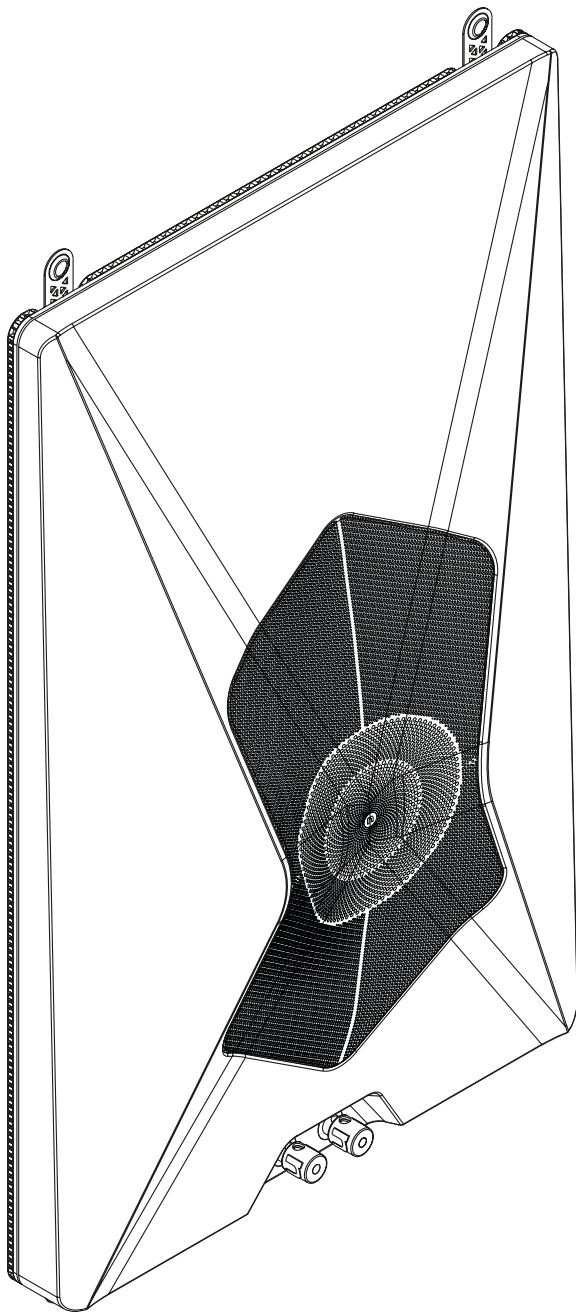




neostein
one

Invisible Loudspeaker Installation Sheet

Full Plaster Skim Installation
V0.2 - E&OE

www.neostein.com - info@neostein.com
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Key Numbers

Specification and Information

Power | 75W

Range (+/-6dB) | 60Hz-20KHz

Impedance | 4Ω

Sensitivity (2.83Vrms @1m) | 85dB SPL

Maximum SPL @1m | 100dB SPL

Dispersion | 360° (full loudspeaker range)

Dimensions | 280mm x 450mm x 65mm

Weight | 1.8Kg

Minimum cavity depth | 70mm (including plasterboard)

Minimum cavity width (between joists) | 300mm

Cut-out size | 284mm x 454mm

Maximum Plaster Thickness | 2mm

Protection | Built-in Overload Circuit

Manufacturers Limited Warranty | 2 years

Key Features

Product Parts

Installation Tabs

Ensuring effortless alignment of the loudspeaker to the front of the plasterboard/drywall for a great finish and acoustic response. With correct alignment and plaster thickness, you can be sure that you will get the best possible sound and maximum reliability every time.

High Performance Drivers

Compact and lightweight neodymium drivers with optimised thermal management allow for the ultimate clear sound with maximum reliability.

Integrated Overload Circuit

Reducing the chances of accidental loudspeaker damage, the integrated overload circuit automatically limits power when excess current is detected.

Soft-touch Terminals

High-tension silicone-wrapped terminals limit rattling and the chance of short circuits from stray wire strands.

Composite Panel

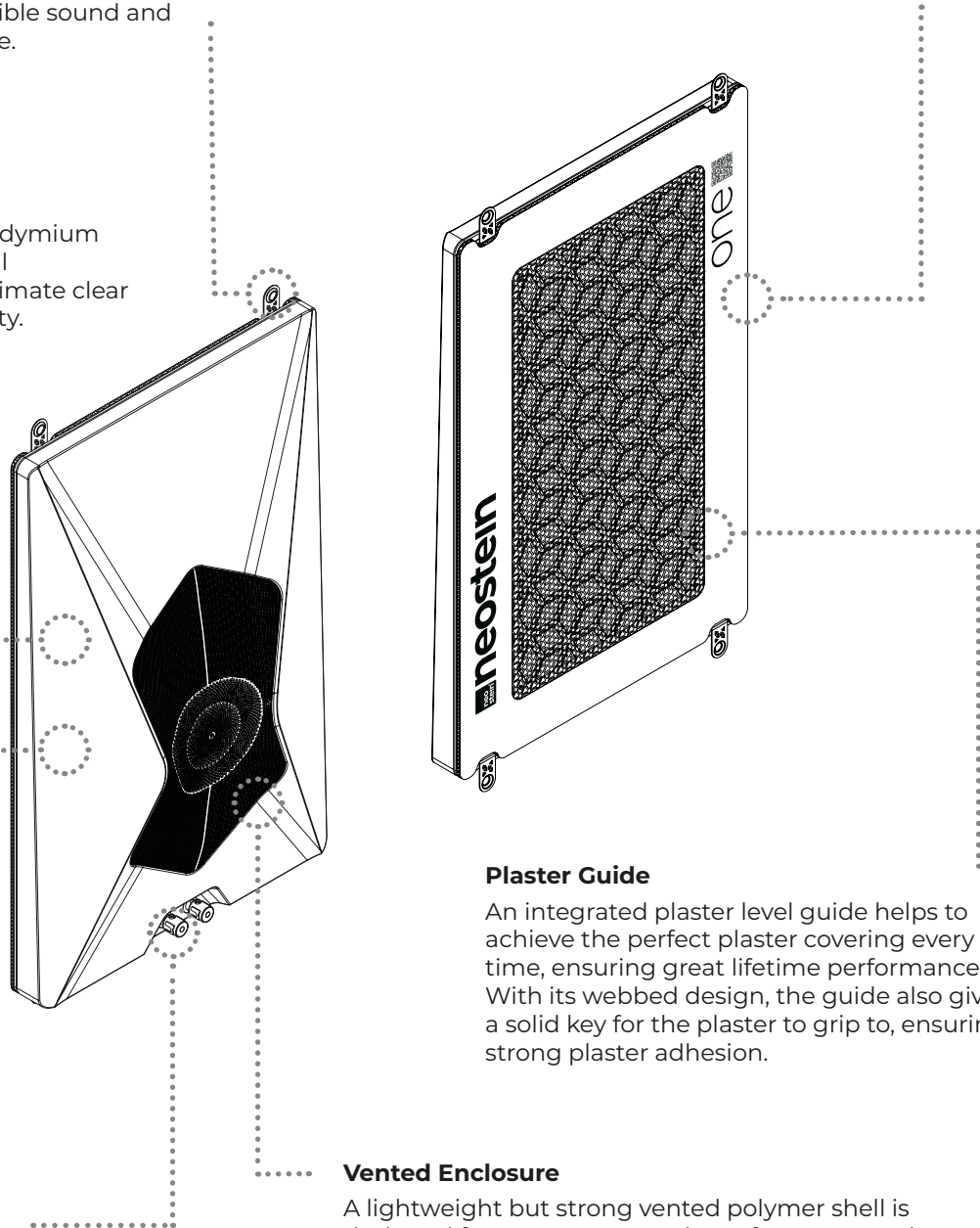
A light-weight and strong composite panel allows for ultra-wide acoustic coverage while providing a continuous flat surface for a great plaster finish. Engineered for sound, built for construction.

Plaster Guide

An integrated plaster level guide helps to achieve the perfect plaster covering every time, ensuring great lifetime performance. With its webbed design, the guide also gives a solid key for the plaster to grip to, ensuring strong plaster adhesion.

Vented Enclosure

A lightweight but strong vented polymer shell is designed for accurate acoustic performance and optimal thermal management. Compound curves and angular faces prevent destructive internal reflections for a clear and uniform response across the entire frequency range.



Invisible Loudspeaker Installation

Offering full-bandwidth acoustic performance, One is easily installed into plasterboard/drywall walls or ceilings with a minimum cavity depth of 70mm (including plasterboard thickness).

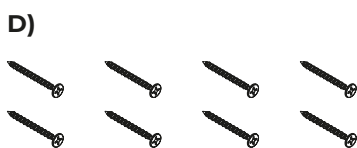
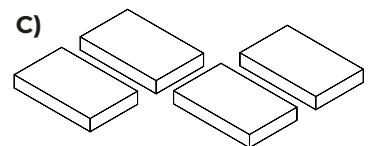
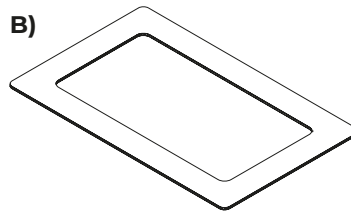
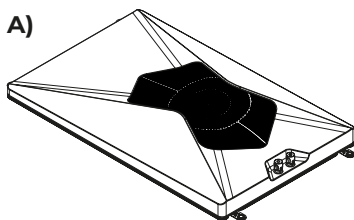
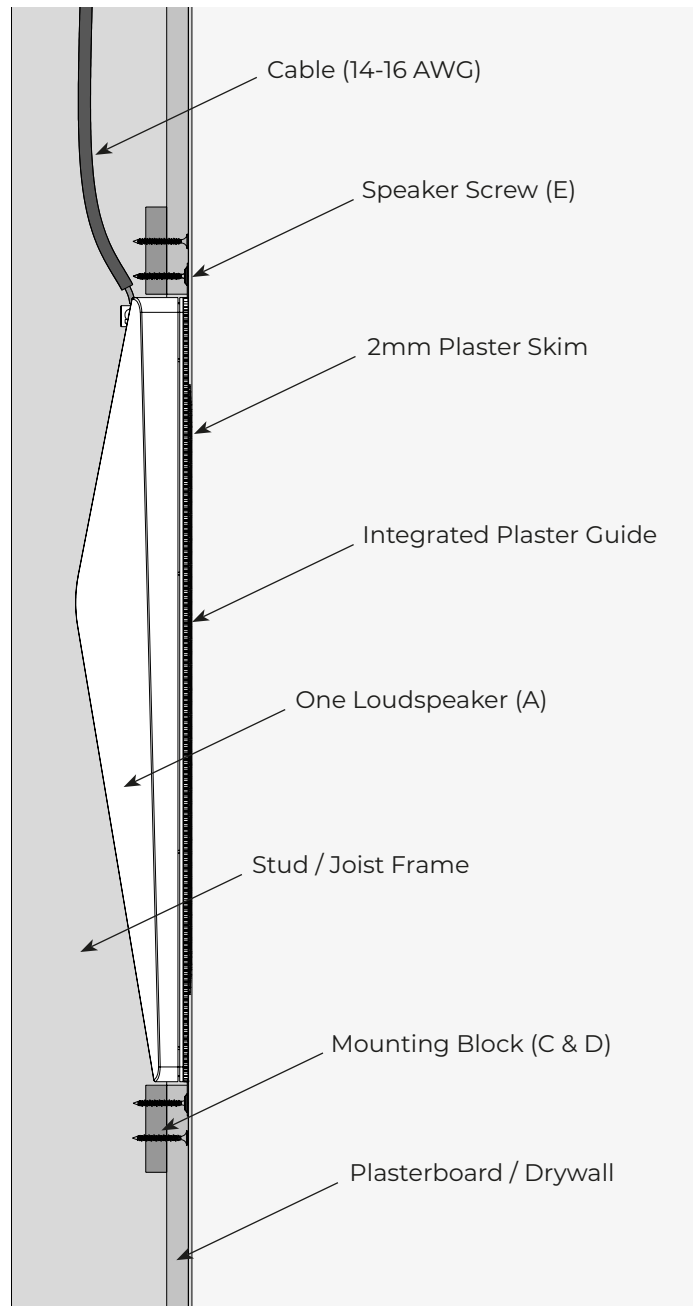
Replacing a small section of your ceiling board, One is then fully covered with a 2mm skim-coat of plaster and painted/decorated to seamlessly blend into the ceiling, giving one continuous surface. High quality room-filling sound from a loudspeaker you cannot see.

One can be plastered over as a full skim-coat (along with the entire wall/ceiling), or can be patch-plastered in the location of the speaker only (with a feathered finish). This guide only covers full wet skim-coat plaster installation.

What's Included

Installation Accessories

- A) 1 x One Invisible Loudspeaker**
- B) 1 x Cutout Template / Space-saver**
- C) 4 x Installation Mounting Blocks**
- D) 8 x Screws for Mounting Blocks**
- E) 4 x Speaker Installation Screws**



Key Information

Installation Requirements

- One is suitable for installation into most plasterboard / drywall walls and ceilings.
- The speaker can be used with any thickness plasterboard / drywall sheet (provided installation screws are suitable for both single and double skin board installation, but for extra thick build-ups, longer screws may be required). There is no requirement for additional spacing shims as the speaker is mounted to the front surface of the plasterboard/drywall.
- One is designed to be covered with 2mm plaster application. The integrated plaster guide provides a reference point and should be left in place on the speaker (do not attempt to remove it). The guide should only just be covered with plaster to hide it. Excessive plaster application may negatively impact loudspeaker performance and void warranty.
- The speaker is designed for both full skim plaster application (2mm maximum plaster thickness) as well as patch-plaster / feather finishes (suitable for dryline construction). This guide only covers full skim application.
- One should be tested prior to plasterwork commencing. The goal is to find, isolate and resolve any structural buzzing issues prior to plastering. Neostein recommends a swept tone between 100Hz and 1KHz to indicate installation issues. Please note that while music may be used, it is not representative of the loudspeakers acoustic response once plastered and is unlikely to highlight construction issues as readily as a tone sweep. Only commence plasterwork once the loudspeaker has been tested.
- Ceiling and wall constructions should be mechanically sound and free from loose debris or material that may rattle or buzz once the loudspeaker is installed. Cables and other services should be secured and not resting on the rear of the plasterboard near the location of the speaker. Additional screws may be used to secure the plasterboard to the stud frame construction surrounding the loudspeaker for a more mechanically tight bond between the materials. Both timber and metal frame structures may be suitable for installation of Neostein invisible loudspeakers, however extra care should be taken with metal frame constructions and suspended ceilings, ensuring all studs, straps and ties are very secure and are all adequately bonded together such that they do not buzz against each other.
- Retrofit installation is possible with Neostein invisible loudspeakers. For more information, contact your local Neostein supplier.
- Ensure that no material rests on the rear of the loudspeaker or obstructs the ventilated enclosure mesh. Failure to prevent such covering may negatively affect the acoustic performance or reliability of the product.

Warning: Excessive plaster application may negatively affect loudspeaker performance and will void the warranty

Warning: Test the loudspeaker prior to commencing plaster work

Warning: Only install the loudspeaker once the site is fully glazed, sealed and dry. Excessive humidity or direct water ingress may damage the loudspeaker or cause delayed plaster curing. A maximum of RH50% and minimum of 16°C/60°F environmental conditions should be met prior to installation.

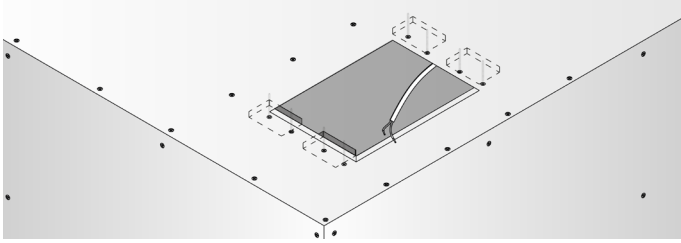
Warning: While on-board passive overload protection circuitry has been implemented within the loudspeaker, this is provided as a backup protection mode and is not designed to be abused; therefore correct amplification selection and system configuration is critical in ensuring safe and reliable loudspeaker performance for many years to come.

Warning: Loudspeaker should only be installed in accordance with all local building regulations and laws. Adequate construction should be implemented to ensure that fire and sound barriers are not compromised. The installer is solely responsible for correct and safe installation of all Neostein products.

Warning: Care should be taken when making any hole or intrusion into a closed/boarded wall or ceiling. It is the sole responsibility of the installer to ensure that they act safely, in accordance with local building and safety regulations and understand the risks involved with installing such products.

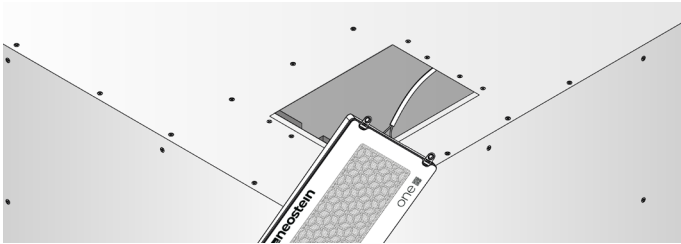
Installation Process

Fast and Secure, Perfect Finish

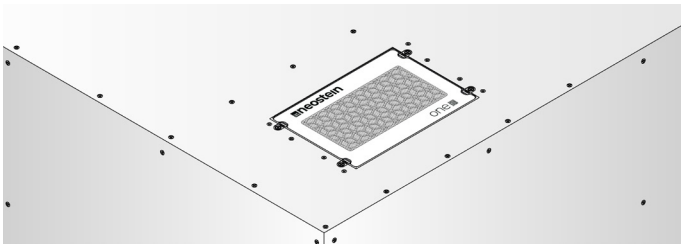


1. Refer to all safety and installation warnings in this guide. Incorrect installation may void warranty, cause damage or harm.

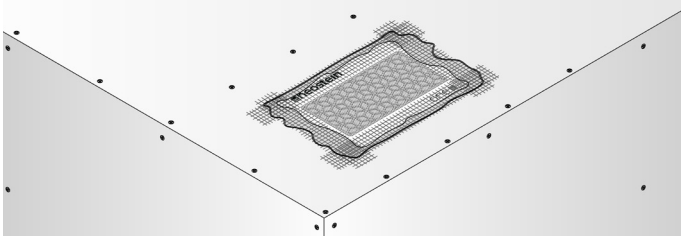
Run loudspeaker cable and close the ceiling. Cut the loudspeaker hole (284mm x 454mm) using the supplied cut-out template (B) and attach a mounting block (C) in each corner of the opening using screws (D).



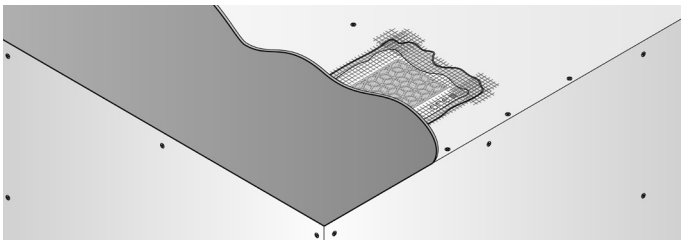
2. Connect the loudspeaker (A) to the cable, observing correct polarity. Affix the loudspeaker to the ceiling, using screws (E), screwing through the installation tabs into the mounting blocks previously installed. The installation tabs mount to the front of the plasterboard, allowing the loudspeaker panel to line up with the surface of the ceiling.



3. Test the loudspeaker for correct connection, listening for any rattles or buzzes coming from the ceiling - it is critical to resolve all structural and mechanical issues before commencing plastering. Any loose debris or cables may rattle if not secured or removed prior to installation.



4. Tape and fill the gap between the loudspeaker and the plasterboard using mesh scrim tape and an appropriate joint filler. This creates a solid bond between the loudspeaker perimeter and the plasterboard. Allow to fully dry before final plasterwork commences.



5. Plaster the loudspeaker along with the rest of the ceiling or wall, using the integrated plaster level guide to **ensure plaster thickness does not exceed 2mm**. The plaster guide should only just be covered with plaster and should not be removed from the loudspeaker. Hand-sanding over the area of the loudspeaker can be done to further improve finish quality if needed.



6. Paint and decorate the ceiling once the plaster has fully dried. Connecting your Neostein invisible loudspeakers to the rest of your audio system, you are ready to enjoy great sound for years to come.