

# Audiophile

Never has there been more interest in the area of high fidelity audio. Long play albums have become cool again and audiophiles are spending more on their 2-channel setups than ever before. But no matter how much you spend on a new needle, cables, preamp, or amplifier, the improvement will only be incremental until you have addressed the room acoustics.

Most dedicated listening rooms are spare bedrooms or converted basements with hard gypsum walls that echo energy back into the room in the form of powerful first-order reflections and secondary ones known as flutter echo. These reflections blur or muddy the information making it more difficult to hear the recording as it was mixed or identify individual instruments.

Excessive bass creates room modes whereby certain frequencies will collide 'in phase' to create bumps or 'if out of phase', cancel each other out to create frequency dips. This causes the sound to change depending on where you are sitting in the room.

As with most things, the solution can be modest, advanced or over the top depending on your space and budget. The first line of treatment is to apply 2" (5cm) thick acoustic panels strategically on the side walls to absorb first order reflections. This is done by sitting in your listening chair while someone slides a mirror across the wall to mark where the speaker reflections begin and end. High frequencies are very directional so using vectors to predict primary reflections is easy. Absorbing energy behind the loudspeaker not only helps attenuate the fold-back echo, it also helps reduce flutter echo in your room. Using a Prima Room kit is a good starting point. You can then add more control by incorporating two or more MTrap™ bass traps in the corners or by adding Cumulus™ tri-corner traps up high, out of the way. Bass traps attenuate low frequencies which in turn reduce the audible effect of room modes. For the ultimate listening space, you can add diffusion behind the listening area to add a greater sense of space to your room. The Razorblade™ is a true quadratic residue diffuser with 17 narrow slots that will effectively diffuse directional energy above 200Hz. For the most discerning audiophile, the ultimate goal is to create a listening space that is neutral yet not overly dry so as to retain the excitement in the room.



## EXECUTIVE SUMMARY

- Broadway acoustic panels absorb first order reflections
- Eliminates comb-filtering and the blurring effect on sound
- Enhances the listening experience by eliminating distractions
- Enlarges the optimal listening space when sharing music with friends
- Significantly improves the performance of your audio system
- Available in a Paintables finish to color-match or add graphics