

THE ULTIMATE HI-FI GUIDE

HI-FI CHOICE

SPECIAL EDITION

SUMMER 2006 | £3.95 | WWW.HIFICHOICE.CO.UK

The Collection

IN-DEPTH REVIEWS OF THE WORLD'S FINEST HI-FI





Audio Acoustics Sapphire Ti-C SE

This 'ultimate' two-way has a beautifully finished and massively over-engineered enclosure

PRICE £46,700 per pair CONTACT Audio Acoustics, 30 Grassmere, Sawyers Close, Windsor, Berks SL4 5HJ ☎ 01753 842173 🌐 www.audioacoustics.co.uk

Of all the speakers that have come in for review, none have involved quite as much fanatical obsession as Shabir Bhatti's Audio Acoustics Sapphires. Since these two-ways cost more than £45,000 per pair, there's some justification in taking the quest for perfection to its logical conclusion.

We would never have noticed that the top corner of one speaker was out by half a millimetre, but Shabir apologised that he hadn't had time to rectify this invisible blemish within the review schedule, but would do so as soon as the speakers had found their way back to him. This level of dedication is reflected in the Sapphire Ti-C SE speakers themselves. They are beautifully finished and styled, and a lot more compact than many high-end speakers to boot. This new SE is actually the most costly of three models with the same basic shape and configuration; the 'standard' Sapphire Ti-C has similar drivers and a less elaborate enclosure, while the Fundamental K2 has a simpler enclosure still and less costly drivers.

The Sapphire Ti-C SE is actually a simple two-way design, featuring twin bass/mid drivers mounted above and below a central tweeter, in what is sometimes described as a d'Appolito configuration. The surface finish is a gorgeous high-gloss, deep-lacquer gel suspension paint job, available in a selection of standard colours, including our Mirabelle Maroon samples, plus Carbon Black, Titanium Metallic, Krystal Metallic, Carbon Metallic and Ferrari Red (though any alternative may also be specified).

The shape is fundamentally rectilinear, with vertical sides and (most of the) back, but the front panel consists of four separately angled sections. The tweeter, on its own sub-baffle, is vertical and located at seated head height, while the matching bass/mid drivers are on tilted sections above and below, so that all three are equidistant from, and point towards the listener. The lower section has a large and elegantly flared port. All edges are chamfered, giving an attractive multi-faceted appearance.

If the external appearance is quite beautiful, the real heart of this design lies in the complex enclosure construction. Shabir's contention – not without justification – is that enclosure engineering is both harder to do and more important than the drive units. He reckons the enclosure contribution is around 80 per cent of the total, so the majority of the cost and effort has gone towards maximising enclosure performance. Should you submerge a Sapphire Ti-C SE in a bath, it would displace something

like 100 litres, but the internal enclosure volume is apparently only 30 litres, such is the elaborate complexity of a construction that uses multiple layers of MDF, steel and damping membranes in order to absorb the energy from the back of the bass/mid diaphragms and avoid any cabinet vibration. The space inside is left largely unfilled, yet the total weight is around 90kg.

“All that enclosure engineering pays off in a wonderfully clean and clear bass register, revealing tonal subtleties on familiar discs.”

Of course, the drive units are hardly cheap. In fact, they are top quality devices from Germany's Accuton, and all three use ultra-stiff deep-anodised aluminium oxide 'Sapphire' diaphragms. The two bass/mid units have 120mm diaphragms in 170mm cast alloy chassis, driven by titanium wire voice coils. The tweeter has a 30mm diameter diaphragm, equipped with little damping 'ears' to control the out-of-band break-up resonance. Floor coupling is accomplished by a tripod of large hardened-steel, nickel-plated cones, used on top of Nano Pucks. Twin pairs of top class WBT terminals feed the drivers via a simple network with ultra-tight toleranced silver capacitors, air-cored inductors and individually wrapped Wow Resonance multi-strand silver cables.

SOUND QUALITY

Carrying out our usual measurements proved interesting. Sensitivity is bang on the claimed 89.5dB, and although the impedance falls to around four ohms through the bass region, this looks perfectly acceptable in the light of very respectable bass extension, which registered -6.5dB at 20Hz under in-room, far-field conditions. The port here is tuned to around 43Hz, and resonances are visible at 140Hz and the 470-600Hz region.

The far-field in-room averaged frequency responses indicate that the speakers should be kept well clear of walls. The tonal balance is reasonably even overall, if a little strong through the bass and lower midband, but it's not particularly smooth through the lower registers, and there's a slight treble peak at around 6-7kHz. This appears to be as much the responsibility of the bass/mid drivers as the tweeter, as the former show a sharp break-up peak at 4.5kHz, which is only partly suppressed by the gentle slope crossover.

However, those were the measured characteristics when the speakers were driven from a typical solid-state power amp. Substituting a loaned SET valve amp resulted in a smoother balance, which compensated for some of the speaker's characteristics – including smoothing that treble peak. Further investigation of the amp/speaker combinations revealed the valve amp showed

variations of +/-2.5dB corresponding to the peaks and dips of the speaker's impedance.

The fundamental sound quality of this speaker is hard to fault. All that extraordinary enclosure engineering pays off in a wonderfully clean and clear bass register, repeatedly revealing previously unsuspected tonal subtleties on long familiar discs. And while the combination with the valve power amp did supply superior sweetness and smoothness over my normal Naim NAP500 solid-state power amp, as the measurements indicated, the speakers still worked very well on the end of my regular system, and seemed to relish its firmer and more solid bottom end.

If the sound could have been smoother, the music was communicative and entertaining, with prodigious dynamic range and precise, delicate detailing. In a very real sense, the Ti-C SE manages to combine the effortless dynamic drama of a horn speaker with the transparency of a panel design and the sheer practicality of a regular direct radiator.

One might question whether any speaker can really justify such a price tag, and quibble over certain aspects of its technical performance, but there's no disputing the delightful way this speaker communicates the essential musical content of even the most difficult examples from the rock repertoire. A fascinating evening was spent exploring late-1960s vinyl from bands like the Velvet Underground and the Mothers of Invention: these groups were poorly served by the recording studios of the day, but this speaker's exceptional clarity and freedom from overhang through the bass region, plus superb timing and wide dynamic range, made it easy to overlook the grunge and appreciate the remarkably original music that had been hiding in those grooves. **HFC**

Paul Messenger