HOW TO SOUNDPROOF

A Collection of Guides for a Quiet Home

Soundproof Central

About This Book

When it comes to any soundproofing project, proper planning is the most important thing. Aside from planning which materials you'll use, it's also worth looking at things like the source of noise pollution, and what options you really have for installing soundproofing solutions.

Budget is easily one of the most important factors in a soundproofing project. The truth is that proper soundproofing is expensive. This is because materials that can be used to block sound are usually specialty products, and are often heavy and difficult to work with.

While you can find budget-friendly alternatives, these generally end up being a waste of money because they don't solve the problem. Usually I recommend that people do as much of their own soundproofing as possible because hiring labor usually ends up being more expensive than the materials. This is because soundproofing a room can be a labor-intensive job, particularly if you have to gut the room first.

I say it to everyone : plan as much as possible. Consider the cost offset of gutting a room against the price of materials you could fit in the room. See how much labor costs and work out which bits you could do yourself (gutting a room is pretty easy after all).

But the most crucial aspect of soundproofing is knowledge. Because proper soundproofing is expensive and requires planning, you need to be sure of what you're doing. Sadly, there is so much misinformation about soundproofing on the net, and people end up making costly mistakes.

This book is a collection of some of my best researched articles on Soundproof Central which can help you avoid such costly mistakes. Here is an outline of its contents:

I'm sure these articles will serve you well in making informed decisions concerning your soundproofing project.

Disclaimer

By accessing this eBook, you accept this disclaimer in full.

No part of this eBook may be reproduced or transmitted in any form or by any means, electronic or mechanical, without written permission from the author.

The information provided within this eBook is for general informational purposes only. Even though we have attempted to present accurate information, there are no representations or warranties, express or implied, about the completeness, accuracy, or reliability of the information, products, services, or related graphics contained in this eBook for any purpose. The information is provided “as is,” to be used at your own risk.

The methods described in this eBook represent the author’s personal experiences and should not be substituted for professional advice. They are not intended to be a definitive set of instructions for this project. You may discover there are other methods and materials to accomplish the same end result. Your results may differ.

Chapter One

About Soundproofing

Why Soundproofing Is So Expensive (And What to Do About It)

I regularly assist friends with their soundproofing projects, and they always ask, "Why is soundproofing so expensive?" Luckily I always have an answer handy so they can know what to do about it.

So, why is soundproofing so expensive? **Soundproofing becomes gradually more expensive as you try to block out more sound because it can involve structural changes and addition of costly materials. However, you can reduce expenses by employing cost effective solutions for achieving your soundproofing goals.**

In this article I look into why soundproofing is so expensive, and what to do about it. I also look at the difference between normal foam and acoustic foam, as this is an area where people usually think they can save money.

Why is soundproofing expensive?

I've had many people come to me looking for ways to soundproof on a tight budget, and while this is possible, it shouldn't be an excuse to cut corners or use cheap materials. After all, this won't get you the result you're looking for, so would be a waste of money.

You can check out my article on how to soundproof a room inexpensively but the solutions offered in that article have limitations.

There are a number of reasons why soundproofing is so expensive. The first is simply the **sheer size of the job**. Regardless of the room's actual size, to soundproof it you'll need to use a variety of methods, some of which could involve you ripping down walls. All of this takes money, and the bigger the project, the more you'll spend.

The second reason relates to the first one: a **soundproofing project requires materials, and plenty of them**. While normal drywall is relatively inexpensive, specialist products like mass loaded vinyl can set you back a tidy sum. What's more, the more budget-friendly options you've probably heard of like **curtains (RELATED ARTICLE)** or foam paneling the walls don't really get the same results.

The final reason I'm going to look at is the one I stated above. High frequency noise pollution is much easier (and cheaper) to block than low frequency, such as bass. **Depending on the extent of the problem and the scope of your project, you could be looking at floating floors and thick, concrete walls to block out bass.**

An effectively soundproofed room could mean a well-sealed door, **Plexiglass (RELATED ARTICLE)** double-glazed windows, thick, solid walls, and further acoustic treatment in the room. None of these options are by any means cheap, but it's the only way you can guarantee that your project is going to be truly effective.

These methods are described in my articles on soundproofing windows and soundproofing doors.

Of course, not everyone is looking for this level of soundproofing. While it can be expensive, it's only ever as expensive as you want it to be. For example, if you're only trying to block out some noisy neighbors then you won't be spending thousands. However, if you wanted a dedicated home theater, then you might need a higher budget.

What to do about the cost of soundproofing

I'm fully aware that cost is a major factor in many (if not all) people's decision when it comes to a soundproofing project. After I explain the reason why it becomes to expensive, people understandably ask if there's anything they can do about it. Thankfully the answer is yes, there's plenty you can do.

Here are my top tips for what to do about the cost of soundproofing. These don't cover all your options, but are what I use when I start any soundproofing project, and they haven't let me down yet!

1. Be aware from the start

This might sound obvious, but starting your project with the knowledge that it's an expensive thing to take on is much better than jumping in head-first and only realizing the problem once you've spent loads of money.

Look at it this way: **soundproofing is essentially an investment**. Whether it's creating an amazing home theater with great audio quality or simply blocking out the sound of street traffic, you're investing in a better experience for you in your home.

By the same reasoning, you wouldn't go to a car dealership with the intention of getting a new car, only to be shocked by the price of one. Everyone knows cars are expensive things, but a good investment can stay on the road for decades.

2. Do some research

Even before looking at how much you're willing to spend on a soundproofing project, spend some time looking up costs. This will give you a much better idea of your options, and will allow you to set a much more realistic budget.

The first step I'd recommend would be to **try some forums**, as these are a great place to find hints, tips, and costs of projects that are potentially similar to your own.

I recommend this soundproofing master thread of AVS Forum. Also, you can always ask people specifically about your project if you can't find the right information.

Another option is to just **search for various soundproofing materials online**, or see if you have any stores near you. While you realistically won't find a soundproofing store, electronic or music stores are always a good place to start, or DIY stores. If they don't have the right information, they can probably point you in the right direction.

To save time, you can read my article on soundproofing materials.

Doing research will let you work out what kind of materials you need to use in your project, and how much they cost. Work out your needs and what results you expect, and then use this information to list the materials that'll be most relevant to you. **Planning is key in any project**, and is the difference between a definite success and a potential disaster.

3. Work out a budget

Setting yourself a budget is a great way to control the cost of any project, providing you stick to it. This is why proper research is so important, because if you know how much materials cost and how much you need, then you have your budget there already.

Also, it stops you from just choosing a random amount of money as your budget. For example, $1000 might sound like plenty, but that won't get you too far in a big soundproofing project.

Your budget for a soundproofing project should be a fair compromise between what you'd like and what you can afford.

There are ways to cut corners and reduce costs, such as only soundproofing internal-facing walls, or external facing.

Again, this is where research comes in, because if you know your problem areas and the best solutions, you can just focus on them and massively streamline your efforts. This, of course, will help reduce the cost.

Even though I said you need to stick to your budget, it's also worth setting aside a little bit extra so you've got some wiggle room. **As a general rule, I set aside around 10% extra of my total budget, just in case some things don't go to plan.**

Don't take this from your original budget, or think of it as part of your original budget. Its purpose is to be a helping hand if you need it, or to be a happy leftover if you don't.

4. Do as much as you can yourself

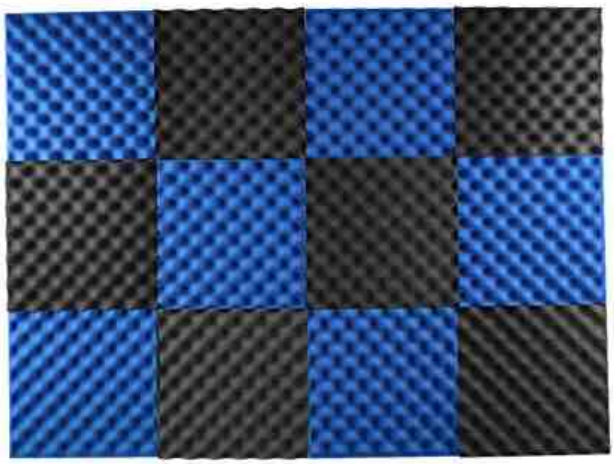
Depending on the size of your project, or your skill level, there might be a limit to how much you can do yourself. However, keeping the project in your own hands is one of the easiest ways to keep costs down. Sure, you might not be able to hang a new wall, but you can probably nail some panels to it instead.

If you do need to get someone in to do a big job, get plenty of estimates first. You might have difficulty finding engineers at competitive prices who have experience in soundproofing projects, but if you've got the materials and the planning done yourself, then it essentially just becomes another DIY project.

Another option is to teach yourself. Don't underestimate the value of YouTube videos; I basically taught myself all I needed to know by watching videos of construction projects. I then fooled around a bit before starting the proper job, but it really wasn't as hard as I thought it would be.

At the end of the day, soundproofing can be expensive. But it doesn't have to be. There are ways around the higher costs, such as sourcing materials and doing things yourself, and these can have a massive impact on the overall expense.

Difference between acoustic foam and regular foam



Acoustic Foam

When you start doing research into various soundproofing materials, you might find yourself asking the question, "Why is acoustic foam so expensive?" Well, there are various answers to this question, but many of them are explained by the difference between acoustic foam and regular foam.

There are 4 differences between acoustic foam and regular foam, which are:

1. **Their structure**
2. **Their availability**
3. **Their durability**
4. **Their price**

While there are plenty more differences, these are the main ones. I discuss each in more detail below.

1. Structure

Acoustic foam is a specialist product, and is designed specifically to treat acoustics within a room. It does this through its open cellular structure, which refers to how open the material is.

The pores in acoustic foam allow sound waves to enter, but make it hard for them to leave again. This reduces echo and reverberation in a room because the sound waves get trapped, and so can't reflect off surfaces.

Normal foam, on the other hand, has a more closed cellular structure. This makes it more suitable for cushions or mattresses, but isn't as effective at blocking sound waves. While you can use normal foam in some soundproofing situations, acoustic foam is better for treating echo.

2. Availability

Thanks to the internet, availability of a product isn't really an issue any more. However, normal foam will always be more readily available than acoustic foam, simply because it has more uses.

You can find acoustic foam pretty easily online, but always look at several sites before making a purchase. Either you'll find a better product, or you'll inevitably find the same product cheaper elsewhere.

3. Durability

Foam's durability will usually be dictated by its use. For example, normal foam inside a sofa cushion will generally be less durable than normal foam used as flooring tiles.

Acoustic foam, on the other hand, is usually pretty durable. It's made to be non-dusting, which means it doesn't turn to powder when damaged. Not only would this affect its ability to block sound waves, but it could be potentially harmful if inhaled.

Manufacturers of acoustic foam are generally aware that their product might get bumped in to, particularly if it's being used in a small environment like a recording studio. Therefore it's made to withstand rougher treatment than most types of normal foam.

4. Price

Price is the biggest reason why people think they can use normal foam instead of acoustic foam. After all, acoustic foam is expensive, particularly if you're wanting to buy a lot of it.

The main reason acoustic foam is expensive is because it's a specialist product, and there's a market for it. This means manufacturers can charge more because it's seen as more valuable, and people will pay for it, whether happily or not. It's simple supply and demand.

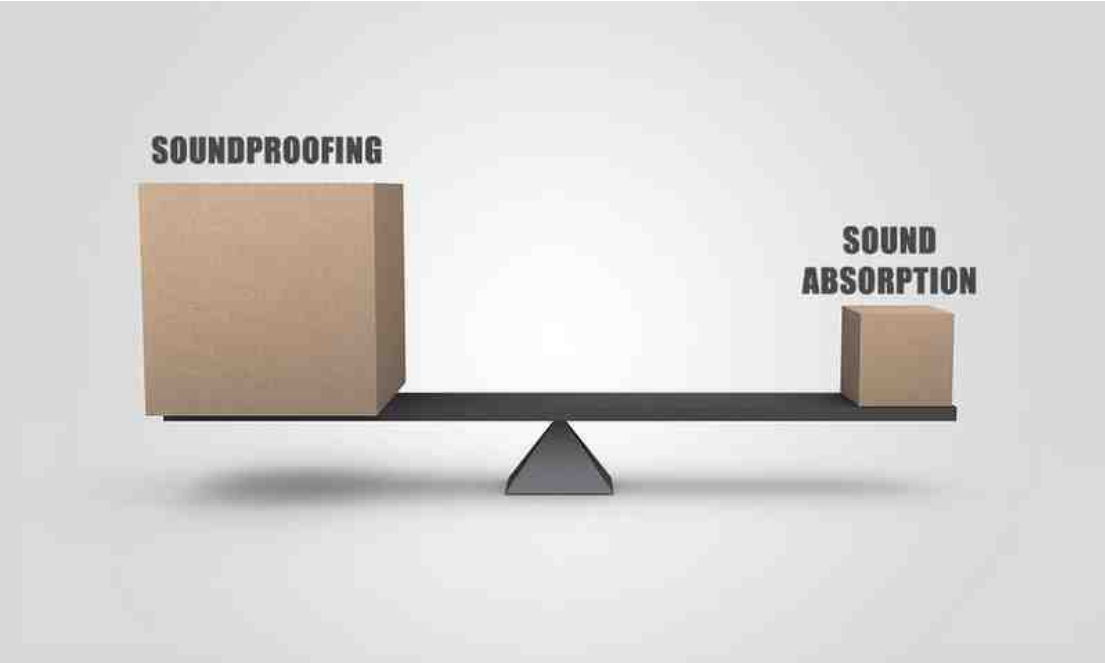
Similarly, normal foam is a much more versatile product, and doesn't usually need to be made to the same quality standards. This makes it much cheaper, but also means it won't be as effective in a soundproofing project.

Some final thoughts

When it comes to soundproofing, it's worth knowing that it can be an expensive thing to take on. However, as I advise people, it doesn't have to be. The cost of soundproofing is dictated by what you actually want from it.

I can't stress how important it is to do research and to set a budget. Doing this will allow you to make much more informed decisions, which means you'll be in a stronger position. However, don't go the wrong way and try to save too much money, because then you'll only be wasting it.

Soundproofing vs. Sound Absorption: What's the Difference?



Getting started in the world of soundproofing means picking up the jargon pretty quickly. I often find myself having to explain the difference between soundproofing and sound absorption, so I thought it would be helpful to write an article on it.

The biggest difference between soundproofing and sound absorption is that soundproofing is the process of blocking noise from entering a room while sound absorption is the process of absorbing sound waves within a room so they don't create echo.