

## MUSIC/PODCAST STUDIO SOUNDPROOFING

### Studio Soundproofing

Megasorber's range of noise barrier and acoustic absorption materials are ideally suited to provide treatment to recording studios for music, podcasts, and other media.

In any room, noise will find the 'weak' areas and try to get through, potentially disturbing those in neighbouring rooms. Imagine a plastic bag with water inside... no matter how strong the plastic is; if there are any holes the water will leak. Similar with noise – if there are any gaps, the sound will enter or escape. In short, to reduce noise being heard outside the studio, you need to 'seal' the ceiling and walls.

Initially, a noise barrier will assist with reducing noise transfer between the studio and adjoining rooms / properties – when applied to walls and ceiling, between layers of plasterboard, due to its high density and viscoelastic properties.

In addition, Megasorber acoustic absorption panels can then be installed on to the ceiling and walls to reduce reverberation and make your audio crisp and clear.

Note that any windows should be double, or triple glazed for best acoustic effect, and doors should be solid and well-sealed, to reduce noise leakage from these traditionally "weaker" points in the room.

### Recommended Treatments

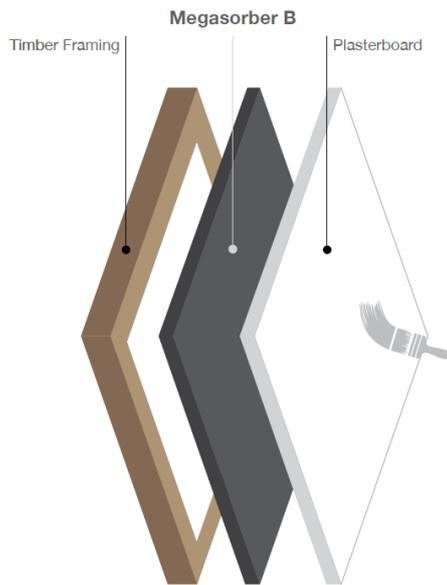
#### Noise Barrier - Walls

We recommend applying Megasorber B8 in between 2 layers of plasterboard (you can also use MDF or similar if you prefer, depending on the finished look you require).

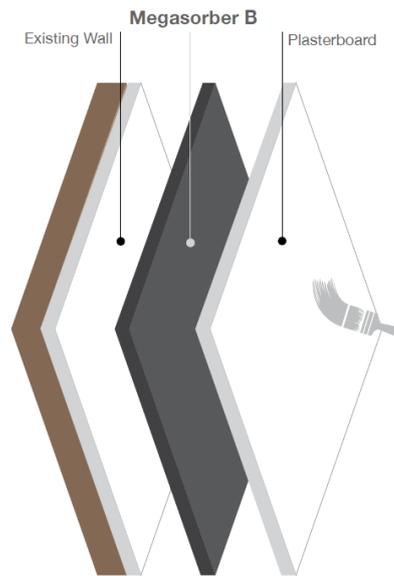
If treating an existing wall, this means simply installing the B8 over the existing plasterboard (this can be stapled or nailed on initially), taking care to overlap sheets to ensure there are no gaps. If overlapping is not possible, butt join the sheets together and use Megasorber A200 adhesive as a bead at each join to seal any gaps. Once you apply the 2<sup>nd</sup> layer of plasterboard, the screws will provide the final fixing for both the plaster and the noise barrier.

If treating a new wall, you may opt to install the B8 directly on the stud frame, and then install a single layer of plasterboard – this is a budget option and will not have the same performance as a wall with a second layer of plasterboard. The following schematics provide more insight:

## New wall construction



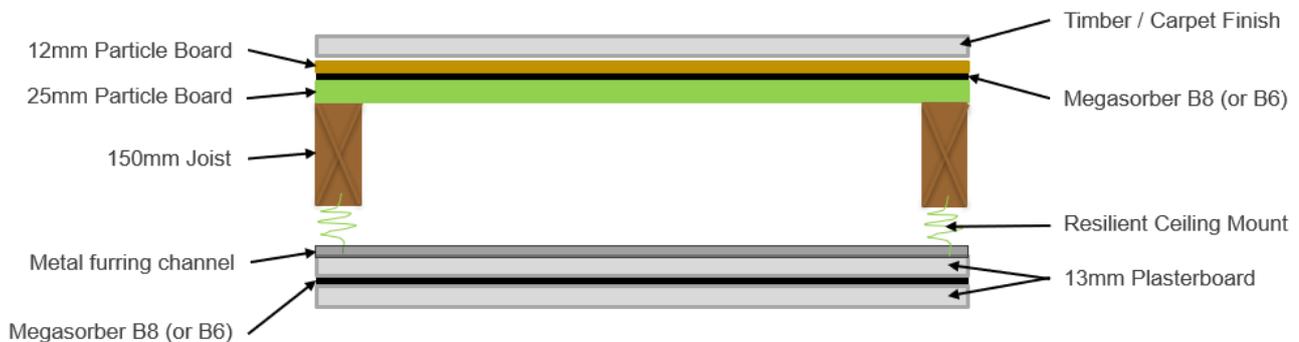
## Existing wall construction



For a super quiet option, treat both sides of the stud wall.

We recommend a minimum 13mm plasterboard – the thicker and heavier, the better the overall acoustic performance of the wall.

## Noise Barrier – Ceiling and Floor



As with the wall treatment outlined above, the ceiling should be treated with Megasorber B8 between two layers of plasterboard. For best results, this should be fixed using resilient mounts and furring channels, however if your space or budget is limited, this can be directly fixed to the joists if required.

In multi-storey buildings, for an extra quiet option, we also recommend using Megasorber B8 on the floor above, between two layers of structural grade particle board or similar, prior to laying the underlay and floor finish of your choice.

If the studio is not on the ground floor (ie. there is a room or other premises below), you should look to treat the studio floor in the same manner as the above, to reduce noise transmission to downstairs neighbours

## Reverberation Reduction

If there are many hard surfaces in a room, the 'noise', soundwaves are reflected, bounce around, echo and reverberate. This noise energy builds up and gets louder, which is a major source of discomfort for occupants of the room.

To treat this, we recommend lining the ceiling and walls with Megasorber's FM range of acoustic absorption panels. The panels can be easily adhered to the ceiling and walls with A200 adhesive. Megasorber FM panels can be cut to different sizes & shapes and have a range of finishing colours depending on your preferred aesthetic.

The general rule of thumb for studios is to treat at least 70-80% (the more the better) of the total surface area with Megasorber FM panels. In a studio set up we recommend Megasorber FM50 panels, with the addition of some FM100 to assist with lower frequencies if required.

### How much absorption do I need?

To determine the amount of panel coverage you require, here is the calculation:

Calculate the surface area of all walls, ceiling and floor.  
Note - only count the floor if it has a hard surface like floorboards / tiles etc.

You need to treat 70-80% of this total surface area.

Example: For a room that is 4m x 3m x 2.7m with a carpet floor...

Walls: 4m x 2.7m (x2)

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Ceiling: 4m x 3m

Floor: N/A

Total Surface Area: 49.8m<sup>2</sup>

The area for treatment on the above should therefore be 35 to 40m<sup>2</sup>, which is around 12 to 14 panels of 1.2m x 2.4m.

Some people prefer to install a smaller amount and build up the coverage until they are happy with the results



## Recommended Products

### **B8**

8kg/m<sup>2</sup> Thermal mouldable flexible noise barrier

Standard sheet size: 2.3m x 1.2m

We recommend installation using mechanical fixings – if adhesive is also required use Megasorber A200CW.



### **FM50W-RW**

50mm Lightweight Acoustic Panel (White) with Water Repellent Soundmesh G8 Facing (White)

Standard Panel size: 2.4m x 1.2m

Other facing colours are also available – black, dark grey, grey, aquatic and sandstone.

We recommend installation using contact adhesive – see A200CW.



### **FM100W-RW**

100mm Lightweight Acoustic Panel (White) with Water Repellent Soundmesh G8 Facing (White)

Standard Panel size: 2.35m x 1.15m

Other facing colours are also available – black, dark grey, grey, aquatic and sandstone.

We recommend installation using contact adhesive – see A200CW.



### **A200CW**

High tack, high temperature resistant cartridge adhesive (white)

Carton size: 12 x 290ml cartridges

Use A200CW to install Megasorber FM panels as required



## Further Information

As each studio has different requirements, this information should be used as a guide only.

Please contact the Megasorber team with any specific enquiries for additional information and recommendations.