once reverse gear is disengaged.

Check with local regulations for suitability of this type of alarm in regards to applicable laws / regulations.



Tonal Manual-Adjusting – Medium Duty

Part No.	SPL – dB(A) @ 1m	Frequency – kHz	Current Draw (A)	Sounder Unit	Cable Length (mm)
BA32NS	0 – 90	1.1	0.2	Speaker	1000

Tonal Reversing Alarms

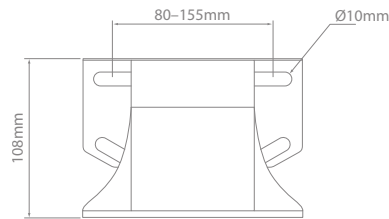
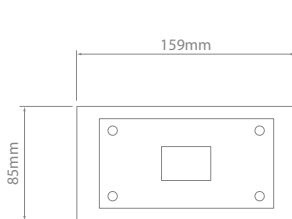
Tonal Fixed Volume

- Frequency optimised for construction equipment in heavy duty models.
- 'Dome Speaker' technology.
- Self cleaning port in heavy duty models.
- Environmentally sealed – IP68.
- Epoxy filled for maximum vibration resistance.
- Can be steam & pressure cleaned.
- Multi-voltage.
- Lifetime warranty.



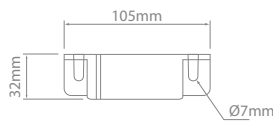
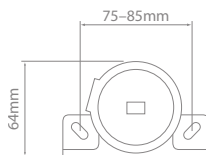
BA560

Voltage : 12-24V
Body : Heavy Duty Glass Reinforced Nylon
 Medium Duty AES
Vibration : 10G
EMC : CE, C-Tick & 'e' marked
Standards : Conforms to SAE J994 environmental
Operating Temperature : -40°C to 85°C
Ingress Protection : IP68



Tonal Fixed Volume – Heavy Duty

Part No.	SPL – dB(A) @ 1m	Frequency – kHz	Current Draw (A)	Sounder Unit	Cable Length (mm)
BA890	112	1.9	0.5	Dome Speaker	300



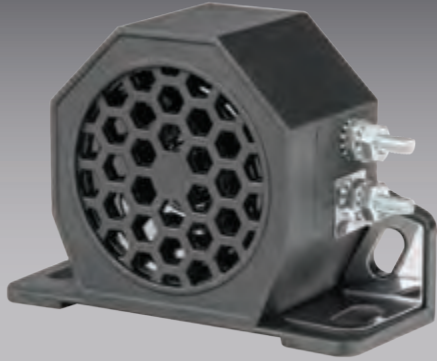
Tonal Fixed Volume – Medium Duty

Part No.	SPL – dB(A) @ 1m	Frequency – kHz	Current Draw (A)	Sounder Unit	Cable Length (mm)
BA560	97	1.25	0.2	Speaker	1000
BA570	102	1.25	0.3	Speaker	1000



Tonal Reversing Alarms

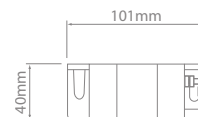
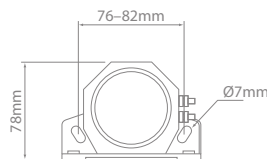
Economy Fixed Volume



- Ideal for price conscious applications.
- Environmentally sealed – IP67
- Epoxy filled for maximum vibration resistance.
- Multi-voltage.
- 2 year warranty.



Voltage : 12-80V
Body : AES
Vibration : 10G
EMC : CE & 'e' marked
Operating Temperature : -40°C to 60°C
Ingress Protection : IP67



Economy Fixed Volume – Medium Duty

Part No.	SPL – dB(A) @ 1m	Frequency – kHz	Current Draw (A)	Sounder Unit
585-1	97	1.3	0.1	Speaker