

Reducing Restaurant Noise to Improve Customer Satisfaction

Acoustics in Restaurants

In a 2015 dining trends survey by Zagat, the number two complaint by patrons, after service issues, is excessive ambient noise. We have all had the experience of speaking louder to be heard by dining companions who are often sitting right next to us. Bottom line is this problem must be fixed or it will affect your bottom line. If acoustics are poor it will only serve to leave a bad taste in the mouth of your patrons, no matter how great the menu.

To solve these issues we must identify what is going on in these acoustically challenged spaces. When you combine the sound generated by a music system, patrons trying to converse, staff communicating, and even ambient kitchen noise, it builds up and reaches a point where the energy in the room is no longer able to be absorbed or dissipated. Moreover, design trends have evolved towards very open spaces (high ceilings) with hard surfaces (wood, metal, stone, tile, glass) which are very reflective of sound. The wide variety of sound bouncing off these reflective surfaces increases the baseline volume causing people to talk louder. The increased noise (noise floor) causes the music to be turned up and this cycle is repeated resulting in a high volume, unintelligible mass of noise.

There are presumptions out there that attempt to find justification for higher noise levels. Some think that the energy in the room makes it more exciting which in turn will increase alcohol sales or that the noise may cause tables to turn more quickly. Although these may hold some degree of truth with a segment of a younger crowd, the real question here is who is your clientele? Who are you trying to attract? More importantly perhaps, based on the Zagat survey response, who are you inadvertently turning off?



Kingfishers pub in Maple Ridge, BC provides a beautiful view for customers but the glass wall and high vaulted ceiling contributed to long echos and poor intelligibility. Broadway acoustic panels installed on the ceiling retain the esthetic but fix the sound issues.

Addressing Noise

In order to resolve the excess noise inherent in many restaurants, owners should incorporate acoustically absorbent materials into the restaurant; either as part of the initial design, or as an aftermarket addition. In the design phase, acoustic panels can be strategically placed within the ceiling structure or on walls and incorporated into the design of the space. Similarly, post construction, ceilings and walls offer opportunities to help tailor the acoustics of the space.



Season 2 'Top Chef Canada' contestant, Trevor Bird's Vancouver restaurant, 'Fable' features exposed brick walls, a creative chalk board wall and an open kitchen concept. With limited wall space to make acoustic improvements, stock beige fabric clouds were hung from the ceiling.

Some restaurant owners are hesitant to address the acoustics or noise problem in their restaurants believing the cost to be prohibitive. While a concert hall or top-end recording studio might see material costs reach \$50,000 to \$100,000, the same is simply not true for most restaurants. In fact, most restaurants can be acoustically 'repaired' for between \$2500 and \$10,000 depending on the size.

Acoustic panels are essentially porous devices that are either hung on the walls or from the ceiling. Sound waves enter the panels causing the minute fibers to vibrate. This thermodynamic process essentially converts sound into heat. Since most restaurants are in commercial areas, attention must be paid to fire safety. Panels that are safe for use in commercial applications will have been tested by an independent lab to ensure they pass ASTM-E83 (United States), Can/UL S108 (Canada) or EIN-36535 (Europe).

Selection and Placement

When using a high density glass wool panel for instance, the most common choice is to install between 20% to 25% wall coverage. Alternatively, you can hang panels from the ceiling. This works equally well. Placement is not critical. It is more about controlling and reducing the excessive energy build-up in a room by hanging panels wherever convenient.

The thickness and density of the panel will dictate the absorption range. The thicker the panel, the lower the frequencies you will absorb. The most common thickness is 2" or 5cm. This will easily absorb energy down into the lower registers of the voice and help reduce low frequency rumble from the music system. If under budget or space constraints, you can get away with a 1" (2.5 cm) thick panel which will help with most frequencies in the speech range. On the other hand, if live performances are held in the restaurant, you may want to consider adding a mix of 3" (7.5cm) thick panels to the room to help control the deeper bass.

Architectural Concerns

A common concern is how the panels will integrate with the existing esthetics of the room. Most panel manufacturers offer basic neutral stock colors but panels can also be covered on site using any decorative fabric so long as it is breathable. More recently a paintable panel has come to market that enables the user to spray the panel on site using standard latex paint to match or compliment an existing color scheme. Available with straight or beveled edges, shipped in a white finish, paintable panels can also be used as an artist would use a canvas.

If you are handy with a screw gun, you can easily fix the acoustics in a restaurant in a matter of hours. Once done, you can be sure that customers will return... so long as the food and service is up to their expectations!



Cirrus Cloud Paintables installed on the ceiling at Vic's Pizzeria in Olympia, Washington to lower noise levels and improve the overall sound experience while complementing the restaurant's design aesthetic.



Primacoustic Paintables panels installed on the walls and ceiling of a cafe in St. Petersburg, Russia. The Paintables were painted by a local artist to add to the shop's decor.

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