

August 15, 2006

## Audio Acoustics Sapphire Ti-C SE Loudspeakers

I've made no bones about the fact that I believe when you assemble an audio system, the loudspeakers should represent your first, and often your largest, financial outlay. The speakers you buy should match your listening room and your own tastes, and the rest of your system should be built around them. Speakers vary greatly from manufacturer to manufacturer for some obvious reasons: driver types, crossover slopes, cabinet materials, and component parts all play their parts in the sound you finally hear. But the largest single determinant of the finished product is the designer's vision of what a loudspeaker should be. All of my favorite speakers through the years have had one thing in common: a single person guiding the process of design and manufacture and seeing it through to the end. That intangible *something* is what the nameless, faceless conglomerates sometimes miss.

The Audio Acoustics Sapphire Ti-C SE follows this designer-led principle as closely as any loudspeaker I've run across. At \$81,000 USD per pair, it's controversial, even polarizing. To produce for retail sale a two-way, three-driver speaker of modest proportions that costs, in some parts of the country, as much as a small home, is an eye-opening move, to say the least. To do such a thing you have to be crazy -- or believe so strongly in what you're doing that you feel the cost will be seen as justified once customers hear what it buys. Shabir Bhatti is of the latter persuasion, though he may volunteer a small percentage of the former as well.

Either way, I heard Bhatti's Sapphire Ti-C SEs at the 2006 Consumer Electronics Show and was genuinely impressed. I also wrote a feature on the company in June: "[Searching for the Extreme: Audio Acoustics.](#)" After much planning and international correspondence, the Sapphires shipped from their UK home to me in coastal North Carolina. I've been listening to them for the last few months and have many thoughts to share.



### TWBAS 8/2006

**Speakers:** Wilson Audio Specialties Alexandria X-2, WATCH Dog Series II, Sound Fusion Luna SF-70

**Amplifier:** Boulder 1060, Krell KAS-2

**Preamplifier:** Boulder 1010

**Source:** Esoteric UX-3

**Cables and power conditioning:** Shunyata Research Hydra Model-8, Orion speaker cables and Antares interconnects

## A gem

Each sculpted Sapphire Ti-C SE weighs 150 pounds, measures 48.25"H x 11.5"W x 15.5"D, and has three ceramic Accuton drivers in a midrange-tweeter-midrange configuration. The two 5.25" woofers are angled slightly toward a centrally mounted 1" tweeter that itself appears to sit within a raised sub-baffle. A large, integral port flares wide at the bottom of the enclosure.

The side panels of the Sapphire's multifaceted cabinet are substantial. What appear to be bolted-on side plates – the heart of this extremely complex cabinet design – are made of many layers of various materials, including steel plate and proprietary membranes designed to dissipate heat and eliminate resonances. As I stated in the feature article linked to earlier, each enclosure contains 886 fasteners – this is one well-built cabinet. Bhatti warned me that the ubiquitous knuckle-rap test is a misleading and primitive indicator of a cabinet's lack of resonances, but I can tell you that I've *never* heard a deader cabinet. There was no *thunkkkkk*. More like a *thu*. The rap just died immediately.

The speaker's rear panel contains two sets of extremely high-quality five-way binding posts. No jumpers connect them – the Sapphire is meant to be biamped or at least biwired. The posts are set in an oval plate recessed into the rear of the cabinet. All markings on the plate are engraved. Internal wiring is said to be made from custom "nine nines" silver in various thicknesses and treated with damping material. The speaker itself rests on three large pre-installed spikes, two in the front and one at the rear. I was supplied Audio Acoustics' own Nano Pucks – large, round, multilayer platforms for the spikes to rest in. These, according to the manufacturer, offer yet another means by which to escape resonance and to achieve purer sound. If all this sounds as if the attention paid to the Sapphire's every detail has been extraordinary, it has been.

Which brings me to the build quality: I've never seen finer. From the flawless finish to the precision cutouts for the drivers, the Sapphire exudes an uncommon quality. The paint, available in a variety of automotive-based colors such as Carbon Black and Mirabelle Maroon, is a "16-coat gel-suspension finish." If you're used to the finest Rolexes or Rolls-Royces, the Sapphire's fit'n'finish will not disappoint you in the least.

Audio Acoustics rates the Sapphire Ti-C SE as having an impedance of 4 ohms and a sensitivity of 89.5dB. Its power requirements are reported to be a minimum of 30W and a maximum of 100W. Each loudspeaker arrives in a heavy wooden crate for safe shipping.

## Placing

I set up the Sapphire Ti-C SEs in my Music Vault listening room, at first in the locations typically inhabited by the Wilson Audio Specialties Alexandria X-2s. That first shot at positioning the Sapphires wasn't completely successful, however, and a quick read through the thorough owner's manual gave me some direction. Even so, I had to experiment for several hours to get the Sapphires dialed in perfectly. They ended up just a touch closer to the front wall than other speakers I've used in this room and with barely any toe-in toward me. I used a biwire set of Audio Acoustics' own resonance-controlled WOW cables, similar to what's used inside the speakers. After all was said and done, the sound of the Sapphires jelled in my room quite nicely, becoming focused and well balanced; I was more than pleased with the result. Time to get started with some serious listening and note taking.

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## Sound

In some respects, the Sapphire Ti-C SE is one of the best loudspeakers I've ever heard. Most notable was its ability to "disappear" as the source of the sound. After much listening and consideration, I have several theories as to why it was so adept at this. First and foremost, its cabinet was dead silent -- as advertised. Playing any music at any output level, the enclosures simply did not produce any audible sound of their own.

A speaker cabinet should be completely inert, which may not be 100% possible, or at least settle down completely between notes. If it is not inert, the large panels -- especially of a tall floorstanding speaker -- will become unwanted sources of sound. I recently had a long listening session with a loudspeaker that I know measures exceptionally flat, and has low distortion and a smooth off-axis frequency response. It's technically very well designed, and sounds it. However, what those conventional measurements don't tell you, and what you don't notice all that much unless you compare such a speaker with something like the Sapphire Ti-C SE, is telling. That other speaker's cabinets are noisy enough that I can hear them vibrating from my listening chair. I can feel the vibrations when I place my hand on the side of the speaker as it plays, and it's shocking how much it moves in time with the music. These resonances seem to muddy the lower midrange and upper bass. The Audio Acoustics Sapphire Ti-C SE, in comparison to most other speakers I've heard, seems to let its drivers work unencumbered by any other source of sound (read: distortion).

I was listening to David Lloyd-Jones conducting the Royal Scottish National Orchestra in Holst's *The Planets* [SACD, Naxos 6.110004] and thought just how musically important it is for a pair of speakers to "vanish" into the background. Imaging of the sort that can really suspend disbelief is successfully created when the reproduced sounds are in no way locatable by ear as emanating from the speakers, and the sizes of the images within the soundstage are properly scaled. This is not just a matter of vocals being center stage and a guitarist over to the left -- that's the easy stuff. It's also the way in which the performers *inhabit* the space around you -- not tethered to the speakers by sonic artifacts. I've never heard a pair of speakers cast a more continuous, believable soundstage, with more realistic images -- most needed in *Mars, the Bringer of War* -- than the Sapphire Ti-C SEs. In this respect, they are extraordinary instruments.

The shockingly continuous soundstage woven by the Sapphire Ti-C SEs was also due to the incredible coherence of its drive-units. Perhaps one key to the speaker's organic nature is that it's a two-way design - not an overly complex beast. I'm not sure. What I'm certain of is that the acoustic integration of the speakers' drivers, as heard at the listening position, was seamless. The outputs of the woofers and tweeter produced a wholeness that defied me to dissect it.

An acoustic piano can tell you a lot about how a speaker's drivers work together. For instance, listen to the opening bars of pianist Franz Vorraber playing the *Finale* of Rachmaninoff's Piano Concerto No.3 [DVD-Audio, Nishimura DVDA-007]. The recording's incredible clarity is a helpful tool. Instruments that cover a wide bandwidth, such as Vorraber's piano, are instructive because there is so little room to hide in: you can't mask a discontinuity of drive-units reproducing well-recorded piano -- not until the orchestra comes in. A complex work with all sorts of sources of sound can tell you a lot about the performance of a loudspeaker -- namely, if it can sort out the various instruments -- but it is the simpler arrangements that can unmask problems at the crossover frequencies. This ability is another major strength of the Audio Acoustics Sapphire Ti-C SE. Call it organic, cut from the same cloth, whatever -- it is simply vital for a speaker to avoid any mechanical bumps in the road, and this one does.

Tonally, the Sapphire Ti-C SE was very close to neutral. Its midband was buttery smooth, its bass controlled without being unnaturally tight. It played low -- around 30Hz in my room, though not all that loud at that frequency. The highs were simply there -- quick, resolving, and precise, without any tizziness, nor did they spotlight any particular area. The Sapphire might not have had the extension of an exceptionally good ribbon tweeter, but it was crystal clear. Musically speaking, nothing was missing from the output of its ceramic Accuton tweeter. I had no complaints about colorations in any area with any of the music I listened to. For instance, Loreena McKennitt's voice in "Dante's Prayer," from *The Book of Secrets* [CD, Warner Bros. 946719-2], was sweet and present, the chorus behind her deep and wide, the cello clear and full. Simply beautiful.

Having read this far, you might think the Sapphire Ti-C SE the perfect loudspeaker. In some areas of sound reproduction -- namely, its ability to "disappear" and cast a continuous, coherent soundstage -- it approached the ideal. But there were specific areas in which a listener shopping in this price range might find the Sapphire lacking. These were obvious errors of omission, I suppose, but I'd be remiss if I didn't point out even the obvious. For instance: The Sapphire Ti-C SE won't move the amount of air needed to create the visceral, large-scale impact that some music, such as Metallica, requires. It won't play as loud or as low in the bass as most any speaker in its price class: Wilson Audio MAXX II, Focal-JMLab Grand Utopia Be, Avalon Sentinel II.

Instead, the Ti-C SE is almost solely about the finer points of musical expression. It won't dominate in a home-cinema environment, where huge explosions and full-scale helicopter flyovers are the norm -- you'll need something larger for that. And I can't argue with anyone who's thinking that the performance of a pair of speakers costing \$81,000 should not be compromised in *any* way. Still, if what the Audio Acoustics Sapphire *does* excel at is your thing, you might find no better loudspeaker for your needs. The market will decide whether this strategy is accepted.

#### **Timeless**



## Timeless



In many ways, this has been the most difficult of reviews for me to write. On the one hand, I love this loudspeaker. It has qualities that are truly extraordinary. It painted my room with images as solid and as real as reproduced music can achieve. The extremely complex cabinet design creates the most silent of backgrounds for the music to emerge from. Its build and finish qualities are magnificent, and I'm a stickler for that stuff. I've enjoyed countless hours of music with the Sapphire Ti-C SEs, and will have awfully fond memories of them when they're gone.

On the other hand, how do I explain a relatively compact \$81,000/pair loudspeaker? I don't. That's the designer's or the dealer's job. Having met Shabir Bhatti, I know he'd say that \$81,000 is the price you pay for what his product does *and* doesn't do. He's made his own choices of design goals and where to spend his manufacturing budget. You'll make your choice of where to spend your loudspeaker allowance. The Sapphire Ti-C SE is Bhatti's vision. It is a grand if controversial vision, and I've immensely enjoyed sharing it for a short time.

...Jeff Fritz  
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### Audio Acoustics responds:

First of all, let me take this opportunity to sincerely thank you for taking the time and putting in the work required to give the Audio Acoustics Sapphire Ti-C SE a thorough, in-depth look and accurate evaluation.

It has been a refreshing pleasure in our correspondence to be able to communicate a whole new concept and have someone grasp, understand, and dissect its merits and ills, and to paint for the reader a factual report (one able to communicate all aspects in a very clear and concise format.)

Concerning the lower register, the Sapphire Ti-C is a small slice of completeness -- a subtle giant, one that has been designed to show what a true basic next-generation transducer should deliver. I fully appreciate the importance of moving enough air, but only down to a level of non-incitement (distortion, hence losing the merits of the Audio Acoustics ideals and lack of sonic presentation). The SE will not reproduce low-frequency resonance (cabinet-incited distortion) as, say, a large piston 15" diaphragm. But it will deliver a very respectable and distortion-free low frequency down to 20Hz (+/- 3dB, room acoustics naturally allowing). Agreed, this is not subsonic bass territory, naturally (>20-16Hz), but nonetheless an accommodating real-word speaker for most environments and applications and with the ability to reproduce all musical instruments except a 32' organ pipe at 17Hz in a large room. There is no compromise or sacrifice in the SE and certainly no apologies. For those looking for quality -- watch this space. Helipad and sound-effects fans look elsewhere. Musical-instrument-reproduction fans will not be disappointed. The price tag represents bare-bones pricing for all involved.

Kind regards,

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