

To get the best sound from your system,
you need the right acoustic treatment.
But which kind should you use?

We remodeled our NY listening room
using different approaches to find out.

by Brent Butterworth, CFG Labs

Treat Yourself

I've advised maybe 2,000 readers on what speakers to buy, but I can't remember a single reader asking me what kind of acoustic treatment they should use. That tells me that thousands of people are spending thousands of dollars on audio products, and getting, at best, mediocre sound.

See, the acoustics of your room can affect the sound of your home theater almost as much as the quality of your speakers does--and room acoustics have a *far, far* bigger effect on the sound than the quality of your electronics or cables. I guess a hunk of foam just isn't as exciting or sexy as a beautifully crafted cabinet full of drivers, chokes, and capacitors, or a black box with a couple dozen buttons on the front. But I hope that after reading this article, you'll be inspired to start treating your room fight.

Acoustic Sciences Corporation

ASC has earned an excellent reputation in both pro and consumer

audio, and the products they supplied for this Face Off proved that their reputation is extremely well deserved.

ASC started us off with four \$739/pair Cube Traps, which measure 37.5 by 14.5 by 14.5 inches. Each Cube Trap is packed with fiberglass, and is hollow in the middle so that it traps bass frequencies. On two adjacent sides, there's acoustically reflective tape between the fabric and the fiberglass. When you place the Cube Traps in the comers, you can turn them so that two, one, or no reflective sides are exposed.

Complementing the Cube Traps were 16 Sound Panels, which cost \$398 for a set of eight. Each Sound Panel is made from fiberglass, with reflective tape between the fiberglass and the fabric. They measure 48 by 8 inches, and they're about 2 inches thick, so according to ASC, they're absorptive at frequencies above about 200 Hz, but the tape makes them reflective above about 1.5 kHz. The Sound Panels are framed in thin sheet plastic. The backs of

the frames have notches so you can hang them vertically or horizontally--just pound in a small nail and hang the panel. We found these the easiest to install of all the products we tried. We also found them the most attractive. When A1 entered the room, he enthused, "Wow! This stuff looks great!" Joe and I very much agreed. ASC offers these products in several neutral colors (the ones we tried are in an off-white color called quartz), and also offers 60 custom colors at extra cost.

Although all three of the manufacturers featured in this Face Off offer consulting services, ASC takes it to new heights by allowing you to take a "measurement" of





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A. Our NY listening room treated the ASC way. Not only did it sound good, it looked great, too.
B. The ASC Sound Panel (left) and Cube Trap.

your room that they can then analyze. To take the measurement, you play a test CD with ASC's Music Articulation Test Tone over your system, and record the results on a cassette or DAT deck. You then send the tape to ASC, and they'll analyze it so they can make specific recommendations for you. ASC also provided us with a couple of thin reflective sheets, which you place along the side walls to find the points of first reflection--the place where the sound from the speaker reflects directly at you.

The points of first reflection are usually the most important place to put acoustic treatment. You can also use any mirror for this purpose; just sit in your normal listening position and have a helper move the mirror along the left wall until you can see the left speaker, then repeat the process for the right speaker and the front wall.

At ASC's suggestion, we positioned the Cube Traps in the corners, with the reflective sides out in the back, and the absorptive sides out in the front. This gave us a live

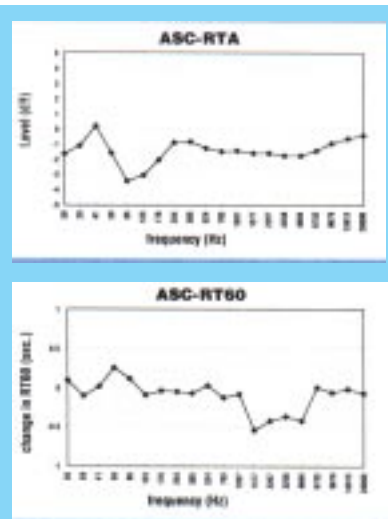
have taken out a couple of traps." All three of us found the treble a little emphasized with the ASC products, though; the word "bright" shows up often in my notes and in the panelists' comments. We think that with maybe two more Sound



Panel at each, then placed three more Sound Panels on each side wall, spaced about 5 inches apart. We placed four more Sound Panels on the rear wall, and two more behind each of the main speakers up front.

This setup gave us outstanding results right away. The sound was reasonably controlled, but very lively and airy, with the broadest soundstage and the best treble detail we heard in this test. "The ASC stuff tended to bring the sonic image into focus," Al said. The dynamics were also excellent, particularly on high frequency sounds like gunshots and the tablas from Trilok Gurtu's Living Magic CD. Al and I thought the bass control offered by the Cube Traps was just right. "The bass is the best I've heard in our listening room," Al said. I found the low end very strong, yet very well controlled at the same time. Joe, however, considered the bass underwhelming from his listening chair. "I'd have liked more bass," he said, "so I think it would have sounded better if we'd

expensive, but we think that for their efficacy and flexibility, they're worth it. Overall, we feel that the ASC Cube Traps and Sound Panels are super-recommendable products that combine great looks, ease of installation, and outstanding performance.



CFG Labs Measures: ASC

We measured the effects of the ASC products by placing a microphone in the listening position to perform real-time spectrum analysis and RT60 (reverb time) measurement--the time it takes for a sound to decay to 60dB below its original level. These charts show the changes the ASC products caused compared to a measurement of the same room with no acoustic treatment. From our listening chair, the ASC products cut the bass considerably, by as much as 3.4 dB (at 80Hz). Between about 200 Hz and 10kHz, they cut the response by 1 to 2 dB. Except for a slight increase around 60Hz, they decreased the RT60 by about 0.1 sec. across most of the audio band, and caused a big drop in reverb time--as much as 0.55 sec.--between 1,000 Hz and 6,700 Hz.

