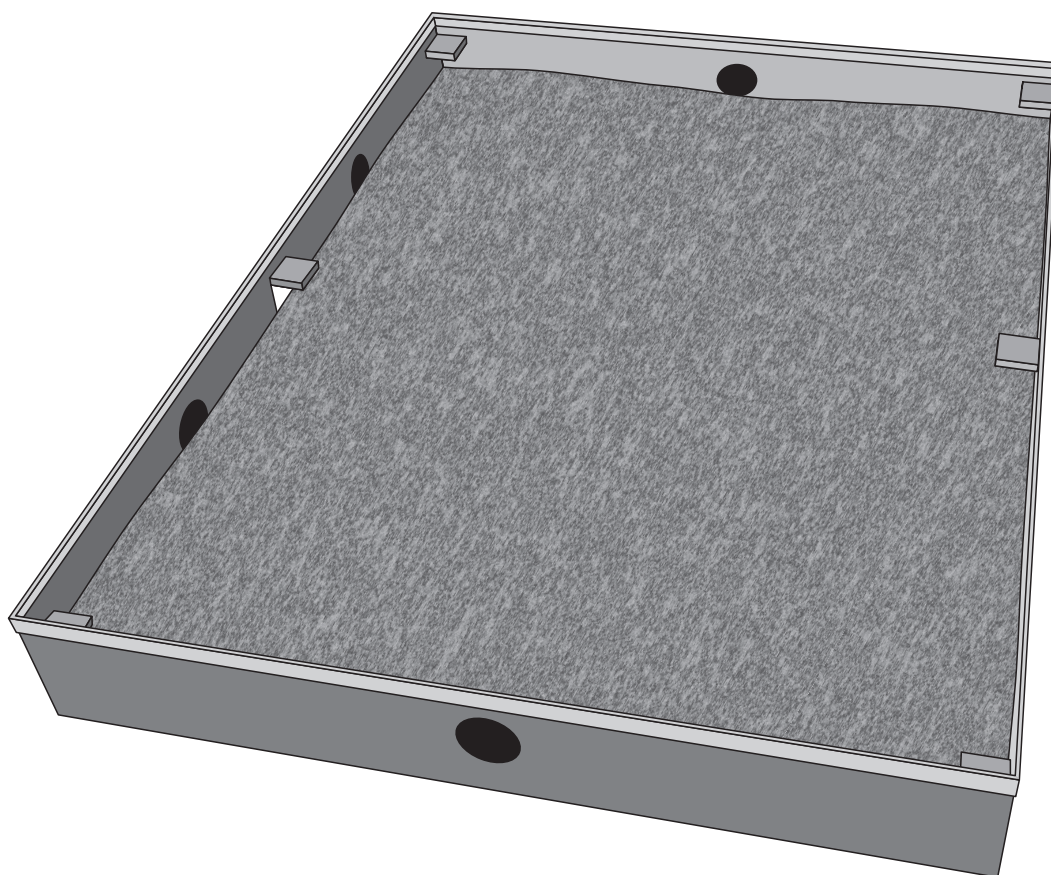

Installation guide

BackboxSW

345/300/200



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Caution: Read before installing this product

- To ensure correct installation, please read this guide carefully and keep in a safe place for future reference.
- Install this product in a cool, dry, clean place - away from direct sunlight and heat sources, cold bridges, vibration, chemical fumes, dust and moisture (steam).
- Do not clean this product with chemical solvents as this may cause damage to the finish. Use a clean, dry or damp cloth.
- Ensure that all installation mounting surfaces are able to support the weight of the BackboxSW plus that of your chosen speaker.
- Do not attempt to modify or repair the product. Contact your distributor or manufacturer if it is faulty or damaged in any way.
- Installation of the BackboxSW will require the use of power tools. Ensure that all personnel working on an installation are fully trained in the use of these power tools and are adequately protected from the dangers of dust and noise.



ENVIRONMENTAL: Please be aware that whilst this product reduces the rearward sound output of the loudspeaker some vibrational energy may still travel some considerable distance up, down and along the wall or ceiling structure. It is therefore recommended the product be fitted in conjunction with vibration absorbing materials to minimise these effects.



WARNING: No attempt should be made to install this product within existing building structures unless you are certain that no electric cables, water pipes, gas pipes or load bearing will be cut through.

Introduction

Thank you for purchasing the Amina Technologies BackboxSW. This product has been designed to be used in the installation of Amina Series Invisible Loudspeakers into solid (eg. brick, concrete) walls and ceilings. Constructed from stainless steel, the BackboxSW is rugged enough to be installed early in the build process.

NOTE: BackboxSW is not suitable for installation of Amina Series Invisible Loudspeakers into partition walls.

Installation is simple, however, please follow this guide carefully as it contains important advice on speaker alignment for plastering and the reduction of structural sound energy transference.

This BackboxSW design includes a removable plastic trim that is aligned during installation to a level 2mm behind the final plaster skim covering to ensure that the BackboxSW sits at exactly the correct depth in the cavity.

The BackboxSW also includes a recycled denim absorption pad to improve the acoustic performance and reduce sound transmission into the wall.

Compatibility

There are three different versions of the BackboxSW to match different speaker types. These are listed in the table below.

Model	Compatible speakers
SW 345	Evolution series except S200 models and AIW750i HF panels.
SW 300	iQ series and LFieMT series.
SW 200	Evolution S200 models and AIW750i HF panels.

Ensure that you are installing the correct model of BackboxSW for the speakers you will be installing.

Unpacking

Unpack the unit.

Retain this User Guide. If you pass the unit on to a third party make sure you pass on the User Guide.

Retain the packaging. If you dispose of it, do so having regard to any recycling regulations in your area.

NOTE: Do not remove any of the following from the BackboxSW before installation -

- The six foam pads fixed to the speaker supports (these should never be removed).
- The Plastic trim surrounding the front edge of the BackboxSW.

NOTE: The denim absorption pad will need to be temporarily removed from the backbox during installation, but should be retained to go back in just before the speaker is installed into the backbox.

Contents

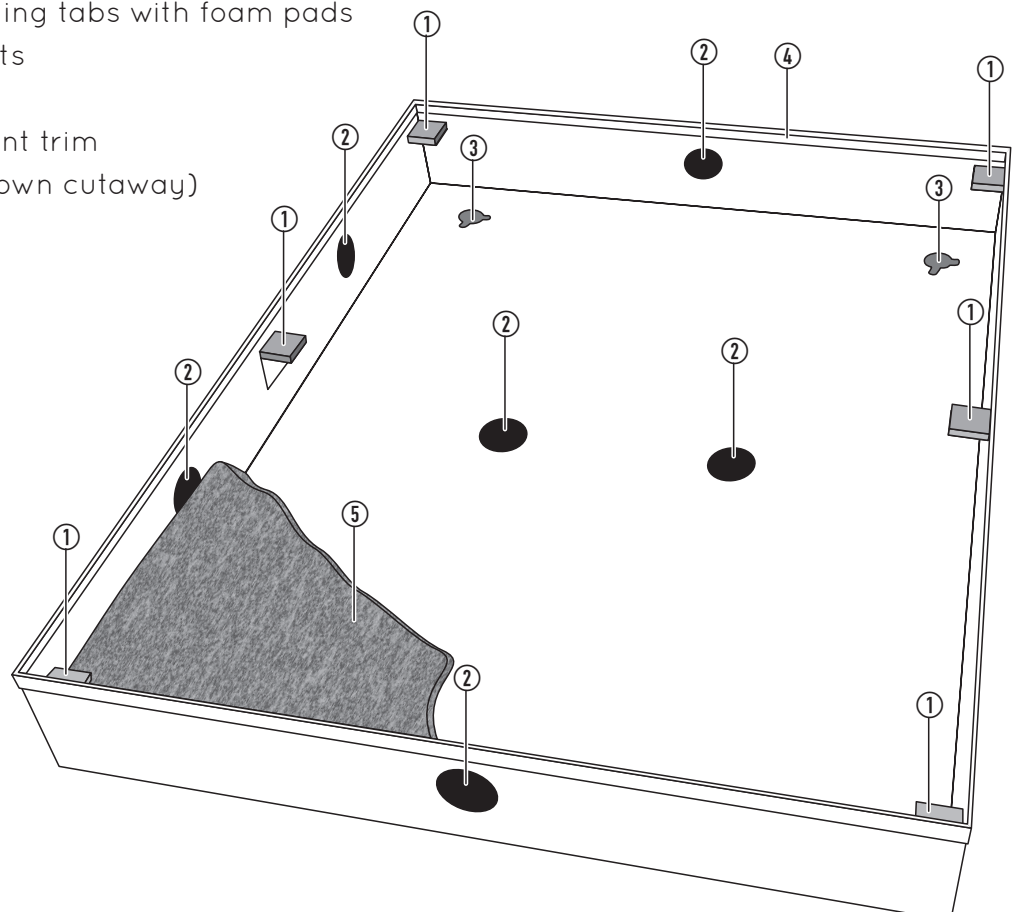
The carton should contain:

- BackboxSW (200, 300 or 345)
- Template
- Denim absorption pad (packed loose inside the BackboxSW)
- Flange-head screws x 4
- Installation guide

If any items are missing or damaged, contact your supplier immediately.

Overview

1. Speaker mounting tabs with foam pads
2. Cable grommets
3. Mounting slots
4. Plastic alignment trim
5. Denim pad (shown cutaway)



Installation

BackboxSW size

Before starting work, check which speaker you are installing and refer to the table on page 4 to ensure that you have the correct model of BackboxSW.

Cavity size

The table below lists the cavity dimensions for each model of BackboxSW.

Model	W	H
SW345	460mm (18 ¹ / ₈ "	355mm (13 ³¹ / ₃₂ "
SW300	410mm (16 ¹ / ₈ "	310mm (12 ⁷ / ₃₂ "
SW200	460mm (18 ¹ / ₈ "	210mm (8 ⁹ / ₃₂ "

A template is included with the BackboxSW that can be used to mark up the wall with the correct cavity width and height.



You will need to create a cavity depth of approximately 60mm (2¹/₂"). Ensure that your structure is capable of accepting this depth prior to starting work.

Marking up

The cables will be channelled into the wall and enter the BackboxSW through one of the grommets holes in its side or back walls. Consider where the cable channels will run.

- Mark up the BackboxSW and cable channel locations on the wall.
- Check that the locations you have chosen for the BackboxSW and cable channels are free of electric cables, water pipes and gas pipes.

Final cavity depth

The depth of cavity for the BackboxSW is critical in ensuring that the plaster skim over the speaker surface is exactly the correct thickness.



The plaster skim in front of the speaker must be 2mm, or very close to 2mm.

Removable plastic trim

The plastic trim around the edge of the opening is used during installation to set the correct depth for the cavity. It must only be removed immediately prior to fitting the speaker and applying the final skim coat. It must be left in place during the base coat render process.

- Refer now to the cutaway drawings on the next 3 pages to identify the plastering method you will use and set the correct depth for the BackboxSW cavity.

Installation

Retrofit / pre-skimmed solid wall cutaway (Feathered plaster finish)

For solid walls /ceilings that have already been plastered and painted.

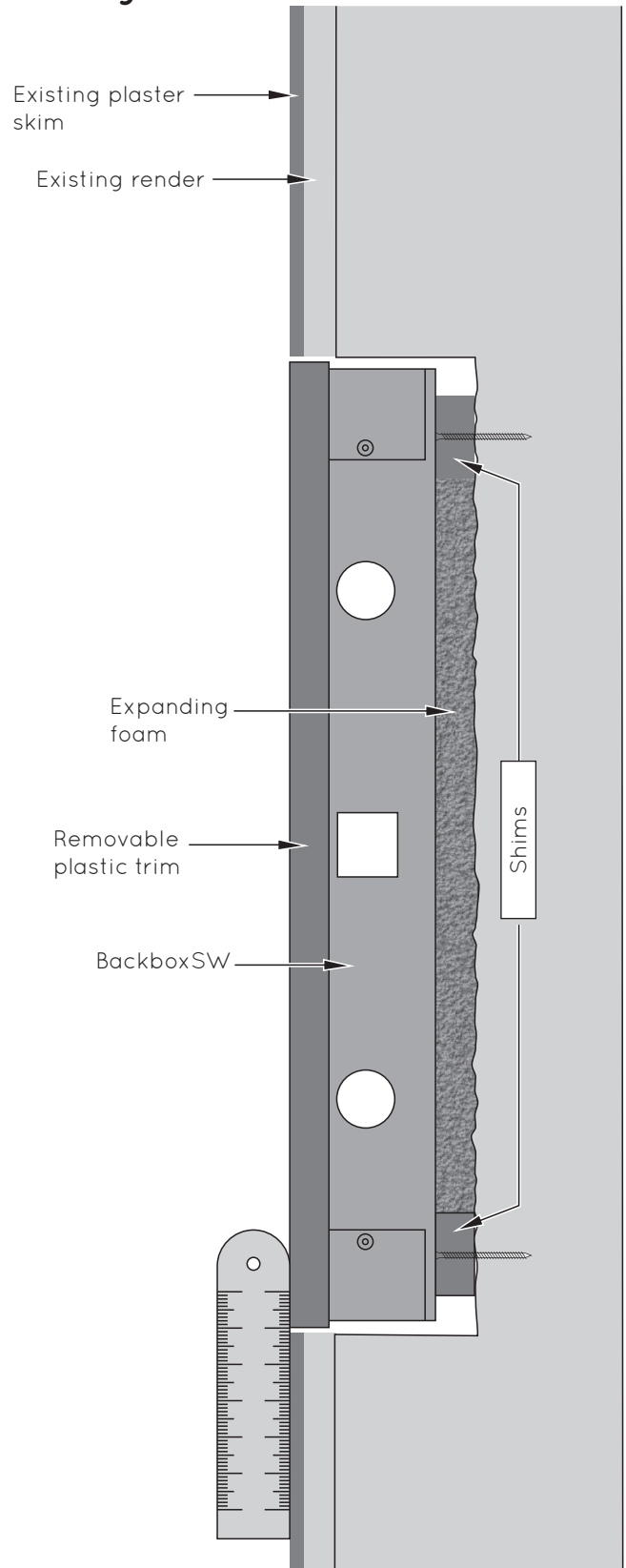
Cavity depth

The cutaway drawing on the right shows the alignment of the BackboxSW in the cavity.

- Temporarily remove the denim pad.
- Use shims between the back of the BackboxSW and the inside of the cavity to align the front edge of the plastic trim with the front face of the finished wall.
- Use expanding foam to fill any cavities behind and to the sides of the BackboxSW.
- Replace the denim pad.
- When the BackboxSW is fixed securely into the cavity, remove the plastic trim ready for installation of the loudspeaker and then application of the final skim coat.

Finishing

This method positions the speaker for a large area (approx. 1m² (39")) to be skimmed over it. This 2mm (⁵/₆₄") thick skim is then feathered outward at the edges and blended into the existing wall/ceiling finish.



Installation

Retrofit / pre-skimmed solid wall cutaway (Patch plaster finish)

This is an alternative to feathered skim installation.

For solid walls /ceilings that have already been plastered and painted.

Cavity depth

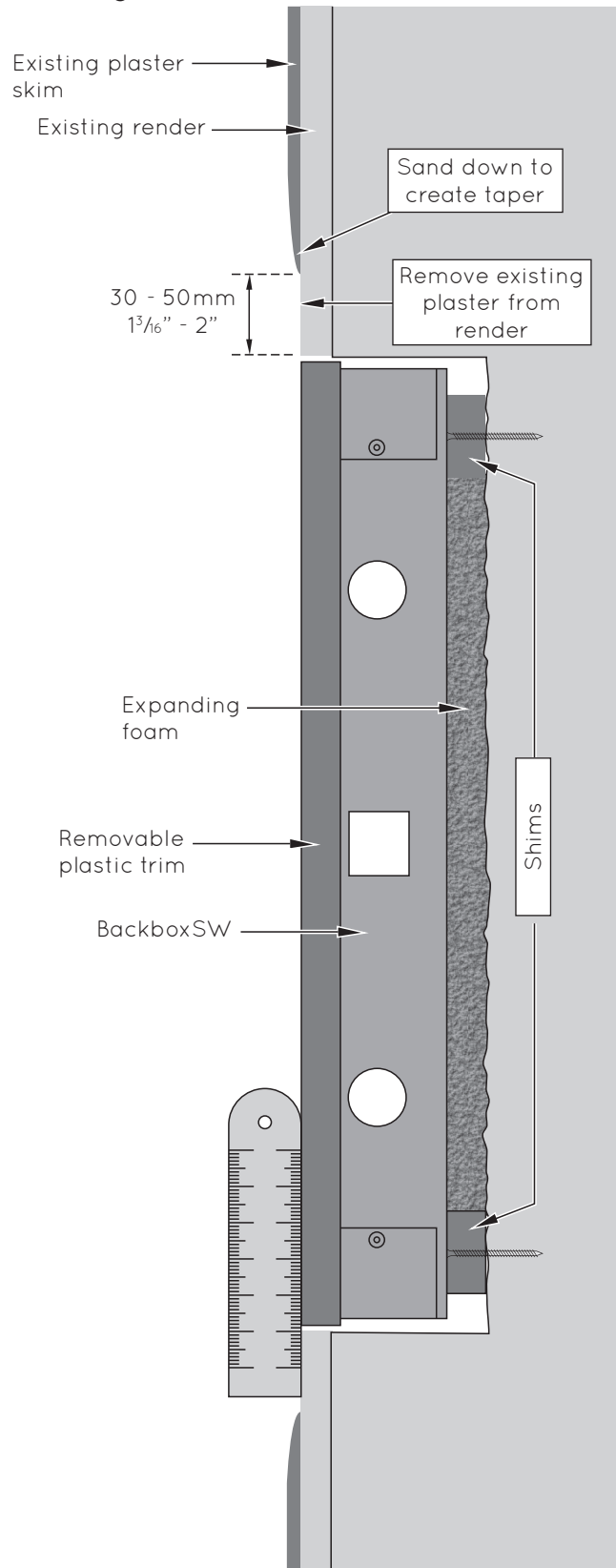
The cutaway drawing on the right shows the alignment of the BackboxSW in the cavity.

- Temporarily remove the denim pad.
- Use shims between the back of the BackboxSW and the inside of the cavity to align the front edge of the plastic trim with the front face of the render.
- Use expanding foam to fill any cavities behind and to the sides of the BackboxSW.
- Replace the denim pad.
- When the BackboxSW is fixed securely into the cavity, remove the plastic trim ready for installation of the loudspeaker and then application of the final skim coat.

Finishing

This method positions the speaker to be patch plastered with a 2mm ($\frac{5}{64}$ ") skim across the speaker front and blended with the existing plaster.

Amina recommend British Gypsum Easi-fill® which allows a smooth accurate finish using fine sandpaper or a wet sponge.



Installation

New build/New solid walls cutaway (Full wet skim finish)

For solid walls /ceilings that are yet to be rendered or have already been rendered but not yet plaster skimmed.

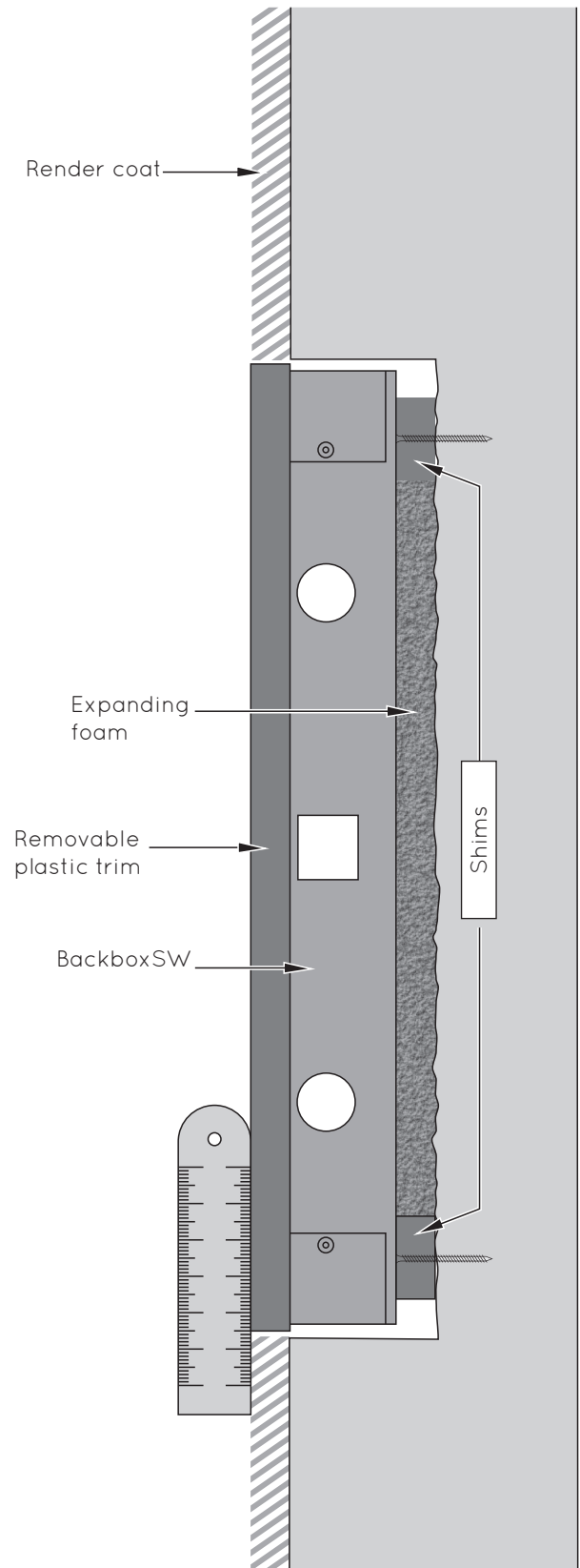
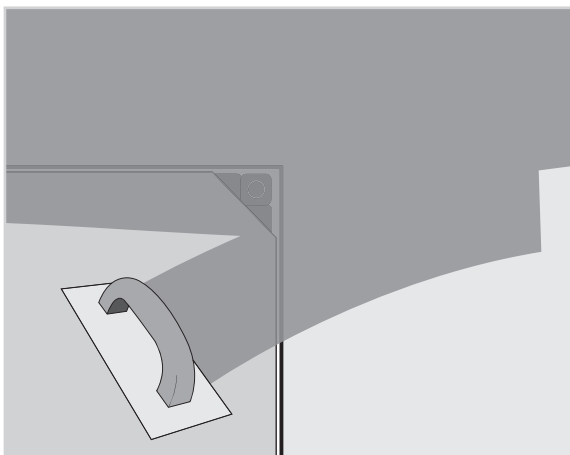
Cavity depth

The cutaway drawing on the right shows the alignment of the BackboxSW in the cavity.

- Temporarily remove the denim pad.
- Use shims between the back of the BackboxSW and the inside of the cavity to align the front edge of the BackboxSW with the (eventual) front face of the base coat render.
- Use expanding foam to fill any cavities behind and to the sides of the BackboxSW.
- If base coat render is not in place, render up to the plastic trim.
- Once the render is dry, remove the plastic trim and replace the denim pad ready for installation of the loudspeaker and then application of the final skim coat.

Finishing

This method allows the speaker to be skim plastered over during the process of the entire wall/ceiling being plastered - 2mm ($\frac{5}{64}$ ") maximum.

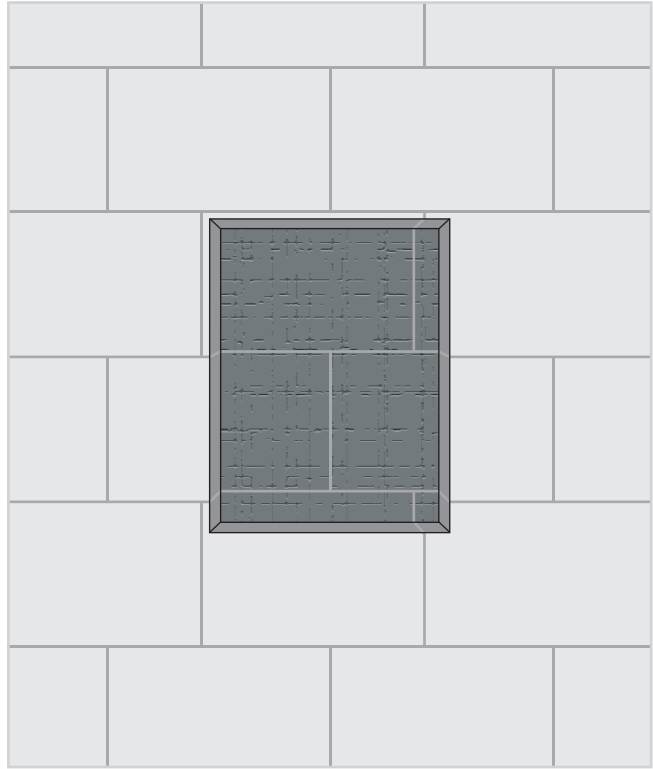


Installation

Cutting cavities

- Remove the denim pad from the BackboxSW and set it aside for use when fitting the speaker.
- Cut each cavity into the masonry using the combination of an angle grinder and a jackhammer drill.

When the cavity is close to size, test the fit of the BackboxSW in the cavity occasionally.

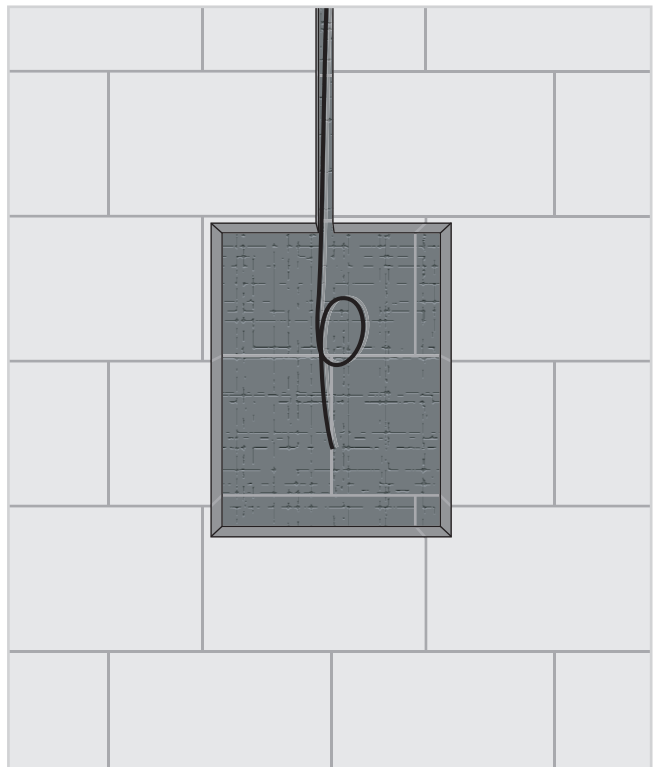


Cutting a cable channel

- Using an angle grinder or hammer and chisel, create a channel that runs into the cavity. This will allow the speaker cable to be pulled into a suitable position within the cavity.

We recommend the cable is run in a suitable conduit to protect it.

Leave enough cable slack to allow connection to the speaker when it is held away from the cavity.



Installation

Mounting the BackboxSW

- Make a small hole in the rubber grommet at the cable entry point and pull the speaker cable through it and into the BackboxSW.
 - There are four keyhole slots in the back of the BackboxSW. Using suitable screws and wall plugs (not supplied), fix the BackboxSW to the brickwork/concrete within the cavity.
 - Check that the BackboxSW is fitted securely into the cavity.
 - To complete the installation it is recommended to add expanding foam behind and around the sides of the BackboxSW to prevent resonance.
 - Render or make good up to the plastic trim. Allow to dry.
 - Remove the plastic trim immediately prior to installing the speaker and apply the finishing plaster skim coat.
-

Installation

Fixing the speaker

- Re-fit the denim damping pad into the BackboxSW.
- Connect the speaker to the cable.
- Remove the backing paper from the 6 adhesive pads on the speaker mounting tabs.

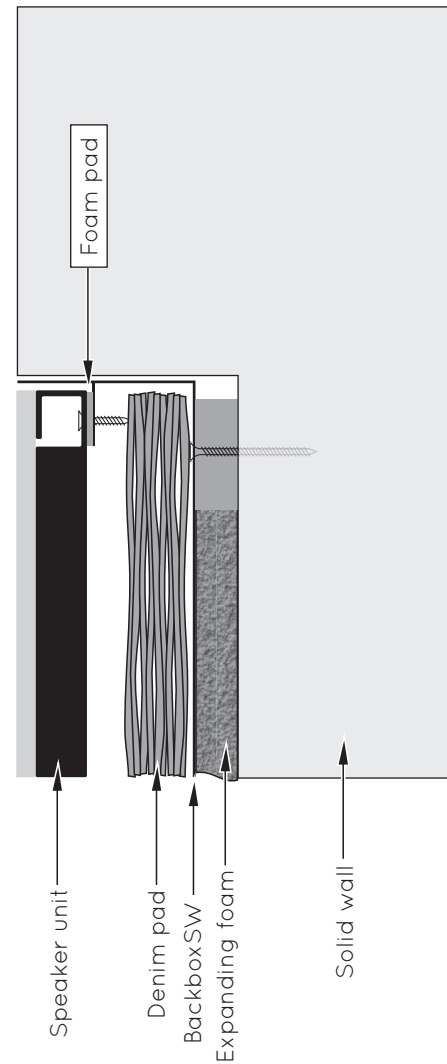


It is imperative that the foam pads remain in place.

- Carefully position the speaker onto the mounting tabs then apply moderate pressure.
There should be an equal perimeter gap between the BackboxSW and the edge of the speaker.
- Use the flange head screws (supplied with the BackboxSW) to fix the corners of the speaker to the four corner mounting tabs.

Each tab includes a pre-drilled hole under the foam pad.

Top view



Testing and plastering

Speaker testing should always be done before plastering. Please refer to the speaker's installation guide for testing information and for details on how to plaster your loudspeaker after you have installed the BackboxSW.

Removal

In the unlikely event of a problem developing with the speaker, or if you simply wish to remove the item to change its location, please refer to the following guidelines:

Locate the speaker by tapping the wall or ceiling listening for a hollow sound compared to the rest of the wall/ceiling. Then, with a sharp chisel or decorator's scraper, carefully chip into the plaster to expose a small area of the panel surface. To ensure you do not damage the panel, hold the tool at an acute angle to the wall or ceiling.

Now, holding the scraper almost parallel to the panel surface, work outwards towards the product's edge easing the plaster away from the panel. Do not worry if the panel surface receives marks or indented scratches during this process (it should not, however, have holes entering through to the unique honeycomb panel). Once the product is plastered back into its original or new location, the new skim of plaster will cover all these imperfections and the speaker's performance will not be unduly affected.

Clear the surface plaster material from the surrounding area of wall or ceiling to expose all the joint tape and subsequently remove it. Use a narrow chisel or flat blade screwdriver to remove the plaster and expose the screws at each corner of the speaker. Using a suitable screwdriver, remove the four screws and then ease the speaker from the wall or ceiling and disconnect the speaker cable.

Next locate the screws fixing the BackboxSW to the wall/ceiling and carefully remove them. Cut away any expanding foam from around the sides of the BackboxSW with a sharp knife and pull the BackboxSW out of the cavity.

If any products become damaged during removal, please return them to Amina Technologies Ltd where the product can be repaired or replaced.

Warranty

The Amina BackboxSW is designed to last for many years. Correctly installed in accordance with these instructions, Amina warrants the BackboxSW against defective materials and workmanship for a period of five years in commercial applications and ten years in residential applications.

At the end of the product's useful life it should be responsibly recycled. The structural backbox is stainless steel, the denim pad is cotton. If you have any questions please contact Amina Technologies Ltd.

Please refer to our full warranty statement for details, available on our websites, or alternatively contact us via email on inspired@amina.co.uk.

Copyright information

This document is Copyright of Amina Technologies Ltd, 2016

Easi-fill is a registered trademark of British Gypsum Ltd

Amina is a registered trademark of Amina Technologies Ltd



The logo for Amina Technologies Ltd features the word "Amina" in a bold, black, cursive script. The letter 'i' has a distinct dot above it. The word "Technologies Ltd" is written in a clean, black, sans-serif font directly below "Amina".

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