

CAN DO ATTITUDE FROM KANTO'S TUK

hi-fi+

REPRODUCING THE RECORDED ARTS
www.hifiplus.com

AUGUST 2019 • 174



ISSN 1465-5950
9 771465 595042

WONDER WILSON!

THE NEW SASHA DAW SETS THE STANDARD



ATC 100 SE
FUNK FIRM RAGE MODS
NEAT ACOUSTICS EKSTRA
ISOTEK EVO3 SYNCHRO UNI



WIN!
MELCO'S LATEST
DIGITAL MUSIC
LIBRARY WORTH
£1,800!

CLASS A POWER WITHOUT THE HEAT FROM SUGDEN!



A Legend in the Making

Vantage™

New Product

Vantage™ is a compact 3-way loudspeaker incorporating 7 key technologies, along with the same materials & precision production methods utilised in the flagship, Sonja™ XV.

This results in a transducer which widens the opportunity for discerning music lovers to enjoy the sonic hallmarks of YG Acoustics™.

Distributed in the UK by



For your nearest UK dealer please
call Padood on +44 (0) 1223 653199
or visit www.padood.com



Carmel™ 2
Pure Clarity



Hailey™ 2 Series
Pure Harmony



Sonja™ 2 Series
Pure Seduction



Sonja™ XV Series
Pure Seduction

EDITOR

Alan Sircom
Email: editor@hifiplus.com

**CONTRIBUTORS THIS
ISSUE INCLUDE:**

Julian Ashbourn, Dennis D Davis,
Steve Dickinson, Jimmy Hughes,
Jason Kennedy, Simon Lucas,
Chris Martens, Tom Martin,
Steven Stone

GRAPHIC DESIGNER

Jenny Watson
Fonthill Creative, Salisbury

ADVERTISING MANAGER

Tom Hackforth
Tel: +44 (0)1425 655255
Email: tom@hifiplus.com

PUBLISHER

Pete Collingwood-Trewin
Tel: +44 (0)1425 655699
Email: pete@hifiplus.com

EDITORIAL DIRECTOR

Chris Martens
Tel: +1 (512) 419-1513
Email: cmartens@nextscreen.com

**THE EDITORIAL OFFICE
CAN BE CONTACTED AT:**

Hi-Fi+ Editorial
Absolute Multimedia (UK) Ltd
Unit 3, Sandheath Industrial Estate,
Sandheath, Hampshire
SP6 1PA
United Kingdom
Tel: +44 (0)1425 655255
URL: hifiplus.com

Absolute Multimedia (UK) Ltd is a
subsidiary of TMM Holdings LLC,
2500 McHale Court, Suite 100A
Austin, TX 78758, USA

CHAIRMAN AND CEO

Thomas B. Martin, Jr.

All Rights Reserved.
Not one word of Hi-Fi+ may be
reproduced without the written consent
of the Editor. We are perfectly happy
to co-operate, but we don't want
quotations to appear out of context.

Printed By
Pensord Press, Caerphilly

Hi-Fi+ is published twelve times a
year by: Absolute Multimedia (UK) Ltd

ISSN 1465 5950



hifiplus.com

editorial

There is an interesting difference in the outlook of the two 'lead' reviews in this issue. One – the Neat Acoustics Ekstra – is in part designed to meet the concerns of a value-conscious world, where every penny counts. While no loudspeaker will ever cost pennies, the Ekstra is attainably priced for most enthusiasts these days, by making a good loudspeaker in a cabinet that keeps the overall price down.

The other is the Wilson Audio Sasha DAW, which makes no such compromises, and as such costs an order of magnitude more than the Neat. I'm buoyed that both exist, because it shows continued diversity and range in audio. We need products that don't cost a fortune, but we also need those that do, and for the same reason: growth.

I am less convinced by 'trickle down' arguments for high-end devices, even though the Sasha DAW utilises a lot of trickle-down from higher-end Wilson speakers. Those technologies that raise the standard of the Sasha DAW are unlikely to make it into true entry level loudspeakers. But what these products can do is act as an intuition pump and a standard that other companies can strive to achieve.

Meanwhile, at more down-to-earth prices, we still need a range of damn good products that inspire and excite people enough to listen to more music. Often for the first time at a decent performance level. The 'I didn't know you could do that' moment such products create is the point where a love of good audio is cemented in place. While few may upgrade to bigger and better, 'few' is still better than 'none'.

However, we need to be more accommodating of products at a variety of levels. There's a tendency among some audiophiles to be dismissive of lower-end audio; you may live on foie gras and caviar, but some people survive quite comfortably on ham and eggs, and unless you want to sound like audio's Marie Antoinette, best keep schtum. At the other end of the scale are the definers of all things 'rip off' (which typically means 'just that bit more than I can afford'). To them, not everyone has the same budget as you, and while you think anyone who spends more is a gullible rube, there are plenty of people who spend a lot less who think you are pretty credulous, too. Just sayin'...

Hi-Fi+ is saddened to learn of the passing of Jason Hector (who reviewed for this magazine in its early years) and Richard Dunn of Nene Valley Audio fame. Our thoughts are with the families of both at this difficult time.

Alan Sircom
editor@hifiplus.com

ISSUE 175 ON SALE SEP 5, 2019 (UK), OCT 3, 2019 (US)



15 years

FUTURE DREAM: Limited edition power, speaker, interconnect and phono cables with Crystal Cable's new and unique **hybrid technology**.



To find out more about Crystal Cable's products and special activities during this anniversary year visit:
www.crystalcable.com and www.crystalcable.com/futuredreamfundraising



Distributed in the UK and Ireland by Padood
www.padood.com | info@padood.com
+44 (0)1223 653199 | 20 Station Road, Cambridge CB1 2JD

contents ISSUE 174 EQUIPMENT+

COMMENT

- 4** **INCOMING!**
Your views on all things audio
- 9** **THE TRUTH ABOUT HIGH-RESOLUTION**
Is CD quality really all we need?
- 69** **RMAF 2019**
Why a change of scene was needed

MUSIC

- 71** **CONTEMPORARY AND AUDIOPHILE MUSIC**
- +**
- 27** **COMPETITION!**
Win! A Melco N100 digital music library worth £1,800!
- 75** **ADVERTISER INDEX**
- 76** **SUBSCRIPTIONS**
- 96** **NEXT MONTH**
Find out what's happening next month!

REVIEWS

- 13** **NEAT ACOUSTICS EKSTRA**
floorstanding loudspeaker
- 21** **WILSON AUDIO SASHA DAW**
floorstanding loudspeaker
- 29** **ATC SCM100SE**
floorstanding loudspeaker
- 37** **HARMAN KARDON CITATION TOWERS**
wireless active floorstanding loudspeaker system
- 43** **SUGDEN MASTERCLASS ANV-50**
integrated amplifier
- 51** **KANTO TUK**
bluetooth-enabled active standmount loudspeaker
- 57** **THE FUNK FIRM RAGE 1**
upgrades for Rega turntables
- 61** **ISOTEK SYSTEMS SYNCHRO UNI**
DC offset blocking device
- 65** **TELLURIUM Q ULTRA BLACK II**
analogue interconnect and loudspeaker cables



90

- 81** **Hi-Fi+'s Ultimate Headphone Guide**
- 83** Show Report: Personal Audio at Munich High-End 2019
- 86** Incoming: We answer your personal audio questions
- 88** Monolith-Cavalli Liquid Spark headphone amplifier
- 90** Astell&Kern ACTIVO CT10 digital audio player
- 92** 1MORE Triple Driver BT earphones
- 94** Campfire Audio Solaris hybrid dynamic/balanced armature earphones

Please send your letters to Hi-Fi+, Unit 3, Sandleheath Industrial Estate, Sandleheath, Hampshire, SP6 1PA, United Kingdom.
Or email them to editor@hifiplus.com

incoming!

in association with **audioquest**

LETTER OF THE MONTH WINS A DRAGONFLY BLACK

Both AudioQuest and *Hi-Fi+* are passionate about music and the sound it makes. We know what makes a good audio experience, and we know what makes it better. Most modern audio equipment is good, but with the right attitude, right advice, and the right components, the sound it delivers can move from 'good' to 'great' to 'fantastic'. AudioQuest has to deal with a lot of queries regarding audio systems, because almost everything in an audio system is connected with a cable. The company has amassed a wealth of information on a range of topics in audio, both in general terms and with a team comprising keen, specialist audio experts willing to impart their expertise.

Which is why we've teamed up with the good folks at AudioQuest to award the letter of the month a free AudioQuest Dragonfly Black headphone amp/DAC.

What next?

I have a good system (Naim CDX2 and Supernait 2, with a pair of PMC Fact.8 loudspeakers, with Chord cable and Naim Fraim table). I really like it and have no desire to 'upgrade' to streaming just yet, but I am a bit bored with it, I have some money to burn, and just want to change something, What should I do?

Derek Carter, via email

The itch that always needs scratching is a part of being an enthusiast. It applies just as much to photographers and anglers as it does to audiophiles. The trick is to scratch that itch without making it worse.

If you like what you have, change for the sake of change is probably not a good idea. If you are bored, rather than bored with the sound of the system, I suggest changing almost nothing and just adding to an existing good system. The logical addition is a power supply for the CD player. Adding in an XPS makes a lot of sense here, and that with an extra Fraim should keep the boredom monster from the door for a little while longer. I would also suggest an audition of other options, which may or may not involve changing the system, changing or upgrading the cables, adding some kind of power conditioning, or a number of other options. Don't forget that the Supernait 2 could also be upgraded, both with a power supply of some description, or possibly using it with a separate power amplifier as a stepping stone to even better things! I would also suggest that – despite your reticence – now could be a fine time to start to investigate streaming.

Just don't take the nuclear step of changing the whole system yet!

Robert Hay – AudioQuest



YouTube – king of music formats!

Hi-Fi enthusiasts might rave over the performance of MQA, DSD, Tidal, or of Qobuz, but there's a harsh reality that no-one in the audio world seems willing to address; most music today is listened to through YouTube!

I didn't realise quite how ubiquitous YouTube as a music service was until I heard about Japan. Japan has been the last main hold-out for music played on CD, but even there YouTube has eclipsed physical formats. The Japanese, it seems, even skipped over the whole iTunes and subsequent hi-res streaming steps, and went from disc to YouTube seemingly overnight.

The trouble is, YouTube is unashamedly terrible at playing music. It might be great as the MTV for Millennials, but the sound quality is almost routinely unashamedly poor, and incapable of improvement by my seat-of-the-pants assessment. I'm not sure if the audio world can withstand such an onslaught.

The First Word in Music Streaming.



Music. Literally the first word in 'music streaming', and always our top priority. Our network players feature cutting-edge technology – developed over 3 years by 25 expert engineers at our Salisbury HQ – but more importantly stay true to our founding mission, to take you closer to the authentic emotion of the music you love.

So, whether you're listening to your own digital library, commercial music services such as TIDAL and Spotify, internet radio,

or exploring the world of Roon, you'll enjoy music streamed with our signature pace, rhythm and timing. Handmade here in England, the slimline ND5 XS 2, Classic superstar NDX 2 (pictured) and flagship ND 555 players are winning Awards around the world. Hear the difference with your favourite music at your local Naim specialist retailer.

naimaudio.com/streaming

Awards for NDX 2



- ▶ However, if you can't beat them, join them. Maybe if the best audio brands met with the teams at YouTube, they could thrash out a means whereby we get good sound as well as great access.

Dave Cooper, via email

The odd thing about YouTube's rise to greatness in Japan is it doesn't seem to have come with a similar abandonment of physical formats. It's more a generational thing; the traditional buyers of CD in Japan are still buying CDs and not materially moving to YouTube, but the younger generations are not so convinced by owning a CD collection. Such are the demographic problems endemic to Japanese society that CD buyers still make up a sizeable proportion of the whole music market.

This doesn't change the point you make, however. YouTube is not audiophile poison, but its ubiquity and poor quality do mean a generation of potential owners are fed a diet of 'good enough' sound and that has an impact on high-performance audio sales. Sadly, when you have music viewing figures in the billions, you don't need to take those calls from audiophiles seeking to make the world sound a little better. – Ed

Clever putty? Go with Playdoh!

Nigel Crittenden's comments ('Clever or not?' *Incoming*, Issue 172) got me thinking and experimenting. I went through a whole toy-shop of goos and putties and other such things (I have a young grandson, access and availability to such things is practically instantaneous because it's everywhere). Here's

- Clever Putty. Too accommodating, your product will sink into the putty.

- Clever Putty wrapped in cling-film. Not much better, the putty in cling-film tends to conform to the contours of the equipment too much, and becomes very hard to level. It does isolate the system, but the sound it produces is worse rather than better in my opinion (I was using a Creek CD player and amp).
- Lego bricks. No! Proves feet make a difference, but not in a good way.
- Playdoh. Less conforming than Clever Putty, sounds reasonably good, in an 'space not pace' manner. Needs regular re-rolling to maintain integrity.
- Playdoh under three feet, Lego bricks under one foot. Grandchild has been playing with the hi-fi again. At least the brick is under the foot of an amplifier, not a grandfather! Actually, this possibly works best of all, even if the amplifier begins to list to one side before the end of the first track.

Ultimately, Playdoh and the Playdoh/Lego combinations worked best, but none of them worked better than simply putting the system on a stand.

Alec Rye, via email

Thank you. Your services to audio have been duly noted. Consider this the equivalent of being mentioned in Dispatches. – Ed

Yes, this is a golden age!

I can understand the reaction by the unnamed author of 'Is this a golden age?' (*Incoming*, Issue 173), but I find the nostalgic view of the past somewhat alien and frankly damaging.

The reason why so many older products are viewed so positively is two fold. They are reminded of their father's audio system from 50–60 years ago (when 'hi-fi' was 'high fashion'), and the recordings at the time were recorded without a mind to heavy signal compression. If you got a studio engineer from the 1950s (and who wasn't hard of hearing due to advanced age), they would be amazed at what was possible from today's audio. They'd also be amazed at what can be done in today's studios. It's just a pity that those modern musical tools are so rarely used for good.

'Art', via email

Nail. Head. Hit! While modern methods of design and manufacture allow for some tailoring of the sound, we also have a lot of the technology needed to make extremely good and consistent audio products at a range of prices. It's a shame in a way that the same drive to look backwards in audio is preventing audio from looking forwards to active loudspeakers, room treatment, and DSP – if I had a pound for everyone who dismisses DSP because they used to have an AV receiver 17 years ago and weren't impressed, I'd have about £13 by now! – Ed

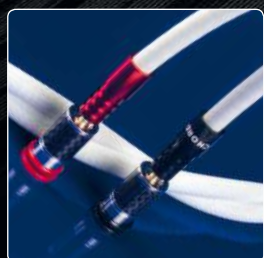
[master]

The definitive version. Ultimate performance, bespoke audiophile cable collection.

Chord Company Signature, Sarum and ChordMusic form the vanguard of our cable ranges. A master collection that features our latest conductor, insulation and connector technology.

High-end audiophile quality at a realistic price and each one built to **your** specific requirements. Book a demonstration and hear the difference for yourself.

Designed and hand-built in England since 1985 by a dedicated team of music-lovers. Arrange a demonstration at your nearest Chord Company retailer. Find out more: www.chord.co.uk



CHORDTM

COMPANY



State Of The Art musicality, transparency and holographic rendering regardless of musical genre!

Model 3000 mk2 vacuum tube line preamplifier w/remote control



Model 9600 mk2 vacuum tube mono power amplifier



Model 120 solid state MC stereo phono preamplifier



Model 3100 vacuum tube line preamplifier



AUDIOFREAKS

DISTRIBUTION AND CONSULTANCY OF FINE AUDIO INSTRUMENTS

tel: 020 8948 4153

email: info1@audiofreaks.co.uk

www.audiofreaks.co.uk

AFI - flat (The Record Flattener) • Cardas • conrad-johnson • finite elemente • HighResTech • Karan Acoustics
Kuzma • Magnum Dynalab • Muse Electronics • Running Springs Audio • Vienna acoustics • **Zanden Audio**

The Truth About High-Resolution Audio

by Julian Ashbourn

Perhaps one of the more interesting developments we have seen in the world of audio in recent years is the rise in the availability of high-resolution recordings, together with the equipment necessary to play these files. The origins of this development lie in the dissatisfaction, among some, with the quality of sound coming from Compact Disc. To be fair, much of this criticism came from the fact that, in the early days of CD, every record label rushed to reissue their analogue catalogue on the new medium with little thought of audio quality. It was deemed sufficient to have pop and click free sound. Consequently, the promise of CD was not really exploited until much further down the line. The fact is, CDs can sound absolutely wonderful with a top quality recording and attention paid to mastering and production. However, in many aspiring audiophile minds, the damage had been done and CDs became the villain.

So, we saw a move back to vinyl, which has been very good for the industry, and a parallel interest in high-resolution digital files. But are we in danger of falling into a similar trap as in the 1970s, where specifications alone were all-important? To answer this question, we need to give some serious thought to how we hear, and the reality of making high-resolution recordings.

Let's get technical for a moment. The CD format of 16bit dynamics and 44.1kHz sampling frequency provides for a frequency range from 0Hz to around 22kHz, i.e., beyond the accepted range of human hearing, together with a dynamic range of around 95dB. More than enough to cover the extremes of almost all available musical instruments and performances. The broadcast standard of 24bit at 48kHz

extends the dynamic range to just short of 150dB and the uppermost frequency to 24kHz. This will cover just about everything coming from natural sources. However, audiophiles like to revel in 24bit 96kHz sampling, which extends the upper frequency to around 48kHz, or 24bit 192kHz sampling which extends the upper limit to around 96kHz, and we can even go further than this. These rarefied upper frequency ranges are, of course, well beyond the range of human hearing and one might well ask the simple question, why? (actually, that is a very good question to ask in many instances).

Those who passionately support Hi-Res will say that, while they cannot hear anything at these frequencies, they can 'feel' a difference in the music. Often this is suggested as an enhanced airiness. Oh yes? With what sensory organ do they hear this airiness? Certainly not their ears. While it is true that you can 'feel' very low frequencies, if applied at high amplitude and at close quarters, this is a different phenomenon as it is simply the large acoustic waves hitting our bodies at a wavelength that we interact with. It is more probable that what the Hi-Res fans hear is an additional smoothness to the sound as a result of the higher frequency sampling and, of course, the ADC components used in 192kHz recordings are probably going to be of good quality which, itself, will write its signature on the final sound. As someone who has recorded orchestras and folk ensembles at a variety of sampling rates, I can, even with my ageing hearing, notice a very slight difference in the smoothness of sound at 96kHz compared to 44.1kHz when listening to the original, first generation recordings, but it is a very small difference and other factors within the recording chain can make a larger difference to the overall quality of sound.

An interesting test, let's call it the BAT (Better Audio Technology) test, would be to get a friend to obtain a small number of high quality recordings at a variety of sample rates and place these, in random order, upon a high performance Digital Audio Player. Place a piece of electrical tape over the display of the player so that you have no idea of the resolution being played. Now, with a pad and paper, listen to all the recordings and make a note of what you hear and which examples sound better to you. If you can reliably determine the different sampling frequency rates, in the right order, then you may be blessed with extraordinary hearing.

Most of us who fall in the 'beyond middle age' range will be lucky if we can hear a fundamental tone at 15kHz. By the time we reach 60 years of age, this may drop to around 12–13kHz for the average male, a little higher perhaps for females. So, a signal at 96kHz is going to mean little to us. But we probably will perceive that additional smoothness in the middle frequencies that Hi-Res can (sometimes) provide. There are many other factors to consider when evaluating the quality of recordings though, some of which have a far greater impact. One may also like to consider the frequency range present in a typical, orchestral recording, such as the supplied spectrogram of 'Finlandia' by Sibelius.

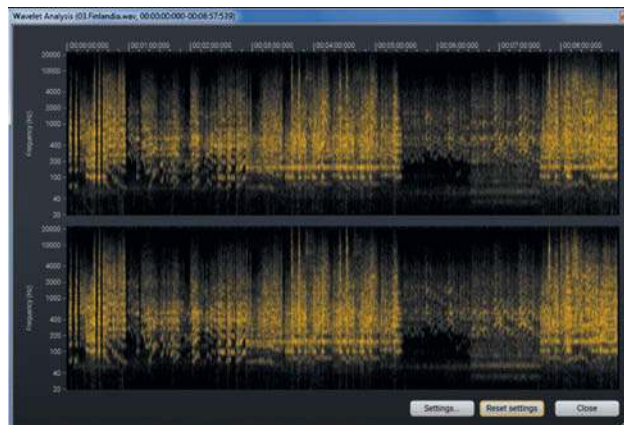
“By 15kHz there is relatively little signal, so what would be the point of recording at 48kHz or above.”

- ▶ As may be seen, there is some energy extending to 20kHz, in fact, there are some small harmonics at 22kHz, but most of the energy lies in a band extending from around 50Hz to about 9kHz, after which, it tapers of quite quickly. By 15kHz there is relatively little signal, so what would be the point of recording at 48kHz or above? There is nothing there, at least not with conventional instruments.

We then have the question of how original recordings are made, and with what equipment. Most recording engineers have favourite microphones and mixing components. It is ironic that many of these condenser microphones from companies such as Sennheiser, Beyerdynamic, AKG, Neumann, Shure, Rode, and Audio Technica have frequency responses that drop off fairly sharply after 20kHz and, there are some often used favourites where this figure is closer to 18kHz. They will respond to nothing at 48 or 96kHz, and this is, for most purposes, a good thing, as one would not want to be injecting very high frequency noise into the mixing chain.

In order to *actually* record in high resolution, firstly, we need specialist microphones that can respond to these very high frequencies, without introducing too much self-noise. These are not common. Then we need microphone preamplifiers and mixers which also have this extended frequency response, together with ultra low noise capabilities and, of course, a similarly extended and clean analogue to digital converter. This sort of equipment is not something that you will find in your average recording shop. Let us suppose though, for the moment, that we have the perfect microphone, with a flat response extending from 20Hz to 96kHz and a noise floor approaching 150db, connected to a special microphone cable that can also cope with this performance criteria without mangling the sound too much. We shall feed this into an ultra low noise preamplifier and mixing section with similar specifications and then, on to our analogue to digital converter which, in turn, will output a beautiful Hi-Res sound into our digital recorder, or computer. This device, whatever it is, will need to have similarly extended specifications in order to produce our Hi-Res file.

Actually, yes, we can do all of this. But what are we to record? Which natural instruments produce identifiable sound energy at these frequencies? Recording a solo violin at 24bit 96kHz, with the musician playing the highest possible fundamental note, I noticed, on analysing the first-generation file, some feint energy (harmonics) reaching up to around 28kHz. A soprano flute may similarly produce harmonics in this area, but whether I can hear them or not is another matter. Most of the meaningful signal in my solo violin recordings may easily be contained within the CD specification of 16bit 44.1kHz sampling.



I have also been surprised, when recording a full orchestra, that the electrifying dynamic range, heard at the podium position, may easily be captured in 16bits if you get your levels set properly. Note, that I do not use any limiters in the recording chain. One can generate electronic, synthesised sounds that extend beyond the range of human hearing and, possibly, a dynamic range extending beyond 100dB. But it surely all becomes academic at these levels.

In conclusion, the author is certainly not against Hi-Res, but we should get things in perspective. The slightly increased smoothness of a 24bit 96kHz recording in the middle ranges is worth having, provided, that everything else is of a suitable quality. It is interesting that, especially within the field of classical music, many audiophiles have favourite recordings that were made in the late 50s to early 60s. Music is not just about specifications. Musical performance is the defining factor and, often, the ability to capture this performance using minimalist microphone techniques and solid engineering skills, will make the difference.

While writing this, I am listening to some jazz recordings made in the early 60s. They sound wonderful and immediate, with a great sound stage and highly musical. I don't really care that they are not Hi-Res. The balance is good and they were obviously recorded and engineered by someone who knew what they were doing. Ahhhh... +



MOON

by SIMAUDIO



Elevate your sound experience



Distributed in the UK and Ireland by



Renaissance

info@renaissanceaudio.co.uk
www.renaissanceaudio.co.uk



STREAMING'S NEW CUTTING EDGE

ES9038PRO
SABRE DAC

DSD512
22.6MHz

PCM
768kHz

USB
OUTPUT

ALL-NEW
PSU

OPTICAL
NETWORK

LUMIN

Authorised distribution

selectaudio[®]
exquisite audio products

www.selectaudio.co.uk
info@selectaudio.co.uk

LUMINMUSIC.COM

Neat Acoustics Ekstra floorstanding loudspeakers

by Alan Sircom

There is a lot of discussion about 'price creep' in audio. A lot of it is extremely understandable and, to no small amount, justified. Granted some of that comes from taking long hiatuses in audio (if you last bought a pair of loudspeakers in 1989, 30 years of inflation might come as a bit of a shock), but that doesn't explain the whole situation. The Neat Acoustics Ekstra wasn't necessarily created to address this problem – Neat designer Bob Surgeoner simply wanted to build a damn good loudspeaker that fitted between two ranges – but in the process built a loudspeaker that pulls much from the company's top models, and the resultant design is very much a 'punches above its weight' model.

Neat makes some extremely good high-end loudspeakers in its Ultimatum range (although even here, high-end is a relative term... high-end by UK standards not the 'help yourself to my bank balance' high five, six, or even seven-figure sums we sometimes see). It also makes several ranges that bring the price of admission down to the distinctly attainable or – in the case of the Iota series – affordable. They all share Neat's distinctive take on product design. The Ekstra simply takes much of the design criteria found in models like the Ultimatum XL6 loudspeaker, puts it in a smaller, slimmer box (making it ideal for smaller rooms), and undercuts itself by several grand! OK, if only things were that simple, but that's the core of the idea behind Ekstra.

In a way, the popular Iota range was born out of the same mindset, making the company's Motive sound more widely available. Ekstra does the same to Momentum and Ultimatum. The new design uses the same configuration first used by Neat in the Ultimatum XL6. The top section is sealed off from the lower, and incorporates two sealed chambers, operating as a two-way infinite baffle loudspeaker. A 50mm ribbon-type tweeter and 134mm bass/midrange unit (that has been used in both Motive and Iota Alpha designs) are both mounted on a specially profiled sub-baffle, attached to the main cabinet via a de-coupling polyethylene membrane.

Meanwhile, the lower, ported, section of the Ekstra houses two more of those 134mm bass drive units. One unit is located on the bottom panel, facing the floor, while the second is located internally, directly above the first, in a sealed isobaric arrangement, handling only low frequencies and acting as an integral subwoofer system. The low-Q port is specially tuned to enable close to wall placement of the speaker in most rooms.

The chambered design is relatively simple – at least compared to labyrinths used by companies like PMC – but very effective, as it essentially means the loudspeaker is a two-way stand-mount sitting on a subwoofer with minimal interaction between the two.



“If the only thing missing from this scenario to make it perfect is ‘a pint and a few mates’, this might well be your next loudspeaker.”

► This system also helps make the Ekstra a relatively benign load. An eight-ohm load with minimum impedance dipping to around five ohms and a realistic sensitivity of 88dB/w adds up to make a loudspeaker that could be run by the most humble of electronics. However, with a loudspeaker of the Ekstra's calibre, it's more about quality than quantity, and a good amplifiers like the Hegel H390 and the Primare I25 both worked perfectly with the Ekstra.

Installation is easy, as the speaker is relatively unfussy about placement. Precise positioning nets the best sound, but 'sub-millimetre precise' isn't necessary. More important, however, is the nature of the floor beneath the speaker. As there is a down-firing bass unit, which is the outer driver of an isobaric chamber, surrounding it in thick shag-pile carpet from the 1970s is unwise. OK, so that's 'unwise' in terms of undermining sound quality (and taste... who has these kind of things today?) rather than a potential fire hazard. But if your living room looks like it was used in some low grade porno movies from the mid-1970s, you might be advised to look elsewhere.

Usually, the way of reviews typically goes good points, bad points. Occasionally it's a sandwich of good-bad-good or bad-good-bad. This time, in honour of Neat's convention-breaking design protocol, we'll break with convention and get the bad out of the way first. There seem to be two results from listening to a Neat loudspeaker; either an almost immediate bonding to the way it sounds, or a tepid 'hmm'. Occasionally, those who weren't initially impressed warm to the sound of the Neat as they shake off years of listening to what ultimately was the wrong product for them. Many will never make that flip, and come to consider Neat loudspeakers as little more than a brand to cross off the short-list. In the UK, such things are given the term 'Marmite' after the dark yeast spread that is either a salty-umami jar of heavenly deliciousness, or some form of food-grade rust protection you might use on the underside of a car. You can't know your feelings about Marmite until you try it, and very few people are so-so about the stuff; it's either 'love it' or 'make it stop!' Neat is a 'Marmite' loudspeaker and the Ekstra is perhaps the most Marmite-y of the lot.

OK, so in the pantheon of 'different' sounding loudspeakers, Neat is relatively mild next to things like the late 'lamented' Rehdeko designs or really quacky early Klipshorns (both of which have their followers, even today). However, in a world of increasing convergence of sound (due in part to everyone using the same group of measurements, often on the same suite of measuring instruments), the Neat does stand somewhat apart. That will mean some will listen and say 'thanks, but no thanks', usually recognising the good points of the design, but realising those good points do not apply to them. Others will be able to do that without even going within 10 miles of a pair of loudspeakers, because they define their musical options at one remove and rely on measurement to define one of the least measurement-defined parts of audio design.

To get an idea of what Neat is all about, let's put a scenario together. You go to a small music venue, a folk singer turns up and plugs into a small, well-tuned PA system and sings a small set. He's no Bob Dylan, but he's very good, and backed by a small semi-acoustic band. If that is your idea of Hell (because it's not bangin' Techno played at eye-popping levels, or it isn't a piece of classical music played without amplification in a natural acoustic), then the chances of you finding the charms of the Ekstra reaching you are remote at best. On the other hand, if the only thing missing from this scenario to make it perfect is 'a pint and few mates', this might well be your next loudspeaker. That may sound flippant, but the more you listen to the Ekstras, the more you realise that's exactly what it does so well.

This means that what you get is a bass performance that defies all logic of loudspeakers of this size. It's not overblown at all; if anything the bass is taut to the point of dryness, but there's a lot of bass energy in reserve. This makes for a very tidy and tuneful presentation, and is particularly good at reproducing the sound of a bass guitar. As ever in such cases, Jaco is called for, and Pastorius's fretless bass voice sings clear here, to the point where *Jaco Pastorius* [Epic] got played in its entirety and led to Joni Mitchell's *Hejira* [Asylum]. That too spun on for the whole album, and led (through slightly less obvious steps) to listening to all of the eponymous *Silly Sisters* album [Chrysalis], then to Richard and Linda Thompson's *I Want To See The Bright Lights Tonight* [Island], then to Richard Thompson's solo career, then to other guitarists, and on, and on.

A pattern emerged here. You put on an album and you listen to the album, not a few tracks. However, that 'on to other guitarists' ►



BREAKTHROUGH DIGITAL TECHNOLOGY

Your music, unlimited

With proven in-house expertise, our award-winning digital audio range continually breaks new ground. For over two decades, our proprietary DAC technology has been shattering convention with landmark products defining the digital audio landscape. Breakthrough limitation and listen with us.

CHORDELECTRONICS.CO.UK



Hugo₂

◦ CHORD ◦

Chord Electronics Ltd.



HEIMDALL 2

FREY 2

TYR 2

NORSE 2 CABLES

SUPERIOR TECHNOLOGY, SUPERIOR PERFORMANCE

MONO-FILAMENT TECHNOLOGY • MECHANICALLY TUNED LENGTHS • ASYMMETRICAL GROUNDING
SILVER-PLATED, OFC CONDUCTORS • EXTRUDED FEP INSULATION

NORDOST
MAKING THE CONNECTION

Distributed in the UK and Ireland by **Renaissance**

0131 555 3922

info@renaissanceaudio.co.uk

www.nordost.com

Made in USA 

► showed it's not just a folk-lover's loudspeaker, and not just a walk down memory lane (to the pub serving foaming pints of Scrummock's Aulde Fetlock). Out came Vök and Little Sims and Stormzy ('cos I is street) and it all worked. I didn't find pen hitting paper too often though, because my attention was focused on the music rather than the sound it makes. A good thing for a listener, not so good for someone with pages to fill!

Strangely though, this lack of description of the sound a speaker makes is what the Neat is all about. You listen to music, then listen to more music, and never once give a damn about the performance of the loudspeaker. To discuss it in audiophile terms seems to be like dragging the conversation back to the prosaic, or worse, back to an entirely different conversation in which you have become thoroughly uninterested.

Nevertheless, a job is a job. The Ekstra is a very fast sounding loudspeaker with outstanding bass in terms of both depth and speed. It is exceptionally good at the presentation of musical coherence, and when listening to a piece of music (such as 'Love in Vain' by The Rolling Stones from the *Stripped* CD [Polydor]) the sense of interplay between musicians in this live cut from the rehearsal room really puts you in there with the Glimmer Twins.

Detail is good but only slightly above average in its class. That being said, upper register detail is very good, and free from aggression or brashness. Staying with the *Stripped* album, the live arena tracks are some of the least listenable tracks I own, even down to an occasional sense of the band 'phoning it in'. Any hint of top end emphasis on tracks like 'Street Fighting Man' make the album descend into thin, nasty brightness,

and the Ekstra managed to keep that top end in check while opening out the top end sound.

Ekstra is also a relatively forgiving loudspeaker, twice over. It needs a good, but not brute-force, amplifier, but more importantly it's very forgiving on less than wonderful pieces of music that are swathed in compression. Muse's 'Invincible' from *Black Holes and Revelations* [Helium-3] is an anthemic piece almost ruined by compression. While the Ekstra cannot undo the damage made by such compression, it can – and does – make it seem less bothersome.

You'll notice that most of my recording call-outs here have not gone too far down the classical rabbit hole. I noticed this several hours into the listening session. It's an odd sensation; it's not that the loudspeakers were bad on classical music – in fact, they played classical music pretty well on balance – but I found myself playing other music each time I thought about playing classical pieces. In later introspection, I can't quite tell whether that was down to the loudspeaker gently moving me away from music it cannot do to the same degree of justice, or it exposing my own musical predilections to be less catholic than I would like them to be. In other words, it might have been 'me' rather than 'it' opting for the non-classical music. To date, I'm still not sure on this and where I run with it. Playing them to a true classical-loving friend (who also 'got' the speaker) they played a lot of Bach through them and were surprised by that ("I didn't realise how much I like Bach" was the reply). I've come to the conclusion that the Ekstra isn't a musical filter, but it engages with your own musical filters with a high degree of accuracy.

What I also found myself not putting down on page too often was imaging. This time, it was more a function of the loudspeaker than me. Imaging here is good, but very much not a priority. So that holographic soundstaging and the kind of presentation that makes a loudspeaker really attractive to some people is a little bit less obvious. It's more a bolus of sound between the loudspeakers than a three-dimensional presentation of sounds around the room. In fairness to Neat, most concerts I've been to have a similar 'soundstage' to the Neats and no one has ever walked away from a concert saying 'what great imaging!' Nevertheless, if you define your musical presentation by a walk-in soundstage, the Neat may struggle to meet those demands as well as some other designs.

A lot of the rest of the performance is marked out by a very high degree of effortlessness in all things. Take its dynamic range, for example. This is not the kind of loudspeaker that presents a powerful dynamic range up front, but the more you listen to it, the more you realise it's incredibly dynamic... it just hides that dynamic range in a kind of British sense of understatement. The same applies to its ability to portray the light and shade of microdynamics; there is no immediate sense of a microdynamic superstar, but all those subtle shades and textures are there in full effect. ►

"The sense of interplay between musicians in this live cut from the rehearsal room really puts you in there with the Glimmer Twins."

“It makes news sound like poetry, it makes a click track sound like Buddy Rich, and so it goes on.”

► Finally in the assessment phase, comes the pace, and it's here that the Ekstra excels. It's a beat-hound; put on a piece of music with even the merest sense of a beat and the Ekstra will sniff it out and play it for you. Not push it upfront or force you into a beat when listening to talk radio, but when you find yourself listening to the meter of the speaker instead of thinking about hand grenades when listening to one of the more pompous orators on Radio 4, you know there's something special in the beat-reproduction of the Ekstra. It makes news sound like poetry, it makes a click track sound like Buddy Rich, and so it goes on. It's an exceptionally good rhythmic performer, one of the best I've heard in a long time. Perhaps more so because its rhythmic properties fall under that whole 'effortless' part of the performance. Not only was it great at keeping a beat – even those crazy beats like Pink Floyd's 'Money' or Dave Brubeck's 'Blue Rondo a la Turk' – but because it does it without any kind of effort or difficulty.

In truth, I struggled with not struggling with the Neat Acoustics Ekstra. I felt the review process shouldn't be this easy, and in truth I laboured over the writing more than normal, trying to find what it did so well. Then the speakers went away and then it hit me. I'd imprinted on them like a duckling to its mother. There was something so musically adept and enjoyable about the Ekstra that it made the playing of music a vital thing. That is the most obvious thing when you hear them and the most sappy thing you can write.

Attributed to everyone from Elvis Costello to Frank Zappa, the quote "Writing about music is like dancing about architecture" holds a lot of truth here. The loudspeaker is not one that opens itself to critical inspection, even though it passes muster in almost all aspects for many. It's a loudspeaker that you either 'get' or 'don't' and if you get it all those details about imaging, dynamics, rhythm, timing, and so on are all academic. It's just a bloody good loudspeaker and all the other considerations melt away. It's little wonder that I got the downsides out of the way first; if you really let the Ekstra get under your skin, it's like insulting a family member.

The interesting thing with this is the last time a loudspeaker and I bonded in the same way, that was a Neat loudspeaker too. That time it was one of the most expensive ones in the group. This time it's way more affordable. There's clearly a lot of commonalities shared here between the Ekstra and the Ultimatum, and the difference in price and performance might be marked, but they have more in common than you might expect for the price.

Neat Acoustics Ekstra's tag-line is 'Thinking Inside The Box' and while that is absolutely correct, it's so much more than that. Ekstra is a loudspeaker that does manage to squeeze a quart into a pint pot, and does it perfectly. You need to be fairly well in lock-step with the sound of Neat (put another way, the sound Bob from Neat likes), but if that is the case, the Ekstra will melt your heart, extra fast. +



TECHNICAL SPECIFICATIONS

System: 2.5-way isobaric bass reflex, incorporating integral isobaric subwoofer

Drive units: 1× 134mm LF/Midrange unit; 1× Ribbon HF unit; 2× 134mm LF units

Impedance: 8 Ohms (minimum 5 Ohms)

Sensitivity: 88dB/1 watt

Finish: American walnut, black oak, satin white

Size (H×W×D): 110 × 17 × 25cm

Weight: 18Kg each

Price: £2,999 per pair

Manufactured by: Neat Acoustics

Tel: +44(0) 1833 631021

URL: neatacoustics.com

VISIT OUR NEW WEBSITE

BUY • SELL • EXCHANGE

GREAT VALUE NEW & PRE-OWNED HIGH END HI-FI

Huge range of high end brands • Expert system matching advice • Used High end hi-fi bought and sold Part exchange available • All items checked and guaranteed • Major credit cards accepted

INTEGRATED AMPLIFIERS

Symphonic Line RG10 mk4 Reference HD Master Integrated Amp	£7,990
Mark Levinson No. 383	£3,450
B.M.C. Audio CS2 Integrated/Power Amp	£2,990
Audio Note Ongaku	£39,990
Analog Domain Audio M75D mkII (X-Demo)	£11,990

POWER AMPLIFIERS

VTL ST150 Stereo Power Amp	£3,490
VTL S200 Signature Stereo Amplifier	£8,990
VTL MB-450 Series III Monoblock Amplifiers	£12,500
Symphonic Line Kraft 300 Power Amp	£8,250
Sunfire 600 Signature Two	£1,490
Sunfire 600 Signature	£1,200
Plinius SA250 mkIV (black)	£3,495
NAT Audio Magma SE Limited Edition	£19,900
NAT AUDIO MAGMA Limited Edition	£11,900
MBL Model 9011 Stereo/Mono-Block Power Amp (Price each)	£18,700
Mark Levinson Monaural Reference Amplifier No 33	£17,900
Luxman MQ88 Power Amplifier	£4,990

Linn Klimax Chakra 500 Twin (x4 Available)	£3,450
Linn C4200 Chakra	£1,990
Jeff Rowland Model 2 Power & Synergy III Pre	£3,990
Gryphon Antileon Signature Monoblocks	£22,990
Gryphon Antileon	£5,990
Goldmund Mimesis 18.4 Monoblocks	£5,990
Boulder Amplifiers 2060 Stereo Power Amplifier	£16,990
Bel Canto EVO 6 Gen III	£1,990
Bel Canto Black- Ultimate Amplification System	£27,500
B.M.C. Audio M3 Monoblocks	£7,990
B.M.C. Audio CS2 Integrated/Power Amp	£2,990
Analog Domain Audio M75P MKII Stereo power (X-Demo)	£9,900

Jeff Rowland Model 2 Power & Synergy III Pre	£3,990
Gryphon Antileon Signature Monoblocks	£22,990
Gryphon Antileon	£5,990
Goldmund Mimesis 18.4 Monoblocks	£5,990
Boulder Amplifiers 2060 Stereo Power Amplifier	£16,990
Bel Canto EVO 6 Gen III	£1,990
Bel Canto Black- Ultimate Amplification System	£27,500
B.M.C. Audio M3 Monoblocks	£7,990
B.M.C. Audio CS2 Integrated/Power Amp	£2,990
Analog Domain Audio M75P MKII Stereo power (X-Demo)	£9,900

Jeff Rowland Model 2 Power & Synergy III Pre	£3,990
Gryphon Antileon Signature Monoblocks	£22,990
Gryphon Antileon	£5,990
Goldmund Mimesis 18.4 Monoblocks	£5,990
Boulder Amplifiers 2060 Stereo Power Amplifier	£16,990
Bel Canto EVO 6 Gen III	£1,990
Bel Canto Black- Ultimate Amplification System	£27,500
B.M.C. Audio M3 Monoblocks	£7,990
B.M.C. Audio CS2 Integrated/Power Amp	£2,990
Analog Domain Audio M75P MKII Stereo power (X-Demo)	£9,900

Jeff Rowland Model 2 Power & Synergy III Pre	£3,990
Gryphon Antileon Signature Monoblocks	£22,990
Gryphon Antileon	£5,990
Goldmund Mimesis 18.4 Monoblocks	£5,990
Boulder Amplifiers 2060 Stereo Power Amplifier	£16,990
Bel Canto EVO 6 Gen III	£1,990
Bel Canto Black- Ultimate Amplification System	£27,500
B.M.C. Audio M3 Monoblocks	£7,990
B.M.C. Audio CS2 Integrated/Power Amp	£2,990
Analog Domain Audio M75P MKII Stereo power (X-Demo)	£9,900

Jeff Rowland Model 2 Power & Synergy III Pre	£3,990
Gryphon Antileon Signature Monoblocks	£22,990
Gryphon Antileon	£5,990
Goldmund Mimesis 18.4 Monoblocks	£5,990
Boulder Amplifiers 2060 Stereo Power Amplifier	£16,990
Bel Canto EVO 6 Gen III	£1,990
Bel Canto Black- Ultimate Amplification System	£27,500
B.M.C. Audio M3 Monoblocks	£7,990
B.M.C. Audio CS2 Integrated/Power Amp	£2,990
Analog Domain Audio M75P MKII Stereo power (X-Demo)	£9,900

Jeff Rowland Model 2 Power & Synergy III Pre	£3,990
Gryphon Antileon Signature Monoblocks	£22,990
Gryphon Antileon	£5,990
Goldmund Mimesis 18.4 Monoblocks	£5,990
Boulder Amplifiers 2060 Stereo Power Amplifier	£16,990
Bel Canto EVO 6 Gen III	£1,990
Bel Canto Black- Ultimate Amplification System	£27,500
B.M.C. Audio M3 Monoblocks	£7,990
B.M.C. Audio CS2 Integrated/Power Amp	£2,990
Analog Domain Audio M75P MKII Stereo power (X-Demo)	£9,900

Jeff Rowland Model 2 Power & Synergy III Pre	£3,990
Classe SSP 600	£1,490
Boulder Amplifiers 1008 Phono Pre-amplifier	£9,900
Bel Canto Black- Ultimate Amplification System	£27,500
B.M.C. Audio DAC1PreHR	£2,250
B.M.C. Audio DAC1PreHR	£3,250
Audio Research Reference 6 Pre-Amp	£8,990

LOUDSPEAKERS

Wilson Audio CUB Series II & Stands	£4,750
Vivid Audio Oval B1	£6,990
Vivid Audio Giya G3	£18,990
Townshend Audio Maximum Supertweeters	£990
Sonus Faber Extrema & 6 Pillar stands	£5,500
Sonus Faber Electa Amator 2 & Iron-Wood Stands	£2,350
Sonus Faber Amati Anniversario GR	£11,990
Shahinian Acoustics Diapason Zebrano	£14,900
Shahinian Acoustics Diapason Rockport Technologies Mira	£4,990
Revel Ultima Voice 2	£4,500
Revel Ultima Studio 2	£8,500
Revel Ultima Salon 2	£10,900
Raidho Acoustics XT-3	£13,990
Neat Motive 2	£590
Martin Logan Fresco (x2)	£490
Martin Logan CLX Anniversary	£14,990
Linn Klimax 350P (Aktiv/Passive)	£9,990
Legacy Audio Aeris	£22,500
JBL Synthesis 4367	£8,490
Dali Euphoria MS4	£2,990
Genesis Technologies 200	£14,900
Funk Audio 15.2 Dual opposed Subwoofers (x2) & 4.8kW RMS M1 Amplifier	£6,900
Focal Stella Utopia Be III EM	£28,990
Focal Diablo Utopia III & Stands	£4,900
EgglesonWorks Andra III SE (Signature)	£13,990
Crystal Cable Arabesque Minissimo	£7,990
Crystal Cable Arabesque Glass Master	£59,900
B&W Nautilus 803	£2,250
B&W Matrix 800	£5,990
Avalon Time Loudspeakers	£37,990
Audiomachina CRM & CRS	£13,990
Audio Physic Scorpio II	£2,490

Wilson Audio CUB Series II & Stands	£4,750
Vivid Audio Oval B1	£6,990
Vivid Audio Giya G3	£18,990
Townshend Audio Maximum Supertweeters	£990
Sonus Faber Extrema & 6 Pillar stands	£5,500
Sonus Faber Electa Amator 2 & Iron-Wood Stands	£2,350
Sonus Faber Amati Anniversario GR	£11,990
Shahinian Acoustics Diapason Zebrano	£14,900
Shahinian Acoustics Diapason Rockport Technologies Mira	£4,990
Revel Ultima Voice 2	£4,500
Revel Ultima Studio 2	£8,500
Revel Ultima Salon 2	£10,900
Raidho Acoustics XT-3	£13,990
Neat Motive 2	£590
Martin Logan Fresco (x2)	£490
Martin Logan CLX Anniversary	£14,990
Linn Klimax 350P (Aktiv/Passive)	£9,990
Legacy Audio Aeris	£22,500
JBL Synthesis 4367	£8,490
Dali Euphoria MS4	£2,990
Genesis Technologies 200	£14,900
Funk Audio 15.2 Dual opposed Subwoofers (x2) & 4.8kW RMS M1 Amplifier	£6,900
Focal Stella Utopia Be III EM	£28,990
Focal Diablo Utopia III & Stands	£4,900
EgglesonWorks Andra III SE (Signature)	£13,990
Crystal Cable Arabesque Minissimo	£7,990
Crystal Cable Arabesque Glass Master	£59,900
B&W Nautilus 803	£2,250
B&W Matrix 800	£5,990
Avalon Time Loudspeakers	£37,990
Audiomachina CRM & CRS	£13,990
Audio Physic Scorpio II	£2,490

Wilson Audio CUB Series II & Stands	£4,750
Vivid Audio Oval B1	£6,990
Vivid Audio Giya G3	£18,990
Townshend Audio Maximum Supertweeters	£990
Sonus Faber Extrema & 6 Pillar stands	£5,500
Sonus Faber Electa Amator 2 & Iron-Wood Stands	£2,350
Sonus Faber Amati Anniversario GR	£11,990
Shahinian Acoustics Diapason Zebrano	£14,900
Shahinian Acoustics Diapason Rockport Technologies Mira	£4,990
Revel Ultima Voice 2	£4,500
Revel Ultima Studio 2	£8,500
Revel Ultima Salon 2	£10,900
Raidho Acoustics XT-3	£13,990
Neat Motive 2	£590
Martin Logan Fresco (x2)	£490
Martin Logan CLX Anniversary	£14,990
Linn Klimax 350P (Aktiv/Passive)	£9,990
Legacy Audio Aeris	£22,500
JBL Synthesis 4367	£8,490
Dali Euphoria MS4	£2,990
Genesis Technologies 200	£14,900
Funk Audio 15.2 Dual opposed Subwoofers (x2) & 4.8kW RMS M1 Amplifier	£6,900
Focal Stella Utopia Be III EM	£28,990
Focal Diablo Utopia III & Stands	£4,900
EgglesonWorks Andra III SE (Signature)	£13,990
Crystal Cable Arabesque Minissimo	£7,990
Crystal Cable Arabesque Glass Master	£59,900
B&W Nautilus 803	£2,250
B&W Matrix 800	£5,990
Avalon Time Loudspeakers	£37,990
Audiomachina CRM & CRS	£13,990
Audio Physic Scorpio II	£2,490

Wilson Audio CUB Series II & Stands	£4,750
Vivid Audio Oval B1	£6,990
Vivid Audio Giya G3	£18,990
Townshend Audio Maximum Supertweeters	£990
Sonus Faber Extrema & 6 Pillar stands	£5,500
Sonus Faber Electa Amator 2 & Iron-Wood Stands	£2,350
Sonus Faber Amati Anniversario GR	£11,990
Shahinian Acoustics Diapason Zebrano	£14,900
Shahinian Acoustics Diapason Rockport Technologies Mira	£4,990
Revel Ultima Voice 2	£4,500
Revel Ultima Studio 2	£8,500
Revel Ultima Salon 2	£10,900
Raidho Acoustics XT-3	£13,990
Neat Motive 2	£590
Martin Logan Fresco (x2)	£490
Martin Logan CLX Anniversary	£14,990
Linn Klimax 350P (Aktiv/Passive)	£9,990
Legacy Audio Aeris	£22,500
JBL Synthesis 4367	£8,490
Dali Euphoria MS4	£2,990
Genesis Technologies 200	£14,900
Funk Audio 15.2 Dual opposed Subwoofers (x2) & 4.8kW RMS M1 Amplifier	£6,900
Focal Stella Utopia Be III EM	£28,990
Focal Diablo Utopia III & Stands	£4,900
EgglesonWorks Andra III SE (Signature)	£13,990
Crystal Cable Arabesque Minissimo	£7,990
Crystal Cable Arabesque Glass Master	£59,900
B&W Nautilus 803	£2,250
B&W Matrix 800	£5,990
Avalon Time Loudspeakers	£37,990
Audiomachina CRM & CRS	£13,990
Audio Physic Scorpio II	£2,490

Wilson Audio CUB Series II & Stands	£4,750
Vivid Audio Oval B1	£6,990
Vivid Audio Giya G3	£18,990
Townshend Audio Maximum Supertweeters	£990
Sonus Faber Extrema & 6 Pillar stands	£5,500
Sonus Faber Electa Amator 2 & Iron-Wood Stands	£2,350
Sonus Faber Amati Anniversario GR	£11,990
Shahinian Acoustics Diapason Zebrano	£14,900
Shahinian Acoustics Diapason Rockport Technologies Mira	£4,990
Revel Ultima Voice 2	£4,500
Revel Ultima Studio 2	£8,500
Revel Ultima Salon 2	£10,900
Raidho Acoustics XT-3	£13,990
Neat Motive 2	£590
Martin Logan Fresco (x2)	£490
Martin Logan CLX Anniversary	£14,990
Linn Klimax 350P (Aktiv/Passive)	£9,990
Legacy Audio Aeris	£22,500
JBL Synthesis 4367	£8,490
Dali Euphoria MS4	£2,990
Genesis Technologies 200	£14,900
Funk Audio 15.2 Dual opposed Subwoofers (x2) & 4.8kW RMS M1 Amplifier	£6,900
Focal Stella Utopia Be III EM	£28,990
Focal Diablo Utopia III & Stands	£4,900
EgglesonWorks Andra III SE (Signature)	£13,990
Crystal Cable Arabesque Minissimo	£7,990
Crystal Cable Arabesque Glass Master	£59,900
B&W Nautilus 803	£2,250
B&W Matrix 800	£5,990
Avalon Time Loudspeakers	£37,990
Audiomachina CRM & CRS	£13,990
Audio Physic Scorpio II	£2,490

Wilson Audio CUB Series II & Stands	£4,750
Vivid Audio Oval B1	£6,990
Vivid Audio Giya G3	£18,990
Townshend Audio Maximum Supertweeters	£990
Sonus Faber Extrema & 6 Pillar stands	£5,500
Sonus Faber Electa Amator 2 & Iron-Wood Stands	£2,350
Sonus Faber Amati Anniversario GR	£11,990
Shahinian Acoustics Diapason Zebrano	£14,900
Shahinian Acoustics Diapason Rockport Technologies Mira	£4,990
Revel Ultima Voice 2	£4,500
Revel Ultima Studio 2	£8,500
Revel Ultima Salon 2	£10,900
Raidho Acoustics XT-3	£13,990
Neat Motive 2	£590
Martin Logan Fresco (x2)	£490
Martin Logan CLX Anniversary	£14,990
Linn Klimax 350P (Aktiv/Passive)	£9,990
Legacy Audio Aeris	£22,500
JBL Synthesis 4367	£8,490
Dali Euphoria MS4	£2,990
Genesis Technologies 200	£14,900
Funk Audio 15.2 Dual opposed Subwoofers (x2) & 4.8kW RMS M1 Amplifier	£6,900
Focal Stella Utopia Be III EM	£28,990
Focal Diablo Utopia III & Stands	£4,900
EgglesonWorks Andra III SE (Signature)	£13,990
Crystal Cable Arabesque Minissimo	£7,990
Crystal Cable Arabesque Glass Master	£59,900
B&W Nautilus 803	£2,250
B&W Matrix 800	£5,990
Avalon Time Loudspeakers	£37,990
Audiomachina CRM & CRS	£13,990
Audio Physic Scorpio II	£2,490

Wilson Audio CUB Series II & Stands	£4,750
Vivid Audio Oval B1	£6,990
Vivid Audio Giya G3	£18,990
Townshend Audio Maximum Supertweeters	£990
Sonus Faber Extrema & 6 Pillar stands	£5,500
Sonus Faber Electa Amator 2 & Iron-Wood Stands	£2,350
Sonus Faber Amati Anniversario GR	£11,990
Shahinian Acoustics Diapason Zebrano	£14,900
Shahinian Acoustics Diapason Rockport Technologies Mira	£4,990
Revel Ultima Voice 2	£4,500
Revel Ultima Studio 2	£8,500
Revel Ultima Salon 2	£10,900
Raidho Acoustics XT-3	£13,990
Neat Motive 2	£590
Martin Logan Fresco (x2)	£490
Martin Logan CLX Anniversary	£14,990
Linn Klimax 350P (Aktiv/Passive)	£9,990
Legacy Audio Aeris	£22,500
JBL Synthesis 4367	£8,490
Dali Euphoria MS4	£2,990
Genesis Technologies 200	£14,900
Funk Audio 15.2 Dual opposed Subwoofers (x2) & 4.8kW RMS M1 Amplifier	£6,900
Focal Stella Utopia Be III EM	£28,990
Focal Diablo Utopia III & Stands	£4,900
EgglesonWorks Andra III SE (Signature)	£13,990
Crystal Cable Arabesque Minissimo	£7,990
Crystal Cable Arabesque Glass Master	£59,900
B&W Nautilus 803	£2,250
B&W Matrix 800	£5,990
Avalon Time Loudspeakers	£37,990
Audiomachina CRM & CRS	£13,990
Audio Physic Scorpio II	£2,490

Wilson Audio CUB Series II & Stands	£4,750
Vivid Audio Oval B1	£6,990
Vivid Audio Giya G3	£18,990
Townshend Audio Maximum Supertweeters	£990
Sonus Faber Extrema & 6 Pillar stands	£5,500
Sonus Faber Electa Amator 2 & Iron-Wood Stands	£2,350
Sonus Faber Amati Anniversario GR	£11,990
Shahinian Acoustics Diapason Zebrano	£14,900
Shahinian Acoustics Diapason Rockport Technologies Mira	£4,990
Revel Ultima Voice 2	£4,500
Revel Ultima Studio 2	£8,500
Revel Ultima Salon 2	£10,900
Raidho Acoustics XT-3	£13,990
Neat Motive 2	£590
Martin Logan Fresco (x2)	£490
Martin Logan CLX Anniversary	£14,990
Linn Klimax 350P (Aktiv/Passive)	£9,990
Legacy Audio Aeris	£22,500
JBL Synthesis 4367	£8,490
Dali Euphoria MS4	£2,990
Genesis Technologies 200	£14,900
Funk Audio 15.2 Dual opposed Subwoofers (x2) & 4.8kW RMS M1 Amplifier	£6,900
Focal Stella Utopia Be III EM	£28,990
Focal Diablo Utopia III & Stands	£4,900
EgglesonWorks Andra III SE (Signature)	£13,990
Crystal Cable Arabesque Minissimo	£7,990
Crystal Cable Arabesque Glass Master	£59,900
B&W Nautilus 803	£2,250
B&W Matrix 800	£5,990
Avalon Time Loudspeakers	£37,990
Audiomachina CRM & CRS	£13,990
Audio Physic Scorpio II	£2,490

Audio Acoustics Sapphire Ti-C SE	£55,000
Audio Acoustic Sapphire Ti-C	£29,990
ATC SCM50A + P6 (Custom)	£20,990
ATC SCM 50ASL T	£7,490
ATC C6 Subwoofer (Piano black)	£3,990
Apogee Stage	£1,990
Apogee Diva	£4,990
Apogee Caliper Signature	£3,000

Audio Acoustics Sapphire Ti-C SE	£55,000
Audio Acoustic Sapphire Ti-C	£29,990
ATC SCM50A + P6 (Custom)	£20,990
ATC SCM 50ASL T	£7,490
ATC C6 Subwoofer (Piano black)	£3,990
Apogee Stage	£1,990
Apogee Diva	£4,990
Apogee Caliper Signature	£3,000
Orpheus Laboratories System (see details)	£7



SPENDOR

REVEALING EVERY DETAIL

Spendor D-Line loudspeakers reveal every nuance of the performance with absolute clarity and realism. With their transparent, superbly natural sound and extraordinary resolution, they create an airy, spacious soundscape, then invite you in to explore it, uncovering new depths, textures and definition in your music

MADE FOR MUSIC. DESIGNED FOR YOU.

spendoraudio.com

Wilson Audio Sasha DAW floorstanding loudspeaker

by Alan Sircom



There is almost a hint of sadness about the Wilson Audio Sasha DAW. The suffix is short for 'David A Wilson', the founder of Wilson Audio and father of Wilson Audio's President and CEO, Daryl Wilson. Dave Wilson passed away in 2018, and the Sasha DAW acts both as tribute and legacy.

The Sasha loudspeaker project was developed from the most successful high-end loudspeaker project in history; the Wilson Audio WATT/Puppy. First launched in 1985, the Wilson Audio Tiny Tot (WATT) was a two-way stand-mount monitor loudspeaker that set new standards in performance

(and price; it was more than twice the cost of its closest rival) and was quickly joined by the Puppy subwoofer. This combination went through several iterations in its 24-year lifespan, becoming ever more a combination in name only until its replacement Sasha W/P in 2009. The Sasha W/P still relied on the separate mid-top and bass cabinets, and the familial resemblance could be seen, but this was a very different animal. The Series 2 replaced the original Sasha W/P five years later. And now, five years after that, the Series 2 gets replaced by the Sasha DAW. Looking at it from a distance, this is simply another churn of the product life cycle. ▶

“Given the significance of the Sasha in the Wilson line, this is as close as it gets to a clean-sheet design.”

► In fact, a surface check of the Sasha DAW might conclude it's more 'evolution' than 'revolution', as that basic product roll-out (two-way top box sitting on a twin-driver bass cabinet) is the same and the dimensions appear ostensibly similar to what went before.

Looks can be deceptive. Apart from that familial resemblance, there is almost no point of contact between what went before and the Sasha DAW. Well, not entirely, but aside from the upper module that's more than 13% larger than its predecessor, a new lower module that's over 10% larger than its predecessor, a revisit of the materials that go into the cabinet, the way the group delay mechanism works, resistor access panel, and even the binding posts... it's the same loudspeaker!

Given the significance of the Sasha in the Wilson line, this is as close as it gets to a clean-sheet design; it retains the basic parameters that explain why a loudspeaker system can remain at the top of the tree for 35 years, but it looks at every aspect of the design to re-evaluate the concept from first principles. In the process, the loudspeaker needs to appeal both to potential newcomers who hear Wilson Audio for the first time, and to those who have been there from the get-go. It needs to fit into the Wilson Audio ecosystem (both in terms of physical placement and equipment compatibility – more on that later – and in hierarchy of product line). And most importantly, it needs to sound damn good.

The drive unit roll-out is always the Cliff Notes version of loudspeaker description, but here that almost says the least about the loudspeaker. Wilson has used a 25mm soft dome tweeter and a 178mm mid-woofer in the top box, and a pair of 200mm bass units in the cabinet for the longest time in this design. In fairness, these have been subject to a range of changes (a quick look at the original WATT shows an inverted metal dome where the fabric dome sits). And while we are staying on the 'in fairness' part of the review, those drive units saw some extremely profound revisions in the last iteration, so this isn't the first place to go looking for changes.

The crossover, too, remains the subject of evolution rather than revolution, although the resistor changes used to help the speaker match the unique bass characteristics of different rooms are now accessed through an easier to open panel. This is not some form of tailoring or DSP, but instead

a very slight change in loading to suit different sized rooms. This helps a lot; someone buying a pair of Sasha DAWs in a ranch in America has a very different room load to someone doing the same in an apartment in Hong Kong.

Each successive iteration of the Sasha improves on the group delay system, which is tuned in situ, both in terms of slight changes to the crossover network, but more importantly changes to the pitch of the front baffle of the top-box. This has gone from a relatively simple adjustment to a very precise micrometer, allowing the most precise set-up in room it's possible to get at the price. This really is a trickle-down from higher-end models; what began at the MAXX level and beyond appeared in the last generation of Alexia, and now makes it to Sasha. It can't go any lower than Sasha of course, because the Sasha is the first in the range that includes that kind of top-box adjustment.

There's a misplaced feeling of voodoo about this tuning, in so far as saying it presupposes a fixed head position for the listener. Nod your head forward and the time-alignment is out of alignment. While this has some very raw credibility, it misses the point of all that careful installation made with electrostatic loudspeakers that also uses alignment that notionally presupposes pin-point head position. In fact, the time-alignment works for an optimal space for the listener relative to the room, and time-alignment takes that into account. Yes, it still focuses the best part of the sound into a very precise sweet-spot and those not sitting in that sweet spot don't get anything like the same benefit, but it's not the kind of sweet-spot that requires a head-clamp. Rather it is more like 'a zone of sweetness' that is focused on the listening position. Move a small amount and you'll still be in that zone. A deft installer with time enough to fine tune could extend that zone out wide enough to accommodate two listeners sitting close to one another, a deeper zone in front and behind the best position, or focus that sweet spot in so tight that you might want to think about a neck brace.

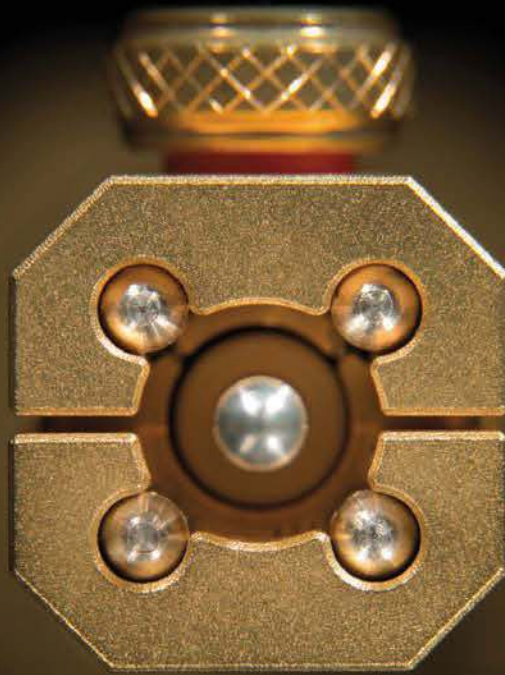
One of the strangest parts to this review is writing up the sound quality, in that the words just sprinted onto the page. This is usually a sign of a very good or very bad speaker indeed. In this case it is a positive sign. There's an aspect of good audio that is often forgotten in the path toward getting 'better' sound; it's also got to be enjoyable. There are a ►



SILTECH

EST. 1983

Years of excellence is no accident.



Products of sound engineering



EXPLORER
SERIES



CLASSIC
ANNIVERSARY
SERIES



ROYAL
SIGNATURE
SERIES



35th ANNIVERSARY
CROWN PRINCE
& PRINCESS



TRIPLE CROWN
SERIES

www.siltechcables.com



Distributed in the UK and Ireland by Padood
www.padood.com | info@padood.com

+44 (0)1223 653199 | 20 Station Road, Cambridge CB1 2JD

“Those who have heard them are weighing up which formerly vital organ they have to sell to get a pair.”



► number of loudspeakers that you listen to and find yourself full of respect for the sound, but musically unmoved. They aren't 'sterile' or 'harsh' sounding... just 'not for you'. And often you hear consensus among those who heard that speaker; great speaker, does everything right, but don't like the sound. The absolute opposite applies to the Wilson Sasha DAW

There's a bit of a buzz going around the audio world about the Sasha DAWs. It's one of those 'have you heard them?' moments, not dissimilar to the buzz about the mighty WAMM Chronosonics, but with wider accessibility. It's between those who haven't heard them and wonder what all the hype is about, while those who have heard them are weighing up which formerly vital organ they have to sell to get a pair. Even people far farther up the loudspeaker food chain have been known to re-evaluate their position, wondering how they can get that performance from their typically larger and more expensive existing loudspeakers, and often concluding

that the Sasha DAW is a feasible upgrade to more expensive loudspeakers. This isn't just the usual hyperbole and self-aggrandisement from reviewers (we can be guilty of being a touch 'carney barker' about high-end at times), but the genuine 'why I got into this business' moments of interest that don't come round too often. And that is precisely what the Sasha DAW offers.

This isn't jaw-dropping, unless the music calls for a spot of jaw-dropping. If you want jaw-dropping, put on von Karajan's 1969 recording of 'Wellington's Victory' [DG]. It's like the 1812's louder brother with more cannons. Be prepared to sit back a bit or turn the music down. The Sasha DAW will do jaw-dropping like you are guzzling down radium milkshakes.

Like all good Wilsons, the Sasha DAWs go crazy loud and crazy clean too. I played Ernest Ranglin's 'Surfin' from his 1996 album *Below the Bassline* [Island], played at close to club levels. You need a powerful amplifier to keep up ►

Listen to your favourite album for the first time. Again.



Visit [dynaudio.com](https://www.dynaudio.com)

Dynaudio Evoke: Listen up.

Five models. Zero compromise. Evoke takes all the acoustic breakthroughs, all the materials science and that timeless Danish design from our top-tier speakers. We didn't create it for people who agonise over price-tags... we created it for people who agonise over what to listen to next.

DYNAUDIO Evoke

“The uncanny ability to listen to the intent of a musician as well as their performance.”

- (Constellation helps), but your ears surrender long before these speakers begin to hit problems. In fact, in normal rooms, your eyes give in from the pressure before the drivers!

But, where it's simple to dismiss loudspeakers that go after impressiveness, this is only the first stage in understanding what the Sasha DAW does. Move over to some more textured and subtle music – such as Jackie McLean's 'Bluesnik' (from the album of the same name, Blue Note, XRCD) – and the level of texture and layering is excellent, but even this hardly scratches the surface. Yes, as you go deeper you get the outstanding levels of detail, articulation, and solidity of instruments in a rich and large soundstage. But these are just world class aspects of a world class performance... there's much more.

There is a level of musical communication here that comes along so rarely it stops you in your tracks. The big WAMM Master Chronosonic has it, and so does the Sasha DAW, albeit writ smaller. It's the uncanny ability to listen to the intent of a musician as well as their performance, that marks the Sasha DAW out as outside the audio norms.

It didn't matter what genre of music you played, or no matter how tortured the sound in an attempt to slip up the Sasha DAW; it was so musically assured, so sure-footed in its performance, it was an exercise in futility. 'Me and the Devil' from the Cowboy Junkies 1986 *Whites Off Earth Now* album [Latent] was telling. Well recorded but 'earthy' in performance, this can easily fall one of three or four ways: too flat sounding, too exaggerated, too loud, or undynamic. All of which depends on how good your speakers are at dynamic shading, staging, and sheer headroom. Compromise is the only way for most speakers, and compromise ruins the album. With the Sasha DAW here was no need for compromise, just music; raw and fun and enjoyable.

In fact, the Sasha DAW's only real weakness is possibly also its greatest strength. This is not a loudspeaker that ever sounds bad (its greatest strength), but it also has the potential to sound truly soul-shakingly good. There will be some pairs of Sasha DAWs where that potential remains untapped. This is a loudspeaker where going to the extra place is not simply an exercise in navel-gazing but returns the kind of performance that can stop you in your tracks. Here's a perfect test of the Sasha DAW's true power; play something evocative like

TECHNICAL SPECIFICATIONS

Type: Two chassis floorstanding three-way loudspeaker

Drivers:

Woofers: Two – 8 inch (20.32 cm)

Midrange: One – 7 inch (17.78 cm)

Tweeter: One – 1 inch, Dome (2.54 cm)

Enclosure Type Upper Module: Rear Vented Midrange, X&S-Material

Enclosure Type Woofer Module: Rear Ported Woofer, X-Material

Sensitivity: 91 dB (one watt at one meter at 1kHz)

Nominal Impedance: 4 ohms/minimum 2.48 ohms @ 85 Hz

Minimum Amplifier Power: 25 watts per channel

Frequency Response: 20 Hz–30 kHz +/- 3 dB room average response [RAR]

Dimensions (H×W×D): 113.67 × 36.83 × 58.26 cm

Weight: 107.05kg per channel

Price: £39,998 per pair

Manufacturer: Wilson Audio

URL: www.wilsonaudio.com

Distributed by: Absolute Sounds

URL: www.absolutesounds.com

Tel: +44(0)208 971 3909

Jacqueline du Pré's remarkable rendition of the Elgar Cello Concerto [Barbirolli, LSO, EMI]. Unless the system has been set-up with a pick-axe, you will get goose-bumps. When the system is fully on song and at its very best, you find yourself in tears. It's an uncontrollable, almost atavistic, reaction to the music that happens when the system pulls the music into focus. You can find this in very well set-up systems, but usually in very well set-up systems that cost so much they could depth-charge the economy of a small island nation.

There is a tendency to view any suffix after the name of a product as simply a new version of that product. There was a Sasha W/P and a Sasha Series 2 before this, so one might be forgiven for thinking the Sasha DAW to be a 'Mk 3' model. Except that, once you actually hear the Sasha DAW, thinking that way is unforgivable. The Sasha DAW is no Sasha Mk 3... it's Sasha reborn, pure and simple. It's also perhaps the best way to honour Dave Wilson in a way he would have loved... with one of the best loudspeakers you can own right now! +

Bring all your *music* to *life*

'The Vega G1 is a hard act to beat - put it with a decent server and it will deliver results that will revise your opinion of what can be done with digital audio.'

JASON KENNEDY, THE EAR

'Bloody hell ... this thing's good!'

ALAN SIRCOM, HIFI +

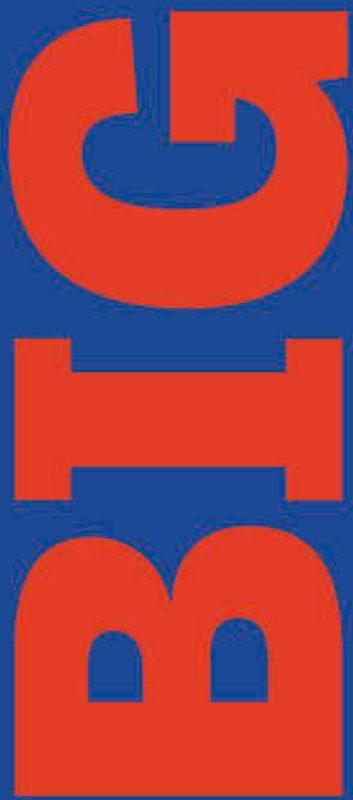


Built around the idea that true hi-fi should be accessible to everyone, **AURALiC** today enjoys a worldwide reputation for innovative digital and analog components that sound as great as they look.

We build devices that help you explore digital streaming and discover new music. Combining progressive technologies that deliver on the promise of modern digital formats with premium analog circuitry and hardware rooted in classic designs, **AURALiC** is always creating new ways to bring you closer to the music.

For your nearest authorised dealer please visit

auralic.com



SOUND SHOW FUN

2019

AMERICA'S MEGA STEREO SHOW

NOW AT THE

Gaylord Rockies Resort
and Convention Center



SEPTEMBER 6-8, 2019
DENVER, COLORADO
www.AudioFest.net

ATC SCM100SE floorstanding speaker

by Jason Kennedy

Acoustic Transducer Company (ATC) has been making drive units and loudspeakers since 1974 and building a fan base in the hi-fi market for the performance quality of its systems for over two decades. Modelled on the company's Tower series of heavyweight floorstanders, the SE versions bring fancier cabinet work and electronics to the equation. You pay over 50% more for the impressive finish, inlaid metalwork and all-discrete electronics, but you do get a pretty swanky loudspeaker for your money. And in the case of the SCM100SE it is a pretty substantial one, tipping the scales at 79kg, over 10kg more than the standard model. .

Special Edition design enhancements include nickel piping on top and sides and a matching electro-plated nickel flat plate that covers the amplifier on the rear. On the Classic ATCs the amplifier's cooling fins and grab handles sit proud of the back, but all of this is hidden on the SE versions, and a second vented panel is fitted to let the heat out. This makes for a more elegant piece of furniture.

Another difference is the plinth that raises the cabinet up a little, creating a gap that adds panache to the design of the speaker footing and possibly helps the bass too. The plinth is threaded on the underside for spiked feet, but I'd be careful about using spikes on some floor finishes given the weight involved. The most satisfying detail of all for me is the curve in the top of the box which forms a 'brow' over the baffle housing the drivers. You can choose the colourway for the 'brow' section with matching or contrasting fillets, which is a nice touch. The SCM100SE has a rectangular grille with a fairly substantial frame that fits over the baffle. I preferred the look with the grille on, and since the system is tuned by ATC with grille attached, that's where it stayed for most of my listening.

Like many ATCs the SCM100SE is an active system. There is an electronic crossover and three separate power amplifiers in each cabinet. The signal from a preamplifier goes into the crossover via an XLR-only input, where it is split up using second order active filters and an all-pass phase correction filter. Then it's sent to the individual power ►





“Of all the speaker pairs ATC sells into the pro market every year, less than one percent are passive.”

► amplifiers which in turn are connected directly to the drive units. When I asked ATC engineer Ben Lilly to explain the benefits of active operation, he began with the fact that of all the speaker pairs ATC sells into the pro market every year, less than one percent are passive, which tells you quite a lot. In a nutshell, the benefits avoid the problems inherent with passive systems. These peccadilloes include the need for an inductor on the bass driver, which absorbs energy, reducing efficiency and compromising the damping factor of the amplifier due to series resistance: similar in effect to a speaker cable. A compromised damping factor means less control over the bass. Another issue is that passive crossovers struggle to cope with the dynamic behaviour of driver impedances; designers are forced to engineer around the problem in order to deliver a least-worst compromise. Then there is the difficulty of achieving a good phase response whilst maintaining an even frequency response and steady impedance. The whole thing is a tricky balancing act. Not only are the most successful passive crossovers more complex and expensive to design than active crossovers, but they also have to deal with the high power of an amplifier. By contrast active networks receive the far lower voltage output of a preamp.

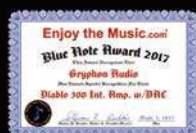
In an active loudspeaker the crossover only sees the fixed input impedance of the power amplifier(s), which in turn have low output impedances and can cope with the variations presented by any driver, especially when they're specifically trimmed for the job. Thus the optimised power system aboard the SCM100SE has a 50W amp for the tweeter, 100W for the mid and 200W for the bass driver.

There are some drawbacks to active design nonetheless. First is the difficulty of upgrading: you are pretty much stuck with the on-board amplifiers. Second is the fact that the amplifier is attached to a vibrating box and thus vibrates itself. If these niggles hold you back from embracing the glory of active performance, ATC has a solution in the form of a standalone stereo amplifier with built in active crossovers. The P6 was created for the range topping EL150 but can be used with any of their three-way speakers, it's no more powerful than the on-board amps but it's a more refined amp and has a rather fancy case.

The amplifiers in the SE models are an upgrade to those found in lower ranges by virtue of discrete components ►

DIABLO 300

Integrity and Integration



THE
GRYPHON



www.gryphon-audio.com

▶ replacing op-amps, and they're all built from the ground up by ATC in house. The drive units on the SCM100SE are likewise built in-house and consist of a soft dome tweeter from the company's 'S' series, a classic ATC dome midrange unit, and a 12-inch bass driver with a Super Linear Magnet system, the latter contributing significantly to the overall weight of this loudspeaker.

The SCM100SE is a bass reflex loaded system with a large port on the front, allowing it to be placed closer to a wall than you'd normally expect for a speaker of this size and capability. I've used active SCM150s in a regular British living room of 15 x 12 feet and had no problems with excess bass, which is pretty rare in a speaker capable of reaching down to 25Hz (-6dB).

On this occasion the SCM100SEs were used in a larger space but remained little more than a foot from the wall where they were connected to the Townshend Allegri+ preamp, which is neither balanced or active, but with a pair of suitably

terminated, three metre interconnects, worked rather nicely, or so I thought until I made an important discovery, which I will divulge in due course.

As things stood the system sounded right from the very first note of Nils Frahm's 'Said and Done' [*Spaces*, Erased Tapes], which starts with an insistent repeating piano note that has been treated in some way. ATCs have always been good at reproducing piano recordings: founder Billy Woodman used to play professionally (which must help), and this one - despite its less than purist nature - hit me right in the ivorys. With the aid of BorderPatrol's non-oversampling DAC SE, which is particularly adept in the emotional communication department, it reached the parts that others fail to find. Alfred Brendel's 'Joanna' sounded pretty superb as well; his Haydn 11 Piano Sonatas [Philips] being particularly nuanced and charming, demonstrate that in addition to (or perhaps because of) huge power and bandwidth, this speaker can do the fine detail as well as any.

Need Punch?



Knockout Performance!

ALLNIC ZL AUDIO CABLES

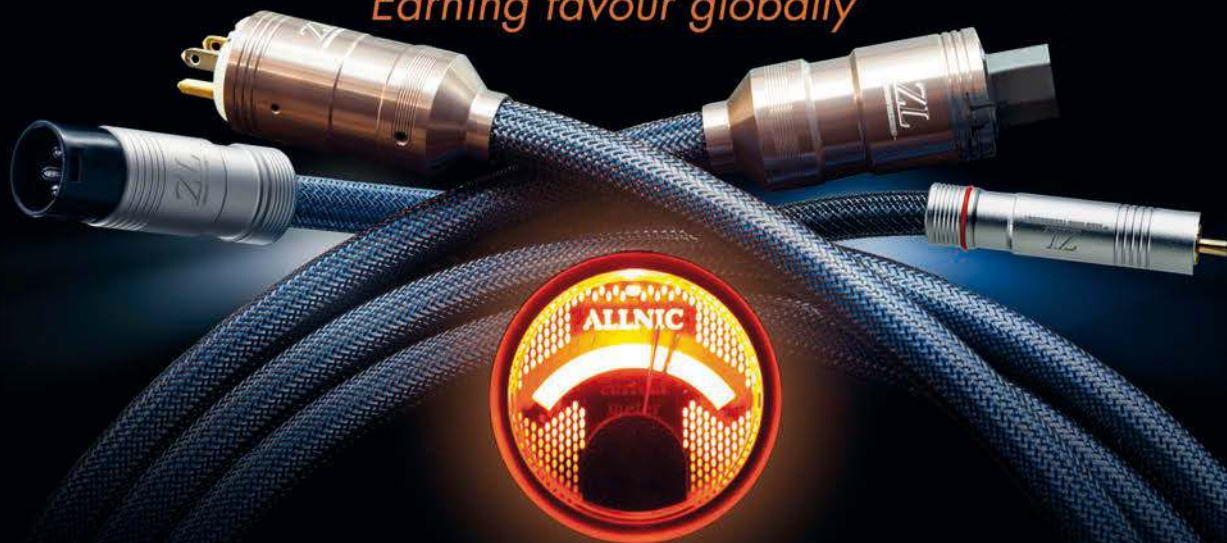


I tried a number of different digital to analogue converters with the SCM100SEs. They revealed the wideband neutrality of an MSB Discrete with its huge detail resolution and calm delivery as effectively as they unveiled the excellent timing if relatively dry presentation of a Naim NDX 2 streamer. In both instances the speakers exhibited plenty of control right down to the lowest frequency without any of the subtle high frequency glare that you get with grippy amps that have a little bit too much negative feedback. I really like the effortless volume that they can deliver; there really is very little change in character between high and low listening levels, and what there is may well be down to the reflections in the room rather than the loudspeakers. It may take a while before I get used to regular amp and speaker combos when these are gone, such is the roller-coaster life of the audio reviewer.

I tried using the volume controlled output of the NDX 2 directly into the ATCs as well. This was strong in the mid and a little lean in the upper bass but had impressive powers of



ALLN/C
Earning favour globally



ALLNIC AUDIO CABLES
ZL (Zero Loss) TECHNOLOGY



TEL: +1.250.826.6872
www.hammertoneaudio.com



“All this glory and more is there for the enjoying with these high-resolution loudspeakers.”

► engagement, taking tracks into a sublime zone where all you do is close your eyes to be transported. Depth of reverb was particularly strong as was the shape and power of kick drums. The MSB combined with an AURALiC ARIES G1 streamer, connected this time with balanced cables, was very special in a more even handed way. Abdullah Ibrahim's 'Ishmael' [*Africa – Tears and Laughter*, Enja] is a vocal-led long form piece that sounded incredibly transparent and totally captivating with this combination. I also spun some vinyl back through the Allegri. Here Gwenifer Raymond's guitar picking lacked some of the openness I expect of her *You Never Were Much of a Dancer* [Tomkins Square] album, but the beauty and brilliance of her playing was very clear indeed, and the banjo positively turbo charged. The live sound of a thunderstorm in the distance was especially gratifying because I'd not been able to identify the low-end rumble until it was exposed by the bass definition of this speaker.

I mentioned earlier that I'd made a discovery about ATC actives over the course of this review. They need more drive than average; more than was provided by the MSB DAC or transformer passive Allegri. I was getting extremely revealing, wide bandwidth results with plenty of power but limited emotional impact: something wasn't quite gelling. So I dug out an ATC CA2 preamplifier and hooked it up. Bam, that did it: the musicians were in the room. Now the Nils Frahm sounded truly live, the piano regaining its full dynamic glory and the performance taking on a spine tingling immediacy. Using a preamp with decent line driving capabilities broke through the last barrier between the listener and the performance to deliver both technical and emotional communication of the first order. Hendrix's 'Spanish Castle Magic' [*Axis Bold as Love*, Track] is hardly a high fidelity recording in the conventional sense but all the important stuff is there: all of his power to communicate precisely what he felt is present in the data stream, and you can't help but be blown away by the soul and energy of the performance. That and the bass, which surely could never have sounded this good back in the day with the monitors available. Zappa's 'The Torture Never Stops' [*Zoot Allures*, Warner Bros] has so much going on in the background: such an intense and compressed guitar sound on a tune that

TECHNICAL SPECIFICATIONS

Type: Three-way, three-driver, floorstanding speaker with active drive and reflex loaded enclosure

Driver complement: 1 x SH25-76S 25mm ATC soft dome, dual suspension tweeter; 1 x ATC SM75-150S 75mm/3" soft dome midrange driver; 1 x ATC SB75-314SL 314mm/12" 'Super Linear' magnet bass driver

Crossover frequencies: 380Hz, 3.5kHz

Frequency response: 32Hz–25kHz (–6dB)

Amplifier output: 200W LF, 100W MF, 50W HF

Input sensitivity: 1V

Protection: Fabric grilles

Finishes: Satin lacquered or high gloss, black, white and a range of wood veneers

Dimensions without spikes (H×W×D): 1150 × 419 × 585mm

Weight: 79kg/each

Guarantee: 6 years

Price: £31,250 satin lacquered, £36,083 high gloss

Manufacturer: ATC

Tel: +44 (0)1285 760561

URL: atcloudspeakers.co.uk

starts out sounding lush but ends up infused with layers of the filthiest feedback. All this glory and more is there for the enjoying with these high-resolution loudspeakers.

The ATC SCM100SE is a big-boned loudspeaker, and while its SE aesthetics help it to look more classy than its 'pro-tools' type stable mates, it will never be the slender belle of the speaker ball. But the 100SE makes no apologies for this and neither should it. If you want to move air properly you need a box with volume and preferably a large bass driver. The SCM100SE has both and is very well put together. What makes it so appealing is the ease with which it goes about the business of reproducing not only the full bandwidth of the signal but its full dynamic envelope as well, and if you like to play at levels that approach the realistic, it is in a class of its own.

I found the ATC SCM100SE extremely rewarding once a key ingredient had been added to the mix. I'm sure that there are other preamplifiers that have the ability to drive these speakers but the results I got with the modestly priced CA2 were pretty damn fabulous. However I suspect they have even more to give. +



KJ WEST ONE

EST. 1965

Connoisseurs of Sound



The High-End Show That Never Ends

Our Central London showroom is constantly kept refreshed with the latest creations from the world's finest audio brands. We are proud to offer a sanctuary for audiophiles to try combinations impossible to find anywhere else in the UK.

Latest additions to the collection

Sonus Faber Electa Amator III Loudspeakers (ITA)

Audio Research Reference 160M Monoblocks (USA)

Vertere DG-1 Dynamic Groove Record Player (UK)

Naim Mu-so 2nd Generation (UK)

Shunyata Venom NR-V12 / V10 Mains Cables (USA)



KJ West One

26 New Cavendish St, London W1G 8TY

T: +44 (0)20 7486 8262 E: info@kjwestone.co.uk

kjwestone.co.uk



Audiodesksysteme PRO Ultrasonic Vinyl Cleaner



A new adaptor for cleaning 7" singles is now available for the updated PRO Vinyl Cleaner.

This allows vinyl collectors to extract the full potential of improved sound from this format.

As well as being able to clean different sized vinyl, this latest generation cleaner is more efficient, more gentle, and quieter than before.

Visit our website for more information.

This contactless cleaning action removes more dirt than machines that rely on conventional suction methods.

A deliberately low energy ultrasonic generator enables maximum cleaning efficiency without potential damage to the LP surface.

Ultraclean grooves will extend stylus life.

Ultrasonically cleaned LPs have a much better sound, more than just the removal of noise. The sound has a larger soundstage, more detail, better tonal balance and greater dynamics.

Used LPs, previously cleaned LPs, and brand new albums all benefit from ultrasonic cleaning.

A completely automatic cleaning and drying cycle of 6 minutes results in an ultraclean LP.

More than a cleaning machine, an essential component.

4 colour options available: grey, black, white and red. £2525.

Please contact us for your nearest dealer.

Apart from the removal of loose particles, it's the *embedded* dirt that has, up until now, never been removed, and has proven resistant even to an expensive record cleaning machine. This is a true first for record cleaners. This, in vinyl terms, is revolutionary.

Paul Rigby – The Audiophile Man, Dec 16



<http://bit.ly/HiFiComp>

Harman Kardon Citation Towers wireless floorstanding loudspeakers

by Simon Lucas

It's possible to reach all the way back to the mid-1950s and draw a straight line to these most 21st Century of loudspeakers. Well, a straightish line at least – there are one or two minor deviations involving a food conglomerate, an American president, South Korea, and several billion dollars.

In 1956 Bernard Kardon decided to retire from the company he and Sidney Harman had founded three years beforehand. Suddenly the sole boss of Harman Kardon, Sidney changed the company's name to Harman International – but its products continued to be branded Harman Kardon.

In 1959, Harman Kardon unveiled the Citation I preamplifier and a tube-driven power amp called Citation II. Citation II in particular, and the rest of Harman Kardon's model range in general, was popular and successful enough to allow Harman International to begin acquiring other manufacturers – in 1969, for example, Harman International purchased the JBL loudspeaker brand.

Sidney sold his company to Beatrice Foods (yes, really) for \$100m in 1976 – he was serving in Jimmy Carter's government at this point and was allowed no other business interests. By the end of the Carter administration, Beatrice Foods had undermined the Harman Kardon brand to the extent that Sidney was able to buy it back in 1980 for \$55m.

Sidney Harman was 88 years old by the time he retired in 2007 – by then Harman International was sitting on a significant portfolio of electronics brands, including the likes of AKG, Lexicon, and Revel. The company had the sort of profile and credibility in the stereo world a brand like Samsung would quite possibly kill for – but instead the South Korean giant settled for a takeover. It acquired Harman International in early 2017 for a reported \$8bn.

Harman International probably fancied itself a company of heft and importance – but, of course, its activities are dwarfed by the scale of Samsung's operation. Yet it seems to have been granted enough autonomy for the first fruits of its labour under new management to be precisely the sort of products one imagines Sidney Harman would be demanding were he still at the helm. And, of course, the range is called Citation.

The Citation Towers are the biggest and boldest statement in the current Citation range. A floorstanding pair of beefily powered speakers (with 200 watts of amplification in each tower), they're comfortably over a metre tall and are that special three-dimensional, flared-ovoid, vaguely triangular shape for which the world of geometry has (as far as I can tell) no word. Cone? They're cone- ▶



“Digital audio can, at least, be accessed from literally hundreds of sources thanks to built-in Google Chromecast.”

► shaped, sort of. The impression of bulk is mitigated somewhat by the way the Towers seem to float a little above the plinths they’re mounted on.

The good people of Kvadrat must be working triple shifts at the moment. The Danish textile manufacturer seems to have cornered the ‘hard-wearing fabric with good acoustic properties no matter the colour it’s dyed’ market – every wireless speaker brand and their uncle has beaten a path to the town of Ebeltøft. The Citation Towers are covered by blended-wool Kvadrat from top to bottom, in either black or grey. Black is, well, black – the grey is the sort of shade one can imagine Don Johnson favouring for the suit jacket he intends to roll the sleeves up on.

Each Tower deploys four drivers. From the top it runs ‘10cm doped paper mid/bass

driver, 25mm silk dome tweeter, 10cm doped paper mid/bass driver’ with a 20cm doped paper woofer firing upwards from the bottom of the enclosure. Between the woofer and the three-driver array there’s a sculpted bass reflex port that vents at the rear of the cabinet, just above where the mains cable plugs in. That’s if cones can be said to have a ‘rear’. Frequency response is given as 28Hz to 22kHz, and sensitivity as a manageable 103dB.

Unsurprisingly, Class D amplification gets the nod – each woofer enjoys 100 watts of power, while each three-driver array splits the other 100 watts. Processing of digital audio is done by a 24bit/96kHz Texas Instruments DAC – which, for most people’s real-world purposes, is probably fine. But it’ll disappoint those who like a 24bit/192kHz download and/or are Tidal Masters subscribers.

Digital audio can, at least, be accessed from literally hundreds of sources thanks to built-in Google Chromecast. The speakers can also access any music stored on a local network, and they’re equipped with Bluetooth 4.2 (which, again, is just slightly a suboptimal number).

Control is via Google Assistant, which means you are – through no fault of Harman Kardon’s – subject to the typical Google Assistant catalogue of unpredictable misunderstandings and general slow-wittedness. There’s also a touch-screen on the top of the right-hand ‘master’ Tower (it’s the Control Tower! Boom! Tish! etc.) – it is small, bright and, high-resolution.

It’s also rather leisurely in its responses, which is much more Harman Kardon’s fault.

Set-up is achieved using the Google Home app, and it’s here you can arrange your numerous Citation speakers into a multi-room system. It’s very straightforward to do – the real trick is getting Google Assistant to do as you ask once your multi-room set-up is established.

If you’re the patient type, it’s now you enter negotiations with Google Assistant about getting some music playing. If you’re more like me, you open the Tidal app on your phone, select a ‘Masters’ file of Karen O & Danger Mouse’s *Lux Prima* [BMG] and press ‘play’. Then try to hide your disappointment as the track quality indicator on the app switches down from ‘Master’ to ‘HiFi’ as casting begins.

Despite the theoretical step down in quality, there’s much to like – even to admire – about the way the Citation Towers ►





Zero-compromise isolation technology
A necessity — not an accessory.



"If your budget will stretch to accommodate their price range, then I don't know any better way for you to go.

I therefore give the Stillpoints ESS Rack System and Ultra 5 and SS Isolation Feet my highest recommendation, without hesitation, and with deep enthusiasm. If you are looking for the exceptional in this category of the audio arts, then this is the current top 'o the heap for me."

Positive Feedback, January 2016

"The Ultra 6 is a state-of-the-art isolation device. Deploy it under an audio chassis and it will disclose addictive new layers of detail and harmonic richness - in addition to improvements in dynamics and just about anything else that contributes to the lifelike reproduction of music."

Product of the Year Awards 2015, The Absolute Sound



To try Stillpoints for yourself, please contact your local stockist.

Analogue Seduction	Peterborough	01733 350878
Audio Destination	Tiverton	01884 243584
Audio Therapy	Newcastle	07976 496218
Castle Sound & Vision	Nottingham	0115 958 4404
Choice Hifi	Richmond	020 8392 1959
Homesound	Edinburgh	0131 662 1327
KJ West One	Marylebone	020 7486 8262

Lotus Hifi	Walton-on-Thames	07887 852513
Lintone Audio	Newcastle	0191 477 4167
Martins Hifi	Norwich	01603 627010
Nintronics	Welwyn	01707 320788
Oxford Audio	Oxford	01865 790879
Rayleigh Hifi	Rayleigh	01268 779762
Studio AV	Chobham	01753 863300



Distributed by
KOG AUDIO

www.kogaudio.com

info@kogaudio.com

024 7722 0650

HANDCRAFTED SINCE 1967
SUGDEN
AUDIO

THE MASTERCLASS ANV-50

Rescuing Music From Technology



SUGDENAUDIO.COM

“They’re certainly impressive at the bottom of the frequency range – kick drums, bass guitars, and so on have real depth.”

- serve up ‘Turn the Light’. Standing out in some free space and toed in just a fraction towards the listening position, the Harman Kardon pair generate a fairly broad, fairly deep, and fairly convincing soundstage. There’s nice three-dimensionality to the way the speakers place the acoustic guitar towards the rear of the stage as it plays the root chord changes, and the close-mic’d vocal enjoys a pocket of space up front and centre. Danger Mouse (Brian to his Mum) has got the whole low-temperature disco insouciance thing down pat, and the Towers allow the tempo to simmer elegantly.

Tonally, the Citation Towers sit just on the cool side of neutral. There’s plenty of heat in Henry Mancini’s *The Music from Peter Gunn* [RCA], but the speakers take just a touch of the sting from the blaring brass. The result is an undoubtedly easy listen, but not the most forceful or assertive you’ve ever heard. This kind of approach suits Karen O and Danger Mouse just fine, but where Henry’s concerned a little more attack wouldn’t go amiss.

That’s not to suggest the Towers are an entirely passive proposition. They have sufficient vim to tackle Fela Kuti’s *Colonial Mentality* [Arista] head-on, and manage to keep control over a stage that’s crowded with quite forceful performers. This recording is a fine showcase of the speaker’s ability with timing and integration, too – keeping the gimpy rhythm rolling while it’s punctuated from all directions is a test many a speaker has crumbled in the face of.

Avoid Bluetooth if at all possible (here it drains much of the animation and excitement from music) and stick to casting from your preferred sources, and the Towers are an adaptable, generally engaging listen.

They’re certainly impressive at the bottom of the frequency range – kick drums, bass guitars, and so on have real depth and texture. These instruments display great discipline with the attack and decay of bass sounds too, which helps reinforce their timing credentials.

There are a couple of unusual blind spots in the frequency range, though. For all the good work the Harman Kardons do when digging deep, a little higher up – towards the area the woofer hands over to the brace of mid/bass drivers, at around 120Hz – they become a little boneless and tentative. And it’s a similar story at the opposite end: the tweeter strikes a nice balance between bite and grind, but towards the bottom of the upper frequencies (at 2.8kHz, where the handover down to the mid/bass drivers happens) there’s vagueness rather than positivity.

Which makes it sound like the mid/bass drivers are somehow culpable, but that’s not the case. They do really admirable work with the unbearably vulnerable voice in Lotte Kestner’s *Secret Longitude* [Saint Marie], describing all the details of her vocal technique but maintaining a human, rather than analytical, quality to the sound. The problem is not with the drivers, which on an individual basis are doing everything they ought, but with the way the active crossovers are managed.

TECHNICAL SPECIFICATIONS

Type: Three-way, four-driver floorstander with ported bass reflex enclosure

Driver complement: 1 × 25mm tweeter, 2 × 102mm mid/bass driver, 1 × 203mm woofer

Frequency response: 28Hz–22kHz

Crossover frequencies: 120Hz, 2.8kHz

Impedance (ohms): 6

Sensitivity (dB/w/m): 103

Dimensions (hwd, cm): 116 × 34.7 × 34.7

Weight (kg): 19

Finishes: Grey, black

Price: £2199 per pair

Manufacturer: Harman Kardon

Tel: 0161 222 3325

URL: www.harmankardon.co.uk

Distributor: Harman Kardon

Tel: 0161 222 3325

URL: www.harmankardon.co.uk

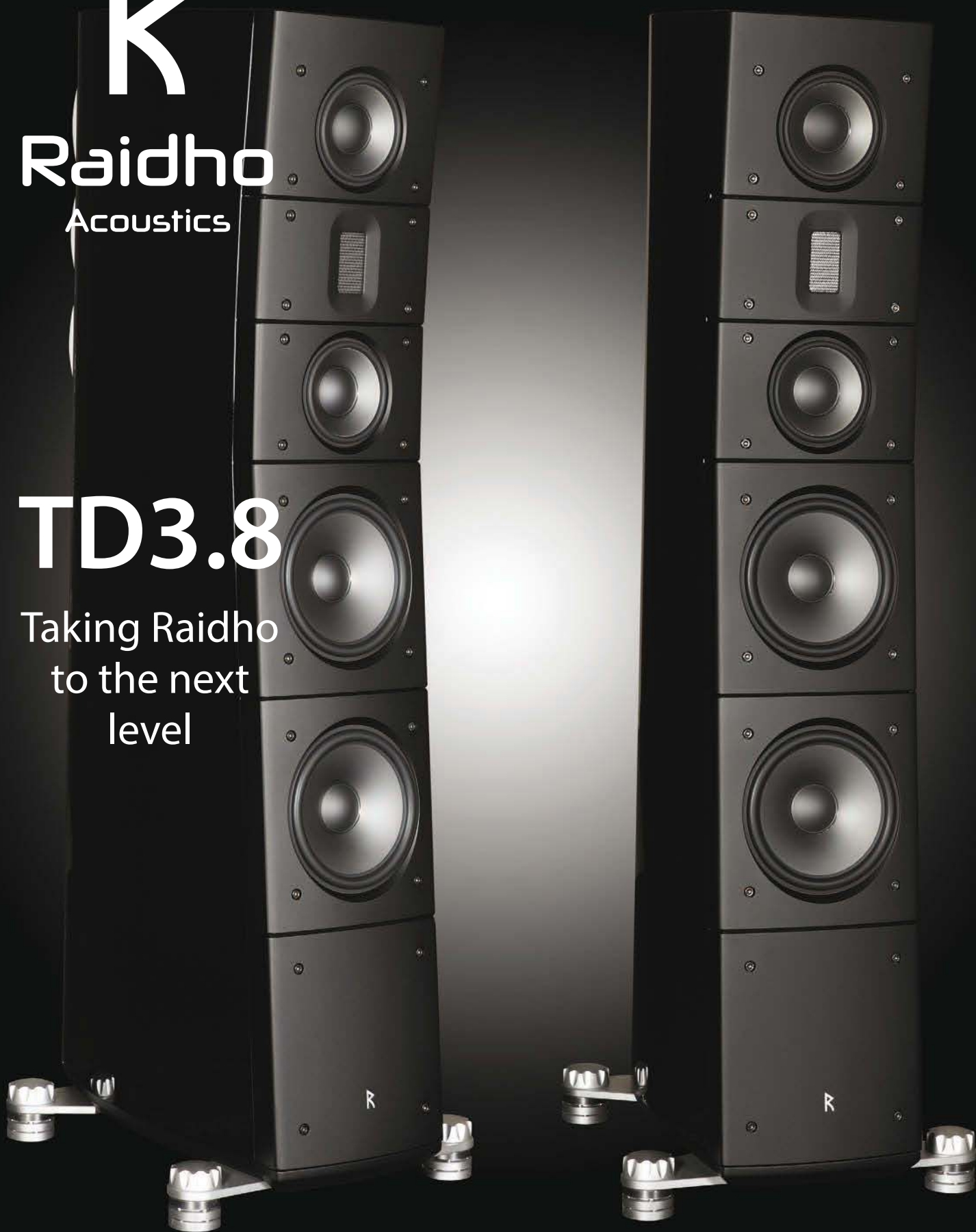
How fair it is to deal in absolutes when considering a product so squarely designed to offer as much convenience as much as performance is debatable. Consider the Citation Towers purely by the standards of £2k per pair floorstanders and you can do better in terms of frequency integration and dynamism. Consider them as a self-contained system, though, one that’s capable of functioning as an element of a multi-room or surround-sound set-up without any undue aggravation, and they become quite a bit more valid. And... Google Assistant’s low IQ is not Harman Kardon’s responsibility.

Like virtually everything in hi-fi that doesn’t carry a lottery-winner’s price tag, the Citation Towers are a compromise. A trade-off. But they do nothing to blacken the proud heritage of the Citation name, and they really ought to encourage Samsung that at least some of its money was well-spent. +

R
Raidho
Acoustics

TD3.8

Taking Raidho
to the next
level



Meet us on facebook · uk distribution: www.decentaudio.co.uk

Sugden Masterclass ANV-50 integrated amplifier

by Steve Dickinson



It was 'Birdland' that did it. I'd been listening to the Sugden Masterclass ANV-50 for a day or two. Not careful, reviewer type listening, you understand, just *getting to know you* listening, and it had been immediately obvious that Sugden had something a bit special on their hands, but it wasn't until I happened upon that old Weather Report warhorse that I actually realised just how special.

Sugden decided to celebrate the 50th-anniversary of the A21, the world's first production Class A transistor amplifier, by developing another pioneering design, but this time one with a distinctly 21st-century vibe. Two years on, the ANV-50 is that 50th-Anniversary product. It was designed with a few objectives: first, it needed to have a more robust

power output than the 25-35 Watts of the A21; second, it needed to deal with the sometimes-unwelcome heat output of Class A designs; and finally, befitting the current era, its power consumption needed to be rather eco-friendlier. The 50-Watt, cool-running, ANV-50 consumes 20 Watts when idling, compared to the A21's constant 200 Watts.

So, job done then. Provided it doesn't sound like all the musicians are texting their accountants while performing, obviously.

It doesn't. The interesting thing for me, on first impressions, was how unlike the warm and easy Sugden sound the Masterclass ANV-50's character seemed to be, but at the same time, how it retained that fundamental

“So here it is, and it’s not Class A and, deep breath, it has a switched-mode power supply rather than a linear PSU.”

- musical *nous* that Sugden products bring to bear. Sugden amplifiers, and particularly the A21, seem to manage an effortless facility with the important aspects that simply draws you in to the music. The ANV-50 does have that signature sweetness, though, and a kind of empathy with the music that can find beauty and meaning in all but the most raucous racket. So, actually, exactly like the Sugden house sound. But different, somehow.

The technology is different, too. Sugden, after a half-century of the ground-breaking A21 recognised that they needed another ground-breaking product to do it justice. So here it is, and it’s not Class A and, deep breath, it has a switched-mode power supply rather than a linear PSU. So, not just a development of the A21, which continues in production. But it’s not just any SMPS, you understand; it’s about twice as fast as conventional switched mode supplies, the better to replicate the speed and transient attack of Class A designs whose power delivery is instant, thanks to the ‘always on’ nature of the design. But Class A is a wasteful way to amplify a signal. Switched mode power supplies have come a long way since the likes of Linn and Chord first made them mainstream, and if you think you don’t like what they do, then perhaps it’s time to let the ANV-50 recalibrate your expectations like they did mine. The power amp section is itself a two-stage design, a small Class A stage drives a second Class A/B final output stage (the first 4 Watts or so are Class A) and the speed of the SMPS means pretty much instantaneous power delivery, all the time.

It’s an implementation Sugden think is unique. Trailblazing again.

DC-coupling keeps capacitors out of the signal path, and a new design of comparator circuit improves compensation for load (output doubles into a 4Ω load), making this a most flexible and fuss-free partner in a much wider variety of systems. It’s a very 21st-century solution, because it consumes so little energy except when it needs to. It’s also going to disappoint anybody who appraises amplifiers by weight: the Masterclass ANV-50 weighs barely more than half as much as the A21SE, largely due to the lack of need for a toroidal transformer, banks of capacitors, and hefty heatsinking. But don’t make the mistake of equating weight with quality. The usual unimpeachable Sugden build-quality,

fit, and finish are there just as you’d expect. The switches and knobs are tactile and a pleasure to use. Take the top off and you don’t see machine-built surface-mount boards, just neatly laid out and constructed componentry in the time-honoured fashion.

So, that Weather Report track (from *Heavy Weather* on Columbia). In moments, I was utterly gripped. Fast, detailed, and insightful, with explosive transients and that beautiful tonal colour and tunefulness that Sugden does so well. The bass was tight and melodic, the percussion fast and urgent, and the sax’s phrasing was absolutely on the money. I remember going to a Weather Report gig in my youth, not long after *Heavy Weather* came out, and this was as fresh and exciting an experience as I remember from that day. Good hi-fi is about evoking feelings, generating a visceral, emotional response to your music, and the Masterclass ANV-50 was absolutely delivering right at that very moment.

It’s not perfect, and while the 50-Watt output (doubling to 100 Watts into a 4 Ohm load, which is itself quite a rare capacity in the real world) gives it considerably more than twice the headroom and grunt of the A21, it can’t quite match the solid bottom end of my (twice as expensive) 110-Watt Albarr M1108s. So that famous opening bass riff of ‘Birdland’ has power, impact, and tunefulness, but just misses out on a degree of mass and solidity – Pastorius’ bass goes ‘boing’ not ‘Boing!’, but you’d only notice if you’d heard it differently elsewhere. In all other respects, the freshness and vitality of the piece just leapt out of the speakers, aided no doubt by the sort of natural timing and ‘rightness’ that just doesn’t draw attention to itself. This was the music speaking, not the system.

Setting to one side, for a moment, thoughts of lower bass, I turned to the more contemplative and thoughtful Tord Gustavsen Ensemble, specifically ‘Wrapped in a yielding air’ from *Restored Returned* [ECM] which, while seldom rising above a *mezzo forte* still manages a sinuous, compelling propulsion in the twists and turns of its phrasing and the understated percussion. Its textures, particularly Kristin Asbjørnsen’s characterful vocals, are a key part of the whole performance, and the ANV-50 delivered its complex layers and subtleties impeccably. And, as it happens, bass really isn’t an issue. Tord Gustavsen again, but this time with his trio on ‘At Home’ from *Being There* [ECM]; there is a skilful ►



Beautiful hand-matched, real wood veneers.
A choice of four classic finishes: Cherry, Oak, Rosewood or Ebony

Clarity by Design

Transparent Uncolored Accurate.

This is what made the sound of the original British Broadcasting Corporation monitors legendary. Graham Audio has made it their mission to continue this legacy, and to bring the Chartwell LS3/5 and LS3/5A, the Chartwell LS6, the LS5/8 and LS5/9 to a broader global audience.

Drawn from many years of BBC research, and through the engineering genius of Derek Hughes, these speakers have been recreated using state of the art materials and technology under license from the BBC. A new addition to this series is the Chartwell Sub 3, a bespoke compact, passive sub-woofer designed to be used in conjunction with the LS3/5 monitors.

Graham Audio are also proud to announce the VOTU, their flagship 1000 watts per channel, high-end monitor for large studios and listening rooms. Effortless dynamics and vast detail come as standard.

...hear the difference



www.grahamaudio.co.uk



CHARTWELL
A DIVISION OF
GRAHAM AUDIO

“The amp is more than capable of giving a convincing account of the weight of a piano’s lower registers.”



▶ and oh so subtle build up of energy and urgency. Again, the volume seldom rises above moderate levels, and lesser amps struggle to portray the energy if there isn’t much of yer actual loudness, but the ANV-50 absolutely nailed it. It’s a clever trick, depicting energy without loudness, and it takes a very accomplished amp to pull it off. ‘Vesper’ from the same album showed that the amp is more than capable of giving a convincing account of the weight of a piano’s lower registers, with a solid, convincing, and above all, tuneful bass.

The Sugden Masterclass ANV-50 reminds me of another of my very favourite amplifiers, the Lavardin IS Reference. Both have a speed, delicacy, and subtlety, a way with textures, phrasing, and timing that simply elevates their performance above their peers. The Sugden, however, also has ample reserves of power and drive, despite its 50-Watt output not being far removed from the Lavardin’s nominal 45 Watts. The difference, I suspect, is how the Sugden deals with lower impedance or reactive loads, which neither the Lavardin, nor Sugden’s own A21 can even approach.

So, the on-paper power output means the ANV-50 isn’t a heavy-hitter, but the delivery is robust enough for it not to show under most circumstances. Billy Taylor’s piano on ‘I wish I knew how it would feel to be free’ from *Music keeps us young* (Arkadia) can indeed be as weighty and powerful

as you expect, if you turn the wick up a bit, but sometimes that comes at the expense of a small degree of the piece’s signature bounce, and the subtlest phrasing touches.

These are very small trade-offs, however, and the truly remarkable thing is that I’m nit-picking because there’s very little else. And in truth, any small nits I’ve picked are largely I suspect down to the relatively modest power output, rather than any issues with the amp itself. Probably fair to say that 50 Watt, doubling into a 4Ω load, is going to be more than adequate for most applications.

I use Russell K Red 150 floorstanders for most of my reviewing; these are a fairly straightforward load, but not especially efficient at 87dB for 1 Watt at 1 metre. Thoroughly antisocial volume levels were entirely possible in my typical UK domestic-sized listening room, but a 50-Watt amp is never going to move as much air as a big ‘un, and it was when extended that the limits of the power did show. The Royal Concertgebouw Orchestra’s account of the Dvořák 9th Symphony [RCO Live, SACD] has huge reserves of energy, and dynamics to pin you in your seat. But it’s not lacking in subtlety. The Masterclass ANV-50 delivered nearly all the energy and drive you could wish for, for example in the Scherzo third movement and the finale, but if I drove it hard there was a slight trade off in resolution. The tone and ▶

ELEMENT 118 Monoblocks

"There are a handful of amplifiers that create a sound as fast and as precise as this, but one of the few that is still in production is DarTZeel. The two have a lot in common sonically, although the Element 118 is perhaps even more neutral-sounding than the Swiss triumph."

HiFi Plus, Alan Sircom Editor in Chief.



MERRILL
AUDIO



FLORIDA 2019: The Best of The Show



www.MerrillAudio.net

“It manages that neat trick of portraying the energy in the music without needing to be played loud.”

► pitch of timpani was perhaps a touch vague, compared to the Albarries, and there was a small reduction in the scale of the soundstage and depth. But the ANV-50 didn't lose its composure or become congested, and this is a piece which has foxed many an amplifier in my system. Played at a slightly lower level, the spatial detail and texture was all there, so I conclude that any limitations are largely down to the ultimate reserves of power you have available. Some of it may be the preamp section (the Sugden has a pre-out option) which is a little leaner and a shade less emphatic than my Albarry, but the essential character of the amplifier as a whole was consistent, whether I used just the pre- or used it as an integrated design.

The amp uses its available power as effectively as any amplifier I've heard. As I mentioned before, it manages that neat trick of portraying the energy in the music without needing to be playing loud, so it's an absolute wonder at creating tension and drama, and letting the musicians' skills shine through in the subtlety of their playing and phrasing. All these little micro-dynamic details which lesser amps are apt to airbrush away can so often make the difference between an enjoyable performance, and a truly memorable one. The Sugden just owns it. Take Joanna MacGregor playing 'Autumn in Warsaw' from *Play* [Sound Circus]; this is a subtle, yet complex and hugely technically demanding piece, and MacGregor's articulation and phrasing is finely wrought. It goes loud, but the musical forces are not massive; here the piano has very good weight, scale and solidity, and the build up of tension and drama is so skilfully managed that the apocalyptic climax to the piece is all the more effective in its impact. It's about the way the power is delivered – just the right amount, at just the right moment.

So, timing is another particular strength; the late, and much missed Jacques Loussier's 'Pastorale' from *Plays Bach* [Telarc] has lots of subtle inner detail and little delights – the interplay between the piano and the percussion with its peculiar 'not quite off-beat' counterpoint, or the way piano and bass work together and, in particular the melodic and tuneful nature of the acoustic bass. Marc Cohn's 'Ghost Train' from *Marc Cohn* [Atlantic] showed off its inner detail and rhythmic structure, the tom toms and tambourine being particularly tactile and texturally rich; but it's subtly done, not pushed into your face, and all the more effective for it.

TECHNICAL SPECIFICATIONS

Type: Solid-state two-channel integrated amplifier with switched mode power supply

Analogue inputs: 5, single-ended line level only via RCA jacks

Analogue outputs: One tape loop, one pre-amp (variable) output, one pair multi-way loudspeaker binding posts

Input sensitivity: 110mV @ zero attenuation for full output

Input impedance: 50kΩ

Signal to Noise Ratio: 90dB

Frequency response: +/-1dB 12Hz–45kHz

Bandwidth: 8Hz–86kHz

Distortion: THD @1 Watt < 0.05%

THD: @35 Watts <0.05%

Rated power into 8Ω: 50 Watts, both channels working

Rated power into in 4Ω: 100 Watts, both channels working

Finishes: Brushed Black or aluminium

Dimensions (HxWxD): 143 x 430 x 370mm

Gross Weight (packed): 10kg

Price: £3,950

Manufacturer: J E Sugden & Co Ltd

Tel: +44 (0) 1924 404088

URL: sugdenaudio.com

The Sugden Masterclass ANV-50 is, by any standards, a remarkable achievement. As a spiritual, if not literal successor to the pioneering A21, the amp that made Sugden's name, it has some big shoes to fill. On this experience, it does so magnificently. It is light on its feet, and has a deftness that eludes so many otherwise decent amplifiers. Coupled with a perfectly respectable and usable power output, and the reserves to double that output into difficult loads, it's going to be quite a challenge to find anything at the price that will give you anything like the musical satisfaction and sheer joy this amplifier delivers. Here's to the next fifty years. +



Primer - from £260

A Revolution in Musical Performance !

Digital and analogue cables that will redefine your expectations.



Primer Stockist

Audio Destination ... (Devon) ... www.audiodeestination.co.uk ... 01884 243584

Audio Therapy ... (Newcastle upon Tyne) ... www.audiotherapyuk.com ... 07976 496218

Choice HiFi ... (Richmond) ... www.choice-hifi.com ... 07768 720456

Future Shop ... (Hertfordshire) ... www.futureshop.co.uk ... 0208 9051555

HiFi Corner ... (Falkirk) ... www.hificorner.co.uk ... 01324 629011

HiFi Corner ... (Edinburgh) ... www.hificorner.co.uk ... 0131 5567901

Homesound ... (Edinburgh) ... www.hsound.co.uk ... 0131 6621327

Martins HiFi ... (Norfolk) ... www.martinshifi.co.uk ... 01603 627010

Rayleigh Hifi ... (Essex) ... www.rayleighhifi.com ... 01268 779762

Studio AV ... (Chobham) ... www.studioav.co.uk ... 01753 863300



Demand to hear Primer cables at your nearest dealer before you make your next cable purchase !



Ultra Black II Speaker Cable

Even taking in account all the awards that the old Ultra Black speaker cable won, this new version gives a whole new level of performance that is obvious from the first second of listening. Greater detail, more clarity, more organic but still sitting very firmly in the Black cable family.



Tellurium Q have been busy....

With new introductions such as the Silver and Silver Diamond power cables and an upgrade to the established classic Ultra Black speaker cable, we have the ability to achieve even greater performance from our systems. Contact Kog Audio for more information or ask your dealer to arrange a demonstration.

Silver Diamond Power Cable

The final piece in the puzzle for the Silver series of power cables. It has some of the "magic" of the Statement power cable because it came out of that same research and so is a smooth, detailed performer that brings your system to life.

Silver Power Cable

The new Silver power sits above the Black power cable in performance. The Silver power cable does a great job balancing the smooth attributes of the black cable while giving more energy, detail and dynamism that is the signature of the Tellurium Q Silver family. Add to that a more flexible construction and the new Silver power cable ticks every box.



Kanto TUK active bookshelf loudspeaker

by Alan Sircom

Such is the delta of change within the audio industry that products like the Kanto TUK weren't so much a rarity as functionally non-existent just a few years ago. Then, there were a few difficult years when the products were best described as 'floored' (sometimes with the prefix 'horribly...'). But recently – and it has been in the last year or so – things have changed. Instead of being a mediocre alternative to the real deal, suddenly active makes more sense. The Kanto TUK is one of the front runners in this revolution.

Why the change, and what the TUK?

The change is more a confluence of small events that added up to a potentially big change. The move from 'own' to 'loan' in music, meant less focus on local sources and therefore less need for UPnP wrangling, Class D and Bluetooth both getting just a little bit better, and the need for a way for playing records that didn't require the other parts of the 'old school' equation – amplifiers and larger loudspeakers, all made a market for a good, high-performance small active loudspeaker both a proposition and a reality.

Now on to the Kanto TUK. One of the great advantages the TUK has is its specifications force audio enthusiasts out of their comfort zones. When it comes to products in this category, traditionally there has been a full naval parade's worth of dismissal from the audio community, but those days are coming to a close. A product with an AMT ribbon tweeter shuts down the whole 'cheap drivers in a box' argument pretty quickly. All the other components give audiophiles the same degree of pause, too.



The TUK (pronounced, paying very close attention to autocorrect, 'tuck') is an active Class D two-way, rear-ported loudspeaker, with an electronic crossover network that rolls off at 80Hz in that event of a subwoofer being connected (this doesn't auto-detect, you need to tell the TUK about the sub from the remote handset). Otherwise, Kanto claims a 50Hz lower frequency point from the 133mm aluminium cone woofer, and in room – unless that room is a barn – that figure is achievable and surprisingly realistic.

The TUK system uses one active and one passive loudspeaker separated – perhaps unsurprisingly – by speaker connectors and cable. By default, the active speaker is the left channel, but you can swap over by pressing and holding the 'Previous Track' button on the remote for five seconds. You can also enable or disable the auto power up or power down from the remote. The TUK takes about six seconds to wake up or go to sleep.



“The speakers perform extremely well. The first thing that hits you about them is the bass. There is a lot of it, but it is not overblown, too fat, too obvious, or uneven.”

And that is the big feather in the TUK's cap; it's a very well-balanced piece of engineering. It was clearly designed to play the long game; it is not so loud and shouty that it attracts people in the short-term and pushes them away in the long. A volume headroom that makes you think twice before playing too loud, yet is perfectly comfortable at low level listening, and an overall balance that is big and expansive without being too showy to make the more sensitive audiophiles on the planet run for cover.

The speakers perform extremely well. The first thing that hits you about them is the bass. There is a lot of it, but it is not overblown, too fat, too obvious, or uneven. Like many speakers of its size, there is some thickening around the 80Hz mark to give the impression of bass depth, but the impact on the sound is mild and only really serves to make the sound seem that bit fuller and larger. OK, if you listen primarily to very pure female vocals such as Joyce DiDinato [*Stella di Napoli*, Erato], that slight lift might come over as a little too much chestiness, but for most listeners with most music, it's just a good, big, and clean sound, that's fun to listen to.

Let's not underplay the TUK's hand, it's got the audiophile chops. It's more than just a big, bassy sound, and can give fine stereo imaging, when used on speaker stands. And they are fast, too. The combination of quick metal coned driver and notoriously fast AMT tweeter combine well here.

► In terms of wired inputs, the TUK sports USB and Toslink optical inputs, a line-level input via two RCA sockets, and a phono preamp with a ground connection also via a pair of RCA sockets. The USB DAC behind the input is capable of 24-bit, 96kHz precision, but is not asynchronous input or galvanically isolated. The phono stage does not specify the type of cartridge input it supports, but of course it's moving magnet. This is eminently sensible – putting a moving coil option on a pair of speakers at this level is gilding the lily, but it would be useful for many prospective vinyl/TUK users to have this snippet of information. The only other connection is a charging port for a USB device (this does not act as an input for the DAC).

The front panel is also reasonably minimalist in aspect. Drive units aside, the controls on the master unit comprise a single multi-function knob (turn it... volume; push it in... source selector, with matching LED; press and hold... toggle standby mode). An IR receiver eye and a 3.5mm headphone minijack output complete the deal. You can also feed it from a Bluetooth device, and the TUK supports Bluetooth 4.2 with aptX HD and AAC codecs.

Kanto has built in Class D amplification capable of delivering 130W RMS, but such figures are relatively meaningless unless the efficiency of the loudspeaker section is taken into account. Fortunately, although not an insane party powerhouse of a loudspeaker, it plays more than loud enough to cope without clipping, and you'd really need to go full rabies on the volume control for sustained periods during a thunderstorm to do any damage to the TUK's drivers. It's a very well matched system in this way.

CELEBRATING
40
YEARS
1979 - 2019



40 years of cutting edge audio excellence

WHY STOP NOW? WE'VE ONLY JUST GOT STARTED!

For your nearest dealer call

01280 700147

OR VISIT

proac-loudspeakers.com

 **ProAc**
perfectly natural



EXCLUSIVELY AVAILABLE THROUGH A DEDICATED TEAM OF UK INDEPENDENT DEALERS AND INTERNATIONAL DISTRIBUTORS

“I’d rather this sheer speed of delivery than blandly listening to well-produced aural wallpaper replayed tiresomely, but with tireless detail.”

► The TUK is also very unforgiving in performance, which is not a back-handed compliment. The TUK will have to play nice with a range of inputs that are not likely to have much in the way of audiophile snootiness, and the results that might sound too compressed on conventional audio are absolutely fine sounding through the TUK. It won’t make the most compressed signals magically solve their problems, but the TUK is a lot less forgiving than a lot of its older-style rivals at its price and above.

Detail is perhaps ‘good plus’ rather than outstanding, but the loudspeaker goes instead for speed of delivery than sheer weight of information on offer. On balance, I like that position for the TUK, as it makes it all the more listenable, and I’d rather this sheer speed of delivery than blandly listening to well-produced aural wallpaper replayed tiresomely, but with tireless detail.

The phono stage is perhaps the best example of this balance in the system. It is ideal for good turntables with moving magnet cartridges. I can easily see the TUK being used with a turntable that costs roughly as much as the loudspeaker itself. Swap out that turntable for one that costs ten times as much and you won’t get the concomitant improvement in performance that you might expect to hear elsewhere, but in the context of the TUK, this all works together perfectly.

One of the tests many reviewers quietly run through their respective heads is the ‘would I?’ game. Would I recommend this to a friend or a family member? Would I buy one for a loved one? Would I be happy if I thought this was the dorm-fi of a son or daughter while at college? While there is no need to go all audio-proselytiser, there are still minimum standards that need to be maintained, and thinking of it in close friends and family terms seems more personal than ‘would I put my name to it?’ Besides, angry relatives can know how to punch and know where I live!

All this is a way of saying a confident ‘yes’ to all the above. I would be happy recommending the TUK to a family friend. I would be happy with it being the dorm-fi system. It might be a tougher call talking about it in terms of a downshifting audiophile, wanting to swap out tens of thousands worth of equipment. I wouldn’t completely discount this speaker as a kind of extreme de-audiophiling, I think the downshifter is more likely to opt for ‘more of the same, only smaller’ rather than this level of change.

I was extremely impressed by the Kanto TUK. It’s a very professional package with a very big, very powerful sound for so small a loudspeaker. It doesn’t rely on a tweaked balance to deliver that sound, and the overall balance of both the performance of the inputs and the quality of the drivers is such that they all work in a kind of dynamic balance. Top stuff! +

TECHNICAL SPECIFICATIONS

Type: Active two-way stand-mount loudspeaker

Drive Units: 28 × 35mm Air Motion Transformer (AMT) tweeter, 133mm aluminium concave cone mid/bass unit

Amplifier type: Class D

Analogue input sensitivity: 950mV

Frequency Response: 50Hz–20kHz

High/Low Pass Filter: 80Hz (selectable)

Inputs: Bluetooth 4.2 with Qualcomm® aptX™ HD and AAC codec

1x USB

1x optical (toslink)

1x RCA

1x RCA with dedicated Phono

Preamplifier

Output: 1x Subwoofer RCA,

1x 5V 2A DC USB output

1x 3.5mm headphone out

Power Output: 260W peak power (130W total RMS)

Maximum USB bit depth/sample rate: 24-bit, 96kHz

Auto power down: Yes (Can be disabled for Always On operation)

Auto power up: Yes (Can be disabled)

Input Voltage/Frequency: AC 100V–240V 50/60Hz (auto switching)

Standby power consumption: <0.5W

Speaker Grille: Included

Remote: Included

Finishes: Matt black, matt white

Dimensions (H×W×D):

27.6 × 17.8 × 21.5cm

Weight: 5kg (master), 4.5kg (slave)

Price: £799.99 per pair

Manufactured by: KANTO

URL: Kanto.com

Distributed by: Dynamic Distribution

URL: dynamic-distribution.net

Tel: +44(0) 1242 820000



New power distribution for your music system!

The NEW Ansuz Mainz8 A2/C2/D2 power distributors will become the heart of your music system, providing a steady flow of current to even the most demanding High End systems. With a massive capacity to ground through star grounding technology, these three new models holds the same principles as the Ansuz Mainz8 D-TC line, and delivers the perfect groundwork for High End performance.



Ansuz Mainz8

The NEW Ansuz Mainz8 A2/C2/D2 units exploits two different ways of conditioning the mains current, a passive and an active mechanism. The passive coil-based mechanism rounds of noise transients, so your HiFi-equipment better deals with transient current noise. The active mechanism samples the noise spike. A counter noise transient spike is added to further condition the current to an even lower noise floor for unmatched clarity and spatial focus.

The new Ansuz Mainz8 power distributors comes in three versions; A2, C2 and D2. All three models distributes mains power in 8 dedicated power outlets and an effective ground connection. Starting with the A2 version, you will experience that performance is way better than our previous Mainz8 D model. Moving up to C2 and D2 you will get more of the technology and experience significantly improved performance, gained from creating the Ansuz D-TC series and from the new Ansuz 2-series.

D2
C2
A2

MICROMEGA

Le son de France

ONE



"The M-150 from MicroMega's M-One series is surely this year's most intriguing new integrated amplifier"

By Paul Miller, EISA President

UPnP

DLNA

AirDream

TIDAL

vTuner
Internet radio

DSD
Direct Stream Digital

DXD
Digital eXtreme Definition

ENTRÉE
PHONO

"It's remarkably capable, flexible and well sorted, the MARS room correction is convincing, and the performance is similarly impressive: able to sound at turns lusty and supremely delicate and above all consistently in control."

By HiFiNews



CLONEY
AUDIO

Ireland

MusicMatters

Midlands

AV Online

North

Ceritech
AUDIO

South West

Oranges
& Lemons

London

audio
philia

Scotland

HOME MEDIA
SPECIALISTS IN SOUND AND VISION

South

Distributed exclusively in the UK & Ireland by SCV Distribution

Unit C1, Belcon Industrial Estate, Geddings Road Hoddesdon, Hertfordshire - EN11 0NT
Tel: 03301 222 500 | www.scvdistribution.co.uk | sales@scvdistribution.co.uk



The Funk Firm Rage 1 modifications to Rega turntables

by Alan Sircom



The Funk Firm makes turntables, tonearms, and Achromat pure vinyl replacements for the often-gastly fuzzy slip-mats on turntables. But what it is also produces is a range of upgrades for popular turntables. The Rage upgrades tested here, for example, are designed to upgrade turntables from the ever-popular Rega stable. Theoretically, anything from a 30-year-old Rega Planar 3 up to the latest models in the line are ripe for Rage.

The Rage modifications require a bit of a run-up in explanation, and – in fairness – The Funk Firm’s website explains this in a somewhat scatter-gun exuberance. While the exuberance is understandable given the performance of the products, it could do with some simplification, so here goes. The Funk Firm offers three points of upgrade to a Rega; feet, mat, and arm. There are two grades of arm. You can upgrade in steps (start with the Achromat, then add the feet,

finally arming yourself), or you can just choose one of the two complete upgrade paths; Rage 2 – that includes the F7 arm – and the Rage 1 (tested here), which upgrades the arm to an FXR arm. In both cases, the arm uses the Rega bearing housing and mount, upgrading the arm-tube and modifying the bias adjustment to be a contrast linear design. There is a small price penalty if you build up the Rage in steps, so we went with the complete package.

The 5mm Achromat is a direct drop-in replacement for the fuzzy mat supplied by Rega. It’s tight on the spindle so it fits snugly, but part of that is because you don’t want any slip in your slipmat. The Achromat is made of thick vinyl, on the grounds that the best interface between record and platter ►

“The Achromat and Bo!ng are designed to make the turntable an arm-holder for the F•XR II.”

► is the same material as the record. That's not as much of an oversimplification as it first sounds. The Bo!ng feet are direct screw-in replacements for the existing Rega feet, although they have small outriggers attached to widen the distance between feet. As the name suggests, these feet have a trio of small springs that connect the foot to the downward point of the outrigger, effectively making the feet into a surprisingly bouncy suspended turntable system. These add about 30mm to the height of the turntable. The Achromat and Bo!ng are designed to make the turntable an arm-holder for the F•XR II. They also allow the listener to roll back the changes in a way the arm does not, although why you would want to do that remains unclear, because the overall change is such a force for good.

Of course, this also means a lot hangs on the performance of the arm. Viewed as an upgrade, it replaces the arm-tube, the horizontal bearings, improves the anti-skate system, and central column... and that is a bit like saying a Ferrari is just a really hot up Fiat. The arm-tube improvement is the most visible part; the thin, red, and extraordinarily light tube is also incredibly stiff (try to imagine a drinking straw with an X-shaped bracing running inside its whole length). The result is an arm with unparalleled levels of arm resonance control, meaning a vastly more linear frequency response.

This invited comparison with standard Rega decks, but rather than a step-by-step approach, we compared a standard Rega against ‘the Full English’, so we had a reasonably upmarket – albeit a generation old – Rega RP6 (which was two and a bit notches up on the Rega used as donor for Funkification) as comparisons and both decks used an Audio Technica moving magnet cartridge.

The difference was extraordinarily clear. The enfunkented deck had more of everything it should have and less of everything it shouldn't. Bass was better defined and deeper, with a sense of buoyancy and rhythm that made the standard Rega seem flat by comparison. The midrange clarity was substantially improved – not just in context of comparing Rega with Rega, but in absolute terms. It becomes pretty obvious by about the second track into the listening that we have

PRICE AND CONTACT DETAILS

The Funk Firm 5mm Achromat £70

Available in: Black, White, or Orange

Bo!ng feet: £112

F•XR II arm: £1,300

Complete Rage 1 kit (as tested): £1,380

Manufactured by: The Funk Firm

URL: thefunkfirm.co.uk

Tel: +44(0)7846 798367

grown used to tonearms grunting their way through music like a modern tennis pro, and the Funk just doesn't do that.

Stereo imaging is improved too, but this is not the primary goal of the Rage 1; more, “among our arsenal...” than, “our chief weapon...” The telling record for all the Rage mods was Beck's *Sea Change* [MoFi]; you hear how personal that pain was all the more direct due to the deck getting out the way.

What might be surprising for many people is just how far the humble Rega can go in terms of high-end performance. We've come to expect that level of performance from the company's top decks, but the Rage mods show something similar is possible from every Rega. So, while that F•XR II is the star of the show with the frankly shocking realisation of just how most arms act as a resonant obstacle to the sound, the three parts of the support it needs (the Rega itself, the feet, and the platter) mean the turntable platform never runs out of steam no matter what. The Rage mods do not have the same ‘forever build’ of the original Rega, but I'm not sure how big a concern that might be beyond the arm itself.

The biggest criticism, however, is philosophical. There are gazillions of Regas out there, but most people who buy Regas generally do so because of their inherent fit-and-forget nature. This means The Funk Firm might have the right products for the wrong market. Still, if just a fraction of one percent of Rega owners Funk Up, that's still a big market to tap.

That's missing the point of the Rage 1, as those untappable Rega owners are not the people who read magazines like this one. Instead look at the Rega as the vinyl equivalent of a donor car in building that AC Cobra kit you always dreamed of. Just as that kit Cobra gave people a high-end supercar without supercar prices and running costs, so buying a cheap Rega and Funknating it is probably one of the best and cheapest ways into high-end record playing sound. The Rage 1 is Funking great! +

Black Rhodium



All cables obey the
Laws of Physics.
Some just sound
infinitely better.

Bespoke high end audio cables hand made in the U.K
www.BlackRhodium.co.uk



SUNDARA

Beautiful Music to Your Ears

HIFIMAN
Innovating the Art of Listening



hifimanelectronics



hifimanoofficial



www.hifiman.com



store.hifiman.com

Enjoy the Music.com[®]

Reviews

News

Show Reports

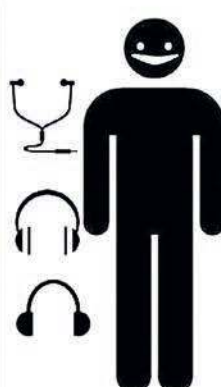
And More...



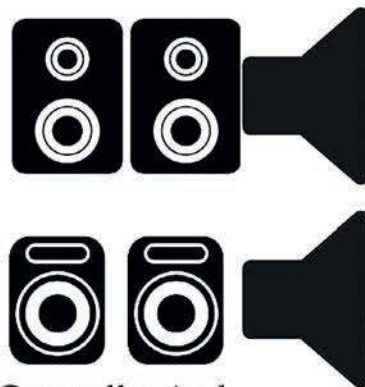
Single



In A Relationship



It's Complicated



IsoTek EVO3 Synchro Uni DC offset blocking device

by Alan Sircom



The IsoTek EVO3 Synchro Uni is a small, relatively light brushed aluminium box. It has an IEC output on one side and the plug socket of your country on the other. It is designed to counter the hum and dynamic constraining problems from DC offset plaguing the AC power fed to your system.

The standard version is designed to work with small-to-medium sized components and systems (it has a 10A, 2,300W maximum throughput as standard; owners of D'Agostino Relentless amps or similar should opt for the 16A, 3,680W version). Inside are silver-plated high-purity Ohno Continuous

Cast copper conductors held in what IsoTek calls a 'Virtual Air Dielectric'. It comes with a manual of sorts, which basically shows you how to plug it in (unplug existing power cable, attach that to one end of box, add another cable between wall and other end of box) and a series of 'don'ts' that could also apply to Gizmo from *Gremlins* (don't get it wet, don't cover it with curtains, don't feed it after midnight... this last might be subject to some creative license on the part of the journalist). Otherwise, that's it. No switches, no internal parts to mess with, not even a few DIP switches. Just a box.

So what does it do again?

Let's create a convenient set of numbers to best explain this. Imagine a perfect alternating current, which flips between ►

“It’s surprising just how much noise we put up with in audio, especially when the cure is so easy.”

- ▶ +100V and -100V, crossing over at precisely 0V. An amplifier connected to such a current receives a mains power input that is entirely predictable. Now, introduce a constant direct current offset of 5V into the mix; you have an alternating current that goes from +105V to -95V, crossing over at +5V. That amplifier receives a mains power input that overloads by 5% half the time, and as that means either 25 or 30 times per second (depending on country), which causes mechanical hum. It can also damage the integrity of the audio that effectively modulates off that power input. This can mean pushing the amplifier into over-saturated distortion on the upswing and robbing the amplifier of its full dynamic range due to the limitations of the downswing. So, compared to the notional ideal, a mains power input with some form of DC offset can at best contribute to transformer hum, at worst simultaneously make your audio system sound more distorted and less dynamic.

“But,” cries the man reading the *Boy’s Own Book of Audio Electronics*, 1956 edition, “no one talked about DC offset in the before time, so it’s an invented ‘problem’ designed to separate the credulous from their money!” The difference is we have moved from a world of linear power supplies to a world of cheap-as-possible switch-mode power supplies. In the past, the two main sources of DC offset on the mains were the linear power supply in your TV and your fridge, and they introduced fractions of a volt at most. Today, at least one of those two sports a cheap SMPS that is more likely to introduce an order of magnitude more DC offset as a result, and things quickly multiply if you then add in computers, routers, DECT phone docking stations, anything with a plug-top power supply, and especially phone chargers (perhaps the perfect storm of ‘bad’ for an audio system, adding more than their fair share of radio frequency and electromagnetic distortion, as well as putting a DC offset into the mains). A quarter of a century ago, the typical DC offset load in a house was negligible enough to be ignored; now it’s a question of how much can your system tolerate.

DC offset blocking devices are not new; in fact, the EVO3 Synchro Uni is predated by the EVO3 Synchro, which still exists in the IsoTek catalogue. The main difference between the two is cable options; the EVO3 Synchro includes captive cords at both ends. While these captive cords are of excellent quality, the EVO3 Synchro Uni offers the option of picking your own power cords, whether inside the IsoTek ecosystem (as IsoTek would understandably recommend) or outside. We used it both with a pair of IsoTek EVO3 Premier power cords (to remain within IsoTekWorld) and a pair of Nordost Blue Heaven cords. The EVO3 Synchro Uni results were identical.

There are two kinds of transformer hum; the more subtle hum that raises the noise floor of a system and the obviously mechanical hum that comes from either poor quality control or having a transformer that isn’t working

true to form (most commonly, this happens when using a product built and tested in a country with very different voltage and AC frequency). Fortunately, the EVO3 Synchro Uni is good at nailing both kinds of hum well. OK, so if you have a very wayward transformer, the best results come from a gentle tap or two from a rubber mallet and then a return to the manufacturer, but for the rest, it’s surprising just how much noise we put up with in audio, especially when the cure is so easy. You plug the EVO3 Synchro Uni in between the system and the wall, and the hum goes away. The noise floor gets lower almost every time. And the system gets very slightly cleaner sound and more dynamic most of the time. Unless you live in a cloistered house with a complete absence of 21st Century consumer electronics, these statements hold universally. The only times they won’t is if you have some form of power conditioner that blocks DC offset elsewhere in the system. Naturally, when talking about cleaner, more dynamic sound, we are talking about playing music through the system (it took less than a minute of listening to ‘Inertia Creeps’ from Massive Attack’s *Mezzanine* [Virgin] to hear the difference), but the hum differences apply from just listening to the system running quiescent.

The EVO3 Synchro Uni is a perfect introduction to IsoTek, as it offers almost no disruption in your existing system (except for the purchase of a single additional power cord) and offers a noticeable and repeatable performance boost. Who knows, it might be the stepping stone to a lot more IsoTek equipment to shore up your mains... +

PRICE AND CONTACT DETAILS

IsoTek EVO3 Synchro Uni £595

Manufactured by: IsoTek Systems

URL: isoteksystems.com

Tel: +44(0)1279 647039

WE'VE GOT THE **PROS** COVERED.

PRO Look.
PRO Build.
PRO Results.



Abbey Road Studios

"The wide selection of colours, sizes and modularity of their panels were a major factor in our decision to use GIK products."

LUCA BARASSI, ABBEY ROAD INSTITUTE

FREE ACOUSTIC ADVICE

GET HELP WITH ROOM SETUP



GIK Acoustics
Solutions. Innovations. Quality.

ORDER DIRECT

GIKACOUSTICS.CO.UK +44 (0) 20 3815 8608 (UK)



Award winning Pre Amplifiers



Call now for a home demonstration

01424 858260 info@mfaudio.co.uk www.mfaudio.co.uk

CLONEY

AUDIO

HOME ENTERTAINMENT



A World of Natural Sound

For 40 years Harbeth has refined the BBC loudspeaker legacy, creating loudspeakers in worldwide demand for their unbeatable clarity and resolution.

www.harbeth.co.uk



Photo by Harbeth customer: @consideredthings

ARCAM - AUDIO RESEARCH - B&W - CAYIN
CLASSE CLEARAUDIO - COPLAND - DEVIALET - LAVARDIN
LEBEN - MARTIN LOGAN - MERIDIAN - NAIM - PRIMALUNA
QUAD - REGA - SME - SONUS FABER AND MANY MORE



THE BEST ADVICE, HOME INSTALLATION AND AFTER SALES SERVICE IN IRELAND - SINCE 1966.

55 Main Street, Blackrock, Co. Dublin, Ireland.
T: +353 1 28 88 477 www.cloneyaudio.com

brianandtrevors



relaxandlisten

www.brianandtrevors.com www.houseoffinn.com www.booplinth.com

ATC . booplinth . Chord Cables . Entreq . Graham Audio . Innuos . Kudos Audio . Linn . Melco . Naim Audio . Puritan Audio . Quadraspire . REL . Roon . Sugden Audio . Vitus Audio

KRONOS

TIME FOR MUSIC™



“...the best of all decks with none of the downsides.”

- Alan Sircom, HiFi+

Life's just better with a
DECENT AUDIO System

t: +44 (0) 56 0205 4669
e: info@decentaudio.co.uk
www.decentaudio.co.uk

DECENT AUDIO
sound distribution
OFFICIAL UK DISTRIBUTOR

Tellurium Q Ultra Black II RCA cable and loudspeaker cable

by Jason Kennedy

There is nothing like telling the uninitiated that cable makes a big difference to sound quality if you want to elicit a “Shut up! Are you mad?” response. Even for those within the fold, the notion of cable differences being significant has taken a long time to become established and incredulity remains strong. Yet, as practically anyone who has been given an A/B demonstration will tell you, cables do make a clear difference; quite often a bigger one than electronics, at least on a first impression basis.

Geoff Merrigan at Tellurium Q makes matters apparently worse by not divulging even the smallest details about what goes into his cables; he almost challenges unbelievers to stop looking for reasons and just listen to results. After all, it's all very well knowing that a cable is made out of finely woven slivers of unobtainium but if you don't know what that really means in terms of characteristics you are better off sucking and seeing, or maybe listening and learning.

Tellurium Q's Ultra Black II is not – as I had thought – the range topper in the catalogue (there are several tiers above it and even more below). But, it's a large range of cables to choose from and I guess that you have to use your budget to determine what level to start at. TQ Ultra Black II speaker cable has a wide (40mm) and fairly flat construction with conductors spaced apart in the

style of Naim NACA5 but considerably wider. An inner plastic covering of some kind (PVC?) has a woven cover that terminates in nicely finished aluminium fittings where flying leads are used to provide flexibility of connection. Termination can be a spade or hollow banana plug; our sample was supplied with the latter. No indication is given as to the nature of the conductors, but the wide spacing means that the cable will have high inductance and low capacitance. Build quality is high and the cable has direction indicators on the heat-shrink tubing around the plugs.

There is even less information available about Ultra Black II RCA interconnect, which also has a braided outer and direction indication but nothing to give away the nature of the materials or the topology of the design. What TQ does say is that it uses their TeCu connector that suggests that the plug is made out of copper, which is gold-plated so you can't be absolutely sure. The RCA plug is in the style of WBT locking plugs with a thread that means the ring part of the plug clamps onto the socket when the body is turned clockwise. The main difference with WBT is that the outer body is plastic rather than ▶



“My foot started tapping of its own accord and I found myself swept up with the groove on all manner of tracks.”



TECHNICAL SPECIFICATIONS

Construction details for both cables

Conductor: Not Specified!

Dielectric: See 'conductor'

Shielding: See 'dielectric'

Type: Analogue interconnect with RCA jack terminations

Price: £430/1m pair

Type: Loudspeaker cable with 4mm banana terminations

Price: £310/m

Manufacturer: Tellurium Q

URL: telluriumq.com

Distributor: Kog Audio

Tel: +44 (0)24 7722 0650

URL: kogaudio.com

- metal; less is generally more when it comes to metal in connectors. It's a nice plug... if you don't have to plug it in and out in the time-honoured style of cable reviews. It's a conveniently flexible, almost floppy cable, so much so that it's hard to imagine there is any shielding used in its construction.

The speaker cables are a little more unwieldy but not difficult to use unless you are looking for a discreet install, in which case they wouldn't be a first choice. The character of the speaker cables is distinctly pacy; this is very much a rhythm-oriented cable, where timing is given top billing regardless of the music being played. And this makes it very engaging and powerful; my foot started tapping of its own accord and I found myself swept up with the groove on all manner of tracks. Adding the Ultra Black II RCA interconnect reinforced this balance and opened up the soundstage, cymbal splashes became more obvious, and guitar notes more pronounced. It's very much a leading edge cable, but avoids the forwardness that other cables of its ilk tend to introduce. It has a superb sense of immediacy and acoustic instruments like drum kits sound all the more real as a result. Bass is likewise fast and pacy; it's not as extended as some cables, perhaps, but deep and powerful enough.

Imaging could be more expansive but that is to judge it by rather more expensive standards; taken on its own the image has good depth and height and seems to be well proportioned with voices fitting in with bands rather than leaping out, production notwithstanding. Lou Reed's 'Walk on the Wild Side' [Transformer, RCA] is taut with good kick drum and separation of instruments. The strings in particular benefit from this because they are one of the quieter elements within this iconic tune; it inspired me to play a more recent Reed piece called 'Vanishing Act' from *The Raven* [Sire]. These cables relayed the drop dead silent background and the palpable presence of Reed's voice over a strong but tight bass backdrop. It's a beautifully phrased performance where both voice and piano sound excellent.

Tellurium Q supplied some jumpers to use on bi-wire speakers rather than having the cost of two cable runs. These sounded clearly better than

the standard jumpers on a pair of Bowers & Wilkins 802 D3 speakers, which showed just how good the depth rendering is on the Ultra Black II cables. I played a new Amon Tobin album [*Fear in a Handful of Dust*, Nomark] which is a little bit on the abstract side with a lot of percussive electronica, but the TQ revealed the rhythms clearly and once again had my toe tapping without any apparent suggestion on my behalf. The Hadouk Trio's *Live à FIP* recording of 'Vol De Nuit' [Mélodie] has deep, all encompassing bass synth that can often obscure the melody played by double bass. Here the taut nature of the bass meant that the synth didn't overwhelm the lead instrument, but still let you appreciate the nimbleness of the playing.

Tellurium Q Ultra Black II is a remarkably coherent and 'well-timed' cable. It's not the richest in tonal terms but more than makes up for this with an ability to make all manner of music sound engaging and enjoyable. It works with all sorts of music too, because it puts the message before the sound. Communication is the aim of the game and these TQs are a fine conduit. +

NEW

Balanced Mains Unit BMU1500 MKII

'Every home should have one'

Paul Rigby, theaudiophileman.com

- New, custom-wound twin balanced mains transformer
- 1500 or 3000 W balanced output
- Internally wired with Kimber Kable
- 2 stage magnetic and thermal protection
- Factory calibrated to match your mains voltage
- Pre-transformer filtering
- Redesigned, bespoke ABS casework with acoustic damping

Learn more online at www.russandrews.com/bmumk2
or call us on 01539 797300



60 DAY HOME AUDITION
WITH MONEY BACK GUARANTEE

Russ Andrews[®]
30 YEARS OF INNOVATION

TRIANGLE ART

Artisan Crafted Analogue



Experience the award winning sound.

839 S. Parkglen Place, Anaheim, CA 92808
Visit us online at: triangleart.net
Email us at: info@triangleart.net
714.553.6474



Raidho acoustics



“ Pick an album, play track one, intending to listen to only that track. Five tracks later you are still mesmerised. ”

- Alan Sircom, HiFi+



Life's just better with a
DECENT AUDIO System

t: +44 (0) 56 0205 4669
e: info@decentaudio.co.uk
www.decentaudio.co.uk

DECENT AUDIO
sound distribution
OFFICIAL UK DISTRIBUTOR

“ONE OF THE BEST TURNTABLES IN THE WORLD”

Long Live Vinyl Magazine

Helping you recreate the original sound

Origin Live's range of analogue products have consistently won awards for their exceptional performance, innovative design and outstanding musicality.

“A new benchmark for musical communication” **STEREO TIMES**

“One of the truly special products I've reviewed in the past 18 years” **STEREOPHILE**

“One of the best turntables in the world the sound is stunning. An incredible design with amazing insight in sonic terms” **LONG LIVE VINYL**

“The best tonearm I've heard” **HI FI WORLD**

“The singularly most addicting piece of gear I have ever heard” **10 AUDIO**

“The best musical results I've ever heard from any turntable regardless of price. Since I've been listening to turntables professionally for 32 years and am aware of the pitfalls of ultimate proclamations, I hesitate somewhat to make this statement. Nevertheless, it is true. The level of musical communication available from the Illustrious/Aurora Gold is in a class by itself. It sets a new reference.” **STEREO TIMES**



Sovereign Turntable with Enterprise-C Tonearm

What Makes the Best Turntable?

Our success comes from better design.

- Light Speed Controller ensures your records spin at absolutely constant speed.
- Multi-Layer Platter absorbs vibration from your playback.
- Superior Materials bring you the best performance.

“Our turntables leave one wondering how such massive differences can possibly exist, when to all outward appearances things look the same” - Mark Baker M.D 1986-present

Read the full article “What makes the best turntable?” online at: www.originlive.com

Origin Live Tel: +44 02380 578877 E-mail: originlive@originlive.com
For full information see: www.originlive.com



PREVIEW

Rocky Mountain Audio Fest 2019

by the Hi-Fi+ team

Our little world of audio can be at times exciting, exhilarating, and exceptionally entertaining... but it's not known for its risk-taking. When CD happened, we turned our back on the format and embraced LP. When downloading and streaming took over, we started praising CD, SACD, and even reel-to-reel. While there are very real changes in performance with each generation of loudspeaker, there are also a heck of a lot of generations between what you hear today and the original papers laid down by Rice and Kellogg almost a century ago. While not fully risk-averse, the audio industry is not an alpha risk taker any more.

So perhaps it shouldn't be a surprise when the Rocky Mountain Audio Fest changed venues and – for this year, at least – times, there would be some inertia from the risk-averse. RMAF has been in the Marriott Tech Center in Denver for more than a decade, but no longer. It was always in the first week of October, and this year RMAF is in early September. The 'we fear change' brigade has spoken, and guess what... they fear change!

But change was inevitable. The refit to the Marriott hotel rooms a few years ago might have put some polish on an otherwise tired hotel, but it was the wrong kind of polish. Putting in large air-conditioning trunking left many of the rooms impractical and poor sounding, the infrastructure was at times crumbling (three broken elevators out of three, anyone?), and the events team at the hotel complex seemed to have lost interest in the show itself. Complaints flooded in from attendees and exhibitors alike, and when prices began to increase, it was make or break time, and it was clear this meant it was time to break with the Marriott.

However, staging a large audio show in Denver itself proved impossible, and while buddying up with CEDIA might have been a plan, the different requirements between audio and custom install make for very uncomfortable bedfellows. So, this year, RMAF has moved to the new Gaylord Rockies resort and convention centre hotel complex, situated between Denver International Airport and Denver itself. For those attendees intending on the full weekend, the resort means more restaurants and amenities to hand, without the need to travel to nearby bars and restaurants.

"This year RMAF is in early September. The 'we fear change' brigade has spoken, and guess what... they fear change!"



RMAF remains RMAF. It's still the same welcoming, enthusiast-driven show it ever was. CanJam this year has been replaced by the Colorado Audio Society's own HeadSpace venue for personal audio. It's an exciting time to be at the show.

We think the change of scene is a good thing. The new resort has more rooms, more suites, and early reports suggest they sound good too. "If it ain't broke, don't fix it" doesn't apply here; the old venue was broken for good audio, and this is how we fix it! +

DETAILS

The 16th Rocky Mountain International Audio Fest

Dates: September 6-8, 2019

Address: Gaylord Rockies Resort

& Convention Center,

6700 North Gaylord Rockies

Boulevard, Aurora, Colorado 80019

URL: audiofest.net

COMPETITION

WIN! A Melco N100 digital music library worth £1,800

We have collaborated with our friends at Melco to bring you a fantastic competition for a chance to win a N100 digital music library worth £1,800.

Our Editor Alan Sircom recently did a web exclusive review of the N100 where he wrote, “OK, so in reality ‘computer-less computer audio’ is an oversimplification; the architecture inside the Melco N100 is still very much that of a digital computer; it has inputs, outputs, memory, storage, a processor, and it operates using a series of programs running along an operating system...the N100 is the smallest and most affordable in the range; the half-sized device that manages to cram a lot of architecture into a very small box. What’s also shared with all Melco models is an ability to cope with tracks up to 32bit/384kHz PCM, or DSD 512. MP3, WMA, and OGG fall into the ‘squirt, not play’ category. There is a matching D100 CD/DVD/BD transport/ripper, and a E100 external 3TB hard drive (you can also use your own external USB



hard-drives). There is also a bigger brother called the N10, which beefs up the size of the (internal) hard drive (from 2TB to 3TB) and comes with an external power supply.”

He went on to conclude, “...a device like the Melco is hard to categorise. It’s an increasingly powerful music library in its own right, especially when used with Melco’s own app, but effectively acts as a UPnP server, or even just a high-performance storage device if you want to ‘roll your own’ using something like Roon. In a way it makes it a bit like a butler in an English costume drama (without all the underlying and unresolved sexual tension, or the Jeeves-like dry wit); it does the job almost invisibly, effortlessly, and perfectly. And it’s built like a tank, too!” +

Competition Question

What is the name of the N100 bigger brother?

- A. Ben10
- B. N10
- C. N1000

Please send your answer – either ‘A’, ‘B’ or ‘C’ – via email to competitions@hifiplus.com, placing the words ‘Melco N100 competition’ in the title. Remember to include your name and address in the email.

Alternatively, send your answer on a postcard (including your name, address, and contact details) to Melco N100 Competition, Unit 3, Sandleheath Industrial Estate, Sandleheath, Fordingbridge, Hampshire, SP6 1PA

Competition Rules

The competition will run from August 1st 2019 until October 3rd 2019. The competition is open to everyone, but multiple, automated or bulk entries will be disqualified. The winner will be chosen at random from all valid entries, will be contacted via email (where possible) and their name will be published in the magazine. The Editor’s decision is final and no correspondence will be entered into. Absolute Multimedia (UK) Ltd. is compliant with the Data Protection Act and UK laws apply. Our policy is such that we will not pass on your details to any third party without your prior consent. However, by entering this competition, you consent that your data be shared with Melco and/or its UK distributor, ADMM.

record reviews

How To Read Them

The information contained in the record reviews is presented in the following way. Albums are identified by label and – where possible – serial number. Beneath this you will find one or more icons that denote the available formats for the recording. The first icon refers to the format reviewed.

The ratings at the bottom of each review reflect the reviewer's opinion of the recording quality, and musical merits of the album. You'll soon realise that a great many musically significant albums offer less than wonderful sound. Don't let it put you off! For your information, the scale rates a standard, good quality pop recording as slightly below average.

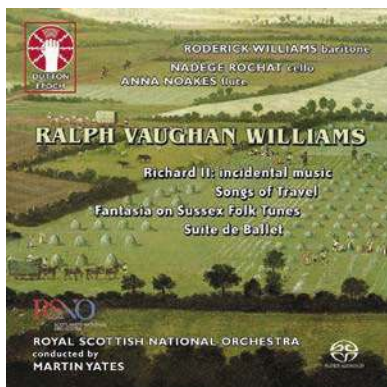
This issue's featured reviewers are:

DD – Dennis Davis

JMH – Jimmy Hughes

JK – Jason Kennedy

	CD		120g LP
	Gold CD		150g LP
	HD CD		180g LP
	XR CD		200g LP
	Double Disc		10" LP
	DVD		Availability As S/H LP
	SACD		Vinyl Double Album
	Hybrid SACD		45 RPM
	Multi-Channel		Download
	Blu-ray		High-Res Download



Vaughan Williams

Richard II – incidental music;

Songs of Travel

Fantasia on Sussex Folk Tunes;

Scene de Ballet

Royal Scottish National Orchestra

Martin Yates

Dutton Epoch CDLX 7359

This is a very interesting disc of rare Vaughan Williams from Dutton, containing a world premiere of VW's incidental music to *Richard II*, composed in 1944. There are also a number of brass fanfares and much that suggests pomp and pageantry. This is balanced by quieter more atmospheric music. The moods change quickly, and your attention hardly has time to wander. It's good 'late' Vaughan Williams – richly-scored and full of incident – definitely music that deserves to be heard.

The *Fantasia on Sussex Folk Tunes* for solo cello and orchestra is also not encountered that often. Cellist Nadege Rochat plays the solo part with great fluency and passion, and she makes as convincing a case for the music as one could ever hope to hear. That said, the work does not make a strong immediate impression; it's all very agreeable, but needs a few 'plays' before things sink-in.

The *Suite de Ballet* (originally for solo flute with piano; here arranged for flute and orchestra by Roger Steptoe) makes a more positive first-impression. This is its first recording with orchestra, and it features flautist Anna Noakes. The performance is very lively and persuasive, and Roger

Steptoe's orchestration adds depth and colour to VW's original piano accompaniment.

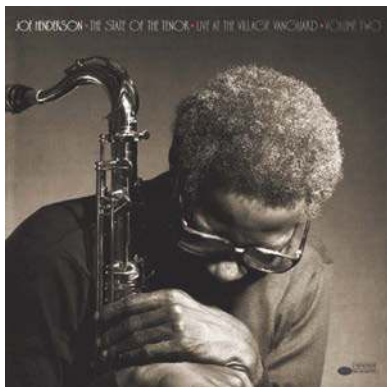
The *Songs of Travel* date from 1901/04, and find VW at his most lyrical. The words are by Robert Louis Stevenson. I find this cycle of songs extremely rewarding and very moving to listen to. VW's music perfectly captures the poet's nostalgia and regret at things passing. My favourite song – 'Whither Must I Wander?' – never fails to bring a lump to the throat! The cycle ends on a note of quiet stoicism – as if to say 'change, and the end of things, is unavoidable'.

Baritone Roderick Williams sings with warmth, sensitivity, and intimacy. He has a smooth rich voice, and shades each word with meaning and precision. He delivers Stevenson's words in a simple direct conversational manner, and successfully conveys their significance and mood.

Dutton's recording – made in Caird Hall, Dundee – is unobtrusively excellent. There are SACD stereo and multi-channel mixes, plus a normal CD layer for those without SACD players. Listening to the stereo SACD mix, the sound is very detailed and transparent with excellent clarity and good dynamic range. The engineering is not obviously 'impressive'. Rather, it's one of those discs where everything sounds effortlessly natural and 'real' without one's attention ever-being drawn away from the music. **JMH**

RECORDING
MUSIC





The State Of the Tenor – Live At The Village Vanguard, Volume Two

Joe Henderson

Blue Note/Tone Poet Series
BT85126

180g

It's hard to believe that Joe Henderson has been gone now for 18 years. Born in Ohio in 1937, he moved into the Detroit jazz scene as a young man where he attended classes at Wayne State University with Donald Byrd, Barry Harris, and Yusef Lateef. After serving in the army, he headed to New York City, where he made his great series of studio recordings for Blue Note between 1963 and 1966, not to mention a couple dozen records where he was a sideman. After that, he signed with Milestone Records in the early 1970s and moved to San Francisco just across the bay from Milestone's Berkeley, California offices and recording studios, where he stayed until his death in 2001. He recorded countless sessions for Milestone, as well as two live sessions for Blue Note—*The State of The Tenor/Live At The Village Vanguard, Volumes 1 and 2*. Neither the Milestone recordings nor the Vanguard sessions brought him the kind of attention he deserved. It did come, however, in 1992 when he signed with Verve and that kept his name in lights for the rest of his life.

The Vanguard sessions were recorded over a three-night stand at the Village Vanguard in New York in November 1985. The piano-less trio had Ron Carter on bass and Al

Foster on drums. Two earlier jazz trio recordings at the Vanguard stand out. Bill Evans famously recorded two sets there with a piano/bass/drums trio in June 1961. But it was Sonny Rollins' recording sessions (*A Night at the Village Vanguard*) from November 1957 that inspired jazz critic and record producer Stanley Crouch to pitch the idea of a Henderson trio recording at the Vanguard to Blue Note president Bruce Lundvall. The pitch was approved and producers Crouch and Michael Cuscuna selected, with Henderson's approval, six classic songs from Charlie Parker, Monk, Mingus, Horace Silver, and Henderson. Blue Note founder Alfred Lion considered these sessions to be among the best recordings ever made by Blue Note, and that case is easily supported. Each of the six songs is a jewel, in part made crystalline from the trio setting, which adds urgency and directness to the arrangements.

The Vanguard sessions were recorded on a Mitsubishi X-80 PCM digital reel-to-reel recorder. Blue Note obtained the same X-80 to do the transfer for the Tone Poet series and it's the only digital recording in the 2019 Tone Poet series. The recording engineers were David Baker and Jim Anderson. The disc was issued on vinyl in 1987 in France and the U.S. and was mastered using Direct Metal Mastering (DMM), a process that was then being marketed as a premium audiophile perk. DMM has been largely abandoned today by cutting engineers because of its tight, etched sound, especially in the upper

frequencies. Tone Poet Joe Harley was able to see the gem hidden in that somewhat shrill DMM sound and mastering engineer Kevin Gray has created a sonic wonder by going back to lacquer to remaster the tapes.

What is now revealed is an almost perfect sounding trio recording, with a very realistic spread of the three instruments, very much like what you would hear seated upfront at the Vanguard, the performers packed into a small space and close enough that you might be tempted to reach out and touch them. Compare it to the Bill Evans Vanguard recordings and you will hear a very different sounding recording—the Evans recording is dripping with hall sound, making it seem almost larger than life. You hear so much chitchat from the audience that it's almost distracting. The instruments in the Evans' recording are big and full of bloom—the sound of the acoustic bass in the two sessions could not be more different. The Henderson recording may not sound as 'beautiful' as the Evans, but to me it sounds closer to what I would hear in the hall. Let's just say that both are treasures in their own way.

Each of the Tone Poet releases to date have been outstanding, but this may be my favourite so far—don't miss this great sounding performance for the ages. Volume One of the Vanguard sessions will be issued in the Tone Poet series in 2020. **DD**

RECORDING
MUSIC



ORANGES & LEMONS



oandlhifi.co.uk
02079242040 - London SW11

bowers & wilkins rega sonos linn naim atc pmc arcam tellurium q
chord co neat dynaudio rotel rel sennheiser chord electronics

studio **AV**

**NOW STOCKING
KII AUDIO**



We are excited to announce that we are now stocking Kii Audio products, a renowned and prestigious range of revolutionary speakers. Get in touch to arrange your personal audition.

WWW.STUDIOAV.CO.UK
01753 863300 sales@studioav.co.uk



WBT

PlasmaProtect™

WBT-PlasmaProtect™
A leap in quality for audio connectors

For further information visit wbt.de



Structuralism

Alfa Mist

Sekito



Alfa Mist is a London based keyboard player with a natural inclination toward laid-back jazz grooves that have depth and soul beyond the norm. I have been enjoying his debut *Antiphon* from 2017 for well over a year, so it was encouraging to see the release of *Structuralism* in April. Unlike its predecessor this was not made entirely at Pink Bird studios with its analogue tape machine, but enough of it was recorded there to give *Structuralism* a similarly easy yet solid sound. The band has expanded in the time since the first release; the Fender Rhodes, piano, and synth of Mist are joined by Jamie Leeming's guitar, drums by Jamie Houghton and Peter Adam Hill, bass by Rocco Palladino and Kaya Thomas-Dyke (who also sings), James Creswick is on double bass, and there's plenty of trumpet from Johnny Woodham. Popping up on at least half of the tunes is a string quartet and Jordan Rakei provides vocals on the last of the eight tunes.

Essentially it's the *Antiphon* band plus a whole bunch more, which explains the two-studio nature of the production; as discussed, Pink Bird is in London, while the second studio, Invada, is in Bristol and has the space to record the larger ensembles.

Alfa Mist tells us that *Structuralism* is his effort to learn how to communicate. He feels that the society he grew into shaped him in

such a way that he no longer knows how to do this. He wrote the eight tracks with his sister Angela, whose voice might well be the one on the start of 'Mulago'. She asks why we are not taught how to communicate as part of the curriculum; when on-screen exchanges appear to be replacing verbal intercourse, I'd say she has a point. All they need to do is add transcendental meditation, tax returns, and real economics, and we'd have kids who could do more than media studies, but I digress.

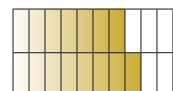
The opening track '44' has a short verbal intro as the keys, drums, and bass get going, but it's not long before the late-night jazz vibe kicks in with a taut but relaxed beat from the rhythm section that's always on the money. Jazz guitar joins in and provides a focal point that slowly amps up the rhythm section, taking things to a higher but still restrained level of intensity before handing over to the trumpet and keys. At a second under 10 minutes, it's an extended piece that takes up most of the first vinyl side. 'Falling' with Kaya Thomas-Dyke is a more soulful affair thanks to the vocal and a generally more dreamy feel. Like many of the songs on *Structuralism*, it ends well with just piano and strings ramping up the pathos. 'Glad I Lived' has Alfa Mist expressing in a poetic rap style over punchy drums, before the strings come in and the band develops a chilled groove that's enriched by synth and trumpet. 'Jajaja's Screen' has heavier bass and strings that add extra tone, this plus an unexpected

twist or two giving it a Steely Dan feel at times, the tune ending with solo keys that leave you hoping for more of the same. 'Naiyti' sounds like smoky club music for smoke-free clubs; it's a builder where the guitar manages once again to lead the rhythm section into more lively pastures. The drums on here sound particularly good when they round off the piece with keyboards alone.

Double bass joins the electric variety for 'Retainer', where the trumpet leads the band in sketching out a clear-cut tune with keys joining the rhythm section, before a guitar interlude takes us to what sounds like another song altogether. Here strings form a distinct bridge to some lovely piano and adventurous drum work from Peter Adam Hill. It's almost as if two songs have been combined, with the second one taking a rather different tack to the first. It's an album highlight for those after a more jazz rock vibe. Rakei's sweet voice lifts the finale 'Door', a track that warrants releasing as a single given it's emotional depth and beautiful, if unexpected, string quartet ending.

Alfa Mist is clearly very good at communicating through music and hopefully he will have the confidence to do so on his own on future outings. This album isn't quite as strong as *Antiphon* but it's best moments are in the same league, and give one faith that jazz is making real progress. **JK**

RECORDING
MUSIC





Select partners & where to buy...

Audiophilia Edinburgh
The Music Room Glasgow
Definitive Audio Nottingham
Strictly Stereo Stockport
Audio Destination Tiverton Devon
Midland Audio Xchange West Mids
Guildford Audio Guildford
Oxford Audio Consultants Oxford
Signals Audio Ipswich

For further information visit lateralaudiostands.co.uk

hi-fi+ ADVERTISING INDEX

6 Audio	78	Dynaudio International GmbH.....	25	Origin Live	68
Absolute Sounds	OBC	Enjoythemusic.com.....	60	Oxford Audio Consultants Ltd.....	79
Allnic Audio	32 & 33	Entreq	49	ProAc.....	53
Ansuz Acoustics	55	GIK Acoustics	63	Raidho	42
Audio Oasis.....	78	Graham Audio.....	45	Rayleigh Hi-Fi.....	79
Audioreaks.....	8	Gryphon Audio.....	31	Renaissance Audio	11 & 16
Auralic.....	27	Hegel	IBC	RMAF.....	28
Black Rhodium	59	HiFiMAN.....	60	Russ Andrews Accessoriess.....	67
Brian & Trevor's.....	64 & 78	Highend Headphone Shop/ HiFi Lounge.....	78	SCV London.....	56
Brook Audio	78	HiFi Sound	79	Select Audio.....	12
Cardas Audio Ltd.....	82	Infidelity.....	79	Siltech	23
Ceritech Ltd	78	KJ Westone.....	35	Sonata Hi-Fi	79
Choice HiFi	19 & 78	Kog Audio	39 & 50	Spendor Audio Systems Ltd	20
Chord Electronics	15	Lateral Audio.....	75	studioAV Ltd.....	73 & 79
Cloney Audio.....	63	Merrill Audio Advanced Technology Labs.....	47	Sugden Audio	40
Criterion Audio	78	Midland Audio Xchange	79	The Audio Consultants.....	36
Crystal Cable BV.....	2	Monopulse.....	79	The Chord Company	7
DB HiFi.....	78	Music First Audio	63	Triangle Art.....	67
Decent Audio	64 & 68	Naim Audio	5	WBT-Distribution GmbH	73
Deco Audio	78	Oranges and Lemons	73	YG/Padood	IFC
Divine Audio	78				

SUBSCRIBE

hi-fi+



1 YEAR
SUBSCRIPTION

Save
16%

2 YEAR
SUBSCRIPTION

Save
25%

In order to ensure prompt arrival of your copy of hi-fi+, it is best to take out a subscription. This lasts for a year (12 issues) and means that your magazine is delivered to your doorstep as soon as it is published. You never miss an issue again!



www.hifiplus.com

SUBSCRIPTION RATES

UK, Western Europe & Rest of the World

ONE YEAR SUBSCRIPTION /12 ISSUES

Within the UK	£50
Western Europe, USA & Canada	£60
Rest of the World	£80

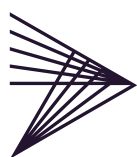
TWO YEAR SUBSCRIPTION/24 ISSUES

Within the UK	£90
Western Europe, USA & Canada	£105
Rest of the World	£140

SPECIAL OFFER

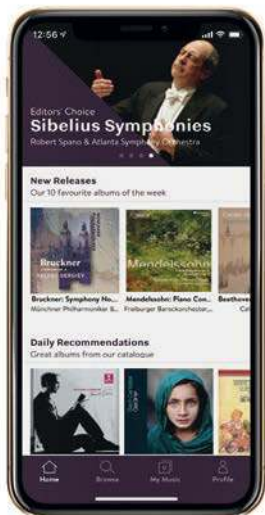
Save 16% (1 year subscription)

Save 25% (2 year subscription)



primephonic

The streaming service designed for classical music



FREE 3 months subscription to Primephonic

New subscribers and renewal subscribers will receive a free 3 month trial to Primephonic.

* The trial is only available to customers in the UK, North America and the Netherlands.

** People who take out a subscription to *Hi-Fi+* will receive a special code for a free 3 month trial to Primephonic via email once their subscription has been processed.



TO SUBSCRIBE COMPLETE THIS FORM BELOW AND RETURN TO:

HI-FI+ SUBSCRIPTIONS

Unit 4, College Road Business Park, College Road North, Aston Clinton, HP22 5EZ, UK

or call: +44 (0) 1442 820580
or email: hifiplus@webscribe.co.uk
via the web: www.hifiplus.com

I would like my subscription to start from **current** issue/**next** issue (please delete as appropriate)

One year ☐ Two years ☐

ABOUT YOU:

Title _____

Forename _____

Surname _____

Address _____

Country _____

Post code/Zip code _____

Daytime Tel _____

PAYMENT:

UK ☐ Europe, USA & Canada ☐ Rest of World ☐

Cheques made payable to Absolute Multimedia UK Ltd.

Visa ☐ Mastercard ☐

Card no

Expiry date

3 digit security number

Switch ☐

Card no

Expiry date

3 digit security number

Direct Debit ☐



Originators Identification No

Instruction to your Bank or Building Society to pay Direct Debits

Name(s) of account holder(s) _____

Bank/Building Society account number

Branch sort code

Name and full postal address of your Bank or Building Society branch.

To: The Manager

Bank/Building Society

Address _____

Country _____

Post code/Zip code _____

Instruction to your Bank or Building Society. Please pay Webscribe Ltd Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit Guarantee. I understand that the instruction may remain with Webscribe Ltd and, if so details will be passed electronically to my Bank/Building Society.

Signed _____

Date _____

Bank and Building Societies may not accept Direct Debit instructions for some types of account

The Direct Debit Guarantee



This Guarantee is offered by all Banks and Building Societies that take part in the Direct Debit scheme. The efficiency and security of the Scheme is monitored and protected by your own bank or Building Society • If there are any changes to the amount, date or frequency of your Direct Debit Webscribe Ltd will notify you 10 working days in advance of your account being debited or as otherwise agreed. If you request Webscribe Ltd to collect a payment, confirmation of the amount and date will be given to you at the time of the request • If an error is made in the payment of your Direct Debit, by Webscribe Ltd or your bank or building society you are entitled to a full and immediate refund of the amount paid from your bank or building society. • If you receive a refund you are not entitled to, you must pay it back when Webscribe Ltd asks you to. • You can cancel a Direct Debit at any time by simply contacting your bank or building society. Written confirmation may be required. Please also notify us.

DEALER DIRECTORY



⑥

We are the only UK retailer where you can audition and compare the complete Vivid Audio speaker range.

WWW.SIXAUDIO.CO.UK

01403 713125



Audio Oasis
Beautiful Styling & Real Musical Enjoyment

sales@audiooasis.co.uk

T:01722 322215

www.audiooasis.co.uk

HAMPSHIRE WILTSHIRE DORSET

booplenth

"Finally, a new and advanced plinth upgrade reveals more recorded detail from any Linn LP12 and a transformational musical performance."



booplenth

booplenth LP12 performance upgrades and installation

www.brianandtrevors.com

info@brianandtrevors.com +44 (0) 161 766 4837



BROOKAUDIO

PURVEYORS OF
FINE AUDIO EQUIPMENT,
VINYL RECORDS
AND AUDIO ACCESSORIES.

VISIT
BROOKAUDIO.CO.UK

Choice hi-fi "where dreams meet reality"

The HiFi Exchange
New and Used HiFi

www.choicehifi.co.uk

Email info@choice-hifi.com
Telephone 020 8392 1959 / 07768 720456

VISIT OUR NEW WEBSITE

The Finest Hi-Fi & Home Cinema
Come and treat your senses!



Ceritech AUDIO

Drake House
1 Pavilion Business Park
Forest Vale
Industrial Estate
Cinderford GL14 2YD

www.ceritech-audio.co.uk 01594 540268

DB HIFI

SUFFOLK

01379 873451
WWW.DBHIFI.CO.UK

criterion audio



Criterion Audio is a premium hi-fi dealer in Cambridge.

From vinyl and valves to the latest in streaming and headphones, we can help you find the perfect system to suit your budget and needs.

www.criterionaudio.com
info@criterionaudio.com
01223 233730

DECO AUDIO



Kempson Close, Aylesbury, HP19 8UQ

www.decoaudio.com

01296 422 224

divine audio

AnalogueWorks
Creek Audio
Croft Acoustics
Graham Audio
Jelco Tonearms
Neat Acoustics
Omega Loudspeakers
Rogue Audio
Supra Cables

www.divineaudio.co.uk
07918 728860 tim@divineaudio.co.uk

hifi lounge here to listen...

Visit us in the Beautiful Bedfordshire Countryside for all your Hi-Fi needs

www.hifilounge.co.uk

01767 448121

With 5 Relaxing Listening Rooms




**Your ad
could be
here!**

Tel: **+44 (0) 1425 655255**
Mobile: **+44 (0) 7900 252975**
Email: **tom@hifiplus.com**

Infidelity
MUSIC & CINEMA SYSTEMS

020 8943 3530

www.infidelity.co.uk
info@infidelity.co.uk

9 High Street, Hampton Wick
Kingston upon Thames
Surrey KT1 4DA

Tuesday to Saturday 10-6

CEDIA MEMBER

clarity

hifisound

Stockton on Tees...the North's
hotbed of audio delights

- Anatek
- Audeze
- Chord
- Clearaudio
- Dynavector
- EAR
- Esoteric
- Focal JMLab
- Funk
- Grado
- Koetsu
- Kronos Audio
- Lyra
- Michell
- Magneplanar
- Naim
- Nordost
- Notts Analogue
- Pathos
- SME
- Sonus Faber
- Stax
- Sugden
- Transfiguration
- Unison Research
- Usher Audio
- & many more

t: 01642 267012 w: hifisound.co.uk
e: simon@hifisound.co.uk

MonoPulse
.co.uk

New Model SA
Full hi-fi streaming
- reality on line

midlandhifistudio

.co.uk Wolverhampton
01902 380083

audioelevation

.co.uk Doncaster
0800 035 1620

zouchaudio

.co.uk Ashby
01530 414128

audiooasis

.co.uk Southampton
01722 322215

Refreshingly different



01865 790 879
www.oxfordaudio.co.uk

Cantay House, Park End Street, Oxford, OX1 1JD

rayleigh... sound & vision
Smart home technology

Superb range of world-class hi-fi
on demonstration.

Rayleigh, Essex SS6 7EA
01268 779762

rayleigh@rayleighhifi.com
www.rayleighhifi.com

Stores also at Chelmsford and Southend

studio **AV**

**SEE, HEAR AND
FEEL THE
DIFFERENCE**



Get in touch to arrange your
personal audition of some of the
world's most highly respected
Hi-Fi and Home Cinema products.

WWW.STUDIOAV.CO.UK
01753 863300
sales@studioav.co.uk

**SUBSCRIBE
AND SAVE!**

Get your copy delivered to your
door as soon as it is published



www.hifiplus.com

SONATA
high-fidelity

APPLAUSE

west hampstead london
0330 111 5653 www.sonatahifi.com

ULTIMATE HEADPHONE GUIDE

LIMITED STOCK AVAILABLE

**SPECIAL
OFFER**

Each issue RRP £9.95 – Discounted price £7 + P&P
Special Offer Issue 1 & 2 for £12 + P&P



BUY IT NOW!!

www.hifiplusstore.com

PERSONAL AUDIO SPECIAL!

Our exclusive section dedicated to the best in Personal Audio

Campfire Audio Solaris
A best-of-two-world's design



**1MORE Triple Driver
BT earphones**
High Tech
+ Low Price
= Big Fun

Astell&Kern ACTIVO CT10 DAP
At last, an A&K Digital Audio
Player for everyone



Personal Audio at Munich High-End 2019



Cardas Audio

Established 1987



High Performance
Cables



Golden Section
Litz Conductors



Ultra Pure
Copper & Silver



Premium
Connectors



Bulk Cables
& Chassis Wire



Quad Eutectic
Solder & Flux

Cardas Audio • Bandon, Oregon • 541-347-2484 • support@cardas.com • www.cardas.com

Personal Audio at Munich High End 2019

by Chris Martens

To speak with candor Munich High End 2019 was perhaps not a great personal audio show, in part because several big-name German players (Sennheiser and Beyerdynamic, to name two) were conspicuously missing in action. Also missing, at least relative to some past Munich shows, were areas where large numbers of personal audio exhibitors could group together to display and demonstrate their products in close proximity to one another. With this said, however, Munich High-End as always featured a number of important new personal product launches that will have significant impact on the industry in the year to come. As expected, Munich High End 2019 marked the debut of a number of significant new headphones. Four that particularly drew my attention came from Spirit Torino, Stax, Ultrasone, and Warwick Acoustics.

In the earphone world, two important trends involve the on-going development of cable-free 'true wireless' Bluetooth earphones and, in the high-end, the creation of earphones using hybrid combinations of dynamic and other exotic types of drivers.

Finally, Munich saw the evolution of new, high performance, single-chassis, Bluetooth audio systems, which may prove to be the entry-level hi-fi systems of choice for a new generation of high-enders. Compact dimensions, surprisingly accomplished sound quality, and soundstaging that belie their modest size characterise these systems. Two good examples are new models from iFi Audio and Naim. +



The Italian headphone specialist Spirit Torino launched a new €3,200 flagship headphone called the Spirit Torino Twin Pulse Ragnarr, which takes its place at the head of the firm's Twin Pulse model range. Spirit Torino's Twin Pulse models enjoy the distinction of being the industry's only headphones to use isobaric-loaded dual dynamic drivers.



One of the most technically advanced new earphones shown in Munich was the German firm Ultrasone's new €3,000 Sapphire, which uses two balanced armature bass drivers, one balanced armature midrange driver, one balanced armature high-frequency driver, and two miniature electrostatic ultra high-frequency drivers. All of which means Sapphire offers a great deal of performance potential.



The Ultrasone Edition 15 is a superb open-back dynamic headphone favourably reviewed in our pages, but the new €3,000 Edition 15 Veritas model represents a closed-back take on the Edition 15's superb sound. As a rule, many headphonistas love the openness, subtlety, and transparency of fine open-back headphones, but two problems involve inevitable 'bleed through' of eternal noise into the headphones, and vice versa.



To emphasize the fact that its latest Bartok is offered both as a DAC and as a combo DAC/headphone amp (€12,000 for the DAC alone, €15,000 for the combination DAC and headphone amp), dCS set aside a listening room to show multiple Bartok amp/DACs driving a wide assortment of top-tier headphones.



Warwick Acoustics' \$24,000 APERIO system represents an all-out assault on the state of the art. The APERIO headphone is a push-pull electrostatic design that uses an advanced version of the HPEL electrostatic drivers used in Warwick's original Model One. The amp/DAC sports different converters for PCM and DSD.



FiiO's £449 FH7 earphone features a 13.6mm Beryllium dynamic bass driver, two modified Knowles 30017 balanced armature midrange drivers, and two Knowles SWFK-3176 balanced armature high frequency drivers. The earpiece enclosure is CNC machined from a magnesium/aluminum alloy.



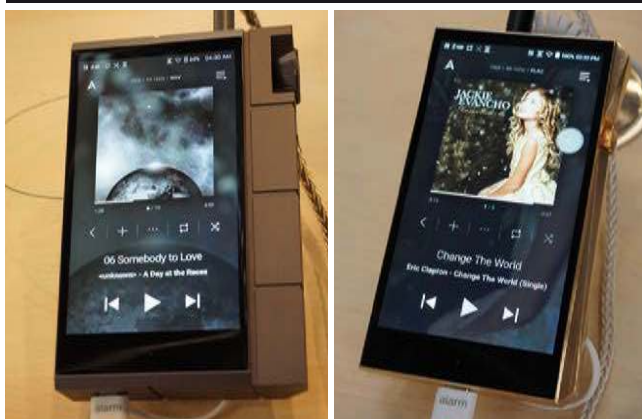
oBravo designer David Teng has crafted an absolute terrific sounding new universal-fit earphone called the \$269 Cupid that uses a 6mm dynamic driver and a very tiny 8mm planar magnetic driver. Based on a brief listen, I felt the new earphone was one of Teng's finest efforts to date... from a brand that makes \$5,000+ earphones!



HiFiMAN's \$199 TWS 600 is an uncommonly good and reasonably priced wireless Bluetooth earphone that offers extremely good range and that ships—get this—with HiFiMAN's familiar RA-600 wired earphone to allow listeners to do direct comparisons between equivalent wired and wireless earphones. This is one of the cheapest ways to experience HiFiMAN performance, but will it represent a change in stance for the brand?



Naim Audio's £1,299 Mu-so 2 features all new drive units (developed with Focal), a 450-watt amplifier system, a high-res DAC capable of handling up to 32-bit/384kHz files, Naim's well-regarded streaming platform, plus a broad array of inputs including Wi-Fi, Ethernet, Bluetooth, USB, Optical, HDMI ARC, and 3.5mm inputs.



Alongside the new \$1,499 KANN Cube (pictured above, left) Astell & Kern's introduced a new flagship: the \$3,400 A&Ultima SP2000 (right). The SP2000 offers dual AKM AK4499EQ DACs, and is the first A&K DAP to offer native support for 32-bit/768kHz PCM and DSD512 playback, plus dual band (2.4GHz/5GHz) Wi-Fi.



The visually striking £1,299 iFi Aurora offers an external design reminiscent of some of the works of the Finnish architect Alvar Alto. Appearances aside, the Aurora leverages much of the development work done for iFi's Retro Stereo 50 compact audio system, and includes a high-res 32-bit/192kHz capable DAC; Wi-Fi, USB, Ethernet, and Bluetooth connectivity; a hybrid tube/solid-state 320-watt amplifier system.



Cayin's \$3,300 N8 is a hybrid DAP that uses Korg's miniature Nutube 6P1 dual-channel triode device. The N8 offers user selectable tube and solid-state voicing modes, balanced and single-ended outputs, and dual power output modes.

Please send your letters to Hi-Fi+, Unit 3, Sandleheath Industrial Estate,
Sandleheath, Hampshire, SP6 1PA, United Kingdom.
Or email them to editor@hifipus.com

Incoming!

One head is better than two?

How important is it to separate DAC from headphone amplifier? I come from the traditional two-channel world, where splitting the two into separate devices was vital to prevent interference (although that importance has waned recently). I would have thought the proximity of amplifier to headphone would make separating the digital and analogue sides important, but most amps are amp/DACs in personal audio. Is this purely a space thing?

Mike Bains, via email

I think the answer to your question has much to do with whether we are speaking about a desktop vs. a portable system. For desktop applications, separating the DAC and headphone amplifier often makes good sense, partly because there are a number of very good amplification-only products to choose from, and partly because there is the possibility of sharing a high-quality DAC between your speaker-based system (assuming you own one) and your personal audio system.

For portable applications, though, a combination DAC/amplifier often makes more sense. As you surmise, this is partly owing to space and convenience considerations (one small chassis being smaller and less cumbersome than two small chassis strapped together in some fashion). However, another important point is that designers have come a long, long way in terms of eliminating noise between the digital and analogue sections of their portable products, so that there is no longer much in the way of a meaningful performance advantage to keeping portable DAC and amplifier components separate.

Chris Martens, Editor, Ultimate Headphone Guide

Why-a-Duck? How about Why-a-DAP?

Are DAPs really worth owning? A well-known online pundit suggests a phone and a good DAC that runs from that phone is more than good enough. Why should I spend more and carry more when almost all I need is locked away in my phone?

Michael Henning, via email

Yours is an entirely fair question to ask. I think for many listeners the phone + DAC/amp can be very satisfactory provided—and this is a big provision—the listener in question is entirely happy with the level of flexibility the phone offers and the sound quality of both the DAC and amplifier sections of the DAC/amp that is chosen. The fact Apple self-cannibalised sales of the iPod for the iPhone suggests many are happy with this one-size-fits-all scheme.

However, the counterargument in favour of DAPs runs something like this. First, the DAC devices used in today's best DAPs are often of higher quality than those found in typical portable DAC/amps. Second, many DAPs provide extremely flexible EQ systems that typically are not matched either by phone features or standalone DAC/amp features. Third, many listeners simply prefer to separate what they think of as phone functions (e.g., telecom, email, texting, web-surfing, You-Tube, etc.) from music functions (e.g., storing and/or accessing favourite musical material, applying EQ as desired, and listening to music as rendered by extremely high quality DACs and analogue audio sections). If you like to keep phone functions and music functions separate (as I personally like to do), then a DAP is the way to go. Fourth, many DAPs provide much higher music storage capabilities than phones typically do, meaning that in principle DAPs can let you take more of your music library with you.

There is no one right answer, here, but I strongly urge you to do careful listening comparisons between today's best DAPs vs. competing Phone + DAC/amp solutions. At present, I use an Astell&Kern A&ultima SP1000M DAP when I travel and I have found it highly satisfactory. .

**Chris Martens, Editor,
Ultimate Headphone Guide**

How Low Can You Go?

We've seen a lot of very expensive personal audio systems on the pages of *Hi-Fi+* and the *Ultimate Headphone Guide*, but what is the lowest level of personal audio you personally could live with, and why?

It's easy to keep bigging up the Highest Common Factor, but what is your Lowest Common Denominator?

Tom Whittle, via email

You raise an excellent question. With the caveat that my Lowest Common Denominator might or might not satisfy other listeners, let me list a few affordable personal audio favourites.

Headphones:

- PSB M4U8 wireless, automatic noise cancelling, BT headphones (£299)
- Cleer Flow wireless, automatic noise cancelling, BT headphones (£249)
- Final Sonorous VI hybrid dynamic/balanced armature headphones (£499)
- HiFiMAN Sundara planar magnetic headphones (£449)
- HiFiMAN HE-400i planar magnetic headphones (£360)
- Audio-Technica ATH-MSR7 dynamic headphones (£200)

Wireless Earphones:

- HiFiMAN TWS600 (\$199)
- RHA TrueConnect (£150)
- Sennheiser Momentum True Wireless (£279.99)

Earphones:

- Campfire Audio IO dual-balanced armature earphones (£299)
- Campfire Audio Comet full-range balanced armature earphones (£219)
- Final F7200 single balanced armature earphones (£400)
- Final E5000 dynamic driver earphones (£220)
- FiiO FH7 hybrid dynamic/balanced armature earphones (£450)
- oBravo Cupid earphones (£249)
- RHA T20/T20i dynamic earphones (£140/£150)
- RHA MA750/MA750i dynamic earphones (£80/£90)

Portable Amp/DACs:

- Chord Electronics Mojo (£399)
- iFi Audio xDSD (£399)

Digital Audio Players:

- Astell&Kern ACTIVO CT10 (£249)
- FiiO M11 (£450)
- FiiO M9 (£230)

Remember that this is not an exhaustive list and that my favourites may not be yours. Even so, I hope this impromptu list provides food for thought and a starting point for further investigation.

Chris Martens, Editor, Ultimate Headphone Guide

Oily ear syndrome

What can I do to de-gunk my earphones? Maybe my ears are exceptionally greasy, but I find my earphones seem to become lint magnets whenever I take them off, and I don't know of a good way of cleaning them, especially as I don't want any residue from the cleaning material interacting with my ears. Right now, I use Zeiss impregnated lens cleaning tissues, but I'm not sure they are doing the best job; they are great for cleaning my glasses, but I don't need to worry about streak-free finish. A friend recommended the lemony wipes you get from KFC, but I'm worried these might damage the earphones. Is there a dedicated option? Naturally, I am somewhat embarrassed by my oily ears!

Name and address withheld on request, via email

No need for embarrassment whatsoever.

I think your choice of Zeiss cleaning wipes is a perfectly good one, but if you would like to try dedicated, audio-specific solutions, here are several you might consider:

- Audiologist's Choice Audio Wipes (sold in packets of 30, or 100-count singles)
- Audiologist's Choice Earmold and ITE Hearing Aid Spray (4 oz. spray bottle)
- CleanBuds Cleaning Wipes for Earbuds and Bluetooth devices (sold in boxes of 20)
- HygenX Headphones and Headset Cleaner (8 oz. spray bottle plus microfibre cloth)
- Soundlink Hearing Aid Cleaning Wipes (sold in boxes of 100 isopropyl alcohol pads)

And, recognising that you might find it helpful to have a small set of appropriate earphone cleaning tools, here is an inexpensive tool kit to consider:

- Acu-Life Ezy-Dose 5-in-1 Hearing Aid Cleaning Kit (note: not all of the tools in this kit will be needed for earphones or earbuds, but the kit is so affordable that this hardly matters).

All of the above are available through Amazon or from local Audiologists.

Chris Martens, Editor, Ultimate Headphone Guide

EQUIPMENT REVIEW

Astell&Kern **ACTIVO CT10** portable digital audio player

by Steven Stone

When my review of the Astell&Kern A&Futura SE100 appeared on the website of our system magazine *The Absolute Sound*, the first reader comment was, “Yet another DAP from A&K? Whoopee.” Snide, but I get it. Astell&Kern portable players have never been exactly pocket-book-friendly. But with their ACTIVO line, Astell&Kern looks to change that.

The ACTIVO CT10 has impressive specifications. It's based around a Quad-Core CPU and was designed jointly by groovers Japan and IRIVER. It debuts Astell&Kern's TERATON TM200 module, which combines a Cirrus Logic CS4398 DAC chip, analogue amplifier, independent power unit, and clock together on a single chip. It uses a 2500 mAh 3.7V Li-Polymer battery for a power source.

The CT10 has full DLNA networking, as well as Bluetooth connectivity, including aptX HD support for streaming up to 24-bit/48 kHz high-resolution audio over 4.1 Bluetooth. The CT10 can also be used as a portable amplifier/DAC via its USB connection. The ACTIVO CT10 includes 16GB of internal memory along with a microSD card slot that supports up to a 512GB microSD card. The CT10 can playback high-resolution audio up to 24-bit/192 kHz PCM and quad-rate DSD, which the CT10 converts to PCM. It is also MQA compatible. Tidal and Groovers+ streaming services apps are built in and you can add other services, including Qobuz, through the OpenAPP site. For those who like to custom-tailor their sound, the CT10 has an 10-band, eight preset adjustable EQ built-in. Is there anything the CT10 doesn't have? With only one single-ended headphone output, the CT10 won't power



"I suspect the ACTIVO CT10 will be a big hit. It delivers much of Astell&Kern's ergonomic mojo in a small, value-packed player."

tough-to-drive headphones quite as well as Astell&Kern's buff and beefy KANN or suave and sexy SE100.

The CT10's form factor is a departure for Astell&Kern. Its round-cornered rectangular shape is nothing special, which is unusual for A&K, who are known for their unorthodox player body shapes. Instead the CT10 has a curved corner, one-piece design with its 'cool white' coloured back panel wrapping around to meet the touchscreen's front panel. I would love to see that white back panel morph into dark grey or royal blue so the overall appearance would be less generic 'white goods.'

Even though the CT10 only has a single-ended headphone output it successfully was able to drive a pair of Beyerdynamic DT-990 600 ohm headphones to adequate volume levels even with my own live concert recordings (although they did require its full output level to accomplish this.) While playing, the back of the CT10 could get quite warm, bordering on hot, especially when it was working at decoding and playing DSD recordings. The CT10 comes with a soft bag, but no travel case or armband, which would make the CT10 ready for gym use. You can get a nicely designed leather case from Amazon, however.

Sonically I found the CT10 was more than up to the task of delivering high-resolution music without any negative sonic issues. Your choice of earphones and EQ settings will have a far greater sonic influence of the final sound than the player itself. I also used the CT10 with several Bluetooth headphones. The inclusion of aptX HD made for a wireless headphone experience that was on par with what I heard from comparable wired headphones.

The only glitch I experienced during playback was on DSD DFF 5.6 files played from a 128GB card. Every 30 seconds (or so) there occurred an extremely short drop out. IRIVER could not duplicate the bug when I sent them the file, but it occurred on two different CT10 players, so I suspect it was something to do with the card since these same tracks played correctly when the card was loaded into a A&K A&futura SE100. Overall the operational efficacy of the CT10 was on par with Astell&Kern's other players. Its touchscreen responded with alacrity, and its menu options were well laid out.

Summary

Voicing: Variable (depends on EQ settings chosen)



(All ratings relative to comparably priced digital audio players.)

Resolution/Focus:



Sound staging/Imaging:



Dynamics/Expression:



Value:



Pros

- The CT10 is a fully-featured player
- It has a logical well-designed control surface
- It supports aptX HD with Bluetooth

Cons

- The CT10 can get quite warm during use
- No protective travel case is included

I suspect the ACTIVO CT10 will be a big hit. It delivers much of Astell&Kern's ergonomic mojo in a small, value-packed player. For those music fans who don't travel with difficult-to-drive headphones the ACTIVO CT10 could be a near-perfect travel and workout companion. +

TECHNICAL SPECIFICATIONS

Astell&Kern ACTIVO CT10 portable digital audio player

Type: Portable digital music player

Formats Supported: WAV, FLAC, WMA, MP3, AIFF, DSD

Sample Rates: 8KHz to 192 KHz/24 PCM; DSD 64 to DSD 256

Power Output: 22 mW @ 8 ohms; 36 mW @ 16 ohms

THD+N: 0.0005%

Signal to Noise: 115 dB

Outputs: One 3.5mm mini-stereo headphone jack and Bluetooth 4.1.

Dimensions (HxWxD): 3.67" (93.2mm) × 2.57" (65.2mm) × 0.61" (15.5mm)

Weight: 3.95 oz; 112 g.

Price: \$299 US, £249 UK

MANUFACTURER INFORMATION

IRIVER Inc. / Astell&Kern US

19600 Fairchild Road, Suite 125, Irvine, CA 92612 USA

+1 (949) 336-4540/4541

URL: us.activostyle.com/products/ct10

Monolith by Monoprice Liquid Spark headphone amplifier by Alex Cavalli

by Buzz Hughes



After a distinguished 18-year career in audio circuit design, Dr Alex Cavalli shut down Cavalli Audio and retired as an industry heavyweight. Cavalli made it known he would rather stop short his famed run rather than sacrifice his reputation for quality, performance, and sensible prices. Recently, however, Cavalli has found the right partner in California-based Monoprice to restoke his fires and give headphone amplifier design another go, starting with the introduction of the Monolith by Monoprice Liquid Spark headphone amplifier. Cavalli Audio once planned a portable amplifier to be named the Liquid Spark, so this amp pays homage to a product that might have been. This is great news to those of us who lamented Cavalli's retirement, but even better news is that Monolith's Spark will retail for the rock bottom price of £76. While some of you may have rolled your eyes on hearing this price (thinking good things must cost

more), don't sleep on this extremely small headphone amp as it really packs a punch and lives up to the reputation Cavalli so carefully crafted over the previous two decades.

The Liquid Spark uses a DC-coupled topology from the input to the output stage and is a fully discrete design. This approach eliminates the need for capacitors and op-amps in the signal path that might colour the overall sound. At the differential input stage the Liquid Spark uses laser-matched, low-noise audio JFETs instead of traditional bipolar transistors. JFETs are known to perform well in low-level applications, producing little noise while at the same time providing high input impedance. The output power stage employs high performance MOSFETs, which are ideal for designers looking to provide high power and very clean amplification within tight space constraints. The net result is a compact headphone amplifier that employs dual 18V filtered power supply rails that produces a convincing 1300mW RMS per channel into 50

"The affordable Liquid Spark isn't going to wow you with an array of flashy lights or features, as this rather bare bones amplifier banks its value on what really counts: the sound."

ohms with very low distortion. With adjustable gain on the front panel, the Liquid Sparks exhibits a remarkable ability to produce a full sound that is crisp, quick, and sits quite comfortably in comparison with headphone amplifiers double or even triple its cost, as we will discuss shortly.

The affordable Liquid Spark isn't going to wow you with an array of flashy dials or features, as this rather bare bones amplifier banks its value on what really counts: the sound. However, one exciting feature that deserves mention is found on the back panel where a user will see two sets of RCA jacks, one of which is a preamp output. The preamp outputs are controlled by the volume knob on the front of the amplifier and can be tailored to control entry-level powered speaker systems, or other power amplifiers.

I auditioned the Liquid Spark with multiple pieces of music, but for this review I selected Furry Lewis' 'St. Louis Blues' [Fantasy] as a baseline. The hauntingly sparse blues guitar and vocal combination inherently would allow plenty of space to help detect just what this little pitbull of a headphone amp could sink its teeth into. The Liquid Spark picked up and polished all the micro details of Furry's uncanny buzzing slide guitar sound that I previously thought only were audible with my reference Oppo HA-1 (10x more expensive than Liquid Spark). The Liquid Spark produced an impressively wide soundstage and a three-dimensional presentation that made the listening experience sublime. Impressed start to finish I have to truthfully say that the Liquid Spark gave me over 90% of what I was accustomed to hearing from the HA-1 in every discernable metric.

For those of us (and I think there are many) who appreciate that last sonic 10% but don't feel driven to pay through the nose for it, let me firmly encourage you to go pick up the Monolith Liquid Spark. The Liquid Spark offers outrageously good value for money and is exactly the headphone amp you need (or some fledgling audiophile close to you needs), whether building a first headphone system, or adding headphone capabilities to an existing system. +

Summary

Voicing: A full-bodied yet crisp and quick sonic delivery



(All ratings relative to comparably priced digital audio players.)

Resolution/Focus:



Dynamics/Expression:



Sound staging/Imaging:



Freedom of noise:



Features and versatility:



Value:



Pros

- Surprising sound quality for the money
- Small enough to fit virtually anywhere
- Can be used as a preamp in certain instances
- Excellent value

Cons

- No-frills design may leave some wishing for additional features or adjustment capabilities (but at this price, do we really care?)

TECHNICAL SPECIFICATIONS

Type: Solid-state DC coupled headphone amplifier

Inputs: One unbalanced analogue input (via RCA jacks)

Outputs: One 6.35mm headphone jack, on variable-level preamp output (via RCA jacks)

Frequency Response: 10Hz–50kHz, +/- .05 dB

Power output: >7.6v/ 90mW (@600 ohms) Balanced, >3.8v/ 45mW (@300 ohms) S-Balanced

SNR: 108dB (ref. 1 Vrms input/2 Vrms output @ 1kHz)

THD + N: <0.006% Balanced, <0.005% S-Balanced

Crosstalk: -83dB

Gain: +3dB or +6dB

THD + N: 1VRMS (20mW) – 0.007% THD at 1kHz both channels.

5VRMS (530mW) – 0.035% THD at 1kHz both channels

Dimensions (HxWxD): 1.5" × 4.5" × 3.75"

Weight: 252 g

Price: \$99 US, £76

MANUFACTURER INFORMATION

Monoprice, Inc.

11701 6th Street, Rancho Cucamonga, CA 91730 USA

+1 (877) 271-2592

URL: monoprice.com

UK URL: monoprice.uk

1MORE Triple Driver BT earphone

by Tom Martin

Some audio products do a few important things well, and they do them at a price point that is so reasonable, that you look at them and ask, “Is there any point in spending more”? Many times during the testing of the 1MORE Triple Driver BT Bluetooth wireless in-ear headphones, I had this feeling. These headphones list for \$150/£109.99, which is toward the lower end of the market. But the 1MORE’s have a smooth midrange sound that makes them very attractive for music lovers of all stripes. And, of course, they are wireless, which is an important convenience.

Let’s back up a smidge to review a key point. When people first listen to in-ear headphones, they often comment on the overall balance between bass, midrange, and treble. Two earphones, one with bass at +6dB and the other with bass at -6dB relative to the midrange, will sound quite different. Variations within the midrange are also noticeable, but harder to describe. This is partially because bass/midrange/treble balance shifts the emphasis on different instruments (e.g., between bass guitar, piano, and cymbals). In contrast, the evenness of midrange output shifts the emphasis on the harmonics of each instrument. That is, different midrange contours control whether individual instruments sound “right”. Using a food analogy, balance is like the size of the foods in a meal – is the hamburger bigger or smaller than the apple pie? Pretty obvious. Midrange smoothness is like the taste of the food – does it taste good or bad, delicious or bland? It’s less obvious, but probably more important.

The 1MORE Triple Drivers get the midrange “righter” than many other earphones in this price category. Using the Apple AirPods (\$159) as a point of comparison, the AirPods sound



"The Triple Driver BTs have an elevated bass sound that gives drums and bass guitar and synth a nice impact, but which can also sound a little thick."

duller, less dynamic, and grainier than the 1MORE's. The 1MORE in particular has a refined sound where instruments sound whole and less like they've been through some digitizing process.

For example, on 'I Wish I Was' from Maren Morris's *Hero* [Columbia Nashville], Morris' vocals sound clear and breathy but not edgy when using the 1MORE. On Shawn Colvin's 'Round Of Blues' from *Polaroid* [Sony Legacy], Shawn's voice is smooth and delicately nuanced with the character it has live. By contrast on the AirPods, the vocal chime and body are reduced and the sound is more 'dead'.

The 1MORE's are less accurate when it comes to their overall balance than they are simply in the midrange. The Triple Driver BTs have an elevated bass sound that gives drums and bass guitar and synth a nice impact, but which can also sound a little thick. The quality of the bass is pretty high, so this isn't wholly objectionable and I think many listeners would find this type of bass more desirable than accurate bass because they are accustomed to elevated bass. If that is your feeling, the 1MORE does a very nice job. This elevated bass is also handy in the noisy ambient environments that some earphones are regularly found in (the 1MORE also has active noise cancellation).

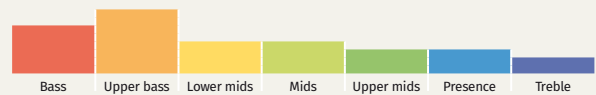
I thought the treble of the 1MORE was unobjectionable, but a little down in level by comparison to live music. Smooth treble is hard to do, especially with compressed files, so this is another wise design choice that sounds imperfect but in fact is practical.

A final comment should be made about the physical construction of the 1MORE. The finish level is surprisingly high for this price point. You should know, however, that the batteries, electronics and controls are all in a neckband which in turn runs via wires to the in-ear drivers. This has advantages (easier to access controls and less weight in the ear) but is not ideal for sports applications. Eight sets of differently sized ear tips are included, making it relatively easy to fit the 1MORE to your ears.

In summary, a very likeable wireless in-ear headphone at an amazing price. +

Summary

Voicing: Elevated bass and shelved treble



(All ratings relative to comparably priced CIEMs.)

Resolution/Focus:



Dynamics/Expression:



Sound staging/Imaging:



Value:



Pros

- Lightweight with multiple tips that will fit comfortably in most ear canals
- Higher than normal Bluetooth resolution resulting in mid-range purity
- Noise cancelling without significant artifacts

Cons

- Two-piece construction not ideal for mobile use
- Small earpieces can be tricky to insert
- Treble balance less vibrant than some competitors

TECHNICAL SPECIFICATIONS

1MORE Triple Driver BT In-Ear Headphones

Model: E1001BT

Type: Wireless, universal fit earphone

Driver complement: Dual balanced armature drivers and a single dynamic driver with metal composite diaphragm

Battery Life: 7 hours (charging time: 1 hour)

Wireless Range: 35 ft

Connector: MMCX connector cable with Bluetooth

Bluetooth compatibilities: Bluetooth 4.2, LDAC, HFP, A2DP, AVRCP, AAC

Noise cancellation: Yes

Weight: 42.5 g

Price: \$149.99 US, £109.99 UK

MANUFACTURER INFORMATION

1MORE Inc.

10225 Barnes Canyon Road

Suite A202

San Diego, CA 92121 USA

+1 (855) 551-6673

URL: usa.1MORE.com

Campfire Audio Solaris universal-fit earphones

by Chris Martens



Campfire Audio is descended from ALO Audio—an early generation high-end personal audio specialist known for its high performance electronics and especially for headphone/earphone cables. Campfire Audio, in turn, was spun off with the mission of building extremely high performance universal-fit earphones and CIEMs. This review focuses on the Solaris earphone, which many consider the most sonically accomplished Campfire earphone to date.

The design of the Solaris is derived from two earlier Campfire earphones, both regarded as classics: the Atlas and the Andromeda. The Atlas features compact stainless steel earpieces each housing a single, full range, 10mm dynamic driver with an ADLC (amorphous diamond-like carbon) diaphragm. Atlas admirers praise its top-to-bottom coherency and the uncanny ‘physicality’ of its sonic presentation. In contrast, the Andromeda uses machined aluminium earpieces each housing a driver array comprising a total of five balanced armature-type drivers. Andromeda enthusiasts enjoy its effortless rendition of sonic details, its overarching articulacy, and its neutral tonal balance.

Technically and sonically the Solaris combines the best elements of the Atlas and the Andromeda designs. This means

it features comparatively large CNC-machined aluminium earpieces each housing a hybrid driver array consisting of two balanced armature high frequency drivers, one balanced armature midrange driver, and one 10mm dynamic mid-bass driver with an ADLC diaphragm. All Solaris drive units get their own specialised housings. The high frequency drivers use Campfire’s signature TAEC (tuned acoustic expansion chamber) enclosures, the midrange driver uses a rear-ported enclosure, while the dynamic bass driver is mounted in a ‘polarity tuned chamber’. Completing the picture is a set of ALO-built silver-plated copper Litz-wire signal cables (user replaceable).

During my listening tests I compared the Solaris to Campfire’s Atlas and Andromeda earphones, and to Sony’s superb IER-Z1R earphones. Most of my listening was done through an Astell&Kern A&ultima SP1000M digital audio player and through the Woo Audio WA11 Topaz portable, balanced-output headphone amp/DAC.

First, like the Andromeda, the Solaris is uncommonly articulate and detailed, so that it harvests all the textural and transient information that good recordings have to offer. Second, like the Atlas, the Solaris delivered self-evident qualities of sonic coherency, punch, and immediacy.

One album that proved a useful illustration of all these Solaris performance characteristics was the Dave Matthews Band *Before These Crowded Streets* [Sony Legacy, 16/44.1]. Throughout the track 'Stay (Wasting Time)', for example, bassist Stefan Lessard serves up a deep, intricate, and intensely syncopated groove on his electric bass, which the Solaris reproduced with uncanny power, clarity, and—here's that term again—'physicality'. At the same time, percussionist Carter Beauford provides a perfectly taut, also very intricate, and deliciously filigreed rhythmic drum and cymbal accompaniment that the Solaris rendered with flawless timing, delicate textures, and an invigorating quality of dynamic snap.

But perhaps the most revealing Matthews track is the album's closing song 'Spoon', where we hear backing vocals from Alanis Morissette and even a brief banjo passage from Bela Fleck. Even though these two important musical contributions are not entirely 'front and centre' in the mix, the Solaris deftly captures the elusive, almost quirky qualities of Morissette's voice while at the same time gently rendering the smooth, fluid tonality of Fleck's banjo. Time and again the Solaris evinced a satisfying "I-can-do-all-things-well" sonic persona that complemented every genre of music that I tried.

Caveats? I can think of only one, which is that the Solaris earpieces are larger than the enclosures of Campfire's compact Atlas earphones and also larger than the earpieces of Campfire's considerably bigger Andromeda earphones. For this reason, the Solaris may not be an entirely comfortable fit for all listeners, so a pre-purchase test-fit is suggested.

All in all, the Solaris is the finest high-end earphone that Campfire has yet produced. I routinely use them as a go-to reference in my work for *Ultimate Headphone Guide*, but I also choose them for those increasingly rare moments when I get to listen just for fun and relaxation. Try them and you may choose them too. +

TECHNICAL SPECIFICATIONS

Campfire Audio Solaris universal-fit earphones

Type: Hybrid dynamic/balanced armature-driven universal-fit earphone

Driver complement: Two balanced armature tweeters with a 'tuned acoustic expansion chamber' (TAEC) enclosure, one larger rear-ported balanced armature midrange driver, one 10mm dynamic mid-bass driver with amorphous diamond-like carbon (ADLC) diaphragm in a 'polarity tuned chamber'-type enclosure

Frequency Response: 5Hz–20kHz

Summary

Sonic Character: Rich and highly musical sonics, but also naturally detailed



(All ratings relative to comparably priced digital audio players.)

Resolution/Focus:



Dynamics/Expression:



Sound staging/Imaging:



Freedom of noise:



Features and versatility:



Value:



Pros

- Fast, well-defined, and richly detailed sound invites 'go-deep' listening
- Beautifully combines dynamic driver punch and coherency, plus balanced armature speed and articulation
- An excellent all-rounder that combines the sonic virtues of two of Campfire's finest earlier designs

Cons

- Relatively large earpieces may not be an ergonomic match for all listeners
- Definitely not for those seeking a softly focused, 'background music' sound

Impedance: 10 ohms

Sensitivity: 115 dB/1mw

Connectors & Cables: Both the earphones and signal cables use beryllium/copper MMCX connectors, standard signal cable features four-conductor 'Super Litz' wire using silver-plated copper conductors

Accessories: Two-chamber mesh earphone bag, dark brown leather carry case with zipper closure and faux lambs wool interior, cleaning tool, Campfire Audio lapel pin, five pairs of Final Audio E-type ear tips (XS, S, M, L, XL), three pairs of Campfire Audio Marshmallow ear tips (S, M, L) and three pairs of Silicon ear tips (S/M/L)

Weight: Not specified

Price: \$1499 US, £1,449 UK

MANUFACTURED BY: Campfire Audio

URL: campfireaudio.com94

UK DISTRIBUTION

KS Distribution

+44 1903 768919

URL: ksdistribution.co.uk

hi-fi+

Next issue

Naim's Supernait 3 integrated amplifier

Sometimes, all you need in life is a damn good amplifier. The Naim Supernait 2 was always considered to be Naim's best integrated amplifier, and now it's improved, and has replaced its DAC with a natty phono stage! We put this fine improvement on a fine amplifier through its paces.



Plus:

Sonus faber's Elector Amator III and Fyne Audio's F501 loudspeakers, CH Precision's modular preamplifier, and more!

HI-FI+ ISSUE 175 ON SALE SEP 5 2019 (UK), OCT 3, 2019 (US)



H590 Reference Integrated Amplifier

HEGEL
MUSIC SYSTEMS

Master & Commander



A **MASTER** at musicality. The **COMMANDER** of any set of loudspeakers. H590 is the name of Hegel's ultimate integrated amplifier. The H590 includes user friendly services such as Spotify Connect and Apple AirPlay®, while at the same time embracing

ultra high performance formats like MQA and DSD. With SoundEngine 2 technology and Hegel's finest amplifier implementation to date, the **H590** really personifies our strive to bring High End to the people.



LET IT LOOSE



THE PROGRESSION AMPLIFIER SERIES

"Progression" – it's a word that suggests forward movement. The latest in Dan D'Agostino's growing family of power amplifiers is the culmination of a lifetime spent in the research and development of components that always rise to the occasion, that always respect the demands of the music and that convey realism from the most subtle of nuances to the most thunderous of crescendos. Constraints are not allowed to affect the dynamics. No loudspeaker

poses a threat. Progression monoblock and stereo amplifiers and the matching preamplifier deliver sound that's visceral, tactile and authentic. And if you know and love your music, "Progression" also describes a sequence of chords, also describes a sequence of chords, and in the case of rock and blues in particular, "power chords". Progression thus defines, in so many ways, the very foundations of music in all its forms.

 **absolute sounds ltd.**

International Distributors & Consultants of Specialised Hi-End Audio & Video Systems

58 Durham Road, London, SW20 0TW T: +44 (0)20 89 71 39 09

W: www.absolutesounds.com E: info@absolutesounds.com

For Your Nearest Dealer Please Visit The [Absolute Sounds](http://www.absolutesounds.com) Website

D'Agostino
MASTER AUDIO SYSTEMS