



Head master

Arcam's classy rHead amp gives headphones a boost

Essential buy

Pro-Ject's value vinyl spinner is a knockout



Hi-Fi Choice

PASSION FOR SOUND

Issue No. 420

February 2017

Best of British

Home-grown amps put the music first

THE KNOWLEDGE

Six award-winning record players for every budget

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standmount

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PRODUCTS ON TEST:

Audiolab, Cyrus, Naim, Polk, Simaudio & Yamaha





"The Shawlines are really top-class interconnects... Give them an audition and hear for yourself"

★★★★★
OUR VERDICT

Chord Shawline Analogue
Hi-Fi Choice July 2016

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Chord Shawline Range
Hi-Fi World October 2016

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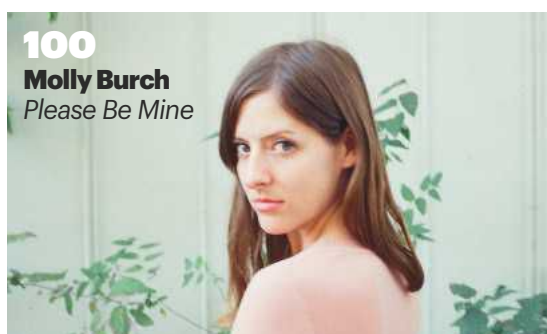


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Molly Burch
Please Be Mine

BADGES EXPLAINED

OUR AWARDS



EDITOR'S CHOICE:
Awarded to those products that are judged to deliver outstanding performance



RECOMMENDED:
Products that we feel meet a high standard of performance



GROUP TEST WINNER:
Comparative tests can only have one winner, and this badge says it all!

Welcome

www.hifichoice.co.uk Issue No. **420** February 2017



2017 got off to an exciting start following our annual pilgrimage to Las Vegas' Consumer Electronics Show last month to witness the latest technology developments and product launches for the year ahead. The massive event attracts trade visitors from across the globe,

and you can read all about the hottest new trends and audio highlights coming your way on p10.

One of the most significant stories at this year's show was MQA's announcement that its Masters hi-res content has been added to Tidal's HiFi music platform. Tidal is the first to offer hi-res audio streaming content, and regular readers will know that its top-tier HiFi subscription offering is our preferred music service of choice after winning our blind listening streaming services *Group Test* for the last two years running, thanks to its consistent CD-quality streams.

Developed by Meridian, MQA (Master Quality Authenticated) is a high-resolution technology able to pack music into smaller file sizes without harming sound quality. Masters content will typically stream at hi-res 24/96 according to Tidal and for HiFi subscribers there's no additional charge – it's easily activated by going to the Settings menu on your desktop and then selecting HiFi/Masters under the Streaming tab. Content is growing daily, and at the time of press there are over 400 Masters album versions ready to stream. What a great way to start the year!

Lee Dunkley Editor

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AT-LP5 IPT turntable

Never miss an issue – turn to p120 for our latest subs offer



Material world

US brand Wilson Audio's latest floorstander is derived from its more lofty high-end designs, but comes in a more compact and more affordable form

PRICE: £28,880 **AVAILABLE:** NOW **CONTACT:** 0207 89713909 **WEB:** ABSOLUTESOUNDS.COM

PRODUCING A NEW loudspeaker every 12 months is no mean feat, but that's precisely what high-end manufacturer Wilson Audio has consistently managed to do over the last five years. And now we're treated to the latest innovation, playfully named Yvette – a three-way design that sits between the entry-level Sabrina and Sasha 2 floorstanders. Described by the company as drawing from traditional Wilson virtues

including dynamic resolution and soundstaging, Yvette derives its core technology from its enviable R&D department and is modestly described as the most advanced and musically refined single-enclosure loudspeaker in the company's history.

Hand-built in Utah, the three-way floorstander boasts a more compact form factor than what's come before and perhaps more significantly, it's more affordable. Like its more recent

predecessors, it is the beneficiary of Wilson's extensive composites research, and the enclosure is built primarily from the latest third-generation of X-Material – an extremely well-damped and inert composite – and S-Material, which was developed to provide an exquisite midrange performance and is used in the midrange baffle.

The distinctive 178mm midrange driver is constructed from a cellulose/



Yvette has a more compact form factor than before and is more affordable

paper pulp composite and is angled to optimise the time domain relationship between itself and the tweeter above it and bass driver below. Similarly optimised, the 25mm silk dome benefits from Wilson's Convergent Synergy Tweeter technology – also found in the Sasha Series 2 and Alexx floorstanders – and features its rear-wave diffraction and ultra-low resonance rear chamber developments to aid performance.

X factor

Completing the picture is the 254mm paper pulp bass driver, aided by a rear port. The bass baffle is angled back

slightly towards the midrange, claiming better dispersion accuracy in the upper bass.

Each Yvette enclosure weighs 79kg – owing to the X-material construction used in the cabinet as well as in the bass and tweeter baffles – and is extensively braced and precisely shaped for fully optimised time alignment of the drive units. Sensitivity is quoted as 86dB, with a minimum amplifier power output rating of 50W per channel. The Yvette's dimensions are 336 x 1,041 x 509mm (WxHxD) and it can be made in any colour desired. Wilson Audio is distributed in the UK by Absolute Sounds.

COMMENT

THE CONTINUING SUCCESS OF VINYL

Just as we were all preparing ourselves for Christmas, vinyl fans received an early present with the revelation that for the first time ever record sales were higher than digital downloads. According to the Entertainment Retailers Association, £2.4 million was spent in week 48 of 2016 on vinyl as opposed to £2.1 million on digital downloads. Compare this data with the same week in 2015 – when £1.2 million had been spent on vinyl albums and £4.4 million on digital downloads – and it's easy to see just how far vinyl has come – and how the digital download appears to be on its way out as streaming becomes the music distribution method of choice for the vast majority of listeners.

And the good news for the black stuff kept on coming. The end of the year saw the British Phonographic Industry reporting that vinyl sales for 2016 were at the highest point they'd been for 25 years. More than 3.2 million records were sold in 2016 – which accounts for a rise of 53 percent.

If the best-selling albums are any indication, it's music fans of a certain age that are driving the market with David Bowie's *Blackstar* (the biggest-selling album of the year) and Radiohead's *A Moon Shaped Pool* the only releases in the top 10 actually released in 2016 (The Beatles, Amy Winehouse, Bob Marley, Prince, Nirvana and The Stone Roses complete the list). To keep things in perspective, vinyl still only accounts for 2.6 percent of the overall music market.

However, as if to prove the resurgence isn't just a passing fad, in its TMT Predictions in mid-January, Deloitte claimed that vinyl is set to become a billion-dollar industry. The report notes that the money will mostly be generated through the sale of new records, but that used-discs and turntables will also contribute to the total. Interestingly, it suggests that vinyl isn't an alternative to streaming, but it is actually being powered by it, pointing out that the uptake in record sales started in 2008, which coincides with the launch of Spotify. Coincidence? We'll let you decide... ▶



Q Acoustics' new flagship

Concept 500 is packed with innovative thinking

PRICE: £3,599 **AVAILABLE:** FEBRUARY
CONTACT: 01279 501111 **WEB:** QACOUSTICS.CO.UK

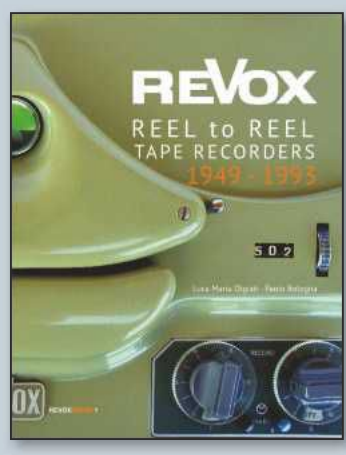
HAVING RECENTLY CELEBRATED its 10th anniversary, Q Acoustics announces its latest flagship floorstander from its Concept series. The Concept 500 is a new speaker design with a Dual Gelcore construction to all sides, where three layers of MDF are separated by thin layers of gel that remains as a viscous liquid and turns cabinet vibration into heat. The floorstander utilises refined versions of its existing 28mm fabric dome tweeter and 165mm mid/bass drivers, while bass extension is aided by a large bass port at the back. The contemporary style of the Concept 500 keeps some house design features from its award-winning Concept 20 and 40 models (HFC 372 & 404 respectively), but combines this with some new aspects. The most notable of these is the cabinet, which is predominantly finished in a choice of black or white high-gloss lacquer with a rose wood or light oak wood veneer around the rear, as well as the stylish aluminium plinth. Expected to cost £3,599 per pair, it will be on sale later this month.



IN BRIEF

GUIDE TO REVOX REEL-TO-REEL

● It's more than 30 years since the last Revox reel-to-reel tape recorder was made, and this glossy guide documents the Swiss brand's range from 1949 to 1993. Conceived as a manual for historian audiophiles and fans of the format, it documents all 25 Revox models over 240 pages, illustrated with more than 400 previously unpublished photographs. Available in pocket and full-sized softback and hardback versions with English and Italian text, prices range from £63 to £136. **BLURB.CO.UK**



VPI's Prime Signature

PRICE: £6,000 **AVAILABLE:** NOW
CONTACT: 0131 5553922 **WEB:** RENAISSANCEAUDIO.CO.UK

As the vinyl format continues to attract greater audiences, so does the rise in the number of players available to spin LPs on, with many turntable brands covering all sectors of the market with a range of prices to suit. US-firm VPI Industries is no exception, and covers starter turntable packages as well as mid-priced and more specialist decks to appeal to vinyl newbies and junkies alike.

The Prime Signature fits into the growing super deck category, and is the latest model to join the New Jersey firm's expanding lineup. Its plinth is composed of layers of gloss MDF and machined aluminium partnered with a stainless-steel motor housing – claiming improved resonance damping, owing to its heftier weight over the original Prime motor – corner posts, bearing nut

bell and arm board. It's fitted with a new JMW 10 3D Reference uni-pivot tonearm and Nordost Reference cable and also claims better aesthetics and improved damping. It sits on custom-designed HR-X (Hot Rod Extra) isolation feet and features a black speckled gloss finish. The Prime Signature is on sale now, and is distributed in the UK by Renaissance Audio. ▶



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CES 2017

No sooner have we rung in the new year than it's time for another trip to visit the bright lights of Las Vegas. **HFC** braves the airline food so you don't have to

THE BEGINNING OF January saw the 50th CES – formally known as the Consumer Electronics Show – an annual event where big-name consumer brands come together to showcase the latest developments, and an effective indicator of what products will find their way into our lives in the year ahead. The huge electronics show first started in New York in 1967, and now dominates the Las Vegas strip with a sprawling arrangement that makes use of various convention centres and the Venetian Hotel. It remains exclusively for trade attendees rather than the general public, but attendance levels held up well again this year, building on the success of last year's record-breaking 177,393 visitors across the four-day event that gathered from across the globe to experience technology innovation spanning the show's 2.47 million square feet of incredible exhibition space.

The vast show takes several days to cover, and it's true that most of the attention-grabbing headlines are focused on the latest developments in big-screen TV or virtual reality technology. Generally, CES 2017 shows that technologically we're in a period of incremental refinement rather than wholesale change, particularly when it comes to audio – the sight of many audio systems having streaming front ends would have been unlikely only a few years ago, but this year many were present. There was still plenty to get excited about, with many audio brands choosing to unveil their latest components to the world at the US event, along with UK specialists including Arcam, ATC, Chord Electronics, Monitor Audio, Naim and Roksan all making the trip across the pond to showcase their latest developments. Read on for our show highlights and the most desirable hi-fi arriving in 2017.



1 Audio-Technica releases a new range of VM moving-magnet cartridges. The nine-model lineup is priced from £99 to £639 and combines three different cartridge bodies and seven different stylus shapes. eu.audio-technica.com

2 Audeze demonstrates its iSINE 10 and 20 earphones for the first time. Using miniaturised technology of its full-size planar magnetic headphones, a quick listen on stand suggests impressive performance levels. audeze.com

3 The first public outing for Monitor Audio since it purchased London-based Roksan, showcases its Platinum Series II standmount speakers with Roksan's Blak electronics and Radius 7 turntable. monitoraudio.co.uk; roksan.co.uk

4 Continuum Audio Labs returns with the \$45,000 Obsidian turntable that employs many of the same design features as its extraordinary Caliburn deck, but in a slightly more accessible package. absolutesounds.com

5 Chord Electronics debuts three new products – the upsampling Blu MKII CD transport (£7,995), the next-gen Hugo 2 DAC (£1,800), and the all-new Poly wireless player add-on for its Mojo DAC/amp (£499). chordelectronics.co.uk

6 If power is what you are after, then Simaudio's Moon 888 monoblock takes some beating. As the name suggests, it claims a mighty 888W power output into 8ohm, and the 115kg beasts can be yours for \$118,888 a pair. simaudio.com

7 Known for its active loudspeaker designs, ATC chooses CES to showcase its passive SCM50SL floorstander partnered with its new £3,125 P2 power amplifier, claiming 300W into 8ohm. atcloudspeakers.co.uk

8 Sennheiser unveils two new closed-back wireless headphone designs in the form of the HD 4.40BT (£130) and HD 4.50BTNC with noise-cancelling tech (£170). en-uk.sennheiser.com



9 Following last year's launch, Technics unveils the SL-1200GR direct-drive deck that manages to convey most of the same solidity as the SL-1200G (HFC 418). Price is yet to be confirmed, but looks to be under £2,000. technics.com

10 RHA shows off its full range of earphones, including the flagship series CL1 Ceramic (£350), CL750 (£100) and portable Dacamp L1 (£400), which prove an impressive listening experience on the stand. rha-audio.com

11 It might be one of the strangest product names for some time, but the Devore Fidelity Orangutan O/96 speaker designed for low-powered tube amps represents one of the very best sounds at the show. devorefidelity.com

12 CES represents one of the earliest opportunities to have a good look at Naim's Uniti series, which here partners the flagship Nova unit (£3,800) with Focal's Sopra No2 speakers (£9,600) to great effect. naimaudio.com; focal.com

13 Hifiman shows off its Reference series Shangri-La planar magnetic headphone and (enormous) partnering valve headphone amplifier. Price is yet to be confirmed, but performance easily ranks as one of the best headphone systems we've yet to hear. hifiman.com

14 Japanese valve specialist A&M unveils its new Air Tight ATM-3211 high-end monoblock, which uses a relatively unusual complement of two 211 triodes running in Class AB and claims 120W into 6ohm and costs \$72,000 per pair. airtight-anm.com

15 Celebrating its 45th anniversary this year, Harman's luxury audio brand Mark Levinson unveils its celebratory No 515 turntable. Developed in partnership with VPI Industries, it is expected to cost around \$10,000 when it goes on sale in the summer. marklevinson.com

16 Firmly at the affordable end of the hi-fi spectrum, Arcam gives the first demo of its rPhono MM/MC phono stage, which has a useful variety of cartridge load settings and is expected to cost £399 when it hits the high street. arcam.co.uk



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Webwatch

HFC reveals the best hi-fi websites, social media and online content to fuel your passion for sound



New and improved
Focal's Elear headphone impressed when we saw it in *HFC* 416, and now the French manufacturer has unveiled its new website. Featuring stunning photography and product lookbooks, it also makes organising a product demo easy: focal.com



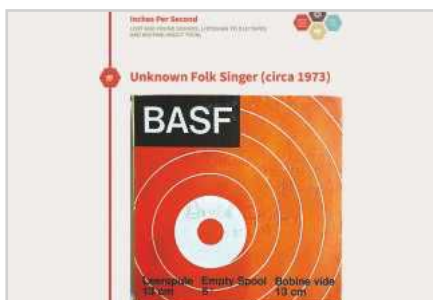
Make a Connection
Much like a regular magazine, Naim Audio's Connection news and community forum is packed with fascinating features with a decidedly Naim slant. Everything is covered from its partnership with Bentley to making the most of Mu-so and new Uniti series: naimaudio.com/connection



Load of hot air
Got some time on your hands, how about making a wind-powered turntable? Produced by Popular Science, it takes two hours to make at a cost of \$35. Performance is said to vary according to the wind source, but it's probably not a good idea to throw away your turntable just yet: bit.ly/2hpyMDI



Appy and you know it
Reviewed in *HFC* 417, Cyrus' ONE shoebox-sized integrated amplifier with built-in MM phono stage can now be controlled from the comfort of your sofa using a downloadable app designed for iOS or Android smart devices: cyrusaudio.com



Inches per second
Founder of the Glossop Record Club and occasional *HFC* contributor, Simon Galloway has launched a fascinating blog about his love of finding old tapes and detailing what he discovers on them. It's an evocative look back on long-forgotten memories that deserve a revisit: bit.ly/2hPtFgu



Obama loves vinyl
Outgoing US President Barack Obama let *Architectural Digest* into the White House where eagle-eyed viewers noted his vinyl setup – a modest £250 Denon DP-300F turntable with unidentified sub/sat speaker system. We can't help but wonder what LPs might be in his collection: bit.ly/2hrFwOX

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TECHNICS @TECHNICS
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NME @NME
17 very special vinyl releases from 2016 you'll want to own <http://trib.al/ZhUQ7pl>

AUDIO-TECHNICA @AUDIOTECHNICAUK
5 massive artists releasing albums in 2017 <http://bbc.in/2gzZpBu>

LEEMAACOUSTICS @LEEMAACOUSTICS
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Solid air

Boasting F1-derived technology and some design firsts for the brand, this is a seriously clever speaker as **Ed Selley** discovers

When is a replacement not a replacement? This slightly abstract question comes about as a result of the loudspeaker you now see before you. When PMC started work on the twenty5 range, the intention was to replace the well-regarded twenty series models. But it very quickly came to the realisation that the speaker it was developing had the potential to be considerably better if the range was repositioned to sit between the twenty series and the equally lower-case fact range. The result is that the twenty series continues as before with simplified finishes and a reduced price, while the twenty5 series arrives as a range in its own right.

The two ranges may look similar at first glance, but they have almost no parts in common with one another. More significantly, the latest speaker has some elements that are new to PMC as a company. The basics remain intact – the twenty5.21 is still a two-way standmount that partners a 140mm mid/bass driver with a soft

dome tweeter. It still has a folded transmission line that augments the bass response. After this, though, the changes come thick and fast.

The transmission line is much the same shape and length as before but it now benefits from PMC's Laminair technology (see box out), which has been developed to reduce air turbulence in the mouth of the transmission line and therefore increase the efficiency of the airflow through the line and boost the

The bass response is simply extraordinary considering its fairly modest dimensions

efficiency of the driver at the same time. The greater efficiency of the airflow also reduces the audibility of the moving air with obvious benefits on the performance as a whole.

The mid/bass driver that is the main recipient of the benefits of this new transmission line is all new. For the

DETAILS

PRODUCT
PMC twenty5.21

ORIGIN
UK

TYPE
2-way standmount loudspeaker

WEIGHT
6kg

DIMENSIONS
(WxHxD)
162 x 340 x 284mm

FEATURES
• 27mm fabric dome tweeter
• 140mm g-weave mid/bass driver
• Advanced Transmission Line bass loading with Laminair technology
• Quoted sensitivity: 86.5dB/1W/1m (8ohm)

DISTRIBUTOR
PMC

TELEPHONE
01767 686300

WEBSITE
pmc-speakers.com

first time in any of its products, PMC has moved to a glass fibre weave for the driver material with attendant benefits in stiffness and response. The dust cap is also revised to become an inverted type, which is claimed to produce a better seal with the rest of the driver and provide an extremely smooth impedance transition along the profile of the cone.

To take advantage of the new cone's abilities, it is mated to a long-throw voice coil that allows for greater excursion and low-frequency extension. To keep this under control, the spider (the mount for the driver in the assembly) has been designed to reduce the velocity of the driver at maximum excursion. This reduces breakup and other associated nastiness and effectively acts as a sort of mechanical soft clipping circuit. The final development is that the cone neck is now vented (a process that called for considerable engineering finesse to keep the required strength to the design), which serves the dual purpose of reducing air compression under the dust cap and keeping the magnet cool by using this air.

The famous five

The work on the tweeter is less extensive, but still enough to ensure that it won't let the side down. Based on a unit produced by Norwegian company SEAS, the principle evolution for the twenty5 series is the addition of a new 3D-modelled grille that has been designed to allow for optimum dispersion. By far the most notable aspect of the tweeter, however, is its relationship with the mid bass driver. PMC has opted to crossover with the larger driver at 1.8kHz, which is unusually low for a two-way design.

To achieve this, the crossover is all new and features a steep roll-off to ensure that this transition point is as 'clean' as possible. The crossover itself is made from a military-grade glass fibre board with extremely hefty copper tracks that are designed to ensure that it doesn't reduce the efficiency of the speaker. All components used are carefully matched and then hand assembled. One other significant revision for the twenty5 range is that it reverts to being single wired.

The single pair of speaker terminals on the back is PMC's own design and is also new for this series. They are machined from copper and then Rhodium plated for longevity, and look and feel excellent. They sit on a back panel produced in part from

The gorgeous non-magnetic stainless steel back plate is a fingerprint trap



non-magnetic stainless steel that is given a stunning polished finish. While this is a bit of a fingerprint trap, it does look and feel extremely smart. The rest of the cabinet is MDF and feels extremely solid.

Indeed the twenty5.21 as a whole is a very handsome speaker. PMC has managed the neat trick of ensuring that the new model is indisputably a PMC offering – details like the rectangular aperture for the transmission line and the staggered cabinet give it some clear visual clues and a tie to other members of the range – while also marking it out as clearly different to what has gone before. The Laminair vents in the port aperture are smart and the new mid/bass driver also looks elegant and well finished. As you might expect, the build quality is of a consistently

high standard and while you can buy bigger and showier speakers for the same price, there aren't many that are as well constructed.

Some quirks of setup that I have encountered in the past with PMC speakers have survived into the twenty5.21. Positioned relatively far apart from one another in my listening room, they give by far the best results with a relatively aggressive level of toe-in that has the sound crossing over at a point a foot or so behind my head. Otherwise, the speaker is usefully well behaved and seems fairly unconcerned by proximity to walls. Impedance is quoted at 8ohm and sensitivity at 86.5dB, which should be more than sufficient to allow the twenty5.21 to play nice with most amplifiers although it still seems at



The twenty5.21 makes for an interesting comparison with Spondor's A5R (HFC 413) with its £200 stands added. The PMC can't match the A5R's refinement and composure. The extra volume of the A5R helps, but the transmission line gives the twenty5.21 closer figures than you might expect. Where the PMC comes into its own is with faster music played at higher volumes. It can be pushed harder than the Spondor and keeps its composure for longer when you do so. Choosing between the two is tough, but the PMC's sense of fun is hard to ignore.

its very best with a bit of power behind it.

With a Naim Supernait 2 and ND5 XS streamer (HFC 352) acting as partnering electronics and the speaker placed on a pair of PMC's own stands (£295), the twenty5.21 provides a sonic performance that's every bit as impressive as its looks.

Sound quality

This is still unmistakably a PMC speaker in that the bass response is simply extraordinary considering its fairly modest dimensions. A 16/44.1 download of the Chemical Brothers *C-h-e-m-i-c-a-l* has a punch to it that is utterly at odds with such a small and slender cabinet.

And this isn't something that only works with high-energy electronic material. The scale of the orchestra in Fink meets the Royal Concertgebouw Orchestra's *Berlin Sunrise* is reproduced without any sign of strain or artificial augmentation. At the same time, there is no sense at all of there being a bass port of any kind present, which suggests that the work that has gone into the business of air management has paid off.

Where the twenty5.21 differs somewhat from its predecessors is that there is a sweetness to the midrange and upper registers that I've previously only really experienced on rather more expensive PMC models that benefit from the bespoke dome

There are no limits to the different types of music that it is happy handling

midrange driver that the company uses. Fink's vocals have a richness and texture to them that draws you into the performance and positively encourages you to keep listening. What is clever about this is that there is no shortage of detail or feedback on the recording itself, it is simply that flaws are shown up less aggressively than they were previously.

The twenty5.21 also has an unapologetic sense of joy when required. Its rendition of *The Sound Of Violence* by Cassius is punchy, refined, detailed and spacious, but above all of these things it is hugely entertaining. The big synthesiser riff is infectiously lively and the sound has me wanting to turn it up and have some fun. The good news is that the PMC is more than capable of responding to you behaving like a thug and even under French

IN SIGHT



- 1 27mm fabric dome tweeter
- 2 Binding posts
- 3 ATL vent with Laminair tech
- 4 140mm g-weave mid/bass driver

GO WITH THE FLOW

The twenty5 series is not the first PMC speaker to benefit from the Laminair system. This honour went to the QB1-A, which was equipped with Laminair because its unique shape placed considerable demands on the transmission line. The idea is to eliminate turbulence that builds up at the mouth of the transmission line. This disrupts the free escape of air from the line and results in wasted energy and unwanted noise. With modelling originally developed for Formula One, the ports have been modified to eliminate this issue by being a variation on a laminar flow

aerofoil – an extremely low drag wing-shaped arrangement. In the case of the twenty5.21, PMC claims Laminair makes the speaker 60 percent more efficient.

The modifications are largely internal and not visible from a listeners' point of view, but the foils can be seen as a series of curved strakes in the mouth of the transmission line port, which participate in this air management process. These have been neatly worked into the styling of the twenty5.21 and look smarter than the mesh cover used in the older twenty series speakers.

electronica-induced provocation, I don't believe I've experienced the spiders slowing the drivers down. If I'm being hyper critical of the performance, it might be fair to say that the twenty5.21 does its best work from moderate volume levels and upwards. At low levels, it tends to soften a little and so loses some of its exceptional low-end extension, although many of its virtues – including the detail retrieval and midrange sweetness in particular – are present pretty much from the threshold of audibility. If you want to hear what it is truly capable of, however, it's probably best to give it a little welly.

Conversely, there are no limits to the different types of music that it is happy handling. An extended, day-long listening session takes me from the sparse simplicity of Nils Frahm to the hugely overblown outpourings of *Warp Riders* by The Sword, and at no stage does the speaker seem to be anything other than completely happy with its lot. It also manages to respond positively to good recordings and hi-res material while avoiding showing up too many of the failings of poorer feeds. It is completely happy running through a

Spotify playlist and only seriously compressed internet radio stations will provoke it into sounding a little thin and scratchy.

Conclusion

The twenty5.21 won't alarm the people already on board with what PMC does. The result is a speaker that has a refinement and control that takes this newest member of the family beyond what we have seen relatively affordable models achieve in the past. This is a seriously talented speaker that has to be on everybody's shortlist at the price ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Powerful, refined and engaging sound; excellent build

VALUE FOR MONEY



DISLIKE: Slightly fussy about placement; works best with a little volume

BUILD QUALITY



WESAY: A supremely composed speaker combining incredible sound and build

EASE OF DRIVE



OVERALL



Q&A

Oliver Thomas
Designer, PMC



ES: Does the development work for the Laminair port have implications for other PMC speakers?

OT: The use of Laminair to control the airflow through the transmission line exit is a principle that could indeed be applied to future speakers. It is integrated into the design during the initial stages; upon deciding product dimensions, performance, drive units capabilities, among many other parameters. All of which must be considered before deciding whether to use the Laminair technology or not. It is certainly not a simple case of adding it to an existing design.

What is the thinking behind the low 1.8kHz crossover between tweeter and mid/bass?

The lower than average crossover frequency is selected to maximise the benefits of the tweeter drive unit frequency response, which at that frequency displays extremely wide, even dispersion creating a huge open soundstage. A woofer at higher frequencies is far more directional, and will not give this open, natural spread of sound. The benefit is in directivity performance. The reason this was not common practice historically is that the power handling of the tweeter at those lower frequencies was poor; however advances in design and manufacture of these drive units and the addition of our steep 24dB per Oct crossover slopes makes it a highly beneficial and achievable crossover frequency.

Is the move to glass fibre midbass drivers something we will see in other future PMC products?

It is possible, but much like the Laminair it is a technology that is perfect for this application, but depending what the specification of the next product is it may not suit. The glass fibre material was selected due to its ultra-low colouration in the vocal range and the additional rigidity we required from these drive units in this higher performance, higher compression transmission line design, where we found paper could not sufficiently deliver.



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MAGNEPAN
INCORPORATED

VELA
PURE TO LISTEN PURE TO FEEL

van den Hul

How we test

Hi-Fi Choice employs the most rigorous test and measurement regime in the business. Here's how we do it...

Unique group tests

Our *Group Tests* are supported by rigorous and exhaustive listening tests carried out by experts

INTEGRATED AMPLIFIERS GROUP TEST

BEFORE THE TEST starts, a few days are spent ensuring all six amps are thoroughly run in and functioning correctly. Power conditioning is provided by a 20A Nordost QB8 8-way mains block connected to the electricity supply with a Nordost Valhalla 2 power cable and to each amp under audition with a Nordost Frey power cable. A Cyrus CD Xt Signature CD transport (HFC 386) is selected as the main source along with a Chord Hugo DAC (HFC 386) connected via a Nordost Valhalla 2 digital interconnect. A Pro-Ject Debut Carbon turntable (HFC 361) serves vinyl to amps sporting phono stages. Connection between the RCA output of the Hugo and the amps is via Townshend Audio F1

Fractal interconnect and from the amps' speaker terminals to the ATC SCM40 (HFC 389) floorstanders via Nordost Frey speaker cable.

All the auxiliary kit has been chosen both to challenge the amps and allow them to display qualities and subtleties that might otherwise be hidden. During the main comparative listening sessions, all the amps are kept powered up to eliminate any possibility of sonic differences during warm-up cycles. Each amp is level matched with a pink noise test tone to ensure volume parity and avoid sonic differences being influenced by level. Four tracks (right) are used for the principal listening tests, but a wide range of additional music is also used during testing.



BLIND LISTENING TESTS

This crucial process is very carefully controlled so that we get reliable and consistent results in a relaxed and friendly atmosphere. Our listeners must not feel that they're being tested, despite being unaware of the brand or price of the products they are auditioning.

The session begins by setting the volume level to an agreed point, one that all three panellists feel comfortable with, yet that is

high enough to make differences easily discernible. Then the choice of music is agreed – it needs to be familiar, but also well recorded and of sufficient variety to give meaningful listening comparisons. The chosen selection of music is played, and the panellists are encouraged to discuss their impressions of the sound of the product. This is then repeated, and periodically the panel listens to earlier products for reference purposes. The

consensus, or otherwise then forms the basis of our sound quality section.

At the end of the session, there's a final debrief when panellists discuss their findings. It's an exhaustive process, but carried out in this way is free from prejudices based on brand, price or appearance, while the different sensitivities of the listeners help to round out the analysis in order to make it more widely applicable.

REFERENCE SYSTEM

SOURCES

Cyrus CD Xt Signature transport
Pro-Ject Debut Carbon turntable

DAC

Chord Hugo

LOUDSPEAKER

ATC SCM40 with Townshend Audio super-tweeter

EQUIPMENT SUPPORTS

Atacama Equinox rack
Townshend Audio Seismic platforms

TEST MUSIC

BOB JAMES & NATHAN EAST

The New Cool
Turbulence 16/44.1 CD



ESPERANZA SPALDING

Emily's D + Evolution
One 16/44.1 CD



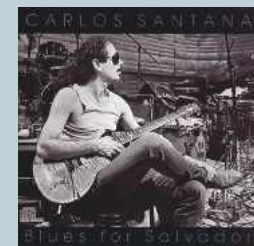
PAUL SIMON

There Goes Rhym'n' Simon
Something So Right 16/44.1 CD & vinyl



CARLOS SANTANA

Blues For Salvador
Blues For Salvador 16/44.1 CD





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*Balanced
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ROTEL.COM



Group test

INTEGRATED AMPLIFIERS £700-£1,030

The Brit pack

When it comes to next-level integrated amplifiers, British brands offer an embarrassment of riches.

David Vivian listens to six of the best

THE INTEGRATED HI-FI amplifier, once considered the automatic choice for system builders with limited funds, has become a lot sexier in recent years. True, pre-power separates may be the way to go in larger systems if ultimate sonics are the goal and the budget permits. But today's integrated designs have become less the poor relation, more the smart, high-functioning and flexible solution catering for modern hi-fi sensibilities. Contenders offer everything from purist minimalism to feature-rich connectivity and future-proofing, as well as a choice of both traditional and more recent circuit topologies. But the core appeal remains: a powerhouse system hub that doesn't take up much space on the equipment rack.

Upgrade path

Where once an entry-level integrated amp might have been chopped-in for a modest pre-power combo, the rise

and rise of the next-level 'super' integrated amps (pioneered by the likes of the Naim Nait and Audiolab 8000A) has defined a new upgrade path that has no need to veer from the single-box approach. It's a trend that continues to be well served by British companies, almost to the extent that a mythology has grown up around the circa-£1k Brit-fi integrated amp based on the assumption of a shared 'characteristic sound' that puts the music first and doesn't obsess over the hi-fi minutiae. Music first, yes, but don't buy into the idea that this stems from an adherence to a particular sonic template. This is no truer than the assertion advanced by some that all well-designed amps sound more or less the same – the six next-level integrated models we have here – including the descendants of the original Naim Nait and Audiolab 8000A – do not. Talent abounds, but one amp takes the group by storm. Read on to find out which... ▶

ON TEST



Arcam
FMJ A29 £849 p27

Arcam's most affordable Class G amp has muscle to spare, fine build, plentiful inputs with a built-in phono stage and claims to deliver low distortion, class-leading sound.



Audiolab
8300A £900 p29

With a bloodline that reaches all the way back to the trailblazing 8000A, this latest incarnation is billed as the best integrated amp Audiolab has ever made, and so has much to live up to.



Cambridge
CXA80 £750 p31

The more powerful of the two amps in Cambridge's keenly priced CX range delivers a high-end aping spec and generous features including an on-board 24-bit/192kHz DAC.



Cyrus
ONE £700 p33

Paying homage to the company's original amp, the new Cyrus ONE defies the group norm with its half-width shoebox proportions, latest-gen Class D amplification and aptX Bluetooth input.



Naim
Nait 5si £1,029 p35

It may be Salisbury-based Naim's starter amp and stripped of frills with just four line-level inputs but, true to the original Nait, the 5si's sonic ambition, like that well-known energy drink, has wings.



Rega
Elex-R £898 p37

Another no-frills contender but with MM phono stage, the Elex-R combines features of the smaller Brio-R and more expensive Elicit-R to serious effect and is, by reputation, very much the amp to beat.



Bowers & Wilkins

Designed for listening

The new CM Series loudspeakers are undoubtedly beautiful, capable of gracing any room with their clean lines and high-quality finishes. But as with all Bowers & Wilkins loudspeakers form must follow function, and thanks to our Decoupled Double Domes and tweeter-on-top technology you won't believe how beautiful your music can sound.

bowers-wilkins.com



Decoupled Double Dome tweeter





Arcam

FMJ A29 **£849**

The well-featured A29 uses innovative Class G circuitry from Arcam's flagship amps to make its sonic case

DETAILS

PRODUCT
Arcam FMJ A29

ORIGIN
UK/Far East

TYPE
Integrated amplifier

WEIGHT
9.2kg

DIMENSIONS
(WxHxD)
433 x 85 x 275mm

FEATURES

- Quoted power output: 2x 80W (8ohm)
- Inputs: 6x RCA; 1x 3.5mm jack
- MM phono stage
- 3.5mm jack headphone output

DISTRIBUTOR
Arcam

WEBSITE
arcam.co.uk

Nailing the sweet spot between quality, performance, practicality, usability and price must be harder than Arcam makes it look. Yet doing just that has been at the root of the Cambridge-based company's success since it set up shop in 1976. Take its Class G operation. Above the entry-level A19 (conventional Class A/B), Class G is Arcam's resident amp tech and certainly an advanced solution for a sub-£1k integrated such as the A29. Developed over six years, the circuit configuration switches between multiple power supply rails to deliver vastly more low-distortion, near-Class A output than is the case with conventional Class A/B biasing but without the attendant inefficiency – manifested as heat – that afflicts pure Class A designs. So, although the 80W-per-channel rating is healthy, Arcam says we can expect the A29 to have noticeably greater room-driving muscle in practice, even with inefficient speakers.

That the A29 is one of the slimmer, lighter amps in the group is also impressive given the available firepower. It's a neat and exceptionally well-built unit with a clear dot-matrix display and straightforward layout that's easy to use. The six line-level

inputs should be enough to cope with most system requirements, but if one more is needed and you don't use a turntable, the phono input can be re-configured to line level via the set-up menu. That said, Arcam claims the phono stage is good enough to satisfy the demands of a quality moving-magnet cartridge, and that similar care has gone into the design of the low-noise headphone output, which should obviate the need to buy a separate headphone amp for all but the serious high-end can user.

Sound quality

The immaculately produced piano and bass-centred arrangements from Bob James and Nathan East on *Turbulence* is a perfect intro to the A29's sonic character. The sound is expansive, smooth and well nourished with a natural sense of flow, tempo and rhythm. The track jogs along nicely, sounding poised, natural and as easy going as James and East intended. A good start.

A desire to steer well clear of hyping the drama is perhaps even more obvious with the handling of jazz bassist Esperanza Spalding's Joni-Mitchell-on-acid vocals and challengingly angular harmonic constructions. After a rather gentle opening, *One* explodes into an almost

G-UP

Arcam originally became interested in Class G for its AVR range of AV receivers. Developed over six years, it proved a good fit for a product that required multiple high-powered amplifiers in a small space. During that period, the company realised that the tech could also endow stereo amplifiers with good efficiency and excellent current reserves. It isn't an easy option, though. Class G requires additional transformer windings and a more complex power supply, factors that inevitably add cost. The company also had to overcome numerous technical hurdles, not least current spikes from the lifter components, the upshot being the undesirable possibility of trading crossover distortion for sound degrading issues from the Class G circuitry itself. That's why it took so long to get it right.

cacophonous, densely layered chorus that should deliver something approaching a sonic shockwave. But the Arcam is a bit of a gentle giant. You sense the effortless power and authority, but a lack of assertiveness gets in the way. The ability to play loud ultimately counts for less if the force isn't dynamically expressive and, by the standard of the group, it is a little lacking in this respect.

It always sounds as if it has plenty in reserve, but is reluctant to really let rip. Leading edges are ever so slightly softened, diluting the raw energy and attack of Carlos Santana's *Blues For Salvador*. More cut and contrast is needed to do the track justice. I get the impression the A29 is trying hard not to impress via obvious hi-fi showboating. But there's also a touch of radiogram tonality, a hint of 'pipe and slippers'. It can sometimes sound just a little too cosy and comfortable for its own good ●



Hi-FiChoice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Powerful, expansive sound; fine phono stage

VALUE FOR MONEY
★★★★★ **DISLIKE:** Lacks excitement and drive

BUILD QUALITY
★★★★★ **WE SAY:** One for relaxing rather than raving, but a solid all-rounder

FEATURES
★★★★★

OVERALL



The new wine

"We wanted to create something beautiful... beautiful in sound, looks and connectivity. The Röst is all that. It is the sum of everything we have learned. A true one-stop amplifier. Something you would want to have on the top shelf."

- Hegel Music System AS -



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Imagine a small, good looking, and incredibly versatile piece of audio kit that can power some of the most difficult loudspeakers you would ever want.

Imagine a true high fidelity solution you can use with your iPhone, integrate in your "smart home" and that plays all your favourite music the way it was intended.

No distortion of the original music signal. No distortion to the looks of your living room... you have just imagined the Röst.



Derby: Musicraft

Edinburgh: Loud & Clear

Kent: Igloo Audio

Hegel: www.hegel.com





Audiolab

8300A £900

It hasn't always been plain sailing, but the replacement for Audiolab's much-lauded 8200A is on a roll

DETAILS

PRODUCT
Audiolab 8300A

ORIGIN
UK/China

TYPE
Integrated amplifier

WEIGHT
7.8kg

DIMENSIONS
(WxHxD)
444 x 80 x 330mm

FEATURES
● Quoted power output: 2x 75W (8ohm)
● Inputs: 5x RCA; 1x XLR
● MM/MC phono stage

DISTRIBUTOR
IAG Group Ltd

TELEPHONE
01480 447700

WEBSITE
audiolab.co.uk

The story of how Audiolab's 8000A of 1983 – the quintessential 'next-level' integrated of its time – drove down an evolutionary *cul-de-sac* as the TAG McLaren 60i and crashed, is best left for another day. The good news is that today's Audiolab 8300A is very much the fully evolved, thoroughly modern amp that the 8000A deserved to become. While acknowledging the critical plaudits of its predecessor (the 8200A), the 8300A is built around a clean-sheet circuit design and is unquestionably the best integrated amp it has ever made.

No pressure, then. But boasting a 75W-per-channel dual mono amplifier section that can pump 115W into a 4ohm load and call on a robust maximum current delivery of 15A, it has every reason to feel confident. The bones of the design brief required a highly linear, thermally stable, low-distortion performance into even the most unobliging speaker loads. If this suggests the need for a stiff power supply, the answer comes in the shape of a 300VA toroidal transformer with 60,000uF of reservoir capacitance (see box out).

This is a smart, solid and ergonomically sussed amp with a big, clear OLED display and expensive-feeling rotary controls that operate

with well-oiled precision. Round the back, sockets include five line-level inputs, a MM/MC phono input and a balanced XLR input for similarly equipped source components, including the matching 8300CD disc player (HFC 404). An extra degree of flexibility is provided by the two pre-outs, a power input, a 12V trigger loop and two sets of loudspeaker binding posts for bi-wiring.

Sound quality

Immediately obvious is that the 8300A is a more revealing amp than the Arcam. Playing the Bob James and Nathan East duet, the soundstage has a clearer sense of air, shape and structure and conveys more of the recording acoustic. With this pristine production it's easy to hear how exceptional the Audiolab's retrieval of low-level detail is. Subtle inflections and accents are beautifully resolved.

The delivery doesn't have quite the Arcam's scale and weight, but there is a similarly neutral and organic hue to the sound, albeit gifted a cleaner and crisper presentation. Leading edges are sharper, start-stop timing snappier. With the challenging yet satisfying track from Esperanza Spalding, dynamic expression isn't quite up there with the Naim, Rega and Cambridge, but it's good enough.

POWER PLAY

The output stage of the 8300A's discrete power amp circuits uses a CFB (Complementary Feedback) topology with conventional emitter follower circuitry. The idle current is kept independent of the temperature of the output transistors. Having the emitter follower deliver additional current only when needed allows for a simpler current-limiting arrangement, which can be voltage independent. Audiolab calls this Active Current Drive, where the current limiting is microprocessor controlled and allows it to supply high currents (+/-15A) into complex loads on a par with amplifiers that are bigger and more powerful on paper. A 300VA toroidal transformer supplies the two mono amplifiers using separate secondary windings, followed by 2x 15,000uF reservoir capacity per channel (60,000uF in total).

Where the 8300A really comes into its own is through the achingly plaintive sections of Paul Simon's *Something So Right*. I have this on vinyl and CD and although the music sounds more precisely articulated via the latter, it sounds effortlessly natural and musical on both, suggesting the phono stage is good.

The whirlwind ferocity and virtuosity of Carlos Santana's guitar playing, however, isn't quite so well conveyed. Great tonality once again, and enough speed to pick apart his breakneck runs. But the dynamics feel a little sat on and although the lower frequencies are weighty, extended and controlled, they have a slightly thicker texture to the others in the group.

The 8300A has a tendency to want to make everything sound nice. It's a sophisticated sound, well enough disciplined and easy to live with, but a little short on fun and excitement ● ▶



HIFIChoice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Neutral, finely resolved sound; great build quality

VALUE FOR MONEY
★★★★★ **DISLIKE:** Makes everything sound a little too sweet to be true

BUILD QUALITY
★★★★★ **WE SAY:** A very classy amplifier that's lovely to use, but needs more fire in its belly

FEATURES
★★★★★

OVERALL



A black OPPO UDP-203 Ultra HD Blu-ray Disc Player is shown from a three-quarter perspective. The front panel features the OPPO logo on the left, a power button, a disc tray, a small digital display showing '000000', and several control buttons on the right. The background is dark and textured.

oppo

4K
ULTRAHD
Blu-ray

OPPO UDP-203

Video

4K UHD for Blu-ray and media files
Playback of all HD formats including
4K@60p 4:4:4
High Dynamic Range (HDR10)
HDR to SDR conversion

Audio

7.1 analogue channels for Dolby
TrueHD and DTS-HD Master Audio
Dolby Atmos and DTS:X HDMI
bitstream output
Multi-channel DSD64/128 and
192kHz/24-bit PCM

Dual HDMI outputs

HDMI input
Playback of all standard disk and
media formats
Network playback via DLNA and SMB
Control via IR, RS-232, IR IN, network,
HDMI CEC and Trigger In/Out

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LESS IS MORE

Cambridge says it previously went to almost surgical lengths to minimise distortion in its amplifiers for the best results and that, invariably, it meant 46 components sat in the signal path. For the CX Series, the company wanted to dramatically cut the component count. As a result, the CXA80 has just 24 components in the signal path. The big difference is that there are 500 support components as well. Their job is to guarantee those 24 key components are optimal all the time regardless of mains fluctuations and other influences. So where previously tweaking one of the 46 components only made a tiny, hard to quantify, difference to the sound, changing just one of the 24 components in the CXA80 affects the character of the amplifier, making it possible to hear clearly what each component is doing.

Cambridge

CXA80 £750



Building on the strengths of its CXA60 sibling, here's a big, keenly priced amp that could upset the form book

DETAILS

PRODUCT
Cambridge CXA80

ORIGIN
UK/China

TYPE
Integrated amplifier

WEIGHT
8.7kg

DIMENSIONS
(WxHxD)
430 x 115 x 341mm

FEATURES
● Quoted power output: 2x 80W (8ohm)
● Inputs: 4x RCA; 3.5mm jack; 1x XLR; 2x optical; 1x coaxial; 1x USB Type-B
● 24-bit/192kHz-capable DAC
● 3.5mm jack headphone output

DISTRIBUTOR
Cambridge Audio

TELEPHONE
0207 9402200

WEBSITE
cambridgeaudio.com

As the flagship amp in Cambridge's CX range, the CXA80 boasts 80W per channel (20 more than its CXA60 sibling in HFC 401), a hi-res built-in DAC and an asynchronous USB Type B input. To that it adds three hi-res digital inputs: one coaxial and two optical. A second USB port supports the BT100 Bluetooth dongle (available from Cambridge for £70). The trade off is no onboard phono stage, but there are four line-level inputs into which you can plug your own plus a pair of balanced XLR inputs and, on the fascia, 3.5mm inputs for personal players and headphones. And, like the Audiolab, there are two sets of speaker terminals to easily facilitate bi-wiring.

On top, the heat venting also doubles up as a showcase for the smartly dressed toroidal transformer and flanking heat sinks. But pretty as it looks, the symmetrical circuitry drops a strong hint about the CXA80's intent, which pushes the performance potential of its dual mono layout a step further by having separate transformer taps for both the left and right channels.

In terms of build and finish, it's hard to see where any corners have been cut. On the contrary, the thick aluminium fascia and smooth, radiused edges are something you'd expect to find on a far more expensive amp. As an ownership proposition, the CXA80 looks and feels as desirable as any in the group.

Sound quality

Some of the amplifiers here are slow burners and take a while to get under your skin. The CXA80 isn't one of them. It has stacks of detail and a big, confident presentation that immediately grabs you. Playing the Esperanza Spalding track, it displays something of the Cyrus ONE's spry, supple energy, but spiked with a couple of Red Bulls and a testosterone injection. Excitement most definitely gets out of bed when Spalding kicks things up a gear. From this point, the song simply has more life, attack and vim – a vitality missing from the Arcam's account, which while just as loud and room-filling, seems a shade vague and lazy by comparison.

The Cambridge gets stuck into Carlos Santana's frenetic fret work on

Blues For Salvador with even greater gusto, exhibiting tremendous clarity, speed and solidity with noise floor-sweeping low-level detail. With this track it sounds every bit as resolute as the Rega and Naim, but with slightly drier tonality. For sheer, palpable, in-the-room presence, though, it's probably the best on test.

It's not unconnected with its slightly mid-centric balance, which isn't quite so convincing with the Paul Simon track where front-to-back perspectives are a little flattened. But this isn't a concern with the slick, modern Bob James and Nathan East cut, which is treated to great stereo and perhaps the tautest and most tactile rendition of East's double bass.

Timing feels fleet and generally secure, but a little more mechanical than some others here. That said, I seriously doubt you'll find more clarity, drive and capacity to entertain in an integrated amp at this price ● ▶



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★
LIKE: Clarity, muscle, high-entertainment factor; design; value

VALUE FOR MONEY
★★★★★
DISLIKE: Can be a little relentless

BUILD QUALITY
★★★★★
WE SAY: Almost too good to be true. Almost...

FEATURES

★★★★★

OVERALL

★★★★★

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entertainment in
one convenient
place...

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CONVERT



Cyrus ONE **£700**

The shape and name might be familiar, but Cyrus' homage to its founding amp contains some surprises

DETAILS

PRODUCT
Cyrus One
ORIGIN
UK
TYPE
Integrated amplifier
WEIGHT
5.6kg
DIMENSIONS
(WxHxD)
220 x 85 x 390mm
FEATURES
● Quoted power output: 2x 100W (6ohm)
● Inputs: 4x RCA
● MM phono stage
● AptX via Bluetooth
● 6.35mm jack headphone output
DISTRIBUTOR
Cyrus Audio
TELEPHONE
01480 410900
WEBSITE
cyrusaudio.com

According to Cyrus, the ONE is aimed at savvy young people with the potential to inject new life into the hi-fi movement. You can tell by the way it looks. Yes, the compact shoebox size and proportions mirror other Cyrus components, but the inscrutable gloss black facia with its brace of large, LED-garlanded matt-black rotary knobs is a radical departure that make its rivals look rather antiquated. Build quality seems to have taken something of a hit in the process, so the ONE feels a bit insubstantial by the standards of the group. The credit card-style remote control doesn't help. But it's what's under the bonnet that really matters.

One reason why the ONE weighs a relatively modest 5.6kg is because it uses third-generation 'hybrid' Class D technology derived from that in its Lyric one-box system (HFC 384), in this instance delivering 100W per channel (into 6ohm). To counter the variability in sound quality Class D amps usually suffer with different speakers, the ONE also has something called SID (speaker impedance detection), which on power-up

measures the impedance of the connected speakers and optimises its output to suit. A meaty toroidal transformer takes up most of the space inside, but the limited room also favours the four-layer PCB that claims to use short signal paths and extra-thick copper tracks. Unlike the Cambridge CXA80, there's no onboard DAC but aptX Bluetooth means you can stream from a phone, tablet or laptop. There are four line-level inputs (one has an AV bypass mode so you can use the ONE as a power amp in a home cinema system) plus a moving-magnet phono stage and a headphone output driven by a separate Class A/B amp.

Sound quality

This is an amp that makes you sit up and take notice. Its quicksilver, unforced delivery (just as evident with the superbly implemented aptX Bluetooth) swiftly hooks you in. The interplay between Bob James' piano and Nathan East's double bass on *Turbulence* sounds lithe and interesting. And if not as polished as the Audiolab's take, the presentation seems fresher and less muggy with deftly nuanced dynamics. In its lean balance, speed and transparency, it reminds me of the original Cyrus 1.

With Esperanza Spalding, there's a lighter but more exultant feel to the track, which gains in separation and focus and has a lovely hear-through quality with real depth to the soundstage and nimble pacing. Here, power is sensed by the subtlety and shading of the dynamics. The Cyrus

D + EVOLUTION

The ONE is the first standalone integrated amp from Cyrus to feature what it calls its third generation of hybrid Class D technology. Much of what has gone into it has been trickled down from its Lyric one-box system (HFC 384) and Stereo 200 power amplifier (HFC 398) and is claimed to achieve similar qualities at a lower price. Similarly, the ONE's phono stage borrows many of the qualities from the company's flagship Phono Signature stage (HFC 408). What may be less obvious, are the deep insights Cyrus says it has gleaned around power supplies over many years and asserts that in order to make a beautifully clean and clear output signal, you need beautifully clean and clear input current. As such, the ONE has 13 high-quality power supplies to serve up what it believes is a truly musical experience.

doesn't try to sound large and muscular like the Cambridge, but it's certainly all there when the music demands it and delivered with great speed and precision.

Maybe the older Paul Simon recording, with its strangely synthetic-sounding string section, is a little thin. Simon's vocals also verge on the sibilant, and the Cyrus might be guilty of emphasis here – it certainly makes no attempt to smooth things over, though via the excellent phono stage it's less of an issue with the LP version. But the amp's essential transparency also makes more of the contrast between the cut and brightness of Santana's violently distorting guitar and the warm, rich synth pads on *Blues For Salvador*. It may not have the 'obvious' clarity and muscular solidity of the Cambridge, nor the colour and clout of the Naim, but the Cyrus ONE is a fine, charismatic performer all the same ● ►



HIFIChoice

OUR VERDICT

SOUND QUALITY
★★★★★
VALUE FOR MONEY
★★★★★
BUILD QUALITY
★★★★★
FEATURES
★★★★★
OVERALL
★★★★★

LIKE: Spry, transparent, fluent sound; bold design
DISLIKE: Build; cramped rear panel; poor remote control
WE SAY: Does things differently, but with some style

TOTEM

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HFC nov 2016

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"During the Marcus Miller track I'm so captivated I forget to write any notes at all which, in the end, tells you all you need to know. An absolutely magical little speaker"



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Sonata Systems, LONDON, NW6
South East
Rayleigh Hi Fi, RAYLEIGH
Rayleigh Hi Fi, SOUTHEAST
Rayleigh Hi Fi, CHELMSFORD
The Audio Barn, HARLOW
South
Hidden Systems, HARTLEY WINTNEY
Norman Hobbs, HAYWARDS HEATH
Summer House Sounds, ALTON
Future Audio, EAST GRINSTEAD
South West
Audio Destination, TIVERTON
Midlands
Cymbiosis, LEICESTER
Hifi Gear, HEREFORD
Hidden Systems, KIDDERMINSTER
Sound Academy, WALSALL
North
Moorgate Acoustic, SHEFFIELD
Dough Brady, WARRINGTON
Audiovation, HUDDERSFIELD
Scotland
Loud & Clear, EDINBURGH
Loud & Clear, GLASGOW





Naim

Nait 5si £1,029



The original Nait has become a hi-fi classic, but can Naim's latest starter amp still cause a sensation?

DETAILS

PRODUCT
Naim Nait 5si

ORIGIN
UK

TYPE
Integrated amplifier

WEIGHT
6.8kg

DIMENSIONS
(WxHxD)
432 x 70 x 301mm

FEATURES

- Quoted power output: 2x 60W (8ohm)
- Inputs: 4x RCA; 2x DIN
- 6.35mm jack headphone output

DISTRIBUTOR
Naim Audio Ltd

TELEPHONE
01722 426600

WEBSITE
naimaudio.com

For some people, hi-fi amplification begins and ends with Naim. Once they've sampled the Salisbury-based company's wares, there's no turning back. In the amplifier stakes, the responsibility for providing the first bite of the apple still largely falls to the entry-level Nait, which means it must deliver a true taste of the company's sonic flavour – maybe smaller in scale and power, but not watered down in any way.

So it's hardly a surprise that in its latest 60W-per-channel 5si incarnation, the Nait is claimed to synch completely with the things Naim thinks are most important in music reproduction. As the publicity blurb puts it: "The Nait 5si engages even the most complex rhythms and demanding dynamics with all the grip and authority you would expect from Naim". Developed from the previous Nait 5i, there's a 10W power boost thanks to a larger toroidal transformer and a beefier power supply. The main circuit board and wiring loom take cues from the DAC-V1, while components in the power amp stage and all the signal capacitors have seen an upgrade too.

For arrestingly stark, clean industrial design, the Nait takes the biscuit, so that it also manages to look quite cute is something of a triumph. It's the

slimmest amp in the group and the second lightest after the Cyrus. Facilities are pretty basic, but typically quirky with four line-level inputs (those marked CD and Tuner giving a choice of RCA socket or Naim's favoured DIN connection) and one set of banana plug-compatible speaker cable sockets rather than binding posts not quite where you'd expect them to be (the ones on the left serve the right channel and *vice versa*). Things are more straightforward on the chunky aluminium fascia: just the volume control on the left, four illuminated input buttons on the right, a 6.35mm headphone jack and the famous Naim logo centre stage, glowing green.

Sound quality

It's almost uncanny the way the Nait 5si instantly makes you think more about the music and less about the recording. Although its presentation is amply detailed, it's far from the most forensic amp in the group, but it's definitely the one with the shortest path to 'the groove', wherever it might be found. The amp's muscular, supple bass certainly helps Bob James and Nathan East find theirs. Here, the tonal balance is a little mellower and less shiny than with the Cambridge, but then the Naim is able to paint

FOUR PILLARS

Naim believes that there are four fundaments that have to be adhered to in the pursuit of sonic excellence. First, each of the critical components is given its own environment, omitting outside interference. Second, Naim seeks to minimise any interplay between the internal levels, so that listeners can simultaneously enjoy both the quiet and the loud. Third, build materials are chosen for their performance and not just their appearance. Finally, integrating sophisticated electronic design and software development with mechanical engineering and acoustics is key to achieving the end result. It all folds into what the company calls the 'Voice of Naim'. The idea is that the 'voice' is carefully engineered across Naim's extensive product portfolio and crafted to give a consistent sonic signature.

instrumental timbres with believable colour and texture and the company's hallowed tenets of pace, rhythm and timing simply fly along with Carlos Santana's soaring PRS electric guitar on *Blues For Salvador*.

The Nait 5si has musical bones, no question. With the Esperanza Spalding track, it doesn't sound as obviously sprightly as the Cyrus, Cambridge and Rega, but then neither does it sound as if it's rushing, dragging or tripping over itself, which is probably more telling. Everything is given the right emphasis and weight. There's a sense of deep coherence, of Spalding's artful dissonance and tricky tempos sounding cogent and all of a piece. And every time the opportunity presents itself – Paul Simon's *Something So Right* in this case – it goes for the emotional jugular. Doesn't miss. It's a curious thing, but all seems well with the world when you're listening to it ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** The sound that made Naim famous; build; design

VALUE FOR MONEY
★★★★★ **DISLIKE:** A bit quirky around the back

BUILD QUALITY
★★★★★ **WE SAY:** Not many features, but one of the great-sounding £1k integrated amps

FEATURES
★★★★★

OVERALL



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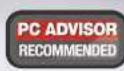
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Rega

Elex-R £898

It's been around for a while and looks as unassuming as they come, but the Rega's reputation precedes it



A LONG TIME AGO...

Rega's founder and boss Roy Gandy admits to having had a reasonably normal childhood spent building electric guitars, flying model planes, playing the clarinet and breeding budgies. At 14, Roy's mum asked him if he wanted a TV or a record player in the house. Roy begged for a record player. His mum bought a telly! Aged 18, Roy built his first pair of speakers in perfectly sealed cabinets. Not the first Rega product, maybe, but Roy was on his way. His interest in hi-fi evolved from a passion for music – a live concert, a folk club, or any kind of record player. When a flatmate demoed his system consisting of a Garrard SP25 turntable, Sonotone 9TA cartridge, Rogers HG88 amplifier and Wharfedale speakers, Roy realised the record player had room for improvement. The rest, as the saying goes, is history...

DETAILS

PRODUCT
Rega Elex-R

ORIGIN
UK

TYPE
Integrated amplifier

WEIGHT
10.8kg

DIMENSIONS
(WxHxD)
430 x 80 x 320mm

FEATURES
● Quoted power output: 2x 72W (8ohm)
● Inputs: 4x RCA
● MM phono stage

DISTRIBUTOR
Rega Research Ltd

TELEPHONE
01702 333071

WEBSITE
rega.co.uk

A seriously weighty slab of an amplifier, the Elex-R is notably the heaviest of the group. Billed as a hybrid of the smaller Brio-R and the more powerful Elicit-R (HFC 374), what it lacks in aesthetic subtlety – let's be honest here, brutalist is closer to the mark – it more than compensates for in the sheer sturdiness of its casework which, according to Rega, is one of the reasons it sounds the way it does. It's rated at 90W per channel into 6ohm (72W into 8ohm) and there's nothing out of the ordinary about its complement of four line-level inputs or the inclusion of a moving-magnet phono stage and pre-out.

A few performance pointers are suggested by the use of a combined feedback and passive volume control, where the feedback and input levels are varied to set the required volume level. The level and tracking between the two channels is set by the close tolerance parts in the preamplifier circuit and less by the actual potentiometer itself, so keeping the mismatch of channels due to volume control tracking irregularities to a minimum. The method is also claimed to reduce noise and input overload as the control will only 'use' the required gain to amplify the signal. Rega says this form of volume

control is normally only found in professional broadcast environments where accurate low-noise control of levels is demanded.

Sound quality

Working through the amps in the group one-by-one, some peak in particular ways while others make a virtue of their even temperament and all-round facility. The Elex-R doesn't fit into either category for one simple reason: musically, it's untouchable. It may not go the loudest or have the deepest bass or the most expansive soundstage, but its ability to get to the heart of the musical matter seems to have no baggage to slow it down. It's the ultra-fast broadband of musical communication that's, I have to tell you, a real pain because every time it's landed on the equipment rack I just wanted it to stay there when I should really be moving it on for the next amp.

The Nait 5si gets pretty close in its ability to draw attention to what the musicians rather than the recording engineers are doing, but it just misses out on the last few degrees of rhythmic subtlety that makes a piece of music truly immersive and compelling. It's a minute but unmistakable nuance perfectly demonstrated during the second half

of *Turbulence* as the initially sparse sparring between the piano and double bass melts into an altogether more complex and densely layered multi-instrumental arrangement driven by the polyrhythmic patterns of the Nashville Recording Orchestra's drummer. No other model tracks this as well as the Elex-R, and it's a vital ability if you're to stay hooked all the way to the end.

Carlos Santana's extraordinary *Blues For Salvador* needs an amp that's open and resolute, but can really let rip and hit hard and, again, the Rega has the decisive edge and delivers the biggest thrill. It seems to calibrate the best the Cambridge and Naim can do with this track, and nudge it up a hair where it matters. Esperanza Spalding is more startling, Paul Simon more tender – especially on vinyl via the cracking phono input. While the other amps bring special talents to the group, the Elex-R delivers the masterclass ● ▶



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★
LIKE: Life, pace, addictive musicality; bomb-proof build

VALUE FOR MONEY
★★★★★
DISLIKE: No style icon

BUILD QUALITY
★★★★★
WESAY: A fabulous, life-enhancing integrated amplifier

FEATURES

★★★★★

OVERALL

★★★★★

Group test verdict

The amps have been powered down and the scores added up, so it's over to **David Vivian** to reveal the results of this month's closely fought roundup

MUCH AS I suspected, the modern British 'next level' integrated is capable of hitting it out of the park sonically, irrespective of the degree of added functionality and connectivity some models offer, but I have to start the countdown somewhere. The Arcam FMJ A29 is a great amp to kick off proceedings, immediately filling the listening room with a huge, well-tempered sound and seemingly able to take everything in its stride without breaking sweat. The ideal benchmark. As the test progresses, however, it becomes clear that while few can compete with its real-world

power, greater musical insight and dynamic expression are to be found elsewhere. A little better in these disciplines and the owner of a gorgeous natural tonality, the Audiolab 8300A also impresses with its speed and ability to resolve the subtlest details. But it doesn't engage like the Cyrus ONE, a cleverly conceived, high-value package with a decent phono stage and Bluetooth streaming and, best of all, a brilliantly agile, lucid and transparent sound.

Also great value, the plushly appointed Cambridge CXA80 delivers a tangible, muscular performance

and top-drawer clarity, rivalling the Naim Nait 5si for being able to project a physical, in-the-room presence with a sense of 3D solidity. The CXA80's desirability is further bolstered by its classy, modern design and fine build quality. But, in the end, it's the Naim that nabs the runner-up spot with its superior handling of tempo and rhythm and the sheer intensity of its commitment to preserving the most important elements of the musical message. A real smile inducer and a lovely slice of minimalist design to boot.

WINNER

When it comes to delivering pure, unfettered musical joy, nothing can lay a finger on the Rega Elex-R. It looks a bit brutal and it's short on frills, but put this integrated at the heart of your music system and I'm positive you'll want to spend plenty of time together.

Make/model	Arcam FMJ A29	Audiolab 8300A	Cambridge CXA80	Cyrus ONE	Naim Nait 5si	Rega Elex-R

Price	£849	£900	£750	£700	£1,029	£898
Sound	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Value	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Build	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Features	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Overall	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
	A powerful, well-featured integrated amp that only wants for verve and fun	Superbly designed and built unit that always sounds lovely, but lacks excitement	Gloriously designed and feature-packed amp with potent, detailed sound	Clever package with Class D power, streaming and fine transparency	Naim-flavoured sonic goodness in a frill-free design that's hugely likeable	Does what an integrated should do above all: sound absolutely brilliant

Key features

Quoted power	2x 80W	2x 75W	2x 80W	2x 100W	2x 60W	2x 72W
Phono stage	MM (line configurable)	MM/MC	No	MM	No	MM
Analogue inputs	6x RCA; 1x mini-jack	5x RCA; 1x XLR	4x RCA; 1x mini-jack	4x RCA	4x RCA; 2x DIN	4x RCA
AptX Bluetooth	No	No	No	Yes	No	No
DAC	No	No	24-bit/192kHz	No	No	No

TRY WITH THESE

CD PLAYER: Audiolab 8300CD **£1,000 HFC 404**

The replacement to our favourite mid-price CD spinner brings better styling, subtly improved sound and format playback, plus full preamp functionality. Its sonics are on the dry side, but it still scavenges plenty of detail, which it strings together very deftly.



FLOORSTANDING LOUDSPEAKER: Monitor Audio Silver 8 **£1,250 HFC 387**

This potent tower will get the best out of any of these amps. With a quoted sensitivity of 90dB, its undemanding speaker load will be able to fill the largest rooms with ease given the real-world driving power all of the amps in the group possess. It boasts a clear, detailed sound with plenty of punch and polish.



TURNTABLE: Analogue Works Turntable One **£1,200 HFC 388**

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AUDIO

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OR LESS

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NEW

£599
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NEW

£599
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AWARDS 2016
Best CD Player
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Hi-Res
AUDIO

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NEW

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OR LESS



£499
OR LESS

5 YEAR
WARRANTY

Hi-Res
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NEW

£499
OR LESS

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Cutting edge

The original Blade wowed us with its unique design, but **Ed Selley** finds its sibling an altogether more room-friendly option

Producing a concept unit especially for a show or event is a relatively common practise in the car industry, but rather less so in the world of hi-fi. Most companies tend to consider the business of creating items for production to be work enough, but one noble exception is KEF. Having done exactly this with the Muon floorstander, it repeated the process with the Concept Blade, and then managed to get both speaker prototypes into series production.

In the case of the Blade, the result was an extraordinary speaker and one we liked very much. There is no escaping it is also rather large, fairly pricey and somewhat demanding in terms of placement. With this in mind, KEF has taken the design features of the original and produced

The crossover points between the drivers are completely imperceptible

the Blade Two, which shrinks the dimensions by roughly a third to create a speaker more appropriate for those with smaller rooms.

One look at the Blade Two ought to be sufficient evidence that beyond a spot of shrinkage, other compromises are not on the menu. The speaker is still built around the concept of the 'Single Apparent Source' that ensures that the 'acoustic centre' of every driver is the same. This gives the brain the impression that it is listening to a single extremely wide bandwidth driver with none of the phase or alignment issues that a conventional forward-facing driver array usually faces.

Key to the success of this approach is an example of KEF's ubiquitous Uni-Q driver. This is the only driver completely visible to the listener on the leading 'edge' of the blade form and combines a 25mm tweeter sat in the throat of a 125mm midrange driver. The latest refinements to the design are present, notably the

'tangerine' waveguide that's designed to widen the dispersion from the tweeter at high frequencies and ensure it more closely matches that of the midrange driver. This duo is exactly the same as the one used in the full-size Blade and sits inside a small, sealed enclosure.

Like the original, the Blade Two partners this forward-facing driver array with a quartet of drivers mounted on the sides of the cabinet in opposed pairs. The reasoning for this is that by doing so, the forces on the cabinet are eliminated by a process of the drivers operating against one another – a technique that is also adopted by some opposed cylinder engines and recoilless rifles. As the Blade Two is smaller, the four 225mm drivers are replaced with 165mm units. The combined radiating area of this quartet is still considerable. Each pair occupies a separate chamber, which is ported via openings of exactly equal lengths to maintain the sense of all drivers hitting the same acoustic centre.

KEF has expended considerable effort ensuring that despite the cabinet mounting six drivers apiece, the overall sensitivity of the Blade Two remains easy to drive. The speaker is strictly a 4ohm design, but the quoted sensitivity of 90dB/1W/1m is pretty impressive for a speaker of this nature. The reduction in size means the low-end extension drops to a quoted 40Hz at +/-3dB in test conditions. KEF suggests that in a room – as opposed to an anechoic chamber – owners should see extension below 30Hz.

The form of the Blade Two is unchanged from the original concept and to my eyes at least, this is a good thing. There is no arguing that the singular appearance is going to be to everyone's taste – this is never going to be a speaker that vanishes in a room unless you happen to live on a movie set of a utopian future – but I admire the sheer ambition. There is the intriguing addition that the colour you choose has an effect on your perception – I find that in black, the detailing is consumed by the cabinet

DETAILS

PRODUCT
KEF Blade Two

ORIGIN
UK

TYPE
3-way floorstanding loudspeaker

WEIGHT
35.3kg

DIMENSIONS
(WxHxD)
338 x 1,461 x 475mm

FEATURES
• 25mm Uni-Q aluminium metal dome tweeter with 125mm mid driver
• 4x 165mm mid/bass drivers in opposed pairs
• Quoted sensitivity: 90dB/1W/1m

DISTRIBUTOR
GP Acoustics (UK) Ltd

TELEPHONE
01622 672261

WEBSITE
kef.com

The 25mm tweeter is combined with the 125mm midrange driver

and robs the appearance of some of its elegance. The silver of the review sample conversely shows that striking form off to great effect while ensuring you can take in the extra design aspects at the same time.

Sound quality

KEF has close ties with Chord Electronics so a DAVE DAC/preamp and SPM 1050 MkII power amp have been made available for testing. It is a simple business to connect my Melco N1A (HFC 397) to the DAVE to create a functional system with my music library to hand. I only need a minute or so of the 24/88.2 SACD rip of Dead Can Dance's *Toward The Within* to establish that while it looks spectacular, the form of the Blade Two definitely follows function. The six drivers in each cabinet have the unerring ability to function as one to the extent where there is a disconnect between what your eyes see and ears can hear. The reproduction of the performing space in *Rakim* lacks any sense of ambiguity about where performers are and the space that they inhabit. More than anything else, the effect is like wearing a giant pair of open-backed headphones.

If you play something rather smaller in scale like Regina Spektor's *Consequence Of Sounds*, the KEF shrinks its scale back to the intimacy of a single vocalist and a piano but



Q&A

Jack Oclee-Brown
Head of acoustics, KEF



ES: What was the process that led to the Single Apparent Source used in the Blade and Blade Two?

JOB: The idea came from my colleague Mark Dodd, who is Head of Research at KEF and Celestion. I believe that he originally had the idea quite a while ago, but hadn't had the right opportunity to try it out. The Concept Blade was the ideal project since the whole focus was on performance and technology and this gave us the chance to try much more radical ideas than we could risk in a normal product.

Was the ability to scale the size of the Blade something envisaged at the concept stage?

The concept was very much focused on developing a single pair of speakers that represented the best we could do technically. We chose the size to match the bass extension of our biggest speaker in the Reference range at the time, the 207.2. The production version of the Blade is exactly the same size as the Concept Blade. The Blade was tremendously well received, but it is still a very large loudspeaker and too big for many living rooms. This was the catalyst for us developing the smaller Blade Two.

Would KEF consider using the Blade Two's driver and cabinet in a more affordable product?

From a design point of view the Blade is a sculptural form, which means it doesn't really work visually below a certain size. There are also some aspects of the manufacture that make it very tricky to do at much lower prices. From the Blade project we developed not only a lot of new acoustics technology, but also a lot of knowledge on what the loudspeaker needs to do to give really good sound. So while we're not always able to use exactly the same tech from Blade in more affordable speakers, we can find other ways to achieve similar results. For example, the bass driver arrangements in the R-series and Reference floorstanders results in similar directivity to the single apparent source driver layout.

IN SIGHT



The Blade Two is £500 cheaper than Bowers & Wilkins' 802D3.

Choosing between the two is going to make for a hugely entertaining session for any would be owner, but there are differences. The B&W is slightly more restrained and relaxed in its presentation. While it is still capable of enormous dynamics, it does so with a greater refinement than the KEF. It also has slightly better bass response.

By contrast, the KEF has a sense of dynamics and soundstaging that eclipses even the deeply talented 802D3. There is a speed and intensity to the way the Blade 2 goes about making music that is truly singular and for many listeners, this glimpse into the live performance will be something they won't be able to live without.

never loses that cohesion and sense of an almost perfect soundstage. The crossover points between the drivers are utterly imperceptible and the tonality is unaffected by the shift from driver to driver. Even when listening to something comparatively low key and gentle, the impression is extremely dynamic. Spektr's sharp, staccato vocals leap out of the soundstage with every syllable reproduced with an unwavering intensity. Minute pauses for breath, lost almost everywhere else are here in full. The piano is a physical presence that has meaningful weight to its struck keys and a tangible delay to the notes that are played.

This does mean the Blade Two is not a speaker that is going to cosset you or wrap you in a sort of comforting blanket of sound. It demands your attention and focus in a manner that I suspect won't appeal to everyone. While it has a superbly refined top end, it has little interest in sugar coating material that is rough or compressed and the whole presentation is the antithesis of 'background listening' although if you are spending £16,000 on a pair of speakers to burble away in the background, your priorities are rather different to the norm.

If you accept this, give it your undivided attention and ensure it is fed by suitably capable equipment, the results are unquestionably thrilling. The 24/44.1 download of Scratch Massive's live *Communion* album allows the Blade Two to demonstrate every feature in its impressive arsenal. The opening *Waiting For A Sign* is underpinned by bass that suggests that KEF's thoughts on the boost in room are entirely accurate. As the chorus kicks in, you are presented with a furious wave of sound that you feel as much as hear.

Once you become used to the sheer scale on offer, you can appreciate that within this enormous presentation, the soundstage is effortlessly detailed and the character of all of the instruments at work are distinct but harmoniously presented as a whole. This is an album that exists to be played loud and the Blade Two is more than up to the challenge. You will need to ensure your amplification is up to the job too, not so much in terms of outright power but in the ability to work with a speaker that will highlight any shortcomings.

Conclusion

This is still a demanding speaker in terms of placement, in partnering equipment and in the listening demands that it makes of you. It should be expected that a speaker that looks the way this one does will never be an unobtrusive wallflower and there are rivals, even at this elevated price (see box out), that might be seen as easier to live with. This doesn't matter, though. This is an uncompromising piece of engineering brilliance that does things with soundstage, scale, impact and three-dimensionality that are truly exceptional. Anyone lucky enough to own a pair will have a sculpture that's also one of the most awe-inspiring loudspeakers on sale today ●

Hi-FiChoice

OUR VERDICT

SOUND QUALITY



VALUE FOR MONEY



BUILD QUALITY



EASE OF DRIVE



OVERALL



LIKE: Exceptional soundstage and coherence; bass; gorgeous appearance
DISLIKE: Needs plenty of space; won't flatter poor recordings

WE SAY: Everything that makes the Blade a great speaker in a smaller package





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Aces high

The first all-in-one from Simaudio faces some stiff competition, but **Ed Selley** thinks it has what it takes to succeed

It wasn't so long ago that bespoke audio brands made a point of actively shying away from the convenience of all-in-one systems, preferring instead to promote the flexibility and focus of dedicated components for a given role. In recent years, the market for such devices has become significant enough that many companies have decided to come in from the cold and offer one-box systems of their own. The latest to join this group of converts is Simaudio with the NĒo ACE, with the latter part of the monicker standing for 'A Complete Experience'.

This might be a slightly bold claim, but the specification of the NĒo ACE certainly goes some way towards warranting the 'complete' bit – Simaudio has managed to cram pretty much every connection you might reasonably expect onto the back

panel. The NĒo ACE is fitted with the company's MiND streaming module that allows for UPnP streaming of files up to 24-bit/192kHz sampling rates with native Tidal support as well as internet radio functionality. This is backed up by a USB-B port that enables it to handle 32/384kHz PCM and DSD256 files from a suitably equipped source. However you want to access your digital material, this single box has you covered.

Additional connections include a pair of digital coaxial and two optical Toslink inputs alongside aptX-capable Bluetooth. There are three analogue connections; two of which are stereo RCA inputs on the rear and one via a 3.5mm stereo jack that's located on the front panel. This considerable list is topped off by the inclusion of a moving-magnet phono stage and a headphone amplifier, allowing you to collate a fairly biblical selection of

equipment. The only omission of real note is a CD player.

The amplification is a 50W Class AB offering that is derived from the unit fitted to the entry-level Moon stereo amplifier. If you feel that you might be lacking in power, the NĒo ACE is equipped with a pre out that allows for any of the company's power amps to be used with it. Given that Simaudio amplifiers have generally been powerful beyond the bald numbers, it is highly unlikely that you'll be short of power for any remotely sensitive speakers.

Externally, the NĒo ACE is built into the company's NĒo chassis. This is a full-width design and features the trademark curved side cheeks that can be specified in contrasting black on a silver fascia, which looks extremely smart and breaks the lines up nicely. One traditional Simaudio feature that hasn't been included is a red-on-black display. Given the amount of information that it needs to display, the manufacturer has instead chosen to fit it with an all-new blue-on-black OLED screen, which despite having fairly compact text is clear and easy to read.

There's a well thought out selection of front panel controls alongside an IR remote control and the MiND control app. The remote handset is attractive and works well, but has too many identically sized buttons to be

DETAILS

PRODUCT
Simaudio Moon
NĒo ACE

ORIGIN
Canada

TYPE
All-in-one system

WEIGHT
11kg

DIMENSIONS
(WxHxD)
429 x 89 x 366mm

FEATURES

- Quoted output power: 2x 50W (8ohm)
- Network Audio streaming via wi-fi and Ethernet
- Digital inputs: 2x coaxial; 2x optical; 1x USB; aptX Bluetooth
- Analogue inputs: 2x RCA; MM phono stage

DISTRIBUTOR
Renaissance Audio

TELEPHONE
0131 5553922

WEBSITE
simaudio.com
renaissanceaudio.co.uk



comfortably used without looking at it. The MiND app, meanwhile, is a much more flexible control option, although it is not without a few operational quirks of its own. The volume up and down buttons and the mute control are positioned rather too close together in both the Android and iOS version, and the use of a queue function for playback is an irritant compared with more straightforward systems.

Much like almost everything else that Simaudio makes, though, the NĒO ACE is beautifully constructed with well-weighted controls, non-existent panel gaps and a genuine sense of care and attention lavished

upon the points of interaction. At a whisker under three grand, it is never really going to be considered cheap but it certainly feels worth its asking price. Given the extensive feature set that it offers, it would be considerably more expensive to replicate what it does in standalone Simaudio components so it should be seen as good value in this respect.

Sound quality

Having delivered a tempting overall package, Simaudio seals the deal with an impressive sonic performance. Once you have connected up a pair of speakers – in this case Rega RX1 standmounts (HFC 417) – and performed the simple setup procedure to place it on your network and get it communicating with the MiND app, it puts in a performance that is not simply good judged by the standards of an all-in-one style system, but impressive full stop.

Initially using the Ethernet connection and listening to the hauntingly beautiful 16/44.1 download of *Spaces* by Nils Frahm, the NĒO ACE is able to let this startling piece of music flow effortlessly and completely believably from the speakers. The single most important part of making this album sound right is the reproduction of the piano and it manages to convey the weight and power of the instrument without losing any of the delicacy of higher and more softly struck notes.

If you put something faster on like the 24/96 version of David Bowie's *Blackstar*, the relentless nature of *Girl Loves Me* is something that it is completely at home with. The balance of refinement and aggression that it possesses is demonstrated to perfect effect. There is no sense that detail is being lost or hard edges are being softened and the Simaudio is exceptionally refined. Test this to destruction with a 24/96 download of



Nirvana's *Nevermind* and the jagged edges of this rough and ready recording make themselves felt, while the musical message remains perfectly intact throughout.

The NĒO ACE knows how to have fun too. Push the volume up and ask for a spirited rendition of Radiohead's *Burn The Witch* and the response is genuinely exciting. Thom Yorke's

There is no sense that detail is being lost or hard edges are being softened

vocals soar over a musical performance that has impact and real grit to it while keeping the tone of the supporting strings perfectly intact. The combination of composure and energy is something that underpins almost everything that the NĒO ACE does. If I have to level one criticism at it, at very low volume levels some of the excitement is lost – pleasingly, you don't need to crank it up too much for the energy and vim to return. ▶

CONNECTIONS



- 1 Phono input
- 2 Power switch
- 3 USB input
- 4 Toslink optical digital inputs
- 5 Pre out
- 6 Grounding post

Q&A

John Carroll

UK distributor, Renaissance Audio



ES: What prompted the launch of the ACE?

JC: The discussion for the project that became ACE was started over five years ago. As a close partner I have been involved in this at all stages. The reason for launch now was down to targeting a moment when we could pull together our fully developed MiND streaming, our core amplification and DAC technologies and industry-leading build quality while keeping manufacturing inhouse in Montreal and still offering a 10-year warranty. Many more people are living in busy compact apartments with houses full of objects and the need for compact one-box solutions without sonic compromise is at an all-time high.

Does Simaudio see the ACE being augmented with other Simaudio products, or moved to a second system and replaced by a separate Moon component system?

We see two different directions for the main categories of purchaser. The music fan who loves quality reproduction we hope will enjoy the ACE for at least the period of the warranty giving them a care-free decade of ownership. The audio fan who loves music can enjoy many upgrades in the years to come by cherry picking from the cosmetically matching Nēo product line. Currently they can upgrade with a higher quality phono stage, improve amplification with our stereo power amp, massively increase power with our 400W mono amps or even add CD playback with our highly acclaimed CD transport. The streaming element is a modular card system, with a future upgrade path for new streaming technologies.

Are additional streaming services planned for the MiND platform?

In the last couple of weeks we have added Deezer and Tune-In and are working on additional services. This development will be ongoing and we have a roadmap of releases in place for the next two years already.



Although the text on the OLED display is small, it remains clear and easy to read

The performance differences between the Ethernet and USB connections are very slight, but the latter does add DSD support and it does a good turn with Ragnari's *Fort Of The Hare*, managing to relay the sweetness and warmth of the simple instrumental arrangements. Connected to a Melco N1A (HFC 397), the USB input handles every sampling rate without issue and reconnects reliably. This stability and consistency also applies to the other digital inputs, meaning that even if you have a wide variety of digital sources, the Nēo ACE is going to be perfectly happy with all of them.

It conveys the weight and power of the piano without losing any of the delicacy

Switching to the analogue inputs and connecting a Naim ND5 XS (HFC 352) via RCA interconnects shows the performance to be no less capable. There is the slightest sense listening to the same material as via the MiND app, that the bass response through the Rega speakers is not quite as deep and detailed as it is via the Ethernet connection, although the fundamental balance of refinement and energy is still retained.

The real star of the analogue connections, though, is the phono stage. It is tempting to assume with a specification that's this extensive, its presence is little more than a box-ticking exercise but this is far from the case. Connected to an Avid Ingenium, SME M2-9 and Nagaoka MP150 (HFC 379), the Nēo ACE puts in a fantastic performance. Talk Talk's *The Colour Of Spring* is reproduced with a wonderful sense of delicacy underpinned by the weight and drive

required for *Happiness Is Easy* to sound convincing. The balance of warmth and richness is beautifully judged for the performance to sound inviting without ever coming across as warm or bloomy.

No less impressive is the Bluetooth connectivity. Tested with a Motorola Android phone that is aptX capable and listening to Tidal, the Nēo ACE gets creditably close to the performance it offers with the same Tidal files when used with the MiND app – with the added benefit of Tidal's own interface being a little slicker in use. Like the phono stage, this is not a mere convenience feature but something that Simaudio has worked hard on to deliver a seriously impressive performance.

Conclusion

It is this attention to detail that marks the Nēo ACE out as an outstanding product. The huge specification means that it comfortably holds its own against the competition (see box out), but the level of performance it delivers across this functionality is a clear indication that Simaudio is determined to deliver a knockout blow in this category. Judged on these results, it has succeeded ●



The closest competitor is Linn's Majik DSM (HFC 356). This is similarly well specified with more power than the Simaudio and a useful set of HDMI inputs for use with video sources, but the lack of wireless connectivity and Bluetooth robs it of some of the convenience of the ACE. Sonically, while the Linn is talented and its optimisation facilities are very clever, the composure and ability that the Simaudio possesses across its multiple inputs means that the Canadian system has the edge in this contest. It will be very interesting to see if the upcoming Naim Uniti systems are able to challenge it.

Hi-FiChoice

OUR VERDICT

SOUND QUALITY



VALUE FOR MONEY



BUILD QUALITY



FEATURES



OVERALL



LIKE: Superb sound across all inputs; great functionality and excellent build

DISLIKE: Clunky app; does its best work at higher volume levels

WE SAY: A seriously accomplished all-in-one that should be on everyone's shortlist



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Tall order

While others claim that less is more, Yamaha's big new NS-F350 attempts to offer more for less, says **David Price**

The fashionable view among some audio purists is that huge Japanese corporations are in some way disqualified from being credible hi-fi manufacturers. Thanks to all of those compromises that ensue from the need to sell vast volumes, some believe that marketing is put before engineering and quality is sacrificed at the altar of quantity. While this may be true in some instances, it's a criticism that cannot be levelled at Yamaha. The company's logo is a piano tuning fork, and it has sold high-quality musical instruments around the world for the best part of 50 years. Moreover, it has great engineering resources and a large pool of talented people, one of whom is Masahiro Tobise, who is responsible

This is an extremely polished performer that can move vast amounts of air

for the very capable high-end Yamaha Soavo loudspeaker. So the £500 NS-F350 has fine provenance, and a reputation to keep up.

It's a budget speaker, but you wouldn't know it. Although not quite as beautiful as the Soavo, and built more down to a price, it certainly doesn't advertise its budget status and you can't argue with the size. It sports four drive units, starting off with the 30mm aluminium dome tweeter that runs all the way up to a claimed 45kHz (at -10dB) and down to 3.8kHz. At this point, the 130mm midrange unit takes over, running down to 1.4kHz when a pair of 160mm woofers kick in all the way down to 35Hz. The crossover that enables all this is unusually complex, being an eight-element design.

Having a keen interest in cone materials, you'd expect the company to have come up with something individual and in this case it's Polymer-Injected Mica Diaphragm (PMD) that's used in the midrange

and bass units. Yamaha says this is light and rigid with low internal loss and high elasticity. The tweeter employs black anodised aluminium for its dome, plus a new voice coil using copper-coated aluminium wire (CCAW). It is affixed to a special rounded waveguide horn, which is claimed to have a left-right directional range of 135° and a vertical range of 120°, which is claimed to be optimised for home applications.

The cabinet is gently rounded at the back to reduce the number of parallel surfaces present. There's an unusual double front baffle with a mirror-like piano finish, which is offered in a choice of black or white. Yamaha says the power handling is 200W, which is a lot for a speaker of this price.

Sound quality

Placement is very easy, with the NS-F350 working happily without too much time spent experimenting in my largish listening room. Hook up a good source, put a high-quality recording on, close your eyes and you could be forgiven for thinking it costs a good deal more than £500. Smoothness and scale are the watchwords here; there's a really easy

DETAILS

PRODUCT
Yamaha NS-F350

ORIGIN
Indonesia

TYPE
3-way floorstanding loudspeaker

WEIGHT
25.9kg

DIMENSIONS
(WxHxD)
220 x 1,157 x 339mm

FEATURES
• 1x 30mm aluminium dome tweeter
• 1x 130mm PMD midrange, 2x 160mm PMD bass drivers
• Quoted sensitivity: 88dB/1W/1m (6ohm)

DISTRIBUTOR
Yamaha Music Europe GmbH (UK)

TELEPHONE
01908 366700

WEBSITE
uk.yamaha.com

quality, regardless of the type of music that you play. At all times, the sound is uniformly well balanced, couth and polished, as well as being unexpectedly large in scale.

I kick off listening with Scritti Politti's *The Word Girl*, a bouncy piece of eighties electro-pop with excellent production values. The cavernous nature of the soundstage strikes me very early on, along with a bass response that is way deeper and more assured than expected. Further up the frequency range, the silky strains of singer Green Gartside are carried very cleanly, with no sense of 'shout' as he goes up and down the range. Right up top, the tweeter proves far more civilised than I'd anticipated – if only all budget metal domes were made this way. At first listen, the speaker seems to be doing everything right; from its extended bottom to its sparkling top. Meanwhile, in the middle it sounds composed and even in a way that makes it seem more expensive than you'd think.

Probe a little harder and you begin to hear that this isn't a £2,500 design after all. There's a lack of detail that gives it a slightly vague and opaque feel. Rather like an impressionist painting, there's a romantic quality to the way it sounds but it's still a little misty and ill defined. Of course, this is no criticism considering its £500 price tag – most of its rivals are far worse. The interesting thing is the way it hides its tracks so well. For example, Kate Bush's *Babooshka* sounds most impressive for a product at this price. As we know, her wondrous voice is a little icy and can grate through a substandard speaker, but it doesn't here. Instead, the NS-F350 presents a ▶

It's all too easy to forget that this is supposed to be an affordable loudspeaker



Q&A

Masahiro Tobise
Yamaha Japan



DP: What were the design priorities for the NS-F350?

MT: We wanted to create a loudspeaker that gives the listener a wide frequency response, and is able to reproduce high-resolution sound, suitable for any sound source chosen by the listener. It is designed for home listeners who want superior quality without spending too much.

Can you explain why you opted to use PMD in the drive unit cones?

It's a well-balanced material, offering rigidity and minimal loss of sound quality. We've been using this style of driver for 30 years and continue to improve our sound to this day.

And why was it that you opted to use a metal dome tweeter?

First, dome-type HF units have better directivity than a ring-type tweeter, and secondly we chose a rigid aluminium dome with black anodised treatment for minimum coloration.

How would you describe the sound of the NS-F350?

From the start, we wanted to design a speaker that corresponds to all genres of music and all varieties of source quality. The most important part was to control the midrange – the energy, tonality and nuance were very important. After this the high and low range comes naturally. We also wanted to optimise the soundstage and the sound's focal point for home use, controlling the directivity by the wave-guide horn.

IN SIGHT



- 1 30mm aluminium dome tweeter
- 2 130mm PMD midrange driver
- 3 160mm PMD bass drivers
- 4 Bass port
- 5 Bi-wireable binding posts



Q Acoustics' 3050 at £500 (HFC 398) is the speaker to beat at the price. While the Yamaha serves up a very large, clean, powerful sound, the 3050 is smaller in scale, fractionally warmer in tonality, but more precise. The 3050 has superior focus in the midband and is able to eke out extra detail in a way that the NS-F350 cannot. It has a tighter and tauter bass, with a tad more propulsion and it's better able to push the song along. The NS-F350 has a bigger and more powerful bottom end that's obviously less compressed. It also has a slightly better tweeter. Overall, both are excellent value but serve up a slightly different sound.

big-hearted soundstage, underpinned by a strong, deep bass and spacious treble. As the song's chorus kicks in and the band ups its energy levels, it shows off its obvious dynamic prowess – sounding gutsy and assured even in the loudest moments.

Cue up some classic drum and bass, such as Goldie's *Terminator*, and it's astonishing just how powerful it can go. I use an Arcam P49 power amplifier – which isn't short of a few watts – and turn the volume right up. Despite the heavy basslines and frenetic drum machine work in the midband, overlaid by big keyboard pads, it shows consummate poise and surprisingly little compression. Whatever else you may say of it, £500 speakers rarely come as barrel chested as this. Again, the only criticism is more than excused by its price – the bass isn't quite as controlled as it could be. Knock the NS-F350's cabinet and it's not as dead sounding as more expensive designs, and here it shows. Bass drum strikes, especially at high levels, tend to melt into one another a little. Of course, being a reflex-ported design, this will always happen to an extent. Again, I also hear just a slight opacity in what

is otherwise a most satisfying sound. The real sweet spot for this speaker is smooth soul or jazz funk. It has an ever so slightly warm tonality that really seems to gel with Randy Crawford's *One Day I'll Fly Away*. Here, its big, easy nature and excellent sound staging really make the mood. It seems especially good at propagating large amounts of sound around the room, serving up a spacious recorded acoustic inside which all the elements are fairly accurately located. Images don't hang back too far behind the plane of

It certainly doesn't advertise its budget status and you can't argue with the size

the speaker, but the effect is still convincing and immersive. The even-handed midband carries Randy's velvety voice well, with just a touch of nasal coloration to remind me that this isn't an expensive speaker. Similar enjoyment comes with my favourite Debussy Prelude, *The Submerged Cathedral*, where it serves up a warm and spacious rendition, with a fine tone to the piano and an impressive sense of the way the brooding music builds to a crescendo.

Conclusion

At times it proves tricky to gauge this budget box, because it simply doesn't sound like one. You find yourself criticising it for things you'd normally look the other way with on speakers at twice its price. It's an extremely polished performer that can move vast amounts of air without so much as breaking into a sweat. At the same time, it makes music enjoyable and accessible, without being too fussy about the quality of the recording, or the genre of performance ●

Hi-FiChoice

OUR VERDICT

SOUND QUALITY



LIKE: Power; scale; clean and smooth midband

VALUE FOR MONEY



DISLIKE: Slight lack of low-level detailing

BUILD QUALITY



WE SAY: Superb-sounding big box, considering its low price tag

EASE OF DRIVE



OVERALL



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Headmaster

Arcam's new rHead is designed to get the best from a serious pair of headphones, and **David Price** is suitably impressed

Headphones are popular again, and legions of discerning folk are enjoying the superb sound that's possible from a serious pair of hi-fi cans. It's this demographic that Arcam is chasing with the new rHead – people that want the best possible performance, with no regard for portability. A number of these potential purchasers may already have great 'phones which are being held back by the mediocre output stages fitted to their amplifiers and CD players.

Lightning-fast, shimmering with detail and possessed of smooth tonality

Arcam's first full-size headphone amplifier is singularly focused on sound. Features take a back seat, because it doesn't have anything superfluous to the mission such as a DAC, USB or network connectivity. The minimalist fascia offers a choice of 3.5mm or 6.35mm sockets, and a status LED. Round the back, you're given both RCA phono inputs and balanced XLRs, plus a power socket and master switch; the unit is powered by an external wall-wart type power supply. As with all current Arcams, the case is a lovely piece of industrial design cast in aluminium and damped by a rubberised non-slip pad that covers the underside.

Inside its compact box, you'll find a full Class A headphone driver section. Arcam has been working on this for a long time, with founder John Dawson playing a key part in the design and voicing. He demonstrated it to me at the Munich Show in May 2016, with the relish of an eight-year-old boy showing me his new bike. The circuit board I was told, is carefully laid out with multiple ultra-low noise power supplies and a fully direct-coupled signal path. The volume control is an ultra-linear analogue resistive ladder device, as used in the flagship A49 integrated amplifier. This is said to minimise tracking errors, which bedevil lesser solutions. It's also fitted with a comprehensive protection system to save your hi-fi headphones, should the worst happen.

Sound quality

If the quoted figures are anything to go by, this should be a fine performer. Frequency response is a solid 10Hz to 20kHz, with very low distortion (0.001 percent distortion, 2V output, 32ohm load), and a power output of 2W into 16ohm. Recommended impedance is 16 to 600ohm. It's highly neutral sounding and doesn't interfere with the signal it has to work with, nor does it show any fear of the headphones it is asked to drive. Strong, fast, detailed and dynamic, the rHead makes you want to keep on listening through to the early hours. Whether using Oppo's £1,099 PM-1 or a pocket-friendly Sennheiser

DETAILS

PRODUCT
Arcam rHead
ORIGIN
UK/China
TYPE
Headphone amplifier
WEIGHT
710g
DIMENSIONS
(WxHxD)
194 x 44 x 135mm
FEATURES
• Inputs: 1x RCA;
1x XLR
• Headphone
outputs: 1x 3.5mm;
1x 6.35mm jacks
• Class A amplifier
DISTRIBUTOR
Arcam
WEBSITE
arcam.co.uk

PX-100 at £30, it lifts the lid on the recording to reveal the music in all its glory. It's surprising just how good it makes cheaper headphones sound.

Goldie's *Terminator* is chosen as my first torture track, and the rHead shrugs it off and asks for more. The trick it pulls off so adeptly is to punch out a really strong and satisfying bottom end – one which makes even low-cost open-backed portable 'phones sound muscular – yet it still delivers a supple and rhythmically engaging midband. Add to that a deliciously well defined and extended treble without an ounce of grain, and you get the picture. Here's a headphone stage that's lightning-fast, shimmering with detail and possessed of a silky smooth tonality.

Considerations of hi-fi reviewing seem to drift away as I run the gauntlet of my collection, enjoying this great window into the music. I keep coming back to its innate transient speed, which is all the more apparent through headphones with ultra-light transducers. This makes music a thrilling listen, yet it never displays so much as a hint of harshness. Rather, as Isaac Hayes' classic Stax-era song *Café Regios* shows, it is consummately neutral with a smooth and creamy vocal tone. The only observation to make is that people seeking an overly warm and euphonic sound won't appreciate its unerring neutrality; it doesn't gild the lily so poor recordings aren't as easy listening as some rivals.

Conclusion

An excellent all-rounder, the Arcam rHead isn't the cheapest such product around but it still offers fine value for money. It has every practical feature you need and is in a neat, unassuming yet effective package. Sonically the very model of transparency, it is musically satisfying and doesn't shy from driving difficult headphones. What's not to like? ●



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Highly revealing yet musical sound; excellent build quality and finish

VALUE FOR MONEY
★★★★★ **DISLIKE:** Faces some stiff competition at this price point

BUILD QUALITY
★★★★★ **WE SAY:** Superb value headphone amplifier in a pretty package

FEATURES
★★★★★

OVERALL





Essential selection

Ed Selley thinks Pro-Ject's latest Essential deck is the new one to beat in the competitive entry-level turntable market

The number of turntable models on sale last year costing less than £500 was possibly among the highest number we've seen since vinyl officially became a mainstream format. With the influx of new models looking to grab the attention of both newbie and returning vinyl fans alike, specifications have grown and finishes and performance levels have improved significantly. This is all great news for potential purchasers as competing brands raise their game to ensure they remain competitive, and Pro-Ject's latest Essential deck follows the trend and builds on it.

If you're thinking that this latest version of the Austrian-based company's Essential line is simply a mild spruce up of the previous model, think again. Like its predecessor reviewed in *HFC* 376, the Essential III A is an unsuspended, belt-driven design, but is beefed up by a number of significant additions that were aftermarket extras for the forerunner. The most noticeable of these is the inclusion of Pro-Ject's Acryl-IT E platter in place of the MDF one that was supplied with the Essential II.

Less obvious, but no less significant, is the move from an Ortofon OM5 moving-magnet cartridge to the

higher-specification OM10 that comes bundled with the new deck. The two cartridges might appear identical to the naked eye, but the more advanced stylus profile of the OM10 cartridge should allow for higher performance over the previous model. Furthermore, an internal ground link for the motor simplifies the number of connections to the amplifier, and aims to reduce overall noise levels.

The motor driving the platter remains unchanged and is the same single-speed unit with 33 and 45rpm selected by moving the belt position on the pulley. The other big carry over is the 8.6in tonearm, which is one of the more venerable parts of Pro-Ject's turntable inventory, but no less effective for that. Connection to an external phono stage now comes via a smart-looking OFC copper interconnect, which appears to be much more substantial than most rivals and feels usefully sturdy.

Visually, the turntable is a genuinely pretty proposition with the gloss finished plinth and acrylic platter improving on its older sibling's aesthetics and giving an improved sense of quality. Black and white finishes are available, but the pick of the bunch has to be the eye-catching red option (shown), which looks even

DETAILS

PRODUCT
Pro-Ject
Essential III A

ORIGIN
Austria/Czech
Republic

TYPE
Belt-drive turntable

WEIGHT
5kg

DIMENSIONS
(WxHxD)
420 x 112 x 330mm

FEATURES
• 33 & 45rpm
• Fitted with
Ortofon OM10
cartridge
• Acryl-IT E platter

DISTRIBUTOR
Henley Designs Ltd

TELEPHONE
01235 511166

WEBSITE
henleydesigns.
co.uk

The Essential is available in black and white finishes, but for us the red is the pick of the pack

more elegant and very smart in the flesh and avoids any of the aesthetic rough edge criticism levelled at its predecessor. Build quality is good with all the major points of contact feeling of a high standard. The compliant feet give the deck a degree of isolation when placed on normal furniture, and the supplied Perspex lid ensures that the Pro-Ject offers a level of useful practicality.

Setting up is an entirely logical and straightforward process. Everything bar a stylus force gauge is included and the whole process shouldn't prove too daunting regardless of previous experience. The only aspect that still lets the side down is the drive belt, which runs around the outside of the platter and can be rather fiddly to fit. What makes this particularly frustrating is the ease with which it's possible to inadvertently snag the belt when lifting the Perspex lid from the front, requiring you to refit it again.

Sound quality

Once up and running and connected to a Graham Slee Gram Amp 2 Communicator phono stage (HFC 407), Audiolab M-ONE integrated amp (HFC 410) and Mission LX-2 standmounts, the new Essential shows that the additions are entirely worthwhile. This is most apparent with the overall tonal balance that it demonstrates. No single part of the frequency response stands out as it is remarkably even from top to bottom.

This can mean that in a side-by-side comparison with similarly priced models, you might find that it appears to lack the midrange warmth that some associate with vinyl, but it is unquestionably more accurate. If you miss this bloom and sense of warmth, you do have the option of tweaking the output by partnering it with a phono stage that accentuates the midrange, which is far more

preferable to having to remove it by the same process.

It also possesses excellent tonality. Listening to Arcade Fire's *Funeral* sees the Essential III A put in an extremely compelling performance. The simple, almost waltz-like *Crown Of Love* is wonderfully handled with Win Butler's vocals beautifully defined in the centre of the soundstage and entirely distinct from the rich and vibrant string section and Régine Chassagne's vocals that support him. There is a sense of space around the performers that greatly enhances the feeling of realism and lends the performance a sense of effortlessness that is all too often absent on rival offerings at this price point.

The Essential sets the new benchmark in the sub-£300 turntable market

Switch to the more ballistic *Ibifornia* by Cassius, and there are clear and discernible limitations to the absolute bass depth that it can produce, but the low end that is on offer has plenty of texture and detail to it and is beautifully integrated into the rest of the performance. This integration works to ensure that the Essential III A never sounds slow or bloated and there is a sense of life and energy to the way it makes music that compliments the infectiously boppy *Go Up* and ensures that before too long, you stop trying to evaluate what the Pro-Ject is doing wrong and instead start to enjoy what it is doing right.

This fundamental musicality is its greatest asset. It shuns an overtly attention-grabbing presentation in favour of a more balanced and considered approach that is

admirably hard to wrong foot across a wide variety of different musical genres. The presence of a good phono stage undoubtedly helps here and to really get the benefit of what it is capable of, it's best to try and spend at least a three-figure sum on a suitable partner for it.

Even more impressively, if you connect the fearsomely competent Cyrus Phono Signature (HFC 408), the Essential III A reveals few gremlins. The noise floor is extremely low, suggesting the revisions to the grounding have been worthwhile. The same even tonal balance and engaging timing are still present and it remains a very satisfying listen even when part of this rather financially lop-sided system.

Conclusion

This is a serious statement of intent from Pro-Ject at the asking price. The Essential III A doesn't simply better the performance of its predecessor, it realistically sets the new benchmark in the sub-£300 turntable market. There are rivals available offering slightly more extensive specifications, but few have the same level of finish and aesthetic, and none can match the Pro-Ject's balance of refinement and energy in their performance ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Wonderfully balanced and engaging sound; great looks and build

VALUE FOR MONEY



DISLIKE: Slight lack of bass weight; drive belt

BUILD QUALITY



WE SAY: A seriously talented arrival to the budget turntable market that sets a new standard at the price

FEATURES



OVERALL



CONNECTIONS



- 1 Ortofon OM10 cartridge
- 2 Acryl-IT E platter with felt mat
- 3 Speed selection pulley
- 4 8.6in tonearm



Signature tune

Polk Audio's diminutive S15 standmount offers something a little different to the norm, says **David Price**

Great American Sound", is how Polk Audio describes itself, but is there such a thing? Does music sound different in San Francisco to how it does in Slough? Unless the weather or the wine play an active part, then possibly not – but then again, didn't people once used to talk of a "British sound" in the same breath as the words Quad, KEF and Celestion? Four decades or so ago, I remember hi-fi nuts talking about how different US brands like Acoustic Research, KLH and JBL sounded to UK fare – so maybe there's something to this...

Another American brand that appeared on the scene in the early seventies was Polk Audio. A bunch of physics and mechanical engineers from Johns Hopkins University set up the company in a garage in an old

Victorian rooming house in Baltimore, Maryland. Since then the brand has grown assuredly, but has failed to make the grade in the UK for much of that time. That's not down to the quality of the product, but the vagaries of British distribution and the difficulty of selling into one of the most mature hi-fi markets in the world. After all, it's not as if Britain needs another loudspeaker, is it?

The California-designed, Baltimore-engineered Signature S15 you see here is a little different – and interesting enough to be considered by Brit buyers on a budget, too. It's certainly not just another 'me too' small standmounter that's indistinguishable in engineering terms from the rest of the pack. For starters, there's a 25mm Terylene dome tweeter, complete with

DETAILS

PRODUCT
Polk Audio
Signature S15

ORIGIN
USA/China

TYPE
2-way standmount
loudspeaker

WEIGHT
5.9kg

DIMENSIONS
(WxHxD)
191 x 305 x 259mm

FEATURES
• 25mm Terylene dome tweeter
• 133mm mica/polypropylene mid/bass driver
• Quoted power handling: 2x100W (8ohm)
• Quoted sensitivity: 88dB/1W/1m

DISTRIBUTOR
Polk Audio

TELEPHONE
+1 410 3583600

WEBSITE
polkaudio.com

curvilinear formers said to extend response and lower resonance. It sports a ceramic motor structure, and is claimed to extend up to 40kHz; this is not your average low-cost metal dome. The 133mm mid/bass unit uses a cone made of Mica-reinforced polypropylene with butyl rubber surround, a ceramic motor structure and high-temperature Conex fibre spiders. Again, it's a little different from the norm, and has the added benefit of giving a striking look.

As you'd expect, the compact cabinet is a bass reflex design; fans of alliteration will doubtless hail its Polk Power Port, which is an interesting twist on the theme. Effectively it's a rear-mounted plastic surround which smooths the airflow on its way in and out of the cabinet, and is claimed to offer 3dB more output than conventional designs. The enclosure is pretty well done for the price, with a decently rigid and quiet MDF construction that's braced in the right places inside. It has rounded edges, but the jury's out on just how useful these are in sonic terms. As far as aesthetics go, the S15 comes in black washed walnut finish. Gold-plated five-way binding posts do the business around the back.

With a claimed sensitivity of 88dB, the Signature S15 isn't the most efficient loudspeaker, although it will get the job done with most amps you'll likely be using to drive it. Ideally, you'd be wanting to use a good solid-stater such as the new

Cyrus ONE (p33). Placement isn't difficult; I find the Polk to be less fussy than many small standmounts. It proves happiest with about 30cm of breathing room behind it, gently toed-in and with its tweeter at ear level. This done, it serves up a nicely balanced performance.

Sound quality

So what of this American sound? Polk might just be on to something. Take Q Acoustics' 3020 (HFC 402) for example, which is a similar design that's very European with a smooth, even, open and enjoyable sound. The S15 is a good deal more feisty, offering up a more animated view of the world – and one which, if we're honest, isn't quite as refined.

Goldie's *Timeless* is a wonderful slice of electronica that has an altogether more forceful feel via the S15. You wouldn't naturally think to play this sort of music through something with a mid/bass unit little larger than some midband drivers, but it handles things pretty well at most volume levels. It sounds alert and alive, and takes an obvious interest in the rhythm, especially the interplay between the snare drum and hi-hat of the drum machine. The Q Acoustics by comparison is less emphatic, but revels in the swirly, atmospheric synthesiser backing more. The Polk is punchier and certainly seems to want more power fed into it – this done, it proves an exciting and enjoyable listen.

Of course, it's unreasonable to expect any kind of deep bass from such a speaker and nor is there any, although the company has voiced it to give a solid upper bass. It's not that strong but it is taut and tuneful, which gives the effect of making this part of the frequency range a bit part

of the performance. By the standards of bigger and more expensive rival standmounts, the dinky S15 is lacking – but still sounds well integrated and tuneful in the bass. There's little sense that you're listening to a terribly compromised speaker, because it just gets on and has fun. The only problem is when you really push the volume up and it begins to compress things; the Goldie track losses some of its composure. That's to be expected of course, because Polk has designed it for smaller spaces.

Moving up into the midband, the S15 does a good job of throwing the sound way beyond the confines of its cabinet. That's the great thing about a small speaker, when properly done – it images right out of the box. It tends to push the stereo soundstage forward just a touch; it doesn't drop things back to offer an accurate sense

A bright, upfront personality that doesn't obsess too much on details

of depth perspective. Still, the result is a wide and immersive sort of sound that will work well in smaller listening spaces. It doesn't quite have the pin-point precision when locating the instruments in the stereo mix of some small rivals, but once again it's excused because of its low price. As Lou Donaldson's *Alligator Bogaloo* shows, spatially it is good if not quite exceptional at the price.

Tonally it presents a quintessentially American crispness to music. Michael Jackson's *Off The Wall* is a magnificent analogue production, but the Polk doesn't quite impart the richness and warmth of the sound. There's a kind

of dryness to it that's not unpleasant and gives it a sort of 'matter of fact' character; this is especially evident when placed next to the warmer 3020. At high levels, the Polk can get a bit shouty in the upper midband; there's a subtle hardness to it that you don't find in some European-designed models. However, when well matched with a good patterning amp it won't really intrude and gives the speaker a bit of an edge; it makes The Strangler's *Nuclear Device* a lively and powerful listen that really gets the joint jumping.

The traditional approach to treble on inexpensive budget loudspeakers is to tame it, and many of the Polk's rivals have a rather rolled-off, nondescript sort of sound up top. The S15 is a little more lively, and this is good and bad; play a poor recording via a bad source and it's not going to be an easy listen. However, do the opposite and it proves an engaging and entertaining partner; it's good with transients and this makes for a pleasingly propulsive and enjoyable sound. Isaac Hayes' *Life's Mood* is fun, with a shuffling beat, punchy bass and sparkling cymbals. Although obviously coloured in the midband (as you'd expect at the price), it still delivers the vocal line in an emotionally poignant way. It isn't detailed enough to dot all the 'i's and cross all the 't's, but it still gets the big picture just right. For its size and price, it's a feisty and fun performer.

Conclusion

Perhaps that strapline isn't so silly after all, then. The Polk Signature S15 provides a strong performance at its price, and – yes – it's a little different to what we're used to in the UK. This speaker has a bright, upfront and engaging personality that doesn't obsess too much on finer details, but loves to party. There's certainly a space for this sort of sound, so it's well worth auditioning if you're in the market for such a thing ●

CONNECTIONS



- 1 25mm Terylene dome tweeter
- 2 Power port
- 3 4mm speaker binding posts
- 4 133mm mica/polypropylene mid/bass driver

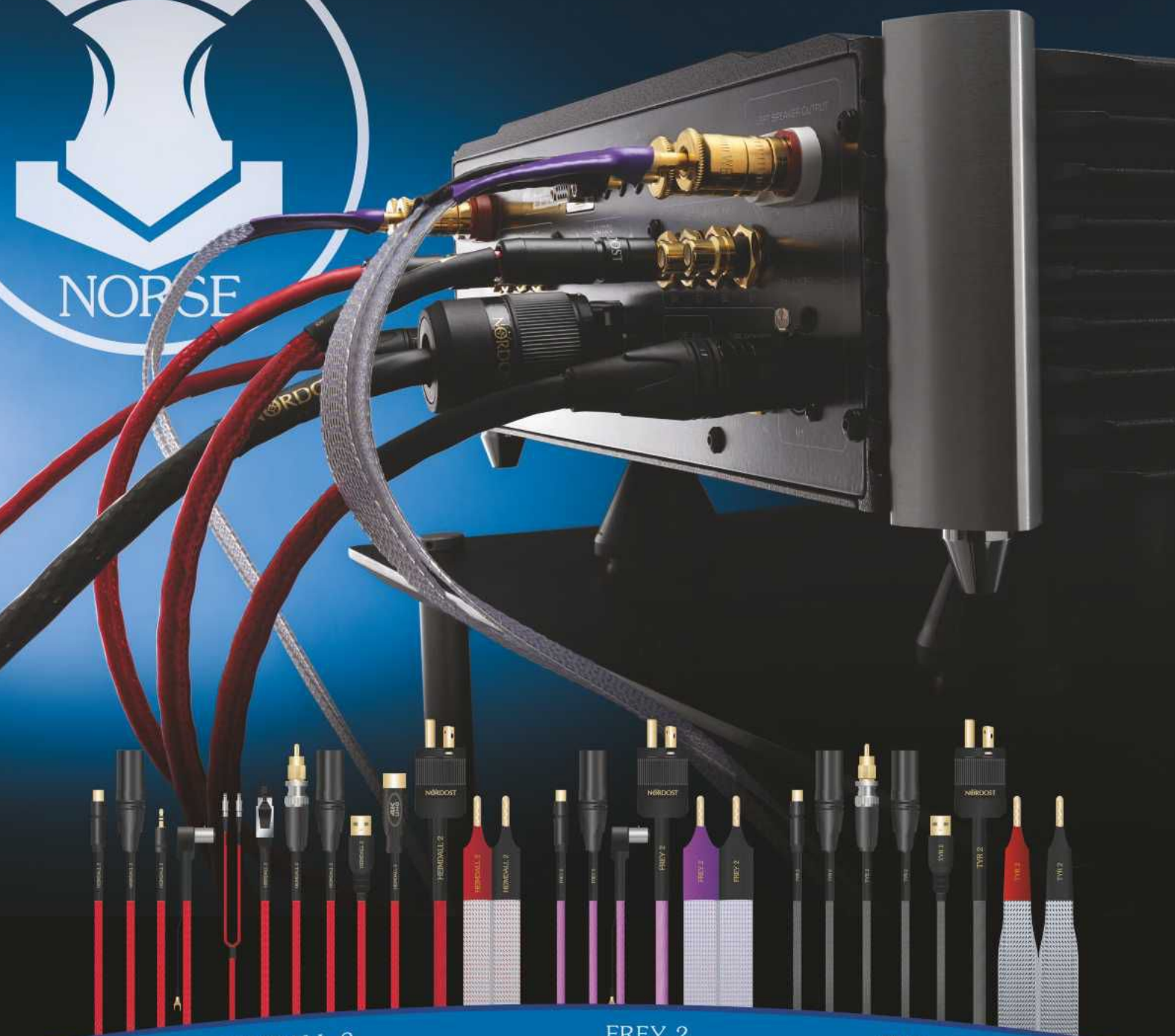
Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Fun and feisty sound; value for money
VALUE FOR MONEY ★★★★★	DISLIKE: Lacks refinement compared with some rivals
BUILD QUALITY ★★★★★	WESAY: A welcome addition to the small standmount speaker segment
EASE OF DRIVE ★★★★★	

OVERALL





HEIMDALL 2

FREY 2

TYR 2

NORSE 2 CABLES

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Pocket symphony

Oppo has updated its portable headphone amp/DAC to SE spec, **Ed Selley** finds out what's changed

Add-on DACs look like being a big thing in the coming year as manufacturers follow Apple's lead and remove the headphone socket from their upcoming smartphone models. The change means that they are no longer a deluxe add-on, but are instead the only means of listening via a conventional pair of headphones or earphones.

Oppo was quick out the blocks with the original HA-2 launched last year and reviewed in *HFC* 397, and we became keen fans of the elegant little DAC. It hasn't let the grass grow under its feet, however, and the HA-2 SE claims performance improvements. Anyone looking for sweeping changes on the outside is likely to be disappointed, though. Save for the addition of an 'SE' moniker, the new model is identical to its predecessor. This is no bad thing as it is a great piece of industrial design. The decision to make it much the same size and shape as a smartphone means that it is easy to use alongside one, and the leather and metal finish is very attractive.

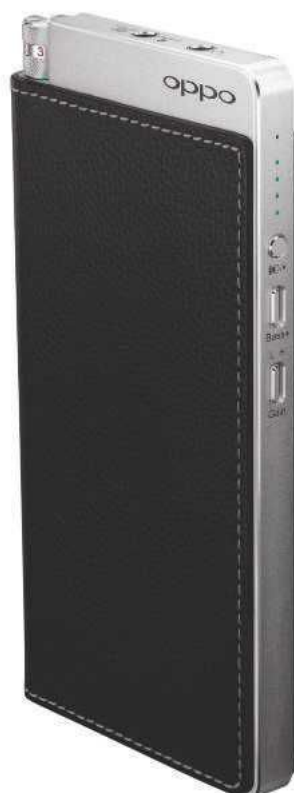
Internally, the SE model moves to a newer version of the ESS Sabre DAC – the ES9028-Q2M. The formats and resolutions supported remain unchanged – with 32-bit support already in the specification – but performance is improved. This is partnered with a new headphone amplifier section that is intended to reduce noise when used with sensitive in-ear monitors.

Connectivity and features are unchanged and the HA-2 SE has a single USB input split between normal and micro Type-A connections and a 3.5mm headphone output combined with a second 3.5mm connection that can be used either as a line out or an analogue line in. This is less connectivity than you get with

Chord's Mojo (*HFC* 405), but more than AudioQuest's DragonFly Red (*HFC* 414) can muster. The Oppo retains the very useful ability to shunt charge from its internal battery to your phone or tablet, allowing it to act as an external power supply.

Sound quality

Given the lack of visual clues about the changes to become the SE, it is good to note that sonically, the new model makes some useful gains over the old one. With an original HA-2 running in parallel connected to a Lenovo ThinkPad, the single biggest change is the drop in the noise floor. With the full-size Sonus faber Pryma 01 (see p63), this does not make an appreciable difference, but with a pair



DETAILS

PRODUCT
Oppo HA-2 SE
ORIGIN
China
TYPE
Portable headphone amp/DAC
WEIGHT
175g
DIMENSIONS
(WxHxD)
68 x 137 x 12mm
FEATURES
● 32-bit/384kHz and DSD256 capable DAC
● Inputs: 1x USB-A; 1x USB micro-B; 1x 3.5mm input
● Outputs: 1x 3.5mm headphone jack; 1x 3.5mm line-level
● Quoted battery life: 13 hours
DISTRIBUTOR
Oppo UK
TELEPHONE
0345 0609395
WEBSITE
oppodigital.co.uk



of Noble Dulce Bass earphones – which are much more sensitive – the improvements are readily apparent and the SE is impressively silent.

As a result, with the 24/88.2 rip of Dead Can Dance's *Toward The Within*, the sparse and simple performance of *The Wind That Shakes The Barley* is fleshed out with a greater sense of the venue and the audience, and gains a considerable boost to the realism and presence as a result. The tonality with voices in particular is weighty and natural and bass extension is exceptionally good.

Ask it to deliver something a little more frenetic – in this case the 16/44.1 download of Grimes' *California* – and there is a sense that it wants to have a bit more fun than its predecessor. Without altering the fundamental accuracy of the sound, there is a little more urgency than before. The odd bassline has more definition and energy to it, which draws you into the music much more effectively.

Some traits of the original unit have been retained, and I still feel the low gain setting sounds considerably better than the high setting. The good news is that there's enough grunt so that even in the low setting it should handle most headphones with ease. The bass boost facility is best left set to off as this can be somewhat unruly, and spoils the otherwise excellent tonal balance.

Conclusion

If you already own the original HA-2, there probably isn't a great deal of point upgrading to the SE version. What it does ensure, however, is that an already excellent product has improved even more in expectation of the portable headphone and DAC market becoming a lot more significant in the year ahead. Viewed in this context, the HA-2 SE is a very desirable add-on device at a highly tempting price ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Powerful and involving performance; good build; good looks
VALUE FOR MONEY
★★★★★ **DISLIKE:** Works best in low gain mode
BUILD QUALITY
★★★★★ **WE SAY:** Some detail revisions to an already excellent product make for a very capable DAC indeed
FEATURES
★★★★★

OVERALL





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DETAILS

PRODUCT
Sonus faber
Pryma 01

ORIGIN
Italy

TYPE
Over ear, closed-
back headphones

WEIGHT
355g

FEATURES
• 2x 40mm Mylar
Dynamic Driver
• Quoted sensitivity:
118dB/mW
• Detachable 1.3m
cable with 3.5mm
jack

DISTRIBUTOR
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liquid quality that never sounds harsh or thin. There is also no shortage of bass. Listening to the Ramin Djawadi score for *Westworld*, the electronically augmented orchestra has a real sense of scale and presence to it. There is also an impressive openness to the way that material of this scale is handled. For a closed-back headphone, the Pryma 01 does a fine job of opening the sound beyond the confines of the earpads.

Where the performance is less confident is the midrange. Like the upper registers, this is smooth, natural and unfailingly easy to listen to, but it always feels somewhat recessed in comparison with the bass and treble output. Switching to the studiously neutral Chord Electronics Mojo (HFC 405) doesn't do very much to alter this balance. There is a positive to this, though, that suggests that it might be at least partly intentional. If you use the headphone on the move and in noisy locations, the slightly boosted extremities tend to even out slightly, making it well adapted for use out and about. The performance also holds up well when you switch to compressed media like Spotify and internet radio services. Whether Sonus faber has looked at the likely usage patterns for its headphone and tweaked it accordingly isn't clear, but it certainly works out that way.

Conclusion

The Pryma 01 is a slightly curious headphone. It is unquestionably attractive and it feels special to use without being impractical. What it cannot do so effectively is act as a true all-rounder in the manner that some rivals can, and when compared with more specialised 'nomad' headphones, it feels a little lacking in features and practicality. It certainly has considerable promise, but doesn't quite manage to deliver that decisive knockout blow ●

Buckle up

Sonus faber's first headphone is achingly chic, but **Ed Selley** wonders if it can match the style with a decent performance

If you have a brand reputation for making beautiful loudspeakers, moving into another area can be fraught with complications as you struggle to achieve the same elegance but in a different medium. Nonetheless, Sonus faber launched the Pryma sub brand of headphones back in 2016, and the Pryma 01 is the first model to hit the market.

It adheres to the 'nomad' category of headphone, meaning that it's smaller than a true home headphone for use on the move but up to the job of home use if desired. Each enclosure completely covers the ear and contains a 40mm dynamic driver made from Mylar. The quoted performance figures look entirely competitive and, on paper at least, this is a serious multi-use model.

As a Sonus faber design, efforts have been made to ensure that it looks and feels a cut above the competition. It comes in a variety of finishes that range from the black and brushed metal of the review sample to a rather more subtle combination of white and brown, which is referred to as coffee

and cream. The quality of the materials and the way they are assembled is very impressive, and the result is a solidly elegant design.

It isn't without some quirks, though. The headband and earpads are separate from one another and instead of a conventional slider, they attach by inserting the clip of the earpad into a series of holes in the headband before rotating to secure it. It is clever, but I'm not entirely sure I can see any benefit over a regular slide headband – particularly as the hole spacings are unlikely to provide an optimum fit for all and each earpad is connected by a cable.

Sound quality

In use the Pryma 01 has a few immediate standout traits that in some ways replicate the behaviour of Sonus faber's box loudspeakers. Connected to the Oppo HA-2 SE (see p61), the most significant impression that comes across is that this is an extremely easy headphone to listen to for long periods of time. There is no shortage of treble energy, but it is consistently delivered with an almost

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Handsome looks; comfort; excellent build

VALUE FOR MONEY
★★★★★ **DISLIKE:** Headband buckle; recessed midrange

BUILD QUALITY
★★★★★ **WE SAY:** A good-looking headphone with many likeable features, but it isn't a complete all-rounder

FEATURES
★★★★★

OVERALL



The golden age of digital audio

David Price talks to the gifted engineer that played an important role in the development of CD

Rainer Fink is a modest man, but doesn't have much to be modest about. Nowadays he is the product manager for Marantz, spending his life developing new designs with his friend and colleague Ken Ishiwata in the company's European headquarters in Eindhoven. However, catch this quietly spoken German engineer off duty, and it turns out he played a key part in the development of consumer digital audio – and specifically compact disc – in the latter part of the eighties and early nineties when he was a senior engineer for Philips. Rainer's career provides an interesting insight into the development of the format, and he kindly took the time to talk to me at the end of last year.

"I was born and grew up in an industrial area east of Düsseldorf. I studied electronics very close to Essen and actually lived in the next town, just 10km away. My course was a strange mix of topics, so I did acoustics and RF technology and information technology. Because of the latter, I graduated in doing something in the research of coal mining. This area, you know, it was a coal mining district. But I loved music and the hi-fi gear that goes with it, and that is why I did some courses on acoustics. Graduating from university I got the opportunity to join Valvo, which was quite famous for its tubes and part of the component business for Philips."

Rainer had the chance to join the audio department, and at that time most of their projects were on FM tuners. "So, in [the] mid-to-late eighties they were working on the first solutions to come up with RDS for FM tuners. Most of my colleagues were older with a lot of experience, but not a lot of knowledge on digital signal processing and digital converters. So they decided to hire a couple of new guys to work on CD projects and digital audio. That is where, not only me, but also a couple of colleagues were hired and then also a kind of digital audio department was built."

The glory days

He remembers Philips in the late eighties: "At that time the company had the biggest research lab in Europe and maybe even the world. There were a couple of thousand people working just in research and development, doing all kinds of things – chip technology, etc. – and they came up with basic simulations, what is possible with this oversampling rate and noise shaping. That was really basic research, which at that time was really difficult to do because computers were not so powerful as they are today. We used this research work to define new digital converters and there I was involved."

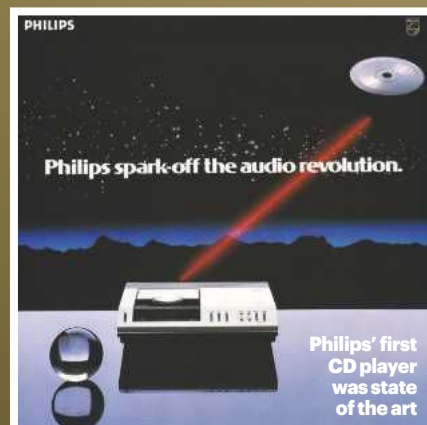
Rainer's main role was to make things work and find customer solutions – in other words,

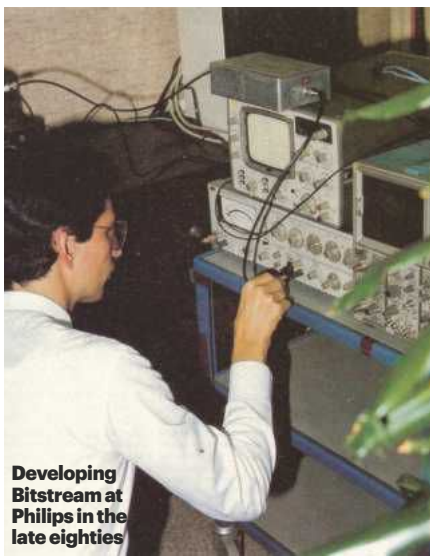
potential markets for these clever new chips. "I got the first chips from the factory and had to check it was doing what it should do, and come up with proposals to improve them if we could not fulfil the specification. I was working with our guys in the factories who had to implement it on the chip; I had to see and understand what was built with the research people. I had the opportunity to visit companies and present the technology and see how it could fit into their ideas. Getting the technology out to people was one of the tasks that made this job so attractive for me."

He really dug in at Philips just at the time the company was in its pomp. "I started by



Rainer at Marantz's Eindhoven HQ





Developing Bitstream at Philips in the late eighties



After his Philips years, he became Product Manager at Marantz in 1990

doing evaluations on the classic TDA1541 16-bit, four times oversampling DAC chip, and then for nearly three years I was working on what we called Bitstream DACs – the third generation of chipsets for CDs. With the third generation we learned many things that would be helpful later on; what we called DAC3 was the first one with digital filtering, noise shapers and even an analogue stage built in. The original intention of this was to get something small, which could be used for portable use. There were a couple of features like extended temperature range down to -40°, so it could work in cars. Actually, we learned that it is not such a good thing to integrate everything, and also that working in dual differential mode for each channel made it sound much better. Then we kicked out certain things to make it less noisy and took out the analogue part, to make the DAC7.”

Thinking big

Rainer remembers that this was the golden era of digital, when Philips was really thinking big. “We started to look at more than just CD players – like in-car use, portable DAT recorders and sound cards. So, I visited a lot of American companies, for example the company run by Steve Jobs after he left Apple. All these manufacturers at the time were thinking about audio cards in desktop PCs. Alpine came up with products with our DAC inside and Sony was using it for a so-called digital amplifier at that time, [it] mixed an analogue amplifier with a digital

I/O functionality. Sony’s Discman portable CD was getting better, too. Those early Bitstream chips made all this possible; the idea was to have something lower cost because at the time a lot of the multi-bit DACs needed tweaking to get them to give their optimum performance; people had to do some adjustments and this was costly over a large production run. Bitstream for the first time was a universal, compact chip at a relatively low cost.”

“You could have 2mm or 3mm scratches on the disc and there were no clicks whatsoever!”

Many people romanticise those early first and second-generation Philips CD players, but Rainer believes they were far from perfect and was happy to move on in many respects. “They were costly and complex and had limited appeal. Quality was an issue and even though the TDA1541 DAC chip was really good, it had a lot of external components to work and needed 15V, plus all sorts of other things you can never have in portable use. Things were changing fast – as now – and new applications came up. As I was doing all this, one didn’t really realise what was really going on, because I was so close to it. When I joined Marantz in 1991, I was soon working on a CD recorder, yet nowadays it’s ancient

MARANTZ SA-10/PM-10

Launched on 1 December 1996, this new Marantz SACD player/amplifier combo is technologically the boldest thing the company has done in many years. The SA-10 (pictured) replaces the SA-7, and sports a bespoke, newly designed optical disc mechanism that can also read DVD-ROM discs with FLAC, DSD, ALAC or MP3 files stored as data – in addition to its standard CD and SACD functionality. It has a very powerful digital signal processing suite called Marantz Musical Mastering, which involves custom hardware and software to carry out oversampling, filtering and conversion. The SA-10 also functions as a DAC and has extensive galvanic isolation, optimised for USB playback. The PM-10 integrated amplifier sees Marantz for the first time using an analogue high-speed Pulse Width Modulation switching power amplifier section working in Class D. The company points out that it’s not ‘digital’ and nor does it have a DAC! It does, however, have twin switch mode power supplies, to complement the one large toroidal, and runs fully balanced and in dual mono configuration. Marantz says this particular design was chosen to give a high power output (claiming 2x200W RMS into 8ohm, twice that into 4) in a comparatively compact package; the PM-10 is still a large product, but smaller than the monoblocks it supersedes. Both products have obviously been built with meticulous attention to detail and with little concern for cost; UK prices haven’t been announced so far, but expect both pieces to cost between £5,000 and £7,000.



history because nobody buys such a thing for hi-fi; if you even burn your CDs, you do it on a PC, right?”

To show how close to the cutting edge Philips was running back then, Rainer points out that just five years earlier, it would have been impossible to have done a Bitstream DAC, simply because of the slower speed of the chips that were commercially available.

Fishing for chips

“There was also a big change within Phillips, as the technology was NMOS and we began to move to CMOS with its lower power consumption, and 5V supplies, and so on. You could say that the TD1540 and the 1541 were the necessary things to get the product to market, but the new Bitstream chips were how Philips wanted the concept to be – cheaper and more consistent and more durable. As for the sound quality, at that time we design engineers personally never checked. Instead, we left it to the experts judging it, and the customers who bought it. Remember that we were making chips, not finished consumer products. Manufacturers like Sony did listening tests and came up with requests...”

The early nineties was a febrile time for DAC technology, with everyone racing towards different goals at great speed, remembers Rainer. “There was a lot of oversampling developed parallel to us. Development from Japan, which was then called MASH conversion by Technics, for example. Instead of our 1-bit pulses they used something like a PWM signal with something ▶



Philips CD624 (1991) was one of the first Bitstream CD players

marantz

like 16 steps, which was kind of a 4-bit system. The idea of both concepts was to have something that is giving us the opportunity to get better accuracy at 16-bit. On one hand, in differential mode the DAC3 chip that we designed reached 96dB, which was the theoretical limit of the 16-bit system. But that was also the time that in recording studios and multimedia applications people had started to think about 18-bit, 20-bit or even 24-bit. That's when the demand for higher resolution came up."

The Marantz years

"I became product manager for Marantz in Germany at the end of 1990. At that time, especially in the UK, Marantz was doing very well particularly with CD-50 players and the matching amplifiers. That was the time that this SE concept really went over the top in the UK. In Germany, after all the restructuring, we had a very hard time to get distribution right, to get good press because the German reviews were very technically oriented. They were doing a lot of measurements and proper listening. Coming straight from Philips and knowing the latest technology, I had some quite controversial discussions with Ken about whether we should give up on the TDA1541 DAC chip. He didn't want to! He's a real fan of the chip and I have become so too, when working on the Marantz CD-7 project. I must say I really appreciate the sound of that machine. I like the character, no doubt."

Still, as a mainstream manufacturer of affordable machines, Marantz could not stay wedded to the past. "The theoretical advantages of the Bitstream concept, and having something new and fresh, was a different feeling to going to the press and saying that our new machine has the same chip as before. Saying: 'Oh, we changed a little bit here and a little bit there' isn't the most exciting story! Still, it wasn't easy because there was a very mixed reaction to Bitstream in the early days – it took us one or two generations of middle class CD players to bring it to a very good level. The CD-50 SE

was very successful, but we had to push hard to get the Bitstream ancestor, the CD-63 back up there at the top of the charts!"

"Middle class' CD players were always the great strength of the Marantz brand in the UK of course, although a little lower down the scale than the best sellers in Germany. "The CD-63 KI Signature was a great machine for the UK, but in the German market we focused on more premium products like the CD-17, CD-10, CD-16 and so on. They were big rivals to Sony's CDP-X779ES, and suchlike. We specialised on upmarket, but not completely crazy priced machines. It was a fantastic time. The team spirit within Marantz has always been great, but it was exciting when we were still heavily working with Philips components. But nothing lasts forever and the Dutch giant began to move away from the consumer audio market..."

At this point, in the mid-to-late nineties, those Philips Bitstream chips were beginning to work their way out of the system, and the company's iconic CD mechanisms too. "DVD appeared and so the focus of Philips moved away from audio and then effectively pulled the plug. They also decided to move away the

"As for the sound quality, we design engineers never checked. Instead, we left it to the experts"

focus of chip development. Things were going much more in the direction of video and computer chips, and they did lots of special developments for graphic cards and display drivers, those kind of things. What they did was start to integrate parts of their audio technology into, for example, TV sound chips to bring the chip count down. This wasn't about improving the performance any further; then they decided to sell the semi-conductor division around the turn of the millennium and it was the end of an era."

The same happened with disc transports – on the first CDM-1 and CDM-2 machines with swing-arm technology the error correction was really top notch. Rainer remembers that: "The CDM-4 that followed came in several versions. We used both plastic and metal at Marantz, depending on the product. You could have 2mm or 3mm scratches on the

disc and there were no clicks whatsoever! It used memory and in those chips we implemented the full strategy to do error correction as much as possible. With the CDM-4 you really had the best of both worlds – the swing-arm mech and really sophisticated error correction. We really liked it, kept it as long as we could, but then computer technology picked up and people wanted higher speed. Two times, four times, eight times normal playback was what people were looking for – the computer business and CD-ROM drives. The CDM-12 that followed was the first non-swing-arm mech from Philips. It was also a good drive, because in the end we managed to find good decoding electronics that weren't from Phillips any more, because by then Phillips had stopped some of the old devices. After that, there was one more, last Phillips drive. We used it as long as we could, but then began to purchase mechanisms in Asia from various sources over the years."

And so to the future

Was there ever a 'golden age' of early CD for Rainer? "Well, it is possible to say that there was a special period of when, in terms of digital converters from the TDA1541 and then maybe to the latter phase of DAC7 when we got it very stable. Also, with the mechanisms you had the CDM-4 era tied in with that, didn't you? So, if you had a CDM-4 and DAC7 machine then you'd have a great machine I guess! The challenge for us today is to make that new golden age, and it's different now. We used to have to get on planes and go to Japan or China to find the best chips or drives, but now there is a lot of information on the internet. Also, because Marantz and our sister company Denon is so big, as soon as manufacturers have something interesting and new, usually they offer us some samples to evaluate, hoping we'll like it and design it in. We are of course, in very close contact with our regular suppliers and also new ones. If something performs well at the price then we do lots of listening and measurements. In the end, we choose what we want as a company. Being product manager at Marantz has given me over the years so many different jobs and roles – and working for Philips was a great experience. For me it has been fun – the pace of change of technology means it never gets boring!" ●

Marantz's CD-7 (1998) was a fascinating – if short-lived – return to the Philips 16x4 DAC





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THIS MONTH



NEVILLE ROBERTS

EXPERTISE: ENGINEER

Neville has an eclectic taste for classical baroque. His wife was forced to marry his transmission line speakers in the eighties and he collects BBC test card music.



JASON KENNEDY

EXPERTISE: REVIEWER

Editor of HFC from 1998 to 2001, Jason's first turntable was Rega's Planar 3 and Elvis' 40 Greatest Hits was his first vinyl, so don't go stepping on his blue suede shoes.



DAVID PRICE

EXPERTISE: REVIEWER

DP two-finger typed his first hi-fi review 25 years ago. Since then he's edited *Hi-Fi World* and *HFC*. He describes himself as an "unreconstructed analogue addict".



CHRIS WARD

EXPERTISE: REVIEWER

Like his first kiss, Chris will never forget the sound of his first amp – an Aura Evolution VA-100. *War Of The Worlds* and Fleetwood Mac's *Rumours* were his first records.



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You can also send your questions to us via social media:
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Email us at: letters@hifichoice.co.uk **or write to:** *Hi-Fi Choice* Letters, AVTech Media Ltd, Suite 25, Eden House, Enterprise Way, Edenbridge, Kent, TN8 6HF **Your letters** may be edited before publication and we cannot enter into personal correspondence

► Is MQA better?

While listening to music over the Christmas break, I was reading a digital copy of an *American audio* magazine. A reader's letter lambasted it for saying that MQA sounds better than the original, and that this was impossible. If this is the case, MQA could have a major impact on the quality of new vinyl pressings. I have read elsewhere that about 95 percent of vinyl is produced from digital recordings (24/96) due to the deterioration of the master tapes. If they were processed with MQA prior to remastering for vinyl, surely the sound quality would be vastly improved?

Alan Bridgens, by email

LD: Hi Alan, since our *Insider* feature in issue 416, we've seen Meridian's Master Quality Authenticated technology make significant inroads into all areas of the music business. Following a recent announcement at CES in early January – see *Show Report* starting on page 10 – MQA

Is it really true that MQA can have an impact on the recording of vinyl?

material is now available under a new Masters listing through the Tidal desktop streaming platform, which is available to its HiFi tier subscribers.

To get back to your question, though, many respected recording and mastering engineers that have compared their original recordings

with the MQA version share the view that it can indeed be better. But we don't just want to take their word for it, so we got in contact with the director of content services, Spencer Chrislu at MQA Ltd, who told us: "Any release will sound its best when sourced from the highest-quality master. So, yes, we believe that an MQA source used as the master to feed the vinyl cutter will produce the best-sounding vinyl master as well".

► Make the switch

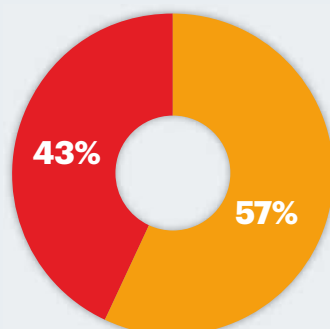
I have been given a golden oldie amp – a Sugden A48. It copes with any cartridge with ease and both new and old vinyl as well as CDs, because it has an attenuator. I quite enjoy my CDs, but not as much as vinyl. Do you think more manufacturers should include attenuators on their gear?

Dennis O'Hara, Leeds ►

WE ASKED...

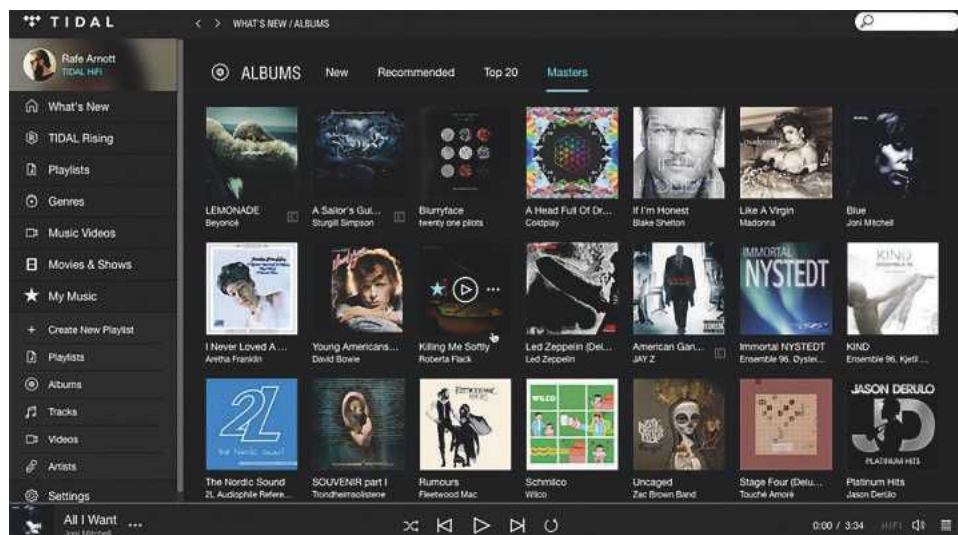
Does leaving an amplifier on continuously improve your hi-fi system's performance?

● Yes ● No



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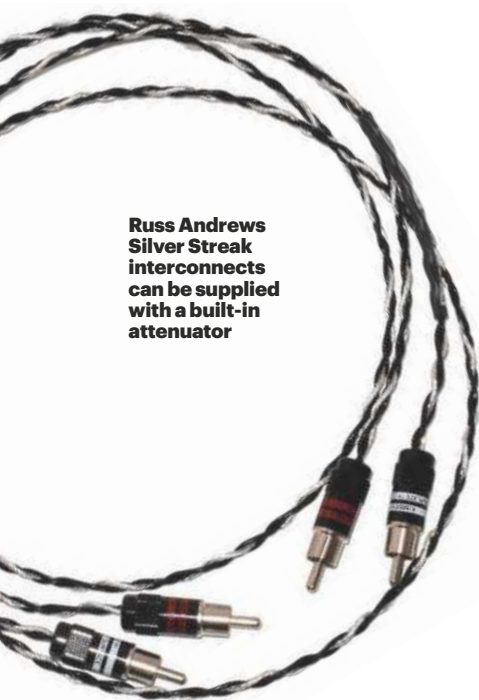
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Russ Andrews Silver Streak interconnects can be supplied with a built-in attenuator

JK: Hi Dennis, this used to be a problem when CD players first appeared because older amps were not designed for their 2V peak output. It can be difficult for amp makers to accommodate the full gamut of source output voltages and speaker sensitivities, but most seem to manage without the need for attenuation. If anyone does have this problem, Rothwell Audio makes inline attenuators that do the trick.

NR: As a rule, it's a good idea to keep the number of switches and filters in the signal path to a minimum, so I'm not a fan of tone controls or switchable attenuators as they can introduce more problems than they solve. When it comes to balancing the outputs of different items of audio equipment, I would consider using an interconnect lead that has a built-in attenuator. For example, Russ Andrews Silver Streak interconnects (HFC 405) can be supplied with a built-in attenuator of 11dB, 14dB, 16dB, 19dB or 22dB. Of course, some items of audio have a means to adjust their output level and they can easily be tweaked to reduce the level or to match the other items that have a fixed output. However, many do not have this facility and another solution is to fit a good-quality audio attenuator on the output of the equipment with the higher output.

CW: You touch on many interesting points. Amplifier controls still create healthy arguments in hi-fi circles. Those that simply seek a 'wire with gain' will prove that every extraneous component in the signal path can only degrade sound quality. However, the purest signal path will sound unbalanced if you can't place your speakers symmetrically, at which

point you'd wish for a balance control. Treble energy falls significantly over distance, so those further away from tweeters could justify winding treble up. Equally, perceived bass is very dependent on room dimensions, construction and furnishing as well as speaker and listening positions, so some could argue a need for bass control. Of course, for many the reality of tone controls is possibly more to do with preference and arriving at a pleasing sound rather than a perfectly even frequency response.

The advent of CD in the eighties seemed to trigger a volume war between manufacturers, with each wanting their product to shout that bit louder than a competitor. This trend creates components that can swamp sensitive preamps, as well as disproportionately boosting distortion. I for one would love to see a return to well-applied attenuation

Do you think more manufacturers should include attenuators on kit?

and impedance matching along a hi-fi chain. A rocket scientist friend of mine reliably assures me it's the ideal way to maximise signal-to-noise performance.

► **Audition time**
My current system comprises a Bel Canto CD2 used as a transport, Cyrus Pre DAC, Cyrus X Power and PMC twenty.23 speakers. Both Cyrus boxes have the PSX-R power supply attached. By means of the tape loop on the preamp, I use a Graham Slee Solo Ultra-Linear Diamond Edition headphone amp and Audeze LCD-3 headphones. I am looking at reducing the box count while retaining or improving the sound quality and wondered if you could recommend some equipment to audition? I want to retain the Bel Canto as a transport as my main source is CD. I was thinking of a two-box solution, ie: DAC/preamp/headphone amp and a separate power amp. My listening is approximately 50/50 speakers and headphones so the headphone amp is equally as important as the speaker side of things. I am open to trying a different 'house' sound to the

JITTERBUG

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Can a £39 insect make all your CD files sound better than Hi-Res?

Yes and no: Using the same equipment and a quality DAC, a 24/96 file (for example) will always sound better than a CD 16/44.1 file ... but, even a single JitterBug will often allow a CD file to be more musical and more emotionally stimulating than a Hi-Res file without the benefit of a JitterBug.

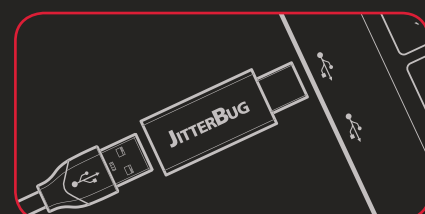
Noise is the problem. Real noise—the kind you can't hear directly. Most often, the word "noise" is used to describe tape hiss or a scratch on a record, but these sounds aren't noise; they are properly reproduced sounds that we wish weren't there.

Problem noise is essentially random, resonant or parasitic energy, which has no meaning. It can't be turned into discrete sounds, but it does compromise signal integrity and the performance of everything it touches.

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A single JitterBug is used in between devices (i.e., in series) as shown below. For an **additional "wow" experience**, try a second JitterBug into another USB port on the same device (such as a computer). Whether the second port is vacant, or is feeding a printer or charging a phone, JitterBug's noise-reduction ability is likely to surprise you. No, the printer won't be affected—only the audio!

While a JitterBug helps MP3s sound a lot more like music, high-sample-rate files have the most noise vulnerability. Try a JitterBug or two on all your equipment, but never more than two per USB bus. There is such a thing as too much of a good thing.



audioquest

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HRS system components will prove to be an essential collection to remove noise from your hi-fi. And less noise, of course, means more music.

Paul Rigby – The Audiophile Man, Dec 16



Chris' elegant stands were developed for him by Andrew Bratt

Cyrus, perhaps a little warmer. My budget is around £3,500, but can stretch a little if necessary to achieve the desired result. Thanks in advance.

Stuart Brundell, by email

JK: Hi Stuart, that's a good budget, you should be able to get what you're after with a bit of auditioning. I would suggest taking the Naim route by combining a DAC-V1 preamp/headphone amp with a NAP 200 power amp. By way of contrast, see if you can audition ATC's P1 power amplifier with a DAC/pre such as the Auralic Taurus, Benchmark DAC2 or even a Graham Slee Majestic DAC as the latter brand seems to work with your headphones. The P1 should be the most powerful and capable amplifier you can find for your budget and I have personal experience of it working well with a variety of PMC speakers, indeed I use it with Fact.8 as my reference.

Take a stand

I read Chris Ward's article *Panel Beater* in your November issue with interest and took particular note of the legs/stands that he used on the Quad ESL-57.

Getting the ESL-57 correctly positioned is a tricky business unless you replicate the original sixties advert by only having one

speaker and sitting right in front of it (while smoking a pipe of course!). After much searching, I have been unable to locate the exact stands that Chris was using, are they available to buy or were they just a one-off? Many thanks for your help.

Martin Pearce, by email

CW: Hi Martin, the elegant legs in the article were prototypes developed by Andrew Bratt, who is very knowledgeable about bringing classic speakers bang up to date. This design is clever for a number of reasons. The speaker is better angled towards the listener; the curves are attractive and, cleverly, the centre of gravity has been thought about to keep them stable and the new legs utilise the existing Quad screw holes on the side, so you can always remove them if selling the panels on to a purist. I don't smoke a pipe, but I can confirm that the legs also work very well with a glass of sherry! These prototypes were hand made in marine ply, but if enough readers are interested, maybe you'll be able to entice Andrew into production. Andrew's website can be found at: anapeachloudspeakerrestoration.co.uk

Power play

I have very much enjoyed your magazine for years, so thanks for your efforts! My main system is Cyrus based and comprises: a Pre XP preamplifier powered by a PSX-R, power amplifier; 1x

Can you suggest something to help me reduce my box count?

SmartPower Plus for LF and 1x SmartPower for HF. The sources include a Cyrus CD i, Pro-Ject Debut III, Denon tuner, a second CD player Marantz CD-63 KI (for the CDs the CD i refuses to play) and a Yamaha RXV-1700 receiver connected at AV mode.

I have recently upgraded the speakers from Monitor Audio's RS8 to the GX300 and I feel there is not enough power from the old SmartPowers. Compared with the easier drive of the RS8, I think that stronger amplification would benefit and bring out more of the magnificent GX300.

My question is: would I see enough difference with a power

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amplifier like the Cyrus Stereo 200, or should I change route and consider something different? My budget is around £1,500. Any advice would be hugely appreciated.

Nick, by email

DP: Hi Nick, I think you've correctly identified the main problem, which is that the GX300 is not the world's most sensitive loudspeaker. It's certainly not bad in this respect, but does really like to be downstream of a good deal of transistor power in order to pull the skin off the rice pudding, so to speak! The higher-end Monitor Audio loudspeaker, in my experience, does need power; it's not an ideal speaker for week knee'd tube amplifiers, for example. Especially in the bass, it requires amps with decent levels of grunt, alongside tight control of the bottom end – if not, it can sound a little lost, opaque and lacking in impact. For this reason, the Cyrus Stereo 200 (HFC 398) would be ideal; it has power and grip aplenty, and a clean, balanced tonality that will work well with the highly transparent GX300.

LETTER
OF THE
MONTH

Low-to-no budget upgrade

How do I get the best from my hobby when I retire when I won't have the same resources that are

available to me now? With five years of work left and an aging hi-fi, how do I go about improving my setup without eating into my retirement fund?

I have been investigating refurbishment and it seems that most aging amplifiers and speakers are catered for in one way or another. Cartridge re-tipping, driver replacement for speakers, servicing for nearly all amps and CD units and, of course, upgrades for those saggy turntable suspensions!

Although the temptation of new equipment might be too much to resist for some, I believe I have still not eked the last ounce of performance from my current system. I guess the old tweaker in me will never die.

It is truly warming to hear the enthusiasm companies have for their equipment and customers

My amp doesn't have enough power for my new speakers, what should I do?

and pleasing to think that there will be someone to look after me and my setup as we age together.

Service is the main stay of most of our established companies and it is this that gives them the good will that eventually leads to future sales through the recommendations of their satisfied customers.

I'm now looking forward to retirement and many years of fantastic music. Many thanks for the mag, keep up the good work!

John MacCormack, by email

LD: Hi John, how to keep a treasured collection of components going and squeeze every last drop of performance from it is a popular topic in our regular *Retro* section, along with our guides on set up, component matching and maintenance advice to keep your components sounding their best. It's not wise to encourage readers to lift the lid on components for health and safety reasons, but I'd be interested

Monitor
Audio's
GX300 is an
ideal match
for Cyrus'
Stereo 200



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Hi-Fi Choice, Jan '13



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Linn, Neat, Naim, PMC, Quad, Rega, Rotel, Sennheiser,
Spendor, Trichord, Van den Hul.**

**The Chord Company (Speaker cables/interconnects)
and others.**



Cleaning every plug can make a huge difference to performance

to run a list of approved professional services in the mag and online if any of you have recommendations to share. This could be the start of a new HFC community, so why not post in your suggestions or email: letters@hifichoice.co.uk.

NR: It seems a shame to have to discard an item of cherished equipment when perhaps all that is required is some TLC. However, you do need to be careful – you mention about cartridge re-tipping. While this can certainly help to get more hours from your treasured cartridge, remember it's not just the stylus tip that will have worn. It is quite likely that the cantilever support structure will have weakened over time, so I would recommend sending your cartridge back to the manufacturer for refurbishment as you will end up with a virtually new cartridge for a lot less than a brand-new purchase. Similarly, it's not just the drive units of your speakers that require attention, it may be that some components of the crossover need replacement, such as bi-polar electrolytic capacitors, which degrade over time. Again, a word with your manufacturer or local dealer would be in order as I'm sure they will be able to advise.

DP: With hi-fi, experience teaches me that you can make a huge sonic improvement simply by setting up your system correctly. If I were you, I'd find a rainy day when it's too damp to be on the tennis court, and rip my system out and put everything in another room momentarily. Then

clean the room, and begin putting everything back – after you have cleaned every single plug, connector and socket using Kontak (HFC 381) and pipe cleaners (or a similar contact cleaner). Take great attention with isolation; place sorbothane damping pads underneath or on top of the equipment as you put it back, and/or use bespoke sorbothane feet such as FoculPods. Make sure the equipment is totally level – especially disc players. Make sure your speakers are correctly placed and the drive units are tightened up (if the screws or hex bolts are exposed). Make sure the cables are dressed carefully so they don't carry ground-borne vibration into the source or amplification components. This done, you'll find it sounds dramatically better – for under £100 or so and a day or two of fiddling, you could get an improvement in sound equivalent to an upgrade costing thousands.

CW: I'm a fan of looking after older, much-loved items and keeping them in fine fettle. As I get older, I find it's increasingly a good metaphor for us

How do I get the most from my hobby when I retire and have less money?

all! The knack is knowing what may need attention and finding good people to help. Older speakers can sometimes need new drivers, especially tweeters that lose performance, but commonly it's just driver surrounds that need re-foaming, which can be a very simple and inexpensive task. Some capacitors within amps and crossovers can deteriorate over time, but are relatively easy to swap out by someone competent with a soldering iron. Indeed, new hand-chosen components can lift performance immediately. I'd seek to do things like this cheaply in order to enable the occasional indulgence, like completely reconditioning a cherished phono cartridge or treating yourself to a new one.



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Hi Fi Choice, Nov '12

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Radio ga ga

As Norway's decision to switch off FM radio transmitters gets a bad reception, **Lee Dunkley** wonders whether the UK is likely to follow its controversial lead

The usually tranquil Scandinavian nation of Norway made global headlines in mid-January following its government's decision to phase out FM radio broadcasting and move exclusively to digital-only DAB+ services. The controversial decision taken by the nation's politicians saw the first switch-off of the FM transmitters start in the Northern city of Bodø on 11 January, with the complete FM network ceasing to broadcast by the end of 2017. It is the first county to do so in the world and has antagonised Norwegian citizens who are unhappy at the decision. But is this mere nostalgia for those that miss the white noise or are there more serious issues afoot?

The North European country, which is perhaps better known for its natural attractions including fjords, mountains, northern lights (aurora borealis) and midnight sun, covers 148,747 square miles and has a relatively small population of just 5.25 million spread across territories that extend to within the hard-to-reach Arctic circle. It's costly to get FM to these remote areas where the terrain can distort radio signals and the country has already ceased broadcasting via its long and medium wave transmitters in a bid to make financial savings.

By turning off the FM transmitters – rendering an estimated 15 million radio tuners redundant in the process

FM radio delivers vastly superior sound quality for hi-fi listening

will allow broadcasters to invest more in programming, and give listeners arguably better sound and a reliable signal that can be more easily received throughout the country's mountainous landscape. Community radio and smaller local radio stations will continue to broadcast on FM until 2022, after which licences will be reviewed.

But not everyone is in favour. According to Reuters, 66 percent of the country opposes the switch-off, with only 17 percent approving of the new digital-only method. Norway is a nation of radio listeners and most stay loyal to a particular station, more so than they do with TV equivalents. Norwegian homes typically have several radios per household, so it's not too hard to see why the decision has proved to be so unpopular, and has been met with scepticism as well as concern for those elderly and vulnerable listeners that will be forced to replace their early DAB radio models as they won't work with the nation's new DAB+ broadcast services.

– the Norwegian government estimates that the savings will be around 200m Norwegian kroner (£19m) a year, and

Norway's handling of the switch-off, which could potentially see millions of people that aren't ready being left with radio silence, is being closely scrutinised by other nations around the globe like Denmark and Switzerland, which plans a similar shift to DAB-only broadcasts from 2020. The region of South Tyrol in Northern Italy will also begin its FM switch-off this year. Germany was due to turn off its FM signals by 2015, but in 2011 MPs voted against the schedule.

Dubbed 'FMExit' in Norway, the fear is that a similar FM transmitter switch-off could soon follow in the UK. FM switch-off has long been a topic for discussion ever since terrestrial analogue TV services ended here in 2012 and the spectrum was reallocated for mobile and broadband use. An FM radio switch-off date was originally set for 2015. The proposed day came and went, as before the switch can happen in the UK there needs to be at least 50 percent of radio listening via DAB radios and signal coverage must be comparable to that of the FM network and received by 90 percent of the population.

Radio silence

In Norway, as many as 2.3 million car users don't have DAB radios. Taxes are so high that the country has many older vehicles and most people are resistant to buying an add-on adapter costing 1,500 Norwegian krone (£143) to convert in-car FM radios to receive DAB signals. Many fishermen, for who radio is vital, are also said to be ill equipped. Critics have also warned that emergency traffic messages – so often vital in Norway's inclement winters – may go unheard.

In the UK, DAB radio listening is currently estimated at around 45 percent of the population, but as the growth in luxury car sales continues and with 80 percent of all new models now being fitted with DAB, this figure looks set to reach that target very soon. Based on current trends, the critical mass may be reached in the UK by the end of the year or early 2018, meaning that any switch-off is unlikely to happen before 2020. Ultimately, such a move will be very bad news for audio fans who appreciate that FM radio delivers better sound quality for hi-fi listening without any reduction in the amount of data ●



Though the FM switch-off in the UK is a way off, it's arrival will prove unpopular



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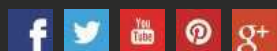
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WHAT HI-FI?



Let's get physical

Streaming now accounts for well over a third of all UK music consumption but contrary to all the predictions, music lovers still like buying 'things' reckons **David Price**

Most people reading this magazine are men who love 'things'. Not wishing to be sexist about it – but nevertheless I shall – if you're a bloke then the 'things' you like tend to be big and shiny like cars, motorbikes and hi-fi, whereas the fairer sex tend to enjoy smaller, more colourful but no less expensive objects such as handbags, jewellery and shoes. That's fine – each unto their own of course – but where does this leave music?

Until a decade or so ago, both boys and girls were forced to buy their favourite music on physical formats. Men tended to want CD or Long Playing vinyl records because they either sounded better or were more 'authentic' and collectable. Women on the other hand tended to be fans of pre-recorded cassettes, because they were cheap and easy to use. Men thought of them as beautiful artefacts – such as that special edition Pink Floyd digipack CD of *Pulse* with its flashing LED, or the first pressing of X-Ray Spex's *The Day The World Turned Day-Glo* in shocking orange 7in vinyl – whereas women tended to just buy the physical object for the music it carried.

Then, along came streaming, and we began to read about CD player sales plummeting. Every manufacturer suddenly appeared to be rushing out a streamer, and futurologists talked about the end of physical products. I remember someone coming up to me at the Bristol hi-fi show around

2010 and asking: "Hey David, are you a death-of-physical-media kind of guy?" I wasn't then, and am still not now.

Instead, I think that

The humble vinyl LP has just had its best year for an entire generation

people will always want nice artefacts, even if they become niche and reassuringly expensive.

Personally, I'd love to see vinyl and CDs stay around forever and I suspect they will – but how can I be sure that I'm not just projecting my own sentimental instincts on the wider music buying public? Thankfully, some interesting research has just come out – in the form of the British Phonographic Industry's Official UK Recorded Music Market Report For 2016. Just as we'd all expected, it shows a huge rise in streaming, but fascinatingly highlights a sharp rise in vinyl sales and a steady decline of CD too.

Overall music consumption is up by 1.5 percent to 123 million albums sold on either physical or digital streamed or downloaded format. Part of this was 45 billion audio streams served in 2016, which is an increase of more than two-thirds (68 percent) on the previous year. In December, it hit 1 billion streams taking place in a single week for the first time ever. The total volume of music consumed in 2016

corresponds to an estimated retail value worth around £1 billion, says the BPI. Just to put this into context, streamed music was 500 percent up on 2013. This works out at well over 1,500 audio streams for each of the UK's 27 million households, and the BPI notes this doesn't include the huge number of streams on video platforms such as Youtube.

Streaming now accounts for well over a third (36.4 percent) of all UK music consumption, but despite this the humble vinyl LP had its best year for an entire generation. The last time that Britain bought 3.2 million LPs was in 1991, when Simply Red's *Stars* topped the album charts. This was a stellar 53 percent rise on last year and the ninth consecutive year that demand for vinyl has risen. We're now in a post-modern world where people want both their music streamed and a physical copy of it on vinyl for either special moments or for show. In 2007, just 200,000 LPs were purchased in the UK, says the BPI, so it shows how far the vinyl revival has come.

Things can only get better

By way of illustration, more than 30 albums sold over 10,000 copies last year, compared with just 10 the year before. Vinyl LPs now account for nearly 5 percent of the album market. Some of this was thanks to Bowie, whose last album *Blackstar* was 2016's most popular vinyl recording, ahead of Amy Winehouse's *Back To Black*, selling more than double the number of copies of 2015's best seller on vinyl – Adele's *25*. Even CD didn't have a bad time, with sales declining by just over a tenth. Physical formats still account for just over 41 percent of UK music consumption in volume terms, says the BPI.

We are now living in what the music industry is calling – slightly confusingly for us audiophiles – a "multi-channel" world where people want multiple formats of recordings, both streamed and physical. So the world of 'things' isn't going to go away just yet it seems, despite the huge explosion of intangible media ●



Vinyl is now so popular that it's possible to pick it up in your local supermarket



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John, Hugo and DAVE

David Vivian sits down with Chord Electronics boss John Franks to discuss the changing face of the hi-fi market, life with Hugo, the evolution of DAVE and beyond

It's been a few years since I last had lunch with Chord Electronics' John Franks. Last time, what was to become the most potent chunk of hi-fi tech you could fit in your pocket – the Chord Hugo DAC/headphone amp – had just been launched and was only beginning to garner the kind of critical acclaim dreams are made of. Now, in early December 2016, we're a month away from CES and the launch of Hugo 2. Between the two events, Chord has experienced a period of unprecedented growth and a surge in brand awareness. It's achieved this largely through entering previously untapped markets and, to a degree, re-defining them. As we settle down at a corner table in a pub, I put it to Franks that Hugo was the product that changed everything.

"Very much so," he agrees. "I think the interesting thing with Hugo is that it shone a light on what we've been doing (quietly) for many years. People suddenly realised that the technologies we'd been developing were actually pretty good, if not better than what was available. As a result, more dealers and distributors came on board and realised the larger equipment was good too, so the whole thing has been feeding back on itself."

And then there's the timing. The world went headphone and DAC crazy. It could hardly have been better. In a

"It may be that we bring out a £100k DAC at some stage in the future"

sense, the market came to Chord.

Again, Franks acknowledges the gods were on side.

"I think we were very lucky. Yes, it

was the perfect storm. When we first launched the DAC64, there were virtually no outboard DACs and no need of an outboard DAC. It's been a happy combination of factors that's driven the business upwards. Crucially, the mobile market seems to be unlimited. I don't think it will dry up. For us, something like the Mojo has the potential to create more audiophiles, which in turn will feed back into our larger products."

Indeed, the high-end amps and digital players originally put Chord Electronics on the map, but it's the potential for incredible miniaturisation that's currently feeding Franks' urge to push boundaries. "Essentially it's about when processors went down to under 22 nanometres," he says. "The capabilities they have are astounding and the power requirements are now milliwatts compared to many watts. It means you can do the total thing. For instance, we're working with printed circuit boards that are 10 layers and less than a millimetre thick. This is staggering technology.

It's something I thought we would never ever get anywhere near. You've got to be able to place components that are about the size of a grain of sugar, and to do this repeatedly and accurately. And so we've really had to choose the right partners. And of course, we're doing

all of this in the UK. We're driving the technology and allowing our partners to manufacture at these sorts of levels. So these are very exciting times for us. That we could have embarked on this growth path and become a \$25 million company in a couple of years is remarkable."

As good as it gets?

Our lunchtime can't pass without mention of DAVE, reckoned by many to be the best DAC ever. Is this as good as it gets I wonder, and will DAVE's tech trickle down to more affordable Chord DACs? Franks is clear this isn't how Chord does things: "Every product we manufacture, working at these performance levels – the levels we're working at – must be treated holistically. You can't just go in and change something. If you do, you end up with a ripple effect right through the design. So we've got to say that DAVE is a stake in the ground. It is the best that can be achieved with the generation of componentry and designs that we have at this time."

Intriguing – as is Franks' elaboration on how far Chord's collaboration with digital engineer Rob Watts might go if circumstances allow. It's just about all I can think about on the drive home. So I'll leave you with this fairly mind-blowing scenario... "It may be that we bring out a £100k DAC at some stage in the future. If we do it will probably have 20 cores, all in parallel, and be running at 10 million taps or something crazy like that. But essentially the customer would still be getting value. The strange thing is that people always thought you couldn't hear anything below 120dB dynamic range. Well, Rob Watts has demonstrated that you can hear between 180 to 200dB. And he's taken it beyond to 350dB. It seems that the brain, because of its processing ability, is able to resolve signals at these extraordinarily low levels. And, well, he keeps pushing it. That's the nature of Rob." ●



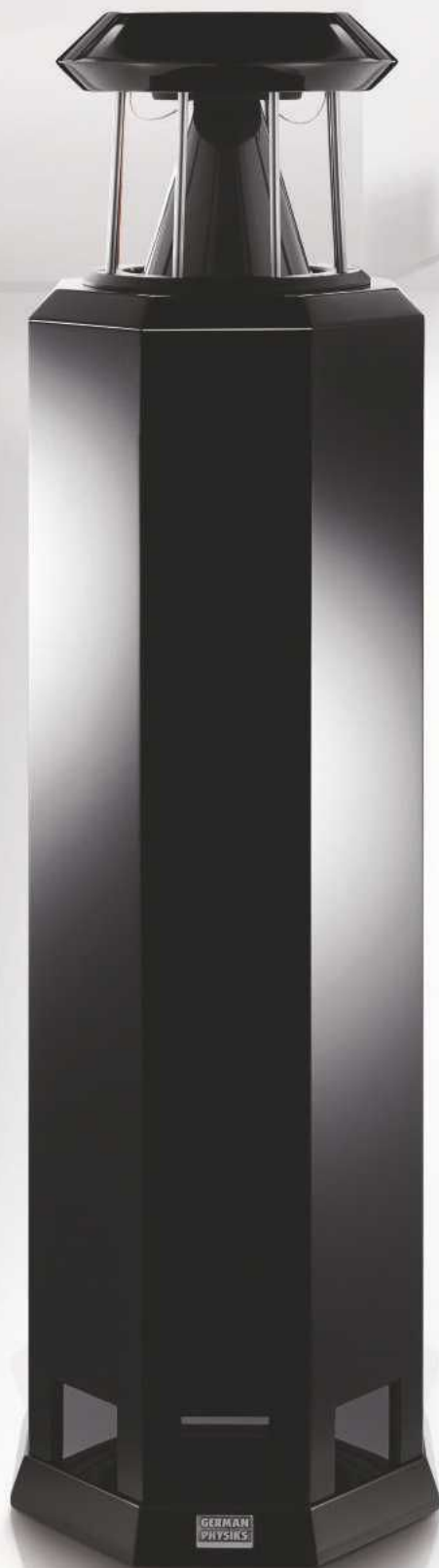
Will Hugo 2 continue Chord's astonishing success story?



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Rockets to recordings

If World War II hadn't happened, would we have seen the development of one of the world's greatest microphones? **Neville Roberts** explains all

It's interesting to note that the 16/44 format of the humble CD was set in 1980 so that recording sessions could be made digitally using what was one of the most successful portable video recorder formats of all time – the Sony U-Matic video recorder, which has been around since the early seventies. If the CD had waited until 1986 when the Sony U-Matic SP was produced, which had much better performance, would we now have better quality CDs? However, it's not just audio CDs that have their roots in a different technology that was around at the time.

In the early days of radio and electrical sound recording, carbon microphones were used, but the quality of these was dreadful. A German by the name of Georg Neumann considered that a far better microphone could be produced based on the capacitive transducer, but these condenser microphones could only be manufactured under laboratory conditions. So Neumann set about developing the technology to suit commercial manufacture and established his own company in 1928 to produce the first ever mass-produced condenser microphone, the CMV3. This was far superior to carbon microphones and gained recognition under the nickname of the Neumann bottle. It had a selection of exchangeable capsule heads with different polar patterns for use in different situations, but it wasn't exactly

Neumann's U47 had possibly the biggest influence on modern studio technology

compact, measuring 9cm in diameter, 40cm high, and weighing in at nearly 3kg. Right up until the end of World War II, the CMV3's design remained virtually unchanged and this microphone was the standard for studio use. After the war, the damage to German infrastructure was so severe that no nationwide electricity supply existed. Instead, many provisional mains electricity supplies were put in place – some AC and some DC. So, as part of post-war reconstruction, domestic radios were required that could operate on DC. This was quite an unusual requirement because sets running on DC supplies can't use mains transformers. To satisfy this demand, German valve manufacturers, in particular Telefunken, developed valves with high filament voltages that could be run directly from the mains supply. One such valve was the VF14, which had a high voltage (55V) heater and could work at radio frequencies as well as audio frequencies, and it soon became the workhorse valve of the time. Since two-valve radio-sets were commonplace and 110V AC and DC were the mains supplies in Germany then, two VF14 filaments

could be powered by wiring them directly across the mains in series. The VF14 was mass-produced by Telefunken and it found applications in everything from military field radios to the Vergeltungswaffen Zwei (aka V-2 Rocket or Retribution Weapon 2).

So how did all this affect microphone development? The new German broadcast stations after the war had the same issue as civilians. Faced with a 110V DC mains supply, Berliner Rundfunk (Radio Berlin) asked Neumann to supply mics which could be used without a transformer power supply. Neumann solved this problem in exactly the same way as the radio designers and opted to use the VF14. So in 1949, the Neumann company launched the microphone that has probably had the greatest influence on the development of modern studio technology – the U47. A particular feature of the U47 was that its characteristics were adjustable and could therefore be tweaked to suit the requirements of the studio or, indeed, the artist. The U47 was a firm favourite among artists such as Frank Sinatra, because its response characteristics suited the human voice, and it is still very much in use today.

Dial M for...

So, why was the quality of the signal from these microphones so high? This may be due in part to the fact that a problem for Neumann in developing the U47 was that the requirements are very different for the valve in the head amplifier of a broadcast mic and that of a radio. While the VF14 worked consistently in the latter, only a few would work in the former. Neumann's solution was to agree with Telefunken to return the valves that were not suitable for use with microphones. Those that passed the Neumann test were marked with an M (for Microphon). At least two-thirds off the production line were rejected by Neumann, so every valve was hand picked for the job, which probably accounts for the very high standard.

Neumann went on to produce other legendary studio microphones, including 'dummy head' models for binaural recording. But a question still remains: if it hadn't been for the war, would one of the greatest microphones of all time been invented? I think perhaps not ●



But for WWII, the Neumann U47 microphone would have been very different



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Generation shift

From Baby Boomers to Millennials, every age spawns new youth cultures with new music and new ways to listen to it. **Nigel Williamson** considers what lies ahead for Gen-Z

First we had the Baby Boomers. Then we had Generation X. After that came the Millennials. And now – as I learned during the course of 2016 – we are entering the era of Gen-Z.

One can see how labels are useful to sociologists trying to analyse trends in youth culture and to marketing agencies trying to sell stuff to them, but they are also of significance to music fans for each successive social cohort has brought with it profound changes in our listening habits.

The Baby Boomers gave us rock and roll, The Beatles, the Stones, Dylan, Bowie, Woodstock, 45s and 33rpm LPs. Generation X was the kick-back, expressing its sense of alienation and disaffection in punk and, a little later, grunge, and was responsible for many great bands from the Sex Pistols to Nirvana, most popularly listened to on C90 cassettes. The Millennials – aka Generation Y – came of age around the year 2000, invented file-sharing and Napster, went clubbing and listened to techno and, although they didn't invent hip-hop, they made it the biggest-selling music genre in the world.

But Millennials, it seems, are now yesterday's generation. They've got jobs and families and mortgages and have been superseded by Gen-Z, whom the music industry has decreed is the target demographic for 2017. That means their tastes and predilections are going to determine what we're going to be listening to over the next few years.

There are huge possibilities here if the music industry learns how to adapt

most of us have traditionally discovered music via DJs, radio stations, television and the music press. Back in 1971, a quarter of a century before the first Gen-Zer was born, The Who recorded a song called *Going Mobile*. Having written *My Generation* for the Baby Boomers, this could be an anthem for Gen-Z, whose denizens live in a world of continuous updates and cannot imagine a moment without their mobile devices. They process information faster than any generation before and they're more likely to find new music from playlist algorithms on digital music platforms and from friends pressing 'like' and 'share' buttons than from BBC 6 Music or *NME*.

Older generations may sneer that they have short attention spans, but the criticism misses the point. They shift with staggering alacrity and efficiently between work and play and do so with multiple distractions going on in the background. They are the world's most impressive



multi-taskers, doing homework on a laptop while researching on their smartphone, talking to a friend on Facetime and streaming the new album by Let's Eat Grandma or Car Seat Headrest on Youtube or Vimeo.

Gen-Z are the world's first true digital natives. They grew up with the technology and are radically transforming the way entertainment is delivered and consumed. They don't sit in front of conventional TV sets and don't listen to music on state-of-the-art hi-fi systems. Everything they want is just a mobile click away. One of the most obvious manifestations is the growing importance of what is now known as 'the sync business' – the synchronisation of music to film, TV, ads and games.

Talking 'bout my generation

All of this represents a massive cultural shift, which impacts hugely on advertising, marketing and visual and audio content. The astonishing thing is that most of us over 30 are only dimly aware of what is happening. Yet there are huge possibilities here if the music industry understands how to adapt to them – as it failed to do when file-sharing first came along. Anyone can check their mobile device and discover an artist or song – old or new – that they've never heard of before. Competition is greater than ever, and never before have new musicians had so many tools at their disposal to get themselves heard. They no longer even need record labels. Those who survive and thrive in this new world will be those that embrace the changes. Those that don't are destined for the digital equivalent of what we used to call the cut-out bins ●

Gen-Z will be able to access music in ways that will seem alien to previous generations





Seventh heaven

David Price tells the extraordinary story of Marantz's modern classic CD-7 compact disc player

Marantz's CD-15 was a very good bit of kit, one that was dramatically sonically superior to the first Philips Bitstream designs. Costing £3,000 in the UK and honed by Ken Ishiwata, it sold over 500 units a year and used an awful lot of Philips bits. A beautiful bit of kit, it set the look for future Marantz machines when it was launched in 1994. So four years later, when the time came to do an update, you'd expect only some modest changes. Instead, Marantz effectively decided to scrap Bitstream and start over.

Instead, it went back to the pre-Bitstream era with the new model. 1998's CD-7 was acknowledgement that progress is not necessarily a good thing. Although an object of beauty that measured superbly by the standards of the day, its CD-15 predecessor didn't float many people's boat. It was thought to sound a bit too 'hi-fi', and believed to lack the organic musical flow of the earlier 16-bit, four times oversampling machines. Knowing that Philips was about to stop making the TDA1541 DAC chips, and that it had already achieved legendary

status, Marantz duly bought the last of the production run and built the CD-7 around them.

This £3,500 CD spinner amazed the world when it came out with an older digital converter than the model it had replaced. Inside was the very best Double Gold Crown version of the TDA1541 running doubled up in differential pairs for maximum linearity. Working in conjunction with these was a new bespoke Linear Music Filter (see box out), which effectively comprised two Motorola 56000 processors running the source code of

Marantz's Bitstream adventure

1989	1994	1998	2006
Philips introduces its Bitstream DAC while Paul McCartney releases <i>Back In The USSR</i> exclusively in the USSR	Marantz sets the look for future releases with the CD-15 as a band called Oasis debuts its first album, <i>Definitely Maybe</i>	It's back to the pre-Bitstream era with the launch of the CD-7 as composer John Barry unveils his first full-length classical work	Marantz replaces the CD-7 with its new flagship SA-7S1 as founder member of Pink Floyd, Roger Keith 'Syd' Barrett sadly dies
			

Philips' SAA7220 digital filter chips, along with custom Marantz code. Although the player didn't physically use SAA7220s (which partnered Philips original TDA1541-based players), its DSP chip emulated them to recreate their four times oversampling as well as offering three switchable filtering algorithms, including a special option that vastly improved on the stock filter profiles. The idea was to offer the best versions of the classic DAC chips, with state-of-the-art filtering.

One problem for Marantz was the lack of a top-flight off-the-shelf transport. Sadly the superb CDM4 Pro was no more, so the company had to make do and mend with the (then) ubiquitous CD12.3. This was duly re-fettled; the metal chassis version was specified and Marantz rebuilt it to its specifications – including diamond-milled stainless steel slide bars for super slick disc loading. As with its predecessor, the CD-7 sported a good number (14, no less) of selected Marantz Hyper Dynamic Amplifier Module (HDAMs), and the power

A fascinating conjunction of the old and the new, with its own unique sound

supply was breathed on with Shottky diodes, discrete transistor regulation and an ultra-low noise ring-core toroidal transformer. Audio-grade selected components were in abundance, while the copper-plated diecast chassis and casing got anti-resonance fixings and vibration damping feet.

The CD-7 sported sonically superior balanced XLR outputs as well as RCA phonos and a choice of either optical or coaxial digital outs. Alongside the retro DAC chips, the other stand-out feature was the digital input. It was a highly prescient move, meaning that the machine could function as a standalone DAC working at up to 20-bit/48kHz resolution.

The CD-15 sounded very much 'of its day' – a decade before, CD players were lacking in fine detail and focus, and the 15 was made at a time when the goal was to wholeheartedly move on from that. So the first Bitstream Marantz flagship seems to be all about signalling its hi-fi credentials. It has a very low distortion sound, one which is extremely clear and open and explicit by the standards of the day. It's muscular too, prompting some to say at the time that it sounded very American and not particularly European; absent is that wonderfully fluid, organic character that Philips-based machines traditionally had. One can now see why some Marantz fans yearned for something more familiar.

Coming of age

The CD-15 was a great CD player, done at a time when CD was finally coming of age as a credible music carrier. It was comprehensively better in so many respects than what had come before, and yet somehow it just didn't stir the emotions. In this context, the apparently rather bizarre decision to exhume those old Philips multi-bit DAC chips for its replacement, begins to make sense. The CD-7 sounds spookily similar to the CD-15 in a number of ways, yet profoundly different too. It makes a dramatically more musical noise – things aren't flat and matter-of-fact, and instead the recording sounds far more animated and full of life. Listening to the CD-7 after the CD-15, it's clear that Marantz engineers achieved their stated aim of making a memorable and unique silver disc spinner.

It has a wonderful zest to how it goes about making music. It's fast and full on, with a highly spirited sound that makes listening consummate fun. Bass is expressive, fluid and tuneful, while its treble seems eager to make itself more than just an adornment. The midband is highly percussive, and grabs the phrasing of the music by the scruff of the neck. There's no sense that the listener is ever left to his or her own devices; this machine takes you on a musical journey whenever

LINEAR MUSIC FILTER

The digital-to-analogue conversion process produces a huge amount of noise and this has to be filtered out of the audio band. The trouble is, filtering brings its own problems, which impact the sound in other ways – the time domain can be and is affected. Filters introduce pre and post ringing, basically blurring an impulse so that it doesn't start and stop cleanly, but rather has artefacts before and after the event which in turn smears the sound in the time domain. For the CD-7, Marantz decided to tackle this head on with its own custom-designed Linear Music Filter, which used digital signal processing before the digital conversion stage. This acted in a more subtle way, delivering both a flat frequency response and very little phase distortion. It was a development of a standard 'FIR' digital filter used commonly, but significantly cut down on pre-ringing. Alongside this, a gentle-acting third order Bessel analogue filter offered optimum impulse response and low phase distortion after the digital-to-analogue conversion process. Marantz's DSP also offered other features such as 'soft mute' to eliminate signal noise clicks when activating the stop and pause controls, -12dB track search attention and automatic de-emphasis switching.

you push the play button. It makes most rivals of its era seem musically rather lost and aimless sounding. One key facet of this is the dynamic performance, which seems particularly adept at tracking the changes in the intensity of the music as well as being very deft at reproducing musical transients.

Mixing the old and new

Tonally, this classic Marantz isn't quite as sweet and warm as you might think. We were well past the days of those early Philips-based machines, and the result is a neutral product that errs only very slightly towards sounding sweet. It certainly doesn't have the 'bright white' sound of some rival Japanese machines of the day, but nor is it the digital equivalent of an old tube amp either! Don't bother investing in the CD-7 if you're after a trip down memory lane – instead, it's a fascinating conjunction of the old and the new, one which makes for its own unique sound.

Marantz only made 750 CD-7s, which is one of the main reasons they have held their value so well. Expect to pay between £1,500 and £2,000 for a mint specimen, and don't think you'll pick one up on your next trip to the audio jumble – they're rare and need searching out. Find a good one, though, and you'll have an extremely special disc spinner that plays good old-fashioned 16-bit digital audio better than almost anything – and a true modern classic too. There was nothing quite like it before, or since ●



Marantz's CD-15 didn't enjoy the same success as the CD-7

Personal headspace

If you're after a serious headphone setup, **Ed Selley** thinks you'll need to pay a trip to Audio Sanctuary

For many years, headphones have existed as part of a wider selection of dealer stock. The idea being if you bought parts of your main system from them, you might go back and buy a suitable pair of cans too. More recently, the significant growth in high-end headphone sales has changed the dynamic. Listening to the main contenders at an elevated price point becomes a challenge as most dealers won't stock them all.

Into this breach has stepped a small number of dedicated headphone dealers that allow the customer to listen to a significant number of high-end models in one place. Audio

Sanctuary is the sister company of Unilet Sound and Vision and operates out of the same premises. Formally known as Custom Cable, the company changed its name in 2016 to better reflect the scope of product it offers.

This impressive selection now occupies a section of the Unilet lower floor and has been set up for quick and easy listening to multiple products. A pair of HP Pavilion desktop PCs act as the source for multiple amps to which any of the headphones on the shop floor can be attached. Website manager, Phil Wannell has picked out three pairings for me to sample and in a state of complete silence, I sit down to listen.



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Fleet Foxes
Blue Ridge Mountains
16/44.1 FLAC

System 1 – Pioneering spirit

IF YOU HAD presumed that a headphone specialist would be largely full of the usual suspects in terms of supported brands, this opening pairing should be an indicator that this is not the case. Pioneer has been considerably more active in two-channel audio in recent years, but still might not be regarded as a go-to brand for headphone listening. But, as this duo clearly demonstrates, this is a mistake.

DAC's the way to do it

In fairness, the marketing of the U-05 doesn't do anything to help these perceptions. Pioneer describes it as a DAC and consequently it has participated in a *Group Test* as such (*HFC* 405). At the time, I noted that it was deeply accomplished as a headphone amp, but it seems I was merely paddling in the shallow end of its ability. The U-05 is not to be sniffed at in decoding terms. It is built around an ESS Sabre DAC and offers all of the format support that you might reasonably expect and can output via either XLR or RCA connections with or without the help of a preamp section.

The front panel should be sufficient to show that there is more to it than

decoding. Sat in a row are balanced Neutrik, single Neutrik and 6.35mm jack connections to handle pretty much any headphone you might care to connect to it. The headphone circuit is fully balanced and completely separate from the decoding hardware with separate transformer windings to keep it as isolated as possible.

This means that the U-05 is something of a dark horse. It needs to be at the top of its game, though, because it is partnering a rather more overt statement of intent from Pioneer. The Master 1 is the company's flagship headphone and features a technical *smörgåsbord* of high-quality materials

Ask the Pioneer pair to pick up the pace and the performance is no less effective

and sophisticated design practises. The open-backed enclosures contain 50mm drivers that are ceramic coated for extra stiffness and the whole headphone has been designed with a view to getting the most from hi-res formats. Originally announced as a limited edition (the SE Master 1), the

demand and response to it has been such that Pioneer has made it a standard production item. It all sounds very encouraging, but does this pairing deliver on the hype?

Kicking off with the 24/96 version of The Cinematic Orchestra's *Manhatta*, it becomes clear from the outset that while Pioneer might not be the first company you think of for headphone systems, this thinking might well need revising. Perhaps most importantly, the pairing has all of the basics down perfectly. The opening strings of the track rise from utter silence and from those very first notes it is abundantly clear that the duo is effortlessly capable at placing everything in such a way as to create the illusion of space.

String theory

The tonality of the strings is worthy of note as well. They have a richness and almost analogue smoothness to them, but this hasn't been bought at the expense of them sounding vibrant and immediate. As the whole orchestra joins in, there is a sense that the pair is merely treading water even though massed instruments traditionally pose a stern test for earphones. At one point where a solo flute plays the main refrain, it is perfectly captured and locked in place, but there is never any loss of the wider performance.

Ask the Pioneer pair to pick up the pace with the 88.2 SACD rip of Dead Can Dance's *Song Of The Stars* and the performance is no less effective. The bass response of the Master 1 is deep and powerful, but electrifyingly fast and detailed at the same time. There is a continuous sense of unflappability that is hard not to be impressed by. The U-05 has Herculean levels of gain available and the Master 1 will go painfully loud without any signs of distress. This means that when you are listening at less ballistic volume levels, you get the sense that there is nothing you can do that is going to wrongfoot them. This is a combination of equipment that while terrestrially priced is capable of an other-worldly performance when called upon.

Pioneer proves it can hang with the headphone super powers



1 PIONEER MASTER 1 £1,699
2 PIONEER U-05 £699
TOTAL £2,398

System 2 – Listen to the man

THIS SYSTEM REPRESENTS a complete change in brand and design philosophy. This is a pairing of two of Phil's hot tickets that have been finding a number of happy owners of late. Unlike the Pioneer duo, this system comprises two more specialised brands more commonly associated with headphones.

Form a queue

Questyle has a small but highly regarded range of headphone amplifiers and DACs of which the CMA600i is one of the more affordable models. Built around the AK4490 DAC chipset, it supports all the formats you might expect via USB and coaxial digital inputs. It is fully balanced from the digital decoding to the outputs and can be used as a conventional preamp via RCA and XLR outputs. For headphone use, there's a pair of 6.35mm jacks and a balanced Neutrik connector.

Partnering the Questyle is the Hifiman HE1000 v2. The flagship of its headphone range, this is a planar magnetic design that represents the ultimate expression of the technology. Planar magnetic drivers use voicecoils printed on a flat membrane and this one has a thickness measured in nanometers,

which ensures that the overall mass of the driver is extremely low. This in turn means that the response of the drive is exceptionally fast, leading to a clean and dynamic performance.

Less important in the great scheme of sound quality, but no less significant in ownership terms, is that the Hifiman looks absolutely stunning. The enclosures have CNC-machined metalwork that is polished to a mirror-like finish and this is partnered with extremely

There is a subtlety to this system that takes a little while to fully appreciate

high-quality pads and a headband, which – while a little on the large side – allows you to get an exquisitely comfortable fit. The Questyle is less ornate, but is still finished to a very high standard. The chassis manages to balance a pro audio feel with a level of styling and design that won't see it out of place in a home system.

Returning to *Manhatta*, it only takes a few bars of music to appreciate that the planar magnetic drivers bring a radically different presentation. The

music swells and decays with startling immediacy and the orchestra takes on a tangibility that pushes it beyond what the Pioneer pair managed. There is still a huge amount of space and scope to the presentation, but this is partnered with a sense of the individual musicians making up the whole.

This fluency is no less apparent with *Song Of The Stars*. The wonderful undulating bassline flows with the same absolute lack of inertia and near forensic detail retrieval. The Questyle makes more of its presence felt with this material. The Hifiman needs plenty of power to sing and the CMA600i is able to deliver the grunt that it needs to shine. It ensures that the bass extension of the headphone is deep and powerful – something that planar magnetic designs can often struggle to deal with.

The gentle touch

It is with more delicate material that this system moves onto a different level. The simple arrangement of *Blue Ridge Mountains* by Fleet Foxes leaves nowhere for any failings to hide and the duo rises to the challenge. Robin Pecknold's delicate vocals are locked centre stage and the relationship with the supporting guitar is so effortlessly self explanatory, you can easily forget that you are wearing headphones at all. It manages to push the music far beyond the confines of the earpads to leave you immersed in a perfectly realised space that grows and shrinks instantly based on the demands of the music at that particular moment.

Above all, there is a subtlety to this system that takes a little while to appreciate. You are unlikely to put it on and instantly go "wow!" Instead, you realise after about half an hour that you can't think of a single way you would improve on what you are hearing. It approaches any genre of music with a competence that leaves you absolutely bowled over. This ranks as one of very finest headphone systems I've ever heard – and we still have one rung on the Audio Sanctuary ladder left to climb.

The hardware is strictly business, but this duo knows how to party



1 HIFIMAN HE1000 V2 £2,599

2 QUESTYLE CMA600i £1,199

TOTAL £3,798

System 3 – Strike the right Chord

THE LAST SYSTEM asks some probing questions. Is it really fronted by a pair of earphones? Is that price a typo? All these questions and more have answers and this pairing makes a great deal of sense once you dial into its unique way of working.

Chord Electronics has been pushing the boundaries of digital-to-analogue conversion for the best part of 20 years. The DAVE (Digital to Analogue Veritas in Extremis) is the latest in a line of DACs that takes everything Chord knows about the process and condenses it into a single box.

One in a million

In this case, you get the ultimate incarnation of Chord's FPGA-based decoding with over a million lines of code intended to handle any possible outcome that can be envisaged by the designer. It is equipped to operate as a preamp with a fully digital volume control that allows for perfectly linear and level-matched gain. There is also a headphone socket, allowing it to act as a piece of self-contained digital bliss.

Partnering this is the equally extraordinary oBravo EAMT-1c earphone. This contains an Air Motion Transformer (AMT) driver working in partnership with a Neodymium

Dynamic Driver to provide low-end extension. Aesthetically, the pairing could not be more different. DAVE is like a sci-fi prop, while the oBravo is an extremely subtle-looking device that won't attract any undue attention when used out and about. Phil says the reasoning behind this pairing is that the earphones can go with you to work and still deliver a breathtaking performance at home with the DAVE.

It might seem weird using earphones to listen critically to a device, but a

The jump in the sheer cohesiveness of the presentation here is worthy of note

minute after securing a decent seal in the ear canal, the sound it produces will leave your brain believing it's listening to full-size loudspeakers.

The way that this pairing handles *Manhatta* certainly makes it easier for your mind to be convinced that this is the case. Even though the previous systems have featured some exceptionally talented headphones, the jump in the sheer cohesiveness of the presentation here is worthy of note. The placement of musicians takes on a



The oBravo might just be the best earphone there has ever been

level of pinpoint accuracy that leaves you the recipient of a unique concert especially performed for one. You are unambiguously part of the recording in a way that very few conventional speakers will ever be able to replicate.

Breaking down barriers

This sense of being there is no less present with *Song Of The Stars*. There is so little sense of reproduction between you and the music that various subconscious barriers you erect when listening to a 'normal' system break down with this one. The role of DAVE in this process is initially rather hard to get a handle on. Put simply, it has no personality traits so obvious you can automatically ascribe them to it. It is incredibly transparent and so utterly even in its handling of whatever your throw at it that it becomes perhaps the closest physical device to Peter Walker's 'straight wire with gain' ideal that I've yet experienced. The idea you can then plug the oBravo into your phone and go to work is slightly mad and really rather marvellous at the same time – who ever said that the high end has to be inflexible?

The DAVE looks striking, but delivers an incredibly subtle performance



1 OBRIVO EAMT-1C £3,699
2 CHORD DAVE £7,950
TOTAL £11,649



The idea of a dedicated headphone dealer is still something of a specialist concept, but if this is your principle way of listening to music, it becomes the most logical thing in the world. In the same way you would want to choose an amp or piece of source equipment

from a reasonable spread of the models available, so it is the case here.

Furthermore, Phil and his team's enthusiasm for what they do is infectious. They have clearly spent time with each of these systems and carefully chosen the partnerships because they deliver what

they are looking for rather than through simply deciding that it looks right on paper. Audio Sanctuary might be serving a specialist corner of the market, but when the results are this good it's hard not to become a convert to the idea of personal audio nirvana.



STIFF RECORDS

The template for eighties' maverick independents... **Simon Berkovitch** steps inside the house of fun, its magic and madness undiminished 40 years on

Although mainstream pop had lost the bite of its formative years by 1976, the sound from the pubs was music to jaded ears. Small clubs and bars were home to bands with a harder-edged sound, playing the kind of gritty R&B that had nourished the UK's beat and mod scenes a decade earlier.

The mood of the times was perfect for Stiff Records. Jake Riviera and Dave Robinson – one-time managers of pub-rock legends Dr. Feelgood and Brinsley Schwarz, respectively – sensed the moment was ripe for change. The pair launched the label that August. The first single out of the traps was Nick Lowe's *So It Goes* 45, which boasted the

catalogue number BUY 1, setting the irreverent tone for the label.

Although serious about having hit records, the public image of Stiff was anything but: its name referencing industry parlance for a flop record, and its quirky slogans and promotional gimmicks woke the slumbering majors with a jolt. Aside from garnering column inches, significantly, Stiff inspired many would-be entrepreneurs to form their own independent labels.

Its first 18 months were a hive of activity, seeing the release of 30+ 45s and a handful of albums. Although few singles charted – Elvis Costello's *Watching The Detectives* was Stiff's first hit in 1977 – sales were healthy enough to feed the

next release and keep the production line chugging along. Wreckless Eric and Ian Dury climbed aboard the same year and a distribution deal was struck with Island Records and EMI to help spread the word.

By the time Riviera jumped ship in early 1978 to form the short-lived Radar label – taking Costello, Nick Lowe and Yachts with him as part of the divorce settlement – an instantly recognisable in-house design style had been established. Many of the 45s were issued in picture sleeves, unusually for the time, often designed by Barney Bubbles of Hawkwind artwork fame.

A golden period followed with Devo, Lene Lovich, The Pogues and, highest profile of all, hit

making powerhouse Madness all hitched to Stiff. But despite a diverse roster and regular hits, business complications saw Robinson sell up in 1986. In truth, much of the pioneering spirit had already departed by then, but its bold, brash, punky and – most importantly – fun attitude to making records in the late seventies and early eighties earns Stiff its reputation as a true original.

The Big Stiff Box Set (2008) – featuring nearly 100 belters stretched out over four CDs – is the one-stop shop to head to, but to whet your appetite, we present an *hors d'oeuvre* of four of the label's key players and a selection of rarities to get collectors' hearts racing.

The Damned

The exhilarating early releases from these cartoon punks are the true sound of '76

Beating the Sex Pistols to the punch by a month, The Damned's *New Rose* was the UK's first homegrown punk 45 and the sixth record out of the Stiff traps. And what a record: "Is she really going out with him?" a voice enquires... pounding tribal drums... one of the great electric guitar riffs... Before it even hits the 30-second mark, The Damned have their name scrawled in the history books.

The original lineup – singer Dave Vanian, bassist Captain Sensible, drummer Rat Scabies and guitarist Brian James – lasted as long as the group's tenure on Stiff. Second single *Neat Neat Neat* also kicked off The Damned's, Stiff's and punk's first long player *Damned Damned Damned* in February 1977. Housed in a striking cover – the back of some highly collectable early mispressed copies featured the wrong band; Eddie and the Hot Rods – it's the pick of their two albums for the label.

Second LP *Music For Pleasure* followed in November, produced by Pink Floyd drummer Nick Mason with mixed results, after an aborted attempt to coax reclusive former leader Syd Barrett into the role. By that time they were mere months from disintegration and James quit in early 1978. The others regrouped later that year, eventually

New Rose was the first homegrown UK punk 45

producing two of their best albums for Chiswick and breaking the top 40 in 1979.

Unfairly dismissed by many punk purists, an incarnation of the group survives to this day, having dabbled in psychedelia, proto-goth and even neo-prog along their 40-year journey. Had they only produced that timeless debut 45, they would still be held as punk – and Stiff – legends.

Publicity shy second single *Neat Neat Neat* (1977) came out at the same time as the group's classic debut long player



Madness

There's much more to North London's magnificent seven than they'd have you believe

There's a scene in the classic 1982 promo video for *House Of Fun* where the band ham it up on a rollercoaster to the dizzy, lilting instrumental section, much like fairground music itself with its organs and calliopes. This epitomises Madness, then at the peak of their powers, sitting at the pole position in the singles chart with their 12th single and 12th consecutive hit.

But listen closer to that snaking, merry-go-round sound and a more sinister atmosphere emerges – as much thirties Berlin nightclub as fifties Blackpool pier – and these darker tones surface frequently on the two albums which bookend *House Of Fun*, their twin masterpieces 7 (1981) and *The Rise & Fall* (1982).

After crashing the top 20 in 1979 as part of the 2-Tone-led ska revival (see *HFC* 390) with their debut 45 *The Prince*, the North London combo were quickly snapped up by Stiff with whom

their finest work was recorded, aided by the subtle but expansive production of Clive Langer and Alan Winstanley.

Initially cast as nutty, nattily dressed rude boys, Madness soon stretched out sartorially as well as musically: with five prolific writers, their unique sound incorporated American soul and jazz as well as Jamaican ska.

Their remarkable purple patch came while with Stiff

Some of the magic disappeared with principal tunesmith and keyboardist Mike Barson's departure, and though the band bade Stiff farewell soon after, their remarkable purple patch will always be associated with the label. With an impressive 15 top 10 singles under their belts thus far, Madness still continues to tour and pull in substantial crowds.

Released in October 1981, 7 was the nutty boys' third album, which went on to reach number five in the charts



Ian Dury

The delightfully demented discography of Lord Upminster of Rhythm Stick

Good evening, I'm from Essex, in case you couldn't tell" So begins *Billerica Dickie* from Ian Dury's debut LP *New Boots And Panties!!*. Ripe with mythology, clever wordplay and poetic smut, it's a prime example of storytelling from the self-proclaimed Lord Upminster... who actually hailed from Harrow.

After taking the traditional thinking musician's route through art school, Dury had fronted the highly rated Kilburn & The High Roads in the mid seventies to little commercial success. Teaming up with musician and arranger Chaz Jankel, he recorded what became *New Boots* with the nucleus of a new band in 1977.

Stiff took the plunge where other, larger labels feared to tread and soon had a huge hit album on their hands. After debut 45 *Sex & Drugs & Rock & Roll* inexplicably failed to chart, 1978 saw the newly

christened Ian Dury & The Blockheads storm the Top 10 with *What A Waste* and then *Hit Me With Your Rhythm Stick*, the label's first number one that

typified their diverse blend of funk, jazz, punk and music hall.

More success followed, but subsequent LP *Laughter*, would be Dury's last for Stiff Records.



Kirsty MacColl

Two stints on Stiff produced some of the national treasure's best songs

Although she never released an album on Stiff, this multi-talented singer songwriter cut some of her finest singles during her two spells with the label.

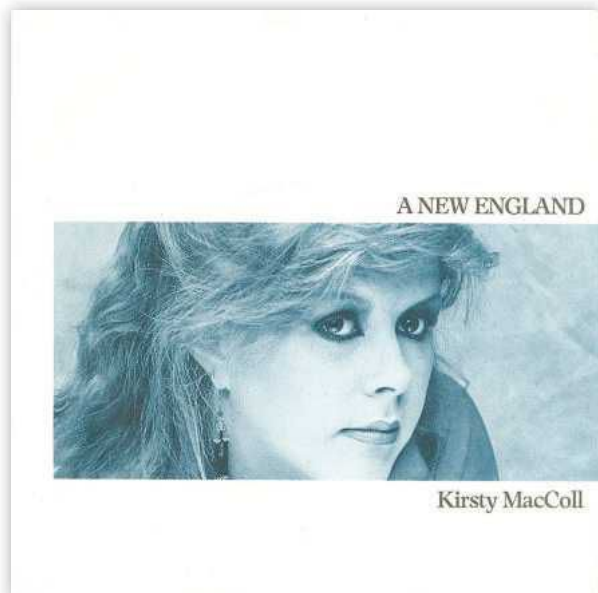
Stiff issued her first solo single, the majestic *They Don't Know* in 1979. Despite heavy airplay, a distributors' strike put an end to any chance of a chart placing. She left for Polydor, scored a hit single and recorded two albums before returning to the Stiff fold and issuing three classic singles before the label imploded.

Terry and He's On The Beach missed the mark, but issued between them was a superb reading of Billy Bragg's *A New England* that managed to crack the Top 10 in 1984.

Renowned for her unique layered harmonies, dubbed the Kirsty Choir, she remained in demand as a session singer, working with The Smiths,

Talking Heads and The Rolling Stones among others, before finally signing with Virgin in 1989 and recording her masterpiece, the LP *Kite*.

Her last association with Stiff occurred when she duetted with Shane MacGowan on the Pogues' Christmas perennial, *A Fairytale Of New York*.



► SHOPPING LIST

Music and Video Exchange's resident new wave expert JT Rathbone selects eight Stiff Records oddities and rarities to get the party started



Motörhead
Leaving Here
"Scheduled for late 1976 but then cancelled, copies subsequently surfaced in Stiff's first *Singles Box* and fetch £30+."



The Adverts
One Chord Wonders
"Non-charting debut from first-wave punks. First issues in picture sleeves sell for £25 or more."



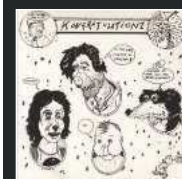
Elvis Costello
Watching The Detectives (DJ copy)
"As few as 20 copies of this rare radio edit exist, making it a three figure collectable."



Larry Wallis
Police Car
"This decidedly menacing ode was the ex-Pink Fairies and Motörhead guitarist's only solo single."



Devo
Be Stiff
"A compilation of early singles, housed in a fetching Man Ray-inspired sleeve. French yellow vinyl copies are rarer."



The Dulcet Tones Of Jack Scot
Kongratulationz
"Presented to guests at Stiff MD Alan Robinson's wedding in 1979. Fewer than 25 copies survived."



The Pogues
Boys From The County Hell
"Promos of this 45 with the original blue tinted sleeve go for £20 or more."



London Cast Of Oklahoma
Oklahoma!
"Another bizarre, promo-only super-rarity this show tune will set you back at least £50."

Annual Clearance

criterion audio

	Retail	Clearance		Retail	Clearance
Bel Canto REF500M power amplifier (pair)	£3,998	£2,199	Linn Akurate 212 (Rosenut)	£4,380	£3,299
Bel Canto REF1000M Mk2 power amplifier (pair)	£7,000	£2,499	Linn Akurate 4200 (Silver)	£5,270	£3,849
Bryston 28B SST2 1000W power amplifier (pair)	£19,000	£7,599	Linn LP12 Akurate (Walnut, no cartridge)	£5,270	£4,449
Burson Audio Timekeeper	£1,950	£1,199	Linn Majik 4100 (Black)	£2,410	£1,899
Burson Audio Conductor SL9018	£1,199	£999	Mark Levinson No32 Reference preamp	£15,000	£7,499
Chord Chordette Maxx amplifier	£989	£799	Moon 180 MiND streamer	£799	£499
Chord Sarum speaker cable (3.5m pair)	£3,850	£2,999	Moon 380D MiND DAC streamer	£4,500	£2,999
Clearaudio Performance DC turntable	£2,495	£1,999	Musical Fidelity E20 and E30	£900	£649
Cyrus 82 DAC QX (Quartz Silver)	£1,970	£1,549	Pass Labs XP-25 phono stage	£12,000	£6,499
Cyrus SmartPower	£699	£349	Plinius SA-Reference power amplifier	£17,000	£13,599
Denon AVP-A1HD processor	£6,799	£1,499	PMC Fact 12 (Tiger Ebony)	£12,995	£9,749
Denon DVD-A1UD universal player	£4,500	£1,199	Proac D30R (Cherry)	£4,750	£3,749
Devialet 200	£5,490	£4,399	PS Audio P5 mains regenerator	£3,500	£2,199
Devialet 250 Companion	£7,990	£5,499	Quad PA One headphone amplifier	£1,200	£999
Devialet 400	£9,890	£6,999	Raidho D1 + stands (Walnut Burl)	£15,125	£10,599
Dynaudio Focus 220	£2,600	£799	Sennheiser HD800 headphones	£1,099	£799
Focal Diablo Utopia + stands (White Carrara)	£9,898	£6,499	Sennheiser IE800 headphones	£599	£499
Focal Scala Utopia V2 (Black Lacquer)	£21,399	£12,749	Sim2 HT5000 projector	£42,500	£7,499
Grace M903 headphone amplifier	£2,150	£1,599	Sonus Faber Olympica II (Graphite)	£6,398	£5,049
KEF Reference 1 (Gloss Rosewood)	£5,000	£4,249	Sonus Faber Olympica III (Walnut)	£8,998	£6,799
KEF Reference 3 (Walnut)	£7,500	£6,399	Sonus Faber Venere 1.5 + stands (Gloss Black)	£1,298	£999
KEF Reference 5 (Gloss Black)	£10,500	£8,899	Spendor A5R (Walnut)	£1,995	£1,399
KEF R500 (Walnut)	£1,500	£1,149	Torus RM16 power conditioner	£7,900	£1,999
KEF R700 (Rosewood)	£2,000	£1,549	Vitus RCD-101 (Black)	£9,700	£7,249
Lavry AD122-96 MKIII (analogue to digital converter)	£6,360	£3,199	Vitus RI-100 (Black)	£9,900	£6,999
Lavry 3000S (sample rate/bit depth converter)	£4,248	£2,099	YG Acoustics Carmel (Silver)	£20,000	£14,999

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Hana in Japanese means "brilliant and gorgeous"



SH model

High output Moving Coil
with nude natural diamond
Shibata-stylus.



SL model

Low output Moving Coil
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"What immediately impressed me with both cartridges was the very low surface noise and how quiet they were overall."

HANA SL & SH - REVIEWED BY HIFI PIG / JAN 2016

VERDICT £

"Meet the Hana twins...a pair of moving coil cartridges from Japan that can be yours at an exceptionally low price. Paul Rigby is smitten by their charms."

HANA EH & EL - REVIEWED BY HI-FI WORLD / FEB 2016

"To compare the Hana with a cartridge costing 10 times as much seems madness, but 'blind' I would have believed they were in the same class - extraordinary. If tomorrow all the other cartridges I had disappeared I would be quite happy to continue listening. I wouldn't feel short-changed, and though I might miss certain things they wouldn't 'bother' me so much. No other cartridge under 1500 Euro has passed this test. That the Hana is well below this limit is quite an achievement."

HANA SL - REVIEWED BY GEOFF HUSBAND, TNT FRANCE / JUNE 2016

EH model

High output Moving Coil
with elliptical stylus.



EL model

Low output Moving Coil
with elliptical stylus.

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- Tone Audio products of the year 2016

"If you're looking for a major jump in your system's performance, I'd suggest buying a pair of these instead of considering a hardware upgrade. Before you write this advice off to cable delusion, expectation bias, or the recent Mercury retrograde phase, please take note: I have never said this in TONE's 11-year history"

- Jeff Dorgay, Tone Audio

"The Tellurium Q company has once again proved their products belong at the top of current cabling offerings. No matter how secretive or even mystic their approach may seem, the indisputable fact is their cables show a level of reproduction quality so far unheard of."

- Mono & Stereo, 2015



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"The Wand certainly pulled something wonderful out of the hi-fi hat.... It sounds completely out of its price class, letting you get lost in music." **Hi-Fi Choice # 363**

"What The Wand brings to the party is excitement. a sense of speed and energy and zest to the LP." **Hi-Fi Plus #112**

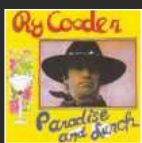
"...the low end is a real strength of The Wand as it captures bass lines expertly and never seems to run out of puff or feel it was lacking authority. I would say that it is almost impossible not to fall for The Wand's charms." **Hi-Fi World January 2012**

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Musicreviews



The Rolling Stones Blue & Lonesome

★★★★★

**ALBUM
OF THE
MONTH**

CD **Polydor**

2016 TURNED OUT to be a wonderful year for the Rolling Stones. In their 55th year they toured South America, culminating in a historic concert in Cuba for an audience of 700,000. Then they appeared at the Desert Trip festival in California with Bob Dylan, Paul McCartney, The Who, Neil Young and Roger Waters – surely the most stellar lineup ever assembled this side of the great gig in the sky. Oh, and Mick became a father again at 73.

If the latter event was unexpected, the arrival of a new studio album seemed even more unlikely. More than a decade had elapsed since, 2005's *A Bigger Bang*, and it appeared that the Stones had become purely a jukebox act, playing their old hits on endless stadium tours but lacking the desire or motivation to record new music. Then came the surprise announcement that they would drop a new album at the end of 2016, although the music itself was

cloaked in the kind of high security you'd expect at a G7 summit: there were no advance review copies, which is why we haven't written about it until now.

If the reason was that the band were concerned about a critical drubbing after such a long lay off, they need not have worried. *Blue & Lonesome* – only their second studio album in 20 years – finds them sounding raucous and fired up, a rejuvenation achieved by going back to their earliest roots.

It contains a dozen blues and R&B classics that might easily have found their way on to their debut album more than half a century ago. Indeed, one of them, Eddie Taylor's rambunctious *Ride 'Em On Down*, appeared in the set list for their first gig at the Marquee Club in July, 1962, although they've only now got around to recording it.

The entire album was recorded in three days on ancient valve-driven equipment, the way they used

to work. By contrast, the digitally enhanced *A Bigger Bang* took eight months to record. The result is a sound that is urgent and immediate.

On the opener, Little Walter's *Just Your Fool*, Jagger dusts down his harmonica and whoops and wails with something approaching abandon. His voice, too, seems to turn back time – on Howlin' Wolf's *Commit A Crime* and Jimmy Reed's *Little Rain*, he sounds younger and more dangerous than in years.

Eric Clapton joins them on Johnny Taylor's *Everybody Knows About My Good Thing* and Otis Rush's *I Can't Quit You Baby*, his pristine slide playing contrasting dramatically with the grittier guitar lines of Keith Richards and Ronnie Wood.

If *Blue & Lonesome* is the Stones' final studio album, it's a fitting and graceful place to finish. Back where they started, playing the white boy blues with a raw conviction few have ever rivalled. **NW**

MUSICREVIEWS



Molly Burch

Please Be Mine



★★★★★
CD

Captured Tracks

A NEW NAME for the new year and if there's any justice, Molly Burch is set to become one of the faces of 2017. Born in Hollywood to movie industry parents – her father was a writer/producer and her mother a casting director – but now resident in Austin, Texas, Burch channels the spirit of sixties girl-pop with a delicious ability to evoke Patsy Cline crooning in some imaginary mid-Western lounge bar to a reverberating Duane Eddy guitar.

Yet just as Amy Winehouse managed to transform her retro-sixties influences

She channels the spirit of Patsy Cline crooning in some imaginary mid-Western bar

into something fresh and exciting, so too does Burch with a set of songs that are sometimes poignant and sometimes assertive, but always potent. She sings of love, loss, loneliness and connection with a plangent beauty. The outcome is that songs such as *Downhearted*, *Try* and the exquisite slow burn of the title track are completely and utterly irresistible. **NW**



Neil Young Peace Trail

★★★★★

CD

Reprise

YOUNG HAS BEEN churning out albums at the rate of two a year in recent times and this may be his best since 2012's *Psychedelic Pill*. But that isn't saying much. Young confines himself mostly to acoustic guitar and some ragged harmonica on a set of protest songs. *John Oaks* is about an eco-activist shot down by police. *Terrorist Suicide Hang Gliders* could have been a commentary on Trump's scary new America if Young had bothered to write a decent tune. The problem with *Peace Trail* is that worthy causes themselves do not make for great songs. Maybe it's time he thought about taking a well-earned vacation. **NW**



Jethro Tull Stand Up The Elevated Edition

★★★★★

HOT PICK

2x CD/1 DVD

Parlophone

THE LATEST LAVISH triple disc and book revamping from the Tull catalogue is their second studio album from 1969. It contains Steven Wilson remixes of the original album, plus loads of extras including BBC sessions, a concert in Stockholm and a DVD of multi-channel versions with 24/96 transfers of stereo and two mono tracks. The remixes sound considerably cleaner, more muscular and reverberant than the originals, thankfully they avoid the compression that mars so many remasters. *Stand Up* marked the transition from blues to folk rock and the introduction of guitarist Martin Barre who is in blazing form. **JK**



The Flaming Lips Oczy Mlody

★★★★★

CD

Bella Union

AFTER THE SOFT *Bulletin* and *Yoshimi Battles The Pink Robots* at the end of the nineties, The Flaming Lips spent the next decade in full experimentation mode, producing concept album after concept album full of half-formed, meandering songs. With *Oczy Mlody* they're back on semi-formed form, mixing the immediacy of their hits of yesteryear with the experimental nature of their recent works. This is still a far cry from their glory days, but *Oczy Mlody* really sounds fantastic on a good system: its intricate rhythms, washes of colour and texture and stroboscopic effects drifting in and out of consciousness. Kick back, put on your headphones and prepare for lift off. **PH**



Do you agree with our reviewers?
Decide for yourself and listen to
some of this month's tunes at
www.hifichoice.co.uk

AUDIOFILE VINYL

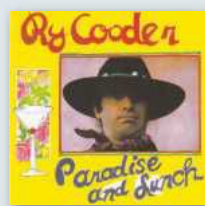
★★★★★

Ry Cooder Paradise And Lunch

180g vinyl

HOT PICK

Speakers Corner/Reprise



OVER THE YEARS

Ry Cooder has made many great records that cross the blues/Americana/rock divide, but 1974's *Paradise And Lunch* is arguably one of the best. It features

a diverse range of songs from Bobby Womack's *It's All Over Now* to blues favourite *Married Man's A Fool* and even a Burt Bacharach classic in the shape of *Mexican Divorce*, but Cooder pulls them all together and makes them his own. It certainly helps that he has a killer band behind him that includes the talents of drummers Jim Keltner and

Milt Holland, Chris Ethridge on bass and Earl Hines playing piano on *Ditty Wah Ditty*, not to mention eight backing singers with some notables among them.

Ultimately it comes down to Cooder's superb sense of feel, the way that he can get to the heart of each song and imbue it with his own, honest but intensely rich tone.

This is also a rich-sounding release, in fact it sounds gorgeous. The opener *Tamp 'Em Up Solid* sets the bar high and it stays that way throughout all nine tracks. Its sound is in no small part due to the immense skills of producers Russ Titelman and Lenny Waronker, who managed to capture a vibe that few have matched. **JK**

HIGH RESOLUTION DOWNLOADS


Jean-Michel Jarre
Oxygene Trilogy

FLAC 24/48

★★★★★
hdtracks.co.uk

THE DANGER WITH any Jean-Michel Jarre re-release is that it can sound horribly out of date, but this stunning, two-hour-plus trilogy sounds bang on the money even if the first part was released in 1976. Frequencies are sharp and the pulses and darting effects whizz in and out of earshot. Yes, tracks from the final part of the trilogy sound more up to date, but compliment the other parts nicely. A must for any fans of epic, grand electronica. **PH**


Tony Bennett
Tony Bennett Celebrates 90

FLAC 24/44.1

★★★★★
hdtracks.co.uk

AS THE REMAINING link to a golden age of jazz singers, Tony Bennett has every right to celebrate his 90th birthday. All the hits are here – recorded live at Radio City Music Hall – and, for a man known for his generosity of spirit and as a lover of a collaboration, there's a stellar list of guests. Lady Gaga, Diana Krall, Stevie Wonder, Michael Bublé, Elton John and KD Lang all pop up. Production is perfunctory, but this is all about the songs, and the man. **PH**



Listen to the second symphony uninterrupted on the Blu-ray, or split over two CDs

Dvořák
Complete Symphonies
István Kertész
★★★★★
9 CDs/1 Blu-ray

HOT PICK

Decca

WHAT MAKES THIS new reissue definitive is the use of the original LP cover art, new 24/96 remastering, plus all the music on one single hi-res Blu-ray disc. The CDs now sound a tad more immediate and transparent than earlier silver disc issues, while the Blu-ray appears to be even more vivid and immediate. Kertész' performances are notable for their freshness and sense of discovery. The LSO play with swashbuckling virtuosity and brilliance, and Decca's sound still sends shivers down the spine with its vividness and clarity. Layout is good, though the second symphony is once again split between discs one and two. **JH**


Tchaikovsky & Sibelius
Violin Concertos
Lisa Batiashvili
Daniel Barenboim

★★★★★

6 CDs

Deutsche Grammophon

IT MUST BE daunting to record popular pieces like the Tchaikovsky and Sibelius violin concertos, given the number of great soloists who've done so. Lisa Batiashvili need fear no comparisons. Her playing is beautifully refined and note-perfect, without seeming soulless. She performs with total assurance, as if she has all the time in the world to colour a note or inflect a phrase. Barenboim and the Staatskapelle Berlin support her well, and the recording sounds smooth, open and very natural, with a good balance between soloist and orchestra. Dynamic range is impressively wide and the level of clarity is excellent. **JH**

BLU-RAY DVD

★★★★★

Pixies
Doolittle At 25

Pure Audio Blu-ray

Eagle Vision

HOT PICK



After their Steve Albini-produced second album, *Surfer Rosa*, Boston's Pixies returned with this in 1989 – a collection of 15 songs that would catapult them into the burgeoning indie and grunge mainstream and influence a generation. 25 years on, *Doolittle* still sounds otherworldly and out there, full of feral, unhinged angst (*Debaser*, *Tame*, *Crackity Jones*), sing-along indie hits (*Wave Of Mutilation*, *Monkey Gone To Heaven*) and haunting, spectral yarns (*I Bleed*). It still sounds fantastic and the use of multi-channel surround sound adds an utterly thrilling element to an essential album. **PH**

DEMO DISCS



Greg Stidsen, Director, Technology and Product Planning at NAD reveals the music he uses to develop and demo products


Shelby Lynne
Just a Little Lovin'

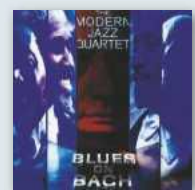
This has plenty of atmosphere and dynamics with a slightly misty presentation that fits the music perfectly. The hi-res version is notably more detailed than CD.


Rachmaninoff
Symphonic Dances – Dallas Symphony

Large in scale and palpable in presence, this recording of one of the most dynamic works always gets my juices flowing!


Stevie Ray Vaughan
Tin Pan Alley

This is earthy, smoky and dynamic with Ray's guitar slashing through the up-front bass. You'll need flat response to 30Hz to hear it at its very best.


Modern Jazz Quartet
Blues in B Flat

A straight ahead acoustic jazz recording from the seventies. With the MQA version, the spaciousness and detail are palpable.


Heinali
Anthem

★★★★★

Vinyl/CD

Injazero Records

SELF-TAUGHT 'SOUND DESIGNER' and composer Oleg Shpudeiko hails from Ukraine and under the guise of Heinali has crafted an enormously evocative soundscape that is equal parts movie soundtrack, meditative ambient mindwash and alien horror from the depths of the darkest soul. Described by the composer as a kind of personal therapy from an emotionally dark place, *Anthem* cries out to be played on a decent system to fully appreciate the mix of sweeping strings, ambient abstractions and low-end rumble. It's a thing of wondrous beauty and is perfect for tuning in and dropping out to. **JDW**

Hey, that's no way to say goodbye

Nigel Williamson pays homage to another of 2016's sad losses, the Lord Byron of rock and roll – Leonard Cohen

LEONARD COHEN: THE ALBUMS

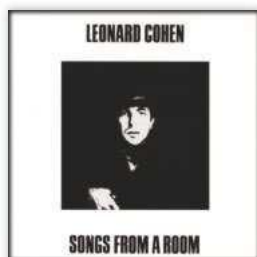
1967



SONGS OF LEONARD COHEN (1967)

A near-perfect debut, including *Suzanne*, *Sisters Of Mercy* and *Marianne* – although Cohen didn't like the arrangements producer John Simon added to sweeten the austerity of his voice and finger-picked guitar.

1969



SONGS FROM A ROOM (1969)

Cohen decamped to Nashville to make his second album – a starker and even more unflinchingly dark set than his memorable debut. *Bird On A Wire*, *The Story Of Isaac* and *The Partisan* are among the highlights.

1971



SONGS OF LOVE AND HATE (1971)

Cohen felt that his third album was "over-produced and over elaborated" and claimed that it was recorded in a fit of deep depression. Yet it still included some of his finest compositions.

1973



LIVE SONGS (1973)

Released to fill a three-year gap between studio albums and recorded at concerts in 1970 and 1972, much of the material is familiar, but the 13-minute *Please Don't Pass Me By (A Disgrace)* is unavailable anywhere else.

When Bob Dylan was awarded the Nobel Prize for Literature in October, Leonard Cohen, in one of his final interviews before his death at the age of 82, remarked that it was “Like pinning a medal on Mount Everest for being the highest mountain”. If so, then Cohen was surely K2, the world’s second loftiest peak in rock and roll’s Himalayas.

Taken together Dylan and Cohen represent the twin pinnacles of modern troubadourism as the two artists that did more than anyone else to transform the bland, homogenous nature of popular song into a profound and substantial art form that became the defining form of latter 20th-century expression.

In an era in which anyone that warbled about the unicorns prancing in their mind was liable to be hailed as a poet, Cohen was the genuine article. Weighing every word to say something precise and yet to suggest so much more, if you prefer a literary analogy to a mountainous one, Milton, John Donne or Keats to Dylan’s Shakespeare comes close.

Cohen did not argue with his reputation as the laureate of romantic gloom and the most

depressive, wrist-slitting troubadour of them all. Yet that is only part of the story. His songs dealt with war and death and sacrifice and the mortal absurdity of the human condition and he sung them in a voice marinated in an austere, world-weary melancholy. It was easy to see how his music became a personal liturgy for the lonely and lovelorn, the anguished and angst-ridden, the disaffected and disappointed and he accepted the role with self-deprecation. “I don’t consider myself a pessimist,” he noted. “I think of a pessimist as someone who is waiting for it to rain – and I feel soaked to the skin.”

Although his work was deeply introspective, at the same time his themes were universal. His fatalism was built on stoical perseverance rather than the abandonment of hope, many of his best compositions driven by a search for self and meaning and a restless quest for

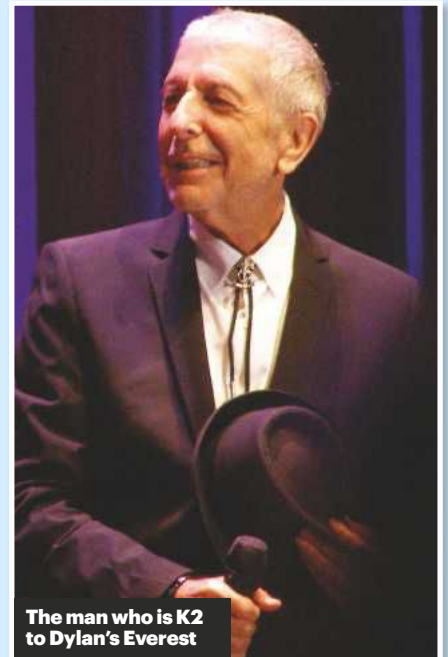
His financial crash was a blessing in disguise as he was forced to return to the stage

personal freedom. Nowhere is this more evident than in *Bird On A Wire*, with its memorable opening tercet:

“Like a bird on the wire,
Like a drunk in a midnight choir,
I have tried in my way to be free”

The song has been covered by dozens of artists including Johnny Cash, Willie Nelson, and Joe Cocker, but it is the phlegmatic resolve of the original recorded in 1969 that remains definitive – a bohemian counter-balance to the braggadocio of *My Way*, recorded by Frank Sinatra the same year.

Like many of Cohen’s best songs, the emotions are complex and nuanced, the philosophical resignation illuminated by what he called: “The cracks where the light gets in”. No other voice in popular music – even Dylan – conveyed such a sense of contemplative maturity, wisdom and



The man who is K2 to Dylan's Everest

humanity. If his songs sounded as if they were the product of deep, self-wounding pain, with that came knowledge and the possibility of enlightenment, while the doom was nuanced not only by an unquenchable romanticism but by a delicious black humour and a razor-sharp and frequently mischievous wit.

His status as the most poetic singer-songwriter of his age meant that his musicality was sometimes overlooked. “When people talk about Leonard,” Bob Dylan noted, “they fail to mention his melodies, which to me, along with his lyrics, are his greatest genius. Even the counterpoint lines – they give a celestial character and melodic lift to every one of his songs. As far as I know, no one else comes close to this in modern music.”

You only have to listen to songs that have become much covered standards such as *Suzanne*, *So Long*, *Marianne*, and, of course, *Hallelujah* to hear where Dylan is coming from. What’s more, Cohen’s musicality was

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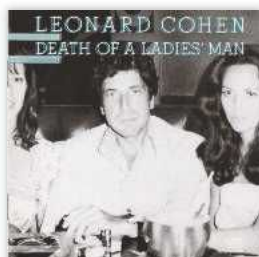
1974



NEW SKIN FOR THE OLD CEREMONY (1974)

Several songs were inspired by the 1973 Arab-Israeli war, which Cohen witnessed first hand, although the album is infamous for *Chelsea Hotel #2* which described ‘acts’ with Janis Joplin.

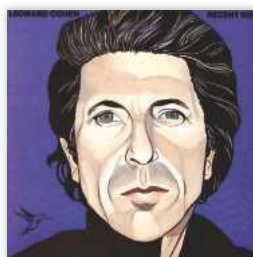
1977



DEATH OF A LADIES' MAN (1977)

The ‘what was he thinking’ album as Phil Spector was allowed to run amok with inappropriate ‘wall of sound’ production. Of the eight songs, only *Memories* was considered good enough ever to make it into his live shows. A career nadir.

1979



RECENT SONGS (1979)

Some criticised the sound as bland and MOR – but after the chaos of *Death Of A Ladies' Man*, most fans welcomed a return to form on crafted songs such as *The Traitor*, *The Gypsy's Wife* and *Came So Far For Beauty*.

1984



VARIOUS POSITIONS (1984)

Synths, Jennifer Warnes on backing vocals and Cohen’s voice dropping to a deep, resonant burr on classic songs from *Dance Me To The End Of Love* to the country-tinged *The Captain* – and, of course, *Hallelujah*.



Often overlooked, Cohen's musicality constantly evolved

constantly evolving. While his early records were centred around the sound of his voice and soft finger-picking of a Spanish guitar, in later years he expanded his musical palette dramatically, adding a full band, synthesisers, orchestras and heavenly choruses.

His voice, so often maligned, was a potent instrument, too – idiosyncratic, yes, but more conventionally ‘musical’ than say, either Dylan or Tom Waits, and an arrestingly expressive narrative vehicle. “I knew I was no great shakes as a singer, but I always thought I could tell the truth about a song,” he said. “I liked those singers who would just lay out their predicament and tell their story, and I thought I could be one of those guys.”

For all his questing, both spiritual and carnal, there was also something deeply reassuring about Cohen, a sense of maturity that befitted a literary aesthete who appeared aloof from the hurly-burly of modern celebrity culture and who was already a published poet and novelist before he recorded his first album in 1967 at the relatively late age of 33. In a real sense, Cohen was unique – the only

Although his work was deeply introspective, at the same time his themes were universal

rock and roll icon whose intellectual rite of passage predated the advent of rock and roll.

Born in Montreal in 1934 into a prosperous middle-class Jewish family, Cohen's father, the owner of a clothing store, was approaching 50 when his son was born and died when he was nine years old. He grew up steeped in Talmudic lore and the stories of the Old Testament but influenced in his teens by folk and country music, he learned to play the guitar and formed a group called the Buckskin Boys. Yet his primary interest was literature and as he came of age his cultural heroes were the poet Lorca and the beat writer Jack Kerouac rather than Elvis Presley and Chuck Berry.

In 1951 he enrolled at McGill University, where he chaired the debating society and

won a creative writing prize. His first book of verse was published in 1956 just as Presley was enjoying his first No 1 with *Heartbreak Hotel*. Further books of verse and a brace of novels followed, with one reviewer comparing him to James Joyce.

Travelling widely, he spent time in Castro's Cuba, in London and then on the Greek island of Hydra before he returned to North America in 1966, planning to try his luck as a singer and songwriter. After meeting Judy Collins, she decided to record his song *Suzanne* and then invited its writer to sing it with her at a concert in New York.

Learning the craft

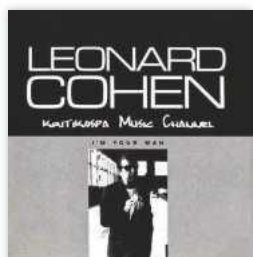
Cohen was so nervous that he fled the stage, but an enthusiastic member of the audience encouraged him back and set him on his way as a performer who would eventually develop an enviable stagecraft that was able to shrink the biggest concert hall to the intimacy of a front parlour.

He spent the next year living in the Chelsea Hotel in New York, mixing with Andy Warhol's set and playing folk gigs, which brought him to the attention of Columbia Records' veteran mover and shaker John Hammond, who had also signed a certain Bob Dylan to the label.

Cohen's first album, *Songs Of Leonard Cohen* appeared in 1967. Sales in America were modest but the record found a cult following in Europe and Britain, where the album spent a year in the charts and launched the era of the ‘bedsit troubadours’. He followed it with *Songs From A Room* (1969), *Songs Of Love And Hate* (1971) and *New Skin For The Old Ceremony* (1974), all of which cemented his reputation as Dylan's only serious rival as pop music's most significant songwriter-poet.

His songs from the period touched on love, loss and longing (*Suzanne*, *Sisters Of Mercy* and *So Long Marianne*); lust (*Chelsea Hotel #2*, which described a liaison with the singer Janis Joplin; faith and religious themes (*The Story Of Isaac* and *The Butcher*); war and death (particularly after his experiences

1988



I'M YOUR MAN (1988)

A landmark album with a richer musical canvas than ever before, Cohen in total command of his new deep voice, much wry humour and sophisticated songs such as *First We Take Manhattan*, *Everybody Knows* and *Tower Of Song*.

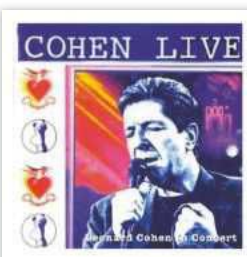
1992



THE FUTURE (1992)

Cohen's vision of the modern world was dark and dangerous – so much so that no fewer than three of the songs fitted seamlessly onto the soundtrack of Oliver Stone's notoriously dystopic film *Natural Born Killers*.

1994



COHEN LIVE: LEONARD COHEN IN CONCERT (1994)

13 tracks recorded in concert in 1988 and 1993, ranging from early hits such as *Suzanne* and *Bird On A Wire* to later classics including *I'm Your Man* and *Everybody Knows*.

2001



TEN NEW SONGS (2001)

Working with Sharon Robinson, Cohen's first album in almost a decade was a triumphant return, mature, brooding with a Zen-like wisdom after his years of isolation in his Buddhist monastery.

during the 1973 Arab-Israel war when he performed for Jewish troops) and depression and suicide (*Seems So Long Ago, Nancy* and *Dress Rehearsal Rag*).

By the mid-seventies, however, he appeared to be in the grip of a mid-life crisis. "I got into drugs and drinking and women and travel and feeling that I was part of a motorcycle gang or something," he admitted some 20 years later.

His confusion led to the surprising decision to ask Phil Spector to produce him. The result was 1977's *The Death Of A Ladies' Man*. Out went the austere sound of his earlier releases in place of full-on, melodramatic rock arrangements. One grotesque track, *Don't Go Home With Your Hard On*, featured a drunken chorus of Cohen, Dylan and Allen Ginsberg repeating the title line over and over again.

At one point during the sessions for the album, Spector locked Cohen out of the studio, put an armed guard on the door and

sung back-up on various Cohen records, in 1987 Warnes recorded a critically acclaimed album of his compositions titled *Famous Blue Raincoat*. It not only re-awakened interest in his work, but also renewed his self-confidence and his 1988 album *I'm Your Man* was a magisterial career highlight.

Back to his best

With Warnes singing backing vocals and a contemporary synthesiser-based sound, the album contained some of his most profound compositions in more than a decade, as with an increasingly sardonic humour he surveyed the wreckage of the modern world in songs such as *First We Take Manhattan*, *Tower Of Song* and *Everybody Knows*.

The songs on *The Future*, released in 1992, continued the social commentary and painted an apocalyptic picture of a world going to hell. It was no coincidence that the director Oliver Stone co-opted three of its songs for the soundtrack of his dystopic film, *Natural Born Killers*.

As if recoiling in horror at his own vision of such a dangerously fractured civilisation, Cohen retreated to a Zen Buddhist monastery, high up on the snow-capped Mount Baldy in California, where he served an octogenarian Zen master and was ordained as a monk. He spent six years there and described a punishing regime that involved rising at 3.30am to meditate and pray. "It's just a way of life that is very

simple, very rigorous, very military, that suits the unenlightened fascist in me," he said with that characteristic black humour of his.

It was widely assumed that he had retired from music, but he came down from the mountain in 1999 and to the surprise of many returned to the fray with the albums *Ten New Songs* (2001) and *Dear Heather* (2004).

The following year, he announced that he was again broke, and issued legal proceedings against his manager, who was accused of misappropriated millions from his bank accounts and swindling him out of the publishing rights.

Artistically, his personal financial crash was a blessing in disguise for he was forced to return to the stage to replenish his pension fund. Undertaking his first concert tour in 15 years, he presented his greatest hits in a wonderfully intimate show, even though he was performing in huge and impersonal concert halls. The culmination of more than 40 years of hard-won experience, they were, arguably the defining shows of his career and the tour was subsequently captured for posterity on a compelling live album.

Suitably encouraged he also returned to the studio and a prolific period of golden, autumnal creativity followed. Between 2012 and 2016, he released three timeless albums of new songs, an unprecedented late flowering, which in his eighties gave him the highest chart placings of his career and proved that even in the jejune world of rock and roll the cult of youth cannot always trump the wisdom of experience ●



His songs dealt with war and death and sacrifice and the mortal absurdity of the human condition

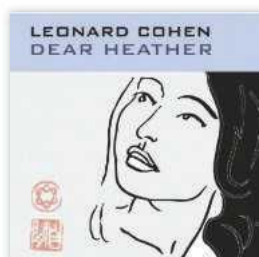
would not let him listen to the mixes. When he protested, Spector allegedly threatened him with a gun and a crossbow.

Death Of A Ladies' Man horrified most of his fans and he swiftly returned to something closer to his old style on *Recent Songs* (1979) and *Various Positions* (1984). The latter included *Hallelujah*, which went on to become one of his most covered compositions, although the song's genius was largely overlooked at the time. The general consensus was that the eighties found Cohen's muse very much in decline and, heavily addicted to amphetamines, and with record sales falling, he found himself emotionally and financially bankrupt.

He credited the singer Jennifer Warnes with his revival. A long-time colleague who had

Picture credits: (left) Shutterstock/Route 66, (right): Kazban Ozcan

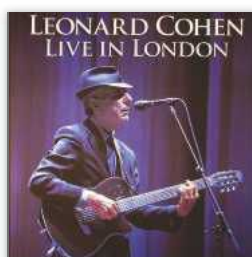
2004



DEAR HEATHER (2004)

Something of a ragbag, consisting of leftovers from *Ten New Songs*, and tracks rescued from past projects, a setting of a Byron poem and a cover of *Tennessee Waltz*.

2009



LIVE IN LONDON (2009)

A brilliant 26-track memento of his stunning 2008 performance at the O2 Arena. The witty, self-deprecating between-song banter is almost as compelling as the songs.

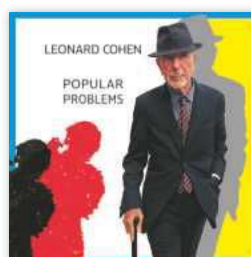
2012



OLD IDEAS (2012)

Mortality, desire, faith, betrayal, redemption and the quest for love in an apocalyptic world – viewed with grace and wit through the eyes of a 78 year-old who had seen and done it all.

2014



POPULAR PROBLEMS (2014)

More ripe recitations from the old master on his 80th birthday, produced by Patrick Leonard, famed for his work with Madonna. "You got me singing, even though it all looks grim," he deadpans.

2016



YOU WANT IT DARKER (2016)

Age and experience have intensified the wisdom and insight. The result is witty, sagacious, smart and dignified, every note and syllable nuanced into a perfect symmetry.



How to set up your turntable

To get the best from your record player you'll need to dedicate some time and attention to set it up properly, here's everything you need to know

Unlike a CD player or a streamer, a record player is not a plug-and-play device. To get the very best from it, great care needs to be taken to ensure that it is correctly set up. Happily, this is not as difficult as you might expect and there is a wide selection of inexpensive accessories available to help.

Before considering any form of adjustment, it is important to make sure the turntable itself is level. The stylus is held in the groove entirely by gravitational force, and any imbalance means the downward force on it is not exactly perpendicular to the record.

On the level

Most turntables are fitted with adjustable feet and levelling is easily done using a spirit level. Place the level on the platter, to allow any variation in manufacturing tolerances to be adjusted out. A better solution is to use a level that fits over the central spindle, like Blue Horizon's Prolevel tool (HFC 373).

Assuming your cartridge has been fitted according to the manufacturer's instructions, the next step is to set the tracking force. This

is usually done by setting both the tracking force adjustment and the bias adjustment on the tonearm to zero and then moving the counterbalance weight so that the arm is perfectly horizontal. Make sure you remove any stylus protection cover as this will affect the weight of the cartridge. Now set the tracking force adjustment on the tonearm to

It's surprising how much fluff can accumulate around the stylus from airborne dust

the correct value according to the cartridge manufacturer. This is good enough to enable the other adjustments to be made before the tracking is set more accurately later.

Now we can align the cartridge. This involves setting the azimuth or vertical alignment, the overhang and the angle of the cartridge in the headshell.

Setting the azimuth simply involves making sure the stylus is perpendicular to the record

when the cartridge is viewed from the front. Placing a small mirror on the platter and gently lowering the stylus onto it will highlight any misalignment. If your headshell does not have an adjustment for this, fitting a small paper shim between the cartridge and the headshell will suffice.

The overhang and the angle of the cartridge in the headshell are set using an alignment protractor, sliding the cartridge forwards or backwards and twisting it in the headshell so it lines up with the calibration marks on the gauge. The overhang is the difference between the distance of the tonearm pivot from the centre spindle (which is fixed for a given tonearm) and the distance of the tonearm pivot to the stylus (which is known as the effective length).

The calculations required to work out the optimum positioning of the cartridge are not particularly straightforward. Fortunately, alignment protractors are available to help (you can download a free one online from: vinylengine.com/cartridge-alignment-protractors.shtml). All you have to do is decide which calculation model you wish to

use. As long as you follow the instructions, you should achieve satisfactory results.

Once the cartridge is exactly where it should be in the headshell, it's time to set the tracking force. The markings on a tonearm are notoriously unreliable for making this adjustment force and the only way to do it properly is to use a stylus balance.

The cartridge manufacturer will usually specify a range for the tracking force, and you should set the force to a value within that range – but what value to use? A test record is useful for deciding this, but not essential. Usually records have a tracking ability test consisting of a tone recorded at increasing amplitudes, which can assist in setting the tracking weight and bias. Too low a tracking weight will result in poor tracking and do more harm to your records than erring on the high side, but don't overdo it. Tracking ability depends on your tonearm and cartridge combination. At very high levels of the test tone, your cartridge will start to miss-track and this will be indicated by a buzzing sound.

The bias adjustment (sometimes referred to as the anti-skating) exerts a small outward force to the tonearm to counteract the

Before tackling any form of adjustment, it is important to set the record straight

tendency of the arm to swing towards the centre of a record when playing. Usually, the tonearm's bias adjuster has markings on it and you set it to the mark corresponding to the tracking force applied. However, if you have a test record, you can set the bias more accurately by the tracking ability test and when the point is reached when the cartridge starts to miss-track, there should be the same level of buzzing on both channels.

The last adjustment to make is the tonearm height to set the Vertical Tracking Angle (VTA), which sets the Stylus Rake Angle (SRA) of the cartridge. The VTA is the angle of the cantilever to the record surface (usually around 20°), which in itself is not that critical. However, the SRA, which is the angle of the stylus in the groove, is vital and has a major impact on sound quality. The closer the SRA can be adjusted to match that of the original cutter head, the more information the stylus will retrieve from the groove. The VTA will vary depending on the tracking weight, so it is important to set this before attempting to adjust the VTA. The VTA is adjusted by altering the height of the arm (which may be via an adjuster built into the tonearm or by adding or removing



If you can't afford to buy a record cleaning machine, anti-static liquid is ideal

shims from the tonearm mount), and the correct point is best determined by ear. A good starting point is to set the arm height so that it is parallel to the record when it is playing and to choose a well-known record with some bass and either a solo violin or a female vocalist. If the arm is too high (VTA too great), the sound will be harsh and thin with poor imaging. If set too low, it will be dull with 'boomy' bass, lacking detail and with poor imaging. The correct point is unmistakable where the instruments and vocals snap into focus and everything sounds clear. A simple gauge can be made using a piece of card temporarily fixed to the turntable to help adjust the height and note the position where the VTA is correct.

Having taken the time to set everything up correctly, it is important to keep everything as clean as possible. Apart from cleaning the record playing surface using a wet cleaner or record cleaning machine of some sort, we recommend cleaning off any dust before every play. There are many cloth and brush accessories available for this purpose, but we prefer using a carbon fibre brush. And remember that if you buy second-hand records it's always a good idea to give them a thorough wet clean before playing. Always replace the inner sleeve with a polyethylene



This Audio Origami digital scale (HFC 411) is perfect for setting the stylus force

or paper and polyethylene product to avoid re-contaminating the cleaned record from any residual dirt left inside the old sleeve.

It's surprising how quickly fluff can accumulate around the stylus from airborne dust after only playing a couple of sides – even with records that you thought were scrupulously clean. With a carbon-fibre or fine hair stylus brush, the way to clean a stylus is to gently brush from the rear of the cartridge forwards towards the front. Occasionally, the cantilever and cartridge underside may also require a gentle brush. Another popular cleaning method is to use a stylus cleaning putty or cleaning substance where the stylus is gently lowered into the cleaner to remove the dirt.

Bear with us

The final thing to mention is the turntable main bearing. Many bearings require some form of lubrication and they will also require occasional cleaning, the frequency of which will depend on use. It's a good idea to clean these once a year and replace the bearing oil. A special high-performance oil of the correct viscosity for your bearing needs to be used, and you'll find oils specifically blended for this purpose available from your turntable manufacturer and audio accessory supplier.

As modern bearings are high tolerance, a completely lint-free cloth should be used to avoid any risk of leaving debris

in the central bearing or around the central spindle.

It's important to be aware that some bearings have a small ball bearing inside, so be careful if you plan to turn your deck upside down to clean it.

So there you have it. Although setting up your turntable might initially appear rather daunting, the truth is if you carefully carry out the steps in a methodical fashion, you'll be rewarded with superb sound from your record player. So put the mag down, follow the simple steps explained above and go and rediscover the joy of properly reproduced vinyl ●



Pro-Ject's VC-S (HFC 410) record cleaning machine is the ideal way to clean discs

TURNTABLES £279-£2,999

Groove masters

As the vinyl success story continues to run its course, we select six of the best record spinners at a variety of prices to get you in the groove



Elipson Omega 100 RIAA BT

PRICE: £500 **TELEPHONE:** 01628 484968
WEB: elipson.com **REVIEWED:** HFC 415

A completely bespoke design that's been developed inhouse by the French brand, the Omega 100 RIAA BT boasts a number of unique features. Chief among the new technology is a computer-controlled motor with electronic speed switching. The new carbon fibre armtube is connected to an innovative bearing arrangement that combines vertical and horizontal yokes into a single knuckle and applies the antiskate down the bearing axis using a patented rubber torsion system. There's also an onboard phono stage that can connect via aptX Bluetooth to a suitably equipped device (hence the BT part of its monicker) and an Ortofon OM10 cartridge is included as part of the bundle.

Sound quality

What makes this such a capable design is the way in which it is able to balance excitement and refinement to ensure that everything you listen to sounds tonally accurate when required, but conversely full of attack and energy when the record demands it. Music enjoys a fantastic combination of effortless space and an appealingly lively presentation while the built-in phono stage can comfortably hold its own among more exalted company.

WE SAY: Offers a stunning performance across a wide variety of music combined with superb build quality



Pro-Ject Essential III A

PRICE: £279 **TELEPHONE:** 01235 511166
WEB: henleydesigns.co.uk **REVIEWED:** page 56

As the sale of vinyl albums has once again become part of the mainstream, so too has the number of decks to spin them on. Consequently, the choice of budget turntables available has grown to such a point that there's more available now than there were back in the format's original heyday, but Pro-Ject's latest value deck is a standout buy for newbies. An unsuspended belt-drive design, the Essential III A replaces the MDF platter of its predecessor with acrylic and swaps the Ortofon OM5 moving-magnet cartridge for the higher-spec OM10. An internal ground link for the motor simplifies the number of connections to the amplifier (in an effort to reduce noise), while connection to an external phono stage comes via an OFC copper interconnect, which appears to be much more substantial than most rivals and feels sturdy.

Sound quality

The overall tonal balance here is quite impeccable given the asking price. No single part of the frequency response stands out as the performance is remarkably even from top to bottom. There's a sense of space around musicians that greatly enhances the feeling of realism, lending the performance a real sense of effortlessness that is all too rarely witnessed on rivals at this price point.

WE SAY: A super impressive arrival to the budget turntable stable that very much sets the standard for others to attain to



Pro-Ject RPM 9 Carbon

PRICE: £1,500 **TELEPHONE:** 01235 511166
WEB: henleydesigns.co.uk **REVIEWED:** HFC 409

Positioned towards the upper end of Pro-Ject's comprehensive range of turntables, the RPM 9 Carbon certainly takes the plaudits for originality of design. Its teardrop-shaped plinth is manufactured from an advanced sandwich construction of MDF, carbon fibre and steel pellets that has all been subjected to thermo treatment. The polished 7.2kg aluminium platter has a vinyl top and is fitted with an inverted ceramic main bearing that has been designed to deliver stable speeds with very low rumble. Spinning the platter is a free-standing precision DC-driven, AC generator used to electronically control speed. The deck is partnered with Pro-Ject's 9CC Evolution tonearm and an optional Ortofon Quintet Black cartridge can be supplied for an additional outlay of £400.

Sound quality

The first thing to strike us upon slipping some vinyl onto the RPM 9 Carbon is the incredible realism of the performance. This deck is adept at extracting all of the subtle nuances from the music. Instruments are well positioned in a soundstage that is both wide and extends a long way back, enabling us to focus on each individual instrument.

WE SAY: This sumptuous design turns in a highly polished performance with every bit of vinyl placed on its platter





The way that you store your beloved record collection is key to how well it will play back and how long it lasts – with care it should give you pleasure forever. Always try to keep your albums stood up vertically, side by side and try to avoid packing them too tightly. Temperature is also an important consideration, as rapid increases can cause warping. Normal room temperature between 18°C and 21°C is thought to be ideal.

Although humidity isn't generally considered to be a problem for vinyl, it can affect the sleeves – the last thing you want is a soggy cover. More worrying, damp conditions can lead to mould growth, which results in surface dirt getting in between the grooves. Try to avoid this by keeping your LPs in polyethylene sleeves inserted into the album cover with the open edge uppermost to stop any unwanted dust getting in.



Rega Planar 2

PRICE: £375 TELEPHONE: 01702 333071
WEB: rega.co.uk REVIEWED: HFC 413

Something of a legend in the world of British hi-fi, the original Planar 2 with its glass platter was launched by Rega back in 1976. Jump forward 40 years and not only has the record industry changed beyond recognition, but the Planar 2 seems to have undergone something of a facelift too. It features a raft of new parts including the RB220 tonearm, a 24V low-noise motor housed in the acrylic laminated plinth and a newly designed central bearing for the platter. The RB220 arm is fitted with a new ultra-low friction, zero-play ball-bearing system contained within a stiff and lightweight bearing housing and features a Rega Carbon moving-magnet cartridge. The 10mm platter doesn't have the same glass as the original Planar 2, instead opting for an Optiwhite equivalent manufactured from float glass.

Sound quality

First impressions are good, especially of the bass response. Though considered a budget moving-magnet cartridge, the Rega Carbon is comfortably able to hold its own providing a deep and powerful bass line that is both well extended and immaculately controlled. Picking a very bright recording with potential for lots of objectionable sibilance with vocals, we're impressed by just how smooth the singing is – a testament to the cartridge and RB220 tonearm combination. On a final note, the bundled felt mat is great at stopping the top end from ringing out.

WE SAY: The famous Planar 2 is brought bang up to date and offers amazing sound quality at a great price



Rega Planar 3

PRICE: £625 TELEPHONE: 01702 333071
WEB: rega.co.uk REVIEWED: HFC 411

Anyone that's paid attention to legendary UK turntable manufacturer Rega's vinyl output will recognise the significance of the number three over the years – the Planar 3, P3, RP3, the list goes on – so when the third incarnation of the Planar was announced, there was much excitement. While the basic form is the same as what's come before, there are some key differences. The bearing has been reworked with a new brass central section that improves fit and quality to lower the noise floor and reduce stress on the bearing. The plinth features new bracing and the sub-platter is stiffer and built to tighter tolerances. The new RB330 tonearm includes a new bearing housing, armtube and counterweight along with adjustments to anti-skate settings.

Sound quality

In many ways, the sonic performance echoes the aesthetic improvements that have been made. The Planar 3 sounds very much like a Rega deck should, and yet simultaneously more capable and infectious lively. The result is a turntable that performs with absolute assurance and a genuine sense of fun. Where the differences start to show is in the way that it opens up material, never making it sound disjointed or confused, instead creating a sense of space and soundstage where so many similarly priced rivals struggle. There is a three dimensionality to the performance that allows it to sound believable and consistently fun.

WE SAY: An ideal starter turntable for those that want to know what the fuss is all about, quite simply superb



Technics SL-1200G

PRICE: £2,999 TELEPHONE: 03332 228777
WEB: technics.com REVIEWED: HFC 418

Iconic is a word that's banded about all to freely these days, but no other turntable can lay claim to such a description in quite the same way as the SL-1200. Recognised by even those that don't know anything about hi-fi, it's the design that everyone can identify. And after nearly a decade in the wilderness, it's back. Updates are too lengthy to go into in any real depth here, but the headlines include a new direct-drive motor that's described as being better than anything that's come before, an aluminium tonearm that's able to handle cartridges varying from 5.6g to 19.8g and newly designed feet claimed to have a high level of vibration damping.

Sound quality

The SL-1200G effectively takes up the baton from where its illustrious predecessor left off, building on the strengths and fixing the failings. With a sweeter, smoother tonality – especially in the midband – and better soundstaging and depth perspective. Spin up some classic rock, and you're struck by the propulsive feel of the music. The SL-1200G sounds fresh and rhythmically captivating with the laid-back sound that so many people like about vinyl replaced by one that's like hi-res, but with soul.

WE SAY: Still deserving of the title of iconic, the SL-1200G is even better than before, despite the high price



Time to accessorise

Having splashed the cash on your perfect vinyl spinner, here are just a few of the ways that you can get the very best out of your record player



RUSS ANDREWS TORLYTE TURNTABLE STAND £650
TELEPHONE: 01539 797300
WEBSITE: russandrews.com
TESTED: HFC 417

Superb sound-deadening and isolation properties make this the record player stand of choice.

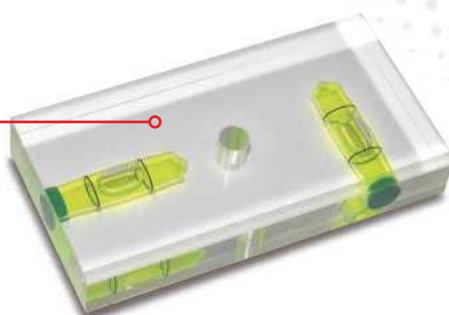


OYAIDE BR-12 TURNTABLE MAT £90
TELEPHONE: 01733 350878
WEBSITE: analogueseduction.net

Supplied with a large stroboscope disc, the BR-12 cleans up the sound and brings greater clarity to records.

ANALOGUE WORKS TURNTABLE SPIRIT LEVEL £25
TELEPHONE: 01536 762211
WEBSITE: divineaudio.co.uk

Fitting over the centre spindle, this is the perfect way to ensure that your turntable is level.



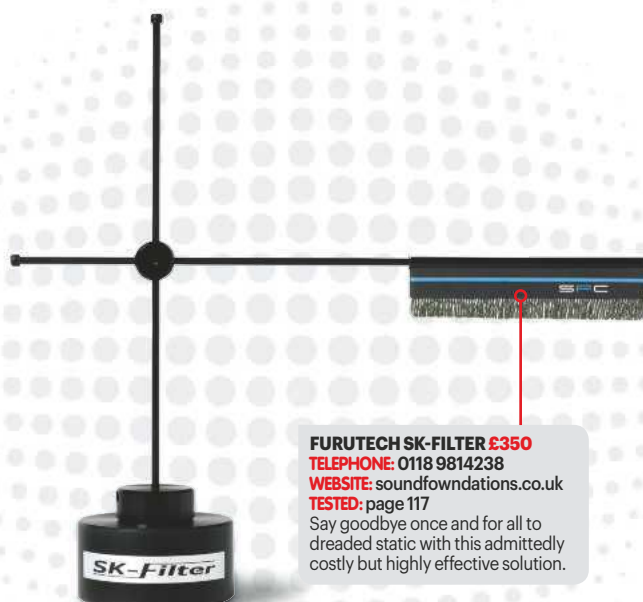
CYRUS PHONO SIGNATURE PHONO STAGE £1,200

TELEPHONE: 01480 410900

WEBSITE: cyrusaudio.com

TESTED: HFC 408

This phono stage delivers on the promise of vinyl as a high-resolution format and the fact it does so while delivering class-leading functionality makes it very special indeed.



FURUTECH SK-FILTER £350

TELEPHONE: 0118 9814238

WEBSITE: soundfoundations.co.uk

TESTED: page 117

Say goodbye once and for all to dreaded static with this admittedly costly but highly effective solution.



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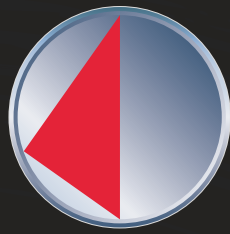
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Pro-Ject
AUDIO SYSTEMS

The Classic



August 2016



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The Classic was released to celebrate Pro-Ject Audio Systems' 25th Anniversary. This retro-inspired turntable has been designed from the ground-up to combine timeless aesthetics with modern technology and audiophile sound performance.

The striking frame design is available in three wood finishes, and provides clever decoupling between the acoustically treated aluminium platter and the motor.

The new motor is powered by a built-in generator, for a consistent performance, and drives a sub-platter that sits atop a precision-engineered main bearing.

The all-new 9" Classic Tonearm is made of aluminium and carbon fibre, for unrivalled rigidity while retaining a low mass. The arm benefits from a new bearing system for completely free movement and is supplied as standard with an Ortofon 2M Silver cartridge.

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Electric Jukebox

Music streaming service

AT FIRST GLANCE, Electric Jukebox appears to be just another streaming music service, along the lines of Spotify or Apple Music. However, the way it brings its music into your home is drastically different from its rivals. Instead of streaming it via an app that runs on a computer, smartphone or tablet, Electric Jukebox uses hardware, in the form of a matchbox-sized adaptor that plugs directly into an HDMI port on your TV. This uses wi-fi to connect to your home network, and also provides the onscreen interface that lets you browse through the Jukebox library of some 29 million songs. You then use a motion-sensitive controller to navigate through the menus. The controller also includes a mic so you can use voice commands to locate songs or artists. The service claims to be 'subscription-free', but the £169 price tag does include a 'premium pass' that allows you to listen for 12 months without adverts. After this time you'll revert to a free service that includes adverts, or you can renew the premium pass for £52.

Know your audience

This emphasis on the TV means Electric Jukebox is aimed at a family audience, as well as older users that aren't comfortable with smartphones and tablets. The appearance of Stephen Fry and Alexander Armstrong as 'tastemakers' that provide their own playlists is a bit of a give-away. To be fair, Robbie Williams and Sheryl Crowe also appear, but the target audience is clearly more Radio 2 than 6 Music.

Still, taken on its own terms it works quite well, and is easy to set up and use. The adaptor requires its own mains power supply, but as soon as it's connected to the TV it automatically appears on screen and prompts you for your wi-fi password. There's no need to set up an account, so you're online and ready to browse in minutes.



To keep things simple, the main interface consists of three large icons – Discovery, My Music and Search. Discovery takes you into those Tastemaker playlists, and also lets you browse categories such as genre, decade and mood. You can tag favourites, or create your own playlists, and these will appear in the My Music section. The Search feature can be a bit untidy at times.

The voice-recognition works well, and it takes phrases like “*Bohemian Rhapsody*”, “*Synchronicity*”, “*Django Reinhardt*”, and “*Barbra Streisand*” in its stride, but the presentation of the results is messy. You tend to get best results if you ask for a specific album or song title – searching for “*Sheer Heart Attack*” shows both the Queen album from 1974, as well as the track from 1977’s *News Of The World*. But if you just search for an artist such as Queen – which has a pretty large back catalogue – you’ll end up with long lists of albums and songs that seem to be organised completely at random – in neither alphabetical nor chronological order. It all seems a

little sloppy, and the search features could definitely be more precise.

The sound quality will, of course, largely depend on the speakers that you use with your TV, but music is streamed in AAC format, varying between 160kbps and 320kbps, which is comparable to Spotify and Apple Music. There’s also a 3.5mm connector on the Jukebox adaptor, and hooking it up to my Libratone Zipp wireless speakers produces a satisfying, room-filling sound.

Turning the tide

The search tools could certainly be improved, but Electric Jukebox succeeds on its own terms as an easy-to-use introduction to music streaming services for people that might be a little digitally challenged. But restricting its use to just the TV screen seems rather short sighted in these days of mobile music, and it remains to be seen if the company’s cosy vision of happy families gathering around the television for a jovial sing-along is more than just rose-tinted nostalgia. **CJ**

DETAILS

PRICE
£169
TELEPHONE
03300 881505
WEBSITE
electricjukebox.com

OUR VERDICT



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The Chord Company

Clearway analogue RCA interconnect

HAND BUILT IN Wiltshire, The Chord Company's Clearway interconnect uses the maker's proprietary ARAY technology like the C-Line RCA interconnect (HFC 403). This was originally developed for its flagship Sarum range and was designed to offer improvements in detail and transparency. Building on the C-Line ARAY design, the Clearway improves the conductors by using a very high-purity oxygen-free copper. The insulation has also been upgraded to Fluorinated Ethylene Propylene (FEP) and the cable is screened with a higher density foil to improve shielding. It's terminated with VEE 3 direct silver-plated RCA plugs, but can also come with DIN or XLRs and can be custom made to any length.

One direction

I connect the interconnect between my preamp and monoblocks with the arrows pointing towards the monoblocks, and run them in by playing music with the monoblocks switched off for 10 hours before undertaking any subjective listening tests. I start off with Saint-Saëns *Organ Symphony No.3* played by The City of Birmingham Symphony Orchestra conducted by Louis Frémaux. This recording is noted for some really deep organ notes during the first movement. The power and emotion is incredible, and the Clearway has no problem conveying this to my monoblock amplification without restraint. The more joyful second movement is sprightly and tuneful, and all sections of the orchestra are clear and well positioned within the soundstage.

Turning to some baroque music to check out Clearway's handling of solo instruments, a delicate recording of Rameau harpsichord pieces played by George Malcolm demonstrates its sophisticated handling of the instrument. I am really drawn into the performance by the intimate playing of all the complexities of the piece and the



tonal variations of the pedal stops. The leading edges and natural decays of each note of the harpsichord contributes well to the overall realism of the reproduction.

It's time to lighten the mood with some classic Latin music played on the guitar by Tony Mottola. His version of Cole Porter's *I Love You* is light, airy and tuneful, with a perfect balance between the guitar, flute and drums. As with the solo harpsichord music, the tonal details of each instrument are extremely well conveyed and musical.

To see how the Clearway performs with vocals, I select David Bowie's *The Stars (Are Out Tonight)*. Vocals are clear and not submerged into the drums or guitar accompaniment, which is quite an achievement with this piece of rock music as they are very prominent throughout the track. In addition, the vocal is reproduced extremely accurately.

To focus on the Clearway's bass response, I opt for *Black Lightning* from Gordon Giltrap's *Airwaves*. The guitar playing demonstrates a great

musicality and the bass line is well extended, yet punchy and tight – just as I like it.

I finish off proceedings with a superb direct-to-disc vinyl audiophile recording of the Syd Lawrence Orchestra playing Benny Goodman's *Sing, Sing, Sing*. This is an exuberant recording and the trumpet and trombone solos are sharp and natural without becoming unpleasantly harsh. The drums that resound throughout the piece are punchy and the Clearway takes the whole thing comfortably in its stride.

Ear for detail

To sum up, this interconnect very much fulfils the objective of creating a set of analogue cables that can carry a signal with a sense of musical coherence and a high level of detail and dynamics. All of this leads to a great insight and involvement into any music you listen to. If you are considering an upgrade from a set of budget interconnects, the Clearway gives you every reason to re-explore your music collection. **NR**

DETAILS

PRICE
£100 for a 1m pair
TELEPHONE
01980 625700
WEBSITE
chord.co.uk

OUR VERDICT



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Furutech

SK-Filter turntable anti-static remover



STATIC CHARGE IS a big problem for vinyl lovers as it attracts dust to the surface of the record like a magnet. As the vinyl spins on the turntable platter, friction with dry air causes it to build a static charge of anywhere from 3-20kV.

Some readers may remember the Dust Bug record cleaner from the seventies, which was designed to remove dust while playing a record. This consisted of a cylindrical velvet pad and small brush suspended from an acrylic arm that tracked across the surface of the record to remove any dust. Sadly, this method is likely to generate static charge on the record and attract more airborne dust than it actually removes.

Furutech's SK-Filter is designed to solve the same static problem, but unlike the Dust Bug, it discharges

static electricity into the air using a delicate comb of material that is positioned a millimetre or two above the record's surface. The comb uses a patented material called Thunderon, which is the result of detailed research to arrive at the precise combination of fibre length, quantity, and density to discharge static electricity into the air whenever static-charged material approaches it and without any fibres touching the playing surface of a record.

Brushes up well

The SK-Filter is placed alongside the platter and the stand is adjusted to position the fibres just above the record when the brush is rotated into position. This is easy to alter using the supplied Allen key. The weighty base means that it stays securely



positioned on the turntable plinth. Thanks to a dry and warm spell of weather, I am able to detect that some subtle, static-induced crackling when playing an unmodulated part of a record groove disappears completely once I swing the brush into position over the record. As vinyl accessories go this is costly, but it is very effective at eradicating static issues. **NR**

DETAILS

PRICE
£350

TELEPHONE
01189 814238

WEBSITE
soundfoundations.co.uk

OUR VERDICT



Russ Andrews

RF Zapperator for loudspeakers

ZAPPERATORS USE A network of high-spec components to absorb RFI and reduce noise in the amplifier/speaker interface. They can be connected at the loudspeaker end or the amp end of your speaker cables and can be supplied with spade connectors to fit to the binding posts (shown). Alternatively, they can be supplied with 'piggy-back' banana connectors to allow you to use existing cables fitted with banana plugs and sockets on your speakers.

The RF Zapperator is supplied as a pair and contains a passive filter called a Zobel network. This is often employed on the output of amplifiers to cancel out the reactive portion of loudspeaker impedance. In its simplest form this is a resistor and capacitor in series across the amplifier output, but the Zapperator is also designed to reduce high-level RF interference at the point of speaker

cable termination. Another requirement of the Zapperator is to be immune to vibration-induced noise as it is often fitted close to the speaker and will be subjected to high levels of bass vibration from the cabinet, and special components are used that are not prone to microphony.

Fit and forget

The review sample comes with spade connectors and I have no trouble fitting them to my loudspeakers under the binding posts with the leads plugged in to the central banana sockets. As each Zapperator measures 40 x 27 x 18mm (WxHxD) and weighs just 37g, I leave them hanging behind the speakers, although they could easily be fitted to the back of each speaker with



self-adhesive Velcro for a more permanent installation. Playing a full orchestral recording of Prokofiev's *Symphony No. 1*, I experience a very subtle sense of improvement to the depth and width of the soundstage and to a lesser degree in the bass performance also. **NR**

DETAILS

PRICE
£148 per pair fitted with banana plugs or spades

TELEPHONE
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OUR VERDICT



The Audio Files

AT-LP5 IPT turntable



READERS WITH REASONABLE

memories might be curious to know why we are featuring the Audio-Technica AT-LP5 again. Having reviewed it in *HFC* 405 and in a *Group Test* in *HFC* 415, you might understandably wonder what is left to be said about it. The performance in the *Group Test* goes some way to answering this question. Used in isolation it is a fine performer, but when compared with some rivals, it lacks a little finesse. A few of these issues can be traced to the tonearm, which while respectable is nothing to get too excited about.

What you see here is an LP5 that aims to correct this. British specialist The Audio Files has been carefully tweaking the basic design to unlock much higher performance.

The AT-LP5 IPT replaces the original J-shaped tonearm with an Audio Origami-sourced version of the Rega RB202. The mechanics of fitting this are not the work of an afternoon. The two tonearms have different effective lengths and the pivot point for the Rega needs to be relocated. It also has a greater height above the platter than the tonearm it replaces, which as a result, requires some ingenious work with the base to ensure it fits correctly.

Let's get digital

The wiring from the replacement arm is connected to the LP5's original internal phono stage, which can still be bypassed via a switch on the rear panel to allow an external model to be used if you wish, and also retains the USB output to digitise vinyl. Custom-made interconnects are supplied.

The other significant change concerns the platter. If you look at the underside, you'll find additional sections have been carefully added. This has been developed by specialist SDS to reduce ringing. The result of this hard work is a turntable that looks largely identical to the basic LP5, although the Rega arm cleans the lines up a little and



this specialist package adds a hinged Perspex dust cover. More importantly, the performance is comfortably superior to the basic stock unit and the Rega tonearm can be supplied fitted with either an Audio-Technica AT95E moving-magnet cartridge or, for an extra £100, an AT440. While the latter takes the price of the complete package to £795, the results are well worth it.

Listening to the recent repress of *Dig Your Own Hole* by The Chemical Brothers against the stock LP5, the modified unit leaves its ancestor standing and provides a real demonstration of what vinyl is capable of as it unpicks more detail from the record. *The Private Psychedelic Reel* has greater space and scale and a better sense of three dimensionality.

The AT-LP5 IPT takes control with Nils Frahm's *Spaces* in a way that's unmatched by the more basic model. The rendering of the piano and a sense of the venue around it is pretty special and unlikely to be bettered by any sub-£1,000 turntable. Some of the characteristics of the unmodified Audio-Technica still make themselves felt, but they do so in an almost

entirely benign fashion. There is still a sense of propulsive energy to the way that this deck goes about its business and the exceptional pitch stability can leave rivals sounding rather uncertain in comparison.

Floor manager

Switch to an external phono stage like Graham Slee's Gram Amp 2 Communicator (*HFC* 407) or Avid's Pellar (*HFC* 363) and the results improve further with richer tonality to voices and instruments and a useful drop to the already low noise floor. Using a Funk Firm Acromat on the platter brings a small but worthwhile gain to the soundstage.

For many, the idea of stretching a budget player this far won't make an awful lot of sense, and similarly priced competitors may look and feel a little more special. The performance is up to the challenge, though, and even judged head to head with models costing near £1,000 the virtues of the LP5 IPT will win many over. This isn't the most obvious turntable choice at the price, but there is no escaping that it is a remarkably capable one. **ES**

DETAILS

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MUSICAL FIDELITY

M6i amplifier in silver, mint condition with all packaging. Less than 50 hours use. Pix on request. £1,050: **01902 884694 or email: jukey39@yahoo.co.uk (West Midlands).**

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REGA Brio 3 amplifier, satin finish, excellent condition. Box and manual included £150: **07510 687880 (Luton, Bedfordshire).**

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CYRUS 8 DAC QX sounds great, but upgrading £750. Cyrus CD t transport boxes etc. £425: **07973 426291 (Birmingham).**

BUYING TIPS **BUYING SECOND-HAND** can be a great way to pick up a bargain. A formerly expensive second-hand component might well prove a better long-term bet than a brand-new product if the price is right. **DO SOME RESEARCH** on which brands have a good service back up, so if something does go wrong, you can get it fixed. Unless you purchase from a dealer, you're unlikely to get any warranty, so it's up to you to ensure the fitness of any gear that you buy. **USUALLY** speakers should be less prone to breakdown than amps, and amps should be more reliable than CD players. But any abused component could be trouble – have a proper demo and judge the seller as well as the goods!

possible: **07801831972** or email: **mel17dept@outlook.com** (Dorset).

SOUNDSTYLE 5-shelf hi-fi rack, Opus Green, smoke glass shelves £60 ono. Soundstyle 4-shelf hi-fi rack, Opus green, smoke glass shelves £50 ono. Buyer collects: **07913 374413** (Spalding, Lincolnshire).

RUSSANDREWS Powermax Plus mains cables 1x 1.5m and 2x 1m. All under 18 months old. £90 the lot inc carriage: **07986 987380** or email: **heddondt@btinternet.com** (Northants).

REGA RS3 loudspeakers in piano black finish, offered in immaculate condition boxed, new cost £800, selling for £400: **01934 521621** or email: **stemar2@me.com**.

MUSICAL FIDELITY A3.2 RDS tuner £175. Absolutely spotless, remote, original box. Kept covered and clean. Beautiful: **07500 804700** or email: **imeldayates@hotmail.com**.

AUDIOPLAN Powerstar 'S' mains distribution block complete with 7 Powercord 'S' leads. Boxed and unused, so 'as new'. Made in Germany and highly rated. £300 ono: **01932 341421** or email: **chrisjones4you@gmail.com** (Surrey).

SONUSFABER Grand Piano Domus (Home), gloss black, good condition, little used, £550. 25kg each, buyer collect: **07532 349953** (Hants).

WANTED Jamo Concert 11 loudspeakers, will collect: **0191 2815482** (Newcastle upon Tyne).

BOWERS & WILKINS PM1 loudspeakers/FS PM1 stands. Beautiful condition with boxes and manuals. £1,195 ono. Possible delivery: **07402 299243** or email: **frank8ush@ntlworld.com** (Cardiff).

LINN Keilidh LS300 floorstanding loudspeakers in medium walnut with Ku-Stone spiked stands and cloth covers. In superb condition,



TOTEM Arro speakers. Cherry. Boxed. Original packaging. Receipts. Purchased 2008 Moorgate Acoustics. Coated and veneered inside with Borosilicate resin for stiffness. Can demo. Collection only. £700 (£1,299): **07855314593** or email: **PEFGNO1@gmail.com** (Sheffield).

but stands have been re-coated. With original Linn boxes and manual. £375, free ParcelForce delivery: **07833 894242** or email: **redeye@talktalk.net**.

LOWTHERSPEAKERS Acousta 115 circa 1980 for sale or exchange for a decent, compact hi-fi system: email: **garyhardwareuk@yahoo.co.uk** (Essex).

NEAT Momentum 3i standmount speakers. Bought September 2013. £2,000+, unmarked oak finish, all original packing. Collection or send at buyers cost £1,200: **07807314801** or email: **rachells@btinternet.com**. (Leigh-on-Sea, Essex).

LFD Grain-Free Signature bi-wire speaker cable x2m, cost £550, for sale £225 ono, plus LFD balanced interconnect XLR cost £160 for sale £75 ono. Both £250: **01634 842874** or email: **p.evans11@live.co.uk** (Chatham, Kent).

REGA Brio 3 integrated amplifier, 2x 50W, silver 4½ yr. old, nice condition £200. Rega Fono Mini A2D MM phono to USB, new £65: **07510 687880** (Bedfordshire).

GARRARD 401 with Rega RB300 and Goldring 1042, great sound and condition, £1,400. Power supply for DIY Class A amps (JLH 1969/1996 etc.) £300: **0207 4998729**.



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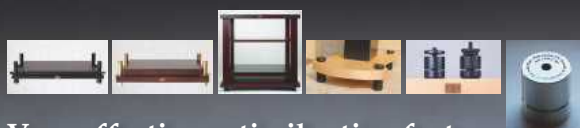
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