STOP NOISE™ ACOUSTICAL SURFACES INC.
Sound Solutions for Over 35 Years | Soundproofing | Acoustics | Noise & Vibration Control

Noisy... Restaurant Problem SOLVED!

Having a noise problem in a restaurant could be one of the best problems an owner can have. Noise means people enjoying themselves. A bigger problem would be if the place was completely empty all of the time. Restaurants with noise problems can be a tricky space to treat for a few reasons.

Understanding sound energy is pretty simple but most people have trouble understanding because they can not see it. Let's paint a picture which will hopefully allow you to picture the sound and what's happening in your room. Developing a visual representation of the physics involved has helped hundreds of our previous customers because it offers a fundamental understanding of the problem. Understanding the problem will help you fix it.

Imagine you are sitting in a restaurant. Looking around, you see hard surfaces everywhere. The floors are hardwood, the table is made from Cherry. The walls are all drywall and the ceiling is a textured sheetrock. It makes sense for a restaurant to be filled with these easy to clean surfaces.

Sitting all by yourself, the only sound in the space is probably white noise; the light fixtures, HVAC system, and an ice maker are all humming in the background. During a busy rush however, The space comes alive talking, laughter, kitchen noises. Situations like this could be called the Cocktail Party Effect! Everyone is making noise and talking in order to be heard above the background noise, everyone must raise their voice. Soon everyone is shouting just to be heard and it becomes frustrating to have a conversation.

There are two major challenges with creating a quieter restaurant by changing the acoustics. The first is reducing noise without impacting the overall design and decor of the space to reduce echo and reverberation, reflective surfaces need to inevitably be covered with an absorptive surface. It can be tricky to find a delicate balance maintaining design elements and reducing background noises. It is important to take off the "edge" without over-deadening the rooms acoustics.

> ***"It has knocked the echo off the room. We have had a full house and no noise complaints. It kills that high pitch."***

The other challenge is to determine the right amount of panels to put into a space. For all practical purposes, panels can be installed anywhere in the room and will essentially result in an overall reduction in noise level. Adding panels to exposed open room surfaces will give a larger reduction than panels placed on the undersides of tables and chairs. Either way, you will hear a significant drop in background noise. This gives you the flexibility to add panels as accent pieces or install them in areas that blend into the background.

To achieve the optimum acoustical level for your room type trial and error will be required in determining the correct square footage of panels to use. Some rooms need to-and-should be quieter than others. Attaining the perfect sound level for your room is very site-specific and isn't something anyone can tell you.

Putting that clause out there this is a simple equation that has been very successful in determining how many panels to use. Take the cubic volume of the room (height x weight x dept) multiply by 3% (.03). This will give you a middle of the road educated guess at the square footage of panels to install in the room. Using the relationship of a room's size and square footage has worked well in the past,

Will this treatment be ideal and perfect for your room? Maybe. Will it make a noticeable difference? Absolutely without a doubt.

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Additionally, if you send me a few digital photographs of your room, I am happy to make suggestions. You probably already have a few ideas of where you'd like the panels to go. I can help narrow down choices and offer assistance and advantages of one area versus others.

Ok, so now that you have determined the cubic volume of your room and multiplied that by 3% (if you haven't yet, do that now, I'll wait) you have an idea of how much product you will need and how much total surface you need to cover. You also know that covering the ceiling will give you the same result as putting panels onto the walls. This is where you need to help me help you. Many people in the past have sent me a few digital pictures of the space which is a huge help and I'm happy to offer some suggestions. But, really, you already know where you want the treatment. Even right now, you're thinking of where it will go, and you're just wondering what effect it will have and "is it enough?" How do I know these things – just ask my wife, I know everything…

What products should you use? There are hundreds of different types of products out there that are possibilities for each type of room and each will have its own advantages and disadvantages. To make your life simple, I am going to narrow it down to two. The first being a utilitarian and cost effective panel – the other being a decorative and custom (higher cost) panel. Both offer the same basic absorption and will work within the equation above.

- The first option would be the Echo Eliminator panels (http://www.acousticalsurfaces.com/echo_eliminator/wall_panel.htm?d=0)

  Echo Eliminator panels are made from recycled cotton. These panels are available in ten different colors and come in a 2'x4' panel size. They are the lowest cost, highest performing Class A/1 panel on the market. Echo Eliminator panels are the utilitarian yet effective option and generally glued or attached in some way to the structure on site. They ship in boxes via UPS at small quantities and can be installed by anyone. These are not ugly panels, but the most common reason why they are declined is because they are not "finished looking" enough – which is understandable. When you receive a quote for both options, however, this panel usually becomes a bit more attractive.

- The second option would be the Fabric Wrapped Fiberglass panels (http://www.acousticalsurfaces.com/fabric_panel/fpswallp.htm?d=4),

  These are exactly as the name says – we cut boards of fiberglass to size and wrap them with fabric. This panel offers more freedom in panel size and color. The largest panels we can make are a 4'x 10' board and the panel sizes and shapes can be as creative you need. There are hundreds of fabric choices to select from in a range of different price points. The cost for these panels will depend on the sizes, shapes, quantity, and fabric that you need. Because of the size, weight, and more fragile nature of this product, they are usually shipped on wooden crates on the back of a semi-truck.

Here is a great example, and I truly wish I lived in or near Crystal River, FL as their menu sounds awesome. The e-mail below was sent to me by one of the owners of the Fat Cat Grill (www.fatcatgrill.com) who was trying to fix a sound/noise problem on a budget. The restaurant purchased 200 square feet of our 1" Beige Echo Eliminator Panels and installed them onto the ceiling.

CUSTOMER E-MAIL

"We need sound control for our restaurant. 8 ft ceilings two areas, one 30 ft by 13 and the next is 13 by 13 in the bar area. Two areas separated by a 2 ft drop down area housing the AC ducts. We need an affordable approach."

The restaurant purchased 200 square feet of our 1" Beige Echo Eliminator Panels and installed them onto the ceiling.

After the panels were installed, ASI received the following short description of the improvement: "It has knocked the echo off the room and we have had a full house and no noise complaints. It kills that high pitch."

If you have any questions or need any information about any of the products or applications discussed in this article, please feel free to contact me. I would be happy to do my best to help you. Ted Weidman, Acoustical Surfaces, Inc.
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