

Product Guide

CC2099 100mm (4") 100V 5W Public Address EWIS Driver
CB2098 One-Shot Rat-Trap Mk. II Snap Fit Grille



One-Shot® 'Rat-Trap' Mk. II 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 Mk. II Rat-Trap is the first snap-fit speaker grille design in the world constructed from a single piece of plastic. No screws, clips or springs. Representing hundreds of hours of research and development, the new grille provides significant cost savings. It 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 Redback CC2099 EWIS speaker complies to this standard.

About Redback® Speaker Drivers

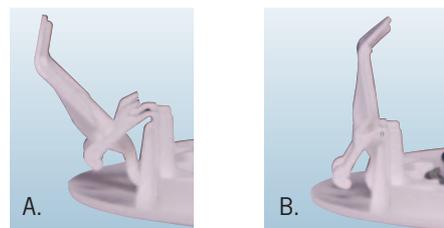
Each custom designed speaker and transformer combination has been specifically engineered to ensure a wide frequency range and dispersion angle, plus a high sound pressure level (SPL) ensuring excellent music and speech intelligibility; which is critical for emergency paging applications.

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 One-Shot" utilises 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.

Installer Note: The Mk II Rat-Trap is supplied in two pieces, CC2099 PA driver & CB2098 grille. These must be fitted together prior to installation, and should take no more than a few seconds per unit.

Installation Guidelines

The C 2170 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.

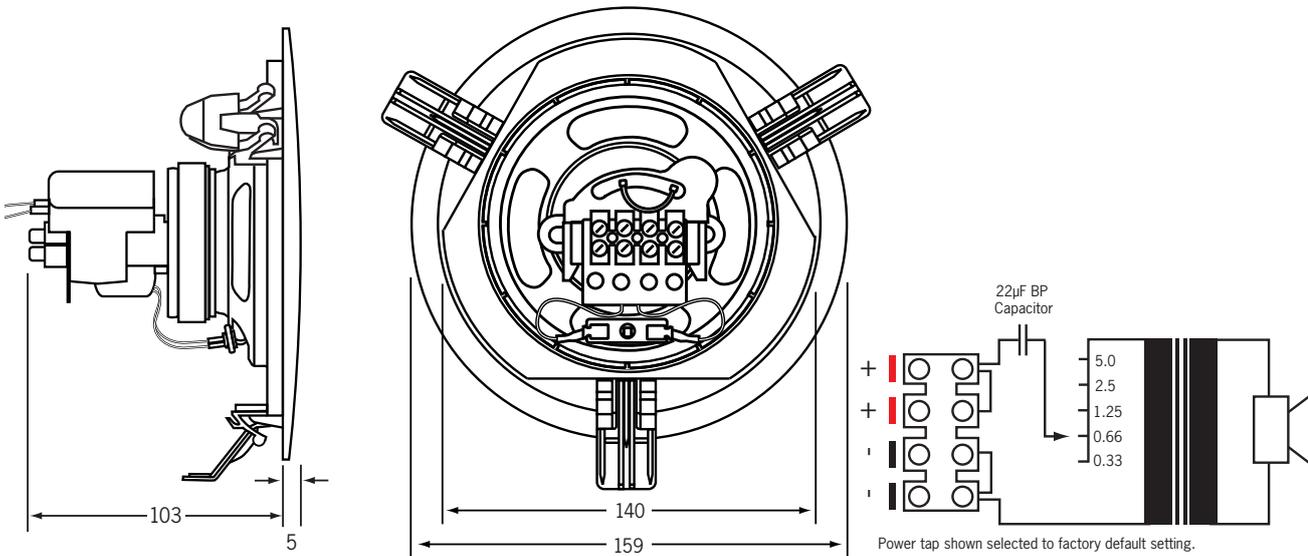
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Dimensions & Transformer Detail



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:	103mm (including ceiling tile thickness)
Overall weight:	606g
Carton quantity:	32pcs

Environmental

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

Additional Installation Accessories

C 2163 Steel ceiling tile support pan

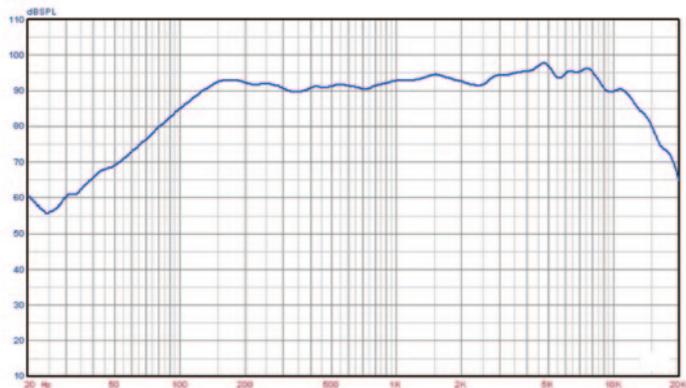
C 2164 Ceiling tile support split ring

T 2312A 140mm holesaw

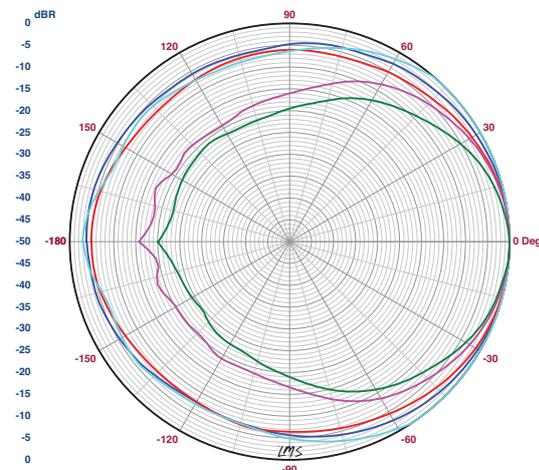
Architectural Specifications

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 model number of the PA speaker shall be CC2099. The speaker shall be attached to a one piece white ABS grille with One-Shot Rat-Trap mounting mechanism. The model number of the grille shall be CB2098.

Frequency Response (SPL 1W @ 1m)



Polar Plot (Ratio vs Angle)



	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