

Product Guide

SPQF100 100mm (4") 100V 5W Ceiling Speaker White
SPQF100-B 100mm (4") 100V 5W Ceiling Speaker Black

One-Shot® 'Rat-Trap' EWIS Ceiling Speakers

- ✓ Excellent speech intelligibility
- ✓ Engineered to meet Australian Standard AS1670.4
- ✓ High quality speaker driver developed for BGM, paging and emergency warning applications
- ✓ Patented 3 way latching ensures a neat, sag free installation.
- ✓ Fitted with 4 way wire protect terminal block for loop in, loop out wiring as required by Australian Standards.
- ✓ Fitted with cable restraint plate and transformer safety cover as required by Australian Standards.
- ✓ Fitted with supervisory capacitor for line monitoring.
- ✓ High impact styrene grille.
- ✓ 5 year warranty.



Application

The SPQF100 is an EWIS compatible speaker designed for fast installation, offering high SPL output & excellent speech intelligibility whilst meeting the requirements of AS1670.4

Emergency Warning & Intercommunications Systems (EWIS)

This speaker and transformer combination is designed for both paging announcements and emergency tones in EWIS systems.

Speakers employed in an EWIS installation must comply to AS1670.4. This dictates that the speakers must be fitted with transformer safety cover, cable restraint plate, line monitoring capacitor and 4 way wire protect terminal connection.

The SPQF100 EWIS speaker complies to this standard.

Manufacturing & Performance

Redback® drivers are engineered and manufactured to stringent specifications ensuring maximum reliability under all operating conditions. Each driver has a power rating well above the max tapping of the transformer, ensuring reliable operation and excellent longevity. A strict quality control procedure is employed during every step of the manufacturing process. Finally, every finished speaker is 100% QC checked prior to shipping.

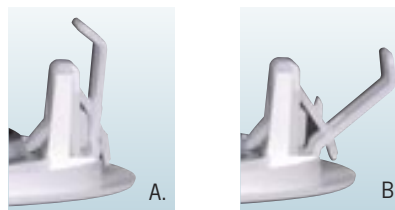
About Redback® Speaker Drivers

Each custom designed speaker and transformer combination has been specifically engineered to ensure a wide frequency range and dispersion angle, plus a high sound pressure level (SPL) ensuring excellent music and speech intelligibility; which is critical for emergency paging applications.

Each transformer is fitted with multiple power settings which are user selectable via taps on the transformer. For reference, the transformer safety cover is imprinted with power selection information.

The Labour Saving One-Shot® Mounting System

Redback® "One-Shot®" speaker units install in seconds providing substantial labour cost savings for the professional installer compared to traditional mounting methods.



The "Rat-Trap" version is the first "One-Shot®" to utilise a retaining 3 way spring latching system. Each latch is set like a rat trap before installation into the speaker hole (picture A). When the speaker is pushed into the ceiling, the latches spring open, securing the speaker in place (picture B).

The snap clip material is formulated to retain long service life strength and spring action, ensuring a firm vibration free fit to either gyprock tiles, mineral fibre tiles or fixed gyprock ceilings.

A neutral white RAL colour provides an architecturally unobtrusive finish to virtually any installation.

Installation Guidelines

The SPQF100 is fitted with a 4 way wire protect screw terminal block. This is suitable for loop in, loop out cabling. The cable can be secured to the in-built restraint plate with 100mm cable ties.

All One-Shot® speakers are designed for fast installation due to the integral pressure clips which grip to the reverse side of the ceiling tile. They suit any 10-13mm ceiling tile, including gyprock, mineral fibre or fixed gyprock ceilings. Redback provide a range of optional tile supports to minimise sag and vibration.

Ceiling support pans: These pans fit inside the 't-bar' supports for the tile ceiling and provide a solid surface on which the One-Shot® clips secure to. Once the hole is cut, these simply slide up into the hole, the speaker is then pushed in until the clips release.

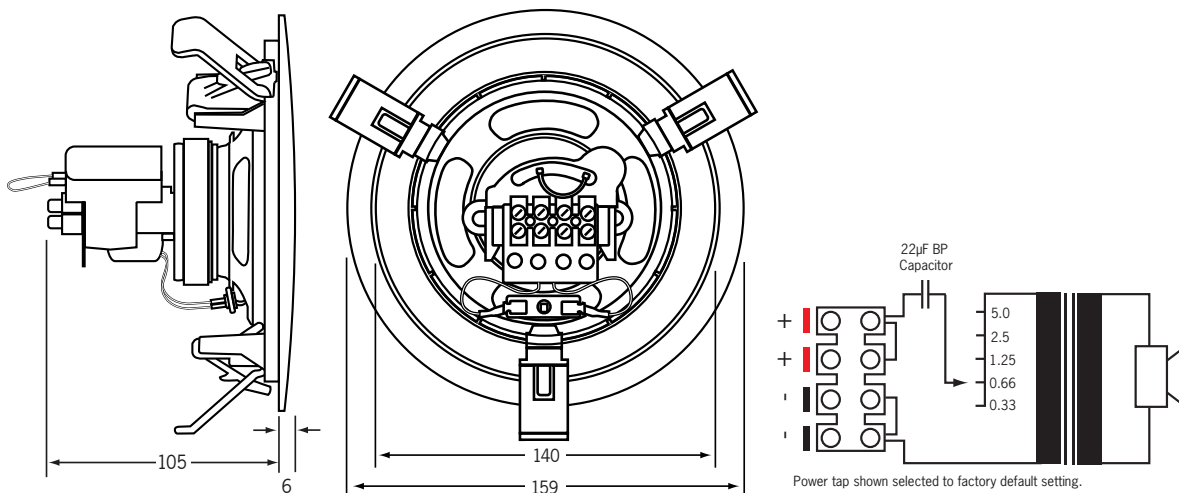
Ceiling support ring: This plastic 'split-ring' offers the same protection for soft tiles. With the added benefit of being lightweight and compact.

For 100mm (4") models we recommend a speaker hole of 140mm. This is easily cut using the T 2312A holesaw.

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Dimensions & Transformer Detail



Specifications

Electrical

Power taps: 0.33, 0.66, 1.25, 2.5, 5W
 SPL 1W @ 1m: 92.7dB @ 1kHz (+/- 2dB)
 Frequency response: 100Hz-15kHz
 Connection: 4 way terminal block + 22µF bipolar capacitor

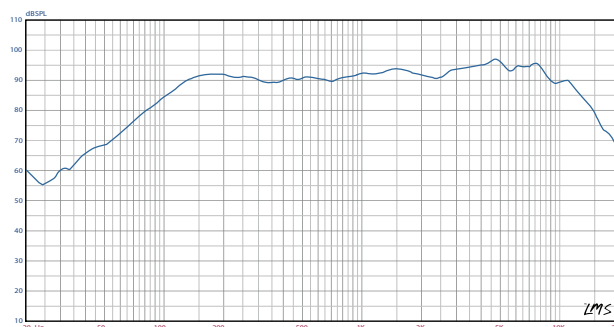
Mechanical

Grille material: High impact styrene
 Driver construction: Paper cone
 Ceiling cutout: 140mmØ
 Grille diameter: 159mmØ
 Mounting depth: 105mm (including ceiling tile thickness)
 Overall weight: 606g

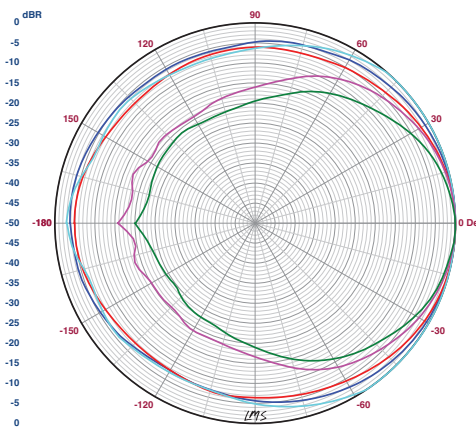
Environmental

Operating temperature: -25°C to +55°C
 Relative humidity: < 95%

Frequency Response (SPL 1W @ 1m)



Polar Plot (Ratio vs Angle)



Architectural Specifications

SPQF100

The speaker shall be of 100mm diameter and be low profile fitted with a 100V transformer with power taps of 5W, 2.5W, 1.25W, 0.66W and 0.33W. It shall have a SPL of 92.7dB (1W@1m). The transformer shall have a safety cover and cable restraint mechanism (conforming to the relevant Australian standard). It shall be fitted with a 4 way wire protect terminal block for connection and 22µF bipolar capacitor for line monitoring. The speaker shall be attached to a white ABS grill with One-Shot mounting mechanism.

SPQF100-B

The speaker shall be of 100mm diameter and be low profile fitted with a 100V transformer with power taps of 5W, 2.5W, 1.25W, 0.66W and 0.33W. It shall have a SPL of 92.7dB (1W@1m). The transformer shall have a safety cover and cable restraint mechanism (conforming to the relevant Australian standard). It shall be fitted with a 4 way wire protect terminal block for connection and 22µF bipolar capacitor for line monitoring. The speaker shall be attached to a black ABS grill with One-Shot mounting mechanism.

	500Hz	1kHz	2kHz	4kHz	6kHz
SPL 1W @ 1m (dB)	91.2	92.7	92.4	95.4	95
Beam Width (BW)	273	149	182	91	69
Q-Factor	1.3	2.4	2.0	4.0	5.2
Directivity Index (DI)	1.2	3.8	3.0	6.0	7.2