

## Acoustic Sciences Corporation Studio Traps

Over time I've successfully used a variety of tuning devices to refine the acoustics in Kathleen's and my listening room. But I've always suspected that Acoustic Science's Tube Traps might be a good way to finish it off. I've occasionally asked visitors to stand in one spot or another behind the speakers as I listened for tergiversation (ie, "to change one's tune"; hoo-hah!). I found several locations where a nice, dense audiophile body made an improvement to the sound.

Since installing the JMLab Utopia speakers (a bass-reflex design), I've been aware of a low-level boom in the mid and upper bass. This effect was ameliorated by moving the Utopias out to the leading edge of the MDF reinforcing platform and so more into the main room, as well as by moving the listening chair forward a few inches onto the carpet between the Ribbon Chair and the speakers. (See the diagram of our room in the November '98 *Stereophile*, p.55.) Basic math and physics at work, you might say: nodes and antinodes, Man and Superman. The doctor will see you now. A quartet of large, PolyCrystal-coated brass spikes under the speakers did their parts in tightening up the bass.

**Description:** Tripod-mounted room-tuning devices adjustable for height and rotation. Absorption: 6dB/octave rolloff, 3dB down at 110Hz. Reflection: active over 4 1/2 octaves, treble diffusion 400Hz-7kHz, 12dB/octave crossover, 3dB down at 400Hz.

**Dimensions:** 9" diameter by 48"H. Weight: 28 lbs.

**Finishes:** Available in 5 stock colors and 55 custom colors in an architecture-grade, fire-resistant fabric.

**Price:** \$315 each. Approximate number of dealers: 140.

**Manufacturer:** Acoustic Sciences Corporation, P.O. Box 1189, Eugene, OR 97440. Tel: (541)343-9727. Fax: (541)343-9245. E-mail: studio@tubetrap.com. Web: www.tubetrap.com .

Of more immediate effect, Argent RoomLenses (reviewed by yrs trly in the August '98 issue) were very helpful in improving the imaging, smoothing out the frequency response, and eliminating yet more of that slight plumminess in the mid- and upper bass.

But I hankered for more. Look, it's not just that I'm totally anal retentive-I freely admit that I am. But K-10 and I have the privilege of auditioning some of the world's finest components, and no matter what you might think, I never get blasé about it. (Kathleen won't let me.) I deeply respect the craft and the madness behind it all. So I simply (ha!) ensure that my system is of the highest resolution possible--neutral enough to tell the tale while keeping it musical. As Roger Skoff of XLO said, "Jonathan, the question is, can I believe it, and does it move me?"

Enter Christopher Klein of Acoustic Sciences Corporation. After some few years of nudging, we finally exchanged dimensions, as it were, and Christopher had their CADman draw up a plan. Not long afterward, eight Studio Traps arrived chez Scull, clad in an attractive light gray finish. They're 9" in diameter and stand about 4' high. These new minted examples represent the latest in TrapThink from ASC. The cylindrical gobo<sup>1</sup> is mounted on a tripod and spindled on a countersprung shaft that makes it easy to raise, lower, and rotate. The front half of the Trap is treble reflective for a brighter sound, while the back side is treble-absorptive for a drier acoustic. The original Studio Trap rolled off at 6kHz, which has been raised to 7kHz in these newer models. Top and bottom, little chrome buttons are set in the lateral middle of the reflective side so you'll know where you are.

### Let the schlepping begin

The plan Christopher faxed me was built around what ASC calls the Attack Wall. (Perfect for audio reviewers, don't you think?) The idea is to take the room



Acoustic Sciences Studio Traps

<sup>1</sup> Gobos are sound-absorbing panels used to surround performers in recording studios, thus providing acoustic isolation. The derivation seems to be from "go between."

completely out of the equation rather than treat its pressure zones individually. Some of you may have seen those massive Trap setups at WCES or at one of the Stereophile HI-FI Shows. Two Traps are set obliquely to the baffle at the speakers' outside edges, the outside Trap closer to the listener than the inside one. Another pair is placed at the inside edges of the speakers, the first Trap adjacent to the baffle and the second more steeply raked toward the back wall.

I tried the Attack Wall and didn't really like it. It absorbed too much high frequency information, deadened the sound, and robbed the music of its natural dynamics. No juice. What was left was focused and pretty, but hey-Demanding Reviewer At Work: I want more, not less. Some of the life and sparkle returned when I rotated the Traps to show more of their reflective sides to the drivers, but I just couldn't find a balance I liked.

But man, did the highs get smoooooth. That was interesting--I wondered if there was a tad too much smoothing going on; one way or the other, it meant more problems with side reflections than I'd realized. Some fairly amusing but all-too-meaningful glances passed between K-10 and me as we listened. Yes, I was beginning to feel... Trapped! [reader-supplied badaBOOM here]

Lounging in the Ribbon Chair, I considered the Attack Wall while listening to a fine new double CD of Paul Galbraith doing Bach's complete Sonatas and Partitas for Solo Violin arranged for 8-string guitar (Delos DE 3232). Arthur Noxon, PE, MSME, physicist, and owner of ASC, has his roots sunk deepest in the professional recording world. An Attack Wall in a recording studio is a mini-forest of Traps surrounding a m~ng console or a performer and mike. I appreciate the idea of it, yet as I thought back to the demos I'd heard, the Wall had always been accompanied by a huge number of ASC products throughout the room. Of course, it's logical to pull out all the stops at a show. And, as Christopher Klein assured me, the audiophile version of the Attack Wall could be made to work wonders with some patience and help from a knowledgeable ASC field operative. But what could I do now, I wondered.

Time to take my own best advice and follow my instincts. I was sure the two Studio Traps at the outside edges of the Utopias should stay where they were. Attenuating first reflections can only be of help, even from such relatively dis-

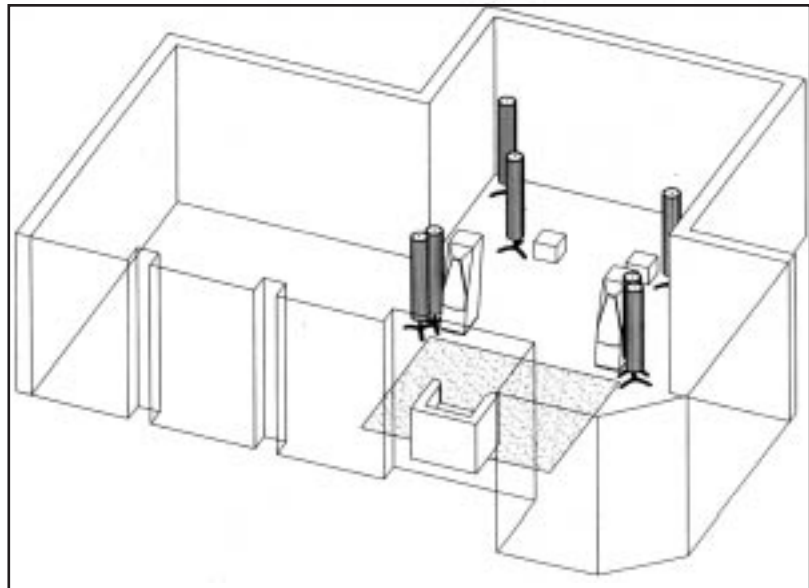


Fig.1 The Skull listening loft, primary Studio Trap array (an additional Trap is in the right-hand corner behind the speakers).

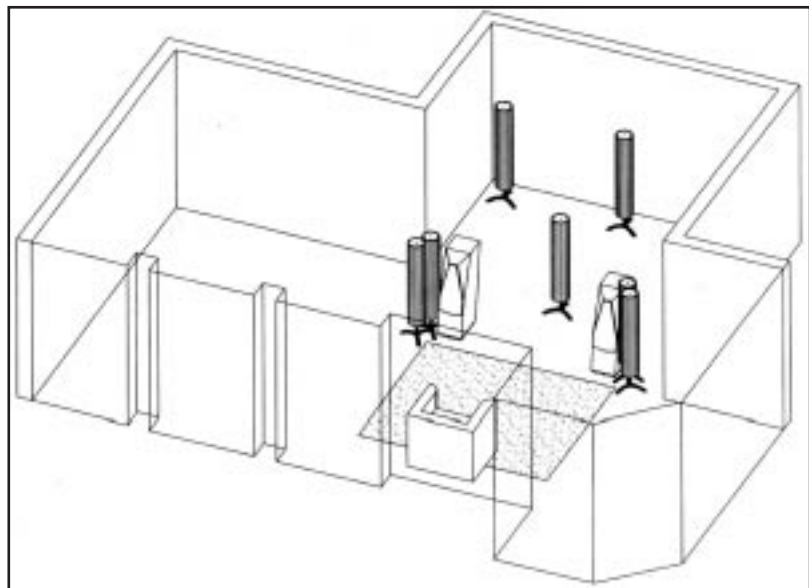


Fig.2 The Skull listening loft, secondary Studio Trap array (an additional Trap is in the right-hand corner behind the speakers).

tant surfaces as are found in our setup. The soundstage had moved way forward with the Wall up, so the two pairs of Traps adjacent to the inside edges of the speakers were first on my hit list. I took a pair and plunked them in the left and right corners behind the speakers, their absorptive sides facing the corners of the room. This is, of course, classic Tube Trap positioning for bass attenuation. Another pair went to a point about halfway between the backs of the Utopias' cabinets and the rear wall, about a third of the way in from each sidewall--about where I'd stood friend

and foe alike when tuning the room with the (living and breathing) bodies of my long-suffering friends (see fig.1). A modified plan put the middle pair up against the sidewalls about halfway between the speaker cabinets and the back wall.

As I listened to the changed acoustic, I nudged the two pairs of Traps on the outsides of the Utopias a bit farther apart, allowing both speakers and Traps room to breathe a little. Then I fanned out the Traps for a shallower toe-in when seen from the listening position. Then I humped the middle pair behind

the Utopias back and forth while listening to the results. (Kathleen was laughing her ass off watching me grope and waltz the Traps around our listening room.) The best results were found with the middle paws reflective sides pointing toward the back corners. The pairs outside of the speakers were rotated until about 300/0 of the inner pair's reflective sides and 600/0 of the outer pair's reflective sides faced the drivers.

Okay, we're cookin' now, as Emeril Lagasse shouts while kickin' it up a notch [BAM!] with 50 cloves of garlic. First and most exciting, I preserved the alluring smoothness in the upper midrange and top end. Oh man, was it sexy--pulled my little audiophile face right into the music, it did. Totally yummy. Then, too, playing with the reflective ratio of the two pairs of Traps on the outside of each speaker allowed me to match that smoothness with a perfect blend of detail, air, extension, articulation, and focus. The boom was gone, banished, extinct, finito.

Oh man, it was good. In its place was terrific extension, tight and controlled throughout the entire bass range, and as transparent and quick as I've ever heard. The upper bass, especially running the Nagra PL-P preamplifier and YBA Passion 1000 monoblocks, sounded simply incredible: taut, transparent, fast, and finely pitch differentiated.

The transition from the bass to the midrange, and thence to the treble, were both more seamless than ever. The midrange itself was cajoling, charming, rich, or as lean as whatever was inscribed or encoded on the surface of the recording being played. Not too much, not too little, just right. Oh MAN, it was

gettin' good! Pace, timing, slam, and quick-as-life transients were there for the hearing, delivered with a particular ease, as if the Utopias were no longer fighting the room as before.

I was in audiophile heaven as I enjoyed the transparency, the air, the neutral, coherent soundstage that developed before me. The sense of each recording's original venue was much enhanced; I was hearing the recorded acoustic and that alone. The palpability factor flew off the peter meter. Everything was that much more round with body and presence; music was composed of heart and mind, metal and wood. Tonal color seemed to be spot on, the resolution of the acoustic decay giving me the chills. It was as if, bereft of even more of the mechanical artifacts of playback, I was entering into the true realm of the music.

I had good luck with another setup: leaving the two Studio Traps in the rear corners with a single Trap centered halfway between them on the back wall. I centered another Trap about halfway between the back of the speaker cabinets and the back wall (fig2). I liked both setups; each delivered an acoustic much better than the room sounded without them.

Don't forget: spoiled bastard that I am, I've got a gaggle of Argent RoomLenses to play with too. You might be interested to know that we now use a mix of 'Lenses and Traps to make our listening room as friendly an environment for high-end sound as is possible. Just now, a trio of 'Lenses sits behind the listening chair to break up the bounce from the wall behind it. More about mixing 'Lenses and Traps

later on.

In the meantime, let me point interested readers to an article by Wes Phillips in the May '97 *Stereophile* (Vol.20 No.5), in which Studio Traps were employed with MIT cables and Martin-Logan speakers to best effect. If you're really curious, try February '92 (Vol.15 No.2), in which Traps were used to correct room problems with Martin-Logan CLS IIAs. True seekers will look for April '86 (Vol.9 No.3) and a full review of Tube Traps by our own J. Gordon Holt.<sup>2</sup> You can also contact ASC directly and ask for a literature packet, or request same from their website ([www.tubetrap.com](http://www.tubetrap.com)). Top Tube Trap Art Noxon has written a veritable cornucopia of fascinating materials on room acoustics. Altogether, it's an exhaustive, scientific, and beautifully documented package that I found extremely informative. Tell 'em J-10 sent you.

#### **Trapped and liking it, or "I do!"**

ASC's Studio Traps have become permanent fixtures in our system. I can actually use the two pairs flanking the JMLab Utopias to tone down bright and hashy pop recordings, or to open up the treble for well-recorded audiophile discs. It takes about five seconds, but the pleasure goes deep. Highly recommended for anyone whose family will allow them to populate the listening room with gobos. (They do come in five stock colors and 55 custom hues.) Really, you have no idea what your system can do until you deal with the speaker/room interface. Now go forth and boogie!

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<sup>2</sup> Call (800) 766-0020 for back copies, or order them through our website, [www.stereophile.com](http://www.stereophile.com).