

HiFi PiG **MAGAZiNE**



**PACKED WITH HiFi REVIEWS
AND INDUSTRY INTERVIEWS**

SPRING 2021



"Tellurium Q's Ultra Black II's can be see as one of the best loudspeaker cables on the market at their price"

– Jon Myles, Hifi World

"The differences were stunning.....What I can state is that the Ultra Black 11 cables are currently the best I have heard in my system."

– Ian Ringstead, Hifipig.com

"Tellurium Q Ultra Black II is a remarkably coherent and "well-timed" cable"

– Jason Kennedy, HiFi +

"I have yet to hear a speaker cable which delivers timing like this one."

– Chris Kelly, The Ear

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COVER STORY

The return of a legend. English Acoustics interpretation of the classic Leak Stereo 20 and an interview with EA's Jordan Jackson.

LOUDSPEAKERS

Ophidian Minimo 2 Loudspeakers
hORNS Symphony 13 Horn Loudspeakers
Diptyque dp77 Anniversary Loudspeakers
Mellow Acoustics FrontRo II Loudspeakers
Cabasse Pearl Akoya
Triangle Borea BR09 Loudspeaker
Davis Acoustics Courbet 4 Loudspeakers
EgglesonWorks – Nico Evolution Speakers & Stands

AMPLIFIERS

KJF Audio SA-01 NCore Power Amplifier
Gold Note PA-10 Power Amplifier
ModWright KWH225i Hybrid Amplifier
Synthesis Roma 98DC Power Amplifiers
Electrocompaniet ECI 6 DX MKII Amplifier and Streamer
Hegel H95 Amplifier

PRE-AMPS, DACS, & STREAMERS

Leema Libra DAC
Auralic Altair G1 Streamer and DAC
Bricasti Design M3 DAC
Technics SL-G700 Network, CD and SACD Player
Rupert Neve Fidelice Precision DAC and Precision Headphone Amp
Novafidelity X45 Ripper and Streamer
Stack Audio Link II Streamer
iFi Audio ZEN Blue Wireless Bluetooth DAC

CONTENTS

PHONOSTAGES & TURNTABLE

LAB 12 melto2 Phono-Stage
Hegel V10 Phono-Stage
Electrocompaniet ECP 2 Mkii Phono-Stage
Alpha2Delta Audio PS1 Phono-stage & PSU1 Power Supply
Audiokultura Iskra 1 Phono-stage
Pro-ject VC-S2 –ALU Record Cleaning Machine
Keith Monks Prodigy Record Cleaning Machine
Origin Live Cartridge Enabler

CABLES AND POWER ACCESSORIES

Tellurium Q Blue II Interconnects And Speaker Cables
Esprit Eterna Cable Loom (Speaker, RCA and XLR)
Townshend Isolda Loudspeaker Cable
Vertere Redline Balanced XLR Interconnect
iFi Power Station Mains Purifier

ALL IN ONE SYSTEMS

iFi Aurora Music System

FEATURES

Will Binks Punk Photography

TALL TALES

The Earworm – A Natural History

INTERVIEWS

Peter Thomas of PMC

HiFi Pig takes the opportunity of the PMC 30th Anniversary to have a chat with Peter Thomas, PMC's owner and founder.

Alfred Vassilkov Of Estelon

Estelon is a high-end loudspeaker manufacturer based in Estonia and this year they are celebrating ten years of creating what they hope are "the world's best loudspeakers". HiFi Pig caught up with chief designer and engineer Alfred Vassilkov to ask him a few questions about the brand, their philosophy, and more.

Lee Taylor of Leema Acoustics

A BAFTA winner, Lee has had an incredible career in music and audio, and following what is (still) the most valuable of audio educations, sound engineering at The BBC, Lee went on to work on some of the BBC's most popular TV shows including Casualty, Blue Peter and Panorama.

Karl-Heinz Fink of Fink Team

Karl-Heinz Fink is the man behind Fink Team and the fantastic Borg and Kim loudspeakers. In this interview, he talks to Stuart Smith about his background, his designs and more.

Matt McNulty

Matt McNulty is well known for his refurbishing work on the classic Townshend Rock turntables and has moved into re-bodying cartridges. Stuart Smith has a chat with him.

MUSICAL JOURNEYS

Colin Pratt is the sales director and all-round good egg at Chord Electronics. We chat with him about the music that moves him and how he developed his taste in tunes.

CAMPAIGN



YOU NEED YOUR HiFi DEALER & YOUR HiFi DEALER NEEDS YOU!

In this issue of HiFi Pig Magazine we launch our campaign to help support HiFi retailers and independent record shops. We'll be putting our money where our mouths are and offering all independent HiFi retailers and record shops the opportunity to take advantage of a FREE advertising package worth £250 with us.

These shops and the people that run them are the lifeblood of HiFi, and rather than simply talking about giving back to the wonderful individuals and companies that are the foot-soldiers of the industry, we want to make a REAL contribution in the hope that YOU, our wonderful readers, will be encouraged to get back into retailers and start buying from them.



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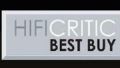
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JORDAN JACKSON, COO OF ENGLISH ACOUSTICS

Within these pages you'll find a review of the English Acoustics Stereo 21C amplifier, a modern take on the classic Leak Stereo 20. Here we have a quick chat with Jordan Jackson, Chief Operations Officer for the Wiltshire based company.

INTERVIEW

H P: What was your motivation in bringing what is an iconic product back to market?

JJ: We have always loved the original and for years we were asking ourselves why no one has brought it back. There are a few products out there that retain parts of the circuitry but nothing that keeps the timeless design of the chassis. This is what we wanted to capture when designing the Stereo 21c but inject some modernity within the amplifier by using new components throughout and this is where the name comes from, 21c which represents 21st Century.

We have been designing amplifiers for the best part of 30 years but we have never released a final product, only prototypes which have made over the years. We were tired with seeing all of the, what we

considered, poorly made products that flood the market and demand very large price tags and when we restored our personal Stereo 20 we loved how it was constructed in a beautifully simple but appealing way and we wanted to capture this.

HP: What do you feel is so special about the original Stereo 20 and how do you feel you have improved on the design?

JJ: The Stereo 20 was special because it was one of the first commercially available hifi stereo amplifiers, launching at the 1958 London Audio Fair, two months after the introduction of stereo records. When the Stereo 20 was launched other manufacturers were using two mono amplifiers to realise stereo, the Leak stereo 20 was way ahead. Its design is beautiful, not just from a



visual point of view, but the circuit design and transformer design are very good. Our criticisms of the chassis stem from how it was manufactured back in the 1950's using folded steel and then spot welded together, something which is very rudimentary and basic by today's standards. We improved upon this by having a thicker folded steel chassis with a built in joggle to support a base plate and have seam welded the corners ground to a smooth finish so you have a lovely rounded edge. As I mentioned, the base plate is something we really feel we needed as the original was never supplied with one and there are high voltages inside making it potentially unsafe in the hands of someone who is unaccustomed to valve amplifiers.

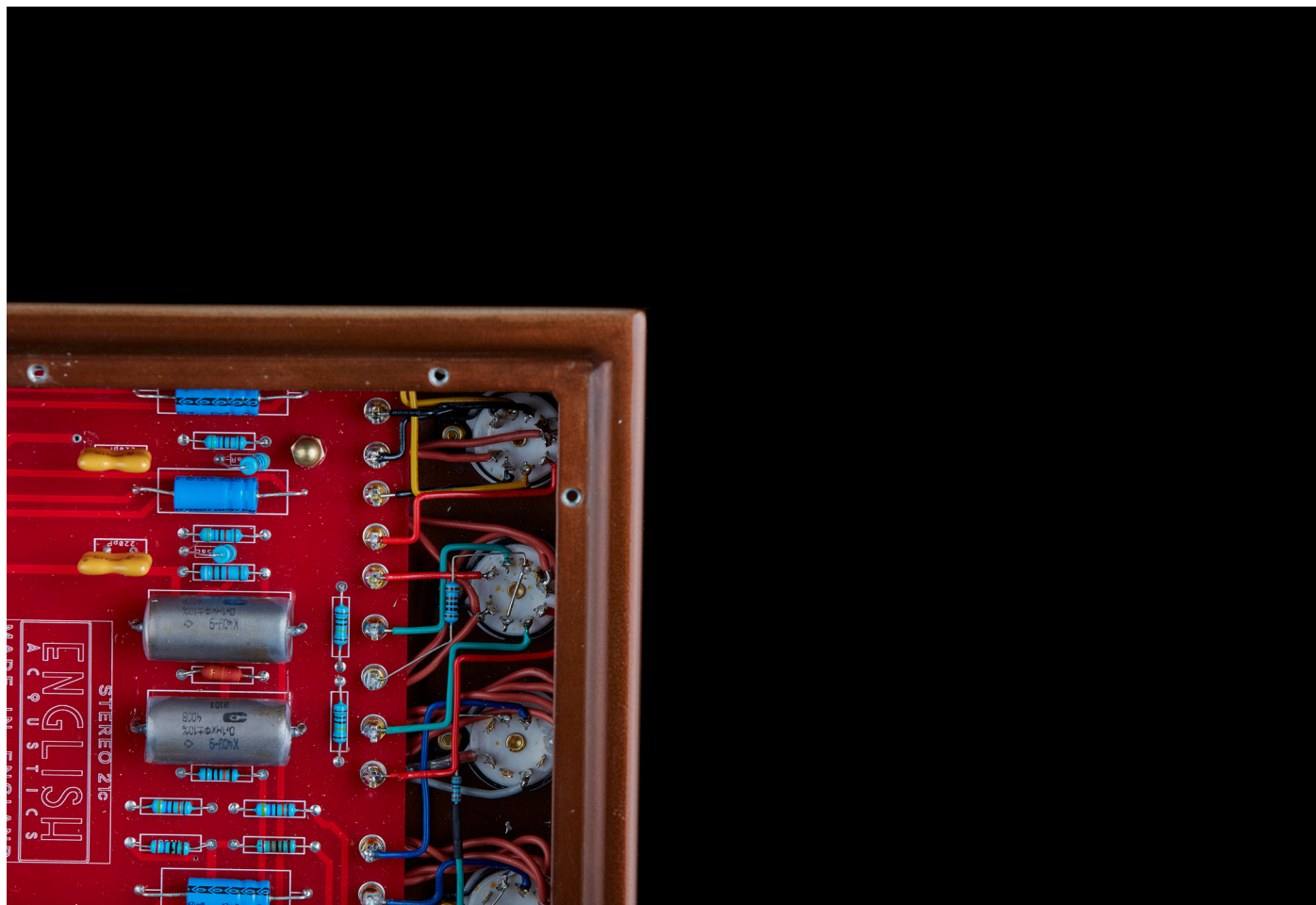
The changes didn't end there, we have redesigned the mains and audio transformers so that the mains runs on a specific voltage that is country specific and it now runs 20°C cooler compared to the original. For the audio transformers, we have redesigned these to run specifically on 8 ohms as this is the most common impedance on modern and classic speakers. We also wanted extended bass performance with a smoother roll off at the high-end,

but still maintaining that classic sound, but with a modern precise delivery.

Perhaps the most special part of the Stereo 20 was what was printed on the front, "Made in England". This is one thing we wanted at our core company philosophy and we have gone extensively out of our way to source UK-made components and we hand build all of our amplifiers at our workshop in Wiltshire in the west of England. Because of this we are sure to include Made in England on our amplifiers and we are also an official member of the Made in Britain partnership, but more notably, we are the only valve amplifier manufacturer to carry this prestigious mark.

HP: What would you say the company philosophy is and how important is a UK supply chain to that?

JJ: Our company philosophy is to ensure where we possibly can, all of our products will be, and are, made in the UK using as many UK sourced parts as far as physically viable. A UK supply chain is hugely important to us as we feel UK manufacturing has a lot to offer and having



British made HiFi is a breath of fresh air in a market which is dominated by outsourced, cheaply made products.

We also prefer the traditional approach to business where you interact with the client as much as possible and this is why we personally hand-deliver all of our amplifiers where possible as we feel it is important to make them feel valued and that they are not just buying a product, they are also buying the knowledge, expertise and care that goes along with it. We also note that most manufacturers only offer a 2 year warranty and this is why we offer 3 years instead, we are so confident in our design and build quality that we felt we could better the industry standard.

HP: Given there has been a move towards more complex loudspeaker design that inevitably require lots of power, how relevant do you think the amp is in 2021?

JJ: It is a question that we get asked a lot and how do we cater to current speaker design. This is why we have a specific 8 ohm output impedance and test on a wide variety of speakers.

Our main demo speakers are a set of Bowers & Wilkins 800 D3 diamond speakers and we also have Quad electrostatic ESL-2912's, Wharfedale Linton's, vintage Heybrook HB-1's, Klipsch RP-600m's and a few others so we can be confident that the amplifier will work and drive a range of modern and classic speakers.

Even though the amplifier power of the 21c is modest, the stated power is across the audio range from below 20Hz to above 20KHz. This is a notable detail in itself, as most other manufacturers quote over generous power and performance figures, and almost universally at 1KHz. It's rather more difficult to get a clean 10W at 15Hz compared to 10W at 1KHz, and this is why other manufacturers stick to 1KHz for their performance claims.

We recently had a demo with German Physiks where they kindly brought down their HRS-130 loudspeakers which are not high sensitivity, but the Stereo 21c was able to drive them perfectly and provide the distinctive 'valve sound' that we have all come to love. You do not need a hugely powerful amplifier on contemporary loudspeakers provided the amplifier is designed properly



and the 21c is testament to that, as was the original Stereo 20.

HP: Who is involved in the company and what is their experience in the audio industry?

JJ: We are a small team that is mainly situated in England, but we are spread as far as New Zealand. At our Wiltshire headquarters there is our Chief Technical Officer and founder Peter Farrow and the Chief Operations Officer, Jordan Jackson (that'll be myself). Further afield we have director Ron Martin based in Aylesbury, our Creative Director, Jamie Baker based in Bournemouth and our Compliance and PCB designer, Adam Rosner based in New Zealand.

Combined we have over 60 years of audio experience and Peter is an ex-BBC broadcast and sound engineer with a 1st class honours degree in electrical and electronic engineering from the University of Leeds. He was also awarded the English Electric Valve Company prize for the best telecommunications project in 1989 when he graduated. Peter and Adam design the amplifiers, it is my responsibility to take the prototypes and turn them into finished products.

I (Jordan) have qualifications in business and media production with an avid interest in audio and manufacturing and I design all of our amplifiers using high end CAD software and have a large hand in building and assembling them. I'm also the person you're likely to speak to when you contact us!

Ron is successful director of a high-profile company and has years of experience manag-



ing various companies and ensuring business compliance so that all procedures are carried out correctly and within regulations. He is also a qualified electronics field application engineer and has worked for various blue chip companies.

Jamie is an established photographer with a wealth of knowledge spanning from photography to graphic design. His experience is not just in UK companies but also those in the Middle East, most notably, Dubai where Jamie was based for 5 years working with a successful production house and he is our guy who produces these excellent photos.

Adam runs an audio design company which also manufactures valve amplifiers which is based in New Zealand and he is our PCB designer and compliance designer who ensures our amplifiers pass stringent safety regulations and helps with the internal layout and design. Adam has considerable compliance experience the Aerospace industry, which have some of the toughest regulatory requirements of any market sector.

HP: What is next for English Acoustics?

JJ: The Stereo 21c marks the first in a long line of high-end British made products from English Acoustics. We have more products in the pipeline and a few designs which we have prototyped and they have worked faultlessly for years with 10,000+ hours on some!

We are working to expand our portfolio and offer something for everyone which utilises the exceptional craftsmanship you would find on the Stereo 21c and build upon this.

SUPPORT YOUR DEALER

DON'T BE A DICK...OR A CHAD

LAUNCHING OUR HiFi PiG "SUPPORT YOUR DEALER" CAMPAIGN WE LOOK AT HOW YOU CAN PLAY FAIR WITH YOUR DEALER AND GET THE BEST SERVICE THERE IS.

Imagine yourself arriving on a sunny spring morning at your local HiFi dealer with whom you have been in discussion for some time about buying your first really serious system. You are the first demonstration of the day and you arrive at 9:25, five minutes before the 'demonstration' is about to begin. There is five minutes of how are yous and general chitchat and then you are ushered into a rather nicely appointed demonstration room that has been set up just for your specific purposes. What's more is you have a full hour's use of the room, the system, and the salesperson (who also happens to be the owner of the store – but that's not really all that important to this story). The room is dappled in spring sunlight and in there is a single sofa, a low table, a scattering of plants, and a smidgen of mood lighting. All in all it's very convivial and is how you wish

your listening space looked in an ideal world.

You sit in the centre seat of the three-seat sofa – a spot that has been specifically set as the 'hot-seat' and has the best sound in the house – and before you there is the system of your dreams. You have scoured the online magazines and asked countless questions in the innumerable Facebook groups that you are a member of, but most importantly you have been popping into the shop and discussing the final demonstration system with your host on and off for a couple of months now.

Kelly, the owner, hands you the remote control, the iPad and invites you to spend the next hour listening to some of your favourite tunes to get a feel for the system.

You've gotten to know Kelly

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quite well over the last few months and whilst the hive-mind of the internet has been useful and the online reviews have helped you narrow down your choices, it is her you have turned to when asking the really big questions. You have found her to be incredibly knowledgeable, helpful and with a hugely evident passion for music and its replay in the home. This is her fifth year in the shop and she has built an enviable reputation for stocking only products that she believes in, but also a reputation for offering the most excellent pre and after-sales care and support.

As you take your seat Kelly asks you if you would like a cup of coffee which arrives a few minutes later, and whilst you are starting to listen to your first record (you already have a mental list of the tunes you want to listen to and Kelly has advised you to choose recordings that you know well and you think will tax the system). Kelly leaves the room with an “I’ll pop in between tunes to see how you are getting on, or have any questions”, at which point you notice that along with the coffee there is a small selection of what look like rather splendid biscuits on a small plate on the table before you. That’s a nice touch, you think to yourself.

The first tune ends and as promised Kelly arrives and asks “How was that? Do you have any questions?” to which you respond that you feel the system seems a little bright. Kelly has anticipated this given the choice of speaker cables you have made and asks your permission to swap the current cables out for some ever so slightly more expensive cables, but ones that she feels will take that edge off and suit your particular hearing better. All done in a couple of minutes and you are left to continue your listening experience.

This coffee is really good and the biscuits are clearly not your run-of-the-mill own-brand rubbish. You sit back, find the next tune you want on the iPad and relax into the music thinking that this is perhaps one of the most pleasurable shopping experiences you have ever had. Throughout the hour Kelly proves to be attentive and almost magically there to answer your questions when needed, but at the same time not there and allowing you to listen and make up your mind about the system. You like that!

You like it a lot and you like the system that has been put together for you a lot too. It fulfils everything you have been discussing over the last few months and you can’t help but think that Kelly has done a splendid job in putting together such a wonderfully coherent system at the price-point that you discussed – bar the few extra quid on the cables which you feel easily add more than their value to the sound, anyway. A change in speakers came later but the difference they made was even greater and you knew that the extra few hundred quid was certainly worth it.

Now imagine that you are Kelly.

The last five years have been tough but hugely rewarding and you get a real kick out of seeing people leave the shop with a huge smile on their faces, and you particularly like the emails you receive thanking you for your time and patience and how the sender is in musical nirvana given your help and assistance – one couple even sent a rather lovely bouquet of flowers by way of thanking you for your time and help.

You’ve got to know Chad (the chap currently sitting in the demonstration room) over the last few months and whilst he was certainly no newbie to the whole HiFi thing, he certainly wasn’t an expert. However, you took your time, asked the right questions, and found out his likes and dislikes both musically and sonically. Almost as much as Chad you were looking forward to the demonstration and had been in the shop at seven to make sure that everything was perfect for Chad and that he could make his final choice in an unhurried and un-hassled kind of way. You’d set the system up perfectly, ensured that the network was running properly, hauled the kit from the storeroom, dusted it down, and meticulously placed the speakers so that Chad really got the very best experience possible. You understood immediately what his needs were with regards to cables, and when he suggested he wanted a little more bass slam you went and found what you thought were the perfect, but slightly bigger floorstanders. Of course, this took a few minutes to set up but you ensured that your customer was well looked after, had a fresh cup of coffee and his now empty plate of biscuits was replenished.

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Whilst setting the speakers up you notice that Chad is tapping away at his phone – perhaps a family matter or a work email that needed his immediate attention.

The clock ticks around to almost 10:30 and the allotted hour has passed.

As Chad you are elated and you know you have the perfect system right there before you.

As Kelly, you know you have done everything you could possibly do to make the buying experience as enjoyable as possible.

Kelly enters the demonstration room and asks Chad how he found the system and explains that everything comes with free set up and obviously she was only a phone call or email away should he have any questions. From her experience, it is clear that Chad has found the system he feels he can live with for many years to come and Kelly feels a certain pride in knowing that she has not only made a considerable sale this morning but also that she has a client that will come back time and time again in the coming years as the upgrade bug takes hold.

And then it happens and the penny drops in Kelly's mind as to why her customer had been tapping away on his phone whilst she was setting up the new speakers. Chad looks a little sheepish but also somewhat full of confidence and says "I've looked online and I can get the very same system from a well-known online retailer for 15% less than you are asking. Can you match that?"

Now dear reader, you can imagine the deflation in Kelly's spirits. Not only has she spent the morning setting up this demonstration, but she has also spent the last few months offering up her time and experience to Chad who now slaps her in the face with a poxy 15% discount. Doesn't he know the overheads that offering this level of service face to face has?

A discussion ensues but there is just no way that Kelly can match this level of discount and still cover her costs, never mind make a few quid by way of profit – that is, after all, why she opened the shop in the first place.

Chad leaves the shop without a purchase.

Kelly feels utterly miserable and used. And quite rightly so.

Our customer goes home, gets out his laptop, and buys the very same system that he heard in the demonstration room a few hours earlier and is more than a little smug that he has done so whilst saving what he feels is a hefty 15% into the bargain. A few days later the various boxes arrive unceremoniously at his door, and whilst nothing is damaged the boxes do look as if they have been thrown around a bit. Anyway, he lugs them from his front door, where the typical English spring has turned to showers and some of the boxes are getting a little rain-splattered if not actually wet, and into the front room where he spends the next six hours moving furniture around and setting the system up, only to find that the online company have sent the wrong speaker cable – by a strange coincidence the one they have sent is the one he'd originally had in the system that Kelly had set up for him. Obviously he can't use this cable and so he is online and trying to contact someone to get the cable changed, but that's not going at all well and he can't actually get to speak to a real human being. It's getting close to midnight when he finally manages to get the cable situation sorted but it's going to be another five days before it will be delivered. For the next five days he sits in front of his new HiFi that is making no noise but did cost him 15% less than from Kelly's shop. Five days later his cable arrives and all is well with the world. He has music at last and so it continues for the next month or so until his amp pops a channel. More hours spent on the computer. More hours of Vivaldi's Four Seasons whilst waiting for someone he barely understands to pick up the phone. And yet more weeks spent waiting for a replacement to arrive – all the time he's without music in his life!

If only he'd bought his system from Kelly all this hassle would have been so much more simple and sorted in a lot less time and possibly whilst having a nice cup of coffee and a free biscuit or two, he thinks to himself.

So the moral of this story is that bricks and mortar dealers cost more because you are paying for a level of service that is worth it! And



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don't forget that to run a bricks-and-mortar shop costs far more than running a warehouse and a team of outsourced telephone 'helpline' personnel.

Dealers give you a service far and away more personalised than any huge online retailer can. They offer a level of knowledge far in excess of what any large-scale faceless corporation can offer. They offer a level of after-sales service that simply cannot be given by the names that are surely by now on the tips of everybody's tongues.

Now there are some very good online retailers, but these tend to be the ones that have a bricks and mortar presence too, or that have built up a reputation for excellent customer service over years and years...and quite often coming from that face to face environment in the first place.

So, don't be Chad! If you intend to buy blind and online then do just that – it's your choice, after all. Don't use the time, expertise, and knowledge of a professional HiFi dealer and then go buy online because you may save a few quid. First of all, it makes you a dick of the highest order. Secondly, it is a false economy!

You pays your money and you takes your choice!

HiFi Pig says don't be Chad!

HiFi Pig says Support Your Local Dealer!

You need your dealer and your dealer needs you!

WHAT WE ARE OFFERING

At HiFi Pig we think that actions speak louder than words and that's why we are offering any INDEPENDENT HiFi retailer, anywhere in the world, a free listing on our interactive "Find Your Dealer" feature. This is an interactive map that recognises where a reader is located and automatically locates their local listed HiFi dealers. We'll include your logo, your address and your phone number absolutely free of charge - normally priced at £150.

We have also put together a pack of posters and online images that HiFi dealers (or anyone for that matter) can [download](#) and share on their social media platforms, on their websites, or in their shop windows. For those shops in the UK we have had printed a large number of stickers and badges - ask and we'll get some out to you free of charge (*while stocks last*).

If you are someone who buys HiFi then you can show your support by displaying the [I Support My Dealer banner](#) on your social media platforms and by wearing your I SUPPORT MY HiFi DEALER badge (See top left). We'll be sending badges out to participating retailers so you can just pop along and claim yours (*while stocks last*)



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THIRTY YEARS OF PMC WITH PETER THOMAS

HiFi Pig takes the opportunity of the PMC 30th Anniversary to have a chat with Peter Thomas, PMC's owner and founder.

INTERVIEW

2021 sees one of our best known British Hifi brands, PMC, the Professional Monitor Company, celebrating its 30th birthday.

As big a name in professional audio as they are Hifi, PMC are continuing to expand into new fields such as that of Custom Installation for integrated home cinema setups and as a distributor of a select group of international Hifi brands through PMC Distribution UK.

30 YEARS OF PMC

The brand was born way back in 1991, back when the UK was leaping about to the repetitive beats of rave culture, and probably before some of you reading this were born yourselves.

PMC was established by Peter Thomas, then a manager and engineer at BBC Music Studi-

os, and his friend Adrian Loader, an engineer at FWO Bauch. The pair were dissatisfied with the speakers that were commercially available at the time for both studio and home use, so they began designing their own, developing transmission line technology and, after four prototypes, created the first BB5 (big box version 5), which they sold to the BBC.

BBC STUDIOS

Their first year was a busy one also seeing the launch of PMC's first domestic loudspeaker, the LB1, at the time the world's smallest transmission line design, and the BB5 XBD Active including PMC designed and built active electronics, which was installed in BBC Maida Vale Studios. The pair also exhibited at their first trade show, the Association of Professional Recording Services in London and, as anyone



INTERVIEW

that has attended Hifi Shows since knows, PMC has gone on to be a 'must visit' exhibitor at Hifi Shows the world over.

Maida Vale To Nashville

By the next year, 1992, PMC had opened their first factory and, through the following years, went on to be highly in demand, both in the BBC and far beyond, in concert halls and recording studios including the world-famous Metropolitan Studios and for Hollywood's film scoring elite. Big-name celebrities like Brian May, Stevie Wonder and Robbie Williams installed PMC speakers in their own studios and in the USA the brand was used in some of the most famous recording and mastering studios from Nashville to New York. Status Quo's Francis Rossi installed PMC IB2s and TB2S in his personal studio and proclaimed them "f**king brilliant". In Germany PMC were used for recording classical music for Deutsche Gramophon and Harmonia Mundi, and by electronic pioneers Kraftwerk in their Kling Klang studios in Düsseldorf

Sadly, Adrian Loader passed away in 1998. The PMC AML1 Active Monitor was named in honour of the brand's co-founder later that year.

MADE IN BRITAIN

The PMC client list, both for professional and home use, reads like a Who's Who hall of fame stretching throughout the music industry and beyond...of course not forgetting the most important people of all, the thousands of people just like you, our readers who have been buying these proudly 'Made in Britain' speakers for the past 30 years and will, undoubtedly, continue to do so for many years to come.

We would like to take this opportunity to wish Peter and all the team at PMC a very happy 30th anniversary!

Hifi Pig caught up with Peter Thomas and had a chat, looking both back over the last 30 years and forwards to the future.

Hifi Pig (HP): What do you think your time at the BBC brought to the table?

Peter Thomas (PT): The opportunity to draw on

decades of accumulated audio experience. The BBC had been designing and building much of its equipment since the 1930s. This included microphones, recording desks, amplifiers, turntables and of course speakers. The training you received was incredible...and intensive. Understanding all elements in the audio chain, from microphone through to the radio receiver and playback in your home really gave you a detailed knowledge of every piece of equipment and its strengths and weaknesses. This had an enormous influence on me when it came to designing loudspeakers. I knew I had to look at every element and understand its effects on the final design. This 'holistic' or balanced approach has certainly put us in good stead and its one of our guiding principles.

They had also developed and honed a method of designing speakers for over 50 years which led them to a combination of measurement and multiple listening tests to achieve their design goals. That's another essential procedure we have adopted in our development of PMC designs.

HP: What do you see as the biggest achievement for PMC in the last 30 years?

PT: Helping audio professionals to capture music in the best possible quality and advancing speaker design so we can enjoy the same experience in the home. We can now listen to recordings made in the 1950s and 60s in a quality that they could not reproduce at the time. I think we have helped recording standards move forward so music captured today will sound better today and in years to come.

HP: If you could go back 30 years, with all the knowledge you have gained, what bit of advice would you give yourself in 1991?

PT: When we started our business, our passion was to create something really special with the main focus on the product and what it can do that was better than anything else available. It's key not to lose that sort of drive, it ensures you don't produce a 'me-too' product. But when you are so deeply embroiled its important you see the bigger business picture, so get a good accountant! It will help you realise your goals.







HP: You are well known for having a collection of vintage audio products. If you were to be able to keep just one item what would it be and why?

PT: It would have to be the Gale GT2101 turntable. A stunning piece of design and so advanced for its time. The platter is driven directly via a DC brushless motor powered from an outboard motor controller. The motor features a floating magnetic bearing, and the speed is quartz locked with a three-digit LED display showing the speed. This turntable can be vari-speeded between 10 and 99.9 rpm!

And this is in 1975. Incredible. Its rarity is also an attraction. Estimates range from 50 to 100 as the total production run and the customers were the rich and famous of the day.

It would be fair to say that its styling owed a great deal to the IMF 300 turntable released in the early 1970s which is also a rare item in our collection.

HP: What record would you play on/through

the above?

PT: Well as Elton John was rumoured to own at least one, it would have to be Captain, Fantastic and the Brown Dirt Cowboy album released at the same time as the turntable. This is a great recording on the original vinyl release. Gus Dudgeon produced and captured some amazing performances in his career.

HP: Who has been your most memorable client over the years?

PT: For me personally that would have to be Stevie Wonder. He had installed our PMC BB5s in his Wonderland Studios in Los Angeles and while visiting the UK phoned me to ask for some small monitors and to visit him at his hotel to discuss speaker design. During a memorable evening, he invited me as his personal guest to a private concert held at the Natural History Museum. Some months later I visited his studio in the USA to do a performance check on his studio monitoring as he was remastering all his albums with our speakers. There is nothing quite like being at the recording desk with

Stevie Wonder standing next to you performing one of his songs live!

HP: Going forward (and getting out the crystal ball), what kind of developments do you think will be seen in both pro and home audio in the next few years?

PT: The TV and Music industries are investing heavily in Dolby Atmos so that is a major focus for us currently in the professional field. Many large studios are being constructed around the world and the demands for high level, high end performance speakers make PMC a natural choice. Our Advanced Transmission Line cabinet technology allows us to achieve those requirements for our clients.

In the home, that same technology allows us to design speakers that are smaller but still perform like large speakers. That development continues so that it becomes less necessary to have large conventional speakers to achieve the performance desired.

The growth in demand for multichannel systems also fuels the need to be able to hide the speakers better in the living room so high-performance low profile custom installation designs will be in greater demand. Something we have pre-empted by producing our new Ci series

HP: Where do you see the PMC brand going in the future?

PT: As a privately owned business we have grown our brand steadily over the last 30 years and that will continue. We've always invested very heavily in Research and Development, so we have many new ideas in the pipeline to include in our future products.

Our philosophy is to only introduce or change products when they offer a significant improvement. Improving performance and accuracy so our customers can get the very maximum enjoyment has always been our driver as a company.

HP: With more and more artists recording music at home (especially during lockdown) what do you see as the future for big, professional recording and mastering studios?

PT: Well ironically there are many large studios being constructed or re-equipped at present. The old school large studios are less in demand but then there are now far fewer of them. The new studios are quite a different design and much more for the 21st Century. It feels very much like the change that happened in the 60s and 70s where the more formal studios were replaced by cool studios with a more casual attitude to making recordings. It's a generation thing. Big studios are here to stay...but in a different format.

Many of those behind the construction of these studios started recording at home.

Home recording can conjure up an image of a back bedroom with a pair of £200 speakers and a laptop, whereas many are full blown studio installations so the line between a "home studio" and a "professional studio" is now blurred.

The future will certainly be a mix of both.

HP: PMC have been heavily involved in Dolby Atmos for music, and we were lucky enough to have witnessed the Miles Davis Atmos master demonstration at Munich. How did your interest in this come about and do you think it will be widely adopted?

PT: We initially became involved with Atmos at Capitol Studios in Los Angeles. We equipped their studios with PMC monitoring and installed their first Atmos system. We worked very closely with Dolby, Capitol and Universal to calibrate and align the speakers for the best result for music recording. This was at the very beginning of music recording in Atmos as up to then it was primarily designed for the movie industry (as all the multichannel formats have been).

This led to optimising the system for music and then the opportunity for PMC to be involved in mixing Miles Davis' Kind of Blue in Atmos. I'd like to add that, within the PMC team we have some very talented recording, mixing and mastering engineers, all with very good ears and a love of music so those sacred recordings were in good hands. The Miles Davis Foundation were very happy to let us produce them in a new immersive way. In the past, multichannel has always been held

INTERVIEW

back by too many formats. Quadraphonic had SQ, QS, CD4 and then surround had DTS, Dolby, 5.1, 7.1 etc. Atmos offers one format that can be configured for all rooms large and small.

More and more artists are mixing or remixing albums in Atmos and we are installing more and more Atmos studios around the world with the highest profile companies on the planet - that news will be public soon.

HP: What is your personal favourite PMC

loudspeaker and why?

PT: It has to be the PMC fact 12. It blends into a room so easily but produces this giant detailed soundstage with such an incredible low-end performance. I've always liked designs that don't look like they should be able to produce that scale of reproduction.

It was also the first speaker my son Ollie developed as head of the development team so it's particularly special to me.





KARL HEINZ FINK OF FINK TEAM

Karl-Heinz Fink is the man behind Fink Team and the fantastic Borg loudspeaker we reviewed in October. In this interview, he talks to Stuart Smith about his background, his designs and more.

INTERVIEW

H P: Can you tell readers a little about your background and how this led you to an interest in audio?

KHF: Audio started as a hobby and a sort of accident. I was on my way to visit a very early sort of HiFi Discounter in Duisburg, couldn't find it, but instead ended up in one of the most famous High-End shops in Germany, named Audio Forum (later maker of the Acapella horn speakers). I immediately got hooked and visited them as often as possible. After a while, I was ready to buy my first speakers but asked if I could also make my own design. To my surprise, the answer was "Yes" and so I left the shop with a pair of KEF B139 woofers, Peerless mid-ranges and Isophon tweeters. I started with a huge transmission line and never stopped making speakers. But it was

only a hobby in those times, as I had a proper job as a surveyor. Years later, I got the opportunity to run a shop for loudspeaker DIY and I was crazy enough to leave my safe job to help other people making speakers.

HP: Obviously great sound reproduction is a priority, but when engineering a new loudspeaker how do you approach the project?

KHF: Nowadays, a lot of the design can be simulated before we drill the first hole or switch on the soldering iron. Industrial design comes first, as this is a very important part of the product and the drive units will be constructed around it – not like in the old days, when existing drivers dictated the cabinet dimensions. In addition, the cabinet construction gets simulated to minimise cabinet vibration and



after all that has been done, the speaker ends up in the anechoic chamber to start with the crossover. We try to get as far as possible with measurements before starting listening. Let me give you an example. Before we got deeply into the cabinet vibration problems, we often had bad results in the listening room when starting the voicing – even with the best drivers and a good crossover. It was the cabinet that often enough made our life complicated and we ended up voicing “around” those problems. Today, we simulate the cabinet, scan the final one with a laser vibrometer and so, there is no bad surprise in the listening room and we can concentrate on the final voicing and we have to make less compromises.

HP: Sonically, what are you looking for from a loudspeaker and do you rely on measurements or your ears when fine-tuning a loudspeaker?

KHF: Measurements are important, as they help us to stay on the right track. Yes, one can voice a speaker around some “problems” in the design, but I prefer all the things out of the way that we can cover with measurements. That

gives us more time for listening and fine-tuning. I don’t go to classical concerts every week to calibrate my ear....I go to concerts, but that’s normally Blues or Rock and that can teach you what timing means. Tonal balance, I do like I feel it should be. There is no other choice, as we have so many different recordings and I want as many recordings as possible to sound good on our speakers. So, if it feels good to me, I leave it.

HP: What inspired you to create your prototype WM-3 loudspeaker that was demonstrated at Munich 2016 and how was it received?

KHF: We had those speakers as an internal reference and fun speaker, but it was never planned to produce it. Ken Ishiwata of MARRANTZ, who was a good friend, a mentor, and supporter to me, asked if we could do a nicer looking pair for him to demonstrate his new amplifier in Munich and so we made the WM3. The reacting was very positive and we had orders without even knowing a price for the beast.



HP: Following the prototype WM-3 came the commercial product the WM-4, can you tell readers a little about the process of refining the WM-3 to a commercial loudspeaker?

KHF: We more or less had to do anything from scratch. In the WM3, the woofer was a sample we had sitting around, the midrange was assembled in an old Dynaudio basket and the AMT was a leftover from an ELAC project. We had to design a new woofer, making a tool for the midrange and work with Mundorf on a tweeter that would work and do a new crossover. So it's all-new more or less.

HP: The second loudspeaker from Fink is the Borg (which Hifi Pig awarded our Outstanding Product award), how did this project come about?

KHF: Steve Harris, who was part of the team in the beginning thought it would be a good idea to do a 2-way with a big woofer. He had the Japanese market in mind and I found it interesting to marry a 10" woofer with an AMT. There are not many 2-way speakers with 10" around and there is a reason for that. The tweeter needed some serious rework to go down to 1600Hz with low distortion and a 10" woofer that could go up to 3kHz is also not a standard solution. The crossover is very special, but I had managed it before, so I was confident it could be done.

HP: The Borg uses a 10" bass driver as opposed to a 15" bass driver in the WM-4, do you think this brings compromises, or indeed any benefits, and if so, what are these?

KHF: WM-4 needs a big room to work and not everybody got such a big room. The Borg is a lot easier to integrate into smaller setups and we can use them in standard hotel rooms. If you have the space, WM-4 does offers a bottom end dynamic that is not easy to ignore.

HP: Both your loudspeakers use AMT for the higher frequencies, what benefits do you feel the AMT brings to the loudspeaker and were there any issues in integrating it into the loudspeakers?

KHF: AMT drivers have a large radiating area and that's why they sound sort of easy with very good resolution. They often sound detached from the woofers/midrange and it takes some tricks in the crossover to adapt them to the woofer. The AMT principle is still unexplored. The inventor did not do a lot during the period the patent did protect the AMT and now, that the principle is free, only a few people are working on it.

HP: Borg has a uniquely shaped cabinet, whose aesthetics do split opinion, can you tell readers a little about how the design came about and what benefits you feel it brings to the sound of the speaker?

KHF: The design of the speaker was done by Kieron Dunk, who is in this business as long as I am, designing very successful speakers for Mission, Infinity, Q-Acoustics, and many others. I gave him a page out of a book (Harry F. Olson) with pictures of cabinet shapes offering the flattest response curve and that was the start of Borg. I also asked for a design that was a statement and he did that very well. I definitely didn't want a speaker that was looking like many others.

HP: Unusually Borg allows users to fine-tune the loudspeaker in four different parameters, what do you think the inclusion of these brings to the speaker and how well have they been received?

KHF: These controls can help to fine-tune the system. But there is a story behind it. We normally work in a team for listening and the reason is that every listener has his personal set of

priorities in his mind and by finding a compromise between all of us, there is a big chance that many people will like it. So Walter Fuchs is our classical music guy and he has his special Pavarotti track for defining the depth of the stage. He likes it more backward, but I like it more forward. In a normal project, we find a compromise, but in Borg, you can have it both by changing the mid control one step. Or you got a set of cables with a slight emphasis on the higher mid-band to boost the resolution. That can get a bit over the top, so you take out presence one notch to compensate. Or you change the damping to adapt to the amplifier you got. Not big jumps, but useful tools for fine-tuning. However, to be honest, not many people use the settings and stay with what I like most. Good choice!

HP: Fink Team have previewed a smaller standmount loudspeaker called Kim, can you tell us a little more about this project?

KHF: Kim is another 2-way with AMT, but in a smaller package and sitting relatively low on the floor. It's a bit like we did speakers in the past and the reason for it is that it's again easier to integrate, as the speakers blend into the rest of the furniture. You can read more about KIM by following this link.

HP: You recently acquired the well-known EPOS brand, what are your plans for the brand going forward?

KHF: EPOS was always very special and the founder, Robin Marshall, as a clever guy. So whatever we will bring to market, should be more than just another speaker with EPOS logo. We are working already on some ideas, but the Corona problem pushed it all back a bit. I'm even working on a sort of Transmission Line! I gave up Transmission Lines many years ago, but nowadays, we have simulation tools and so we can try tricks we have learned in the last few years to make a Transmission Line work well. But so far, it's not finished. I'm also doing some studies on Metal domes.... EPOS did use them in the past. What really surprised me was the positive reaction we got from old EPOS distributors. They are waiting to restart again.

INTERVIEW



INTERVIEW

HP: You have a deep interest in blues music, who are your favourite artists and why?

KHF: There are many I like – not easy to answer. I found it into the Blues with Sonny Terry and Brownie McGhee. I bought a record with both on the special deal table of a record store when I was 16 or so. I took it, because it was cheap and I discovered a music that did really touch me. I still like this kind of Folk Blues with artist like Mississippi John Hurt, Son House and many others I did never see live, because I was too young when they came over to Europe. I saw B.B. King many times and even had a chance to meet him in person. He was a great guy. When I was reading his autobiography, I listened to the music he was talking about on Spotify (that was before Tidal) and that was a great experience. My last concert Big Daddy Wilson, who adds some Soul elements to the Blues and the concert before was Bernhard Allison, son of Luther Allison.

HP: Do you play an instrument yourself?

KHF: Sort off....I do a bit of guitar, but not good enough to be honest. Would love to play more and better, but time is really limited.

HP: Other than engineering and music reproduction, what are your other passions in life?

KHF: I got a few hobbies. Taking photos is one, but not a lot is happening right now as you can imagine. I have a collection of vintage lenses that I adapt to modern Cameras to add character to the shots. Right now, I'm rebuilding a few vintage guitar amps. All tube of course. It's really relaxing to move from my desk to my personal workspace and switch on the soldering iron.



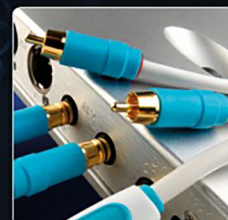
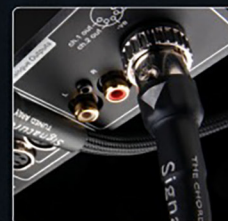
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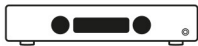
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INTERVIEW

ALFRED VASSILKOV OF ESTELON

Estelon is a high-end loudspeaker manufacturer based in Estonia and this year they are celebrating ten years of creating what they hope are “the world’s best loudspeakers”. HiFi Pig caught up with chief designer and engineer Alfred Vassilkov to ask him a few questions about the brand, their philosophy, and more.

From a young age, and while growing up in the Soviet era, Alfred began dismantling radios and changed and adjusted their components in the hope of improving their sound quality. At university, whilst studying electro-acoustics in St Petersburg, he extended his interest in this field which led him to a Eureka moment back in 2010 whilst, of all things, having breakfast with his family.

Alfred recalls the moment, “It was a lovely Sunday morning having breakfast with my family. I had long held the ambition of creating the world’s best loudspeaker. I knew what the concept would be but instead of selling my idea to a company, I decided to build it on my own. Luckily I already had the best key executives in my family, my daughters Alissa and Kristiina. That same evening we decided to set up

the company.” So, it goes without saying that family Vassilkov isn’t one to let the grass grow under their feet.

He’d been designing speakers for almost three decades and his experiences during this time helped him develop new technologies and materials with which to design and build “unique and innovative” products.

To celebrate their tenth-anniversary Estelon has Developed the Forza Anniversary model that uses technology from the company’s flagship Extreme loudspeaker. The Forza Anniversary is limited in production to a total of 10 pairs and features a combination of Black Pearl Gloss and Gold accents highlighting its curves, whilst the rear connector panel features the signature of Alfred Vassilkov.



INTERVIEW

HP: When did Estelon launch the company, what is the background to Estelon, and how did you initially become interested in audio engineering?

Alfred Vassilkov: As a child, I was a member of a family full of musicians, so it was quite natural for me to listen to a lot of music. I was listening to radio stations a lot and I remember vividly how excited I was when searching for different radio frequencies. This love of music developed my interest in learning how an electrical signal converts into an acoustic signal and this led me to study electroacoustics at St. Petersburg's University. After finishing my studies, I worked in the audio industry for 25 years. In the meantime, I was developing the Estelon concept. One Sunday morning, 10 years ago, I discussed this idea with my family whilst having breakfast and this is when Estelon was born.

HP: You mentioned in passing that it was your aim to create the world's best loudspeaker. Do you think you have achieved this? What are your criteria for "The World's Best Speaker"?"

Alfred Vassilkov: I would say that the world's best speakers are the ones that can reproduce music flawlessly in any given conditions. I always believed that I could design speakers that provide the ultimate performance in every acoustic environment. This was my ultimate goal and it was achieved with the development of the Estelon speakers.

HP: What inspires your designs?

Alfred Vassilkov: I had noticed that the traditionally designed speakers do not perform as well as I always believed a speaker should, or could, perform. This is why I always start designing on a 'blank sheet of paper' without following any previous 'traditional' concepts or ideas. I always have a goal and a clear idea of what I want to achieve, and this method gives me the freedom to do that without copying previous designs.

I would say that the main source of my inspiration is Estonian nature. In my country, we have endless forests and lush nature that always fascinates me and inspires me.

HP: You have spoken in the past about each engineering, design, and materials used decision being made with the final loudspeaker always being in mind. How important is this holistic approach and why?

Alfred Vassilkov: The main idea behind this approach is the actual philosophy of our speakers' design. As a principle, we use the best possible components according to each project that we always treat individually. But this principle proceeds in the combination of all the parameters that are equally important and contribute to the end result. From the crossover networks, the shape of the speaker, the surfaces of the cabinet, to literally everything that is included in the designing process. Lastly, the speaker should 'collaborate' harmoniously with any acoustic environment.

I always like to think of this process and the end result as a majestic performance of an orchestra!

HP: Each of your loudspeakers uses a special marble-based composite material, with other processes that follow. Can you tell Hifi Pig readers a little more about these materials and the process?

Alfred Vassilkov: The material is a proprietary marble-based composite consisting of crushed marble that's turned into a fine powder. This powder is mixed with high-temperature special epoxy to form a liquid composite mixture. The mixture is then injected into the cabinet moulds from where two halves of the cabinet are formed. The two halves are then glued together with special glue. Then the bracing walls and internal separator walls are glued together. The resulting cabinet is, we believe, acoustically superior to other well-known cabinet construction methods. The material is very dense, rigid, and with good internal damping properties, making a perfect enclosure for the transducers and the filter.

HP: Your loudspeakers certainly look very different from the norm. Is this to stand out from the competition or does form follow function?

Alfred Vassilkov: It has been one of the most







important goals for us to create something that does not only sound excellent but also looks great. The unique design of our speakers is the result of relentless engineering. Placing the low bass driver close to the floor with a low crossover point allows extended low-end performance and minimal bass smear. The position of the mid-woofer minimizes the coloration from the cabinet edges and the floor surface, and finally, the tweeter placement provides what we consider to be outstanding imaging and 3D soundstage rendering. The internal construction has no parallel walls, plus almost every surface is curved, for a better spread of the standing waves and also added rigidity. Furthermore, such a form allows the speakers to be more forgiving in non-acoustically treated listening spaces. Lastly, we believe that the form looks unique and fresh.

HP: This year is the tenth anniversary for Estelon. What do you have planned by way of celebration and will you be making any changes to existing lines of loudspeakers?

Alfred Vassilkov: Our 10th anniversary is an important milestone for us. We want to celebrate the 10th year of Estelon by providing an even greater experience to our customers through our products. We have already launched our latest Flagship Series model, the Estelon Forza Anniversary Edition and we have

also announced our upgraded Classic line to Mk II versions. We have developed the second version of our Flagship Extreme, which we think sounds better than ever, and we have many more exciting announcements coming up in 2021! (stay tuned readers!)

HP: Will you be announcing any new or flagship models in this special year? I have heard mention of the very limited and exclusive Forza loudspeaker, indeed we mention it in our introduction to this interview. Can you tell us a little more about this loudspeaker?

Alfred Vassilkov: The Estelon Forza carries the DNA of the Extreme, our ultimate flagship model. The Forza Anniversary Edition is a true collector's item and it is limited in production to a total of 10 pairs. As you understand it is a very exclusive product and it has a unique finish that was achieved through advanced painting technology. It comes in a unique colour combination of Black Gloss and Gold accents highlighting its elegant curves and presenting a truly luxurious finish. Only very few lucky customers will have this unique pair of speakers with the golden Estelon anniversary logo and my signature on the connectors' panel.

HP: Your loudspeakers are clearly very luxurious and exclusive at the moment. Do



you see Estelon ever releasing a less expensive “Diffusion” range at a more affordable price-point?

Alfred Vassilkov: Designing a more affordable speaker that maintains the high-end performance that Estelon is known for, is one of the biggest challenges. Let's see what the future holds!

HP: What do you see the next ten years bringing for the high-end audio industry in general, and for Estelon in particular?

Alfred Vassilkov: One of our main goals is to bring the Estelon speakers and brand to more and more audiophiles and music lovers. We seek to push the boundaries in the audio industry, and we challenge ourselves continuously to improve our products. We attempt to balance traditional high-end values with modern technological achievements.

HP: Do you see Estelon moving into other areas of audio (amps etc), or do you prefer to be masters of one particular field of design...loudspeakers?

Alfred Vassilkov: We will do whatever it takes to fulfil our vision. It is not out of the question for us to bring out a product to accompany our speakers, when such a solution is unavailable,

or when the readily available ones are not up to the task. Our focus is and always will be speakers.

HP: What, personally, is your proudest achievement for Estelon?

Alfred Vassilkov: I could write a long list of awards as my answer to this question, however, what's really important to me, is the acknowledgment of the fact that we are offering more than just a product. We are offering an experience. And this contributes to our biggest achievement which is the 'thank you' letters we receive from our happy customers.

HP: You are clearly passionate about your loudspeaker designs and the pursuit of audio excellence, and this must be an all-consuming task, but how do you relax when you are not working, and what are your other passions?

Alfred Vassilkov: As mentioned above, one of the best things here in Estonia is nature. It not only inspires me, but it also helps me to clear my mind and relax. That's why one of my favourite activities is hiking, either in our forests or near the sea. I also enjoy a lot of swimming and cross-country skiing.

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LEE TAYLOR OF LEEMA ACOUSTICS

Lee Taylor is the founder of Leema Acoustics, the lead designer, and the 'Lee' in Leema.

A BAFTA winner, Lee has had an incredible career in music and audio, and following what is (still) the most valuable of audio educations, sound engineering at The BBC, Lee went on to work on some of the BBC's most popular TV shows including *Casualty*, *Blue Peter* and *Panorama*.

Lee set up Leema Acoustics in 1998 with fellow BBC engineer Mallory Nicholls as a means of further exploring their fanatical interest in audio reproduction. Starting with loudspeakers, the company progressed into electronics, hand-building everything from the Welsh factory. Even its PCBs are made in Wales.

What is your ideal day away from the office and why?

Your question has made me realise I have never worked in an office, not ever! Even now, I work from a desk/workbench in the Leema Acoustics factory in Welshpool, rather than a little white cubicle. Away from work, I love to walk by the sea, which is probably why I now live in a little Welsh seaside town.

My family, three daughters and wife, (she insists on 'wife' by the way, if I say 'partner',

'significant other' or 'Mrs', I get hit by flying objects, which is odd because she has many names for me, most of which question various aspects of my conception/parentage and which you couldn't print), were in a wonderful old French townhouse near Carcassonne, when the sky turned black and the mother of all electrical storms started. We all stood on the balcony getting soaked, watching the free light-show illuminate the mountains in the distance with massive lightning flashes all around us. It was bonkers, really, but utterly captivating and lasted for about two hours.

Ever since then, the perfect day for me is an afternoon walking by the coast, followed by biblical rain and terrifying lightning which takes out the power and the phones. This would be followed by a large scotch and a candle to read



INTERVIEW

by; for someone who works in a technology-led industry, I could happily live without any of it. My daughters remember the Carcassonne storm as a family high point, mostly because they were terrified/excited/screaming, in equal measure.

Best gig you've ever attended and why?

I don't think any one gig could cover this: I've been to hundreds and played quite a few. But I'll try: Alice Cooper, Wembley Arena early 1970s. Pure theatre and he was on top of his game.

Alex Harvey, Hammersmith Odeon, 1975, the week I left school! Hammersmith Palais, 1983, Grandmaster Flash with Melle Mel and the Furious 5 - had to leave when people started shooting at the ceiling.

Rhianna, LOUD tour, The O2 Arena, 2012/13; totally different arrangements, live with a rock-royalty backing band. Fabulous. Also, the loudest gig I have ever been to. I was clearly the oldest person in the audience (by about 40 years!).

John Mayer, The O2 Arena, 2017; a joy from beginning to end. Glad he's dropped the ego/introspective obsession.

Tito Puente and Arturo Sandoval, Ronnie Scott's, 1980-something; distilled happiness and sunshine.

Gil Scott Heron, Bracknell Jazz Festival early 1980s, so cool! Rammstein, Birmingham Ricoh Arena, 2012, more fire than hell. Earth Wind and Fire, Wembley Arena early 1980s; endless groove. Verdine White, the bass player, flew the entire length of the Wembley Arena on a wire (while playing) to hit the stage just as the EWF mothership landed. The world was so much better without health and safety.

Mahler (Second), Royal Albert Hall, late 1990s; heart-rending. Prince. Words fail me.

Artist you would have loved to see but never had the opportunity?

Sister Rosetta Tharpe. Electric rock 'n' roll, blues and rock all started with her. Stunning. Great guitarist, massive voice, wonderful gospel

sound and all in a floral-print dress, fur coat and sensible heels!

Top five tunes of all time and what they mean to you and why.

Focus, Moving Waves album. Guitar solo side two (only vinyl back then). Jan Ackerman is one of the greatest guitarists of all time and made me buy my first electric guitar, a really shit Les Paul copy. I have played guitar ever since; you can never have too many! In fact, my wife just bought me another one for my birthday. Hoorah.

Steve Vai, Passion and Warfare. As a guitarist with a passable level of competence, I heard this album and just thought, "Shoot, might as well give up now." He had a level of ability that, at the time, was truly shocking.

Anything by Martin Taylor (no relation). A British jazz guitarist of indescribable talent: he can play three-part melodies simultaneously, without breaking a sweat.

Christophe Godin in Metal Cartoon and Morgl-be. Crazy French guitarist who was my online teacher for a while. His jazz-funk/progressive rock version of Smoke On The Water is brilliant.

So, I guess you may have spotted a bit of a guitar theme here? So, I will throw in a curve-ball any Disney song written by Alan Menkin. Need the motivation to get on with something? Just play Happy working song from Enchanted. Need a pick-me-up? Try Be our guest from Beauty and the Beast. Need a good cry? I defy anyone to listen to Aerial lose her voice to Ursula, the wicked witch in Poor Unfortunate Souls from I, without a tear. Colours of the Wind from Pocahontas, I could go on, but they are all great recordings, too.

Analogue or Digital and why?

Quite a lengthy subject, this. I don't have the 'normal' HiFi perspective on this because I spent most of my working life in recording studios which has shaped my views.

I think you have to break it down to 'recording technology' and 'delivery technology' and how the introduction of digital technology affected

audio quality as a whole.

So, delivery technology first. I assume you mean vinyl when you say 'analogue' because most domestic tape machines were not very good (OK Janine, I'll give you Revox/Tandberg/TEAC) Commercial tape recordings were iffy and accommodating a lovely, proper lined-up Studer C37 quarter-inch machine running 468 was unlikely for most; though I had one. In silver. Hammerite! Oh, how I miss it.

Vinyl became the delivery format of choice. It was stunningly cheap to make, very profitable, easy to transport, could have nice big colourful covers to divert your attention from how awful much of the music was and made people very rich. However, by the late '70s/early '80s, pressing quality was largely terrible, with the thickness, dimensional stability and cleanliness of disks at a real low point. As a format, it's fragile, noisy, has poor L/R separation, is subject to poor tracking at the extremes, suffers warping and did I mention fragile!

Ironically, turntable technology took a leap forward with the availability of Rega/Linn/Lenco/Garrard decks that could actually rotate at a constant speed and could track a low-compliance cartridge properly, just as the physical format turned to doo-doo.

Enter the CD. It suffered none of the foibles of vinyl, didn't scratch if you coughed, you could finish a four-pack/bottle of plonk before you had to get up and change the disk, it had mega channel separation, perfect frequency response/phase-linearity, and was laboratory-perfect; we were all very excited, but they sounded sort of harsh and nasty! A view that has perpetuated.

What was wrong? Well, several things, actually. Firstly, in the early days, most albums were issued on CD from masters that had been destined for vinyl release, so the bass was rolled-off, dynamics reduced etc. When re-played from CD, their true horror became apparent, hence the 'remaster' craze.

More importantly, the early DAC chips were poor in many ways. Specifically, the anti-aliasing filters tended to ring or sympathetically oscillate horribly, producing audible but non-mu-

sic-related artefacts in the audio band.

However, like vinyl, the latest CD players suffer none of these problems and are capable of fabulous sound (with the right recordings, see below) just as, once again, the CD format is disappearing. History sadly repeats itself, which brings me on to:

Acquisition (recording) technology.

Disregarding direct acoustic techniques from the very early days, (which by the way, with modern playback equipment can sound amazing), the majority of recording over the last 80 or so years has been with magnetic media: firstly wire recording - I believe it's the longest-running recording technology - from the late 1800s right up to the late 1960s, the quality was not great, but very long recording times, over an hour!

These were eventually replaced by magnetic tape machines, which were very expensive but much better quality, so were immediately adopted for commercial recording. Throughout the '40s and '50s, the quality of tape improved enormously, thanks to innovations by BASF in Europe and AMPEX in the US, which largely ushered in the HiFi era. Various additions were included through the late '70s until the '90s: DBX/Dolby A/Dolby SR noise-reduction etc., but the basic concept was just the same.

So, by the early '90s, we had the basic recording technology to make breath-taking recordings, but once again, we threw it all out for the lure of digital perfection. Beautiful 24-track machines were scrapped by the hundreds and replaced with digital workstations and computers because they were cheap, offered perfect recordings (yeah, right), and needed no maintenance or real engineering knowledge.

Simultaneously, we had entered the age of the bean-counters whose only concerns were costs. Digital technology meant studios (and broadcasters) could lose engineers/maintenance staff by the truckload and vastly reduce electricity consumption, so the survivors of this cull were forced to go digital.

Mega-expensive bespoke systems from AMS/Fairlight etc. were adopted by the elite but the majority of commercial studios adopted Pro

Tools (AVID Audio back then).

The concept was fine, but the analogue-to-digital converters which were recommended by Pro Tools (which everybody used) were absolutely hideous: they had a very distinct sonic signature which in essence, turned everything to mush.

So, for a while in the mid '80s to mid- '90s, there was a bit of a perfect storm (a bit like Carcassonne): recording quality went downhill. The delivery format was compromised and the engineers who knew what they were doing moved on and became builders or, in my case, fitted kitchens for a while. Later, I started an audio company!

At the time, people hunted-out albums that were recorded on analogue tape because they reputedly sounded better. Well, folks, I have news for you: between recording and distribution is a little process called 'Mastering' (I could write plenty about that).

Many mastering engineers took fabulous two-track analogue masters and loaded them into Pro Tools to cut them up/tweak/order the tracks/add gaps/metadata etc. To make things worse, the majority of digital systems at that time ran at 48kHz, due to various reasons but mostly because they were descended from video standards, so the final assembled master was copied to a DAT tape for delivery either at 48kHz, leaving the glass mastering house to do the conversion to 44.1kHz or the assembled master was converted back to analogue and played into a DAT machine that could record at 44.1kHz natively (not many did at that time). Sadly, even the best recordings ended up going through multiple conversion processes before the final stages.

Perversely, many albums (recorded digitally) from that time, do sound better on vinyl, simply because the analogue process seems to suppress many of the digital nasties which are often prevalent at very high frequencies. Peoples' near-religious mantra that 'vinyl is best' does have some credence, but only because the recordings are filtered via an inferior medium. Wow, HiFi Pig are going to need a bigger inbox!

So, to sum up, it's a meaningless comparison because either can be very good or very bad, however, it is generally far more expensive to get stellar audio from vinyl than it is from digital sources, plus modern digital equipment and techniques are capable of recording quality technically superior to analogue, however, to be clear, if I were recording a session today and could choose any equipment I wanted it would be an Otari MTR90 24-track (or two) running at 30-inches-per-second with no noise reduction, an early '80s Neve mixing desk, steel-plate reverbs, Neumann u87/AKG HD414/Beyer M160/Coles 4038 microphones and ATC monitoring. Heaven.

Finally, I just want to make a quick additional but important point: as much as I have discussed the technological aspect of all this, I would like to say that good recordings are made by well-trained and experienced engineers who know what they are doing, not by the technology. Years of experience, knowledge of microphones, correct positioning, studio craft etc. are far more important than the equipment and no audio engineers were better trained or more capable than those who went through the BBC training machine from the '50s until the late '80s. Wherever you are now, I salute you all.

You have the opportunity to dine with one person (living or dead), who would this be and why?

My Dad, who loved music and spent a lot of time building a terrific system which has been my gold standard ever since. We had stacked Quad electrostatics ('57s) actively crossed over with a Tractrix subwoofer built under the floor. Massive dynamics and imaging. We lived in a terraced ex-council house in East London; we were very popular with the neighbours! He was a member of Mensa but resigned because he thought they were all stupid! If he was still alive, he would love what we do here at Leema and would probably be involved. Even now I sometimes think of ideas which would be great to talk to him about.

You're choosing the food, what would be on the menu?

I have been a Pescatarian for 40 years and



increasingly, I find that the 'Posca' bit is shrinking. Oddly, I have never liked the taste of meat, even as a child. So, most likely, I would go for a really good Vegetable Pathia, Nepalese- or Ghurkha-style, with all the trimmings and a bottle of Indian Champagne (oops, not allowed to say that) Indian Methode Traditionnelle which is a magic combination - bubbles and burn, if you haven't tried it, you must. But it will change your life.

What's your tippie?

Really nasty, peaty Scotch. Laphroag as a minimum. Caol Ila preferred. Talisker as an everyday drinker, if I had to you understand.

Favourite book and why?

Another difficult one because I am a prolific reader and have worn out two Kindles! Skalla-grigg by William Horwood should be compulsory reading and deals with a number of issues surrounding disability. It is made all the more poignant because the story is inspired by the author's own daughter.

Also, The White Hotel by D.M. Thomas. It involves a Holocaust survivor retelling her story to a psychiatrist but goes right off track in ways you will not easily forget.

Name a film you can watch time and time again.

Les Vacances de M. Hulot, Jacques Tati at his absolute best: no dialogue, gentle observed comedy, black and white, enchanting and a France that is a still (just) in La Belle Epoque, clearly the inspiration for the far less subtle (and funny) Mr Bean.

If you weren't working in the HiFi industry what would your dream job have been?

I would be a rock star and I very nearly was! But, I would definitely be dead now having gone out in a haze of drugs, alcohol and excess.

What will your epitaph say?

I am with Andrew Carnegie: 'The man that dies rich dies disgraced'. He was the equivalent of a multi-billionaire in the late 1800s and was America's richest man at the time, but he gave it all away in his last 20 years. He built Carnegie Hall in New York, dozens of other civic buildings plus over 3,000 libraries around the world. Tragically, so few of today's super-rich want to give it back. It should be made compulsory for the super-rich that 90% goes back to society. For my part, probably something like, 'Was that it?'



MATT McNULTY

Matt McNulty is well known for his refurbishing work on the classic Townshend Rock turntables and has moved into re-bodying car-tridges. Stuart Smith has a chat with him.

INTERVIEW

H P: You are well known on the British Audio scene for your work in taking old Townshend Rock turntables and completely renovating them, how did this come about?

MM: That's a bit of a long-winded answer I'm afraid, as it's been nearly 25 years, that story. I guess the first thing I should say is that I'm a massive fan of all turntables, especially the Rocks in all their forms - and I love the mechanics and the interaction you get from using records and turntables. I got my first Rock II in 1987 (bought with my first grant cheque at uni! (shhhh!!)). Later, (00's), after owning several more Rocks, a Voyd and then realising my dream of obtaining a Rock Reference with Excalibur I realised that I was paying a fortune to have it set up every time I wanted to change something and actually

it was coming back worse in some cases. Being an engineer I decided to take the thing apart completely and rebuild it as it was getting long in the tooth.

Again later, troubled (financial) times hit and so I had to sell both the Rock Reference AND a reasonably recently acquired Avid Acutus/SME V (which went first). This was around the time when vinyl was really dying and I realised the skills were getting very scarce, regarding the ability to set up TT's, so I started offering a volunteered service for petrol money where I'd assist people who had vinyl system problems due to set-up. I'd invested in a lot of set-up tools by then so I'd go to their house, set their system up and come away, them happy that their system was performing as it should be. I did this for about 10 years, and still do it if some-



one needs help...so, in exchange for the RR I took in a Rock II. It needed lots of work and my experience with these decks (I think I'd had 3 by then) told me they were of 'intermittent quality, (let's just call it) in terms of their fit, finish and overall looks!! I restored several of them to the standard black finish (we're still in the time here where all HiFi components were black, here!) I knew, of course, they were inherently great-sounding decks (and a bargain for the money). Side note: I've always maintained they are a bargain, especially today, but by the same token I do acknowledge they are not the best deck out there - Townshend's newer/later Rocks take that accolade along with many others in this TT heyday. However, nothing comes close at the price you can buy them for, in my opinion, if you get a good one, properly set up.

OK, so only about 3 or 4 years ago I started buying up the decks because they were so cheap and vinyl had again started to boom (understatement of the year - it hadn't ever stopped for me!) Whenever friends said they were looking for a deck I'd show them one, and invariably it was the best thing they'd heard, both non-audio people and seasoned audio

people love it when they hear it - there's a lot of scare stories around the use of a rock, mostly ill-conceived and untrue! Of course, operationally they work exceedingly well, but they do look bland, so I painted one in Escort RS Cosworth Blue (I have contacts from my other hobby to do with old VW's in the paint business - in fact my brother is a painter). As you will know, given the Internet nowadays, a few posts and it kind of snowballed a little from there. This culminated in my being given the ultimate honour of having the Blue deck shown on the Townshend stand at the Bristol HiFi show just this year, to great praise - I think everybody who saw it really liked the concours level paint job! Thanks, Jamie!!

To me, Max is the closest you can get to an audio God so it really was an honour for me that he and the whole Townshend family had embraced what I was doing to keep their legacy TT's alive and well. I really do have to thank them for their support, especially Harriet as many companies would have cried sacrilege and not wanted to help someone in my position. It's Max's design after all, not mine...he's the genius, not me. So all due praise goes out to the whole Townshend family. Such lovely peo-



ple. Thanks, Townshend for your support, and for welcoming not just me, but my wife Sarah, into the fold!

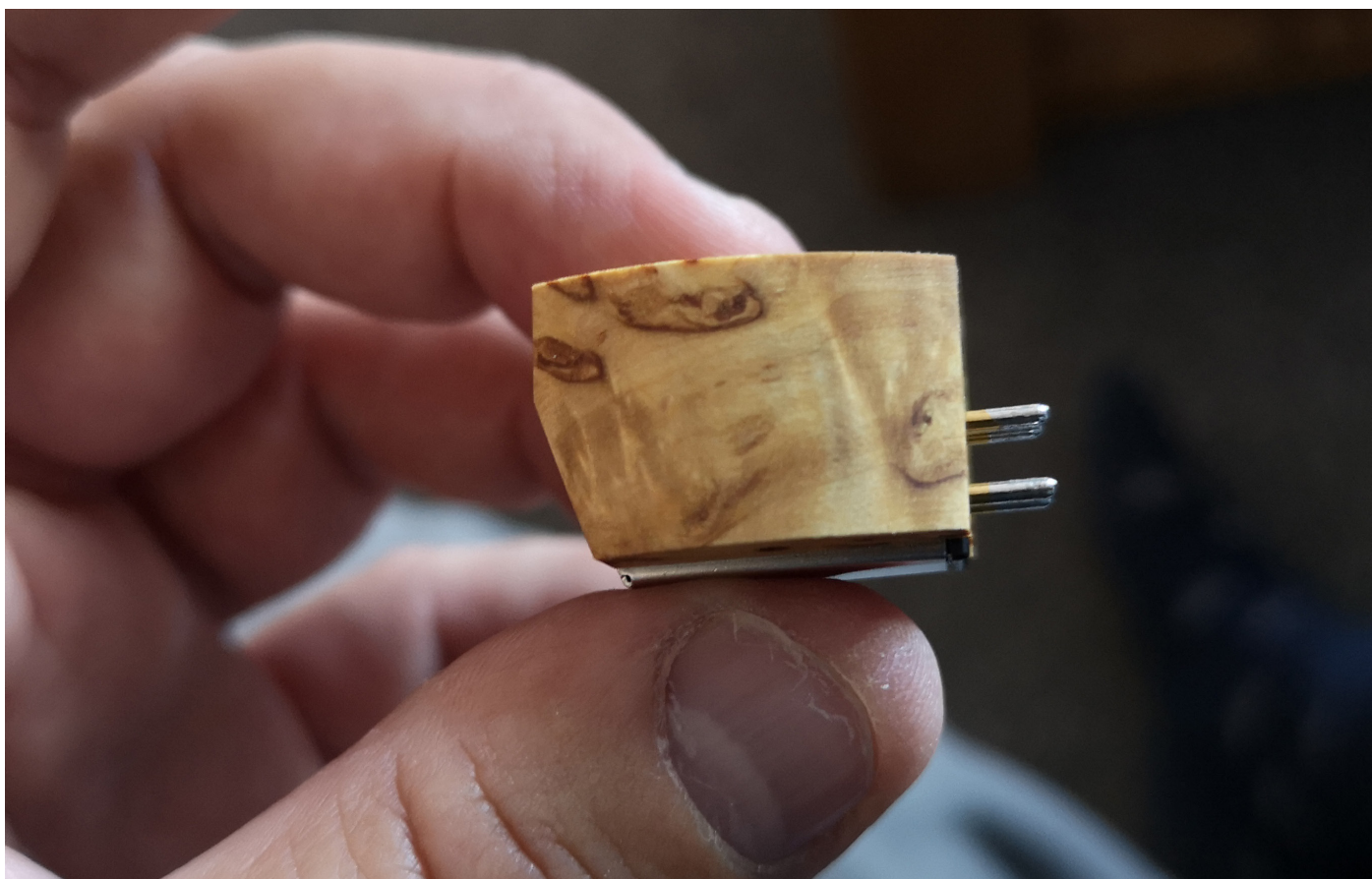
HP: What does the process of renovating a Rock involve and are you improving on the original design?

MM: It can be tailored to what people want, but essentially, when I do them for myself (mostly!) It's a full rebuild, which involves: Complete strip-down, prep and paint the plinth to concours standards, in very high-quality automotive paint. Prep and paint the armboard, trough, trough pillar and repair/paint platter (often they're cracked). Refurbish and re-lap the bearing and use a new ball, either standard or I can use a ruby or ceramic ball. Sometimes this involves refinishing the shaft as well. I have had to (twice only), reset the bearing in the plinth. Once because I had to take it out to fix a bent shaft (don't ask!) and once because I bought a parts deck that had been dropped and badly damaged. I recondition the small PSU board with new components and new PSU lead where necessary. New improved motor. New Belt, new trough, fluid, new bearing oil, new double outrig-

ger headshell kit (if required). I rewire/rebuild the tonearm - I generally use Missing Link Cryo pure silver wire as it gives great insight and I respect Mark Sears greatly as both a friend and an engineer. I use a mixture of both his and Townshends in my own system.

HP: What do you think is so special about the Townshend Rock turntable?

MM: For me, it's the fact that it can attain such a high level of reproduction for such a small price with the Rock II's. However, its sound quality (the Rock family of TT's, that is) is unique amongst TT's – it's not for everyone and those looking for that so-called excess vinyl warmth are best suited to look elsewhere.. Rocks are, and always have been, about faithfulness to the master tape - clean, crisp, detailed and solid sounding. Due to the trough and its inherent advantages, bass is much more tightly controlled but deep and not in any way 'woolly'. Because of the headshell-end damping effects of the trough, it's also a great arm-leveller. You can use a budget arm on a Rock and it will sound great. You can move to an esoteric arm, and it will just step up to the next level I find. Of



course, the Excalibur arm that was designed for it, I love and for me it is a fantastic arm if you can find one (not easy!), But also one of the best arms for the decks as you'd expect, especially when silver wired!! Surface noise is also lowered by using the trough, many people report, with that 'black background' all audio-philosophers crave!

HP: How many of the Rocks have you renovated and what is a typical cost for one of yours?

MM: How many total customisations, with full paint jobs in custom colours, only 4, (as I only started doing it last year) but many many more than that to standard 'black' renovation level. I differentiate because the options are limited only by my time (this is my hobby, not a business), the customer's requirements and budget - to me, this is more about keeping people enjoying their decks, and keeping them alive. I make little to no money on any. It would be a loss leader if I had to.

Each full customisation and complete renovation takes about 35-40 hours of work... But some choose, for instance, not to have a new motor, or rebuilt PSU, on the grounds that

they've worked for 30 years so don't try to fix something that isn't broken and of course, cost! Some just want a service, or a set-up, or an arm rewire or re-tagging, or a belt service, etc. so it's difficult to say how much - There really is no typical cost - I try to work to people's budgets - if they're honest with me, I'll tell them if they're realistic or not. I point out there are options such as used arms, to keep costs down and give them many options on cartridges - as I'm not a business though, I don't get anything trade price, so I generally point them in the best direction for their given budget - I guess what I offer is free guidance, if you like, in some respects, as I know what works after all this time playing with them.

I've had 19 Elite Rock II's through my own hands now, but that's me owning 19, and renovating them for myself! I like to keep these things alive!! I can't stop myself!! I've lost count in total, although I now totally document any full renovations I do, but for the customer's sake, not mine...

HP: At the Bristol Show in February you exhibited some very colourful plinths on the rocks, what's the most bizarre/strange colour request you have had and which is your

favourite?

MM: Well so far the two strangest, although Covid has held me back a little and it hasn't happened yet – I've had to postpone it, are Porsche Peppermint green (to match the guy's peppermint green 911 GT3) and some guy who wants a bright pig pink one! (Ed - Who could that be?)

HP: I recently found out that as well as renovating Rocks you also upgrade cartridges. Can you tell readers a little more about this; what cartridges you use, what you do to the bog-standard cartridge, and how you think your modifications improve on the originals?

MM: Firstly, this came about because of necessity. I was doing some Rock II's for 2 (unrelated) people that had both limited budget and limited turntable use experience. So basically on discussion, we agreed that to limit costs (and the first user snapped stylus syndrome) we'd stick to a budget MM cartridge. I suggested Audio Technica, because not only are styli easy to replace, but you can also very easily upgrade them to the next level up, right from a cheap elliptical stylus to a Shibata stylus. They also sound great for the money in all of their forms, which is the point if you're shelling out on the deck.

In the meantime, I'd discovered that various other companies sell a re-bodied version of the AT series of cartridges in various forms so I looked into those... which got me thinking. So I researched and now I have bodies made and re-body the generator basically. I do use some proprietary damping for compliance-related means and special adhesive to affix the generators into the body, but I can't give much away on that front!!

The two that are on the Rocks I used as a trial run so I just paid for everything out of my own pockets as an experiment and just to give that something a little extra special and unique again. That's where it started. Again, it's not really anything rocket science and I'm no genius, tbh.

HP: Would you ever like to move into im-

proving more esoteric cartridges, or indeed creating your own cartridge design from scratch?

MM: I just like playing, to be honest, and it's just again to help people out with alternatives to the mass market - Although the bodies are beautiful, I'm no genius, so don't worry, Koetsu, you ain't going out of business yet!!! I do have a Denon DL103R that I'm playing with at the moment so I guess we'll see. But I very much doubt it, especially as I like my Kiseki's, Koetsu's and Dynavectors too much to want to start being any kind of competition to them...and I prefer playing with my TT's. That said, if someone is willing to trust me, then I'll have a go at most things, so never say never I guess, but mostly the money's not there to fund that level of pursuit for me...

HP: You are clearly in the analogue camp with regards to music playback, what do you think the benefits of analogue playback are over and above digital playback?

MM: Haha, this question again!!! I genuinely do think that analogue playback sounds more real and digital more artificial. I've owned a few high end CD players in my time and all got sold because they ended up sitting idle (that's a silly plan when you have a Krell worth half the cost of your house just sitting there!!). I know digital audio has many advantages both theoretical and actual, but one of them actually really doesn't bother me at all, and it's the main one - convenience - I still use no remote controls in my system! I love the tactility and mechanics of putting on a record and the ritual of using the Rocks especially, with their extra effort of using the clamp and putting the trough in place (hardly!). I think a lot of it for me is merely the fact that the covers are more detailed as they're larger, obviously! The other thing is that I'm so invested in vinyl replay now (I own best part of 4000 plus records and, at last count 7 record players in the living room, 1 in the hall, 1 with a friend and another upstairs!!) that going to another medium would be stupid. I also spend my whole working life having grief from computer-based products, so I do not want one of those to spoil my listening pleasure!!! Hence no CD player, no streamers, etc...in our house.



HP: What are your five most treasured records and why?

MM: Easy!

1- Gary Numan - The Pleasure Principle - Because it was the first album I ever bought, (well my mum bought it for me) aged 7. I still play THAT copy of it all the time and got it signed by Gary Numan last year when I met him - he was very humbled that it was my fave record of all time. The irony is she bought the WRONG record... I wanted Replicas for Are Friends Electric?! Still, Cars hit the charts and the rest is history!

2 - The Chameleons - Script of the Bridge. Again I've loved the Chameleons since day one of their careers. The epitome of indie music for me and the first wave of 'proper' Manchester bands along with the likes of Joy Division.

3 -Tool - Lateralus. Just outstanding musicianship, writing and energy, all in perfect synchronisation. Prog metal at its best, along with fantastic mosh and stomp potential!

4 - Yello - Baby. It's just genius production and fantastically weird, like all Yello's stuff!

5 - Porcupine Tree - Fear of a Blank Planet. The epitome of Prog, again, with fantastic song-writing great songs and even better musicianship. 5 is nowhere near enough. There should be some Floyd, Ozrics, NIN, Hallucinogen, Astral Projection, Dire Straits, Butthole Surfers, Fugazi, Tori Amos, Nirvana, Mazzy Star, PIL, Marillion, The Prodigy, and all manner of other amazing music in that list, but you said 5, right!!! I like everything from Punk to pop to classical, to Techno to Goa Trance to ambient. The only two I struggle with tbh, are Opera and Jazz - it's far too pretentious in places for me... But I'll give most things a go!!

HP: Outside of audio what are your other passions?

MM: Classic cars, mainly vintage and classic Era VW's but I've owned all sorts, my fave outside of VW's being Alfa Romeo 2000 and 1750 GTV 105 series Bertones, a Lotus Elan Plus 2S and early 70's Aston DBS V8. I like most oldies though, with a bit of character.



INTERVIEW

MUSICAL JOURNEYS WITH COLIN PRATT

Colin Pratt is the sales director and all-round good egg at Chord Electronics. We chat with him about the music that moves him and how he developed his taste in tunes.

H P: Was music a big part of your early life? Was there music in the home? If so, what kind of music were you exposed to in your pre-teen years?

CP: My Mum and Dad were always listening to music, or so my memory tells me, it was a while ago! Classical music for the most part, particularly Choral music, but Led Zep II, Jethro Tull "Stand Up" and Deep Purple's first album stand out.

One album, in particular, that makes me smile, Gryphon "Midnight Mushrumps", I loved that and actually every now and again still play, I even squeezed that one in at Munich a couple of years back!

HP: When did you start to develop a deep interest in music and why?

CP: From a very early age, I remember me n a mate would finish our day at primary school and run to his house, pull an old Dancette turntable out from under his elder brothers' bed, stack up a load of 7" records and play them till either his Dad or brother came home and I would jump out of his window and head home.

I was introduced to The Who, The Beatles, Hendrix etc but then I discovered Madness and The Specials, that was it! I was a 7 or 8 year-old Mod! I used to draw the Two Tone man all the time!

I remember when I was about ten my friend recorded Thriller onto cassette for me, I knew every word, on the other side was Scot Joplins Piano Rags, so I was listening to different styles and genres from an early age!

MUSICAL JOURNEYS

HP: How would you describe your musical taste and what has shaped it?

CP: I remember a few years later, early secondary school, I guess I still thought I was still a Mod. A compilation album called "Masters Of Metal" was advertised on TV, I heard short blasts of Iron Maiden, Motorhead and Accept and I just had to own it, it sounded so exciting! I bought it with my brother, we paid £2.50 each and then argued as to when each other could have it! From that point on I just needed music in my life! I got two paper rounds, that allowed me one LP a week, every Saturday morning I was in my local independent record store in Malvern, Counterpoint with £6 in hand, what can I buy!?

My older brother started to get into thrash metal and punk, I remember seeing the Sid n Nancy poster on his wall, you know, the one where Sid had carved Nancy into his chest, it was so provocative, dangerous even, then I needed to branch out from "metal" and I just started consuming any style, any genre.

I remember when my Mum and Dad said it was time for me to get my own stereo, I had to stop buying music while I saved up, that was really tough! My taste has become so eclectic, most people who know me pigeon hole me as a pure rocker or metalhead, I love all that, Ministry, Slayer, Death, Obituary, AC/DC but I also love classical, I mean, listen to Du Pre playing Elgar, it just makes me choke up.

When I was about 16 or 17 I was listening to heavier and heavier stuff when one day I heard heavy and electronic mixed together, I just stopped in my tracks, that was Nine Inch Nails, probably 1990, that helped me really branch out and discover new styles or genres. If I got into a band then I wanted to know who inspired them, who did they listen to growing up and then off I would go buying into the artist's history. Nine Inch Nails really kick-started that because most heavy bands are influenced by other heavy bands, NIN were different, their influences were wild and varied.

The industrial scene and post new romantic was really cool. So now I have a deep love for electronic music, I also really like folk, alterna-

tive, Goth, Hardcore, punk, Hip Hop, there is music I like and music I don't, it's very simple for me. I have a close group of mates and we are always introducing each other to something different.

My son introduced me to the current Grime scene, at first, I was a proper Dad, don't like it, just noise blah blah but then I started actually "hearing" it, I went to a couple of gigs, you know, Dad at the back, nodding my head. I went to a Bugzy Malone gig and I was blown away, the energy was incredible, it's today's Punk for the kids, disaffected youths angry at the system. Basically, in a rambling way, all I say now is I love music, I just can't define my tastes.

HP: Before the current "situation" with Covid-19, did you go to gigs and how important is live music to you?

CP: Massively! It's my favourite night out, I have a couple of "gig buddies" who come along, kind of which mate fits which rough genre, it often involves pre-gig chicken wings or burgers then copious amounts of beer and rum and much laughter. The band starts and that's it, straight down the front, I turn into a big kid!

I can't stand how some so-called music fans in our industry poo poo live music, "but its amplified" "it's a PA" "the acoustics will be rubbish" get over your selves!

HP: Best gig ever and why?

CP: I can't name one, there have been so many, and each for different reasons, so I will just have to list some of them:

David Bowie: Earthling tour...because it was Bowie, I still get goose bumps thinking of that one!

Nine Inch Nails, The Fragility Tour at Brixton Academy...just wow, it was like the dawning of a new era of artist, I think they are one of the most important acts in modern times! •Watching Patti Smith rehearse in a tent, there was only about 15 of us there, I was speechless, choked up in fact and then to actually meet her after was just incredible. She is such a kind warm human.

Fields of The Nephilim with our head of Pro,

MUSICAL JOURNEYS



Tom Vaughan, we laughed, danced and drank, simply one of the most fun nights out ever! Any Ministry gig half a dozen beers and a pint of rum!

Goldfrapp Tales Of Us show with the LCO at Royal Albert Hall, that one brought a lump to my throat, visually and sonically it was incredible!

HP: Have you ever walked out of a gig? If so, which one?

CP: Only once, The Mission, I never liked them, I had gone to the gig because I loved the support act. I did try and stay out of politeness, but three songs in I figured I wasn't going to be won over!

HP: List your top five albums and a little about why you chose them.

CP: These kinds of questions are so tough! I could list albums that should be in the top

MUSICAL JOURNEYS

five all day long! I feel almost rude for omitting some! I think I probably have twenty top fives!

Nine Inch Nails "The Fragile", an amazing album, I still hear different elements, sounds, noises in this whenever it gets played, I genuinely think it is the modern equivalent of The Wall, actually better!

Pink Floyd "The Wall" I never understood this album on vinyl, the turning over, constant breaks in the music, I was just a fan of individual tracks. When I got into CD it then made more sense, but I still preferred one disc to the other. When I could finally play it as a single piece from the hard drive, then it made sense, a total masterpiece. I am definitely both feet in the Roger Waters camp!

Fields Of The Nephilim "The Nephilim" Bought based on a review, I had never heard of them before, I was intrigued by the comment "he with the voice several levels lower than gravel" I just fell in love with it, the last three tracks Celebration, Love Under Will and Last Exit For The Lost are some of the finest segues and tracks ever committed! One of my most played albums ever •Bad Brains "The Quickness" Wow, Bad Brains rocked my world! This album is often my "I need a fix" album, turn it up and get blasted, their mix of reggae and hard core, sublime! I was sold after the first drum lick, love em!

Goldfrapp "Felt Mountain" I remember when I first heard this and where I was, I genuinely stopped, turned around, said "what's this?" Then went straight out and bought it. Alison Goldfrapp is a fantastic artist, this is a true genre-defying album.

HP: Let's narrow it down to individual tune; list your top five tunes, not necessarily from your top five albums and why you chose them.

CP: I really couldn't say top five, they constantly change, just like the albums, but here is a quick blast, there are so many more!

Ministry: "Burning Inside" Watch Ministry in concert playing this tune and you will either get why this is here... or not!

Patti Smith: "Elegie" Horses is one of my fa-

vourite albums and this is the stand out track. Fields of the Nephilim: "Last Exit For The Lost" The slow builder, it grows from a really sombre lament into an almost operatic crescendo, probably my favourite live tune ever!

Louis Armstrong: "We Have All The Time In The World" Just sublime, I have to stop and listen to it whenever it comes on.

Martha And The Muffins: "Echo Beach" A song from the past, growing up, it just stuck with me, a great pop song, it's like school is over, it's summer time!

Ray Charles "Georgia on my Mind" As soon as his voice half cracks on the first utterance of Georgia I was sold. If you know the history of Ray Charles and the significance of this track you cannot fail to be moved. I love Ray Charles music so much.

HP: Choose one "feel good" record that gets you on a dancefloor or in a mosh pit.

CP: To get me on the dancefloor it has to be either Ska or heavy and it has to be a gig and I have to be drunk, I am the worst Dad dancer in the world! So not really one tune, it just needs to be "that vibe"

HP: I always find this question nigh on impossible to answer, but I will ask it anyway. Which band or artist is your all-time favourite and why?

CP: I was thinking Bowie, the day he died really got to me, such an incredible artist, so versatile, happy to change and morph as he wished, but then thinking about it, I guess I would probably have to finally choose Nine Inch Nails, their music was so important to me through those years when you absolutely obsessed over music, listening to each note, sound, ambient noise, when you tried to decipher all the lyrics. I still play their music now and still love them, I just choose an era depending on the mood. Trent Reznor is simply a genius.

HP: What music did you have played to get married to: first dance?

CP: My wife walked down the aisle to The Bea-

MUSICAL JOURNEYS

bles "Here Comes the Sun" and we danced to "Stand By Me" Ben E King, we had heard that the first dance feels like it takes forever, so we picked the shortest track we both liked! We just wanted to get to the beer and then party by that point!

HP: What do you think of the current popular music scene?

CP: Love it! I think there are some incredible artists out there, you just find it in different ways to when we were younger. The Grime scene in particular is so exciting, as I mentioned earlier I was introduced to some new stuff by my son, Bugzy Malone is one artist, Litle Simz is also brilliant, I would recommend her albums to anyone, there really is some incredible stuff out there, also Jehnnny Beth solo stuff plus Savages, I mean come on, amazing!

HP: What do you see as being the future of recorded music? Do you think we are heading to everything being online over physical media? How do you see bands prospering from their music? Three questions but all connected, I think.

CP: Tough one, exposure is so difficult, I think different forms of social media and platforms like SoundCloud etc will become the norm. I see bands experimenting with their own websites etc, we have a lad at work who's band is just breaking and it is amazing how hard they are working at the moment for so little reward. I do think physical media will go, the masses are demanding everything be streamed or cloud based, which is a shame, but that is progress. I watched Nine Inch Nails experiment with this, he released four E.P.s rather than albums, I think that is the way it will go. Artists will end up making songs or they will be mini featurettes, maybe.

The good thing now is you can at least listen to a sample of new stuff, in the old days you trusted one person's opinion and if that reviewer had a bone to pick or inevitably had delusions of grandeur the artist would not get a fair review. I always remember a rock magazine reviewing Guns N Roses Appetite for Destruction, they were classed as a second rate Aerosmith, then when GnR got popular they were heralded as

the second coming of the Stones!

I do hope that touring or at the least gigs and merchandise will still be a source of income, I still feel live music is so important.

HP: There was a time when we'd see the likes of Motorhead in the charts and on Top Of The Pops, why do you think that has changed and all we seem to be exposed to on the telly is what I would describe as flaccid pop?

CP: Honestly, I don't think this has changed as much as we think it has, firstly charts are nowhere near as important now, in fact isn't it just playlists? There has always been what you call flaccid pop, a lot of bubblegum pop, but let's face it, if that was popular, then who are we to question it?

Because we like music that is more leftfield shall we say, there is an ever present feeling we are right and the masses are wrong and somehow we must educate them in the error of their listening habits, we must show them how to listen to "real music" which in its own way is still just a form of musical snobbery. I really don't mind if people wanna buy or just invest time in acts that will come and go, it makes some happy and they still like and have an interest in music.

HP: Vinyl, CD, or streaming?

CP: Kind of CD and streaming, I still buy music on cd, I then rip it or I buy downloads but I try and buy them direct from the artists site then stream from my server hard drive, I use streaming services to discover new music. I walked away from vinyl years ago, I was ok with the sound, but the faff of ownership, cleaning them, clicks and pops eugh, no thanks!

HP: Choose three tunes to have played at your funeral.

CP: Haha, these all depends on who goes first! If I go before my wife these will get vetoed! Fields of the Nephilim "Last Exit For The Lost" and then probably "Bike" by Pink Floyd, just for a chuckle!

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WILL BINKS PUNK PHOTOGRAPHY

Will Binks is based in the North East of England and has been chronicling the regions vibrant punk music scene for a number of years through his photographs which capture the heart and soul of the scene.

INTERVIEW

H P: How did you get into photography in general and more specifically documenting the punk scene of the North East Of England?

WB: I don't think I can pinpoint it to one individual reason if I'm honest. My late Father had what I'd call 'ordinary' cameras during the 60's, 70's & 80's as he documented myself, my two younger brothers and sister as we grew up into adulthood. I'm pretty sure that left an impression and fascination with me. It wasn't until 1984 when I asked if I could get a camera for Christmas. I was 18 by this time. My parents took me to Alan Brown's Photography Shop in Frederick Street in South Shields where Alan advised me on what camera and flash would be best to get me off the ground. It was a Pentax though I can't recall what exact model it was. Although

the results where superior to compact cameras I found myself in a bit of a quandary. I was attending gigs at places like The Station in Gateshead and The Bunker in Sunderland very frequently during this period and being at that age I was enjoying drinking, socialising and hanging out with mates. It soon became obvious to me that not only was photography an expensive hobby but carrying around bulky equipment was a pain in the backside too. Films, batteries and developing wasn't cheap by any stretch of the imagination. Here I was in 1985 two years before I started my first "real" employment and I was getting by on my part-time Community Programme wages. I ended up only using The Pentax very sparingly. I did a photoshoot with my mates The Fiend around Laygate, The Funfair and Marine Park which was great but music-wise I didn't do a lot else.





I found myself taking my parents Disc Camera out with me to gigs on account of its compactness and relative less financial burden to use but in hindsight, I gotta say, the results were very poor indeed. I kept The Pentax up until 1989 before selling it. It's a regret that I didn't explore it more or use it enough and perhaps I should've kept hold of it. As they say, you live and you learn!

After that, I had a host of compact cameras up until when my daughter was born in 2007 I purchased my first digital camera, an Olympus 740. This was still a 'point & click' camera but it served me so well as I began to gain a deeper interest and thirst for chronicling gigs. I always enjoyed documenting gigs by listing those I attended, keeping tickets or posters but I can't think of anything better than looking back on good quality photographs of those great performances by the bands I love and appreciate. Using the Olympus 740 was fun but it always left me wanting more. I had lusted after a camera with a lens to make the next step up but for a long time, the finances were never quite right. Eventually, at the beginning of 2013, following a windfall, I decided I would seek out advice and purchase myself a camera, a Nikon D3200. I owe a big thanks to Gav Burn who I asked for direction and guidance. The D3200 is a perfect

entry-level camera for a beginner like myself but offers so much more too! Also, I need to say many thanks to my friend and work colleague Jim Ryan who has also been too kind with the amount of information, help and instruction and even his generosity in giving me some of his surplus equipment. I owe a lot of appreciation to these two lads!

HP: The scene in the North East seems to be thriving, why do you think that is?

WB: The scene up here has always had peaks and troughs, of course. Lately, there has been a steady rise with a glut of new and old bands recording and playing regularly. We're lucky with some great venues too. The Black Bull in Gateshead, Trillians in Newcastle, The Museum Vaults in Sunderland to name just a few. Why do I think this is? Hmm, If only I knew haha! Perhaps a combination of a lot of things. I'm just grateful and feel fortunate I can document such a healthy Punk Rock Scene.

HP: Your Images are full of energy and excitement; how do you go about capturing the perfect shot?

WB: Thanks! Just simple things, really. For instance, if I'm capturing a vocalist I try to make





INTERVIEW

sure I wait until they're just about to finish a line or chorus where they're emphasizing the words and their facial expression contorts.

HP: When you go to a gig to take photographs what's on your bag?

WB: 6+ years on and I'm still using the same D3200 so that's a given to be first in my bag. I usually use a couple of lenses, a bounce flash and spare batteries.

HP: Do you still get as into the atmosphere of gigs or do you find you are more focused on getting the images?

WB: A great question. Photography, unfortunately, isn't my job. I attend shows by bands I enjoy. Yes, I wanna get some great photos but I also want to meet up with friends, enjoy a drink and not detach myself from socializing. It can be difficult to balance the two. After all, I'm there to enjoy the live experience first and foremost. Sometimes, I feel my attention is solely on getting "that shot" so I see a lot of bands literally through a lens.

HP: What's your favourite shot of yours and why?

WB: It changes constantly. Just recently I concentrated on getting a lot of crowd shots from a recent gig by The Varukers. People dancing and enjoying themselves. Some with their tops off and looking a bit battered but they all have a smile on their face which is so great to see. I suspect my favourite shot will always rotate and generally, it will be from my most recent show.

HP: Which other photographers' work do you admire and why?

WB: Out of the big guns Silvy Maatman is absolutely amazing. Her work on the European Punk Festival circuit is quite incredible. I admire her a lot. Morat's work is stunning too. You ask why? Well, check out their work as it speaks for itself. I have lots of friends who too enjoy amateur photography and all do a sterling job. Gav & Jim who I mentioned earlier. Lisa Gray, Mark Cartwright, Melanie Branagan, Steve White, Trunt, Mark Tennant & many more.

HP: Do you have any plans to take this to the next level and turn full-time professional?

WB: I suppose it would be a dream to do a job that you enjoy doing. I honestly can't see it happening any time soon regrettably. I work full time in a large supermarket's distribution centre where I've been for 25 years. Turning professional would probably mean leaving the security of a steady but meagre income. I would probably need to outlay 5-6 grand on equipment to take it up a notch too. Incidentally, I've been taking pics for over 6 years and never made a single penny. I always said it's my passion and not my "business". Turning pro would change the way I approach what I do and without doubt take away some of the fun I feel.

HP: Other than gigs, do you take other photographs and if so of what?

WB: Gig photography is and always will be my main priority. I have taken some sunrises and sunsets but the live music environment is my devotion. I have also made a conscious effort to document my two children in great detail as they mature from toddlers to teenagers and beyond. "Dad, not more photos" is something I heard a lot in recent years haha!

HP: Are bands asking to use your work for covers and promotional material?

WB: I enjoy working with great bands and good people. I ask for nothing more than my pic is credited, I am thanked and I get a copy of the finished release. The following bands have used some of my pics. Anti-System, Decontrol, Varukers, Uproar, Anord, Rats From A Sinking Ship, Hellkrusher, Force Fed Lies, Kickback Generation, The Relitics, Civilised Society, Aye Hobos, The DeRellas & Weld.

HP: Anything to add, Will?

WB: Yeah thanks so much for the interview and exposure. If anyone is wishing to see my work please check out these links.

You can see more of Will's fantastic photography on [Flickr](#), [Facebook](#) and [Instagram](#).

Are you serious about vinyl?



Having collaborated with such guest artists as The King's Singers, Judy Collins, Art Garfunkel, Mel Tormé, Ray Charles, Chet Atkins, Crystal Gayle, Lou Rawls and Roger Miller to name a few, Kory Katseane, Director of Orchestras in the BYU School of Music, knows how music is intended to sound and had this to say about the Graham Slee Accession phonostage -

"I hadn't noticed at first that the Accession was reproducing those acoustic environments more faithfully but gradually became more aware that in addition to it sounding more like real instruments, it was also sounding more like I was in great halls as well."

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hORNS SYMPHONY 13 HORN LOUDSPEAKERS

hORNS are a Polish loudspeaker brand specialising in, you guessed it, horn loudspeakers. In this review, Stuart Smith takes a listen to their Symphony 13 loudspeakers costing €15,000.



Stuart Smith

Long time readers of HiFi Pig will know that I used Polish brand hORNS Mummy loudspeakers as our main reference speakers for several years, and in that time they saw of some serious competition and I never felt the need to change them out for anything else. Indeed, it took our purchasing the Avantgarde Acoustic Duo XDs at around €30K to oust the Mummys, a sub 10K loudspeaker. I've heard many other models from the company's range at shows around the world, and again, I've always been very impressed. So when Łukasz Lewandowski, the owner of the brand, approached us at the Warsaw Show in November of 2019, I jumped at the chance of reviewing their Symphony 13.

Łukasz says that his loudspeakers are "connected with a love of music with a love of

unusual sound and non-standard sound". That's quite a bold statement to my mind as, whilst none of the company's speakers could be said to be standard designs, their sounds if you appreciate the presentation of horn loudspeakers, couldn't be described as an "unusual sound". I have always found that their speakers have sounded particularly natural-sounding and easy to get on with. I've always thought that hORNS loudspeakers represent good value for money too, coming in much cheaper than comparable brands.

BUILD AND DESIGN

The Symphony loudspeakers arrived early February but because of a recurring back problem and the following Covid 19 outbreak languished in their boxes for a good while before taking up residence in our main system which at that



time consisted of a Lampizator Big 7 DAC being fed by an Auralic G1 streamer on the digital front end; later the Lampizator would be swapped out for Leema's top – but more on that later.

The pallet arrived with two large boxes and two smaller boxes. The larger boxes contained the main bass reflex, front-ported cabinet with mid/horn compression driver mounted above. In the smaller box was the screw-on horns. Set up was a simple case of placing the cabinets in their initial position, attaching the horns with the supplied bolts (a simple job), and wiring up to the amp as you would any other loudspeaker – good quality WBT binding posts are used which will accept all the usual suspects of speaker cable terminations. I played a few tunes and fine-tuned their position, but to be fair they seem to be pretty unfussy about placement, something I've found with many front-ported designs.

Fit and finish are impeccable as far as I can see, with the main cabinet looking big, but not imposing in our listening room. You can order the speakers in any RAL colour you like to

match your décor. The 13" bass/mid driver is protected with a removable fabric grille that uses magnets to attach itself; I left it on for the duration as taking it off seemed to have no effect on the sound and they looked a lot better with it in place.

The horn itself is 60cm across and is textured on the inside of the flare. It is fed by a 2" Titanium compression driver. One interesting feature of the horn is that it has a level control on the back so that you can adjust the volume of the high frequencies, a feature that I found very useful and I'm sure others will too. This level control allows you to fine-tune to your preference, your room, and to recordings. This is not a new concept and I've seen L-Pads used on many DIY designs, but I've never seen this done on any commercial horn loudspeakers that I've auditioned.

Quoted sensitivity is 95dB, which should be sensitive enough for any amp with a reasonable output and they are said to have a response of 35Hz to 20kHz. I put several amps through the speakers including a Class-D design, a big American Class A muscle amp, and a low

output AB design; sadly my 2A3 amp is out of action at the moment and so I didn't have the opportunity to see if that would work with them. The amp I feel gels best, of the ones I have tried, has been the 8W Class A Jean Hiraga amp.

The main cabinet of the Symphony 13 is 600x1380x560 [mm] and with a volume of 135 Litres. The speakers weigh in at 75Kg.

So, all in all, this is an incredibly positive start with every aspect of the build being top-notch and with some sensible considerations being included - which include the front-porting and the level control.

SOUND

I've lived with the Symphony speakers for a while now and they have had a lot of music put through them and for the most part I've really enjoyed them. As per the usual review routine, no critical listening was done for a good few days to allow the speakers to run-in sufficiently.

First, we had the Lampizator DAC in place, a brand that G-Point Audio, the UK distributor for hORNS also represents, and there is clearly a synergy between these two Polish brands - I got the feeling that the mid-band was the star of the show and the partnership was best suited to jazz and vocal-centric music. Playing techno and other similar genres, I felt that there just didn't feel to be that impact I'd enjoyed with our Avantgarde DUO XD horns. T

Listening to Sound Pressure (Part 2) by Surgeon on the Tresor Vol 6 compilation I felt the Symphony's lacked a little in sheer weight and heft that I'm used to with our Duo XDs - bass just seemed a little too back in the mix and a tad subdued. With that said, the treble detail was certainly there with the level control increased, though this is always going to be at the expense of overall balance to the sound. I suppose what I'm getting at is I thought with this kind of music the Symphonys were a little polite. Now that is not to say that others will not like this kind of presentation - I'm a self-confessed bass fanatic, as readers will be aware. Scramblers' Nozzle track is fast, frenetic and a tad industrial and dirty in its feel and I'm used to it

sounding like a kick to the chest (how it should be) but just didn't have that feeling with the hORNS. Even cranking the volume up, I felt I was missing punch and involvement. This paragraph may well have you thinking that I didn't enjoy the Symphony speakers, but that's just not the case - I just don't think they are suited to the kind of music that makes up a good proportion of my personal listening, and I am well aware that the majority of people buying/auditioning these speakers are not likely to be going to have the same taste which I have.

Let's take a listen to something that is perhaps more akin to the style of music a person buying these speakers is likely to be interested in, and so to Miles Davis' Sketches Of Spain. Now, I really don't think you can beat horns played through good horns and the Symphonys don't disappoint at all. Davis' flugelhorn sounds utterly magnificent and there are scale and drama presented before me. Nothing forced and nothing over-exaggerated. Details of little hi-hat licks are wonderful and there is real insight into the recording, with a nice sound stage set out before me. It is laidback and untaxing to listen to - in fact it's rather beautiful, even at quite low listening levels. The detail of Davis' playing shines through, and the timbre of his chosen instrument is really very evident. The music ebbs and flows, in and out, with nothing ever feeling confused, even during the crescendos. I particularly enjoyed the portrayal of the castanets, with the hORNS presenting them wonderfully and really drawing me into the recording. I love little things like this that you hear on some speakers - the Audiovector S3s we have, with their AMT tweeter, also seem to have this light and airy quality to them when playing this record, though perhaps not with the same scale as the Symphonys.

Emiliana Torrini's Nothing Brings Me Down from her wonderful Fisherman's Woman album again plays beautifully to the Symphonys' strengths. This is a simple tune and she has a wonderful vocal presentation... and the hORNS let you hear this. Again, there is an effortless, mellifluous quality to the speakers' presentation on this material and it is certainly on a par with the same record listened to on our Duo XDs. Again, I am drawn to the detail in the upper registers that, whilst being detailed and pinpoint accu-





rate, never seems to overpower or get in the way of the vocal. I end up listening to the whole of the record and really enjoying every moment of it. I suppose one word I'm grasping for is "classy" when I'm trying to describe these speakers in this scenario – I'd certainly suggest they are a speaker for an audiophile into what could loosely be described as "audiophile music". As an aside, and as I've just written that line from my notes, we popped to the shop and on the way were discussing these speakers (yeh, I know, what interesting and fulfilling lives we must lead) and Linette used pretty much exactly the same line "Great for audiophile music but not for techno".

Bad Brains' Sacred Love from the album Banned in D.C. is a rock tune that is hard, and at low volumes, the Symphonys feel a little lacking again in the guts department and so I crank up the volume to daft levels and get more of the bass kick I'm looking for, but this is at the expense of the top end being a little too much. Fear not! A quick adjustment of the level control for the horn and you can pull that in a touch, albeit at the expense of losing a little of that detail I really was enjoying. I get the feeling of politeness from these speakers, but there is absolutely no doubt in my mind that they have a lot of qualities that will appeal to many. One of the things I got from listening to the rest of this Bad Brains record was a sense of the vocal and lead guitar really taking centre stage. I got the same feeling on Body Count's KKK Bitch, though the complicated and fast bass certainly there and you could follow it note for note...and the speakers are in themselves fast in this department – it just didn't have the whack I so enjoy on this record on the Duos. On the vocal front, every single word that Ice T utters is easily understandable and easy to follow. The soaring guitar on the following track (C Note) is also a real pleasure with the distortion/overdrive on the guitar being very evident and with a wonderful tone to it – it's as "natural" as I've heard on any speaker!

As I'm writing this up I've got Nick Drake's Bryter Layter playing in the background and up comes Northern Sky – not a track I'd listened to whilst evaluating these speakers, but I'm certainly pleased I took the trouble to sit up, take notice and turn the volume up a little. Drake's

plaintiff vocal delivery is utterly wonderfully portrayed and it's a real hairs on my arms pricking up and taking notice. The detail on the guitar and the cymbal hits at the start of the tune are as well done as I have heard on any loudspeaker we have had in the main review system. The upper notes on the piano also sound wonderfully portrayed and I end up playing the tune several times before moving on. The flute on the following track (Sunday) is likewise beautifully done!

CONCLUSION

If ever there was a piece of equipment that you should audition before you go out and buy them, then the Symphony 13s are it. But then who is going to go out and spend this kind of money without having an in-depth audition, preferably in their own system and in their own home. Knowing Greg at G-Point, I'm sure he will be happy to oblige your every whim. On some program (Jazz, female vocals, etc) they are an outstandingly detailed and emotive loudspeaker that, if I listened to just this kind of music, I'd welcome into a more permanent position in the listening room at the drop of the hat and at the expense of the Avantgarde Duo XDs (high praise indeed). However, I don't listen to this kind of music all the time and a good proportion of what we listen to for pure enjoyment is a more bass reliant kind of program, and here I just don't believe the hORNS cut the mustard for me and in my room – others may see this as the Symphonys actually being a more balanced and well-rounded loudspeaker and hence my urging any prospective buyers to get a proper listen with the kind of music they really enjoy!

In the grand scheme of things, they are a very good speaker (with the given caveats) that offer good value given the level of fit and finish you are getting!

AT A GLANCE

Build Quality: Very good indeed. Handsome loudspeakers that whilst being big are not over-domineering. Available in a wide range of REL and real wood veneer finishes.

Sound Quality: On female vocals, they are an



exemplary loudspeaker. Likewise, in bringing top-end detail to the fore in a piece of music. Lacking in bass kick and oomph, though bass detail is well evident.

Value For Money: If you can live with what I see as the speakers' foibles then they are good value. In comparison to our Duo XDs costing double the price of these, I'd possibly say the hORNS beat them in, particularly, the mid department.

Pros:

Beautifully well finished.

Exemplary mid-performance.

Detailed and engaging with lots of music.

Cons:

Lacking in bass oomph for me.

Price: €15,000





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EGGLESTONWORKS NICO EVOLUTION LOUDSPEAKERS

With new UK distribution in the form Auden Distribution, Memphis based EgglestonWorks has been a name in the high-end marketplace for more than 25 years. Here Alan McIntosh takes a listen to their Nico Evolution Speakers & partnering stands costing £6000.



Alan McIntosh

As I have a relatively small room I tend to favour well-appointed stand-mounts and my reference system has always been stand-mount oriented so I'm always keen to see what can be done in this arena when you climb the investment ladder and it was with this in mind when I was asked to review the latest offering in this space from a company with great US legacy and with a history steeped in the studios of yore that I didn't need to be asked twice. EgglestonWorks are not that well known in the UK outside of the audiophile or studio market but with a home base in Memphis rubbing shoulders with the likes of Staxx records, Gibson guitars and the spirit of Elvis they have some serious loudspeaker credentials to boast of – not least of these that when legendary mastering engineer Bob Ludwig was seeking the

perfect sound for his studios he chose the EgglestonWorks Ivy Signatures and Andra's (for multichannel). Being presented then with an opportunity to try out the Nico Evolution stand-mounts was a serious no-brainer then!

CONSTRUCTION

The Nico Evolutions, being the "mark II" of the Nico design, is a 2 way stand-mount speaker, supplied with dedicated stands that come (helpfully) mass filled with sand and typical spike footing. The test pair came in a lovely off-white creamy gloss with drivers set into an aluminium fascia carrying the EgglestonWorks moniker. They are also available in dark grey/black. As they ship as a pair they come in pretty large boxes and are not unsubstantial to carry, so make sure you have someone on hand to help ring them in – luckily Mrs



REVIEW

McIntosh is no wimp! With trickle-down enhancements from the Viginti and Kiva range that includes cabinet re-design and internal improved bracing as well as revised crossover design and driver refinements, the Nico Evolutions are designed as EgglestonWorks put it to be the “very best speaker possible for the cost”.

When starting to get my head round the build and reading to lay down the usual soliloquies to design I thought actually it would be more interesting and informative for you dear reader to speak to the boss man himself at Eggleston Works – Jim Thompson - to hear it from the horse’s mouth as they say – so I got in touch. Jim is a lovely and very open guy and it’s a real honour to have him give his time – albeit by email due to time differences and our diaries!

Hifi Pig : Hey Jim, first of all many thanks for taking the time to speak to us, let’s start by talking about cabinet design – what was the thinking behind not porting, at least in the ‘round hole’ sense?

Jim Thompson: Well, we did port but not in the traditional sense. In development of the Viginti speaker a couple of years ago, we discovered that using a slot port (or shelf port) produced a tremendous advantage over round or other types of ports. The slot port allows the cross-sectional areas of the port to be maximized to minimize any chuffing or compression issues.

HFP: Talk to me about the cabinet evolution – it’s not plain box!

JT: None of our speakers over the years have resembled anything close to a plain box. Our upper range is defined by the faceted shape of the top of the cabinet. For the Artisan line (Nico, Emma, and Oso), we chose to soften those facets for a more organic visual effect. The curved inner walls also help to introduce non-parallel surfaces which are always a plus for internal box design.

HFP: The cabinet design is certainly much nicer to look at than many, tell me about the materials used?

JT: The cabinet is made of MDF and HDF

boards. For the curved sides of the cabinets, we use a cold press to create the curve from 4 layers of ¼” material with a polyester-based glue.

HFP: They are also much more interesting to look at I must say! Cone materials – always an interesting and even controversial topic for those with an engineering mid – what did you choose for the Nico’s and why?

JT: For most of our speakers we stay with poly cones and silk domes. This is altered in some of our upper range with carbon fibre and Beryllium. For the Nico and Emma, we chose to stay with our traditional feeling that great midrange is the most important characteristic of great overall sound. For that reason, these are the drivers we have were chosen.

HFP: I can’t argue with the sound there Jim, I have really enjoyed these speakers. The Evo bit – what evolutions have you made?

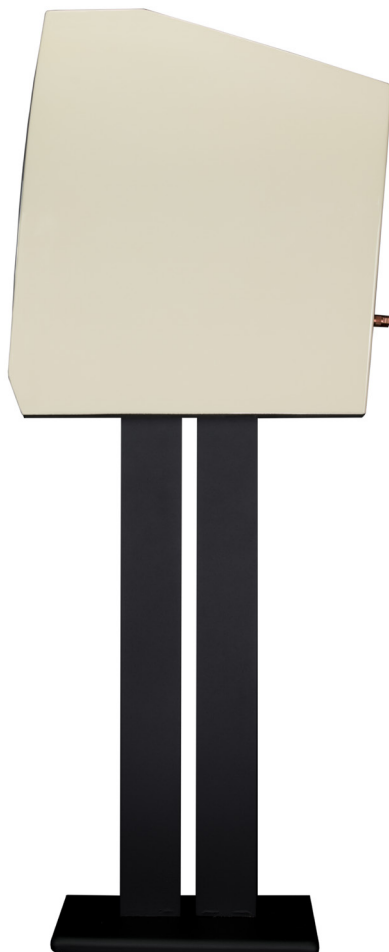
JT: The Nico Evo is the second iteration of the Nico speaker. If you have them side by side, the main difference is the size of the cabinet. The Nico Evo is about 25% larger than the previous version. This added box volume – along with the porting technique – produce far more bass response than previously.

HFP: Yep that bass response is quite a feat for a stand mount! – So where does the name Nico come from?

JT: see attached - an image of Jim’s dog Nico followed.

SOUND QUALITY

As my standard reference system is driven by a Hegel 190 we felt we needed something slightly more commensurate to test the Nico Evo’s. And with me knowing the Hegel sound so well (own 2 and reviewed the new upgraded 95 very recently) it made a lot of sense to add an eminently capable Hegel 590 in the mix (and I really wanted to get my paws on one). After spending a week or so first getting used to it vs my reference, with a very similar signature sound but...well...more of it, I was ready to add in the Nico’s. As usual, this is not a quick pro-



cess, I sat on these speakers for a few weeks, both casually playing them in the background as I worked and in “serious” listening sessions where I could really discern what was going on. It’s a real luxury to be able to do this but it is in my opinion essential. We all know that mood, time of day and well... the odd dram can give us an impression of sound that can be fleeting.

Right away with the Nico’s I was gripped but the bass extension. Playing known favourites like Simple Minds “Colours Fly and Catherine Wheel” (Qobuz, 16/44) the depth, gravitas but with control was a revelation. Extension and dimensionality are deep and wide but never slouchy or languid. The bass drum bumping along, hitting right in the gut but with a finessed boundary. Timbre across the mid’s really is beautiful. There are so many clichés used to describe HiFi but there is a great sense of separation and layering here; positioning has space and there is no muddling among even the busiest of tracks. Even Jim Kerr’s at times less than dulcet tones on “Promised You a Miracle” have a bandwidth all of their own and slide across the guitars and drums beautifully, synths crystal cut and vibrant. That bass I have to keep commenting on as it’s simply sublime. The Hegel has class-leading grip (damping factor) so I’m sure that it is adding some restraint, but the Nico’s are handling themselves beautifully.

To get a real sense of air and space as well as subtlety in mid’s and highs I moved to Melody Gardot’s truly stunning “The Rain” from her Live in Europe album (Qobuz 24/48). Cymbal washes and crashes, guitar strains, tabla’s, that lamenting saxophone and then that golden voice all given their own position on stage, perhaps a hint of warmth just edging in around mid’s but it only added to the audio goodness. I’ve tried to think about how best to explain what the Nico’s bring to the party and while all the usual platitudes could get an airing, I think it’s best explained thus; Imagine your music as existing in a cube, in 3D, and you are used to where all the parts sit in that cube. Now imagine stretching that cube just a smidge, enough that every player is given some extra room and the overall space is increased in all directions, including down into bass – that is how I sum these speakers up. Melody’s breathy low voice

and glass high tones fill the stage like fog and lasers in an 80’s video. The overall effect is incredible.

I have sat and listened to these speakers now for hours on end and not once am I feeling fatigued, instead, every listen I find something new. It feels like that slot port, and cabinet topology is changing the physics of what I’m hearing and there are new players, new extensions in the space. And they are beautiful to sit and look at too! Piano strikes bounce along and ring just right, bass guitar is full of dynamics and transitions to the point you feel you could see and feel the weight of it, see the strings vibrating in the pucker’s hands. No speaker is perfect, there is at times just a warming around the lower mids and that bass at times threatens (but doesn’t) let fly, for some who may prefer dryer, clinical sounds there may be too much on offer here, but for those who want in your face dynamics, power behind the stage, full delivery these Nico Evo’s are way high up the must-try list, and at a price of entry that belies what is on offer. As I finish this paragraph Melody is continuing to embrace me lyrically with “Deep Within the Corners of My Mind” and I don’t want to leave! The sheer vividness of the audience applause and resonance of those strings in the intro are a joy!

CONCLUSION

Paired with the Hegel 590, which many will know offers a very uncoloured and dynamically powerful sound coupled with class-leading grip courtesy of their SoundEngine 2.0 technology, the Eggleston Works performed wonderfully. Set in my relatively small room (just over 14m sq) and given air to breathe from the back wall, and some minor placement attention, they offered up a beautifully engaging experience. Across rock, electronica and jazz there was never a dull moment. That incredible bass response aided by that intriguing slot port design lends itself well to those who love big electronic basslines, while the control and timing through mid’s and highs really complement analogue jazz and prog. Pairing to match desirable bass could be advised but this is the same of all speakers. With the history they have these speakers were never going to disappoint, but as entry level for EgglestonWorks they



surprised, the budget is not outlandish and in my opinion well worth it!

AT A GLANCE

Build Quality: Wonderful – I've had so many square edge boxes trough the room its delight to have speakers that are very well thought through aesthetically, and the materials and build quality are top-notch. The dedicated stands are superbly sturdy but can take a bit of fettling to ensure the speaker sits fully level.

Sound Quality: Thwumpingly good (yes I made the word up but it does the job) – that reach into the depths with a solid, but deft handling on lows, robust but never overly forward mid's and refined, keenly edged but never coarse highs, great timing and separation. Just eminently engaging and inviting. A real pleasure to listen to for hours on end.

Value For Money: As a speaker and dedicated stand package, at this level sound quality these are exceedingly good value for money. A very

big sound for a, some might say, entry budget when referring to credible components. No corner-cutting here.

Pros:

Sheer delivery overall, space, dynamics and power, separation and depth of bass.

Preloaded, bespoke stands.

Build quality is exceptional and strong aesthetics.

Cons:

Honestly, at this price point, the only real con is you need a strong back to get them in!

If I had to be uber critical pair well to get the perfect sound for your bass desires

Price: £6000rrp including stands (pre mass loaded)



DIPTYQUE dp77 ISODYNAMIC LOUDSPEAKERS

Diptyque is a French loudspeaker manufacturer specialising in making Isodynamic panel loudspeakers. In this review, Stuart Smith takes a look at their dp77 Anniversary model retailing at €3540.



Stuart Smith

Diptyque Audio is a partnership in France made up of Gilles Douziech and Eric Poix. Gilles spent time in his earlier years at an internship with Marcel Rochet, the designer of Mulidine Loudspeakers, and later continued his studies with another internship at LAMI, the acoustic laboratory based at the University of Toulouse. Later he carved out a successful career in medical electronics specialising in ultrasound, although during all this time he never stopped producing his own loudspeakers, culminating then in developing his first ribbon loudspeakers used to broadcast his artistic sound creations in contemporary art galleries. Eric on the other hand is an audiophile of twenty-five years standing and in this time has never stopped developing his system with scant regard for the current fashions in audio. It is Eric that

is responsible for the mechanical structure of the Diptyques following his creation of his own speakers and supports for electronics. Eric is also responsible for the design of the sophisticated mechanical structure of the speakers that ensure the speakers' membranes' tension and rigidity are perfectly controlled.

All Diptyque loudspeakers are made in Montauban in the Occitanie region of France by hand where they are then subjected to both acoustic measurements and listening tests. The guys behind the brand have explored every loudspeaker technology, but after listening to all these they came to the conclusion that it is Isodynamic/Magnetostatic loudspeakers that they feel gives the most natural reproduction of sounds. Gilles and Eric say on their website that the benefits of this Isodynamic approach are:

- Diffusion over a large area by a plane wave, which enables immersive listening without the sound projection effect.
- A dipole operation, on both sides of the speakers, to recreate the spatialization of the concert in your listening room.
- The use of extremely thin mylar membranes (12µm) for high speed and no drag effect.
- The same type of diaphragm used from low to high so everything operates at the same speed to provide consistency in dynamic behaviour across the sonic spectrum.
- No enclosure behind the speaker; there is no “box colouration” associated with cabinet bound loudspeakers.
- Consistent, balanced and detailed listening even at low levels.
- A regular impedance which does not represent a complex load on the amplifier.
- High reliability over time, not afraid of dust or humidity and they do not have a high voltage circuit.

So what is Isodynamic/Magnetostatic technology? Full disclosure – I had to look this up! So, if I get this right, Isodynamic speakers, first developed in the '70s in the States, use a planar concept much in the same way that an electrostatic loudspeaker, but instead of there being a coated plastic membrane between two plates with a charge they have very fine wire that is embedded into a membrane that moves between two magnets to create the movement. My only other experience of this kind of technology has been with planar headphones and so I'm somewhat intrigued by what the Diptyques will bring to the party.

The guys at Diptyque have further developed this technology and have several innovations/improvements over and above the broader concept. These are:

- PPBM®: Push-Pull Bipolar Magnet is an innovative patented architecture where large section bipolar magnets, manufactured to Diptyque's specifications, are located at the front and rear of the membrane. They make it possible to maintain the coil (aluminium tapes) in a constant magnetic field when the membrane moves. Diptyque claim this makes the bass more dynamic and transient sounds are reproduced with precision.

- A Mechanical Sandwich Structure composed of the assembly of an MDF frame, fine felt and stamped sheets held in place by a welded steel frame. This makes for, Diptyque claim for a rigid structure without resonances and the absence of colouration.

- Proprietary ribbon tweeters. The tape is produced as an isodynamic cell (mylar film and aluminium coil). It moves in an intense magnetic field made from neodymium magnets. These tweeters operate over a wide frequency range and are designed to partner with the isodynamic cell that makes up the mid/bass cell. A gentle slope filtering (6 db per octave) is used in the crossover.

I caught up with Gilles Douziech to ask him a few questions about their brand and their speakers:

HP: This is an unusual design for a loudspeaker, can you explain what benefits this design, in your opinion, brings to the table?

GD: We, Eric and I, have been passionate about sound reproduction for over 30 years. We like isodynamic speakers for the absence of box colourations and the natural sound diffusion, but also the speed and consistency of the entire sound spectrum. Through our research, we wanted to improve the qualities of these loudspeakers in the bass. For the design, we sought simplicity and efficiency.

HP: How specifically, and in your opinion, does your implementation of Isodynamic/Magnetostatic technology improve over the basic implementation?

GD: Our patented PPBM technology and our sandwich structure provide better control of low frequencies and transient sounds. The Diptyque dp77 are small panels but they can reproduce dense and articulate bass and also have all the transparency and a wide soundstage of large Isodynamic speakers.

HP: There are numerous options in the choice of stands. Do they all perform equally or is there one that is better suited to the panels?

GD: The new support we have produced for the 10th anniversary of our brand is a tribute to the old microphones that were used to record the beautiful voices that still make us vibrate! Its



rigid and heavy structure and the insulation by the pieces of wood improve the sound of the dp77.

HP: How important is the Made In France concept to you?

GD: What is important for us is to control all the manufacture of our speakers and not to depend on many subcontractors. All the elements of these speakers are manufactured in our workshops. We have invested in skills and machines to be free to create and manufacture. Only the painting is done outside and then by a company in our region. We train our employees to manufacture the entire loudspeaker, we pass on know-how, like luthiers. We thus guarantee the quality of the sound, and of the manufacturing.

HP: You have obviously thought about the aesthetics of the speakers with regards to them being available in lots of colours and being customisable with users' photographs and artwork. Who do you see as being the typical customer for, specifically the dp77s?

GD: Our dp77 speakers have been designed for passionate music lovers who also love beautiful objects and architecture.

HP: What other speakers do you have in your range and do they all use similar technology to the dp77s?

GD: We currently have two other speakers, dp140 and dp160 models with different options. All of our speakers use the same technology. Music lovers can choose their model according to the size of the listening room. Our dp160 Activ Bass model integrates a solution with DSP amplifiers to adapt the bass curve according to the acoustics. We are working on new models that we will present at the High End show in Munich in September 2021.

BUILD AND FEATURES

The Diptyques arrived on a small palette in a relatively low profile box. Opening the box gives you the immediate impression that there has been a good deal of thought gone into the packaging – this is a good start! The panels themselves come in protective covers and the metalwork (a simple frame and stand) is cable tied to a specially made frame for transport - this frame is actually cut out from the waste

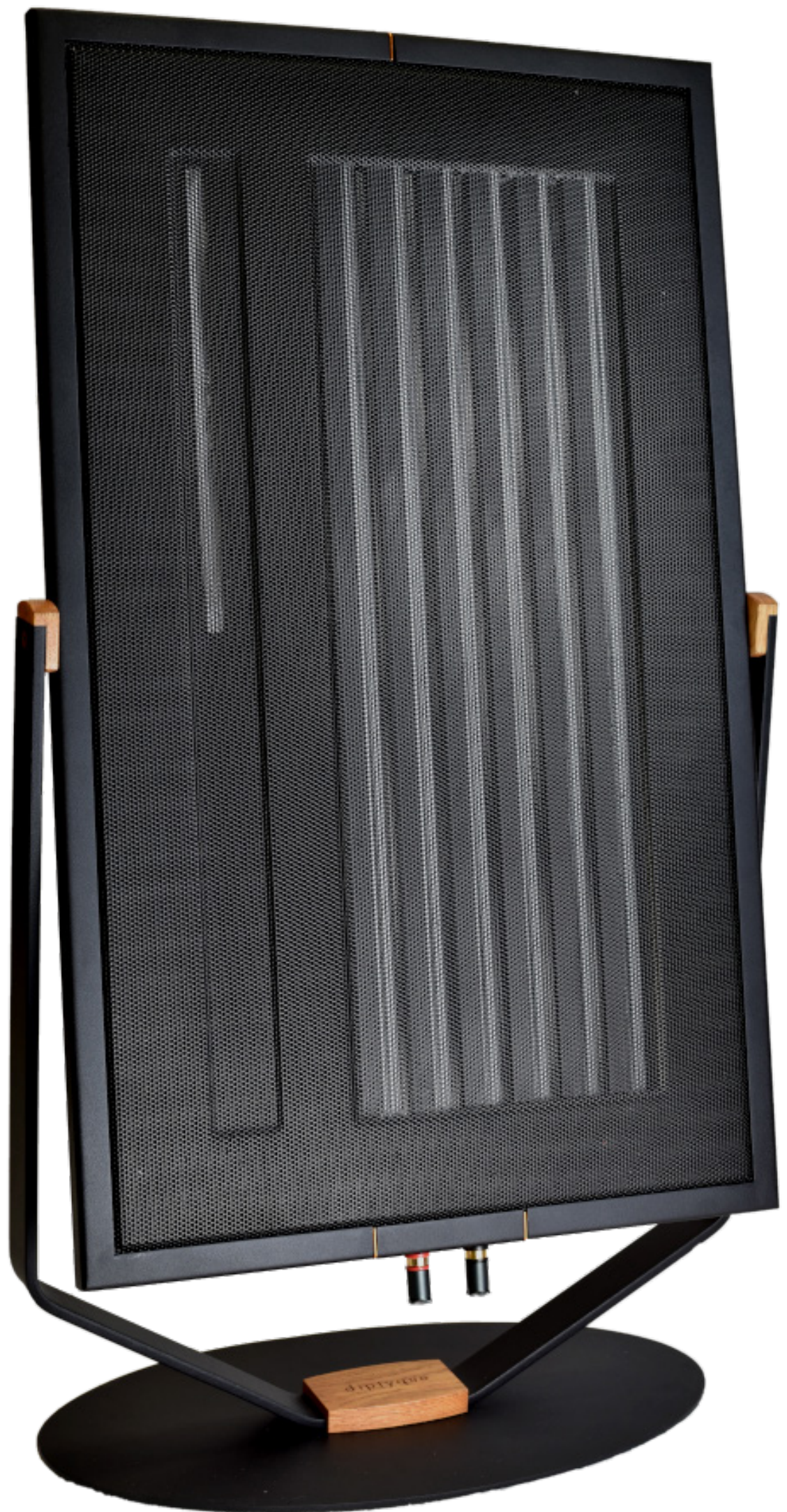
MDF from when the panels are cut and so zero waste. There is a very logical instruction pamphlet, and putting the speakers together is simple as can be that involves screwing two screws to attach the frame to the panels, and two more to attach the frame to the base. It took me about five minutes from unpacking to having the speakers fully assembled and plumbed into the system.

First of all, there is no denying that these are a really beautiful looking speaker, and whilst being big in surface area, they are thin and easy to position in the room. The frame allows you to change the vertical angle of the main panel so you can play with what positioning works best for you. A nice touch is the little wooden doodads to both protect the frames' finish and to hide the screws in the base. A single pair of speaker binding posts are positioned centre at the bottom of each of the loudspeakers' panel, which is itself a couple of CM thick. That's about it and there's not much more to say about the look of the dp77s.

Specifically, the dp77s use a 0.1232m² bass/midrange 'panel' and a 30cm high ribbon tweeter. They are a 2-way design with a sensitivity of 84db and impedance of 6Ohms. Quoted frequency response is 50 – 19000Hz and Diptyque recommends amps with a minimum of 60W, but preferably 150W and above – I used our Merrill Thor amps which are more than capable in this respect. The actual panel measures 770 x 470 x 20mm and weighs 11kg, though with the base etc comes in at 18Kg.

The dp77 are supplied as flat panels with no feet and you choose the finish and legs thereafter via their online shop. The panels in standard finish are €2860 and £3240 in one of 184 RAL colours. You then choose your legs - you can have the Anniversary Legs in Black Steel and Oak (as supplied here) at €680, or the less expensive Finnish Birch legs at €300, or transparent PMMA at €540. For an extra €80 each (€160 per pair) you can have custom made skins made from your photos for these speakers, which is really rather cool and means they will fit into any environment and become a sonic piece of art. I like this idea...a LOT!

SOUND





These arrived and got set up in the upstairs mid-priced system and I just put on the CD that was in the drawer from my last listening session, Hot Chip's *Made In The Dark*, and the first thing that hit me was the bass. It just didn't seem right that these panels seemed to go so low, and it was only later I read that they are supposed to go down only to 50Hz, it certainly seems lower than that, or perhaps it's that they are in a room that is relevant to their size. I'm going to review the sp77s without a subwoofer in place but may well put our pair of RELs in the system just for a bit of fun towards the end of the review process.

There are no instructions about whether to set the dp77s with the tweeter panel on the inside or outside and so I had a bit of a play and found that, despite how I'd originally had them set up, they sound best with the tweeter's on the outer edge of the panels – that is to the far left on the left speaker and conversely on the right-hand speaker. Likewise, you can alter the angle that you set them up at vertically and I originally had them pointing upwards towards my head when sat down. However, I found the soundstage seemed more accurate with the speakers having no angle at all and flat with regards to their frame. Likewise, with the tweeter being on the outer of the panel, I found the soundstage to be a little wider. The great thing is you can experiment really easily with their angles without having to lug the speakers about, even swapping them from one side to the other was a couple of minutes job.

Regular readers will know that, as a rule, I tend to listen pretty loud, but I started off with these speakers listening to Jefferson Airplane's *Crown Of Creation*, specifically the third track, *Triad* (a David Crosby Number) at a very low volume... for me. This has Grace Slick's voice sounding as smooth as cream, and there is a really good awareness of her singing style that really shines through – a slight vibrato on notes that are held for longer periods is very evident and clear with these speakers in place. The lazy taps on the cymbals come through the mix really well, and even at these very low volumes, I feel like I'm getting a complete picture of the recording, right down to fingers moving on the strings and fretboard of the guitar. A lot of loudspeakers really lose it at low volumes and you are left

with just a vague impression of the recording. The separation of instruments is clear and it is obvious where individual instruments are panned on the desk. On the title track, the fuzzy bass is presented absolutely majestically; of course, there isn't the weight you get at higher volumes, but I genuinely don't feel I'm missing any detail or timbre of instruments and voices.

Time for a bit of a change of style and pace with the vinyl copy of Channel One Pressure Sounds 55. I crank the volume up a bit but not too silly volume (well easy enough to have a conversation over...ish). Of course, it is the pounding and relentless bass that defines dub reggae and I don't think there's anything missing here, even at this modest volume the dp77s do a great job on the opening track *Kunta Kinte* – keep in mind I haven't added the subs to the equation as yet, and I don't feel the need to. Likewise, on track two (*Hotter Fire Version*), the bass underpins the whole tune, and, whilst it is prominent in the mix, it doesn't overpower the presentation the Diptyques offer up. The HUGE reverb hits are well evident and decay as they should into the background. I'll be quite frank here and say that I'm a bit overwhelmed at how these unassuming panels handle this material - pleasantly overwhelmed. One thing I did notice here - I'm sitting slightly off-axis as we have two listening seats side by side in this listening space, and it becomes clear that there is a definite sweet spot with regards to these loudspeakers. However, I get up, toe in the right-hand speaker a little, and all is well with everything snapping into place.

Snowpatrol's *Eyes Open* is up next and the opening track *You're All I Have* comes on before I can get back to my seat. It sounds a bit muddy walking back to my seat, but as soon as I sit down everything just feels right again – you do need to be sat down between these speakers to get the best from them, but that really shouldn't be a surprise to anyone. I didn't pull this record out for this track, I pulled it off the shelf for *Open Your Eyes*, but end up playing *The Finish Line* beforehand and that bass is strikingly portrayed and really energises this very well damped room – very impressive indeed. The track I was looking for begins pretty gently with voice and a guitar and it sounds as it should here, but when that bass drum kick comes in I'm really feeling

it. It's not too much and the whole is very well balanced, the vocal being nicely projected forward into the room. When the track breaks, if you know the tune you'll know when I mean, the room is filled with sound and I do actually find myself turning it down a tad.

Nirvana's Smells Like Teen Spirit is on next and it becomes clear that there is a volume at which the Diptyques become uncomfortable - but that is VERY loud and to be fair to them, I don't think folk would listen so loud. I also imagine the volume is too much for this room! I grab an app for the phone and it tells me I'm listening at around 80dB and much above this is where it starts to get a little much, but to be absolutely fair I can't listen at that high a volume for very long. What is clear is that the speakers are incredibly fast, dealing with changes in volume and dynamics absolutely splendidly. Interestingly, I was reading one of the Facebook groups' questionnaires that asked its members what they looked for in a system, and dynamics was one consistent feature - the dp77's certainly do dynamics wonderfully. I also love that there is NO bass lag/overhang/bloat - call it what you will - and regular readers will know bass bloat is a major bugbear of mine.

Right, I'm going to tune in the subs by way of experimentation, but, in this room, I don't really think the dp77s need them at all. And I'm right, to an extent. Yes, a pair of subs fill out the lowest of the low frequencies that the dp77s are missing, but I found I really had to rein the subs right in to get them right. Playing the same Studio 1 tracks I played earlier, what I found the subs brought to the party was an ability to listen to the db77s more quietly and still experience them at their best (the sound meter app reckons and an average of 75dB.) I also felt that adding the subs sharpened the soundstage a little more - I don't understand or know why and can only tell you what I experienced! Do the dp77s need subs? - I don't think so, but they do add a bit more weight to proceedings.

I'm just typing up my notes and I've got Jorma Kaukonen's Quah playing. I'm not really listening, but the track Blue Prelude comes on and makes me look up from my keyboard. His guitar sounds utterly lifelike and 'in the room'. I know that sounds like reviewer claptrap (no, really, I

am fully aware!) but that's what I got from it and it really did draw me in, stop me in my (typing tracks) and I was mesmerised. I listen to this album a LOT and the track Genesis is one of my all-time favourites but I'm not sure I've heard it sound better! Unfortunately, the Diptyques couldn't make the track Sweet Hawaiian Sunshine sound anything but lyrically dire.

CONCLUSION

These are a very good loudspeaker indeed. They can do delicate and restrained when they need to but they really can rock out too. They certainly have an upper limit with regards to volume where they become a little uncomfortable. However, one of the big selling points of the dp77s is that they play really beautifully at lower and more realistic listening levels.

On the bass front (Nirvana's Breed's bass line is a brilliant case in point) the Diptyques are fast, articulate, and wonderfully impactful. Nothing on the bass front phases them, and I expected this to be their Achilles Heel. Dub, rock, electro, techno - nothing gives them grief. Adding a pair of subs does add a little more weight and does something to the imaging, though I can't explain why. I certainly didn't think I would be, but I played a LOT of dub through these speakers and loved the way the bass was portrayed.

On the soundstage front, I think that the dp77s present a good forward to back image, but left to right the image is certainly mostly between the speakers. There is also good height to the image presented.

Detail from these speakers is phenomenally good, but they also feel very natural sounding - almost as if they aren't having to try too hard - they never (unless pushed too hard), lose control. Keep them within their limits and they are wonderful! I would have loved to have been able to partner them with our Krell amplifier, but sadly that is in hospital in America having major surgery.

Do they prefer a particular style of music? I don't think so, and I threw a whole lot of stuff at them to get them flustered and hot under the collar. Only when pushed too hard so they get a bit much, but that's par for the course for any

MELLOW ACOUSTICS FRONTRO LOUDSPEAKERS

Mellow Acoustics FrontRo II is the second incarnation of this interesting electrostatic-hybrid loudspeaker. The loudspeakers cost £9500, are manufactured in England and have some interesting design features. Janine Elliot takes a listen.



Janine Elliot

I wrote about the original Mellow acoustics FrontRo hybrid loudspeaker a few years ago. I was impressed with the technology and precision of performance but found there were a few shortcomings; the lower bass needed more oomph and mid frequencies were slightly too obtrusive. I am pleased to hear that Tim Mellow wasn't put off with my criticisms and worked hard to get the FrontRo to the next level, and boy has he just!

Just as Skoda, Kia and Seat improved their cars profoundly in their second generations, so this has happened with a number of now-famous HiFi brands I could mention, Mellow Acoustics included. Made in Berkshire, UK, the FrontRo II is a beautiful art deco looking feature to any living room with a triangular diaphragm bass unit with circular electrostatic unit atop, the whole standing

only 80cm from the floor. Tim has had an enviable career in acoustic technology, initially working as an electronics design engineer, as an acoustical engineer and then at Nokia in Farnborough until its closure in the UK. Around the time, he left Nokia in 2011 he started up Mellow Acoustics. After about two and a half years the first prototype was made, and now the FrontRo is as mentioned, in its second edition.

One of my all-time heroes is Peter Walker, founder of the Acoustical Manufacturing Co. Ltd, later known as Quad, synonymous with electrostatic speakers. He is also a hero of Tim's, and whilst Tim never actually met him, he worked with his other acoustical hero Leo Beranek, co-authoring an updated version of Leo's classic 1954 book 'Acoustics', including 43 pages allotted to electrostatics. Tim's knowl-



edge on speaker design is to be revered, having also published 11 papers in the Journal of the Acoustical Society of America.

CONSTRUCTION

The FrontRo is a hybrid electrostatic loudspeaker weighing in at £9500 and employing an LP-sized lollypop shaped electrostatic unit to handle the mid and treble frequencies (600 to 20,000kHz) above a tetrahedron shaped box employing a conventional 5.25" dynamic woofer to handle the lower midrange and bass, taking it down to 40Hz. The company have improved the bass end considerably from the earlier model. For a start, it is a completely new woofer with a smaller but more powerful neodymium magnet that is less obstructive to rear waves. It has a more linear suspension, a longer throw coil, and an air-core crossover inductor (low-pass filter) to replace the less linear ferrite one. As Tim also told me "The higher winding resistance of the air-core inductor is compensated for by the slightly greater sensitivity of the new woofer". This woofer is considerably better than the original driver and having it in sealed box helps get the frequencies down to numbers not to be sneered at.

The top half of the unit supplies 600Hz and higher. A single electrostatic unit covering the essential mid frequencies and above. Like Mr Mellow, I am a big fan of the principle of electrostatics. Not only does it mean doing away with both a cabinet and 'slower' conventional drivers that are both prone to adding their own signature to the music, but also the dipoles are incredibly light and therefore much more responsive to the signal. I found the original FrontRo wasn't quite as fast at initial transients as I wanted to hear and hoped that the new model would feed my ears with clarity as well as low colouration and low distortion. The only drawback with electrostatics is that they are generally not quite so efficient as conventional drivers, and indeed the FrontRo is low at 84dB/m at 2.83VRMS. However, trying to get a realistic portrayal of the music from an electrostatic loudspeaker is far from easy. If it isn't designed well, an electrostatic unit can be quite forceful and only sound good at a single sweet spot on the settee. Martin Logan created their distinctive curve-shaped electrostatic hybrid to enable

a far larger dispersal of mid/high frequencies. Mr Mellow considered curving the diaphragm, but this would add distortion to an otherwise distortion-free loudspeaker and curtail the lower notes due to increased diaphragm stiffness. What he did do, however, is create a spherical waveform – to mimic the natural sounds we hear – by employing six rings fed from a tapping on a delay line that progressively increase from the centre towards the outer edge, so that by the time the audio comes from the edge, the sound from the centre has already had a head start, and since it is a distance from the diaphragm it creates a curved wave-front. Incidentally, Peter Walker was to do this a different way in what became known as 'Peter's Balls'; a pre-production spherical creation built just before his untimely death that had three diaphragms and four plates in front of each other with time delays going forward in order to create a spherical waveform. This rear-ported cardioid design was shelved as they believed the revolutionary shape would put people off. A spherical wave is ideal because it has constant directivity and a perfectly smooth frequency response. Where I felt the original speaker was too pronounced in the vocal frequencies meaning it lost some of that detail in the top end, for this model he has tweaked the delay line slightly to lift the output at around 10 kHz where it was previously sagging. As an aside, the pattern of holes on the diaphragms are apparently the same as the seeds on a sunflower head, showing that a link to nature is perhaps possible. Sweet. And because the membrane is flexible, each part can move more-or-less independently from the rest according to the signal on the nearest ring.

The triangular woofer box is made of half-inch thick birch plywood that is heavily damped with a special lining material, just as was used in BBC LS3/5a's. On the rear are two sets of speaker terminals to allow it the ability to be bi-wired or bi-amped. A figure-of-eight power connection is provided with a green LED to let you know the electrostatic diaphragm is powered up. As it consumes less than 1W, some owners may well leave it plugged in permanently. The unit is also provided with 4 adjustable conical feet, plus cups to be placed underneath if you don't want to scratch your floor. I needed to angle up the unit in order to have the speaker



aimed correctly for my armchair. Speaker placement was not a problem for me in my listening room, not least because the electrostatic loudspeaker is usually less sensitive to room placement than a conventional loudspeaker box. However, as the electrostatic diaphragm has a figure-of-eight output, sounds will be heard equally behind as in front, so placement near to a reflective surface is not suggested. The bass unit being an infinite baffle design also meant that I could place the speaker easily, though at least a foot away from the nearest object was found to be the best starting point. Generally electrostatic speakers need to be placed in big rooms well away from walls, but the FrontRo's were ideal for small rooms and I could place it closer to the room boundaries. The unit is finished in light oak veneer (though you can choose your own preference such as American walnut), with a choice of non-removable grille cloths in gunmetal, navy or burgundy. Underneath the cloth of the electrostatic unit is a special screen that keeps out dust and moisture.

THE MUSIC

My first listening, via Synthesis KT88 valve amplification, was to Bach's Toccata and Fugue, BWV454 (Chasing the Dragon 2), in order to

test out those lowest frequencies from the Organ. This was a totally new speaker! I played this same track in my first outing with the FrontRo and noted that it missed the lowest octave. This new speaker went all the way down to 40Hz with no problem at all. Similarly, the top end was tight and clear. Only the fact that I needed to turn up the wick a few stops to get the same volume of sound. Toed in as requested, the speakers produced a full and detailed sound. Turning to Saint Saens 'Carnival of the Animals' (Orchestre Philharmonique de Mexico), this has very spacious orchestration ably shown off by the FrontRo, the two pianos performing side by side centre stage (I preferred the left-hand piano!) This work has 14 movements, including the famous movement "The Aquarium". Instrumentation includes glass harmonica and xylophone, all clearly reproduced in a forward space in my music room. Similarly, the double bass in 'The Elephant' was extended, making the FrontRo an all-round hybrid serving both bottom and tops in a pint-sized package.

My only criticism of the speaker was a little lack of speed and gumption, that could sound a little "mellow", to use Tim's surname. In order to dispel this comment, I zapped up the music with Russell Watson singing "Nella Fantasia". This

lovely classical vocal number gave me a chance to add some excitement into the foray, with excellent vocals and punchy orchestration. The speakers really gave as much as they could muster, and ably so; this was actually one of the best performances of this song I have heard. The improved bass and more focussed mids and highs from the electrostatics made for much enjoyment. Turning to 'De Profundis' and "Stabat Mater" (Russian National Orchestra and Moscow Synodal Choir) the repeated melodic and harmonic phrases sounded powerful and emotional. The speakers could live above their size, though not quite as powerful a performance as from my resident gear.

To test the speed and focus of the electrostatic membranes I turned to Sven Vath 'The Harlequin, the Robot and the Ballet Dancer'. This is an electro-acoustic album with both real and electronic sources, put together to make a highly 3D performance with pin-sharp top end and extended bass. The Mellow Acoustics FrontRo was simply excellent in portraying the composer's thoughts, working well at low level as well as loud. Birds and sea waves were equally real that my cat even pricked its ears to go hunting for game.

I wanted to test the issues I had with the earlier FrontRo speaker in terms of mid frequencies. Genesis 'Selling England by the Pound' is often confused in the mid frequencies with the vocals, synth and piano all fighting for supremacy. The FrontRo allowed a very clear performance, helped by the very low cross-over frequency, and definitely an improvement on the earlier incarnation. Carol King's "I Feel the Love" didn't quite do it for me; the piano and vocals were still too present for my liking, though detail from the percussion and guitars was very focussed with excellent transients. The piano in "You've Got a Friend" was so focussed it showed off the inefficiencies of the recording; sounding like an upright that badly needing tuning. Vocals were clearly and realistically delivered, due in part to the 1st order crossover point being at 600Hz, two octaves below a typical loudspeaker. This generally allowed vocals to be exceptionally good in my listening tests, and certainly better than the first FrontRo. All that seemed lacking was oomph in that bass when playing at loud volume, though this would be better in smaller

rooms; this speaker being so small making them ideal where space was limited. Where this speaker shone, dare I say better than a Quad ESL63, was in the detail of positioning of sounds. Playing Kitaro 'Live in America' was a case in point. This is a very aesthetic album performed in Atlanta, April 1990. The synths and instruments, particularly the percussion, were clearly and keenly delivered and positioned precisely in what is a very large arena. The dipoles were able to give pin-sharp transients with solid and stable imaging, and the bass - being an infinite baffle - was also precise, making for a good pairing. Finally, to Sky and 'Sky II', an album that should be in every audio reviewer's portfolio, including as it does harpsichords, tubas, synthesisers, guitars and drum kits. The "Tuba Smarties" was a sweet tune testing out the bass end, proving that even 5¼" was sufficient, and the harpsichords and synthesisers showed the top end was equally compelling. This is a very energetic album, and I did feel the small overall size did mean some of that drive and punch was lost. In terms of accuracy, though, this new speaker was a stepping-stone towards excellence.

CONCLUSION

They might be small in size, but the FrontRo II is large in personality and features. Now that my initial findings have been addressed, I can honestly say that these speakers are ideal for those wanting electrostatic accuracy yet with enough bass to fill your room, creating a great listening environment whatever type of music you play, especially vocals.

These speakers can also be placed closer to walls than most electrostatic designs and work well with all types of music. The improvements in bass end and clarity at the top make this a much better proposition that well deserves to be put in the front row.

AT A GLANCE

Build Quality: Well-built design that also looks great as furniture

Sound Quality: Excellent detail in mids and highs with much improved bass. Works well at lower levels

REVIEW



Value for Money £9500 may be more than the original FrontRo but the price gain more than pays for the improvements in sound

Pros:

- An involving presentation
- Excellent soundstage retrieval
- Very low distortion
- Works particularly good at lower levels

Cons:

Can lack in excitement unless matched with appropriate amplification

Price: £9500



TRIANGLE BOREA BR09 LOUDSPEAKERS

Costing £1199 the Triangle Borea BR09 loudspeakers are a three-way floorstanding design. Stuart Smith tries them out for HiFi Pig.



Stuart Smith

Triangle, or Triangle Manufacture Electroacoustique to give them their full title, is a French manufacturer based in Soissons in the North of the country and now owned by Hugo Decelle. They are distributed in the UK by Elite Audio. The Borea series of speakers is very much at the budget end of things and has three floorstanders, two bookshelves, and a centre speaker in the range, with the BR09 being the top model. Clearly the Boreas are aimed at the multi-channel market as well as the more traditional two-channel market. The Borea range is available in light oak, walnut, black and white finishes.

FIT AND FINISH

Let's be clear here, at this price I wasn't expecting the BR09's to be anything fancy fit and finish wise but, in truth, there is nothing here to com-

plain about at all, though it is clear they are built to a price point. It's a three-way design with three 16cm bass drivers in a front-ported bass reflex enclosure. There's a similarly sized mid-range driver and a partially horn-loaded "Efficient Flow System" 25mm silk dome tweeter that has a phase plug designed to reduce directivity. The white midrange driver is made of natural cellulose paper, has no surface treatment, and has a "small pleat peripheral short-travel suspension" and is designed to be very rigid. The bass drivers are fiberglass.

The cabinet itself utilises something Triangle call DVAS (Driver Vibration Absorption System) which is in effect a back brace to each driver, interfacing with the back of the drivers motor with a high-density foam gasket. DVAS is a pretty neat solution as it reduc-



es vibrations of the drivers' suspension getting to the cabinet and, in turn, provides bracing to the cabinet itself. You get a pedestal on which to mount the speakers that comes with rubber pads should you not be able to use spikes. You also get a grille that connects to the speakers magnetically but I didn't bother with them and Triangle suggests removing them whilst listening anyway.

Being 92.5 dB sensitive they should be pretty easy to drive and they have a claimed frequency response of 35 to 22 000Hz.

Round the back you get a couple of good quality speaker binding posts that accept all the usual connections.

Standing 1.1m the BR09 is a pretty imposing loudspeaker and you certainly do seem to be getting a good deal of product for the asking price, though, being hypercritical, they are a bit boxy looking – lots of other loudspeakers are too and that aesthetic will either be to your taste or not.

SOUND

I've always been a fan of Triangle since first encountering them at a HiFi show in the UK about 10 years ago and they then had a good reputation of being a great match for valve amplification. One criticism that has been levelled at Triangle (like Focal for that matter) has been a sharp top-end response but I've never really got that accusation at all.

For the purposes of this review, I've partnered them with a pair of Merrill Thor amps, Leema DAC, and an Auralic G2 streamer. Cables are the usual mix of Tellurium Q, Atlas, Way, and Atlas. Qobuz allied with Roon was used for the duration

For a two-channel set up Triangle recommends having the speakers at least 40cm away from the back wall, 50cm away from side walls, and 2m apart. I had them well out into the room and well away from any side walls but when considering a purchase you should take Triangle's recommendations into account. They also suggest having them firing down the length of the with the listening position 2m from the centre which I

duly complied with.

One of the very best experiences I have had with HiFi was a few years back at Munich was listening to Kraftwerk on a huge set of old Western Electric horns, and it was Trans Europe Express I virtually reached for and this is when I had to go look at the price of the BR09s. The delayed synth sequence at the start of the album's opening track (Endless Europe) was really well done and I was well impressed with the focus and imaging of these speakers. No, you don't get the same airiness of our Audiovector R3 Arete with their AMT tweeter but there was really nothing to moan about here I don't reckon. The width of the soundstage could be better and there is a feeling that it is confined between the speakers left to right, but there is good depth to the image and sounds stay in the right places. Jean Michel Jarre's Oxygene confirms all of the above but, due to the recording's production I'd suggest, you are getting more width to the stereo image and the little staccato pings on Oxygene Pt 1 bounce about in a very pleasing manner – in fact, I let the whole album play and wash over me.

OK, 35Hz is a pretty bold claim for a loudspeaker and so a bit of Photek was in order and his Solaris album. Yep, these go low but when the volume is cranked up to realistic volumes things can get a tad confusing when compared to listening to our Avantgardes and their active bass, but hey, apples and oranges. I'd not say the BR09's have the same refinement in the bass as our Audiovectors either, but the market for these speakers is in my opinion, and judging by the Borea range's offering, going to be people who want a good stereo production that can easily be incorporated into a surround sound system without the need to add a sub and in this these speakers hit the mark very nicely indeed. Compared to the Davis Acoustics speakers we had in recently for review (read it here) there is certainly more bottom end but it's just less tight with the Triangles. But bass it's still nicely balanced with the rest of the frequency range and certainly doesn't dominate proceedings. In fact, and turning to our speaker killing track (Daft Punk's Contact) and at volume, I'm really enjoying what I'm hearing and when the track breaks at around 4 minutes 48 seconds that guttural synth is presented very well, and



CONCLUSION

the throbbing undercurrent sounds fab. No there isn't the detail the Davis' or the Audio-vectors give you when pulling sounds apart but for the vast majority of folk not being too over critical they will be well served. Roon throws up The Chemical Brothers' Gravity Drops before I can make my own selection and again that bass kick sounds great at volume. Actually, on this kind of material, the Triangles are great fun to be around – and an exciting listen!

After reading our recent interview with Colin Pratt from Chord (read it [here](#)), I've found myself delving into more and more rock from my mid-teens and so to Motorhead's Ace of Spades and the fantastic anti-heroin track Dead Men Tells No Tales. At low volume I feel I'm left wanting a little more, but hitting Vol+ on the remote brings rewards and I'm really rocking out to what the Triangles bring to the party, though those looking for more refinement may want to explore the company's Esprit range of speakers. Audiophiles can be a demanding bunch and, let's face it, most people buying these speakers are not going to be your dyed-in-the-wool audio nutter (I include myself in this category so please don't feel offended if you think "that's me!") and if you want to party at volume, then these could well be the speaker for you – in fact, I pop on more Motorhead in the form of Overkill and loving it and, as Lemmy says, and it's very apt with these speakers, "The only way to feel the noise is when it's good and loud" – wise words from the much-missed Mr. Kilmister. I suppose what I'm trying to get across to you is that these speakers, like Lemmy, certainly know how to party!

However, the world is not only made up of techno and rock freak and so I line up Tracy Chapman on Roon. Again I'm really not disappointed at all, with the Boreas throwing Chapman's voice out into the room and without adding much colour at all – Behind The Wall sounds really beautiful and her voice is presented with a clarity that belies the price of these loudspeakers - I really wasn't expecting this at all. Being hyper-critical they are not as uncoloured as our reference floorstanders, but there's little to whine about here. There's also a good level of detail to Chapman's guitar playing and you get a very acceptable feeling for the song and the production – very accomplished for the price!

When I first plumbed in the Boreas I thought there was a fault with the left-hand channels tweeter. There was a very slight tizziness and so I contacted Triangle's press guy to tell them so and I took them out of the system – next day the left-hand channel went on my amp. This ability for the Triangles to highlight what was a very minor warning sign is pretty impressive I think.

OK, these speakers are not going to win the contest for the most revealing speakers overall and they are certainly not perfect, but for £1200 they are great fun and especially at volume. If you are looking for the ultimate refinement then you will want to look elsewhere, I reckon, but if you want to PARTY then these could well be the speakers you have been looking for, with the added bonus that, in actual fact, they play a wide range of music very well indeed. In the final analysis, they are a nicely balanced speaker.

So, overall I really enjoyed the Boreas and think that if you want a good pair of speakers to perhaps put into a home cinema then these are a good value, great sounding choice with the benefit of doing two-channel really well.

In France I know which shops these loudspeakers will be bought in (Boulangier (where they can currently be bagged for €499, which is outrageous value) and Darty) and Triangle have created a product that fits this market very well – a mid-priced product that shifts in numbers. In the UK I think the Borea will struggle a little more with regards to being bought in huge numbers, but that is not to say they are not a relevant product for this market too.

If you get a chance to hear them and are in the market for a fun loudspeaker that won't break the bank, then do so.

AT A GLANCE

Build Quality: Clearly built to a price but solid and well put together.

Sound Quality: A party speaker that likes to be turned up loud but one that can also do a good



degree of subtlety too.

Value For Money: Triangle has done a great job at creating a speaker with great mass-market appeal.

Pros:

- Deep bass
- Reasonably uncoloured
- Exciting and involving
- Good imaging and soundstaging
- Fairly well integrated across the frequency spectrum
- Like to go loud.

Cons:

- Bass not as tight as some other speakers
- Do like to have a bit of volume to sound at their best
- Not the most refined of speakers
- Not the prettiest of speakers

Price: £1199



CABASSE PEARL AKOYA

Cabasse Pearl Akoya is a powered speaker with onboard streaming capability and costs £1499. Janine Elliot takes a listen.



Janine Elliot

I have always been amazed at the Cabasse La Sphère, not just its substantial size and price (£197,000) but also its exceptional sound, so I was quite excited to be sent a wifi/Bluetooth active speaker using trickle-down technology from that enormous “Sphere”. This tiny sphere, the Pearl Akoya, is the little sister to the Cabasse Pearl, and retails for £1499, whereas the larger Pearl at £2599. It is a streaming loudspeaker using Cabasse’s own StreamCONTROL app designed to be used on its own – as in this review – or as a stereo or multi-room setup. Despite being infinitely smaller than the Sphère it should nevertheless be taken equally seriously, even to me, a rather sceptical follower of streaming speakers, admitting to only owning a once’ world’s smallest 4.1cm Bluetooth speaker. To compare the two would be wholly unfair, I know.

Created and developed in Brittany, France, the Akoya is a 220mm diameter, 8kg sphere that is beautifully constructed and available in shiny black or white.

The musical history of Cabasse actually goes back considerably earlier than when its founder Georges Cabasse began the company in 1950. In 1740 in the Vosges Mountains of France was the creation of the very first Cabasse violin. Another 5 generations of luthiers continued this tradition building violins, violas and cellos, but in 1950 Georges decided to continue this pattern of music-making in a new form, that of loudspeakers for the HiFi market. Inspired to create perfection in sound reproduction Cabasse has developed coaxial driver technology, whereby several drivers can be placed in front of each other creating great savings in





space. In October 2014 Cabasse was acquired by AwoX, a company specialising in streaming technologies, as are utilised in the Pearl and Pearl Akoya. The word Akoya is not only a type of pearl from Japan or China, but it also means "powerful and complete". Very appropriate.

CONSTRUCTION

From the very start I could see this was a well-constructed device, and almost as good as the mighty Sphère, with its polished casing in injected resin and fibre. Six layers of lacquer are applied to obtain the depth of finish, and the Akoya is available in metallic black with pure chromium rings, or pearl white with silver rings. All controls and sockets are to be found at the base of the rear. From left to right is the source status LED and reset button. For example, cyan is wifi, ethernet and streaming, green is Spotify Connect, yellow is optical, and Blue (unsurprisingly) is Bluetooth. Next are the SPDif optical and LAN sockets. After the central IEC mains socket is the on-off button followed by a microUSB socket to be used with an external source such as a DAP, and 3.5mm analogue input. In the larger Pearl these last two are USB

and RCA pair respectively. Finally, there is the network pairing indicator and pairing button. Utilising the Cabasse StreamCONTROL app on your phone or tablet the Akoya can be controlled from your device. It not only controls sources, what speaker you want to hear in a multiple set up, but also allows you to EQ the speaker if you so desire. As well as you being able to select bright, HiFi, low, very low, or extremely low tone, it can also set the speaker to best match the acoustics of your room; the app automatically calibrates the Akoya using its own built-in mic and by using sliding frequencies. It also allows you to play internet radio or online streaming services such as Qobuz, Deezer, Spotify, Napster, and Tidal. The Akoya plays MP3, AAC, WMA, plus higher definition files such as AIFF, FLAC and ALAC, (192khz/24bit) and it processes digital signals with up to 32 bits and 768khz.

The unit is surprisingly stable sat on a levelled surface despite the almost spherical shape, and uses Cabasse's tri-coaxial design of 13cm coaxial BCI midrange and neodymium tweeter at the front and a 17cm carbon HELD (High Excursion, Low Distortion) subwoofer at the rear.



With a total amplification of 1050W (300W for mid, 300W high, 450W bass), Cabasse claims that it can actually sound as loud as a concert orchestra in your living room. Quite some claim and something I will talk about during listening. At 22cm diameter, it surely is one loud performer, possibly the very loudest, though playing it loud can have its own problems in terms of control and quality of the audio. For the review I was sent a single loudspeaker, and whilst reviewing it as a single unit I was still conscious of how a pair of units would sound and hence my readings are a fair account. Connecting two is a simple Wi-Fi connection and provides full stereo playback, though you would only need to set up one of the supplied remote controls. Complementing the Akoya's good looks is a beautiful circular remote with the top half revolving to turn up or down the volume. On the top are controls for Preset 1 access, play/pause, previous/next, and the all-important source selection. Finally, the Akoya comes complete with a beautiful custom carrier case, power cable, plus 3.5mm/RCA and micro/USB adapters. The enclosed instruction booklet is very simple, only there to get you connected up to wifi and Bluetooth, as it doesn't give instructions on using the remote, particularly the all-important volume adjustment,

which took me a little while to work out. However, going on to their website I was able to find the all-important operational manual.

SOUND

The Cabasse La Sphère has an enviable reputation so I really wanted to find out whether this diminutive globe-shaped wonder also had an equally rounded performance. Listening was done mostly via Bluetooth and Wi-Fi, plus the analogue input from my DAP's line out. Cabasse compares the acoustics of the Pearl Akoya to that of a concert orchestra, so much of my reviewing was with orchestral and live music, wishing to turn my house into a concert hall. They also suggest it can have vinyl input; well yes, as long as you add a phono-stage or turntable with digital output. It also works well connected to a television, working particularly good in films with explosions and anything low frequency.

First of the music to be played was David Bowie's final album 'Blackstar'. This is a highly compressed album and the Akoya had to cope with two channels of compression mixed down to one, which didn't sound as good as I had

hoped. However, turning swiftly to the Kinks 'Misfits' the sound was very open and with a good clean top end. The bass is particularly strong and given any chance to exude it really came into its own. For example, Saint Saens Symphony Number 2 (Barenboim, Chicago Symphony Orchestra) the Organ entry at the start of the third movement was profound, though the quiet piano arpeggios in the background were still given their space in this mono player. The generous bass was also something to enjoy in "Something in the Air" (Thunderclap Newman). Whilst bass sang, the cymbals could also be clearly heard, showing this player excels at all frequencies.

Continuing the theme of old rock-hits I played "I Hear You Knockin'" from Dave Edmunds. This has highly EQ'd vocals for effect, and the Akoya gave a very capable reproduction; the sphere not sounding 'boxy' as some major loudspeakers can do when only one of the speakers is playing. This made me start to think the Akoya would sound extremely good as a pair. Turning to David Gilmour's 'Rattle that Lock' and the very atmospheric and quiet opening track "5am", this was a very impressive performer.

Despite being mono, it gave lots of depth of ambience with a very clear bass end plus detail from the acoustic guitar. Cabasse talks about the speaker offering a 360-degree homogeneous directivity soundstage. Whilst, yes, there is a sub at the back, and bass is multi-directional, the detail from the acoustic guitar is only clear from the front, it being a front-fired driver and top frequencies being directional. However, I did find it covered an extremely wide area due to a spherical baffle, with it extending much further than a square box, meaning my positioning in the room wasn't critical, although that might affect soundstage in a stereo set up (as a sound engineer I'm not generally in favour of 360 degree speakers!) Listening to the album 'Basie Meets the Duke' and the track "Battle Royal", whilst the soundstage was particularly wide for a single speaker especially the cymbals and brass section, the piano was rather set back. Only the really deep bass and kick drum surrounded the room with sound. Turning up the wick enabled me to fill my room louder than I really should! Yes, it can go as loud as you can bear, so listen to the Pearl at your peril.

To classics and Ravel's Piano concerto in G



Cabasse THE PEARL AKOYA Crédit photo : Mathieu Scia

REVIEW

(third movement, Julius Katchen, London Symphony Orchestra, 24/192), it has a poignant bass drum “bang” in bar two announcing the arrival of the piano, loud enough to wake up my cat asleep beside me. All was clear and extended with good speed and made for very enjoyable listening. That bass could be reduced a little via the app, and for me was preferable. I am not in favour of unrealistic bass end, and sometimes that came across with the Akoya. I did find the piano was at times less clear due to the level of the lower bass. Playing the same music via line-out into the 3.5mm analogue input actually gave a more musical and realistic performance, and which similarly was the case in Supertramp’s “Ain’t Nobody But Me”. The digital input was fine with the most exciting and forceful performance, but the analogue input just topped it further with a more musical and realistic performance. Being able to change the source from the remote or via the Android/Apple app was great but I wish the source selector and indicator were at the front base rather than hidden round the back. Luckily the speaker does verbally inform you of what input you have chosen. Turning to Binaural Baroque (Chasing the Dragon) it was actually very clear at all frequencies, particularly the extremes. That bass was particularly exciting with Pachelbel’s Canon having a great sense of space even from one speaker. Being a binaural album played on a single loudspeaker was funnily enough quite successful! Finally, Mozart’s Symphony number 1 is my very favourite from this composer, reminding me of days learning the piano before my teens. This is such a youthful and innocent work, and a chance for the Akoya to play like a full symphony orchestra (in this case actually a small orchestra). Yes, the Akoya can definitely go loud, but its forte is in its mezzo pianos; it has much more control in quieter volumes or sections of music. Played excessively loud is none the less very good, but you are still aware of a small speaker trying to be a big one. Simple melodic lines, including an ostinato harpsichord, are clear and enthralling but best at lower levels. Working as a pair of speakers takes the Akoya up several levels, and I can see it being a relatively cheap main system in anyone’s home, even with the additional cost of the matching stands (at £299 each). I personally would love a pair of Akoya’s if I had the space to add yet another system! Of course,

as a multiroom system, it becomes even more powerful. Oh, and as to my own 4.1cm Mighty Music Engine Bluetooth speaker, well obviously there was no comparison.

CONCLUSION

This was always going to be an interesting review for me, but I can report that I am actually very pleasantly enamoured with the Akoya. Not only would it look gorgeous in my bedroom, or anywhere, but the sound quality was very surprising for such a small size, especially the bass. Music from a single speaker sounded a lot better here than it did when we had to listen in mono back in the days when I was very young! Only that the bass needed a little taming down at times. Adding a second Akoya will give you a complete digital stereo system at a very good price, and as part of a multi-room system I would heartily recommend the Akoya.

AT A GLANCE

Build Quality: Cabasse really know how to build the very best quality

Sound Quality: Excellent all-round quality, only the bass can be a little too generous

Value for Money: £1499 for a beautiful powered speaker like this is excellent value.

Pros:

- A very lively performer with exciting sound
- A very clean and undistorted performer
- Beautiful looks
- Can go very loud
- Excellent Cabasse StreamCONTROL app

Cons:

- Some may find the bass too forward
- Poor instruction booklet

Price: £1499 plus £299 for stand



OPHIDIAN MINIMO LOUDSPEAKERS

The Ophidian Minimo 2 loudspeaker is, as the name would suggest, a mini-monitor type of loudspeaker. It is made in the UK and costs £900 a pair. Ian Ringstead takes a listen.



Ian Ringstead

I know the Ophidian range of speakers very well having reviewed several of their models in the past from the original Minimo to the then range-topping P2. Gareth James is a talented designer who looked at how he could reinvent the cabinet design of his speakers to control the internal air movement created when drive units play music. Many approaches by many designers have been adopted since loudspeakers were first invented and with variable results, but today with modern analysis techniques, better materials, and parts coupled with some creative thinking, there has never been such a choice of great models to choose from.

BUILD AND CONSTRUCTION

Gareth's approach to the new M2 series was to improve on his original range by using

what he had learned, along with constructive criticism over the last few years to produce a worthy successor. The original Minimo blew me away when I first heard it at a show, and the subsequent review I did was a pleasure. How could such a small speaker produce the sound it did? Like all designers, Gareth wasn't content to rest on his laurels and so the new series is a determined effort to make a real difference. This has been achieved by using a new mid-bass drive unit that has a strong long-throw motor assembly - and of course the new speaker uses Gareth's unique Aeroflex system. The mid-bass unit is 115mm and critically has 65% greater surface area than the previous Minimo - allowing for greater power handling. The Aeroflex technology controls internal air turbulences extremely well to dissipate any unwanted resonances and



smooth out the airflow from the rear port of the cabinet. I tested this by placing my hand behind the rear port whilst playing music at a decent volume level and it was surprisingly noticeable how reduced the airflow and turbulence was. Certainly, in older designs that have a port, you could often hear the distinctive chuffing sound they made as air was escaping. Many methods have been used to try and control that effect, drinking straws being ones - stuffed into the port tube - or dimpled port exits flared in shape. These are all clever ideas, but I believe that Gareth's Aeroflex works particularly well.

The tweeter is 27mm with a Sonolex coated fabric diaphragm and uses a low distortion neodymium motor system. That allows for excellent dispersion characteristics and combined with close placement within the small cabinet, makes for seamless integration of the drive units, whilst creating a very accurate portrayal of the sound. By building the port systems directly into the cabinet structure the outer walls are braced and strengthened, thus minimising panel resonances. Integral rear inserts allow for easy wall mounting - especially useful for surround or background systems.

The Minimo2 was finished in a lovely oak veneer to a very high standard by Timberworx in Sheffield (my home city) and they had a simple cloth grille attached by hidden magnets on the front speaker baffle. High-quality gold plated binding posts are attached to the rear metal plate that is rebated into the bottom section of the cabinet and also incorporates the vents of the port. A really neat touch I thought for a beautifully executed compact micro monitor. I placed the Minimo2 on top of my 60cm wooden floor stands that are filled with sand, about 30cm from the rear wall of my living room and 2 metres apart and firing straight down to my listening position.

SOUND

Exactly as with the original Minimo, my first impressions of the Minimo2 were wow! It's like a magician pulling a rabbit out of a hat. You think "How on earth does he do that?" That made me happy because I knew the next few weeks would be a pleasurable experience. When reviewing products, of course, you want them to all be good if possible, but that isn't



always the case.

The sound field was expansive and detailed, only lacking the extra depth and weight that my Jern's create. Small speakers have always excelled at imaging and detail (look at LS3/5A's as a prime example) if well designed. The Minimo's aren't just monitors, though, as they are meant for your main listening room or perhaps a second system in a study.

Frequency response is 53hz to 25khz (-3dB) so they have a decent bass output for smaller rooms and worked in my living room admirably (3m x 5m approx) and not sounding bass light at all. I had large floor standers a year ago which could go pretty low, about 35Hz, and they certainly drove my room with floor-shaking abilities if I pushed the volume up, but unfortunately, as good as they were, (Audio Physic) they could overpower my room and bass boom could be an issue. The Minimo 2, whilst not seismic, produced bass I could happily live with. My criteria for a good speaker are control, detail, imaging, and neutrality. Bass fiends will want more, and I get that, but some of the best speakers I have ever heard in the last 45 years were smaller stand mounters or compact floor standers. The narrow width of the Minimo 2's front baffle aids its imaging capabilities when combined with the quality of the drive units and their integration.

Yello's Live in Berlin was one CD I used to test the Minimo 2's abilities. Boris Blank and Dieter Meier's albums always have excellent production values and so are a good measure of a system's attributes. Synthesised bass can really push a speaker to its limits and so depth and control are paramount. I was sensible with the volume as I didn't want to damage the Minimo 2s and if I treated them with respect they responded accordingly. Like a car, if you gradually increase the speed then the torque of the gearbox will build the speed up without causing any fuss. Of course, you could push the pedal to the metal and go faster more quickly - or increase the volume control rapidly in my analogy - but in either case, damage could be caused. Respect is key, treat the Minimo 2's as they deserve and they purr like a cat being fussed. As mentioned earlier, the stage width was very good with precise placement of instruments with voices

sounding natural and clearly delineated. It was just image depth or projection that fell short of reference standards for my taste. I like the illusion of depth in a recording and this varies from performance to performance and how the music was produced and engineered.

I listen to a lot of jazz by groups such as Fourplay and The Crusaders, because beyond the musical enjoyment I get, the musicianship and recording quality is usually superb. The Minimo 2 provided a great foundation on which to build the performance of each track I played and enjoy the end results. Each musician plays their part, whether it's the bass, drums, keyboards, saxophone, or guitar with the jazz I prefer, and although not everyone agrees with my tastes (my wife in particular !!), the way a speaker communicates with my ears and mind are paramount. The Minimo 2 had an empathy with my ears and emotions that my own speakers (Jern) excel at. As mentioned earlier each musician was clearly delineated, so my brain wasn't working overtime trying to unscramble a cacophony of sound that poorly designed speakers or system mismatches create.

Bass had good weight and linearity and didn't leave me wanting more in my listening room, so it is a credit to the design and bass unit used. Vocals were natural and lifelike with low colouration compared to the old designs of yesteryear.

Top-end detail and sparkle came through again without the dullness or harshness of poor voicing due to good tweeter choice and crossover design. Percussion is difficult to portray clearly and cleanly, treading a fine line between reality and manipulated recording techniques and production. I prefer the soft dome tweeters Gareth uses in the M series to metal domes that became popular in the eighties. Ribbon tweeters can be superb but costs count them out in this design.

I know Gareth experiments tirelessly with the choice of capacitors and inductors for his crossovers to achieve the balance he is after, and it is a never-ending task for perfection - I have seen this first hand when I visited him a few years ago. Trial and error, coupled with patience certainly yield results in the end.

REVIEW

CONCLUSION

Here is a compact design that would fit anywhere if you are spatially challenged or desire a discreet sonic solution. These speakers have excellent sound and are well worthy of their asking price. Many small monitors abound and have always been popular for many reasons - smaller homes and family restrictions, let alone budgetary restraints.

If you want a smaller monitor for a second system, or indeed your main rig, then you should give the Minimo 2's a listen. There are a few dealers out there now who you could visit, or arrange a home trial given the current Covid 19 situation.

Hats off to Gareth for another super design that certainly improves on the original mk 1 which was pretty damned good anyway.

AT A GLANCE

Build Quality: Excellent for the price, smart

looking, compact form, and flexible.

Sound Quality: For their size, spot on.

Value for Money: Superb and well worth auditioning.

Pros:

Highly flexible form expertly executed and superb sound.

Cons:

A lot of competition, but then that's a healthy situation to be in.

Price: £900 a pair.





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DAVIS ACOUSTICS COURBET 4 LOUDSPEAKERS

HiFi Pig take a listen to the Davis Acoustics Courbet 4 Loudspeakers from France and costing €2200.



Stuart Smith

French brand Davis Acoustics may be a new name to many but in actual fact they have been around since 1986 when Michel Visan, previously of Audax and Siare Acoustique, set the company up after Siare was bought by Harman. Initially, the company sold drivers and kit loudspeakers, they still do, but in 1993 they launched their first finished loudspeaker, the Davis Acoustic DK200. All the manufacturing of speakers is carried out at the company's facility in Troyes (Aube) in France and all their speakers and drivers carry the "Made in France" guarantee. I am surprised that Davis do not as yet have UK Distribution.

Davis Acoustic has a wide range of speakers, drivers, and kits but the loudspeaker we have here is the Courbet No4, a rather elegant looking, two-way, forward-firing bass reflex

design with a 28mm soft dome tweeter and a 13cm Kevlar midrange/woofer. The review sample arrived in a piano gloss white but other finishes are available.

The speaker arrives well boxed and there is a separate wooden base-plate you have to bolt onto the bottom to support the speaker that has a trapezoid shape. The tap test proves the cabinet to be pretty inert. Frequency response is 51-25000Hz, efficiency 90dB and they stand 83.5 cm high (16cm wide and 22 cm deep). Fit and finish are very nice and the engraved aluminium back panel with the name and some technical specs whilst the plastic binding post plate has a single pair of rather nice posts that will accept all the usual suspects.

All in all, this is a lovely looking and compact package that

will suit the modern home, falling, as it does, somewhere between a bookshelf and medium-sized floorstander floorstander. Siting was a doddle given the front-firing port and I had them well out into the room and being fed by a pair of Merrill Audio Thor amps, which in turn was being fed by a Leema Acoustics Pulsar DAC/pre (our new reference in the main system) with cables being Tellurium Q interconnects, Way Cables speaker cables and power cables and power management by Atlas.

THE SOUND

These are pretty diminutive speakers playing in a relatively large room and so they were always going to be up against it, but they do a pretty good job if you sit relatively near/mid-field. With that said, you can crank these up pretty loud and they don't lose their composure. Of course, they only go down to 51Hz so you are never going to get that visceral bass kick, but they are great fun to listen to. However, they do need it "up 'em" and really come into their own when the volume button hits – actually they sound to be a much bigger speaker than they actually are.

As I'm typing up my notes I'm sat listening to Qobuz/Roon and just letting it do its stuff and I have to say, I'm rocking out quite a bit with these. Motorhead's Bomber off the No Sleep album (I just found out I was at the gig it was recorded at – Leeds Queens Hall 28/3/1981) and I've no complaints at all; of course, the bass doesn't represent the visceral attack that Lemmy would have wanted, but it's a fun ride. In comparison, when playing this on our main speakers, despite it being a bit of a crap recording, you feel the bass – the Courbet No4s were never going to be able to achieve what an active dual 12" per speaker system can, but I still enjoyed the listen and Philthy Phil's drums at the end of the track were particularly enjoyable. In fact, as the next track Roon throws up Get Back in Line from the Motorhead Motorhead album sounds fab and I'm drawn particularly to the drums again which are crisp and well positioned in the fairly encapsulating soundstage.

Switching from the heavy-fest, I pop on Fleetwood Mac's Rumours which has been a long-term reference for me and probably one of the

records that gets played more than any other at Pig Towers. The opening track, Second Hand News, just draws me into the music with snare hits and guitars sounding tight as the gnat's proverbial. Imaging is, as you would expect, pin-point accurate in the mix, and whilst these speakers don't have the air at the top-end that our Audiovector R3s have they have a crispy accuracy to them which is reminiscent of good monitor speakers. I'd not say there is a three-dimensionality to the soundscape that you would perhaps get with the older Audio Physic offerings, but there is certainly something pleasing about these speakers that pulls you into their presentation. Again, the word I think I'm grappling for is "tight", but there is also bags of detail in there too. Dan that writes for us talks a lot about micro-detail in recordings and these speakers certainly seem to pull a lot out of the recording...or present that detail in spades; guitar on Never Going Back Again sounds fab and starts and stops on a pinhead – no doubt down to the smaller and incredibly nimble fast driver. Again, I've no complaints here and really loved listening to this record through the Davis loudspeakers.

Neil Young's Little Wing from the excellent Homegrown album (thanks mum and kids for the vinyl copy and tee-shirt) sounds truly wonderful through these and, again, I'm wanting to use the word detail. Young's voice is presented very nicely and the rasp of the harmonica sounds just right. These speakers excel at presenting the mid-range I'd say, which was expected to be the case given their mid/bass drivers size and composition. Fast is also a word I'd like to add to the lexicon here and, as previously mentioned, they stop and start on a pinhead. Now, this is perhaps an unfair comparison but I'm going to make it anyway. I love how really good monitor standmounts can image and present the musical landscape and these Davis Acoustic speakers remind me of this – there is a lot to be praised about the presentation of smaller standmounts and these Courbet No4 capture that, but give you a little bit more too.

Time to pull out our killer track (Daft Punk's Contact – a track that will demolish a speaker and one we use just for that purpose – if a speaker can't play it, it doesn't get a review!). Of course, the bass kick doesn't have the visceral





REVIEW

quality that we are used to, but get those toms, snares and hats dancing about the soundstage! And the speed at which they come and then go! This track is more complex than many think, and the sounds in it are too. A good system will let you hear the make up and layering of synth sounds and I'm loving what I'm hearing here, in fact the amount of detail is pretty astonishing.

Roon throws up Bango by the Chemical Brothers and whilst still not having the oomph I'm used to, the bassline is pretty on-point. There's a synth sweep in this tune that has a clever effect that throws it out and into the room and the Davis' present this really (REALLY) well with the sound I'm banging on about feeling as if it is just to the left of me – a great achievement for a speaker of this size and price-point. In fact, despite what I said earlier, I could be listening to one of the older, and much pricier, Audio Physics speakers at this point.

Massive Attack's Unfinished Sympathy is a joy, lacking only that lower-bass, but for the fun factor and sheer musical enjoyment, I'm loving these speakers. The strings on this track soar in the mix and the Davis present that wonderfully. It's a similar story with Rhythm and Stealth from Leftfield, and whilst I am missing that gut-punching bass I'm used to I'm getting right into the album.

It's been a bit of a heavy and techno-fest with these speakers whilst I have had the pleasure of their company and that really shouldn't be the case given what I've said about the bass, but, genuinely, I've just been so dragged into the recordings that I found it hard to move on. However, Carole King's Tapestry was calling and I thought this would give a little balance to this review. A Natural Woman sounds really beautiful on these speakers and there is that connection to the music - an emotional connection that I feel what music and good reproduction is all about. Piano is presented very well and sounds like it should, and her voice is projected slightly out into the room. What is interesting is you can hear the production that is going on here and very "of its time" and that's down to the level of detail these speakers allow for. An overexposure to detail can be fatiguing when listening for long periods, but none of it, I could listen to these for hours and days on end.

CONCLUSION

These are very good loudspeakers and deserve to be auditioned if you get the chance.

No, they don't go low, but what bass you do get is tight, tight, tight...and bouncy too. In a smaller room they will perform very well and you will not miss that bass – as I've said in the past, I think some speakers go too low for some smaller modern dwellings, and the Courbet's get that balance of things right.

They are fast, present a great image, and look fab...and as such I highly recommend them. Were I in the market for another speaker for a smaller room in the house, these would most certainly be on the short-list.

AT A GLANCE

Build Quality: Very good but I would have liked the plinths to match the finish of the speaker.

Sound Quality: Tight and detailed, lacking only in the bass in our large listening space.

Value For Money: Very good value I think, but resale may be a problem in the UK given they are relatively unknown...should you want to part with the, though you very well may not want to.

Pros:

Fast, tight and detailed
Great imaging
Not too much bass so could be ideal for smaller listening spaces

Cons:

Bass light in big rooms
Need some watts up 'em

Price: €2200



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iFi AURORA MUSIC SYSTEM

Costing £1399 the iFi Aurora Music System is an all-in-one streaming music system that boasts a plethora of features and innovative touches. It's also striking in its aesthetics and design. Stuart Smith takes a listen.



Stuart Smith

Let me say from the off that from the first time I clapped eyes on the iFi Aurora at a glitzy launch party back in May 2019 during the High-End Show in Munich (see image below), I thought it to be, perhaps, THE most striking bit of audio kit I had ever encountered. Let's be honest, HiFi isn't exactly known for the aesthetic beauty of its design, though personally, I do like a lot the more "form follows function" designs, but it is wonderfully refreshing to see a company taking the bull by the horns and going all out to create something very different, but also beautiful. Of course, there have been beautiful audio components before; Dieter Rams for Braun, the Lescon AC1/AP1/3 pre/power amps by Allen Boothroyd, and the original Transcriptor turntables – among others, but in the main, we are given non-descript boxes.

DESIGN AND FEATURES

The design of the Aurora is architectural, striking, and thoroughly modern, but then with a nod to earlier design movements. Its designer, Julien Haziza, drew inspiration for the Aurora from Japanese industrial design, and Japanese architecture and architects. The Aurora is clad in bamboo with an aluminium frame. The whole thing, despite all of this, feels relatively understated and classy looking and it should fit into any modern home perfectly, and, indeed, the juxtaposition of the Aurora in a more traditionally furnished home would be a real talking point. My only concern about the design is the pretty sharp point on the top of the aluminium frame, but that's mainly because we have idiot cats – I left the protective silicone protector on.



REVIEW

The Aurora comes well packed and includes a remote and a power lead. The unit weighs in at 15Kg (33lb) and measures 59 x 27 x 28cm (WHD) (24 x 11 x 11 inches) and can be carried about by the aforementioned aluminium frame – or that’s how I carried it about, anyway. So, basically, what we have with the Aurora is a wireless music system that aims to offer a “sonic experience like no other table-top, all-in-one system”. It has no less than six drive units that are just about visible through the bamboo slats, plus another two bass radiators that are found underneath the box. The drive units are made up of four 4.5” (120mm) coated paper cones of the wideband variety and a pair of 1.1” (28mm) silk dome tweeters. The two 8” (120mm x 200mm) passive radiators are made from steel. iFi claims a response from these drive units of 27Hz to 40KHz. The active drivers are powered by a hybrid amp that sports a Russian 6N3P tube which is used in the pre-amplifier stage of the amp.

iFi calls this driver array “Soundstage by iFi” and it adjusts the level of output from specific drivers at specific frequencies to give “a room-filling performance”. Not to be outdone, the bass radiators get a name too – True Bass.

Along the front of the Aurora is an OLED display, a window to see the tube/valve and a series of touch-sensitive buttons that are hardly visible until they light up when the Aurora is switched on. The buttons perform the usual suspects of functions, plus ones to aid you in setting the unit up. One such button is named ART (Automatic Room Tailoring) – press this button and six sensors (see image below) measure the distance to surrounding walls using ultrasound and then a 32-bit ARM Cortex processor adjusts the output from the speakers to match the unit to the room and the music to the room. Importantly, depending on how you view the importance of such things, all this wizardry happens in the analogue domain and there is no DSP or feedback used, which is the case with most other correction systems.

The DAC used in the Aurora is the ESS Sabre Hyperstream chipset whilst Bluetooth is dealt with by a Qualcomm chip which “routes the raw digital Bluetooth signal to a specialised Sabre DAC chip to convert the signal from digital to

analogue, with a filter controlled by a Femto precision clock system”.

As well as all this it supports Spotify and Qobuz, but no Roon readiness as yet. It will support files up to 32Bit/192KHz via WiFi. You can also get your music into the unit by USB storage or an SD card, and there are inputs for Coaxial and S/PDIF so you can plug in your BluRay, games console, or tellybox. For those of such a bent, you can even plug your Alexia into the Aurora via an RCA/3.5mm inputs – though you can, of course, use these to add more traditional items like a CD player or any other line-level device – add a turntable with a built-in phono-stage (or an external one for that matter) and you have a full system. Oh, and it fits perfectly on top of the IKEA Kallax units that it seems just about every audiophile I know has for record storage!

PHEW!

SET UP

The set up was a relatively painless process and I chose to go wireless from the off as I reckon this is how most folk will use the Aurora – though wired connection is of course possible. I downloaded the free MUZO app, pressed the WPS set up button on the Aurora, followed the instructions on the app and hey-presto I had access to all the music on my NAS drive, and all within ten minutes of unpacking the Aurora. Of course, as mentioned, I also had access to my Qobuz account – plus a whole host of online streaming services - though I really do wish it had Roon capability. The MUZO app itself is a doddle to use, though you can also use your preferred UP and P app – find the Aurora, set it up as a player, find your NAS, set that as your library and away you go. Bluetooth is likewise simple to set up – pair your smartphone with the Aurora and Robert’s your Mother’s Brother.

SOUND QUALITY

I’ve heard a good few all in one units in my time, but the Aurora is, in my humble opinion, the best sounding one I’ve yet to hear.

The Aurora was put on top of one of the ubiquitous Kallax units down the left-hand side of our





Ultrasonic Sonar

large listening space and about six inches away from another upright Kallax to its left. I deliberately didn't want to think about positioning too much and simply put it where I thought it looked best and was most convenient – it is, after all, a lifestyle product rather than a die-hard audiophile product.

First of all, let me say that the user experience is fab, something that can't be said for all units like this. MUZO is a pretty cool interface, though the spinning disc on the screen when an album is playing can get a bit tedious, and everything works without any hassles or headaches, despite our abysmally poor internet connection. I didn't experience ANY dropouts at all.

Bass response is impressive for such a compact box of tricks, very impressive as it happens, and I had no complaints at all, even when playing more challenging tracks – and I have a good few of those. Playing *Going All the Way* by Spiral Tribe I found the bass to be guttural and fast, though not as trouser-flapping as with our main speakers – not surprising given they have 2 x 12" drivers and a 1000 Watts of power per speaker. Certainly, the bass was more visceral than I've yet to hear from this kind of product. If you are reading this and thinking "this sounds like a glorified ghetto blaster" then think again! Even at loud volumes the Aurora never got flustered, even on hectic techno material or dub reggae. Certainly, those passive radiators on the bottom of the Aurora are adding a good bit of weight to proceedings at the very bottom end. One thing that did cross my mind was that if our Kallax units weren't weighed down with hundreds of records there may have been resonance/rattling issues. Whatever, this wasn't an issue for me, but worth bearing in mind when positioning an Aurora, though playing 808 States' *Tokyo Tokyo* (a very bass-heavy tune) there was some feeling that a more solid surface would have been more suitable, or perhaps a dedicated stand for the Aurora with isolation – bamboo chopping blocks and Sorbothane, anyone? Of course, you can mess with the bass (three different choices – I found "Bass 3" was best for most music) and I found that pretty effective.

At this point, I have to be honest and say that I could certainly get on very well with the Aurora

as our only source had it not been for the fact that we have been spoiled for choice on the kit front and live in a house big enough to house it. In the kitchen, bedroom, dining room, or if you live in a smaller apartment, I don't see the Aurora being anything but excellent, or indeed having much competition – though you should certainly check out the competition to make your own mind up on that given the aesthetics – though the Aurora suited me absolutely perfectly.

Now, where I plonked the Aurora was, as I've stated previously, not really ideal and not really thought out a further than "it'll look pretty cool there" and so I really wasn't expecting much by way of soundstaging and being down the side wall certainly didn't help in this respect. However, shifting myself to the corner off the sofa and facing the Aurora directly improved this pretty drastically. OK, you aren't getting the same width and dimensionality you get from a properly set up pair of loudspeakers, but it ain't half bad with the room being filled, as per the marketing spiel, "with music".

Back to the tunes and old favourite in the form of the fantastically wonderful Roy Harper and his sublime *Bullinamingvase* (see it's not always a Teknival chez Pig Towers!) and what a treat it is on the Aurora and I almost forgot I was not listening to a "proper" HiFi with proper big speakers. The room really is filled with glorious music and it's all there, though obviously on a smaller scale than I'm used to. With that said, you do get used to the presentation very quickly and you really do forget how diminutive this package is when compared to our other systems. Where the Aurora really scores is in the upper and mid-bass frequencies and then through to the tops. This kind of music really plays to the strengths of the Aurora. Clarity and coherence are words I would use, with everything being very enjoyable and foot-tap-pingly splendid.

Bluetooth is simple to set up – pair it with your phone and then a presumably tiny woman hiding inside the Aurora tells you that pairing is achieved and off you go. Sound quality is pretty damned good too (I was expecting it not to be, as I'm just not a fan of streaming via Bluetooth), though from a sound quality perspective

REVIEW

streaming certainly has the edge. I used the Bluetooth function to stream via YouTube and the like without issue, accepting the fact that music via YouTube is obviously going to be compromised.

For the couch spuds out there (and here) you can scroll through which input is active via the remote. I think that what buyers of the Aurora will use it for is for to become the hub of their aural entertainment. It doesn't take up much real estate which is a good thing for modern living environments and you can attach, as mentioned, pretty much all your entertainment devices. Really, you don't have to be an obsessive collector of boxes of electronics to be able to enjoy your music to a very high standard. And that's the thing, most people that buy this don't want the hassles of lots of kit and would really relish a one-box solution like this.

CONCLUSION

Let me say from the get-go, this is a very good sounding bit of kit in its own right, with the caveat that if you push it too far in the bass department it can resonate your furniture (if it's a bit flimsy, or has ornaments on it), and I applaud iFi for having the guts to take what could have been another nondescript box and instead creating an interesting and great sounding box of kit. Really it's like a piece of sculpture in itself, with the added bonus of playing your tunes.

The acid test, as I bang on about a lot in my reviews, is could I live with this unit long-term? Yep, I could, though it's not going to change my warped audiophile with many boxes sensibilities and I'll not be getting rid of those in exchange for the Aurora, but then we are talking systems that have taken years, if not decades, to build and with the expense that is inevitable. Actually, I really loved the Aurora – it looks stunningly fabulous, sounds great (and not just for a small all-in-one), has great connectivity, is simple to set up even for Luddites like myself and will really press all the buttons for a music lover looking for a one-box solution that could potentially grow (adding a turntable etc.).

Well done iFi, this is an excellent product – one of my favourites this year! It's certainly the best of the all-in-one units I've yet to hear and comes

in at an attractive price and the award reflects this.

AT A GLANCE

Build Quality: Excellent is the only word that I could use here. Add to that the interesting design and it all adds up to a great package. The sharp bit on the top of the frame does need a cover I feel, but they are provided!

Sound Quality: Actually, and surprisingly, very good sounding and not just for what it is. With sensible positioning on a solid surface, it can sound VERY good. On flimsy surfaces and if pushed it can resonate furniture, though, if sensible, that bass can be brilliant.

Value For Money: It's not cheap but I think it is a solid purchase for its intended market. Obviously functionality and styling have added to the cost.

Pros:

- Eye-catching design
- Lots of connectivity
- Easy to set up
- Good app
- Can grow with the user
- Great sound.

Cons: Some will consider it pricey

The spiky top of the frame could be an issue for some.

Price: £1399 €1599



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HEGEL H95 AMPLIFIER

The Hegel H95 Amplifier is an upgrade from the company's H90 amp but there has been no price hike from the £1500 asking price of the previous amp. Alan McIntosh takes a listen.



Alan McIntosh

I've increasingly been an avid fan of Hegel for a couple of years since I came across them at some shows and then invested in an H190 amplifier after really being sold on them at the North West Audio Show hosted at De Vere Cranage (cant wait to get to back in November this year !). Since owning and loving the H190 (see my recent review) I recently bagged myself its little brother, the H90, for my second system based in my dining room come home office. Like many of us, I'm spending far more time there instead of being on and off planes or visiting my local company's office, so I've been investing in it. (I don't know about you but my lockdown spending on hifi is borderline addiction level!). When Bill Leigh at Auden Distribution, Hegel's wholesale partner in the UK, contacted us to say there was a new H95 coming soon but still under

embargo and would we like a sneak preview I didn't need to be asked twice. Having the H90 and H190 puts me probably in quite a unique position comparison wise, so it was going to be interesting to find out more!

CONSTRUCTION

Like all the Hegel range the H95 is an understated Norwegian design of simple elegant casing with a clear to read, white text OLED display (offering source, volume, digital depth/frequency and settings menu information) flanked by a source selector, and volume rotary knob. In this case in the same dark matt black, its power button secreted below the front so as not to spoil the aesthetics and a 6.3mm headphone socket sitting to the lower right and the clean Hegel logo above the digital readout.



Around the back we have plenty to play within the digital domain with 3 Toslink/optical, 1 digital coaxial and 1 USB input as well as RJ45 Network input (for firmware updating and also for streaming audio) reflecting the ongoing pivot of many listeners who want streaming integration and less physical boxes either from web sources such as Qobuz or Tidal, or who have NAS solutions, as well as those who already have digital sources such as CD transports, Hi-Res streamers and laptops, as well as TV's for those with home cinema setups. It's also fully Airplay and Spotify connect enabled.

Essentially the H95 is the H90 but reworked extensively to substantially upgrade the digital end of things and bringing the same high quality and (beautiful sounding) integrated DAC, network and streamer electronics from the H190 downstream, as well as minor tweaks to the power and analogue stages. This overcomes the issue of the H90's DAC and network functionally becoming somewhat obsolete in the near future and beyond upgrading sound quality, introduces things like IP identification and an element of future-proofing via firmware upgrades over the internet via the on screen OLED menu, as well as Spotify Connect (lacking on the H90). Additional features include being able to configure each input to allow for Home Theatre bypass and setting up things like maximum volume level individually for speakers vs headphones, as well pre-configuring startup volume (however this does require the more advanced R8 remote control that comes with the H190 and above and is available to purchase separately for around £95 (at time of review)

The streaming capability is extensive and includes "wake on LAN" meaning (for the non IT doctorates among us) that the amp can be in "off" mode and you can wake it up by simply streaming to it. Handy if you are sitting close by in your PJ's on a Sunday morning with a nice coffee and do not fancy actually having to get up to physically turn it on. The H90 is fully UPnP/DNLA compliant so you can choose the control application you prefer to suit your phone or tablet – getting around the often frustrating situations of either being given a proprietary app that is clunky or being limited to either Android or iOS. For iOS I'm using MConnect

and for Android my app of choice is Bubble-UPnP - both work equally seamlessly with the H95. Connection to the Hegel couldn't be simpler – simply plug in a LAN/Ethernet cable from your router and you can "see" it is a rendering device on the app like you might see a Sonos or Sky box etc. Then simply stream from Qobuz, Spotify, Tidal or your NAS box as you desire.

From the analogue lovers among us (and I run up to 3 analogue sources at any one time) there are 2 unbalanced RCA inputs as well as one variable out if you fancy adding a power amp. For those running a Home Theatre setup, the inputs can be set as fixed via the Hegel's updated settings. Solid quality speaker binding posts (banana or bare) and an adequate unfussy plastic remote complete the picture. Hegel remotes are universal and will run other components in the range. You also get a lovely, simple yet informative manual with Hegel's typical Norwegian landscape cover design – user manuals often get overlooked by manufacturers, so again it is a point of praise here for Hegel.

The H95 is rated at 60W per channel into 8 ohms, with a minimum load of 2 ohms, has an industry-leading "grip" (speaker damping) 20 times that of most, with less distortion thanks to their proprietary SoundEngine 2 technology and a signal to noise ratio of more than 100dB.

Anders, Bent & Joakim are the trio of musical magicians responsible for the H95's design and posit the SoundEngine2 technology as the key to why they (and others including myself) say Hegel sounds better. Acting somewhat like an internal noise cancelling system, the SoundEngine 2.0 computer is "listening" to what's being fed into the amplifier and samples the outgoing signal and uses any differences to calculate a correcting signal a bit as a noise-cancelling headphone does. So while you may "only" be getting 60W you are getting a "class-leading" 60W!

SOUND QUALITY

Having the H90 already here I find myself being able to compare the upgrades to the H95 side by side which is not something I am sure often happens.

REVIEW

As usual my first test with most analogue components is the Abbey Half-Speed master of Simple Minds' New Gold Dream (81/82/83/84) - Someone Somewhere (In Summertime) gives away so much when a system is or isn't able to perform - its wonderful bass & percussion, great guitar and richness of melodies is a great background for comparison. The H95, as with the H90, does a great job and I'm happily tapping away to the rhythm and continue to do so through Catherine Wheel and Colours fly. The sound is refined and unmuddled, never over clinical or "shrill" - very organic without being too warm, and the grip is clearly in evidence keeping everything in order. That bass delivery is great but not at all bloaty!

Running from a Tape Project Master Copy 15ips ¼" tape of Sonny Rollins' Saxophone Colossus it's clear how great the analogue end of the Hegel is, and the SoundEngine2 keeping any distortion at bay as Max Roach opens with those drums on St Thomas - it just hits you, tight but alive, a joy to listen to - timbre and decay, in the room level reproduction but not "tinny" as they can sound if poorly handled, in comes Rollins, the sheer neutrality of the H95 allowing that Sax to do its thing wonderfully.

The aim here really is to test out the digital end of things and to judge any gains over the preceding H90. For this I decided to stream from my Auralic Aries G1 to get a sense of the DAC in the H95, then I'd move onto streaming from the Hegel own system via UPnP/DNLA. Switching back and forth between the amps, swapping coax, power and speaker cables to retain as much consistency as I can. Cards on the table - this is no "instantaneous" (but is quick) or "blind" A/B and I'm a great believer that as reviewers at some point we are subjective, but it's an imperfect world we Audiophiles inhabit and I trust my ears as well as the next person.

First up - Big Love from Fleetwood Mac's 2017 remaster of Tango in The Night (Qobuz, 24/96). Bam! A big step up indeed. That new DAC simply adds a whole other dimension around bass fullness, smoothness over the whole spectrum, and is quite a bit more natural sounding than the H90 (which is very good to start with) - the jump is honestly much more surpris-

ing than I expected. I had to go back to the H90 to check and that I wasn't imagining things, The H90 is good for sure, but lacking the extra oomph the H95 brings to the table. It's not colouring the sound, but allowing it to breathe fully is my interpretation. The transparency, especially around mid's and highs, really is a joy and coming from warmer amps can actually take some time to get used to but once you are there you realise what you've been missing. The dynamics coupled with a pure black noise floor really offer up all the artist has to offer. Well played Hegel!

Over the next few days, trying different sources and music there was a consistently positive impact from the H95. It has the H90 looks but it's a whole new story sonically, and ever more so on the digital front than analogue where I felt there was a small improvement on an already very good delivery.

CONCLUSION

It was no surprise I'm sure to anyone reading this, that I was going to enjoy the H95. I'm already being an open fan of the Hegel sound, but it really was a surprise how much this H95 steps up from the H90 and for anyone not looking to drive an overly large room, or monolith scale speakers (Try the H190 or upwards for that) and who wants clean aesthetics, great streaming and digital transport options, enough analogue inputs for a turntable and maybe a CD and that wonderful low noise floor and beautiful organic and detailed signature Hegel do best, this must be on your audition list. Hegel I think are continuing to be a "one to watch" manufacturer who, if they continue on this line of quality and focus, can only go on to even bigger things. The upgrades on the already great H90 are well-considered and re-position the H95 as a front running contender in any race at this price point, or somewhat above I would say.

AT A GLANCE

Build Quality: Scandinavian minimal elegance with a rock-solid build and high-quality electronics and power under the hood. Matt black finish and styling are lovely. Adequate and unfussy remote.

Sound Quality: A step up from the H90 for

REVIEW



digital, the already great Hegel sound remains overall combining incredibly low noise floor, clean but organic reproduction and feel and class-leading grip. Transparent, dynamic and crisp - a must listen.

Value for Money: At this price, with this level of sound quality, build quality, range of inputs and streaming capabilities included this is a no brainer! Incredible value.

Pros:

Superb quality DAC and streaming capabilities, class-leading grip and low distortion, clean yet organic, unmuddied sound quality, very high-quality execution of build all round. Ease of setup and control.

Cons:

Honestly at this price and with this quality I would have to be super picky so will settle on it being a bit light on analogue inputs for those rare among us with many analogue sources like cassette or R2R.

Price: £1500 rrp (same price point as the previous h90)





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SYNTHESIS ROMA 98DC POWER AMPLIFIERS

The Synthesis Roma 98DC hails from Italy and costs a couple of notes under €5000 for a stereo pair. Janine Elliot takes a listen.



Janine Elliot

I had several reasons to get excited at reviewing the Roma 98DC from Synthesis. Not only did it combine the excellent KT88 tubes but it also used one of my favourite valves, the 6CG7, often seen in Audio Research and Stax amplifiers due to their excellently detailed and musical sound. This is a mono amplifier meaning you will obviously need two, and that ticks another box for me, or rather two. At under €5000 for a pair this is extremely good value. The word 'synthesis' means the combination of components or elements to form a connected whole. The more I listened to this power amplifier the more I could see that all those components – more on those later – worked in tandem to produce a highly musical and connected entity. The "Roma" series is one of three lines of products from the company, and this is the only power amplifier in a

large line-up of tube and hybrid integrated amps and CD players. Synthesis has made power amplifiers in the past; the 'Theatre' and 'Celebration' went out of production some years back. Synthesis Art in Music, to give it its full name, was founded by Luigi Lorenzon in 1992, with their first success being the Nimis dual-mono integrated. Each product is totally handmade within the company in Morrovalle, Italy, with particular care and attention to the transformers. This latter point is worth mention. Luigi's father founded FASEL in 1961, a company making transformers for valve amplifiers, and which rapidly became a significant manufacturer of output transformers, power transformers, chokes, and inductors for musical instruments. It is, therefore, not surprising that Luigi himself would have learned a lot about transformers, later deciding



to combine his acquired technical knowledge with his love for music to create Synthesis Art in Music. The output transformers in the Roma 98DC are hand assembled in the company and are notable for their particularly wide frequency response and very low distortion. Synthesis are a small company with Luigi in R&D, three gentlemen working in production, and one in administration, plus Ludovica in PR, who kindly supplied the review sample.

CONSTRUCTION

What is immediately noticeable is the use of lacquered wood on this and other Synthesis models. This really was a good-looking amp; supplied for me in an almost Ferrari-red wooden front panel with black frame and valve guard. Other colours are available, including lacquered piano black, lacquered dark mahogany, and the two aluminium finishes, black and silver. Other finishes available on request. There are 4 valves; a pair of KT88s in push-pull and ultra linear configuration, delivering the ample 80W power-stage, plus the 12AY7 double triode input stage and 6CG7 driver. The 12AY7's later brother was the 12AX7 (ECC83)

which had more than double the output, but the 12AY7 was chosen because they produced the best sound for the Synthesis, in that all-important first stage. Indeed, the 12AY7 has a rich warm sound, which was apparent when listening to the Roma 98DC. One can alter the bias on each of the two KT88's if, for example, you replace the tubes, but you will need an Alan key in order to remove the guard, however a screwdriver for bias tuning is supplied. An 80W valve amp for under €2499 each is a very good price, and the website stresses the "almost maniacal attention to detail" going into producing it. There are two sets of loudspeaker outputs for bi-wiring, a balanced XLR input and a choice of unbalanced RCA "direct" and RCA "filtered" inputs – the latter has a -3dB attenuation at 20Hz and 20KHz. Obviously, you mustn't connect to both RCA sockets simultaneously, and there is a switch at the back to choose between XLR and RCA. Completing the rear is a small screwdriver volume control to finely adjust to get a perfect match between the pair of monos. Overall build quality is excellent, as is the instruction book completing the package. There is no indicator for the off-on button, though the front VU meters light up. In a bright room the illumination might



ROMA98
80W Tube Mono Power





not be apparent so I personally would prefer an indicator as well. The logarithmic VU meters go all the way up to 100W with mid-position at 1W. They seemed accurate. All construction is done in-house. This is not a designed-in-Italy-but-made-in-China affair. It is all done in house. This is even down to the choice of insulating paint on the metal plates on the transformers, in order to reduce vibration. The whole process includes painting, leaving in the air to dry off, and then putting in an oven for four hours at 100°C exactly.

THE MUSIC

My first listening was Phil Collins 'No Jacket Required'. Tons of digital drums and synths in this, and many an amplifier (particularly transistor) make heavy listening out of it. This valve amp gave an excellent punchy sound with great initial transient speed and full control of the music with an openness that made it easy to understand what is going on in the music. With "Susudio" the digital drums were almost acceptable to my musical ears, and "One More Night" was velvety smooth as a valve amp should be, the solo saxophone coming out of the ether beauti-

fully blended in with the synth and drums. Next on the platter was Andre Previn's version of the Holst Planet Suite, one of my all-time favourite works, not least because I once got to sit on the very chair and touch the piano he wrote it on whilst teaching music at St Paul's Girls School in London. Only the very top percussion parts weren't as crystal clear as I would have liked them to be, but the bass was excellent. Side 2 track 2 Uranus "The Magician" had a beautiful clarity to the strings, with formidable brass and flowing flute lines. The percussion has its chance to let it all out, and this is beautifully controlled with an excellent bass drum. I pumped up the amp to over 10W, though the bass drum had plenty in reserve if needed. The last track is my favourite. Such a sad and lonely cry from Neptune "The Mystic". This movement has 7 beats to the bar, which unless a Dave Brubeck jazz piece just wouldn't normally sound quite so musical, especially for a quiet number, but this just flowed so well. All the running lines from the Celesta were brilliantly articulated by the Synthesis. No shortage of top frequencies here. Holst's Planet Suite was written before the discovery of Pluto, though that planet has now been re-classified as a dwarf planet. They think



there are as many as 10,000 planets and dwarf planets in the solar system. That would make a very long work, if Holst was still around.

Keeping with classics I decided to play Mozart's Piano Concerto No23 in A major K488 (Ian Hobson/English Chamber Orchestra) because it can sound rather woolly and confused unless the amplifier can eke out the details from within. My valve Leak Stereo20 can sound so gorgeous but slow and cluttered when playing this, but the Synthesis opened up every instrument into their separate parts, plus the reverb was allowed to hold out to its bitter end. Only the mid ranges were slightly too pronounced, but this was in the recording; playing Mozart's Piano Concerto in D minor K466 (24/96 via my streamer) had a completely open and detailed performance with a much clearer top end. My point, that the Roma 98DC doesn't augment colourations in the performance, but it also doesn't take anything away from the music. If you want over-excitement look elsewhere; this is pure honest music to the highest order, something we should all want. The piano was in the room in front of the orchestra, playing away with effortless ease. This was as good as it gets.

Turning to Muse 'Drones' and "The Globalist", the long string phrases, vocal whistling, lots of atmosphere and a sense of being in the wild wild west were captured so well by the 98DC. Excellent bass end and pin-sharp percussion. Even when Muse let rip all was still highly controlled. The Elgar Enigma Variations spoof was highly successful as were the harking back to 17th century motets at the end. There was so much space in the performance that one could almost touch the musicians. Turning to "Walking on the Moon" (Y H Trio) again there was so much space to breathe but still to be boisterous when it needed to be. All the detail was ably performed with pin-sharp accuracy and ample power in the bass and toms. Again, the saxophone had plenty of breath with the double-bass positioned clearly in the soundstage accompanying it.

Turning to one of my favourite groups, Alan Parsons Project, and their 'Eye in the Sky' album the Roma was able to give a highly enjoyable performance with great ease and fast initial transients, for example, the snare rimshots on the penultimate track. Alan's voice was clearer on the Roma than my own Krell amp which made it rather nasal.



Finally to London Grammar and the album 'Truth is a Beautiful Thing'. This could so easily sum up this amplifier. The sound was so truthful, making for a very enjoyable performance. There was a sense of authority and tightness but at the same time a calmness and delicacy. Nothing was missed out in the performance, including pressing the foot pedal damper on the piano or the vocal breaths. In all the music that I played, there was great retrieval of detail, with a realistic soundstage, and it didn't matter how large or small the instrumentation or dynamics, it covered them with ease and honesty.

CONCLUSION

I get to listen to so many amplifiers and many just sound the same that you can end up repeating the same words each time, but this was different. Not only did the Synthesis deliver with accuracy and speed, but it did so with a musicality that is often missed out in amplifiers. OK, it might not be as creamy as my Leak Stereo20 or as punchy as my Krell, but it was pure honest reproduction of the music, which is what we should all be wanting. €5000 is a small price to pay.

AT A GLANCE

Build Quality: Beautiful wood front piece and good construction throughout

Sound Quality: Highly musical with excellent low bass and detail of sound

Value for Money: €2499 per mono is excellent value for the sound

Pros:

Balanced input
Musical and honest performance
Excellent bass end
I like the VU meters!

Cons:

Nothing at this price

Price: €2499 per channel



ENGLISH ACOUSTICS C21 POWER AMPLIFIER

English Acoustics Stereo 21C is a modern take on the classic (and legendary) Leak Stereo 20. It costs just shy of £4000, is predominantly sourced and built in Great Britain and comes in a range of funky colours as well as any colour you like for a small extra charge.



Janine Elliot

It had to happen, though I do wonder why it has taken so long. To re-issue what is one of the most celebrated amplifiers of all time makes the Stereo 21c THE most exciting review for me for a long time. When Harold Leak released the original Point One Stereo 20 in 1958, he would never have guessed that audiophiles would still be talking about it with lust 63 years later. OK, it might look very industrial and have a very slow and treacle-like sound, but what made it so great was not just that it had a maximum of 0.1% distortion (hence the "Point One"), but because it just sounded so magical. It was only let down by the sophisticated Varislope pre-amp that went with it. Original Stereo 20's can cost as much as £1600 on eBay and are still hard to beat in sound quality today. Step in Wiltshire's, English Acoustics formed in 2018, with Chief

Technical Officer Peter Farrow, ex BBC engineer, and Chief Operating Officer, Jordan Jackson. Having restored a Stereo 20 they thought to themselves, 'why not build one from the ground up'. No one was making them, not even IAG's "Leak" company; they are making the Stereo 130, based very, very lightly on the less able transistorised Stereo 30. Of course, that means English Acoustics can't use the Leak name, and rather than being a new "Stereo 20", they chose "Stereo 21c" to indicate it being a 21st-century incarnation of the iconic 20. Coming in at £3995 it still uses the same ECC83 driver, EL84 output and GZ34 rectifier valves of the original, and most of the components are the same values as the original, but this amp has improvements in all areas, particularly transformers, input stage and safety.



One would find it hard not to think visually of this new machine as just a rebuilt Leak; It looks that close, even to the labelling of the valves on the top. But there is much improvement to the shell; no sharp edges at the sides exposing the underside as in the original which I don't think would pass today's H&S directive. Where that model was destined to be hidden in a wooden cabinet the 21c needs to be out on full show. Available in 12 colours (at no extra expense) including "Lansdowne Gold", "Marlborough Red", "Stonehenge Silver" and my favourite "Dartmoor Bronze", it can also be built in any colour you like for a further £250 (the first 25 to be sold waive that charge). So, if you want it to match your Aston Martin then that is possible. Even the accompanying mains lead is colour matched, and the mains plug even has a "handle" just as in the original, so you can pull it out with ease.

There is point-to-point wiring to the valves as in the original amplifier, and the tubes are identical to the original amp, in this case using Tung-sol valves throughout. The internal capacitors are silver mica caps with paper-in-oil coupling capacitors, and the two big capacitors originally

enclosed in cylinders on the top are German F&T. When these needed replacing on old Stereo 20's most DIYers removed these cylinders and had new capacitors exposed on the top showing through the hole. Not a very good-looking or safe repair. What English Acoustics have done in their new Stereo 21c is take a new capacitor, strip the outer metal and rubber and then paint it and place it in the hole. It looks so good. As to the painting, that is exceptional, and it should be, bearing in mind EA's workshop sits above an Abarth paint shop. It is painted, polished, assembled, and polished again. I wish my car looked this good. In terms of pluggery, the 21c looks identical to most mod'd Stereo 20's; gold plated RCA's on the left and 5-way speaker terminals at the right side (yes, the amp was originally designed to sit sideways, and not front to back, as most people place it).

The original screws to hold speaker wires and the cheap RCA sockets are long gone. All that is missing is the multiway socket in the original that was connected to the Leak preamplifier. There is a digital clock next to the mains socket to give you a reading of total hour time of the



valves, plus a central mains on/off button that was missing on the original; off/on would have been achieved via the pre-amp volume control. The output and mains transformers are improved versions of the original; operating at 50°C and not 70 degrees, so not quite so hot. The casing is CNC machined made from a billet of aluminium and they also are more tightly hand-wound and there is a thermal cut-out in the mains transformer, rather than the 100Ω resistor as in the original '20 that "dropped off" if it got too hot to break the circuitry and protect the transformers! The output transformers are designed for 8 ohms load rather than the choice of 4/8/16Ω as in the original. This is not, therefore, a direct Stereo copy -there has been much thought given to improving on the original, including an altered input stage with less gain. I have an original Stereo 20, and find I need to turn my preamp down to '3' on the dial or it would just be too loud, since it was designed before the days of CD players with high output level. The amp is 11+11WRMS ultra-linear 8Ω and 20-20,000Hz +/-1dB. The unit also uses a medical-grade power inlet filter and tilt and vibration cut out. The amp sports the Union Jack, the company being a proud member of

the "Made in Britain" programme; only offered to companies who predominately use British parts. The English Acoustic 21c ticks that box, unlike a number of companies advertising "Made in Britain" that actually have more foreign parts than the Royal family. More models are planned, including their rendition of the Leak TL25.

THE MUSIC

There is a particularly good bass end on the Stereo 21c. There always was on the original Leak amplifier but this was now much more controlled and extended; the bass drum in Katie Melua's "Perfect World" (LP) was astounding, living up to its name. There was also better speed and clarity compared with the original Stereo 20. Although not my personal musical taste, listening to some of the highly compressed Hardfloor's Acid Podcast vol 1 (FLAC) gave for a much more controlled and appropriately acidic performance than the Leak could ever do. There was much better speed and understanding of what was going on.

Turning to ELO "When I was a Boy" there was



again plenty of welly but the vocals were so beautifully smooth as only valves can do. The top ends from percussion and guitars were not quite as extended as I would like, but certainly matched the Stereo 20.

Dream Theatre "Repentance" (from 'Systematic Chaos') has lots of top-end cymbals throughout and the 21c gave enough clarity to make this all highly desirable. Tops were just right; not too loud or too bright. Where the original Stereo 20 could make vocals too prominent the 21c was much flatter, just clearer and more controlled. Both the Stereo 20 and the 21c are very sweet at the top. "Repentance" has very thick textures but were all handled beautifully by the ECC83's. I did find, as in the Stereo 20, that the soundstage was slightly narrowed. It didn't worry me, just making the music more realistic and focussed, with sounds not extending further than the speakers themselves.

Back to vinyl and Alan Parson's "Eye in the Sky" - this has ping-ponged guitars that were very clear and meaty. The electric drums and bass guitar were precise plus the electronic violins warm. Only the double-tracking vocal sounded

dated. Alan's "Eye in the Sky" has a murky opening with powerful bass end and warm strings. As the fog lifts the electronic drum gives a fervent stature and whilst the music is louder it is easy on the ear allowing for many hours of fatigue-free listening plus realistic precision. Even the angelic backing voices gave me spine-tingling performance that was so much like the Stereo 20. Similarly, Simon and Garfunkel's vocals in "Bridge Over troubled water (192/24) were smooth as silk contrasting well with the powerful and "full" drums and bass. Johnny Cash's rendition of the same song was more precise and faster than with the Stereo 20, though still with the smooth top end that makes listening so easy and such fun. If you want a tizzy top-end look elsewhere. Indeed, the Leak "Varislope" preamps were so-called as they had a variable top-end slope designed to enable high-frequency distortion from inadequate LP reproduction of the day to be filtered out. Despite the 21c's silky-smooth top-end it could still do wonders in the top end. In Pat Metheny's "Higgins Haden Rejoicing" there was plenty of ride cymbal brilliantly spraying the air with delightful droplets of sizzle. In contrast, the jazz guitar in the midst of the sandwich of



double bass and percussion was smooth and very musical.

Turning to classics and this is where the Stereo 21c really shone out. Tartini's Violin Concerto in A, D56, was as good as I have ever heard it played, as good as the Stereo 20 ever was. Bach's Toccata and Fugue in D minor, BWV565, is very well known, particularly the 18.5Hz 'D' pedal note. The Stereo 21c was better at this than my Stereo 20.

Now to solo piano and John Field's Nocturnes allowed me to sit back and take in the effortless performance from the amplifier. Whilst the piano could get aggressive in places the 21c coped well with whatever was put in its way.

Finally, to the wonderful Mussorgsky "The Hut" from 'Pictures at an Exhibition' was a perfect way to finish my listening, with a clearer and wider soundstage on the 21c and clearer mid frequencies than the Stereo 20.

CONCLUSION

This was always going to be a review comparing new with old, and I am so glad I did this review that way. Most will know I love my Stereo 20, so to better it was going to be a hard task, but English Acoustics have done just that. This has a better bass end and is faster at all frequencies, plus retaining the Leak musicality that means you will just want to sit and listen and listen and listen.

£3995 is not much to ask for such musicality and history attached. Moreover, it also looks pretty damn good.

AT A GLANCE

Build Quality: Superb build putting the original Stereo 20 to shame.

Sound Quality: Rock solid bass line and effortless delivery.

Value for Money: Around £3995 for an improved Leak Stereo 20 is a bargain.

Pros:

Very quiet delivery

Excellent extended bass

Smooth top end

Cons:

Some might find delivery a little too relaxed.

Price: £3995



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**MADE IN
BRITAIN**

GOLD NOTE PA-10 POWER AMPLIFIER

The Gold Note PA-10 Power Amplifier is a stereo amplifier offering up 150W into 40hms, but add a second PA-10, flick a switch on the back of the amps and you have a pair of monobloc amps that give you a total of 600W into 40hms. Stuart Smith gives these £1300 (each) amps a whirl.



Stuart Smith

The Gold Note PA-10 is an interesting stereo amplifier in that when it was sent there were two boxes, almost as if what had been sent was a pair of monobloc amps – well I had been sent a pair of monobloc amps, but I'd also been sent a pair of stereo amplifiers. Confused? You won't be after this week's episode of Hifi Pig (aficionados of the late '70s/early '80s tellybox program 'Soap' will get this reference, but to others, it will have gone completely over their heads - sorry!) So, yes, you guessed it, the PA-10 is a stereo power amplifier that can be run in bridged mode to run as a mono amplifier – or rather a pair can be run in bridged mode to run as a stereo pair of monoblocs.

Now this to me seems rather a shrewd move on the behalf of Italian brand Gold Note, in that users may well buy one of the

PA-10 amplifiers with a view to upgrading in the future, or when funds allow. It also allows a degree of flexibility for users who may want to move up to more demanding loudspeakers in the future or move to a bigger listening space.

BUILD AND FEATURES

This is a good looking bit of kit in a sort of champagne finish (Gold) reminiscent of Marantz and TEAC, but it is also available in black and silver – judging by the images online, and I had I being buying one of these, I'd have gone for the black finish, but that's just down to my personal choice and preferences. Gold Note tell me that the Silver finish will no longer be available post 2021.

Each box is compact and very nice looking to these eyes. They have a brushed front panel that looks rather attrac-



tive in a very minimal kind of way and has just a blue LED to indicate the amp is on. The case itself is chunky and well put together and has ventilation 'fins' down the sides of both top and bottom – see the picture above and you'll get what I'm on about.

When I say the amps are compact they are sort of shoebox size (20cm x 80cm x 26cm WHD) but they weigh a reassuring 4Kg.

Each PA-10 is built around a solid steel chassis and all the panels are aluminium which Gold Note suggests will avoid RFI and EMI issues.

Power output is a quoted 75W into 8Ohms and 150W into 4Ohms when used in stereo mode. In mono (BTL) mode they kick out a healthy 600W into 4 Ohms and presumable, though it is not mentioned in the company's bumph, 300W into 8Ohms.

I'd guessed given the overall sound of the PA-10 that it was in some way Class D in its architecture, but Gold Note makes no mention of this in their technical specifications. Personally, I'm a massive advocate of Class D technolo-

gy when it is done well and so I asked Gold Note directly "What Class of amplifier is the PA-10?". Here is the response I got – "The PA-10 features quite an interesting design. It is not a Class D amplifier but it leverages a new technology that uses MOSFETs for the output stage, in common with the Class D, featuring an output oscillator (GaN Mosfets with Gallium Nitride), a proprietary design that actually doubles the power of the amplifier when reducing the impedance - exactly as a pure Class A but with extremely high efficiency to deliver great amounts of energy." So there you have it.

Around the back where things start to get interesting and it's pretty busy around there. Each of the amps has RCA and Balanced XLR inputs, Balanced XLR outputs, a pair of speaker binding posts that accept all the usual suspects, a power in, and a master power switch. There are also two minijack size holes for GN Link (more in a mo'), and tiny little buttons and associated LEDs for BAL, DF, and BTL (again, all will be clear in a moment).

Most of the inputs and outputs are pretty obvious on the single unit if we look at it a stereo

power amplifier and set up is as you would set up any power amp – pre to input (RCA or XLR) and then wire up your speakers. Nothing out of the ordinary at all here.

The GN Link 3.5mm ins and outs are pretty useful if you have other kit with the feature. Basically, this allows you to connect suitable kit together so that they turn off and on at the same time – sort of like the 12V trigger on some products.

The three little ‘tiny little buttons’ I mentioned are used for the following. Press the BTL (an LED above will turn blue to show it is on) for when you are using the amp in mono mode. BTL actually stands for Bridge-Tied-Load. The DF button is for when engaging low-damping factor – a useful feature for matching the amp’s damping factor to your speakers. You use the default high-damping factor when driving large and/or “difficult” loudspeakers and then engage the DF button for low-damping factor when using high-sensitivity or other speakers that are easier to drive. The BAL switch is used to activate the XLR inputs – without this engaged and the blue LED not lit, the amp will only work on the RCA inputs.

So all that is pretty straightforward when using the amp as a stereo amp, but it does change a little when you use two amps as a mono pair – the handy and well-illustrated instructions pamphlet explains it all. When using as a stereo pair you need to press the BTL button so the LED lights up on both amps, and then attach the Left and Right outputs of your preamplifier to the LEFT-hand input of each of the amps. With speaker connection, you use the left positive output and the right negative output on each amp, and this is similar for both RCA and balanced inputs, although, of course, you need to press the BTL button so the LED is NOT lit. It sounds confusing but the manual is pretty clear to be fair and has excellent diagrams for several scenarios with regards to the amps’ use.

The manual also includes information on how to connect four loudspeakers (two stereo pairs) to a pair of PA-10 as well, as to how to connect four loudspeakers to four PA-10s. The latter two iterations are beyond the scope of this review and I mention only to give an idea of the amps’

flexibility.

SOUND

I think it’s worth separating this review into, broadly speaking, two sections – one for when I used the amp in stereo mode and one for when I used it in bridged mono mode.

First of all I used the amp in stereo mode and using our Audiovector R3 Arreté loudspeakers rated at 90.5db sensitivity and a nominal impedance of 8Ohms, and so not really a difficult load by any stretch of the imagination - I left the DF button unengaged for the most part but found little difference with these speakers when engaging it, but your mileage may vary depending on the loudspeakers you have to hand, and I do think this is a useful feature to have on board, making it a much more relevant amp for many more potential users – smart move on Gold Note’s part there!

I put on a bit of Gabber first of all as I do like a bit of this kind of stuff and it is certainly a work-out for any amplifier (or loudspeaker), though it’s not to everyone’s taste. What I really took from this was the kick sounding very dry (that is a good thing) and true to what I think the artist was intending. So, what do I mean by using the word “dry”? Well, it was fast in its attack and decay, but with the slam that is a prerequisite to this genre of music. What I also liked about the bass kick here was that it was projected well out into the room rather than being slightly hidden in the background of the mix. What I’m trying to say here, I suppose, is that the PA-10 managed to separate the individual sounds on the (very busy) record into a coherent image. The speed of this amp is in no doubt, and it feels as though it starts and stops sounds as they should. Sounds aren’t left hanging in the mix for longer than they should and they also appear in the mix instantly is the effect. This instantaneous, for want of a better phrase “on and offness”, the amp presents is something I like in an amplifier and it makes for an exciting and engaging listen. This is, to a large degree, reminiscent of the better Class D amps. On the very upper frequencies and with our Celestion SL6s speakers on the end of the amps there is a little tizziness (with a metallic edge) in the very upper frequencies and so potential buyers may need



to keep this in mind if they have speakers that are prominent in the tops. Power-wise into the R3s (90.5dB sensitive) there was oodles of steam left in the single amp, and I did push them pretty hard, though I would have liked a little more power on tap with the SL6s. Which begs the question (and I will come to this later), why would you want to buy a pair of them to run in mono when the stereo amp is ample for most circumstances and most real-world loudspeaker demands.

Switching to Fleetwood Mac's Songbird (I've not used this in a review for a long time) I have presented a good sense of the recording space and the nature of its acoustic. Christine McVie's vocal came across with the right amount of emotion and feeling that can be missing on amplifiers that smear the sound a little. This is a simply recorded tune and, as such, there is no place to hide for a given piece of kit, but piano here sounded like a piano in a big empty room, as did the vocal. Here the decay on instrument and voice is much more prolonged than with the music I mentioned earlier, but that speed I mentioned previously also translates into accurately portraying the acoustics and (god, I hate this word) micro-dynamics of the recording. The Audiovectors have, and this is a big part of why we chose them as our review speakers in this system, a very open and three-dimensional presentation, and the PA-10 plays very nicely to this character and enhances it a little. Again, I think it is that rock solid stability of the image that the PA-10 brings that many will enjoy.

So, we have so far an amplifier that has plenty of control and power in the bass end of things, but it also had a deftness of touch in the mid and upper frequencies. In many ways, the PA-10 is like our reference Merrill Thor amplifiers which are a Class D design. Both have an even hand across the frequency spectrum and both add very little of themselves, though I would say the PA-10 is a little warmer overall through the mids – some will prefer this, whilst others will like the leaner approach of the Thors.

So, given that the stereo amp is a more than capable performer, why would anyone go for the bridged pair and the added expense? Let's find out.

Well, it's actually just more of the power, control, and lightness of touch that you get with a single amplifier, only just a little bit more so, with a more assured feeling of command and speed. You also have the benefit of that 300W into 8Ohms on hand, and so I plumb in our notoriously power hungry Celestion SL6s speakers again. The PA-10s barely break a sweat, delivering the same strength and command in the bass registers I'd heard previously, and still managing to have a truthfulness to the mids and tops. Switching the R3s back into the system there is a sense of there being more there in reserve, much in the same way that if you are cruising in a sports-car you know you can change down a gear, put your foot down and have that power on tap. Personally, I'd only buy the two amps if I had a more difficult pair of speakers to drive, or had a room so large that I really needed that extra power to drive the room to high SPLs. However, if you have the budget and you want that little bit extra control and power in reserve, then why not go for the pair if budget allows – they will certainly stand you in good stead should you ever feel the need to upgrade to a more difficult speaker.

CONCLUSION

Gold Note's PA-10 is a very capable performer across all the genres and styles of music I threw at it in its standard one box, stereo format. It errs on the side of having an ever so slightly warm presentation that many will enjoy, but it is certainly no slouch in the speed, slam, and control department.

In mono mode you get more power for more difficult speaker loads, along with a sense of there being more control, and more in terms of presenting dynamic shifts in the music.

The damping factor feature is a useful one I would suggest, though I found I didn't need to use it with the speakers I used, and engaging it to Low had little effect, though your mileage may well vary depending on the loudspeakers you used.

In a lot of ways, the PA-10 amplifiers are very much like the better iterations of Class D amplifiers in their presentation.



AT A GLANCE

Build Quality: Very well put together and very well specced. Its size means it is easily accommodated on a rack and it looks very attractive

Sound Quality: Clean, fast, detailed and controlled, though erring on the side of a warmer presentation through the midband. At the very top end, there was an ever so slight tizziness to the sound leading to a metallic edge on particularly the SL6 speakers we used

Value For Money: £1300 is not a great deal in the grand scheme of things for an amplifier that is so well built (those cases will not come cheap). Sound-wise it delivers nicely for the asking price and I think the price is very fair. I also think the Gold Note will hold its value well on the second-hand market, something that cannot be said for some.

Pros:

Flexible

Upgradeable

Fast and powerful presentation

Clean sounding but with a touch of mid warmth

Good looking

Fairly priced given fit and finish

Cons:

You will need two to drive bigger rooms or bigger speakers

You are paying a good percentage for the fit and finish

A metallic edge to the very top frequencies that may become evident on more revealing loudspeakers

Price: £ 1,300, € 1.390



MODWRIGHT KWH225i HYBRID AMPLIFIER

ModWright KWH225i Hybrid amplifier costs £8500 and is distributed in the UK by Elite Audio. Janine Elliot takes this valve/solid-state hybrid for a test drive.



Janine Elliot

When I picked up the ModWright Instruments amplifier for review, I did wonder if the company was made up of a Mod and Wright, just as Harbeth and Spendor were the names of the husband and wife teams (Harwood/Elizabeth and Spencer/Dorothy). Whilst Mr Dan Wright is the CEO and chief design engineer of the company founded by him in 2000, there is no Mrs Mod. Rather "Mod" refers to the earliest (and continuing) role of the company, that of modifying existing equipment, such as Sony and Oppo SACD and DVD players with valve analogue stages and improved power supplies. What really makes ModWright stand out for me, though, is the marriage of valve and solid-state technology in their own amplifiers. We are used to hybrid cars combining the best of batteries and combustion engine, and Mod-

Wright similarly sees the virtue of combining the musicality of valves with the speed and power of solid-state. In the hybrid KWH225i up for review here, there is a valve preamp section and 225W (8ohm) solid-state power stage. Music to my ears, reminding me of my, and many other audio-ophile's, first "hi-end" system of valve ARC preamp and Krell transistor power.

Having begun with the 'Truth' series of modifications, this led to ModWright making products from the ground up; Their 9.0 series of preamplifiers in 2003, and then a phono stage and later a balanced tube line stage, the LS 36.5. Their first amplifier was the KWA 150, still available in their Signature Edition, with a single voltage gain stage, a circuit first developed by Alan Kimmel, who created the Mu valve stage (also evident in ModWright

REVIEW



equipment). Dan was educated as a Mechanical Engineer and began his journey in audio like many as an enthusiast and hobbyist. "As many companies begin, ModWright started in my basement," he told me, though he now distributes equipment globally, all hand-crafted in the USA in their production facility in Amboy, Washington. His interest in audio lies somewhere in the middle of SS and tube audio spectrum, hence his love of hybrid designs. "I prefer tube circuits for line-level applications, such as source, preamp, phono, or any voltage gain stage. I prefer SS components anytime that current is being amplified." His love of tubes extends to all his phono stage designs and similarly, he prefers to have digital sources with tube analogue stages; in his first 'Truth' modification series he added tube stages to make them more natural sounding. Oh, and in his spare time he is a hobbyist potter.

The KWH225i comes in at £8500 and represents the culmination of many years of solid-state and tube partnerships, and follows on from the successful KWI 200, their first integrated amplifier. Indeed, the KWH225i is very similar in appearance. However, apart from looks, the new model adds the tube preamp, has more power, a completely new and modular internal design and better build quality. Where the KWI200 was a MOS-FET design the 225i combines the BJT (Bipolar Junction Transistor) based output stage of their Reference KWA 150SE amplifier. Notably missing in this integrated amplifier is a DAC option. Dan felt that as the technology changes so much and so quickly it would be a limiting factor; "One can easily buy any DAC to use with the KWH 225i and replace that DAC when technology changes without needing to replace the integrated amplifier." Clever thinking. He does, however, give the option for a phono stage. This is a MM/high-output MC, SS based phono card that is a low-cost option. They do, however, also manufacture the PH 9.0 and Reference PH 150 standalone tube-based phono stages with external power supplies.

CONSTRUCTION

For those who like separate pre and power amplifiers, the ModWright should still be of interest, and any combination that saves on

expensive inter-cabling is even more desirable. This is a particularly heavy unit, weighing in at 64lbs, and available in silver or black, using the same basic box frame as is used in other products in the line-up - another money-saving attraction. Similarly, the chunky remote is a standard unit seen in other ModWright products. The general construction is excellent, notably the blue side fins and substantial cut-out top that for ventilation and cooling, but which also permits you to peruse the excellent build quality inside, with massive toroidal transformer taking centre stage. The back of the unit has a cut-out coloured blue with space for the two ECC88 (or 6922/6dj8/7308) illuminated valves to appear from an open cage at the rear. Unlike many who put the valves at the front for show, the valves here are visibly less important. Maintaining the theme of "blue" are two large LED displays at the front showing source on the left and volume level on the right, and like other models from the ModWright stable the central "MW" logo has a backlight. Next to the two LEDs are freely moving knobs; the left one operating relays that select the inputs, and the right one the volume control that goes from mute to 99. Under the left LED is the recessed on/off button. This is the only power switch; there is no hard-to-get-at rocker switch on the rear, hurrah, but that does mean if you actually want to securely switch off the unit, rather than put it into standby, you need to turn it off at the mains. Turning on takes around 45 seconds to go through the start-up and stabilization sequence. Indeed, the amplifier has multiple levels of circuit protection - DC input, thermal overload, and DC output. Should there ever be problems it will display "00" and "P5" ("OOPS"!) across the two LEDs. Under the right LED is a home theatre bypass (HT/BP) switch. At the rear are four inputs including one XLR, plus a pre-out RCA connection should you need it, and the HT/BP RCA sockets. With the mains socket centrally placed, the two 5-way loudspeaker binding posts are far left and right, helping to isolate the speaker cables from the mains cable. The cover plate can be removed for installation of the optional phono-stage board, and when in situ the channel selection indicator adds "P1" to the list. The remote control is a chunky, heavy metal affair operating all functions, though some buttons including "phase" and "Bal" do not work. This is a universal re-



mote for other equipment in the ModWright line-up, and the only part of the package I personally didn't like. The owner's manual is particularly good, typical of hi-end American HiFi, though it fails to include pictures of the front and rear, which would be useful, especially if you have the unit in a rack and can't get to see the sockets easily! I have spent many hours fiddling behind HiFi relying on knowing from pictures that the CD input, for example, is the fourth row of sockets along! In terms of operation, this is a very quiet Class AB amplifier working in Class A all the way up until 25W, and a zero global negative feedback design. At 64lb it is very heavy, and with the three feet at the extremes of the box, some may find their racks too small in depth to fit the amplifier.

THE MUSIC

Listening to this amplifier, after running it in for a few days, was a real pleasure, particularly with classical and jazz music. Liszt's Piano Concerto No. 1 (George Bolet) was so open and spacious both L/R and front/back. It sounded as musical as I would expect from the very best valve amp, the ECC88's doing their thing in the preamp stage. The Graham Audio LS5/9's were agile and almost as full-sounding as the bigger BBC LS5/8's (from which this BBC speaker was

designed to replicate in a smaller box). I generally avoid playing this digital recording in favour of my vinyl alternatives, but this really performed well with the KWH225i having authoritative pianoforte and a very forward and clear top end (especially the fourth movement triangles, almost grating in my ear as they were just so loud!). Turning to the Dave Brubeck Quartet 'Live at the Kurhaus 1967 mono recording (Fondamenta/Devialet) I felt no loss of depth and soundstage, the amplifier giving a polished and detailed rendition of this lesser-known Brubeck performance. I really enjoyed the playing, particularly the percussion from Joe Morello, with its solid kick drum and precision cymbal. Music really flowed freely. Next on the playlist was Genesis 'Selling England By the Pound' (24/192). I rarely find Genesis sounding good on any equipment, so welcomed to see what the ModWright would do. "Moonlight Knight" has speedy percussion and positive vocal lines with detailed instrumentation. The bassline was full, more so than with my resident power amp, giving lots more energy to the performance. Indeed, the ModWright had plenty of power in reserve should I need it – the amplifier never sounding stressed with anything I played – and it could still be tender when it needed to be, such as at the very end of this song. "Firth of Fifth" is one of my all-time favour-

ite tracks, one that I grew up with in my youth, adoring its extensive fast classical grand piano introduction. The ModWright gave a clean and energetic performance here, making way for the vocal interjection complete with guitars and percussion. The amplifier was always very good with vocals, and it showed with Peter Gabriel's singing here. Moving on to Johnny Cash 'American IV – The Man Comes Around' and the title track, suddenly the ModWright revealed a masculinity that showed the amp was in control and nothing would be lost in performance. I have used this track in a number of reviews, largely to show off the speed and detail of the vocals and guitar. The acoustic guitar was clear and fast with Mr Cash's distinctive voice coming across with great feeling and pain (the words in much of the album are about death!) Overall, the KWH225i was incredibly clean and open with life-size imaging and feisty transients.

On to vinyl via my valve Manley Steelhead and London Grammar's 'Truth is a Beautiful Thing' and the track "Rooting for You". The vocals were beautiful, though an OTT digital reverb made it rather too sickly for my liking. The KWH225i is very honest, not hiding anything at all, and that reverb was just too big, exacerbated by the generous bass from the amplifier. The transients were punchy, especially the lower octaves, and all frequencies were as I expected them to be, from the lowest to the highest, the latter performed with great agility and honesty. Normally I prefer to go the separate pre-power route, but this integrated showed just how good it could be and having the preamp use valves was definitely the right move. The London Grammar album has a particularly strong bass end, and if I were to find any fault in the amp it would be the lowest frequencies could be just a little too strong. Turning the wick down I listened to Louis Armstrong 'All the Time in the World'. The bass was a lot more settled down and Louis' distinctive voice came over above the strings really well. This 44/16 copy did, however, sound rather "digitised", showing the KWH225i is not going to hide anything! Mark Knopfler's equally distinctive vocals in "Border Reiver" ('Get Lucky') was equally powerful and honest. This song has a very spacious country style opening, a tale about the life of a lorry driver at the end of the '60s, Mark having witnessed lots of drivers preparing their loads

close to his home. This was no heavyweight or clumsy performance, despite the somewhat energetic lower bass. "You Can't Beat the House" is a simple bluesy number which had more energy than I was used to hearing from it, though the detail from the lowest bass to top ride cymbals was perfectly positioned and levelled. Only at times did that double bass ("upright bass") sound a little too pronounced. Having watched films about ELO on catch-up tv recently I thought I'd put on my favourite album from Jeff Lynne, 'On the Third Day'. Much of his music is inspired by the Beatles; the repeating bowed violin and cello rhythms in "King of the Universe" allowed the amplifier to reveal the deft electric performance from the Electric Light Orchestra. The detail in terms of positioning and focus made for an enjoyable listen. "Dreaming of 4000" was similarly wide awake with the immediacy of the strings and percussion making for a very telling performance with flawless timing.

Winter was beckoning as I reviewed the ModWright and I was wishing Spring to arrive as soon as possible and so what better way to end than Schumann's Spring Symphony No. 1 (Berlin Philharmonic Orchestra, Herbert von Karajan). This is a typically forceful Schumann performance giving the KWH225i a chance to pull its punches. This amp really does do classical music well, painting a picture of flowering meadows yet still a hint of the cold winter in its temperate blasts, a work inspired by the spring-tide of love for his new wife Clara. The sonic picture was particularly good, particularly on the famous third movement. Even at lower listening levels, the ModWright gave a succinct performance, but at fortissimo, the amplifier gave a stunning performance of flawless timing and engagement.

CONCLUSION

The idea of a hybrid valve and solid-state amplifier might not be new but what made this amplifier so very special for me was how well the two gelled giving a highly musical yet detailed performance and always in control. If you have muscles to lift it, then this monolith of an amplifier will just make you smile at every phrase of music you listen to. This is American muscle but with feeling.



AT A GLANCE

Build Quality: Excellent build quality, but heavy!

Sound Quality: Excellent all-round performance in terms of speed and musicality, only that the bass can be a tad too generous at times.

Value for Money: £8500 might seem a lot for an integrated, but this is a separate valve pre and SS power in one box, making for an excellent return on your investment.

Pros:

Clean and open sound
Excellent noise floor
Very fluid performance
Excellent build quality

Cons:
Bass can get rather excited

Price: £8500



ELECTROCOMPANIET EC1 6 DX MKIII AMP/STREAMER

Hailing from Norway the Electrocompaniet ECI 6 DX MKII is an integrated amplifier and streaming solution costing £5999 (a version without streaming capabilities is available at £4999), Alan McIntosh plugs it into his system for Hifi Pig



Alan McIntosh

Any winter mountaineer will tell you one thing Norway does well (apart from training the hardest of winter soldiers) is ice. Ice for climbing that is – Rjukan in Norway is a mecca for ice climbers. Turns out the Norwegians also do something else well – HiFi. Electrocompaniet is continuing on their 40 odd year journey of audio excellence with the launch of their new ECI 6 MKII amplifier and also the ECI 6 DX MKII which integrates streaming into one solution. I love my digital as much as my other sources so was very keen to hear what the latter could do.

CONSTRUCTION

Electrocompaniet has a history of nearly 50 years in the HiFi business (47, to be precise) and is renowned for class-leading products from Amplifiers to CD players to speakers. Ex-

ported worldwide but designed and manufactured in Norway the company proclaims “Our products have been designed to bring you the most rewarding musical experience possible in your own home” - not a bad ethos at all.

The ECI 6DX MK1 is the ECI 6 MKii Amplifier (also new to market) with the streamer and DAC added (also available as an add on after purchase) and sits alongside it and the ECI 80D in their Classic line of their product suite which also includes Pre and Power offerings, Phonostage, standalone streamer and CD player.

Unboxing the ECI 6DX MKII is no mean feat. Weighing in a hefty 20.5kg's and being as deep and wide as any amp I've tested - I made sure to warm up first (also make sure your shelves can accommodate it). The solidly built black slab of



the outer casing is flanked by heat grilles and fronted by a clear, polished plexiglass type fascia covering, with a simple screen, power, volume, and input sections buttons (all resplendent in gold) with a rather sexy Electrocompaniet “e” logo which when powered up is “orbited” by a blue light denoting volume position. Hidden unless active to provide user set up information are 3 very small LED’s, the Electrocompaniet name completing the classic, unfussy but paradoxically slightly ostentatious aesthetic. It’s certainly no shrinking violet in the rack. An Electrompaniet “multi-device” remote is also provided which for me is overly busy - but I am picky about remotes.

When comparing the physical features of the ECI DX6 MKII versus the now replaced ECI 5 MKII we can see it has had a fascia update to streamline it, the input/output layout has been reconsidered well (to accommodate the Digital components) and there is an upgrade to the binding posts, as well as rigidity added to the main chassis. The rear layout and internal architecture redesign mean if you want, you can buy the ECI 6MKII and add the digital/streaming components later as a modular upgrade. Power is delivered from one large 650VA shielded toroidal transformer with 7 secondary coils, 880000uF capacitors and 16 different voltage regulated circuits for the amplifier, and a further 10 regulators for other circuits such as digital, streaming, etc.

While we are round the back we also see we have a plethora of inputs to choose from with both a balanced and 2 unbalanced analogue options, 2 digital Coaxial, 2 Toslink and 1 USB digital, and an RJ45 for setting up network and streaming inputs. This latter can then be disconnected as the 6DX can run wirelessly which is how I predominantly ran it. Even someone like me with multiple analogue as well as digital sources would be hard pushed to run out of inputs – the XLR being particularly useful for running SACD as I do. In addition, there is a Home Theatre input for those that need it, and for anyone wanting to use the 6DX as a pre we even get balanced and unbalanced Pre-outs. To top it off there is a USB for attaching a hard drive or other external storage.

From a digital/streaming perspective, the on-

board DAC (a Cirrus Logic design with Texas instruments sample rate convertors) operates to 24 bit/192khz on all inputs and can handle files up to DSD128. Wi-Fi is a nice robust 802.11ac protocol which, as well as its RJ45 connection handles the very generous 1Gbit/s meaning you won’t be struggling with streaming issues associated with bandwidth – I never once had a dropout or stutter even at 24/192. In terms of streaming services and options, again it’s a laundry list that covers all the bases like Spotify Connect as well as Qobuz (my primary service for every day and for testing), Tidal, Airplay, and Bluetooth, as well as Internet radio. Rendering is by DNLA allowing for easy connection of services and meaning you don’t need a separate streamer. Uncommonly, and a bonus, is that the Electrompaniet proprietary control/streaming app (EC Play) is available across both iOS and Android – saving all the usual arguments! You can of course connect a pre-existing streamer via one of the digital inputs.

Running in Class A the input stage has zero feedback while the output stage runs with moderate feedback, that Electrocompaniet advises, is there to deliver a good balance of sound from bass to top The 6DX and its Amplifier sibling delivers a respectable if not earth-shattering 125W into 8ohms, 200W into 4 and a listed 370W into 2ohms with a very good -135db noise floor preamp wise. As with all Class A it gets warm so you need to give it air to breathe so don’t be cramming it into a tight unit, there are adequate vents and heat sinks but give it room.

SOUND QUALITY

After having the 6DX in the rack for a couple of weeks, listening every day either as background while working or with more focus when time allowed, and moving between it and another review amp I have as well as my own reference amp (the Hegel H190) it was time to get down to proper critical listening. As usual, I have some go-to pieces that know really well and some others that just are so well recorded that they really help the listener hear what’s going on under the hood and how it may compare to other offerings.

First up is a collection of master quality record-

ings by the Dutch reel-to-reel music company STS played back on my recently refurbished Tascam 32. A broad collection of ballads, jazz, and classical, recorded at such high quality that nothing is left behind. When coming to classical pieces such as Gabi Rynvelds wonderful take on Ravel, Debussy, and Handel I was actually so distracted by how wonderful the music was and how “there” everything was that I forgot to really assess what was going on but of course – that was the assessment. Large and rich, well-timed with a smooth but not too glassy, natural reproduction and great imaging, the merest hint of warmth and veneer from bottom to mid, but wonderfully engaging to listen to.

Moving to I, Robot from Alan Parsons (MoFi) on vinyl that same vibrancy and weight of sound paired with a light touch and nimble treble had me tapping fingers and feet and revelling in the music, that super funk bassline and handclap of The Voice almost had me on my feet (almost!). The imaging and full bass really shine through and with the right room you feel very involved in the sound.

Switching gears to stream Trentmøller’s Obverse album (Qobuz 24/44.1) via the EC play app, and we get that pace, rhythm, and solid bass again. No slouch but definably weighty in its playback you’re getting a thumping, powerful drive that Trentmøller deserves, his dark, edgy atmospheric soundscapes catching you off guard as well as making your heart beat a bit faster – all conducted with aplomb by the 6DX. Streaming Bladerunner 2049 OST (16/44.1) from Qobuz via my Aries G1 via coax demonstrates again that the DAC implementation here has been handled very well – that bass is gut hitting and visceral, while the synth stabs, sweeps and piano hits are clear and gripping, although to my ears streaming directly from the Aries G1 does perform a little better than streaming via the 6DX’s DNLA render from the EC Play app - if only marginally so - the G1 streamer is more than double the £1000 price upgrade for the streaming module of the Electrocompaniet.

As I close the session with John Coltrane’s Love Supreme on SACD and its aching, ethereal celebration of his faith that is both challenging at times, but beautiful to listen to - nothing is

taken away here. That strong “fullness” that Electrocompaniet achieve with that minimal by design feedback on Class A design only serves to provide the very deserving bed on which to serve up this Jazz masterpiece. Overall I am left with a very contended and wry grin, a great satisfaction at a day’s musical enjoyment and am forced to give a nod of “well played” to the Norwegians. Moreover, it feels like more time with this amp would only offer up more and more enjoyment of it.

CONCLUSION

Across a broad spectrum of genres and formats the ECI 6DX MKII really serves up a very enjoyable listen. It drives hard and low when you need it too, with a strong warm and rich bass response but doesn’t sacrifice much at all further up the scale, with smooth, separated and open mid’s as well as good detail in the top sections, without being at all overly bright or jarring. Imaging is superb overall especially with recordings that offer it up well. At times the overall impression can be more fluid than clinical, a sheen more than a microscope on sound but that is no detractor as it’s very hard not to just sit back and get lost in music listening to the 6DX MKII. Speaker matching may well be warranted to ensure you really hit the mark for personal tastes, but that fullness in the bass, natural timbre and natural liveliness just pulls you in. Combining the construction, aesthetics, functionality and sheer sonic competency, Electrocompaniet have produced for me a very powerful package and a well-functioning amplifier/streamer that simply deserves to be listened to at a very reasonable price point. Their aim for a rewarding listening experience has been achieved, and then some.

AT A GLANCE

Build Quality: Solid, well thought, super range of inputs and pre-out including balanced, with stand-out aesthetics, a 22KG box of refined capability.

Sound Quality: Wonderful, rich and warm where you need it, strong across the board, detailed yet silky, seekers of clinical reproduction may want to consider careful speaker matching to cool the sound and open the mid’s



and highs further but superbly enjoyable for hours on end.

Value For Money: Certainly this isn't a budget offering for many, but Electrocompaniet have the pedigree to justify this price point and the wealth of inputs, high quality DAC/ streaming integration, build quality, power and of course sound quality for me do justify the investment. This is not a "buy now, upgrade later" solution, this is a long term keeper for me and many I would bet.

Pros:

Integration of DAC/Digital streaming and amplifier, plethora of inputs (inc Pre and HT), build quality, rich enjoyable sound, the application offered for both iOS and Android.

Cons:

Overly busy remote.

Blue LED readout possibly not for everyone.

Price: €5999 RRP, €4999 without the Streaming capabilities. Superb quality DAC and streaming capabilities, class-leading grip and low distortion, clean yet organic, unmuddied sound quality, very high-quality execution of build all round. Ease of setup and control.



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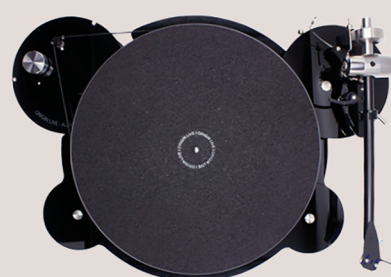
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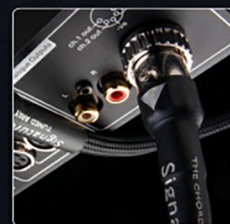
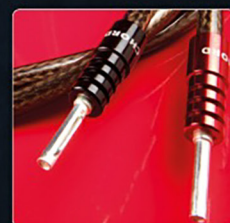
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KJF AUDIO SA-01 NCCORE POWER AMPLIFIER

The KJF Audio SA-01 NCore 100W (continuous) power amplifier is a no-nonsense but good looking power amp that is made in the UK. Stuart Smith, a long time advocate of Class D power, takes a listen to this £690 power amp.



Stuart Smith

The SA-01 is made by Stefan Whatcott in the UK using NC502MP NCore modules. The SA-01 comes in mono and stereo versions but it is the one box stereo version on test here. You can choose the NCore module you want in the amp on the KJF Audio website depending on the output power you want/need. These are the NC122MP that offers a peak output of 75W into 8 Ohms and continuous power of 25W, the NC252MP that offers a peak output of 200W into 8 Ohms and continuous power of 50W, and finally, the NC502MP that offers 350W peak into 8Ohms and continuous power of 100W. Prices are £540, £590 and £690 respectively. Stefan reckons that “The the older Class D amps would have their outputs effectively modulated by speaker loads with wildly changing impedance plots, whereas the new Ncores

couldn’t care less” adding “They are also happy to keep playing into an almost short circuit so even 1-2 Ohm speakers are no problem really. In fact, you could short circuit the outputs without killing the amp.” I didn’t try this!

It’s the latter of the modules fitted in the review sample giving a total price of £690. As well as the board you would like you can also choose the front panel that comes with the amp and these are Aluminium, Walnut, Sapele, Cherry and Maple (wood front panels are a £25 option). The review sample came with the 8mm Aluminium front panel that has been bead blasted, has an on/off button, and the company logo laser etched into it. The on-off button has an LED halo around it to indicate the current state of the amp and to indicate when it is clipping – I like the latter a good deal. You can



also hold the button down and cycle through different brightness levels which could be useful for some.

Round the back you can choose to have either gold or silver RCAs with the silver adding £20 to the price-tag – the review sample had gold RCAs. The back panel also sports balanced Neutrik XLR inputs and you switch between XLR and RCA with a pair of little toggle switches. There are speaker terminals that accommodate spades, bananas or wire, an IEC and master power switch, and a socket for a 12Volt trigger should you have a suitably equipped pre.

The case itself is a pretty stylish if simple affair and is around shoebox-size 230 x 83 x 370mm (WHD).

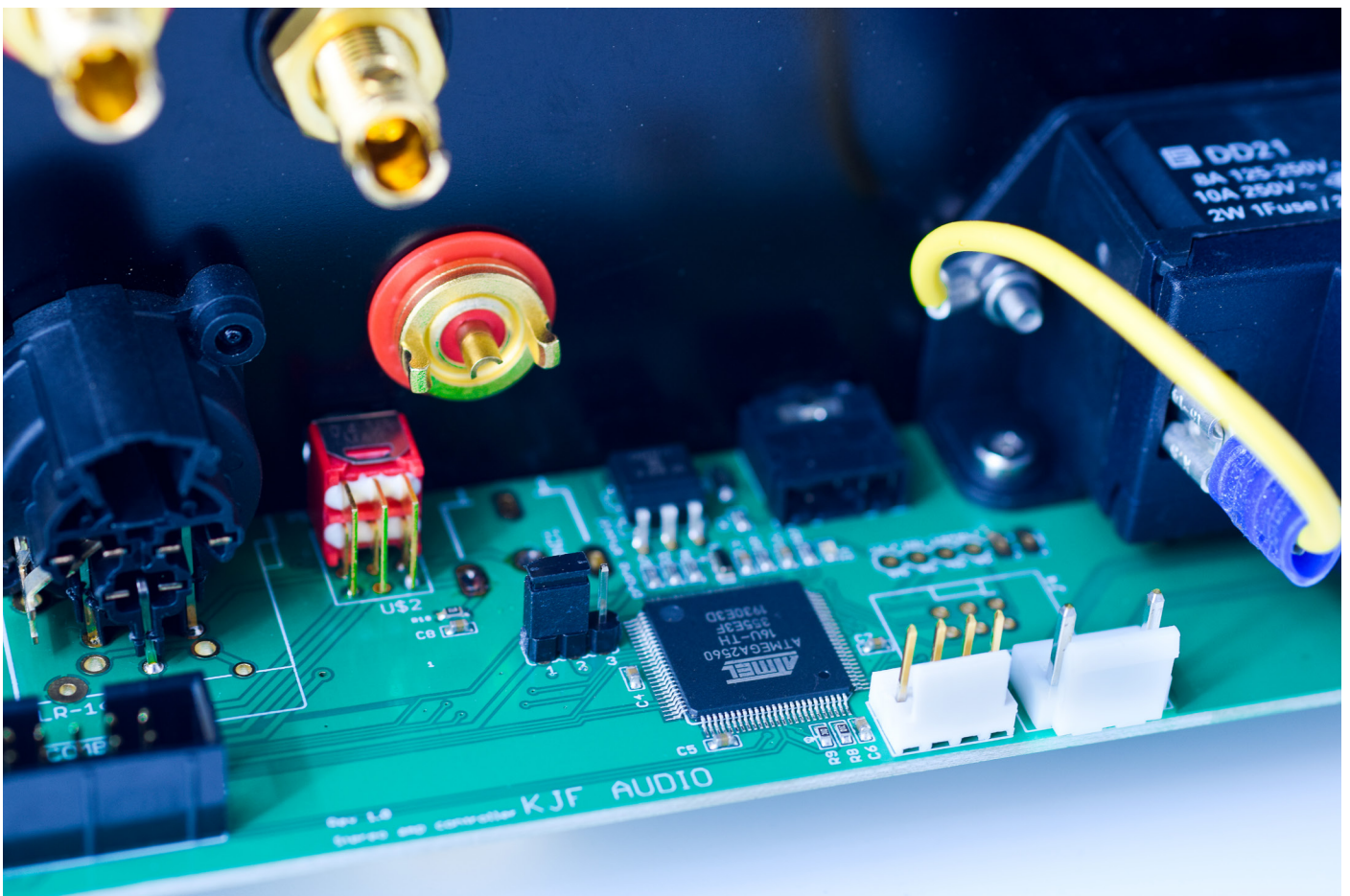
Other features of the SA-01 include muted startup so you don't get a pop through your speakers on power-up (a sensible inclusion), DC detection and protection should the amp have a catastrophic failure, clip indication and over-temperature indication. The amp will operate at 110V or 230V without any need to change anything – plug it in wherever you are

and off you go.

All in all, it's pretty cool looking without it looking like money has been spent on stuff that is there merely for decoration – though the laser engraving of the name on the front is a nice touch and will have added a tad to the price. The previous MA range was much more utilitarian in its aesthetics, whereas the SA-01 is designed in keeping with being at home in the modern listening space – and it succeeds in this goal in an understated “I am what I am” kind of way. It feels solid enough and has a decent weight to it, though it can be picked up with one hand with no problem.

The packaging is simple and effective, which pretty much sums up the unit thus far.

While the SA-01 uses the latest iteration of the Ncore modules with onboard buffers and power supplies, leaving little room to tune the sound, KJF audio have designed their own PCB that they are calling the Stereo Amp Controller. The Hypex modules are clever little things in that they offer the integrator a communication bus to monitor both power and amplification error





monitoring, clipping, temperature monitoring, muting, standby and protection, and reporting from failure to DC. “Until now no other company offering the Hypex amps at anywhere near this price have implemented these available features”, KJF reckon. Stefan added ‘When I was contemplating this amp I wanted to make sure that all the features available were used, this meant designing a PCB with an onboard micro-controller to communicate with the modules, I know that sounds expensive – it was – but it saves a huge amount of time when actually building them as there is much less messy wiring to produce, It also meant I could optimise the layout and ground plane to keep noise out of the sensitive circuitry, in short, it’s a proper grown-up design”

Set up is easy - as expected given the simplicity of the amps layout, and I was up and running within a matter of a few minutes. I used the SA-01 with a variety of loudspeakers including Xavian Perla, Celestion SL6s and the recently reviewed Diptyque dp77. Sources were a mixture of CD, streaming and vinyl (see the Review Equipment list at the bottom of this review for full details).

SOUND

Regular readers will know that we at Hifi Pig Towers are no strangers to Class D and be aware that we have been using the technology for a good number of years. We have owned, and still do own, Class D amplifiers (among other classes of amplifiers) and they are regularly used in both our review systems. In the main I’ll be comparing this amp to our Merrill Thor Class D monoblocs which retailed in 2015 when we first put them into at \$4800, which equates to around £3500, meaning that the amp in question costs around a fifth of the amps the KJF is going up against. Now that may not seem particularly fair, but it is what it is.

First up is the Scratch Bandits Crew on Chinese Man Records and I’ve chosen this because it has a lot of deep, deep and detuned bass on it. Into the Diptyque dp77 speakers (isodynamic and 84dB), and when pushed to very loud volumes, the amplifier did start to clip, indicated by the LED around the on/off button the front panel flashing red – it’s usually green. Now, I was pushing it, and with the same speakers and at a similar SPL the Merrill amps clipped too,

though they don't have any method of indicating this clipping. One thing I enjoy about good Class D is the speed of the bass and the KJF really doesn't disappoint, in fact, I'd suggest it is on a par with the Merrills in this respect. The amp is also absolutely silent when nothing is playing. At low volume, it still brings out the same level of detail that these speakers excel at. Switching these speakers out and putting in the notoriously power-hungry Celestion SL6s (82dB) speakers and playing the same tunes there are no complaints by and large and I'm able to push the volume louder than previously without clipping. In fact, I'd say the SA-01 are a fairly decent match for these speakers which it is usually suggested are partnered with high current amps (read the likes of Krell) - this did come as a bit of a surprise as I fully expected the amp to struggle a good deal. It certainly feels like the amp is pretty much in control of what is, let's be frank, music that could very easily descend into a muddled mush of noise. Again switching speakers, this time to a pair of 88db Xavian Perla, there's that same control with this record and in honesty, I think the SA-01 is much better suited to these speakers. There is that same control, but the stage seems a tad wider and with more depth. With that comment in mind, I'll continue the rest of the review the Perlas in place for the duration of the review. I suppose the amp is more at ease and it feels more 'at ease' it with the Perlas in place. The overall sound is open and under control.

Keeping on the theme of difficult music I pull out Soulwax's Essential from June of 2018. It's a deceptively simple-sounding record (CD actually in this case), but it's full of complex 'analogue' synths, it's well mixed, and pushes kit to the extremes at both frequency extremes. The SA-01 doesn't bat an eyelid, and again there's that feeling of command from the amp. The helpfully named second track 'Essential Two', which follows 'Essential One' and precedes 'Essential Three' again has a lot going on and a squidgy synth line running throughout that can become confused at times with some amps, but the SA-01 takes it in its stride - there's a sample in there, and I've not noticed this before, but I'm sure it's from The Flying Lizards 'I Want Money' - genuinely I'd never noticed it before, but, of course, I am listening very closely here. There is no doubting that this amp suits these

speakers and material very well indeed. There is a common failing that is often aimed at Class D amplifiers and that is that the top end can sound brittle, and, for want of a better word, broken. I'm just not getting this at all with this amp and with these speakers, and I am pushing it a fair old bit. It's also nicely balanced across the frequency range here, though this kind of program is heavily weighted to the top and bottom of that range. I'm looking (and listening) hard to find fault with this amp here, I really am. Little effects and details in this record come and go in the mix and they are presented as they should be.

Changing the tone somewhat and here I reach for Rufus Wainwright's Want One album, and this is the first time I've really felt that the amp on test here didn't deliver in the same way as the Merrill amps - the Merrills just seemed to be a little 'sweeter' in the mid-band presentation. On this material, I'm just finding the presentation to lack a bit of excitement and, conversely, refinement. Is it bad?...no, not at all, and had I gone out and spent a tenner short of £700 on an amp that performed like this I'd be well chuffed. This is a big scale recording in parts, with orchestras recorded at Angel Studios in London and Avatar in New York, and I felt the amp got a little muddled on some of the more hectic and full on orchestral passages. With that said Wainwright's voice is presented really nicely and with a good degree of insight into his tone, which is pretty unique. It is also projected nicely out into the room and there is a good degree of openness and space presented. Really, to moan at this price for an amp would be a bit much given all that you are getting on the positive. On the simple vocal and piano of the song Pretty Things I begin to forget the points I made above and feel I can almost reach out and touch/see Wainwright sat at the studio's piano, simply mic'ed and simply recorded - wonderfully reproduced and hard to fault! Go Or Go Ahead (another simple track for the most part) is likewise beautifully presented, with only the slightest lack of definition becoming evident when the track gets a little busier. Detail of spatial cues to the recording space and the recording style are well in evidence with 14th Street, and orchestration and choir come in and sound great - by way of calling me a liar with regards my previous comments - but it is a little

REVIEW

less busy than the other tracks I banged on about. Trumpet on Harvester of Hearts on this record is presented gloriously, with the right amount of pap pap pap (that's a technical term) and very realistic presence.

CONCLUSION

There are obvious comparisons to this amp, and there's plenty of brands putting out simple amps using Hypex modules, in this case the MC502MP. To a great extent you are getting what it says on the tin with most of these amps, but it is not they I have had in front of me for the last week or so. For the money this amp is excellent and if partnered well with speakers relevant to its abilities will give you very good service. It feels as if it is in control of everything that is going on at the top and bottom of the frequency range and only seemed to lose it a little with regards our reference in busier passages with lots of mids and lots going on in the mix.

Do I recommend this amplifier? Yes, I recommend it highly, and feel that for the money being asked you are getting an amplifier that will serve you well – bear in mind it is for the main part being partnered here with kit, specifically speakers, that (in price terms) are well further up the ladder, but it really doesn't embarrass itself at all.

AT A GLANCE

Build Quality: Well put together and looks good in a minimalist kind of way. Certainly a no-frills product on the build front, no doubt to keep costs down, but it does look pretty cool on the rack. Has both XLR and RCA outputs where many similar amps only provide XLR

Sound Quality: Partnered well, and especially with the right speakers, you have a gem of an amplifier for the money here

Value For Money: It comes in at a little less than similarly spec'd products I have come across and so I'd say it offers very good value for money

Pros:

Good value

Nice Looking, no-frills design

Clipping circuit is a nice touch

Soft start

Open and engaging sound

Good control of bass with appropriate loudspeakers

Articulate with regards to spatial cues

RCA and XLR inputs

12V trigger and cable included at no extra cost

Cons:

Can become a tad muddled on hectic material, particularly in the mids

Does perform differently with different loudspeakers, so do keep this in mind

Price: £690 as tested



LAB 12 melto2 PHONOSTAGE

The melto2 from Lab12 has different equalisation curves, mono and stereo options, three inputs, balanced outputs and on paper at least looks like an interesting proposition. But does this flexibility come at the expense of great sonics? Stuart Smith finds out when he listens to this €3750 phono-preamplifier.



Stuart Smith

Lab12 is a Greek company headed up by Stratos Vichos and based in Athens. I first became aware of their products a few years ago whilst attending the Munich High-End show where I got to have a look at their products and subsequently, we've reviewed a couple of their products. Indeed, their gordian power conditioner and pre 1 pre-amplifier are key components in our mid-priced system. Most of their products (obviously not the power conditioner) are valve-based and feature a distinctive and attractive retro look to them. The retro look, however, belies the complexity and usability of their products. Adding to the appeal of the Lab2 products, they come with a full five-year guarantee, which to me suggests that Stratos and his team have a good deal of confidence in their designs and the longevity of their products.

What we have here with the Lab12 melto2 is a fully adjustable phono-preamplifier that will handle up to three cartridges of either MM or MC design. Adjustments can be made on the fly and you can choose to change cartridge type, gain, impedance, capacitance, equalisation curve and whether you want mono or stereo output. So, a pretty flexible unit on the face of it, it would seem. One of the features mentioned here that will interest collectors is the ability to change the equalisation curve and you get the normal RIAA curve but in addition both Decca and Columbia curves. Most readers will be aware of the RIAA (Recording Industry Association of America) curve that has been the industry standard since the mid-1950s. Before this standardisation it was standard practice for different record companies would use their own equalisation – obvi-



ously something of a problem for collectors and radio stations. It's not the purpose of this review to go into the technical side of the curves, suffice to say that different curves have different pre-emphasis on certain frequencies at recording and de-emphasis on playback, with the RIAA curve the recording made with low frequencies being reduced and high frequencies boosted, whereas on playback the phono stage does the opposite and boosts low frequencies and reduces the high frequencies. So, with that in mind, the melto2 will be an interesting proposition for serious collectors of vinyl whose collections span many decades and different labels. Here's a link we published explaining the different EQs.

I mentioned also that input impedance can be adjusted and we have a range of 50 ohm to 47Kohm available with input capacitance being adjustable from 0 to 300pF. Gain for Moving Magnet is 38dB and for Moving Coil cartridges 64dB. This would suggest then that the target market for the melto2 is not only the serious record collector but also vinyl aficionados who use more than one cartridge for playing different records, something that seems to become increasingly popular amongst audiophiles.

I mentioned this a valve/tube design and the complement inside the melto2 is 2x E88CC dual triodes and 2x 6n2p-EV dual triodes. The design of the circuit is a no-feedback design and Lab12 uses two proprietary implementations – SRSG and Fine Symmetry. The step-up transformer inside the unit is by Lundahl who have been making transformers in Sweden since 1958.

Build-wise the unit continues the high standards of other Lab12 products I've had the pleasure to review and the front panel is made of 5mm Aluminium which is available in matt black or frozen silver – the review unit arrived in frozen silver. On this panel you have a large and easy to read OLED display, a knob for turning the unit on (or to mute it) and another knob that allows you to navigate the different settings. The latter sounds pretty complex, but, like their gordian power conditioner, it's all pretty straightforward and you can do it all from the comfort of your armchair with the simple but effective remote control. All in all, the melto2 looks very attractive on the rack and certainly has a retro feel to its design.

Dimensions of the melto2 are 43x11x29cm (WHD) and it weighs in at a reasonable 8Kg. It



arrives in simple but well-done packaging.

Round the back of the melto2 you have a total of three RCA inputs with each having its own grounding post. Output to your pre-amplifier of choice is either by RCA (unbalanced) or the increasingly popular balanced XLR. This is a nice touch and from a marketing perspective a sensible decision on the part of Lab12. Other than the AC mains IEC input and the master on/off switch that is your lot. Everything is well-spaced and there is plenty of room for your cabling – some products seem to space their sockets so close together as to make it all but impossible to get all your cables in there.

So that's the physical aspects of the melto2 taken care of but what about the sonics – expectations are high given the features and build so let's hope it delivers!

IN USE AND SOUND QUALITY

OK, I'm not a serious collector of older vinyl and I use only MC cartridges, having given my only MM away some time ago and so for the purposes of this review, I'll be using just the Gold Note Tuscany Red that is bolted onto the Origin Live Zephyr tonearm mounted on their Resolution

record deck. This vinyl front-end has been our reference for a good while now and takes pride of place in our main system which comprises Merrill Audio Thor power amps along with a Music First Baby Reference II pre-amplifier. Cabling for the purposes of this review is all Tellurium Q, other than power which is by Atlas and Tellurium Q. Speakers are our Avantgarde Duo XDs but, as these have active bass, I also auditioned the melto2 using a pair of Xavian Perla stand-mounters with Franc Audio Accessories slim footers added.

Switch the melto2 on and you are presented with a screen that says "melto is warming up" and a countdown from sixty seconds. The screen is clearly legible from my sitting position about 3 or so metres away which is a good thing. You can then scroll through the settings using the remote. First up, set the input you will be using, then the cartridge type, then high or low gain, then the equalisation curve, capacitance is locked at low, impedance is set to 25ohms (you can scroll through 25, 27, 34, 40, 60, 66, 73, 79, 88, 100 and High Impedance) and you can set whether you want a mono or stereo output. Finally, you can change the contrast of the OLED display but I kept it on full brightness as it made it easier to read. All this



setup took a matter of a couple of minutes and, as I said, was all achievable from the comfort of my listening chair – I like this. I'm a bit of a prat when it comes to remote controls and never seem to get the hang of them with Linette being the guardian of remotes for television, satellite box, etc, but this experience was hassle-free and very intuitive. Good work Lab12 as I really hate the whole having to learn a new product thing – In a world of plug and play (and let's face it laziness) there's no excuse for over complicating things.

First up, and it was the first record that I came to, was John Martyn's Solid Air (Half Speed Master) which regular readers of my reviews will know I reckon to be one of the finest recordings out there. The first thing I notice is that there is absolutely no noise that I can hear being put into the system by the melto2 – it is silent between tracks other than the odd crackle and pop that is on this very well-played record. The second thing I note is the width of the soundstage, which I'm aware is a characteristic most influenced by the speakers, but it is wider than it was previously for sure. Thirdly I note the clarity and purity of tone in Martyn's voice and instruments. First impressions of this phono are VERY encouraging and I find myself sat listening to the whole record, only pausing to take the odd note and to turn the record over at the end of side one. Imaging also feels somewhat sharper than I'm used to, again a characteristic influenced mostly by speakers, but the melto2 is

definitely doing something positive to the whole and I'm liking it...a lot!

Next up I dig out a copy of Handel's Messiah (Decca LXT 2921), a mono recording from 1954 giving me the opportunity to switch between RIAA curve and Decca and mono and stereo outputs, again from the comfort of my listening position. Now I don't know this record particularly well but switching to the Decca curve and mono did seem to bring the recording to life a little more, with a perceived improvement in top-end and low-end definition when switching to the Decca curve. I'm in no way an aficionado of this style of music and it is pure coincidence I picked up this particular version at a second-hand shop some time ago, but it does show that for people who do go out and search this stuff down, the melto2 is a useful tool to have in your artillery.

Another delve into the record shelves and I pull out Daft Punk's Random Access Memories, again a record that gets a lot of play here at Hifi Pig Towers. It really is a tour-de-force in what can actually be achieved with electronic music, which, let's be fair, does have its fair share of detractors in the audiophile world. I'm particularly enthralled here with the perception that there is more air around noises and "instruments" on the track Motherboard and the open-spaciousness I'm hearing on Fragments Of Time. I'm also aware again of the very low (imperceptible) noise-floor of the system allowing me to delve

REVIEW

right into the recording and pick out little nuances previously veiled (“oh, no he’s going to use the phrase “a veil has been lifted” I can sense it!”) to an extent. Again, I’m aware that the track feels to have more space – this is not a clinical kind of thing and the word I’d use is, perhaps, organic...or natural. Whatever, it’s a nice sound that feels very unforced, and whilst there is masses of detail coming through the speakers I’m not feeling overloaded by the detail, a characteristic that over the days led to me spending more and time listening to the system without once feeling fatigued. I know that is a bit of a cliché too but the melto2 really does produce a sound that is easy to get on with without sacrificing detail and (oh god he really is going to use it!) ...micro-detail. I really am able to pick a record to pieces should I choose with the Lab12 in place but equally I’m able to just sit and enjoy my records. This is a good sign to me.

CONCLUSION

In the time I’ve had it in the main system and in the mid-priced system I’ve fallen in love with this phonostage and what it brings to the music that I’m hearing, so much so that it now sits in the main system having replaced a unit costing somewhat more than the asking price of the melto2. Yes, I bought it. I’ll rarely if ever use the different curves, and chances are that that particular setting option will never again move away from RIAA, but some will find this feature invaluable - in my Decca experiment outlined above it certainly works! Likewise, the mono setting, though I’m sat looking at the rack and thinking “I could add another turntable to the set up now, or add another arm and cartridge to the Origin Live record player.”

Sonically this is the easiest to get on with phonostage I’ve heard in our system. It is quiet to the point of silent in operation, allowing me to really get into a recording’s detail, but at the same time, it is relaxed, unhurried, and natural-sounding in its delivery. There is a definite feeling to music having more space around individual instruments and those instruments sit in the soundstage with a solidity that is uncanny.

I’ve outlined a few records I listened to during the evaluation process but the melto was completely unfazed at whatever style of music I

played through it, being equally at home with Dutch gabber from the early 90s to Miles Davis and everything in-between.

There is little to criticise here: set up is simple, build is great, sound is wonderful and perhaps all I could suggest to Lab12 is they bring a more basic version out without the mono function and without the different curves, though I fully understand why they have chosen to include them.

AT A GLANCE

Build Quality: Simple and elegant styling allied with good build quality and materials. The OLED is easily visible from your sitting position.

Sound Quality: Exceptionally good sounding with an organic and mellifluous presentation that manages to still have all the detail present in the recording. Very low noise-floor and very un-fatiguing sounding.

Value For Money: Even with the features I’m unlikely to use very often I feel the asking price is exceptionally fair for the sound I’m enjoying.

Pros: Good looks. Simple setup. Super sound. A bit of a Swiss Army knife of a product for those that need or want those EQ curves. Remote setup is very useful.

Cons: For me, some of the features are superfluous.

Price: 3750 Euros



Cardas Audio

Bandon, Oregon



Since 1987, Cardas Audio has manufactured premium audio cables and component parts. My father, George Cardas, founded the company to perfect audio cables using ultra-pure materials, innovative Golden Ratio resonance control techniques and uniquely insightful solutions to transmission line problems. The legendary craftsmanship at Cardas reflect his pursuit of perfection.

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NOVAFIDELITY X45 RIPPER AND STREAMER

The Novafidelity X45 boasts a host of features and costs £2099 and is distributed in the UK by SCV. In this review, Stuart Smith takes a look at this massively specified unit.



Stuart Smith

I've been a long-term user of one of the older Novafidelity units having only very recently parted with it. The truth of the matter with regards the user interface was that I found it a little clunky, though it worked fine – so when Matt at SCV (the UK distributor) asked if I'd like to try one of the latest models I naturally jumped at the opportunity, particularly as the newer models are Roon ready – the only reason I parted with my old unit.

CONSTRUCTION AND FEATURES

The X45 is available in silver and black (the review sample was silver) and came in a well designed and sturdy box with the unit itself, a large remote control from which you can control all the functions and setup gubbins from, though I actually found set up easier using the knobs and buttons

on the front panel of the unit.

The front panel is well layout out with a large screen that I could just about read from about 4 metres away.

To the left, you have the volume/mute knob and underneath this, you have a power/standby button, a quarter-inch headphone socket, a USB "host" input for adding an external hard drive (there are two more round the back too), a mini-jack input and the remote control receiver window.

There's a slot-loading CD drive above this which worked very well.

To the right of the screen is another knob and set of buttons that allow you to scroll through the setup and functions of the X45.

Round the back is where

things get really interesting and it could never be said that Novafidelity has skimmed on functionality. You have three digital outs (AES, Toslink and Coaxial) so, should you feel the need you can connect to an external DAC. There is also a HDMI output and a USB Audio out.

There's an analogue out section to connect to a preamplifier or power amplifier, for the latter you would use the onboard volume control, and you get both XLR and RCA outputs.

You get an input for USB, coaxial, and XLR so that you can use the X45's onboard DAC and attach a computer or streamer, though given the simple functionality of the unit's streamer I don't know why you would want to do this, but it's there for those that want it.

You get an antenna included (the copper wire type) for DAB and FM radio and then you have an analogue input should you want to add an external source such as a reel to reel or extra CD player.

For vinylistas there's an onboard phonostage that is moving magnet only.

Finally around the back is the bay for the hard drive itself with the options of 2.5" SATA up to 2TB, 3.5" SATA up to 8TB, and 2.5" SSD up to 2TB with the promise that bigger capacity hard drives will be supported in the future with relevant firmware updates. On the firmware front you can set the unit to update to the latest version automatically or do it yourself.

Supported file types are extensive and include: MQA, PCM 384KHz/32 Bit, DSD up to 256, DXD 24Bit/352.8KHz, HD WAV (24Bit/192KHz), HD FLAC (24Bit/192KHz), APE/CUE, WAV, FLAC, ALAC, AIFF, AIF, AAC, MP4, WMA, CAF, Ogg, Vorbis, PCM, M3U, PLS...etc and so you can throw pretty much any file format you want at this and it will play nicely.

UPnP (DNLA) is supported so you can control the X45 from your smartphone and the X45 also supports the online music services Tidal, Tidal MQA, Deezer, Qobuz, Napster and Spotify Connect.

If all that wasn't enough you have a clock, alarm, a function to display lyrics, autoplay, photo slideshow and a CD burning function. You can also obviously play internet radio and record from that should you wish.

I genuinely cannot think of anything that Novafidelity have missed out here and with the perfectly serviceable phonostage, analogue and digital inputs I can well see a lot of people using the X45 as the main hub of their system. Really, I don't think they have missed anything out.

Oh, the user manual is pretty exhaustive, well written and easy to follow.

RIPPING CDS

One of the key features of the X45 and other Novafidelity units is obviously the ability to rip your CDs to the hard drive on the unit. All is pretty simple and explained comprehensively in the user manual. Insert CD, click menu, click "ripping all" from the menu, select what format you'd like to rip to (I chose FLAC) and click OK. The X45 does the rest and rips at about 6 times meaning that Jorma Kaukonen's Quah took five or six minutes to rip. Easy, logical and straightforward. Album art all sorted along with metadata too thanks to the inclusion of FreeDB – actually it was preloaded on this device.

STREAMING SERVICES AND ROON

Again a simple case of setting stuff up on the X45 which took a couple of minutes. For Qobuz I enabled it in the menu, popped in my username and password and it was all there. With Roon I made the stupid mistake of not setting the X45 as an audio device and so was frustrated that the Roon app wasn't seeing the X45. Simply adding it in the app and selecting it as the player was again a minutes job and now having Roon/Qobuz I was a very happy bunny as this is my preferred way of accessing new music now.

PLAYING

So playing tracks ripped to the X45 is as simple as can be. Go to the Browse function in the menu, select the album you want and Robert is your Mother's Brother. Likewise playing tunes



on the NAS, and although I expected having to input the name and password of our network, the X45 recognised it immediately and I was off.

Of course, most people will want to control the files being played from their NAS via a suitable player and I found that the JUP&P player worked fine. Add the network on the X45, open the player on your smartphone, set the X45 as your player and set your NAS as the media library. Again a doddle, even for this tech-phobic dullard. However, Novafidelity has introduced the NOVATRON controller for IOS and Android which is the option most will use. It's good looking and intuitive.

SOUND QUALITY

For the purposes of this review, I wanted to use the onboard DAC as I think that is what most people will be happy to do and adding an external DAC really only gives you a flavour of that DAC's sonic signature. It seems pointless to me for someone to buy a product with so much functionality as the X45 and then whack it through an extra DAC with all the expense that that incurs. Considering the price of the X45 and the amazing array of functionality the onboard DAC is perfectly usable and gives a very good rendition of whatever you throw at it. I've just popped over to the SCV site to check the price on this and it's £2099 – I had expected it to me much more. Comparing it to our Leema Libra DAC at around £6500 I'd say the Leema has the edge in digging the most out of recordings, particularly in the higher frequencies, but to moan about the X45's onboard DAC would be churlish, I feel. Tunes bounce along very nicely and there is good involvement in the music itself. The DAC used is the Dual ESS ES9018K2M Sabre³² Reference DAC chips allied to a Dual Core ARM Cortex A9 processor running at 1.0Ghz and 16 Core microcontroller with Advanced RISC Architecture. So now you know!

It is audio reviewer law that I now have to give you a list of some of the tunes I listened to and try to describe what I heard. Throughout I was using the analogue input to the Leema DAC feeding a Jean Higara Le Monstre Class A amplifier into Avantgarde Duo XD and Audiovector R3 Arete loudspeakers. Cables by

Chord, Way, Tellurium Q and Atlas. Throughout the review period, I used the X45 wired physically to the network but a USB 801.1b/g/n WIFI dongle is available to allow wireless functionality – I'd have like to have seen this included in the package, but sadly it is an optional extra and Nova Fidelity do stress you must use a dongle that is approved by them.

Playing Little Wing by Neil Young off the recently released Homegrown album and streamed from Qobuz on FLAC 96kHz 24 Bit was a really beautiful experience with the presentation through the X45 losing none of the fragility of Young's. Little details like Young fading away at the end of some lines wasn't lost and harmonica retained its rasp and bite. Playing the same track through the Auralic G1 and Leema DAC had the latter having the edge – no surprise there now I know the price of the X45 – but in the final analysis there is not a lot in it and the vast majority of people who want to enjoy their music without over-analysing every last detail and nuance will be very well provided for by the former.

Switching to a more electronic feel and the recently released Plastic Mermaids' "Suddenly Everyone Explodes – The Remixes" draws me into the music and I'm particularly impressed with the way the soundstage feels. It's expansive, and reach out and touch, with instruments in the mix being placed properly and staying placed – in small part down to the speakers, of course. Again, switching to the Auralic G1/Leema combo via USB (remember the X45 is going through the analogue input of the Leema and so a perfect way to A/B test) and the latter has the edge by a small margin but I don't really think I'm missing very much at all with the X45.

I did of course play a whole lot more music and did the A/B thing every time and got the same result time and time again. The X45 is a solid performer, of that I have absolutely no doubt, with the Auralic/Leema combo having an edge in absolute terms of resolution and ability to present micro-detail (I hate that word) more realistically, but it's closer than you might think!

Playback off CDs was, as far as I could tell, identical to similar streamed files, but higher resolution files did have the edge, and again I



think it's down to an improvement in the upper frequencies.

CONCLUSION

Before I went on the SCV site and saw the price I had assumed the price of the X45 would be in the region of £3500-£4000 and was very pleasantly surprised at its £2099 price tag given the masses of connectivity, functionality and sound quality. If you are looking at absolute fidelity then you may want to look elsewhere, but I'd suggest most will not care about this level of scrutiny and be very happy with the X45. I said earlier it would be daft to plug this into a much more expensive DAC but given its price, it does leave a good deal for experimentation with DACs if that is your bag. Personally, I'd be over the moon if the X45 landed on my doorstep – add a decent power amp, a turntable if you must and speakers and you'll be well catered for with only a very reasonable outlay.

AT A GLANCE

Build Quality: Well put together but isn't going to win any prizes in the looks department.

Sound Quality: The onboard DAC is more than acceptable and should be all most people need. The phonostage (mm) again should satisfy

most people.

Value For Money: Given the feature set of the X45 it's difficult to criticise the offering at this price. I would have liked to have had a USB wireless dongle included in the package rather than being an optional extra.

Pros:

- Incredibly versatile and with a massive feature set
- Easy setup and intuitive in use
- Onboard phonostage
- Roon Ready
- Great sounding unit in its own right but with the option to output to a higher spec'd DAC
- App for iOS and Android.

Cons:

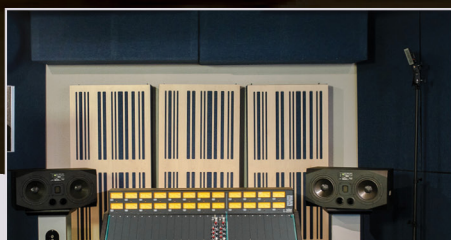
- Wireless dongle not included
- Some will want to use an external and better phonostage

Price: £2099



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AURALIC ALTAIR G1 STREAMER AND DAC

The Auralic Altair G1 Streamer/DAC is a well-featured box of tricks to which you need only add an amp and loudspeakers. Stuart Smith checks out this €2399/£1999 unit.



Stuart Smith

I've been using the Auralic Aries G1 standalone streamer for a good while now and wouldn't be without it, to say it has transformed how I listen to music, when partnered with Roon and Qobuz, would be somewhat of an understatement. The Altair G1 looks for the main part identical to the G2, save for a silver knob on the right-hand side but it's a different beast in its function as it combines a DAC and streamer in one unit – you also get an onboard headphone amp. So, on paper, the Altair G1 looks like a pretty cool box of tricks – add a power amp (the G1 can also work as a preamplifier) and speakers, and Bob's your uncle. It will play your music from files on your network, Airplay, Internet radio, Bluetooth, USB drive, or online streaming services – I use Qobuz but the G1 can play other services such as Tidal. It offers wireless connectivity to

your network as well as wired connection and you can control it from Auralic's Lightning DS app, though I used Roon as the controller as this is what I am most used to.

You can get the G1 in two flavours – no onboard storage or a 2TB SSD, the latter being only available in the US, though dealers elsewhere can fit the drive of a customer's choosing. With the storage you can add virtually any CD drive, attach it to the G1 via a powered USB hub and rip your CDs directly to the unit (internal drive), or even to an attached external hard drive.

BUILD AND SETUP

As mentioned the G1 shares the same heavyweight aluminium casing as its stable-mates (though AURALIC'S latest G2.1 has an additional internal copper sub enclosure and



substantial base plate with sprung feet) – it feels solid and purposeful. It also shares the same 4" colour display. Where it differs, as mentioned, is the inclusion of a silver knob on the right-hand side that allows you to scroll through the functions displayed on the very easy-to-read screen to enable setup of the various parameters. Headphone users are catered for by a quarter-inch jack which is a useful feature and makes the G1 a very flexible product.

Wired connection is my preferred method of streaming and this setup is as quick and easy as you could hope for. Plug in your RGB ethernet cable connected to your router, set the G1 to wired connection, using the rotary knob, let it do its stuff and you're off. Set the G1 up on Roon and it appears immediately as zone and you have music.

Round the back of the G1 we have a pair of Tri-band Wifi antennas and the main AC input and then things get interesting:

The streaming input is obvious and where you connect the device to your home network's router as outlined previously with an RGB ethernet cable.

There are inputs for AES, COX and TOS allowing for sample rates of up to 24Bit/192KHz. Each of these inputs' signals are buffered to the G1s Lightning Tesla platform which aims to remove jitter before going to the DAC itself, which has its own Femto clock.

Then we have the HDD input where you can add an external hard drive. This is a little more sophisticated than a straightforward USB input. With a Hard Drive Kit from Auralic costing around £100 and an upgrade to the V.7 firmware, you can add a generic CD drive and rip your CDs – even when you are listening to them. You can choose to rip to either the on-board SSD drive (if you have opted for that version of G1), or you can plug in an external hard drive via a powered USB hub and rip bit-perfect files to that. I think this is a very cool feature and one that many potential (and existing owners for that matter) will find very useful. Next up is the USB HS socket where you can connect a computer with a USB out.

Altair G1 will support files up to 32Bit/384KHz and DSD 512 so pretty much everyone is ca-

tered for. PCM data is dealt with and buffered by the Lightning Tesla platform as above. DSD is buffered by a separate circuit. Supported sample rates are up to 32Bit/384KHz and DSD 512, so pretty much everyone is invited to the G1 party.

Outputs are via either balanced XLR or RCA sockets allowing you to connect to your power amplifiers directly without the need to use a preamp, though for the sake of consistency in the review process I chose to output through the preamplifier circuit of our Leema unit, before sending the signal to our Merrill Thor Class D power amps.

I'll not go into all the functions or set up information as it is beyond the scope of this review, suffice to say the manual explains everything in good detail and easy to follow instructions.

One feature that I think some will find useful is the Smart-IR remote control function that allows you to map the G1 to any remote you like to control play/pause, volume, track select and all the other usual suspects – many may find this useful. I didn't use this facility as I outputted to the Leema unit that has its own control and I used Roon for controlling track selection etc. but the manual again talks you through every step of the process very clearly.

You can use the G1 as a USB DAC with Mac OS and Linux systems needing no drivers but, as usual, for Windows, you will need to download and install a USB Audio Driver. However, for the purposes of this review, and how I believe most people will use the G1, I'll be using it as a combined streamer/DAC.

SOUND QUALITY

So, after the brief setup process, it was time to get down to some serious listening on the G1. Regular readers will know I listen to a wide range of music, but I don't really do classical, and I certainly put a hell of a lot of tunes through the G1 and one thing I found was I was listening to whole albums and getting lost in the musical performance whilst really connecting with it. In fact, as I'm writing up my critical listening notes I had Roon playing Neil Young's After The Gold Rush - and then it threw up Van Morrison's Astral Weeks, an album I've never

really gelled with and have perhaps played a handful of times in my life. I think I may well be a convert! Perhaps I'm just mellowing in my old age or perhaps the G1 presented the record in such an organic and natural way that I heard it in a different way to ever before. I dunno, and perhaps it's not relevant, but I thought it was an interesting aside, dear reader.

Gabber (hard and fast techno synonymous with Rotterdam in the Netherlands) may not be everyone's idea of something to evaluate a piece of kit with - it's fast, sample-based, distortion loaded, and many would say unlistenable. However, what characterises this genre in the main, and why I'm using it here, is the kick drum sounds used. Whilst the kick sounds may appear to be pretty simple they can often be made up of complex layers of sounds and effects to give the overall gabber punch. Gmoork's Vliegender Kunstgebit has a kick sound at the start that to me has always sounded like a detuned voice and the G1 gives me the same insight. Our Aries G1/Leema reference brings more detail out in the kick, if we are being analytic, but the G1 does a very good job and allows the track to bounce along very nicely indeed. The kick here, there are several different sounds used throughout the track, underpins this style of music and, whilst a little warmer overall than our reference, I really can't complain. Switching to Reyes' Rock With Me, the kick is presented with gusto and again pretty well detailed too.

Keeping on the techno theme I pop on Hard-floor's classic Acperience 1. The reason for this is I use the same distortion unit used by Hard-floor (Rat) when making music and I am very familiar with the sound of the Roland 303 that characterises this German pair's output. The 303 has a rasp to it that is unmistakable and the G1 allows this to come through in the recording, though again a little warmer overall than our reference. This tune is characterised by a breakdown that builds and builds (I used hammer this when I was DJing in the 90s) and has a lot of delay effects which the G1 presents nicely whilst maintaining the atmosphere I remember of dirty and dark clubs - it evokes memories of a misspent youth. Of course, there are several 303s being used here and the G1 allows them to be clearly heard and separated in the mix. This is a good thing.

The role of a Streamer/DAC is, I suppose, to get as much information to the amp without adding a flavour of its own, and whilst this unit is certainly not absolutely without flavour, it does a very commendable job. I'd say it is on the slightly less analytical side of the fence and 'sacrifices' this for a lovely, easy to get on with sound that you can just listen to for ages, and with that in mind, and seeing as today is the 14th November, the day in 1979 when Neil Young's Live Rust was released, I thought I ought to give this much-loved album a virtual spin - it's an album we play a good deal here and I've loved it for many a year. Powderfinger and Cortez The Killer are the go-to tracks for me and I'm certainly not disappointed with what I'm hearing. There's a real feel for the live aspect of this recording presented and Young's 'almost broken' guitar style comes across wonderfully. The G1 doesn't bring the level of the edge of your seat excitement that I'm used to with our reference system, but it ain't far off given its asking price, and I could certainly see myself rocking out to these tracks on the G1 on a Saturday night. The opening bars of Cortez The Killer bring a shiver - I must have heard the record a thousand times or more and I never tire of it. With the G1 the stage feels a little constrained in comparison to the much more expensive reference but I'm not complaining. One thing I will say is the G1 has a lovely and seductive 'tone' to it - it is neither harsh nor over the top - no histrionics here, just a straight forward and enjoyable reproduction of the music. The harmonies of Young and Crazy Horse are presented wonderfully, the dynamic impact of the drums is fab, and again that guitar! Is it like being there, I don't know the answer to the question, I wasn't there, but it's impressive stuff in this system.

I pop the G1 into wireless mode - simple as - and pop on Gil Scott-Heron's Pieces of a man. I'd say this unit really suits this kind of music - there is a slight bloom to the bass and a syrupy feeling to Scott-Heron's voice presented here. It's really beautifully done - in fact, I'd say that some may prefer this kind of presentation over more critical presentations, but then horses for courses. There are no dropouts in wireless mode streaming from Qobuz and once again I find myself really drawn into the music.



I don't often listen to headphones but it's lovely to see a headphone output, particularly a quarter-inch socket, and so I pop on Bob Dylan's *We Live Here* (If you don't know it, find it and buy it!!!). This is a hard-hitting, grimy, urban track that reeks of London street culture and I lose none of this on headphones. Yeh, the output isn't going to compete with a mid-market standalone unit but again I find myself tapping my feet and singing out loud, in fact, I switch back to using the speakers and crank up the volume – absolutely fantastic! The grittiness of this track shines through and whilst I've referred to the G1 as being a bit "warm" this is fantastic stuff.

CONCLUSION

Overall the G1 has a detailed, enjoyable, and satisfying quality to it that really draws you into and connects you with your music. It is not as analytical as our Leema DAC/Auralic G1 combination and overall has a warmer/softer presentation. That's not to say that it is woolly or lacking in any way, it's just not as revealing a product, but then the Leema/G1 combination is about four times the asking price. I found myself able to sit for very long periods and just get into the music without feeling the want to over analyse the sound quality - I think this is a

good sign for any product.

So who will buy the G1? My thoughts are it is aimed at a market that wants a fuss-free, high-quality musical experience without the need to start investing in separate boxes or an over-complicated setup process (it's pretty much a plug and play unit with you needing only to add amp and speakers) and the addition of the headphone socket is a real bonus. With that said, the feature set of the G1 allows those that do want to add external drives, use it as a USB DAC, etc. are very well catered for. The ability to rip from your CDs, particularly whilst playing them 'live' is an excellent update! Roon readiness is another major plus point for me as this is fast becoming my preferred way to listen my music collection. I spoke to Auralic after the review was written and discussed my use of Roon as a preferred source and they suggested that they believe the sound quality to be slightly better than Roon when using Lightning DS (Auralic's dedicated app). One point, and not really connected to this review, but I will say it anyway, is I'd love for Auralic to produce a power amplifier that matches the casework of the G1 and that would make for a very compact and handsome system.



The G1 doesn't give a monkey's about what music you throw it! Whatever the genre, it performs flawlessly for its asking price, and, in that respect, it offers the music lover a really excellent package. If I was to compare it to another product I'd say I'd compare it to the Technics 1210 MK5. Is it the last word in resolution – nope (but it is very good.) Is it a whole load of fun and a workhorse that just delivers – yep, you bet!

As always, I think the question anyone reviewing a product should ask themselves is "Could I live with this?" and in the case of the G1 the answer is and emphatic "HELL YEAH!". So, having made that statement, I feel I have no other option than to award the Auralic Altair G1 our highest accolade. At this price-point, it's a must audition bit of kit!

AT A GLANCE

Build Quality: Very well built with a bomb-proof feel. Well specced.

Sound Quality: A lovely effortless sound quality that is very easy to get lost in for hours on end.

Value For Money: A great streamer and DAC in one package and with this level of build and sound quality for less than £2000 is a good deal.

Pros:

- Ability to add online SSD storage of any size.
- Live ripping of CDs.
- Roon Ready.
- Good app and Lightning Server. Smart IR learning.
- Good headphone output. Clear and easy to read screen.
- Ease of setup.
- USB, Coax and TosLink inputs.

Cons: Some may prefer a more analytic presentation, but that will be down to personal taste.

Price: €2399 £1999



LEEMA LIBRA DAC

Hifi Pig first reviewed the LEEMA LIBRA DAC way back in August 2016. In this update to that review, Stuart Smith takes a slightly different viewpoint and makes very different conclusions, but based on very similar findings, to the initial review.



Stuart Smith

Regular readers of Hifi Pig will be well aware of the Welsh manufacturer Leema Acoustics, founded by ex-BBC engineers Lee Taylor and Mallory Nicholls (LeeMa). Originally focusing on creating a mini-monitor loudspeaker to the very highest standards, Leema has expanded their outlook since launching 1998 to include a whole range of electronics, including DACs, Servers, CD players, Phonostages, music servers, power amps, pre-amps and integrated amps which are spread over three ranges - Elements, Stellar and the top of the range Constellation. Leema also produces a range of audio cables.

What we are looking at today is the Libra DAC which falls under the Constellation range of electronics (we already reviewed it way back in August of 2016,) and so this review is

more by way of a bit of an update to that review and by way of giving a different spin on that reviewer's conclusions. The original review concluded that the LIBRA had "Plenty of power, detail and nuances to the sound, although lacking involvement and emotional connection. It isn't bland or sterile by any means" and added, " (it is) Perhaps a bit too much neutral-sounding". I'd like to look at the DAC/Pre through new eyes and through our highly resolving reference system.

Now, I recently wrote an article for Hifi Pig asking the question "What is HiFi" and by definition, it is a product/piece of kit that reproduces the signal it is presented with "with a great degree of exactness." The original review's conclusion bears this out but says the LIBRA lacks emotional involvement. However, if we are as audio-



philes looking to get the nth degree of exactness out of a product, then perhaps the LIBRA actually fulfils this benchmark and needs to be discussed with this criterion in mind. As a person who reviews a lot of kit, what we are looking for in our main system is a series of products that work together symbiotically and in as neutral a way as possible so that we can slot a new product in the chain and hear exactly what it is doing. Of course, we also listen to a lot of music purely for pleasure and so any product that finds a permanent place in our reference system needs to be highly enjoyable. With that said, we have two systems within one – a review system using highly transparent class D monobloc amps and a pair of Audiovector S3 loudspeakers, and a system we have using a Jean Hiraga Le Monstre amp and Avantgarde Duo XD loudspeakers. For both systems the kit ahead of the pre/DAC is identical. For the record, both systems now use the same DAC – the LEEMA LIBRA, where previously the Lampizator Big7 DAC sat, which may well give you a clue as to where this mini-review is going to end up.

I'm not going to go into masses of detail about

the features of the LEEMA LIBRA as they have already been covered in the previous review, but briefly, they are (and taken from LEEMA's specification sheet):

Analogue Inputs: 3 (configurable as Balanced or Un-Balanced)

Bluetooth interface

Headphone Amplifier

S/PDIF Coaxial Inputs: 3 (24 bit 192kHz & DSD64)

S/PDIF Optical Inputs: 3 (24 bit 192kHz & DSD64)

I2S Inputs: 2 via RJ45 connectors (24 bit 384kHz, DXD, DSD64 & DSD128)

One I2S Input has fully programmable pin allocation

AES/EBU Inputs: 2 via XLR connectors (24 bit 192kHz & DSD64)



Asynchronous USB: Yes (24 bit 384kHz, DXD, DSD64 & DSD128)

USB: fully asynchronous - Windows & Macintosh

USB Isolation: Full Galvanic

The three coaxial and three optical inputs will reproduce 24-bit/192kHz audio and since an upgrade, it can provide DSD64, DSD128, DXD & 384kHz via the USB and I2S inputs. DSD64 is also supported via all SPDIF inputs (coax and optical) and AES/EBU inputs.

The outputs, importantly for us given the two systems in one outlook I touched on, are via balanced XLR (which feed the Merrill Thor Class D amps) and RCA (which feed the Hiraga Le Monstre).

So, feature-wise the LIBRA is hugely well endowed and has more than enough inputs to satisfy even the most feature-hungry music lover.

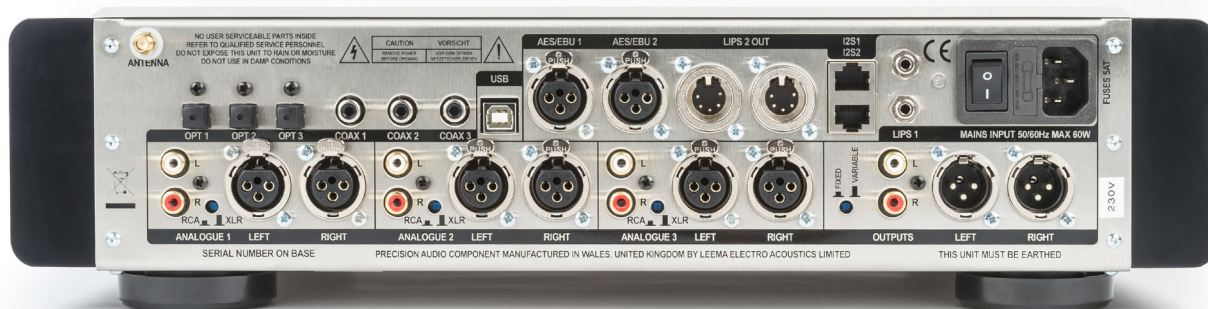
Interestingly, the LIBRA doesn't use the usual

suspects with regards to its' DAC chips and instead uses the unique Quattro Infinity dual-mono DAC modules. According to the blurb on the LEEMA website these modules "... feature user-selectable output filter bandwidth for maximum flexibility with higher sample rate sources. They are also field replaceable. Should conversion technology improve in the future, the modules may be upgraded, thereby future-proofing your investment." Good to know.

SOUND

I'm not going to go into detail as to what tunes I listened to and what I thought about the presentation of each of those tunes, rather I am going to speak in broader terms with regards the sonic signature of the LIBRA.

First of all, the previous review levelled a criticism that the LIBRA was perhaps "too neutral", but for me, that is exactly what I am looking for with a piece of kit in this system. It is a piece of equipment that allows the listener to see into the recording and pull it apart detail by minute detail – in short, the LIBRA is hugely meticulous in its presentation as to what is going on in a



recording. There is no place to hide...NONE! If we go back to the definition of High-Fidelity then the LIBRA DAC fulfils this definition brilliantly. See it as a benchmark in the physics lab meaning of the word and you get to understand what the LIBRA is bringing to the test-bench. If you are looking for a product that will cover up inadequacies in a recording, or electronics that precede it in the audio chain, then you will want to look elsewhere, I'm afraid. If you are looking for a product that offers true "high-fidelity" performance then you will be well served, and at a price that is very reasonable indeed for the level of reproduction and features on offer.

Often reviewers will level the criticism that a piece of equipment is just too revealing and as such can become "fatiguing" to listen to. I don't get this I'm afraid! Whilst the LIBRA is hugely revealing in its presentation, I can listen to it for hours and hours on end without any feeling of being over-exposed to detail – indeed, to a large extent, and when I've got my audiophile hat on, that detail is exactly what I'm looking for in a true high-fidelity product.

So, the DAC section works as advertised and whatnot, but the LIBRA is also a preamp with the three analogue inputs (XLR or RCA), so how does it fare in this sense? The answer is pretty much the same as with regards the digital inputs. I have it being fed by a LAB12 melto phonostage for vinyl reproduction from a pretty high-end front end, and I have absolutely no

complaints whatsoever. I can hear the tone of the melto (it's a valve stage) and the character of the GoldNote Tuscany Red cartridge. In short, the LIBRA is pretty much neutral in its effects on the analogue inputs.

CONCLUSION

I don't necessarily disagree with the findings of the review carried out back in 2016, where I differ with my thoughts is what I conclude from those results. Yes, the LIBRA is hugely analytical – I think this is a good thing, whereas the original reviewer (not me, I must add) thought that level of detail a bit much. I also don't find the LIBRA in any way fatiguing.

In short, if you are looking for a DAC/Pre that is true to the source material you feed it and don't want your chosen DAC to present anything but the truth of the recording you are listening to, then you need to look no further than the LEE-MA LIBRA. As an analytical tool, it is, in my experience, second to none. However, if you are looking for a DAC/Pre to give you a big hug, wrap you in a blanket and hide you away from the big bag world of High-Fidelity sound then you ought to look elsewhere. With that said, if you are looking for a less analytical sound you can temper the naked truth with your amps and speaker choices, whilst safe in the knowledge that what your amp is getting fed to it is the full fat, nowt taken out reality of the matter.



Put it this way, the LIBRA fulfils everything I want a DAC to do in our review system and it's going nowhere, and hasn't now for the best part of 12 months!

AT A GLANCE

Build Quality: Great solid build. Display isn't anything to write home about but adequate. Good remote control

Sound Quality: Highly analytical and true to the recording. A high-fidelity product

Value For Money: Not a bargain-basement product but this is a precision tool and the price reflects this

Pros: Massively analytical and true to the recording/file it is presented with. Neutral sounding. Tank-like build. Good remote. Headphone amp. MP3 Input

Cons: Some people don't want the truth! Bluetooth is superfluous for my needs. Display isn't really visible unless close to the unit.

Price: £6250





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iFi ZEN BLUE BLUETOOTH DAC

The iFi ZEN Blue is a wireless Bluetooth DAC costing just £129. Janine Elliot gives it a whirl.



Janine Elliot

I love iFi. You just know you can get totally up-to-date technology, excellent audio quality, diminutive size boxes and at an equally diminutive price. That should mean that this review is done and dusted before it has begun, but you should know that I like to take great time and care listening before putting fingers on my keyboard. This is very important because many audiophiles are still not yet converts to Bluetooth as a purveyor of hi-end music. iFi are aware of that and so the Zen Blue is the most advanced allowing all types of Bluetooth including aptX HD. At £129 I wanted to see if this is the very best value streamer out there. iFi is a “British” company I have watched with great interest since their beginnings in 2012. I say British somewhat loosely; iFi manufacture all their products in China at their wholly-owned factory, hence keep-

ing prices very competitive, and have a head office in Southport (where the company was founded) with a team of designers, marketers, sales, training and customer services from around the world. This includes the head of the in-house technical design team, German Thorsten Loesch, plus French and American input (the legendary amp designer John Curl working as a technical consultant). iFi is an offshoot from the high-end manufacturer AMR (Abbingdon Music Research) with both companies designing and manufacturing portable, desktop and hi-end HiFi components. iFi’s audio products are aimed particularly at those with digital leanings; whether DACs, Bluetooth, wifi or headphone amps. Despite the size of the products they claim Class A analogue circuitry and being all “Bit Perfect”. iFi is also conscious of the environment



using recyclable materials in construction and packaging. This is a lot of product for very little money.

CONSTRUCTION

Weighing in at £129, the Zen Blue is one of a pair of products, the other being the Zen DAC, a USB 3.0 input DAC, both being art-deco in looks but with a gorgeous curvy matt grey finish top and bottom and brushed aluminium front and rear. The Blue is diminutive in size at 158mm width, so easily placed just about anywhere you wish. The front is spartan, with a pairing button and two large LEDs evenly spaced. The first button should be pressed when seeking a new device and when searching the right-hand large LED will go from a flashing blue light (as it searches for previously installed devices) to a blue/red flashing indicator (as it hunts out for new devices). Interestingly the instruction manual, a book-marker-sized card, suggests the middle “iFi” labelled LED indicates the searching and pairing. Generally, though, the instruction card is very detailed and easy to follow. Once connected, the middle LED indicated the format, whether that be AAC or aptX, for example, and the LED on the right indicates the kHz (44/48 Blue; 88/96 White). The rear is where all the work can begin; Balanced 4.4mm TRRS and single-ended RCA analogue outputs, plus coax and optical digital outputs should you need them. A digital/analogue switch in between them selects either the analogue or digital output, so only one is active at a time, and completing the back is the socket for the supplied screw-in antenna in order to pick up signals from my DAP and Phone. All current and future Bluetooth® audio formats are supported. This includes Qualcomm’s aptX and aptX HD, LDAC (from Sony) and HWA (Huawei) hi-res Bluetooth® codecs, AAC (Apple’s favoured format) and SBC (the standard Bluetooth® codec), the unit receiving up to 24bit/96kHz. The unit can store up to 7 Bluetooth devices, so more than enough for me then. A Qualcomm 5110 chip processes all the Bluetooth side and the DAC is handled by an ESS Sabre chip. Analogue outputs are 2V and 4V for RCA and Balanced, respectively, more than enough for today’s HiFi or studio applications. Supplied in the box is the mains adaptor, the aerial, and even a basic RCA lead just in

case your expensive interconnect isn’t available. The mains unit can be updated with improved low-noise adaptors such as the iPower or iPower2 if you so wish.

THE MUSIC

Connecting up and pairing the unit with my DAP and Sony phone was not an issue. The middle “iFi” labelled indicator shows the file format is being received, for example aptX (Blue) or SBC (green). My Sony phone lit up LDAC (Cyan). The right indicator shone blue to show that I am playing 44.1kHz audio.

My first listening was to break me in gently; Vaughan Williams ‘Fantasy on a Theme by Thomas Tallis’ (Adrian Boult - London Philharmonic orchestra). This album has some superb playing and recording, considering its age. The Zen was exceptionally quiet and with a superb soundstage capturing this dreamy and beautiful work with passion and detail. Up next was Vivaldi’s ‘Guitar Concerto’ second movement (Binaural Baroque, Chasing the Dragon), which is an equally beautiful piece of music and written almost 200 years earlier. The binaural recording particularly worked well on my speakers on this movement, though of course is best served on headphones. Output from the 4.4mm balanced jack could then be fed into the balanced inputs of my Music First Audio preamp, just to take the quality and level even higher than from the RCA outputs. Taking things musically up a level or three I turned to Curved Air and the album ‘Air Cut’. This is a 1970’s progressive rock band but with a twist. A loud rock first track is replaced by a Joan Baez style voice in the second track with acoustic guitar and a quiet monophonic synthesiser, then to be followed in track three with a classical piano introduction. Quite an unorthodox mix of ideas all on one album. No wonder, the band members history included classical training and experiments in folk music and electronic music. I hadn’t played this album for a while and chose it now due to the clarity and openness of the music, plus being such a wide source of ideas all on one album. The Zen carried it off brilliantly, bringing out each instrument clearly and better than I had obtained from any “portable” Bluetooth receiver in the past. Turning to Johnny Cash ‘American IV – the man comes Around’, whilst I



think his voice is overrated he has a masterful way of mating the words with the music. I guess selling over 90 million records he must be pretty good. American IV was the last album he put together, released in 2002, a year before he died. In the performance of "Hurt" the Zen not only displayed an amazing amount of detail from lowest bass to the tops of cymbals and the detailed strumming of the strings on the acoustic guitar, but its timing was equally honest, giving an openness to the music that simply pulled the listener into the music. This is a highly depressing album though; track three "Give My Love to Rose" is all about someone dying and track 5 "I Hung my Head" is about shooting someone. So depressing, thank goodness I didn't have a tape editing razor blade nearby. Time, perhaps, to move on to something a little happier.

Time then for a novel solo violin performance of Bach's Toccata and Fugue BWV 545, played by Paxlo Beznosiuk. A brilliant performance and a chance for those mid and upper frequencies to shine in this ambient 24/96 recording. This is a brilliant performance from the Ukrainian/Irish violinist. His performance was full of warmth that the Zen gave the top frequencies a musical

sheen that was contagious. I wanted to listen to more. To check out even more of that excellent midrange I turned to the voice of Diana Krall in "All or Nothing at All". This song begins with excellent double bass. Bass frequencies from this little box were excellently clear and accurate, as was her voice; Precise and musical. Ricky Lee Jones "Spring can Really Hang you up the Most" is another favourite for me and my next choice. Her voice is very distinctive, often sounding like she is yawning; she often doesn't quite finish the ends of words or she suddenly gets more animated with her top notes. The performance was highly spectacular; a silky-smooth rendering that still had all the detail from the very low to higher frequencies. The amplifier had an excellent mid-range frequency, creating excellent vocals, as well as the strings in the classical music I played. Hard to believe this all came from such a cost-efficient product, especially the balanced-out option. Finally, I turned to Brunette Models "Autarky" an experimental electronic music group from Poland combining different effects and bells and tonal musique concrete with lots of "3rds". All delivered with a massive dynamic range and covering the very lowest to highest frequencies. The Blue handled it all significantly well with a solid and fluid silky



performance that often made you forget you were listening to digits.

CONCLUSION

Those who think there is no future in Bluetooth audio need to take this little beauty out for a ride. Not only is it so simple to use (you don't actually need an instruction manual) but the audio quality – whether you choose basic aptX or HD – is equally capable, with detail at all frequencies and an excellent noise floor. The bass end is particularly clear and extended and that mid-band was very musical. The Balanced output is great if you can get a 4.4mm to XLR cable. Where other more expensive streamers have no HD streaming or balanced output facility somehow iFi can do it all for £129. Others please take note.

AT A GLANCE

Build Quality: Very professional finish and placement of plugs

Sound Quality: Very good amplification built-in including excellent signal to noise and wide frequency response.

Value for Money: £129 is not much money for heaps of features.

Pros:

Gets the very best out of your Bluetooth
Excellent bass end and mid-band
Detailed and exciting presentation
Balanced output facility

Cons:

Not at £129

Price: £129





STELLAR SOUND

Discover the 5-star Tucana II Anniversary Edition amplifier and the new Quasar streaming amplifier with DAC and Bluetooth, available now.



BRICASTI M3 DAC

Bricasti Design is a brand more associated with the pro-audio market, but that could all set to change given Dan Worth's enthusiastic review of their £5399 M3 DAC, with options to add a network player and headphone amp.



Dan Worth

As with the rest of Bricasti's M Series of electronics, the M3 is fully differential and derives its technology from the flagship M21 D/A Converter. The M3 is available in a few different forms. As a standalone DAC format with the option of some additional extras - an on-board network player/renderer, a fully balanced headphone amplifier and an optional remote control. I'd strongly suggest envisaging what you may want from the M3 in the long term, as retrofitting any further options would incur additional charges and shipping fees, a new front or rear panel would need installing also as the M3 in its standard form doesn't have blanked cutouts to its casework, which I like as it keeps the unit's fascia looking clean and smart. The version of the M3 I have for review here is the "full fat" version including all of the above options.

The M3 boasts an analogue volume control too, excellent for headphone attenuation or an active speaker setup, and of course for those who wish to drive power amps directly through either its fully balanced XLR or single-ended RCA outputs.

The M3 has the same conversion as the long-standing yet updated M1, as well as native DSD conversion technology which can be found in the M21. The M3's input selection comprises of USB, AES/EBU (XLR), and Coaxial RCA along with Optical SPDIF. The Network Player version will have an additional Ethernet socket on the rear.

The overall unit itself is really quite heavy for the size, being around 3/4 the width of a full-size unit. Its weight comes from two chunky power supplies used to run digital and



analogue circuits independently, along with the substantially constructed chassis of the M3, which is beautifully machined, with custom made feet - the M1 and above do have an option for integrated custom made Stillpoint feet, which I would have liked to have as an option on the M3 but nevertheless, the enclosure is very well made with great lines. The front screen has the ability to cycle through all it's menu options using the designated buttons and volume knob as a scroll wheel, all selections can also be made via the optional remote control. The screen can be dimmed or turned off completely, which for many is a must due to placement and is often overlooked by many manufacturers surprisingly. A simple touch of a button will illuminate it again while selections are being made.

CONNECTING THE M3

The SPDIF connections on the M3, when used directly, have some differences, this, however, is mainly when using optical as the source. Like every other DAC I have used, optical just isn't as accomplished a connection sonically when other options are available to the user for a main source component and things are no different with the M3, even with a good quality

glass fibre cable.

I have been using for some time now with all my DAC and streamer combinations the Audiobyte Hydra SPDIF converter. It has always been a step up in performance when using the USB output of any streamer, offering re-clocking and separation of the USB +5v power line in favour of a strong linear power supply.

Hooking up each of the SPDIF options, which I can do consecutively from the clock/convertor to compare, optical does sound flatter, less spacious and doesn't have as vivid a tonal palette. However hooking up either my OLED TV or NVidia Shield offers great sound quality and in comparison to my other range of DACs, such as the Benchmark DAC3, B.M.C. UltraDac or Mytek Brooklyn for instance gives an undeniable step forward in sound quality with notably more substance, control, clarity and detail.

Each of the RCA and XLR digital inputs, however, sound fantastic and incredibly similar to each other, to the point that unless listening so critically, for so long and late in the evening when there's silence all around, you aren't going to notice the fractional difference in background silence between the two connections, especial-

REVIEW



ly with anything less than a highly transparent system.

Using USB direct from the streamer is also not as good as using the external clock/converter, which when in the chain and using either AES or RCA coax, gives a far more spacious, vibrant and tonally rich sound that has a greater 3D image and more abundance of micro details and micro dynamics. I have a good range of high-end USB cables, with the absolute best being the Gobel Lacorde Statement but the pitfalls of USB still remain and once the noisier power from the source is removed via the Hydra, things rapidly clean up and become more natural.

As the M3 offers a better sound when being fed this way it safe to say that its own abilities aren't questionable and the correlation between the comparisons made between connection types reflect my historical findings with any other D/A Converter. The USB direct option comparative to the USB to Hydra and SPDIF out preferred method would hint at two scenarios. One that the USB chipset of the Hydra is better than the one within the M3, or two and most sensibly that the replacement of the streamers clock with the introduction of the Hydra in the signal path is giving a superior clocked signal to the M3, along with the use of a Paul Hynes top of the range SR7 Linear Power Supply replacing the +5v feed from the streamer is indeed removing a lot more streamer expelled noise into the circuit. Although only being able to use a SPDIF connection in this instance limited to 192khz isn't ideal (I2s over HDMI on the M3 would have been much preferable and a connection type I also could accommodate to use higher bit rates and DSD). Consequently, I find the sound far more tactile, detail rich and engaging using this combination of connections and will be my choice to proceed with this review.

SOUND

After a couple weeks of constant run in time with a huge playlist on repeat, with just the DAC and streamer running with some intermittent listening, I felt that 350 hours or thereabouts was offering a consistent sound. I will add, however, that out of the box the M3 sounded pretty incredible pulling me away from the

B.M.C. UltraDAC which was in situ as the main DAC since the review I conducted of it a few months ago.

The biggest difference initially heard whilst critically listening to these two DACs side by side was a more heavily fleshed out and richer top end, more three-dimensionality within the image set and an overall more mature tonal palette. The M3 has a purity of tone that is really quite remarkable, closer to that of a good valve based piece of equipment, but clearly still solid state. It doesn't have the warmer character of a valve unit but it gives that conciseness of a note, with liquidity and naturalness.

For instance, listening to an acoustic guitar solo will give a concise leading-edge immediacy that fleshes out with exemplary timbre as the note reverberates and hangs and then naturally and most of all convincingly decays. Spatial awareness also plays a big part in enjoying an acoustic guitar and the Bricasti sound allows for each of these decays to remain audible as the next note overlays the previous, giving far better realism.

Although I fear as we go along my opinions on the DAC may become a little repetitive, I will state quite categorically now that each genre and even each piece of music I have been listening to has its own characteristics and sounds utterly different - the M3 has the ability to allow each piece of material to sound truer to its recording than any of the previous DACs I have owned or had in my system and to characterise its sonic signature as imposing a similarity over each piece of music would just be erroneous. Although the M3 will lend its sonic attributes to each type of music it will never enforce an agenda on proceedings.

As I type "We Built This City" by Starship has started playing - I was drawn to the bass line presented by the M3, that gives a very resolute and controlled rhythm, which underpins this DAC's incredibly transparent midrange, and through the all-ceramic drivers of my Ayons is just so full of clarity, bags of informative detail and is very engaging. The top-end is just so polished and analogue-like which offers tremendous balance, is airy and wonderfully spacious, giving a perceivably larger and arguably taller

soundstage than the B.M.C. I have been using, the Lindemann, or any of the studio-based DACs I have. The most noticeable attribute within the top-end sounding so solid and articulate is the richness of its captivating tonal balance. This accomplishment isn't one-sided by any means, micro-details are clearer to hear and the micro-dynamics of these smaller details each have their own fullness of tone rather than simply being grouped and packaged with a linear signature designated by a preconfigured voicing strategy, rather than when you listen to a romantic and rounded vintage valve amplifier sound, where everything sounds warm and rosy.

Midrange is better explored and explained for me with the M3 too. Emily Sandé's live and acoustic version of "Suitcase" shows off her beautiful vocal very well. The guitarist which accompanies her can be heard and realistically imagined to be sitting a couple feet to the left of her and fractionally behind her on the stage, whereas the tambourine can be clearly designated as a little further out to the right and a few feet further back than the guitarist. More than often when listening to this track everything sounds flatter and more as a grouped event within the midrange, whereas now the greater individuality of the instruments and singer are more clearly defined and the additional space plays its roll in adding to the realism and beauty of the track as it contains far more believable instrument decays and has the acoustic interactions and reference points giving more sense of the venues setting.

Newton Faulkner's cover of Maroon 5's "Payphone" from the Live in London album has Newton's vocal nice and tall at the forefront and the guitar is clearly heard to be played by himself and realistically positioned on his body, there's a wonderful feel to the acoustics of the venue again here and crowd applause comes from a lower point in the soundstage and closer to me - almost like I'm sat listening to the performance just a handful of rows back from the stage. The sensation I get is almost like I'm floating above their heads with the applause and interactions seemingly rising out of my floor space in-between myself and the speakers, with me being more level with the artist on a raised stage. Whether this is correct in resembling the

reality of the live performance I'm not sure as I've never booked a floating seat previously! It does, however, feel true to the recording at least. Newton's vocal is once again strong, natural and expressive with notes and acoustic space being completely convincing.

I also like to have a listen to a bit of Boris Blank and Yello from time to time, especially when demoing equipment. The attributes the music presents for me are mainly to ascertain resolution, leading-edge control, overall dynamic presence and tonal balance across multiple layers. The M3 is a very dynamic and very resolute part of the overall source compliment with my streamer, the xolone which I love for being the first streamer I ever heard which sounds truly analogue.

As mentioned previously, the M3 does a sterling job in giving each note its own transient response rather than being grouped into a bracket of dynamic boundaries, creating bottlenecks in expressiveness. Leading edges are tight and crisp and notes can stop on a dime, but don't let that comment give you a false sense of belief that everything sounds overly fast and accurate because it simply doesn't - synthesised top-end notes will if that's the way they were intended. Other notes which have more longevity to them have their own playful area in the soundstage to explore and behave as necessary. The M3 does this trick so tactfully that unless I knew better I'd swear the system was dual mono with multiple independent power supplies, rather than separate supplies only for digital and analogue - I'm starting to fantasise about the M3's older siblings now and, although I haven't had a chance to hear each of them, the mind does speculate about what they must offer.

After a couple albums by Boris Blank and feeling as though I was inside an almost surround sound like environment whilst listening I played a number of tracks from Bliss. These guys do the feeling of being encapsulated with sound very well and with my listening position being more near-field, it's something I love and always try my best to obtain when setting up any system. I love the scale a large speaker system can give being situated at the end of a room, especially when recreating live performances, but my personal leaning is being more

inside the “musical bubble” for want of a better phrase, which is why I like good depth to my music to balance this out.

Bliss offered exactly what I was learning to expect from the M3 - imagine being seated with your eyes closed in an unfamiliar room, not knowing its dimensions or how close you have been seated to the speakers. The sound you hear sounds close as a track begins, it's wide and full of out of phase notes that sweep around the peripherals of your hearing. A drum-beat begins centre stage and notes begin to wash from left to right behind this while curving toward the peripherals, which are dancing with different transients at varying heights, and then the main focus is cast to the filling of varying instrument notes within the now developing centre stage in multiple layers. A bass drum starts rolling outwards on a wide-angle low down from the centre and tiny pings and sounds like swarms of fireflies start dancing all around the front of the soundstage.

What the M3 offers is a fatigue-free sensory overload...almost; with this type of music the brain fires on all cylinders, like eating cuisine full of many complex, delicate and perfectly balanced flavours. Exploring all of the small nuances and finely finessed details it takes a bit of time to adjust and begin directing everything, but once acquainted with the new information provided the experience is just so much more satisfying. You could also compare it to a more complexly flavoured wine, if that's what you enjoy.

If you were required to draw what you heard it would have to be within a 3D CAD program on a computer as no piece of paper would suffice, it's an exciting thing to witness that can only be compared to a virtual reality type experience, with the ability to walk through the sound as you would the virtual world.

What I also find very endearing about the M3 is its capability to remain controlled when playing the likes of Def Leopard's “Hysteria”. Being able to pull apart the busyness of some passages, allow for the break-up of electric guitar to not sound too harsh or overbearing, and still have the ability to represent a vocal with such tonal accuracy is a testament to the Bricasti design

team.

Much the same goes for classical music. During large crescendos, whereas some equipment will make the excuse that too many cooks spoil the broth, the Bricasti has an audible time and space for each instrument and offers fantastic timing which in turn shows up excellent transient individuality of each instrument. The beauty of classical music can be overwhelming and fatiguing at times when a system can't pull it all apart and allow each musician and instrument the ability to be focused on whilst still remaining part of the overall performance. The M3 makes great efforts to achieve this and does a wonderful job. Another point of mention related to this genre is how the M3 deals with piano, the absolute accuracy of recreating a piano is something that is almost unobtainable from any HiFi system - very expensive and well put together systems can get close, but it's one of the most difficult instruments to recreate faithfully in my opinion. Now, of course, I'm not saying the modest M3 does, but it does a better job of recreating the tonality and decay of a piano in my system than any other DAC or source I have heard and for that I applaud it.

ONE BOX SOLUTION?

As a stand-alone unit, the M3 is a master-class all of its own. A single unit on a desk with a set of active speakers and a pair of headphones, with a NAS located somewhere in the home or office is actually all that one would need to enjoy the beauty of the Bricasti sound - so I did, I set it up just like that!

I have a pair of Focal CMS50 actives which I hooked up to the M3 with a pair of XLR cables and unlike the B.M.C which gave me the same option previously, I was able to stream music directly from my QNAP NAS across the network. Using the Astell and Kern App.

Note: in my tests I found music streamed from either a Mac or PC to sound quite a bit better than a direct USB connection.

I have heard these Focals with a huge range of DACs and have had many smaller setups with the Focals, and although those setups have changed dramatically over time the Focals have



always remained. Although the Bricasti would undoubtedly deserve a higher-priced performer, I love them for their accuracy and honesty, allowing attached electronics to show their true character.

The M3 made the Focals sound at their best to date and by quite a margin. The M3's purity of tone simply has to be heard to be appreciated and the experience right here right now has surpassed what I believed the capabilities of the CMS50s to be. I championed them hugely in the B.M.C review (and rightly so) but this is on another level. Treble is fleshed out more analogue-like and is more lucid, midrange expression and tone is more realistic and palpable, and basslines are as dynamic as in the main system showing consistency in the M3 - proving to my mind that the M3 is the mastermind behind the new performance in each of these systems.

Listening to Iris by the Goo Goo Dolls explored the further weight I had in this setup now, - it usually takes a fairly well put together system to express the detail in the bass within this track, along with the control over the chorus, where things can get a bit splashy at higher volumes. Whereas Bliss' "Wish You Were Here" album sounded as detailed as it should, conveying a

remarkably large soundstage, fine delicacies and fantastic spatial awareness.

The other option available for anybody wanting to purchase an M3 is a fully balanced headphone amplifier and, as part of a standalone one-box solution, a very viable option that will give an additional layer of flexibility. Remember to factor in the price of the remote too as it's really quite expensive and would be a very useful option for headphone listening.

I have a pair of Meze Empyrean headphones and have the 4 pin balanced XLR cable option, so naturally, I wanted to pair the two together. The Empyreans are an incredibly special set of headphones and although I find them to be one of, if not the best headphones I've heard, preferring them over many of the other high-end offerings. The M3's headphone amplifier is not just an afterthought and it is actually very capable and drives the Empyreans incredibly well. The sound I received has the full heart of the M3's DAC. As with all previous testing done M3, tonality and timbre are firstly and foremost the special ingredients with realistic tempo, timing and background silence come a very close second. The amp is quiet but I have heard more eerie silences and more lucid tones from some very high-end headphone amplifiers, but I have

to take my hat off to Bricasti when I say that the addition of a headphone amplifier is great and for that headphone amplifier to be as good as it is, well, I'd feel like I was getting good value, and with a reasonably priced set of headphones I believe I would be 100% satisfied with the performance.

So, to level the playing field a little more and as I was able to add a reasonable amount of reality to the comments made above I did. I introduced my long-standing and much loved Audio Technica 2000X's to the M3. These headphones were around £2000 less in price than the Emphyreans at £750 and have been the longest-lasting pair of cans I have ever owned. The Audio Technicas sit on the edge of being too much and a bad recording can really be highlighted with them, but when fed good recordings and on the end of something well-voiced I just love what they do. The M3's DAC/Amp combination must have given them a good talking to, put them firmly in their place, explained the boundaries, and warned them should they overstepped the mark because what I gained from their top-end especially was the most analogue-like, controlled, and expressive performance I have had from these headphones. I gained additional bandwidth but with less hardness/harshness. There was more space and air in the upper and middle frequencies and the signature Bricasti clarity that polished the midrange. Being able to do all of this while stacking the layers in the way it did was marvellous! Yes, the Meze Emphyreans are superior headphones, and yes they do things that the Audio Technicas can't, but for a reasonably priced pair of headphones with a reasonably priced headphone amp which lives inside the DAC (without the need for a separate box and cabling), I was very impressed with the level of performance.

CONCLUSION

Being a pro-audio company, Bricasti has stepped firmly into the home audio sector, and although I own, have owned/heard a lot of DACs from most of the big names in this category I find the Bricasti sound to be the superior option - at least for me.

Attempting to convey my experience with the M3 when I have so clearly championed and

given great reports to many other DACs can at times be awkward? At the time of writing each review I will if warranted state that a particular DAC is my new favourite, or express that one offers a range of characteristics which are better than the previous champion. There are also considerations such as price against performance, features and pure enjoyment to factor in.

It's all very subjective and similar in scenario to the average enthusiast - do you often have a scenario where a friend or family member mocks you by saying "You said the last one was the best one!" and laugh a little? This also happens to me - your not alone! The reply to this is always the same for us all "Yes, it was at the time" and it's very much the same scenario with reviewing, although sometimes the goalposts can shift far quicker - needless to say, the M3 at this present point in time is my personal favourite DAC to date and by a good margin. I've personally heard maybe two DACs that would compete sound-wise with the M3 (though I obviously haven't heard them all) but for me, for sound quality, build quality, options, features and usability, the Bricasti M3 ticks all the boxes.

To sum up the sonic signature of the Bricasti M3, I'd say it has an extremely wide bandwidth and high resolution. It has an analogue quality and a purity of tone which I have not previously heard in a transistor-based DAC - the other competitors I mentioned that would rival its sound are all valve and far more expensive and within its price range I'd struggle to find anything to better the M3. The Bricasti is incredibly expressive dynamically, has detail in spades and is so spatial that the realism of performances keeps surprising me still now. The M3 doesn't just create great music, it creates experiences and has shown me, that even now, after all this time, there's more to be had from my system.

If you don't require the network player, headphone or remote options the M3 is a ridiculous performer for its price and I look forward to hearing what in the future can compete with it - it's going to be an interesting time for the M3 going forward as it will not be being returned!



AT A GLANCE

Build Quality: Beautifully finished in a substantial chassis with anti-vibrational qualities and looks good to boot.

Sound Quality: stunning, analogue, just so natural and tonally accurate. Incredible resolution and dynamics. Mixes finesse with robust details and times superbly.

Value For Money: The standalone DAC is fantastic value for money and the options represent great value. The remote is far too expensive, however.

Pros:

- Great range of options
- Huge system flexibility
- Signature pure tonality

Wide resolution bandwidth and transient response

Cons:

Remote control is very expensive

Pricing:

DAC: £5,399

Network Player: £1119

Headphone option: £529

Remote Control: £529





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TECHNICS SL-G700 NETWORK CD PLAYER & STREAMER

The SL-G700 network, CD and SACD player from audio giant Technics is, as the title would suggest, a wired or wireless network player, CD player and SACD player in one heavyweight box costing £2350. Stuart Smith gives it a spin.



Stuart Smith

Japanese Hifi giant Technics has been making a bit of a resurgence of late, not that they really went away, what with their relatively recently introduced new series of their classic 1200 (plus) series of turntables, as well as lots of other separates. I've always had a soft spot for this Japanese brand and my first ever turntable was the company's SL-DL1 linear tracking turntable, before graduating on to their 1200 turntables for DJing duties. As well as using their turntables in clubs and raves I've also used them at home, and have the excellent 1200G in our upstairs system. When I had the SL-DL1, I also had given the company's catalogue of the time and I pored over it, and particularly remember really lusting after the SP-10 turntable in its beautiful obsidian plinth. I also absolutely loved the look of their power amps with their front panel

domineering VU meters. Sadly, I have never owned either an SP-10 or any of their amplifiers.

For a good while I seemed to hear very little of Technics other than their turntables and it seemed like they had kind of abandoned the home audio market – how much of this was me being blissfully unaware of the brand, I don't know - perhaps they retreated a little when the mid-market for HiFi contracted. Anyway, it seems, if their presence at audio shows (remember those?) is anything to go by that they're are making something of a resurgence and the SL-G700 represents this renaissance beautifully. So what is the SL-G700? Put simply, it is a fully functioning Network player that will play CDs and Super Audio Compact Disc (SACD) too.

BUILD AND FEATURES

First of all, the SL-G700 certainly feels like a purposeful bit of kit – it is well built, big, and heavy, 430 x 98 x 407 mm (WHD) and 12.2Kg to be precise. The finish is good in the silver (it comes in black too) but the tiny display over on the right-hand side is a bit small to be of any use from my usual seating position, though it is invaluable when setting the machine up.

Onboard is an Asahi-Kasei AK4497 DAC with a dual-mono construction circuit that feeds a variable analogue output so you can plug it straight into your pre, or even straight into your power amp using the remote to control the volume.

The discrete AMP module is used instead of more common OpAmps and it uses low noise transistors and thin-film resistors – the idea here being to keep noise generated by circuits as low as possible, a common theme as you will see.

The clock generator is battery driven to isolate it from any changes in the AC mains supply, again to keep noise to a minimum.

Technics call the power supply for the G700's analogue audio output a "High-Speed Silent Hybrid Power Supply - catchy. The no-feedback switching power supply aims to "suppress frequency fluctuations", and again, the aim here the aim is to keep the signal to noise ratio as low as possible.

Technics talk about loads more unique features in their marketing bumph, but one of the things that really did make very good sense to me was the rather grandly named "Optimally Activated Circuit System" which in essence closes off various digital modules (display, analogue and digital interfaces) to lower noise generated when tunes are playing. As well as this, I also like that their Pure Disc Playback Mode" shuts off the Network circuit, with the idea of improving the playback of your silver discs.

Inside, the whole of the unit is split into four sections which house the power supply, the digital circuit, the analogue circuit, and the disc

drive.

The disc drive itself is of a triple chassis structure aimed at preventing vibrations getting out of the drive and into other sections of the G700. The tray is die-cast aluminium and again it is highly dampened to stop vibrations.

The front of the G700 has a 6mm aluminium plate and from left to right you have an on off button with an LED to the side of it so you can see the unit is on, a quarter-inch headphone socket, a USB input (to allow you to connect a hard drive, with your tunes on, or flash memory to facilitate firmware updates) and a small window for receiving info from the supplied remote control. The CD tray itself sits in the middle of the front panel, and then you have the aforementioned display that has the usual play, rewind, stop and pause buttons below it, and to their right a multi-control knob that changes the input source and is used for scrolling through the set-up screen. Finally, and below this knob, are buttons to select input source and headphone volume. All in all it all looks pretty stylish and very much in keeping with what most folk would expect a HiFi separate to look like.

Round the back, it's pretty busy but not over-crowded. On the far left as you look at the back panel you have a section dedicated to the analogue outputs, for which you have a pair of unbalanced RCAs and a pair of balanced XLRs. There is then the antenna for the Wi-Fi (actually there are two of these) and next comes a section for digital inputs and outputs – optical and coaxial for each. File wise the optical input will accept up to 24bit/96KHz and the coaxial up to 24bit.192KHz. There's a socket for a LAN cable so you can wire the unit directly to your network and then another USB socket for connecting an HDD with tunes on it. There is no USB input for connecting a computer or similar, but I'm not sure that is going to be missed by anyone using this machine given its already impressive feature set. There is also, obviously, a power IEC socket.

The remote is nice enough if a little lightweight, but it does seem to cover all the relevant functions on the G700.

SET UP



OK, I admit it, I'm absolutely useless when it comes to Network gubbins, but, once I got my head around the instructions in the manual for the G700, getting the unit connected to our wireless home network was pretty painless and extremely fast. Here's the routine - Turn the unit on, hit the 'NWP' on the remote and then 'Set Up'. This then brings up a load of options on the little screen and you scroll through until you come to the Wi-Fi screen, press 'OK' and then scroll up and down using the remote to select ON and then OK – hey presto, you are in Wi-Fi mode and you are ready to set up the Local Area Network. Select 'WPS Push' and press 'OK' and press the 'WPS' button on your router. No need to input any passwords or anything. As Borat would possibly say, "Great success!". Set the G700 as the renderer in BubbluUPnP (or whatever UPnP controller you prefer), find your library on the network and play your tunes. Of course, you can wire it directly to your network via the LAN socket on the back but sadly that option wasn't available in the room we set this up in.

SOUND

I'm going to split this bit essentially into three sections as there are three different aspects to the G700: Networked, CD, and SACD playback. For the purposes of this review I'm going to be using the SL-G700 as a standalone unit and using the internal DAC, as I think that is how most people will use it – why spend this kind of money on a Network, CD, and SACD player and then use an external DAC, though, of course, that is an option should you feel the urge by using the optical or coaxial outputs - in fact, I did have a little play with it into our LAB12 dac1. Pre for the duration is the LAB12 pre1, amps are Merrill Thor and speakers are Celestion SL6s, with cables being Atlas throughout in this system.

NETWORK

As I have said, once you get your head around the instructions, Network set up is pretty straightforward and I had tunes playing really quickly - it will be instantaneous via the wired connection. First up was the excellent Fun Loving Criminals' 100% Columbian and it's really a bit of treat with the Technics in place.

The presentation is wide and open, detailed, and erring on the side of being ever so slightly on the warmer side of neutral and I find myself listening a bit louder than I normally would in this system. On the track, All For Self the guitar licks and brass that come and go in the mix are projected well out into the room in a very pleasing manner. Layering of instruments is good, if not exceptional when compared to the LAB12 or the LEEMA DACs I have to hand – certainly no slouch though. Even at high volume, the Technics seems sure-footed and in control of everything, though between tracks I'm getting a little pop coming through the speakers - switching to MConnect as the UPnP controller, and with gapless renderer set to on, cures this popping and so I recommend MConnect with this unit - YMMV.

One point here, and I feel I really do have to make it, most of my Network/Streaming listening is done using the ROON app with the ROON core being on a little NUC permanently connected to the network, but sadly ROON is not an option with the G700. This may seem a minor point, but, having finally embraced ROON, I find I'm missing it a little. Others will find this point completely moot, of course! I hope that future firmware updates will allow for Roon readiness.

Vibert and Simmonds' Rodulate has a static-like electronic pulse at the start of the track and this comes across very well with the Technics in place, perhaps a little more 'electronic' feeling than with the LAB12 DAC and perhaps a little more lively in its presentation overall. The Technics certainly gives a good feeling for the nature of the sounds/instruments used, and whilst the presentation isn't quite as three-dimensional as the LAB12 or the LEEMA, some of the sounds do leap out into the room at you as they are supposed to. The track Story from the same album has a lovely bass noise and it is presented without nasty artefacts and very deeply, though again I don't think I'm getting that degree of separation of sounds in the mix I'm used to – but we are splitting hairs here to an extent as it's certainly nothing to whine about.

Gil Scott-Heron's When You Are Who You Are is fast and frenetic with lots going on in the mix,

but the Technics copes very well with everything, and Scott-Heron's voice is projected nicely into the room. Norberto's guitar solo is a delight with plenty of insight into the timbre of the instrument. Dynamically the Technics is excellent and very fast at dealing with the coming and going of instruments. During quieter passages the G700 is absolutely silent!

For the next bit of this review I'm going to be really boring and play the same album and tracks via the network connection, Red Book CD and finally SACD as I hope this will bring a sense of how the SL-G700 plays different formats whilst keeping a consistent reference point for myself. For the CD and SACD playback I engaged the Pure Disc Playback Mode.

JOURNEY TO THE DARK SIDE

So, on the Network, and via Qobuz, I play Dark Side Of The Moon at 44.1/16 and it really does sound great, I have to say. There is subtlety, dynamics and detail aplenty. Again I don't think I'm getting that level of separation of instruments I get with the LEEMA LIBRA, but then we are looking at a standalone DAC that costs the best part of three times what Technics are asking for this all singing all dancing Network Player/CD/SACD/DAC. I'm also sensing an ever so slight tizz to the very top-end frequencies, but you do have to be listening hard to hear it at all and have a highly resolving system. The slightly lazy sounding drumming towards the end of Time is really well-timed with the Technics and I am drawn to it very much.

Popping in the Red Book CD, the mechanism is as smooth as butter, and I feel that there is a little more there when compared to the streamed version of the same record by way of detail and dynamics. The heartbeat at the start of the record seems a little more deep and solid in its form, and the separation of instruments is a little more, well, separated, and, dare I say it, there does seem to be a bit more detail, though the overall slightly warm character of the SL-G700 is still there. The 8 note synth sequence also seems to have a smidgen more detail and depth to it - it sounds a bit more 'organic', for want of a better word. The presentation isn't chalk and cheese by any means. There also seems to be a more depth (front to back) and

width (side to side) than with the streamed version. Overall I think the CD is portrayed in a more immersive and nuanced way. Put it this way, if I was stuck with just CDs to play, I'd be well chuffed with the SL-G700 as spinner/DAC. At this point it is clear that the CD mechanism used in the G700 is very good indeed and I enquire of Technics if they produce a standalone CD transport using this mechanism – sadly they don't! I popped, briefly, it has to be said, the Technics into our Lab12 dac1 DAC where I would usually have a little Leema Elements CD player routed to. In this short test/play, I found the image the Technics presented to be a smidge more stable than that of the Leema and a touch wider/deeper.

And so to the SACD. Now, I know you all may be reading this and thinking "this is not the kind of stuff that Stu would usually use in a review", but the truth of the matter is I've never owned a machine that plays SACD and had to buy a disc especially for this review...and it was Dark Side that first caught my eye as something I know inside out. Ok, the low-level rumble on the synth sequence I mentioned above is clearly more pronounced and seems to come into the mix a little earlier (or is audible earlier), and there is a little more feeling of the timbre of the synth and it being an analogue instrument. And detail of the sounds that are usually in the background is a little more prominent too. As the album progresses, that separation of instruments, width and space becomes more evident than with either streaming or CD. The highs on the guitar are also without harshness or brittleness. Now all this could be the mix/mastering of the SACD, I don't know.

I don't do a lot of listening to headphones – we live in the middle of nowhere with neighbours out of earshot (good job really) - but popping the OPPO PM1s on for a bit I'm happy enough with what I hear. I'm sure a person who listens mostly to headphones would go for a dedicated headphone amplifier, but it's a useful addition on the G700 for those that need it from time to time.

CONCLUSION

I like this machine. I like it a lot. It's not daft expensive, it sounds very nice, has plenty of



detail and connection to the music, but without overloading you with detail to the point of it being a bit much. It certainly errs on the side of a warmer presentation than the LEEMA Libra DAC and is more akin to the excellent LAB12 in this respect. That slight warmth will appeal to a lot of people I think, it certainly did to me.

The transport section of the Technics is clearly very good at what it aims to do and it is a joy to use – as I said, smooth as butter.

It is best to my mind when using CD and SACD, but then the streaming option is very good too via a Wi-Fi connection – sadly a wired connection is just not possible in this system.

The SL-G700 has plenty of features to satisfy all but the most demanding and is a cinch to set up and use. It's also built like a tank! The remote is well laid out, big enough for those with sausage finger syndrome and pretty logical.

On the negative side, Roon is not catered for and the screen is far too small to be of much use other than when setting the unit up.

AT A GLANCE

Build Quality: Built like a tank. My only gripe is the display and I'd have liked to have had something I could see from across the room

Sound Quality: Detailed, expansive and enveloping, particularly with CD and SACD. That warmth that I talk about is not at the expense of

top end extension and bass goes deep at times. Good if not exceptional layering of instruments. I found it did get a bit muddled on very busy music in the lower mids when streaming

Value For Money: It's not cheap but nor is it daft money either. You are getting a very good sounding machine that does a whole lot very well and is feature rich.

Pros:

- Great build
- Lovely and non-fatiguing sound, whilst being detailed and lively
- Good soundstage
- Dynamic
- Streaming, CD and SACD in one box
- Onboard headphone amp
- Decent enough remote
- Fantastic transport
- Electronically silent in our review system
- Feature rich

Cons:

- No Roon
- That screen is a bit pointless as it is for me
- Not as detailed as our reference DAC

Price: €2499 £2350 \$2999



STACK AUDIO NETWORK STREAMER

John Scott wonders if the new version of Stack Audio's £725 network streamer with optional £400 power supply is the missing link he has been searching for.



John Scott

Okay, I'm going to come clean here: I have a bit of a problem with audio streamers. Not with using them, I've used my fair share and I actively enjoy doing so; my problem is more of a philosophical one.

People who read HiFi reviews expect HiFi reviewers to tell them how the piece of equipment being reviewed sounds. That's fine; that's our job. The problem is that my brain tells me that a streamer shouldn't really have a sound. A streamer has two jobs to do: it has to interface with whatever control device is being used to choose the music and then it has to move the signal containing the digital representation of that music from wherever it is being stored to a connected digital to analogue converter (DAC). On the face of it, my brain says, neither of these jobs should be particularly difficult and neither

should affect the "sound" of the digital signal. During the time I spent with the Stack Audio Link II, I began to suspect that my brain didn't know what it was talking about.

Theo Stack of Stack Audio would certainly disagree with the notion that a streamer has an easy job to do. Working with respected audio engineer John Westlake who has designed products for Pink Triangle, Cambridge Audio, Quad, and Peachtree amongst others, Theo had a very clear aim for the Link II to achieve: the removal of noise from the digital signal. I asked Theo what changes he had made to the original version of his Link streamer. Theo told me that the Link II has an improved clock circuit with 50% lower noise than the previous version. Additionally, Theo said that feedback from users has indicated that many people were using

the Link as an endpoint rather than a server. The new operating system optimises the Link II as an endpoint for those who wish to use it this way, minimising the workload on the processor and improving performance.

Computer audio is still an evolving technology; some people store audio files on a PC or laptop, others on a NAS (Network-Attached Storage) drive, or external hard drive. However you store your files, they are going to pass through circuitry that will inject an element of digital disruption or “noise” into the signal. It is well accepted that this noise adversely affects the signal, creating difficulties when it is processed by a DAC. With this in mind, the Link incorporates a “signal detox” system, along with other refinements, to actively reduce noise from the signal when it is passed on to the DAC.

BUILD QUALITY AND SETUP

The Link is machined from solid aluminium which gives it a reassuring solidity that belies its size. It is available in either a black anodised or silver finish. The unit supplied to me was silver and my preference is usually for black but I have to say that I found the silver finish very attractive. The quality of the machining is exceptional, the buttons on the front panel feel substantial but operate smoothly. A front-facing USB port is covered by a solid piece of aluminium which is easily removable when access to the port is required but which otherwise stays solidly in place. The Link is pleasing to look at and tactile to hold and this really helps to convey a sense of quality that you would expect at this price point.

Most streamers boast a host of outputs on their back panel, providing a choice of whether to connect your DAC via AES/EBU, S/PDIF, USB, or Toslink. The Link provides USB output only. While this might seem unusual, the thinking here is to keep things simple when it comes to the signal path. The Link was supplied with an 18v DC wall-wart power supply. A linear power supply is also available at additional cost. Part-way through the review period, Theo sent me an early version of one of these to try, but let's not get ahead of ourselves.

Keeping outputs to the minimum means that

the rear panel is uncluttered and well laid out. The D.C. input sits beside a USB power switch, which is not something I had seen on a streamer before. What it means though is that if your DAC is self-powered and therefore does not rely on power from the streamer then only the digital audio signal will pass through the USB cable so another potential source of interference is removed. Next up on the rear panel are a USB out port for connection to your DAC and a USB in port for connection to USB storage such as a hard drive or memory stick, an Ethernet port for wired network connection, an HDMI port for connection to a monitor, a USB type B “detox” port and a Wi-Fi antenna.

Set up of the Link was fairly straightforward. I connected to my network via a wired Ethernet connection connected my DAC via the USB output then powered up the unit using the standby button on the front. The streamer uses either a bespoke version of the Volumio operating system, enabling it to be used as a server, or Stack Audio's own proprietary OS which will allow it to be used as an endpoint in conjunction with other server software such as Roon, Audirvana or Squeezelite.

Having used Volumio before, and as the Link II had been supplied with Volumio installed I opted to start with that. I already had the Volumio app on my iPad so I fired that up then used a network discovery app, Fing, to find the Link's IP address. Once I had entered this into Volumio it only remained for me to input the file path of my NAS and I was good to go. If you don't use a NAS, Volumio will also recognise a USB storage device, library file path on a PC, or online streaming from Tidal or Qobuz.

While Volumio offers a perfectly adequate and enjoyable streaming experience, as a Roon user I knew that it wouldn't be any more than a couple of days before I'd be back to Roon as my default interface. This presented me with two options: I could click the Roon “enable” switch in Volumio which then enables the Link II as an (almost) fully-fledged Roon endpoint. I say almost as I found that in this configuration the Link II did not support native replay of DSD files, instead, Roon converted them to PCM before sending them on to the Link II. I guess if you have a large number of DSD files and really



want to stream them natively, this might be an issue but in reality, I didn't feel that sound quality was compromised at all.

As I've already mentioned, Stack Audio supply an alternative operating system that supports a range of streaming protocols including Roon, Audirvana and Squeezelite. The OS can be downloaded from the Stack Audio and quite easily installed on the Link II's internal memory. Once installed it is a simple matter to configure the OS for your choice of streaming protocol. Obviously, I chose Roon and was pleased to see that native DSD streaming was now possible.

If the last couple of paragraphs have sounded a bit complicated, that's only because Link II offers a degree of flexibility and customisation that I haven't encountered in other streamers. It really just boils down to this: If you want a simple plug and play experience, stick with Volumio as your streaming interface but if you want to maximise Link II's performance with another streaming protocol, use the Stack Audio OS.

SOUND

Time to get down to some music listening. The first DAC I paired to the Link was my NextDrive Spectra DAC. The Spectra is a small device, primarily designed for portable use with headphones. Over the last few years, however, it has crept its way into my main HiFi set up with some regularity as I just love the way it sounds. With the Spectra coupled up to the Link I popped on a power-pop playlist I'd recently put together. As I'll Do It Anyway by The Lemonheads galloped into the room, It didn't take too long at all before my ears pricked up. I wasn't hearing what you'd call a transformative change to the Spectra's sound; I wasn't quite stopped dead in my tracks, but I was definitely drawn further into the music. Next up, Sparky's Dream by Teenage Fanclub then Red Dragon Tattoo by Fountains Of Wayne. Toes tapping and smiling, bouncing in my seat like a long-life battery-operated bunny, I decided it was time to pull out a few old favourites and do some serious listening.

As it turned out, I plumped for a new favourite rather than an old one: Nils Petter Molvær's

Khmer album streamed from Qobuz. This is a fascinating mix of acoustic jazz and electronics. Molvær's trumpet switches from a whisper to a stream in a heartbeat. With the Link II in the system, it was easy to hear the trumpet as an extension of his body as his breath powers the instrument and gives it life.

A few weeks into the review period, Theo Stack contacted me to let me know that he had been working on a new upgraded power supply for the Link II. He also told me that he had been having some success in combining the Link II with Audioquest's Dragonfly Cobalt DAC. Would I be interested in trying them both out? Well, of course, I would.

It's well accepted that a high-quality power supply helps to deliver performance benefits and given Stack Audio's commitment to removing noise, it is no surprise that they have developed an upgraded PSU. The company state that features includes a UK-made precision wound toroidal transformer, audio-grade capacitors, noise suppression filters on both the output and input signal, a precision machined, aluminium enclosure, and an elevated "advanced vibration dissipation" platform to eliminate vibration. At an additional £400 (or £350 if bought at the same time as a Link II) it seems fairly priced for a power supply upgrade and I found that it definitely delivered performance benefits, most noticeably at lower volume levels where dynamics, sound staging, and musicality were retained despite the reduced "welly". Don't worry though if that additional chunk of change for the PSU is a step too far at the moment; it's something to be aspired to in the future rather than a must-have – the standard power supply is perfectly capable and you can enjoy many happy hours with the Link II while you save up.

Having had good results in pairing the Link II with the Spectra DAC, I was really keen to try it out with the Dragonfly Cobalt as both DACs are designed with the same primary purpose - to be used as a portable device with headphones. I already knew that the Spectra was capable of tremendous performance when asked to step up and deliver in a "proper" HiFi set up but would the same be true of the Cobalt? This was also a chance to try what was, for me, a different kind of computer audio. I have always



stored my audio files on a NAS drive then streaming via Ethernet or Wi-Fi, and this was how I had used the Link II until now. The Link II has, however, been designed to maximise the performance of any digital source and so I borrowed a friend's MacBook (thanks Michael) to see how that would work out. Firstly, I connected the MacBook's headphone output directly to my Etalon SuprA amplifier and played Radi-ohed's Paranoid Android. It sounded terrible; the music was completely flat and almost totally locked into my AudioGE Sincerus 80 floor standers. Next, I connected the Dragonfly Cobalt to the MacBook's USB port and then to my amp. This was a great improvement; the music came to life, delivering the emotion and staging that had been missing. It was still a step down though from what the combination of the Supra and the Link II had been delivering. So, would there be a difference with the Link II plugged into the MacBook and the Cobalt connected to the streamer's USB output?

There was indeed a difference, and stunningly so. Clearly, the Link II's "detox" circuitry was working its magic. What was it I'd said about a streamer not really having a sound? Think again, John. Now, the Dragonfly Cobalt is not

an expensive DAC at around £260 but paired with the Link II, it was a combination that I could live with and I don't mean in an "I guess that might do" sense; this was seriously good stuff. While I wouldn't want to change my NAS drive for a MacBook, it was a real eye-opener to hear how much the Link II was improved with the laptop as a source.

Having satisfied myself that the Link II had allowed the Spectra and Cobalt DACs to reveal the full extent of their best qualities, it wasn't very long at all before I began to wonder whether it would do the same with my reference VAD 10D DAC. Weighing in at around 13 kg, this is the opposite of a portable DAC and its price and performance similarly outweighs that of the Spectra and the Cobalt; I thought I had already experienced it at its best but might it too reveal hidden delights?

The short answer is: yes. In the same way that I'd found the Spectra DAC fundamentally more engaging rather than earth-shatteringly different, the VAD 10 was giving more of itself; its sound signature unchanged but its sense of musicality definitely enhanced.



CONCLUSION

Every now and again a product comes along that forces you to reassess the way that you think. The Stack Audio Link II is one of those. Despite having had a few different streamers in my system over the years, I'd dismissed the idea that they could have a significant effect on the sound of my system. The Link II and its "de-tox" design philosophy has forced me to think again. With its combination of solid build quality, good looks, and impressive performance, the Link II is not just highly recommended but is very highly recommended indeed.

AT A GLANCE

Build Quality: The casing is machined from a solid aluminium billet and seamlessly put together, some heft and sense of purpose.

Sound Quality: The Link II revealed new aspects to every DAC I partnered it with, bringing new levels of musical enjoyment to each.

Value for Money: You can pay a lot more money for streamers that deliver a lot less. The Link II is not the cheapest streamer you can buy but it's an investment worth making.

Pros:

- Supports a wide range of computer audio applications
- Fully Roon ready
- Elegant form factor combined with high-quality machining
- Choice of operating system to suit individual requirements.

Cons:

- USB only output might not suit everyone.

Price: £725 plus £400 for PSU



RUPERT NEVE FIDELICE PRECISION DAC + HEADPHONE AMP

Rupert Neve Fidelice Precision DAC (£4,747) and Precision Headphone Amp (£1,149), yes, many readers will recognise Neve as being a legend in the pro-audio world, but now he has put his name to a DAC and a Headphone Amplifier.



Janine Elliot

I have spent the most part of my life in recording studios, and much of that listening to various forms of Neve mixing desks at the BBC, whether the GP desks or my favourite Neve 66 (an analogue desk with digital routing of channels that had clout and passion and that worked so well whilst being very easy to use). Similarly, Air Studios in London have three specially made, and now aged, analogue Neve consoles worthy of mention. The legendary Beatles producer and founder of Air Studios, George Martin (1926-2016) was heavily involved with Rupert Neve in the design process of what was then a radical new desk; With toroidal wound transformers, it was clear that sound quality was the key aim here - as it always should be. Rupert Neve has always had that desire to produce the very best in audio and, turning 94 in July 2020, he is still working hard

on both studio and home products.

Rupert was born 31 July 1926, the same year as George Martin, in Newton Abbot, England. Growing up mostly in Argentina before WWII, his experience with broadcast equipment design spans some 80 years. Starting it all from his home and then moving to a purpose-built factory near Cambridge, Neve Electronics created professional audio consoles and systems with Class-A designs and using high quality components. The history of Neve is very complex. Setting up the company in 1961 (and then leaving it in the mid 70's) Neve was sold to the German company Siemens in 1985 and then linked with AMS (Advanced Music Systems) becoming AMS Neve. Siemens moved the Neve factory to the AMS Burnley site. Setting up ARN Consult-



ants, Rupert's links to Focusrite, Amek, SE Electronics and others show his interest in getting involved in all areas of analogue broadcasting consoles and ancillary equipment. The massive Amek 9098 was probably his best work to my mind. More importantly for this review, Rupert Neve Designs was set up in the United States, where he has moved to with his wife Evelyn in 1994 and where they became U.S. citizens in 2002. This great British master craftsman now has his masterpieces built in the picturesque Texas Hill Country. This company continues the work of one of the most respected names in the business, with many famous musicians and broadcasters having their utterances played through his creations. The new Fidelice range contains three models; a DAC/Preamp, Headphone amp and Phono-stage, with the name "Fidelice" a Latin word meaning "Loyal".

FIDELICE PRECISION DAC CONSTRUCTION

The Precision DAC at £4,747 is built around Class-A high voltage topologies, as I would expect from Neve mixing desks from the past, offering excellent bandwidth and with balanced

ins and outs and utilising the excellent 32bit Ashai Kasei AKM4497 DAC. The RNDAC also utilises custom audio transformers based around those found in the mixing desks. In terms of appearance my first thoughts were the original Commodore Pet computer with its trapezoid shape and aluminium frame, but this unit and its matching phono-stage and headphone amp look highly professional. My only criticism in the build is the after-thought rubber feet. I would expect far better options for the price.

The top and sides are thick aluminium with a triangular mahogany wooden feature to the right - this is a feature of all the Fidelice range. You can tell this is built by a manufacturer of mixing desks by virtue of its well-thought-out design, catering for just about every possible need. The front panel of this DAC is so well laid out; separate buttons for inputs, balanced and unbalanced headphone sockets, and separate LEDs to indicate the various PCM and DSD computations. The Alps analogue volume control has a positive feel to it and is in a contrasting red colour to match other products Neve has been building over the years - such as his studio



equipment. The main off/on switch is round the back above the mains socket and perhaps a little small for large-fingered beings, but still easily accessible.

At the front is a “Line Out” button in order for you to output to your amp - the headphone output works whether or not this is depressed. Next to this is a lo/hi gain switch for headphone sensitivity ranges so that all types of headphone design are catered for. Indeed, 1000mW for 16-ohm headphones is more than enough for most needs. To the right are the three headphone outputs; TRS unbalanced, XLR balanced and 4.4mm Pentaconn balanced. To the right are source buttons for the digital and analogue inputs.

The rear is equally well set out. As well as balanced and unbalanced outputs there are balanced and unbalanced inputs allowing you to use this DAC as a full preamplifier for playing analogue sources such as reel to reel or phono (with a phono-stage). There is a fixed/variable toggle switch to allow you to use this as a preamp for your power amplifier or to connect to your integrated missing out the volume control.

There is also a +4/-10dB toggle switch to adjust the balanced input to match the nominal output level. Digital inputs include coax and optical plus USB. The former two operate to 192kHz with USB up to 384kHz PCM and all the way to DSD512 (22.4 MHz/octa) DSD native and DoP playback. There is also a five-position dip switch for digital filter options and mode selection, allowing the user to have control over the digital filter sets and modes internal to the AKM4497 DAC. For example, in the up position the filtering is inactive, and with switch one down gives “super slow roll off” for PCM playback. Switches 1-3 affect PCM, 5 affects DSD and 4 is the AKM “High quality” sound mode for both PCM and DSD. Most of my testing was done with no filtration, as I found that preferable. There is also a micro USB port to be connected to PCs for firmware update. Finally, I have to say that the instruction booklet is one of the best I have ever seen, including help on firmware updates as well as connecting via USB to your Windows or Mac PC.

On switch-on the RNDAC does a fancy light display going through all the LEDs before settling down ready for play. The volume control is



an analogue affair which feels very positive. My only criticism is that there are no numbers or lines around the dial to assist with finding your “ideal” resting place for the potentiometer. Most of my listening was at around 10 o’clock.

PRECISION HEADPHONE AMPLIFIER CONSTRUCTION

This new amp comes in at £1149, the same price as the matching new Neve Precision phono pre-amplifier. The Fidelice Precision Headphone Amp (RNHP) is in many respects visually identical to the original RNHP that I glowingly reported on in 2017, albeit with the new trapezoid shape and double the price. The added price takes into consideration component changes and improvements including capacitors and adjusting gain level, gold connections and the new body, which looks significantly better than the original. That original headphone amplifier was so good that I couldn’t put it down - I will find out if that increased cost brings in increased sound quality. As in the RNDAC there is a wooden panel at the top with the Neve signature imprinted into the wood.

By now you should understand Rupert’s love of all things analogue, Class-A and toroidal transformers, with audio transformers on every input and output of the 5088 mixing desk and a true floating ground and high-quality capacitors and inductors. Music to my own ears. The new 24V

Precision Headphone Amp is based on the headphone output circuit found in one of his smaller mixers, the 5060 ‘Centrepiece Desktop Mixer’. Headphone monitoring in the studio is often a necessity and Rupert Neve can see the importance of a reliable and accurate monitoring source.

Again, this is a very robust and industrial looking machine though without the industrial name of the DAC. As in the RNDAC the feet are thin rubber coins which I feel could have been better chosen. As in the original RNHP, the new Neve headphone amp has three inputs, selected by three green illuminating buttons on the front. There is a stereo RCA phono input, a stereo 3.5mm input (calibrated to work with mobile devices such as phones, tablets and laptops), and thirdly a calibrated +4dBu line input with two combo jacks accepting either XLR or TRS inputs for balanced professional devices.

As in the RNDAC, the RNHP has been designed with a near zero Ohm output impedance ($.08\Omega$ at 1kHz) to minimize changes in the sound due to reactive load impedance; something which is noticeably greater on headphones than loudspeakers. For example, if a headphone has a low frequency bump at around 50Hz it will accentuate the bass further if output impedance is higher, changing the sound and possibly adding distortion. With 230mW RMS at 16 Ω (typical Load: 1.933 VAC RMS @1kHz) my 43 Ω Audio Technica and

300Ω Sennheiser were adequately catered for, though it is not overtly generous. I never felt the need for more power, so most headphones will work well.

Power supply is from an external wallwart switch-mode power supply, this from a man famed for class-A designs and toroidal power supplies. But, switch mode supplies can be very efficient and quiet and he intentionally chose them for this design (as he does for the Fidelice phono-stage). They also operate with whatever input voltage and frequency you have in your country meaning that “one unit fits all”. My only criticism is when affixing the UK’s 3-pin 13A plug the rectangle unit fits sideways meaning you cannot connect it on a multiway mains adaptor without hiding other sockets or the off/on switch on a two-way wall socket.

THE MUSIC

For the review I mostly used my laptop. I am pleased to say that installation of the driver was a lot simpler than I have found with many reviews in the past, largely done quickly with the help of the instruction book. I also used digital output from my aged Fiio X5 DAP and analogue from my reel to reel. Listening to the headphone amplifier was done via the line out of the RNDAC, so I could compare the internal headphone amp with the Precision Headphone Amplifier.

First to be played was for me a familiar recording of Tartini’s Violin Concerto in E minor D56, courtesy of Mike Valentine’s ‘Vivaldi in Venice’. My initial response was “wow”; there was excellent special detail not only left and right, the DAC and preamplifier giving a very clean and precise performance. The whole worked so well with a fast and noise-free rendition.

Next for the DAC it was time to turn to a completely digital classical album ‘Pieces in a Modern Style’. This is the sixth album by electronic instrumentalist William Orbit. An album featuring synthesised versions of well-known and beautiful classical music, it was released in 2000. Track two is John Cage’s “In a Landscape”, a piece he wrote before he got possessed by Indian Philosophy, Zen Buddhism, mushrooms and I Ching, and is much easier to

listen to than his most famous piece 4’33”, which is incorrectly assumed to be four and a half minutes of silence. That piece is really about the unanticipated sounds that are around us, not that the RNDAC produced any. “In a Landscape” had an excellent hold on the very lowest notes whilst still sensitive to the string samples behind. The strummed guitar then brought in a new landscape of sounds including delicate brushing of fingers on the fingerboard. Listening on cans using my aged Sennheiser HD650 that bass detail wasn’t so apparent though on bass heavy Meze Classic 99’s there was no shortage. Listening to this album was a great pleasure on the RNDAC, with its excellent detail and no discernible digital distortion.

Next to be fed into the USB input on the DAC was Pink Floyd’s “Shine on You Crazy Diamond” from the album ‘Wish You Were Here’. The distorted guitar could be heard in all its glory -warts and all; this was a razor-sharp performance only slightly overzealous in accuracy over musicality. The Saint-Saëns Third Symphony amazes me every time I listen; who else would add a pipe organ and piano to increase the textures and timbres. In terms of structure it is actually written as two movements though appears on albums as four distinct sections. The Neve gave a compelling and full performance giving plenty of space for the organ and piano in the “third” movement. The performance was not cluttered or claustrophobic for this 44.1/16bit performance. The amplifier gave a beautiful sheen to the music, particularly the strings. Only the brass was a little brash. Turning to London Grammar ‘If you Wait’ this was a clear performance with every instrument and note precisely positioned in their own space and time. Bass was again excellently catered for in the first track. I couldn’t fault the performance.

Turning to analogue input of the DAC, I found this was a particularly quiet preamplifier. I have to admit my preference for TVC passive preamplifiers, having tried and spent a fortune on active systems over my lifetime. The analogue stage on this essentially DAC box was not an afterthought. It is really is worthy of a place in any HiFi system. I listened to tracks from the excellent Hemiolia Records portfolio and I found them very hard to fault. Vocals were particularly



human in The Daniele Mencarelli Duo “Treni a Vapore”, and the Jimi Hendrix number “May this be Love” from the Davide Pannosso Trio gave a very clear top end from the ride cymbals and fortitude from the fretless bass. I just felt the mid frequencies were not quite so compelling; in Aria de Opereta from Mirabassi/Taufic the clarinet just was a little too prominent though very clear and with excellent control. If I had to find any fault in this excellent machine it was the mid frequencies not being quite as musical as I wished for though bass and top ends were extended, and excellent.

For specific headphone amplifier testing I utilised my DAP feeding into the RNDAC with output into the Precision Headphone Amplifier (RNHP), so that I could compare the headphone stage on the DAC with the standalone machine. The headphone amplifier has the same red coloured button as in the DAC, and it is nice to see they have position markings around the edge.

My first music was Mike Rutherford’s ‘Small Creep’s Day’. This is not an easy album to listen to in terms of the sound engineering, sounding highly digital and nasal in places, but both the headphone facilities performed it well. If any-

thing, the RNHP was the better sounding, adding more analogue warmth and control. The Sennheiser HD650’s were accurate and more rounded.

Turning to Miles Davis Quintet ‘Freedom Jazz Dance’ - this is basically a rehearsal of the musicians including Herbie Hancock on keyboard. This is a hissy recording, and contains talk back from the sound engineer, but both amplifiers gave a compelling performance and excellently controlled dynamics. Again, the RNHP was the better of the two, but both are particularly good. Indeed, the headphone amp on the Precision Digital to Analogue Converter is by no means an afterthought and is better equipped than the Precision Headphone Amplifier. Indeed, the RNDAC actually gave a better performance of Mozart’s Requiem in D minor (Complete Mozart, Philips) than the headphone amplifier did, being more musical, particularly in the mid frequencies.

‘A Life Within a Day’ from Squacket is a great album for Prog Rock lovers, featuring Chris Squire from Yes and Steve Hackett from Genesis. There are lots of synths, guitars and drums, ideal for a review. I found the RNHP had better control of the busy music and with a better

REVIEW

extended bass. Track 2 starts with acoustic guitar with lots of reverb and delay before the heavy rocks starts up again. This was equally good on both amps; plenty of musicality and all frequencies admirably covered with aplomb.

Turning to guitars on Steve Howe and Martin Taylor's 'Masterpiece Guitars', it was clearer on the RNHP, though very hard to tell the two amps apart. If anything, the DAC offered a better stereo spread and speed. 'The Queen Symphony' (Tolga Kashif) has plenty of violins and brass in this rendition of some of the best Queen tracks assembled into a 3 movement work. The RNHP performed slightly clearer; this work has multilayers of idioms throughout which can sound congested if you are not careful. Finally, again to London Grammar 'If You Wait' gave a chance for the RNHP to show off its slightly better lower end, but both are such excellent headphone amplifiers; both had excellent speed and control, a highly addictive analogue feel, and if I had to prefer one it would be the bass from the RNHP. However, if you were to buy the DAC then you wouldn't need to buy the headphone amplifier.

CONCLUSION

Both the DAC and headphone amp continue the long line of excellence from this craftsman of fine studio equipment. The DAC was exceptional in all areas and is definitely worth an audition (All frequencies had precision and musicality and it was hard to find fault in such a masterpiece). The headphone amplifier continued to meet my expectations, and as in the original RNHP this product was very hard to put down and well worth the increase in price. As for the headphone amp in the RNDAC, that was so good that you wouldn't ever need to buy both products if you wanted to listen exclusively on cans.

AT A GLANCE

Precision DAC

Build Quality: Excellent construction and components. Disappointing feet.

Sound Quality: excellent speed and transparency. Particularly good bass and top frequencies.



Value for Money: £4,749 is not cheap but it ticks all the boxes and some.

Pros:

Excellent Precision and timing.

Transparency

Excellent choice of inputs and outputs, including balanced

Cons:

Some might find the looks not fitting with their decor. I love them.

Price: £4,747

AT A GLANCE

Precision Headphone Amplifier



Build Quality: Excellent construction and components.

Sound Quality: excellent speed and transparency

Value for Money: £1149 is excellent for this class A quality.

Pros:

Choice of three inputs.

Transparency

Excellent bass end control

Cons:

Pity there are no balanced outputs, bearing in mind there is balanced input, but that would add to the price.

Price: £1,149



GOLD NOTE
il suono italiano

DS-10

STREAMING DAC & HEADPHONE AMPLIFIER



ROON



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ALPHA2DELTA PHONOSTAGE & PSU1 POWER SUPPLY

Alpha2Delta Audio PS1 phono-stage and PSU1 power supply is handmade in the UK and costs (as tested) £3999. Alan McIntosh takes a listen.



Alan McIntosh

If like me, (when not listening to music) you enjoy passing these long lockdown nights with TV of a technical slant and seeing people solve problems while pitting their skills against one another, you probably end up watching TV and programs like *Forged in Fire*, *Last Man Out*, *Masterchef* or *British Bake Off* (the current Lockdown go-to for my wife and I) – if not bear with me! What becomes evident to me in each of these shows is that to get it right you need two things to work in perfect harmony – great skills (often born out of years of experience) and great ingredients. Have one but not the other and you get the dreaded soggy bottom! It's the same in HiFi – you can have great engineering skills but poor components, or even great components but lack the skills to implement them well – but when you get both - well that's when the magic happens.

Enter the Alpha2Delta PS1 Phone stage and partnering PSU1 power supply.

Based in Hungerford (in the UK), A2D's chief designer and founder, Jessica Kinchin, comes from a long career in design and advanced electronics, including formerly owning a company that provided ultra-sensitive test equipment for BT, the military and for medical research – not areas known for tolerance of anything but the very best equipment. With a childhood love of valves and analogue (Jessica built her first valve amp at 13!), A2D's design ethic is about great materials, designing for the very best sound (but not budget) and aiming for ultra-low distortion and high-quality analogue reproduction - that shows in the choices made in the PS1. So, the relevant skills seem to be in evidence, but what of the

REVIEW



“ingredients”?

CONSTRUCTION

As a 2 box design, the PS1 and PSU1 are connected by a pair of satisfyingly well-constructed screw down umbilical power cables that are terminated in DIN plugs. The PS1 itself is a fairly plain black metal box with plastic front and rear plates (however, that front plate will be metal in the upper models). On the front, you have a rotary Moving Magnet (MM) /Moving Coil (MC) selector (two inputs can be connected at the same time) and two 6 point rotary selectors for each cartridge type to adjust capacitance (MM) and load (MC). It's great to see capacitance adjustment for MM as it's not so common these days. Round the back we find the power connections, silver-plated RCA inputs and output as well as a dip switch selector for balanced or unbalanced output (MC only). There is also a gain step-up selection for Low Output MC's courtesy of the internal step up transformer. XLR connection is available as an option if desired.

The partnering PSU1 power supply immediately makes a visual impact with its large silver toroidal case sitting atop a square base box that is shiny enough to see yourself in! Power goes in via the usual IEC and 2 separate DIN umbilical lines pass power to PS1. The PSU also has a ground binding post employing a star point approach to eliminate ground loops.

The PS1 is a full valve, passive RIAA design employing specially selected 12Ax7 valves. These are renowned for high gain and ultra low distortion and hence a perfect choice for audio. A 6072A/12AU7 provides the amplification, with an ECC81 (12AT7) handling the load within a specifically chosen circuit architecture - all this adds up to a 32dB gain. That 6072A adding final amplification takes gain to a robust 42dB, with a rated capability to drive loads down to 10Kohms. The SUT offers additional gain for low output MC's.

RIAA capacitors are courtesy of Charcroft (silver mica in this case) and the 6072A tube is a carefully selected balanced, gold-pin, ultra-low noise variant from TAD. The EC-C81/12AT7's are either military-grade NOS or

NOS from GE in the USA, offering both high quality and coming fully balanced. A true dual-mono design, both channels in the PS1 are fully separated in a 6 layer PCB, with each channel completely isolated and getting its own HT power supply tracks and 0V planes.

The internal SUT is no afterthought either! Its unique design is said to offer a fixed 280V for the amp stage, but without feedback. It has a carefully selected smorgasbord of audio grade and military spec' components from some of the best manufacturers in the business, including signal capacitors from Mundorf's Silver and Gold range.

SOUND QUALITY

I have been listening to the PS1/PSU1 over the last 3 weeks or so as I've had some downtime and so I have been able to explore it without time pressure. This week I got down to some real critical listening!

With “Monks Dream” (Columbia / Impex 2016), Thelonious' free form and at times seemingly off-kilter keying is so resolved and present you can almost see the Ivory beneath his hands. Dunlop's drums snap and thwack with pace letting John Ore somehow keep us all sympathetic on his bass. Rims and cymbals (often where things can be disappointing) are crisp and tight. Originally recorded in 1963, the separation and attack is wonderful - decay on the recording rooms natural reverb only brings us closer to the source. The PS1 gets out the way to let us get at that tight bass with no sickly sweetness and leaning towards precision that in lesser offerings could drift into sterility. This allows Monk to cut loose. I'm taken aback at the clarity and attack - there is incredible speed that is all wrapped up in a wonderfully impressive wide and deep sound stage. The PS1 also displays an extremely low noise floor, providing that inky black backdrop we all seek.

A quick change over and we have Herbie Hancock giving us “Direct Step” (Mastersound DirektDisk /Columbia RSD 2020). Here the PS1 offers a wonderful deftness balanced with a real subtlety of delivery on the bass drum – it's full, but never bloaty heartbeat cutting through the creeping inertia of “Butterfly”. Timbre and tran-

REVIEW

sients are again handled eminently well due, it seems, to the very high (more than 1.5V) input headroom. Time and time again the sound stage caught me off guard and I found it just wonderful to engage with. Those rippling key strokes of Hancock dancing across that bed of funky delight were like a dancer light footing across a lake of honey. The balance between detail and fullness here is very impressive with Hancock's groovy yet frenetic pace being delivered without restriction or impedance that allowed the music just to carry you – superbly done and I find myself with a renewed appreciation of Hancock's work that is now presented in even more glory. The use of Polypropylene capacitors instead of electrolytes is evident in the clarity and transient delivery. There is nothing holding the music back or clouding the presentation – it's all here. Frankly, it's wonderful!

Throughout the weeks of listening, I flipped between my Townshend Avalon turntable equipped with a fully restored Helius Designs Scorpio arm festooned with a bespoke wooden body modified AT95VM Shibata (courtesy of the increasingly well known Townshend/Rock guru Matt McNulty) and my heavily modified SL1210Mk3D running an upgraded Sumiko Blue Point Special Evo III on a lovely Origin Live Zephyr arm. Both the prior MM and latter MC performed well. The Sumiko I feel, being more forward, matched very well with the energy of the PS1 despite being an elliptical stylus. Placing my reference Vincent Pho700 stage back into my system only brought a sense of grief at what I had lost – the PS1 clearly outperforming it!

CONCLUSION

Alpha2Delta have taken the best ingredients and worked from a clean sheet to produce a superbly performing phono-stage. Aesthetically its both simple and bold but I would like to have seen a full metal body as opposed plastic front/rear panelling, but A2D say this allows for custom requirements of the client. Customizable for needs and budget this offers fantastic performance at a fairly accessible price point. The internal material construction is of the highest order with a “sit up and pay attention” sonic delivery. With an expansive sound stage,

great detail and resolution, speed and energy (but without fatiguing in the slightest), the PS1 draws you in and you find yourself wanting to stay for more. A hidden gem and “must audition” for me. The proof was indeed in the eating!

AT A GLANCE

Build Quality: Carefully curated components, high quality design and execution. All path wiring in silver. All valve. Customisation options on loading and outputs. Strong aesthetics on the PSU1. Would prefer to see front and back plates finished to same high level.

Sound Quality: In a word, wonderful. The detail, transparency, pace and resolution really left a mark that couldn't be matched by my reference phono-stage. Sound stage is very wide and deep. Not over clinical, but just enough brightness to keep you highly engaged.

Value For Money: With options for MM starting at around £800 and the full customised MM/MC combination between £4K and £5k (depending on requirements) it's not small beer, but it is accessible to many and if you are seeking the very best out of your vinyl source then it's a very worthy investment and not one you'd need to make again any time soon (if ever).

Pros: All valve, build quality, components choice, sonic performance, wide range of load options, customization available.

Cons:

If I was ultra-critical I'd like to see the fascia finish improved to match the rest of the build. One for those with deeper pockets.

Price:

1 box MM only PS1 available from £799. Full MM/MC versions with the PSU1 are available around £4k to £5k depending on the bespoke design for the client. As tested £3999



ELECTROCOMPANET ECP 2 MKII PHONOSTAGE

Janine Elliot takes a listen to Electrocompaniet's £1969 ECP 2 Mkii phono-stage.



Janine Elliot

I have always had a soft spot for Electrocompaniet products. That minimalist front panel with gold buttons and screws and gold lettering on black just looks so good, and the ECP 2 Mkii at £1,969 continues the art form, albeit with new curved edges matching other products in the latest Classic Line range. It is also lovely to see a thick Perspex front as a change from the usual mass-production thick aluminium fascia another Electrocompaniet trait. Just be careful not to scratch it. Electrocompaniet was established in 1973 starting with a well-regarded 25W power amplifier and is based on the west coast of Norway. What is well known is their philosophy on creating the best sound by basing their design by listening and adjusting rather than simply technical measurements and theory. Their amplifiers are exceptional, having been used by

recording artists and in several recording studios, including Michael Jackson and Abbey Road Studios. They also love Class A and toroidal power supplies, a design philosophy maintained regularly in their products.

CONSTRUCTION

This is the third in a series of phono-stages; firstly the ECP 1, then the ECP 2, and now ECP 2 Mkii. The difference between ECP 1 and ECP 2 is profound, not least the size of the cabinet being larger. Where the original only had a single switch to select between MC and MM cartridges the ECP2 has a series of microswitches on the rear to allow connection of just about every cartridge you are ever likely to meet, whether MM, MC, Moving Micro Cross (MMC) or Moving Iron (MI). The difference between the Mki and Mkii is much



more subtle. The original offering was a fine machine, but the new model has tweaked bits and pieces to make it even better. As Technical Director Volker Hunger told me, the design goal of the ECP Mkii has been to keep the signal path as short as possible using the best circuitry and components. That includes the use of the excellent AD797 op amp from Analog Devices. This amp has very low noise and low distortion. Improvements in the rest of the circuitry include high-quality film capacitors utilised in the RIAA correction circuitry and the subsonic filter. The ECP 2ii has a non-defeating steep low-frequency roll-off at 11Hz to filter out unwanted noises such as those from warped records. Of course, none of my records are warped, and certainly not when using a turntable puck, but I'd prefer to have a choice of selecting the function. The output stage incorporates op-amps that can drive loads under 1kohms with virtually no distortion meaning that the ECP2 MkII could drive absolutely any amplifier with no effort.

THE MUSIC

The front panel is very minimalist; just the off/on switch and blue LED above (rather than the illuminated "E" as in the original ECP 2). There is no volume control or selection switches, nor a useful mono switch. Everything needs to be done from the rear. Therefore, it is probably a

good idea to set up this marvel with the unit about-face. You can adjust the settings to get the best music whilst the unit is switched on, though probably best turn the amplifier's volume right down each time! Just remember that the dip switches are set up as mirror images (ie LH goes 1 to 12 and RH goes 12 to 1). There are no less than 30 different resistance load settings to select from 47,000Ω for MM cartridges and 2,553Ω to 10Ω for everything else. Similarly, capacitance loading for MM cartridges is catered for with 8 settings from 0pF to 350pF. Finally output gain can be altered with a choice of 8 settings (71.4 – 39.8dB in 5dB steps). Very importantly this phono stage has a balanced output option, so for the XLR output add 6dB. For much of this review, I went balanced from phono-stage to output. Having a balanced output at this price point was a particularly good feature. If the ECP 2 had a balanced input I could have connected the Thorens TD1600 and gone balanced from source to output! The ECP 2 Mkii is DC coupled throughout using high-quality discrete components. A lot of detail has been put into the power supply, employing a very well filtered input section with a total capacitance of 8800uF. This feeds a total of 8 voltage regulators supplying each individual channel and each amplifying stage. Finally, a battery of sixteen 470uF capacitors filter the outputs of the voltage regulators, meaning there

is a total of over 16,000uF capacitance. The circuitry is all carefully laid out on the PCB to not only keep signal paths short but also to make sure that noise and unwanted stray magnetic fields are kept away for the delicate front-end circuitry. All is designed and assembled in-house. They believe this is the best way to ensure the best quality, and the company labels all their components as “fine Audio Instruments”.

For the first cartridge to be used for this review, the Audio Technica AT33sa, I set up the array of microswitches so that I had a resistive loading of 156Ω and 61.5dB gain (67.5 in balanced mode). The turntable was my Polish tangential GL1102 from Pre Audio. I hadn't been too happy with the cork mat supplied with this turntable so decided to use my aged Audioreference that was all the rage in the 80's. The heavy-weight rubber keeps the whole free from any vibration and static and bonds the record to the platter which was a good choice for this exceptionally quiet phono-stage. Of course, the extra thickness required some adjustment of height of the arm. The first record out of the box is one of my favourite albums of late, Herbie Hancock's 'Imagine Project', featuring a number of famous artists – Herbie on keys, of course. The title track “Imagine” had a detailed keyboard and a bass guitar that was all there, though more veiled than I would like. “La Tierra” is a typical South American rhythmic number with very clear vocals and piano and a foot-tapping bass. Everything was where it should be, though in “Tamatant Tilay/Exodus” the top end wasn't quite as ecstatic as I wanted, nor soundstage as clear as I remember it. Herbie's Fender Rhodes stage piano was well defined with clear initial transients. This is a very quiet amplifier allowing me to get so much more of the record than most I have reviewed over the years. All frequencies were clear, only the lowest frequencies lacking some decay though they were quick and tight.

That somewhat restrained soundstage was not an issue in Patricia Barber's “Laura” (Live in Paris). The music was extremely open and atmospheric and tantalisingly spacious, whilst still punchy at the right moments. Performance from this EQ unit was effortless and very accurate. Top-end fully met my expectations, only

lean in the lowest frequencies, probably not helped by the low-frequency roll-off. With so many settings for load impedance one can change the EQ of the cartridge by degrees, so do spend considerable time setting up this phono amplifier. Turning to my Ortofon Kontrapunkt b cartridge and Rock 7 turntable I found the performance that much more exciting and the bass-end more invigorating.

Time for the excellently mastered 'Vivaldi in Venice' from Chasing the Dragon. Tartini's E minor Violin Concerto D56 was spacious, open, and atmospheric with all instruments correctly spaced out both left and right and also in terms of depth. The ECP 2 Mkii could eek out every sense of musicality from the groove and whilst it was accurate in every sense of the word it wasn't perhaps as cuddly and warm as I would have liked it to be when needed, rather it was bearing more on the side of clinical. Vivaldi's B minor concerto RV386 made for highly infectious listening, so much so that I played the rest of the 2-LP album rather than flipping about from one disc to another. The phono-stage really excels at classical music, particularly smaller ensembles. The musicians were in the listening room, each in their own space and the performance was so musical it was hard at times to believe this was solid state. Notable was the fact that strings were allowed to vibrate to their very ends, not hindered by noise or electronics.

Next on the platter was Dire Straits 'Alchemy'. Track 1 “Once Upon a Time in the West” has a notable thunder in the bass at the start after the intro, but it just wasn't as forthright as I would expect. Similarly turning to Genesis 'A Trick in the Tail' and “Dance on a Volcano” the lowest octave from the bass just wasn't there until I whacked up the Wilson Benesch subsonic generator. Time to turn to Miles Davis 'Bitches Brew'. That mid and top-end was just so good, but again the bass end was not as powerful as I know it can be, particularly the drum riffs. The track 'Miles Runs the Voodoo Down' has lots of different pitch and rhythmic patterns intertwining, and these were very clear and precise, the ECP 2 Mkii able to deliver micro dynamics and every nuance of music with knife-edge precision. It just wasn't quite as meaty as I know some phono-stages can perform. This is a very



clear and accurate phono-stage, just missing out slightly on the sensitivity of musical expression that I am used to hearing from my own phono-stage, though that is considerably more expensive. The Electrocompaniet is more precise and transparent than most phono-stages, but less seductive than my Manley Steel-head.

Turning to the excellent live recording, Love Song 'Feel the Love' the vocals shone through, with cymbals brilliantly clear. Indeed, the concert has a long drum solo that I like to use in reviews, and the kick and bass tom tom were more forthright than I expected to hear, going by earlier experiences. The performance was very refined and dynamic, gripping each hit of the sticks with a vice-like detail. The mids were fluid and tops were again pin sharp. Dave Brubeck's "Forty Days" from the direct cut disc "A Cut Above" is highly ambient, and again the ride cymbals were pin sharp and extended. The synth, played by son Darius, is more forward in soundstage than I expected, ably accentuated by the Electrocompaniet; his playing sounding tiring at the best of times. This double album is a family affair with Dan on drums and Chris on bass. I bought this LP from "HiFi Care" down in Tottenham Court Road, London, when it came out in 1978, and where I also presumably bought my platter mat, in the good old days when that road was festooned with HiFi shops such as Lasky's and you could see products in

shop windows as opposed to Microsoft Windows. The Electrocompaniet gave a compelling performance just slightly clinical side of the line. Finally to Sibelius Symphony No.5 (Karajan, DG), the best-known symphony from this Finnish composer. The strings were full and lush and trumpets piercing and authoritative. The ECP again showed its flair with classical music. I am not suggesting that nothing else worked well; Indeed, this is a very "all-round" amp. Closing my eyes and listening I was totally transported to the concert hall. This is a very fast phono-stage and with a very flat RIAA curve. Performance is very transparent only slightly veering towards being clinical. My only criticism was in the very lowest frequencies being slightly subdued. What was particularly loved by me was the balanced output and that there is a choice of 30 load resistances. Highly impressive.

CONCLUSION

This is an excellent phono-stage for those looking to spend around £2000, but with a performance that matches phono-stages far higher in cost. Having a choice of balanced output is also a bonus. By having microswitches not only keeps costs down but also keeps that lovely minimalist front. I would certainly recommend you audition this model but make sure you spend time setting it up correctly.



AT A GLANCE

Build Quality: Typical Electrocompaniet minimalist design, well put together, and looking great.

Sound Quality: Excellent speed and transparency

Value for Money: £1,969 for such a refined and detailed sound is excellent value.

Pros:

- Precision and timing with excellent midrange and top-end
- Transparency
- Very quiet in operation
- Can be set up to match every cartridge out

there

Balanced output

Cons:

Some may find sound a little too restrained in the lowest frequencies.

Price: £1969



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HEGEL V10 PHONOSTAGE

The Hegel V10 is the Norwegian company's first foray into the land of phono-stages. It costs £1350 and is distributed by Auden Distribution in the UK. Stuart Smith gets into the grooves with it.



Stuart Smith

Released January 7th 2021, the latest product from Oslo, Norway based manufacturer, Hegel is the V10 phonostage. In the last year, we have reviewed a number of their products and in several cases, the reviewer has gone on to buy the product for themselves. As we all know, the popularity of vinyl, despite the best efforts of streaming and online services, doesn't seem to be anywhere like on the wane. I'm not going to get into the whole thing of why I think vinyl is prospering, that's something for another time and another place, but the truth of the matter is it seems to offer (if people on Facebook groups are to be believed) a whole different experience and sound to digital formats.

Anyway, the V10, suitable for both Moving Magnet and Moving Coil cartridges (though not simultaneously), arrived for

review a while ago, but I have been sworn to keeping its existence secret until today. It is designed by Hegel's chief designer Bent Holter (with the input of the rest of the team) who has been playing with phono-stage designs since the '90s but interestingly this is the company's first foray into this kind of product. The project was supposed to be to release a relatively modest product but Bent suggested that it was better to get it right from the get-go and so here we have the V10.

CONSTRUCTION AND FEATURES

It comes well packed and with a simple but stylish user manual. In the box you have the unit itself, which looks about half the width of a standard bit of Hegel kit, but around normal depth (6cm high, 21cm wide, and 28cm deep. It feels nice



and substantial and weighs in at 3kg.

There is a wall wart in the box with two leads coming off it that connect underneath the V10, the rubber feet allowing for decent enough coverage to get the wires between rack and unit.

The front is elegant simplicity itself having a small Hegel logo, an LED, and an on-off button – it's a very handsome bit of kit indeed, without looking like it's just been popped in a generic case.

Round the back gold plated terminals are used for RCA inputs and outputs, there are balanced XLR outputs too, and the custom grounding feels solid and secure.

Below the usual suspects is a plethora of dip switches for both left and right channels, though Hegel says that is it configured as plug and play for moving magnet cartridges – if you aren't familiar with dip switches they are essentially two-way switches that set various parameters on the V10, but they are common on many phono-stages. You can choose between MM or

MC cartridges, capacitance for MM cartridges (47 – 367pF), impedance for MC cartridges (100 – 300 Ohms, Gain, which is set for 40db for Moving Magnet cartridges and 60dB for Moving Coil cartridges, however, you can increase the gain by 5, 10 or 12 dB. Finally, there is a subsonic filter switch which is an interesting addition and designed to be used if your cartridge is feeding sub-sonic vibrations to your speakers - it cuts out frequencies below 20Hz. Now all this first looks a bit daunting, but the manual's excellent images make it all pretty logical, though in honesty, and all that said, I found getting my head round them took me a little while - I also found the writing on the unit itself difficult to read. Most people will likely set these dip switches up for the cartridge they use and leave them, but they may be a pain for those who change cartridges regularly – with that said, few folk in the market the V10 is aimed at will be in this group.

Inside the V10 "ultra-low-noise" discrete JFET transistors are used for the input stages for both MM and MC cartridges. The MC input stage uses 4 JFETS in parallel which Hegel says make the V10 completely silent and stop any



bias current feedback from getting to the cartridge's coil. The input stage feeds the amplifier part of the V10 and both MM and MC gain stages use low noise power supplies with discrete bipolar transistors, again with the intention of keeping noise to an absolute minimum. The AC power supply for this stage uses an E-Core transformer that is in its own housing - that'll be where a good chunk of the weight comes from then.

To save power and to comply with EU legislation, the V10 goes into sleep mode if there's been no music played through it for 15 minutes - you can turn this function off should you wish, which seems a bit counter-intuitive, but useful for the end-user.

SOUND QUALITY

From my perspective, the role of the phono-stage is to be as true to the RIAA equalisation as possible, whilst adding as little of its own quality into the mix, and being electrically (and physically for that matter) quiet. I want a phono-stage to allow the information coming from the cartridge to be presented dynamically and

to be true to the recording. What I don't want is masking of poor mastering and generally bad recordings. In short, I want it to amplify the minuscule electrical information coming from the cartridge to a level the preamp/amplifier can make good use of without embellishing the signal or taking anything away - the much-quoted "straight wire with gain" comes to mind.

In their marketing gubbins, Hegel claims a number of features and design elements that are there to make the V10 as quiet as possible and they have been very successful in this respect. I could perceive no noise at all when it wasn't playing music - and likewise when music was playing.

Anyway, let's have some tunes played, and first up is Leftfield's Phat Planet from the album Rhythm and Stealth - you know the one off the Guinness advert from years ago. It's a tune I like to test new kit out on but rarely talk about it in reviews. It's a good workout for any bit of kit being relentless, dynamic, and with lots of different frequencies in the mix. It's also got a lot of spatial effects that move about in the mix and a bit of kit needs to be able to represent



these – the V10 does so and does so very well. The tune is very nicely presented and I feel this is at the very least on a par, if not quite a bit better than our reference costing £1200, I just seem to be hearing a little more of what the AT09CIII cartridge is digging out of the grooves – but then these are early days in the review and may be a case of Emperor’s new clothes - we shall see. That dynamic feeling of the record is delivered in spades with the stereo mix being particularly well portrayed – I’m getting a more three-dimensional presentation compared to what I am used to in this second system. Bass just seems to go lower and I am feeling that I’m just drawn into the recording, and particularly the fine detail of the recording - you know, the little things that make you go “ooh and aah” when you first hear them. I end up listening to all four sides of this record and loved every second of it, hearing it in this system almost as if with a fresh pair of ears.

One of the finest pressings in my collection is the Half-Speed Master of John Martyn’s Solid Air and I listen to it a LOT! And so it’s a really good reference point for me to use when reviewing something. I enjoy this record every

time I listen to it but this is pretty special through the V10, it has to be said. With Martyn’s guitar playing, I seem to be hearing every nuance of his style, and whilst I’m getting a lot of the upper detail of the guitar it doesn’t seem to be overpowering anything else in the mix – just a bit more detail than what I’m used to in this fairly modest system. It’s pretty impressive stuff and I’m starting to question if I wasn’t a bit wide of the mark thinking this may be around the price of our reference and so I message Bill Leigh of Auden Distribution (the UK distributor) to ask the price; £1350 is his response, which surprises me quite a bit in all truth...in a good way. I’d love to have Miles Showell here to listen to this (he’s the mastering engineer at Abbey Road and responsible for this master) and see how close he reckoned it to be to what he wanted – I think he would be well impressed. As I mentioned, this record is very well played and I’m getting to hear a lot of surface noise, which I suppose is just the V10 not trying to, for want of a better phrase “polish a turd” – and by that I mean what the cartridge picks up the V10 presents to the preamp/amp.

You may not know the name Scott Wainwright,

REVIEW

he's a musician from my home town of Barnsley and I've seen him a few times at the North West Audio Show. His album Every Man Has His Critics is well worthy of your attention if you enjoy a bluesy style, though remember it is a 45 rather than a 33 or you'll sit down only to get up again. But I've not picked this album out for its content, rather I've plucked it from the shelf because it is a very simply and honestly recorded album – no big budgets or multi-million-pound studio production here. That production style comes across really well with the V10 in the system and the album feels honest and true to Wainwright's blues. OK, the tuba may not be the first instrument you'd expect to find herein, but it's immediately identifiable as being that here, not just another brass instrument or a sample of such. This really is a very good phono-stage that is truthful to what it is being given to play with and seems to mask very little of what the cartridge is digging for in the grooves. Of course, a lot of what you are going to get from the record will depend on your choice of cartridge, but put a decent cartridge in front of the V10 and you will be richly rewarded. The V10 is very transparent is probably what I'm trying to convey here.

CONCLUSION

So, what I think we have here is a very, very good phono preamplifier at a price that I believe belies its performance - it betters our, admittedly cheaper, reference by quite a margin - certainly more than the £150 price difference would suggest. It is transparent, detailed, and honest with what it is given to play with by your cartridge, but it doesn't mask any imperfections with a pressing or well-used disc. I found myself, rather than just picking out test tracks to put it through its paces, playing the track and then the rest of the record – as I type I'm listening to some Channel 1 dub and finding it hard not to put the computer down and listen more closely.

It has a good range of features including catering for Moving Magnet and Moving Coil cartridges, a subsonic filter that blocks frequencies below 20Hz, gain settings for very low output MC cartridges, and balanced XLR outputs.

On the negative side, I find the dip switches and

their layout a bit confusing and it took me a while to get them set up. There was also a pop after it went through its start up cycle and so I'd suggest you turn your preamplifier down on startup. It's also unforgiving of battered records or poor recordings.

All in all a bit of a triumph of which Hegel should be rightly proud!

AT A GLANCE

Build Quality: Well-built and purposeful feeling. Nothing flashy or ostentatious about its looks.

Sound Quality: Transparent, detailed, and silent. I loved its presentation but if you have a lot of crackly discs this won't mask them and may want to look at a less revealing phono amplifier.

Value For Money: I'd say this first phono-stage from Hegel represents very good, if not excellent value for money.

Pros: Detailed and transparent. Very quiet. Flexible and with a good range of features

Cons: On crackly records, it hides nothing

Dip switches have a bit of a confusing layout

Audible pop on start up

Price: £1350



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AUDIOKULTURA PHONOSTAGE

The Audiokultura Iskra 1 phono-stage is from Poland and costs £340. Ian Ringstead takes a listen.



Ian Ringstead

This phono-stage was meant to be reviewed early on this year but a thing called Covid 19 got in the way and delayed it. I saw Stuart at the Bristol Show in February and he said I've got a new phono stage for you to play with. I said great and then lockdown came, so I only recently received the unit to appraise. I have had countless phono stages through my system over the years, many as purchases to then be sold on and quite a few for HiFi Pig to review. Vinyl is in my veins so I eagerly want to try anything new that can offer a new spin on things (pun intended), especially when it is aimed at the budget end of the spectrum.

The Audiokultura Iskra 1 is a very flexible phono-stage that will handle both moving magnet and moving coil cartridges. Iskra is Polish for a spark in simple translation terms, so I

assume that is what the design aim was behind the model. Vinyl is definitely on the rise again and here to stay, so for cash strapped music fan, this unit is a very welcome addition. It is made in Poland where hifi has really caught on in the last decade or so and my visit to Warsaw the other year for the audio show was a real eye-opener to what they offer in enthusiasm and fantastic products, many of which are not crazily priced. This item sells for 379,00 € / £340 approx.

BUILD AND CONSTRUCTION

The Iskra 1 comes in a very simple compact metal case in a lovely blue paint (Daphne Blue) finish (also available in black and matt silver) with just the logo and a red power led on the front panel. Connections are on the slim back panel where there are a pair of

RCA inputs from the turntable and a set of RCA outputs to your amps line stage input. Also, an earthing post to stop any hum in the wiring loop. Underneath the case is where all the adjustments are made via six cut-outs on dip switches, a commonly used arrangement. You can independently adjust the left and right channels for load and capacitance on eight switches and then there are two lots of gain stages 1 and 2 to cover the vast majority of moving magnet and moving coil cartridges that may ever be used with the Iskra1.

The loads are 100 Ohm, 1k Ohm, 47 k Ohm (mm), and 75 k Ohm. The capacitances are 47pf, 100pf, 100 pf, and 220pf. You then play around with the switch positions to get the load and capacitance you want. If all the capacitance switches are off then only the tonearm cable capacitance is in the circuit. The phono-stage has a passive RIAA filter which is placed between two ultrafast laser-trimmed amplifiers. The first amplifier before the RIAA filter called Gain Stage 1 has two levels 30dB and 40dB. The second amplifier is behind the RIAA filter which is Gain Stage 2 and this has four levels of gain: 15dB, 20dB, 25dB, and 30dB. You then set the gain to suit the sensitivity of your system - levels that can vary hugely. Basically, set the gain so as not to distort or overload your amplifier input and possibly blow up your loudspeaker drive units. This might sound complicated or off-putting to some readers, but in practice is common-sense and a case of experimenting sensibly.

The Iskra 1 is powered by a commonly used 12v DC plug top power supply (switch mode), but this can be upgraded to an external battery or linear power supply. I stuck with the supplied plug top which worked fine. The Iskra 1 has no instruction manual supplied in the box but it is readily available to download from Audiokultura's website, which is what I did. There is a QR code on the bottom of the Iskra 1 case so you can scan with your mobile phone and access the instructions easily.

SOUND

I used my trusty Audio Technica ATVM95sch moving magnet and Benz Micro ACE Low output moving coil in an ebony body. My Luxman

PD151 turntable has a detachable headshell tonearm and so cartridge swaps are a doddle - a key reason I bought the PD151 (as well as its superb build and sound quality). I compared the Iskra 1 with the built-in phono-stage on my Luxman L505ux mk2 amplifier, the Temple Audio Harmony 3 moving magnet preamp stage, and their Harmony moving-coil stage with separate power supply.

Kate Bush's Aerial was first out on the platter and is a personal favourite of mine. I got it on CD originally when it was released and of course, Rolf Harris sang on it on the track "The Painter's Link." The later vinyl version now has another artist singing (for obvious reasons), but that doesn't detract from the original recording's enjoyment. Kate's albums are always well recorded and with Aerial on vinyl, it excels. Being a double album there is time to build up the story and finish on a crescendo with the last track Aerial. Kate's songs are rich and varied. The Iskra1 revealed the complexity of the tracks whether they were simple or complex arrangements and brought out the subtleties of the compositions. Instruments in the background (or vocals) were spaced well with decent depth and spread, not as good as I am used to, but for the asking price more than acceptable. Top-end detail was crisp and clear and through my Jern loudspeakers did not grate or aggravate, showing the Iskra's careful design and accuracy. Voices were rich and true, which is a must for any good component to achieve. Bass was deep and tight but lacked the authority and weight of my references and when the going got tough on more complex tracks struggled to excel. This is not a criticism, rather an observation of how difficult it is to maintain an overall standard at a lower price level.

Steely Dan's Aja was next, an all-time classic and definitely one of my desert islands discs. I have both the original pressing which was always a disappointment sound wise and the MFSL version which is sublime in comparison. The clarity and punch this version has is spot on and always brings a smile to my face. Donald Fagan's vocals were forward in the mix as intended and the instruments around him were etched left to right in all their glory. Fagan and Becker were fanatical about the quality of their recordings and performance and used the best

REVIEW





session musicians on all their albums. Saxophone solos were sonorous and a real delight, as were the keyboards, bass, lead guitar, or drums. The rhythm sections drive these songs along and the Iskra1 boogied.

A recording from the seventies, the Commodores "Natural High", which I bought second hand and cleaned on my Pro-ject VCS really surprised me for its quality of the recording. Lionel Richie's superb voice and the band's instruments powered along in the funky numbers such as "Flying High and X Rated Movie". The album is most famous for the number one hit single "Three Times a Lady" but for me, it's the funky tracks that really thrill me, even forty years on. As they say, good music never dies and the Iskra1 preserves that heritage.

A dedicated linear power supply would I am sure up the ante and solve the weaknesses that the cheaper switch mode power supply can't resolve. AudioKultura recommends this as an option and I can testify to this type of upgrade as very effective with every phono-stage I have ever tried it with. AudioKultura are in the process of finalising the Iskra2, an advanced version of the Iskra 1 with front panel access to the load and capacitance adjustments, and other features. The designers are also tweaking the capacitor choices to attain the sound they are after. This is not an easy task and not to be rushed. Rome wasn't built in a day.

CONCLUSION

If you are after a highly versatile phono-stage for under £400 look no further. There are many units out there now, but the Iskra1 offers such adjustability that tweakers will love it. Don't let its simplicity at first glance fool you, it has a lot to offer. The systems it will probably be used in will be less critical than mine so it will perform admirably. As it was it still did a sterling job in mine.

AT A GLANCE

Build Quality: Excellent for the price and smart looking in its blue livery.

Sound Quality: Low noise design that punches above its weight

Value for Money: Excellent given the competition

Pros:

Highly flexible and handles mm and mc.

Cons:

Only that the dip switches are tiny and hard to alter, so patience is required, and studying the instructions for the adjustments is vital.

Price: £340 / 379,00 €



PRO-JECT VC-S2-ALU RECORD CLEANING MACHINE

Ian Ringstead checks out the £429 Pro-ject VC-S2 –ALU Record Cleaning Machine.



Ian Ringstead

The vinyl revival has certainly taken a hold in recent years and even my great-nephew has got into playing records now at sixteen years of age. This is brilliant and I hope more people, young and old, either discover vinyl for the first time or return to it after a long hiatus. Pro-ject really excited me a few years ago when they released their first VCS machine for less than £300. I reviewed it for HiFi Pig and consequently got one for my own use. I collect a lot of second -hand vinyl from shows or charity shops when on a trip to another town or city. There is a lot of dross out there but occasionally you hit the jackpot as I did in Salisbury several years ago when visiting the cathedral and I passed a charity shop near the river. Inside there was a corner which had a large selection of used vinyl all from the 70's and 80's of

bands I love. It turned out that the owner of them had decided to get rid of all his vinyl and donated them to the shop. The bonus was there were loads more in the back. At £1.99 each, they were a bargain and I spent over £100 that day. By chance a few months later my wife and I with both mums were staying nearby in Wells and as we went to see the cathedral again it would have been rude not to call in on the shop again. Guess what, they still had some left, so I spent more money. That was a real find which may only happen once in a lifetime.

CONSTRUCTION

So as an avid collector a record cleaning machine is vital and a good investment. The Pro-ject VC-S2 ALU is a refined version of the original VCS and housed in a very smart all aluminium casing as

REVIEW

opposed to the original black painted mdf VCS. Yes, it's more expensive than the original VCS was and costs £429, but it is a lot smarter to look at and has a more durable finish. The new finish isn't affected by cleaning fluid spills and is wipe clean. The vacuum motor is very powerful and effective at cleaning a record side in two revolutions, one forward and one back. The drive motor achieves a full revolution within two seconds so is very quick compared to the competition on the market. This means quick and easy record cleaning. The motor is a new improved design over the original and is meant to be durable and last a long time. The aluminium screw-on clamp is lined with rubber for protection to the label from fluid spillage. The actual metal suction arm is rugged to withstand a lot of repeated use and all the suction is concentrated onto the record being cleaned.

The VC-S2 ALU is supplied with Pro-Ject's own eco-friendly, non-alcoholic vinyl cleaning concentrate called Wash-It. The fluid is very effective at cleaning dirty records without causing any damage to the vinyl and evaporates easily into the air so the tank doesn't fill up for a long time unless you clean loads at one time. My suggestion is to do a few at a time because the

vacuum is very loud and although the cleaning process is quick and easy you don't want to be standing around for an hour or so repeatedly cleaning records. A little and often is best. The actual collection tank is 2.5 litres so I doubt you'll fill it. If you do then there is a level indicator to let you know if it's getting full.

USE AND PERFORMANCE

I tried quite a few records old and new in various states of dirtiness. You simply place the record on the small turntable and screw down the clamp. Then squirt some of the wash-it liquid onto the record and start the motor holding the goats hair brush supplied to evenly distribute the fluid. Then you lift the vacuum arm from its rest position and place it on the revolving record to suck off the liquid and dirt. I did a couple of rotations in each direction and then stopped the motor, unclamped the record, and repeated on the reverse side. All very easy. Even brand-new records should be cleaned to get rid of any mould release agent from the manufacturing process. Very dirty discs will really benefit from a good clean and may take several attempts to remove stubborn grime and hardened deposits. In every case, there was a definite improve-







MOTOR



VACUUM





ment as you would expect, but don't think that the VC-S2 ALU will perform miracles. No machine does that, no matter how sophisticated or expensive they are. It's not just dirt that is the culprit but faults in the stamping and pressing of the vinyl and how it cools down. If any airborne dust or particles contaminate the vinyl at the manufacturing stage then that leaves a permanent trace or defect. Also, poor tracking or setup of a cartridge and mishandling of the record will cause wear and tear.

The Pro-ject VC-2S ALU works extremely well within its design parameters and for a vacuum machine it does a thorough job. Of course, there are far more expensive and sophisticated machines you can purchase that use ultrasonic cleaning methods, but they are generally £2000 plus and you would have to be seriously dedicated and have a large collection of vinyl to justify the outlay. The different machines I've seen are either very easy to use and automatic in operation or incredibly time-consuming due to their rigorous regime of cleaning processes. I'm all for ease of use as are most people, but that's down to individual preferences.

CONCLUSION

More expensive than the original VCS I feel the new VC-2S ALU is worth the extra investment and for less than £500 is exceedingly good value compared to the competition. It will also mean your precious stylus will last a lot longer. I

would go as far as to say unless you can afford the dearer units and justify the convenience / improved performance, then the money you will have saved can go on more records or HiFi.

AT A GLANCE

Build Quality: Excellent for the price and smart looking

Sound Quality: Effectively cleans dirty or old vinyl to make the listening experience far more enjoyable

Value for Money: Excellent given the competition and a must have accessory.

Pros:

Easy to use and does what it is supposed to do efficiently

Cons:

Very noisy. The old model was as well, but the competition is also, unless a lot more is spent.

Price: £429



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KEITH MONKS PRODIGY RECORD CLEANING MACHINE

Linette Smith gets into the groove with the Keith Monks Prodigy Record Cleaning Machine which promises to be a compact, quiet and home-friendly solution to keeping your vinyl in pristine condition.



Linette Smith

Keith Monks has been “making records sound better” since 1969, indeed the company is famous for their machines being used by the BBC. From 1970 onwards the BBC’s main Central Record Libraries, the BBC Archives Library, the BBC World Service, the BBC Transcription Service, as well as regional and overseas stations with sizeable collections all took delivery of a Keith Monks RCM, with an instruction that every record kept by the BBC was to be cleaned on the Monks prior to broadcast. Many other archives and organisations around the world use Keith Monks RCMs and a silver machine was delivered to Buckingham Palace in 1977 for the Queen’s silver jubilee.

After Keith’s death in 2005, son Jonathan Monks relaunched the company and continued to innovate, the latest product

being the Keith Monks Prodigy Record Cleaning Machine, a compact machine designed to fit better into the home environment than the larger models.

All Keith Monks machines still adhere to the same basic principles - an effective liquid and applicator to wet wash the record, then a “point suction” suction arm moving from the inside out (following the centrifugal fluid movement) and vacuuming away all contaminated fluids, one turn at a time. A teaspoon of fluid is only used once, and the system ensures zero recontamination, however many records you clean.

The point suction system has traditionally used a reel of nylon thread to act as a buffer between machine and disc, cushioning the nozzle tip off the record, protecting the surface, and creating an air space to allow the precision

REVIEW





suction to function. Thread would reel out a little at a time, so the piece touching the record was always clean and uncontaminated.

The idea and its execution are not without their drawbacks. Wet thread, often covered in surfactants to help remove pressing oils and aerated by the concentrated suction, would cling to the tube inner walls. The resulting thread accumulation would restrict the suction and eventually cause blockages with trying to find and unblock them a challenge in itself.

Many found re-threading the arm a worry, and for new prospective customers compared with simple push-button new technologies, fears about the complicated appearance of the Monks became more of a purchasing consideration than the cleaning results.

Meanwhile, Jonathan Monks' sights were firmly set on making Prodigy, his "new baby," as simple and inclusive as possible, in aesthetics as much as function, operation and performance, so after 50 years, the thread had to go.

Two years of work involved trying different

thread substitutes, shapes, materials, then adding air breather holes to replace the former air space at the tip. After numerous trials, a blend of four polymers was approved to create a new nozzle tip, fine-tuning its shape and softness to perfect its ability to vacuum all traces of discOvery fluid away, while ensuring direct contact would not affect the record surface. Finally, at the suggestion of Brian Berdan of the high-end audio store Audio Element in Pasadena, CA, the air breather holes were finally replaced with a single adjustable air regulator.

The latest machine now has double the width of fluid removal than was previously possible. A simple air valve regulator helps to create just the right amount of suction to remove all fluid while ensuring the force of vacuum didn't slow or stop the suction arm.

Threadless Point Suction was born and is now rolling out across the entire Keith Monks RCM range. R/Evolution sets are now available as an easy user retrofit kit for all Monks machines going back to 1969.



BUILD QUALITY

The Prodigy is made of bamboo, chosen for its strength and ecological credentials. To carry on these principles, it arrives simply boxed in brown paper with eggbox padding. When not in use there is a lid that covers up the business end of the machine and it sits tidily on a shelf or piece of furniture, we put the review model on an IKEA Kallax unit.

You have the option to light it up which is pretty cool and adds to the disguise of the unit. All in all, it is very 'home-friendly' and did not look out of place in our lounge rather than the listening room. When the lights are on the glow emits from a strip around the Prodigy's middle and also from the bottle storage compartment on top. I would actually like the option of a clear perspex lid so that you could see the glowing parts under the lid.

The Keith Monks Prodigy comes with a couple of bottles of discOvery cleaning fluid, a bamboo roller, power pack, light remote control and some spares like nozzle tip. I had an issue with the roller detaching from its bamboo case but its issue has been fixed since ours was sent over, with the roller now screwing onto a threaded pole in the case.

Overall it is a very different looking machine to usual record cleaners and looks good and feels well built.

EASE OF USE

Firstly, the Keith Monks Prodigy doesn't come with any written instructions, but I watched the very well done Youtube video a couple of times and made a few notes. All in all the process is very simple and it doesn't take long to get the hang of it.

REVIEW

CONCLUSION

It is a bit more involved than the Degritter machine that we recently reviewed and though you can leave it while it is suctioning off the liquid, this takes under 2 minutes 30 seconds per side so you don't want to go far. I found it a little messy dripping liquid onto the roller and then wiping it onto the record so kept some tissue handy to wipe up drips. The record is clamped in place with a little screw on clamp and once you have applied the liquid the arm neatly moves over the record from the centre sucking up liquid and whatever filth has been festering in your grooves. You have to get involved again to manually make sure the edge is dry but it is a very simple process. Liquid and groove filth is suctioned into a waste jar which is easy to remove for emptying,, though the process uses so little fluid that you don't need to do this often.

The air valve on the top can be adjusted but comes factory set and I had no need to tinker with it.

You can also put CDs on the machine, something I hadn't done before with an RCM, they clamp on slightly differently but the process is the same and they take just a few seconds to clean.

DOES IT WORK?

In a word, yes. The Keith Monks Prodigy Record Cleaning Machine does exactly what it says on the tin...it gets you records clean, very, very clean. What's more the records are able to be played straight away. I was really impressed by how clean it got records and CDs, throwing some second hand finds and rather dirty discs onto it that had all sorts of gunk on them. It is hard to tell from the photos but in the flesh and to your ear the difference was exceptional. Records were left without surface noise and looked and sounded better than new.

The Prodigy has claims of being the quietest Record Cleaning Machine on the market, is it? Well yes, there's some noise but is significantly quieter than other machines. You can easily have a conversation while it is running, unlike some machines where you have to shout. And it doesn't spoil things when listening to music whilst cleaning.

The Keith Monks Prodigy is a neat and practical solution to the age-old problem of cleaning vinyl. With a lot of history behind them, the brand has refined their techniques and the Prodigy is a functional machine that does its job whilst not looking out of place in your home.

I would say it is for audiophiles who like to be quite involved with the cleaning process but want their machine to look nice too and not sound like an aeroplane taking off whenever they use it.

AT A GLANCE

Build Quality: Nicely made and with good consideration to how it looks, fits and performs in the modern home.

Ease Of Use: Very easy to use, would like some written instructions though for clarity

Value For Money: At just under £800 it isn't cheap but it does the job and has the weight of a lot of experience and knowledge behind it.

Pros:

Quiet

Fast

Effective clean and dry, record is ready to play straight after cleaning

Stores neatly on a shelf and doesn't take up too much room, looks cool

No lugging baths of water around or mixing solutions

Cons:

Can be a little messy dripping the liquid on

No written instructions

Quite involved process

Price: £795





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ORIGIN LIVE CARTRIDGE ENABLER

The Origin Live Cartridge Enabler is a £25 piece of felt that fits between cartridge and headshell and comes with felt and nylon washers. In this Quickie Review, Stuart Smith gives it a spin.



Stuart Smith

The Origin Live Cartridge Enabler is essentially a felt pad that fits between your cartridge and tonearm headshell and comes with three felt washers and three nylon washers. Packing is a simple printed paper envelope that has an A4 sheet of instructions (that are very good) and a sealy bag with the Enabler itself and the washers.

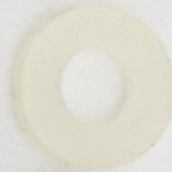
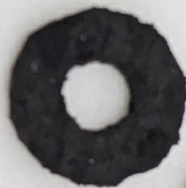
The enabler is a piece of felt around 1mm thick and with cut-outs to locate cartridge bolts. It has TOP labelled to indicate which way the enabler should be positioned. The top being Top!

FITTING

Fitting the enabler is a simple enough job, though I found it a bit fiddly to get it to sit still on top of the cartridge whilst attaching the cartridge back to the headshell.

Basically, you sit the enabler with the 'Top' side facing upwards onto the top of your cartridge (ie top interfaces with the headshell), put the nylon washer, and then the felt washers on your M2.5 bolts, and then attach the whole as you normally would fit a cartridge. There's no need to undo the cables and tags! You then attach the cartridge to your arm as you normally would, and sort out overhang, alignment, tracking force etc accordingly. However, you will need to raise your arm by 1mm to account for the extra height the 1mm thick Enabler adds. Azimuth can be altered slightly by applying different tensions to the left and right-hand bolts which is a useful thing to be able to do.

One point – the cartridge enabler dictated that I needed longer bolts than the one I pre-





viously had fitted to the Ortofon Rondo Red MC. This is perhaps worth bearing in mind, but most carts do seem to come with both short and long bolts and I had several to choose from. Origin live suggests that bolts should not be overtightened.

If you have a cartridge with three points of connection for bolts then there is an extra felt washer and an extra nylon washer, though you will have to make a hole in the main top piece yourself.

SOUND

As mentioned, the Enabler was attached to an Ortofon Rondo Red MC cartridge using an Ortofon headshell onto a standard Technics 1200G tonearm. The Red is a good cartridge with, to my mind, a balanced performance top to bottom, though it's not the most high-end cartridge we have to hand. It delivers a convincing portrayal of whatever it is fed but lacks some of the refinement of our more expensive and capable cartridges – though for the price it is excellent.

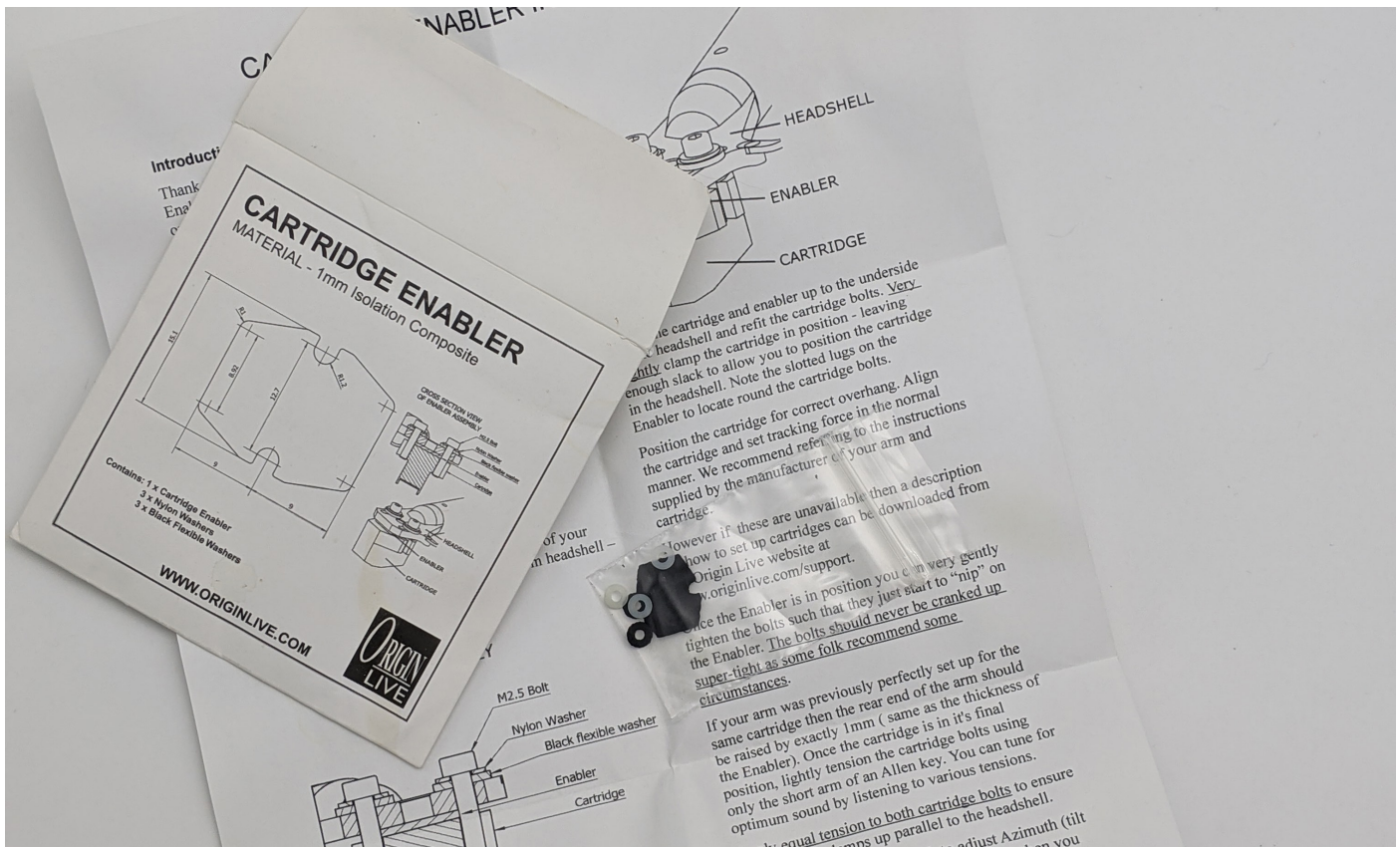
I've read quite a lot about the Cartridge Enabler and some of the claims seem to be a little over-enthusiastic in their declarations of it

being like buying a new cartridge etc. Direct A/B testing is difficult here as I'm not going to go to the hassle of taking the enabler on and off the cartridge between every tune, and I simply don't have a second identical cartridge.

My thoughts on the sound with the enabler in place are that there is a slight opening up of the sound – more air and more space to the recording. It also seems that the bass has tightened ever so slightly, and the top end is a little clearer, though it is the bass tightening I noticed the most and that tightening adds to the way a tune feels 'pace' and tempo-wise. Now I am not talking night and day here - that has to be stressed – but there are improvements across the board. The stability of the stereo image is a tad improved, but again not by a huge margin, and mid-band on vocals seems to be more 'liquid' and "real" sounding.

All in all, there seems to be a tad more focus and accuracy to proceedings with the Cartridge Enabler in place - instruments and sounds in the mix seeming to be a smidge more stable in their positioning.

CONCLUSION



This is not the first product of this kind I have used, but it is the cheapest and it is the simplest. For £25 there are improvements in the overall presentation, but, to my ears at least, they are not in the realms of having spent an extra couple of hundred quid on a better cartridge, though they far exceed the very modest asking price.

However, that £25 is neither here nor there in the grand scheme of what many of us will spend on achieving even minuscule improvements in the performance of our systems, and as such, I reckon it's well worth a punt. Put it this way, I'll be leaving it on this particular cartridge and may well look to adding to my other cartridges in due course.

Obvious comparisons will be made with the more complex Cartridge Man Isolator, but that is around four times the price and has similar results to my ears – yes, I do have one to compare with.

AT A GLANCE

Build Quality: Not much to say really. It's a piece of felt cut out to the shape of a cartridge top with some felt washers and some nylon washers

Sound Quality: Not the same night and day improvements you may get by spending a good chunk on a new cartridge, but there are clear benefits to the Enabler being in place, particularly, I noticed, in the bass

Value For Money: It's £25 for a bit of cut out felt and some washers. Some will baulk at this and claim they can do similar for less at home (don't they always), whilst others will happily pay the relatively small sum for a bit more performance from their cartridge.

Pros:

- Definite improvements, if not huge leaps
- Cheap enough to experiment
- Allows simple azimuth adjustment

Cons:

- Can be a bit fiddly to fit
- May need longer bolts that are not included

Price: £25



iFi POWER STATION MAINS PURIFIER

The iFi Power Station is, as its name may well suggest to many, a mains purifier and distribution block. It costs £499.



Janine Elliot

Continuing my exploration of cute iFi DC operated DACs and digital and analogue products I was taken aback to be given a weighty box with a large six-way mains cleaner inside. But there again, I needn't have been so shocked since the company have been producing mains taming devices since 2016. Their first power related product was the iPower upgrading wall-wart switch mode mains adapter followed by the AC iPurifier in 2017 and the DC iPurifer2 arriving in 2018. The PowerStation, up for review here, was launched in 2019, incorporating iFi's ANC II tech into a whole-system mains block for the first time. The very latest iFi clean-power product is the just-launched iPower X, a higher-spec alternative to the iPower power supply. With the mains Aurora and the Retro Stereo 50 requiring mains, plus a number of

smaller iFi products working with mains adaptors such as the excellent Zen range, the desire to produce a mains purifying solution is a good move.

This is a British company with the expertise at their Southport head office and manufacture at their own China workshop. It all began in 2012, an offshoot from the high-end manufacturer AMR (Abbingdon Music Research) with both companies designing and manufacturing portable, desktop and hi-end HiFi components. iFi is certainly a name that is getting banded about the HiFi press with excellent reviews every time. I should be in very good hands here, then. I also need to be honest, though, having had a love/hate relationship with mains conditioners and mains taming apparatus over the years, having built my own conditioners, advised a few



companies, and owning a number, but this Power Station is completely different to anything I have yet got my hands on, not least in looks and adaptability.

Some mains purifiers particularly passive units can have side effects such as curving of initial transients and affecting timing and dynamics. Where passive mains conditioners generally only work at the higher frequency range reducing noise from Wi-Fi/phone/radio transmissions (MHz - GHz), the active PowerStation mains audio noise eliminator works significantly better in the lower frequency bandwidth from 10kHz and is quoted as giving greater than 40dB noise reduction at 1MHz. Whilst passive mains conditioners, working at the very high frequencies, can reduce noise by a higher degree (~70dB), they “change” the sound especially transients, and don’t work at the important lower frequencies. Whilst your mains might be 50Hz there are a lot of other frequencies, “distortion”, coming along your mains leads that need to be removed. Not only does noise get into the system from AC and switch-mode power supplies, and digital circuitry, but it is all around us whether emanating from AM, FM, TV or Wi-Fi. It just

interferes with all our audio and video. It is very important, therefore, that as well as good mains cables you choose the best filter that removes all the interference but maintains the original 50Hz or 60Hz signal as pure as it was leaving the power station. Whilst a balanced mains unit is another approach to having pure mains, they are rather expensive unless you build them yourself. The PowerStation comes in at £499 which is considerably cheaper considering all that it does on the quiet.

CONSTRUCTION

This is a 6-way unit for 13A sockets (though also comes in AU, EU and US versions, of which the US version is 8-way since the sockets are smaller). With an IEC socket at one end with an off/on switch, the matt finish grey block has an iPurifier at the other where most of the work is done. The iPurifier has polarity and earth indications (more on this later) and a 4mm earthing socket for banana connectors. The unit looks very stylish, though the matt gunmetal finish may tarnish over time if you are using dirty fingers. The lines and edges are ruler sharp giving it a very special appearance (espe-



cially the “wedge shape” at one end) and has a solid build quality. It operates to 2.5kW 10A, with surge protection up to 30kA@ 1,000V/10µs which is also impressive.

iFi is very good coming up with names for their devices and techniques, with a penchant for adding i's and joining words together. In the Power Station, I mean PowerStation, we have PurCopper Bus-Bars and PurCopper outlets, Active Noise Cancellation2 technology, and most importantly the AC iPurifier.

Let's begin by taking the unit verbally apart to explore all that is going on inside. Each of the six mains outlets is independently isolated in its own chamber to prevent cross-contamination, with the addition of strategically placed EVA (Ethylene Vinyl Acetate) to damp vibrations. It is excellently put together with solid pure (99.9999% pure OFHC - Oxygen-Free High-Conductivity) copper cores, the solid PurCopper bus-bars running along the mains block connecting to each of the socket terminals via very short wire connections. Each socket also has a capacitor between the Live and Neutral connections to eradicate the higher

frequencies just as in a basic passive conditioner. These components will only reduce wireless transmission infiltration in the megahertz, things like FM, mobile phone and Wi-Fi. RFI (Radio Frequency Interference) covers a large range and any reduction in this area will be well received. However, there is also much interference in the kilohertz range that is needed to be removed to get that pure mains signal into your mains HiFi or switch mode power supply. The iPurifier will be responsible for this and is the white cylinder that sits at one end of the mains board fed from the IEC socket at the other, using heavy OFHC Continuous Cast Copper internal wiring with multi-layered polymer insulation. This is where the active cleaning takes place. Additional iPurifier's can be purchased for £99, which can be added to the mains board or plugged precariously around the house next to important audio or video plugs. Using the principle used in noise-cancelling headphones, with Active Noise Cancellation2 technology any noise faces an 'equal' and 'opposite' noise to end up with “clean power”. This is the same end goal as balanced mains units; In the case of balanced mains units it is achieved by splitting the 230V voltage into two separate 115V sup-



plies with one on the live and the other on the neutral, and because each is a different polarity the noise on one is cancelled by the noise on the other. In the PowerStation it detects the “noise” and recreates a reverse sample to eliminate it, all done on a very small PCB, rather than large and heavy toroidal cores in the case of a balanced mains unit. Finally, the Wireless Purification System (WPS) circuit reduces power line noise “without audible or measured side-effects”. In total, with both active and passive noise reduction from 10KHz into the megahertz the PowerStation should reduce interference from every corner of your property.

As well as active noise reduction the AC iPurifier has other functions. The polarity and earth diagnostic system combine inbuilt earth/ground and polarity detection. The grounding system ensures the AC iPurifier will not introduce a ground loop when one isn’t needed. This means that there should be less hum in the system. As mentioned, additional AC iPurifiers can be purchased to lessen contamination even further along the 6-way block. For example, if you have your analogue amplification on the first two

sockets you can insert a purifier and separate the other remaining 3 sockets for your digital “sources”, the iPurifier acting as a noise shield. Noise is reduced, isolated and confined to each section. At the end of the AC iPurifier are two LEDs; a red or green polarity and earth indication. This means that green is good and red signifies an issue. You can check the polarity is correct and that you have the necessary ground/earth connection. If both are green all is well, but if both are red then there is a ground issue and earth is missing or faulty (for example the resistance is far too high). Luckily my system was fine, showing green for both. Just wish there was also an LED display telling me how many volts were coming in. Finally, there is a 4mm socket for adding an additional earth to your HiFi, for example, a turntable. iFi refers to this circuitry as “Intelligent Ground” because it will not create a ground loop, a common cause of buzz or hum, even if the system is already earthed.

THE MUSIC

I have four HiFi setups at my disposal at Chez Janine, so decided to operate most of the

reviewing using the third system in my bedroom. There were several reasons for this. Firstly, this is not on my dedicated HiFi mains run. Secondly, the room is in the middle of being rearranged; at the moment it goes against my own knowledge of setting things up, and common sense, as there are very long cable runs and daisy-chaining of mains blocks. Highly dangerous and prone to noise interference so ideal for testing the PowerStation. I hasten to add that after reviewing, my room was set up in a much more agreeable manner. Thirdly, this system uses a lot of mains adaptors. This room was therefore the ideal starting point for the review. This is a very able system and gives excellent sound at the best of times; Slee Proprius mono-blocks and Majestic pre/DAC, Fiio DAP, Mitchell/SME turntable, and Chartwell LS3/5a loudspeakers. This setup works well especially at the end of a very long day of coronavirus lockdown. To listen, I chose a variety of music that I know very well and have used in previous reviews, after all, this is not a record review.

Listening to mains conditioners and mains taming equipment of all sorts is not an easy task and one that many audio folk have fixed views 'for' or 'against'. I use various manufacturer's mains cleaning products around the house in order to get the best audio I can, but I only choose the right equipment, or not at all, after much evaluation. I, therefore, reviewed the PowerStation with an open mind. To start with I chose Oscar Peterson 12-bar title track from the 1962 album 'Night Train' (24bit/96kHz). I sometimes have problems with this album finding it somewhat unexciting. With the SoundStation I was instantly aware of a quieter system with extra details particularly from the percussion and an extended bass line; I was instantly awarded tighter transients, positional detail, and the ability to get more engrossed in what was happening in the music. For example, track 3 "Georgia on my Mind" had tighter instrumentation and increased width to the soundstage.

Patricia Barber 'Live in Paris' is one of my favourite double albums with plenty of bass and treble and an excellent soundstage. "Crash" was insanely good; the clarity and excitement, particularly in the piano and percussion, was

proof for me that this trio of active AC iPurifier, an excellent mains block and passive mains conditioner worked so well. Having next removed all the filtration ended up with much more noise on the piano – like it was over-recorded and distorting.

Chasing the Dragon 'Vivaldi in Venice' is a lovely album to listen to especially at the end of the day with a glass of wine, and without the PowerStation, whilst the sound is "adequate" it didn't get me that enthused. Reconnecting the PowerStation was a different matter. Tartini Violin Concerto in E minor D56, was clearer, not just a tightening of transients but also the soundstage both front and back; for example the harpsichord behind the strings. Similarly, the reverb in the hall improved with the iFi, all the detail after the notes were played given time to die off.

I set up my modified Leak Stereo20 for auditioning in the main listening room. This amp can be very susceptible to mains hums and "noise" especially when connected to my Pre-Audio tangential turntable. My own active/passive mains taming system works very effectively in giving me an excellent sound, so I really needed to remind myself of no mains conditioning at all before I started playing with the iFi. Goldfrapp 'Seventh Tree' is their fourth studio album, with my favourite being the one that started it all, 'Felt Mountain'. 'Seventh Tree' loses some of the uniqueness from their first and that includes some of the excitement and sound quality, lacking in depth and top end, with lots of "intentional" distortion that doesn't sound nice, especially the last track. Track 2, side 2 did give some good definition of the acoustic guitar on the right, but I could see why record sales only hit 200,000 as against a million at the height of their fame. The PowerStation added more depth to the music, with a bigger soundstage, space between the instruments, and a clearer vocal line. That distortion also sounded more acceptable.

Listening to Patricia Barber's 'Live in France' on this system provided clearer initial transients (surprising me on the rather slow Leak) and an openness to the sound revealing more of the music. For example, side D "White World" had a tightening of the percussion giving more defini-

REVIEW

CONCLUSION

tion and a slight improvement in the soundstage, and the distorted electro-acoustic guitar was much more precise; I wanted to hear all the distortion, in full 4K not 405-lines. The PowerStation enabled greater “texture” so I could hear all those particles of distorted sound.

To Respighi, “Pines of Rome” (Maazel conducting the Cleveland Orchestra). This is a great album to test not only the soundstage and timbres but also dynamics and picking out individual instruments. Some believe this to be one of the best recordings of the 70’s, period, and is one of my most treasured LPs. In performance, just as in the other tests, backgrounds were quieter, and imaging was improved. Respighi had a thing about Rome, composing three of his best works about the city. “Feste Romane” had lots of powerful initial brass transients brilliantly portrayed with what sounds like an American battle scene from the trumpets followed by an Eastern wilderness minor chordal section. Such a lot happens in the mind of Respighi, with colouristic orchestration showing the influence of Rimsky Korsakov with whom he studied. “Pines of Rome”, the best known of the trilogy, is no exception; a highly programmatic work of children playing in the first movement, Pines casting a shadow in the catacomb in the second, a nightingale singing in the third, and the last movement all about a consul’s army advancing toward along the road. In the latter movement, Respighi wanted the listener to feel the vibration of the troops marching in, so he employs an organ blasting away the very lowest Bb on the 8-foot, 16-foot and 32-foot organ pedals. My LS3/5a might have problems with that one but my LS5/9 with Wilson Benesch subsonic generator certainly didn’t. Bass seemed clearer and richer without being any louder - if you see what I mean. Whilst Respighi might have had lots of imagination, the PowerStation was just pure honesty. My Leak usually has a slightly prominent mid-range, but the combination gave purity and honesty to the sound. #

Finally, ‘Heartplay’ (Naim) with my favourite guitarist Antonio Forcione and Charlie Haden on double bass rounded off the review just perfectly with an extended bass end and tight top end from the guitar. The music was allowed to breathe with space for decays and reverbs.

iFi produce some lovely kit, and the PowerStation is no exception. Normally ‘conditioners’ add to the sound; after all, they are basically a tone control. The PowerStation was different. It left me engaging in more of the music, with noticeably tighter bass, greater definition and dynamic control.

For £499 this is such good value, but if that is too much for you then you can buy the AC iPurifier at £99 and add to your existing mains block. Better still, buy both for even better mains.

AT A GLANCE

Build Quality: impeccable construction. Well-thought-out both inside and out.

Sound Quality: A tighter bass and greater depth to soundstage

Value for Money: £499 for an instant upgrade to your HiFi is a no-brainer.

Pros:

Improvement to the bass

Greater dynamics and soundstage definition

No softening of the edges as often found in passive noise conditioners

£499 is excellent value for an active/passive combo.

Upgradeable with further iPurifiers.

Cons:

Some might not like the shape but that’s about it

Price: £499



TELLURIUM Q BLUE SPEAKER & INTERCONNECT CABLES

Tellurium Q has updated their entry-level cables, Janine Elliot compares the old with the new.



Janine Elliot

Geoff Merrigan is different from most manufacturers. He doesn't like to give away too many details about his cables, even to friendly reviewers, as he feels you should just listen to them and come to your conclusion as to just how good (or not) they are. After all, you could be sold a lot of information on the cable's design, but unless it actually sounds good it's not much use. Luckily Tellurium Q has been producing some amazing products over the past 10 years, winning numerous awards including the Queen's Award for Enterprise 2018. When Geoff sends me cables to review that are new versions of existing cables, he always sends me the old cables as well so that I can do a direct comparison between old and new. The Blue II was no exception. This allowed me a great opportunity to experiment with both cables from

this ex industrial chemistry student who trained in material science. Geoff turned to cable manufacturing just over 10 years ago. Tellurium Q produces three ranges of cables; the Blue family of products is their entry line aimed at giving warmer and richer sounds, the Black range is midway and more revealing, and at the top sits the Silver top-of-the-range series, with more detailed and revealing sounds. On opening the TQ website it shows a moving image of a single sine wavelength multiplying into several, illustrating a fault of many cables where the pure sound input can morph into something quite different by the time it gets to the other end of the cable. Their mantra is "Phase relationships in a signal is our focus".

"We are primarily focused on removing the smearing of frequencies through a timing



shift and by doing this you get better clarity and transparency”.

According to Geoff, no one can totally rectify this issue, rather just make the effects less audible.

“Every material a signal passes through will shift differing frequencies by differing amounts relative to one another. That will vary by each and every material and fields acting upon those materials. That is just the laws of physics in action. Even an ultra-pure amazing conductor will exhibit this problem, there is no getting away from it. It is only really an issue though in the transients – leading and trailing edges, but that is enough. So, you have to carefully match/develop materials, dielectrics, etc to get a better result to listen to”.

In a Bell Labs report from 1930 they found that transient phase distortion affected the ‘naturalness’ of voices, and this has inspired Geoff to create cables that gave a pure representation of the source. For example, the more expensive interconnect, Ultra Black, is one of the best cables I have ever heard, so I looked forward with great excitement at trying the new entry-level Blue II. Complete with the 1m XLR interconnect, weighing in at £235 (the RCA version is £180 for a 1m length), I was also supplied with a 3m Blue II loudspeaker cable, working out at £16.50/m plus £12 for termination.

CONSTRUCTION

This section will be very short since Geoff is very secretive about what goes on inside, and I didn’t particularly want to cut a cable in half! What is very important in terms of construction is that a lot of different areas build up to create the ‘best’ cable, not just the choice of conductor or dielectric. Geoff told me that manufacturers can be too dependent on getting as much purity of the copper, rather than looking at the overall design;

“People assume that to get the best performance the “fastest” conductor – pure silver or something even better has to be used. Which is also one of the reasons for the pointless chasing of nines as I call it i.e. copper to 99.9999999% purity as if that is the single most

important factor for a cable!”

Even the choice of solder is vitally important to Geoff and is the result of many tests. As a result, solder is both silver and lead-free. Important, too, are the connectors. For this entry-level product, the excellent Neutrik connector is used, but in the higher range products, they have multi-layers of plating and not always the materials you would expect. Indeed, the plating process itself is chosen carefully, even to the thickness of the plating, and what has to be in the plating bath as well as what shouldn’t. Whilst both old and new Blue cables look very similar (well, actually the new Blue interconnect is a nicer lighter shade of blue), that is where the similarity ends. Improvements have been made in the conductors and dielectrics, plus work on the asymmetric shielding. The speaker cables follow the TQ pattern of a flat cable design, and the finish of all the cables sent to me for review was exemplary.

THE MUSIC

For the review I used two HiFi set-ups: one high-end and the other more in keeping with the price range of the cables. To start the review, I decided to listen to the old Blue to totally understand how they sounded before moving on to the new products. When reviewing the interconnects I kept my existing loudspeaker cables in situ as I know them so well, only listening to the TQ loudspeaker cables when the first part of the review was completed.

Initially, the XLR cables were used between my excellent Krell KPS20i CD player and MFA pre-amplifier, and then between the passive pre-amplifier and valve Synthesis power monoblocs. On listening to the original Blue and then the new product it was easy to establish the differences. Indeed, the cables were like chalk and cheese. The new cable was astounding in comparison – though the original was still a very good product. Listening to Tangalco’s ‘La Zucca Barucca’ on the older cables the sound was forward and engaging but lacked extreme bass. I also found in comparison with the newer cable that the sound wasn’t so forceful and certainly not as engaging. This album is a very exciting performance, and the instrumentalists sit in their own defined areas which wasn’t so



clearly heard with the older cable. With the Blue II positioning was improved and there were better initial transients that even made my cat jump up in surprise at the beginning with the piano and drum rhythms. The music actually sounded louder than with the elder cable and it had a far better top end. This cable is really aimed at getting close to the Ultra Blue though I could hear some similarities with the Ultra Black which I had previously reviewed. Each instrument was placed in its own defined space with the musicians visible in the room, rather than behind a curtain, as in the older Blue's. As well as improvements in the treble, the bass was further extended and tight with the double bass and percussion.

Mozart's String Quartet in Bb KV174 was next (Philips Complete Mozart Edition). The Blue sounded a little blue in comparison with the Blue II, with detail not as good as with the new cable. The Blue II had a "cleaner" and more extended top end. Lower mids sounded particularly good, especially the viola. Interestingly, everything sounded a tad faster. The interconnect gave a warm and musical rendition of the work with excellent space around the five instrumentalists. Continuing with classical music I listened to a mono 1955 recording of Ravel's 5-movement Miroirs. This work is very dry; no digital reverb to spoil the music, though in the recording its dryness was perhaps a little too much. This was like listening to a piano in the smallest bedroom, but it enabled me to accurately assess the cables. The Blue II did this much more successfully and admirably. Nothing was added nor taken away. Shostakovich

Concerto for Piano, Trumpet and Orchestra in C minor is a particularly innocent work with plenty of oomph and space, and much more reverb. The cables gave a faithful and honest rendition, with the Steinway grand piano easily identifiable against any other make with its handling of the top frequencies and the bashes of the lowest "B" and "C". Whilst this isn't my favourite Shostakovich piano concerto it is a particularly enjoyable one, basing ideas on neo-baroque combinations of instruments, hence the small orchestra. The piano seems to get most of the playing with the louder trumpet taking second fiddle. But when he does play, the cables are able to bring quick and tidy transients and separate the soloists in space with the orchestra. The trumpet does have the final laugh, though, playing the final melodic line.

Turning to things a lot louder the punchy "Dancing in the Moonlight" from Toploader (Onka's Big Moka) gave the electrons something to dance about, the cable not having any problems giving a feisty performance, with all frequencies accurately catered for. "Just Hold On" is particularly good in respect of frequencies, particularly the highest, and the cable again gave as good as it could. Slowing things down 'Tres Lunas' from Mike Oldfield, an album more suited to reiki or reflexology sessions, gave me a chance to unwind. The dated digital instruments were easily discerned, but the cable did so in a very musical manner, something some more expensive cables can find problems with. All frequencies were evenly distributed. Only the digital bass line in track two was a little too prominent, though my Wilson Benesch Torus sub handled

it with relish.

Time to add the loudspeaker cables. Listening to the excellent 'Vivaldi in Venice' and Tartini Concerto in E minor, the original Blue cable had lots of detail but the instrumentation was very central and lacking in excitement. Tops were good and detail in the bass adequate, but it was not as good as I know this album can be. But soon as I switched to the Blue II my eyes just lit up. This was a far superior cable. Instruments weren't so confined, and the acoustics of the Venice San Vidal Church could be heard in all their glory. London Grammar's album 'Truth is a Beautiful Thing' allowed me to hear a surprisingly truthful performance from both of these cables, but the elder sounded more relaxed and subdued in comparison with the new cable, which was also much more natural. "Everyone Else" has significant phasing in the track which was more confused in the original Blue but opened up with greater clarity in the newer cable. The latter gave an excellent bass and clear treble in "Non Believer".

Some of the listening of the loudspeaker cable was done using Slee amplification and Chartwell LS3/5a's. Whilst the lowest octave might well be missing, I had no sensation of the loss of musical prowess. This cable made these speakers sing with precision and accuracy to a much higher level than I expected. When replacing with Wilson Benesch Arcs that accuracy was even greater with these clinical sounding speakers, especially the initial transients. Listening to John Barry "Raise the Titanic" (John Barry 'The Collection') the music was detailed and very precise at all frequencies, particularly from the brass and percussion. Jennifer Warnes "Bird on a Wire" had very quick and accurate striking of bass tom-toms with precise lead and backing vocals being given space on the soundstage, plus extended decays. For ultimate space I turned to Kitaro 'Live in America', an album I first heard in the States. Whilst the LS3/5a might miss the lowest frequencies, the Blue II added more depth and space than I expected for such a cheap cable. These really are the bargain of the year. Combining both Blue II interconnect and speaker cables gave a very capable performance for the price, particularly its ability to transform the aged digital sounds in the live performance into a very

musical and realistic affair.

CONCLUSION

Both cables excelled in giving a faithful reproduction from the very lowest to highest frequencies with a speed that far belied its price point. The interconnect particularly excelled with all music thrown at it, and combined with the loudspeaker cable formed a tight, musical and extended frequency package. Music was controlled, and with an open and natural transmission of the music with no colouration. I would highly recommend both these cables not only for the cheaper hifi set up but, as has been shown in this review, also for those with top end audio but on a budget. These really are a bargain!

AT A GLANCE

Build Quality: Excellent quality control. Good XLR connectors.

Sound Quality: Excellent clarity from lowest to highest frequencies, with excellent speed of initial transients for the price.

Value for Money: £235 for an interconnect and £99 for 3m loudspeaker cable is excellent value for the quality of sound being produced.

Pros:

Transparency
Excellent speed
Clean and extended response

Cons:

Nothing other than I wish I knew what was inside

Price: £235 1m Blue II XLR interconnect (£180 1m RCA interconnect)
£99 + £12 termination 2 x 3m Blue II loudspeaker cable



YOU NEED YOUR HiFi DEALER!



YOUR HiFi DEALER NEEDS YOU!

ESPRIT ETERNA CABLES

Esprit is a French-based cable manufacturer and here David Robson checks out their Eterna range of cables, including RCA, XLR interconnects, and speaker cables.



David Robson

It's been quite a while since I had a loom of cables in for review, I'd forgotten how nice it is to get well packaged, high-end cabling to unwrap. I've had the pleasure of reviewing cables from around the globe, including Japan and Bali, but a first for me are these from France - a new brand for myself and perhaps others.

Esprit was launched in 1996 by Richard Cesari, but this was not his first foray into cable making. Richard had been building cables for himself and for friends for a few years and his hunt for better, and, importantly, better-sounding cables led him to try many different configurations and materials to gain that extra ounce of quality and performance.

As well as the speaker cables and interconnects that are reviewed here, the Eterna range of cables from Esprit

also includes a 75 Ohm SPDIF digital cable, a 110 Ohm AES/EBU digital link, mains cables, and speaker jumper cables.

CONSTRUCTION AND BUILD

So how do these cables look out the box? As you would expect from cables in this price range, the fit and finish are exemplary. From the box they arrive in, to the little hand-signed certificate by the maker (a simple but still very nice addition), everything suggests a great deal of care and attention has been taken in their presentation and this is certainly a good starting point for any product. The cables themselves are sturdy and weighty and come with a dark brown/grey nylon webbing/sheath outer. The quality of the plugs and connections looks superb. The XLRs have silver-plated connectors, whilst the RCA's have 810 strands of pure



copper (6n 99.9999% pure), and Esprit's own EH100rca silver plated (10 microns of pure silver) connections - these are custom plated with layers of silver and copper and not just "Flash" plated. The Speaker cables have 4mm Bananas which are pure silver. It's a matter of personal choice on how you like your connections, but these used by Esprit look the real deal and I'm hoping the looks are matched by their sound.

Shielding is shielding, right? Well, not if you're Esprit! They believe that a full shielded cable can have a dullness and constricting nature to the sound and suggest the opposite for unshielded (lively but then obviously compromised). So how are the Eterna cables constructed? A progressive shielding technique is used, where the length of cable is divided into 3 parts - the first section is unshielded, the second third has one layer and the last third has two layers of shielding, this aims to balance out the sound to give, in theory, bandwidth, dynamics, and a silent and detailed delivery. All good for the listener.

So apart from the outward quality, what sets these Esprit Eterna apart from other cables I've seen or used before? Well, you may notice that

on each cable there is a box at one end! A box with a button that lights up blue when you push it! Hmmm, now I'm sad to say, as much as I love HiFi and Music I'm quite errrrr, "electronically embarrassed"! So off I went to ask the question, "What do they do?".

The answer came back from those in the know, that the Eterna uses "Polarisation" of the outer jacket. What's that then? Developed in the '90s for the telecoms industry, they found that by injecting the insulation materials with 12v that the signal has no chance of leakage as the insulation is saturated with DC. The signal in the conductors can excite the insulators into micro-vibrations, this is bad but the small amount of DC prevents this. The button which lights blue is to check the state of the battery conditions and serves no other purpose. So quite a technical reason for this addition, and makes sense to eliminate electromagnetic interference, as every little bit of extra detail helps what we end up hearing and the performance of our equipment. You can remove a 3.5mm jack to turn off this polarising effect as this disconnects the battery and so easy comparison is well achievable

SOUND

REVIEW





So that's the technical bit, but I'm sure the most important bit is the sound and its effects on your equipment, well on my equipment anyway!

I was told that the cables improve with a bit of use, and my personal experience tends to agree with this much-contended theory of a 'burn-in' period. This can be anywhere from 24 to hundreds of hours but having left the CD on at low volumes I felt confident that after about a week we were ready to go and get on with the serious business of listening to some music through the Esprits.

With the Eterna speaker cables and XLR's, CD to DAC using my own Coax, I started going through my collection of reviewing stock. From the outset, the music was as coherent and even as my personal set up - one that has had countless interactions of cables through it over the years and finally chosen for both my own listening enjoyment and high-fidelity presentation. There was nothing stand out or glaringly obvious giving me anything to pick up as a negative with the Esprits in place - nothing! Stereo separation, both in width and depth, was as it should be and with a cosmic silence keeping everything apart. Instruments hung in their rightful places and were choreographed with pinpoint accuracy. I have a smaller listening space and the soundscape can easily be put out of balance if not portrayed correctly, a little bit like trying to focus with a magnifying glass - the Esprit Eterna perfectly framed my music. This imaging quality of the Esprit cables is

certainly one of their strong points and one that I immediately latched onto. Whether listening to more full-blown productions with lots going on or more intimate recordings, I was really drawn to the way the musicians, instruments, and effects were correctly positioned with a rock-solid and locked-in quality. Imaging is an important part of the whole stereo experience for me - isn't that what the whole stereo thing was supposed to bring to the table in the first place? A feeling of the bands and musicians being audibly 'visible' in a three-dimensional space in front of the listener. With the Esprit in my system, I got the feeling that this all-important spatial element of the music I was listening to was really well represented.

The overall presentation was smooth, refined, detailed, and tight, without being forward or coarse. Certainly, there was no high-frequency tizziness that can become tiresome and lead to listener-fatigue very quickly. Using the word smooth may suggest I thought the cables rounded off the higher frequencies, but that's not the case and the level of detail the Esprits brought to my system confirms this to my way of thinking - you can't have this amount of detail if there is any high-frequency cut-off.

Bass was full and dug deep and with no flab or overhang or blurring of the notes. All in all, the bass was very tuneful indeed. Whether electric bass, acoustic bass, or electronic basslines all were taut and accurate sounding and there was a good deal of engaging with the bass by way

REVIEW

of my right foot tapping along to the rhythm sections of a lot of the music I played.

There is excellent mid-range detail with the Esprits, and that, in conjunction with the silky sheen of the top-end, made the listening experience very relaxing and enjoyable. Indeed, there was no hint of fatigue or strain even after hours of listening to music. Vocals projected nicely into my room and I could hear the little inflections and details of different singers' voices clearly. The lasting crispness of the decay of notes from the likes of cymbals and bells added that extra hint of realism to the whole experience and this was achieved without sounding fake or slushy. Often it is little things like how a cymbal or reverb decays that can really enhance the way we experience and enjoy music and the Esprit present these well and without them feeling overdone or being enhanced artificially.

Adding in the Eterna RCA's to both my CD player and Auralic Streamer (SSD HD with ripped CD's in .wav format) bought the same thoughts as previously encountered. The level of details and presentation are very similar if not identical across the cable range - in that I mean that swapping out the XLRs for RCAs brings out the same experiences as previously outlined. The superb qualities that Esprit has designed into this range of cables is very welcoming. I really don't see any integration issues with other well-balanced systems. The easy-going nature and silk-like delivery make these a must try choice if you're looking for cables of this level of performance and price.

To confirm I was actually hearing these differences as opposed to either becoming attuned to the cables presentation or imagining their effect, I put the 'box' in and out of the circuit and without exception, the differences were clear to me.

CONCLUSION

This engineering on this cable was something I'd never experienced before, and in all honesty, I was a bit sceptical about "add on" boxes on cables. Once the technology was explained to me, I began to get the concept and a little of the scientific thinking behind them. Then the listen-

ing experience I had proved to me that the polarisation effect that the add on box gives, is, indeed, a good addition and a worthwhile technology - as I say, I was very sceptical to say the least.

Esprit utilising the best cabling, components, scientific thinking, and materials in the construction of these cables has made this range very hard to ignore. Of course, as with all equipment and not just cables, I strongly suggest you have a listen yourself and with your own equipment if at all possible.

AT A GLANCE

Build Quality: Superb fit and finish, as you would expect from cables in this price range. I really like the quality of the connectors, and I really can't see anything that can be done to improve what has been utilised in this respect

Sound Quality: Highly detailed, non-fatiguing and silky smooth delivery. Tuneful and tight bass delivery

Value For Money: These are not a cheap option, but if you have invested in a quality set of electronics then these cables make perfect sense

Pros:

- Non-fatiguing presentation
- Silky smooth mids
- High level of detail
- Great build and associated components
- Polarisation technology does work

Cons:

The cables are very well made and that makes them a little weighty for lighter equipment

Price (Euros):

Eterna Speaker Cable 3m €2360, RCA 1.2m €1890, and XLR 1.2m €1980.



TOWNSHEND AUDIO ISOLDA SPEAKER CABLES

Max Townshend is one of the stalwarts of the UK (and beyond) audio scene and is one of the industry's great characters. Here Janine Elliot takes a listen to his company's Isolda loudspeaker cable costing £1141 for a pair of 3m lengths.



Janine Elliot

Some things were meant to last. If you make something good why would you bother to change it? The Krell KSA100, Leak Stereo20 (though the English Acoustic is an excellent update), BBC LS3/5a (though the licensed Falcon Ls3/5as are great), E-Type Jag (but Jeremy Clarkson seemed to really like the outrageously expensive Eagle remake), you get where I'm going. If it ain't broke don't fix it...with caveats. The same applies to a few cable manufacturers, some have been unchanged for 20 years. That is also the theory of Aussie but England based Max Townshend, founder, and CEO of Townshend Audio that has some 65 year history, including the excellent Elite Audio, famous for the 500 and 700 moving magnet and 550 series moving coil cartridges.

The present-day Isolda loud-

speaker cable has been around since 1993 and still selling well despite the newer Fractal F1 making heads and ears turn. What better, then, than to see just why this unusual cable is still worthy of adding to your HiFi collection in 2020. With names like Rock, Merlin, Glastonbury, and Excalibur, Townshend's product names are based on the history of King Arthur, and the Isolda has an equally historical, if also Wagnerian name, though the real reason for its name will be clearer as we progress.

CONSTRUCTION

Before even describing the cable itself it is worth looking at the physics behind wires. Not only is the choice of the conductor – whether silver or oxygen-free copper – vitally important, but so also is the dielectric; the insulation



(whether PVC or PTFE or better still air or vacuum between the conductive elements.) I have reviewed many cables and even designed a few in the past and have discovered it is not one just part, but rather how they are all are combined that determines the success or failure, and all manufacturers will have their theory on why their own cables are the best. Important, too, is the geometry of the wires themselves, which is something very close to the heart of Max when he designs a cable. In an ideal world, the impedance of the cable should match that of the loudspeaker. Indeed Jack Dinsdale, a long-time friend of Max (famed for co-designing the transformer-less transistor amplifier in 1960) came up with the important claim that "...a major factor in determining the 'sound' of a speaker cable is its characteristic impedance, Z_0 , which is determined by the cable's 'geometry'....For a 'perfect' cable the Z_0 should match the impedance of the speaker load it is driving". Impedance matching is therefore so important; in the case of 75ohm radio antennae cable the 75ohm aerial is connected to 75ohm cable to a 75ohm input p Perfect matching between the three parts of the system. The equation $Z^2 = L/C$ is also vitally important, where Z is the imped-

ance of the cable, L is the inductance and C is the capacitance. In designing a cable it is impossible to have both a low inductance and a low capacitance. If one is high, the other is low, a bit like a seesaw. One needs to choose your favourite; a cable with the conductors well apart usually means very high impedance and hence high inductance. Not a good idea in the eyes of Max and Jack. Max has come to the conclusion that a low inductance is preferable to a low capacitance, and that in order to create the least distortion you need high capacitance and lower inductance. Therefore, the two electrical components are kept as close as possible in order to achieve this. This is true also with the more expensive and newer F1 cable, though its appearance is far removed from the elder. The Isolda consists of two thin flat 20mm wide 99.999% copper strips kept just 0.1mm apart with polyester insulation on the hot conductor – literally tape stuck onto the bare metal, a long time-consuming job – with both strips insulated in a polyester braided sheath. This cable has very high capacitance by most standards, but the important impedance is kept at a very low 18 ohms. As the impedance is so low Townshend even suggests using un-equal lengths if



necessary, something very welcome for many, I'm sure.

That brings us to another important discovery, that if the impedance of the wire does not match that of the loudspeaker then audio traveling along the wire will reflect back to the amplifier, like waves rebounding at the shoreline, and resulting in "colouration" of the sound. I noticed the difference between my resident cable and that of the Isolda straight away when listening to music. The former was brighter and more "tizzy" than the Isolda. Max's extensive testing revealed that the higher the impedance the greater the errors at high frequencies, making them sound unrealistically bright, due to time-smear because of the delayed energy release from the multiple reflections. It is important to stress that you need to be careful when wiring your Isolda cable; having two wires very close together has its own physical problems. Standing on the cables, particularly when coiled up, would be very unwise and it is important not to twist the wires as the gap between the two "wires" would change. One also needs to be careful winding them. Their closeness to each other does, however, mean they are also virtually immune

to RFI. I had no problems setting up the cables and coiling them near my right speaker.

At each end of the Isolda cable is a rectangular box. At the amplifier end, two inductors stabilise, in Max' words, "Bad amps" (Max tells me of one amp manufacturer that is particularly renowned for this), and at the speaker end is a Zobel network to ensure constant impedance throughout the audio band to maintain a flat frequency response. The box also assists in keeping the two strips equally apart (think of the mathematics of having two adjacent strips coiled up, the inner strip would effectively be longer than the outer).

Townshend is famed for introducing DCT (Deep Cryogenically Treated) cables, and the Isolda cable is treated in this manner. Whilst he gave away his secrets back then, his newer "Fractal" treatment process (as used in the F1 series of interconnects and speaker cables) is top secret, even to his best friends.

That brings me back to why it is called Isolda. In the 1980's Townshend made their first 8Ω cable by paralleling up six lengths of 50Ω coaxial



cable to bring that impedance down. That meant a total of 900 strands of wire had to be soldered together in two bunches. Thus, he had to solder and solder and solder, hence the word “I-solda”. Of course, with other products linked to King Arthur’s court, it is handy, too, that Izolda was also one of the Ladies in his court.

The Isolda cable is available at £1141 for banana terminated 3m length.

THE MUSIC

Listening to the Isolda gave distinctive and favourable results which actually made this review very easy to compose. Whilst initially it felt like the top end was missing its “pizzazz”, it was more that the top frequencies suddenly came into focus with a clarity that was more realistic. There were no losses, just a better uniformity of frequencies. London Grammar’s “Rooting for You” had a clean portrayal of Hannah Reid’s vocals - even her top F# was just so clear - as were the extended reverbs. Suddenly the bass came alive with a realism that evades many a cable. The aptly named track “Big Picture” allowed me to hear everything from the

music that my resident cable missed. The constant ‘click’ from the kick drum running throughout the track was precise and clear amidst the constant build-up of the other instruments. Initial transients were clearer, and a greater detail was pulled out of the grooves. There was no confusion in the top frequencies; the sound is not “tizzy” like many cables; this is just plain honest, and not at any time did I feel I was missing any of the top-end detail. There is an illusion that a more prominent top-end means a “better” cable. The ear is very good at determining whether a cable works or not, but we can often get influenced by such things as a bright sound.

The detail was such that I could pick out that certain tracks were recorded in different studios. Listening to my favourite guitarist Antonio Forcione (“Tears of Joy”, Naim) the bass line was extended with greater space between instruments than I have heard before. This cable has amazing bass clarity and extension. Similarly, in “Déjà vu” (Giorgio Serci, Naim) there was clear drumming and an excellent guitar solo giving plenty of space and time.

REVIEW

Next on the platter was Alan Parson's "Eye in the Sky". The reason for this was because this is an extremely clear recording mastered on a digital Sony PCM1610 at Abbey Road Studios, with Alan engineering and performing, using the (now aged) Fairlight Music Computer, the £20,000 sampling workstation that began it all. The album only lacks a deep end, though the clarity was what I expect only from reel to reel, and surprisingly musical given the album's digital roots. The style always reminds me of Rick Wakeman, full of choirs and guitars, and short idioms. The speed of transients was impressive from the cable; notable also from Katie Melua in songs such as the "Cradle Song".

Turning to classics and Joseph Haydn Symphony No. 44 (88.2/24 recording), the detail from all instruments was very apparent with an open and relaxing sound that was hard to assume was a digital recording. Having very recently played Quentin Collins' jazz album (reel to reel, Chasing the Dragon) on my resident cables and loving it I was now aware that the sound wasn't as bright, though top frequencies were still there. The sound was now just so much more controlled, realistic, and less fatiguing; the latter point I also noted when listening to The Pat Metheny Group 'The Way Up'. This was less grainy and painful at high volumes. The top cymbal wasn't so overpowering or "blistered" like some cables can make it sound. Similarly, the cymbal beat moving slowly from right to left from 2-minutes-in was much more timely and somewhat clearer. Turning to another equally bright and clear album 'Live at the Broadwalk' from Erin Nauendorf which has closely miked acoustic guitar that is viscously but brilliantly performed, this is a great album if you want to try to make just about any HiFi sound "apparently" great with its extended top end, but with long listening it is very hard on the ears unless you have the right components. The Isolda just tamed it. The top end was still there and just as quick, but it was much more controlled, and additionally, there was a tighter extended bass. Playing this from CD on the excellent Krell KPS20i renewed my faith in this now aged medium, as did the Mahler Symphony No.5 (Chicago Symphony Orchestra, Sir Georg Solti). This is a powerful and highly busy work that some cables can make sound overpower-

ing. The Isolda kept things under control with a precision and detail that kept me addicted to playing the whole work through. Listening to a complete Mahler symphony is rare for me!

CONCLUSION

I had no idea quite how good this cable was going to be when it was sent to me. It opened up the sound and tamed the music in such a way that it was more honest than I have heard for a long while, and although not the cheapest is a very cost-effective upgrade to your HiFi. A much more honest performance than I thought a cable could give and therefore is highly recommended.

AT A GLANCE

Build Quality: Excellent build quality but needs to be carefully placed away from feet!

Sound Quality: Excellent solid bass and controlled top end with no top frequency distortion common in higher impedance cables

Value for Money: Excellent value considering the improvement from your speakers.

Pros:

Controlled and clear sound at all frequencies, particularly the top frequencies

Extended bass

No "tizz" at top frequencies

Cons:

Some may wrongly think the controlled and undistorted sounds at top frequencies is actually a loss of high frequencies.

Price: £1141/3metre length



VERTERE REDLINE XLR INTERCONNECT

Vertere, best known for their turntables, has released a range of cables. Here, Ian Ringstead tries out their Redline XLR to XLR balanced interconnect.



Ian Ringstead

Vertere Acoustics are best known for their beautiful turntables designed by Touraj Moghaddam who back in the 1980s co-produced the Roksan Xerxes turntable, a rival for the Linn Sondek LP12. Touraj is a gifted engineer and designer and never one to rest on his laurels. For me this is a first reviewing one of his designs, not one of his superb turntables though, rather, a nice balanced XLR interconnect cable.

Cables tend to be taken for granted as necessary bits of wire that carry the electrical signals between the various pieces of electronics and they are not without controversy. - a mere mention of cables on a Facebook is sure to spark a degree of "discussion". In the early 1980s, Jean Hiraga, the legendary writer and audiophile, dared to declare that all cables weren't equal, but

actually sounded different. The likes of Peter Walker (Quad fame) and other companies of the time were initially somewhat scathing of these claims, but as time has proved over the last thirty-five plus years, things are very different now. Whether you are a firm believer and convert to this notion or a complete naysayer is irrelevant, it is all down to personal opinion and your ears. The non-believers won't carry on reading this review, but the disciples will.

Vertere Acoustics certainly believe cables are vital in the sound chain and take great care over their product designs. Simplicity is the key, with all designs aiming to preserve the signal as much as possible and without any contamination. The Redline range are the affordable items within the hierarchy of the Pulse series, of which there are four divisions.



HB (Hand Built) is the ultimate reference, followed by the R Reference series, the Redline reviewed here, and finally the D-Fi series for portable devices.

CONSTRUCTION

The balanced XLR cables I received come in snazzy packaging and are very well made as you would expect for the price of £595. They have Vertere branded XLR plugs with gold plated pins and a rather attractive red outer sheath for the cable itself. The cable is not too thick and is very flexible, which was a boon when connecting up behind my equipment. I used the cable between my Luxman D-05 SACD player and my Luxman L505UX11 amplifier.

I normally use unbalanced cables with my amp and SACD player (although I have obviously used balanced too) so it was intriguing to see how the Redline would perform in comparison.

Inside the Redline are seven high purity copper conductors consisting of a ground, three hot signal, and three return signal conductors. The

signal conductors are silver-plated and are made up of two thin and four thick, whilst the thicker dedicated ground conductor is tin-plated. The insulation is FEP and a special PVC with the shielding consisting of the main braid and an inner wrap. The conductors are arranged in a quasi-balanced configuration to attain a dynamic wideband audio signal. The bespoke connectors look great quality and the gold-plating on the contacts is three times the normal thickness used by some other companies. The PVC outer sheath allows you to have a glimpse of the braiding.

SOUND

The emphasis on this Redline series is to offer superb value for money and also a lot of what the more expensive series offers by way of performance via trickle-down technology and also ingenuity in design compromises to meet the price-point. I had the cables for a couple of months to evaluate their capabilities against my experience of other balanced models from the likes of Tellurium Q Ultra Black reviewed in the past and against my Way silver unbalanced cables.

My Luxman equipment is my reference at a relatively affordable price for a serious audiophile like myself, but one who doesn't have oodles of funds to lavish around. I, therefore, saw the Redline as an ideal benchmark for what I would be prepared to pay, whilst still offering excellent performance. I didn't need a long run-in period to gauge what the Redline was capable of, as straight away it was superb and felt right at home in my system.

My musical tastes vary but I do listen to a lot of female vocals and the human voice is something our ears are highly attuned to, and, as such, a great reference for reality. The Redline was smooth in sound without being dull - there was no metallic harshness to annoy anyone sensitive to top-end tizz. I insist on detail and tonality without the music being pulled apart and artificially recreated, so neutrality is key for me and the Redline did this very well. Of course, the partnering equipment has to play its role, but the Redline is the vital conduit between source and amplification. Inexperienced listeners and "bah humbug" critics may well say they can't hear a difference and it's a con. However, it's my gut instincts and having heard thousands of systems over the last fifty years that are my reference. The Redline allowed me to simply sit down and enjoy my music whatever the genre and without wanting to analyse or feel/search for something that wasn't quite right.

The best accolade I can give any component is to just sit back and enjoy the music without a care in the world and to escape the harsh reality this world throws at us on a regular basis. Favourite albums or tracks are what I use to assess a component or system's abilities. Step up Dire Straits' first album. The Redline didn't fail on this album one bit, allowing the rhythmic guitar style of Mark Knopfler to be easily followed - his sometimes-laid-back approach is sublimely portrayed with the Redline in situ. Certain tracks are benchmarks and "Six Blade Knife" is one such gem. Anyone who knows this track will get what I mean because there are audio clues in the mix which not all components pick out very well. As the lilting bass line moves the track along there is a point where very briefly a wooden percussion instrument in the background comes through. It is very subtle but I always listen out for this part as you could

easily miss it and it always makes me smile when I hear it. The Redline brought the effect through effortlessly and so passed muster. These musical cues are very important to me and my enjoyment of a product and there are other instances I could relate but I feel you get my gist, I'm sure. Put your favourite music on and if it makes you smile all is good with the world!

Vocals are always a good test so Karen Matheson of Capercaillie fame and a solo artist in her own right was spun in my D-05 CD player. The album "Time to Fall" showcases her beautiful voice which is sublime, and her backing musicians are top-notch too. Anyone who loves Celtic music and folk and has watched Transatlantic sessions on BBC 4 a few years ago will have seen Karen perform along with the best musicians from the UK and North America. The music is infectious and reminds me of when I saw River Dance for the first time on the Eurovision final many years ago, catapulting Irish dancing onto the world stage. Instruments such as the bodhran, Uilleann pipes, and harp are captured in all their glory by the Redline. They are harmonically and accurately portrayed in a deep and spacious sound field. I know these instruments well as I have heard them live many times in concerts and you know a system is good when you are concentrating on the musical performance and not the equipment - the Redline produced these instruments in a wholly believable and realistic way. Our ears are tremendous at recognising sounds, just look at how we easily recognise a voice on a mobile phone, even though it is coming out of a micro speaker.

Jon Anderson of Yes fame has just released a new solo album "1000 Hands, Chapter One" and as well as his distinctive voice there are some legendary musicians performing on it. Jean Luc Ponty on violin, Chick Corea on keyboards, Billy Cobham on drums, and Ian Anderson on the flute to name just a few. The whole musical range from top to bottom was clear and dynamic, making the musical enjoyment easy on the ear. Album after album was put on and they all flowed seamlessly like a good wine that slips down your throat too easily and before you know it you need another glassful.

REVIEW

AT A GLANCE

Unlike an electronic piece of equipment that usually sits in front of you so you can't ignore its presence, a cable is behind all the electronics and just gets on with it. The Redline is like glue holding everything together so it doesn't fall apart and remains solid and reliable.

CONCLUSION

The Redline cable certainly delivers in spades for the asking price. Obviously, I haven't heard all of the available cables out there, no one has, but for me, it's a frontrunner for anyone after a superb cable for a fairly reasonable price. Most dealers will now allow you to try before you buy and cables certainly need to be auditioned to see if they gel with your components and tastes. The Redline range was designed to fit into the category of excellent performance without the high price tags and it does this brilliantly.

Another excellent product to add to your list if you are wanting to upgrade!

Build Quality: Excellent for the price, smart looking, compact form and flexible.

Sound Quality: Low noise design that punches way above its weight.

Value for Money: Superb and well worth auditioning.

Pros: Highly flexible form expertly executed and superb sound.

Cons: Nothing.

Price: £595



THE EARWORM - A NATURAL HISTORY

We've all experienced the phenomenon commonly known as an 'earworm' where we feel we can hear a song or piece of music whilst none is actually playing. Here's why.

We've all experienced the phenomenon commonly known as an 'earworm' where we feel we can hear a song or piece of music whilst none is actually playing. These tunes, or Involuntary Musical Images (thanks Wiki) can come from absolutely nowhere and may indeed be songs that you haven't heard in years, but for some reason they just worm their way into your brain. But what is behind this inner discotheque?

Now many people will believe that an earworm is some kind of mental aberration that the mind simply conjures up from the depths of our subconscious, but the reality is far more interesting than that. However, let's not get ahead of ourselves and look at a little of earworms in antiquity – and we need to go right back into prehistory to do this.

THE NEANDERTHAL CONNECTION

The cave paintings at Lascaux near the village of Montignac in the Dordogne department of France are best known for their paintings of various animals, and are now commonly believed to be created some 17 000 years ago. Amongst the various chambers dedicated to specific animals, or groups of animals, is one smaller room that Henri Breuil, the Catholic Priest commonly known as Abbé, and responsible for the original sketches of the cave complex's paintings named the *Chambre des Bruits* (Chamber of Noises). In this room there are numerous paintings that seem to depict human heads with other humans within their heads beating what look like rocks with sticks, or shouting (singing?). Originally it was thought that these images were portraying members of

the prehistoric community experiencing possession by unknown forces – there are skull fragments in the area with what are believed to be trepanation holes that are considered to be by way of ‘releasing’ the uninvited spirits. However, and echoing the name that Abbé gave the room with these images, it is widely assumed that what is actually being illustrated is our friend the earworm.

PUNCH, BROTHERS, PUNCH!

Throughout history many novels and philosophers have made mention of these inner ‘musical’ episodes, with Mark Twain’s 1896 short story ‘A Literary Nightmare’ (or ‘Punch, Brothers, Punch!’) describing how a particularly musical poem he read in a newspaper became lodged in his head rendering him incapable of writing and effectively becoming a ranting loon.

In 2016 researchers at the St Andrews (Scotland) School of Philosophical, Anthropological and Film Studies came up with a formula for predicting a song’s likelihood of becoming an earworm. That formula is expressed as follows: Receptiveness + (predictability-surprise) + (melodic potency) + (rhythmic repetition x1.5) = earworm. This team declared Queen’s ‘We Will Rock You’ as the ultimate earworm. Admit it... it’s in there right now isn’t it?

But what is the actual mechanism that allows an earworm to become so lodged in our brains? To answer this we need to travel back in time again, but not too far, to the early Spring of 1836 and the town of Shrewsbury in England where the illegitimate and slightly simple sibling of Charles Darwin, Herbert Darwin (though more commonly known in the area by his unmarried mother’s surname Howells) resided. Herbert Howells was somewhat in awe of his brother’s exploits - Charles having departed on the Beagle’s epic voyage of discovery shortly after Christmas in 1831 and not to return until early October 1836. These dates are important with regards the earworm, dear reader!

Not to be outdone by his brother, Herbert, a wealthy young man in his own right, commissioned a small boat called the Labrador that set sail from Plymouth on the 27th December 1835, but only getting as far as the small Breton fish-

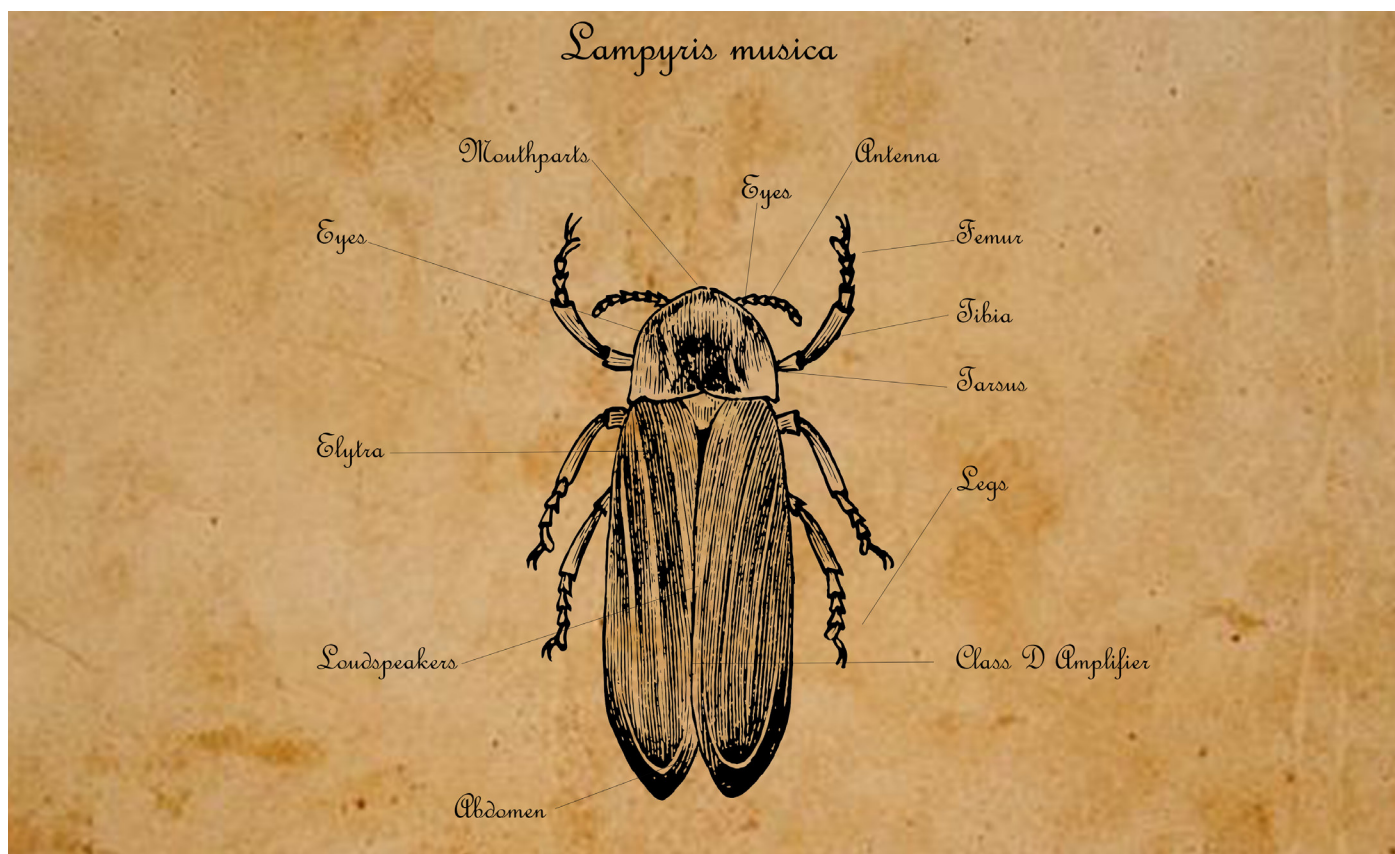
ing port of Perros Guirec in North West France. Herbert, despite his apparent simple demeanour, was actually highly intelligent in many ways, but tended to be very narrow in his areas of expertise, and with that obsessiveness for a particular topic changing regularly. During the Spring and Summer of 1834 it is documented in his mother’s diary that Herbert’s obsession du jour was the “Minstrels in my (his) mind.” Again documented in his mother’s journal, he was visited on several occasions by physicians and priests to rid of him of these voices in his head. However, Herbert was not convinced by the quacks and shavelings and conjectured that something else was afoot with regards these internal musical recitals.

Upon landing in Brittany, Herbert made his base the Château de Kergouanton, fifteen kilometres inland of where he disembarked, in the small town of Trélévern. It was from here that he conducted his research into what he considered may be the cause of the music in his mind. During his time at the Chateau, Herbert’s behaviour was becoming quite bizarre and he was found to be spending more and more time in his make-shift ‘laboratory’ examining the fauna of the area, with one particular, and until then unknown species becoming the intense focus of his mania.

In October 1859, and around a month before Charles Darwin published ‘On the Origin Of Species’, Herbert self-published a pamphlet with the title ‘Lampyrus musica - An Original Species’. Needless to say this publication was far out shadowed by Charles’ book and was essentially forgotten until it resurfaced in late 2017, coincidentally in St Mary’s College Library at St Andrews University. Essentially, the pamphlet, now largely moth-eaten, describes what Herbert called his ‘Earworm’s’ lifecycle in great detail, though the hand-drawn images are barely decipherable – much like the cave paintings where we started this story.

Lampyrus noctiluca (the Firely, or Glowworm) and its lifecycle had been documented for some time, and Howell’s Lampyrus musica is very closely related and has a similar, if not wholly different, modus operandi. Herbert found that the earworm, whilst largely a nocturnal beetle found in the hedgerows of where he was stay-

TALL TALES



ing in Brittany, actually and in the main, laid its eggs on cotton and linen – obviously bed linen was a perfect hatchery for the minute eggs and once they hatched Hubert found that they would enter a person's nasal cavity and burrow, without any discomfort, pain or damage, right into the centre of a person's brain where they would sit symbiotically until maturity when they would begin to search for a mate.

Now this is the important distinction between the Glowworm and the Earworm – where the Glowworm uses bioluminescence in order to attract a mate, the Earworm feeds on energy from the brain's auditory cortex, the part that handles information from your ears and holds on to musical memories - this is why when I mentioned the Queen song We Will Rock You earlier, you heard it – the mature beetle was feeding off your auditory cortex (as it is now). The energy is converted into the music we hear by ever so tiny bioamplifiers (Class D for those who have interest) and miniscule loudspeakers (bookshelves with EMT tweeters) located in the abdomen of *Lampyris musica*. Have you ever wondered why the music you are hearing isn't actually being heard in your ears as such and seems to be coming directly from the centre of your brain – well now you know. Once a mate has been attracted the individual earworm will cease to emit the music, the bio-

amplifier and loudspeakers will be turned off, and he/she will wait for a response from the prospective suitor, often heard by us a short burst of tinnitus to the host. This triggers the earworm to begin its descent into the world where the whole cycle will start again. Of course, such is the nature of this symbiotic relationship that the host, apart from the inner music, is blissfully unaware that they are being used as a pick-up joint for beetles.

Interestingly, once the beetles descend from your brain they congregate in large numbers in fields, turn their amplifiers and loudspeakers back on, capture a 'technohead' host and take part in what scientists have called Beetle Manias or Worm Raves until the Chucky Pigs (Woodlice) turn up and arrest them all. And there you have it. I feel it is such a shame that the timing of Herbert's publication of his findings coincided so significantly with the publication of his brother's much more weightier and widely read tome, otherwise we would have libraries and university halls named after him rather than his brother.

It is also sad that in the years following Herbert's publication that the term "He's a bit of a Herbert" became a common phrase to mean that someone was a bit of a fool.