



Groove rider
 Pro-Ject's 2 Xperience SB DC
 turntable puts vinyl in a spin

Sonic boom
 Acoustic Research returns
 with superb hi-res portable



Hi-Fi Choice

PASSION FOR SOUND

Issue No. **397**

May 2015

WIN!
 Musical Fidelity
 Merlin 1
 system worth
 £1,300

Drive time

Six sensational standmounts
 make neat beats under £1,000

High Exposure



Revised amp ups flexibility
 but how does it perform?

30

PRODUCTS ON TEST:

**B&W, Denon,
 KEF, Quadral,
 Sony, Tannoy**



Design for life

Leema's stunning mini system
 with the mighty big sound

Head rush

Oppo HA-2 headphone amp
 & DAC for music on the move

MAY 2015
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 PRINTED IN THE UK
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 05
 US\$13.99

NOVAFIDELITY X40



“OUTSTANDING... amongst the best”
Hi-Fi World - April 2015



DXD
Digital eXtream Definition

HI-RES MUSIC SERVER | PLAYER | STREAMER
CD RIPPER | DAC (ESS SABRE 32bit/384kHz DAC)
INTERNET & FM RADIO | QOBUZ and more...

DSD
Direct Stream Digital

Store & play all of your hi-res music on one component with up to 4TB storage. Connect the X40 to your existing system with a range of Analogue and Digital outputs (including Balanced XLR). Record from Vinyl (in 24bit/192kHz) and radio. Listen to streaming services like Qobuz, take control with your smartphone/tablet and much more...

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50
Oppo HA-2

Musicreviews



100 Van Morrison
Duets: Reworking The Catalogue

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!



The annual celebration of all things vinyl is almost here as we prepare for the eighth Record Store Day to take place on Saturday 18 April. If you've not heard about the event before then you are missing an opportunity to bag yourself some exclusive vinyl as artists launch special editions and rare releases specifically as part of the celebrations through more than 200 independent record stores across the UK.

The event is growing year on year around the world, and was first started in the US by a bunch of independent records stores looking for a way to reconnect customers with the joys of vinyl. The ethos is very much about bringing record shop staff, customers and artists together to celebrate the unique role a record store plays in the community with the event participants being physical stores with at least 50 percent music retail.

This year's 500 or so exclusive releases includes new material from Mumford and Sons, Foo Fighters and Johnny Marr takes on Depeche Mode's *I Feel You*. Releases from The 1975, Chvrches, George Ezra, Gorgon City and Calvin Harris will entice younger music fans into their local record store perhaps buying up physical music for the very first time, while David Bowie, Jimi Hendrix and The Kinks will surely help to rekindle the love of long-time vinyl fans. To find a participating store head to recordstoreday.co.uk.

Lee Dunkley Editor

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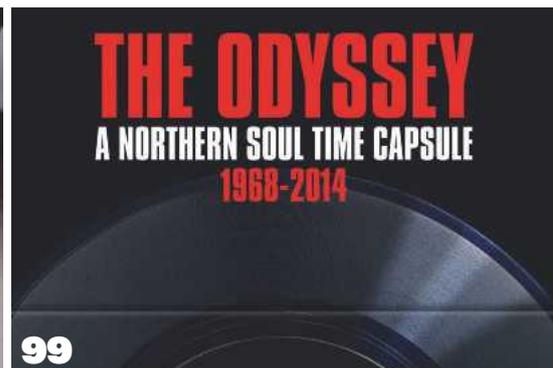
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Hi-fi reboot

Acoustic Research returns with USB DAC and a hi-res music player

PRICE: £400-£900 **AVAILABLE:** NOW
WEB: ACOUSTIC-RESEARCH.COM

2015 IS SHAPING up to be the year of the veteran hi-fi brand reboot. At the beginning of the year we saw Technics make an eagerly anticipated comeback after some considerable time in the wilderness, with the introduction of its scary-money Reference system alongside the more wallet-friendly Premium Class separates hi-fi components (reviewed in issue 394). And now we see the welcome return of Acoustic Research as it embraces hi-res computer audio and portable music.

The announcement of the relaunch of the Acoustic Research brand was made at the Bristol Show back in February with news of two models triggering the rebirth of the 60-year old hi-fi name that is better remembered for its innovative speaker designs and suspended sub-chassis belt-drive turntables.

The first model to grab our attention at the unveiling is the £900 AR-M2 hi-res 24-bit/192kHz portable audio player that we successfully managed to get our hands on early, making us

the first to bring you a full review, starting on page 60.

The second model is the UA1 desktop DAC and headphone amp on display here, which is scheduled for a *HFC* review in the coming months. In the meantime we can tell you that the UA1 is a hub-powered USB DAC and headphone amplifier capable of handling up to 24-bit/192kHz source material thanks to its Burr-Brown PCM1794A DAC. Measuring 82 x 24 x 135 (WxHxD) and weighing in at 338g, the maker says the UA1 is



Two new models trigger the rebirth of the 60-year old hi-fi brand

designed to upgrade the sound from any computer and comes with free JRiver Media Centre software that is compatible with both Mac and Windows computers – and supports higher than 192kHz or DSD64/DSD128 formats within the JRiver Media Centre software.

The built-in headphone amplifier section claims support for 16 to 600ohms headphones via a 6.3mm output, while gold-plated RCAs as well as an optical digital output are fitted for amplifier hook ups.

High-end components are used on the internal circuitry, which is housed in what the maker describes as aerospace-grade aluminium casing with exceptional anti-vibration properties. Damped rubber feet secure the UA1 when used on a desk or tabletop.

A status display indicates the sampling frequency of material being played by the multicoloured LED and a high-precision Alps manual volume control completes the picture. Look out for our full review soon.

COMMENT

THE FUTURE FOR FAIR MUSIC?



Over the last year or so the news has been full of tales of woe for musicians trying to make a living from the ways that content is now consumed. The consensus appears to be that streaming and downloads don't offer an ideal way for struggling musicians to scrape together enough money to get by. But before we blame the internet for the death of music, it might just hold the answer to getting it back on track.

Patreon.com follows a similar model to the crowdfunding platform popularised by Kickstarter. For the uninitiated, Kickstarter is a pledge system for creative projects from books to inventions. It allows ventures to be funded by donations from contributors who receive different levels of 'reward' according to the amount that they pledge. So if for example you give money towards the creation of a comic book, as well as the actual finished product you might also receive original artwork, extra stories or the opportunity to be included in the plot by offering up a decent amount of cash.

Patreon takes this idea one step further by being an ongoing crowdfunding platform, so that instead of raising a bulk amount of cash for a single scheme, patrons offer to give a set amount per month or per piece of content. You could pledge \$1 for your favourite artist and in return you will receive each piece of exclusive content they produce. The model works because it's cheap for the consumer, while the artist receives a far more substantial chunk of change than they would from iTunes, Spotify or the like. For example, avant-garde artist Amanda Palmer has at the time of writing 3,617 patrons paying between them \$27,765.02 per piece of content that she produces. Because Palmer is free from the constraints of a record company and is dealing direct with her fans she can release anything she fancies from a piece of poetry, song or painting and get paid, while her fans get something to treasure in return. The idea is brilliantly simple and surely far fairer than anything else we've seen thus far. ▶

Excite goes active

Dynaudio adds active standmount loudspeaker to popular range

PRICE: £1,350 **AVAILABLE:** NOW
CONTACT: 01353 721089 **WEB:** DYNAUDIO.COM

DANISH HI-FI SPECIALIST Dynaudio says its new Excite X14A is the ideal loudspeaker for smart, modern audio systems. This active standmounting speaker system is a rear-ported, two-way design with built-in amplification claimed at 50W employed to drive the bass/midrange driver, while a second similarly rated amplifier powers the tweeter driver. Rated at 2x 100W stereo power output, the X14A offers superb soundstaging and imaging between the two speakers, says the company.

The bass, midrange and treble can all be individually adjusted for room tuning and a high-pass filter (60Hz or 80Hz) allows the Excite X14A to be combined with a subwoofer. The rear panel features RCA and XLR inputs and the facility to switch-on from standby after sensing the presence of a music signal.

The Excite X14A is available now and comes in satin white, satin black, rosewood and walnut finishes.



IN BRIEF



ASTELL&KERN IN-EARPHONES

● Designer of in-ear monitors (IEMs) for musicians as diverse as Alicia Keys, Bruno Mars, Pitbull and The Rolling Stones, Astell&Kern's new Layla and Angie earphones are engineered by Jerry Harvey Audio (JH Audio). The flagship Layla (£1,999) has a carbon-fibre body with burnt titanium bezel and contains 12 custom-made drivers. "These proprietary quad drivers deliver audio quality that will truly put you at the mix position in the recording studio", says Harvey. Angie (£899), with its red and black Kevlar shell, has the same crossover design and eight custom drivers. Both models include multiple ear tips, 3.5mm and 2.5mm 4-pole cables as well as a carry case. ASTELLKERN.COM

Tidal streaming integrates with Meridian Sooloos

PRICE: £19.99 PER MONTH **AVAILABLE:** NOW
WEB: TIDALHIFI.COM; MERIDIAN-AUDIO.COM

Tidal, the first lossless music streaming service with HD music videos and curated editorial, is available now on Meridian Audio's Sooloos digital media system, enabling seamless streaming of its extensive library of 25 million CD-quality tracks.

Founded in 2010, Tidal's FLAC/ALAC 16-bit/44.1kHz - 1,411kbps - format made its UK debut last year with a performance that won it first place in our Music Streaming Services Group Test (HFC 396). And now, after what is described as a simple software upgrade,

Meridian Sooloos customers can sign up to the service and gain unlimited access to Tidal's extensive catalogue. A system that can be navigated via the Sooloos Control 10/15 touch panel screen or any compatible tablet, smartphone or the desktop controller.

Additionally, a complimentary three-month trial service will be available, allowing instant access once customers are registered.

Tidal is also offering all new Meridian customers the opportunity to trial its service. Available up until 31 May 2015, any

customer purchasing a Meridian product will receive a three-month (90-day) subscription, with unlimited access when they register their product at meridian-audio.com/my-products/.

This tie in with Tidal follows on from Meridian Audio's MQA (Master Quality Authenticated) technology launched at the end of 2014. "The partnership with Tidal is significant for Meridian, which prides itself in delivering a super-quality digital signal throughout the path from the studio to the home" said CEO John Buchanan. ▶



TIDAL



Revolution XT



Revolution in design. Revolution in sound.

Revolution XT lives up to its name, marking a major leap forward in loudspeaker design and the realisation of some of Tannoy's most radical and forward thinking technologies.

Retaining the classic trapezoid shape from its multi award-winning predecessor, the new Revolution XT cabinets now feature an ingenious reflex-coupled dual-cavity design. This optimises performance of the all-new Omnimagnet™ Dual Concentric™ driver across extremely low to mid-bass frequencies. The complex internal design is further perfected with an integrated plinth that provides a uniform and predictable low frequency interface to the listening environment, delivering the deepest bass notes with ease.

Dynamic, engaging and articulate, yet incredibly easy to set-up and place in any room, Tannoy's Revolution XT is a true revolution in sound. Find out more at tannoy.com

TANNOY®

"The Tannoy Revolution XT6Fs are incredible speakers for the money and you must seek them out for an audition."

WHAT HI-FI?
SOUND AND VISION
★★★★★
March 2015 What Hi-Fi website

Seismic isolation

Townshend Audio introduces its Podium loudspeaker support

PRICE: £1,500 **AVAILABLE:** NOW
CONTACT: 0208 9792155 **WEB:** TOWNSHENDAUDIO.COM

THANKS TO RESEARCH by the BGS (British Geological Survey), Townshend audio has arrived at the scientific conclusion that, due to seismic disturbances deep beneath the surface of the earth, the ground beneath our living rooms is constantly vibrating (see David Vivian's *Opinion* page in last month's issue). With a measurement of 1-2 on the Richter Scale, the result is severe contamination of your audio signal up to 10 microns.

Townshend's Seismic Podium is designed, to break the acoustic connection between the floor and the speaker, and prevent the passage of deleterious vibrations both to and from the speaker cabinets. Now, says the company, you can listen to your favourite music at home and at a more realistic volume level without annoying the neighbours. Suitable for wood, tile or carpeted floors, the Seismic Podium features a 'Captive' Load Cell on each



corner, with a screw handle on the top that provides fine level adjustment and an adjustable foot to accommodate out-of-true floors. A black steel plate has a constrained layer-damped stage that can accommodate any medium-to-large loudspeaker or subwoofer with or without spikes.

IN BRIEF

BLACK RHODIUM INTERCONNECT

Derby-based Black Rhodium announces the arrival of the Aria stereo interconnect cable with a DCT++cryogenic processing treatment, PTFE insulation and two silver-plated copper cores. The DCT++CS process, says BR, alters the molecular structure of the cable resulting in an improvement to every single aspect of its performance. Additionally, the Aria DCT++ CS is treated with the Crystal Sound Process, which promises to deliver improved bass performance and anti RFI/EMI technology protects the core from radio frequency interference. The RCA version is terminated with Graham Nalty Legacy Range GN-4 RCA connectors, while the XLR version uses the new Black Rhodium XLR connectors. Prices range from £800 to £1,400 for between 0.5 to 2m lengths.

BLACKRHODIUM.CO.UK



Sonus faber's Chameleon collection

PRICE: £338-£1,338 **AVAILABLE:** NOW
CONTACT: 0208 9713909 **WEB:** ABSOLUTESOUNDS.COM

Sonus faber's Chameleon collection embodies all of the iconic design elements for which the Vicenza-based company is famous. It also features, says the maker, a level of customisation previously unattainable at this price point. Each cabinet is covered in leather, driver flanges are embellished with aluminium trims and the sidewalls house exchangeable coloured panels. Thanks to this design, owners of the Chameleon will have the freedom to select the style and colour best suited to either their environment or personal taste, claims Sonus faber, while the new

cabinet shapes and proportions promise exceptional control of internal resonance, perfect acoustics and simply excellent driver stability.

The three speakers that make up the collection include the Chameleon B, a two-way bookshelf model, Chameleon T, a three-way floorstander and the Chameleon C, a two-way centre channel. Sensitivity is 87dB, 90dB and 87dB respectively, with a frequency

response from 50Hz to 25kHz. Each speaker features a 29mm pre-coated fabric dome tweeter, while the Chameleon T includes both a 150mm polypropylene midrange cone and a pair of 180mm woofers. The Chameleon B and C each boast a 150mm polypropylene midwoofer cone. The detachable side panels are available in six different finishes: white, black, grey, red, turquoise, and orange priced from £42.





PS AUDIO

Pioneering world class audio products

40 years in the making, Sprout is PS Audio's stunning new fully integrated amplifier



£650.00

High quality sound, simply delivered.

"Sprout will change the way you listen to music at home. As a music lover, this 'plug and play' (Bluetooth) solution will re-connect you with your entire music collection".

Sprout is the culmination of PS Audio's 42 years' experience building concert-quality audio products. We hand selected the best parts of that rich history and put it into a single, simple, easy-to-use personal music system. It's everything you need and nothing you don't. Just add speakers or headphones. Sprout is the link between your music and your speakers. Barely the size of a hard-back novel, it will fill any room with enormous, live sound. Sprout is designed to make access to your music so simple. Whatever the format – CD, downloads, vinyl or analogue – just connect to Sprout and enjoy the music.

- 50/W per channel power amplifier drives any speaker • Passive EQ moving magnet phono preamplifier • Low output impedance headphone amplifier • 192/24 high end fully asynchronous DAC • Built in AptX Bluetooth receiver • Analog preamplifier
- Coaxial digital input • Analog Input • USB input • True analog stepped volume control • Analog output for subwoofer or otherwise
- Headphone output 16 Ω 500mW, 300 Ω 425mW

North West - Brian & Trevors 0161 766 4837. **East** - Analogue Seduction 01733 350878 / LW Audio 01284 716415.

Midlands – Oxford Audio Consultants 01865 790879 / Midland Hifi Studio 01902 380083 / Art Audio Salon – 07878 566814.

South East - Guildford Audio 07979 515577 / Audio Venue W5 0208 567 8703 / Audio Venue Maidenhead 01628 633995 / Stereo Now 07870 192618 / Phase 3 Audio 01903 245577. **South West** - Audio Destination 01884 243584

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JUNE 2015



New TAD CE1

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
<p>NuNu Distribution are pleased to show you just one of the sonically stunning products that you will be able to see and hear at the Cranage Show so book your free ticket now on the show website.</p> <p>Tel. 0203 544 2338 - Email. info@nunudistribution.co.uk - Web. www.nunudistribution.co.uk</p>						
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
		30				
<div data-bbox="82 1818 344 2069" data-label="Image"></div> <div data-bbox="603 2011 1455 2168" data-label="Text"> <p>UK Premiere at North West Audio Show www.audioshow.co.uk Cranage Hall, Cheshire</p> </div>						



PMC twenty Sub

Bring some low-end rumble to your music

PRICE: £2,950 **AVAILABLE:** NOW **CONTACT:** 0870 4441044 **WEB:** PMC-SPEAKERS.COM

BRITISH SPEAKER MANUFACTURER PMC has unveiled the latest addition to its twenty range, which will be music to the ears of fans of bass as it's a subwoofer. Like all PMC speaker designs, the twenty.sub utilises Advanced Transmission Line (ATL) technology to work its magic. With an effective length of 3m, the transmission line delivers a smooth flat response that is claimed to go as low as 22Hz. This is combined with a brace of long-throw 7in custom-designed bass drivers constructed from ultra-light, ultra-stiff doped paper cones mounted in a cast magnesium chassis, which the manufacturer claims delivers an unparalleled transient response. There's a quoted 400W of ultra-low distortion Class D

amplification, inside the chassis, while a series of DSP circuits and filtering and bass management functions are onhand to keep music sounding as it should.

Connectivity comes in the form of balanced stereo analogue (RCA unbalanced convertors come bundled) and AES/EBU digital inputs and there's a convenient cable aperture around the back to keep all wires tidily out of the way.

Available in a choice of walnut, amarone, oak or diamond black finishes (like the rest of the twenty range), the twenty.sub is braced throughout by multiple internal baffles offering superior rigidity and ultra-low cabinet talk, claims PMC. The plinth also house the threads for M8 reversible stainless steel spikes.

Multi-room system

PRICE: £150-£1,250 **AVAILABLE:** NOW **CONTACT:** 03308 080489 **WEB:** RAUMFELD.COM

If multi-room audio sounds appealing but you're unsure if it's worth the investment, German company Raumfeld might just have the answer. Available online, the

multi-room range is available with an eight-week trial period, which should be more than enough to decide if it's a keeper.

The range consists of the £150 Connector² (below), a wi-fi network player that can be hooked up to your system for streaming music around your home wirelessly to the Stereo L or Stereo M loudspeakers. The Stereo L is a floorstanding

model with three-way design and an integrated 400W amplifier. Also featured under the hood is a Cirrus Logic DAC for streaming at what the company claims is the highest possible quality.

The Stereo M (left) also offers a three-way design with a coaxial driver, but in a bookshelf chassis. It boasts a coaxial driver for point-source sound and a plug-and-play wi-fi streaming system with an integrated 320W amplifier. It costs £700 and the floorstanding Stereo L is £1,250. Both speakers are available in a choice of black or white finishes. There is also a choice of smaller compact portables from £200.



IN BRIEF

BLUETOOTH FOR YOUR CAR



● Here's a smart solution for anyone that has a cassette deck in their car that wants to be able to take advantage of wireless streaming from a mobile device. ION Audio has introduced its £30 Cassette Adapter Bluetooth, which as the name suggests makes tape players compatible with Bluetooth devices. The adaptor looks like a regular cassette and is simply placed into the car's tape deck and removed as and when you want to return to playing tapes. It also has a built-in microphone for hands-free mobile use.

IONAUDIO.CO.UK

DEEZER ELITE

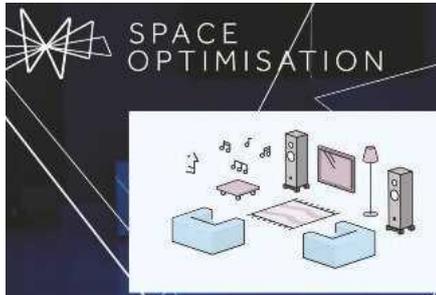


● Having appeared in last month's music streaming services *Group Test* and regrettably being the least favoured in hi-fi sound quality terms may have spurred Deezer on to make some changes. And so, news arrives that the music streaming solution is to improve its quality in an effort to take on the likes of Tidal – which itself underwent a rebranding exercise this month (see the *Opinion* piece on page 79). Deezer Elite – as it is called – was first made available to Sonos owners in mid March, but it wasn't too long before the service became accessible to all. Streaming at 16-bit/44kHz, it offers lossless FLACs at 1,411kbps – like Tidal – putting it on a par with CD. Deezer Elite will cost £14.99 a month for 12 months or £120 and £240 for one or two years respectively if paid in advance.

DEEZER.COM/EN

Webwatch

Andrew Simpson checks out the best hi-fi websites, social media and online content



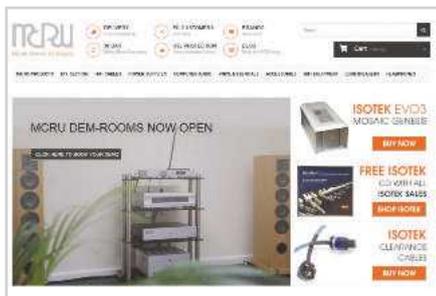
Space age

Linn's latest range of DS players now all come fitted with its Space Optimisation technology, which builds an acoustic model of your listening room to tailor the sound for your home environment. Find out how it works on its website: lin.mn/SpaceOp



Creating a buzz

Vinyl's rising appeal amongst cool young hipsters has inevitably led to tongue-in-cheek videos like this one from BuzzFeed's Yellow Youtube channel, highlighting why there's so much more to collecting the black stuff than any other music format: youtu.be/R4NEdrk9Oag



Every need

Huddersfield high-end accessories and hi-fi experts MCRU's website has gone from strength to strength in recent months, with a vast product list, used and ex-demo section and an insightful blog from company owner David. See what's in store for yourself: mains-cables-r-us.co.uk



Head matter

Hats off to Bowers & Wilkins for laying bare the internals of its latest P7 over-ear headphones in all their splendour, revealing exactly what goes into each pair from sheepskin leather ear pads to their nylon damped diaphragms: bit.ly/1xpeP2N



Sweet vinyl

From Lego record players to LP wall art, vinyl has always enjoyed novelty ideas and this retro Youtube video really takes the biscuit, featuring eccentric Berliner Peter Lardong making, playing and then eating his 7in chocolate singles: youtu.be/JVM18iJTMz5



Used bargains

Cheshire-based HiFi In Touch is a family-run business and website offering free product listings for any of your unwanted hi-fi that's looking for a new home. The site is intuitively laid out, making searching easy and is packed with lots of quality kit: hifi-intouch.co.uk

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CHOICE TWEETS

YAMAHA (@YAMAHA AV)
 CDs were king in the 80s and 90s - Yamaha CD Players led the era! Learn more: 4wrd.it/HIFICDPAGE

MERIDIAN AUDIO (@MERIDIANAUDIO)
 Receive free 3 month subscription to @TIDALHIFI with Meridian products buff.ly/1O2X2UI

ANDYGILESASSOCIATES (@AGA_PR)
 See Sonus faber's Liliun speakers in 24K gold leaf finish at #GuildfordAudioShow, 18-19 April with @Absolute_Sounds

KRELL AV (@KRELLAV)
 Beautiful custom audio stands by our friends F1 Audio: facebook.com/F1Audio/posts/350257071835009

THE VINYL FACTORY (@THEVINYLFACTORY)
 The full list of 2015 @recordstoreday releases. Dig through them ALL here: <http://bit.ly/1GDwia6>

SUPERFI.CO.UK (@SUPERFIONLINE)
 Superfi Blog: How music affects productivity goo.gl/85Wqoj #infographic

ANALOGUE SEDUCTION (@ANALOGSEDUCTION)
 Once again we've been busy looking through our demonstration stock and seeing what we have that we need to move on fb.me/3TTQcBtuv

OXFORD AUDIO (@OXFORDAUDIO)
 Thrashing our @KEFAudio blades with a bit of Rudimental and the coin on top is staying completely still. Walls aren't

PONOMUSIC (@PONO)
 We're letting YOU decide our #PonoMusic #HiRes album of the year! Cast your ballot: surveymonkey.com/s/KL9CWYZ

TIDAL (@TIDALHIFI)
 The TIDAL Guide to South by Southwest. #SXSW #SoundsPerfect tdl.sh/8PHNZJ

HARBETH AUDIO LTD (@HARBETHHQ)
 Every room at Hifi Bauernhof in #Bavaria has a different #Harbeth speaker playing this weekend

ARCAM OF CAMBRIDGE (@ARCAMUK)
 Fabulous song from #Patreon a new 'Kickstarter' website for music. Sign up and support young musicians. patreon.com/creation?hid=1553963 #music

LARRY OGDEN (@THEAUDIOWORKS)
 We welcome back an old friend: Avalon Acoustics. The delightful 'Idea' is now on demonstration.

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PRODUCT
Exposure 3010S2-D

ORIGIN
UK/China

TYPE
Integrated amplifier

WEIGHT
12kg

DIMENSIONS
(WxHxD)
440 x 115 x 300mm

FEATURES

- Quoted power output: 2x 110W (8ohms)
- 6x RCA line inputs inc AV bypass
- Optional DAC module
- Optional MM or MC phono stage module
- Preamplifier output

DISTRIBUTOR
Exposure Electronics Ltd

TELEPHONE
01273 423877

WEBSITE
exposurehifi.com



Back to the future

Amplifier buyers now demand digital connectivity, which is why Exposure has updated its 3010S2 integrated, says **David Price**

Times change and fashions with it. The integrated amplifier is just as susceptible to these as any, and so we have seen a number of new designs in the past year or two that feature a far wider range of facilities than their predecessors. It seems that people buying integrated amplifiers in 2015 no longer expect or indeed want the stripped-down minimalism that first came into vogue in the eighties. Nowadays, the breed needs to have digital functionality available to its customers, should they desire it. Exposure is the latest company to recognise this, in its update of its excellent 3010S2.

I must confess I am a big fan of this amp. I first heard it several years ago, when it won a *Blind Listening Group Test (HFC 373)*. It was admittedly by a narrow margin, but the point was that it went against what I believed to be the invincible Creek Destiny 2. The Creek bettered the Exposure in a couple of respects, and the Exposure sneaked ahead in a few more; but previously every other amplifier I had heard at or near the price of the Creek was roundly trounced by it. This shows you just how good the Exposure was. Will the fourth incarnation of Exposure's top integrated amp sacrifice sound at the altar of added convenience? The

challenge for its designer is to manage any extra functionality without letting it interfere with all that was good about its predecessor.

Board walk

The price goes up from £1,495 to £1,700, and this accounts for the new 'D' suffix, indicating its readiness for the optional new plug-in DAC board. This costs £375 and offers PCM at up to 24/192 resolution, plus DSD64, and comes with USB and BNC inputs between which it auto-switches. All this is possible thanks to the Wolfson WM8742 DAC chip, which is at its heart. Vinyl fans aren't forgotten either; there's also an optional £240



CONNECTIONS



- 1 Phono/aux 1 input
- 2 Earthing point
- 3 Bi-wiring shrouded speaker terminals
- 4 Pre outputs

onboard phono stage, in moving magnet or moving coil flavours.

The 3010S2-D is a well screwed together product at the price with a solid aluminium casing with extruded front panel and metal knobs – now available in a choice of silver or black finishes. Although not quite as swish feeling as a Japanese-built Marantz is, it has a Land Rover-like solidity. It's claimed to put out 110W RMS per channel, and certainly listening tests bear this out. It runs cool and silent, and is less fussy to use than many.

Sound quality

I kick the listening session off with Congo Ashanti's *Days Chasing Days*, a lovely slice of mid-paced, late seventies reggae that sounds clean and smooth on practically anything you play it through. Still, it can seem a little anodyne, and the 3010S2 didn't quite capture it in its full glory. Because the track ambles along, not really going anywhere, it could sound a little uninvolved after you had got over the pleasantly powerful and smooth sound. The D model, again fed by a high-quality CD source, proves altogether more engaging.

It's a subtle sensation, but a meaningful one. There's a sense of the midband being better resolved; it seems a little less opaque and is able to drill down into the fine detail of the mix slightly better. Because so much is going on at this level, it becomes all the more enjoyable for it. Once the amplifier has warmed through for an hour or three, you really begin to appreciate the higher resolution afforded by the new design. It doesn't sound harsher or harder in any way, yet the recorded acoustic appears at once better lit and more vibrant. The result is a lovely, bouncy rendition of a great track; I am particularly impressed by the extra stage depth and the smoothness to the vocals. The previous S2 could sound ever so slightly 'metal plated' through the upper midband, giving a

crispness to instruments that otherwise wouldn't have it. But its successor brings detail and depth to the sound that seems to nullify this; instruments appear slightly more three dimensional and less artificial.

Move to a more upbeat piece of music in the shape of The Motors' *Forget About You*, and the Exposure picks up its skirts and runs, so to speak. It is a fast sounding design, one that seems a little more fleet of foot than its predecessor. Again, the difference is not vast, but I discern a greater sense of involvement, a feeling that the new amp is able to start and stop fractionally faster than before. Bass guitar lines seem to flow fractionally better, giving a more fluid feel. There's a greater sense of involvement that makes the

It crystallises everything that's good about the Exposure sound

Exposure even more fun to listen to than before; indeed its predecessor begins to seem ever so slightly wooden by comparison. The thick, compressed, crowded midband that the song offers up proves no match for the 3010S2-D, which is able to scythe through it in an imperious manner. It throws out lots of detail and delivers a believable, three-dimensional recorded acoustic – something its forebear was a little less adept at, and also something that very few amplifiers of this price seem to be able to do.

Staying with the analogue line inputs, it's time to try a vinyl source. A Michell GyroDec/TecnoArm tracking a Lyra Delos makes a very nice noise indeed from my original first generation Charisma pressing of *Trick Of The Tail* by Genesis. *Mad Man Moon* is a joy, my 30-year old



Coming in at £1,500, Creek's Evolution 100A is one of the closest rivals. It's a brand new design, has optional plug-in boards and offers exactly the same 110W RMS power output. Sonically, there is a lot of common ground between them. Both are clean sound modern transistor amplifiers with lots of power and detail, yet are smooth and subtle too. There's none of the fizz or mush of lesser, cheaper solid-state amplifiers, and they're satisfyingly rhythmic too. In absolute terms, I would say the Exposure just about pips the Creek, but others may disagree. It has a slightly meatier sound, and a better sense of space and bass grip, but the Creek is a little softer and more romantic, which may suit some listeners a little better.

record sounding beautiful. As always when I listen to good vinyl, I am struck by the massive and immersive soundstage, as if everything is larger than life. It is smooth too, and wonderfully detailed. You're well aware that you're listening to something that's not entirely neutral, yet the Exposure sounds so engaging and inviting that it's almost a crime not to play black plastic through it. It is as if the 3010S2-D has – ironically – been destined to flourish via vinyl, despite its 'digital' designation!

Plug and play

Still, a key *raison d'être* of the new amplifier is, of course, that plug-in digital audio board, so Kraftwerk's *Electric Cafe* is duly fired up, only to reveal a seriously good sound from 16-bit/44kHz. Let's be clear about this; the £350 digital card is certainly no match for the £9,000 dCS Debussy DAC that I normally use, but what really surprises me is just how musically enjoyable the Exposure's new board is. There is definitely the sense that you are listening to a Wolfson converter; it is bright and crisp and even with no undue harshness anywhere.

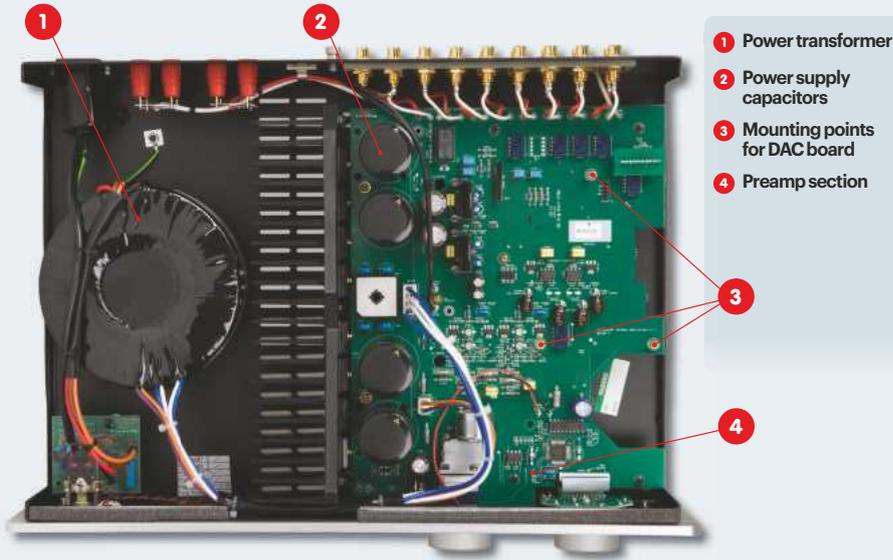
Techno Pop from the same band sounds well lit and punchy, with sledgehammer bass and sparkling highs, plus a detailed midband that catches the song's many electronic instrumental strands well. Again it works very well as a package, appearing to deliver a performance that is greater than the sum of the parts. Indeed, this song is a great workout for the Exposure, showcasing its large reserves of power and its willingness to use them. It thumps out a staggeringly deep bass, yet this is still fast and focused, which makes it all the more enjoyable.

Next up, my MacBook Pro running Audirvana Plus is introduced to the 3010S2-D, via the USB input. I click on a 24-bit/96kHz version of Wings' *Band On the Run* and settle down.

A highly focused hi-fi product with the minimum of frills – available in black also



INSIGHT



- 1 Power transformer
- 2 Power supply capacitors
- 3 Mounting points for DAC board
- 4 Preamp section

ALL CHANGE

The new Exposure is more than just a 3010S2 with the option of a few plug-in boards. Designer Tony Brady has actually gone through it and made a number of significant tweaks to the circuitry. The preamp board now has discrete components where there were previously some integrated circuits used. It offers six line-level

inputs, and one of these is now a direct AV input to enable integration within a surround sound system. A preamp output means that you can power an external power amplifier, and/or bi-amp your system should you so wish. Instead of using the MOSFET output devices, the power amp has a bipolar transistor output

stage, and a new power supply adds extra stages of regulation for improved performance, the company says. The chunky loudspeaker terminals are doubled to allow bi-wiring. As you would expect, careful attention has been paid to the design of the circuitry, to keep signal and power supply paths short.

Again the Exposure excels itself, sounding very enjoyable on this classic early seventies rock track. There is a fine sense of air and space in the studio, and lovely silky smoothness to Paul McCartney's vocals and a wonderful warmth to the proceedings; you can almost taste the air at Abbey Road Studios in West London! Aside from all the impressive hi-fi aspects, what I enjoy the most is the way that the music just flows along in a wonderfully easy yet entertaining way. There is no sense of the song sounding stilted in any way; the digital board sounds good with CD-quality digital audio, but really raises its game on a well recorded high-resolution digital music file. Everything about the song is natural and believable; of course a high-end, and highly expensive off-board DAC gives more detail, dynamics and drive, but the Exposure's plug-in module works way better than it has any right to given the cost – and so should be considered a valuable optional extra.

Conclusion

The price tag may have risen by a few hundred pounds, but this has done very little to compromise the Exposure 3010S2-D's value for

money. Indeed you might argue that it is an ever better package now, because that sound takes a subtle but significant step forward.

This company does solid-state amplification really well in my view, and always has done so. This new integrated shows why; it crystallises everything that's good about the Exposure sound down into one simple, versatile package. From a single, modestly sized box you get a fast, powerful sound that's highly involving to listen to, yet it is tonally smooth and neutral enough to let you listen for long periods on end. Highly recommended ●

Hi-FiChoice

OUR VERDICT

SOUND QUALITY



LIKE: Superbly powerful, crisp, musical sound

VALUE FOR MONEY



DISLIKE: Still lacks flexibility compared with rivals

BUILD QUALITY



WE SAY: Worthwhile update to a brilliant mid-price integrated

FEATURES



OVERALL



Q&A

David Denyer
Exposure Hi-Fi PR



DP: Is the new 3010S2-D more than just the old amp with new cards?

DD: Yes, of course the new functionality offered by the digital board is an important feature, but key to the new amplifier's performance improvement is a new preamplifier board, which now uses entirely discrete transistors along with some additional stages of regulation. This creates a significant performance upgrade, regardless of whether you're interested in any of the optional cards.

Why use bipolar output transistors instead of MOSFET modules?

We believe discrete bipolar circuitry is more linear and more consistent than power modules, and this translates to a superior sonic performance – although the measured performance is broadly similar. That is why the 3010S2 also used these, and is one of the factors that contributes to the amplifier's fine sound. The two versions (old and new) of the 3010 don't measure identically, but they are not so different because the amplifier is set up the same way in terms of gain and frequency response.

Do you have any plans to offer an aptX Bluetooth input?

Many premium-priced integrated amplifiers are now doing this, but Exposure does not see this as an important feature going forward. The 3010S2-D remains a highly focused hi-fi product with the minimum of frills. This contributes to its excellent sound.

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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

STANDMOUNT LOUSPEAKERS GROUP TEST

A LOUSPEAKER WILL never sound at its very best when factory fresh from the box, and will need time to free up properly to reach optimum performance. All six standmounters here are given a minimum of 72 hours with the IsoTek Full System Enhancer CD on repeat, plus an additional two days of music before any listening commences.

Auditioning is done in the main listening room over a period of seven days, during which time optimal placement is experimented with. Each speaker is placed on a sand-filled, spiked stand so that its tweeter is at ear height when listening, and initially positioned close to the rear wall then moved out into the room until

the bass response is judged to be even. In the case of models that come supplied with foam bungs, these are tried both in and out to get the best balance.

Toe-in is also experimented with; generally a few degrees is applied, which snaps the stereo image into focus and opens up the treble. This process ensures each loudspeaker is performing at its very best in the room.

Following this careful set-up period each speaker is then individually auditioned with other designs reinstated for cross referencing. Levels are carefully matched and a wide variety of music is used, although four key tracks are focused on (see right).



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

CD TRANSPORT
Cyrus CD Xt Signature

DAC
Chord Electronics Hugo

AMPLIFIER
Exposure 3010S2-D

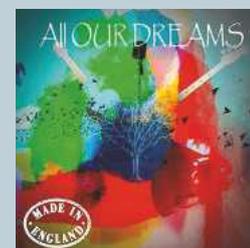
EQUIPMENT SUPPORTS
Quadraspire

SPEAKER STANDS
Atacama SE24

POWER
IsoTek EVO Mosaic Genesis

CD TEST MUSIC

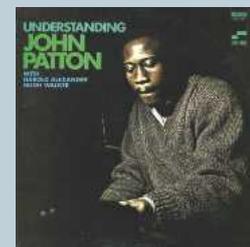
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TRANS-GLOBAL UNDERGROUND
Dream Of 100 Nations, Temple Head



JOHN PATTON
Understanding, Ding Dong



RYUICHI SAKAMOTO
The Last Emperor OST, Theme





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Group test

STANDMOUNT SPEAKERS £869-£1,000

Special delivery

David Price checks out six upmarket compact standmount speakers capable of a performance that belies their diminutive dimensions

WITH THE CONTINUOUS evolution of drive unit technology, the development of cabinet manufacturing processes and increasingly sophisticated measurement devices you'd think that we would have reached the pinnacle of loudspeaker design, manufacturing and performance and that loudspeakers would pretty much all sound the same. Anyone that has visited a dealers' dem room will know that this isn't the case.



Loudspeaker design has followed the same principles for decades, but there are still big differences to be heard between similar-looking boxes and drive unit materials – even models costing the same still manage to sound profoundly different from one another. OK, this isn't very likely to come as much of a surprise to any loudspeaker design engineers out there, but given that electronic components can be made to uniformly high standards these days

and sound pretty similar, why are loudspeakers still managing to have a sonic signature so vastly different from one another?

Energy conversion

Anything that converts one form of energy (ie electrical) to another (mechanical) has its job cut out. Factor in the physics like internal cabinet volumes and material construction plus electronic factors like impedance and the number of

variables that can affect loudspeaker performance is quite considerable.

Here to help is our roundup of six high-quality standmount speakers priced from £869 to £1,000. The group's close pricing demonstrates the plentiful choice of models that are on the market and each has its own unique design and sonic signature. Read on to see how they sound with a range of musical styles, and then use it as a starting point before going to listen for yourself... ▶



ON TEST



B&W CM5 S2
£949 **p27**

From one of the world's leading speaker brands, this new model promises a punchier and more powerful sound than its predecessor.



KEF R300
£1,000 **p29**

KEF has majored on innovative drive units and with its Uni-Q treble and midrange driver array, this speaker sounds different to all the others here.



Martin Logan Motion 15 £898 **p31**

This US brand is best known for its radical electrostatic hybrid designs, offering the punch of a conventional speaker but with the clarity of a panel.



Quadral Platinum M25
£990 **p33**

Not many people know this German brand in Britain, so it has a tough job ahead to prevail over our many more established domestic brands.



SVS Ultra Bookshelf
£869 **p35**

The second US loudspeaker in this group, SVS may be unfamiliar to UK hi-fi fans. On paper it looks impressive, but how does it compare?



Tannoy Precision 6.1
£900 **p37**

Tannoy's unique Dual Concentric technology gives very distinct sonic benefits, including point-source imaging. This standmount promises much.

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Bowers & Wilkins CM5 S2 £950

From one of the world's top speaker brands comes this small, but slick-looking standmount

DETAILS

PRODUCT
Bowers & Wilkins
CM5 S2

ORIGIN
UK/China

TYPE
2-way standmount
loudspeaker

WEIGHT
8.9kg

DIMENSIONS
(WxHxD)
200 x 340 x 285mm

FEATURES
● 25mm metal
dome tweeter
● 165mm Kevlar
coned bass unit
● Quoted sensitivity:
88dB/1W/1m

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Met another new loudspeaker from a world-famous company whose reputation leaves nothing to be desired. The CM5 S2 sits towards bottom of the range, and doesn't get the top-mounted tweeter, which is becoming something of a B&W tradition. The box is attractive, crisp and modern looking. Like most products in this test it is very well put together. Finishes include lacquered gloss black, satin white and rosenut.

This two-way loudspeaker sports a 25mm aluminium dome tweeter, which is double-decoupled from the cabinet with a ring of synthetic gel to cushion it and remove extraneous vibration. It is married to a Kevlar-coned mid/bass unit, a popular choice for B&W models and used seemingly since hi-fi was in its infancy! It has an anti-resonance plug fitted to its voice coil to reduce high-frequency break up. The crossover uses audiophile-grade Mundorf capacitors and works at a highish 4kHz, while the internal wiring is said to be upgraded from its predecessor. The heavily braced cabinet is satisfyingly free from resonance when tapped.

Sound quality

You can tell that B&W has been in the speaker game for a good while, because the CM5 sounds impressive right from the off. It doesn't matter what type of music I play, this small black box sounds good. But that is not to say that its sound is the most

accurate I've heard; you can definitely tell that it is voiced to make its mark in any hi-fi showroom, such is its punch and power. The CM5 S2 seems to jump into everything with relish. One key reason for this is the highly propulsive bass; it doesn't go down particularly low, but what low frequencies there are, are certainly fun. *Made In England* shows this to great effect; it's a raunchy rock track, almost like a slightly down-tempo Motorhead, and the CM5 loves it. It has all the usual B&W characteristics of sounding tight, spry, crisp and clean. True, there is a little brightness to the upper midband and lower treble, but nothing excessive and just enough to pep up a pop recording. The midband is clean up to a point, but doesn't really have the insight of the Martin Logan or KEF.

Moving to some techno from Transglobal Underground, and *Temple Head* is a pleasure. The CM5 shuffles along with aplomb and seems to relish the snare drum, hi-hat and kick drum work, showing how it counterpoints with the percussive piano playing very well. It hangs a decent image on Ryuichi Sakamoto's *Last Emperor* soundtrack, again with a very explicit rhythmic accent. But you might say that texturally it isn't as good as many here. There's a definite patina to the sound of the bass/mid unit that works well when dry, taut rock music is played, but you're left wanting a little more warmth on acoustic instruments ●

MR SMALL

Despite being one of the smaller standmount loudspeakers on test here, the sleek looking Bowers & Wilkins CM5 S2 is a decently sensitive offering, proving relatively efficient (B&W claims 88dB/1W/1m) and it also goes down usefully low too – although you'll never quite manage to get the subterranean bass that some larger floorstanders are now capable of, because even B&W standmounts cannot change the laws of physics!

The woven Kevlar bass unit has grown to become a Bowers & Wilkins staple, and it gives a distinctively spry, fresh sound that is immediately recognisable as being a product of this brand. Its rear-mounted port makes it arguably more sensitive to placement than some, although this has been well implemented and doesn't impose itself on the proceedings, unlike those of some lower-cost loudspeakers.



Instantly
recognisable
B&W styling

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Punchy, propulsive, musical sound; build and finish

VALUE FOR MONEY
★★★★★ **DISLIKE:** Lacks transparency compared with the best of the rest

BUILD QUALITY
★★★★★ **WE SAY:** Fantastic value compact standmount

EASE OF DRIVE
★★★★★

OVERALL



Intune Audio

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Audiolab 8200MB Power Amp



Arcam A49 Integrated

Arcam FMJ D33 DAC
Arcam CDS27 CD Player / Streamer
Arcam FMJ A19 Integrated Amp
Arcam FMJ A39 Integrated Amp

Bowers & Wilkins 683S2
Bowers & Wilkins 684S2



KEF LS50
KEF R700

KEF Reference 1

Musical Fidelity M3Si Integrated amp
Musical Fidelity M3SCD CD player
Musical Fidelity M6Si Integrated amp
Musical Fidelity M6 DAC

Musical Fidelity NuVista 800

ProAc Tablette Anniversary
ProAc Studio 148 floor standers
ProAc Response D20R floor standers

Pro-Ject Xpression Carbon





KEF R300 £1,000

A design with a difference, this brings some unconventional thinking to the group

DETAILS

PRODUCT
KEF R300

ORIGIN
UK/China

TYPE
3-way standmount loudspeaker

WEIGHT
12kg

DIMENSIONS
(WxHxD)
210 x 385 x 345mm

FEATURES

- Uni-Q driver: 1x 25mm tweeter; 1x 125mm mid
- 1x 165mm bass
- Quoted sensitivity: 88dB/1W/1m

DISTRIBUTOR
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WEBSITE
kef.com/gb

One of the latest in a long line of sub-£1,000 KEF standmounts, the R300 is pretty and technically interesting, being the only three-way loudspeaker here. It is one of the larger designs in the group and looks the part with clean uncluttered lines that give it an air of sophistication, helped in no small degree by the excellent finish (which comes in a choice of classic piano black, rosewood or walnut wood veneer).

It sports the latest version of KEF's Uni-Q driver array which takes care of treble and midrange duties, and a 165mm bass driver, effectively making it a three way design. The 25mm vented aluminium dome tweeter sits mounted in the centre of the 125mm braced magnesium/aluminium midrange cone, and a 165mm bass unit made of the same material handles the lows. Crossover frequencies are 500Hz and 2.8kHz, which means they're not done in the 1kHz region where the ear is especially sensitive – a key advantage of three-way designs. The cabinet sports constrained layer damping to lessen vibration. On the back there's a reflex port and a terminal board with built-in, selectable bi-wiring links.

Sound quality

One of the finest sounding speakers here, this has much of what the best of the rest offer, and sometimes more. I'm first struck by the maturity of the sound; it has a smooth and extended

treble, a clean and detailed midband and deep, extended bass – and it all integrates smoothly. The sub-bass on Transglobal Underground's *Temple Head* shows this speaker going lower and with more poise than any other; it's more like listening to a floorstander. Yet there's no 'thrummy' peak up into the lower midband to give the illusion of more bass – it is even and well proportioned. Further up the frequency band, there's a sense that the instruments can play more independently of one another than the other speakers. It's fascinating listening to the decay of the snare drum on *Made In England*, which seems to hang in the air far longer than all other models here except for the Martin Logan.

The Quadral is very clean and detailed too, but not the world's most captivating listen – which is where the KEF scores over it and most others here. It's very good in hi-fi terms yet lots of fun to hear. It doesn't quite have the terrier-like energy of the Tannoy, but isn't far off, and this makes it far less music-sensitive than most. For example, John Patton's *Ding Dong* is lots of fun, with a big, powerful groove as well as a delicate cymbal sound and super-clean snare drum. It's as if the KEF is able to sift through the muddle in the mix and take you direct to the instrument. *The Last Emperor* piece shows excellent soundstaging too – almost up there with the Tannoy, but it gives a fuller range with greater detail and depth ●

THREE FOR ALL

There is always a trade-off between the size of a loudspeaker's cabinet, the amount of bass it can reproduce, and its sensitivity. Because of the effort expended to move lots of air from a small box, more compact speakers are invariably less efficient and require more amplifier power.

KEF claims the R300's sensitivity is 88dB/1W/1m, which is good for a model of this size. It is likely that its modern hybrid magnesium and aluminium cone materials will be especially helpful here, as they're lighter than more conventional plastic-based formulations. Another consequence of this is that transient speed should be good, too. The R300 is clever for packing a three-way design into the box, and this has been done well, exhibiting a smoothness that's so often lacking in some rival models that use a more conventional two-way set up. It's certainly a very interesting product.



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★

VALUE FOR MONEY
★★★★★

BUILD QUALITY
★★★★★

EASE OF DRIVE
★★★★★

DISLIKE: Powerful and detailed yet smooth and sophisticated sound

DISLIKE: Lacks a little in the way of high frequency delicacy

WE SAY: Superb all rounder that delivers excellent value

OVERALL





STYLE.
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January 2015



K3 Integrated
February 2015



K3 System
April 2015

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DIFFERENT STROKES

The Motion 15 is not exactly what you'd expect a MartinLogan loudspeaker to look like. Normally suppliers of exotic electrostatic panelled loudspeakers, the type of driver has changed in this entry-level offering, although the principle has most certainly not. MartinLogan believes that electrostatic panels have a wonderful speed, delicacy and lightness of touch – and a ribbon tweeter can also offer some of these advantages, while being a little less expensive to implement. It certainly has advantages over dome tweeters such as transient response and low distortion, although trouble comes when trying to marry it up to a conventional coned mid/bass unit – as its characteristics are so different. With a high sensitivity this speaker certainly goes loud for a small amount of power, but transistor amplifiers with good current drive will sound best.



MartinLogan

Motion 15 **£898**

Famous for electrostatic panel designs, this company also does innovative box loudspeakers as well

DETAILS

PRODUCT
MartinLogan Motion 15

ORIGIN
US/China

TYPE
2-way floorstander

WEIGHT
5.4kg

DIMENSIONS
(WxHxD)
173 x 290 x 242mm

FEATURES

- 26 x 36mm ribbon tweeter
- 133mm aluminium bass unit
- Quoted sensitivity: 92dB/1W/1m

DISTRIBUTOR
Absolute Sounds

TELEPHONE
020 89713909

WEBSITE
absolutesounds.com

An American company best known for its high end electrostatic and hybrid panels, a conventional box loudspeaker like this isn't really a core MartinLogan product – yet it still remains arguably the most interesting design here. In the States, the 15 is sold as both a two-channel and a home theatre speaker. It feels a quality product, with a solid cabinet and a choice of piano black, piano white or black cherrywood finishes. Most notable, though, is the use of a ribbon high-frequency unit, which is unusual at this price and normally the province of more expensive items.

Called the Folded Motion Tweeter, it is a 26 x 36mm driver with a 133 x 44mm diaphragm, which takes care of midband and treble duties from 2.7kHz upwards. Below this, a 133mm coned mid/bass driver handles the lower end of the spectrum, via its black, long-throw aluminium cone. The crossover uses a custom air core coil and low DCR steel laminate inductors with polypropylene film capacitors and low DF electrolytics. The steel grille attaches magnetically to the cabinet, which has a black anodised brushed aluminium baffle.

Sound quality

Marrying a ribbon tweeter to a moving coil drive unit isn't always easy, but the Motion 15 has a smooth response and no nasty audible response peaks. It auditions extremely well, being blessed with a delicacy

and airiness that no rivals here have. The cymbal work on *Ding Dong* is there in all its glory, immediately showing up every other design. The same goes for *Made In England*, which is a grittier and more modern digital recording that's carried smoothly and intimately; the vocals in particular shine through with remarkable translucency. It has a dramatic and insightful sound that reminds me of how flawed conventional metal dome tweeters can sometimes be.

But this is a small speaker and cannot transcend its own physical limitations. It sounds more lightweight than several, lacking bass extension compared with the larger KEF and Quadral. Not only does it not go as low, but it doesn't have that sense of effortlessness either. However, although it may not be prodigious, its bottom end is lithe and tuneful; even thumping dance tracks prove great fun. The bass seems to reap rewards from that clarity in the midband and treble, scything through the muddy mix and adding real zest to the proceedings. That tweeter is great with the snare drum pattern, reproducing it really fast and also tracking the dynamic accenting better than almost all here. The result is that the Motion 15 is quite captivating to listen to, diving head first into any type of music and really enjoying itself. It images extremely well too, as *The Last Emperor Theme* highlights – setting up a decently sized three-dimensional soundstage ●

**Hi-Fi Choice****OUR VERDICT**

SOUND QUALITY
★★★★★ **LIKE:** Translucent treble; delicate midband; fast bass

VALUE FOR MONEY
★★★★★ **DISLIKE:** Limited low-frequency extension and power

BUILD QUALITY
★★★★★ **WE SAY:** Small standmount with high-end sound

EASE OF DRIVE
★★★★★

OVERALL



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Quadral Platinum M25 £990

A small standmount from a large German company, but how does it fare in this international competition?

DETAILS

PRODUCT
Quadral Platinum M25

ORIGIN
Germany/China

TYPE
2-way standmount loudspeaker

WEIGHT
7.7kg

DIMENSIONS
(WxHxD)
195 x 360 x 300mm

FEATURES
● RiCom-V tweeter
● 170mm aluminium bass unit
● Quoted sensitivity: 86dB/1W/1m

DISTRIBUTOR
NuNu Distribution

TELEPHONE
0203 5442338

WEBSITE
quadral.com

Hanover-based Quadral offers a vast range of speakers of various shapes, sizes and types – although like many foreign brands has struggled to gain traction in the United Kingdom's overcrowded loudspeaker market. The M25 is the smallest in the Platinum M series, and said to be suitable for both hi-fi and home cinema applications. It sports the company's latest RiCom-V tweeter and aluminium coned mid/bass unit – the latter proving a recurring theme in this roundup. The other point of commonality is the piano lacquered cabinet (available in white or black), which is of high quality, if not quite the best finished here. There's also an option of white fabric grilles, too.

This is a two-way design fitted with Quadral's RiCom-V tweeter utilising a titanium membrane, which is claimed to stretch up to a bat-scaring 50kHz. This crosses over to the 170mm mid/bass driver at 2.1kHz. The cabinet is strong and quiet when you tap it, despite being on the lighter side of the group average. It is bass reflex loaded by a rear-firing port, which is designed to improve sensitivity and/or bass extension from a smaller box.

Sound quality

The Platinum M25 proves an accomplished design that is good at most things thanks to its clarity, detail and cleanliness. Compared with the B&W for example, it sounds a good deal less muddled in the midband;

suddenly recordings that are difficult to reproduce for some speakers just snap into focus through the M25s. The vocals on *Made In England* are a case in point; the Quadral takes the listener right to the vocal booth, whereas some others here get lost on the way. I also respect the sober way it handles classical orchestral music; the rousing massed strings on the *Last Emperor Theme* are elegantly carried, with this loudspeaker adding relatively little of its own character to the proceedings.

However, it isn't a universal panacea. While it is clean and detailed with rock and electronica and shows a commendably even tonal balance, I find it is less rhythmically engaging than most here. In a sense, the contrast between this and the B&W could not be more marked – the Quadral ticks all the hi-fi boxes with a deeper and tauter bass, more transparent midband and a slicker treble, but somehow it just doesn't find the emotion in the music. It's not the natural life and soul of the party, and this is especially in evidence when I cue up *Temple Head*. Again it conveys lots of information about the recording, but just doesn't boogie in the way that the B&W, KEF, Martin Logan and Tannoy do. This is somewhat disappointing as there is much here to like and respect in this decent loudspeaker. It is unerringly competent, but many listeners will feel that it hasn't quite connected with its inner soul ●

LOW RIDER

The vast majority of the standmount loudspeakers in this round up are tuned to go relatively loud for a certain amount of power. Choosing to adopt this approach has trade-offs, however, and a key one of these is that some bass extension may be sacrificed in the process.

The Quadral offers a touch more low-frequency extension than many of the loudspeakers that we've looked at here, but conversely it isn't quite as sensitive. While many in the group work reasonably well with lower powered amplifiers – including valve amps – the Platinum M25 really needs a solid 40W per channel (ideally more) from a good transistor amplifier in order to produce realistic listening levels in a medium-sized or bigger room. Larger than the majority of the speakers here, it works best at a distance of at least 20cm from a rear wall; closer than this could imbalance the bass.



HIFIChoice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Balanced, clean, detailed sound; extended bass

VALUE FOR MONEY
★★★★★ **DISLIKE:** Lacks emotion; rhythmically flat; difficult to drive

BUILD QUALITY
★★★★★ **WE SAY:** Decent design, but lacks excitement and the ability to boogie

EASE OF DRIVE
★★★★★

OVERALL





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SVS Ultra Bookshelf **£869**

Meet this newcomer to Britain's crowded speaker market, how does this American mini-monitor fare?

DETAILS

PRODUCT
SVS Ultra Bookshelf

ORIGIN
US/China

TYPE
2-way standmount
loudspeaker

WEIGHT
8.6kg

DIMENSIONS
(WxHxD)
212 x 380 x 254mm

FEATURES
● 25mm dome
tweeter
● 165mm glass fibre
mid/bass unit
● Quoted sensitivity:
87dB/1W/1m

DISTRIBUTOR
Karma AV

TELEPHONE
01423 358846

WEBSITE
karma-av.co.uk

Another American-designed speaker, SVS is relatively unknown in Britain but has made a name for itself in the US with its subwoofers. Typical of what's on offer at this price, it looks elegant in – yes, you've guessed it – a choice of lacquered gloss black or white finishes. I have no complaints on the quality of its build either – it's a solid little loudspeaker.

One might say this is an archetypal modern mini-monitor, being a two-way bass reflex design with a 25mm aluminium tweeter and a 165mm mid/bass driver – which swap duties at 2kHz. Unlike many that use aluminium coned mid/bass units, it has a glass fibre cone. The crossover is said to feature premium-grade capacitors, air-core inductors and heavy-trace printed circuit boards for signal integrity. The cabinet gets the benefit of non-parallel panels, which are claimed to reduce internal standing waves, and there's a gently wedge-shaped front baffle. The grille was designed with Finite Element Analysis for transparency, as was the tweeter's diffuser. Like most here the single bass reflex port fires backwards.

Sound quality

This small speaker presents a slightly more extended bass than all but the KEFs in this test, something quickly apparent with Transglobal Underground's thumping *Temple Head*. It certainly goes down a little lower than you might expect from the

size of its box, but this doesn't mean it sounds more bassy because it has been well done. Some speakers here appear to have a slight peak in the upper bass which gives an artificial 'push' to bass guitar lines, for example, but the SVS appears pretty even. It's an old trick that works well in dealers' demonstration rooms but perhaps not quite so well at home, and happily the Ultra avoids it.

All well and good then, but the speaker's upper midband and lower treble region do appear a little too well lit. For example, the ride cymbals on *Made In England* are slightly bright, drawing attention to themselves a touch too much. In one sense it gives the song more bite and attack – and an enjoyable feeling of rhythmic urgency – but with some music it detracts from the listening experience. There is a fair degree of detail there, and the speaker projects vocals out into the room with confidence. All the same, that upper midband does have a hint of nasality to it, and this makes for a slightly opaque feel. As a result the SVS doesn't seem able to convey the tonality of orchestral instruments in a particularly realistic way. It's not quite delicate and open enough to really get to grips with the sound of acoustic instruments in the way that the MartinLogan does, for example. It seems more at home playing electronic music than with jazz or classical, as the rather artificial sound to John Patton's *Ding Dong* shows ●

GLASS HALF FULL?

Though it's undoubtedly rather attractive to look at, the SVS Ultra Bookshelf doesn't have any particular distinguishing factors aside from its angled cabinet.

The driver complement is pretty standard fare, although the choice of glass fibre cone for the mid/bass unit is rather unusual as it's much less popular now than it was 10 years ago – these days the trend tends to be to opt for aluminium in some shape or form.

This will give the Ultra Bookshelf a slightly different tonality to some of the other standmount loudspeakers that are included here, of course. Despite its obviously different characteristics to the crowd, it proves to be reasonably easy to drive although we should point out that it shouldn't really be hooked up to a solid-state amplifier of less than around 40W per channel if you intend to listen at highish volumes.



More at home
with electronic
music than jazz

HIFIChoice

OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Impressively extended bass; good finish
VALUE FOR MONEY ★★★★★	DISLIKE: Well lit upper midband; opaque tonality
BUILD QUALITY ★★★★★	WE SAY: Decent design but faces very stiff competition
EASE OF DRIVE ★★★★★	

OVERALL



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Q Quintet

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Tannoy Precision 6.1 £900

From an old loudspeaker brand name, this pert standmount looks set to be a musical charm

DETAILS

PRODUCT

Tannoy Precision 6.1

ORIGIN

UK/China

TYPE

2-way standmount loudspeaker

WEIGHT

7.3kg

DIMENSIONS

(WxHxD)
224 x 330 x 257mm

FEATURES

- 25mm Titanium dome tweeter
- 150mm treated paper mid/bass driver
- Quoted sensitivity: 88dB/1W/1m

DISTRIBUTOR

Tannoy UK

TELEPHONE

01236 420199

WEBSITE

tannoy.com

From one of hi-fi's most venerable brands comes this compact monitor whose headline feature is the Dual Concentric driver, similar in some respects to the Uni-Q design in the KEF. This is set into a curvy cabinet which is angled on the inside, the idea being to break up internal standing waves.

The Dual Concentric unit is actually two discrete drivers in one, with the tweeter mounted behind, and concentrically, with the low-frequency unit. High frequencies radiate from the centre of the low-frequency unit through Tannoy's Tulip Waveguide. The company says the crossover further time-aligns the two drivers, so the sound comes from a point-source just behind. The tweeter is a 25mm titanium dome, crossing over to the 150mm mid/bass unit with a cone of blended paper pulp fibres at 1.6kHz. The crossover uses low-loss laminated core inductors and audiophile-grade polypropylene capacitors, with hard-wired components and a fifth ground terminal on the binding post board to reduce RF interference.

Sound quality

In a world of design conformity, this speaker is always going to sound different. You can instantly hear that it has a smaller cabinet than most others here. *Ding Dong* from John Patton's *Understanding* album is a slice of Hammond organ-driven modern jazz, and the Precision 6.1

relishes getting its teeth into things – although it does lack low bass compared with the Quadral or KEF. The song bounces along with a fast, propulsive and highly engaging sound. It seems particularly good at communicating the leading edges of notes and their accenting too. The B&W proves good at the former, but seems less adept at the latter by comparison. The result is a lightweight but taut and tuneful performance.

It sounds great with jazz then, if not particularly accurate. There is some sense of coloration across the midband, especially the upper mid, and this gives a slightly monochrome feel to tonality. There's also a subtle nasal quality, obvious when played back to back against the Martin Logan. Yet still, the Tannoy moves and grooves, and you can't help but have a ball. The pattern repeats with the powerful rock of *Made In England*, but is less of an issue because the recording itself is quite dry; this loudspeaker is less concerned with the sumptuousness of the sound and more with the music's rhythm. One thing the Tannoy does bring into sharp relief is the soundstage; its Dual Concentric design is particularly good at conveying the respective positions of instruments in the mix, and seems able to nail vocals onto an invisible wall up there right in front of you. This proves even more impressive with the classical *Last Emperor* score, which sounds gloriously expansive and immersive ●

MR VERSATILITY

Yet another speaker claiming 88dB sensitivity, the Tannoy Precision 6.1 works especially well with lower powered amplifiers, although you do tend to notice a significant lightening of the bass compared with some of its bigger boxed rivals. This gives it one advantage, in that it can be used comfortably close to a rear wall, or even Blu-tacked to a deep bookshelf provided that you use the supplied rear port foam bungs.

Indeed, the Precision 6.1 is unusually versatile in the way that it can be positioned, at least by the standards of the rest of the group.

It projects particularly well into the room if it is toed-in slightly and then it is otherwise pretty much as case of fit it and forget about it.

Its blended paper mid/bass cone delivers a certain tonal patina that not everyone will find to their liking, but its infectious musicality is unarguably universally appealing.



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Charmingly musical nature; great imaging
VALUE FOR MONEY ★★★★★	DISLIKE: Slightly coloured, lacks ultimate transparency
BUILD QUALITY ★★★★★	WE SAY: Highly likeable loudspeaker that loves music
EASE OF DRIVE ★★★★★	

OVERALL



Group test verdict

He's spent the last seven days living with these standmounts and reckons he finally knows what makes them tick, **David Price** gives us with the final verdict

THERE ARE NO bad loudspeakers here, nothing that makes a genuinely flawed sound that's unpleasant to listen to. However, it is possible to divide the models into two groups; those that lack a sense of fun and those that make you want to boogie.

The SVS is the first of the former; it has a slightly opaque sound allied to a subtle brightness that isn't particularly endearing. The Quadral is more accurate and polished, giving a more mature and sophisticated sound, but it seems a little dispassionate and aloof. This makes it more sensitive to different types of music than the rest.

Ranked fourth overall, the B&W is simple, honest and satisfying. There's nothing especially fancy about it, but it knows how to get the listener's foot tapping and finds the fun in music, despite some lack of low-level detail and colouration.

The Tannoy comes third but in some respects it's up with the best here; it is extremely enjoyable to listen to, bounces around like a puppy in a field and has bags of charm. It's a little opaque in absolute terms and lacks bass extension and treble finesse, but everything you play is always funky.

Second is the MartinLogan. In some respects it is better than the winner, which succeeds because it's a superior all-rounder. The Motion 15 has an excellent midband and treble, real pace and insight, and a highly faithful reproduction of dynamic nuances and accents. The downside is its lack of bass extension and the fact that when really cranked up it compresses things just a touch. This is down to its cabinet size and also the small diameter mid/bass; it's almost a miniature speaker and can't be all things to everyone.



WINNER

The KEF R300 has a deeper and more articulate bass, a crisp and expansive midband with lots of detail and finesse, and a spacious treble that projects well. It works well across a variety of material, and doesn't excel with one and fail with another.



Make/model	B&W CM5 S2	KEF R300	Martin Logan Motion 15	Quadral Platinum M25	SVS Ultra Bookshelf	Tannoy Precision 6.1
Price	£950	£1,000	£898	£900	£869	£900
Sound	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Value	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Build	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Ease of drive	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Overall	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
	Punchy and musical, Bowers & Wilkins CM5 S2 comes across as a genuine rock and roller	Powerful, full-range sound that is refined beyond its price tag, the KEF is a winner in every sense	An impressively rhythmic and detailed performer let down by limited bass extension	Tidy, refined and with a competent design, the Quadral suffers as it lacks the charm of its rivals	A more than decent loudspeaker, the Ultra Bookshelf ultimately falls a little short of the rest	Charmingly musical and spacious this rather fabulous standmount lacks a little transparency

Key features

Two or three-way	Two	Three	Two	Two	Two	Two
Ribbon tweeter	No	No	Yes	No	No	No
Metal tweeter	Yes	Yes	No	Yes	Yes	Yes
Bi-wiring	Yes	Yes	No	Yes	Yes	Yes
Bass reflex port	Yes	Yes	Yes	Yes	Yes	Yes

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INTEGRATED AMPLIFIER:
Creek Evolution 50A **£700 HFC 377**

One of our favourite affordable amplifiers, the Creek has an open, detailed and musical sound – one that is far better than the price suggests. If you can't quite afford a high-end integrated, this will make a nice noise with any of the speakers in this test, and it's flexible too.



INTEGRATED AMPLIFIER:
Exposure 3010S2-D **£1,700 see p16**

The previous version this integrated amplifier won a *Hi-Fi Choice Blind Listening Test in HFC 373*, and this is even better. Powerful enough to drive any speaker here, it has poise and pace and gives a very convincing all-round sound.



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WHAT HI-FI? AWARDS 2014

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WHAT HI-FI? AWARDS 2014

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NAD • D 3020 AMPLIFIER / DAC

Features digital and analogue inputs plus the convenience of wireless streaming with its Bluetooth capability.



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NAD • C 390DD • DIRECT DIGITAL AMPLIFIER / DAC

The combination of sound quality and features make the NAD C 390DD a highly capable and versatile amplifier. Featuring NAD's MDC, the C 390DD comes with 8 inputs which can be expanded to 14 with the optional MDC modules.



AUDIOQUEST • DRAGONFLY v1.2 DAC / HEADPHONE AMP

DragonFly is a sleek, flash drive sized Digital-Audio Converter that connects to a USB jack on a Mac or Windows PC, turning any computer into a true high-fidelity music source.

WHAT HI-FI? AWARDS 2014

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£199 OR LESS

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NEW £1249 OR LESS

ROKSAN • K3 • CD / AMPLIFIER

New integrated amplifier with aptX Bluetooth, a phono input plus five additional line inputs for other sources. The K3 CD player is the perfect match for the K3 amplifier. Three finish options available.



£599 OR LESS

£499 OR LESS

ROTEL • RA-12 / RCD-12 • AMPLIFIER / DAC / CD

Amplifier with DAC that supports iPod USB and Bluetooth audio streaming. Includes four analogue line-level inputs and a phono input. The RCD-12 CD player is an ideal partner.



£899 OR LESS

SAVE £600

WHAT HI-FI? AWARDS 2012

NAD • M51 • DAC / PREAMP - SILVER FINISH

This award-winning DAC / pre-amp features optical, coaxial, USB and HDMI inputs, all of which can handle files up to 24-bit/192kHz. The M51 will truly transform any system.



NEW £499 OR LESS

PIONEER • N-50A • MUSIC STREAMER

Developed for the digital age, the N-50A Network Audio Player connects to many different sources and features Internet Radio and Music Streaming from compatible devices, a high quality DAC and Airplay and DLNA compatibility.



NEW

£399 OR LESS

SAVE £100

MARANTZ • NA6005 • MUSIC STREAMER

If you prefer direct wireless access to your digital media then look no further. With in-built WiFi, Bluetooth and USB-A capabilities, this player also connects to everything: to your computer, external hard disc, smartphone, and tablet.



B&W • P5 S2 HEADPHONES

NEW

£249 OR LESS



GRADO • SR325e HEADPHONES

WHAT HI-FI? AWARDS 2014

NEW

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NEW

£329 OR LESS

PIONEER • XC-HM82 • CD/NETWORK SYSTEM

The XC-HM82 is an absolute power house, equipped with a Class D amplifier to boost your sound. Its compact size and stylish aluminium design make it suitable for any interior style.



NAD • VISO HP50 HEADPHONES

£229 OR LESS



SENNHEISER MOMENTUM 2.0 WIRELESS HEADPHONES

NEW

£379.95 OR LESS



BOWERS & WILKINS • 685 S2
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NEW

£499
OR LESS

WHAT HI-FI? AWARDS 2014
Best speaker
Home Cinema
Bowers & Wilkins 685 S2

Price excludes stands



PMC • TWENTY-22
An astonishingly natural balance and high dynamic capability are the hallmarks of this speaker. It creates a precise sound stage and profound bass performance from its compact cabinet.

£1970
OR LESS

WHAT HI-FI? AWARDS 2014
Best speaker
Home Cinema
PMC Twenty 22

Price excludes stands



Q ACOUSTICS • CONCEPT 20
A truly remarkable award-winning speaker which delivers a level of sonic performance previously only available to audiophiles able to invest in high-end models.

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OR LESS

WHAT HI-FI? AWARDS 2014
Best speaker
Home Cinema
Q Acoustics Concept 20

Price excludes stands

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NEW

£2999
OR LESS



MONITOR AUDIO SILVER 6

2.5 way speaker system combining excellent dynamics with a naturally rhythmic sonic character and tight, controlled bass. The Silver 6 is an outstanding communicator of music and film audio.

£999
OR LESS



KEF • R500

The smallest of the floorstanders in the R Series. Uses the latest generation Uni-Q driver array and two 5.25-inch aluminium bass drivers. Its slim proportions and sleek contemporary looks make it perfectly suited for any interior.

£1499
OR LESS



Q ACOUSTICS 3020

Replacing the award-winning 2020i speakers, the 3020 incorporates numerous improvements including a revised cabinet with wool fibre damping plus new bespoke drive units.

NEW

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OR LESS

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Premium finishes
£249.95



PSB IMAGINE XB

An attractive compact two-way speaker featuring a 5 1/4" woofer and one inch titanium dome tweeter. The XB is ideal for smaller rooms or in concert with a powered subwoofer for a compact full-range system.

NEW

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OR LESS



WHARFEDALE DIAMOND 220

The award-winning Wharfedale Diamond 220 is a 2-way, bass reflex bookshelf speaker offering everything you need from an advanced speaker design that doesn't cost the earth.

£199
OR LESS

WHAT HI-FI? AWARDS 2014
Mid-range speaker
Home Cinema
Wharfedale Diamond 220



NEW

£299
OR LESS



Bluetooth



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WHAT HI-FI? AWARDS 2014
Mid-range speaker
Home Cinema
Bowers & Wilkins T7



NEW

£895



Bluetooth



NAIM • MU-SO • WIRELESS MUSIC SYSTEM

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Mid-range systems
Home Cinema
Sonos

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Boost
£79



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WHAT HI-FI? AWARDS 2014
Mid-range systems
Home Cinema
Bluesound

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Studio line

Few companies are more famous for loudspeakers, but what of its amplification?

David Price samples ATC's CA2/P1

There's an old adage in specialist hi-fi – there are electronics manufacturers, and there are loudspeaker manufacturers, and never the twain shall meet. Many competent amplifier makers have tried their hands at speakers and come away with more than one finger burned. The reason is that it needs a completely different set of core competencies; speaker design is largely a mechanical engineering challenge, amplifier design is not.

Even fewer companies attempt to do it the other way round, and those that have, haven't always showered themselves in glory.

The Acoustic Transducer Company crossed the rubicon, as founder Billy Woodman told me last year, because it needed something good, strong and reliable to demonstrate its speakers with. Actually, ATC wasn't completely new to this because it has made some very fine active speakers for many

years, but the idea of doing separate standalone hi-fi amplifiers is relatively recent. The CA2/P1 pre-power amplifier combination isn't one of the world's most dazzling packages, has precious few 'whizz bang' features and claims no special technology. Instead, the essence is that it's a rigorously engineered and flexible pairing that is hand built in the United Kingdom, alongside the company's excellent loudspeakers, to drive the very same.

ATC believes in amplifiers with extremely wide bandwidth, and especially low distortion and noise. Likewise, this combo is not equipped with fripperies like built-in DACs, and the like. It isn't first and foremost a piece of 'convenience audio', a sort of hi-fi equivalent of a pack of Super Noodles. Rather it is old fashioned in the way it's unashamedly designed to fulfil a role that has existed for five or so decades now – giving flexibility and functionality without gimmicks.

▶ DETAILS

PRODUCT
ATC CA2 Mk 2

ORIGIN
UK

TYPE
Preamplifier

WEIGHT
7kg

DIMENSIONS
(WxHxD)
445 x 90 x 330mm

FEATURES
• 4x line inputs
• 1x MM/MC phono input
• 1x balanced XLR input
• Tape monitor loop

DISTRIBUTOR
ATC Loudspeaker Technology Ltd.

TELEPHONE
01285 760561

WEBSITE
atcloudspeakers.co.uk

The £1,437 CA2 preamplifier is a straightforward design with four line inputs, phono input and tape monitor, all via RCA phono sockets. There's also a main stereo output on both RCAs, balanced XLR, plus sub output via RCA phono and a headphone output via a 6.3mm jack socket. The phono stage is configurable for different loading and input voltages, so will work with most moving magnet or moving coil cartridges. Slightly frustratingly, you do have to remove the unit's cover to get to the jumper switches on the board. Although not ostentatious, this preamp feels like a quality product with crisp source switching via gold-plated relays. While the motorised volume control feels slick enough, it's rather too inset into the fascia to be easy to use, forcing use of the disappointingly plasticky remote control.

The £2,079 P1 MOSFET power amplifier has been designed to partner ATC passive monitors, and puts out a claimed 150W RMS in Class AB – which should be sufficient for all but heavy metal fans living in palatial homes with vast listening rooms. Although an entry-level power amp for ATC, the manufacturer says it has the same speaker protection circuits used in its active monitors, which ensures that even when running at high levels the amplifier is held back from clipping – thus protecting the loudspeakers from damage. It's a true dual mono

DETAILS

PRODUCT
ATC P1

ORIGIN
UK

TYPE
Power amplifier

WEIGHT
23kg

DIMENSIONS
(WxHxD)
435 x 135 x 350mm

FEATURES

- Claimed power output: 2x 150W RMS
- 1x RCA phono line input
- 1x balanced XLR input
- IR remote compatibility

DISTRIBUTOR
ATC Loudspeaker Technology Ltd.

TELEPHONE
01285 760561

WEBSITE
atcloudspeakers.co.uk

Rigorously engineered simplicity is the order of the day

integrated amplifiers seem vague and tremulous. I try my budget reference Cambridge Audio AeroMax 6 floorstanders, which the ATCs drive like they are lighter than air, and ATC's own SCM40 loudspeaker, with which this pre-power combo doesn't so much as break into a sweat. Clean, unsullied power it is, then!

Proving itself good at turning in a punchy, muscular sound with dance music is one thing, ability to carry a tune is another. With the 2009 remaster of The Beatles *White Album* cued up and *Martha My Dear* selected, it is an interesting experience as this song sounds cleaner and more polished than usual. There's a lot of information coming through, with a wonderful sense of the recorded acoustic. The ATC combo places the different elements of the mix very accurately in space; both left to right and front to back. I am not used to hearing this song with such clarity; and extension to Paul McCartney's vocals, which come over in a really intimate way – I almost get the feeling I am in the vocal booth with him. This amplifier combo proves to have an excellent midband then, very transparent and with no small amount of space and depth. This is precisely the sort of thing you should expect from a capable highish-end pre-power, and reminds you just how far even the best integrated amplifiers have to go in this respect.

It is fast becoming clear then, that this amplifier combo is a big-hearted device with a very clear and open midband. How then does it fare with large-scale orchestral music? I cue up one of my favourite pieces of 'battle music', Wagner's epic *Flight Of The Valkyries*, and sit back. This pre-power tracks those soaring strings and rasping horns with great aplomb, doing two things particular well. First, it seems especially good at separating different strands of the music out from one another, so you can focus on one

section of the orchestra and follow it completely independently of the others – even on those great, crashing crescendos. Secondly, it again sets up a massive soundstage with excellent spatial information inside, and majors on telling you where everything is and giving an immense listening experience, as if you were in a concert hall.

Tonally, I find the ATC surprisingly good for a conventional Class AB design; it's just ever so slightly brightly lit across the midband – most obvious with the starkly revealing SCM40s rather than the warmer AeroMax 6s, it must be noted – and this adds to the feeling of insight and air, without ever pulling the amplifier combination towards stridency; *Valkyries* is not a piece of music that gives bright sounding electronics an easy ride, but

The combo ties in well with ATC's heritage of being seen and not heard

it doesn't flag up any tendencies for harshness here. Instead, this powerful, dynamic rendition proves highly enjoyable, as I tap into the P1's not inconsiderable output power and loudspeaker-driving ability.

The only downside to this pre-power combo is with jazz music, where I feel that the ATC is slightly matter of fact, rhythmically. You would never criticise it as being a slouch in the timing department, but it's fair to say that it's not the most euphoric sounding amplifier I've ever heard; it doesn't sugar the pill or throw things together in a charmingly insouciant way. Rather this duo focuses on giving an accurate rendition of the music with no other frills thrown in. Donald Byrd's *Street Lady* flows nicely for example, sounding wonderfully smooth, spacious and wideband – but you

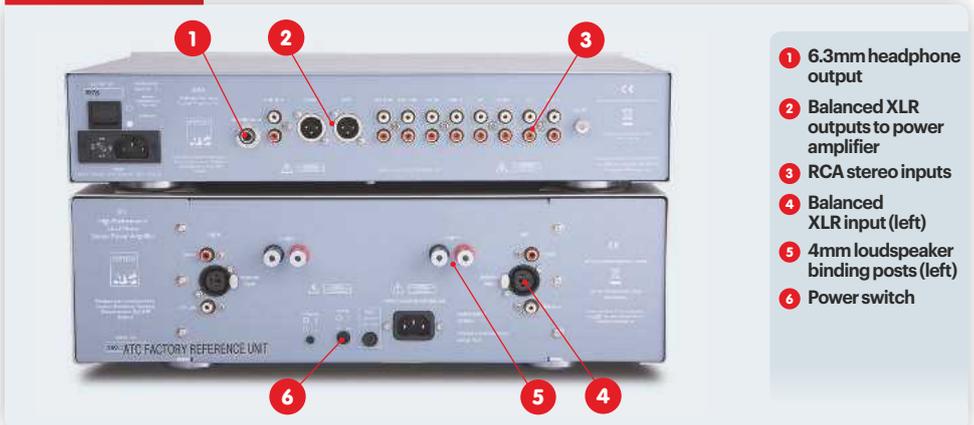
design, with power supplies, signal and return paths totally separate from one other. Aside from a choice of balanced XLR or unbalanced RCA phono inputs, it is fairly Spartan in terms of facilities with just a power LED and infra-red receiver; annoyingly the main power switch is on the back, and is small and hard to reach. In its defence it's designed to be awakened by the supplied remote. Two pairs of ATC's speaker binding posts and an IEC mains in complete the picture.

The two products are a good visual match and built very well, although the finish isn't as slick as some at the price – you need only look at a Marantz integrated to realise this.

Sound quality

Listening to the ATC CA2/P1 reminds me just what a complete, well-rounded, high-powered solid-state amplifier is capable of. We're talking a large and spacious recorded acoustic, powerful bass and sparkling highs. Effortless dynamics, and a general insouciant ease when asked to reproduce powerful musical peaks. For example, Fun Lovin' Criminals' *Love Unlimited* has a thick, fat, punchy soul groove with some very solid bass. It proves just the sort of song that a pre-power amp combination like this is made for. The ATCs show real control, seemingly exerting an iron grip on the low frequencies that make less

CONNECTIONS



Q&A

Ben Lilly

Technical sales and application manager, ATC



DP: Why does a speaker company feel the need to sell electronics?

BL: Having built active loudspeakers since the mid-eighties, a range of standalone electronics was never far from what we were already manufacturing. It was just a logical progression really. We also had some bad experiences when auditioning electronics to partner our loudspeakers so we felt that by offering an all-ATC solution we could not only widen our product range, but also benefit the performance of our loudspeaker systems. We set out to design audio systems with neutral fidelity, wide dynamic range and excellent reliability. Our electronics and speakers share our philosophy and are completely compatible, but perhaps dynamic range is something we pay particular attention to and this is why we don't build any integrated or power amplifiers capable of less than 100W continuous into 8ohms.

What were the key objectives behind the CA2?

The first generation was designed in 2000, and the second came out in 2009 with an improved PCB layout, more features and an updated chassis. The idea behind the product was to offer a highly linear and transparent method of selecting multiple audio sources, controlling level, driving long output cables if required and driving headphones.

How did the P1 come about?

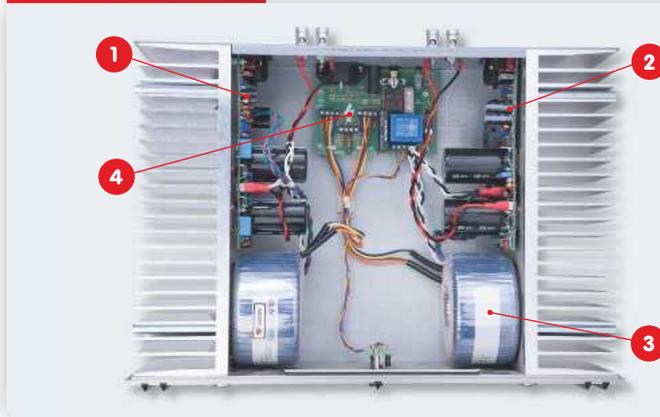
The design of the grounded source output stage used in the P1 was developed by Tim Isaac back in the early eighties, and has been refined many times – but the basic topology remains the same and we use it in the majority of our power amplifier stages, both in the standalone electronics and the loudspeaker active amplifier packs. The P1 was launched in 2009 to accompany the Mk2 CA2 and is the work of a number of our engineers. It was designed to meet the requirements of our customers with wide bandwidth, very low distortion and noise, and a power output capable of driving the vast majority of speakers.

CA2 PREAMP



- 1 Discrete stereo input buffers
- 2 Regulated power supply
- 3 Alps precision motorised stereo volume pot
- 4 Configurable MM/MC phono stage

P1 POWER AMP



- 1 Balanced and single-ended input buffer
- 2 Grounded source Class A/B MOSFET output stage
- 3 230VA toroidal power transformer
- 4 Mains power input circuit

HOW IT COMPARES

The obvious rival for the ATC pre-power is the Naim NAC 152XS (HFC 324) preamplifier (£1,095) and Naim NAP 200 power amp (£1,925). Both preamps are relatively minimalist and both power amps share an equally Spartan approach. The ATC out punches the Naim in power terms on paper at least. Both are excellent at driving real-life loudspeakers, although the ATC does go louder and stay cleaner. The Naim combo is more rhythmically engaging with some music, pulling you in and immersing you more. But the ATC is better at detail and control, and sounds a little less congested across the midband. This is a typical case of try before you buy. Both are excellent products, but different.

wouldn't say there's a particularly romantic or dreamy quality to its performance. This ties in well with ATC's studio heritage; in such applications electronics should really be seen and not heard, and the last thing you want is euphony and an excess of emotion.

Overall, I find this combo works best on classical and electronic music then, and the two genres share many characteristics. The dazzlingly well recorded *Electric Cafe* by Kraftwerk is a joy, with a big, three-dimensional soundstage and a glass-clear midband. At the same time, the bass is deep, articulate and appears to have effortless reserves of power.

Conclusion

An excellent performer, this is a true slice of affordable esoterica – you get a taste of what a really top-flight high-end pre-power amplifier will do, without having to remortgage your house in the process. The ATC CA2/P1 pre-power amplifier combination may be slightly quirky and fiddly in some ways – seeming very much the product of a specialist British manufacturer – yet it has great appeal to those that are interested in getting a serious bang for their buck, so to speak, and so it comes highly recommended ●

Hi-FiChoice

OUR VERDICT CA2

- SOUND QUALITY** ★★★★★ **LIKE:** Clean, crisp and detailed sound
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Controls hard to use; plasticky remote control
- BUILD QUALITY** ★★★★★ **WE SAY:** Effective performer that's a fine partner for the P1
- FEATURES** ★★★★★

OVERALL



Hi-FiChoice

OUR VERDICT P1

- SOUND QUALITY** ★★★★★ **LIKE:** Powerful, clean and very open sound
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Nothing at the price
- BUILD QUALITY** ★★★★★ **WE SAY:** A hidden treasure – in power amplifier terms
- FEATURES** ★★★★★

OVERALL





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BEAUTIFULLY
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In a spin

Neville Roberts polishes up his vinyl collection and settles down to listen to Pro-Ject's 2 Xperience SB DC package

Right from the outset, I find myself impressed with the look and feel of the top-of-the-range model from Pro-Ject's Xperience turntables. It has an air of classic elegance and refinement. In particular, the lovely matt finish of the walnut wood veneer is a perfect complement to the black of the platter and the Pro-Ject 9CC Evolution carbon-fibre tonearm. This arm is fitted with an Ortofon 2M Silver moving magnet cartridge, which has already been fully aligned at the factory. As well as the walnut wood veneer, the 2 Xperience SB DC is available in mahogany or olive wood or in a gloss piano black finish.

The turntable has some great design features. The plinth is made from a special non-resonant MDF, which uses a combination of high density and lower density MDF in its construction. It is also fitted with three high-quality metal cone feet, each of which incorporates an acoustically damped coupling mechanism that sits between the foot and the plinth. These screw onto the underside of the plinth and can be adjusted to enable levelling of the turntable. The platter is also of a special sandwich construction to minimise resonances and provide an excellent acoustic match. Pro-Ject recommends that the record is placed directly on the platter *sans* mat.

DETAILS

PRODUCT
Pro-Ject 2 Xperience SB DC

ORIGIN
Austria

TYPE
Belt-drive turntable

WEIGHT
7.7kg

DIMENSIONS
(WxHxD)
460 x 160 x 360mm

FEATURES

- 9CC Evolution carbon-fibre tonearm
- New DC-powered synchronous turntable motor with electronic speed control
- Ortofon 2M Silver moving magnet cartridge

DISTRIBUTOR
Henley Designs

TELEPHONE
01235 511166

WEBSITE
henleydesigns.co.uk

The new motor has electronic control of playback speed and the ability to switch between 33 and 45rpm at the push of a button. It is a 9V AC synchronous motor. The control circuit, which is built into the turntable, takes the 15V DC input from the external power supply and generates a high-purity sine wave of a frequency to drive the motor at the chosen speed. A single press of the power button turns the motor on to 33rpm and the left-hand blue LED flashes while the turntable gets up to speed and then stops flashing when it is ready, and remains lit. Another press of the button switches to 45rpm and the right blue LED is lit. Pressing the button again switches back to 33rpm. You press and hold the button for three seconds to turn the deck off.

Not hiding its light under a bushel, the motor is situated out in the open on the top left of the plinth. From there, the drive is taken from the motor pulley to the outer rim of the platter via a circular cross-section drive belt. The motor itself is suspended in its recess by another small rubber belt to effectively isolate it from the plinth.



any adjustment of needle azimuth be required. Bias adjustment is by a small weight suspended from a wire hoop in a nylon thread, which is connected to the arm by looping the end of the thread over a little pillar that has three grooves on it, with each corresponding to different stylus forces.

At the sharp end of the arm is a factory-fitted Ortofon 2M Silver moving magnet cartridge. This is based on the Ortofon 2M Red, but the internal generator coils are made from silver wire. The signal from this cartridge is taken to a block on the rear underside of the deck that is fitted with a pair of RCA phono sockets and an earth binding post. A set of dual phono leads with a separate earth wire is also included.

The only adjustment required is to set the stylus force after the counterbalance weight has been fitted. The instructions describe how to set the tracking force using the markings on the counterweight, but I prefer to use a digital stylus force balance to do this as it is far more accurate. I check the azimuth and VTA and, as expected, I find these to be spot on.

First thing's first and I check out the tracking ability and arm/cartridge resonance with my copy of the Vinyl Essentials test record. Its a little bit irritating that I have to screw and

unscrew the record clamp every time I change the record, but its a routine you'll quickly get used to and it's good to see the clamp included. Anyway, the arm and cartridge tracks well up to 80 microns and the resonance is at 12Hz, which is great.

Sound quality

Starting off with the overture from Purcell's *Abdelazer Suite* played by the Virtuosi of England – the stately allegro overture immediately commands my attention and draws me into the music. I am struck by the clear musicality of the performance

Delivers a superb sonic backdrop with an excellent dynamic range

– the orchestra is both full and yet well controlled with no audible peaks across the sonic spectrum, which supports the measured performance mentioned previously.

The deep and extended drum roll during the opening sequence of Stravinsky's *The Firebird Suite* performed by the Atlanta Symphony Orchestra is beautifully clean, tight and well controlled. Further into the recording, the twittering of the strings is clear and crisp – I can almost

The top of the spindle is threaded to accommodate a screw-on metal record clamp that is provided with the platter. The clamp is quite lightweight, weighing only 85g, but as it screws onto the spindle, it nevertheless holds the record firmly in position on the platter.

Moving to the business end, the arm is Pro-Ject's 9CC Evolution carbon-fibre 9in offering, which has been designed to lead vibrations away from the cartridge into the mounting board. The headshell, finger-lift and armtube are fashioned from a single piece of carbon-fibre and the armtube itself is slightly tapered along its length to minimise standing wave reflections. The arm bearing housing is a heavy solid ring that supports an inverted bearing design with four ABEC7 specification ballraces. The counterbalance weight is Sorbothane damped and supported on a pillar that extends from the bottom of the armtube in order to lower the centre of mass and thus reduce unwanted forces on the cantilever. It should be noted that, even though the headshell is fixed, the armtube is clamped by a single screw to allow rotation should

The design is typical of Pro-Ject's understated simplicity



Q&A

Laurence Armstrong
MD, Henley Designs Ltd



NR: There is no facility for the user to calibrate the turntable speed. Obviously the AC generator is calibrated in the factory, but is it likely to require any adjustment in the long term?

LA: No, speed stability remains extremely accurate over the life span of the turntable due to the crystal-lock method employed on the AC generator. It will retain the speed *ad infinitum*.

What is the reason for the choice of a screw-on record clamp as opposed to a weightier option that's held by gravity?

Partly it's an effort to keep the cost so competitive, and partly it's due to the high mass of the platter. The clamp gives superb record adhesion without any extra mass loaded on to the main bearing.

Can you reveal a bit more about the materials used in the sandwich construction of the platter?

It's a composite of heavy, non-resonant MDF topped with re-moulded vinyl records. The use of a vinyl surface is not very common, but what it provides is a surface that perfectly matches the make up of the playing record. This removes the need for any mat or additional material that can colour the sound, and instead just lets the record do the talking.

The platter of the review sample tested had three small holes drilled around the outer edge of the underside. Are these part of the manufacturing process to ensure that it is perfectly balanced?

Yes, in the same way that a tyre is dynamically balanced, the platter on the 2 Xperience SB is precision-balanced to create the perfect playback platform.

IN SIGHT



- 1 9V AC synchronous motor
- 2 Solid ring arm bearing housing
- 3 One-piece carbon-fibre arm tube and headshell
- 4 Sandwich-constructed solid platter
- 5 Turntable speed indicator LEDs and power button

identify the individual violins as separate instruments, rather than being one general sound.

For more contemporary electronic music, I turn to a track from Jean Michel Jarre's *Equinoxe*. The last track on side one (imaginatively called *Part 4*) gently introduces me to the pumping bass line that builds up through the piece. The Pro-Ject delivers a superb sonic backdrop with an excellent dynamic range, particularly in the lower registers. The deck carries off to perfection all the complexities of the music and the energetic enthusiasm is captivating.

The King's Singers rendition of *With You On My Mind* from their album *Out Of The Blue* shows off the excellent imaging of the 2 Xperience SB DC. Each singer occupies his own space across the soundstage and the rhythm accompaniment is correctly positioned behind the singers. The rich tonal colours of each individual singer that emerge from my speakers are very addictive.

George Malcolm's playing on a Decca Eclipse recording of Scarlatti sonatas on a harpsichord is tuneful and energetic. The Pro-Ject manages to extract a considerable amount of complexity and detail from the single harpsichord, and at times it is difficult to believe that there is only one instrument playing.

Finally, for a bit of rock, I turn to the legendary Mobile Fidelity half-cut master (ie the master disc is cut at half speed) recording of *Money* from *The Dark Side Of The Moon*. The bass guitar is reproduced with exceptional musicality and the cash registers in the opening section glitter with clarity, causing me to instinctively

reach for my wallet. As with the King's Singers recording, the lyrics are clear and the slight raspiness of Pink Floyd's vocals is perfectly reproduced.

Conclusion

The Pro-Ject 2 Xperience SB DC turntable certainly turns in a performance that complements its looks – one of elegance and refinement. I never get the feeling that it is looking down its nose at me and it is certainly ready to let its hair down when asked.

The combination of the Ortofon 2M Silver cartridge and the 9CC Evolution tonearm is a marriage made in heaven and I find no reason to break up this happy partnership. Their performance together is one of control and harmony, combined with freedom of expression that simply allows the music to flow.

As a complete package, the 2 Xperience SB DC is a serious turntable that will certainly let you fully appreciate everything that your vinyl collection has to offer ●



HOW IT COMPARES

Comparing the Pro-Ject 2 Xperience SB DC with the similarly priced Rega RP6 (HFC 358) with the Exact moving magnet cartridge, both have electronic speed control, an external PSU and use a composition plinth, but the Rega is fitted with basic rubber feet and the Pro-Ject has proper cone isolators. The Rega has a glass platter compared with the composition platter of the Pro-Ject. The Pro-Ject has a new 9CC Evolution carbon-fibre arm fitted with an Ortofon 2M Silver and the RP6 has the RB303 tonearm with the Exact cartridge. Although the RB303 has a great reputation, the 9CC/Ortofon is a winning combination, offering more refinement.

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



VALUE FOR MONEY



BUILD QUALITY



FEATURES



OVERALL



LIKE: Great build quality, superb tonearm/cartridge combination

DISLIKE: The screw-on record clamp

WE SAY: Classic elegance combined with modern tech results in a superb-sounding turntable

Simply the Best

Hi-Fi Choice



hi-fi+

WHAT HI-FI?
SOUND AND VISION



HIFICRITIC
AUDIO EXCELLENCE

HI-FI WORLD
OUTSTANDING

stereophile

CLASS A RECOMMENDED COMPONENT 2014

If you're after a great all-round, affordable, high end loudspeaker, here it is.

Hi-Fi Choice issue 370 2013

Spendor's approach is the most radical I've seen, going where no hi-fi manufacturer has gone before. D7 is extremely capable and very neutral, but most importantly it puts the music first *Hi-Fi + Dec 2013*

However it's been achieved, we can't help but marvel at the sound. Spendor D7's set the standard for speakers at this price *What Hi-Fi Oct 2013*

Among the finest speakers I've heard at any price
Sam Tellig, Stereophile Nov 2014



A6R

The A6Rs truly are a stunning achievement

What Hi-Fi Awards 2014

WHAT HI-FI?
AWARDS 2014

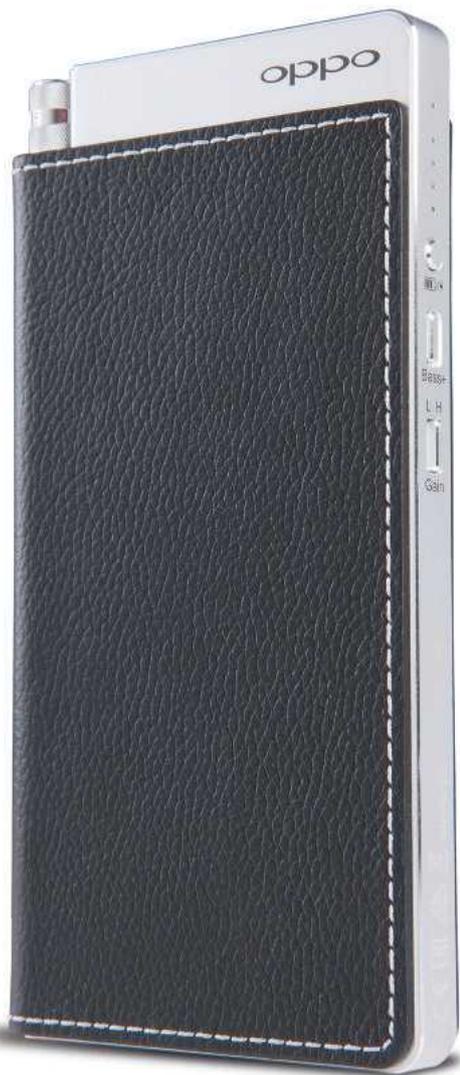
Stereo speakers
Best floorstander £2000+
Spendor A6R

Spendor D7

Let the technology work
Hear the music

SPENDOR

www.spendoraudio.com



▣ **DETAILS**

PRODUCT
Oppo HA-2

ORIGIN
China

TYPE
Portable headphone amplifier/DAC

WEIGHT
175g

DIMENSIONS
(WxHxD)
68 x 157 x 12mm

FEATURES

- Supports PCM audio up to 32-bit/384kHz; DSD up to 11.2MHz
- Two gain settings for optimal headphone matching
- 3,000mAh lithium polymer rechargeable battery

DISTRIBUTOR
Oppo Digital UK Ltd

TELEPHONE
0845 060 9395

WEBSITE
oppodigital.co.uk

perma-wrapped in a smart, protective black leather jacket and supplied with a sturdy pair of rubber bands for lassoing the pair together back-to-back when sweet music is required on the move. Some will say: “Why bother?”, which is a fair point. Any smartphone worth its salt will drive a decent pair of cans and, at best, sound very pleasant indeed. But, as with land-based hi-fi, if you want real kicks, it’s best to call in the services of a specialist packing some proper ancillary goodness.

Once known in the UK only for its top-drawer Blu-ray and multi-format DVD players, Oppo is now tapping into the more specific audiophile market and, unsurprisingly, headphones – audio’s only true boom sector – loom large in the Chinese company’s thinking. Its range of models has recently grown to three, two of which, the PM-1 and PM-2, employ planar magnetic drivers and, given a suitably high-quality source, sound pretty darn wonderful. It follows that Oppo would also provide the means to achieve those necessary

The Oppo is quite comfortably the best we’ve heard at the price, a dream to use

premium front-end sonics. First came the HA-1, a plushly featured £1,200 headphone amp/DAC (tested back in *HFC* 390) very much intended for desktop or kit rack operation. The considerably less expensive £259 HA-2 is obviously much, much smaller (and slimmer), yet still manages to cram an amazing amount of processing power and functionality into its diminutive frame.

This is largely down to a mobile implementation of the potent DAC used in Oppo’s high-end Blu-ray/multi-format players and the HA-1, but more on that in a moment.

To look at, hold and use, the HA-2 possesses an Apple-esque tactility, solidity and clarity of design that’s immediately appealing. The naked perimeter of the aluminium case is beautifully machined with smoothly bevelled corners and the controls set therein, although tiny, work with satisfying precision. The volume/on-off knob on the top left corner is somewhat larger, but the whole thing is eminently pocketable, even when lashed to a smartphone – although, at 176g, it is quite chunky for its size.

But remarkably versatile. A small slider button on the bottom plate is

Head rush

Oppo’s latest headphone amplifier is the same size as a smartphone and packs a super-DAC beneath its slim casework. **David Vivian** plugs in and tunes out

O guess at least a few of us grew up thinking that Captain Kirk’s flip-open communicator was impossibly cool and properly 23rd Century back in the sixties. But imagine a *Star Trek* script meeting where someone proposed a device with the capabilities of, say, an Apple iPhone 6. They’d have been asked if they needed to lie down, or frisked for hallucinogenic drugs. True, Kirk wouldn’t have known a 1,334 x 750-pixel Retina Display from his left elbow back then, but it’s funny how real life sometimes takes a leap way beyond an imagined future.

Curious, then, that we should find ourselves at a slightly awkward, slightly clumsy juncture where the latest smartphones, for all their multi-tasking magnificence, still need a third party gizmo to fully realise their sonic potential as repositories of hi-res music files and some extra (quality) amplification muscle to exploit that most ancient icon of hi-fi tech: a jolly fine pair of headphones.

At least Oppo has grasped the nettle with its new portable headphone amp/DAC, the HA-2. Not only are its dimensions pretty much identical to those of a regular-sized iPhone 6 (and its own N1 smartphone), it’s also

used to select one of the three inputs. The one located on top of the unit, like the headphone output next to it, is a 3.5mm mini plug socket and doubles as a line-out should you want to use the HA-2 as a DAC in a larger setup. Occupying the bottom side, but nicely spaced, are a USB-A socket for Apple devices and a USB micro-B socket for Android and other smartphones with USB OTG (On-The-Go) or, if you're staying put, a PC.

Being Apple MFi Certified, the HA-2 can send a digital signal via the Lightning-to-USB cable. There are two ways to charge the unit's 3000mAh lithium polymer type battery: via the usual USB laptop hook up or Oppo's own VOOC mains plug, which will give a 75 percent charge in just 30 minutes or a full charge in 90.

The HA-2 is good for 13 hours use if you're plugged into an analogue input and seven hours via the digital USB, but it can also be configured to charge your smartphone by holding down the button that flags up its own remaining battery charge via four green LED dots. Below that, on the

side plate, is a switch that activates the 'bass boost' function and, below that, one that toggles between low and medium gain for matching with headphones of different sensitivities.

As for cables, Oppo provides a Lightning-to-USB-A, USB-A-to-micro-B, micro-B-to-micro-B, and 3.5mm-to-3.5mm along with a mains charger in the box.

So it's all really rather neat and, unquestionably, an ergonomic triumph. But none of this really hints

The HA-2 possesses an Apple-esque tactility, solidity and clarity of design

at the hi-tech powerhouse that lurks inside. Oppo is keen to point out that the HA-2's Class AB amp uses hand-picked and matched discrete transistors in the output stage, which augers well. The star of the show, however, has to be the ESS ES9018-K2M Sabre32 Reference DAC, which has 32-bit architecture and can handle PCM signals up to 32-bit/384kHz and DSD64 and DSD128 files (via USB-B). In other words, like the vastly more expensive Chord Hugo (£1,400, tested *HFC* 386) I've lined up to set the portable headphone amp/DAC bar, it can decode and play all the latest hi-res audio formats, and then some.

Sound quality

HA-2 powered up and Hugo standing by, I plug in a pair of Oppo's splendid PM-2 headphones (later swapped for AKG Q701s to play fair) and begin the raid on my modest, mostly Naim and Linn-sourced, high-resolution library, supplemented by a rather more generous collection of CD rips – all stored on an iPad Mini 2 rather than iPhone.

Even with CD-quality files it quickly becomes clear from the opening moments that the HA-2's idea of music making is a world away from what the iPad can manage on its own. Bigger for a start (much bigger), instantly making headphone listening a more expansive and enjoyable experience. With the HA-2 in situ, the presentation is appreciably weightier and richer, too, gaining a sense of solidity and authority that – as with being in the presence of live, breathing, musicians – is very powerful.

The best kind of headphone listening should have this almost palpable realism, and here it does.

Orchestral brass at full tilt – always a stiff test – sounds convincingly bright and metallic, but crucially delivers a whole world of harmonics and microdynamic contrasts. With simpler vocal fare there's no doubting the HA-2's sound is detailed, atmospheric and insightful, especially with hi-res tracks and the Oppo cans plugged in, yet it retains an effortless and easy musicality when the slightly drier and more analytical-sounding AKGs are brought into play.

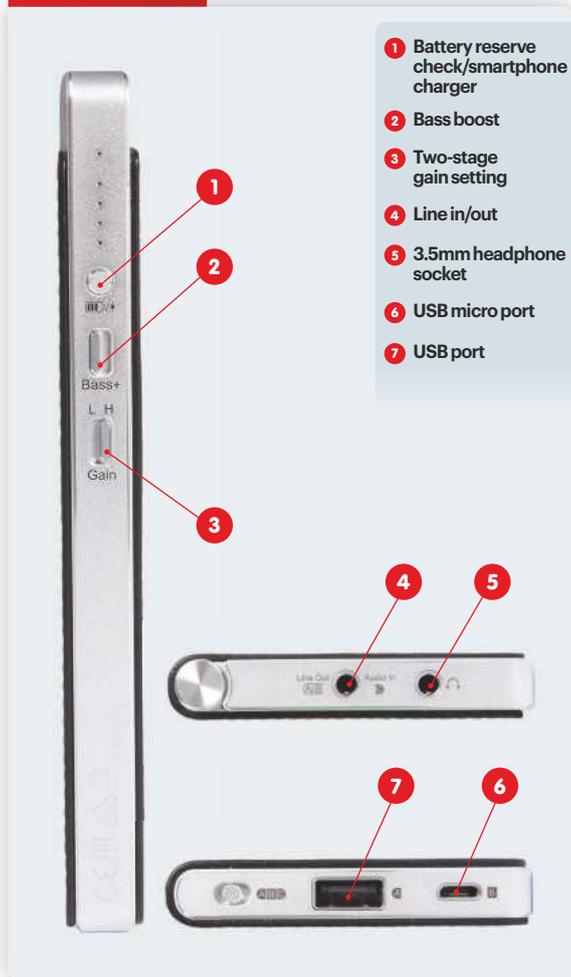
But it's the Oppo combo that's most beguiling: the PM-2s are beautifully voiced and image precisely within a huge soundstage. On Sting's live set, *All This Time*, the rich double bass and subtle piano accompaniment to his rasping vocal on *Moon Over Bourbon Street* are simply mesmerising to hear.

Swapping the HA-2 for the Hugo is fascinating and the vastly more expensive Chord, as well as being much bulkier, doesn't have things all its own way sonically, sounding a tad leaner and less polished than the Oppo. But it's the Hugo's whisper-to-whirlwind dynamics, speed and timing that blow the HA-2 away – in particular the way the Chord copes with the architecture of a performance. Without seeming overblown or in any way over the top, it gives the big picture and presents music in a fashion so natural and coherent you don't just feel you could reach out and touch the musicians, but breathe the same air. Quite something when you're wearing cans.

Conclusion

If the Oppo HA-2 isn't quite the last word in headphone amplifier/DAC performance, it's comfortably the best we've heard at the price, a dream to use, extremely well made and featured, and it looks very cool. If your phone is as smart as it thinks it is, and overflowing with good tunes, it should enjoy the ride ●

CONNECTIONS



- 1 Battery reserve check/smartphone charger
- 2 Bass boost
- 3 Two-stage gain setting
- 4 Line in/out
- 5 3.5mm headphone socket
- 6 USB micro port
- 7 USB port

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Design and size; build quality; powerful DAC; smooth and spacious sound
VALUE FOR MONEY ★★★★★	DISLIKE: Could have more attack and punch
BUILD QUALITY ★★★★★	WE SAY: A gem of a headphone amp/DAC at a very competitive price. Deserves to win plenty of friends
FEATURES ★★★★★	

OVERALL





Slim towers

Bluetooth speakers come in all shapes and sizes, and **Lee Dunkley** reckons these Blue Aura floorstanders deserve your attention

Streaming music from a tablet or smartphone has revolutionised the way many music fans listen to their favourite tunes, and we've seen plenty of aptX Bluetooth-enabled products come to market recently including integrated amplifiers and loudspeakers incorporating the ubiquitous wireless connectivity tech. Up until now, though, Bluetooth speakers have mostly been one-box speaker units, with only a smattering of stereo pair models being added to the mix offering traditional proportioned standmount speakers to keep stereo soundstage fans happy – including Blue Aura's own x30, reviewed *HFC 385*.

The x40 is the latest model from Cambridge-based Blue Aura and among the first floorstanding aptX Bluetooth loudspeakers that we've seen. The slim 'tower' design is very easy on the eye once installed in my listening room. The graphite faux leather-wrapped cabinets with white stitching along the top edges are a

The x40 creates a room-filling sound that goes louder than expected

neat touch, and stand just 865mm tall with the wooden plinth attached at the base to add extra stability to the slender tower. Behind the removable black mesh speaker grilles there sits a 20mm soft dome tweeter and twin 87mm paper cone drivers in a two-way configuration. A bass reflex port is located around the back and the x40 claims a frequency range of 55Hz to 20kHz.

The right speaker in the x40 pair is the 'active' model containing Class D amplification that claims 2x 45W power output, and needs placing within easy reach of a mains power source. The left 'passive' speaker is connected via a 3m Quick Connector cable that looks very much like an Ethernet wire, but enables the

speakers to be placed far enough apart in a medium-sized room to give a decent stereo soundstage. Optical digital inputs and analogue RCA connection leads are provided, as well as a subwoofer output for the addition of a sub, and for users who want to 'daisy chain' speaker systems together around the house there's a USB socket to facilitate connection of Blue Aura's WAS1 wireless audio solution add on, costing £129.

But the x40's key appeal is likely to be its Bluetooth (4.0) with aptX and NFC (Near Field Communication) connectivity, which enables easy music streaming from a smart device. Wireless connectivity is very easy and I get connected in seconds, but even if you don't already own an NFC-equipped device, pairing simply requires users to select the Bluetooth input on the x40 and then to select it

DETAILS

PRODUCT
Blue Aura x40

ORIGIN
UK/China

TYPE
Two-way active floorstander with aptX Bluetooth

WEIGHT
6.3kg

DIMENSIONS
(WxHxD)
112 x 865 x 145mm

FEATURES
• 20mm soft dome tweeter; 2x 87mm mid/bass drivers
• Quoted amplifier power output: 2x 45W Class D
• Optical, RCA and USB inputs
• aptX Bluetooth with NFC

DISTRIBUTOR
Blue Aura

TELEPHONE
01480 477738

WEBSITE
blueaura.co.uk

as the output device from the Bluetooth settings menu on your tablet or smartphone.

Sound quality

Pairing completed and with the speakers positioned around 30cm from the rear wall with just a slight bit of toe-in to focus the stereo image, I am impressed by the big sound that these slender speakers are capable of producing. Stereo separation is particularly notable and the x40 creates a spacious, room-filling sound that's greater in scale and goes louder than these slender standmount speakers have a right to. Playing the *Tron: Legacy* soundtrack from Tidal's streaming service demonstrates that the Blue Aura is able to handle the Daft Punk score in an extremely engaging manner, and achieves a dynamic and rousing performance that only hints at the suggestion that the x40 might benefit from the addition of a subwoofer to provide additional bass depth.

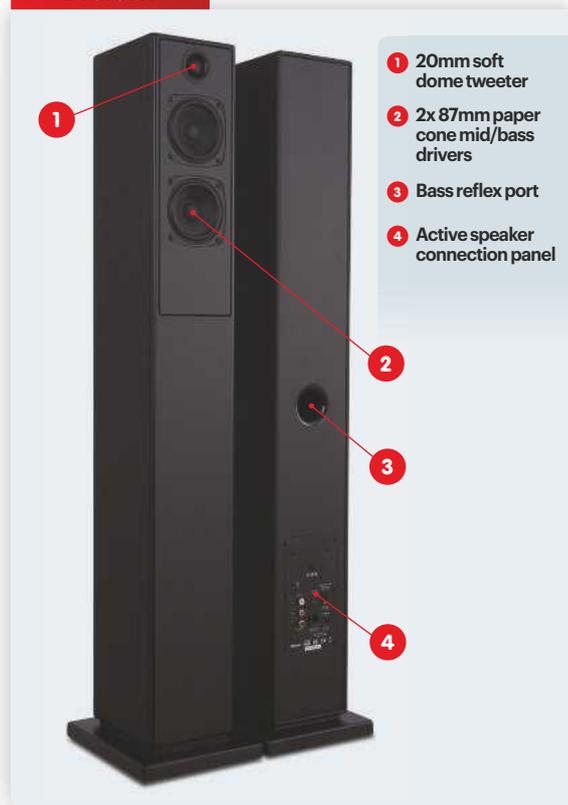
Treble details are never harsh and have good clarity and smoothness even at higher volumes. There is some midband forwardness that comes across on Tom Odell's vocal and piano playing on *Grow Old With Me*, but this up front nature helps to project the main elements of the recording into the room and is a characteristic many will enjoy.

Listening to the same track via a CD player connected to the optical input demonstrates slightly smoother mid frequencies and a more solid sense of stereo, and highlights the x40's true capabilities without a sense of Bluetooth graininess.

Conclusion

The x40 is a beautifully slim pair of speakers that will appeal to anyone looking to unleash music from a smart device. The dynamic sound and ease of connectivity means there's plenty here to like ●

IN SIGHT



- 1 20mm soft dome tweeter
- 2 2x 87mm paper cone mid/bass drivers
- 3 Bass reflex port
- 4 Active speaker connection panel

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Superb build and styling; engaging performance

VALUE FOR MONEY ★★★★★ **DISLIKE:** Audible click during source selection and power on; price

BUILD QUALITY ★★★★★ **WE SAY:** Impressive Bluetooth sound from towers with a pretty small footprint

FEATURES ★★★★★

OVERALL





NAS the way to do it

Can a dedicated audiophile NAS drive deliver a performance upgrade? **Ed Selley** is eager to find out

There is a certain irony to the timing of me reviewing this product. Over the last few issues of *HFC*, I have made my position abundantly clear that I don't believe that going to town on networking accessories is a particularly fruitful approach to upgrading an existing system. No sooner than I have committed those words to print, I find myself in possession of a NAS drive that the manufacturer claims is specifically optimised for audio playback. Me and my big mouth.

The Melco N1A before you here is the more affordable of two bespoke NAS drives that have been designed from the ground up to offer the

highest performance audio playback possible. The company that makes them isn't some young upstart either. Those of you with longer memories will remember Melco from the seventies and eighties where it produced a range of products in the classic high-end battleship school of Japanese electronics. Still under the stewardship of founder Makoto Maki, the company then moved into IT hardware and adopted a name more familiar to the present, Buffalo.

This means that while the N1A is a decidedly specialised proposition, it comes from a company that has a very strong reputation in this field and that it's a genuine piece of clean sheet engineering rather than some

DETAILS

PRODUCT
Melco N1A

ORIGIN
Japan

TYPE
4TB NAS drive

WEIGHT
7kg

DIMENSIONS
(WxHxD)
436 x 70 x 352mm

FEATURES
● Storage 4TB internally
● 2x LAN; 3x USB 3.0; 1x USB 2.0

DISTRIBUTOR
Kog Audio

TELEPHONE
024 77220650

WEBSITE
melco-audio.com

mainstream components in a nice box. In fact, the N1A goes about the business of providing network storage in a way that is completely different to any other device of this nature that I have seen.

The principle difference between what you see here and a conventional NAS drive is how it connects to your streamer. Around the back, there are two Ethernet sockets instead of the more usual one. The N1A is designed to connect directly to your streaming device via the first of these ports. The idea being that by removing the need for the connection to be as fast as possible (even high-resolution audio doesn't represent an especially challenging network load), the connection can then concentrate on performing a single role over a quieter and less data-filled line. As the Melco is the point of connection between the streamer and the router, any additional drives that are hooked up to it will also benefit from this specific output.

As one of the key benefits of a streamer is the control interface, the Melco then has a separate Ethernet port that goes direct to your router. This allows you to communicate with the streamer through it and additionally to use the music on the N1A in other systems and locations. In practise, this works well. While my Naim ND5 XS (*HFC* 352) needs to



have its factory defaults restored, once done I can communicate via the iPad app as before.

To further assist the quality of the audio that the N1A streams, it has a specially designed power supply and casework much more familiar in design terms to a piece of audio equipment than an IT one. This also means that when placed in a rack, it looks very much at home there. It sounds at home too – to all intents and purposes it is inaudible in normal use. One useful feature is the status display, which gives some information on what it is doing at the time and subsequently warns of the need for

It might look like a regular piece of hi-fi kit, but the performance is anything but

any troubleshooting. It's always wise to buy equipment with our ears rather than our eyes, but I don't think it hurts that the Melco is designed to look and indeed feels like a dedicated piece of hi-fi equipment.

The other feature worthy of note is its software. The N1A is produced with a view to being painless to set up even with no prior experience and in this respect it has to be considered as a success. It is able to handle a massive variety of file types including DSD, which can be a sticking point for some network products, and – factory reset on the Naim aside – talks to everything that it is connected to it with no further tinkering. As well as conventional search terms, files can be browsed by type, which is fairly handy. It is extremely fast to load taking well under 30 seconds from first switch on to being good to go. The 4TB storage is hefty, but further drives can be connected to augment this and to provide backup options too. Another feature that should be live by the time you read this is the ability to set it as the default location for files regardless of where you download from.

Finally, a dedicated USB output allows the Melco to be connected to most USB DAC products with no requirement for a driver to be installed, thanks to it being a Linux platform under its skin. The connected device is interrogated, its functionality established and it will then convert any files it has that can't be played natively to ones that can.

Sound quality

A quick test with a Chord Hugo suggests that it does indeed do what it says on the tin, and means that the N1A has some potential outside of use with a streamer. With it connected directly to the Naim and also to a Netgear router on a closed local

network, the results are not night and day, but there are some signs that the direct connection process has some tangible benefits.

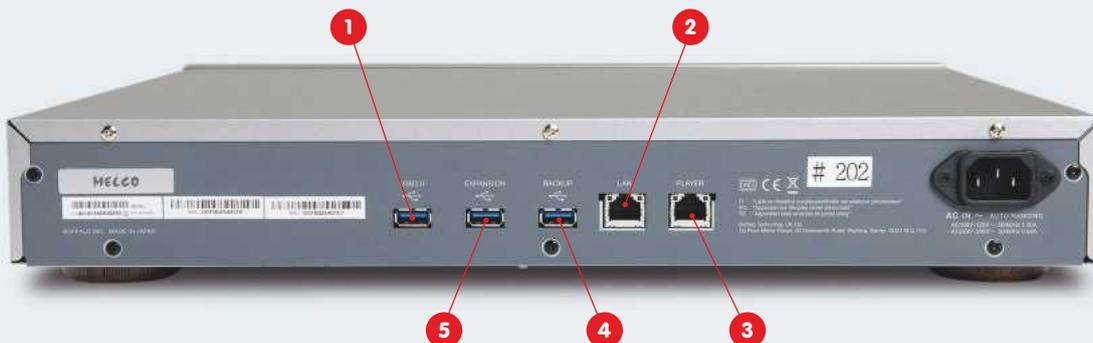
With material copied across from my standard drive, which is itself connected to the same router to allow comparisons between direct and via the router, it ekes out some notable advantages. The easiest way to describe the effect is that presentation takes on a slightly more natural air. With the 16/44.1kHz rip of the Mark Lanegan Band's marvellous *Blues Funeral*, the dense and complex tracks are very slightly opened out and sound less congested.

If you are serious about streaming, this is a very fine one-stop solution

Moving across various pieces of music at a variety of bitrates, this noticeable decongesting of material is consistent. Oddly, the complexity of music doesn't seem to make a great deal of difference to what the Melco does. The pared back simplicity of Jon Allen's *Deep River* still manages to sound a little more fluid and natural in the same manner as Aphex Twin's *Syro* despite the yawning chasm in presentational style between the two albums. Similarly, high-resolution material retains the less digital sound that a lot of material can possess, but listening to an 88.2kHz version of The Police's *Reggatta de Blanc* back to back with my conventional NAS still sees the Melco edge it with a sense of effortlessness to the music that really only becomes apparent when you switch back to the conventional NAS.

At no stage in testing does its impact fundamentally change the presentation of the electronics it is

CONNECTIONS



- 1 USB 3.0 port
- 2 LAN Ethernet port to router
- 3 Ethernet port to streamer
- 4 USB 3.0 backup port
- 5 USB 3.0 expansion port

Q&A

Alan Ainslie

General manager,
Melco Audiophile NAS project



ES: The audio USB connection is an interesting addition, do you see people using the N1A as the source for USB audio to be a growth area?

AA: The nice thing about the audio USB connection is that it is a two-way dialogue allowing the DAC to be matched to the source in terms of sample rate capabilities etc – at least in the new Class 2 implementation. The down side is that unless great care is taken it is not good for audio from a normal computer, as USB is low down the resources allocation, and there are often driver requirements and complications. In the case of Melco USB 3. Class 2 is an ideal situation as the USB 3.0 DAC connection simply gets top priority on the low jitter internal data bus – so from a minimalist hi-fi perspective it is hard to imagine anything more direct and cleaner. Already the signs are that this connectivity is quickly gaining acceptance by audiophiles.

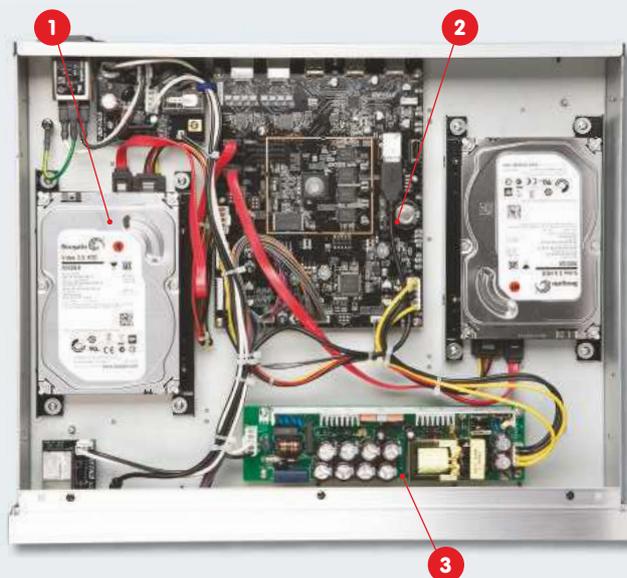
Is the N1A something you see owners upgrading existing NAS based systems to using or a fit and forget device for high-end users buying their first streaming system?

Melco was originally conceived to allow users into the streaming music world without any requirement for computers during setup or requiring any IT knowledge. That includes such essentials as simple backup process as well as easy import of music, easy expansion and direct downloading to the Melco – advantages that are soon evident to existing IT NAS users who, even if experts, have trouble with Rsync and so on.

But as a direct consequence of the fact that Melco is not a redesign of any IT NAS but is totally new engineering from the start, there is the huge sound quality promise as a consequence of the architecture being totally different to IT NAS.

So this creates new markets as people can migrate from IT NAS to Melco for ease and stability, and sound quality. As well as making it far easier for anyone who has been considering the lure of high-definition music to finally make the step.

IN SIGHT



- 1 Low noise HDD on isolation pads
- 2 Mother board with multi-core processor and low jitter system clock
- 3 Industrial grade 60W power supply

connected to. The powerful and slightly dark presentation of the Naim ND5 XS is not altered by changing from my standard NAS to the N1A. The most relevant comparison to the effect that it has on a system is something like the IsoTek Evo 3 Sigmas 1 reviewed in *HFC 394*. If you like the way your system sounds, the addition of the Melco keeps these traits, adding a little extra refinement while it does so. What it cannot do (and to be fair, Melco doesn't claim otherwise) is to resolve presentation issues you might find that you have with a system. When it is used as a conventional NAS – in this case to render the same library in Foobar on a laptop – the performance is the same as my conventional drive, no better or worse – although the excellent format support is as useful here as it is on a streamer.

The burning question with the N1A is how much this gentle boost in performance is really worth to you. There is little doubt in my mind that it is beneficial, but like a number of components that affect the overall performance of a system at an indirect level – mains treatment, equipment supports or as in this case, media delivery – it is really only something worth looking at if you have an existing collection of components that you are content with and you are seeking to extract more performance from, rather than risk upsetting the balance of the whole by changing a more fundamental component. In a performance sense alone, it is not a magic bullet at the price point.

Conclusion

Happily for Melco, the N1A must additionally be judged on more prosaic terms as to how it performs as a NAS drive and here it scores very well. This is undoubtedly an expensive option, but it is simplicity itself to get going and once up and running it provides an impressively flexible operating experience. If you can follow a wiring diagram it is a network audio product that a complete novice could get going in a very short space of time. Once up and running, it can sit in a rack of hi-fi equipment without drawing attention to itself either visually or audibly in a way that more IT-focused competition is unable to achieve. The Melco N1A is a network accessory that manages to deliver both performance and usability commendably well. If you are serious about streaming, this is a very fine one-stop solution to get the very best out of your system ●



HOW IT COMPARES

The Melco is pricey when likened with more conventional NAS drives, but compares favourably with specialist offerings like Naim's Unitiserv. Compared to the £2,290 Naim, the Melco offers double the capacity and superior format handling and playback options thanks to that trick adaptive USB output, as well as a near £700 saving in cost. The Naim's trump card is that it can rip material directly to the internal drive thanks to the CD mechanism built in, which is something that the Melco cannot do. If you are confident in the process of ripping your own CDs, though, the N1A makes a lot of sense in this context.

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Functionality; build; performance boost over competition

VALUE FOR MONEY



DISLIKE: Expensive compared with a conventional NAS drive

BUILD QUALITY



WE SAY: 4TB NAS offering great functionality and impressive sonic performance

FEATURES



OVERALL



Adams Audio

SERIOUS ABOUT SOUND!

Naim Audio
Dynaudio
Acoustic Signature
Renaissance
SME
PMC
Dynavector
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Desktop delight

Denon's latest compact integrated combines computer audio appeal with beautiful build **James Parker** takes a listen

Desktop appears to be the buzzword of late for the D&M Group: starting with the little Denon DA-300USB USB DAC and headphone amp (HFC 393), it's gone on to launch the classy-looking Marantz HD-DAC1 DAC/headphone amp/preamp, and most recently the battery-powered Denon DA-10, its only-slightly-too-bulky portable headphone amplifier.

All of these were launched at the company's European conference last year, where it was clear from the layout of the display that it is taking personal audio very seriously: while the AV receivers and the like were arranged around the sides of the exhibition space, the desktop products were quite literally placed centre stage.

Now there's a fourth variation on the theme, in the form of Denon's

PMA-50, which is a compact integrated amplifier complete with USB-B asynchronous digital input for that all-important computer hook up, and aptX Bluetooth to enable wireless music playback from myriad smartphones, tablets and computers.

Oh, and as well as PCM-based high-resolution content at up to 24-bit/192kHz, the PMA-50 will also handle DSD2.8 and 5.6, which will keep even the most fanatical computer audio enthusiast happy. Yes, DSD tends to divide opinions, with some saying it was a format of its time, and pointing to the paucity of downloads available, but in terms of box ticking with the 'Macs and DACs' brigade – those who play music from a direct-connected computer rather than going down the network streaming path – it is pretty much a must-have these days.

DETAILS

PRODUCT
Denon PMA-50

ORIGIN
China

TYPE
Integrated amplifier/USB DAC

WEIGHT
2.5kg

DIMENSIONS
(WxHxD)
200 x 86 x 258mm

FEATURES
• Quoted power: 2x 25W into 8ohms
• Asynchronous USB input; 3x digital inputs; analogue input; aptX Bluetooth
• Headphone amp

DISTRIBUTOR
Denon UK

TELEPHONE
02890 279830

WEBSITE
denon.co.uk

The Denon PMA-50 couldn't look much simpler from the front, having just three buttons (power, input selection and Bluetooth), plus a volume control and 'proper' 6.3mm headphone socket. The OLED display is hidden when the amplifier is switched off, and there's a touch-point on the lefthand side-panel for pairing with NFC-capable Bluetooth devices.

Like the DA-300USB, the PMA-50 can be used in horizontal orientation or vertically, for example to save desk space. The feet unscrew from the base, and fit into four threads on the right side panel, the display reorients itself when the amp is turned vertically, and four caps are supplied to fill the holes left by the removed feet.

Apart from that low-latency aptX Bluetooth input and the asynchronous USB-B socket, the PMA-50 also has two optical and one coaxial digital input, a single set of analogue inputs, and a subwoofer output in addition to the speaker outs. Power output is quoted as 25W per channel into 8ohms, doubling into 4ohms.

A simple credit-card-sized remote handset is provided with the amp, and further adjustments beyond the basic volume and input select on the front panel are available within the PMA-50's menu system. Balance and tone controls are available, with a 'source direct' option to bypass them; you can choose between three gain settings for the headphone output; turn off Bluetooth completely to reduce interference and enable or

defeat the power-saving auto standby function, designed to switch the amp off after 30 minutes of no signal.

Sound quality

The PMA-50 may only be 200mm wide and 86mm tall in horizontal orientation (or 80mm wide by 206mm tall when vertical, thanks to those movable feet), but for a tiddler it packs quite a surprising punch. I use it both in my desktop system and in a small-room setup, and never find it lacking for power or struggling to keep up with the demands that I place upon it.

OK, so it's not going to be the right choice for those with hulking great floorstanding speakers, cavernous rooms or a hankering for club/front row of an arena gig sound pressure levels. However, used within its limits, for fairly close-up listening with speakers of reasonable-to-high

A fresh, clean and yet substantial sound, with no hint of struggle

sensitivity (which covers most of the popular choices in the sub-£500 arena these days), it is capable of an attractively detailed and punchy sound, coupled with an inherent smoothness and refinement.

In absolute terms, the PMA-50 plays things slightly safe, and there are more conventionally proportioned amps available for not much more money capable of a sound with more attack and drive, if that's what you're after – although often this comes at the expense of subtlety, which is something the Denon has in spades.

The amplification here is digital, using a discrete output stage and CSR's Direct Digital Feedback



Compact desktop amplifiers are all the rage these days. NAD, for example, reinvented its classic 3020 amplifier as the D 3020 (HFC 379), complete with digital inputs, striking asymmetric styling and the same 'vertical or horizontal' choice offered by the Denon. And very good it sounds, too. If you like things small but with more conventional looks, an obvious choice is the Quad Vena Group Test winner (HFC 390) – it's more expensive at £600, but has considerable hi-fi credentials, or at a similar price point to the Denon the Teac AI-301DA also comes highly recommended from the same test.

Amplifier Technology, which compensates in the digital domain for distortions, output filter non-linearities and power supply variations. Ahead of that, the amp utilises Denon's Advanced AL32 processing, which oversamples, interpolates and filters incoming digital data, and tends to produce just the kind of well detailed but smooth and rich sound that's very much in evidence here.

However, if that makes it sound like this is one for the armchair jazzers and chamber music enthusiasts, nothing could be further from the truth. Hooked up to a computer with a hefty slug of hi-res and DSD content cued up on the hard drive, the PMA-50 proves more than capable of getting the air in the room moving with everything from the bass line on The Rolling Stones' *Sympathy For The Devil* to a spot of atmospherically recorded cathedral organ, while at the same time retaining fine control even with speakers much, much larger than you'd expect to find on the end of a dinky 2.5kg amplifier.

And it can do the snarl and slam, too, crashing out those guitar windmills and machine-gun drums on The Who's *Won't Get Fooled Again* in some style. Agreed I've heard Daltrey's great bellow and Moon's manic attack delivered with more conviction when handled at ear-threatening levels by amplifiers costing twice as much as the Denon, but considering the compact dimensions, flexibility and affordable price, this is pretty impressive stuff.

Nor are the other inputs just there to make up the numbers: I'm no great fan of Bluetooth, finding it often sounds rather parched and anonymous, but the Denon's bang-up-to-date implementation seems to deliver the goods rather better than some – at least provided

you don't chance things with low-bitrate MP3 files, which sound horrible whatever you do with them.

This is also a very accomplished headphone amp, as you might hope given Denon's recent form in this area and the product's desktop ambitions: whether with a pair of easy going Bang & Olufsen or the rather more demanding Oppo PM-1s, it delivers a fresh, clean and yet substantial sound, with no hint of a struggle however hard I push it.

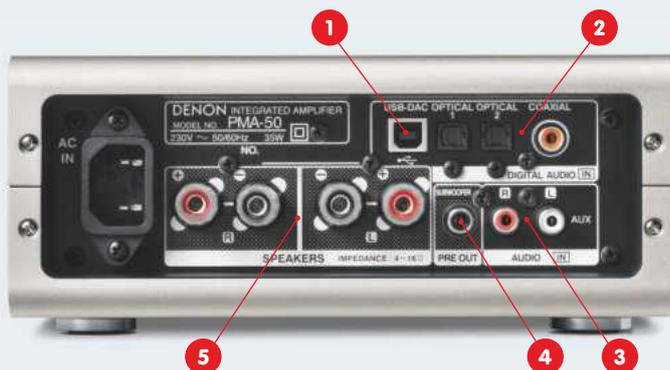
Conclusion

Sensibly priced, well equipped, neatly designed and with a sound that will have wide appeal, the ultra-compact Denon PMA-50 is far more than the novelty it may first appear: it's a real hi-fi amplifier, and a very good one at that – just smaller ●



The feet can be removed so that the PMA-50 can stand vertically

CONNECTIONS



- 1 Asynchronous USB-B port
- 2 Digital optical and coaxial inputs
- 3 Analogue line inputs
- 4 Subwoofer pre output
- 5 4mm speaker binding posts

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Ease of use; flexibility; smooth yet detailed sound

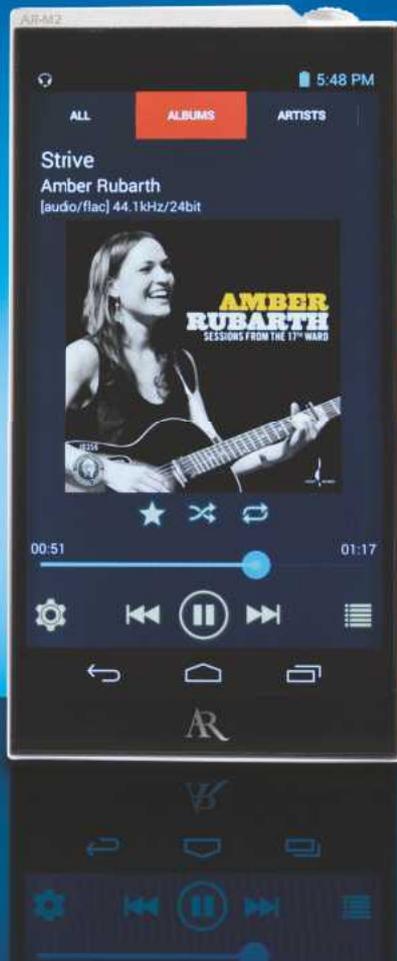
VALUE FOR MONEY ★★★★★ **DISLIKE:** Nothing of any significance

BUILD QUALITY ★★★★★ **WE SAY:** A well-sorted, good-sounding and flexible little amp, capable of punching way above its weight

FEATURES ★★★★★

OVERALL





Blast from the past

Acoustic Research makes a welcome return to audio with this hi-res portable player. **Adrian Justins** takes a look

Proving that hi-fi brands never die, Acoustic Research has reemerged after years of apparent hibernation. Owned by the Vox corporation in the US, the once-renowned speaker maker has been rebooted as an electronics brand. A whole raft of products is slated for release, the first of which is the AR-M2 hi-res audio player here.

In terms of spec, price and looks it goes up against Sony's imminently expected NW-ZX2 hi-res Walkman, with both models featuring Android-based displays and playback of all common hi-res files including native DSD and DXD (with limitations), although the AR-M2 has its own hi-res audio path that bypasses the Android OS. It also takes on Astell&Kern's AK120 MkII, arguably

the benchmark among audiophile portable HRA players. Unlike the AK120 MkII, the AR doesn't have the option of an unbalanced headphone output and it can't be used as an external DAC with a USB-connected source, but it does have a line out, allowing it to be used with an external amp and speakers.

Physically, the AR-M2 is quite a handful, measuring 13.6cm in height, it could pass for a smartphone but its thickness and weight (245g) put paid to any thoughts of carrying it in a shirt pocket or even holding it in your hands for too long. And my advice is to wear a belt if carrying it in a trouser pocket or you'll end up looking like a teenager, revealing your 'Basildon cleavage'. Still, this substantial presence is a result of audiophile-levels of design and

▶ DETAILS

PRODUCT
Acoustic Research AR-M2

ORIGIN
China

TYPE
24-bit/192kHz-capable digital audio portable

WEIGHT
245g

DIMENSIONS
(WxHxD)
71 x 136 x 15mm

FEATURES
● Burr-Brown PCM1794A DAC
● 64GB internal memory
● MicroSD XC slot (128GB max)
● 5in HD screen

DISTRIBUTOR
ATC EnergyTech Corporation Limited

TELEPHONE
07734 064360

WEBSITE
acoustic-research.com

construction. The unit's body is fashioned from a combination of metal and Duralumin, and, like the external control buttons, looks and feels highly durable. Pleasingly, it is not as brutally hard-edged as the AK120 MkII and it has a symmetrical design that's easier on the eye than a lot of other portable players.

Naturally, the M2 can handle WAV, AIFF, FLAC, ALAC, APE and the aforementioned DSD and DXD files. It boasts a bespoke high-current high-output Class A amplifier, plus an audiophile-grade analogue volume ALPS potentiometer. Within its body are a number of critical components including a flagship-grade Burr-Brown PCM1794A DAC and a high slew rate headphone amplifier that can service cans with an impedance from 16 to 600ohms.

The 4000mAh battery will deliver a claimed nine hours of life (Sony claims 33 hours of HRA playback on the ZX2), although this depends largely on the resolution of files being played, as well as the headphones' impedance and sensitivity, and how much onscreen faffing around takes place. Being naturally averse to all things Android I'm a good test for these players that insist on using it as their operating system.

The M2's GUI is pleasingly stripped down of most unnecessary clutter and is relatively easy to get to grips with, but I often find myself going round in circles to get to a playlist. You can

It looks the business, but the weight comes as a real surprise

browse the web using a wi-fi connection, which also provides access to NAS drives thanks to DLNA support. You can download music streaming apps like Spotify, though sadly Tidal isn't available (yet).

I encounter a number of irritating minor problems with copying hi-res files on to the M2. Downloading and installing the Android file transfer application is simple enough, even on an iMac. When connected by USB to the computer, the player simply appears as a folder on the desktop in to which you drag and drop tracks. Sometimes the player locks itself during the copying process and a message appears onscreen telling me to disconnect it, unlock it and reconnect. Many of my tracks are in

It does a terrific job in terms of clarity and headroom and is at its best with DSD

the form of complete albums and when I try to drag and drop them I am told it isn't possible to copy a folder. To add insult to injury, I am then instructed to restart the player and reconnect it after which I am then able to copy all the tracks in one go. With Peter Gabriel's *So* (a 24/48 FLAC remaster) for example, track number four *That Voice Again* appears on its own in a duplicate album.

The M2 maxes out at 128kHz when it comes to DSD and DXD, which hugely frustrates me, but at least this is on an equal footing with Sony's NW-ZX2. The AK120 MkII trumps both as it can support 5.6MHz DSD playback (albeit after conversion and down-sampling to 176kHz PCM).

Happily, it is very simple to drag and drop tracks from within the iTunes interface to the M2, but all playlists are lost and working out how to

create playlists is not obvious. On the plus side, all the files that I do manage to copy over are accompanied by their metadata, including album artwork.

In terms of clarity, the 5in IPS screen is nice and clear, with good contrast and detail. The resolution isn't quoted, but to the naked eye the pixel count looks about the same (854 x 480, FWVGA) as the Sony NW-ZX1 (and ZX2). It's also a nicely responsive screen when pressed, and is backed up by a beautifully crafted volume control thumbwheel on the top and physical transport buttons and a power button on the right side.

This is where you'll also find the microSD XC card slot, which can be used to boost storage capacity from 64GB to 192GB with a 128GB card. For an outlay of around £65 (if you shop around) you can carry around 3,000 FLAC files at 96/24 resolution, each of approx five minutes duration.

Selecting tracks or albums is an easy process, but annoyingly the metadata (including the resolution and file type) is displayed on top of the artwork. This means it's often illegible against complex backgrounds, especially those with words on them. This is a fundamental fail.

Sound quality

When it comes to sonic quality, there's not much to complain about. The AR-M2 does a terrific job in terms of sheer clarity and headroom, and without a doubt it's at its most revealing with DSD tracks. Vivaldi's *Concerto in D minor (Allegro)* for example, sounds simply superb with sumptuously textured cellos that sound so sublime they hypnotise and beguile you. The violins too, are expertly presented with real verve and sparkle. The flat bass is ideal with classical music, with the landmark recording of Bach's *Brandenburg Concerto No. 3 in G Major* (ALAC) by

the Dunedin Consort proving equally engaging, anchored once again to a perfectly measured bass response. You're acutely aware of the fact you're listening through headphones rather than speakers, and the experience is no way comparable to being at a live concert, but the player is able to place you at the heart of the action and is very effective.

Switch to rock music and you may have to alter the EQ setting from the range of presets. I find the kettle drum in Peter Gabriel's *Red Rain* (24/48) over extended and in need of tempering. You can't argue with the detail, though, especially in the higher frequencies.

Bob Marley's *Could You Be Loved* (a 24/96 download from Linn) is an inspired blend of percussion, guitar and mesmerising vocals that the AR-M2 presents adeptly. You just need to find the right EQ for the bass, which can be incredibly meaty.

Another minor irritation (that could potentially grow to become a major one) is an occasional click that occurs at the start of a track when initiating playback from standby. I hope that Acoustic Research addresses this. The player has phenomenal power reserves and you can seriously damage your ear-buds if you're not careful with the volume control.

Conclusion

Overall, the AR-M2 is a versatile, not-so little, machine that has plenty going for it. It doesn't quite cut it in terms of ease of use thanks to its adoption of the slightly flawed Android operating system and the laughable way in which metadata is displayed on top of the album art. But in terms of performance, it has undoubtedly got the tools to extract every last bit of sonic goodness out of your hi-res music collection. Choosing the right EQ setting is, however, often the key to success ●

CONNECTIONS



- 1 Volume control thumbwheel
- 2 Power button
- 3 Forwards transport control
- 4 Play control
- 5 Micro SD card slot

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Capable of top-notch sound from all formats
VALUE FOR MONEY ★★★★☆	DISLIKE: Bass needs managing; poorly displayed track information
BUILD QUALITY ★★★★★	WE SAY: A class act with one or two minor operational flaws
FEATURES ★★★★☆	

OVERALL





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www.exposurehifi.com

Head strong

Planar magnetic drivers for under £400 are about as common as reliable estate agents. **Ed Selley** searches in vain for a catch

By the time you reach the £400 price point for headphones your choice is considerable, but despite this fact Hifiman has managed to differentiate itself from the field thanks to the use of planar magnetic drivers. This process, where a diaphragm is printed onto a flat driver, which is then moved by exerting a current across the surface offers some tangible benefits but equally some clear downsides. The HE-400I is the least expensive model to make use of this technology and is one of the most affordable available full stop to use planar drivers.

This is technically a revision of the older HE-400, but the update is so substantial that very little of the original survives. The most important

It has phenomenal detail retrieval and can provide texture to the low end

developments focus on improving the sensitivity of the design – something of an issue for many planar headphones – and then wrapping the results in a more comfortable shell.

By and large, the latter has been achieved with some success. This is a big pair of headphones, but the 370g weight is lower than some conventional rivals and while the twin headband arrangement is rather large, it works extremely well. Weight distribution is extremely even across the headphone and the tractive force applied on either side of the head is enough to keep everything in place without actively digging into the side of the scalp. This makes it easy to wear for longer periods of time.

The news is positive elsewhere too. The fit and build is extremely good and the ‘smokey grey’ finish is smart without being garish. As an added bonus, the HE-400I is supplied with an excellent storage box that doubles as part of the packaging. One of the upgrades is an improved cable

featuring crystalline metal and silver and in order to keep the cost down, it is fairly short at 1.5m – a longer one is available for an additional outlay should you require it.

Sound quality

The attempts to improve the sensitivity have also been largely successful. As you might expect, Chord’s impressive Hugo has no issues driving the HE-400I to high levels, but even on the end of an iPad the performance is refined and has none of the slightly strained quality that running insensitive headphones on low-powered amps can have. The HE-400I is entirely unsuitable for use on the move – the large size and open backed design see to that – but it is sensitive enough that you need not be tied to a headphone amp.

Most importantly, it manages to deliver on the promises of planar

DETAILS

PRODUCT
Hifiman HE-400I

ORIGIN
USA/China

TYPE
Planar magnetic open-back headphone

WEIGHT
370g

FEATURES
• Planar Magnetic Driver system
• Crystalline silver and metal connection cable

DISTRIBUTOR
High End Workshop

TELEPHONE
01494 956558

WEBSITE
electromod.co.uk

drivers. The performance with Public Service Broadcasting’s *The Race For Space* is deeply impressive. The collection of samples, loops and real guitar is handled with a panache and agility that gives the HE-400I a real sense of speed and attack. This is underpinned by truly excellent bass. Not only does the Hifiman go extremely deep, it has phenomenal detail retrieval and can provide tonality and texture to the low end which greatly aids believability.

Against this wonderful bass, the upper frequencies have to make do with being merely very good. With Drew Holcomb and the Neighbours’ *Medicine*, there is plenty of detail and the presentation is wonderfully open, but if you push the Hifiman to very high levels, it can harden ever so slightly – although these levels are admittedly firmly on the antisocial side, meaning that they are unlikely to be an issue for all but the most ballistic of listeners. The presentation of the HE-400I, meanwhile, is also likely to be something of an acquired taste. It manages to sound both absolutely huge and impressively free of the constraints of the earpads, but if you are looking for pinpoint imagery it is much more of a ‘big picture’ device than some rivals.

Conclusion

This scale and low-end energy means that the HE-400I is able to handle large scale music from a variety of genres with an assurance that many headphones struggle with. This big, effortless sound coupled with the exceptional bass gives a performance that is deeply impressive at the headphones’ relatively sensible asking price. When you add the high levels of comfort, the very solid build quality and the excellent storage box, you have a very fine offering indeed and one that should be on the audition list for anyone that’s looking for a serious home headphone ●



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Powerful, refined and detailed sound; very comfortable

VALUE FOR MONEY
★★★★★ **DISLIKE:** Some limits to stereo imaging and top end

BUILD QUALITY
★★★★★ **WE SAY:** A very capable headphone for the asking price that will work well in a variety of systems

EASE OF DRIVE
★★★★★

OVERALL



CUT to the chase

When it comes to bespoke, hand cut vinyl, 3.45RPM is the place to go, **Simon Berkovitch** meets the man that's a cut above the competition

Phil Macy, vinyl enthusiast and proprietor of bespoke lathe cutting service 3.45RPM, is a rare breed: he loves his day job. "Recently, I was cutting a track by Jimi Hendrix and Simeon [Silver Apples] in my back bedroom," he recalls. "I mean, Hendrix and Simeon. Come on, this is living the dream! I've run DIY record labels and been in all manner of bands, but what I now realise is that all I've wanted to do is cut vinyl. It's my dream job. The records I cut will outlive my grandchildren..."

With a shortage of pressing plants and demand for vinyl at its highest for years, it's little surprise that dedicated operations such as 3.45RPM are springing up to cater to demand. Based in Phil's East Sussex house, it specialises in custom editions of one to 100 7in, 8in, 10in and 12in records. Each disc is individually and expertly hand cut by Phil, knowledgeable head of this one-man setup.

Prices start at £15 for a one-off, one-sided 7in, or £40 per double-sided 12in disc, decreasing the more you order. As each disc is cut in real time, it's a time-consuming business – hence the maximum of 100 copies of each run of 7ins or 50 copies of LPs with a running time of 20 minutes and upwards. An order of 50 LPs, for example, may take a month from the first manufacturing date to completion, whereas a small order of five 7in singles could be turned around in 24 hours.

"Generally speaking, the vinyl you see in the shops and have in your collection has been 'pressed' – a stamper has stamped the grooves of the record into warm plastic. These can be

mass produced at the rate of thousands a day," Phil explains. "Lathe cutting takes each individual disc and cuts the sound into the plastic in real time. If a side of a disc is three minutes long, it'll take three minutes to cut, plus set up and changeover time. If an LP is 30 minutes long and you want 75 of them... well, you do the maths. It can't be done overnight."

Fully booked

However you look at it, Phil doesn't have much opportunity to put his feet up. 3.45RPM started trading in 2014 – and he's been flat out since. "Business is booming," he smiles. "I'm fully booked until mid-May and more orders are filling up each day. I'm not sure how some people who are getting in contact have even got to hear of me. I'm pretty much up to capacity and I'm trying to avoid waiting lists. Getting another machine wouldn't help, though – I can only operate one at a time!"

Although 3.45RPM is primarily a micro-run service for small labels and bands, one-offs and private orders are also welcome – as I discover when I ring the 3.45RPM doorbell, CDR burning a hole in my pocket. To help illustrate the process better, Phil has offered to cut me a one-off, two-sided 12in. The CDR contains three home-recordings by my pal Don, whose 50th birthday is just around the corner. Don's a vinyl junkie too, so this will make the perfect unexpected gift. That a one-man-band will be lovingly preserved on vinyl by a one-man DIY operation also works for me. But one of the first things that Phil reveals during my few hours spent immersed

in the world of lathe-cutting is that, strictly speaking, we're not actually cutting to vinyl...

Polycarbonate discs – the same sort of material that greenhouse windows are made from – have been the mainstay of DIY lathing for years. "They were pioneered by New Zealander Pete King, widely considered the godfather of home lathing," Phil explains. "These cheap and cheerful PVC platters have undoubtedly created an affordable market for the idea and consumption of lathe cuts as well as international mystique."

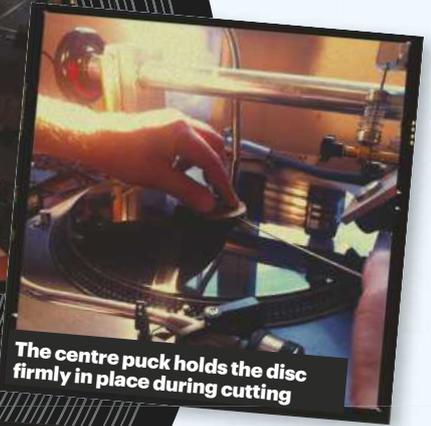
They're relatively affordable, but there's a catch: many of these polycarbonate discs are lo-fi audio quality. Not the ones used at 3.45RPM, however. "The discs I use look, feel, play and last like vinyl discs," says Phil. "I'm told that, strictly speaking, it isn't vinyl; there's apparently some minuscule, arcane chemical variation. But I challenge anyone to spot the difference. They are definitely a few steps above the polycarbonates."

3.45RPM uses a £3,000 VinylRecorder T-560, or a Souri, as it's known in the trade. This DIY machine, named after its inventor, is based on the principle of the original Neumann cutting lathes, allowing users to make their own records from CD and MP3. The Souri is housed upstairs in Phil's workshop; a Heath Robinson-affair lined with thousands of 7in singles.

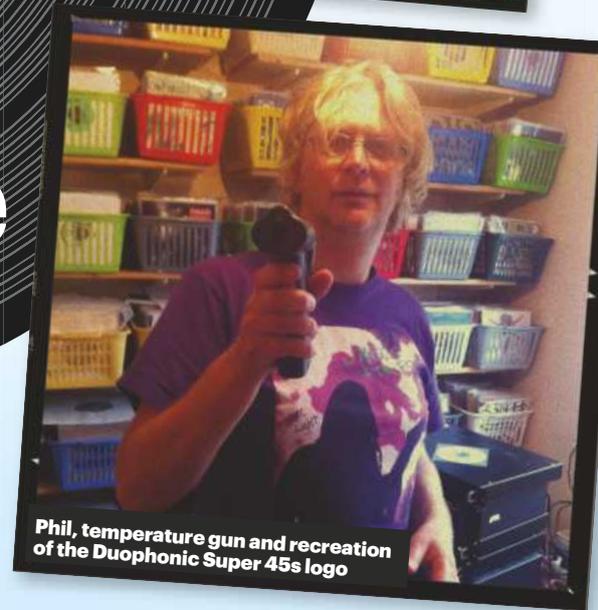
Getting the Souri from Germany to Sussex and fully operational, however, was part spy novel and part crash course in engineering. Souri won't sell his invention to just anybody, and a few months of emails went back and



Monitoring unit: basic, but effective



The centre puck holds the disc firmly in place during cutting



Phil, temperature gun and recreation of the Duophonic Super 45s logo

forth before he was suitably satisfied that Phil had the knowledge and enthusiasm to warrant the intensive on-site training that comes with purchasing this technical kit. So, at the tail end of 2014, Phil drove through Europe to meet his lathe guru. "The training was 14 hours straight off: 9.30am to 1.30am in one day," he recalls. "There was a lot to take in. Added to a 1,500-mile drive in three days either side, it was a frantic trip."

Back home, Phil was keen to put his new expertise to the test, reassembling the lathe with some trepidation. "It was a mission in itself. I spent three hours the first morning trying to line up the cutting stylus correctly. There was a whole load of plugging in and testing that I had to do before I could start cutting, but I knew this would be the case."

Test runs sounded superb, but further improvements were made when Phil contacted Souri after reassembly. "I sent him a few snaps of my setup and from those pictures he was able to deduce a whole list of things I'd done wrong. This did mean another day tinkering around, but this was good news. If it sounded great when set up incorrectly, then it was going to be even better when done right."

Souri's lathe is custom-made to fit the robust Technics 1200 or 1210 ranges. "A lathe deck can typically be running for 10 hours a day," says Phil. "You need to keep it running with heating lamps directed on it, even when

you're not cutting, and a heavy-duty motor with high torque and steady speed is vital."

When it comes to which frequencies it is possible to capture, a big issue with cutting vinyl is that analogue is limited in comparison with digital: you can't just take any digital file and cut it to vinyl. Phil explains: "A digital medium can take any amount of bass, treble or volume you throw at it, but the grooves in a plastic spinning disc can't. Too much bass, and the needle will swing horizontally over the side of the groove. Too much treble and the needle will jump vertically up and out of the groove. Stereo bass will make the needle oscillate wildly from side to side."



These actions make cutting – not to mention playback – impossible, but additional kit devised by Souri steps in to help. "At this point you need the mastering units: the Main Unit to re-EQ the sound; the Stereo Switcher to check the sound coming through each channel and direction (vertical/horizontal); and the Vinyl Optimizer to make the sound compatible with the cutting action.

I can't tell you too much else about these units. They are handmade by Souri and have no markings on them whatsoever, let alone any available tech-spec."

Diamonds aren't forever

The cutting stylus is diamond. It is as delicate as it is expensive, easily damaged if treated without due care and costs the better part of £200 to replace. "Learning the parameters of what the stylus is capable of achieving is an expensive business, even with a cautious approach," says Phil. "While an artist may want a high-end distortion-fest with different bass in each channel, any cutting engineer worth his salt is going to chop both ends of the audio spectrum, then mono-ise the low-end. This approach saves time, blank discs being wasted, and endless waits for the stylus to come back from the repair shop." Phil's advice? "Sort out these issues before you send the file to your cutting engineer, as this will save time and heartache on both sides."

The discs Phil uses for lathe cutting come encased in protective plastic sheets. When removed, they create a brisk static charge that makes them impossible to cut without firstly covering them in an anti-static de-noiser liquid. "When I'm actually cutting discs – as opposed to either pressing or embossing – a thin thread of waste plastic known as swarf is created as the needle ploughs on its way. This requires a vacuum pump to Hoover it up."

As Phil has discovered, noise – and limiting it – is an important consideration when cutting. "By design, the cutting needle has to be extremely sensitive to the sound waves around it – but I have to stay in close proximity to the needle as it's cutting, and so

454545

The idea for 3.45RPM came out of Phil's plan to commit more of his multitudinous musical projects to vinyl, thereby creating the means by which he is now able to realise this ambitious long-term work.

His initial idea was to trawl through a personal archive of solo projects, collaborations and groups he has participated in over the last 20+ years, dig out all the deserving tracks he'd recorded in that time and make them available for turntable usage. Initial plans to use conventional pressing plants fell flat when estimated costs hit a prohibitive £35k! It quickly became clear that it would be more cost-effective and easier to manage schedule deadlines to self-acquire the means of production – the Souri.

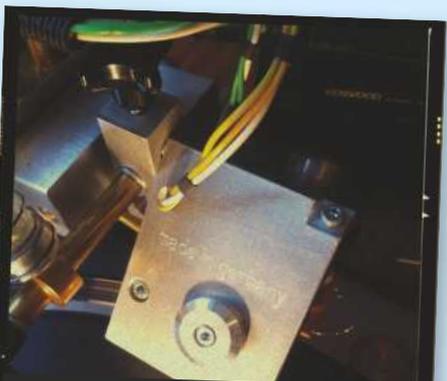
Phil has founded a new record label specifically for the project: 454545. It will release 45 7in singles (45rpm) in editions of – you've guessed it – 45 over the course of one calendar year – from this February to next. With an average of one every eight days, it's appropriate that the 454545 motto is: "Missed one? No worries. There'll be another along in a few days."

Numbers of each disc manufactured will be based on demand. One of each will be made for Phil's own collection and further copies will be made to order, with no wastage or overstock. A maximum limit of 45 copies will be placed on manufacture of each issue – after that they will be considered deleted. "Each one will be hand-cut by me, numbered and packaged in the best style that a quickfire, DIY release can offer," explains Phil, former member of Southall Riot and head of Victory Garden records – the label on which Hot Chip made their collectable debut release.

"Tracks will consist of material never previously found on a full vinyl release, unreleased demos, radio sessions, live tracks, collaborations and anything seen as fit for human consumption," he continues. "Sounds range from agit-pop to post-lo-fi-noise to space rock to ambient balladeering."



The first fruits of the huge 454545 project



The cutter head, the focal point of the whole operation



The tonearm is weighted to drag back, which assists monitoring the live cut

have to be careful of making errant sound as it will be forever etched into the vinyl. When buying the original setup I found myself with a suction pump that was a mini-Hoover. Despite its undoubted efficiency in taking the swarf away from the cutting needle, it was prohibitively loud, which was not only a problem with monitoring, but also risked the needle picking the sound up. Having a loud hum in pick-up distance isn't ideal. I had to cut a hole in the door so as the pipe could lead outside of the room – not very efficient."

Thankfully, Phil has now upgraded, recently acquiring a low-noise suction pump that does the same job at a fraction of the decibels. "It's probably salvaged from a fish tank setup or something similar, but it is a vast improvement and does the job wonderfully. It sits on the ▶

windowsill behind the lathe and is much quieter, I've still had to put it in a box padded with bubblewrap for added soundproofing. It's getting a dedicated shelf lined with anti-vibrational matting and stone and will end up in a solid, soundproofed box as soon as I can get my DIY motivation into gear."

The room and deck need to be warm before cutting commences, ideally 25°C and twice that for the deck itself. "Warmer plastic gives a warmer cut," Phil explains – and helps save the cutting stylus from early damage. "When removing the disc from the deck post-cut, it's advisable to leave it cooling on the side, like a freshly baked fruit pie," he says. "Putting it in the sleeve too quickly results in the spindly hairline effect known as 'sleeving'. This tends to be harmless to the audio, but held up to the light it can look alarming – as if a Brillo pad has been used to gently scrub the surface."

Phil's electric thermometer indicates we're good to go. My CDR slides into the player. It's showtime. Phil explains the process: "The sound source – in this case a CD – is played at the cutting stylus that is suspended between two speaker cones. The vibrations from the CD cause the cutting needle to vibrate and repeat the patterns it's hearing in the form of grooves."

Heavy duty

He carefully points to the diamond-tipped cutting stylus – the most important component here. "The cutting stylus is weighted at around 15-20g," he says. "The playback needle on a standard, domestic record player is weighted at approximately 0.5g, so the lathe cutter is a lot heavier – for an obvious reason."

Since HFC's visit to 3.45RPM's centre of operations, Phil has made some significant changes to his kit. "I've managed to upgrade my monitoring amp from Kenwood to Naim, and my speakers to Rega – nice clear speakers for playback monitoring, with cable to match. This provides a much more neutral sound to master by."

He continues: "I love the way that as hi-fi gets more expensive, the actual features become more basic, simpler and easier: there's less to get in the way. I remember the days when a nice big eight-band graphic equaliser built into an all-in-one stereo system was seen as a must for a discerning bedroom setup, but I now fully understand how these things only obfuscate a nice, neutral sound."

A decent microscope is also essential. Phil now has a x40 stereo microscope to replace the x20 mono (one-eye) model he was previously using. It provides him with better close ups of the groove situations and allows him to carefully check for any stylus damage.

"A microscope is vital. A powerful microscope is even more vital," he emphasises. "Groove quality is the be-all and

end-all of the operation. My first four months of production were spent with a x20 mono microscope. At first, this seemed an awesome piece of gear. I'd spend an hour at a time viewing the grooves and stylus head in search of faults and imperfection – lathe-head heaven. But it started to become clear – or not, as it goes – that this magnification wasn't enough to *really* examine things. Clean cutting requires microscopic detail to be correct, and my new stereo x40 'scope brings home exactly how much I was straining to see. Having stereo vision has brought a whole new 3D world to my eyes, and the increased magnification leaves me feeling I'd just been squinting half-blindly at my previous work. I've no doubt that an x80 will enhance my work even further. All in good time."

Indeed, Phil's attention to detail in every aspect of operation is also laudably microscopic. "As an indication of how much of a card-carrying member of The Secret Society of Lathe Trolls [website dedicated to discussion of all matters lathe-related] I have become, I found myself inordinately

excited last week when I received four square metres of anti-vibration matting – two rolls of dense, recycled rubber, ready to cut to size and line my new slate shelving, flooring and other vibrational conductors."

The 3.45RPM head's enthusiasm is infectious. As Don's home-recorded music endearingly tumbles from the speakers, I sit and watch my own wax being cut, mesmerised by the diamond-tipped

needle and spiralling curls of swarf. In my opinion, watching the process only goes to make the final product of a one-off record even more magical. As Phil says, it's an art form – and I'm inclined to agree. We take a listen on his domestic deck downstairs – it sounds great. As the disclaimer says on the 3.45RPM website: "The sound from a 3.45RPM lathe cut will never match an Abbey Road-mastered Hayes Middlesex pressed disc, but it should easily meet the requirements of all but the most picky and perfectionist audiophile." It certainly meets mine, and it's another successful cut to be added to the 3.45RPM Hall of Fame.

"It can be a frustrating business getting the lathe to do what you intended it to do," he admits, "but the sense of satisfaction at the end of every successfully completed cut is like no other I've known. Each disc is its own little work of art. Like snowflakes – and unlike pressed vinyl – no two are ever exactly the same."

"As a long-term, committed vinyl fan, the knowledge that you've been responsible for bringing a brand new record into the world is always a very fulfilling feeling." ●
345rpm.com



GOING LIVE

HFC also got up close to vinyl cutting on a grander scale at London's Abbey Road Studios last November as dance music icons Underworld and deep house producers Gorgon City took to the stage for Carling's first Black Label Project – an exclusive event that was partially cut direct to vinyl by in-house mastering engineer Miles Showell.

The two acts' performances formed the first in a series of unique collaborations that will pair legendary British artists and emerging talent. The Black Label Project launch on 24 November saw Gorgon City – whose recent album *Sirens* catapulted them straight into the Top 10 – start the party for the invite-only audience. Underworld, fresh from their live show at the Royal Festival Hall, then took to the stage to delight the 300-strong crowd with innovative, timeless tracks from 1994's classic *Dubnobasswithmyheadman* album.

The two acts performed their own reworked versions of Underworld's nineties masterpiece *Cowgirl* – best known to most as an integral part of the soundtrack to the movie *Trainspotting*. These performances were captured by the studio's globally acclaimed live-to-vinyl recording process, with Showell cutting these unique showstoppers straight to acetate. The man at work was projected on huge screens above the electric performances – a welcome centre stage celebration of the behind-the-scenes cutting process.

A limited run of 12in vinyl, pressed by The Vinyl Factory and featuring both live versions of *Cowgirl*, was then produced for attendees of the event as well as being available as a download from the Black Label Project website.

"The opportunity to make a recording live to vinyl is a unique one, and it was exciting to do it in front of an audience in the hallowed halls of Studio 1," Underworld said. Gorgon City added: "Abbey Road Studios holds a certain magic for musicians, so getting to perform there for the Black Label Project and record with Underworld was a once-in-a-lifetime experience."

Abbey Road studios will also play host to further future Black Label Project events over the course of the next 12 months.

blklabproject.com



Miles Showell in the cutting room



Underworld perform live at Abbey Road



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Hi-fi choices

YOUR LETTERS & QUESTIONS ANSWERED

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THIS MONTH



NEVILLE ROBERTS

EXPERTISE: ENGINEER

Retired NHS director, electronics engineer and physicist Neville is very much into valve technology. He's a classical music lover and a serious vinyl junkie.



JASON KENNEDY

EXPERTISE: REVIEWER

Former HFC editor Jason loves music so much that he has dedicated his life to finding the ultimate system. A long-time vinyl nut, he also enjoys a well-streamed file.



DAVID PRICE

EXPERTISE: REVIEWER

DP has spent much longer than he'd care to admit buying and upgrading his own hi-fi system, not to mention reviewing thousands of separates over the years.



CHRIS WARD

EXPERTISE: REVIEWER

When Chris isn't advising businesses on strategy, he's trying to squeeze more musical qualities out of exotic combinations of cutting-edge tech and vintage hi-fi classics.



More ways to get in touch:

You can also send your questions to us via social media: twitter.com/HiFiChoiceMag facebook.com/hifichoice.co.uk

Email us at letters@hifichoice.co.uk or write to: *Hi-Fi Choice* Letters, AVTech Media Ltd, Enterprise House, Enterprise Way, Edenbridge, Kent, TN8 6HF **Your letters** may be edited before publication and we cannot enter into personal correspondence

LETTER OF THE MONTH

► **Pride and joy**

During the last year you published a couple of my letters, and provided very helpful responses. This query concerns – my pride and joy – a full perspex-cased Michell Gyrodec +SME SeriesIV arm +Dynavector DV-20X high output M/C cartridge, with an Audion Silver Night valve phono-stage, plus Primare 132 integrated amplifier, Primare CD32 disc spinner and Sonus faber Cremona Auditor M standmounted loudspeakers, linked by Chord cables.

I get tremendous musical pleasure from this setup, but

because of advancing years, plus a growing desire for a more simplistic lifestyle I shall have to downsize and dispose of it – hopefully to new owners who will cherish it as much as I have done!

With this in mind I have been creating a second smaller system. I purchased a Denon RCD-M39DAB CD receiver, which I am using with a pair of Sonus faber Toy bookshelf speakers, and to this I have just added a lovely (pre-owned) Technics SL1210 Mk2 direct drive turntable. To the hi-fi purist, such a setup may seem anathema, but I have to say that it delivers a very

acceptable sound, and so I'm now considering a couple of minor upgrades.

I'm wondering about substituting the original Technics rubber platter mat, and would welcome your view as to a suitable alternative; also would it be useful to replace the existing Shure M75ED Series cartridge – I'd be prepared to budget around £200 for a new moving magnet cartridge, if you feel that outlay would be beneficial. I'd appreciate any advice that you may be able to offer on these two points.

I've been an avid reader of hi-fi magazines over the

years, but I confess that I'm rather beginning to incline towards the view that some elements of the hi-fi press, increasingly seduced by contemporary electronic wizardry and internet-based activity, are displaying a tendency to lose focus. I realise that our hobby has to evolve, but there must be a significant body of music lovers who, like me, find much of the current thinking of little relevance in that we still prefer to have our music

As far as I'm concerned the sound of vinyl is incomparable

A composite cork and rubber mat will suit John's Technics SL1210

software in tangible physical form – vinyl is incomparable. It is very reassuring that you and your sister magazine, while recognising changing trends, are continuing to keep the faith!

John Boyd, Nottingham

NR: Hello John, Thank you for your letter. Coincidentally, I have been discussing just this situation with a friend of mine who also wishes to downsize his system for similar reasons. Anyway, down to business! As the Technics has a metal platter, I would consider a nice composite cork and rubber mat upgrade – there are many really fine examples available out there, such as ones from the likes





DP likens the convenience of audio streaming to cassettes. Harry Knibb isn't quite so sure...

of Analogue Seduction (*HFC* 394) and MCRU. Also, a good record clamp would be a worthwhile investment and any of the heavier-weight clamps will be an excellent choice for the Technics. As for the cartridge, I remember back in the seventies having a Shure M75ED and my upgrade path was to a V15 Mk.3 then. Nowadays, you might consider the lovely Ortofon 2M Blue moving magnet cartridge for a refined top end and excellent imaging. Long live vinyl!

➤ **The Tide is high** David's article in the February 2015 issue *The Tide Is Turning* was as well written and thought provoking as ever, although I disagree with his analogy of streaming and cassette tape. Clever, but off the mark in my view.

Streaming via subscription is a pay-to-listen model. If you pay, you hear music. When you stop, the music stops and all you have is memory. I think this is more analogous to the juke box.

And if I'm any judge, a utopian goal for the music industry. Nothing for something. Is that another gravy train I hear coming?
Harry Knibb

DP: Gravy train? What could possibly give you that idea Harry, you old cynic you! Of course, you're right that streaming and cassettes aren't the direct equivalent of one another, but there is the sense that the sort of person who thought that Compact Cassette was ideal for him (or her) in the seventies and eighties is now the type who is probably paying a small stipend

to Spotify every month. Basically, it's someone who can't be doing with faffing around with special hi-fi formats and just wants a decent sound, allied to high levels of convenience. While it's possible to pick up enough old prerecorded music cassettes to fill up a skip for the princely sum of just a few pounds – ie tapes are amazingly cheap now – it didn't used to be. It used to amaze me that my friends would buy their new music tapes at full price (£6 or £7) and then deposit them on their car dashboards until they melted, whereas my

Surely streaming is more like listening to a juke box than a tape?

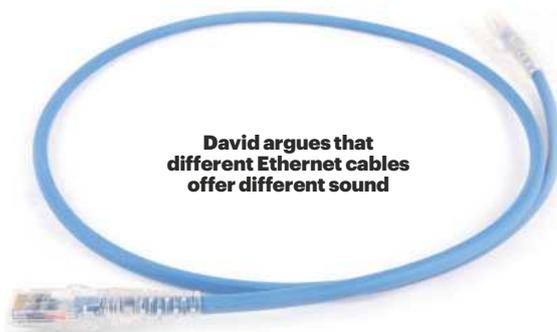
new vinyl would be dutifully stowed away in a cool, dry place. So cassettes too were pay-per-listen in practice, albeit cheaper in the long run if they didn't snap. *Plus c'est la change...*

➤ **Take the lead** I feel I must jump to the defence of Ed Selley's "more neurotic colleagues" (!), as my recent experience leads me to differ with his advice to reader Roger Hooton in the February issue, regarding the

effect of Ethernet cables on sound quality. Last July I installed a Naim NAC 172 XS pre-amp/streamer with QNAP NAS and Netgear buffer switch. The NAS and switch are in the music room close to my hi-fi, with the switch connected to the remote modem/router via 10m of nice quality 'industry standard' cat6 cable. The NAS and NAC 172 XS were originally connected to the switch via the dealer-supplied Chord C-stream Ethernet cables. I was pleased with the sound, which was more relaxed than CD replay via my already excellent Linn Genki. A couple of months afterwards, however, I reorganised the system layout slightly and this necessitated different length cables to replace the Chords. Seeing great reviews of MCRU's MeiCords I decided to use its 30-day trial arrangement. While at a similar price level to the Chords, in my system the MeiCords have proved to be a significant upgrade in terms of leading edge of bass notes and general detail retrieval. Even if anyone were to prefer the sound of the Chords, which I think unlikely in my system, I am confident my experience does indicate that Ethernet cables have an effect upon sound, and I would urge Roger Hooton to begin by giving the MeiCords a try. I've discovered that the power supplies of the NAS and switch affect the sound, but that's another story.

David Deeks

JK: Hi David, the variation in sound quality between Ethernet cables is an inconvenient truth that many find impossible to accept, but you are not alone in perceiving that they do indeed differ. As yet nobody has come up



David argues that different Ethernet cables offer different sound

TWITTER QUERIES

OXFORD AUDIO @OxfordAudio Mar 11
Minutes from an amplifier shootout, great line up with @KrellAV @DEVIALET @RegaResearch and @NaimAudio to name a few!



Brian Rostron @TheShadow1977 Mar 11
@OxfordAudio @KrellAV @DEVIALET @RegaResearch @NaimAudio Poor little Devialet looks like a 9st weakling before a fight in a bikers bar.....hearing roksan's latest amp and CD player

Hi-Fi Choice @HiFiChoiceMag Mar 11
@OxfordAudio @KrellAV @DEVIALET @RegaResearch @NaimAudio look forward to hearing the results

Dave Denyer @DaveDenyer Mar 13
@OxfordAudio @KrellAV @DEVIALET @RegaResearch @NaimAudio my money's on the Naim or the Rega.

OXFORD AUDIO @OxfordAudio Mar 14
@HiFiChoiceMag @DEVIALET @NaimAudio interesting demo, ended with Devialet vs Naim. The acid test is what the chap prefers at home though!

OXFORD AUDIO @OxfordAudio Mar 14
@TheShadow1977 9st weakling maybe, but it was picking the fights! Completely different to the Naim but completely open and fast

Mark Williams @MarkW_CSI Mar 14
@OxfordAudio @HiFiChoiceMag @DEVIALET @NaimAudio Don't know if I'm considered biased, but my amps were made in Salisbury

OXFORD AUDIO @OxfordAudio Mar 14
@MarkW_CSI Vous N'aimez pas le Devialet? Quelle dommage! At least the amplifiers work more than 35 hours per week! Listen to one!

Hi-Fi Choice @HiFiChoiceMag Mar 11
@OxfordAudio @DEVIALET @NaimAudio those two head to head would be some shootout, equally appealing in different measures

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Paul Miller, Hi-Fi News, March 2015

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JK reckons Townshend's Isolda cable could hold the answer for Art



with a good technical reason as to why and the 'bits is bits brigade' will always struggle with any such notion, but all they have to do is use their ears!

➤ **Where's the bass?**

I wonder if you could offer some advice on my system. I am running the following: Arcam A85 amp, Arcam P85 amp, B&W Nautilus 805 speakers, Arcam Diva CD192 Chord Chameleon cables, VDH teatrac speaker cable.

The A85 is running the top frequency and the power amp is connected to the bass frequency (both bi-amped and bi-wired).

The system is lacking in bass weight after rearranging the room, and moving the speakers away from the walls. Obviously, moving the speakers back closer to the wall means I lose the gains from having them in the right placement (with regards to listening position).

Would it be best to get more power or to add a subwoofer? Or would a sub give me more bass extension? I'm thinking a maximum budget of £1,500 if the amps have to go, possibly a bit more if the speakers have to go. I am happy to utilise second-hand kit as the system has been built from such components. Many thanks for any help

Dave Enfield, by email

CW: Hi Dave, the 805s have been around in different incarnations for many years, so I can't be exactly sure which age model

you have. Suffice to say, though, it is hard to create more bass than a speaker design is intended to deliver. You may want to think about some floorstanders, but equally a subwoofer or more power might be the way to achieve greater bass. Alternatively, you may be better off thinking about impedance matching and damping factors. More powerful amplification can create more bass, but possibly only where a lower damping

Help, my B&W Nautilus 805 is rather lacking in bass weight

factor might effectively create a looser grip on the woofer. But be careful, as this won't necessarily be 'better' bass. Conversely, many more powerful amps can have a far higher damping factor, and you can appear to take a step backwards. Try to see if you can demo some different power and damping factor combinations via a friendly dealer, and do experiment more with speaker positioning at the same time.

I also know that the 805 can be very sensitive to the mass of the speaker stands used. Maybe look for heavier stands, or ones you can fill with sand or lead shot. Your floor is also likely to have a large bearing on bass performance too. Spikes that connect firmly with floorboards, for example, can effectively utilise the mass of the floor too, albeit sometimes creating unwanted resonances.

➤ **Treble yell**

My setup consists of Plinius Hautonga integrated amp, Marantz SA-15S2 CDP, Audiolab M-DAC, Spondor SP2/3R2 speakers and a pair of B&W PV-1 subwoofers connected with Chord Crimson Plus/Carnival interconnects/speaker/power cables. My room size is 4 x 3.5m. I listen to jazz, folk, instrumentals, pop/rock and the occasional classical orchestra. My problem is an over enthusiastic treble, which tends to go over the top especially when the volume is turned up. I have subwoofers to adjust the bass to suit my taste, but don't have an option to tame the treble since my amp has no tone controls. This problem varies with different CDs, but it's mostly contemporary pop/rock stuff that suffers from this. I also find my setup especially unforgiving with less than great recordings and I find DDD recordings (eg Telarc) rather grating too, especially those with horn instruments. Is there any way I can tame the brightness or make my setup more forgiving to less than stellar recordings? Thanks.

Art Doug

DP: Hmm... sounds like a case of bad synergy to me, Art. Actually there is nothing particularly wrong with your system. They are all good components, and it seems that you had to spend a lot of time carefully assembling them. At

HINTS & TIPS

ADJUSTING YOUR CARTRIDGE AZIMUTH

The azimuth of a cartridge is the left to right tilt of the body when viewed from the front, and it is extremely important to get this right to ensure that the stylus is exactly vertical in the groove. Without a correct azimuth setting, the electrical output from the left and right channels will be unequal when reproducing a signal that should have equal amplitude in both channels. This resultant channel imbalance will cause a shift of the soundstage to either the left or right. This is corrected by twisting the headshell (or tonearm) when viewing the cartridge from the front.

However, not all headshells or tonearms have an azimuth adjustment facility, in which case an error must be corrected by fitting a shim or tiny spacer on one of the cartridge screws between the cartridge and the headshell.

Azimuth can be checked and roughly set by viewing the stylus from the front of the cartridge when the stylus is resting on a mirror (preferably a front-surface mirror). Once this is done, it can be fine-tuned by measurement if you have a test record with a test track with the left and right channels recorded out of phase and an amplifier with a mono switch. You play the test track through your system switched to mono and adjust the azimuth for minimum output.



POSITIONING LOUDSPEAKERS

It is important to place your speakers in the correct position in your room. If they are too close to a wall, bass notes at particular frequencies can be reinforced by reflections giving rise to peaks and troughs.

Correct positioning is undertaken by ear, but start with the speakers at least 30cm away from the rear and side walls. Ensure that the distances of the loudspeakers from the back walls and the side walls are different, otherwise reflections from the back walls will tend to reinforce or cancel the reflections from the sides, resulting in undesirable peaks and troughs in the soundstage.

It may be thought that increasing the distance from the speaker to the rear wall will increase soundstage depth, but this can have a harmful effect on instrument focus. The best position will be a compromise that only you will be able to determine.

Ideally, you should position yourself equidistant from both loudspeakers. You may find that moving your position will change a particular bass response due to sound reflections and standing waves. Finally, aim to have your ears at the same height above the floor as your tweeters.



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this point it's necessary to do a little bit of tweaking. First, start with the speakers; make sure you have the grilles fitted. It might help if you move them back towards the wall and experiment with the toe-in angle. The next thing to do is to consider a change of interconnects; the Chords are not especially bright, but you might like to try some Missing Link Cryo Reference interconnect between your CD player and amp; this will smooth things out and sweeten it up. Then there's the addition of Foculpods; place a set of these rubbery feet under your CD player and amplifier and you'll find the music further fills up and sweetens.

JK: Hi Art, I can sympathise, there's nothing worse than grating treble. Like DP, I would suggest a change of cables in the first instance. Chord Company cables are very good, but do tend to emphasise any shortcomings in the treble. I would recommend Townshend Audio Isolda DCT speaker cable and DCT300 interconnect. This is revealing, has excellent bass, the best

Can you help me find a decent stylus for my Linn LP12 turntable?

imaging in the business and very clean treble. It won't cover up treble distortion, but neither will it shine a light on it.

The other thing that will help is equipment isolation, digital sources are far more sensitive to vibration than you might expect and I have found that they can be transformed by a calm support. I don't want to sound like a Townshend advertisement, but it makes the best isolation equipment I've found and its speaker bars can be used to support an existing equipment rack in discrete fashion. If you can afford a Seismic rack all the better, but I've been impressed by a pair of Seismic bars at a reasonable price.

➤ **Rebel with a cause**
I have been trying to solve a problem for a while now, then in the February issue, Michael Merry half beat me



to finding the solution. My query relates to a replacement for the Denon DL304. Mine installed in a Linn Ittok LVII on an LP12 into an EAR834P, EAR 859SE and Graham Audio LS5/9 (yes I break the rules, 13W is in general quite adequate in the system, in my home).

I started to notice a lack of soundstage, 'air' and dynamics, then realised the suspension of the Denon had collapsed. Dealers said that I must have a Dynavector DV17 D3. I'm a bit of a rebel (Linn and valves etc.) and shied away from the previous universal option of AT OC9. But I preferred the Denon.

I've rummaged through the spares box and worked through the previous incarnations: Supex SM100E – the best bass, but vocals rather forward and shouty. AT F5 OCC – soundstage is almost there, but lacks the finesse of the Denon. Dynavector 10X – I'm not sure, it is not worn under the microscope, but it doesn't really match the dynamics and space of a friend's year-old version.

I may be in a position to spend more than Michael, online reviews suggest that the AT 33EV is a more relaxed choice than the OC9, but is there a big enough difference over the AT F5? Further up the scale, the Shelter 501 III (import from Germany) or the Transfiguration Axia may be an option.

While I do not agree with the "pipe and slippers" attribution to the LS5/9, I do not like modern in-your-face presentation. Music choice ranges from Gregorian chant, through jazz, reggae, choral, rock to folk. Any comments would be welcome.

Alan Matthews ▶

David believes Audio-Technica's AT33EV may hold the key to Alan's turntable



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NR: Hello Alan. I can totally understand the Dynavector recommendation as I had a Ruby Karat myself many years ago that I loved, but sadly it ended up in the bin having suffered from an age-related sagging suspension. I too have a valve-based system and I find the Lyra cartridges an absolute delight – have you considered auditioning the Lyra Delos, for example?

DP: An interesting query Alan, because it shadows my own vinyl journey over the years. Personally I would choose Audio-Technica's AT-33EV over everything you mention, given that your budget seems a good deal south of the £1,000 mark. The AT-33 is so different from the OC9 that you could be forgiven for thinking that it is made by a different manufacturer. There is a clear family resemblance between the OC9 and the AT-F5, but it has

relatively little in common with the 33; the latter sounds really rather romantic and beguiling, which is something that cannot be said of the OC9 or AT-F5, which are far more forensic and upfront. This is because they are from a different generation of Audio-Technica pickup cartridges to the 33. The AT-F5 and OC9 hark back to the late eighties, whereas the 33 has its roots in the late seventies. Of course, both ranges have been substantially refined and improved since then, but they do have a fundamentally different sound. Given your choice of EAR tube amplification, I think it is safe to say that you would enjoy its smooth, finessed, subtle sound. Although the OC9 is actually punchier and grippier, the AT-33EV does come over as more musical, yet a good deal more sophisticated too. I had one in my Linn LP12/Ittok directly after a brand new OC9 and was

blown away by just how much nicer it was to listen to.

➤ **Radio ga ga**
I am running, for convenience sake my humble Arcam Solo Neo, which is about a year old. I have not long purchased a pair of Monitor Audio Silver 8 loudspeakers. I also have bi-wired a pair of QED Silver Anniversaries, which are about 10 years old. What cable would you suggest, not

Help! I need a cable that's not too bright for my Silver 8 speakers

too bright, to use instead of the one I'm using at present?

The room is 16ft long x 14ft wide. I mainly used to listen to FM radio, via a large outside aerial, FUBA Classic FM. I'm thinking of going all DAB obviously with a new aerial (Vision 6 element). Would you suggest a 50ohm cable to replace my 75ohm used at present? Also should I stay bi-wired or normal? Many thanks

RC Ingram

DP: A 3m stereo pair of Tellurium Q Ultra Blue (£210) would be ideal. It's a little expensive, but seems less so when you don't buy it bi-wired, and also the Arcam Solo Neo really is good enough to exploit it. The Monitor Audio speakers are too, and they're a good synergistic match for the TQ speaker cable, which will sound warmer, sweeter, smoother and more musical than your ageing QED.

NR: The first thing to say is don't be in a rush to ditch your trusty FM radio yet. There are many people (myself included) who consider that a top-quality FM radio will out-perform an equivalent DAB radio. Secondly, if you are looking to buy a DAB radio and if you have a wireless computer network in your home,

may I suggest that you invest in a receiver that is also capable of receiving internet radio? Internet radio can produce superior sound quality to DAB for many technical reasons, not the least of which is that DAB is based on old technology. Anyway, to answer your question on aerial cable impedance, DAB radios usually require a 50ohm aerial and some good RG58 coax will be best for use with this. However, I believe the Vision 6 element V7-006 log-periodic DAB aerial is actually a 75ohm aerial so should work well with your 75ohm coax. If your DAB radio requires a 50ohm input, the best solution is to fit a proper impedance-matching adapter, but in practice you will probably get away without one, unless you live in an area with very poor reception. The QED Silver Anniversary is a great speaker cable and good value, but if you are looking to replace it, have a look at the Chord Rumour or Chord Odyssey. Whether you stay with bi-wiring will inevitably depend on the depth of your pockets!



COMPETITION WINNER

Back in the March issue we ran a competition offering you the opportunity to win Monitor Audio's excellent Silver 8 loudspeakers. We received a mountain of entries and having eventually found a hat big enough, plucked the winner at random from it. Congratulations, therefore, go to: R Theobald from Lancashire. Your prize should be on its way to you soon.



Neville suggests Chord's Rumour or Odyssey cables for RC Ingram's speakers

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Tides of change

What have Jay Z, Jack White, Chris Martin, Alicia Keys and Madonna got in common? They could be about to change the way we listen to music says **Jake Day-Williams**

In 1919 Charlie Chaplin, Mary Pickford, DW Griffith and Douglas Fairbanks decided they'd had enough of being pushed around and took matters into their own hands forming United Artists. The idea being that those with the talent and creativity should be able to have a larger say in how their movies were handled and presented to the world at large. Jump forward nearly 100 years and history appears to be repeating itself, but in the world of music.

Regular readers will have noticed how last month we took a departure from our normal habit of reviewing hardware on our *Group Test* pages and instead turned our attention to music streaming services. Though we as audiophiles tend to prefer the superior sonic qualities of physical media, there's little doubt that streaming holds the key to the future of music distribution. But, take the time to read up on the subject and you'll find two phrases repeated over and over again: "quality" and "royalties".

The winner of the round up for those of you that missed it was Tidal, which offers ALAC and FLAC formats with 16-bit/44kHz resolution at 1,411 kbps, or to put it another way quality that's on a par with CD. But what about that thorny royalty issue? Radiohead, Björk, Taylor Swift and countless other artists have stuck the boot into Spotify, which is arguably the best-known of these services for the

The best analogy I can think of is Posh and Becks buying Cambridge Audio

poor kick backs that musicians get. Now here's a crazy suggestion, what if the music world's biggest artists got together – like

Charlie, Mary and Douglas did – to do something about it? A weird thing happened on Monday 30 March. Social media was abuzz with talk of an exciting announcement on the horizon. But instead of it being related to some faceless celebrity's new hair cut or the revelations of some soap opera or movie star's breakfast, the chatter was all about a music streaming service. Suddenly Tidal was big news.

To understand why, it would be sensible to rewind to earlier in the year when Jay Z decided to shell out \$56 million on procuring Tidal from its Norwegian owners. For those that aren't aware, Jay Z is one of the world's biggest hip hop stars and is married to Beyoncé – I guess the best analogy I can think of is if Posh and Becks decided to take over Cambridge Audio or Creek.

Being a rather shrewd fellow, Jay Z has decided to enlist the assistance of some celebrity mates and 'do' a United Artists. So on that evening in front of the world's press, he took to a stage in New York to announce the details of Tidal



Madonna and Nicki Minaj at the Tidal 'board meeting'

– "A platform owned by artists that will continue to evolve over time. A platform as dynamic as the artists behind it". He then welcomed a procession of some of the biggest names in music today – Madonna, Nicki Minaj, Daft Punk, Calvin Harris, Chris Martin, Kanye West, Jack White, Arcade Fire, Rihanna, Alicia Keys and, of course, Beyoncé – onto the stage where the fellow owners all signed a 'declaration'.

While it's easy to scoff at the idea of celebrity-endorsed products, let's not forget that another hip hop superstar – Dr Dre – recently sold his little headphone company to Apple for \$4 billion. Because of Dre's smart use of celebrity endorsements, kids thought nothing of shelling out £250 on a pair of Beats headphones. And if some smart thinking can make headphones one of the biggest growth areas in technology, why can't the might of Beyoncé, Madonna *et al* do the same for streaming?

Change is in the air

Unlike Beats, which is a bit bass-heavy for my sonically tuned ears, Tidal is a high-quality product that offers superior resolution to the more widely recognised Spotify. In all honesty, I don't care if it's Jay Z or Mr T promoting music streaming, the more popular services like this become, the better for us audiophiles. I'm fairly certain that with this single act Tidal has generated more interest among the general public than any single piece of hi-fi in the last 15 years. And if it takes a bunch of celebrities to do that, so be it. If they get royalties that keep them quiet and we get a music service that's worth using, everyone's happy. And if it gets anywhere near the popularity with the general public that Beats headphones achieved, there's a genuine chance that people might start to be interested in some of the kit that makes Tidal sound great. Say it quietly, but Jay-Z might just have given the hi-fi industry the shot in the arm it so richly deserves ●



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Sign of the times

An encounter with a 40-year old classic leads **David Price** to an interesting comparison between old and new speakers and the revelation that fine design is timeless

Design,” as Swiss architect Le Corbusier famously said, “is intelligence made visible”. This simple yet clever point shows how all the ideas, concepts and theories in our head take on a physical, material form when something is designed. It follows that when we look at anything – whether it’s a building or an object as simple as a toaster, it embodies the common thinking and received wisdom of its day.

You can apply this idea to fashion, consumer electronics, aeroplanes or anything else. Take cars for example; stowed away in a dusty Wiltshire barn is my prized 1977 Rover 3500. Nowadays it looks positively vintage, but 40 years ago was considered the height of sophistication. Indeed, as I like to tell anyone who will listen, it even won the European Car of the Year award in 1976.

Warping back four decades, and you can see how people would have been impressed by its wind-cheating shape, its powerful V8 engine and its futuristic spec which included a laminated, anti-shatter windscreen. So advanced then yet so dated now, it’s a living reminder of how technology has progressed. What was once-cutting edge is now mundane.

Its fascinating to do this with hi-fi too, and if you want the most striking example of how things have moved on you need only look at loudspeakers. Just like cars, they closely follow the conventions of the day in their mass production,

There are so many reasons this speaker should sound bad – but it doesn’t

styling and engineering. They’re just as ‘of their time’ in the way they sound, too. I recently acquired a pair of Wharfedale

Linton 3XPs, of exactly the same vintage as my old Rover. These ‘classic’ speakers were widely acclaimed at the time, sold very well and epitomise the design conventions of their day. Although regarded as the height of sophistication in 1977, 40 years later they seem positively Palaeolithic!

Spending a week reviewing six of the latest sub-£1,000 standmount speakers in my reference system, while playing the old Wharfedales in my second setup was an interesting experience. The Linton is roughly comparable in price when new to B&W’s CM5 S2, yet the two are poles apart both sonically and in design terms.

The old Wharfedale has a biggish box that – while not being tall enough to really sit on the floor – invariably ended up that way in most homes. The CM5 is a small speaker designed to sit atop its bespoke stand, which B&W thoughtfully sells. The former has a wide front baffle, which is easily big enough for a 200cm woofer. The latter has a narrow baffle and a 165mm mid/bass unit, which is

considered large by today’s standards. The oldie has three paper drive units, the newbie runs a metal dome tweeter and Kevlar mid/bass driver. The Wharfedale has a real teak veneered chipboard cabinet with walls thinner than the pressed steel of my old Rover, the B&W has sturdy, heavily braced cabinets that are far less resonant. In short, they are chalk and cheese.

In engineering terms then, the Wharfedale hails from a more primitive time, with everything from the cabinets to the drivers seeming almost prehistoric. Yet actually it doesn’t audition as badly as you might think. There is nowhere near the focus, control, dynamics and rhythms of the B&W, or any other fine modern speaker possesses, but it still sounds rather ‘pleasant’ in a way that none of the contenders in the new standmounter roundup do, regardless of source material. It’s almost as if, back in the seventies, the designers knew they couldn’t make an accurate speaker so they set out to produce a ‘nice’ one instead. From terrible rear terminals and cheap internal wiring to the complex crossover, there are so many reasons why this old loudspeaker should sound bad – so it’s all the more fascinating that it doesn’t.

Just plain nice

Funnily enough, it’s a bit like the Rover 3500. Although it feels very dated with its skinny tyres, rear drum brakes and thin-rimmed steering wheel, it remains extremely nice to drive in its own way. You have to pilot it on its own terms – it’s not going to get you out of trouble if you plough too fast into a bend, for example – but when accorded respect the result is lovely, and way nicer than anyone zooming around in a modern tin box could possibly imagine.

All of this makes me think that great design is about whisking up an enjoyable formula that gives satisfaction and pleasure to the end user, whatever the period in history or technology available. Technological progress is great – and I wouldn’t have it any other way – but the finest designers seem able to work around the limitations of their age to produce something with enduring appeal ●



They might not have the same technological advances, but the Wharfedales still sound great



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Has it come to this?

The whole world is becoming increasingly homogenous and, says **David Vivian**, hi-fi is really no different. With the likes of John Lewis defining what is hi-fi, what hope is there?

The UK is blessed with a veritable Utopia of hi-fi shops – places where kit is still referred to as ‘hi-fi’ and the people who work there have strong opinions and preferences and know useful stuff. They share our passion for music and the desire to extract maximum sonic satisfaction for any given outlay of cash. In short, it’s where we go to find an informed means to a rewarding end. How rare is that?

But I can guarantee this. Our non-hi-fi savvy but nevertheless music-loving friends are no more likely to visit a hi-fi shop than sign up for a one-way trip to Mars. It isn’t because Rowan Atkinson and Griff Rhys-Jones are lurking, poised to re-enact their “don’t think we’ve got any gram-o-phones here, granddad” sketch to any hi-fi innocent foolish enough to walk through the door. No, it’s because the need to get involved, deploy one iota of imagination or detail a single brain cell to the task of wiring your house for sound has been removed from the realm of ‘hi-fi’ – even in its most approachable, post-geeky, new-tech, user-slick form – and implanted in a kind of world where the enjoyment of music has been reduced to cloud-based, multi-room, wireless hi-def muzak peddled by brands of the bland that are perfectly aligned with the lifestyle zeitgeist generated by stores like John Lewis.

To be fair to John Lewis, its website has some hi-fi separates of the time-honoured variety. You can have your choice of speakers from Q Acoustics driven by whichever tube amp you pick from the Fatman range. But the approach is

dispiritingly prescriptive. Yes, Fatman’s valve amps look cool and sound warm, but teamed with just about any Q Acoustics box the results will have a fine but very particular flavour of sonic presentation that gives just a fractional glimpse of what the world of hi-fi has to offer. It’s a kind of hi-fi ready meal menu with fixed price points based on the assumption that people who want a separates system can’t be bothered to put in the effort to discover what really floats their boat.

More troubling still, at the vast John Lewis store that takes up an entire corner of Bluewater (Kent), not one square metre of floor space is devoted to anything that looks remotely like a Q Acoustics loudspeaker or a Fatman valve amplifier. Maybe it would make the place look untidy. The idea seems to be to sell ‘tech’ as one huge homogenised entity with computing power at the core rippling out in every direction to technology subsets that



just happen to do different things. These enablers will be different shapes, come in a variety of colours and finishes, mostly plastic and be so functionally streamlined that once installed you won’t even know they’re there. Is this what everyone wants? Apparently, yes. There is no finer bellwether of ‘discerning’ mid-market mores than John Lewis and if an open-minded yet hi-fi uninterested soul comes away from a stroll around the wares on display with only two words in transit between short and long-term memory, that they are probably ‘Bose’ and ‘Sonos’ – brands peddling a small, discreet, button-less audio lifestyle – should be no great surprise.

How we used to live

Taking a longer look back and the instore John Lewis experience further supports the notion that hi-fi as we understand it for the ordinary man and woman in the street is now redundant, having been finally subsumed and assimilated into the movement towards a uniform, interconnected, hands-off future. A good few years ago, John Lewis had quite a large room, showcasing a selection of real hi-fi components. It was an Aladdin’s cave of innovative design and affordable exotica, clearly assembled by someone who knew their hi-fi onions. It lasted a few years, but was eventually knocked through to make way for more televisions, DVD players and Bluetooth-equipped audio consumables.

Good sounds? So-so, I guess, and that so many will regard it as the bees’ knees is, to a hopeless audiophile like me a little depressing. But as Agent Smith said to Keanu Reeves in *The Matrix*: “That is the sound of inevitability”. That it is and, for all my protestations, it’s a great deal better than it used to be ●

Is this really what a hi-fi dealership should look like?



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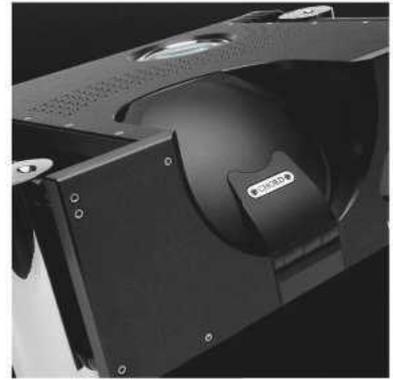
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Bitten by the bug

Do you remember the spark that ignited your love for hi-fi? For **Rob Lane** it was his grandparents' stereogram that turned him on to music and the kit that makes it

It has to start somewhere. For me it was my maternal grandparents' huge HMV stereogram, a 1.5m-long 0.5m-high teak cabinet with built-in speakers hidden behind front-facing grilles, a stunningly cool soft-dampened lid, which needed to soft-close given its weight, a built-in turntable, operational controls and what seems – looking back – a disproportionately large area given up to the 'wireless'. This was my first experience of hi-fi, and I marvelled at how the sound magically emanated from the speakers via those heavy black discs.

Sure, I'd witnessed vinyl in action before. Around the same time there was the thrill of the child-friendly *Octopus' Garden* and *Maxwell's Silver Hammer* on Uncle Rod's 'system' (a Dansette mono one-box unit that was handed down to me). It was only years later, when hearing *Abbey Road* again as a young teenager that I appreciated the rest of the album – I still love it to this day.

Aged around five, my brother and I would spin singles on the Dansette including *Puff The Magic Dragon*, our parent's battered and scratched *Magical Mystery Tour* EP and the first single I ever bought: Alice Cooper's *School's Out* – every primary school kid's fave. The Dansette could hold several singles at once on its Garrard auto-changer. But it was my grandparent's elephantine stereogram that

It used to buzz like a wasp and get so hot I didn't need to heat my room

looking back is that while I was clearly intrigued by the hardware, it was the music that drove my excitement. Maybe not the tunes played on my gramps' HMV – even a toddler could appreciate how dated Vera Lynn was – but the music of my parents and their peers: The Faces, George Harrison, ELO, Fleetwood Mac, 10cc, Eagles. I'm sure I'm not the only one who has witnessed friends and acquaintances who are more concerned with the size of their loudspeakers, the go-louder lights on their tape deck and the overall cost of their system, than the music played on vinyl, tape and latterly CD. For me, the kit was, and still is, the cherry on a disc-shaped music cake.

Later, it was my father's pricey hi-fi that made my prepubescent eyes light up – all reel-to-reel, analogue VU sound level indicators and plumb-weighted and counterweighted tonearm – although, of course, I wasn't allowed anywhere near it. What I was able to do was to listen and appreciate (although I never let on how much I

liked it) the music he was playing. Christmas might have gifted me cassettes by Showaddywaddy and Boney M. to be played on my portable mono tape deck, but it was Fleetwood Mac's *Rumours*, ELO's *A New World Record* (recently acquired on vinyl) and later Elvis Costello's *Armed Forces*, Dire Strait's self-titled debut, The Police's *Outlandos d'Amour* and *London Calling* by The Clash that really floated my pre-teen boat.

As we waved goodbye to the seventies my father shelled out on separates for me, probably as an insurance policy against his own system getting damaged. This proved a defining moment in my hi-fi life – as I'm sure the first separates setup is for all of us.

And what a system! Vinyl-only, it comprised... I'm afraid I cannot recall the brands or models of turntable or loudspeakers, although I'm confident that the amp was Akai. I do recall it used to buzz like a wasp from a Ray Harryhausen movie, would do its best to blow the speakers every time I switched it on with a BOOM and used to get so hot I didn't need to heat my room. And when the Citizen's Band craze hit, the amp would inexplicably pick up conversations as clearly as if the CB hobbyists were in the room. Given that I was enjoying The Police's *Reggatta de Blanc* at the time, which had the divine *The Bed's Too Big Without You* with its accidental inclusion of an opera diva's wailing voice picked up on a radio broadcast during the track's recording, this was an eerie, unwelcome coincidence.

It may have been a fire risk and probably fell shy of privacy laws, but this first separates system helped cement not only my love of music – debuting many of the vinyl cuts I still treasure today – but also hi-fi. When friends were receiving hollow-sounding, cassette-focussed plastic stack systems from big brand names of the time – for their 16th birthdays, crammed with fast-rewind, fwd-cue, auto-reverse and brightly lit power indicator bells and whistles, I was happy to soldier on with my faithful separates system. And soldier on I did, but this was just the beginning of my hi-fi adventure ●



A stereogram much like this one was what kick started a lifelong passion



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The great class war

There have always been pop stars from privileged backgrounds, but is it becoming the norm? **Nigel Williamson** wonders if the death of the working class hero is really so bad

Suddenly the taboo 'c' word has reared its ugly head again. And class isn't only back on the agenda because there's a general election looming and we have to decide between the Tory boys from Eton or take our chances with Labour's lad from Haverstock comprehensive. The 'c' word is being bandied about in artistic circles, with the accusation that upper-crust kids not only rule on the government benches but are swamping our popular culture.

It began when Labour's shadow culture minister, Chris Bryant, named James Blunt – Harrow and Sandhurst – as one of the performers from a "privileged background" who are increasingly dominating UK entertainment. He went on to call on the arts world to address its lack of social diversity. It seemed a routine complaint of the kind we've often heard from Labour over the years, although it has traditionally been directed at such 'toff' tastes as opera and ballet. When Ken Livingstone's Labour administration won control of the GLC in 1981, Tony Banks, the chairman of its arts committee, publicly threatened to cut funding for the English National Opera. At the time I was the opera-loving editor of the weekly Labour newspaper *Tribune*, and Banks told me privately that he merely wanted to rattle the bars of the ENO's elitist cage and all they had to do was to come up with a strategy to make

opera accessible to 'ordinary people', and Labour would be satisfied.

I passed this message on to Peter Jonas, the ENO's

There was a time when we could identify with our pop stars

managing director, the company launched an 'opera for the people' initiative and the GLC's funding continued.

When Bryant opened up the latest front in the cultural class war, Blunt went into full combat mode, denouncing him as a "classist gimp" and a "prejudiced wazzock." Bryant hit back and the media had a field day. *The New Statesman* claimed that "popular music has become as essentially bourgeois as the Boden catalogue." Sandie Shaw, a working-class girl from Dagenham told the House of Commons culture select committee that a career in pop has become unviable "unless you're Mumford & Sons and come from a public school and have a rich family that can support you".

But is there any evidence that Bryant and Shaw are right? While grime, hip-hop and dubstep may still be rooted in the existence of a dispossessed urban under-class, it certainly seems that the mainstream rock and pop firmament boasts more privately educated stars than ever

before; not only Blunt and the Mumfords but also Radiohead, Coldplay, Keane, Laura Marling, Florence Welch, Pixie Lott and Mark Ronson among others.

Should this concern us? If it means that those from less privileged backgrounds are getting squeezed, then most definitely. Historically the impetus for much of the best British music has come from smart outsiders with working class roots, from Lennon and McCartney to Morrissey and Marr.

Music provided one of the few escape routes from a life in the factory or pit and you didn't need a rich family to support you while you were trying to make it; the state sponsored an entire generation of our finest musicians with generous grants to practise guitar while skipping classes at art school. Compare that to today when grants have dried up and state schools are estimated to spend an average of £1.15 per pupil per year on music tuition.

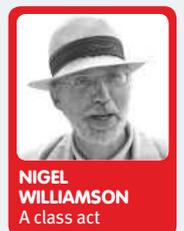
The class divide

Pop music should be classless and Blunt's witless response was unhelpful. Bryant's complaint was not personal, but part of a broader critique which holds that if pop music is to be meaningful, it must draw its talent from the widest social pool. The two most significant figures in the punk insurrection came from opposite sides of the tracks; John Lydon was the son of working-class Irish immigrants, Joe Strummer's father was a Foreign Office diplomat. The Brit-pop wars similarly straddled the class divide; Liam and Noel Gallagher were dragged up on a sink council estate, while Damon Albarn grew up in Colchester, the son of a university lecturer and a theatre designer.

If it is true that popular music is increasingly becoming the preserve of a public-school educated elite, something vital will be lost. There was a time when we could identify with our pop stars because they came from the same unentitled streets, went to the same failing schools and lived in the same modest two-up-two-down houses as us. It also meant that their songs articulated our own lives and concerns. Politicians are widely perceived as out of touch with the people they represent. It would be a tragedy if pop music were to go the same way ●



Can Captain James Hillier Blunt of the Household Cavalry really speak for the common man?



The opinions expressed in this article are those of the author. They do not necessarily reflect the attitudes or opinions of Hi-Fi Choice or AVTech Media Ltd. Picture courtesy of Shutterstock/Slavko Sereida



Life begins at 30

Flip back through the hi-fi history books and you'll find the Stereo 30 right near the front, **Robert Harris** remembers this pioneering amp

It's no exaggeration to say that the Leak Stereo 30 integrated amplifier deserves a place in any comprehensive timeline of audio history, as constituting the very first commercially available hi-fi transistor amplifier that did not use any transformers in its signal path.

Introduced in 1963, the Stereo 30 and its replacement, the Stereo 30 Plus (1967–71), were two of the most popular amplifiers of the swinging sixties. However, estimates of their worth are a source of conflict, with some critics regarding them as having established a precedent for what would become a low point in amplifier design. To some valve enthusiasts, they are almost an embarrassment coming in the aftermath of Harold Leak's notable successes with tube technology.

It'd be a bit of a stretch to argue that the Stereo 30s compare with Leak's development of the Point One tube amp series of the forties, which achieved a 0.1% distortion rating; or that these solid-state amps represent as attractive a purchase as Leak's earlier commercial successes. Yet it is fair to suggest that Leak's foray into transistor technology is still an achievement in its own right.

As one would expect with a sixties vintage amp, the Stereo 30 is solidly built. The finish is attractive with a black and chrome-plated fascia. By today's minimalistic standards it is also well featured. Besides treble and bass controls, a simplified variant of the classic Leak 'vari-slope' filter is fitted, to reduce high-frequency distortion. Beneath the large primary controls, there's a balance knob, and switches for tape monitor to alter the

slope setting of the filter. A control provides selection of monaural sound or the exclusive listening of the left or right stereo signals through both channels of the amplifier.

There are two phono pick-up inputs. With a 3.5mV/47kohm sensitivity, the first is suitable for high output cartridges, while the second varies between 20 and 60mV, which could be useful for antiquated crystal cartridges. The other inputs vary from a redundant 3mV (microphone/tape-head), to a usable 500mV. For sound recording, all the controls, except volume, remain switched into the signal path.

The complex switches, and antiquated balance and filtering controls, can all be bypassed by selecting the 'Replay' input, and then turning the tape monitor on. This feature only works for this input, so

A brief history of the Stereo 30 era

1963	1967	1969	1971
<p>The 30 was issued during a momentous year, heralding the Profumo scandal and The Beatles' debut album</p> 	<p>The 30 is overhauled – its extra wattage comes in handy as Hendrix rules the charts – the guitarist also owned a 30</p> 	<p>The Beatles final album arguably signals the end of the sixties. Harold retires and Leak is sold to Rank</p> 	<p>The 30 gets a new lease of life as the Delta, while The Who top the UK charts for the first and only time</p> 

either attach an external switching unit to get the benefit for more than one source, or have the amp rewired.

The Stereo 30's performance comes across as mixed bag to modern ears. Its AD140 germanium output transistors seriously limited what could be achieved with the design, and sound quality appears to vary from unit to unit. Better samples offer pleasingly musical results, although they need to be carefully matched to undemanding speakers with high efficiency and impedance. Both versions of the 30 require unusual speaker plugs for connecting bare speaker wire to their sockets.

Power to the people

The power supply is a rather small 45VA single-rail type, which requires large capacitors placed at the output stage to de-couple speaker loads.

The manual states that the Stereo 30 offers 2x 10W at 15ohms and 15W at 4ohms, indicating a yield of 12 to 13W at 8ohms. The Point One specification is achieved up to 8W (15ohms, 1kHz), thus near full output,

Units in good working order can sound lively, engaging and warm

but the distortion to power output ratio worsens at lower impedances.

Leak was likely cognisant of the weaknesses of the original Stereo 30. Despite being a commercial success, it was given a overhaul a few years later, heralding the Stereo 30 Plus.

The upgrade saw dramatically increased output power. The 30 Plus used robust 2N3055 silicon NPN output transistors in a similar quasi-complimentary topology, facilitating the use of a 75VA single-rail supply, to more than double the output power of the amplifier. Its Point One performance is achieved at 10W, with negative feedback more judiciously applied.

The upgraded version also offered improvements to the input stage, with greater overload headroom. The first phono input had a 2mV sensitivity, suiting modern MMs better. The line inputs varied from 2mV (tuner/mic) to 250mV. The replay input, bypassing the pre-amp, has a usable sensitivity of 400mV.

The 30 Plus dispensed with the complicated 'vari-slope' filter, shifting the balance control into its place on

the fascia. The balance control's former location became home to a 6.3mm headphone socket.

A welcoming musicality is the predominant feature of the 30 Plus. Units in good working order can sound lively, engaging and warm, but detailing and transparency may be found wanting for those that are more accustomed to modern transistor designs. The amp has less grip on speaker loads than usual, due to a damping factor of 20, so it is best to avoid challenging loads, especially of a low impedance.

The Stereo 30 Plus is reliable, although it may be due a service if it sounds ill-defined and sluggish. Its use of plug-in circuit boards may also be a cause of trouble, so it's worth giving them a clean over time.

In 1948, Bell labs invented the all-important bipolar junction transistor (BJT), but its use in many a hi-fi amp would take a little while to arrive. Early germanium BJTs were fragile and of insufficient quality for critical audio applications, but helped make portable radios a success that would propel rock and roll music.

Transistor circuits, however, couldn't handle heat. They required a carefully controlled environment or thermal runaway would ensue. Class A operation, which was common in tube amps, had to be jettisoned in favour of cooler running (albeit less linear) Class B/AB but this compounded the problems with distortion. Great gobs of negative feedback were needed to combat the ensuing nasties. However, early transistor designs required inter stage and/or output transformers, an added cost that also limited the use of feedback!

The appeal of the transistor was negligible until 1956, when Hung Chang Lin published the

LEAK'S LATER DAYS

Leak achieved considerable success during the golden age of the fifties and sixties, with a wide range of high-quality amplifiers, innovative Troughline radio tuners, mono pick-ups and the 'Sandwich' loudspeaker range.

After the success of the Stereo 30, Leak phased out the production of its legendary valve amplifiers. The final products under original management would be a higher power version of the Stereo 30 Plus, called the Stereo 70 (1968), and the matching Stereofetic FM solid-state tuner (1969).

Leak was sold to the Rank Organisation in 1969, and production was moved to the conglomerate's Wharfedale production facility in Bradford. In 1971, the company's 'Delta' range was introduced. The Delta 30 features a slightly tweaked Stereo 30 Plus circuit in streamlined case design.

In 1975 Leak finally replaced the Delta 30 and 70 with the 2200 amplifier, which utilises a modern complimentary configuration and dual-rail power supply. Its new 2000 range would continue to be made in England, but later Leak-branded products such as the 3000 series of amplifiers/tuners were manufactured by Rotel in Japan, under Rank's instruction.

The Leak brand name became dormant by the late seventies, although plans maybe afoot at IAG to resuscitate it.

first practical transformerless design. PNP transistors were widely available, while NPN variants were not suited for output stages, until silicon NPNs came along in the sixties. Usefully, Lin's design only required complementary symmetrical NPN and PNP transistor pairs for the driver stages, with the heaviest lifting being carried out by two power PNP's in a 'quasi-complimentary' output stage.

Yet Lin's topology was not a panacea, since its lack of symmetry increased inherent non-linearities and problems remained in the practical implementation of such a fragile design for the domestic consumer.

The silicon transistors that are found in the 30 Plus are tougher, but have greater non-linearity issues in Lin's design.

Moving on

Transistor technology has moved on considerably since the Stereo 30's heyday, so it seems the lesser prestige afforded to Leak's transistor era is to some extent deserved. And yet these amps did play a difficult hand well. They triumphed over endemic reliability issues, while offering decent sound quality for the time. This is no mean achievement, and the amplifier's notable success in the mid sixties would also play a role in establishing a formula of design for more than a decade to come ●



The Stereo 30's manual

BEAUTIFUL SYSTEM
LEEMA ACOUSTICS

A design for

LIFE

Not only does Leema Acoustics make complete systems, **Ed Selley** thinks the result is a perfect fit for modern audio



Like a famous brand of wood preservative, *Beautiful Systems* strives to do what it says on the tin. This means that we feature systems that are attractive to look at or otherwise innovative, bold or at least a little different from the norm. We then also seek to have a complete functioning system – something you could buy in its entirety if you fancied. Beauty is in the eye of the beholder, of course, but I think we feature some

great looking kit, as well. This second part sounds easy enough, but in reality there are some caveats. Some systems feature more than one brand that divide the roles and responsibilities of two very different disciplines – electronics and acoustics. Even when we do have systems supplied by a single company, behind the scenes, I generally wire them up with accessories I have to hand. The system you see here is absolutely in brief as it is built by one company and

what arrives in the boxes is a complete functioning hi-fi that needs no other components to work. So, there's no doubting it's a system, but is it beautiful?

Attractiveness for the sake of it is almost certainly not part of the design remit for Leema Acoustics. The result of two ex-BBC sound engineers Lee Taylor and Mallory Nicholls (who's names combine to form the brand name rather than any deep seated affection for Peru), there is a definite



COMPONENTS

**LEEMA ELEMENTS
CD PLAYER £1,395**

The smallest CD player that Leema makes still boasts a dedicated CD transport, the company's Quattro Infinity Multi DAC and the ability to be connected to two separate systems at once, thanks to two sets of outputs.

**LEEMA ELEMENTS
INTEGRATED AMP £1,695**

The matching integrated amp in the Elements range can be fitted with a DAC board and when so equipped boasts no less than nine inputs as well as a 56W output into 8ohms that rises to over 100W into 4ohms.

**LEEMA XERO STANDMOUNT
SPEAKERS £1,295**

The diminutive Xero is an evolution of the original Xen monitor and shares the same very compact dimensions. Small or not, Leema claims that the Xero can keep many larger designs honest.

BEAUTIFUL SYSTEM LEEMA ACOUSTICS



whiff of no nonsense about these components. Leema has developed a reputation for doing things its own way, but this isn't about flamboyance so much as a belief that its approach is the one that yields the best results. The Elements electronics you see here are the entry-level components, but their relatively sensible price point doesn't preclude their specs including some distinctive design practise.

Rear of the year

Take the rear of the Elements CD player. This relatively compact chassis features two separate sets of outputs, with a choice of balanced and unbalanced for both. This is done with a view to being part of Leema's fearsomely clever 'LIPS' system that grants the control to use both those outputs to go to different systems or for a seriously purist bi-amping setup. The matching Elements integrated amp is equally busy. As well as a matching set of XLR inputs, it is fitted with three RCAs, three optical and a single coaxial input alongside a USB connection. Building a half width amp with nine inputs isn't exactly what you'd call 'normal' behaviour, but it does mean that this unassuming little box of tricks is able to handle a truly sprawling system if you really need it to.

The really clever aspect of the Elements is that despite all the functionality, the styling is simple and they avoid being a mass of controls and lights. A small display on both products manages to condense a considerable amount of information into a limited space and the combined volume and selector switch arrangement on the amp is easy to use and saves further controls. The Elements are undoubtedly functional

The Leema nails it in a way that is so much more than just the sum of its parts

– pretty much the only decorative feature is a raised curve on the outside of the front panel – but there is an elegance that's hard not to like.

Leema has let its hair down a little with the partnering Xero standmount loudspeaker. The Xero is a domesticated version of the Xen, the original project undertaken by Leema. Like the Xen, it is very small indeed – a mere 220mm high in fact – but finished in 'gloss zebra', the result is a very pretty speaker indeed. Don't be too concerned by the rather petite size either. The Xen was a design program

Above left: They might be small, but the Elements deliver enormous capability

Centre: With the entire system coming from one manufacturer, the synergy is excellent

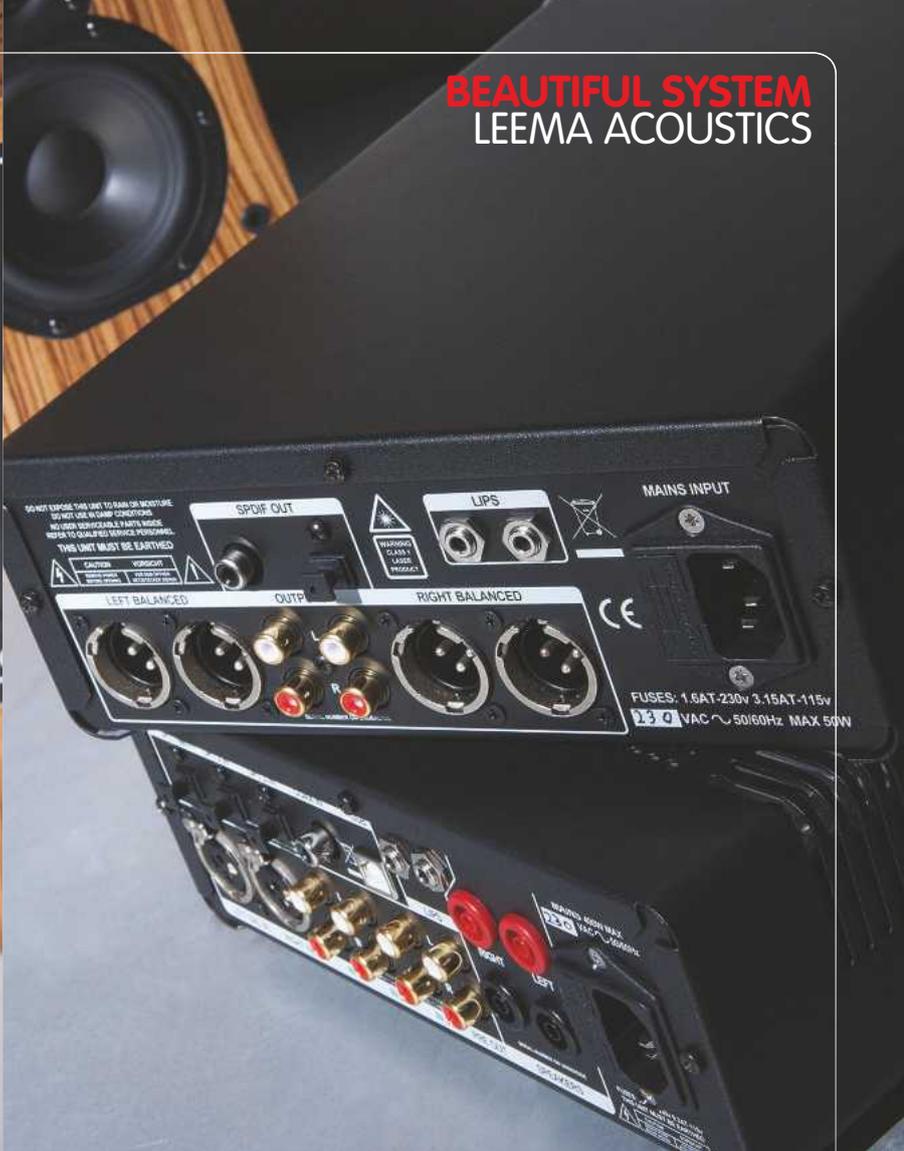
Above far right: Serious socketry means the Leemas can handle XLRs and future expansion

that took several years, but resulted in a compact monitor with decidedly uncompact sound. With this DNA coursing through it, the Xero should be able to punch rather harder than its limited dimensions might suggest.

The final ingredient is the cabling. In the interests of scrupulous accuracy, this is built for Leema by another company, but the Linx Two interconnect and speaker cables are built to Leema's specification and mean that if you are minded to do so, the whole process of playing a CD is undertaken by it from the moment that the disc is placed in the tray to the instant where the sound comes out of the speaker.

Great expectations

The good news is that the resultant sound is really rather something. The expectations you might have for a design that has a 4in driver and a frontal area comfortably smaller than a piece of A4 paper should be kept firmly to yourself until you sit them on some sturdy stands, allow them a little bit of bass re-enforcement from a rear wall and apply a little toe-in. The sound that results is not what should be coming from a little standmount. It punches forth with a scale and impact that you'd expect from something larger and heftier.



A bigger speaker would struggle to sound exactly like this one, though, because the Xero is fearsomely quick. That small driver moves like a skilled featherweight boxer – never still for a moment, but possessing a fearsome punch when needed. The way that the midbass and tweeter are mounted so close together gives the Xero a cohesiveness that is wonderfully compelling and means that the detail retrieval is phenomenal. They might have been domesticated, but the monitor ancestry certainly hasn't gone anywhere.

Maintaining control

In the face of this impressive disregard for the laws of physics, the electronics can initially pass a little unnoticed, but their contribution becomes clearer the longer you listen. For starters, the Xero achieves some of its awesome performance at the expense of sensitivity and it needs a fair amount of power to strut its stuff. The Elements Integrated might only dispose of a claimed 56W into 8ohms, but the control it exerts over the Xero is absolute. The other impressive attribute of the Elements duo is an extremely well judged presentation. The sound engineering background of the founders is apparent in the accuracy of the Elements, but this



WEBSITE:
leema-acoustics.com

never steps into a ruthless dissection of poorer recordings.

This comes together to awesome effect with Unkle's mighty *Psyence Fiction* – a disc I rediscovered after many years of it being trapped behind a cabinet at the same time as the Leemas arrived. This is a flawed recording, but one with a set of musicians working with a real sense of purpose. With the awesome *Lonely Soul*, Richard Ashcroft's vocals anchor

The sound is not what should be coming from a little standmount

a disparate collection of samples and loops that can sound thin and disjointed on merciless equipment. The Leema simply nails it in a way that is so much more than just the sum of its parts. The passion is all right there and in many ways so are the limitations, but such is the engagement you simply don't care.

This ability to grab you and bring you the signal rather than the noise is where the Leema truly excels. Subconsciously most of us divide our collections into great recordings and music we love that was mastered in

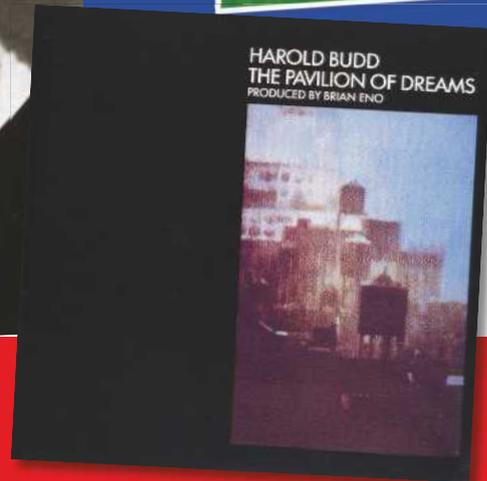
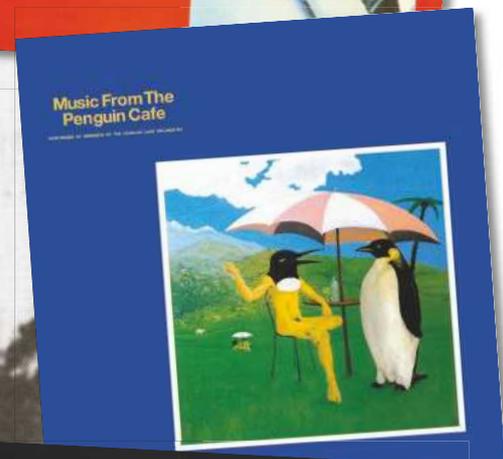
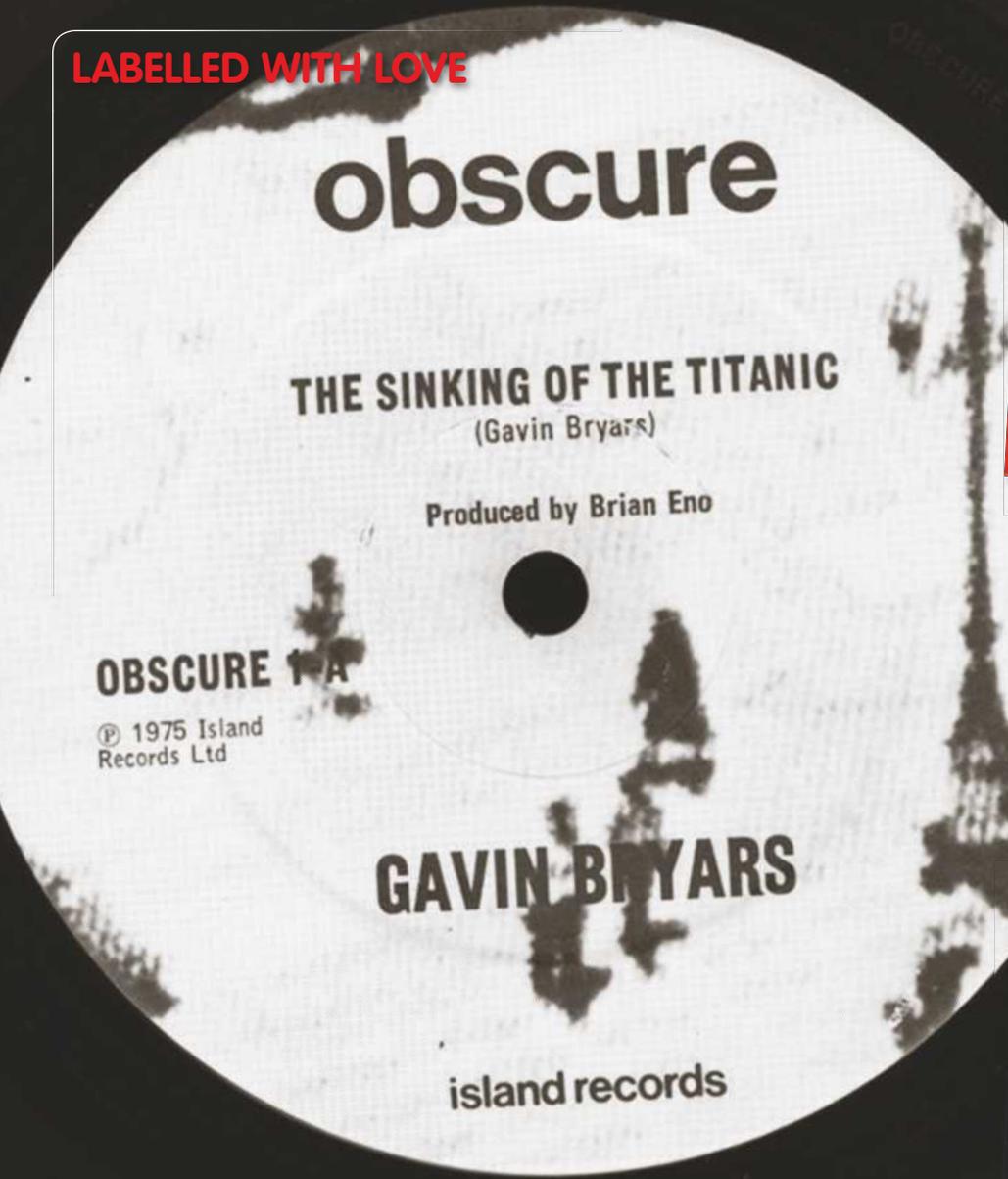
such a way that we listen through it rather than to it. This little system is one that rubbishes that convention in a way that should have lovers of music rather than lovers of hi-fi (and while the two overlap, they are not the same) in raptures. In short, it manages to find music where others find flaws.

Size matters

If this was all it did, we should be pretty happy, but the icing on the cake is how easy these little components are to live with in the real world. Their tiny footprint means that they should represent no real challenge to any room and not content with working exceptionally well together, that vast collection of inputs on the back of the amplifier means that it can Hoover up any other sonic responsibilities you might have for it without breaking sweat. When you are finished listening, they revert to being compact, elegant little boxes.

This is what 21st century audio should be. We live busy, crowded and complex lives and the limited time we have for something as decadent as sitting down and listening to music needs kit that can deliver the goods with everything we throw at it. This is one company's complete vision of how that should be achieved and my word, it's a very beautiful system indeed ●

LABELLED WITH LOVE



Obscure

Curated by Brian Eno, the small but perfectly formed label was a haven for contemporary classical and experimental music says **Simon Berkovitch**

The number of former glam rock stars who left a group at the peak of its powers and ended up founding a classical and experimental music label can be counted on one hand, but Brian Eno – Roxy Music's flamboyant synthesiser player – has always been a singular individual.

A couple of years into an ever-interesting solo leftfield pop career, Eno delved deeper into his undergraduate years for inspiration. While at Winchester School of Art, his ears had been opened to the possibilities of the tape recorder and a thrilling world of experimental – often

contemporary classical – music. Eno was involved in Cornelius Cardew's Scratch Orchestra, appearing on the Deutsche Grammophon recording of *The Great Learning* (1971), his first appearance on vinyl. Post-Roxy, he was also a member of the Portsmouth Sinfonia – an orchestra performing classical standards on instruments they were unaccustomed to playing, helmed by composer Gavin Bryars – who went on to be extremely influential on Eno's next project: Obscure.

Obscure, as the name suggests, was a record label determined to provide a platform for hitherto unheard contemporary composers

and avant-garde musicians. Although not household names, composers such as Michael Nyman, John Adams, John Cage, Christopher Hobbs and the aforementioned Bryars were introduced to a wider audience by association with Eno.

Active through the mid-to-late-seventies, the label produced 10 albums. The first four were released simultaneously in the UK in 1975. The first seven (1975-1976) – Gavin Bryars' *The Sinking of the Titanic* through to Penguin Café Orchestra's *Music From the Penguin Café* – were manufactured and distributed in the UK by Island Records; in 1978, Polydor took up the reins,

reissuing the first seven albums in the series and putting out the remaining three.

In their original pressings, the albums sport distinctive, largely black sleeves, designed by John Bonis of the CCS creative team, responsible for such distinctive LP covers like Bob Marley's *Catch A Fire* and Eno's own *Taking Tiger Mountain By Strategy*.

No complete reissue of the whole Obscure series has appeared since 1982, making some of the vinyl reissues collectable. *Discreet Music* and *Music from the Penguin Café* are perhaps the best known, having been in print constantly since their original release.

Gavin Bryars

Some of the minimalist composer's most enduring works first appeared on Eno's imprint

Gavin Bryars appears on numerous releases on the label as composer, collaborator or guest musician. He started his musical career as a bassist playing jazz in the Joseph Holbrooke Trio with fellow free improvisers guitarist Derek Bailey and drummer Tony Oxley. Studying briefly under John Cage and influenced by minimalism, one of Bryars' earliest works as a composer is the one that continues to both fascinate and evolve: *The Sinking Of The Titanic*.

Composed in 1969, it was the debut release on Obscure in 1975, produced by Brian Eno. Inspiration came from the story that the band on the deck of the stricken *RMS Titanic* continued to play on as it went down. Bryars' piece imagines how the sound would have continued to reverberate as the ship sank, using an Episcopal hymn as the basis for the composition, originally scored for small

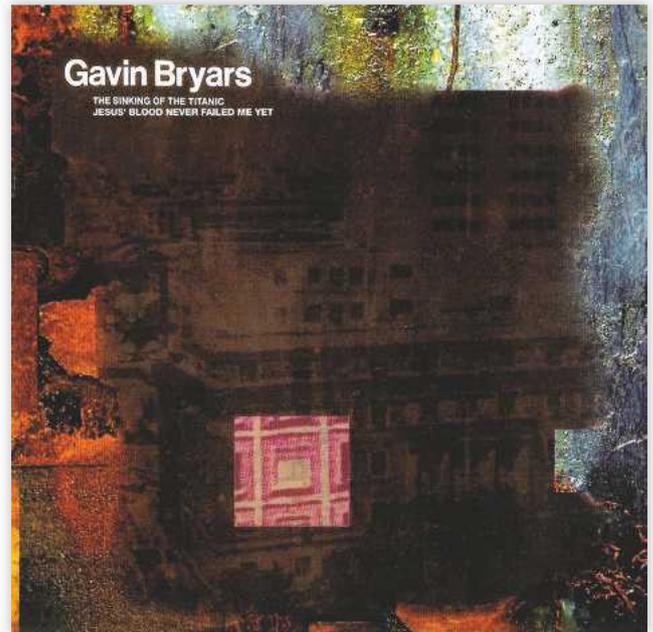
orchestra and tape. *The Sinking Of The Titanic* is an open work, evolving as new information about the disaster emerges, taking in various sound sources. It was re-recorded in a lengthier version in 1990.

Flip the record over and you'll find another of his most enduring works: *Jesus' Blood Never Failed Me Yet*. It's based

The Sinking was the debut release for Obscure in 1975

around an unknown homeless elderly man singing 13 bars of a religious song, turned into a haunting loop by Bryars and given a slowly evolving orchestral accompaniment. Lasting just under half an hour on the Obscure release, the moving piece was swelled to 74 minutes for a 1993 recording with Tom Waits singing along with the original loop.

Bryars founded the music dept at Leicester Polytechnic and briefly taught there



Brian Eno

Applied the concepts of Satie to electronics and astonishing variations on Pachelbel's *Canon in D*

Eno's contribution to the series is Obscure's most well-known release. *Discreet Music* (1975), his fourth studio album, is the first to be credited to his full name, perhaps as an indication that this is a record to be taken more seriously than his leftfield pop releases.

The first side of the LP is a direct precursor to the musician's next major project, and indeed the genre for which he is most readily associated: ambient music. "I was trying to make a piece that could be listened to and yet could be ignored... perhaps in the spirit of Erik Satie, who wanted to make music that could 'mingle with the sound of the knives and forks at dinner'" explains Eno in the liner notes.

He had explored this ambient direction with King Crimson guitarist Robert Fripp on the duo's *No Pussyfooting* (1973) and on some instrumentals on

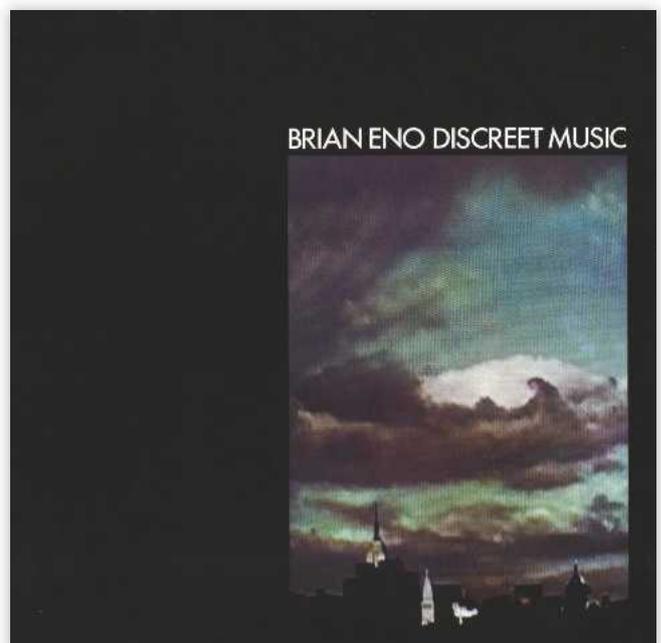
solo LP *Another Green World*, but it's on this luscious half-hour piece where the concept is best realised. It was intended to be played at low volume and conceived as background music for Fripp to play over in planned duo concerts. For the technically minded, an operational diagram

Eno had explored ambient with Robert Fripp

on the sleeve showed how to make a similar piece yourself.

The second side of the album is *Three Variations on the Canon in D Major by Johann Pachelbel*, performed by the Cockpit Ensemble, conducted by Gavin Bryars, who also arranged the piece. Each variation takes a fragment of Pachelbel's score (two or four bars) as its starting point and permutes the players' parts.

Eno has worked with everyone from U2 (on seven albums) to Bowie



Michael Nyman

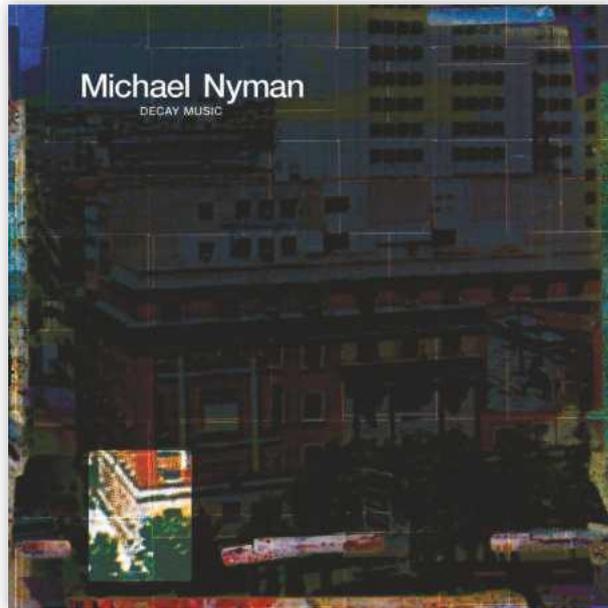
Avant-garde outing for the prolific composer's vinyl debut

The minimalist composer collaborated with Peter Greenaway on numerous projects – including *The Cook, The Thief, His Wife And Her Lover* – and is perhaps most famous for his soundtrack to Jane Campion's *The Piano*.

The first vinyl entry in Nyman's considerable discography was *Decay Music* (1976). Produced by Eno, who like Nyman was a member of Gavin Bryars' Portsmouth Sinfonia, it consists of two avant-garde pieces that will surprise any listener more familiar with his soundtrack and opera work. Side A is filled by *I-100*, a low-volume piece for multi-tracked, repeated chords, making fantastic use of silence as Nyman moves from the high to low end of the piano. Written for Greenaway's film of the same name and played at half-speed, it was only unused because it was too

long. *Bell Set No. 1* on the flipside is a brilliant gamelan-inspired piece for bells, triangle, gongs, cymbals and tam-tam, again focusing on

the concept of decay as the piece begins fast and ends slowly. *Decay Music* is one of the few Obscure albums to enjoy a CD release.



Harold Budd

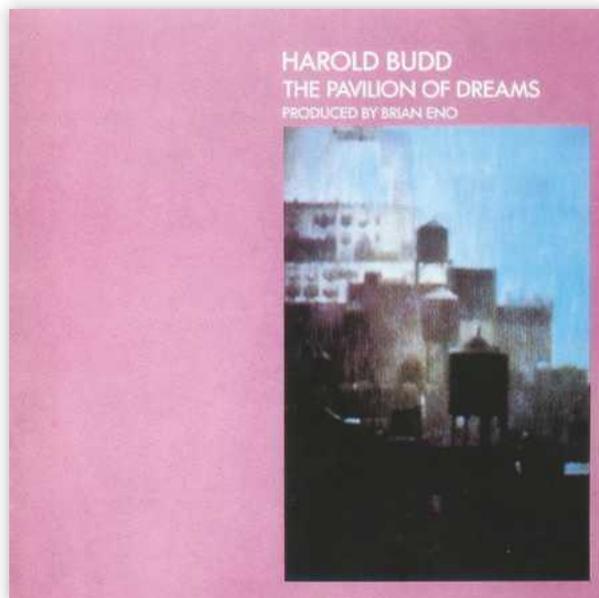
Ambient forerunner and future Eno collaborator

Composer and poet Harold Budd describes his piano style as “soft pedal” – slow and sustained. He collaborated with Eno on classic ambient recordings *The Plateaux Of Mirror* (1980) and *The Pearl* (1984), featuring his hallmark keyboard style.

Again produced by Obscure's head, *The Pavilion of Dreams* is an extended cycle of works begun by Budd in 1972. Released in 1978, the album's opening track *Bismillahi 'Rahman 'Rahim* (Arabic for: In The Name of God, The Beneficent, The Merciful) features the alto saxophone of Marion Brown as well as appearances from Michael Nyman (marimba) and Gavin Bryars (glockenspiel). *Two Songs* follow this beautiful piece of music: *Let Us Go Into The House Of The Lord* is a setting of a traditional hymn after a version by Pharoah

Sanders, while *Butterfly Sunday* is adapted from John Coltrane's *After The Rain*. On the second side, *Madrigals Of The Rose Angel*

and *Juno*, continue the contemplative mood of the album, as ripples of piano and heavenly voices take us blissfully to the runout groove.

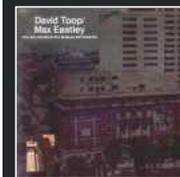


► SHOPPING LIST

The whole series is definitely worth tracking down, and there are also excellent Obscure-related releases to enrich your record collection with.



Christopher Hobbs, John Adams and Gavin Bryars
Ensemble Pieces
This was the second classical work released on Obscure.



Max Eastley and David Toop
New and Rediscovered Musical Instruments
Featured Eastley's strange, self-built instruments.



Jan Steele and John Cage
Voices and Instruments
One of Eno's major achievements was getting Cage's compositions to a wider audience.



Penguin Café Orchestra
Music from the Penguin Café
Material from the first lineup of Penguin Café Quartet from 1974 onwards.



John White and Gavin Bryars
Machine Music
The Squirrel and the Ricketty Racketty Bridge has four guitarists playing two guitars simultaneously.



Tom Phillips
Irma
Music by Gavin Bryars and libretto by Fred Orton on this collab with Tom Phillips on this experimental 1969 opera score.



Brian Eno
Music For Airports
Planned to be the 11th Obscure release, this became the first installment of Eno's groundbreaking ambient series.



Gavin Bryars with Tom Waits
Jesus Blood Never Failed Me Yet
This 1993 re-recording has Tom Waits providing the tramp loop.

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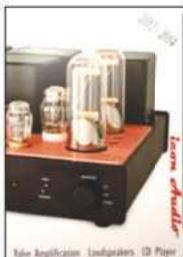
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Audiolab 8200 CDQ	£650	Welborne Labs DRD45 monos Rectifying psu	£1,995	Wadia 3811	£3,990	Dan D'Agostino Momentum Integrated	£26,990
Wadia Digimaster X64.4	£390	Avantgarde Acoustics Duo 2.2 & 225 subs	£6,490	Nottingham Analogue Wave Mechanic	£250	Western Electric 300B (3 Matched pairs)	£2,995
Focal JM Lab Diablos Utopia III & Stands	£4,590	Nordost Vishnu Power Cable	£250	Boulder 2060	£14,990	Mark Levinson No 31.5 Reference CD Transport	£3,590
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Focal JM Lab Alto Utopia	£4,750	VPI Classic 2/JMW 10.5i & SDS psu	£2,490	Wadia S7i	£7,990	McIntosh C2200	£3,750
Plinius CD-Lad (pre-processor by-pass)	£390	PS Audio P300 Power Plant	£460	Meridian Audio DSP 5200	£7,500	VTL TP6.5 Phono	£4,500
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Audio Aero Capitole Signature	£3,300	B&W DM 70 Continentals	£1,800	BMC Audio CS2 Integrated/ Power Amplifier	£4,595	Musical Fidelity Kw Phono	£1,450
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Audiolab 8200CD	£600	Dali 300 Mk2 in Rosewood	£1,650	Chord Electronics 1200c	£1,690	Sony TAE 800	£2,990
Audiomeca/ Pierre Lurme Mephisto CD Transport	£790	Eclipse TD512, A502 + Stands	£2,000	Conrad Johnson Prem 8A monoblocks	£4,950	Tom Evans The Vibe pre & Pulse power supply	£2,750
AVI Series 21 MC4 Reference	£690	Eggleston Works SAVOY	£15,000	Crimson Electronics 640 E3 Monoblocks	£3,399	VTL TL 6.5 Signature Line Pre	£9,990
Bel Canto Dac3	£2,199	Focal JM Lab Alto Utopia	£4,750	Edge NL Reference Monoblocks	£34,990	Turntables/Arms/Cartridges & Phonostages	
Bel Canto USB Link 24/96	£349	Focal JM Lab Diablos Utopia III & Stands	£8,100	Edge NL12.1	£8,900	Aesthetic IO Eclipse	£15,590
Blunote Stibbert valve improved	£1,800	Focal JM Lab Diablos Utopia III & Stands	£4,590	Gryphon Antileon	£5,990	Astin Trew AT8000 phono	£450
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100 Emily Barker
The Toerag Sessions



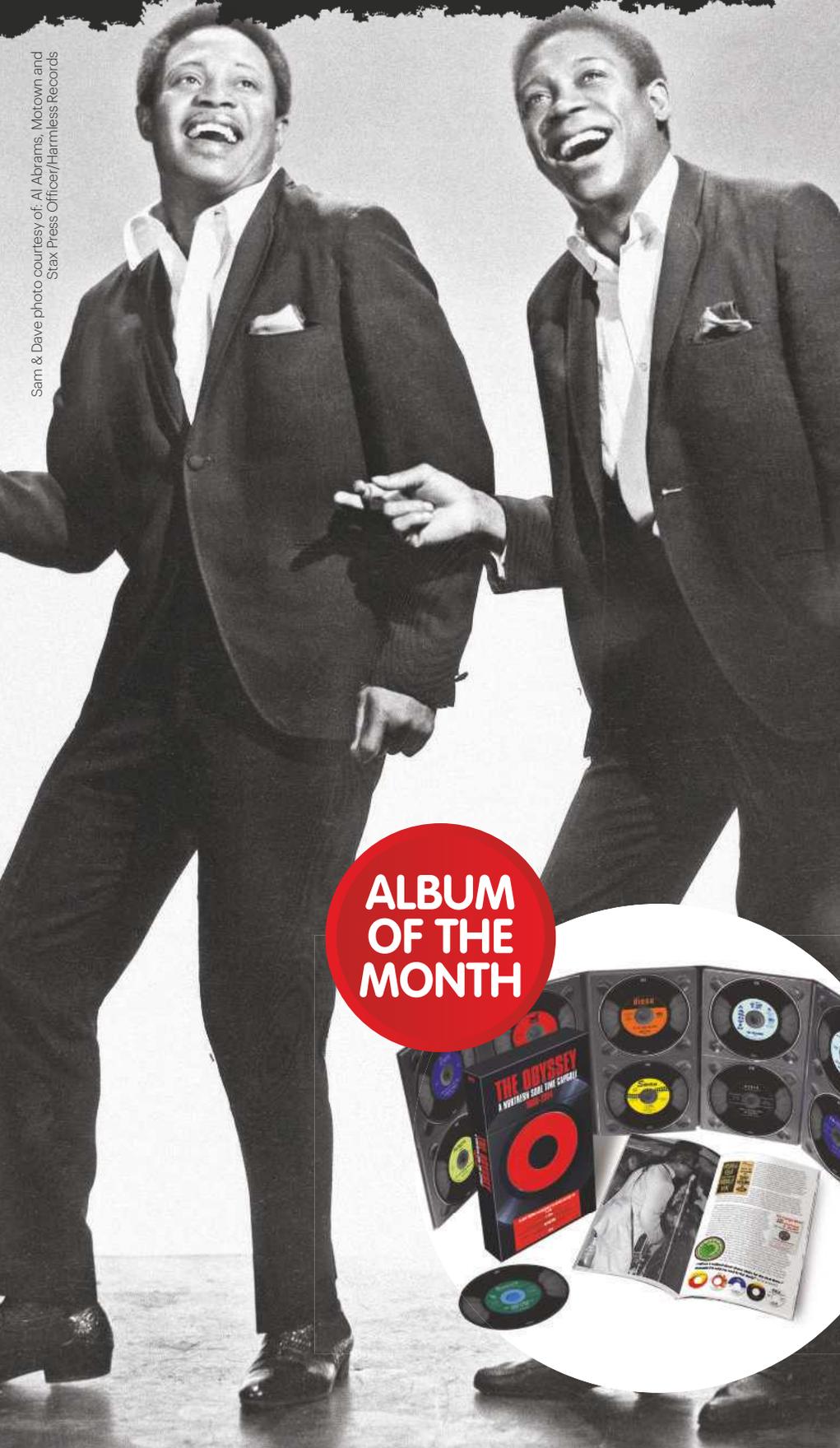
101 Joe Stilgoe
We Look To The Stars



101 Lorin Maazel
The Complete
Early Recordings

Musicreviews

Sam & Dave photo courtesy of: Al Abrams, Motown and Stax Press Officer/Harmless Records



Various artists

The Odyssey: A Northern Soul Time-Capsule

★★★★★

8x CD/2 DVD box set
Harmless Records

BACK IN THE seventies when soft southerners were getting off on prog-rock and punk, the ballrooms and dancehalls of northern outposts like Wigan, Blackpool and Cleethorpes were heaving as white working class youths danced to black American soul records rooted in the infectious express-train rhythms of Motown, Stax *et al*.

Almost totally ignored south of Birmingham, shunned by the media and run by the fans, northern soul swiftly became a cult with its own fashions, dance moves and an obsession with vinyl rarity. The dance-until-dawn, all-night, take-it-to-the-limit sessions elevated the concept of the night out to sacramental heights and created a blueprint for future club culture. But it took 40 plus years and the success of Elaine Constantine's critically acclaimed 2014 film *Northern Soul* for the phenomenon to attain mainstream recognition.

The Odyssey is a splendid manifestation of the wider crossover appeal that's now attracting a new generation of fans to the music – a foot-stomping, booty-shaking, energy-to-burn compendium of 230 classic soul tracks spread over eight discs, augmented by two DVDs featuring the documentary film *Keep On Moving On* and context-setting interviews with the scene's movers and shakers, plus a magnificently illustrated and expertly annotated 150 page book.

Of the various northern soul compilations flooding the market, this feels like the definitive collection – no surprise, perhaps, given that back in the seventies the set's curator Ian Dewhirst, now head of Harmless Records, was a DJ at the Wigan Casino, Cleethorpes Pier, Leeds Warehouse and other legendary venues. Dewhirst also brings a labour-of-love passion and encyclopaedic knowledge to the comprehensive track listing.

Where big names such as Gladys Knight & The Pips and Junior Walker & the All-Stars are represented, it's by lost gems that were hidden on b sides or obscure albums rather than their well-known hits. The true 'stars' are the likes of Garnett Mimms, Chuck Wood, Levi Jackson, Willie Tee, the Casualeers and the Detroit Executives.

The remastering is crisp, with plenty of bottom-end heft for the pneumatic bass lines and riffing horns while pushing the vocals prominently up front. Given this is propulsive music made for the dance-floor rather than finely chiselled for nuance, the dynamic range and brightness is great. **NW**



Van Morrison

Duets: Reworking The Catalogue

★★★★★

CD

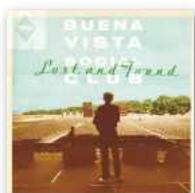
RCA

DELIBERATELY ESCHEWING HIS best-known hits, Morrison's first album in three years revisits 16 lesser-known songs spanning more than 40 years of his storied career, from 1970's *If I Ever Needed Someone* to 2012's *Born To Sing*. The twist is that each track features a new arrangement and also finds Morrison duetting with a different artist, ranging from the sublime (Bobby Womack, Mavis Staples) to the faintly desperate (PJ Proby, Michael Bublé).

This is classic Van, relaxed and mellow with a jazzy swing and some stellar vocals

Morrison has long produced himself, prompting some critics to urge him to break out of his comfort zone and employ an outside producer. He's finally done so, handing over production to Don Was (Rolling Stones) and Bob Rock (Metallica). But they've barely tinkered; this is classic Van, relaxed and mellow with a jazzy swing and some stellar vocal performances from the man and his guests. In other words, just how most of us would want it. **NW**

MUSICREVIEWS



Buena Vista Social Club
Lost And Found

★★★★★

CD

World Circuit

WHEN RY COODER and producer Nick Gold went to Havana in 1997 to record a group of pensioners along with some musicians from Mali (that never actually made it to the session), the romance was irresistible. They went on to sell seven million albums and win a Grammy as well as recording some of the richest, ripest Cuban music of all time. Now that many of the veterans are dead, the vaults have been raided for unreleased gems. But there's no hint of barrel scraping in these 13 unreleased tracks - just an elegiac grace and timeless groove, made more poignant by the knowledge that we shall never hear their like again. **NW**



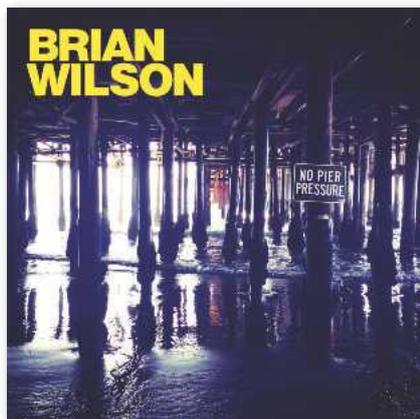
Bassekou Kouyate
Ba Power

★★★★★

CD

Glitterbeat Records

THE GREAT NGONI master cranks up the volume and does a Dylan, going electric and rocking out with the passion of an evangelist for a new sound. Believed to be the ancestor of the banjo, the ngoni is a traditional instrument, but Kouyate has his amped up and is kicking it, with wah-wah and distortion fuzz effects contributing to a sound that seems to owe almost as much to Western rock as traditional Mali rhythms and structures. This is a party album at heart, designed to get the feet moving and the arms waving, though there's still room for a little bit of traditional, acoustic ngoni among the dance numbers. **DO**



Brian Wilson

No Pier Pressure

★★★★★

CD

Capitol Records

WILSON SAYS HE wanted to incorporate the three main phases of his life here - *Pet Sounds*, *Smile* and his later years. So we get the harmonies, sweeping strings, trebly bass guitar and those famous snare drum cracks. Surviving BBs Al Jardine and David Marks help out, as do seventies band members Blondie Chapman and Ricky Fataar, plus there are contributions from singer/actress Zoëy Deschanel and jazz trumpeter Mark Isham. The sound is lush and warm, but is a little thrown together with influences and guests drifting in from all quarters. This is as good a slice of sun-dappled, bitter sweet memory lane cruising as he's created, a fine piece of late-period Wilson. **DO**



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

★★★★★

HOT PICK

Emily Barker
The Toerag Sessions

180g vinyl

Everyone Sang



EMILY BARKER IS a hard working Aussie whose previous releases were made with other musicians, but she plays a lot of solo shows and realised that there is

demand for this style of music making. With just her voice, guitar (acoustic and electric) and occasional harmonica, this is a brave and honest album that sounds glorious thanks to Toerag Studios and its vintage, all analogue equipment. The same hardware that the White Stripes used on *Elephant* as it happens. The fact that an even more purist facility, Gearbox, mastered the vinyl

on its veteran tube-powered kit ensures that the songs cut live to quarter inch at Toerag are delivered in all their glory.

The work is something of a director's cut of the songs she has recorded to date, it owes much to the protest singers of the early sixties but just as much to Barker's nostalgia for her homeland. Just as Dylan was able to communicate more effectively in his acoustic period, this approach works for Barker, who by paring things back to their bare bones makes the ideas and feelings behind them all the more explicit. The album seduces you with its sumptuous sound, but rewards further listening with the unfolding of the performer's heart. **JK**

HIGH RESOLUTION DOWNLOADS

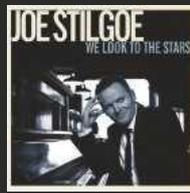


Ethan Johns
Live at Kings Place



FLAC 24-bit/96kHz

B&W Society of Sound



Joe Stilgoe
We Look To The Stars

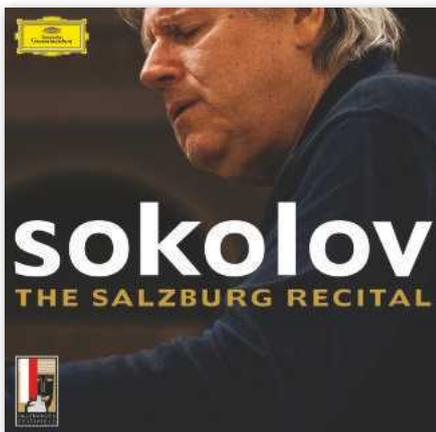


ALAC/FLAC 24-bit/96kHz

Linn Records

THE SON OF legendary producer Glyn Johns (Stones, Zeppelin, Clash, you name it), Ethan has established himself as a very strong name in his own right, working with the likes of Ryan Adams, Laura Marling and Paul McCartney. For these rough and ready sessions he's with his regular band (though steel guitar maestro BJ Cole is absent) playing his blues-influenced slide guitar with tender, almost hesitant vocals on songs culled from *The Reckoning*. **DO**

THE JAZZ PIANIST goes for the full cabaret shebang with parping horns, fizzing keyboard runs and uptempo rhythms supporting a swinging set that harks back to the classics while offering a bit of a modern, melting pot edge. Not as 'jazzy' as his first album, this is Stilgoe as the big-hearted entertainer, belting out the (mostly) original tunes with a smile and a wink. The solo piano version of *Waterloo Sunset* comes as a surprising highlight. **DO**



A beautifully captured live performance - slips and all

Sokolov

The Salzburg Recital



Two CDs

Deutsche Grammophon

ONE GETS SO used to hearing 'tinny' emasculated Dresden China Mozart, that it's almost a shock to hear his music played with warmth and amplitude. Sokolov's performances of Mozart's sonatas K280 and K330 on the first CD sound wise and relaxed; rich and considered, yet curiously avoid sounding dated or old-fashioned. The second CD is mostly given over to the 24 Chopin Preludes, and again the playing is very roomy and spacious. The live recordings sound natural and full-bodied, with natural tone quality and plenty of atmosphere. Applause is included, and the odd finger slip and wrong note only adds to the impression of hearing a live performance caught on the wing. **JH**



Lorin Maazel
The Complete Early Recordings on Deutsche Grammophon



18 CDs

Deutsche Grammophon

THIS 18-CD BOX brings together the first recordings made by Lorin Maazel for the Yellow Label up to the mid sixties. All are stereo, aside from the first two discs. His Mozart and Beethoven can seem a bit seem showy and rather heartless, but the Brahms 3 and Tchaikovsky 4 are good, and the two Ravel operas impress - amazing sound - despite being recorded over half a century ago. DG's sound quality is mostly clear, sharp, and colourful - early stereo at its vivid best. True, the high frequencies can 'spit' a bit, and climaxes sometimes blare. But for the most part the results sound exciting and impressive. **JH**

BLU-RAY DVD ★★★★★

Metallica
Quebec Magnetic

Blu-ray

Universal



Love 'em or loathe 'em there's no denying that Metallica know how to put on a show. This 2009 concert reveals how the years on the road have honed them into a well oiled rock machine. James Hetfield and his collaborators are tireless. They deliver intensity and energy along with a cannon of material that continues to knock 'em dead in the aisles. The sound is as compressed as it comes, but possibly better than Metallica's recent audio releases. Just get as many channels up as you can and don't spare the subs. Even in 2.0 it's potent stuff. **JK**

DEMO DISCS



Roger Batchelor, Product Marketing Consultant at D&M Audiovisual Ltd, reveals the music used to develop products



Cassandra Wilson
Loverly

This excellent recording has a wide-open sound stage and is ideal for checking each performer's position in the stereo image.



Patti Smith
Banga

This is great for hearing differences between different components and speakers. Listen for how easy the deep bass lines can be followed.



Kate Bush
50 Words For Snow

Check for how clearly the layers of instruments, effects and backing vocals are revealed, and how easy it is to follow the bass and drums.



Chick Corea Trio
Trilogy

There are lots of elements to listen out for on this. If your system is up to par, by the time the audience join in you should want to as well!

HI-RES HIGHLIGHTS

Our pick of the best hi-res downloads released over the past month...



This month High Res Audio (highresaudio.com) has an eclectic mix including The Specials' *Specials*

Remastered, Herbie Hancock's *Mwandishi*, Billy Joel's *The Bridge* and for those feeling racy, Danny Elfman's *Fifty Shades Of Grey Soundtrack*. B&W's Society of Sound has The Will Gregory Moog Ensemble (above), which is a delightful mix of classical pieces and original compositions from the man behind Goldfrapp (bowers-wilkins.com/themoogensemble). Finally HD Tracks (hdtracks.co.uk) has a selection of Lou Reed cuts along with Noel Gallagher's *Chasing Yesterday* and Kelly Clarkson's *Bohemian*.

Minitest

IN-EAR HEADPHONES £50-£80

Budget earbuds

When over-ear headphones are too bulky, in-ear is the way to go for music on the move. **Jake Day-Williams** tries some on for size

On those rare occasions when you have to go out and about in the wide world and don't want to leave your music behind, a portable music player is a sensible option and now more than ever the choice of headphones is plentiful. But what if you're after something a bit more discreet? Not everyone wants to walk around with comedy foam cups emblazoned with garish logos and day-glo colour schemes strapped to

the side of their head – and this is where in-ear headphones come into their own.

Admittedly, they are unlikely to give you the bass quality or depth that an on-ear pair of cans will, but that's not to say that they're completely inferior. In-ear headphones invariably provide superior isolation to other people's noise – thanks to the way the buds can be jammed into your ear canal to block out the outside world – and are less likely to disturb others with

your's. They are lighter, arguably more comfortable and won't interfere with glasses, earrings or hairstyles in the same way on-ears can do. And if you like to partake in exercise, they're ideal for keeping you entertained without getting in the way. The four in-ear headphones here have been taken out and about and used with a portable music player in a variety of environments, with a broad selection of music and some spoken word to see how they fare.

Final Audio Design Heaven II

PRICE: £80 TELEPHONE: 01903 768919 WEBSITE: final-audio-design.com

DETAILS

PRODUCT
Final Audio Design
Heaven II

ORIGIN
Japan

WEIGHT
16g

FEATURES
1.2m flat cable;
Original Balanced
Armature driver;
102dB quoted
sensitivity

DISTRIBUTOR
KS Distribution

WHEN IT COMES to expensive high-end earphones, Japanese brand Final Audio Design leads the way with several models costing £1,000 or more. But happily it provides some affordable options for those of us that can't afford to break the bank (including the gorgeous £170 Heaven IV, tested *HFC 377*). Boasting the same 'canal type' design as the IV, the Heaven II is without doubt the sleekest of all of the in-ears in the roundup. Simplicity appears to be the buzzword here and the slim stainless steel barrel is the antithesis of the Musical Fidelity offering. They're available in a choice of blue/grey or black finish and come with a selection of five sets of buds. There's no bag, no inline remote control and no mic, which isn't disastrous but I can't help missing the remote after having it available on the other models.

The upside of the simple barrel design is that the Heaven II feels incredibly unobtrusive and is hardly

noticeable. Of all the earphones, the buds appear to go further into the ear canal to form a tighter seal against the outside world that makes leakage almost non-existent and isolation about as good as it gets. Impressive though this undoubtedly is, I begin to find the experience a little uncomfortable and can't wear the earphones for much longer than 10-15 minutes and I find that if I take one earpiece out to speak to someone, the other one tends to fall out with surprising ease.

Heaven sent

Like the IV, the Heaven II is an extremely impressive earphone, capable of some excellent results. Key among which is undoubtedly the sensitivity that comes to the fore with acoustic material. Similarly, the amount of fine detail present is also a highlight, making it possible to pick out individual instruments in more complex mixes where lesser earphones



collapse into a mush of noise. The only minor criticism – and it is minor – is that high frequencies tend to sound harsher as the volume is cranked up ●

VERDICT

Impressive sensitivity and a solid all-round performance, if not the most comfortable



Musical Fidelity EB-33

PRICE: £80 TELEPHONE: 0208 9002866 WEBSITE: musicalfidelity.com

DETAILS

PRODUCT
Musical Fidelity
EB-33

ORIGIN
China

WEIGHT
24g

FEATURES
1.2m cable; mic/
remote control;
105dB quoted
sensitivity

DISTRIBUTOR
Musical Fidelity

TASTE IS VERY much a personal thing but the EB-33 is more likely to split opinion than any of the other earphones in this roundup. You see, in order to fit in the not inconsiderable 13.5mm dynamic drivers that the Musical Fidelity offering boasts into each earpiece, these are about as bulky a set of earphones as you're likely to find – wearing them is kind of like having two small metal cotton reels hanging off the side of your head.

Happily, the EB-33 is not as uncomfortable as initial appearances would suggest, but after wearing the altogether more sleek Heaven II, I can't help but feel rather self-conscious walking around with them on.

Hefty drivers aside, there's much to like here and the 1.2m flat ribbon cable (with handy tie to keep excess out of the way) remains tangle free. The build is probably the best of the group, with the robust finish suggesting that this earphone will

withstand the trials of commuting much better than most.

Getting it right

The neat colour coding is a real plus point, ensuring that you can locate the right 'phone for the right ear with the minimum of effort, while the bundled accessories are pretty much par for the course – nine sets of different-sized ear tips and a drawstring velour bag to keep the phones in when not in use.

Though not as sleek as the Heaven II, the large drivers of the EB-33 are

capable of superior bass levels, but not at the expense of the rest of the soundfield, which is beautifully balanced. Upper frequencies are impeccably rendered, staying sharp and clear even as the volume is upped. Soundstage is also impressive with individual instruments clearly defined in the mix ●

VERDICT

Design aside, this earphone provides a masterful mix of grace and balance



NuForce NE750M

PRICE: £80 TELEPHONE: 0191 4877123 WEBSITE: leconcepts.com

DETAILS

PRODUCT
NuForce NE750M

ORIGIN
USA/Asia

WEIGHT
14g

FEATURES
1.2m cable; mic/
remote control;
105dB quoted
sensitivity

DISTRIBUTOR
Leconcepts

PROJECTOR MANUFACTURER OPTOMA is probably not the first name that springs to mind when it comes to sonic sensibilities, but with its recent acquisition of US hi-fi specialist NuForce, this could all be about to change. The company has kick started its hi-fi portfolio with the release of an affordable amplifier and headphones and earphones are another area that it is now branching out into.

The NE750M falls somewhere between the Rock Jaw and Musical Fidelity offerings in design terms. While certainly more robust than the former, the barrel-like drivers aren't quite as large and clumsy as the latter and sit comfortably in the ear without drawing too much attention to themselves. In truth, the finish has the cheapest feel of all of the models here and the 1.3m cable has a slightly sticky finish to it. It comes with a clip and an inline remote for starting and stopping music, but no microphone for use with

a mobile phone. There's a small red ring around the wire on the right-hand earpiece to make it quick to locate. Accessories bundled in the box include five sets of ear buds and a black padded pouch for storage.

Jump to the beat

The failings of the NuForce earphones are by no means serious, if anything they just fail to match the fine quality of their rivals here and on another day in different company might have fared better. On the positive side, bass levels are deep enough to keep even the biggest bassheads nodding to the beat, while there's a decent separation across the frequency spectrum. The problem is that the clarity is not up to the high standards of the other models in most areas. Treble details aren't quite so crystal clear, it's difficult to pick out individual instruments from the mix and the soundstage doesn't have quite the same depth as elsewhere ●



VERDICT

Perfectly decent performers that might fare better among less impressive company



Rock Jaw Alfa Genus

PRICE: £50 TELEPHONE: 01773 880980 WEBSITE: rockjawaudio.com

DETAILS

PRODUCT

Rock Jaw
Alfa Genus

ORIGIN

England/China

WEIGHT

14g

FEATURES

1.2m cable; remote control; 108dB quoted sensitivity

DISTRIBUTOR

Rock Jaw Audio

WITH A PHILOSOPHY that's difficult to argue with, Rock Jaw cites its aim to be to provide an excellent listening experience at a price that doesn't break the bank, something that's underlined by the price of the Alfa Genus, which is a good £30 less than the competition here. The people behind the company boast a mixture of experiences in and around the music business from DJs to studio techs and if this offering is a realistic representation of the manufacturer's output, the future looks to be very bright indeed.

Build quality is impressive and though, not quite up there with the Final Audio Design and Musical Fidelity offerings, it certainly doesn't reveal its more affordable roots. In fact, the Alfa Genus goes one better than its rivals by offering a selection of different driver designs, bundling a choice of 'black reference class' and 'gold neutral' 8mm dynamic drivers

that can be screwed in to replace the silver ones it comes fitted with. The 1.2m twisted cable also has a remote control for Android and Apple devices and there are three additional sets of ear buds (small, medium and large) along with a velour drawstring bag to store your earphones in.

Take your pick

The lightest earphones in the roundup, the Rock Jaw is comfortable to wear, but doesn't offer the same levels of isolation as the best in test do here. The beauty of having a choice of dynamic drivers is that you can find the sound that best suits your music – although tests quickly reveal that the gold neutral option is the way to go. Unlike the alternative drivers, a decent balance is struck between bass being too forthright and treble being overblown. The result is a more fulsome soundstage than I would expect for the asking price,



which is also surprisingly airy giving instruments room to breathe. When pushed, music isn't quite so dynamic as the best on test here, but this is still a very expressive and detailed earphone for the money ●

VERDICT

Phenomenal value for money offering that comes close to matching more costly rivals



Mini test verdict

ALL FOUR OF these offerings give decent performances, and if you invest in any of them you are unlikely to be disappointed by what they offer. The wooden spoon goes to the NuForce, which seems harsh as among slightly different competition it might have fared better.

The styling of the NE750M is inoffensive, the build is perfectly decent and the isolation that it offers is very good indeed. There's little in the way of leakage to annoy your fellow commuters and the bass goes down far enough to please those that like their low-end rumble deep. Having said that, it's the other areas of the soundstage where it doesn't manage to live up to the standards set by the rest of the field. While trebles aren't quite what you'd call tinny, they

are not quite as impressive as the other runners, while the width of the soundstage is not as broad.

Taking the bronze medal position is the Rock Jaw, which is no mean feat considering that it costs £30 less than its rivals. Key to success here is experimentation with the tuning filters. The default silver filters are too bass heavy, the black reference class option over eggs the treble, while the gold offers the most neutral sound, which is decent if a little bass light. The battle for the top spot is incredibly close, but in the end the Heaven II narrowly misses out.

Balance, bass response and tonality are all superb and it's only the slight hardening and harshness of the upper registers when the volume is pushed that lets the side down.



With an all-round polished performance the Musical Fidelity EB-33 takes the crown. The design might not be to everyone's liking, but the balance, sensitivity and control take some beating. Best of all it remains consistently unruffled as you crank the volume up.



One of the key advantages with the 'bud'-type of in-ear headphones that are pushed into the ear canal like the four tested here is that they provide far superior isolation to the on-ear headphones that simply cover the ear. Obviously, this is down to the size of fitting that you add to your phones and it's worth experimenting with the ones that come provided as different sizes can affect the bass response of your music.

Having said that, this also means that they are more susceptible to getting jammed up with ear wax and so you should try to keep the buds clean and check on them regularly. Cleaning is a simple matter of using some soapy water, or rubbing alcohol and Q-tips – depending on how dirty the buds are. We strongly suggest you don't let other people use your headphones as this is a surefire way to spread germs.

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Cambridge Audio

Azur 651P MM/MC phono stage

DISTRIBUTED THROUGHOUT

THE UK via the Richer Sounds network of retailers, Cambridge Audio's 651P is the big brother of the Azur 551P, which only supports moving magnet cartridges and lacks the subsonic filter of its sibling. It measures 215 x 46 x 133mm (wxhxd) and feels solidly constructed weighing in at 0.9kg, and features an acoustically damped metal chassis with a thick brushed aluminium front panel. The 651P is available in a choice of brushed black and silver finishes.

The understandably minimalist front panel houses the on/off switch and power LED, while around the back are three pairs of RCA sockets: two for the moving magnet and moving coil inputs and one for the output. A slide switch is used to select the input, which allows for permanent connection of two record decks, if required. An additional switch activates a subsonic filter. The unit is powered from an external plug-top 12V transformer to minimise hum-pickup by the unit. The rectifier and regulator circuitry is built into the 651P and features a delayed start at switch-on to avoid uncomfortable noises as the power supply settles down.

The A team

Under the bonnet, use is made of discrete transistors for the all-important input stages. The moving magnet input impedance is the customary 47kohms with 220pF capacitance, and the moving coil input is 100ohms with 220pF capacitance, which will suit a wide range of cartridges. The circuit employs a single-ended Class A gain stage with passive RIAA equalisation. The RIAA stage uses multi-parallel capacitors to achieve very good adherence to the theoretical RIAA curve of only $\pm 0.3\text{dB}$ up to 50kHz.

I connect the 651P to my record deck, which is fitted with a Kiseki Blue NOS moving coil cartridge and kick off proceedings with the legendary recording of Prokofiev's *Romeo and Juliet* played by the



London Symphony Orchestra under the baton of André Previn. The Azur immediately impresses me with its smooth and full sound presentation. Act 1 Scene 2 of the ballet is a minuet marking the arrival of the guests and is a piece with great contrasts, from the loud, triumphal entry of each new visitor to the delicate detail as they mingle with the other guests. The 651P takes all this in its stride and the music is both stately with great dynamics as well as intimate in the quieter sections, effectively conveying the formality of such an occasion.

Moving on to something simpler, some Beethoven Piano Trios played by the George Malcolm Trio sound exquisitely refined and the deftness of touch on the piano is beautifully presented with good clarity. The instrument focus, positioning and separation are excellent and I get a feeling of being drawn into the performance, rather than the musicians being remote and playing for their own amusement.

For something a bit different, I slip on a recording of Derek Austin's *20th Century Cowboy* – a recording played on several synthesisers dating from the eighties. The driving bass line is clear without being overpowering and the 'whistling' of the synthesiser playing the melody is smooth and

clear without being at all piercing. Once again, the 651P accommodates the music well and never gives the impression that it is struggling with the complexities of the music. Timing is spot on and all the components of the piece come together well. As the record has a slight warp, I switch in the sub-sonic filter and it seems to have no negative audible effect on the sound.

Cut out the clutter

For testing out vocal performance, there is nothing like the final movement of Beethoven's 9th Symphony *Ode To Joy*. When Rudolf Kempe really winds up the Munich Philharmonic and choir at the end, the performance can sound like a muddy blur with some lesser phono stages. Not so with the 651P. It lets rip with tremendous power and results in an uncluttered sound with a wide and spacious three-dimensional soundstage.

Given the Cambridge Audio's performance and flexibility, it is difficult to find fault with it. Even when proceedings start to get busy, the Azur 651P performs with an impeccable sense of rhythm, timing and clarity, making it very worthy addition to any shortlist at the bargain price. **NR**

DETAILS

PRICE
£120
TELEPHONE
0333 9000093
WEBSITE
richersounds.com

OUR VERDICT

★★★★★

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About Explorer² from Meridian Audio

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Russ Andrews®

Audio Suspension Brunel Speaker Stands



IF THE LOVELY clean lines of acrylic hi-fi furniture appeals to you and you are in the market for some stands for your compact loudspeakers, then the latest addition to the rapidly growing range of audio equipment supports from Audio Suspension will be of great interest. As with the other items in the range, the Audio Suspension Brunel Speaker Stands are made from high-grade 20mm low-resonance acrylic sheeting and have been designed to combine design flair with good functionality.

The stands are handmade in Audio Suspension's Sussex factory and are the result of research undertaken by a long-serving professional DJ/audio engineer, working with graduates of Imperial University and the Royal College of Art. The stands are made entirely from thick clear acrylic, which partly accounts for

the high cost of the finished product. They are flame polished by hand to give a perfect mirror finish to the edges that complement the mirror top and bottom surface.

On the level

Each stand has an inbuilt spirit level and adjustable spike feet that fit onto the metal shoes provided. These are Track Audio's award winning high-quality spikes, which have been chosen to provide excellent isolation. The shoes have felt pads on the base so there is no risk of damage to your flooring. The stands measure 250 x 650 x 300mm (wxhxd), excluding the spikes and shoes.

The Brunels are beautifully made and the manufacturing quality is faultless. They are very simple to set up, thanks to the spirit level and easily adjustable feet. Some blue



adhesive putty is provided for supporting speakers on the stand as Audio Suspension considers that this offers the best sonic properties as well as being very secure. The stands work extremely well at providing a sturdy and tonally neutral support for a compact speaker. With these in use, I have no sense of colouration or an over-lively bass, even when playing rock music. Furthermore, I feel that the imaging is really excellent. **NR**

DETAILS

PRICE
£550
TELEPHONE
01273 270613
WEBSITE
audiosuspension.com

OUR VERDICT



Edwards Audio Apprentice headphone amplifier



HAVING BEEN IN the hi-fi business for around 20 years, Talk Electronics knows a thing or two about making audio components. Within the broader scope of Talk Electronics, Edwards Audio is targeted towards entry-level components like this single input Apprentice headphone amp. The op-amp based design with a fully discrete output stage has standard RCA phono input sockets, and the output is a professional-quality 6.3mm Neutrik headphone socket. The unit is 115 x 47.5 x 160mm (wxhxd) and weighs 270g.

The Apprentice has been designed to have a very low output impedance and will drive all known types of dynamic headphone with its 1W maximum output into a 32ohm load. The pre-amp section is a totally active design with improved RF rejection

over the previous model. It is supplied with a plug-top switched-mode regulated power supply, designed for low noise and to enhance the dynamic range of the amp. There is no power switch, so it has to be turned off by the mains socket.

Down to business

I connect the Apprentice to the output of my phono amplifier and I then plug in some Sennheiser HD600 headphones. First to spin is a splendid recording of John Williams playing some Giuliani on a guitar with the English Chamber Orchestra. I am instantly struck by the effortless and

large-scale performance from this little box. The detail and sophisticated rendering of the guitar is really quite incredible.

At the other end of the musical scale, some Pink Floyd is equally impressive. The cash registers at the start of *Money* come at me from all directions and the bass line cuts in with a forceful driving rhythm. Finally, a Prokofiev piano concerto performed by Vladimir Ashkenazy is both elegant and refined, together with a very spacious soundstage.

The Apprentice is no novice in performance terms, and is a great buy at the price. **NR**



DETAILS

PRICE
£120
TELEPHONE
01344 844204
WEBSITE
talkelectronics.com

OUR VERDICT



Sony

MDR-1ADAC headphones



IT'S WIDELY ACKNOWLEDGED

that the vast majority of computers have inferior soundcards and are often unable to handle hi-res audio. As a consequence external headphone amplifiers and USB DACs are commonplace. Likewise, smartphones and portable audio players aren't renowned for the quality of their audio and very few can even play back hi-res files.

But using an external DAC with a portable device is more complex than it is with a desktop machine. Not every audio fan will want to carry around a separate DAC and anyway, doing so can sometimes result in a lengthy analogue path when it pays dividends to keep the signal digital for as long as possible. A pair of active headphones such as the Sony MDR-1ADAC makes perfect sense. It also features a built-in S-master HX amp with 1,500mW of power handling with a claimed sensitivity of 102dB/mW.

Wired for sound

The headphone can receive the analogue signal from a phone or portable audio player using the standard 3.5mm line input, but to take advantage of the internal DAC you need to take the digital path. Sony has made provision for devices with a range of digital outputs comprising Apple's Lightning connector, micro-USB, USB and its own proprietary Walkman connection. You simply select the appropriate cable from the selection and plug it into the micro-USB input on the left enclosure. A separate micro USB input is provided exclusively for charging (it takes four hours to give you enough juice for around seven or eight hours of playback). On the right cup is a rotary volume dial.

The USB DAC is hi-res 24-bit/192kHz compatible and can handle DSD 5.6MHz signals (albeit by converting them to PCM). The specially developed diaphragm combined with 40mm HD drivers claims to deliver a wide frequency response from 4Hz to 100kHz, dependent on the source.

A simple power button is provided for use with digital sources, and it requires a long press to switch the DAC on and a second press to switch it off, but inserting an analogue cable also switches the DAC/amp off to conserve power and automatically switches the input.

This is certainly a classy-looking headphone with plush, black leather earpads. The headband is also clad in soft leather and can be extended or retracted with a reassuring degree of strength and flexibility. Build quality is decent and the MDR-1ADAC feels comfortable. It sits nicely on the head and has enough grip so that you can run for a bus wearing it, but you'd push your luck with full-on marathon training. The enclosures aren't hinged, but can be swivelled flat to reduce their bulk. A carry pouch is also provided.

With an iPhone 5 the performance bar is set very high using the analogue output in passive mode. These are extremely revealing cans, serving up impressive levels of detail across the dynamic range. With the soundtrack from *West Side Story* the oboes, clarinets, flutes and piccolos can be heard discretely and emphatically. As the strings, horns and percussion kick in, the piece has a terrific vitality and enthusiasm about it as the headphone reveals its competency with soundstaging and

scale. Bass, as with the drum beat at the start of David Bowie's *Valentine's Day* is as taut and punchy as a volley of jabs from Floyd Mayweather Jr.

The digital difference

Switching to digital mode the difference is not all that profound, but the delivery is a tad smoother. Where the DAC really comes into its own is with desktop computer audio or a dedicated portable audio player where you can play hi-res files. Hooked up to a Sony hi-res portable player (the NWZ-F886, reviewed *HFC 381*) with the original 24/96 download of *Valentine's Day* there is a notable step up in terms of texture and timing, transient notes are maximised and the emotional impact goes up a notch or two as you become less aware of the presence of the cans and focus more on the sound. The guitars and Bowie's vocals benefit from the extra headroom so that you get a real sense of how the sound engineer intended all of the elements of the track to work together. The delivery is consistent across all genres and holds up well when driven hard (although noise isolation is so good that you rarely need to crank up the volume). Overall then, this is a really rewarding pair of headphones to own especially if you're a hi-res music enthusiast. **AJ**

DETAILS

PRICE
£249
TELEPHONE
0845 6000124
WEBSITE
sony.co.uk

OUR VERDICT



Xpression Carbon

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Russ Andrews

PowerPak Pro power supply

IT'S OFTEN THE case that manufacturers save costs by providing inexpensive switched-mode power supplies with audio equipment. These are often referred to as wall-wart supplies because the entire power supply is housed in an enlarged mains plug. They are more efficient and cost less to produce than a linear regulated power supply, but they do have problems.

A linear power supply has three key elements. Firstly, it has a transformer to reduce the mains voltage to that required by the equipment. Then it has rectifying and smoothing components to convert the voltage to DC. Finally, it has a regulator to provide an accurate and stable voltage for the equipment. All this generates heat and, as it operates at mains frequency, the mains transformer is large. However, in terms of noise, it is primarily 50Hz signals that it has to filter out. Conversely, a switched-mode supply takes the input voltage and switches it at a high frequency, so the circuits are either on or off and, therefore, do not dissipate energy in themselves. Although more complex than a linear power supply, they are more efficient and also utilise smaller components.

Sensitive subject

The big down side is that all this switching generates large amounts of complex high-frequency energy that low-pass filters must block, starting from the switching frequency and covering all the harmonics. Unless carefully designed, a switched-mode supply generates RFI and EMI – all very bad news around your sensitive audio equipment.

The PowerPak Pro measures 80 x 58 x 160mm (wxhxd) and can deliver up to 60W of power from its high-performance switched-mode circuitry, so it is very efficient. Depending on the model chosen, it produces either 5V, 9V, 12V or 24V from its 2.1mm DC output socket. As with other switched-mode designs, it will work automatically from 100-240VAC input. Internally,



it is wired with Kimber Kable with Kimber Kap and Panasonic audio-grade capacitors. The PowerPak Pro also has a Russ Andrews Silencer mains filter and is fitted with a 10A IEC input socket. You'll need to buy a mains cable separately.

I'm looking at the 5V version, with a PowerMax Plus mains cable, which is suitable for use with my Logitech Squeezebox Touch. Incidentally, the lead that connects between the power supply and the Squeezebox is directional and this is indicated by an arrow – this is important as the connectors at each end look similar, but are slightly different sizes.

Starting off with a CD-quality (16/44) recording of Vivaldi's *Paris Concerto 11* played by La Serenissima and swapping between the power supplies, the sound with the PowerPak Pro is definitely smoother and has better imaging with a noticeably wider soundstage. With the Squeezebox power supply, I find strings to be a tad harsh and squeaky. With the PowerPak Pro, the strings become smooth and well positioned, with much greater clarity and realism.

I then move to a high-resolution WAV file as a source with Michael Kaeshammer playing *On The Sunny Side Of The Street*. The piano is much more believable and there is a real

tightening up of the bass, making it more extended and musical.

A fantastic 24/48 FLAC recording of The Scottish Chamber Orchestra playing Beethoven's *Piano Concerto No 3 in C minor* demonstrates an improvement in front to back imaging, with the piano placed noticeably in front of the orchestra. In comparison with the Squeezebox power supply, some residual harshness with the strings vanishes when the PowerPak Pro is fitted.

Sing it baby

Always a good test for an audio system is some choir music as the individual voices often become muddled together and indistinct. This is certainly the case with the original power supply playing a 24/48 FLAC recording of J S Bach's *Mass in B minor* performed by the Dunedin Consort. Switching to the PowerPak Pro unscrambles the performers' voices from the choral mush that I previously experienced. There is an increased sense that the choir is comprised of a collection of soloists, rather than being a bland ensemble of musicians.

In conclusion, the PowerPak Pro makes huge improvements to the sound and is certainly one of the best power supplies I have tried. **NR**

DETAILS

PRICE
£299 for the PowerPak Pro; £56 for 1m PowerMax Plus mains cable

TELEPHONE
01539 797300

WEBSITE
russandrews.com

OUR VERDICT
★★★★★

Graham Nalty Legacy VS-1 Vibration Stabiliser



MECHANICALLY INDUCED VIBRATIONS in audio cables can introduce all sorts of nasties into a delicate audio signal. Any current flowing in a wire will create a magnetic field and any movement of the wire in that field will induce a current in the wire. Tiny it may be, but anything that pollutes the audio signal spells bad news for the audiophile. Graham Nalty's growing Legacy series offers a solution to the problem in the form of the Legacy Vibration Stabiliser.

The VS-1 is a high mass (155g) nickel-plated brass collar that is clamped to a loudspeaker, power or interconnect cable to dissipate any vibrations in that cable. Each VS-1 slips easily over RCA and most banana plugs, thanks to its 15mm diameter opening, so they can be fitted without necessitating the removal of the plug. The VS-1 is

supplied with 14 pieces of clear heatshrink insulation to pad up the diameter of the cable if required and ensure there is a snug fit on the lead. A large diameter grub screw is clamped onto the cable (and heatshrink) using the supplied 5mm Allen key, while two longer grub screws are also included for use with thinner cables.

Things can only get better

I decide to test the VS-1s with some interconnect cables running from my preamp to my monoblocks and it is a simple job to slip them on and off to carry out before and after comparisons. With some full orchestral music, I conclude that there is an improvement in the sound quality with the stabilisers fitted. I have a sense of greater spaciousness around each instrument that helps me to appreciate that the orchestra is

comprised of a number of individual instruments, rather than being one big noise. With smaller ensembles and with solo instruments, I find the attack at the initiation of a note – such as a string pizzicato or the striking of drum – a touch more, er, striking! Although subtle, the stabilisers do a great job and offer audible benefits when fitted. **NR**

DETAILS

PRICE
£100 per pair
TELEPHONE
01332 342233
WEBSITE
gnlegacy.co.uk

OUR VERDICT



ISOkinetik Silicon Turntable Belt Upgrade

THERE IS MORE to a turntable belt than meets the eye. Firstly, its job is to transfer the rotational kinetic energy from the drive pulley to the turntable and it has to do this without imparting any noise of its own, so a chain drive would certainly be out. It also needs to maintain the precise rotational speed imparted by the drive pulley. It should be noted that, during operation, part of the belt is always at a higher tension on one side of the pulley compared with the other as it pulls the turntable platter around. This is as a result of the friction of the turntable bearing and the drag of the stylus on the record.

The belt must, therefore, have a uniform elasticity throughout – any imbalance will show up as wow and flutter, resulting in a variation in turntable speed as it rotates. The belt is also required to provide some isolation for the turntable from any

noise generated by the motor that is transmitted to the drive pulley and it must not slip on the pulley or turntable sub-platter. And you thought it was just an elastic band!

Bet on Red

The Silicone Turntable Belt upgrade has a round cross-section and is suitable for most Rega and Rega-derivative turntables. This is made from high-quality silicone and its distinctive red colour has earned it the nickname 'Little Red Thing'. It is designed to offer a greater longevity and improved speed stability than standard black rubber Rega belts.

To give the belt a proper workout, I use a Telarc digital master recording of Tchaikovsky's *Capriccio Italien*, which has some pounding bass drum notes. Comparing it with the previous rubber belt, I do sense an improvement in the overall timing around the massive crescendos with the Little Red Thing fitted. Similarly, with Laurent Garnier's *Tales Of A Kleptomaniac*, the momentum of the massive techno bass is fractionally more fluid with the new belt than with the old.

This is a very snazzy-looking belt that works a treat and is a great value for money upgrade. **NR**



DETAILS

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WEBSITE
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AC/HFN/76

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AC/HFP/80



MAINTAINING YOUR HI-FI AND MUSIC COLLECTION

Get your system sounding great again with these essential tips on sprucing up your hi-fi components and reinvigorating your much-loved music

As people go, it's probably fair to say hi-fi enthusiasts are generally not all that good at maintenance jobs. Increasingly, we expect machines to go on and on with no input from us beyond a source of energy and the replacement of obviously worn-out parts. It wasn't always thus – speak to anyone who owns kit from the sixties, seventies and even eighties, and they'll tell you all about maintenance and repair jobs.

Indeed, until quite recently most professional audio facilities found in recording studios made a big deal of scheduled maintenance. An analogue mixing desk has hundreds of level and tone controls and just as many switches, and once in a while they would all get checked and/or cleaned – ditto the several dozen connectors round at the back. When several hundred of the local currency per hour are riding on it, you don't want the client to hear crackles every time a knob or fader is touched...

Digital technology has changed this a lot both in the studio and at home, and the reduction in the number of mechanical contacts within electronic products is on the whole most

welcome. But that still leaves quite a lot of scope for routine maintenance if one wants to keep things working in tip-top condition. Which are the critical areas to look after in a full hi-fi 'spring clean', and what's best to do with them?

Stay in contact

Probably the most important item in a typical domestic audio system is the connectors. Metal-on-metal electrical connectors are funny things and they don't take well to corrosion. If you've ever used a torch you've probably noticed that fiddling with the switch can increase the brightness when the battery starts to run flat, and that's because at low voltage the resistance of the contact seems to vary. New contacts, with fresh and corrosion-free surfaces, don't do that. The effects seem to be much less with AC signals (like any audio), but it still makes sense to keep connectors clean and shiny.

Simply unplugging and replugging connectors does a lot to shift thin layers of surface corrosion, but for best effect one can use abrasive and/or chemical cleaners. The choice of which to use depends on the type of

contact, but since practically all audio connectors are plated with nickel, silver, rhodium or gold the answer will be chemical. Abrasives will simply remove the plating. All sorts of chemical cleaners are available and we've tried lots of them. One of our favourites is the Caig range, especially Deoxit D5. You can drive yourself nuts reading catalogues from firms like Caig (Kontakt Chemie is another major manufacturer of similar stuff) trying to work out which cleaner to use for which application, but we've had nothing but success with D5. Kontakt is excellent too.

Mains connectors are also worth giving a clean, but unless you've equipped your system with gold or rhodium-plated ones they usually have solid brass contacts which can be cleaned with HG Cleaning Cloths, specifically made for copper and brass.

The vinyl frontier

If you keep a turntable in your system, this is another strong candidate for tender loving care. Every aspect of the performance of vinyl replay depends strongly on the equipment being in good nick, and the good news is that it's really not

hard to do the basics. You probably already make a point of keeping the stylus clean, as accumulated dirt here rapidly gives rise to gross distortion. For day-to-day fluff removal, a soft brush does perfectly fine, but over time you can get more resilient deposits of caked-on gunge, which are best removed with a wet stylus cleaner. It's important only to use fluids specifically sold for stylus cleaning, though, as alcohol and other solvents are said to be bad for the suspension of most cartridges, and with a decent cartridge costing what it does, who wants to run that risk? Another favourite is a stylus cleaning putty or cleaning substance where the stylus is gently lowered in to remove the dirt.

The other item that needs cleaning, maybe less often, is the drivetrain – the belt and the pulleys it runs over. Ideally, wear cotton gloves for this, to avoid getting grease from your skin on the drive surfaces. Failing that, wash your hands directly before working. The belt can be cleaned very effectively with 'Pledge' furniture polish, believe it or not – it's practically the same stuff as Servisol Foaming Cleanser and easier to find. Just spray a little on some kitchen towel, gently grasp the belt through the towel and pull it through a few

times. Then use the same stuff on a cotton-wool bud to clean the pulleys, checking by eye for the final result.

Bearings on a turntable are worth a check once in a while, too. Most platter bearings should have some oil in them (you may remember putting oil in when installing the turntable, or the manual may mention it) and if they look dry, a drop or two of oil will

No spring clean would be complete without cleaning discs, especially LPs

reduce bearing noise. If you can't find out for sure what sort of oil, fully synthetic car engine oil is a great bet. An excellent choice would be one based on a polyol ester, such as Red Line motor oil. 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.

Arm bearings are not usually user serviceable and are pretty hard to check, but with a sensitive finger one



CAIG DEOXIT MAINTENANCE KIT

DeoxIT kit offers a simple way to clean and upgrade any audio system. Interconnects and power cables often stay in place for many years without being touched. And so corrosion can build up on the surface and stay put, instead of being removed when a plug is connected and disconnected.

This kit from MCRU makes use of a variety of products from the DeoxIT range from Caig Laboratories. DeoxIT D5 is the general purpose treatment for all metal contacts and is specifically designed for cleaning surface oxides from mains plugs, interconnect and speaker cable connectors, as well as from moving parts such as volume controls. Not only will they remove surface contaminants, they also leave a microscopic layer of protection on the surface to prevent future oxidation.

The can is supplied with a flexible tube that fits into a small recess built into the nozzle, enabling it to be directed into the intricate parts of a plug or socket. The supplied mini-spray can is useful where space is limited, such as around the back of an equipment rack. The squeeze tube is perfect for applying a single drop of cleaner into a recess and then letting gravity do the rest. The brush included with the kit from MCRU is perfect for those hard-to-reach places, such as the inside of phono sockets and DIN connectors. In our test it takes only a quick spray of the product and a judicious poking with the brush to clean up the surfaces of a tarnished phono plug prone to noise when moved, and disappears after treatment.

As the various products can be directed onto where they are needed, only a small amount is used on each application. mcru.co.uk



can feel for stickiness. If you think anything is wrong, get the deck along to a dealer for adjustment unless you're in the happy position of being a competent precision engineer!

Speaking of which...

At the other end of the chain, loudspeakers are less obviously amenable to tweaking up, but there are a few things that can benefit their performance. First, if you have connected them using bare cable ends under screw-down clamps, give those clamps a good hard tweak. They always seem to manage to work a little loose (it must be all that vibration) and tightening is beneficial. Second, very carefully clean the drive units (if they are accessible) with a soft microfibre cloth. Especially on ▶

GUIDE TO...

tweeters you need hardly use more pressure than the weight of the cloth, but removing dust can have a surprisingly marked effect.

There's another thing you can do that can benefit most loudspeakers, and that's to give them a bit of stretching exercise. Over time, the suspension can tighten up and, in addition, dust can get into the voice coil and cause very slight rubbing noises as the cone moves. A bit of stretching can help with both of these, and is easily done by playing a bass heavy track at a reasonable volume.

Simply unplugging connectors does a lot to shift thin layers of surface corrosion

There's a slight risk involved in this in that if you turn the level up too high you could do the speaker some damage, but it's really not hard to keep things sensible.

Room for manoeuvre

One aspect of audio spring cleaning that doesn't get much attention is the listening room, but objects and furniture in the room can often cause a buzzing or rattling noise that can prove distracting, so it's worth taking some time to ensure that your room isn't degrading your listening pleasure with a few simple checks.

Play some music that contains a good range of bass notes at a moderate level and walk around your

room, listening for anything untoward. You may well be surprised by the noisy culprits – a plate on a table, a picture on a wall or a scurrilous plant pot have all been known to jive noisily along to the music, in our experience. To read our *Guide to... Room Tuning*, see *HFC 388*.

Feel the burn

Most other specific hi-fi components don't need special attention (some folks like to use a CD lens cleaner regularly, but we suggest these are avoided unless disc misreading is suspected), but there is of course, the option of using a suitable test disc to conduct a system burn-in and demagnetisation. This is still somewhat controversial, but the fact is that a large number of people have found benefits from spinning a demagnetisation disc from time to time. There are a few available, with the IsoTek Full System Enhancer being probably the most widely distributed in the UK.

It's the software, stupid

No spring clean would be complete without cleaning discs, especially LPs. A wet cleaner can seriously transform elderly discs that may have been carelessly handled, and CD cleaning is no bad thing once in a while. But don't try to do your whole collection in one hit. We suggest concentrating on just a dozen or so discs at a time to avoid the laboriousness that a task like this can bring.

Apart from cleaning the record playing surface using a wet cleaner or

SET THE RECORD STRAIGHT

Take care that your LPs are clean before playing – even brand new ones, which may well have residues from the manufacturing process in the grooves that will manifest themselves as surface noise when being played. However, cleaning is particularly important when buying second-hand records as you don't know how they've been treated in the past. More often than not, they won't have been rigorously cleaned before selling and the accumulated dirt will need to be washed off with a good record cleaner before playing. Once the LP has been cleaned, it should never be re-inserted directly into the old record sleeve as it will be instantly contaminated with the dirt left there. The inner sleeve should be replaced immediately after cleaning and Analogue Studio provides an affordable solution to the problem.

Many second-hand LPs are considered collectable items and you may not wish to discard the old inner sleeve. The Analogue Studio sleeves are tailored to fit around the record and can easily slip inside the original, as well as being used as a replacement for any old, tatty ones. They can also be used to line new paper sleeves, which may not provide sufficient protection for a record inside the album cover on their own.

The protective inner sleeves are made from 0.038mm-thick anti-static high-density polyethylene and are supplied in packs of 50. They are thick enough not to have any tendency to ruffle up when used inside an existing sleeve or when used on their own as a replacement. The rounded bottom edge aids insertion as there are no corners that can fold over when being slipped inside the album cover and there is no static 'cling' to the vinyl as it's being inserted.
analogueseduction.net

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 our personal preference is using a carbon fibre brush. And remember that if you buy second-hand records it's always a very good idea to give them a thorough wet clean before playing. Always replace the inner sleeve with a polyethylene or paper and polyethylene product to avoid re-contaminating the cleaned record from any residual dirt left inside the old sleeve.

Finally, don't overlook perhaps the most pleasing benefit of any maintenance task or spring clean – that satisfied feeling one gets of having done a tedious but necessary job, and thereby earning a glass of something relaxing and a sit-down with your favourite music. We're convinced your hi-fi will be in top shape for the year ahead ●

NEXT MONTH: How to get the most from visiting a dealer. Your guide to procuring the best hi-fi for your needs



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Benz Micro LP, boxed plenty of life left used
Clearaudio Innovation Compact, good condition dem
Clearaudio Unity Tonearm excellent boxed dem
Clearaudio Basic Symmetry Phono Stage boxed dem
Conrad Johnson TEA 1b Phono stage used
Conrad Johnson Premier Six phono preamplifier used
Consonance Cyber 40 phono stage dem
Garrard 401, Jelco 750 12" arm, new plinth and lid dem
Graham Phantom Supreme 12", SME ct dem
Hadoock 242 Export, boxed dem
Lehmann Black Cube phono stage dem
Inspire 'Full on' Technics 1210/Plinth/PSU/SME M2 arm used
Linn Majik LP12 with arm cart, near mint boxed used
Linn Sondek, Ittok, Troika, boxed new lid dem
Linn Sondek, Ittok, boxed new lid used
Linn Sondek, Ittok, nice condition dem
Linn Sondek, Lingo, Naim Aro, superb used
Linn Sondek, Grace 707, basic psu, VG+C used
Linn Sondek, Naim Aro, Staff build Armageddon used
Linn Lingo, excellent dem
Linn Bask Plus, vgc+ used
Lyra Erodon Step up used
Michell Hydraulic Reference, Fluid arm, excellent used
Michell Technoarm A in black as new mint boxed used
Michell Synco/RB250/Eroica, great condition used
Michell Orbe, DC motor, SME V boxed dem
Moth phono stage dem
Musical Fidelity XLP5V3 phono stage dem
Musical Fidelity XLP5V8 phono stage dem
Naim Aro, excellent boxed dem
Naim Stageline N excellent boxed dem
Orace Delphi, Zeta, duo in dem
Project PhonoBox SE phono stage, excellent value dem
Project RPM 9 turntable with arm and platform dem
Project Xpression mk2, arm and cart used
Project Xpression mk2, arm and cart used
Project RPM 4 Turntable/Arm with cover, great! used
Project Perspective, Speedbox SE, Shure V15Mx used
Rega Planar 2, RB250, excellent boxed used
Rega RP3 Elys2 cartridge, excellent boxed used
Revolver Rosewood, G1022, excellent used
Roksan Xerxes RB300, PSU, boxed dem
Roksan TMS 2 with Reference PSU, boxed as new dem
Roksan Xerxes, XPS, SME FT, used
Rothel RP3300, excellent used
Graham Sile Elevator with PSU 1 used
Graham Sile Reflex C with PSU 1 used
SME 3009/3, excellent boxed used
SME V, excellent, boxed, duo in dem
SME V12, nr mint boxed dem
STD305, vgc, no arm used
Systemdemo, Syrinx PU2, excellent used
Technics 1210, near mint boxed used
Thorens TD150, SME3009 good condition new
Thorens TD160 HD turntable new
Thorens TD160, Audio Technica arm, boxed used
Thorens TD209 turntable package dem
Thorens TD2030 Blue turntable new
Thorens TD125 c/w SME3009, excellent used
Tom Evans Grove, 0.85mm/100 ohm, excellent used
Townshend Elite Rock c/w Excaltur, boxed excellent used
Transfiguration Orpheus L, good condition dem
VDH Colibri M/C cartridge used
VDH Condor M/C cartridge used
Voyd, Voyd, split phase psu and RB900 used
VPI Scout, JMW arm excellent used
VTL TP2.5 phono stage (new) used
Wilson Benesch Act 1 Tonearm, nr mint superb used

Radio/Recorders

Arcam Alpha 10DAB tuner, excellent used
Arcam T61, vgc+ used
Cyrus FM7, vgc+ used
Denon TU-S10 used
Musical Fidelity A5DAB, sealed box used
Naim NAT03, excellent used
Naim NAT01 and NAPST chrome, serviced, vgc+ used
Naim NAT101 & SNAPS, excellent £500 Naim service used
Nakamichi DR10, excellent used
Nakamichi DR1, vgc used
Nakamichi BX2, excellent used
Nakamichi S80, near mint boxed used
Pioneer CT91a reference used
Pure 70IES DAB Tuner used
Revox PR99, crated used
Tandberg TCD440a, superb! used
TEAC V8000s, superb used
TEAC X1000M, serviced, superb used
TEAC X10R, serviced, superb used
Technics RS1500 in flightcase near mint used
Rotel RT1080, excellent used
Yamaha KX1200 excellent used
Yamaha CT7000, vgc used

Amplifiers

Aimarro 318B with cage, excellent boxed used
AMR 777 Integrated dem
Anthem Integrated 2 Valve Integrated used
Arcam P90, vgc+ used
Arcam A85, vgc+ used
Arcam Alpha 8P, vgc+ boxed used
Arcam Alpha 7, vgc+ boxed used
Arcam C31 preamplifier, remote excellent used
ArtAudio Jota 520b, excellent used
Audio Flight Pre and Flight 50 Class A power dem
Audio Analogue Bellini VB and Donizetti Cento, superb dem
Audio Analogue Puccini SE arm. Black dem
Audio Analogue Class A Integrated - HUGE! dem
Audio Project ap60 integrated dem
Audio Research Ref 610 Monoblocks, vgc boxed used
Audiolab 8000Q/MS, silver, excellent boxed used
Audiolab 8000C excellent boxed used
Audiolab 8000P vgc boxed used
Audiolab 8200A vgc boxed used
Audion Sterling Plus KT88 Integrated boxed used
AVI Lab Series PrePower, excellent remote used
BAT VK50se preamplifier, vgc+ used
Bryston 4BSs2, excellent boxed, duo in used
Chapter Audio Couplet Power Amplifier dem
Chord Electronics CPM2650 Integrated, ex boxed used
Chord Electronics CPA3200/SPM1200E dem
Conrad Johnson Premier 18, boxed with remote dem
Consonance Cyber 10 Integrated dem
Consonance Ref 8.8 integrated valve amp dem
Consonance Cyber 211 monos c/w Pavane valves dem
Creek OBH21, excellent used
Cyrus Power, vgc+ used
Cyrus XPower, excellent boxed dem
Dartzeel NHB108B, excellent £20+k new dem
Denon PMA1500AE, excellent used
Graef GM50B Mk11 Integrated used
Graef GM100 valve power amp used
Jolida Envoy 211 Monoblocks, £7k new, superb used
Leema Hydra 2, vgc+ boxed dem
Leema Elements Amplifier, excellent dem
Leema Tucana 2, excellent dem
LFD Integrated amp LE MK111 used
LFD LS1 linestage, reasonable shape dem
Linn Majik Kontrol & 4100 Power, excellent used
McIntosh C22 & MC275 Commemoratives, boxed used
McIntosh MA5100, excellent! used
Meridian 501V preamp, excellent used
Meridian 501 Pre used
Micomera IA100, great integrated, boxed used
Moon W7R9, excellent used
Musical Fidelity M3i, excellent boxed, REDUCED used
Musical Fidelity A1000 Two box monster Integrated! used
Musical Fidelity A1008 Two box monster Integrated!!! used
Musical Fidelity A1 FPB Preamp and PSU, excellent used
Musical Fidelity 550K Superchargers, sealed boxes! used
Musical Fidelity X-T100 Integrated dem
Musical Fidelity Pre 8 and 2 x MA65 chrome fronted used
Naim NAP100, vgc+ used
Naim NAC82, excellent boxed used
Naim NAP250, olive excellent boxed used
Naim NAP250, very late olive excellent used
Naim NAC42.5/NAP110, vgc used
Naim NAP250, excellent late olive boxed used
Naim NAP150, excellent boxed used
Naim NAC202 with NAPSC, boxed used
Naim AV2/NAPV175, remote, excellent boxed used
Naim NAC122X/150X, remote, excellent, boxed used
Naim NAP180, excellent boxed used
Naim NAIT 5, excellent remote boxed used
Naim NAC152/NAP155XS, excellent boxed used
Naim NAP90/NAP92, vgc used
Naim NAP250, chrome bumper used
Neutonia Sails Integrated, classy Restek built used
Onix OA32 Integrated, excellent used
Onix OA25 Integrated, excellent used
Pathos Logos Integrated dem
Placette Audio Passive Linestage dem
Prima Luna Prologue 3 Preamplifier vgc+ used
Prima Luna Prologue 2 Integrated, good shape dem
Prima Luna Prologue 3 Preamplifier, REDUCED dem
Puresound L300 valve preamp dem
Quad 99 Pre/Power, excellent, remote, Quadlink used
Quad 405, from used
Quad 33/303, vgc, serviced used
Resolution Audio Opus 21 S80 Integrated dem
Renaissance RA02 Monos, vgc and excellent value used
Roksan Kandy K2 Power, nr mint boxed dem
Sugden Masterclass Monoblocks, in titanium used
Sugden A21a line Integrated dem
Sugden Masterclass Pre/Monos in Graphite used
Sugden Masterclass Pre/Monos in Titanium used
Sugden Masterclass Integrated in Titanium used
TagMcLaren 60iRV, excellent boxed dem
Talk Electronics Hurricane/Tomado Pre/Power used
Tannoy TA1400, excellent boxed dem
TEAC Distinction A1000 Integrated, ex demo used
Trio L07C and L07Ci, both good condition from dem
Unison Research Simply Italy Integrated dem
Unison Research S2k Integrated, excellent dem
Yamaha AS500, excellent boxed used
Yamaha A-S3000, nr mint boxed dem

Digital

Arcam Alpha 8, excellent used
Arcam Alpha 8se, excellent boxed used
Arcam CD17, excellent used
Arcam P90, vgc+, remote used
Arcam CD37, vgc+, remote used
Arcam CD37, remote excellent used
Arcam Alpha Plus, excellent used
Atoll 100SE DAC used
Audio Alchemy digital transmission interface/psu dem
Audio Analogue Maestro SE CD dem
Audio Analogue Paganini (later model) dem
Audio Synthesis Transcend CDT (Modded SONY) dem
Ayre Evolution DVD dem
Bryston BDA1 DAC, excellent boxed dem
Cary Audio CD306 Pro, near mint boxed used
Chapter Audio Sonnet CD & Nevo remote dem
Chord 'One' CD player dem
Chord Qute EX DAC, excellent boxed dem
Consonance CD120 Linear dem
Consonance CD2.2, new sealed new
Consonance Droplet, vgc+ dem
Creek Destiny Integrated CD player, boxed dem
Cyrus Discmaster/Dacmaster, vgc+ dem
Cyrus CDXT2, mint boxed just back from Cyrus used
Cyrus CD8, boxed remote dem
Cyrus CD7Q chip, vgc+ dem
Cyrus CD8se, boxed remote dem
Denon DNP720AE, near mint boxed dem
Ear Acute 3, mint boxed dem
Exposure 2010CD, remote used
Goldenote Koala , near mint boxed used
Inca Design Katana cd player (no remote) used
Kelvin Labs DAC, rare used
Leema Elements CD player sealed box used
Linn Majik CD, just factory serviced, excellent! used
Linn Karik 3, excellent boxed remote used
Marantz CD6003, excellent boxed used
Marantz CD10, excellent boxed new belt kit used
Marantz CD17, remote, excellent dem
Marantz CD63K1, remote, boxed excellent used
Marantz NA7004, nr mint boxed used
Meridian 506/20 with MSR used
Meridian G08, remote boxed used
Meridian 563 DAC reasonable condition used
Meridian 500 Transport, excellent boxed used
Meridian 602/606 combo with remote used
Micromega Leader, remote used
Musical Fidelity Fidelity 3.5 CD dem
Musical Fidelity A1Pro CD new
Musical Fidelity KW SACD, new laser, upgraded ps used
Musical Fidelity M1 DAC, excellent boxed dem
Musical Fidelity M1 CDTB dem
Musical Fidelity M6 black boxed dem
Musical Fidelity M3 black boxed dem
Musical Fidelity M1 C1ic new
Mryad Z20DAC, excellent boxed used
Naim CD5i, excellent boxed used
Naim DAC, nr mint boxed dem
Naim CD5si, near mint boxed dem
Naim CD53, excellent boxed, remote dem
Naim CDI, excellent boxed dem
Naim CD3.5, vgc used
Naim CDX2, 2009, excellent boxed used
Peachtree DACi, excellent dem
Prima Luna Prologue 8, ex demo boxed dem
Quad 99CDP, excellent REDUCED used
Rega Planet 2000, excellent used
Rega Apollo R, excellent used
Rega Apollo 35th Anniversary, excellent used
Rega lo DAC, excellent used
Rega Saturn, excellent boxed used
Roksan Kandy K2CD, excellent boxed used
Roksan Kandy C1 Mk3, excellent boxed used
Rotel RCD965BX, excellent boxed used
Sugden Masterclass CD original version used
TAG McLaren DAC 20, excellent used
Tube Technology Fulcrum CD transport dem
Tube Technology Fulcrum DAC (inc DAC64 chip) dem
Yamaha CD-S3000 near mint dem

AV/Accessories/Cables

Audeze LCD2 excellent dem
Audeze LDXC excellent dem
Beyer Dynamic T1, vgc boxed dem
Bryston BHA-1 Headphone amplifier, superb dem
Cyrus PSXR, excellent from dem
Elemental Audio Equipment Rack dem
Elemental Audio speaker stands dem
Ergo AMT phones with Amp 2 (£2.5k new) dem
G+W T2.6F Valve headphone amplifier, excellent used
Grado GS1000 and RA1 amplifier used
Isotek Nova power conditioner dem
Isotek Minisub power conditioner used
Lehmann Rhineland dem
Musical Fidelity M1 HPAB dem
Musical Fidelity TripleX power supply new
Naim XPS DR, ex demo dem
Naim HiCap, various dem
ProAudio Bono Reference Platform dem
Stax SR404/SR100611, stand, cover etc boxed used

Loudspeakers

Acoustic Energy AE1 Classic new
Acoustic Energy AE1 Reference standmount new
Acoustic Energy AE 1 Mk11 in Gloss black dem
Apogee Duetta Signature (Reality rebuilt) Superb used
Art Audio Siletto in Maple dem
Aspara Acoustics HL6 in Oak new
Auro Physical Tempo in Cherry, fair dem
Audiovector S13, near mintboxed dem
Audiovector S13 Super, near mint boxed dem
Aurum Cantus Music Goddess in Gloss black dem
Avalon Ascendant Mk2, mint crated, £10k new used
B&W CDM1se in cherry, excellent used
B&W DM601s3, vgc+ used
B&W DM602s3, vgc+ used
Castle Howard, excellent used
Castle Chester vgc later versions used
Davone Ray, vgc in walnut, great! used
Eminent Technology LFT8, some marks used
Epos M22 in Cherry dem
Call Ferguson Hill FH007'88 'desktop' audio set boxed used
Final 400 Electrostatics with ES400 Sub dem
Focal Electra 1008, mint boxed dem
Focal Electra 1028, mint boxed dem
Focal Electra 1038, mint boxed dem
Gallo Nucleus Reference 2, rare, superb & boxed used
Hecco Celan 500 in Silver dem
Hecco Celan 300 in Mahogany dem
Hecco Statement in gloss black, £3k new dem
Kef Q100, brand new, sealed box new
Kudos C10, boxed vgc and cheap used
Leema Xandia Mk1 in black new
Leema Xero in Mahogany dem
Linn Index with KuStone stands, vgc+ used
Living Voice IBX R2 in stunning Zebrano, excellent used
Mark & Daniel Maximus with treble extenders E2500sh dem
Mark & Daniel Mini in Grey inc. Marble cabinets. dem
Martin Logan Mosaic, excellent boxed dem
Martin Logan Quests, superb sound, reduced used
Martin Logan Prodigy, excellent used
Martin Logan Summit X, ex demo dem
Mission 782se nr mint boxed used
Mission Freedom 5, vgc in Rosewood used
Mission 752.2, pairs, from used
Monitor Audio R58 excellent dem
Monitor Audio GX300, near mint boxed dem
Monitor Audio GX 5.1 Home Cinema set BARGAIN new
Monopulse Model S new
Monopulse Model A speakers new
Monopulse Model C new
Musical Fidelity MC6 Floorstanders, boxed vgc+ used
Naim Nsat x4, NCent and NSub, boxed excellent used
Naim Ovator S400, excellent dem
Naim Credo, excellent dem
Naim SBL, vgc+ used
Naim SBL mk2, vgc+ used
Nola KO speakers in black dem
Nola Micro Grand Reference inc stands, £15k new dem
PMC CB1, excellent, new boxes used
PMC Twenty 21, excellent boxed, ex dealer demo used
PMC Twenty 22, excellent boxed, ex dealer demo used
Proac D38 in Yew, boxed used
Proac D28, good condition in cherry boxed used
Proac D18, good condition in cherry boxed used
Proac Studio 140 mk2, nr mint boxed dem
Proac Studio 110, excellent boxed used
Proac Studio 115, excellent boxed dem
Q Acoustics 1020, vgc+ dem
Quad 21L Floorstander used
Quad ESL63, Rosewood, great condition used
Quad ESL57, good condition used
Quad 11L2, excellent boxed used
Red Rose Rosebud £2.5k new with (k2cd) stands dem
REL Sterling, black ash vgc used
Revel M22, excellent boxed new dem
Revolver RW45 floorstander in Cherry dem
Revolver Cygnis Gold in Black, £14k new dem
Sonus Faber Elipsa, superb boxed used
Sonus Faber Cremona Auditor, boxed used
Spendor A6, in Walnut excellent boxed used
Sunfire True Sub Subwoofer dem
Tannoy Prestige Autograph Mini, ex boxed used
Thiel CS7.2, vgc, just refurbished... used
Tolem Mani Signature, boxed near mint used
Tolem Mite in black dem
Tolem Rokk in mahogany, excellent used
Tolem Staf, near mint boxed new
Usher N6311, transit damaged to dear dem
Usher Mini Dancer 2 in Maple, excellent boxed dem
Velodyne DD18 sub in black dem
Veritas H3 (Lowther drivers) in gloss black, 100db dem
Wilson Benesch Actor floorstanders dem

Special system deals

Consonance PING CD/AMP dem
Linn Klassik Movie 05, excellent boxed dem
Naim Unifite, ex demo dem
Orelle EVO CD and Amp was £2700 used
Yamaha CXA5000/MXA5000 as new boxed dem

Tel: 01642 267012 or 0845 6019390 Email: choice@2ndhandhifi.co.uk



WIN:

Musical Fidelity Merlin 1 system

Conjure up the joy of spinning wax and the magic of Bluetooth streaming...

After years in the wilderness it looks as though vinyl is finally coming in from the cold. Record sales are higher than they've been since 1997 when Britpop ruled the world and many people are universally shunning poor quality downloads and streams in favour of the black stuff. You see, there's nothing quite like the routine of removing an LP from its sleeve, placing it onto a turntable and then putting the needle into the groove and sitting back to enjoy your music as it really should be heard. But what's that, you don't own a decent record player? We might just be able to help you out with that...

Our good friends at Musical Fidelity have very kindly provided us with the very special £1,300 Merlin 1 system to give away to one very lucky reader. Reviewed in last month's issue, this gorgeous slice of eye candy blew us away with its winning combination of

stunning good looks, beguiling build quality and impressive features – oh, and it sounds pretty good too.

Described as “a multi-format digital system designed with vinyl at its heart”, the setup consists of the Merlin digital amplifier and Bluetooth aptX streamer, the Round Table turntable and the unique Merlin 1 elliptical speakers, which can be stood horizontally or vertically depending on your mood.

The amplifier offers a claimed 50W of power into 4ohms and has inputs for the turntable, USB, aptX Bluetooth and digital or analogue line in. The USB input is primarily for updating the system's firmware, but can also play music from a computer. The turntable comes equipped with a high-quality tonearm, that feels smooth to use and is fitted with an Audio-Technica AT95E moving magnet cartridge. And the speakers come with what Musical Fidelity calls a

“diffraction multiplier system” designed to give a larger soundstage from their compact cabinets.

And boy do they succeed! The turntable has an open and accessible sound with a nice gentle easy musical feel. The amplifier suits the system perfectly, with a light, easy, open sound that fills normal-sized rooms comfortably. It is especially enjoyable when listening to vinyl, following the rhythm of the music well and is never hard or strident. The speakers are the best part of all, sounding unexpectedly lucid – music seems to stream out of them in a seamless way, both tonally and rhythmically.

To be in with a chance of owning one of the most stunning systems we've seen in some time, answer the question opposite, pop it in the post and with any luck you'll be back to spinning the black stuff before you know it. Good luck!



TO BE IN WITH A CHANCE OF WINNING, ANSWER THIS SIMPLE QUESTION:

The Merlin 1 offers which wireless technology for streaming music?

- A) Wi-fi
- B) AirPlay
- C) Bluetooth

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1. Entrants must be over 18 years old and resident in the United Kingdom. 2. Employees of My Time Media and companies supplying competition prizes are not eligible to enter. 3. Proof of posting will not be accepted by the magazine as proof of delivery. 4. No responsibility will be accepted for entries lost, damaged or delayed in the post. 5. No alternatives, cash or otherwise, will be offered to the winners as prizes. 6. The editor's decision is final. 7. The closing date is 13th May 2015.

HOW TO ENTER

Write your answer here to win:

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FOR SALE

ION Obelisk 100 amplifier (Nytech) £95; Technics SEA 800S MkII power amp £95; QED 230S amplifier – mint condition: £80, plus Pioneer PD91 CD player: £450 and PL1000 turntable: £450 – collection only: **01708 457691 (Essex).**

MISSION 752 floorstanding speakers – very good condition: £100; Audiolab

8000A integrated amplifier in black: £100; Thorens TD125 MkII with SME arm Ortofon Blue cartridge: £250. Buyer to collect: **07730477564 (West Midlands).**

NAIM NAC 72 preamp: £310 and Naim NAP 140 power amp £315 – both boxed, plus Roksan Artemiz tonearm: £500 – all excellent condition: **01527 835759 or email: andy@tryndei.freeserve.**

co.uk (Worcs).

B&W 686 standmount loudspeakers. Excellent condition: £100, plus Pure Sound A30 integrated amplifier: £400 – recently re-valved: **07716 139026 or email: johnstonr733@gmail.com (N. Ireland).**

ICON AUDIO BA3 valve buffer amplifier. Mint condition includes receipts, manual and packaging for £500 ovno, plus Musical Fidelity X-Can v3 and Sennheiser HD 595: £100 for both: **01793 721506 (Wilts).**

ART Skibo floorstanding loudspeakers. Light wood colour with slight damage to one cabinet. Will demo: £375. Collection only: **01745 822992 (North Wales).**

SONY Minidisc player/recorder plus 100 discs if needed. As new: £90: **01278 238783 or email: hifidave@gmail.com (Somerset).**

MUSICAL FIDELITY A3.2 RDS tuner: £299; A308cr 24-bit upsampling CD player: £599; A308cr dual mono preamplifier:



SUGDEN CD21SE boxed, new laser fitted by Sugden, £899; Pro-Ac Tablette Anniversary standmount speakers, Rosewood, boxed mint £849: **07583 640342 or email: grahamhd842@hotmail.com (Notts).**

£699. All are silver models and have less than 100 hours use from new. Immaculate condition with original boxes, remote and instructions. Happy to demonstrate: **07500 804700 or email: imeldayates@hotmail.com (Cheshire).**

QUAD ESL 989 speakers in black, plus 99 Series preamp, CD player, tuner, 909 stereo amp all serviced by Quad: £2,000. All excellent condition: **01983 299236 or email: abliz@live.co.uk (Cornwall).**

ATC SCM35 floorstanding loudspeakers in cherry, complete with original boxes and manual. Excellent condition. £1,250 ono, buyer to collect: **01452 614515 or email: maecep@gmail.com (Gloucestershire).**

LINN Axis turntable with Basik Plus arm £250. Owned from new, original box and owner's manual. Buyer collects: **01695 422730 or email mailpettener@talktalk.net (South Lancashire).**

LINN LP12, Basik Plus arm, new K9, drive belt and lid hinges. Walnut. Serial number: 73861. £449. Linn Powertek/Pretek. £249. Cyrus Discmaster, Dacmaster and PSX-R Power Supply, £599. All products in perfect working order. No marks or scratches. Owned from new. Original boxes, manuals, interconnects and power leads. Minimal use: **07939512717 or email: steve@symystic.co.uk (Somerset).**

XTZ 99.26 speakers, piano black. As new condition with latest MKII crossover. Look

and sound beautiful. Excellent reviews. Buyer collects or have original box for shipping. £425 ono: **01413844287 or email: imcl747@hotmail.co.uk (Glasgow).**

TECHNICS hi-fi system in very good condition. Tuner (ST-610L); CD player (SL-PG200A); turntable (SL-DD33); amplifier (SU-VX500); twin cassette (RS-TR313) plus speakers, cables and remote control, in original boxes. All sensible offers considered, buyer collect: **07880 727851 or email: bobandkaren2010@hotmail.co.uk (South Lincolnshire).**

COPLAND CSA28 valve and transistor integrated amplifier, excellent condition, boxed with instruction manual and RC 101 system remote control. Cost new £1,249. For sale at £575 ono: **07956 121013 or email: sgbf11@talktalk.net (Middlesex).**

CYRUS PSX-R unit, black in excellent condition with user instruction £130: **01229 584509 or email: lindamarycott@btinternet.com (Cumbria/Lancashire).**

TOM EVANS MicroGroove PLUS phono stage, mint condition, as new £425. Can demonstrate, call for details: **07870 912963 or email: stuardarshan67@googlemail.com (Bedfordshire).**

CLASS A amplifier power supply, self-contained free-standing unit, suits John Linsley Hood's 1969/1996 designs and similar amplifiers, best offer will be accepted, can post if needed: **0207 499 8729.**



ACOUSTIC ENERGY AE1 Mk3 SE. Immaculate condition. Fantastic sound. Only 250 pairs made. All packaging and manuals. £1,000. Audition welcome: **07706169968 or email: alex.ferguson3@ntlworld.com**

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!

TANNOY 2 Mercury Mk 2 speakers, good condition, £50 the pair, buyer collects: **01491838489** or email: **ac_maidens68@hotmail.com** (Benson, Oxford).

PRO-JECT Tube Box DS phono stage, black, recommended in group test *HFC* issue 394, 8 months old, boxed, excellent condition, £310. Collection preferred: **07591899478** or email: **malc3m@gmail.com** (South Oxfordshire).

ACOUSTIC RESEARCH EB101 Legend turntable, Linn K9 cartridge, new drive belt, mint condition, £200 ono: **01202 672998** (Dorset).

B&W 302 speakers for sale, in perfect working order £80: **0208 4402513** (Herts).

NAIM AUDIO CD5i CD player, boxed with remote and Chord Company interconnects. Buyer to collect £150: **0113 2933478** (Leeds).

LYNGDORF CD1 CD player excellent condition, lovely sound (£1,900 new) £475: **07729600847** (W. Sussex).

MARANTZ PM6004 amp £150, CD 85 multi-bit player £100, Sony NS700 SACD/DVD player £40, Aiwa cassette deck £25, Sound Org turntable wall shelf £45, Sound Org two-shelf rack £50, Sound Style tripod four-shelf rack £45, Heybrook stands £40. Hi-Fi Plus mags 1-60 £30: **01691610589** (Shropshire).



ROTEL 1552 MK 2 stereo power amplifier 2x 120W. High-end valve amp sound. RRP £765. Sell as new £595: **07956 121013** or email: **sgb111@talktalk.net** (Middlesex).

DIAPASON Adamantes, pair of solid walnut speakers, plus Diapason stands. Beautiful sound, beautiful condition £1,750: **07852 883778** (Bristol).

ARCAM Alpha 10 stereo and Alpha 10P power amplifiers with factory fitted digital and centre channel modules for stereo, 5.1, DD, DTS, PCM 100WPC. Remote, manual, boxed, VGC £695 ono. PMC CB1i loudspeakers, walnut, boxed VGC £800: **01772 745553** (Preston, Lancs).

RUSS ANDREWS Power Pak 3 unit for Naim preamps etc (alternative to Hi-Cap), as new with signal lead £75 plus delivery: **01825 722936** (Lewes).

AUDIO-TECHNICA AT-F3/III MC cartridge only 12 hours use £69 (£189). Rothwell Attenuators one pair £20 (£39) all plus p&p: **01202 515474** or email: **johnlanglely17@talktalk.net** (Bournemouth, Dorset).

GARRARD 401 in excellent condition, plinth, SME 3009, Shure V15ii. Stylus retipped 2013 by

expert stylus company. Additional used Shure stylus. Refurb service by Loricraft in 2008, serviced 2013. £875: **0208 3326181** or email: **rohan.jensen@btinternet.com** (London).

GOLDMUND-JOB 225 125WPC amplifier, mostly into MCH SACD & BD stereo amp not used. Originally cost £1,089 on sale for £895 as brand new: **07956 121013** (Edgware, Middlesex).

RUSS ANDREWS Kimber 4TC Speaker cable 3.5m pair with Kimber bananas 2 years old. £125.00 ono: **07800 606892** or email: **schandler@dopag.co.uk** (Worcestershire).

QUAD 33/303, Quad FM3, Spondor BC1's with stands, Rotel 1210, Meridian MCD, Fons CQ30 with SME arm and A&R P77, Sugden A48 Amp. Original boxes. Collection only. £650: **01524 272061** or email: **john_d_harley@yahoo.com** (Kendal).

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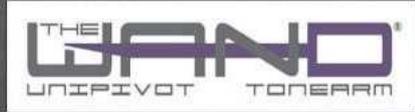
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Dealer Visits goes in search of three superb hi-fi setups put together by the experts in store

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REVIEWS NuForce DDA120, Cyrus Stereo 200 Scansonic MB-1, plus more features, Music Reviews and your hi-fi woes answered

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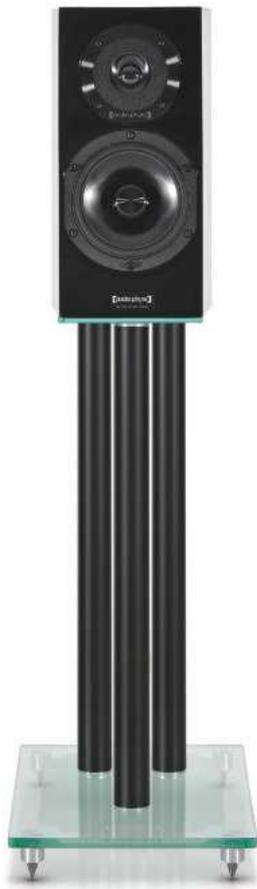
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