

HIFICRITIC

AUDIO REVIEW MAGAZINE

Volume 10 / Number 1

January - March 2014

£17 (UK)



MONEY, MONEY, MONEY

...It's A Rich Man's World. Julian Musgrave muses on inflation and value in High End Audio

NAIM'S DR TECHNOLOGY

Does the Naim Statement research programme constitute a revolution in amplifier design and technology?

ATC SCM11

Martin Colloms discovers a compact but powerful sealed-box, two-way, stand-mount loudspeaker

REGA APHETA 2 + APHELION

Rega has upgraded its Apheta cartridge and added an upmarket Aphelion derivative. Paul Messenger reports.

MAN OF NOTE

Chris Frankland talks to Audio Note UK boss Peter Qvortrup about his 35 years in hi-fi, and some exciting new developments

HECO DIREKT

This daringly different loudspeaker has exceptional sensitivity and an evenhanded balance, as Paul Messenger discovers

REVIEWED THIS ISSUE

Rega Apheta 2

Rega Aphelion

Heco Direkt

Leadingedge panels

Missing Link Passion Signature

Soundsmith Zephyr MIMC

Eclipse TD712zMK2

ATC SCM11

Audes Excellence 5 AMT

Allnic HPA5000

Benchmark DAC2 HGC

Astell&Kern AK500 NAS

Naim NAP300 DR

Studio Connections Platinum

Wychwood Audionics

MUSIC & MORE



Editor | Paul Messenger

Writers

- Colin Anderson
- Chris Bryant
- Martin Colloms
- Stan Curtis
- Greg Drygala
- Andrew Everard
- Kevin Fiske
- Chris Frankland
- Stephen N. Harris
- Keith Howard
- Jason Kennedy
- Paul Messenger
- Julian Musgrave
- Mark Prendergast
- Rafael Todes
- Peter Truce

Publisher | Martin Colloms

Design | Philippa Steward

Published by

HIFICRITIC Ltd.

Registered in England No.6054617
 Registered Office: Winnington House,
 2 Woodberry Grove, London, N12 0DR
info@hificritic.com
www.hificritic.com

Printed in the UK by
 Premier Print, London

HIFICRITIC is a printed publication available by subscription only.

© HIFICRITIC Ltd 2016. All rights reserved. Any unauthorised editing, copying, reselling or distribution of the whole or part of this publication is prohibited. The views expressed in any articles in this magazine should be taken as those of the author or the person quoted unless indicated to the contrary. While HIFICRITIC endeavours to ensure the accuracy of the information contained in this publication, its accuracy cannot be guaranteed and HIFICRITIC.COM accepts no liability for any use of, reliance on or the accuracy of such information.

The last edition of HIFICRITIC carried a review by yours truly of the G9 Audio *NERO MkII* valve amplifier combo, and in the first paragraph I wrote as follows: “As I understand it, G9 Audio is a Russian hi-fi brand, based in Moscow, but its *NERO MkII* amplifiers are actually built in Estonia”. Apparently this isn’t the case at all, so my apologies, though I should also point out that the amplifiers were quite devoid of any ‘country of origin’ information.

Getting used to my new Naim *Statement* pre-amplifier has proved quite tricky. I initially purchased it primarily because I’ve been using Naim’s top pre-amp for some 40 years, and the newcomer certainly sounds quite wonderful. But it does seem to have been designed with little reference to the company’s earlier *NAC552*, which I used at the heart of my hi-fi system for well over a decade, and therefore became very familiar with its facilities and vicissitudes.

Moving to the *Statement* involved a number of changes that were largely unexpected. The reduction in the number of inputs (from six to five) was a bit inconvenient, as was the lack of ‘record output’ socketry, both of which are particularly useful in a review context. However, the most irritating omission was the lack of a stereo/mono switch, which I consider is vital for replaying mono albums. I’m still happy to have made the change, but will have to make a few lifestyle adjustments, and will continue to miss that mono button.

Nigel Finn has sent his apologies for the absence of his *Rock & Pop* reviews in this issue. We actually met and chatted during the Bristol show at the end of February, and he fully intended to send me his copy by the end of the following week. Midweek, however, he visited a doctor who definitely pressed the wrong button on his back, leaving him in considerable pain and quite unable even to sit down, let alone write 1500 words. As a person of above average height myself, I have enormous sympathy with Nigel, wishing him well and hoping that he’ll be better in time for our next edition. In the meantime he suggests readers should check out a new 32-track 2xCD or 4xLP release called *Nightbird* from the late Eva Cassidy, which comprises the complete Blues Alley live concert and includes eight previously unreleased tracks.

Paul Messenger
 Editor

NOTE

Readers may note that subscription rates went up for 2016 (eg to £65 UK) and thus we are requesting top ups for old subscription payments. New subs are set automatically at the new rate (£76 for EU and £84 USA and Rest of World). Thanks, Martin Colloms

Contents

- 4 **STAN'S SAFARI No33**
Stan explores the backwater of component microphony, while packing everything up for a house move.
- 6 **MONEY, MONEY, MONEY**
It's A Rich Man's World (Abba 1976). Julian Musgrave muses on inflation and value in High End Audio.
- 9 **REGA APHETA 2 + APHELION**
Rega has upgraded its Apheta cartridge and added an upmarket Aphelion derivative. Paul Messenger reports.
- 10 **MAN OF NOTE**
Chris Frankland talks to Audio Note UK boss Peter Qvortrup about his 35 years in hi-fi, and some exciting new developments
- 13 **MISSING LINK PASSION SIGNATURE**
Kevin Fiske examines an interesting new interconnect
- 14 **LEADINGEDGE PANELS**
Paul Messenger finds that Vertex AQ's 'Leadingedge' panels are a most effective form of room treatment
- 16 **HECO DIREKT**
This daringly different loudspeaker has exceptional sensitivity and an evenhanded balance, as Paul Messenger discovers
- 18 **PRIVATE INVESTIGATIONS**
Keith Howard explores the ideal headphone frequency response, and envisages further developments
- 22 **THE ROAD TO GREAT BASS**
Peter Truce explains why and how multiple subwoofers and heavyweight filtering are necessary to deliver seriously smooth bass in the listening room
- 25 **SOUNDSMITH ZEPHYR MIMC**
Chris Bryant encounters an unusual high end cartridge
- 26 **ECLIPSE TD712zMK2:**
Never mind balance or bandwidth, this 'dinosaur egg' speaker is all about timing – 'TD' in Eclipse-speak
- 28 **NAIM'S DR TECHNOLOGY**
Does the Naim Statement research programme constitute a revolution in amplifier design and technology?
- 34 **ATC SCM11**
Martin Colloms discovers a compact but powerful sealed-box, two-way, stand-mount loudspeaker
- 37 **ALLNIC HPA5000**
Rafael Todes tries a transformerless valve headphone amplifier
- 38 **BENCHMARK DAC2 HGC**
Chris Bryant tries a compact yet unusually versatile DAC/pre-amp/headphone amplifier
- 41 **ASTELL&KERN AK500 NAS**
From a company known for hi-res pocket music players comes a high-end 'network audio system'. Andrew Everard investigates
- 44 **BRISTOL 2016**
Jason Kennedy reports from the biggest British hi-fi show on the calendar
- 46 **MUSICAL TIMING**
Martin Colloms and Stephen N. Harris pick favourite tracks for assessing musical rhythm and timing
- 49 **BITS & PIECES**
Short reports on SC Platinum interconnects and Wychwood Audionics
- 50 **HIFICRITIC AWARDS 2015**
Our retrospective Awards include Audio Excellence, Recommended and Best Buy components
- 52 **HIFICRITIC INDEX TO VOL9 (2015)**
- 54 **KRAUTROCK**
Mark Prendergast examines Germany's crucial contribution to the music of the 1970s
- 56 **JAZZ PICKS**
Greg Drygala picks several recent jazz releases
- 58 **CLASSICAL**
Colin Anderson picks a number of classical releases
- 60 **SUBJ SOUNDS**
Paul Messenger encounters a gorgeous but flawed Estonian speaker



Eclipse TD712zMK2 - page 26



Heco Direkt - page 16

ATC SCM11

MARTIN COLLOMS DISCOVERS A COMPACT BUT POWERFUL STAND-MOUNT, SEALED-BOX, TWO-WAY LOUDSPEAKER

We have been interested in ATC for some years now and wished to review its products, but somehow nothing was ever forthcoming. Ironically, I had recommended a pair of *SCM11s* to a colleague for an evaluation project, and they had proved eminently fit for purpose. Returning the favour he offered *HIFICRITIC* a review loan of these now well run-in £1200/pair models, which I readily accepted.

They do need stands, so we tried several including the Custom Design *FS104 Signature* at about £200, which suited them well in my largish room; more costly stands, ideally 55cm high, might also be considered. The speakers themselves are quite heavy, weighing 10.9kg each, and with a shipping weight of just less than 24kg when packed in pairs.

This is a sealed box design (also known as an infinite baffle), with a volume of 11litres (as indicated by the model number). Infinite baffles are frequently less loud for the price and size than the typical vented or reflex type, but often confer better room matching in the bass (as well as superior musical timing, for those who care about such things). The 23.2x38.1x23.6cm (WxHxD) enclosure has rigid curved sides, and is fabricated from bonded layers of MDF with strategic bracing. The massive power handling is given as 75 - 300W, reflecting its studio monitor pedigree, and a generous six year guarantee is included. The awkwardly compact connection terminals accommodate spades, bananas or bi-wiring, and a neat and very open mesh grille is magnetically located, and easily removed for critical listening.

ATC makes the *SH25-75*, a 25mm soft dome high frequency driver with an acoustically matched high rigidity mounting plate, and a neodymium magnet, crossing over at 2.2kHz. This tweeter is a short-coil long-gap design, and is rare in including a second suspension to control rocking, which will help to minimise distortion at higher power levels.

Some of the substantial mass quotient may be laid at the door of ATC's bass/mid unit, an *SB45-150CLD* driver with a 210mm (8.25in) die-cast frame. Here a long throw voice-coil is used to reduce distortion at higher powers, and is flat-wound for maximum stability at higher sound levels, conferring high power handling. The 15mm long coil runs in a 7.5mm T-pole magnet gap, and the top class

engineering that is evident reflects its studio monitor pedigree. The bass driver is also a kind of hybrid coaxial, in that its dust cap is actually a designed midrange soft dome driver sharing the over-size bass driver voice-coil. The ATC laminated bass cone is manufactured to studio monitor standards and is rigid and well damped. The crossover is second order throughout while the bass section has impedance matching at higher frequencies. Inductors are large air-cored devices, hence non-saturating, and the capacitors are selected metallised film examples.

While a frequency response *per se* is not specified (apart from the nominal -6dB rolloff points of 56Hz in the bass and 22kHz in the high treble), that vital aspect of pair matching which controls stereo precision is given a very tight tolerance of $\pm 0.5\text{dB}$. Sensitivity is a little below average at 85dB but a 'genuine', amplifier-caressing, 8ohm impedance is claimed. Unusually the directivity is noted as 'coherent', implying a largely uniform output over 20 vertical degrees and 160 degrees horizontally.

Sound Quality

These speakers proved to be temperature sensitive, and they do not perform so well when the temperature is below 19°C; under these circumstances, the bass sounds somewhat dry and 'uptight'. They really began to come to life at 22°C, delivering the music with an exuberant pace and drive which greatly entertained me and my listeners. As befitting their monitor origins, a clearly defined crispness and clean punchy articulation revealed much information in familiar test tracks. The first thing that hits you is the excellent timing, which is quick, upbeat, with a very tuneful and crisp bass.

A most impressive 45rpm re-cut of Frankie Goes to Hollywood was heading towards a reference standard of sound quality for tuneful and punchy bass drive and involvement. While it is slightly lean in the bass compared with some examples, low frequencies have a concerted impact and are fast and nicely textured. Careful positioning, if necessary placed nearer to a wall than usual, provided some extra low frequency weight in my largish listening room, but take it too far and vocals may sound thickened, or 'plummy' (in old-speak).

I worked with spaces of between 0.7 and 0.9m



behind the speakers. Stand over the loudspeakers, and as with many they sound obviously too bright, but sit on axis, with the mid-to-treble driver dividing line just below ear height and the enclosures toed out about 7°, and performance was really impressive, well beyond price and size. They were really entertaining, and exceptional power handling meant that it was easy to wind them up to genuinely high sound levels without any sign of faltering.

It sounded substantially evenhanded on both rock and classical music, with clean and clear singing voices. Orchestral staging and perspectives were presented well, with thoroughly satisfying musical performances, good to very good depth, and stable perspectives. Voices sounded clear and focused: cone 'shout' was kept to modest levels, and speech was only a touch thickened. Percussion was a particular *forte*, keeping the differentiation of instrumental sounds very clear, coupled with explosive mid-bass dynamics. They sounded quite uncanny on rock and pop material, in part because so very few competing designs in this price bracket really get to grips with the beat. Here bass, midrange and treble regions drive in unison with almost no aural confusion; it's a foot-tapper's delight, especially with the likes of Naim electronics.

They certainly need power, not just to get them going but to enjoy the impressive articulate and dynamic slam of which they are capable. Those who don't go crazy will find that 50W/ch is just fine, but 70-150W really shows off what they can do. An Arcam A49 integrated amplifier or Naim NAP250DR stereo power amplifier might be considered price mismatches, but they're definitely not performance-wise; indeed, they could well be used with a large valve power amp. Furthermore, experiment demonstrated that the *SCM11* is less critical than most when choosing cables and amplifiers, thanks to its beneficially moderate impedance loading.

Conclusions

If you think that this reads like a positive review, then you would be right. Not only does the ATC *SCM11* reach beyond its class for sound quality but it does so through exceptional engineering, and shows seriously good taste in balancing the frequency response. Although it's not perfectly neutral in the midrange, the listener is mightily rewarded with enthusiastic musical drive, great dynamics, very good clarity and detail and exceptional bass rhythms. Build quality is first class, and the lab report would grace a design at five times the price. It proved easy to fine-tune its location in the listening room, and is also an easy amplifier load. The ATC *SCM11* is a clear winner and readily achieves a *HIFICRITIC* Best Buy accolade.



Lab Report

This design delivered an impressive set of frequency responses, and in contrast to many, the manufacturer's claims were met in full, including the very close tolerance for pair matching of $\pm 0.5\text{dB}$. Our frequency responses gave a most accurate 64Hz to 22kHz $\pm 2\text{dB}$ overall and a very tight 100Hz to 15kHz $\pm 1.5\text{dB}$ tolerance on-axis. It has well-damped, sealed-box bass, so declines gradually without booming, to 60Hz, -3dB and 50Hz -6dB . Well sited in a listening room, the bass is extended to about 40Hz.

Driver integration is excellent, with hardly any loss right out to 45 degrees laterally off-axis, and the vertical axis is also perfectly judged. The traces show a characteristic if mild presence dip, of about 2dB between 1.5kHz and 6kHz, leaving the upper treble slightly exposed and the lower mid a little 'plummy', but this comment could well be regarded as nitpicking. A trace of this can be seen in the otherwise excellent room averaged response which also shows slightly subdued but still very good bass extension quite free of boom



**HIFICRITIC
BEST BUY**

The System

Amplification: Constellation *Virgo* pre-amp, Constellation *Centaur* power amps, Townshend *Allegri* control unit, Naim *NAP300DR*. Sources: Naim *UnitiServe* network server and *S/PDIF* source, Naim *NDS Streamer-DAC [+555PS(DR)]*. Loudspeakers: Magico *S-5*, Neat Momentum *SX3i*, Quad *ESL63*, BBC *LS3/5a*. Ancillaries: Naim *FRAIM* racks; Transparent *MM2* and Naim *NAC A5* speaker cables; Naim *Super Lumina*, Transparent *MM2* and Van Den Hul *Carbon* interconnect cables.

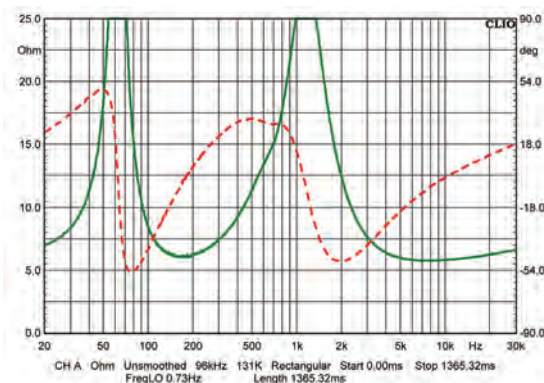
or overhang. Here the in-room response was $\pm 3\text{dB}$ 40Hz to 12kHz, which is a fine result.

Sensitivity measured 85.5dB, which is slightly higher than specified, and all too rarely found! Higher amplifier powers of 50-200W are suitable, though in context it is an almost perfect 8ohm impedance load with moderate phase angles, which will be friendly towards cables, terminals and amplifiers alike. The driver build includes distortion control measures that were confirmed by the first rate results that were obtained here (aside from one sample buzzing at 10W at about 300Hz, which was soon fixed by a couple of turns on the terminal panel moulding bolts). It also benefited from judicious tightening of the bolts fixing the bass driver frames, which slightly improved dynamic contrasts.

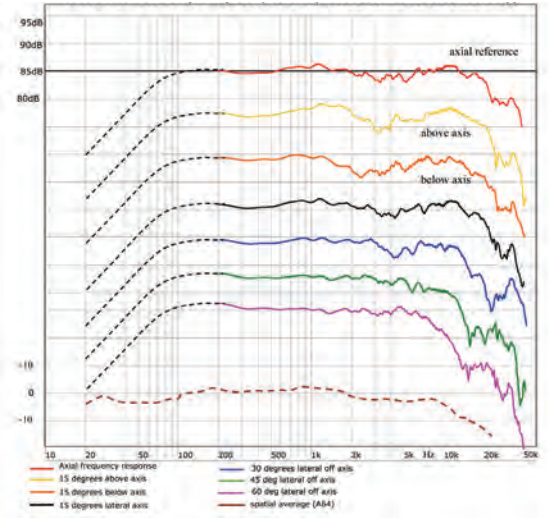
ATC has been exploring lowered tweeter distortion, and has succeeded in keeping third harmonic below -60dB (0.1%), and similar values for second harmonic, even at high powers (eg a 10W input). The bass driver could sustain a generous 30W sinewave at 40Hz without audible distortion, and over the frequency range was typically better than 0.2% (-55dB) second and 0.1% third harmonic at 1W, which is very good by any standards. Taken with the sealed box loading, this is a genuinely low distortion loudspeaker.

The open mesh metal grille was exemplary, decorative, protective, and almost invisible in measurement: perfect to 6kHz, only minor ripples of about 0.5dB were visible from 7kHz to 12kHz. Subjectively it sounded just a little more dynamic without the grilles but this was hardly noticeable. Measuring energy decay behaviour, the early decay has low phase error with a rapid early damping, leading on to a more complex slower decaying floor. This is a fine result, also showing good driver integration. These test results confirm a loudspeaker of exceptional overall engineering and accuracy.

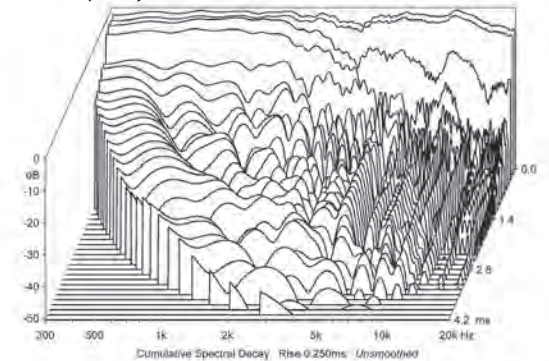
Frequency Response: ATC SCM11
Impedance and Phase: 8ohm Rating



ATC SCM11 Frequency Responses (85.5dB/W Tested Sensitivity)



ATC SCM11: Waterfall Display of Energy Decay with Time and Frequency



**ATC SCM11
HIFICRITIC Loudspeaker measured test results (Feb 2016)**

Make	ATC Ltd
Country of origin	Manufactured in the UK
Model	SCM11: moving-coil, sealed-box loading, stand-mount
Price per pair	£1200
Size (WxHxD)	23.2 x 38.1 x 23.6cm
Weight	10.9kg
Drivers:	2 way: 210mm alloy frame, synthetic and pulp cone bass/mid 25mm soft dome tweeter, dual suspension, neo magnet
Sensitivity for 2.83V	85.0dB (at 1m)
Amplifier loading	Load Impedance: 5.7ohm minimum, 8ohm rated (very good)
Frequency response, axial	65Hz to 22kHz $\pm 2\text{dB}$ (listener axis) (very good)
Frequency response off-axis	Excellent: see graphs and in-room response
Bass extension	50Hz -6dB, (38Hz, -6dB typical in-room)
Max loudness, in-room	104dBA for a stereo pair
Power rating (max, min)	200W, 50W
Placement (recommended)	Ideally a 56cm spiked stand in free space

Contact:
www.atcloudspeakers.co.uk
Tel: 01285 760561

Subjective Sounds

PAUL MESSENGER

HIFICRITIC

AUDIO AND MUSIC JOURNAL

BECAUSE HIFICRITIC IS FUNDED BY ITS READERS THE SUBSCRIPTION COST IS NECESSARILY HIGHER THAN FOR MAGAZINES SUBSIDISED BY ADVERTISING REVENUE, THOUGH CERTAINLY NOT AS HIGH AS PROFESSIONAL SPECIALIST JOURNALS.

Our budget is directed towards obtaining the very best research and writing from the very best freelance authors, whom we encourage to express themselves fully in print, an opportunity not always available *via* established publishing regimes.

Through the use of a virtual office, we aim to be exceptionally cost effective. Subscription management, production, printing, editorial, design, laboratory measurement and journalism are scattered around the world, yet are also efficiently and almost instantaneously linked at the touch of an e-mail send button.

Our independence from product advertising allows us to criticise and comment without fear or favour. The HIFICRITIC team scrutinises interesting and internationally important issues and equipment in depth and detail, technically and subjectively, and provides comprehensive investigations into the key issues facing high quality stereo music recording and reproduction today.

Martin Colloms, Publisher

SUBSCRIPTION DETAILS: Full details are provided on the WWW.HIFICRITIC.COM website, including foreign rates and secure electronic payment. If you prefer to pay direct for the UK please copy this page and send the filled in form, including a cheque payable to HIFICRITIC Ltd and send it to: HIFICRITIC, 29 Flask Walk, London NW3 1HH.

Our website supports the day-to-day activities, reports, archive and download material, while the Journal contains the primary contemporary output of our editorial team. The HIFICRITIC audio journal is a full colour print magazine with about 40,000 words of original editorial content per issue. To see what is in our most recent issue, see our *current issue* page.

Name

Address

.....

.....

Town.....

Post Code

Country

Email

Please give your choice of issue number for start of subscription (see above) Issue no.....

UK SUBSCRIPTION PRICES: (*mail included*)

1 Year £65, for four, quarterly issues

A couple of weeks after a large Schenker lorry had pulled up outside to deliver the G9 Audio valve amplifier set that I reviewed in the last issue (*HIFICRITIC Vol9 No4*), I was staring out of the window when the same thing happened again. No déjà vu, this was the real thing: another enormous Schenker lorry was pulling up, and this time I'd no idea why.

It turned out to be another delivery, again from Estonia, but this time consisting of two very hefty Audes *Excellence 5 AMT* loudspeakers. Unlike the Russian amplifier from G9 Audio, the Audes brand enthusiastically proclaims its Estonian ancestry, and since the loudspeakers weigh some 55kg+plinth each, it's safe to assume that they're floorstanders.

They're not even currently available in the UK, but the reason for reviewing them here is simply that their combination of wood veneers and black lacquer paintwork makes them among the most beautiful speakers I've ever seen. Although I normally try to avoid making aesthetic judgements about review products, there's no denying that these tall, slim, unusually deep and cunningly asymmetric speakers do look exceptionally good, especially their real wood veneered sides.

A pair costs 14,000 Euros in Germany, which translates as a little less than £11,000 in the UK, so they're not exactly cheap, but that's still far below today's 'high end' speaker prices. The bottom line must be to figure out whether they sound anywhere near as good as they look, though some further description must be dealt with first.

In order to keep the front view super-slim, the bass drivers – two paper-cone 8-inchers (200mm) in each speaker – are both mounted on the sides, which are mirror-imaged. The front view is just wide enough to accommodate two 5in (125mm) midrange drivers that are mounted above and below an AMT-type tweeter. The latter has a level control mounted on the rear; this adjusts the output by ± 3 dB, with the impedance here comfortably high.

Although I'd like to have checked my far-field in-room measurements again, the speakers have actually already gone back to Estonia at the time of writing, so that isn't possible. I can report that the claimed 92dB sensitivity is correct, and the midrange and treble responses are very smooth and well ordered. While I cannot carry out further checks on the bass behaviour, the impedance is a real problem, as it drops significantly below 3.3ohms across the two sub-80Hz octaves.

The sound quality of the *Excellence 5 AMT* is smooth, well balanced and essentially free from colorations. I might criticise it for sounding a little too restrained, but this essential tidiness might also be regarded as a strength. One might wish for dynamics that are a little more vivid and expressive, but in other respects the speaker is impressively evenhanded, and its slim front view helps promote fine stereo imaging, with fine focus and good depth.

The bottom line is that this Audes speaker remains among the most beautiful around. Its sound quality is always well behaved, with a superbly even tonal balance, low coloration, and fine stereo imaging. But there is also a problem, as the impedance at low frequencies is very demanding indeed. This will make life very tough for the partnering amplifier, and clearly prevents any formal Recommendation.