



Bottle fed
TAGA's tube amplifier
with stunning sonics

WIN!
Yamaha
MusicCast
setup worth
£1,600

Headmasters
Sennheiser's HD 800 S
top-of-the-range cans



Hi-Fi Choice

PASSION FOR SOUND

Issue No. 411

June 2016

Vinyl revival

**Rega's Planar 3
is back and better
than ever!**



Abbey Road
Legendary studio
reveals half-speed
remastering secrets

38

PRODUCTS ON TEST:

**Devialet, ELAC, KEF,
Marantz & Monitor Audio**



EXCLUSIVE
Active heroes
Dynaudio raises the bar
for wireless speakers



GROUP TEST
Mini systems
Six compact all-in-one
music setups for under £650

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**WHAT HI-FI?
AWARDS 2015**

PRODUCT OF THE YEAR

Accessories

Best speaker cable
Chord Company Clearway



*"In short, this is a good value
and great-sounding cable"*

Chord Clearway speaker cable
Hi-Fi Choice Dec 2015

THE CHORD™ COMPANY

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*"This interconnect handles complex music with ease, delivering a
performance that is lively and involving. It takes both classical and
modern music in its stride"*

Chord C-line interconnect
Hi-Fi Choice Nov 2015



**WHAT HI-FI?
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Chord Company C-line



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Day Of The Dead

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!



At the risk of sounding like a broken record in mentioning yet again just how back on track vinyl playback really is, confirmation of its popularity arrived in mid-April – if ever it were needed – when news broke that pre-orders for Technics' highly anticipated limited edition Grand Class

SL-1200GAE turntable had sold out in Japan in just 30 minutes. The rebirth of the world's most popular turntable among hi-fi fans and DJs alike for its consistent performance, robust build and unique pitch-shifting ability was officially announced in January at CES in Las Vegas, and is due to officially go on sale worldwide in June. But with a production run of just 1,200 models available (natch), the order books for the limited edition £2,800 deck that celebrates the Japanese hi-fi brand's 50th anniversary already look full, and the chance to be able to get your hands on one looks like it's been and gone before anyone realised.

If you're feeling like you've missed out, fear not SL-1200 fans as the non-limited edition model promises to be with us in the autumn, and for details on its pricing and specification read our news story on p8.

Keeping with the vinyl theme, another rebirth has taken place recently in the shape of our cover star and the return of the iconic Planar name to Rega's latest mid-priced model three turntable. The name may have been around before, but the new Planar 3 is anything but a rehash. Turn to page 16 to read all about it.

Lee Dunkley Editor

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“Mo’Wax, like so many other era-defining labels, was very much the vision of its founder”

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SV1820 Bluetooth music receiver

Never miss an issue – turn to p14 for our latest subs offer

Reva fever

Wharfedale adds Reva loudspeaker series, incorporating many of the design principles of its renowned Diamond 200 series

PRICE: £450-£1,300 **AVAILABLE:** NOW **CONTACT:** 01480 447700 **WEB:** WHARFEDALE.CO.UK

MANY HI-FI FANS will have started out with a pair of Wharfedale speakers, and if your passion began in the eighties then you're likely to be familiar with the Huntingdon brand's popular Diamond speaker. As its most famous design from that era, the Diamond started off as one product and grew into a whole family. It still continues today, of course, with the Diamond 200 Series – see our Diamond 230 and 220 loudspeaker reviews in issues 395 and 402 respectively – and has evolved through many incarnations with a number of significant improvements.

Why all the talk of the Diamond Series we hear you cry, well Wharfedale engineers have been hard at work on the new five-strong Reva Series, which borrows many of the design principles that are used in the latest Diamond series, but raises the bar both sonically and aesthetically. The new range consists of the Reva-1 and Reva-2 standmount models and Reva-3 and Reva-4 floorstanders as well as the Reva-C centre speaker (£400) for multi-channel setups, if that's your thing. All of the models throughout the Reva Series employ the same 25mm textile dome tweeter

with one or more woven glass fibre mid/bass drivers engineered to match the acoustic properties of the multi-layer wood cabinets fitted with a slot-loaded distributed port at the base of the cabinet.

The compact Reva-1 (£450) incorporates a 115mm mid/bass driver, while the Reva-2 (£600) uses a larger 125mm unit – both are rated at 86dB sensitivity. The two floorstanding models sport 2.5-way configurations with 88dB sensitivity, and combine a 115mm midrange driver with two 125mm mid/bass drivers in the Reva-3 (£1,000) and a



COMMENT

WHAT DO YOU DO WITH YOUR VINYL?

It's estimated that on average most museums and galleries across the world have as little as five percent of all of their antiques and works of art on public display, while the rest resides in cold storage hidden away from admiring eyes and to all intents and purposes being completely and utterly useless. But what, we hear you ask, do a bunch of Picassos and historic artefacts in a warehouse have to do with hi-fi? Take a look at the latest findings of an ICM poll about vinyl album sales and you might start to see where we're coming from...

The poll, which was published in mid April comes as an interesting counterpoint to all of the noise that's been made (and we include ourselves among the guilty parties here) about the astonishing turnaround in record sales over the last few years. For those that haven't been paying attention, 2014 witnessed the highest vinyl album sales in 20 years and 2015 saw the trend continue to the point that we're at now where you can pick up some of the black stuff while cruising around your local supermarket. But here comes the interesting – or should that be worrying – bit. The ICM poll revealed that of those people that bought vinyl that were asked, as many as 48 percent didn't actually break the seal and listen to the record. We'll say that again just so it's clear; just under half don't actually listen to the album. Perhaps more worrying still, of that 48 percent, 41 percent have a turntable and choose not to use it, while seven percent don't even own a record player to spin their virgin vinyl on.

There has been a lot of talk about the growth of record sales being driven by hipsters and teenagers for whom the nostalgia factor is a key driver. And now it would appear that they want the tangibility of being able to look at a record cover and enjoy the larger artwork while continuing to listen to it on their smartphone or MP3 player. Whatever the reasons, the news remains positive for vinyl's future. If only one or two of these people would break the seal and discover what they're missing out on... ▶

pair of 150mm mid/bass drivers in the Reva-4 (£1,300).

Design that shines

The curved, one-piece cabinets are hand-finished with multiple layers of piano lacquer, each polished to a high shine before the next is applied for a luxury finish. The look is further embellished with aluminium driver surrounds with a soft matt finish. The Reva Series is currently available in high-gloss back and white and rosewood finishes, with a walnut finish that we're told is set to come to market later in the summer.



The Reva-2 in piano white



Technics SL-1200G

New non-limited edition turntable available in the autumn

PRICE: £2,799 **AVAILABLE:** AUTUMN 2016
CONTACT: 0333 2228777 **WEB:** TECHNICS.COM/UK

IF YOU WEREN'T fortunate enough to get your hands on one of the 900 limited edition SL-1200GAE turntables outside of Japan (or the 300 in Japan), fear not as the update of Technics legendary turntable will still be coming to stores in the form of the SL-1200G you see before you here. Boasting a three-layer construction, which consists of a rigidly combined heavyweight brass and aluminium die-cast platter with deadening rubber covering the entire surface, the SL-1200G is claimed to eliminate resonance and achieve high rigidity and vibration damping during playback. The tonearm follows suit, employing lightweight magnesium, which has been cold drawn to further increase the damping effect. Technics additionally claims that cogging has been eliminated thanks to a new coreless direct-drive motor, which suppresses potential vibrations using high-precision rotary positioning sensors guided by a microprocessor-controlled system. Look out for a review in an upcoming issue of *HFC*.



IN BRIEF

CHORDMUSIC FLAGSHIP RANGE



● The Chord Company has unveiled what it is describing as its most advanced cable range in its 30-year history. The new flagship ChordMusic series has been developed using a new insulation material called Taylor, which has never been used in audio cables before. Although its dielectric constant is very slightly lower than PTFE, Taylor is phase stable at typical room temperatures, meaning that it should be able to produce the most natural and musically coherent sound. The range is available as analogue (RCA, XLR and DIN) and digital (AES EBU, RCA, BNC, XLR and RJ45) interconnects.

CHORD.CO.UK

Onkyo DP-X1

PRICE: £699 **AVAILABLE:** JUNE
CONTACT: 07974 143813 **WEB:** ONKYO.CO.UK

Officially launched at the Munich High End Show at the beginning of May, Onkyo's DP-X1 Digital Audio Player should cover all hi-res needs, thanks to its ability to handle 24-bit/384kHz FLAC/WAV files along with DSD 11.2MHz and support for lossless MQA (via a free update). The portable player utilises an Android operating system (and so can download additional apps from Google Play, while the pre-loaded OnkyoMusic service allows music download without the use of a PC), boasts 32GB internal storage (of which 7GB is used by the system) and employs ESS Technology's Sabre ES9018K2M DAC for conversion.

There are two microSD card slots for adding extra memory (up to 432GB) and outputs for both 2.5mm and 3.5mm headphones, while wireless connectivity to additional components comes in the shape of wi-fi and aptX Bluetooth. It has 4.7in touchscreen, 161-step volume control along with a new 'finger-flick' interface as well as physical transport controls.



MUSICAL FIDELITY

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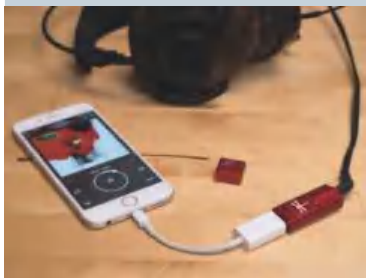
Audio-Technica deck connects to wireless speakers

PRICE: £169 **AVAILABLE:** NOW
WEB: URBANOUTFITTERS.COM

AUDIO-TECHNICA IS LOOKING to bring vinyl to the masses with its latest turntable release, the affordable AT-LP60BT. It's one of the first models to appear on the market from a traditional hi-fi brand that offers Bluetooth connectivity to enable users to wirelessly connect to suitably equipped speakers, headphones and stereo receivers. It looks to be the ideal introduction for those that are starting out on their vinyl journey, and thanks to its built-in switchable phono amplifier users will be able to simply plug and play (RCA phono outputs are also included) or connect and play wirelessly to a Bluetooth music system. The fully-automatic turntable is able to spin records at 33 and 45rpm, has an anti-resonance die-cast aluminium platter and is packaged with an Audio-Technica dual moving-magnet phono cartridge. There's also a 3.5mm auxiliary input and a headphone output. The AT-LP60BT is available now in black or white finishes and is supplied with a dust cover.

IN BRIEF

DRAGONFLY DAC BLACK AND RED



● It's been nearly four years since the original DragonFly DAC (*HFC 367*) was released, and now AudioQuest is unveiling two new models designed to be compatible with Android and Apple smartphones. The new USB DACs handle files up to 24-bit/96kHz, and put music quality first, says AQ. The DragonFly Red (£169) has a 32-bit ESS Sabre 9016 chip and is suited to lower sensitivity headphones, while the Black (£89) DragonFly employs a 9010 chipset and is suited to medium to high sensitivity headphones. Like earlier DragonFlies, the Black has an analogue volume control, while the Red opts for a digital one. A DragonTail USB adaptor for Android devices costs an additional £15. **AUDIOQUEST.COM**

Ruark Audio's R7 update

PRICE: £2,000 **AVAILABLE:** NOW
CONTACT: 01702 601410 **WEB:** RUARKAUDIO.COM

Music centres are the perfect solution for those that are short on space, and Ruark Audio has become something of a master of the form (see its R4 Mk3 on page 35 of this month's *Group Test*), so the news that the British manufacturer has upgraded its R7 is very welcome. We reviewed the original R7 in *HFC 384*, commenting on its styling cues taken from the classic radiogram, which updates the traditional 'wireless' by including digital,

analogue and internet tuners, along with a slot-loading CD player. Ruark Audio tells us that the updated R7 benefits from further audio enhancements to its amplifiers and speaker crossovers that results in a smoother and more extended frequency response with improved soundstage, making the listening experience even more realistic and enjoyable.

The revised model still offers DLNA wi-fi and aptX Bluetooth

connectivity for streaming of music from smartphones, laptops and network storage devices, as well as more traditional analogue and digital connectivity hookups – and a charging port for smartphones and tablets.

As before, spindle legs complete the radiogram look, or it can be sat on pucks on an existing stand. It is available in matte black, matte white or real walnut finishes and comes with a RotoDial remote control.



A close-up, high-angle photograph of a Dynaudio Emit speaker driver. The driver is a circular, metallic component with a central dome and several screws around its perimeter. It is mounted on a dark, possibly black, surface. The lighting is dramatic, highlighting the metallic texture and the central dome.

Emit.

**Enter the World
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The new Dynaudio Emit series is the latest model range from Dynaudio and was conceived as an entry level high end loudspeaker series incorporating extraordinary levels of performance and technical innovation in an attractive package suitable for almost any level of amplification.

Visit www.dynaudio.com to find your nearest authorised Dynaudio retailer.

Listen to the new Emit Series.

DYNAUDIO

Webwatch

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



Technics timeline

Marking the welcome return of Technics' legendary SL-1200 deck, The Vinyl Factory created this timeline charting the evolution of the iconic spinner through the ages, from the SP-10 of 1970 to 2016's SL-1200GAE and each one in between. bit.ly/20eCiOH



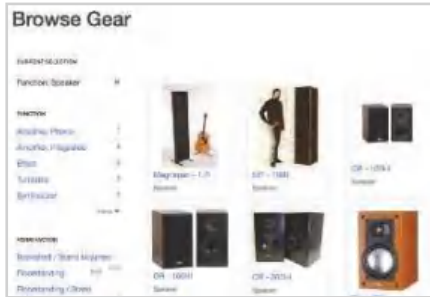
#RSD16 giveaway

This year's Record Store Day fanfare was arguably the greatest yet, and this post from Sonata Hi-Fi underlines why as it joined forces with Sister Ray Records to present lucky winner Danny Hughes with a limited edition Rega deck. [facebook.com/Sonata-Hi-Fi-304700266210224/](https://www.facebook.com/Sonata-Hi-Fi-304700266210224/)



Spring cleaning

All hi-fi components benefit from a bit of TLC from time to time to keep them on song, and keeping your cables clean is just as important as this recent blog post from Nordost highlights by taking an in-depth look at the best approach, with handy tips along the way. bit.ly/1VGJ6VQ



Audio archive

Building on the success of sister site Discogs, Gearogs aims to become the largest database of audio equipment ever. With the help of its users, the site is growing fast as it attempts to list every turntable, amp and audio gear product known to man. gearogs.com



Grim keeper

This macabre vinyl service goes one step beyond by pressing the cremated ashes of those dearly departed into LPs of your choosing. Founded by British music producer Jason Leach, And Vinyly offers personal packages to give people and pets life beyond the groove. andvinily.com



Going nativ

Launched via crowdfunding site Indiegogo, Nativ claims to integrate hi-res video and music streaming services over wi-fi. Offering both a touchscreen control centre and separate DAC, this project looks set for success having exceeded its \$100k target by some margin. bit.ly/1ULOCbU

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CHOICE TWEETS



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Engineer and Co-producer Patrick Phillips explains the recording process for [@9Bach's](https://twitter.com/9Bach) album. [b-w.social/Gv2](https://twitter.com/b-w-social/Gv2)

B&O PLAY (@BEOPLAY)
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The Resurgence Of Vinyl – Deja Vu (All Over Again)? But you can have the secret of getting it right at t.co/ZrZosJUCik

THE SOUND GALLERY (@THESOUNDGALLERY)
The Orb sounds lush on the new [#P3](https://twitter.com/RegaResearch). [#madeforvinyl](https://twitter.com/madeforvinyl). pbs.twimg.com/media/CgG37nyWcAEyUAN.jpg

RECORD STORE DAY UK (@RSDUK)
Happy 1st birthday to the UK's Official Vinyl Charts! [#RSD16](https://twitter.com/RSD16) bit.ly/1Px19LY

KEF AMERICA (@KEF_AMERICA)
Follow us on Soundcloud and be the first to hear our new bi-monthly podcast The Listening Room. [soundcloud.com/kefamerica](https://www.soundcloud.com/kefamerica)

THE MUSIC ROOM (@TMRAUDIO)
Denon DP-75 Turntable mounted on a VPI base. Great cartridge and tonearm! tmraudio.com/product/xx-718#vinyl#analog

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Let's bring precision to your passion. Meet LYD. dynaud.io/3

MUSICFIRSTAUDIO (@MUSICFIRSTAUDIO)
Another day. Another photo shoot. pbs.twimg.com/media/CfZgLBWQA1cQ93.jpg

DAVID BROOK (@MCRULTD)
The [#MCRU](https://twitter.com/MCRU) Ltd Edition Ultimate power cord the best just got better [mains-cables-r-us.co.uk/mains-cables-/1291-mains-cables-r-us-ultimate-mains-lead.html](https://www.mains-cables-r-us.co.uk/mains-cables-/1291-mains-cables-r-us-ultimate-mains-lead.html)

AUDEZE (@AUDEZE)
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Masterpiece

Digital-to-analog Converter with Streaming and AirPlay

HEGEL

NET

60



HEGEL HD30 DAC with Streaming and AirPlay

The HD30 is the ultimate digital control center. It does everything you can dream of, and does so with world-class quality.

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In short... Do you even dare to try it?



MUSIC SYSTEMS

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Edinburgh: Loud & Clear
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Hegel: www.hegel.com

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Three for all

The Planar 3 turntable is one of Rega's most iconic models, but as **Ed Selley** notes this traditional mid-range deck is no rehash




DETAILS
PRODUCT
 Rega Planar 3

ORIGIN
 UK

TYPE
 Belt-drive turntable

WEIGHT
 6kg

DIMENSIONS
 (WxHxD)
 447 x 117 x 360mm

FEATURES

- 33 & 45rpm
- 'Optiwhite' glass platter
- RB330 tonearm
- Upgradeable external PSU

DISTRIBUTOR
 Rega Research Ltd

TELEPHONE
 01702 333071

WEBSITE
rega.co.uk

Some product designs achieve a level of immortality through a magical formula of exceptional performance, aesthetics and longevity that leads to such considerable success that they are forever associated with the brand and in its psyche. Such consumer awareness is the holy grail of a brand's success, but it can also prove to be something of a poisoned chalice when it comes to approaching any form of update or modernisation to what is considered an iconic classic.

In the case of Rega, its icon has been its belt-driven, low-mass unsuspending plinth turntable that has worn a few different names over the years but has always pertained to the number three – the Planar 3, P3, RP3, the list goes on. Although the design of the three has changed over the years, it has retained the same basic form factor and has become indelibly associated with the turntable manufacturer. Now, Rega has released a new version that it claims is the most substantial revision yet and coupled this with a reset of the name so that you can buy a Rega Planar 3 once again.

It has a powerful and impressively deep bass that never loses texture and detail

How substantial are these changes? Rega claims that only two parts of the Planar 3 are shared with the outgoing RP3, effectively making it all new. If you look closely, however, it quickly becomes clear that while the basic form is the same as before, there are some key differences. The plinth is stiffer and has a much improved finish over the preceding model and it's available in black and white high-gloss finishes. The bearing is also re-worked with a new brass central section that improves fit and quality to lower the noise floor and reduce the stress on the bearing itself. This is in turn mated with a new sub-platter that is stiffer and built to tighter tolerances than the preceding version.

Key to the way that the Planar functions is a new bracing system that links the arm mount and bearing together. This comprises a 3mm plastic bottom bracket and a visible top bracket with a metallised skin. This makes the Planar 3 a great deal more rigid and controls the movement between the two. Rega calls this arrangement a 'stressed beam' and claims that coupled with ▶



The RB330 tonearm has no VTA adjustment, so choose alternative cartridges carefully

the stiffer plinth, the Planar 3 is considerably more inert than any previous version, which should audibly reduce distortion.

The arm has been even more heavily reworked. The new RB330 is visibly similar to the old RB300, but given it includes a new bearing housing, armtube and counterweight, it can realistically be thought of as all new. As well as performance improvements, Rega has also worked to improve the day-to-day usability and to this end there are some adjustments to the anti-skate settings and cable plugs that are very welcome. It still lacks VTA adjustment, which is a minor irritant but not the end of the world with careful cartridge choice (see the Needlework box out).

Finishing touches

Finishing off these substantial revisions is a series of detail improvements. Most noticeable among these is the platter. It's still made of glass, but is now 12mm thick, finished to a high tolerance and has 'Optiwhite' polishing around the edge. It looks extremely smart in the flesh and the whole deck rests on revised feet designed to improve isolation. While the new supports are an improvement on what came before, the turntable will still benefit from being placed on a surface that gives it further isolation from the outside world.

As supplied, the Planar 3 comes with a wall-wart power supply, but Rega has ensured that you can upgrade the deck at a later date to use the TT-PSU, which gives improved

performance and the bonus of electronic speed control. Without it, speed adjustment is carried out by changing the belt on the pulley, which is simple enough to do. The biggest change, though, is in the aforementioned tonearm. It might look similar to what has gone before, but the smoothness of the movement and the general feel it offers is much more impressive.

It might seem a little curious that a deck with such extensive revisions looks almost exactly the same as it did before, but the Rega's beauty stems from its simplicity. While the looks are similar to previous incarnations, it feels different to its predecessors once extracted from the packaging. The improved finish on the plinth, the wonderful edge to the platter and the overall levels of build help it to feel more expensive than the moderate price rise over the RP3 might otherwise suggest.

Sound quality

In many ways the sonic performance of the Planar 3 echoes the aesthetic improvements that have been made. Connected to a Cyrus Phono Signature phono stage (HFC 408) and Naim Supernait 2 integrated amplifier, it manages to sound very much like a Rega deck should, yet simultaneously more capable and infectiously lively. Selecting *Motion* by The Cinematic Orchestra as a starting point, the complex but magnificent *Ode To The Big Sea* demonstrates its abilities and motors through the complex beat with an absolute assurance and a genuine sense of fun.



At £550 without cartridge, the Planar 3 has a comfortable performance advantage over pretty much any turntable at the same price. The first to really put up much in the way of a fight is The Funk Firm's *Flamenco* (HFC 391), which at £850 minus a cartridge is a hefty £300 more than the Rega in the same condition. The *Flamenco* has an outstandingly open and natural presentation and Funk's expertise in the use of DC motors helps the timing and overall presentation. For the same money, though, it would be possible to spec the Rega with the optional TT-PSU (£198) – which would likely narrow the Funk's advantage – and still give you £100 spare change for cartridge shopping.

Where the differences start to show is in the way that the Planar 3 presents the complex and slightly congested midrange of the track. It opens up the material, never making it sound disjointed or confused, but instead managing to create a sense of space and soundstage where many similarly priced rivals might struggle. There is a three dimensionality to the Planar 3 which allows it to sound believable and consistently enjoyable.

This spaciousness doesn't require a toe tapping beat to reveal itself either. The lovely repress of Air's *Moon Safari* is involving and intimate, but still possesses an ambience that makes it sound real. The beautiful *All I Need* is delivered with an almost liquid quality with Beth Hirsch's vocals layered effortlessly across a soundstage that is simply exceptional. With the sweeping, semi-orchestral *Talisman*, the Rega effortlessly ups the scale but keeps that same fantastic sense of involvement.

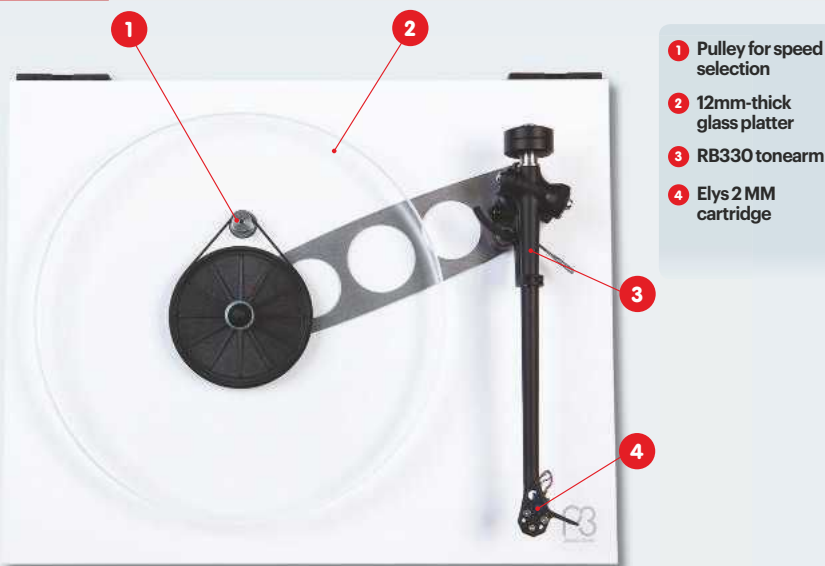
Something that helps across a wide variety of music is the fact that the Planar 3 has gained a bass response that is deeply impressive for a turntable built from these materials at this price point. It manages to produce powerful and impressively deep bass that never loses the texture and detail needed to be a convincing

It is completely unfazed by any genre of music that is thrown at it

part of the performance rather than big uncontrolled slabs of low end. The integration is also seamless. You don't really notice the swell of the lower midrange until it becomes genuine bass extension because the Planar 3 does it perfectly and it does so whether the bass is the swell of an orchestra or the pounding low end of Leftfield's *Alternative Light Source*, for example. There is a substance to the sound that shines through almost regardless of the partnering equipment.

At the other end of the frequency extreme, it shows perhaps its only meaningful weakness. Through the peerless and extremely refined Cyrus Phono Signature phono stage, it never really does anything other than provide a sweet and detailed treble, but switching to the Graham Slee Gram Amp 2 Communicator (HFC 407) – which is more representative of the sort of phono stage that it's likely to be partnered with – results in

IN SIGHT



- 1 Pulley for speed selection
- 2 12mm-thick glass platter
- 3 RB330 tonearm
- 4 Elys 2 MM cartridge

NEEDLEWORK

The Planar 3 can be ordered with the Elys 2 cartridge as tested here and represents a £45 saving on the price of the cartridge on its own. While the Planar 3 is all new, the Elys 2 is a veteran and has been the supplied cartridge for preceding '3' models as well. As noted, the exceptional virtues of the Planar 3 ensure that this is the most impressive performance I have heard an Elys 2 cartridge produce, but given the performance of the deck as a whole it should be seen as a limiting factor in its potential.

The slight catch to choosing an aftermarket cartridge is that as the RB330 tonearm has no VTA adjustment, care needs to be taken over what you choose. Fitting a Hana

EH high-output moving-coil cartridge (HFC 410) to the RB330 tonearm results in the arm adopting a slight 'tail down' position that affects the sweetness of the Hana's top end. Changing the Hana to a Nagaoka MP150 (HFC 375) is much more successful, though.

The Nagaoka has almost identical dimensions to the Elys 2, which results in a more level arm profile. The resulting performance is genuinely excellent with an open and expressive top end and further improvements to the bass response. The combination of Planar 3 and Nagaoka cartridge is likely to cost around £800, but it offers outstanding performance at the price.

the treble sounding a little thin and edgy with less than stellar recordings. Some of this is down to the packaged Elys 2 cartridge (see the box out above), which can be a little strident when pressed, although it is worth noting that the Planar 3 gets more out of it than any other Rega turntable I've heard. Additionally, some of the materials that are used in the deck will add a degree of top-end brightness, but not so severely that they can't be tuned out.

Keep that top end under control, though, and the Planar 3 is consistently entertaining. It is unfazed by any genre of music that is thrown at it and the basic attributes it possesses are consistent regardless of whether you're listening to something small scale and elegant or a massive piece of live rock. The assurance with which it handles such a wide variety of music is deeply impressive. More than almost any relatively affordable turntable I have listened to in recent times, it doesn't require the caveat that it is good at the price.

This consistency and ability is admirable, but what really impresses is that it also manages to impart very little of itself while it does so. There is unquestionably some of the life and

energy that's often associated with Rega turntables, but the Planar 3 gives fine neutrality and should be as happy in a low-power valve setup as a high-power solid state one.

Conclusion

Rega's new Planar 3 is something of a star and is an ideal starter turntable for those looking to discover just what vinyl is capable of. Rega has taken its iconic simplistic philosophy and run with it, and by throwing the Elys 2 cartridge into the bundle it represents the driving force for affordable vinyl playback ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Superb sound; excellent build; great finish; easy setup
VALUE FOR MONEY ★★★★★	DISLIKE: Cartridge has slight treble limitations; no arm VTA
BUILD QUALITY ★★★★★	WE SAY: It might look similar to the previous model, but this is a huge leap forward and a star at the price
FEATURES ★★★★★	

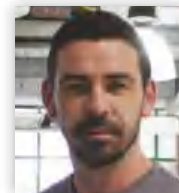
OVERALL



Q&A

Simon Webster

Sales and marketing coordinator, Rega



ES: Was there ever the temptation to leave the RP3 unchanged rather than embark on the level of changes embodied in the Planar 3?

SW: At the point we decided to launch the new Planar 3, the RP3 was seeing some of its highest sales since launch. However, the new model did not appear overnight. Two years of intense development work focused on redesigning almost every single detail of the design dedicated to improving performance in every area is an expensive process. Rega had learnt so much since the launch of the hugely successful RP8 and RP10 and this new knowledge was able to trickle down in the new models. The investment we made and our confidence in the new product made the decision to launch easy. Equally, Rega has a policy of developing all aspects of the company and the RP3 was in its sixth year and ready for a replacement in what is currently a very competitive market.

The changes between the two is extensive. Is there a single one that stands out above all the others?

Two areas of the Planar 3 offer the biggest sonic improvement. The combination of the new central bearing (patent pending) designed with tighter tolerances and a unique fitting method, which removes potential energy from the plinth and the bearing itself. Secondly, it would be the RB330 tonearm, with its redesigned bearing housing and new bearings this arm is operating at the tightest tolerances seen at this price point. However for us the lift in performance over the RP3 is the amalgamation of all the changes, each giving improvements which once combined give the biggest step forward in the three model range we have achieved to date.

Does the launch of the Planar 3 mean we can expect any alterations to the RP1 and RP6 in the future?

Rega is always working on new models and is currently reviving the Planar 2 for launch in May. By the end of the year we expect to have at least three new Planar models available, but I can't give you any more details.



SCANSONIC

AUDIO ANALOGUE
soundpleasure

DECENTAUDIO.CO.UK



TEL: 05602 054669

EMAIL: INFO@DECENTAUDIO.CO.UK

AUDIO ANALOGUE - KRONOS AUDIO - MAGNEPAN - RIVA AUDIO - SCA



Transfiguration

KRONOS
TIME FOR MUSIC™



DECENT AUDIO
SOUND DISTRIBUTION

ANSONIC - TRANSGIFURATION - USHER - VAN DEN HUL - VELA AUDIO

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

MINI SYSTEMS GROUP TEST

A **NUMBER OF** attributes mean that the testing process for this group of products has been slightly more complex than usual. First up, there is no one playback format shared across all six products. Secondly, the Revo and Cambridge Audio setups do without a CD mechanism, while the Ruark and Sonoro are not network audio products. To try and compare like for like, the test music chosen is all 16/44.1kHz on all formats so as to make for a level playing field. This allows CD-based models to play a CD-R containing four tracks burned as WAV files from the FLAC files used with streaming models supplied by a Melco N1A NAS drive (HFC 397) via a wireless network.

For the Cambridge Audio, Marantz and Novafidelity systems that need external speakers a pair of Q Acoustics 3010s is used, but instead of being placed on stands they are positioned either side of the electronics to replicate how these compact systems are most likely to be used and placed one metre apart with the electronics located in the space in between. All products are supported by a Quadraspire QAVX rack (HFC 395) and for the systems that require speaker cabling, terminated runs of The Chord Company Sarsen cable (HFC 398) are used. A Motorola Moto X smartphone and iPad 3 are used for testing the control apps where supplied and for Bluetooth streaming performance.



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

SOURCE
Melco N1A NAS

LOUDSPEAKER
Q Acoustics 3010

SUPPORT RACK
Quadraspire QAVX

CABLES
The Chord Company Sarsen speaker cable

TEST MUSIC

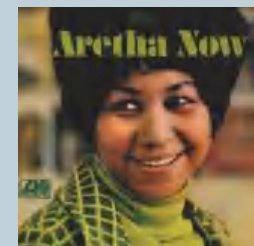
JACK SAVORETTI
Between The Minds
Black Rain 16/44.1kHz FLAC/WAV



BLUE MAN GROUP
Audio
Opening Mandelbrot 16/44.1kHz
FLAC/WAV



ARETHA FRANKLIN
Aretha Now
Say a Little Prayer 16/44.1kHz
FLAC/WAV



KAIROS 4TET
Everything We Hold
J-Ho From The Block 16/44.1kHz
FLAC/WAV



Bowers & Wilkins

Designed for listening

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

bowers-wilkins.com



Decoupled Double Dome tweeter



Group test

MINI SYSTEMS £350-£650

Mini marvels

Music systems come in all shapes and sizes.
Ed Selley listens to six compact designs

NOT SO LONG ago, the compact music system was very much the poor relation to more serious separates-based setups, but in recent years the first rung on the hi-fi ladder has seen this product category offer a level of facilities and performance that makes these models more than just a simple convenience choice. Compact all-in-one components now offer hi-res streaming, access to on-demand services and enough inputs to become the hub of a significant music system – just add speakers. They can be controlled by a smartphone and in many cases perform a level of functionality that was impossible to imagine just a few years ago.

As an alternative to the all-in-one compact components that require additional speakers, an increasingly sophisticated group of single-chassis audio systems has emerged, offering a broad and steadily improving level of functionality. While integrated CD mechanisms remain popular, models are increasingly being bolstered by the likes of aptX Bluetooth streaming, and many models now offer a similar level of network capability to their versatile compact all-in-one cousins and claim healthy power outputs to drive sophisticated built-in speakers.

Space stations

So, if you have around £600 to spend on an audio system and space is limited, is a compact mini system that requires add-on speakers (and the space to put them) worthwhile, or can the latest generation of single-chassis audio systems do enough in terms of performance and facilities to make them a more logical choice? To investigate this conundrum, our lineup of models splits into two groups with a trio of components that require the addition of a pair of speakers facing up against three single-chassis rivals.

If you want great sound but don't have the desire for a traditional hi-fi setup, one of these miniature masterpieces could be right for you...





ON TEST



Cambridge Audio Minx Xi £400 p27

Cambridge Audio's all-in-one streaming system claims 2x 40W power output, 24-bit/96kHz capability, internet radio, Spotify Connect and a useful selection of analogue and digital inputs as well as aptX Bluetooth connectivity.



Marantz M-CR611 £350 p29

This compact system packs an impressive spec with streaming capabilities up to 24-bit/192kHz and DSD 2.8MHz support via network and USB as well as digital and analogue inputs, and claims a respectable 2x 60W power output.



Novafidelity X12 £529 p31

Arguably the most versatile system here, the X12 is the only model with a hard drive (1TB), and is both able to store music files ripped from CD as well as play files over a network. It can be used as a network server and claims a 2x30W amplifier.



Revo SuperSystem £550 p33

As the most ambitiously specified one-box system with built-in speakers, the Revo has UPnP streaming, Spotify Connect, internet radio, digital inputs and aptX Bluetooth combined with a claimed 80W amplifier, BMR speaker drivers and a subwoofer.



Ruark Audio R4 Mk3 £650 p35

The latest in a long-running family of Integrated Music System (IMS), the Ruark Audio R4 Mk3 is CD based with speakers, DAB/DAB+ and FM radio as well as aptX Bluetooth and file support over USB. Total power output is quoted at 80W.



Sonoro SonoroStereo £539 p37

A new brand to HFC, the Sonoro is a one-box CD-based system with DAB/DAB+ and FM radio, aptX Bluetooth streaming and USB music file support. And if that's not enough, there are also six pre-loaded 'nature sounds' to aid relaxation.

Artera

“Lush, gorgeous – choose whatever adjectives you like: The Artera duet respects the music.”

Ken Kessler, Hi-Fi News (November 2015)



DSD
Direct Stream Digital



Classics for the modern age

Artera is a new range of audio electronics from QUAD, fusing 79 years of sonic experience with cutting-edge technology and crisp, clean styling that both evokes the past and looks forward to the future.

The Artera Play is a CD player, DAC and preamp combined in a single elegant chassis. Incorporating state-of-the-art circuitry, its performance extends to ultra-high-resolution playback with an array of digital and analogue inputs. Its perfect partner is the Artera Stereo, a compact yet potent power amplifier delivering 140W per channel and sporting the latest iteration of QUAD's famous Current Dumping topology – the only amp design to have earned a Queen's Award for Technological Achievement.

Combining the assurance of tradition with the buzz of innovation, QUAD Artera is the lifeblood of high-performance audio entertainment for modern music lovers. Visit QUAD's new website at quad-hifi.co.uk to find out more.

QUAD Artera Play and Stereo pictured with QUAD S2 speakers





CONNECT CONTROL

The Minx Xi makes use of the company's own Connect control app. Available for iOS and Android, this has evolved from a slightly shaky start into a capable and very usable app. As well as allowing standard browsing of a UPnP or connected USB hard drive (the former being a rather slicker experience than the latter), you can also browse the internet radio selection and choose from other external inputs as well as control the volume level. Its use with portable devices doesn't end there either. The Bluetooth dongle is easy to get up and running and proves stable and dropout free in use. Its range isn't as high as some rivals, but proves perfectly sufficient for normal use. Finally, Spotify Connect functionality works well for browsing from a smartphone and tablet.

Cambridge Audio Minx Xi £400



This compact system has a wide range of features, but how does it perform compared with rivals of the day?

DETAILS

- PRODUCT**
Cambridge Audio Minx Xi
- ORIGIN**
UK/China
- TYPE**
Integrated amplifier with 24/96-capable network streaming
- WEIGHT**
5.8kg
- DIMENSIONS**
(WxHxD)
270 x 90 x 285mm
- FEATURES**
 - Quoted power output: 2x 40W (8ohm)
 - Inputs: 3x USB; 1x optical digital; 1x coaxial; 2x RCA line
 - Ethernet; wi-fi; aptX Bluetooth
 - 3.5mm headphone socket
- DISTRIBUTOR**
Richer Sounds
- TELEPHONE**
0207 9402200
- WEBSITE**
cambridgeaudio.com

This is one of the more long-standing products in this roundup, but a recent price cut to £400 brings it into line with this group and the spec is even more tempting at the price. Described as a Digital Music System, the Minx Xi is built around a UPnP streaming section that is capable of handling 24-bit/96kHz files via wired or wireless connections and supports internet radio and Spotify Connect.

The system is additionally supplied with an apt-X-capable USB Bluetooth dongle and connectivity is rounded off with two digital inputs and a pair of analogue stereo inputs. Outputs are limited to a solitary subwoofer out, which rather restricts futureproofing.

There is a lot to like about the design and aesthetics of the Minx Xi, though. Of the speakerless units, this is the largest and most solid model here and by far the heaviest. The only slightly peculiar element of the design is that the speaker terminals won't accept a 4mm plug in the end, which is an annoyance. The hefty build is combined with stable and easy to use software. It's easy to set up using a combination of the volume/jog dial

control and the small collection of buttons. The display is clear and easy to read while managing to convey a useful amount of information too. The supplied remote control handset is the nicest in the group, although most users will rely on the control app, see box out.

Sound quality

This is notionally one of the least powerful units here and yet it doesn't struggle with volume in practise. Indeed, in many respects, it is the most powerful and refined-sounding option on test. With Jack Savoretti's *Black Rain*, the Minx Xi produces a performance that is big, assured and easy to follow. Vocals are rich and believable and combine well with the supporting instruments.

This refinement does mean that the Blue Man Group's *Opening Mandelbrot* can sound a little less potent than perhaps it should, but the bass extension and general sense of space is extremely enjoyable. There is a commendable sense of timing and it manages to exert impressive levels of control over the speakers, which helps the feeling of agility and avoids any

overhang to the bass notes. Aretha Franklin's rendition of *Say A Little Prayer* sees the Minx Xi on slightly less happy ground. While the performance as a whole keeps the same sense of scale and drive that the Cambridge does well at, there is a loss of fine detail with backing vocals and instruments that leave Franklin's vocals sounding a little isolated. This is something that really only shows itself when listened to alongside some of the rival models here.

Moving onto the Kairos 4tet piece *J-Hø From The Block* sees the Minx Xi back on happier ground. The instrumental tonality is excellent and even with the closely placed speakers of the test conditions, the performance is spacious and capable of producing a soundstage that has logic and order to it. It isn't perfect by any means, but coupled with its usefully extensive specification and solid build, the Minx Xi does a great deal right ●



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Involving and refined sound; solid build; good spec
VALUE FOR MONEY ★★★★★	DISLIKE: Some lack of fine detail; speaker terminals; no pre-out
BUILD QUALITY ★★★★★	WE SAY: A very accomplished system that does a number of different functions extremely well
FEATURES ★★★★★	
OVERALL ★★★★★	

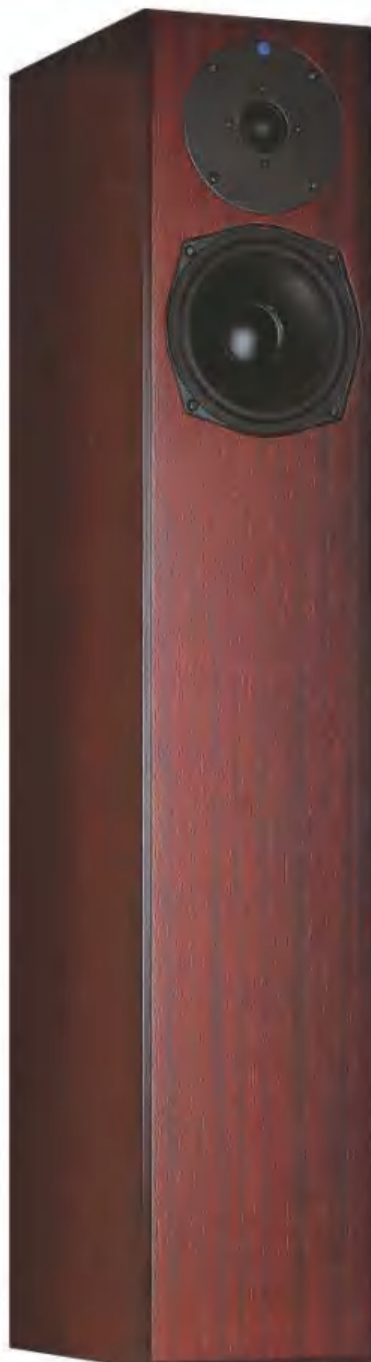
TOTEM

Totem's first floor standing speaker, STTAF, designed in 1997! The ultimate challenge was to provide a floor-standing mini-tower, which incorporates the elements of our mini-monitors yet eliminates all the flaws inherent in tall columnar designs. Uncompromising design engineering, micro-attention to every detail, lengthy critical listening tests -- the attributes long associated with all Totem products -- have resulted in a mini-tower worthy of the Totem nomenclature. Internally, the cabinet is built with two crossbars set at slightly different angles. One has only to listen in order to be convinced of their resulting success. The cabinet joints use a unique lock mitre system. The cabinet is finished with four different veneers: cherry, mahogany, maple and black ash. The standard added plinth with four spikes can be mounted by our specialists, although optional, using the unique Totem "Claw" with ball bearing to floor system will give even better results. Bi-wireable through solid gold-plated binding posts. The cross-over uses sophisticated oil capacitors and teflon isolated wiring.



TOTEM's mini-towers reflect our commitment to both long-term value and continuity. There is no planned obsolescence in this affordable product which would be a market leader at any price. Trust your soul, follow your senses, and experience what proper and exacting sound imaging can do for your psyche. STTAF is a pièce de résistance that attests to the profound sound staging that can be produced by critical, flexible and innovative engineering. Experience STTAF as your key to a new and rewarding listening experience. Once this TOTEM chooses you, there is no turning back...

Totem **STTAF** £1,900/pair



London Area

O'Brien Hifi, LONDON SW20 0TW, 02089 461528
 Cornflake, LONDON W1T 2JU, 02073 234554
 Oranges & Lemons LONDON SW11 6RX, 020 7924 2040
 Sonata Systems, LONDON, NW6, 03301 115653

South East

Rayleigh Hi Fi, RAYLEIGH, 01268 779762
 Rayleigh Hi Fi, SOUTHBEND, 01702 435255
 Rayleigh Hi Fi, CHELMSFORD, 01245 265245
 The Audio Barn, HARLOW, 01279 454860

South

Hidden Systems, HARTLEY WINTNEY, 01252 845400
 Norman Hobbs, HAYWARDS HEATH, 01444 413353
 Summer House Sounds, ALTON, 02031 981782

South West

Audio Destination, TIVERTON, 01884 243584

Midlands

Cymbiosis, LEICESTER, 03332 004475
 Hifi Gear, HEREFORD, 01432 354921
 Hidden Systems, KIDDERMINSTER, 01562 542302

North

Moorgate Acoustic, SHEFFIELD, 01142 756048
 Dough Brady, WARRINGTON, 01925 828009

Scotland

Loud & Clear, EDINBURGH, 0131 555 3963
 Loud & Clear, GLASGOW, 0141 221 0221



Marantz

M-CR611 £350



Looking for a compact music system that's ultra-flexible at a great price? This setup could be for you

DETAILS

PRODUCT
Marantz M-CR611

ORIGIN
Japan/China

TYPE
Integrated CD/
amplifier system
with 24/192-capable
network streaming

WEIGHT
3.4kg

DIMENSIONS
(WxHxD)
292 x 111 x 305mm

FEATURES

- Quoted power output: 2x 60W (6ohm)
- Inputs: 1x RCA; 2x digital optical
- Ethernet; wi-fi; Bluetooth; AirPlay
- 3.5mm headphone socket

DISTRIBUTOR
D&M Holdings

TELEPHONE
02890 279830

WEBSITE
marantz.co.uk

Like the Minx Xi, this is one of a number of models that has seen a recent price reduction, which now means that even after you add a pair of Q Acoustics 3010 speakers, this is still the most affordable music system here. More impressive still is the fact that the specification is in many respects, superior to anything else in the group. You get UPnP streaming that supports PCM files up to 24-bit/192kHz as well as DSD 2.8MHz capability, internet radio, AirPlay, Bluetooth and Spotify Connect, plus DAB+/DAB and FM radio. Last but by no means least, all this functionality is joined by CD playback should you want something a little more conventional. Socketry runs to a pair of optical digital inputs, an analogue input, A/B speaker switching and an RCA line output.

The M-CR611 feels reasonably well assembled, with the points of contact like the speaker terminals and controls feeling solid and logically laid out, although the casework seems a little more lightweight than perhaps it should. There's no volume knob on the front panel, just a pair of buttons,

which makes quick adjustment trickier than on other rivals.

Setup is simple – especially if you have a WPS-enabled router – and the scrolling display is clear and easy to read, if a bit quick at times. The remote control is a little on the fussy side, but works well enough and there is also a control app for Android and iOS devices – see box out.

Sound quality

The good news for the M-CR611 is that although it does a great many things, it largely does all of them well. There is plenty of power on tap and it never sounds like it is straining to hit respectable levels. More than this, it manages a very effective balance between sounding exciting without tipping over into being forward.

With the Jack Savoretti piece, it manages to generate a genuine sense of life and presence with Savoretti's vocals. His supporting guitar is also impressively detailed and has excellent decay to it. This energy and life is also useful with the Blue Man Group and the M-CR611 puts in a powerful and exciting performance of *Opening Mandelbrot* that manages to

CONTROL BUGS

The Marantz Hi Fi Remote app is free and offers full control of the M-CR611, but it is not without its foibles. The speed that the app loads and renders a music library is fairly slow and moving backwards and forwards around the app isn't completely intuitive either. Another annoyance is that selecting a track in the middle of an album will only play that track and not proceed on through the rest of the album even though the M-CR611 is able to do this via the third-party 'Bubble' app.

Elsewhere, the unit's functionality is excellent. Bluetooth and AirPlay connectivity is stable and sounds good, and CD playback performance is every bit as good as the streaming side. Fingers crossed that Marantz is able to further tweak the app with future updates to bring it up to the standard of the rest of the M-CR611.

extract the best bass performance in the test from the partnering speakers. As well as having a useful sense of impact, the bass also manages to display a pleasing sense of definition rather than merely being a bit of low-end shove.

Another strong area is its ability to reproduce fine detail that aids the believability of the Aretha Franklin piece. Simply put, there is a greater sense of this being a group of performers rather than a lead vocal and supporting instruments. Only with the final Kairos 4Tet piece does the Marantz show any real signs of weakness and the irregular timing of the track can sound a little confused and lacks the assurance that rivals have. Tonality, soundstage and sense of energy is extremely appealing, and although it isn't completely perfect, the M-CR611 does a fine job of balancing realism and fun across a variety of different musical styles ● ▶



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★

VALUE FOR MONEY
★★★★★

BUILD QUALITY
★★★★★

FEATURES
★★★★★

OVERALL
★★★★★

LIKE: Lively, exciting and detailed sound; extensive features; affordable price

DISLIKE: Limited control app; timing could be better

WE SAY: A very well equipped unit with a sparkling performance at a bargain price

Enjoyed Worldwide.



"The Sigma SSP can be regarded as a superb stereo analog preamp, and all the rest of its bells and whistles as a gift."

Kal Rubinson, Stereophile, USA

"It combines the flexibility of a Swiss Army knife with the precision of a surgeon's tool in an easy-to-use package. There's simply not enough room here to even pretend to detail what you can do with this processor. It's just awesome."

Theo Nicolakis, Audioholics.com, USA

"But most impressive is the sound quality. This is real high-end at a price that must be considered reasonable. And the step up from the traditional home cinema receivers is nothing but huge."

Ludwig Swanberg, HemmaBio, Sweden

"Oh my, what a wonderful system Classé has provided with the Sigma range. It shows that audiophile sound is not the sole preserve of stereo and equally that it is not incompatible with reliable and convenient operation."

Stephen Dawson, Audio Esoterica, Australia

"This Sigma system is a huge achievement which everyone must absolutely discover."

Adrien Rouah, Québec Audio & Video, Canada



Novafidelity X12 £529

If you desire a compact system with CD-ripping and a music server, this system is built with you in mind

DETAILS

PRODUCT
Novafidelity X12

ORIGIN
UK/China

TYPE
Integrated
CD-ripper/server
& amplifier with
24/192-capable
network streaming

WEIGHT
1.75kg

DIMENSIONS
(WxHxD)
180 x 100 x 150mm

FEATURES
• Quoted power
output: 2x 30W
(8ohm)
• Inputs: 3x USB; 1x
RCA line. Outputs:
1x optical; 1x coaxial
digital; RCA line
• 1TB hard drive
• CD ripping to
multiple formats

DISTRIBUTOR
Sygnifi Limited

TELEPHONE
01732 765105

WEBSITE
novafidelity.co.uk

Of all the devices here, this is the one that stretches the traditional mini system boundaries to the limit.

While it superficially looks similar to the other speakerless models in the group, it is radically different in terms of its specification. Key among the differences is that the Novafidelity has a 1TB internal hard drive and can be used both as a conventional small audio system and a rip server (see box out). Additionally it has internet radio and Spotify Connect as well as supporting native streaming of Tidal, Qobuz and Deezer.

Connectivity-wise it does without digital inputs, but sports both a coaxial and optical output as well as RCA stereo out, allowing it to be used as a line-level head unit if you choose to upgrade in the future. Additional inputs are limited to USB ports and a solitary RCA stereo input.

The only detractor to this impressive haul of abilities is that the X12 feels a little on the crude side. The CD mechanism is flimsy and the chassis is made from plastic and dominated by a colour screen on the front panel that's navigated using a jog dial.

Sadly, not everything can be accessed by the dial, so the X12 has a row of identically sized and spaced buttons on the top. The interface is logically laid out considering what it has to do, but it feels a little clunky and slow to respond at times. The remote is also rather congested and unusually, Novafidelity asks a small fee (£0.79) for its Controller app, but other third-party options are available.

Sound quality

Perhaps the most important aspect of the X12's performance is that it doesn't feel like a ripping device being used outside of its comfort zone. There is plenty of power available and thankfully none of the additional elements onboard prevent it from getting to the heart of the music.

Its performance with the Savoretti track is one of the most energetic and lively here, with a real sense of drive to the backing bassline. Vocals are detailed and well defined and it does a more than reasonable job of creating a believable soundstage. *Opening Mandelbrot* shows up that some of this perceived speed and energy is down to the X12 being a

RIPPING YARNS

Given the ripping functionality of the X12 is one of its key selling points, the good news is that this is all fairly straightforward. If you insert a CD into it while it is connected to the internet, it will find the relevant metadata for the album (and nothing I've tried has defeated it so far) before giving you the option to play the disc or rip the album to the hard drive. You can choose whether to rip individual tracks or the whole disc and you have an option of multiple ripping formats too, although you can't adjust things like the level of compression applied.

Having done this, the ripped material is available for playback on the Novafidelity via the menu system, but additionally the X12 is visible as a server on a network so files stored on its hard drive can be played on another X12 or indeed on any other UPnP connected streaming device.

little light in the bass compared with some other systems, but what bass there is here, is well controlled and has reasonable levels of detail.

Where absolute bass response is less important, such as with the Aretha Franklin track, the X12 puts in a strong showing. The relationship between Franklin and her backing vocalists and instruments is cohesive and the Novafidelity also does a fine job of avoiding the piece sounding a little on the thin side. The reasonable tonality is also in evidence with the Kairos 4Tet. While it has to give a little ground to the best in the test with how 'right' some of the instruments sound, the X12 manages to reproduce the erratic time signature with an assurance that allows you to relax into the track and enjoy it for what it is. If the extra functionality is of interest, there is plenty to commend how it goes about making music ●



HifiChoice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Impressive functionality; lively and detailed sound

VALUE FOR MONEY
★★★★★ **DISLIKE:** Looks and feels a little clunky; limited bass response

BUILD QUALITY
★★★★★ **WE SAY:** Network audio and storage capabilities are impressive, but musicality is beaten

FEATURES
★★★★★

OVERALL





Pro-ject

A U D I O S Y S T E M S

2 Xperience SB DC



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Revo SuperSystem £550



A one-box system to appeal to music streaming fans, but will its lack of CD leave you feeling short changed?

DETAILS

PRODUCT
Revo
SuperSystem

ORIGIN
UK/China

TYPE
Music system with built-in speakers & 24/48-capable streaming

WEIGHT
9.8kg

DIMENSIONS
(WxHxD)
430 x 220 x 165mm

FEATURES

- Quoted power output: 80W + 40W
- Inputs: 1x optical digital; 1x 3.5mm stereo jack
- Ethernet; wi-fi; aptX Bluetooth
- 3.5mm headphone jack

DISTRIBUTOR
Revo

TELEPHONE
01555 666161

WEBSITE
revo.co.uk

As the flagship product in Revo's range and in terms of specification at least, this setup goes some way towards earning the 'Super' part of its name. Unlike the other two all-in-one systems here, the Revo does without a CD player but has an impressive selection of other features up its sleeve. The SuperSystem can play files over a network (up to 24-bit/48kHz) over wired and wireless connections as well as access internet radio. Spotify Connect is supported as is aptX Bluetooth. It is well served for outputs having both optical and stereo RCA sockets, but less so for inputs with only a 3.5mm jack and optical digital connections.

It also differs from the other products here in that it uses a pair of BMR drivers for the bulk of its audio reproduction (see box out), powered by an 80W (claimed) Class D amplifier. Bass performance is augmented by a single downward-firing conventional driver, driven by its own amplifier rated at 40W.

Available in five different finishes, the American walnut with black supplied here is perhaps the most

traditional. I like the combination of retro and modern that the styling encompasses, but there are some oddities. The menu-driven interface is pretty good, but Revo has augmented it with swathes of single-function buttons, which can be confusing. The display is a good size, but a little dark even on the brightest setting. On the plus side, the build and finish is decent and it comes with both a very good handset and a capable free iOS and Android control app.

Sound quality

The SuperSystem is the one-box unit that manages to get the closest to achieving the sound of a dedicated separate speaker system in terms of scale and impact. It gets stuck into *Black Rain* with conviction and the use of BMR drivers gives it an impressive cohesion across the frequency response that makes its handling of Savoretti's vocals and guitar very easy to listen to.

Where this cohesion suffers is with more bass-heavy material. The Revo has no shortage of bass energy – it is the best of the single-chassis devices in this regard, but the integration



BALANCING ACT

The use of BMR (Balanced Mode Radiator) drivers in the SuperSystem is a relatively unusual one, but makes a good degree of sense given the need to squeeze as much performance as possible from the cabinet. A BMR is effectively two drivers in one with a flat panel section that generates high frequencies being placed at the front of a conventional dynamic driver.

This has a few key advantages. The traditionally weak bass output of a flat panel is avoided by having a dynamic section and the placement of the two different sections of the driver aids the cohesion between the two, allowing it to function in a manner not dissimilar to a coaxial tweeter assembly. While more complex than a single full-range driver, the Revo's sonics suggest that it is worth the effort.

between the BMR drivers and the conventional one is never quite as seamless as I might have hoped and the Blue Man Group exposes this weakness, leaving the SuperSystem sounding a little sluggish as a result. Moving back to more restrained bass output sees the Revo on happier ground with Aretha Franklin more enjoyable and sounding warmer and fuller than any other model in the test. The SuperSystem manages to extract enough detail and sense of placement from the recording to sound convincing. It might not be able to completely match the soundstage of the separate speaker units, but it does a better job than you might expect and the Kairos 4Tet performance is lively and rich with enough impact to convince. Despite some design niggles, the Revo is a pleasing performer across its wide variety of functions and makes a very talented all-in-one system ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★
LIKE: Excellent feature set; rich and involving sound; decent build

VALUE FOR MONEY
★★★★★
DISLIKE: Slightly congested bass response; some interface niggles

BUILD QUALITY
★★★★★

FEATURES
★★★★★
WE SAY: A clever take on the all-in-one system that delivers a big sound

OVERALL





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Concept.*

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ROTEL.COM





Ruark Audio

R4 Mk3 £650



Can the one-box system specialist deliver a knockout blow to the competition at this higher price?

DETAILS

- PRODUCT**
Ruark Audio R4 Mk3
- ORIGIN**
UK/China
- TYPE**
CD music system with built-in speakers & Bluetooth
- WEIGHT**
7kg
- DIMENSIONS**
(WxHxD)
440 x 140 x 250mm
- FEATURES**
 - Quoted power output: 80W
 - Inputs: 2x RCA line; 1x optical digital; 1x USB
 - AptX Bluetooth
 - DAB+/DAB/FM tuner
- DISTRIBUTOR**
Ruark Audio
- TELEPHONE**
01702 601410
- WEBSITE**
ruarkaudio.com

As the name suggests, the R4 Mk3 is a revision of a design that dates back some years. Its longevity might go some way to explaining the specification, which along with the Sonoro (p37) includes a CD player, making this one of the most conventional one-box systems here.

The R4 Mk3 is not a network-capable product, but has DAB+/DAB and FM radio, aptX Bluetooth, a pair of analogue line inputs and a single optical input. USB connections are also fitted, but these are for playback from USB sticks and charging devices rather than for accessing music files.

This might all seem a little underwhelming for the most expensive product here, but there are some clear signs where the money has been spent. The Ruark model ignores the notional benefits of Class D amplification for an 80W (claimed) Class A-B amplifier with discrete components, which is unusual in a single-chassis device. These power a pair of speakers augmented by a downward-firing bass speaker.

The chassis feels solid and well assembled, and white, black and

wood surrounds are available to complement the silver front panel. Control-wise, it uses a sort of augmented jog dial for operation which works well and is attempted in a similar way on a smaller scale on the supplied remote, but isn't quite so effective. The display is the best in the group and is clear and easy to read, although it doesn't show as much information as some rivals.

Sound quality

The Ruark is an interesting product sonically and very much stands out for having its own house sound. From the opening bars of *Black Rain*, it demonstrates a surprising amount of low-end heft. Guitar notes have a weight and presence that is attention grabbing and Savoretti's voice is possessed of the same weight. The Blue Man Group tracks sees the system in its element, with a seriously weighty and energetic performance that is great fun.

Against this rather unexpected heft, the top end of the Ruark can appear a little recessed, but this is simply because the bass can be rather dominant. With *Say A Little Prayer*,

RADIO STAR

It is a shame that the R4 Mk3 lacks the ability to access internet radio services because listening to the DAB/FM tuner reveals that it's a truly fantastic partner for radio, especially spoken-word material. The low-end extension and the 3D Enhanced Stereo Sound mode combine to do a fantastic job of making voices sound extremely natural while demonstrating a believable relationship to one another. With the FM Radio 4 signal in particular, the Ruark is a rather lovely device to spend an afternoon with.

Not everything is quite so pleasant, however. The Bluetooth reception is the most unstable on test and there are minor jumps and dropouts even at fairly short ranges and with the transmitting device stationary. This is annoying because the sound quality of Bluetooth – in keeping with everything else – is generally good.

the balance begins to make a great deal of sense. There is enough bass to make this slightly lean recording sound warmer and fuller, which might not be entirely accurate but certainly makes it a pleasant listen.

It is with the final Kairos recording that the Ruark shows off another trait that sets it apart from rivals here. With its 3D Enhanced Stereo Sound mode selected, the R4 does an incredibly effective job of making the unit sound less like a single-point source than any other one-box design. Granted, it doesn't sound completely natural but equally it doesn't distract significantly from the way that it goes about making music. The R4 Mk3 might be the most expensive system in this month's roundup, but listening to it highlights just how carefully Ruark has evolved the design into a clever and capable all-in-one system. For fuss-free listening, it makes an awful lot of sense ●



Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY**
★★★★★ **LIKE:** Excellent build; big and involving sound; attractive design
- VALUE FOR MONEY**
★★★★☆ **DISLIKE:** Pricey; slightly limited spec; can sound artificial
- BUILD QUALITY**
★★★★★ **WE SAY:** A slick and entertaining listen, albeit at a higher price
- FEATURES**
★★★★★

OVERALL

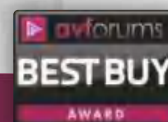




HA-2

EUROPEAN HI-FI USB DAC/HEADPHONE AMPLIFIER OF THE YEAR 2015-2016

HA-2 is a compact headphone amplifier and USB DAC featuring ESS Sabre³² Reference ES 9018-K2M DAC chip and support for 384 kHz/32-bit PCM and DSD up to 11.2MHz



“ HA-2 is the smart choice for those seeking a polished-sounding and gutsy performer that’s keenly priced. ”

“ For £250, you’ll struggle to find better detail or dynamics from a headphone amplifier and USB DAC. ”

“ A gem of a headphone amp/DAC at a very competitive price. Deserves to win plenty of friends. ”

“ It’s this combination of power and finesse that’s so alluring in something so affordably priced. ”

“ ...a crushingly competent piece of equipment for the asking price. ”

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Sonoro

SonoroStereo £539

Sonoro's take on the small audio CD system has a few surprising design decisions up its sleeve

DETAILS

PRODUCT
Sonoro
SonoroStereo

ORIGIN
Germany/China

TYPE
CD music system with built-in speakers & Bluetooth

WEIGHT
5.9kg

DIMENSIONS
(WxHxD)
450 x 153 x 235mm

FEATURES

- Quoted power output: 2x 20W + 40W
- Inputs: 1x RCA; 1x 3.5mm mini-jack; USB
- AptX Bluetooth

DISTRIBUTOR
One Product Ltd

TELEPHONE
0115 8240299

WEBSITE
sonoro.de

Although it has been active in the UK market for quite a few years now, Sonoro maintains a relatively low profile. The German brand makes an interesting range of compact audio systems of which the SonoroStereo is the largest and offers a fairly conventional specification. Like the Ruark offering overleaf, it is built around a CD mechanism (that can also read MP3 and WMA files) rather than a streaming system.

The rest of the features are similarly conventional with a DAB+/DAB and FM radio partnered with an aptX capable Bluetooth input and a selection of USB ports for reading memory sticks and charging mobile devices. Where the Sonoro starts to look a little weak is that it has no form of digital input and is limited to just an RCA stereo and a 3.5mm stereo jack input. A stereo RCA output is included, however.

The single-box unit is fitted with two 3in full-range drivers augmented by a single downward-firing 4in subwoofer as well as offering bass and treble adjustment settings. All of this is wrapped in handsome and well

assembled casework with a good sized and easy to read display. Special mention should be made to its 'Relax' function that plays a selection of pre-loaded ambient background sounds (see box out).

Sound quality

The Sonoro might not be as powerful as some rivals, but its performance doesn't suggest that it is in any way underpowered. The way it goes about reproducing *Black Rain* shows no signs of strain or lack of headroom and across the full expanse of the midrange, the performance is rich and impressive. The handover between the forward-firing drivers and the subwoofer is entirely seamless, but at frequency extremes, it is less assured. The Blue Man Group's ferocious percussion is rendered somewhat toothless. It has no trouble with the speed of the piece, but there simply isn't the grunt that the track manages to convey on the Ruark Audio or Revo units.

Conversely, *Say A Little Prayer* sees Franklin's vocals take on a slightly hard quality that isn't terribly appealing. More problematically, this

BACK TO NATURE

No review of the Sonoro would be complete without further investigation of the built-in sounds designed to aid relaxation. Push the Relax button on the handset and the Sonoro gives you the choice of ocean waves, bird song, whale music, falling rain, an open fire and wind chimes. Ignoring for a second that not all of these sounds are going to be considered entirely relaxing by everybody – the wind chimes in particular are somewhat jarring and the birds have a faintly Hitchcockian quality to them – the effect is more impressive than you might expect. Sonoro has installed some good-quality files for the sounds and the ocean waves, falling rain and open fire all sound pretty convincing. The ambient sounds can also be selected for use as alarms, which makes a little more sense to us.

doesn't seem to be related to the volume levels or DSP settings as reducing the volume doesn't really help to eradicate the hardness, while conversely upping the bass and treble leaves it sounding a little disjointed. The midrange fares better here and the appealing presentation manages to portray an impressive amount of information in a way that is spacious and easy to follow.

The Kairos track sees the Sonoro back in a happier place, handling instruments with real ability and managing to sound bigger than its limited one-box dimensions would suggest. That impressive integration between the drivers is apparent as it does a fine job with the timing of the complex shifting bassline even though absolute bass depth is a little limited. Overall, though, this is a slightly frustrating showing from the SonoroStereo system as frequency extremes tend to let it down ●



HIFIChoice

OUR VERDICT

SOUND QUALITY
★★★★★

VALUE FOR MONEY
★★★★★

BUILD QUALITY
★★★★★

FEATURES
★★★★★

OVERALL
★★★★★

LIKE: Smooth, well integrated midrange; handsome looks and solid build

DISLIKE: Lacks refinement at frequency extremes; limited specification

WE SAY: A decent system, but outperformed by rivals

Group test verdict

The verdicts are all in and checked and it's over to system addict **Ed Selley** to reveal the final results of this month's mini systems test

AS MIGHT BE expected, the all-in-one systems cannot challenge the separate speaker models in terms of absolute sound quality even with the constrained position of the speakers for critical listening. But the gap is closer than might be expected, and we can consider this test in opposing pairs. The Sonoro and Novafidelity are both accomplished units, but shortcomings to the Sonoro's performance at frequency extremes and its limited spec count against it. The Novafidelity has a slightly fragile build and clunky user interface, but the ripping and network

server facilities are impressive and give the X12 a wider appeal.

The Ruark Audio R4 Mk3 and Cambridge Audio Minx Xi are much more assured all-round products and warrant recommendation. While it is possible to criticise the Ruark Audio for its artificial sound at times, it is enjoyable to listen to and manages to sound bigger than many all-in-one systems do. It's the most costly solution here, but when you throw in the handsome looks and solid build, it makes more sense. The Minx Xi is an extremely well thought out streaming system that sounds both

powerful and refined across a wide spread of music. Strong build and an impressive control app add to what is a very capable system.

The Revo SuperSystem never quite shakes off a slight lack of bass integration, but it manages to sound big and refined and thoroughly entertaining. The specification is excellent and it's largely easy to use and has a comprehensive control app. Add the handsome looks and one of the most flexible all-in-one systems at the price, and the Revo ranks as the best one-box system in the test.



WINNER

The Marantz M-CR611 takes the top spot for its consistently enjoyable performance combined with the best overall specification while offering the lowest price in the test – even with speakers added. Control app flaws aside, this is the best all-round combination here.



Make/model Cambridge Audio Minx Xi Marantz M-CR611 Novafidelity X12 Revo SuperSystem Ruark Audio R4 Mk3 Sonoro SonoroStereo

	£400	£350	£529	£550	£650	£539
Price	£400	£350	£529	£550	£650	£539
Sound	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Value	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Build	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Features	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Overall	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
	An accomplished system that does a number of different functions very well	A well-equipped unit with a sparkling performance at a bargain price	Network audio and storage capabilities are impressive, but musicality is beaten	A clever take on the all-in-one music system that delivers a big sound	A slick system with an entertaining listen, albeit at a higher price	A decent system, but it's beaten by rivals and the nature sounds are too gimmicky

Key features

	24/96	24/192	24/192	24/48	No	No
Streaming	24/96	24/192	24/192	24/48	No	No
CD player	No	Yes	Yes & ripper	No	Yes	Yes
Radio	Internet	Internet/DAB+/FM	Internet	Internet/DAB+/FM	DAB+/FM	DAB+/FM
AirPlay	No	Yes	No	No	No	No
Bluetooth	Yes (aptX support)	Yes	No	Yes (aptX support)	Yes (aptX support)	Yes (aptX support)

TRY WITH THESE

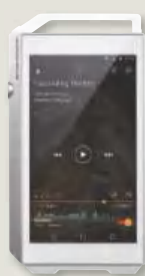
STANDMOUNT LOUDSPEAKERS: Q Acoustics 3010 **£140**

The smallest member of the 3000 Series loses none of the qualities of its bigger brethren. Easy to drive and unfussy about placement, it is a fine choice to get the very best out of the Marantz M-CR611



HI-RES PORTABLE PLAYER: Pioneer XDP-100R **£500 HFC 407**

The Pioneer is a fantastic portable audio player and thanks to its Bluetooth functionality can be used to stream Bluetooth services like Tidal to the Marantz. You can even run the control app on it.



LOUDSPEAKER CABLE: The Chord Company Sarsen **£8/m HFC 398**

The Sarsen combines a usefully small cross section – that should be easy to hide away if required – with a performance that is tonally natural and impressively full in terms of depth and scale.





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£599 OR LESS

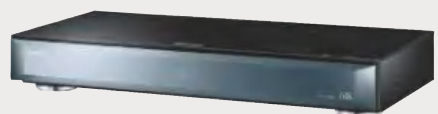
SONOS • PLAYBAR SOUNDBAR & WIRELESS SPEAKER

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Best Hi-Fi system under £1000
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Premium player that features playback of Ultra HD 4K Blu-ray discs, HDR playback and 4K content from Netflix and other streaming providers.

BLUESOUND
HiFi for a wireless generation

Hi-Res AUDIO

WHAT Hi-Fi? AWARDS 2015
PRODUCT OF THE YEAR
Multi-room systems
Best Hi-Fi system under £1000
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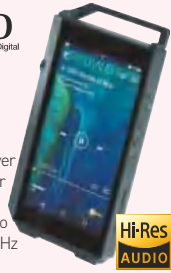
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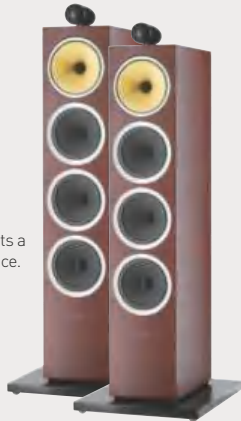
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Home Cinema 2015

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Best speaker
Home Cinema
2014



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OR LESS



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OR LESS

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Best speakers
Home Cinema
2015



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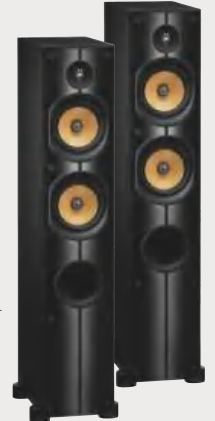
WHAT HI-FI? AWARDS 2015
Best speakers
Home Cinema
2015

PSB IMAGINE X1T

A deceptively slim and discreet floorstanding design, the Imagine X1T has wide bandwidth and high SPL output capabilities that defy its modest size. Features identical 5 1/4" woofers plus a one-inch pure titanium dome tweeter.

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NEW



SONOS

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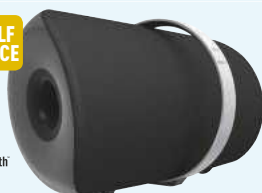
The Sonos Wireless HiFi System delivers all the music on earth, in every room, with warm, full-bodied sound that's crystal clear at any volume. Sonos can fill your home with music by combining HiFi sound and rock-solid wireless in a smart system that is easy to set-up, control and expand.

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HD 800 S £1,200



Breaking the mould

With its HD 800 S variant, Sennheiser is aiming to stay at the top of the tree for sound quality, **HFC** listens in

One of the problems of being a long-established stalwart of any industry is that you become risk averse and conservative. We have no insight into what happens in the Sennheiser boardroom, of course, but as outside observers it seems that this is what happened to the company in the noughties. Back in 1968 Sennheiser recast everyone's notion of the headphone when it introduced the ground-breaking HD 414, a design that was light and compact, sat on the ear rather than around it, was open-back and had gaudily coloured foam earpads.

Some 35 years later the HD 850 was Sennheiser's top-of-the-range headphone model and seems, in retrospect, to have encapsulated the company's torpor. Then, in 2009,

Has a tonal balance that's as close to neutral as I've heard from a headphone

Sennheiser rediscovered its mojo with the HD 800 (*HFC* 324), joined now by the £1,200 HD 800 S, a breathed-on version that offers the option of balanced connection.

Lifting the HD 800 S out of its presentation case, we're reminded just what a surprise the HD 800 was when it first appeared. It was so obviously a clean-sheet design with a bold, modern appearance quite unlike anything we'd seen from Sennheiser before. And its sound reinforced the sense that its engineers were on a mission to throw off old shackles and establish a new benchmark.

Even though it is now over seven years old, the HD 800 still looks fresh and original, and with the S variant, Sennheiser is aiming to keep it at the top of the tree for sound quality too.

Just how different are the 800 and 800 S? Cosmetically nothing has changed, but for the exterior metal parts of the S' capsules having a matt black rather than a silver finish. As before, stainless steel gauze and engineering plastic feature in the construction and the 56mm driver remains, says Sennheiser: "The largest ever used in dynamic headphones". Nominal impedance is unchanged (a high 300ohm) and the specified sensitivity likewise.

What has changed, if only slightly, is the frequency response – according to Sennheiser, the S has a little more output below 150Hz and a little less around 6kHz. Also new is the use of a revised absorptive material within the capsules, which is presumably responsible for the frequency response change in the treble. Plus Sennheiser provides two connecting leads for the S, both featuring silver-plated OFC conductors and 'para-aramid reinforcement'. These are an unbalanced lead, as in the HD 800, terminated in a 6.35mm jack

DETAILS

PRODUCT

Sennheiser HD 800 S

ORIGIN

Germany

TYPE

Over-ear, open-back headphone

WEIGHT

330g

FEATURES

- 56mm dynamic drivers
- Quoted sensitivity: 102dB/mW
- 3m cable with 6.35mm jack

DISTRIBUTOR

Sennheiser UK

TELEPHONE

033 2408185

WEBSITE

en-uk.sennheiser.com

plug, and a balanced lead terminated in a four-pin male XLR plug. At the headphone end both divide to form a Y-cable that connects separately to each capsule via the same push-fit connectors used in the 800.

Accessories include a microfibre cleaning cloth, a drawstring soft bag for the spare cable and a USB flash drive, which carries the individual frequency response of the headphone it's supplied with.

Headband resonance is something Sennheiser took seriously from the outset with the HD 800, combining metal with an 'inner damping element', and it's unquestionably effective. Comfort is high too despite the thin earpads, and sealing to the head is good regardless of the modest clamping force.

Sound quality

Most of the listening is conducted using a Teac HA-501 headphone amplifier. But this offers only unbalanced connections and we're keen to assess what, if any, improvement is wrought by using the 800 S in balanced mode, so Teac's UD-503 is also pressed into service. This offers a balanced connection but via twin 6.35mm jack sockets, so we have to solder up a short adapter lead. In this mode the UD-503's internal DAC is used, feeding signals via USB from Teac's own software player running on a Windows 7 desktop PC.

The HD 800's stock in trade was precision, and the S is no different. But this is not the oddly lifeless precision of the old HD 850, for the HD 800 S, on the end of worthy ancillaries, is full of life and engagement. And it has a tonal

Cosmetically, you'll struggle to spot the differences between the 800 and the 800 S



Q&A

Linda Irvin

Product manager (UK & Nordics),
Sennheiser



HFC: Given the success of the HD 800, what was Sennheiser's goal for the HD 800 S?

LI: At Sennheiser, we are always pushing the boundaries in the pursuit of the perfect sound. The goal here was to raise the bar even further and make the flagship headphone sound even better and we are confident we have achieved this. The HD 800 S is a line extension, the HD 800 has attracted a huge fan base – so we will continue to produce these as well going forward.

What are the key differences of the HD 800 S and how do these contribute to the overall comfort and long-term listening enjoyment?

The HD 800 S is the result of extensive research to further optimise our reference class in wired headphones. We are using patented shock absorber technology to minimise peaks and ensure that the sound is more well balanced – this is something we first tried successfully with our award-winning IE 800 ear-cans. We have also added in a balanced cable with XLR4 connector to maximise overall performance when used with our HDVD 800 amp. The design has been updated to a new smart matt black finish. In essence, the HD 800 S allows the listener to enjoy the very finest sound nuances, with a smoother transition across the entire frequency spectrum.

There's clearly a trend for balanced headphone wiring on upmarket models right now, but what sonic benefits does this bring over conventionally wired designs?

In simple terms, using balanced cables between devices or components of a headphone listening system filters out or minimises overall noise. In our opinion this offers a better, stronger and cleaner signal.

IN SIGHT



- 1 56mm dynamic drivers
- 2 Microfibre-covered earpads
- 3 3m detachable cable connects to port here

QUESTION OF BALANCE

When the HD 800 was developed, balanced headphone wiring was not yet a fashion. Now it is, Sennheiser has clearly decided its top dynamic model has to accommodate it. But is it only a fashion, or more than that? Has Sennheiser embraced it or has its arm been twisted by market developments? The latter's a rhetorical question, but the former could barely be more fundamental to audiophile headphone buyers, whose choice of both headphone and amp is circumscribed if balanced operation is a feature worth having. We're unconvinced of the relevance of balanced wiring's benefit in the case of headphones, but as always, we're prepared to be proven wrong.

balance that's as close to neutral as we've ever heard from a headphone.

Let's deal with the balanced versus unbalanced issue straight away. We begin listening using the Teac UD-503 to compare the two connections and come away with a distinct preference for the unbalanced option, which is crisper and more informative.

In memory of Keith Emerson we turn to *Lucky Man*, ripped from the remastered version of the first, eponymous ELP album. There's a shortfall in resolution over the balanced connection and via the unbalanced link Greg Lake's guitar contributions are clearer, and Emerson's famous synthesiser solo grumbles and soars in a more convincing fashion.

This doesn't mean that balanced connection won't give a superior result. In other circumstances, it might, but having two amplifiers per channel always raises the possibility of sound quality being degraded rather than improved. For the remainder of the listening we revert to an unbalanced feed from the HA-501.

We recall that the original HD 800 sounded better with the dust covers removed from inside the capsules, and feel duty bound to try it with the S. We're glad we do because the sound is vastly superior. One of the tracks to best demonstrate this effect is *Rassa, Tan Creis E Monta E Poia* from the Martin Best Ensemble's *The Last Of The Troubadours*, which is frenetic, and difficult to reproduce without becoming harsh. With the dust covers in place, the 800 S avoids harshness, but seems to sap a little of

the insistent rhythmical energy from the piece. With the covers removed the sound opens up and the energy level increases, but harshness is still kept at bay. Other tracks fly by in a flurry of expressive precision. The opening movement of Pierre Boulez's *Notations* reveals highly believable piano just as a 16/44 download of *Drumkit Quartet #1* by Glenn Kotche showcases its ability to reproduce thumping bass alongside delicately resolved treble percussion.

Conclusion

Sennheiser hasn't done a great deal to the HD 800 to turn it into the HD 800 S, but when you already have a fine product it's important to be careful not to over cook it. Sennheiser has been subtle and the result is that the HD 800 S easily earns a place at the top table alongside the very best headphones on the market. It isn't artfully euphonic, just honest, capable and, above all, highly enjoyable ●

Hi-FiChoice

OUR VERDICT

SOUND QUALITY



VALUE FOR MONEY



BUILD QUALITY



EASE OF DRIVE



OVERALL



LIKE: Neutral tonal balance; unbalanced performance

DISLIKE: Balanced connection isn't as good as unbalanced

WE SAY: Subtle fine tuning of an already impressive headphone has resulted in a truly stunning product



3050

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Floor your pleasure

Elac's Debut F5 floorstander is simply seismic, says **David Price**

The story so far – German loudspeaker manufacturer of many years' standing hires British speaker design wunderkind Andrew Jones. Formerly of KEF, and latterly of TAD, Jones is tasked to provide Elac with serious speakers in a part of the market where the German company has never traditionally been strong.

Designed in Cypress, California and built in China, the Debut range was launched at the end of 2015, to wide critical acclaim. Indeed I really liked the B6 standmount (*HFC 407*), and was impressed by how effectively Elac had entered the most competitive part of the speaker market. It proved

It sounds crisp and decently detailed yet dynamic and punchy too

exceptionally musical and highly skilled at hiding its tracks – there was no sense that you were listening to something that cost less than many people spend on speaker cable. It has a clean and crisp sound with a lively and expressive nature. All well and good then, but what about the bigger beasts in the range?

The F5 is the entry-level floorstander in the Debut lineup. It's a big box for the money, and is not unattractive to look at. It employs the same family of drive units, all bespoke designed and built for Elac, but runs as a true three-way loudspeaker. The two lower drivers work as woofers, wired in parallel, where the upper large driver is the mid/bass unit, and on top of that is the tweeter. Being a three-way confers real benefits over a two-way. The downside is that there's more to go wrong.

Just as with its sister standmounters, the F5 uses a bass-reflex port to provide deeper low frequencies than you would otherwise get, given the

cabinet volume. This tends to make the speaker easier to drive, but this relatively big box offers a rather poor (quoted) sensitivity of 85.5dB. This suggests Andrew Jones has worked to make the speaker an easy load, rather than give it the ability to go loud with just a few watts – you can't do both. Elac says it is 6dB down at 42Hz, which means lower bass than most small floorstanders. The 130mm woven Aramid fibre woofers crossover to the same-sized mid/bass at a low 100Hz, and this hands over to the treble unit at 3kHz, Elac says. The 25mm cone tweeter has a metal front plate for protection. The designer recommends it is used with amps rated between 20W and 120W RMS per channel – I say the more the merrier.

Considering its price, the F5 presents itself reasonably well in its unusual black brushed vinyl finish – but if we're being critical, rivals like

DETAILS

PRODUCT

Elac F5

ORIGIN

USA/China

TYPE

3-way floorstanding loudspeaker

WEIGHT

14.9kg

DIMENSIONS

(WxHxD)
200 x 965 x 222mm

FEATURES

- 1x 25mm soft dome tweeter
- 1x 130mm mid/bass driver
- 2x 130mm bass drivers
- Quoted sensitivity: 85.5dB/1W/1m

DISTRIBUTOR

Hi-Fi Network

TELEPHONE

01285 643088

WEBSITE

elac.com

The finish is rather utilitarian, but performance is anything but



the Q Acoustics 3050 (*HFC 398*) do better with their sumptuous piano lacquer black or white cabinets. Another minus is the lack of neat magnetic fixings for the grille. In my listening room, I find they work best a good distance from the boundary wall – at least 50cm, toed-in a few degrees.

Sound quality

The sizeable Debut F5 sounds like it looks – which is to say, impactful and large in scale. Animated and dynamic, you wouldn't say it is the most subtle of speakers, and nor is it the most sophisticated, but it stands out sonically from the crowd. Indeed, there are strong family similarities to the sound of the B6 that I reviewed last month. Small but with a big heart, it's a hoot to listen to, as is the F5.

As you would expect, it adds depth and breadth to this basic template, on account of the extra cubic inches its cabinet sports, and the larger volume of air that those extra woofers can shift. Unsurprisingly perhaps, its bass response is deeper and its low-frequency performance sounds more articulate and less compressed. Still, the designer has not gone for quantity over quality; it's not overpowering or boomy in any way, which might limit showroom appeal slightly but makes it more enduring over the long term. There's little sense of an upper bass peak, either – the speaker stays reasonably flat and doesn't unduly exaggerate things low down.

This helps it to integrate nicely with the midband, and here we have a similar feel to the B6. It sounds crisp and decently detailed yet dynamic and punchy too. The F5 doesn't attempt to be the most detailed and forensic sounding in its class, preferring to give a sound with wider appeal. Everything integrates well and there's little sense of listening to more than one speaker at a time. It's very good at throwing wide stereo images, pushing out a wide recorded acoustic inside which the various elements of the mix sit with a good deal of space between them. Indeed it gives a most expansive rendition of Harold Budd and The Cocteau Twins' *The Moon And The Melodies*, filling the room with ease. This is a rather dense recording, and tonally a little cold, yet *Sea, Swallow Me* proves suitably soaring and ethereal. As with the B6, the speaker is more concerned with the timing of the music, and the counterpoint between Budd's melancholic piano work and Robin Guthrie's distinctive processed guitar.

Interestingly, feed it a quite different type of recording, and it proves no

Q&A

Andrew Jones
VP Engineering, Elac



DP: What was your design brief?

AJ: It was the same for all the Debut series, to make affordable, high-performance speakers as a good entry point for new listeners getting interested in better sound quality.

Why do a three-way, at this difficult price point?

I initially considered a two or two-and-a-half way design, but rejected them because of the poor vertical lobing issues that are created even with the latter. You can only roll off the lower driver response at first order, so there is too much interaction at the higher frequencies. I found a clever way to implement a three-way at relatively low complexity and cost, that crosses over quite low (100Hz) and so went with that solution. The downsides of three-ways are normally cost, complexity and size of components but my solution got around this.

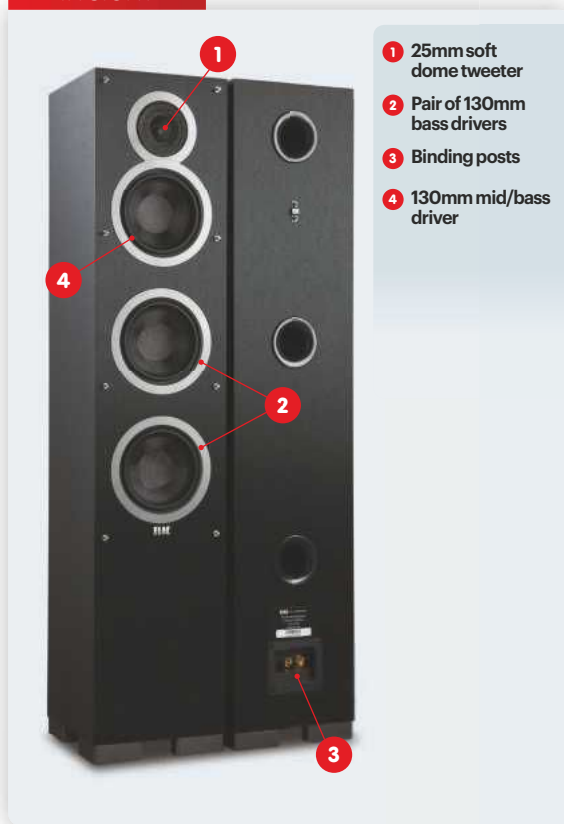
Why is it that the quoted sensitivity is so low?

Well, I always give up sensitivity in favour of an easy impedance to drive, and extended bass – you can't have both. As a physicist I am bound by its laws despite the claims of some designers! I want the listener to hear enough of the low bass to feel satisfied with the purchase and not to be left thinking that they need a subwoofer. Also good power is relatively cheap, so low sensitivity is not so much of an issue these days. Minimum impedance is never lower than 80 percent of the rated impedance and even then does not stay at that minimum value for too much of the frequency range.

How would you characterise the sound of the F5?

My goal was a sound that is reasonably full range, full bodied with good impact and clarity, but balanced in such a way that its shortcomings don't take you out of the musical experience and its strengths allow you to relax into the music and be absorbed by it.

IN SIGHT



- 1 25mm soft dome tweeter
- 2 Pair of 130mm bass drivers
- 3 Binding posts
- 4 130mm mid/bass driver



King of the £600 slot is **Q Acoustics 3050 (HFC 398)**; in standard finish it's £500, but you can add £150 for exotic finishes like leather – which puts the Elac's surfacing to shame. The 3050 is a thoroughbred, and has a smooth, open and musical sound that makes you question if you can do better at the price. The F5 obviously thinks so – it's a little more fluid rhythmically than the Q, and has a wider bandwidth. It sounds a little more earthy and organic than the slick, hi-fi sound of the Q, possibly fractionally less refined in the treble, but with a more punchy and dynamic sound, and a fractionally brighter tonal balance. Ultimately both are excellent, so it's wise to try before you buy.

less uplifting. With the Waterboys' *Glastonbury Song*, it is particularly accomplished at capturing the leading edges of notes, sounding hugely powerful and propulsive, well able to communicate the majesty of this great song. Bass is tuneful and usefully deep, the midband is balanced and detailed and the treble gives a decent sense of the power and bite of the crashing ride and hi-hat cymbals. The F5 proves absolutely in its element with driving, energetic programme material such as this, once again throwing out a wide soundstage with decently placed instruments within.

Of course, no £599 loudspeaker is a universal panacea. It's a largish box at a low price and thus not immune to cabinet resonances. So it comes as no surprise to hear a degree of coloration in the upper bass. It's not a completely unpleasant sensation, lending extra weight and body to the proceedings, and bringing a gently euphonic nature to a speaker that's likely to be used with less-than-perfect ancillaries. It's really rather nice with some types of music, and certainly makes jazz a pleasing experience – John Coltrane and Johnny Hartmann's *You're Too Beautiful* comes over in a particularly sumptuous way that flatters to deceive. Hartmann's voice has a wonderfully confessional quality, and is carried with quite arresting

delicacy. This sultry jazz standard pulls me right into the zone.

It's only when you feed the F5 with some superbly recorded classical music that it begins to show signs of mortality. You begin to realise that this is no different to any other budget box in its lack of real transparency; its drivers and cabinet have a certain sound of their very own (not a criticism, the same goes for speakers of all rungs of the evolutionary ladder). My well played copy of Beethoven's *Pastoral Symphony* on Deutsche Grammophon shows some nasal coloration and a lack of low-level detail, as well as a slight reduction in stage depth and less sense of air than I'd ideally like. All the same, the one thing this speaker does is to make the music fun – giving a very jaunty rendition of the first movement. The larger number of drivers and greater cabinet volume compared with the B6 makes for substantially less compression, so it can go a good deal louder without sitting on transients. For all its failings, it never sounds less than confident and assured.

Conclusion

The obvious sales proposition of Elac's Debut F5 is that it's a lot of speaker for relatively little money – but it's more than just this. It is an extremely well crafted budget floorstander in its own right, and well able to let the listener enjoy a wide range of music in the spirit it was intended. Whereas some speakers have an obvious character that flatters some types of music and detracts from others, this is very well rounded for a product of its price, and never less than fun to listen to. That's a big achievement for a pair of sub-£600 speakers, so it comes highly recommended – this is one of the finest designs on sale in an already highly crowded budget floorstander marketplace ●

Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY**
★★★★★ **LIKE:** Punchy, lyrical, wide-bandwidth sound
- VALUE FOR MONEY**
★★★★★ **DISLIKE:** Cabinet colouration; finish
- BUILD QUALITY**
★★★★★ **WESAY:** Charming, exciting, musical budget box
- EASE OF DRIVE**
★★★★★

OVERALL



Revolution starts from within.



Look at our new range of power amplifiers and you'd be forgiven for thinking not much has changed. Only the DR badge on the rear panel hints at the revolutionary technology within. Inside, our new Naim DR (Discrete Regulation) power supply circuitry and the radical new NA009 transistors developed for our flagship power amplifier, the Statement NAP S1, enhance the fundamentals of pace, rhythm and timing for which the originals are so renowned. The result is an even more immersive and involving music experience. Listen and you'll feel the difference immediately.

Discover more and book a demonstration with your nearest specialist retailer at naimaudio.com



Go Deeper





Full moon

Do you need a DAC with headphone amplifier functionality? **Ed Selley** thinks Simaudio might just have the answer

Canadian company Simaudio is the latest brand to pitch into the DAC and headphone amp fray with its Moon Néo 230HAD. This isn't its first foray into this category – the larger 430HA headphone amp can be equipped to function in this way but is substantially more costly. The 230HAD is smaller and simpler, but pitches in at a more practical price point. This becomes more appealing still when you realise that the simple casework hides a rather sophisticated piece of equipment.

The Moon is built around the increasingly popular ESS Sabre

chipset and as a result has the sort of file and sample rate handling that might be expected of a digital device today. The USB input will decode PCM at sample rates up to 32-bit/384kHz as well as DSD256. The USB connection is joined by two coaxial and one optical input that are all 24-bit/192kHz capable.

So far, so conventional, but the Moon deviates from the norm by adding an analogue input for its fourth input. This input is truly analogue, in that at no stage does the 230HAD perform any form of analogue-to-digital conversion on the signal. This includes the volume

control where Simaudio has opted for a conventional analogue volume pot rather than adjustment in the digital domain. The amplification used internally is also unusual. The 230HAD makes use of a transconductance stage in the circuit that generates an output current proportional to the input voltage. This can't be used for the entirety of the circuit, and it is unusual to find it being used at all.

This volume control can be used to adjust the level of headphones that are connected via the 6.35mm jack socket, but also alters the volume level of a pair of RCA sockets on the rear panel allowing it to act as a preamp. Alternatively, if you don't want the volume control in the circuit, a second pair of fixed RCA outputs is fitted for operation at line level. Line level in this instance is a rather beefy 4V, which may prove a little on the high side for some partnering amps and result in unwanted noise.

The half-width casework is a little on the sober side, but is well built and

DETAILS

PRODUCT
Simaudio
Moon Néo 230HAD

ORIGIN
Canada

TYPE
Headphone preamp
& USB DAC

WEIGHT
2.8kg

DIMENSIONS
(WxHxD)
178 x 76 x 280mm

FEATURES
● 32-bit/384kHz
USB input
● Inputs: 2x coaxial
and 1x optical
digital; 1x RCA
analogue
● Fixed and variable
RCA outputs

DISTRIBUTOR
Renaissance Audio

TELEPHONE
0131 555 3922

WEBSITE
simaudio.com;
renaissanceaudio.
co.uk

logically laid out. The large volume control has a reasonable amount of fine adjustment, which makes the business of setting the correct level on headphones easy. Simaudio supplies a remote, which while rather unattractive gives useful control of the major functions and works well even at fairly tight angles.

There are front panel indicators for the input selected and the sample rate currently playing, but for reasons that aren't immediately obvious, this doesn't take the form of a conventional ascending scale. Instead there are indicators for DSD, 44.1 and 48kHz with additional x2 and x4 lights. As such, a 44.1kHz file will light the single indicator up whereas a 24-bit/96kHz file will light the 48kHz indicator and the x2 indicator at the same time. This does technically reduce the number of indicators needed, but the down side is that it isn't always immediately obvious what resolution a track is being played in at first glance.

Like many of its rivals, the Simaudio needs a dedicated USB driver to work with a Windows machine – Mac owners don't need to worry about such things. It also works flawlessly with the USB 3 output from a Melco N1A NAS drive (HFC 397), which acts as the main media source for the majority of testing alongside a Naim ND5 XS (HFC 352) used to test the coaxial and analogue inputs.

Sound quality

Kicking off with the Moon being used as a fixed-level DAC, a few aspects of the performance make themselves felt straightaway. It has a presentation that is utterly unforced. The 24/44.1 download of Carbon Based Lifeforms' *Hydroponic Garden* is a massive, brooding slab of electronica and it simply opens out as a vast and spacious soundfield in front of the listener. The performance drips with



The closest rival is Naim's DAC V1 (£1,350), which has been updated to include DSD support and uses an analogue volume control. The performance of both is excellent with the Naim showing a little more punch and willingness to groove, while the Moon has an effortlessness to its presentation that can make it a more forgiving partner with some lower-quality recorded material. The Naim has more digital inputs and no analogue ones, and there's also a matching power amp that can be used to form a compact setup. While the 230HAD doesn't have a matching power amp, it does have the MiND streaming front end to enable it to turn into a UPnP streamer.

detail and nuance, which is delivered without any sense of strain or indication that parts of the recording are being given undue prominence.

Neither is this the preserve of big thundering bits of dance music. The wonderfully intimate *Despite The Snow* by Emily Barker is laden with emotion, but the Moon doesn't do anything to overdo it. There's still the same impressive detail and space and Barker's vocals are rendered with magnificent texture and body, but it all comes together in a way that allows you to enjoy listening to the music rather than examining it like a piece of forensic evidence.

If you ask the 230HAD to pick up the pace and deliver something with a

The Moon offers an impressive amount of functionality and does all of it well

bit more attack to it like the 24/88.2 version of Kraftwerk's *Minimum Maximum* it responds well. There is the slightest sense that the flowing beats of *Tour de France Etape 1* are slightly more languid than they are with some of the competition, but it never feels slow or restrained. It also has truly superb bass extension with detail and definition that helps it sound consistently believable.

Given the impressive range of high-resolution formats supported, it isn't too much of a surprise to discover that it is impressive when fed high-quality files. What is even more pleasing is that the fundamental characteristics of the 230HAD don't change with standard CD rips. Ali Farka Toure's *Savane* is delivered with the same fluidity and effortlessness shown with hi-res material and even the less-than-stellar recording of Editors' *An End Has A Start* is delivered with refinement and scale.

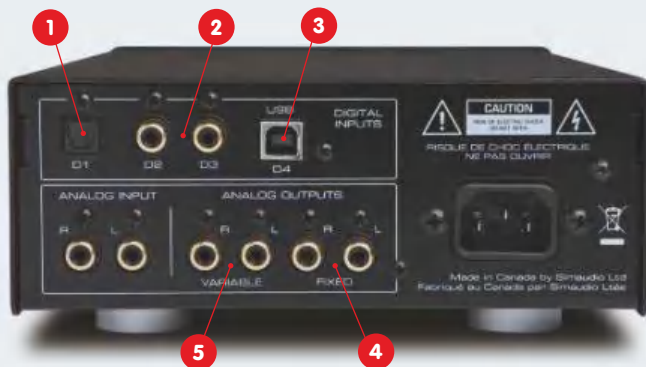
Switching to headphones shows the Moon has considerable strengths in this area too. Simaudio stipulates that the 230HAD is designed with "reasonably sensitive" headphones in mind and its performance with the benign Beyerdynamic T70 (HFC 361) is impressive. That same sense of effortlessness and space that is apparent via the RCA inputs also makes its presence felt here. There is sufficient power on tap to drive the T70 to a decently loud level and even substituting it for the rather tougher Oppo PM-3 (HFC 410) doesn't affect things unduly.

As a preamp, it is also a confident performer. The fitting of an analogue volume control means it feels much more like a conventional – albeit compact – preamp than many rivals equipped with digital volume controls. It also does a fine job of retaining the characteristics of equipment connected via the analogue input. The Naim ND5 XS shows a darker, more forceful presentation via RCA than it does being decoded by the 230HAD via the coaxial connection. The other benefit of this functionality is that if you are intending to use it as a line-level device, but – as has been the case here – find the level on the fixed 4V output to be too high, you can use the variable output to wind it down a little.

Conclusion

DAC preamp units are becoming increasingly popular with plenty of models to choose from, but the 230HAD stands out from the pack. Within a fairly compact chassis, this is a device that manages to offer an impressive amount of functionality and most importantly does all of it well. It is no stretch of the imagination to see it being used as either a line-level DAC, preamp or headphone amp and delighting owners in any of these roles ●

CONNECTIONS



- 1 Optical digital input
- 2 Two coaxial digital inputs
- 3 32-bit/384kHz-capable USB input
- 4 Analogue fixed line-level output
- 5 Analogue variable line-level output

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Effortless performance; good spec and build

VALUE FOR MONEY
★★★★★ **DISLIKE:** High line-level output; ugly remote control

BUILD QUALITY
★★★★★ **WE SAY:** A flexible and well thought out product that works well across a number of different roles

FEATURES
★★★★★

OVERALL





Rhapsody in Bluetooth

Great things are expected of Dynaudio's smallest Xeo to date. **David Vivian** finds out if the Xeo 2 can live up to the promise

A script some like to follow contends that premium loudspeaker makers have been caught napping while the rest of the world wakes up to active, wireless, single-box, multi-room loveliness, thus letting Sonos, Bose, Bluesound *et al* steal a march on the road towards a wireless world.

But as long ago as 2012, Dynaudio, was out of the blocks and running with its first-generation range of Xeo active, wireless speakers. It proved beyond any doubt that cable-free convenience was compatible with true high fidelity and that buying into

The weighty bass is key to the Xeo 2's sound and what makes it special

less discriminating sound served up by too many one-box solutions was optional rather than obligatory.

Now a second-gen Xeo lineup with a plus-one called the Xeo 2 has arrived and looks to be every inch the kind of do-anything, put-anywhere wireless speaker that shows us what could, should and will be. An object lesson in studied understatement, neat hardly covers it. Optimally, each Xeo 2 can be teamed with supports made by Dynaudio: a stubby stand to lift it clear of table or desktop, or a wall bracket that allows 90° of lateral articulation. And unlike previous Xeo models, it doesn't require additional external hardware to work wirelessly, thanks to Bluetooth, and the control speaker communicates with its partner over a built-in closed A-to-B wireless link. If you want to stream to multiple pairs in different rooms, you'll need to buy its Connect (£295) interface box or Xeo Hub (£200).

The control speaker has RCA line-in, a Toslink optical input for playing

your hi-res recordings (accepting up to 24/192, but outputting at a maximum of 24/96) and a 3.5mm aux socket.

Setup is simple, if a little fiddly, as the bulk of the sockets and tiny click switches are tucked up on the ceiling of an open cubby at the back of the control speaker. These include a switch to 'hand' the speaker left or right, with a corresponding one in the rear cubby of the other speaker. It's a useful feature for keeping the master close to sundry source components should you want to make any wired connections. Another pair of switches set the three-way DSP-implemented EQ, allowing the freedom to place the Xeo 2s in free space, in a corner or close to a side wall. Each speaker also sports a USB slot to facilitate firmware updates.

Dynaudio calls the Xeo 2 its entry-level high-end speaker and, ergo, the world's first high-end wireless speaker, too. All of which seems to square with the price. It's a true active design with a generous 65W (claimed) of pulse width modulated Class D amplification assigned to each driver and electronic crossovers to divide up the workload. Dynaudio calls it Pure Path Amplification, which just means that the analogue signals fed to the RCA and 3.5mm inputs are immediately digitised and, along with the Toslink and Bluetooth digital inputs, stay that way until the last possible moment. But not until they've been treated to something of a digital neck rub by the active DSP filters, time coherent phase linear FIR filters and Adaptive Bass tech that optimises bass output against amplifier load to give deeper and more even lower frequencies than you might expect from such a bijou box – flat down to a remarkable 40Hz according to Dynaudio.

Doing the business, and sitting neatly in the Xeo 2's extruded

aluminium baffle, are a 27mm soft dome tweeter and a 140mm magnesium-silicate polymer (MSP) mid-bass unit. Both are made inhouse by Dynaudio. No MDF was harmed in the making of the bass reflex cabinets. Instead, they're formed from an acoustically inert composite moulding, the alloy baffle adding extra rigidity.

Current colour choices run to black or white, both with a satin finish, but at CES in Las Vegas, the Xeo 2's debut was celebrated with a whole paintbox of colours, of which red, orange and yellow were merely the least subtle. It seems very likely some of these will make it into production.

Sound quality

With the DSP EQ switches set to open space, I place the Xeo 2 on my 24in Slate Audio stands, slightly toed-in and pulled clear of corners and walls. My iPad makes the only truly wireless connection via Bluetooth. A Roksan Caspian M2 (HFC 356) CD player bags the RCA sockets using extra-long runs of Townshend F1 Fractal interconnect while a Questyle QP1R hi-res portable (HFC 409) and iPod Classic fill the Toslink and 3.5mm aux roles respectively.

Expectations are naturally tweaked when terms such as 'world first' and 'high-end' are trumpeted by marketing folk, especially those as presumably sober-minded as Dynaudio's. It's only right to be a

DETAILS

PRODUCT
Dynaudio Xeo 2

ORIGIN
Denmark

TYPE
2-way active wireless standmount loudspeaker

WEIGHT
4kg

DIMENSIONS
(WxHxD)
173 x 255 x 154mm

FEATURES
● 27mm soft-dome tweeter
● 140mm mid/bass driver
● Quoted power output: 65W Class D amp per driver
● AptX Bluetooth; wi-fi via add-on Hub & Connect units

DISTRIBUTOR
Dynaudio UK

TELEPHONE
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dynaudio.com

Wireless speakers, it would seem, have finally come of age



Q&A

Roland Hoffmann

Senior manager, Dynaudio Academy



DV: The Xeo 2's Bluetooth performance ranks among the best we've heard at any price. What's the secret?

RH: Many products have the Bluetooth function onboard mainly to make the customer happy when they're looking at the feature list, while no time was spent on how it actually performs with Bluetooth. Some other products try to mask or soften the Bluetooth sound in order to make up for the lack of resolution. But spending time and real R&D effort on the actual Bluetooth performance is a different thing. Our engineers were never happy with Bluetooth performance and we omitted it from the first Xeo generation, while continuing to work on it internally. It all comes down to DSP power (the Xeo 2 has a very capable chip) and understanding how digital signal processing influences the actual audio performance. We also took care of the quality and specific position of the Bluetooth antenna. Such small things matter.

Bass is equally impressive. Again, how have you managed to extract a palpable 40Hz from such a compact box?

Every traditional compact speaker, especially with such a small cabinet size, has a very limited bass performance so the whole design has to ensure an external amplifier never overpowers the speaker. These limitations usually affect all listening levels. In a digital active speaker with such a high performance DSP as in our Xeo 2, we can really extend the physical performance limits. We call it Adaptive Bass and it constantly monitors the low frequencies in the music signal in relation to the listening level. Imagine it as a floating point frequency extension, which allows an incredibly deep bass performance on all listening levels bar the very loudest. An intelligent speaker, no less!

IN SIGHT



- 1 Mode LEDs
- 2 27mm soft-dome tweeter
- 3 RCA & mini-jack analogue & optical digital ins
- 4 140mm mid/bass driver

little sceptical. I can offer some advice. Remember to tense your jaw muscles if you decide to audition the Xeo 2 because if you don't when you hear it for the first time, a bug might fly into your open mouth. That good? Yeah, that good.

The Xeo 2's best qualities are both remarkable and remarkably consistent across the inputs. Bluetooth is easily good enough to call 'hi-fi', though well-recorded hi-res from the Questyle does 'refresh the parts...' as you'd hope. Presentation is gorgeously spacious with crisp imaging and an impressive sense of scale, power, tonal richness and rhythmic surety. In fact, the weighty bass performance is key to the Xeo 2's sound and what makes it a little special. In its smooth and apparently effortless downward reach, it's as if it belongs to an altogether larger system and provides a top-to-bottom balance you'd never experience with a passive standmount speaker of similar size.

But while adaptive bass tech is clever stuff, it isn't quite the panacea it might initially seem. Although the lower frequencies are full-bodied and extended, they have a mildly samey, occasionally over-ripe quality that doesn't always ring true. Listening to ATC's passive SCM7 (HFC 384) confirms that while the Dynaudio has almost uncanny weight and extension and remains ever agile and tuneful, it can't get close to matching the ATC's attack, precise articulation and resolution of timbral texture.

Perhaps you can't have everything. For a speaker system competing in the wireless sector, though, the Xeo 2 is heady stuff, that pleasingly controlled lower-end heft underpinning an almost magically tangible midrange

and sweet, airy treble. It all hangs together brilliantly and, because of ample bandwidth and surefooted timing, with great even-handedness and musicality. I play the Pat Metheny Group's *Speaking Of Now* album along with newer outings from the *Whiplash* soundtrack and Go-Go Penguin's *Man Made Object* CD and the same thing strikes me time and again. It all sounds as if it's been remastered by someone with a cupboard full of Grammys. If the Xeo's tech is manipulative, it's in a good way. The full-bodied bass and unfussy transparency, in particular, are an absolute joy.

Conclusion

With the Xeo 2, Dynaudio has raised the bar for compact wireless speaker systems to a level that would barely have seemed possible a year or so ago. Its Bluetooth performance is outstanding, but best of all it allows anyone for a reasonable outlay to enjoy sound quality that was once the preserve of audiophiles. High fidelity is the winner ●



HOW IT COMPARES

At £600, KEF's bulkier X300A (HFC 386) active wireless bookshelf speakers are a serious rival and come with AirPlay and DLNA connectivity built in. Physical connections are limited to one USB and a 3.5mm mini-jack socket. Each speaker boasts a 24/96-capable DAC. Sound quality is similar to the passive R100 (HFC 408), which means very detailed, spacious and easy on the ear, even at volume levels that eclipse the Dynaudio's, but a little lacking in the musical energy and enthusiasm department, in which the Xeo 2 excels. If you're on a tighter budget, Q Acoustics' excellent BT3 (HFC 379) active Bluetooth is certainly worth an audition, at £280.

Hi-FiChoice

OUR VERDICT

- SOUND QUALITY**
★★★★★ **LIKE:** Speed and transparency; Bluetooth performance
- VALUE FOR MONEY**
★★★★★ **DISLIKE:** Bass can lack timbral finesse; needs hub for streaming
- BUILD QUALITY**
★★★★★ **WE SAY:** Top-drawer sonics meet wireless convenience in a smart, small yet affordable package
- FEATURES**
★★★★★

OVERALL





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Different strokes

Looking for an affordable amplifier that's a little bit different? **Ed Selley** thinks that TAGA's offering might hold the answer

If you read our *Group Test* of entry-level integrated amplifiers (*HFC 409*), you will no doubt be aware that there is no shortage of high-quality affordable models available for less than £300, and many offer rather more functionality than simple amplification. Nonetheless, it is perfectly possible that you looked at our six contenders and wondered if there was another option that offered something a little different. Well, there is and it's called the TAGA HTA-500B.

TAGA (an acronym of To Achieve Glorious Acoustics) is a German-Polish

partnership that manufactures in the Far East. Originally founded in 1990 to produce loudspeakers, the company has expanded into electronics. Many of these products either straddle different product categories or go about offering functionality in a slightly unconventional way. The HTA-500B is an integrated amplifier that was almost an ideal candidate for our *Group Test* were it not for the fact that it has almost nothing in common with any of the other amps in the roundup.

The most obvious deviation from the norm at this price point is that it is a hybrid valve amp. The amplification is

▶ DETAILS

PRODUCT
TAGA HTA-500B

ORIGIN
Poland/China

TYPE
Hybrid digi-tube amplifier with Bluetooth

WEIGHT
3.2kg

DIMENSIONS
(WxHxD)
180 x 130 x 240mm

FEATURES
• 25W per channel
• Two line inputs
• AptX Bluetooth
• Valve preamp

DISTRIBUTOR
Zephyr Audio

TELEPHONE
0843 2898723

WEBSITE
zephyraudio.co.uk

solid state and claims a reasonable if not ballistic 25W output into 8ohm at commendable distortion figures. The preamp section is assisted by a pair of 6N2 valves – a Chinese derivative of the Russian-designed 6N2P. According to TAGA, these give the HTA-500B the richness and warmth of a valve amp while maintaining the power and stability of a solid-state one.

This amplification is made available to three inputs and a pair of speaker terminals. Two of the inputs are conventional enough and connect via a pair of RCA sockets on the rear (one of which splits with aux input on the front), but the third is more unusual. The HTA-500B is fitted with aptX capable Bluetooth v4.0, which features its own aerial on the rear – a sensible move considering the challenges of securing decent reception from an all-metal chassis. The only other function save for a two-position power switch is a 'bass boost' function. This gives a 6dB push to the low frequencies, which should help to give smaller speakers being used at lower volumes a bit more scale and impact.

This is all encased in a compact and attractive chassis. Viewed from above, it looks almost square and is narrower than a half-width component. The

front panel is metal and a fairly thick piece of metal at that. The limited number of controls is also usefully solid and logically laid out and the volume knob in particular has a pleasantly weighted action to it. The valves are placed inside protective perspex tubes that are edge lit to give the valves a little bit more of a glow, which is in part a reflection on the valves themselves not being especially bright.

Around the back, some of this good work is undone a little by the presence of a captive mains lead and speaker terminals that while usefully solid, are a little close together for easily connecting bare-wire terminations, although they have no trouble with 4mm plugs. The RCA inputs are also recessed, which can also potentially foul some cables. There is also the previously mentioned Bluetooth aerial – tests with Android and Apple devices suggest the range it supports is good and the connection itself is usefully stable once you have established it. The actual implementation is good too. The TAGA is not a call-active device, so if your smartphone rings when you have it connected, it will reroute the audio back to the device rather than playing the call through the speakers.

Sound quality

Connected to a pair of Q Acoustics 3020 standmounts (HFC 402) – the same pair used in the amplifier Group Test – and listening to Tidal via aptX Bluetooth from a Motorola Moto X phone, this is an interesting and likeable little amplifier. With a reasonably sensitive pair of speakers like the 3020s it has no trouble reaching a room-filling level and the



A quick head-to-head between the TAGA and the Group Test winning Onkyo A-9010 (HFC 409) is interesting. The Onkyo's extra power doesn't translate into a more powerful performance, but there is more bass extension and the soundstage that the A-9010 is capable of producing is larger and more solid than the TAGA. You also get a reasonable phono stage. The TAGA hits back with that capable Bluetooth implementation and a greater sense of life and energy to the performance. The TAGA is also easier to accommodate and a touch better looking than the all-black A-9010. The Onkyo remains the logical choice for a truly 'hi-fi' experience, but the sheer fun of the TAGA makes it less clear cut than you might initially expect.

volume control has plenty of usable range, so fine adjustment of levels is a relatively simple business.

There's a lot to like about how the HTA-500B sounds as well. It manages to avoid the immediate stereotypes of anything involving valves. The sound is not especially warm and certainly doesn't lack for energy. With M83's anthemic *Kim & Jessie* it makes for an enthusiastic and punchy partner. The tonality is consistently believable and vocals sound rich and lifelike. This is an intrinsically fun-sounding amplifier although it can calm things down with slower material when required.

Listen a little longer and it becomes clearer the bass response is a little

The HTA-500B is impressively forgiving with lower-bitrate audio

lighter than some more conventional rivals, but this is in part what lends it the sense of speed and energy that gives it much of its charm. The bass boost button sounds like the ideal candidate to solve this, but the effect it has on the performance is a little like using a sledgehammer to crack a nut. Whatever a 6dB boost on the TAGA is it translates into great slabs of unnatural low-end energy through the Q Acoustics so whatever lightness is present with it switched off, I'd suggest keeping it this way.

Conversely, there is much less in the way of roll off at the top end and this contributes to the sense of liveliness that runs through the way it makes music. The good news in terms of long-term listening is that while best described as well lit, the treble doesn't easily tip over into harshness or

stridency. Pushing the volume level does leave it sounding a little thin, but its 25W is unlikely to sound significantly less powerful than many more conventional rivals, provided relatively sensitive speakers are used.

Switching to the analogue inputs and connecting the Simaudio Moon Néo 230HAD digital-to-analogue converter (see p50) doesn't drastically alter the presentation, which suggests much of its character comes from the amplifier section itself rather than the decoding of the Bluetooth. The greater low-end heft of the Moon can be perceived, but for the most part the TAGA retains its quick and energetic presentation and its consistency across analogue RCAs and wireless Bluetooth inputs means that all sources are going to sound perfectly listenable.

The HTA-500B is also impressively forgiving of lower-bitrate audio. Listening to the compressed version of Talk Talk's *The Colour Of Spring* on Spotify versus the lossless version via the Moon, doesn't show up significant differences. The TAGA has been equipped with the means to listen to lossless quality and better, but this has been done without losing the ability to deliver a listenable and pleasant sound with lower bitrate sources. You have to reduce the quality down to pretty much rock bottom before it suffers.

Conclusion

The HTA-500B is an unusual product. It is not so radically different from the competition that it won't perform the same functions, but it brings character and energy to its performance that while not perhaps the last word in tonal accuracy, is consistently enjoyable to listen to. When you add to the mix the capable Bluetooth implementation and the small footprint, you have an engaging and entertaining amplifier that if partnered with any degree of sympathy will work well in plenty of situations ●

CONNECTIONS



- 1 RCA analogue inputs
- 2 Speaker terminals
- 3 Port for hooking up Bluetooth antenna

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Lively engaging sound; solid build; aptX Bluetooth

VALUE FOR MONEY ★★★★★ **DISLIKE:** Limited connectivity; slight lack of bass; no remote

BUILD QUALITY ★★★★★

FEATURES ★★★★★ **WE SAY:** A different take on the affordable amplifier that offers an entertaining alternative to conventional rivals

OVERALL





Bronze age

Monitor Audio is shooting for the stars with its latest speaker and **David Vivian** thinks this modest offering is pretty stellar too

At towering achievement in every sense, Monitor Audio has just launched the most expensive speaker in its 44-year history. Perhaps inevitably, the £15,000 Platinum PL500 II raises that largely unfathomable question posed by so many high-end speakers before it: how much does 'the best' actually cost? The irony, of course, is that people who can genuinely afford 'the best' might not really care and perhaps regard £15k as being a bit on the cheap side. This is uncharted territory for MA. We wish it luck.

The good news for those of us that stare at the glistening upper slopes of the high-end with awe and wonder, is that MA takes its holistic approach to loudspeaker design very seriously. In other words, what goes up will come down. And the higher it aims

the better for us because, over time, all of the R&D, design expertise, innovation and material advances get trickled down to evolve the performance of more affordable fare. Monitor Audio isn't alone in this, of course, but it is particularly good at it. Great care is taken to ensure that the sound of the speakers it makes for the masses have essentially the same basic sonic signature as the models in its premium ranges. There are a few budgetary compromises, naturally.

It's a tough call, but the one Monitor Audio knows it must nail. Because it works. It's why the £279 two-way Bronze 2 standmount, launched last spring, and not the new 1.8m-tall flagship, is the most significant and important speaker it produces. As with past models in the Bronze range to wear the '2' badge, a lot rests on its slim shoulders. It simply has to do the

DETAILS

PRODUCT
Monitor Audio
Bronze 2

ORIGIN
UK/China

TYPE
2-way standmount
loudspeaker

WEIGHT
5.3kg

DIMENSIONS
(WxHxD)
185 x 350 x 255mm

FEATURES
● 25mm C-CAM
dome tweeter
● 165mm C-CAM
mid/bass driver
● Quoted sensitivity
90dB/W/m (Bohm)

DISTRIBUTOR
Monitor Audio Ltd

TELEPHONE
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monitoraudio.co.uk

business: commercially, conceptually and sonically. Introducing new customers to the brand in one of the most fiercely fought market sectors of all with the hope of hanging onto them as their hi-fi horizons broaden is the key to success.

In all of its five previous incarnations – most recently the now superseded BX2 – the best-selling larger of the two Bronze standmounts has done a sterling job, delivering standards of build and finish that rivals sweat to match and, with regard to sound quality, a finely judged balancing act capable of easily reflecting ongoing upstream improvements while accommodating those that want to stick with more modest electronics. The claim is that the Bronze 2 retains this appealing double act but pushes the ability to do justice to even finer sources – both delaying the itch to upgrade and eventually steering it in towards the next-tier Silver series and away from competing brands.

True to mission, Monitor Audio has lifted elements from older Silver and Gold series tech to make this happen. The box hasn't changed much, but the drive units have. In line with current Silver series models, the Bronze 2 now uses a dished cone for its 165mm C-CAM mid/bass driver, which abandons the previous dustcap and resulting cone aperture to increase

rigidity, control and radiating area. The 25mm gold-dome tweeter, MA's emblematic metal driver, appears to be the same, but is modified as well with new geometry and venting that prevents back pressure behind the dome – a measure claimed to reduce distortion, improve dynamics and reduce mechanical resonance. Also revised and upgraded is the crossover, which uses polypropylene capacitors and air-cored and laminated steel core inductors. The mid/bass driver hands over to the tweeter at 3.1kHz.

Enclosure dimensions remain unchanged, but benefit from a cleaner, more balanced aesthetic, the tweeter housing matching the look of the front-firing HiVe reflex port (itself trickled down from the Gold series

The B2 won't buckle in the company of expensive source and amp electronics

models), with each having the same marginal 'bite' taken out of it by the woofer surround which sits plumb in the middle of the baffle. With the magnetically fixed grilles removed, it offers a pleasing symmetry. Although dressed in a vinyl wrap rather than wood veneer, the standard of finish would do justice to a much more expensive speaker. Whether you go for black oak, walnut, rosemah or white ash, they all look classy and convincingly 'woody'.

Quite imposing for a standmount, the enclosure is constructed from 18mm-thick MDF with additional bracing and, to further improve rigidity, a 'bolt-through' mid/bass driver where the unit is effectively pulled onto the baffle under tension by a single bolt with an Allen key head that enters through the rear panel. Around the back are two sets

of well-engineered binding posts for bi-wiring. With a quoted sensitivity of 90dB/W/m and 8ohm impedance, it should be easy to drive to decent levels with sub-powerhouse amps, even in larger listening rooms.

I decide to audition the B2 with a couple of different amps and in the smaller of my listening rooms. First up is Monitor Audio's own A100 (HFC 388) streaming amp, a largely forgotten gem that's never had the success it deserves. Connected with single runs of QED Silver Anniversary speaker cable and playing hi-res tracks from a Questyle QP1R (HFC 409), it's an effective pairing with a very approachable sound – as synergistic as Ant and Dec on a roll, but with the kind of broad appeal that's easier to explain.

Sound quality

Yes, these Brit boxes really do have talent and, like their Bronze 5 stablemates (HFC 402), look and sound like much more expensive and sophisticated items.

It may be small, but the A100 is more than capable of extracting a big, dynamically expressive sound from the B2. Soundstaging is open and ordered with a fine sense of depth. Timing is on the money, too, even the fastest and most elaborate polyrhythmic drum solos from the *Whiplash* soundtrack failing to trip it up. The gold dome tweeter has never sounded better. Even during the most fearsome cymbal bashing, it has the knack of resolving fine harmonic detail precisely but not at the expense of musical context. There's lucidity, there's flow. You can listen into a mix easily, but nothing about the sound is overtly analytical or artfully hyped. If anything, tonal balance sits slightly on the warm side of neutral, which is probably no bad thing if the speakers are to be partnered with brighter-sounding budget electronics. Even with the

loudspeaker pulled well clear of boundaries and secured to Slate Audio stands, bass is strong enough to have me wondering if the foam port bungs might be a good idea.

Playing Chuck Loeb's version of *Rikki Don't Lose That Number*, the walking bass line is fruity and then some. The bungs certainly slug the output by a few dB, but on balance the speakers breathe more easily without them and, in truth, the A100 is probably the guilty party here, lacking the grip to keep the lowest frequencies firmly in check.

When a Roksan Caspian M2 (HFC 356) integrated relieves the A100 of its duties, the step up in power and quality is clearly appreciated by the B2 and readily heard. Playing that Loeb track again, the bass guitar sounds superbly supple and altogether tauter with more realistic weight and better defined leading edges to notes. Indeed, the whole track acquires new levels of authority, drive and transparency, strengths that transfer just as positively to Grieg as they do Al Green. And, exactly as Monitor Audio claims, the B2 won't buckle in the company of expensive source and amp electronics. It just sounds better and better still.

In the end, though, it's the Bronze 2's ability to present music with clarity, generosity and finesse allied to an innate sense of performance that's so likeable and rare in a speaker that costs under £300.

Conclusion

Monitor Audio has had a long time to perfect the Bronze 2 and it's hard to think of another standmount in the same price bracket that gets quite so much right. As such, it remains the cream of the class and a terrific buy. The PL500 II may set a new high watermark for the company, but I'd wager that this modestly priced standmount will prove over time to be its proudest achievement ●

HOW IT COMPARES

Perhaps closest to the MA for build, finish and the excellence of its sonics is Q Acoustics' £249 3020 (HFC 402). Refined, smooth and musical, it gives the Bronze a run for its money but, doesn't sound quite as open and resolute. A little more expensive is DALI's £299 Zensor 3. It's an energetic and engaging ride with deep, powerful bass, wide open soundstage and snappy timing, but the B2 digs that bit deeper with more grace and guile. On sale soon, Mission's £200 LX-2 will be one to watch. It features a new advanced fibre mid/bass driver cone and an assurance from Mr Comeau that it will make you want to explore your whole music collection all over again.

CONNECTIONS



- 1 25mm C-CAM gold-dome tweeter
- 2 Bi-wire speaker binding posts
- 3 HiVe forward-firing reflex port
- 4 165mm C-CAM mid/bass driver

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Build and finish; high-quality drivers; superb sound quality
VALUE FOR MONEY ★★★★★	DISLIKE: Not at its best too close to walls
BUILD QUALITY ★★★★★	WE SAY: Monitor Audio's stalwart standmount goes from strength to strength.
EASE OF DRIVE ★★★★★	Warmly recommended

OVERALL





Speed of sound

Simon Galloway talks to award-winning Abbey Road mastering engineer Miles Showell about Universal Music's new half-speed mastering series

When I heard these new half-speed mastered pressings played on a £45,000 turntable, I thought 'wow' – I didn't know I could cut that much detail into a disc! But the beauty of half-speed mastering is that you don't need a ridiculously expensive audiophile hi-fi to be able to hear the difference between a normal cut and a half-speed cut," explains award-winning Abbey Road mastering engineer Miles Showell, a self-confessed vinyl and hi-fi 'nerd' and the man behind cutting Universal Music's new half-speed mastering series.

The first batch of limited-edition releases is made up of six bona-fide rock classics, sourced from the best-quality tapes available and given the half-speed treatment by Miles. This specialist process involves playing back

the master recording at half its normal speed, with the disc cutting lathe also running at half-speed – 16 2/3rpm to be precise – therefore giving the cutting head more time to carve a more detailed and intricate groove onto the master lacquer.

"It's not as simple as just pushing a button on the lathe to make it run at half the speed, it's much more involved than that," explains Miles. The end result is a record that is capable of extremely clean and unforced high-frequency response along with a stable and solid stereo image. "In short" says Miles, "half-speed mastering helps to create a very high-quality record".

The technique was developed by Decca Records way back in the late fifties for its stereo classical releases. In the sixties, Motown notoriously cut its singles at

half-speed for maximum impact, and most famously, in the audiophile world at least, there's Mobile Fidelity Sound Lab's highly prized Original Master Recording series, which launched in the seventies. "When I was getting into records in the late seventies and early eighties I had some of the Mobile Fidelity pressings" Miles recalls. "I was still at school and didn't have the world's best hi-fi, but it was a pretty good system all the same and they sounded fantastic."

Miles' love of music also began at an early age, being exposed to a wide variety of styles at his father's record shop in South-East London, so a career in music seemed almost inevitable. In 1984, aged 18, he joined Utopia Studios in Primrose Hill as a trainee – making tea, taking bookings and dubbing cassettes, gradually being allowed to use the

Miles uses an Ampex ATR-102 tape machine, which he says is "one of the best"



disc cutting lathe and learning mastering skills on the job. After a lengthy spell at London's Metropolis Mastering where he won an award for the innovative 'live direct to disc' concept, he came to Abbey Road in 2013. "It was a scary prospect joining the world's most famous studio" he admits.

Being exposed to different music genres at a young age has stood Miles in good stead throughout his career. As a mastering engineer working across music of all styles and formats, a typical day could involve mastering a dance or hip hop track for digital release in the morning, music from a

"The technical team at Abbey Road are sticklers for keeping everything working properly"

Bollywood film in the afternoon and then cutting records into the evening. "I love cutting vinyl" he enthuses, "it's very hands on and a lot more fun as there are so many things that can go wrong! It can be a difficult job to do, but I get a real sense of achievement when I do a good cut of a tricky recording" citing the recent Queen box set he worked on as being especially challenging.

Mastered at

Abbey Road Studios

This new half-speed mastering series from Universal Music consists of fresh cuts of classic albums by The Rolling Stones, Cream, The Police, Free, Simple Minds and John Martyn, a process that began with locating the best available master tapes for each album. "The quality of the master tapes is hugely important. If you're going to do this then it's got to sound great, but if the source isn't good enough to warrant doing a half-speed cut then there's no point." Luckily for Miles, the best-known analogue masters were found, giving him the perfect starting point from which to begin the mastering process.

Tale of the tape

The John Martyn, Police and Simple Minds tapes were all digitally transferred at Abbey Road by Miles himself. "I use a late seventies Ampex ATR-102 tape machine, which sounds incredible, probably one of the very best. It's fitted with custom extended bass response playback heads and the music is captured digitally in SADiE at the highest possible resolution." The master tapes for The Rolling Stones and Cream were digitally transferred in the USA because "the days of shipping precious analogue masters over the Atlantic are long gone, it would be impossible to get insurance cover for them."

It may come as a surprise to discover that high-resolution digital transfers have been used to cut this deluxe series rather than sticking with a purely analogue chain. "I can completely understand the concerns that some people have. Historically, there have been some horrible digital transfers used as a vinyl cutting source. This has absolutely not been the case with this series" assures Miles. This approach has been taken for a variety of reasons, with the preservation of increasingly fragile master tapes being among the most important. "Analogue tape becomes degraded with each pass over the replay heads – these tapes are getting old, the Cream album is almost 50 years old – and it's no longer considered good practice

THE ALBUMS (PART 1)

As the certificate that comes with each album states: "Abbey Road's world-renowned engineers have been cutting grooves into discs since the studios first opened its doors in 1931." With the vinyl revival showing no signs of slowing down and as the pursuit of high-quality audio of any format gathers momentum, it seems only fitting that this new series of half-speed mastered "superlative records" should come from the world's most famous recording studio.



Cream Disraeli Gears

The oldest album of the batch, the supergroup's psych-blues classic was originally released in 1967 in both mono and stereo mixes and boasts *Strange Brew*, *Sunshine Of Your Love* and the wah wah-heavy *Tales Of Brave Ulysses* among its 11 tracks. The mono mix has been selected for the half-speed mastering treatment, as Miles explains: "Apparently the holy grail for this album is a mint condition mono American pressing." The original 1/4in mono master tapes from Atlantic Records' New York City studios were used to make the digital transfers, which were done at Sterling Sound, again in New York City. "Cutting a record is a juggling act between bass, volume and duration – all these things take up space on the disc. This is a short album, 15/16 minutes a side, which gives me more room to play with on the cut, so I could give it a bit more volume. It's the best it can be."



The Rolling Stones Exile On Main Street

Infamously recorded 'in exile' in the South of France and released in 1972, the Stones' only double studio album (to date) is a sprawling mix of blues, soul and country and is considered among the best they ever released, so it's only right that it should receive a half-speed makeover. 24-bit/96kHz digital transfers made from the original 1/4in tapes were supplied from the band's own archive. The deluxe packaging includes replicas of the Norman Steef postcards included in the original pressing of the album.



"It's not as simple as just pushing a button on the lathe to make it run at half the speed"

to play and play them for fear of damage and wear and tear."

There's another benefit in working this way when it comes to the biggest challenge faced by any mastering engineer cutting for vinyl – the dreaded 'sss' of the vocalist. We've all experienced harsh sibilance and distorted vocals on poorly mastered records, the bugbear of every vinyl lover. As Miles points out: "One of the hardest things to playback accurately with a cartridge is the human voice and the de-essing process has always been the Achilles heel of half-speed cutting."

A lesson in de-essing

For the uninitiated, de-essing is a mastering technique that involves processing the audio signal to control the 'sss' and 't' sounds on vocals, eliminating unwanted sibilance and distortion when the record is played back.

Miles goes into further detail about this vital stage of the process. "For de-essing I have several tools to call on including Maselec, a really nice plug-in de-esser from Waves as well as CEDAR restoration tool, which although not specifically designed as a de-esser is actually very, very good when used carefully. So working within SADiE and with clever editing, I can target just the offending 'sss' and leave the rest of the audio intact – it's just a fraction of a second of audio that needs to be worked on – meaning



Miles worked on the recent Queen box set

hi-hats, bright guitars and snare drums are not affected or reduced in impact. I listen to every track on an album, fixing each 's' as I go along. It's very time consuming and you need incredible attention to detail, but when it's all done and you playback the finished record it sounds fantastic."

It's also at this stage that other sound repairs and any tape restoration work can be carried out. "Problems with the tape can be treated far more accurately digitally than with traditional analogue techniques. Drop outs and clicks, for example, can mostly be restored in a way that is unobtrusive. For the record, none of the albums in this series

Once the recordings have been de-essed and tweaked they are then cut to a master lacquer

have been de-noised. Only clicks and drop outs have been repaired."

Another significant difference in the Abbey Road half-speed mastering setup, involving modifications overseen by Miles himself, is the EQ system used. "We install a custom-designed RIAA filter to replace all the original Neumann circuitry. RIAA is a format agreed back in the fifties. The RIAA curve works by filtering off low frequencies and adding high frequency to the cut. Records are intrinsically hissy, so the idea is that if you limit the bass and add lots of high frequencies at the cutting stage and do the opposite on playback – the amp brings in bass and reduces treble – it puts the bass back where it was and you'll lose the hiss. It's basically a crude noise

THE ALBUMS (PART 2)



**Free
Fire and Water**

Featuring the perennial rock anthem *All Right Now*, Free's 1970 album was their big breakthrough. The digital transfers for this half-speed mastered edition

were overseen by Free's remastering engineer Andy Pearce using the original 1/4in tapes.



**John Martyn
Solid Air**

With its title track written about fellow singer-songwriter Nick Drake and containing Martyn's signature song *May You Never*, this is a true classic from

start to finish. Recorded in late 1972 and released in 1973, Miles was blown away by both the sound of the album and the condition of the tapes. "It was one of the best sources I had – the original master tapes – and they were in unbelievable condition. It sounded so good, you could imagine John Martyn was in the room with you, you'd hardly believe it was over 40 years old. I was in heaven." The 1/4in master tapes were digitally transferred by Miles himself at Abbey Road using a customised Ampex ATR-102 for playback.



**The Police
Ghost In The Machine**

Sting and company's fourth album was recorded and released in 1981 and despite the big international hit *Every Little Thing She Does Is Magic* being

among its tracks, it's actually a darker and more dense record than their previous efforts. This is another album that Miles was able to digitally transfer himself from the best-known 1/4in analogue tape in existence. The deluxe packing includes a replica of the original picture inner sleeve.



**Simple Minds
New Gold Dream**

Simple Minds' vocalist Jim Kerr referred to this as the band's 'holy grail' album. Released in 1982, the band's fifth album includes *Promised You A Miracle*, *Glittering Prize* and a guest appearance from Herbie Hancock. For Miles, this was the most challenging of all the albums because of its running time (the first side is almost 25 minutes long), but one that he's proud of.

"There's a lot of bass, but I didn't want to lose any of that or the stereo image. I got it as loud as I could, it's certainly louder than the original cut."

You can buy the half-speed remastered LPs here: thesoundofvinyl.com/*Abbey-Road-Studios/

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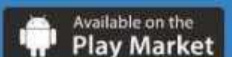
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reduction system. But at half speed, all the frequencies are wrong, so our custom modified filters have been especially designed for the half-speed cut. It makes the real-time cut sound better too, but the half-speed cut sounds fabulous.”

Know your limits

In reference to the dreaded ‘loudness war’, Miles is keen to point out that no digital limiting was applied during the mastering process. “The brief here was to create clean, vinyl-specific transfers, so thankfully I didn’t need to go for loud, mashed-up level. It’s totally superfluous to record cutting anyway, in fact it’s a distinct disadvantage to have a very compressed source. I’m no fan of it and it’s anything but natural and pure sounding.” He does, however, have a range of outboard equipment that he brings into play during the mastering process to help get the best sound possible. “On most mastering sessions I use the outboard gear for the bulk if not all of the work. This outboard equipment is mostly esoteric analogue equipment, namely equalisers from Sontec, Maselec, Dangerous Music, Manley and a set of original EMI TG 12410 EQs. While I do have ‘in the box’ processing tools within SADiE, I greatly prefer the sound of the outboard equipment I have access to,” he explains.

Once the recordings have been de-essed and tweaked to satisfaction, they are then cut to a master lacquer using a modified

Neumann VMS 80 lathe. “It’s in fabulous condition as it spent 12 years in a museum before being coaxed out of retirement in the late nineties. Therefore it’s essentially 12 years newer than anyone else’s lathe” Miles remarks. “Also, the technical team here at Abbey Road are sticklers for keeping everything working properly, so in addition to the lathe having had a fairly easy life, it’s extremely well maintained.”

“The brief was to create clean, vinyl-specific transfers so I didn’t need to go for loud levels”

From the Abbey Road cutting room in London it’s off to the pressing plant, and in this case the German-based Optimal, renowned as one of the finest in the world. “They are consistently brilliant” affirms Miles, “even their test pressings are fabulous, it’s very rare that I have to question something. Their head of quality control does everything by the book – he’s exactly the sort of person you want checking your records. You need that ridiculous attention to detail because there are so many things that can go wrong with a record at that stage.”

Promised to be among the finest pressings that these albums have ever received, the finished product is pressed on 180g vinyl

and presented in deluxe packaging – exact replicas of the original artwork and inner sleeves (where applicable) and obi strips for each album, complete with a certificate of authenticity from Abbey Road. “Records mastered at half speed are a real music lovers’ format and are so much more pleasurable to listen to. It just brings something along that you don’t get from a regular record. You can sit down and dedicate 45 minutes of your life to this music knowing it’s going to sound lovely.”

And how to get the best from these records? Well, it seems all the hard work has been done for us by Miles. “All you need is a moderately reasonable hi-fi deck, something that’d cost you around £200 upwards and not one of these £80 all-in-one box systems, and you’ll easily hear the difference. Obviously the better your deck, cartridge or arm, the more you’ll be able to pull out of the groove.”

Although Miles doesn’t get to choose the albums that receive this bespoke half-speed mastering treatment, he does have a wishlist of favourites that he’d like to work on. “I’d love to do some Steely Dan and maybe some jazz stuff. Marvin Gaye’s *What’s Going On* is possibly my favourite album of all time and it’d be great to do that. Sadly that decision isn’t in my hands but I’m not complaining – I get to come in here, push buttons and listen to music all day and get paid for it. It’s great fun!” ●

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THIS MONTH



ED SELLEY

EXPERTISE: REVIEWER

Active in the industry since 1999, Ed's first record was *Boss Drum* by The Shamen. He splits his time between reviewing and protecting hi-fi kit from toddler son Will.



NEVILLE ROBERTS

EXPERTISE: ENGINEER

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



JASON KENNEDY

EXPERTISE: REVIEWER

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



DAVID VIVIAN

EXPERTISE: REVIEWER

David's love of hi-fi started at an early age after a near-deaf experience with a rubbish Pye music centre and his favourite prog-rock LPs. He hasn't been the same since.



CHRIS WARD

EXPERTISE: REVIEWER

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

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➤ The Naim game

I recently bought a Naim Mu-so Qb and am very pleased with it. I've connected it via Bluetooth on my Apple iPod, but there is another Naim Mu-so, which says "not connected" on the screen of my iPod, should I tap this as well? Or should I just leave the one on top connected? I only have one Mu-so, but an Apple iPod mini as well. Also could I replace my glass shelves with acrylic ones on my Sound Organisation equipment stand and if so where can I buy them?

Julian Bedford

What Steve Hopkins on the Naim support line doesn't know about Naim isn't worth knowing

JK: That's a strange one Julian. You have two options, ignore the second

Muso on your screen or have a word with Steve Hopkins on the Naim support line. What he doesn't know about this sort of thing isn't worth knowing. The only way to get acrylic shelves for your stand would be to have them made to fit as there aren't any third-party companies that cater specifically for audio racks to my knowledge. There are, however, a lot of acrylics companies online that can do this for a reasonable cost.

➤ Vinyl snobbery

As a magazine you have always favoured vinyl over any other media, but recently, the snide/detrimental comments about anything digital have started to come back into force. It is a fact that some of us don't get a kick out of cuing up a record, or enthuse about artwork – I just want to listen to music. I don't know if a comparison has ever been made about how much 'extra' it would cost to get a digital system comparable with a vinyl one, but I would far rather pay that premium for being able to listen without having to break every 20 minutes or so.

In the May issue, Neville Roberts says that he believes people aren't buying vinyl for the 'trend', but are actually listening to it. As it was Record Store Day on 16th April, I thought I'd take a look on ebay, and see what 180g vinyl was being advertised. A total search came up with 3,066 albums, I then searched with the word 'sealed' in the description, and came up with

2,362. That means that only 704 had been played, or about 23 percent. I've subscribed to your magazine for years, and will continue to do so, unless the comments become more rife.

Alan Bridgens, by email

LD: Hello Alan, many thanks for your email. *Hi-Fi Choice* has always been a supporter of vinyl and has welcomed the growing interest in the format, thanks to events like Record Store Day that have helped to popularise it with new audiences and rekindled the passion with anyone that remembers it from the first time around.

Some of us don't get a kick from listening to vinyl and much prefer going digital

We never intentionally make snide or detrimental comments about any music format and certainly don't favour any one over another. Like you, we simply enjoy listening to music in the best quality possible and endeavour to use the most appropriate sources for a particular product review.

NR: Although I am a self-confessed vinyl addict, I do also enjoy my growing digital collection and have invested in a very good digital streamer to play them on. I certainly didn't intend to deride the digital format in my *Opinion* piece, but attempted to highlight that the renewed interest in the older analogue format is not just about the artwork or being trendy, but ▶



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When will vinyl's popularity diminish?



that the LP can still hold its own next to the higher-resolution digital formats. Of course, hi-res is not for everyone and all of the digital formats, including the lower-resolution ones, have a valid place, just as the lower-resolution analogue formats had in the past, like AM radio. Regarding the sales of records on ebay, many of the 'pre-loved' LPs on sale are no longer available and many are collectors' items in their own right. As for the sealed pressings, many retailers also use ebay to sell their products. I do accept that I am indeed a bit weird in also enjoying the process of playing a record, but maybe I'm not alone?

ES: As the analogue side of this discussion has been largely dealt with,

Many people will happily go to the opticians, but won't go for a hearing test

I'd like to stick my head above the parapet and state I almost exclusively use NAS drives for digital source testing – indeed I bought a Melco N1A (HFC 397) to give me both USB and Ethernet connections that weren't tied to a PC or Mac.

LETTER OF THE MONTH

➤ Falling on deaf ears

One or two in the hi-fi press have recently bemoaned a loss of treble in their hearing and each time they've missed the obvious answer. Get some hearing aids! It has particular relevance to older

people and those who have been listening to loud music for a long time. Many people will happily go to the opticians once a year and have no problem wearing glasses, but try getting them to go for a hearing test and wearing hearing aids. There's still a social stigma attached.

People with hearing aids are often regarded as being deaf, yet people with glasses are not considered to be blind. I wear a pair of hearing aids and to me they're just glasses for the ears.

National Health ones are free and do more than raise volume levels. I often enjoy my hi-fi and am happy to use low volumes with my eyes shut, listening to where instruments are coming from in the stereo spread with a smile on my face.

What's more, a friend of mine who was completely deaf for 40 years due to meningitis now hears superbly thanks to two cochlear implants and a few hearing aid tune ups. After a visit here he went home, arranged a demo in his local hi-fi shop, and now enjoys good-quality music.

If you suspect you're no longer hearing higher frequencies or the sound's not as good as it was, maybe buying new, costly equipment isn't the answer. You may find a pair of hearing aids will give you the best-quality sound you've heard for years.

Melvyn Dover, by email

CW: Wise advice Melvyn. Ears must logically be the first piece of equipment to deserve attention in the audio chain, ▶

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

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

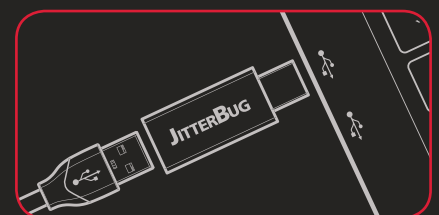
Noise is the problem. Real noise—the kind you can't hear directly. Most often, the word "noise" is used to describe tape hiss or a scratch on a record, but these sounds aren't noise; they are properly reproduced sounds that we wish weren't there.

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

JitterBug's dual-function line-conditioning circuitry greatly reduces the noise and ringing that plague *both* the data and power lines of USB ports, whether on a computer, streamer, home stereo or car audio front-panel USB input.

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

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





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as they enable all other advances to be realised. Plus, I suspect many listeners fail to notice any decline in their hearing over the years. Maybe we should all try to get used to regular tests. I'm aware that Specsavers now do hearing tests, so maybe if we see someone coming out of a hi-fi dealer with needlessly large or overly bright speakers we can now say, "Should have gone to Specsavers!"

NR: I am very much in agreement with you when you say that those of us who are moving on in years and whose hearing is not what it was, can still enjoy music and, indeed, hi-fi. I agree that we should consider hearing aids like specs as items to help us get on with our daily lives. Yes, it is true that our ability to hear high frequencies drops off as we get older. I certainly remember being able to clearly hear the 15.625kHz whistle from the line output stage of a 625-line television when I was young, which I certainly can't now! Modern digital hearing aids, including the NHS ones, can be individually programmed for a

Rega's Apollo-R and Brio-R should be ideal for Brian's Tannoy speakers



patient's ear to boost those frequencies that the ear can't hear as well.

Fortunately, we have a much more complex and effective sound processor for enjoying music – the human brain. For music the brain can, to some extent, compensate for some loss of frequency response. I know people who wear hearing aids, but remove them when going to a concert and enjoy the music like they did when they were younger. Digital hearing aids are great for speech, but I don't recommend them for hi-fi listening.

➤ **All about timing**

Can you please recommend a CD player and amp to partner the Tannoy Revolution XT 6F speakers? I have a budget of £1,500 to £2,000. I listen to a wide variety of music, classical, popular and country. My listening room is about 13ft by 12ft. I am looking for a musical system with good timing.

Brian Small, by email

JK: Hi Brian, look no further than the Rega Apollo-R (HFC 383) CD player and Brio-R (HFC 352) integrated amp. These two have better timing and greater musicality than pretty much all the competition at the price. The Brio-R has enough power for the decent 90dB sensitivity of the Tannoy speakers and the combination of all three will make your television redundant.

ES: The Tannoy is an easy enough speaker to drive and fairly good natured so ▶

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at that price I'd look at the Creek Evolution 50 (HFC 385) CD player and integrated amp. They're beautifully made and sound brilliant.

CW: The Tannoys are an easy load and your room isn't large, so you won't need oodles of power. Exposure's 2010S2CD and 2010S2D amp combo (HFC 401) impressed us. Similarly the Creek Evolution 50CD and matching Evolution 50A (HFC 377) amp should also work very well. One more combo I'd explore is Audiolab's slightly superseded 8200CD partnered with Rega's Elex-R. Don't forget to budget for some decent interconnects.

➤ Upgrade advice

I hope that you can help out with some much-needed upgrade advice. My music catalogue is now firmly entrenched in the PC world. I have all my music in 16 and 24-bit FLAC files. These are fed, via USB, into a Naim DAC V1, and on from there into a pair of Adam Audio Artist 5 active speakers. I've been a big Naim fan for a number of years, enjoying the PRAT and driving bass. The Adam Audio speakers I find punch well above their weight, and I greatly enjoy the speed and insight of the ribbon tweeter.

I live in a fifth-floor apartment and my living room is quite susceptible to reverberations from plasterboard walls and ceilings. I mitigate this as best I can with internal furnishings, but I know this plays an effect and slightly muddies the sound and defocuses the soundstage.

Over the last couple of years, I have tried various PC-related

tweaks; linear power supplies, PCI USB cards, different operating systems, different software players and USB cables. Sometimes I'll make a change and notice an immediate improvement. Subsequently however, in blind listening tests with friends configuring the changes, I've often been unable to identify the better updates. Consequently, I now listen to a stock, hand-built PC, running Windows 10 with J River.

I am limited for space in my apartment. I am around 2.5m from the speakers, which are

Can you suggest a CD deck and amp for Tannoy's Revolution XT 6F loudspeakers?

forced to go near a wall. Floorstanding speakers are definitely out. My speakers are on a long console table, isolated by sorbothane feet. I am, therefore, limited to bookshelf loudspeakers. I'm not totally against going back to passive speakers, provided that somewhere in the PC/DAC/amp/speaker chain there can be scope for room correction, as I know of no passive speakers that offer frequency adjustment.

I need any guidance with what I see as three options: A) amp/DAC/passive speakers, B) DAC/active speakers, C) all-in-one active DSP speakers such as Genelec models. I have a budget of £5,000, hope you can help!

Nathan Wheelhouse, by email ▶

COMPETITION WINNER

Back in HFC 409 we gave you the chance to win AnalogueWorks' fantastic Zero+ turntable (pictured below) worth £1,500. The number of entries that we received was overwhelming, but eventually we picked Peter Dilworth's name out of the virtual hat. Congratulations to you Peter, your smart new turntable should be with you very soon – happy spinning!



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Hi Fi Choice, Jan '16



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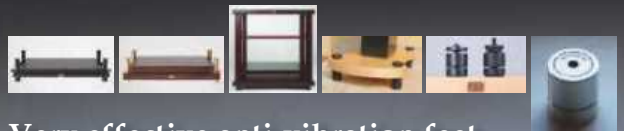


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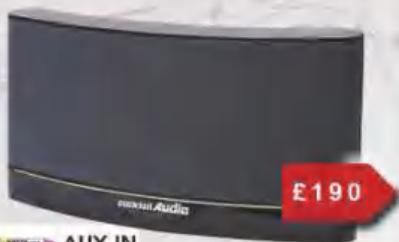
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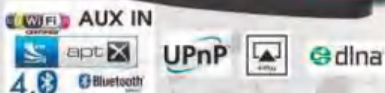
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PMC's two-two.5 has the tonal adjustment features Nathan is looking for

the music intact and could save you a lot of needlessly expensive component changes that won't actually deal with the physics of your room.

JK: I have yet to hear a DSP room correction

system that is entirely positive, they nearly always concede something in the quest for a good tonal response, usually timing. I would recommend you look for an active speaker that unlike the Artist 5 does not have reflex loading, the rear-firing port on your speaker will inevitably muffle the sound if it is close to a wall. I would recommend the PMC two-two.5 which has the tonal adjustment features you are looking for, but is a transmission line design with very well controlled low bass. It's a pro speaker so has plenty of power and is designed for console type placement. The other thing you should do is get some serious isolation for your speakers, I recommend one of the Townshend

Can you help me refocus the sound of my hi-fi setup in my apartment?

platforms, which are made to suit the size and weight of the speakers being used. This should stop your loudspeakers from vibrating the furniture they sit on, which also tends to muddy the sound.

DV: If you're after a 'solution' rather than more tweaks and adjustments, I'd be inclined to take up MunroSonic's offer of a seven-day free loan of its EGG 150 Monitoring System (HFC 408). I think you will find that it addresses all of your concerns and is well within your budget. You can call +44 (0) 845 5002500 or email loans@MunroSonic.com to find out more.

CW: I feel that you need to reappraise the challenge Nathan. Adjusting tone controls may ameliorate the worst nasties, but you are losing music in the process. Linn and other brands have pioneered some highly sophisticated room correction technologies, but I'd be minded to get you back to basics. It's only bass wavelengths that will upset the neighbours. Your current set up is clearly stimulating the natural 'eigentones' of your room – the tendency for specific lower-frequency resonant standing waves to develop between parallel walls. Any adjustments you are making to midband and treble are just your personal preferences. Large bass traps in one or two corners can help, but this may need to become unsightly before they make a difference.

Coving around the top of your room and even vertical corners will help considerably. Primarily though, I'm very wary of you placing the speakers on a console table as this nearby surface may effectively act as extra wall reinforcement, inadvertently loading additional, unwanted bass performance from the woofer as well as transmitting some serious energy down the table legs to your downstairs neighbours. Try heavy speaker stands either side of the table or brackets on a solid wall. If this isn't possible try raising the speakers a few inches on some small marble or granite off-cut slabs from a stone merchant or DIY store. Keep your sorbothane feet and maybe add a child's bike inner tube barely inflated under the high mass isolation slabs. Add an empty biro body between table and inner tube to stop a vacuum forming. These solutions should leave

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Market forces

Vinyl may be the new religion for the latest generation of opinion formers, but mainstream retailers risk ensuring its revival remains a fad. **David Vivian** explains all

I get it, I really do. Compact Disc is dead in the water, and no one who isn't a fanatic can tell the difference between MP3 and hi-res audio, and 16-year-old kids – the increasingly influential Millennial generation – are largely responsible for the 'vinyl revival'. Yep, it's obvious: the music industry has never been in a bigger mess, nor its consumers quite so confused and, as I just demonstrated, misinformed.

No wonder so many people have turned to streaming for refuge. Easy street or what? With just a rudimentary grasp of spelling and a mobile phone, tunes from the largest music libraries ever compiled can be summoned for absolutely nothing if you don't mind putting up with a few ads and slightly less than sparkling sound quality. And ad-free, higher bitrate 'premium' subscriptions to streaming sites are hardly punitive when you can 'eat yourself to death' from an effectively inexhaustible supply of the food of love. Game over, folks, and about time.

Well, maybe not. When have things audio-related ever been that straightforward? At the nub of the current state of unrest and putative revolution is a lovely example of the bleedin' obvious. As an ownership proposition, digital files or access to data streams are a bit boring. Great, brilliant, wonderful... but boring. There's no collateral satisfaction, no physical investment, nothing tangible to tell you it even

A toy turntable with retro affectations will not sound cool playing a £30 LP

singles, most likely played, in the early days, on tediously clunky, distinctly low-fi, portable, auto-changer record decks that, with the benefit of hindsight, sounded pretty dreadful but, because we didn't know any better, were cool as hell.

Liking music required effort and involvement, regular-as-clockwork visits to the record store, person-to-person social interaction, an album-centric rather than 'next track' mindset, a lot of standing up and sitting down and a high degree of manual dexterity, both to swivel an LP between your palms, and drop the needle in the right place. There was a pleasurable inevitability to it all. A love of vinyl was formed because, apart from the radio and pre-recorded cassettes, that's all there was. Vinyl wasn't a lifestyle choice, vinyl was music. A singular entity. Indivisible.

So we're excused. Also, in some cases, for possessing exorbitantly large record collections and – having long ago discovered the true sonic potential of the black stuff – for

coveting expensive and beautifully engineered turntables with exquisite tonearms and fabulously exotic pick-ups. Because, well, you know, it just sounds better.

In times past, that was something best kept between ourselves and certainly, these days, set against the high standard of the latest digital technologies and formats, it's a notion that seems to have lost its smug reassurance. But, somehow, the phrase "it just sounds better" seems to have escaped and, stranger still, become the mantra of the Millennial opinion formers, bloggers and new vinylistas.

Groove is in the heart

My main problem is this. How would they know? I'm sure some have made the effort to find out by visiting a hi-fi shop or trusting in ebay, but – and here's the really upsetting thing – there seems to be a cynical conceit among the mainstream outlets now stocking new LPs at anything between £15 and £35 a pop that you can sell a trend as a package and rip off the public in the process. All you need to complete the authentic re-birth of the cool (for young people), is a toy turntable and amp with two tiny, tinny speakers in a pretend suitcase selling for £99. Over there, hanging on the wall above the record racks, can't miss 'em. Ah, you can hear that analogue warmth from here. Those hi-res digital downloads on your iPhone can't do that can they. One to go?

I used to beg friends to get a decent CD player so that they could appreciate the sound quality a Compact Disc had to offer. I said it was like petrol: more enjoyable in a Ferrari F40 than a Nissan Micra. But here we're closing in on a level of insanity. A toy turntable with retro affectations will not sound cool playing a £30 LP. It may dig the groove, but not in a good way. That these vinyl-shaving devices are often sold alongside LP Cleaning Set kits and 'How to Take Care of Your Records' books is the ultimate irony and transparently exploitative. Whether they're in it for the retro cool daddio buzz, an excuse to get out of the house, an opportunity for the boys to experiment with beard styles and 'downloads suck' posturing, or a genuine belief that vinyl does sound superior, the kids deserve better. Treat them like fools in thrall to a fad, and the vinyl revival will surely stall ●



You are not going to get the best from your fancy new vinyl if you play it on a cheap skate turntable



DAVID VIVIAN
Daddy cool

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Back for good

Vinyl continues to go from strength to strength as **David Price** celebrates the sudden rebirth of the world's most iconic turntable, Technics' SL-1200G

When Technics discontinued its SL-1200 turntable back in 2010, it was a shock to every self-respecting vinyl junkie the world over. The idea that just as our prized format was finally making its way back to full health, the most iconic record player in the world would be euthanised was a blow, to say the least. More than just the 'DJ deck' that it was often derided as, it became the best-selling record player ever made – and the most long lived too (when it ceased production). Indeed it came to symbolise vinyl as a whole. A great many people with no more than a passing interest in audio would instantly recognise it, and be able to explain what it was – and why it was cool. No other hi-fi product has ever been able to do that.

Tetsuya Itani, Technics' chief technical officer, told me that the SL-1200 was discontinued because the diecast moulds and tooling used to make it were wearing out. It would have required a substantial investment just in the middle of the financial crisis, which sent the economy of the company's biggest market – the United States – into a tailspin. Happily though, things have changed and the global economy has now picked up. Also, vinyl sales are now well and truly off the floor, and the LP has become a zeitgeisty object – many people are buying vinyl records with download codes, downloading the music and using the

Hi-Fi News has measured wow and flutter at a stunning 0.01 percent

the fact that it's happening and vinyl is back in the shops.

So now, after a six-year hiatus, please be upstanding for the SL-1200GAE – the first model that Technics is unleashing upon a waiting world. It costs £2,800 and is a limited-edition version of which only (predictably) 1,200 units are being made. The cooking SL-1200G will follow in the UK this autumn (see our *Audiophile* news story on p8) and is expected to be priced the same. This is a good deal more expensive than the SL-1210MK5, which could be had for £800 on the high street, or even less if you shopped around. Having had the chance to play with the new 'GAE' for a few weeks, I can gleefully report that this is more than just a simple rehash of the old deck. I had feared that it would be worse than the high standards of the SL-1210MK5, but it's better – and by a good way. Technics says the cost of the project was considerable. "Investment for the development, diecast moulds and tooling was not insignificant," says Itani, "because most of the original

vinyl record as art to adorn their walls. While you and I, dear analogue addict, might find this a tragic waste, we can only applaud



mouldings and tools were no longer available or damaged. We had to re-design almost all parts from scratch."

Having been a compulsive turntable twiddler for the past 40 or so years, I thought the SL-1200MK5 was a veritable playground. There were various things wrong with it, but at its heart was a superb quartz-locked motor and diecast aluminium chassis. Interestingly, the company has done nothing on the latter (although the GAE gets a swanky brushed aluminium top, for visual purposes only), but has reworked the former. The old motor was the one area where I would have said the SL-1200 was strongest. Itani says it was still guilty of cogging – the uneven delivery of torque to the platter, due to the interaction between the permanent magnets of the rotor and the stator core iron inside the motor. A newly developed twin-rotor, coreless motor is coupled to optical rotary positioning sensors and a microprocessor control system. This, claims Itani, has eliminated cogging, and also brings more torque to the party (up from 1.5kg/cm on the SL-1210MK5 to 3.3kg/cm).

The best just got better

One major weak point of the original was the resonant aluminium platter, and this has been fixed. It now has a brass insert, which brings the mass up to more than that of the old SP-10MK2 broadcast deck, and is rubber coated on its underside and balanced. The result is a substantially improved 'drivetrain', with dramatically better speed stability (our sister publication *Hi-Fi News* has measured wow and flutter at a stunning 0.01 percent, down from 0.25 percent for the SL-1210MK5). It is quieter in operation too, and the result is a superb-sounding deck.

Welcome back SL-1200, it's been lonely without you. Those who dismiss the Technics haven't been paying attention – and given it has been on sale in various guises since 1972, you've got no excuse! The fascinating thing is what this holds for the future; Technics has a brilliant new direct drive motor, all ready to go. Can we expect an SP-10MK4 – a superlative, high-end audiophile motor unit? Itani wouldn't say. But then again, he didn't say no... ●

Back and better than ever before, Technics' incredible SL-1200GAE



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Instant karma

Though he's never been one for single-brand systems, a change of speakers saw **Jason Kennedy** employ Rega components across the board with surprising results

In all my years as a music lover and audio nut I have never owned a one-brand system. Such things are not uncommon among enthusiasts and almost unheard of for reviewers, but the planets got into alignment on this front recently and I have been having an awful lot of fun. I am in the fortunate position of having two systems, one for hardware reviews that I can swap new kit in and out with various reference elements, and a second that tends to remain the same most of the time and which is used for music reviewing. For a long time the speakers in this second system have been Living Voice Auditoriums, but the source and amplifier have over time turned from being a mixture of brands into Rega components. The phono stage is a Trichord Delphini and the network streamer is a Cyrus Stream X (HFC 351), but the key components of record player (including arm and cartridge), CD player and amplifier are all Rega. The RP10 turntable and Aphelion MC cartridge are the best the brand currently makes, but the Saturn-R (HFC 384) CD player and Elex-R integrated amp are pretty affordable separates.

Having used the OBX-R variants of the Living Voice speakers for 15 years, the manufacturer suggested I return them so that the many upgrades and changes that have been instigated over this time could be incorporated. So I had to find a speaker that was living room-friendly and

You get a coherence that delivers what the designer thinks is most important

difficult for small children to knock over, which precludes most. I opted for the Rega RX3 floorstanders I'd been reviewing.

I had expected to come to terms with a drop in detail resolution, bass extension and all-round sound quality but that isn't exactly what I got. Yes the sound was not so refined and rich and the soundstage was less open and expansive, but what came through in its place was tremendous coherence, precision of timing and more surprising, really big differences between recordings. All of which adds up to an ability to engage and entertain that many systems fail to match. This comes down to synergy – when a company that has a clear and distinct idea of what it is attempting to achieve is able to carry out its aims in everything from source to speaker, you get a coherence of approach that will deliver precisely what the designer considered most important. And if that's the character of instruments and voices alongside the precise tempo of the performance, as is the case with this Rega system, you get an awful lot of musical entertainment for your money.

Naim has a pretty good reputation for doing the same thing, built over the time when it seemed to be on the same wavelength as Linn. An era when you would be hard pressed to walk out of a store without an LP12 if you went in to buy Naim amps, or a record brush for that matter! Naim still makes loudspeakers, of course, but since its tie up with Focal the emphasis has been on the French company's models. A range which has been evolving to suit Naim electronics and sources to the point where models like *Sopra* were developed using that equipment and thus should have much the same synergy as a one-brand system. I haven't had the chance to try such a system, but I suspect that Naim speakers still have the edge in the musicality stakes, primarily because they were designed by the same team that created the electronics. A team that puts musical engagement at the top of the tree where it deserves to be.

System synergy

Another brand that make everything is MBL from Germany. Its stuff is pretty expensive and the speakers pretty unusual with their pulsing rugby ball drive units, but as a whole MBL systems deliver imaging and presence that is hard to beat. If you ever get to the High End show in Munich I'd suggest visiting its room, it's something else.

You can, of course, build highly synergistic systems out of components from different manufacturers, I have found some pretty unexpected combinations produce extremely engaging results, and some that do the opposite. So it's handy to be able to track down a company that builds entire system chains that appeal to your sensibilities and tastes, especially if it doesn't charge the earth. I take my hat off to those people who have both the engineering skill and artistic sensitivity required to design and build full systems that are capable of transporting me to a higher plane without leaving a car-sized dent in my bank balance ●



Rega's RX3 floorstander gave Jason the synergy that's been missing from his system for so long



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The vinyl vs CD debate

There's been a lot of talk about how vinyl sounds superior to CD of late. But, wonders **Neville Roberts**, is there any truth in the theory? Time to dig into the grooves and digits

I heard a story recently about a teenager who was saying to her mother that all her friends had been getting record decks and that she wanted to get a turntable too. Her mum said that she had now moved on to CDs, to which the girl replied: "Oh mum, you are so old fashioned!" So is it just the extra enjoyment that you get from taking a record out of its sleeve and playing it on a turntable that has made vinyl trendy again? Or is it that youngsters, who tend to have better hearing than their parents, perceive a greater enjoyment from listening to an LP compared with a CD?

There is an argument that vinyl has a better frequency response than CD due to the limitation of the digital encoding standard. According to the Nyquist Theorem, the theoretical maximum frequency that a CD can store is half of the 44kHz sampling rate. In practice, the maximum frequency for a CD is slightly less at around 20kHz. An LP does not require the encoding process to convert the audio to digital, as the recording stays as an analogue signal and so the maximum frequency is determined by the quality of the vinyl, the recording and the playback equipment.

Think back to the early seventies with CD-4 quadrasonic records – they had a 30kHz carrier signal that was frequency modulated with the information required to reproduce the four channels on a quadrasonic system. A

Digital distortions such as jitter are more objectionable to the human ear

pressing. Although this appears to imply that a record is far superior to CD, the physical limitations of a cartridge can start to produce distortions above 20kHz.

But this does not help explain why so many people consider that vinyl sounds better than CD. Clearly, it's not just about frequency ranges that you can hear. I believe that there are many other factors to consider. Firstly, with a good quality direct-to-disc record, for example, the sound signal stays in the analogue domain. It all starts with a vibrating string or a bang on a drum. This causes a sound wave to whizz through the air and this gets converted by a microphone to a varying electrical signal, which ends up as a wavy groove on a record. During playback, the groove is converted by the cartridge to a varying electrical signal and then back to a sound wave by a loudspeaker. A CD, on the other hand, has to be encoded as a digital signal, which is converted down from a professional high-resolution digital format to 16/44 and then converted back to an analogue

waveform by the DAC. The distortions and limitations introduced by digital conversion are very different from a purely analogue process and are more significant at the lower resolution format of a CD.

These digital distortions, such as jitter, granulation and other nasties generated by the digital filters are more objectionable to the human ear than the simple analogue equalisations of a vinyl record. Some will point out that modern vinyl records are digitally recorded in the studio, but the conversion to analogue takes place at high resolution with professional equipment. With a CD, the digital-to-analogue conversion happens in your CD player at the lower resolution dictated by the CD standard.

Another issue is how the human body experiences sound. It's not with just our ears, but with our whole body that we 'hear'. The brain puts all these elements together to provide the experience. A super tweeter can provide real sonic benefits, but I very much doubt a listener could hear, for example, a 25kHz tone. The fact that an LP can reproduce this to some extent is a contributory element to making the sound more real, and as with CD-4 quadrasonic reproduction, it is less important that it may not be perfect. Similarly, a sub-sonic bass note is felt, rather than heard, and certainly adds to the overall music experience.

Hi-res vinyl

The resurgence of vinyl has prompted an Austrian firm to file a European patent describing HD (High Definition) Vinyl. Unlike current record production that is based on sixties technology, HD Vinyl uses computer-generated, 3D modelling techniques to describe the groove topography. Although this part of the process is lengthier than simply cutting a groove in lacquer, the result effectively 'masters' the topographical data by adjusting the frequency characteristic, correcting radial and tangential errors and, dynamically adjusting the groove spacing before burning the audio directly onto the HD Vinyl stamper using a laser. Clever stuff. Is HD Vinyl going to be the way forward? Only time will tell, but I for one am looking forward to hearing what the future for the LP holds ●



They're both round and they both play music, but which is really the best?



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Virtual reality, no thanks

Sure, not everyone can get to see their favourite band live, but is strapping a cardboard box to your head really the future of live music? **Nigel Williamson** sincerely hopes not

Did anybody watch the David Bowie tribute concert streamed live via Skype from New York's Radio City Music Hall held in April? I was tempted, particularly as the subscription fee wasn't a commercial transaction but a suggested £15 donation to charity. But in the end I didn't bother.

Why? Because in my world the only point of live music is to be there and not only to see and hear the performance but to taste, touch and feel the synergy between artist and audience and to share the communality of the experience.

There are a handful of concert albums I enjoy listening to at home; the Grateful Dead, Bob Dylan, Bob Marley & The Wailers and Jimi Hendrix come to mind as having recorded live LPs on which the atmosphere and energy make up for the lack of studio quality sound. But when I'm hunkered down on the sofa, for the most part I want to hear something more cultured and sophisticated that has been meticulously crafted in the studio for the delectation of our ears without visual distraction.

For a decade now, industry pundits have been telling us that live concert streaming is the next big thing for online music. Until now the production costs involved have by and large limited its use to showcase events such as 2005's Live 8 or Paul McCartney's 2012 concert on Apple TV, but the major festivals are also increasingly embracing it.

Three weeks after the Bowie tribute, Coachella – America's biggest and most prestigious indie festival – was being offered on a live stream video webcast via

“A combination of mild seasickness and terrifying close ups of performers”

Spacelab TV, so that you could catch the Guns N' Roses reunion, without having to trek all the way to sunny California. Get your hands on a Google Cardboard viewer, and you could even watch it in 360° 'virtual reality'.

Companies in the live-streaming space believe the business is on the brink of taking off. Last year the Pixies live streamed a Paris concert via Deezer and there's an American jam band called Umphrey's McGee that posts every show they perform on the internet. The band does it because, like the Grateful Dead in a different era, they pride themselves that no two concerts are ever the same.

However, the band admits that the live streaming of concerts might not suit a lot of acts: most artists put on the same show every night and if you buy an expensive ticket to see your favourite band when they hit town and warm up by streaming a few shows live to your couch first, then you might well feel short changed when you turn up and



find the same set list played note for note. One of the major selling points of the live experience is that it is supposed to be unique.

On the surface, the notion that if you can't make the gig, you can catch it at home is an attractive one. But I'm still not convinced I really want to watch even my favourite band being webcast live into my living room. A concert is not like a sporting event. Wondering what Guns N' Roses are going to play as an encore doesn't quite have the same excitement as an injury-time goal or the last ball of a cricket match sailing out of the ground for six to win the game.

Come together

I once watched a film of a Rolling Stones concert in an IMAX cinema and admittedly it was fantastic; it almost felt as if I was on stage with the band. But you're not going to replicate that kind of scale and grandeur in your living room, even with a Google Cardboard viewer. Last summer I also enjoyed watching a webcast live from the Royal Opera House of Kasper Holten's production of *Don Giovanni* on a big screen in Trafalgar Square. But it was a collective experience. If I had stayed home, I'd have preferred to listen to the Georg Solti or Otto Klemperer recording in hi-fi quality on headphones or to have watched Joseph Losey's sumptuous 1979 film on DVD.

But live streaming of rock concerts to my living room in virtual reality? No thanks. I find myself agreeing with my friend Lisa Verrico, who tried it and wrote in *The Sunday Times* of a “strange combination of mild seasickness and terrifyingly close-up footage of performers”.

But what do I know? My opposition probably ensures that live concert streaming is guaranteed to be the next big thing. After all, I said nobody would ever watch TV on a mobile phone, and then signed up to Sky Go so I didn't miss a single ball of the T20 cricket world cup from India ●

Google's Cardboard viewer: is this really the way to watch gigs?





Three at last

Quad's bold and innovative 303 power amplifier finally made solid-state respectable, remembers **David Price**

Can you imagine being a sixties audiophile? Back then, the everyday concern for people interested in hi-fi was power output. It was a time when technology simply didn't permit amplifiers to push out large numbers of watts. It's hard to imagine now, when even a £200 integrated will do an easy 45W RMS per channel, but back in 1967 when Quad's 303 came out claiming this figure, it was seen as almost outlandishly powerful.



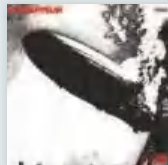
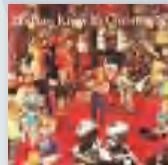
A typical valve amplifier bought when *A Hard Day's Night* was top of

the charts in 1964 would deliver between five and 10W, but this was made up for because speakers were so much more sensitive.

What people wanted was power, and the invention of the transistor in 1947 finally gave it to them. Of course, it took a while for solid-state to work its way into the hi-fi world. The first designs were poor, and contrary to expectations, unreliable. It was only when Quad introduced the 303 that the technology came of age. This is arguably the first truly modern power amplifier.

Claimed to be the world's first low-distortion transistor amplifier, it arrived late to the transistor party in 1967 – around the time of the so-called summer of love. It's fair to say that at £55, most hippies didn't have the cash for one; that was a sizeable amount of money back then. When launched, Quad found itself on the defensive. Why hadn't it made this earlier, asked the hi-fi press? Founder Peter Walker stated: "We are sometimes accused of being slow to take up transistors, but in fact early transistor amplifiers were inferior to

The story of the 303

1947	1967	1969	1985
The transistor is invented, changing hi-fi forever, as David Bowie is also born	Quad's 303 is unveiled to the world as is <i>Sgt. Pepper's Lonely Hearts Club Band</i> by The Beatles	The 303 wins a Design Council Award as Led Zeppelin release their eponymous debut album	Quad ceases production of the 303 as Live Aid (following on from Band Aid) becomes the biggest musical event of the year
			

good valve amplifiers and it has been necessary to develop a fundamentally new approach to circuit design to overcome this. The result is that the Quad 303 is superior to the best of valve designs in every respect.”

The Quad II that was being replaced was much loved, sweet sounding and immensely popular over its 13-year life. Still, the 303 was revolutionary in some senses. Firstly, it had no controls, being designed to hide away inside a rack or installation. Second, its styling was radically different to anything around at the time, and for that reason it hasn't really dated. The third and most original aspect of the 303 was its circuitry. At the time, conventional solid-state amps had a tendency to suffer from thermal tracking problems with the transistors, which caused unreliability and instability. Walker came up with a new output transistor configuration called 'triples', where the symmetrical arrangement of the transistors allowed effective control of the output current. Since the voltage was also controlled, the transistors could only

The idea the design is over 50 years old isn't apparent when you're playing music

operate within their ratings, and caused the quiescent current to be independent of output transistor temperature. This reduced the need for negative feedback, improving the sound, and also brought down distortion and improved reliability. In a wonderfully hyperbole-free advertisement of the day, Quad explained this under the title, "Good Engineering". It won a Design Council Award in 1969, and one magazine called it "the god of amplifiers".

The original 303's chassis was made from diecast aluminium and its case from sheet steel, both finished in stove-enamelled metallic beige and brown with off-white detailing. Heat dissipation was ably assisted by the large fins at the rear of the case; this is why the design is effectively 'back to front' with the front panel adorned with connectors. Aside from the voltage selector at the top left, and the fuse at the top right, there's a neon power indicator and a 4-pin DIN input socket (with the signal carried on pins 1 and 3; left and right channels respectively; with pin 2 being the common return and pin 4 not used).

Quad originally designed the 303 to be powered from the 33 preamplifier, as per the Quad 22/II pre-power combo, which is why the pin 4 output on the 33 is live and must not be connected to anything. The small Bulgin socket at the bottom is where the 303 gets its mains power from.

Mods and rockers

Because it's so easy to get at under the hood, the amplifier has become popular with tweekers and there's now quite an industry that's grown up around this. For example, Dada Electronics (dadaelectronics.eu) will sell you two brand new amplifier boards for under £200, with new high-quality passive components, silver connectors and good PCBs. Many other such mods are available elsewhere, but suffice to say an old Quad 303 has real potential. There's also Quad's own legendary aftersales servicing should you wish to keep your 303 standard, (tel: 01480 452561, email: rob@iaguk.co.uk), which is still very reasonable.

The earliest examples of the 303 will be nearly 50 years old, and if they haven't been properly serviced you're not going to get a clear example of what this venerable amp can do. As well as solder joints and connectors degrading, individual passive components go out of spec over time, and this is particularly an issue with the four electrolytic output capacitors.

The 303 was never built for low impedance loudspeakers like some of the ones around today. It's nominally 8ohm and doesn't like straying too far lower than that. It can be bridged to run 4ohm, and produce a lot more power than the 45W RMS per channel which comes as standard, but sonically doesn't quite sound as sweet. So bear in mind that this is vintage audio, and needs a sympathetic environment as well as a



The 'back to front' design means that all sockets are on the front panel

BUYING

Ebay is your friend - there is always a good selection of these venerable classics listed, and of course they pop up on all manner of other classified ads listings. Prices are staggeringly low for what you get, for two reasons. First, Quad 303s are simply not fashionable, and second, there are loads around. Prices start from £50 (yes, really), but the best advice is to get the one in the very finest cosmetic condition you can (almost regardless of whether it's working or not) for up to £200, and then get it fully serviced at the factory for a couple of hundred pounds or less. That way, you're left with a mint, as-new sounding design - what more could you wish for?

Whether you partner it with the 33 preamplifier is your call, although 303s made from 1982 onwards would have come with the 34 preamp which is an altogether better device because it has replaceable input cards that give moving-coil cartridge or CD connectivity, with no electrical matching issues - and phono sockets are fitted. Ultimately, both preamps are old and full of electrolytic capacitors, carbon potentiometers, switches and PCB connectors which all deteriorate over time. Personally, I'd go for a good passive preamp and use decent modern interconnect cables and a custom mains power lead.

full service to give its best. This done, the 303 is surprisingly fine sounding.

There's no mistaking it, because it's quite valve-like. When running comfortably inside its performance envelope, bass is quite strong and warm while the treble is surprisingly sweet and soft. It has an unexpectedly liquid midband and doesn't sound as mechanical as many modern units. It's surprisingly transparent too, and images well. It's an odd but alluring combination of vintage and modern, with the only downside being just a slightly tinselly upper midband that reminds you that you're listening to a transistor amplifier. The idea that the design is over half a century old isn't immediately apparent when you're playing music, as it's way more contemporary sounding than the Quad II valve amplifier that preceded it - yet still has some of its charm.

Time traveller

It must have been fascinating to have seen the reception the 303 got when launched, especially from Quad fans of that time. Amazingly, it remained in production from 1967 right up to 1985, by which time almost 100,000 had been produced. That's a remarkable number, and all the more so because so many still exist and are in regular use today. Beautifully built and with near bomb-proof reliability when properly serviced, this little slice of classic exotica is still surprisingly affordable secondhand - with prices starting at under £200 ●

Cultural exchange

With a portfolio that matches traditional British with the best from overseas, Oxford Audio Consultants is as diverse as the city's University. **Ed Selley** gets schooled

One theme that continuously makes itself felt in *HFC*'s visits to dealers is that some of our most interesting systems come from those that have a clear philosophy to their brands and equipment. In the case of Oxford Audio Consultants, its 28-year history has seen its lineup evolve into something perfectly suited to Oxford and the surrounding area. The locale is affluent, but properties are frequently compact and the clientele are keen audiophiles but want kit that requires little in the way of fiddling or tweaking. And so its portfolio balances famous British brands alongside a selection of

imported ones intended to create systems that achieves these varying requirements. The result of this is a selection of products that founder Jon Harker and store manager Alistair McDonald feel is unique and able to create systems at a variety of price points that encompass these values. Many of the brands picked to do this have been fixtures of Oxford Audio since the store opened. While keen advocates of streaming, CD and vinyl are also well served and all will be on display here. Sat in the pleasant upstairs demo rooms, it is time to see just what the Oxford Audio effect is on some well-known classics.



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System 1 – Simply ecstatic

IN MANY WAYS the first system is like being greeted by an old friend. It is fronted by a trio of electronics that I've encountered a few times on my travels, but here they are being presented with a twist – a pair of loudspeakers that I've never seen partnering them anywhere else and a promise to take the performance in a different direction to what I might have experienced previously.

The electronics come courtesy of Rega. Specifically designed to work with one another, the RP6 turntable, Elicit-R integrated amplifier and Saturn-R CD player are individually great, but cumulatively greater still. Like many Rega products, there is little truly radical about the engineering that goes into these components, but thanks to careful design and construction as well as Rega's considerable engineering expertise, they deliver excellent performance and a level of flexibility that customers consistently find enormously appealing.

Socket to me

The Elicit-R has a useful selection of inputs including a cracking moving-magnet phono stage while the Saturn-R is equipped with a choice of inputs that allow it to act as a capable digital hub as well as a seriously talented CD player. Against this, the RP6 can seem more minimalist but you still get electronic speed control and that most underrated of items, a lid.

Partnering the collection of Regas is the smallest member of the MartinLogan hybrid electrostatic speakers. Of course, small is a relative term for the Electromotion – it is over five feet tall and imposing with it – but these dimensions are needed to allow for an electrostatic panel of sufficient size to be useful and to allow for the fitment of a conventional 8in bass driver that handles the low-end duties. As a system, this is a good-looking selection of components. The Electromotions aren't exactly shrinking violets, but their footprint is compact and they complement the Regas nicely. We aren't here to judge

aesthetics though, so what does this lot sound like?

In short, this combination takes both speakers and electronics to places you might not expect, but you'll be extremely happy that they do. *Dunes*, the opening track of Josefin Öhrn + The Liberation's *Horse Dance* is a rowdy, powerful piece of noisy shoegazing rock that might not be the obvious material for a speaker like the Electromotion. With the RP6 and Elicit

It is unusual for the strengths of both brands to be quite so easily combined

working in partnership with it, though, the result is joyous.

The trademark MartinLogan soundstage is present in all its glory; a vast and utterly unforced three-dimensional space in which the performers are arranged with absolute

assurance. So far so conventional. Where things start to take a slightly unexpected turn is that this system really wants to rock. There is an urgency and desire to be on each beat to the picosecond that produces a level of excitement that is infectious. Some of the less well-known positive traits of the Electromotion come to the fore at the same time too. That 8in bass driver has real slam and impact to it and the integration with the panel is effortless.

CD is no less assured. A quick blast of *Hollywood* from Marina and the Diamonds' *The Family Jewels* gives the MartinLogan a chance to show that even when partying, it can still do things with the female voice that speakers that cost many times more can



The perfect mix of UK electronics and American speakers

only dream of. Her dulcet tones have a texture and scale that create a reality that is absolutely vital to the way that you perceive the recording. The greater radiating area of the Electromotion really does lend everything a scale and ambience you'll really miss when it's gone.

Come together

This then, might not be a partnership of brands that you'd automatically assemble, but it's one that works exceptionally well. It is unusual for the strengths of both brands to be so effortlessly combined without any sense that they are working against one another, but that is what is happening here. These are great products in their own right, but this system has genuine star quality. ▶

- 1 REGA RP6 £1,098
- 2 REGA SATURN-R £1,598
- 3 REGA ELICIT-R £1,598
- 4 MARTINLOGAN ELECTROMOTION £2,599

CHORD EPIC TWIN 3M £396
CHORD CHAMELEON RCA 1M
£180
QUADRASPIRE Q4 EVO £330

TOTAL £7,799



System 2 – The cutting edge

WE NOW TAKE a big jump in price and an equally significant step forward in capability and desirability. While this setup uses completely different brands to the first system, some of the same tenets of the Oxford Audio Consultants' philosophy are still very clearly present here.

The heart of the setup, providing both decoding and amplification is a limited-edition Devialet. Resplendent in gold casework, the 'Edition Original d'Atelier' is one of 100 pieces and effectively represents a best-of-everything entry from Devialet that is hand finished and tuned. Packing an extraordinary 900W into two slender chassis, it remains one of the sleekest and most elegant bits of hi-fi on the market today.

NAS the way I like it

Supplying a music library for the Devialet is a Melco N1ZH NAS. This effectively combines the exceptional casework of the flagship N1Z with the non solid state drives of the N1A. With 6TB of storage and the usual Melco virtues, it ensures that the Devialet has a viceless signal to work with.

Of course, the other source is hardly flawed. The Michell Orbe is less commonly seen than the prettier Gyrodec, but while it might look a little more sober this is a tremendously capable turntable. Finished with an SME 309 tonearm and Ortofon Quintet Black moving-coil cartridge, it promises to try to keep analogue on a similar footing to digital.

For speakers Alistair has selected the KEF Blade. Part technical demonstrator, part flagship, all sculpture, the Blade is designed around the principle of 'Single Apparent Source'. This means that sat in the listening position, only the front Uni-Q array is visible. The quartet of 9in bass drivers use a clever force-cancelling system to control the drivers in such a way as the listener only receives bass information that is in phase. It's a fittingly striking finish to a handsome system, but how does this selection work together?

The 24-bit/96kHz FLAC of the Neil Cowley Trio's *Touch And Flee* reveals a great deal about how this system goes about making music. That prodigious power output never

makes its presence felt in an overt or obvious fashion, but there's a latent sense of force to even the gentle piano on *Kneel Down* that suggests this system is unfazed by the demands of giving a piano the scale it needs to actually sound like one. This sense of effortlessness is aided by the bass on offer. Those 9in drivers under the leash of the Devialet are absolutely effortless, but produce the sort of low end that is felt as much as heard.

Breaking down the division of responsibilities between the Melco and the decoding side of the Devialet is almost impossible, but they combine to give you digital that is wonderfully detailed, utterly free of any sense of processing and compellingly real. In a system at this price point, even if the Melco was the passive partner, its ability to deliver a perfect signal from a silent and beautifully assembled device is worth the price of admission alone.

Switch to the Orbe and the strengths of this extremely underrated deck compliment the rest of the system perfectly. The Michell is a turntable that delivers a wonderfully open and effortless presentation that is still underpinned by a sense of drive and timing that is a hallmark of the brand. Give a pair of Blades with the thick end of a kilowatt at

their disposal a copy of M83's *Saturdays = Youth* and the result is simply spellbinding. The dreamy electronic of *Skin Of the Night* is utterly captivating with the shimmering, ephemeral vocals laid across a vast space of sound that envelopes you entirely.

Blade runner

There's no sense pretending this system is cheap, but spend 30 minutes with it and I defy you not to see why it costs what it does. This is music on a scale that rarely happens with domestic audio systems and it is important to stress that while the Blade is hardly compact, its behaviour in the demo room is entirely benign. For many dealer visits, this would be a fitting end to the day, but we're just getting into our stride here.

The Blade delivers a performance to match those amazing looks



- 1 MICHELL ORBE SE £3,090
 - 2 MELCO N1ZH £3,500
 - 3 DEVIALET EDITION ORIGINAL D'ATELIER £22,900
 - 4 KEF BLADE £20,000
- SME 309 £1,511
 ORTOFON QUINTET BLACK £650
 QUADRASPIRE X REF £3,000
 AUDIOQUEST OAK 3M £3,060
 AUDIOQUEST DIAMOND USB £599
 AUDIOQUEST CARBON COAX £145
-
- TOTAL £58,455**

Elegant aesthetics conceal a huge performance

System 3 – Digital dreamland

THE FINAL SETUP of the day is a single-source affair. When the source in question is this good, it is difficult to feel short changed – especially when it is partnered with a magical amplifier and a pair of speakers that’s a byword for obsessive engineering.

The digital front end is a pairing of server and preamp, not entirely unlike that seen in the second system. In the case of the Aurender W20 and DCS Rossini Player and Clock, the relationship is more symbiotic. Amplification is handled by an Audio Research REF75SE valve power amplifier. Built around an output stage of KT150 valves and JFET transistors, it produces 75W of power with low distortion and plenty of current delivery. Built into a hefty but sumptuously finished chassis, the Audio Research has a presence in the room that even more expensive components struggle to rival.

But in terms of in-room presence, even it has to give ground to the Wilson Audio Sasha 2. It seems absurd to describe a speaker that costs £35,000 as ‘midrange’ but it sits almost equidistant in the Wilson roster. Built around a pair of 8in bass drivers, a 7in midrange unit and 1in tweeter, each enclosure is exquisitely finished. With Chord Sarum cabling connecting everything together and a hefty PS Audio P10 Mains Regenerator handling power, it’s time to take this rig for a spin.

Straight down to it

Some systems need a serious amount of time and listening to tell you what they’re all about. This is not one of those. A minute of the 24-bit/96kHz FLAC of David Bowie’s *Girl Loves Me* is pretty telling. The performance is dominated by the Wilson, which in some ways is an odd thing to say because it is incredibly transparent and effortlessly able to reveal details about the connecting equipment.

What it also brings to the system is a sense of utterly unflappable control. The Sasha 2 has truly

outstanding bass depth and detail, but it’s the speed that takes your breath away. Of course, if the partnering electronics weren’t up to the job, the Wilson would simply be showing up problems further up the stream, but there aren’t any.

In fact, this relationship between DCS and Audio Research is another fine example of the Oxford Audio Consultants team being able to partner brands so that they become greater than the sum of their parts. The incredible resolving power and scale of the Rossini is perfectly augmented by the Audio Research. Together they offer the ability to take any recording at any scale and render it with an intoxicating blend of accuracy and sweetness.

This means that even taking something less than stellar in recording terms like Public Service Broadcasting’s *Sputnik* is an utterly joyous experience. The way that the track builds and builds over the course of its seven minutes is always wonderful, but on a pair of valve-fed Wilsons it’s outstanding. From the point where the threshold of your hearing kicks in, to the deepest reaches of the bass response, the integration is perfect and the tonality unflinchingly convincing. For a

sizeable speaker with four drivers a side, it manages to do an uncanny job of sounding like an impossibly competent full-range driver.

Why have cotton...

This is an unapologetically expensive collection of equipment, but viewed objectively it is still reasonably compact, impressively flexible and entirely simple to use. It also stands as the physical embodiment of the Oxford Audio Consultants’ philosophy and an incredibly convincing one it is too.

The Sasha 2 is an exceptional piece of engineering



A perfect synergy of brands makes for a digital masterclass

1	WILSON AUDIO SASHA 2	£34,998
2	PS AUDIO P10	£4,999
3	DCS ROSSINI PLAYER	£18,000
4	AURENDER W20	£12,999
5	DCS ROSSINI CLOCK	£5,000
6	AUDIO RESEARCH REF75SE	£8,698
	CHORD SARUM 3M SPEAKER CABLE	£3,300
	CHORD SARUM MAINS 1.5M X 4	£8,600
	CHORD SARUM MAINS 16A	£2,160
	CHORD SARUM SUPER ARAY USB	£1,000
	CHORD SARUM XLR	£2,750
	CHORD SARUM BNC X2	£3,800
	AUDIOPHILE BASE QUADRABASE	£3,000
TOTAL		£109,304



You might make the not unreasonable point that with two systems that cost a significant sum of money, it shouldn’t be too hard to turn out some staggering performances, but that misses the point. What ties these systems together is that they combine brands in a way that might

not be self evident at first, but deliver results that are truly outstanding.

Furthermore, the ethos of flexibility and user friendliness is also present throughout. These are systems that ask very little of the user while delivering the performance that they do. Furthermore

they possess sensible footprints and a surprising degree of room friendliness. Oxford Audio Consultants seeks to produce systems that deliver outstanding performance with little in way of sacrifice from their owners and it has unequivocally succeeded.



MO'WAX

Take a passion for hip hop, jazz and funk, throw in a love of *Star Wars* and you've got the makings of the genre that became trip hop. **Simon Berkovitch** explains all

Mo'Wax, like so many other era-defining labels, was very much the vision of its founder. Oxford-born James Lavelle was a self-confessed fanboy, obsessed with pop culture, focusing particularly on graffiti, street style, hip-hop and *Star Wars*. His childhood dream of working in the music industry saw him commuting into London in his teens to work at hip record stores Bluebird and Honest Jon's. At the latter, he began his ascent, building up a personal clientele, making valuable artist contacts in the fertile West London scene and really expanding the range of music sold. The driven teen combined this work with a burgeoning DJ career and writing

a column, *Mo'Wax Please*, in influential underground magazine *Straight No Chaser*.

At this point, his ambition was to work at Island Records as an A&R, but when his approaches to them with US jazz outfit Repercussions were rebuffed, he borrowed £1,000 from his boss and put the record out himself. Adapting his column's name, Mo'Wax Records was born.

Lavelle pushed his releases over the counter at the store and road tested them in his DJ sets. He plugged his records in his column and the mag's super-hip art director, Swifty, took on the label's soon-to-be-iconic design.

For its first dozen singles, Mo'Wax may have been hip and beautifully packaged, but it was

still very much a niche concern. All this changed in November 1993 with the release of DJ Shadow's seminal *In/Flux* single. Still startling, this 12-minute instrumental hip-hop collage was unlike anything released before, its new style dubbed trip hop in a *Mixmag* article. The disc's success, critically and commercially, freed Lavelle to experiment. A string of great releases from La Funk Mob, DJ Krush, Attica Blues and Air quickly followed, with the landmark 1994 *Headz* triple vinyl compilation providing the soundtrack to many a student's late-night sessions.

A major deal with A&M ensued: famously, part of the deal-clincher was an original

Jean-Michel Basquiat painting. Lavelle became a recording artist himself, with a rotating cast of collaborators, as UNKLE, with debut album *Psyence Fiction* (1998). Arguably the label's zenith, its all-star cast included Thom Yorke, Richard Ashcroft and Beastie Boy Mike D, plus a cover by legendary graffiti artist Futura 2000.

But it wouldn't last. A&M was swallowed by Universal Records in the label buyouts that hit the industry at the turn of the millennium and Lavelle found himself without most of his acts. The name survives, and talk of a rebirth resurfaced in 2014, but for now Mo'Wax remains most closely associated with the mid-nineties trip hop sound.

DJ Shadow

The king of the crate diggers created a musical patchwork of obscure samples and cuts

California-born Josh Davis, AKA DJ Shadow, is pretty much everyone's favourite Mo'Wax recording artist. He'd been DJing on college radio and creating experimental hip-hop tracks since his teens and had made some inroads into the industry, but even in the era of the Beastie Boys' sample-delic classic *Paul's Boutique* his music was considered a little odd by most. Not by Lavelle though, who'd fallen in love with the handful of productions released on Hollywood BASIC Recordings he'd picked up on import 12ins and was desperate to sign him.

The first release, *In/Flux*, went down a storm, and its Fleetwood Mac and U2-sampling sequel *Lost And Found* consolidated this success. The main event was his debut album, *Endtroducing* (1996). Enjoying rave reviews across the board, this was Mo'Wax's first real crossover, breaking the top 20 and selling over 100,000 copies. Avoiding the

standard James Brown and George Clinton sample sources, Shadow dug deep into his vast collection: most of the samples are still unknown, but many of the identifiable ones come from unlikely sources such as Metallica, Björk and Tangerine Dream to name but a few.

Endtroducing was followed by a couple of great singles – *Dark*

Endtroducing broke the top 20 and sold over 100,000 copies

Days, the soundtrack to a documentary about the homeless who live in New York's subway system, and *High Noon*, based on a baroque-sounding organ loop from a pre-disco Giorgio Moroder – but it took six long years for a second album to hit the shelves. By the time of the release of *The Private Press*, Mo'Wax was no more and both the scene and his sound had moved on.

Endtroducing's hip-hop collage template was widely replicated but never bettered



UNKLE

Lavelle gets creative with a cast including everyone from Ian Brown to Thom Yorke

UNKLE's history is far from straightforward: Lavelle is the one constant, but an ever-changing cast surrounded him. For the first UNKLE releases, he was joined by school friend and label co-founder Tim Goldsworthy and maverick Japanese hip hop producer Kudo. The languid, loping, Sun Ra-sampling debut *The Time Has Come* was followed by the arguably even better *Berry Meditation*, a slow-burning classic based on a loop from Tonto's Expanding Head Band's sublime *Riversong*.

Sometime in 1997, Goldsworthy and Kudo departed and DJ Shadow joined the line up. A promo-only 12in, *Rock On*, followed sounding like the essence of the best of the label: thunderous drums, a generous helping of Silver Apples' *Lovefingers*, a few well-chosen hip-hop samples and the sound of a *Star Wars* TIE fighter.

Shadow was at the helm of the debut album, too. On *Psyence Fiction*, his intricate soundscapes provided the backing for an all-star cast of vocalists who pushed much of the album into more rock-influenced territory. The album was a huge success, reaching number four in the

Lavelle remains the one constant in UNKLE's history

charts, but it was to be the last time the two worked together – opposites attract, initially, but they usually end up annoying the hell out of each other after.

UNKLE has never stopped making music: Lavelle has subsequently collaborated with artists as broad as Mark Lanegan, Josh Homme and Ian Astbury. Four further albums have followed, each ploughing a unique, dark artistic furrow.

Fraught with tension, *Psyence Fiction* was DJ Shadow and James Lavelle's last collaboration



Money Mark

The Beastie Boys' carpenter and keyboard player goes solo

Lavelle has never hidden his admiration for the Beastie Boys, and while he secured a Mike D guest vocal on the first UNKLE album, he was never going to be able to sign the band to his label. So in 1995 he did the next best thing and recruited their 'fourth Beatle', Mark Nishita – Money Mark.

'Keyboard' Money Mark had been heavily involved with the band since 1992, helping them to build their studio and to introduce a much greater live element to their sound. He played and co-wrote on their records and filled out the sound of their live shows. In his spare time, he'd recorded a handful of demo tunes – wonderfully loose Sly Stone-inspired drum machine and keyboard jams that sounded as if Timmy Thomas' *Why Can't We Live Together* had gone out for the night and hadn't made it home until 8am. These demos were

expanded and released in 1995 as *Mark's Keyboard Repair*, a really likeable set whose lo-fi sensibility was coupled with a smart pop songwriting talent.

Second album *Push The Button* fared even better, but the business politics at the demise of the label seemed to halt his ascent at a key point.



Air

The French new-wave act, which came close to signing to Mo'Wax

With no disrespect to label stalwarts DJ Krush and Blackalicious who released a string of strong records on Mo'Wax, we're shining a light on an act who only released one single for the label... but that sole outing was a superb, zeitgeist-surfing gem, paving the way for the Gallic duo's subsequent chart dominance.

Modular Mix (1996) was Air's first UK release. Arriving on the crest of a French new wave but fitting in perfectly with Mo'Wax's aesthetic, it was a huge underground hit.

Having heard their demos, Lavelle was desperate to sign them, but was outbid by a bigger label, a repeat of his near miss signing Portishead.

Air went on to put out two further singles on French independent Source before releasing 1998's all-conquering *Moon Safari*, a genuine top 10, platinum-

selling, smash hit album. The group spawned an army of imitators, but wisely took a left turn with second LP, the soundtrack to Sofia Coppola's

The Virgin Suicides. Highly sought after on vinyl, the seventies Pink Floyd influences are turned up to 11 on this highly recommended set.



► SHOPPING LIST

Music and Video Exchange
Greenwich's senior dance buyer
Jamie Upton turns in a vinyl-only
Mo'Wax DJ set worth hunting down



La Funk Mob
Motor Bass Get Phunked Up
"Richie Hawtin strips away all the fuss from this jazz-dance cut to produce a lean funk classic."



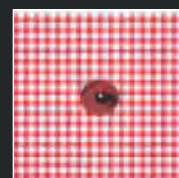
RPM
2000
"My first Mo'Wax 12in. It's the sound of cutting the cord and drifting into space with your Sony Walkman for company."



DJ Krush
Strictly Turntabalized
"His in-demand 1994 album contains genre-defining classics wrapped in a sleeve designed by Futura 2000."



Rob D
Clubbed To Death
"Probably the label's most familiar piece. It's TV shorthand for ominous: if it's playing, Sir Alan is going to fire you."



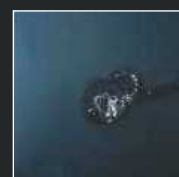
Deborah Anderson
Lonely Without You
"The daughter of Yes' Jon Anderson, this pink vinyl cut is a prime slice of 1997-vintage vocal trip hop."



Dr Octagon
Dr Octagon
"Abstract hip-hop from the Ultramagnetic MCs leader. So good, it was also released as an instrumental."



Innerzone Orchestra
Bug In The Bass Bin
"This jazzy Detroit breakbeat techno anthem is a great example of the scope of the label at its peak."



iO
Claire/Libre
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100 M.A.K.U.
Soundsystem
Mezcla



101 Deftones
Gore



101 Poulenc
Piano Concertos

Musicreviews



**ALBUM
OF THE
MONTH**



The National & Various Artists Day Of The Dead

★★★★★

5 CDs **4AD**

THE GRATEFUL DEAD'S songbook represents a glittering treasure trove of vernacular American music. Although in the minds of many the band will forever be associated with acid-laced space-rock jams and cosmically freeform guitar improvisations, the songwriting team of Jerry Garcia and lyricist Robert Hunter provided the group with an endless supply of exquisitely crafted compositions that drilled down deep into the American psyche and ranged across rock, country, folk, jazz, blues and r&b – the songs which provide the mother lode on this ambitious four-disc tribute.

By the time The National formed in Cincinnati in 1999, the Dead had already broken up, following the death of guitarist Jerry Garcia four years earlier and on the surface the National's epic chamber-pop makes them unlikely inheritors of their freewheeling mantle. Now one of the biggest acts in American

alternative rock, Barack Obama used their song *Fake Empire* in ads during the 2008 presidential election campaign and the band's last album, *Trouble Will Find Me*, made number three in the British and American charts. But the band's Aaron and Bryce Dessner are long-time Deadheads and in 2012 they began creating and curating a tribute to their favourite band. The project wasn't meant to take four years, but as they tapped into the Dead's vast songbook and more artists expressed a desire to come on board, they swiftly realised that they could not do justice to the Dead's cultural impact and musical legacy in a single disc. By the time they were satisfied, they had recorded an extraordinary 59 tracks, including contributions from Wilco, Lucinda Williams, Bonnie 'Prince' Billy, the Flaming Lips and members of Arcade Fire, Pavement, Bon Iver, Grizzly Bear and War On Drugs, as well as

names drawn from far beyond the realms of American indie, including Senegal's Orchestra Baobab, composer Terry Riley, electronic artist Tim Hecker, Australian country sensation Courtney Barnett and jazz pianist Vijay Iyer.

Although members of The National act as the house band on many of tracks, the diversity in both material and performance is astounding. The Dead's back catalogue can be a vast and intimidating proposition to the neophyte and when a young nephew asked me last year for some recommendations as a beginner's guide, it was difficult to know where to start. For anyone too young to have grown up on songs such as *Dark Star*, *Uncle John's Band*, *Friend Of The Devil* and *Truckin'*, and who has ever wondered why the Grateful Dead hold such a mystique for those of us of a certain age, this is the perfect introduction. **NW** ▶

MUSICREVIEWS



Rick Wakeman

Journey To The Centre Of The Earth



CD

Universal

WAKEMAN'S 1974 RECORDING of his prog-rock landmark with the London Symphony Orchestra and the English Chamber Choir and David Hemmings narrating Jules Verne's story, topped the British charts and sold 15 million copies worldwide. Recorded live at London's Festival Hall – when it was originally mixed there was no separation in the tracks – this new release now benefits hugely from today's sophisticated remastering techniques, allowing Wakeman with some justification to

Prog-rock landmark with the London Symphony Orchestra and the English Chamber Choir

describe the old and new versions as "chalk and cheese". Presented in an expanded four-disc edition, we also get two previously unreleased live recordings of the work plus a quad surround sound mix that flamboyantly fills out both the synth pyrotechnics and the orchestral grandeur. Epic but tuneful it maybe, but seldom has prog sounded quite so engaging. **NW**



Eric Clapton I Still Do



CD

Bushbranch/Surfdog

NOW IN HIS early seventies, Clapton's voice has never sounded so weathered, but his guitar playing is still burnished and the dozen tracks make a decent stab at covering most of the stylistic bases that have sustained his career, from the gritty slide guitar blues of Robert Johnson's *Stones In My Passway* to a heartfelt version of David Gray's soft-rock ballad *I Will Be There* and a gloriously bucolic cover of Dylan's *I Dreamed I Saw St Augustine*. The warm, analogue production by Glyn Johns – working with Clapton for the first time since 1978's *Backless* – is airy and spacious and Sir Peter Blake has painted the cover portrait. **NW**



Kristin Kontrol X-Communicate



CD

Sub Pop

KRISTIN WELCHEZ (AKA) Dee Dee Penny from Dum Dum Girls) has reverted back to her real name (at least part of it) for her debut solo record. That's not all she's reverted to – Welchez has transposed her undoubtedly strong songwriting skills into the eighties. We're talking synths, heavily filtered pads and chord progressions that wouldn't sound out of place on *The Breakfast Club* soundtrack. Part Pet Shop Boys, part Madonna and part New Order (with the odd whiff of yacht rock), *X-Communicate* is fun, very pop and, thanks to all the effects, will test your system. Those of a certain age will recognise a lot here, but it still feels fresh. **PH**



M.A.K.U. Soundsystem Mezcla



CD

Glitterbeat Records

HERE'S SOMETHING THAT should put both your hi-fi system and your mind and body through a full groove assault. Self-described as an "immigrant band" and comprising of members mostly made up of Colombian musicians living in New York, *Mezcla* is full of upfront Latin grooves, tinged with some psychedelia and funk. As you'd imagine with such a heavily Latin-based framework, this collection of seven songs is full of driving percussion, horns and layered harmonies, featuring a healthy mix of both English and Spanish lyrics. It's certainly uplifting, infectious stuff, and listening to it on a good system should bring some much-needed sunshine into your life. **PH**



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AUDIOFILE VINYL



John Martyn Solid Air

180g vinyl

HOT PICK

Island/Universal



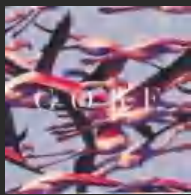
SOLID AIR IS the *Dark Side* of the folk rock universe, a pinnacle of the style and of John Martyn's output. He made a number of very fine albums in the early seventies, but

this from 1973 really hit the spot. It centres on Martyn's voice and acoustic guitar playing both of which have an honesty that is hard to resist, yet this is not smooth music, it's gentle blues written and arranged with consummate skill. The backing is top notch too, Danny Thompson provides perfect double bass and John 'Rabbit'

Bundrick pulls out some glorious vibes from various keyboards, but they are just two of a number of musicians that help to make *Solid Air* quite so compelling.

It's one of several titles chosen for half-speed mastering by Miles Showell at Abbey Road (see page 60), to improve high-frequency resolution by giving the cutting head more time to do its job. And it sounds good, very good considering the vintage of the tapes. It's a little full in the bass, but has good treble detail and an open, clear soundstage that makes space for the band to relax in and they are very chilled. The gatefold sleeve, light blue liner and pink Island label complete a very attractive package. **JK**

HIGH RESOLUTION DOWNLOADS



Deftones
Gore

★★★★★
hdtracks.co.uk

FLAC 24-bit/96kHz

YOU KNOW WHAT you're going to get with Deftones – solid, mathy, emo metal rock that pushes the boundaries of the genre. They've been together for over 20 years and have been dubbed the 'metal Radiohead' and the first two tracks start off in that vein. It's only when track three kicks in that they really let loose. It's a satisfying listen, those tense riffs and pained vocals explode, while the quieter moments provide counterpoints to the mayhem. **PH**



Andrew Bird
Are You Serious

★★★★★
hdtracks.co.uk

FLAC 24-bit/96kHz

AS EVER WITH Bird, there's a bit of everything here – some string-laden chamber pop, shuffling, plaintive ballads (*Left Handed Kisses* features Fiona Apple) and the kind of multi-instrumentalism that wouldn't sound out of a place on a Sufjan Stevens or a Beirut album. There's a lot going on here, and what this HD deluxe edition really brings out well is the crisp percussion alongside the gorgeous strings. A very satisfying, wide-ranging listen. **PH**



Poulenc

Piano Concertos Aubade
Louis Lortie, Hélène Mercier piano

★★★★★
CD

HOT PICK

Chandos

POULENC'S WORKS FOR piano(s) and orchestra contains some really lovely music, and – when played (as here) with sensitivity, a clear sense of purpose, and lashings of Gallic charm. The music is beautifully phrased; the playing, intimate and expressive. Each piece is confidently projected, yet with no sense of showing off. The recordings sound clear and focussed, with natural tonal quality and excellent balance between soloist(s) and orchestra. While sonically not as spectacular as Chandos' Copland disc, the recording exudes a quiet excellence that is very satisfying, taking it into the 'demonstration' category. A gorgeous disc! **JH**

If you own a big system, you really need to add this hybrid SACD to your collection



Copland
Orchestral Works 1 – Ballets
John Wilson
BBC Philharmonic

★★★★★

Hybrid SACD

Chandos

'AWESOME' IS RATHER over-used these days. But what other word describes the massively thunderous bass drum/tam-tam stroke that launches Copland's *Fanfare for the Common Man*? It shakes your room and rattles objects in it – such is the depth and power of the recording. The first in a new series of Copland's orchestral works from Chandos, Vol 1 contains popular favourites like the suites from *Billy The Kid* and *Rodeo*, plus *El Salon Mexico*. John Wilson and the BBC Philharmonic play the music with idiomatic flare and great panache, and the recorded sound is outstanding – rich, dynamic, and very detailed. **JH**



Randy Weston
African Cookbook

★★★★★

180g vinyl

Pure Pleasure/Atlantic

RELEASED INDEPENDENTLY IN 1964 and picked up by Atlantic eight years later, *African Cookbook* followed a series of Africa-themed releases by Weston that has continued throughout his long career as a jazz pianist. Weston is joined by Booker Ervin on sax and Ray Copeland on trumpet alongside drums, percussion, congas and bass, a band that brews up a glorious and heady groove on the title track in particular. The other standout is *Niger Mambo*, an up tempo, swinging tune with a truly great ensemble riff that repeats throughout. Sound quality is par for the vintage so not too rich, but well separated and pretty clean. **JK**

DEMO DISCS



Mårten Sahlén, Peter Cedmer and Daniel Andersson from JAYS reveal the music they use to demo headphones



Kanye West
Black Skinhead

A raw production where Kanye has mixed sounds of distorted breaths, screams and unpolished beats with a result that is really unforgiving for bad headphones.



Pete La Roca
Lazy Afternoon

The whispering way of playing those instruments really creates images in your head and you can feel how your equipment and ears try to pick out all the details.



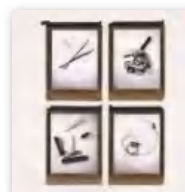
Muddy Waters
Feels Like Going Home

It feels as if you're sitting in the same room as it was recorded in. With good speakers or headphones, the music just flows.



Tom Waits
Take It With Me

That voice, need we say more...



Hauschka
Room To Expand (Expanded)

HOT PICK

★★★★★

180g vinyl

FatCat

ORIGINALLY RELEASED IN 2007 as a 12-track CD-only album, this significantly expanded version of Hauschka's gorgeous compositions exploring the possibilities of the 'prepared piano' was exclusively released on 180g vinyl for Record Store Day. If you missed it, fear not as it will be coming out on CD in July. Boasting a range of moods, each piece is animated with its own highly distinctive character – from the minimalist repetition of *Sweet Spring Come* to the slow build of *One Wish*. The result is a gorgeous collection that highlights Volker Bertelmann's delicacy of touch, skill with accessible melodies and use of micro-details. Stunning. **JDW**

Minitest

TURNTABLE ACCESSORIES £12-£55

Vinyl demands

Fine tune your turntable's performance with these affordable accessories. Spin doctor **Neville Roberts** will see you now

Records require more careful handling than any other form of physical music media. In today's 'turn on and listen' culture of digital audio, it's easy to overlook the simple things that can make a big difference to the enjoyment you get from listening to your cherished vinyl collection, and here we look at four accessories that can significantly contribute to the enjoyment of music for LP junkies.

Firstly, there is the issue of how you store your vinyl as this can affect how long it stays in pristine condition. Once you have chosen the music you want to listen to, you need to ensure it's in the best state for playing, and this is not just a matter of cleaning it to remove dust and dirt, although this is also very important. Of course, before you contemplate playing it, you will have ensured that all the components of the turntable are set up correctly – see our *Guide to...* in

issue 384. Finally, the record needs to be properly supported on the platter before lowering the stylus into the groove. All in all, there is quite a disparate set of issues to consider when spinning any discs, and each performs an important function within its own field, and if dealt with correctly can reap rewards for your vinyl listening pleasure. The following four items address each of the aforementioned areas and do a great job in their own area of expertise.

Analogue Seduction

Zomo VS-Box 100 Vinyl Record Storage

PRICE: £28 TELEPHONE: 01733 350878 WEBSITE: analogueseduction.net

DETAILS

PRODUCT
Analogue Seduction
Zomo VS-Box 100
Vinyl Record
Storage

ORIGIN
Germany

TYPE
Record storage box

FEATURES
Solid MDF
laminated in a
water-repellent
decor; dowelled
and clamped self-
assembly unit;
stores 100-120 LPs

DISTRIBUTOR
Analogue Seduction

ON MANY OCCASIONS I have seen LPs laying in stacks alongside a hi-fi system. Alas, this is probably one of the worst ways of storing vinyl, as it is most likely to result in it warping. Furthermore, if the record that you want to play is at the bottom of the pile, you have to move all the ones stacked on top of it, and before very long your entire collection is in complete disarray.

Record store day

A far better solution is to have some form of dedicated storage that allows LPs to be stood vertically, which is where the Zomo comes in. This range includes options for either LPs or 7in singles in several different styles, including vertical storage and storage with a top tray. Made from MDF and coated with a water-repellent laminate, it's available in black, white, walnut effect or zebrano (a wood effect with a strong dark grain). The model reviewed here is a single unit

finished in black for storage of approximately 100 LPs.

The Zomo arrives flat packed with all the hardware required for assembly, including a screwdriver. The fittings are of high quality and similar to those found with good-quality self-assembly furniture. To build the unit, metal spigots are screwed into threaded plastic inserts and rotating metal clips are inserted into holes in the panels. Next, wooden dowels are pushed into other holes to provide additional rigidity

and the five panels are pushed together. The metal clips are then turned to lock the assembly together and finally some decorative plastic covers are snapped into place over the clips. The result is a smart and solid storage unit that can be added to as you record collection expands ●

VERDICT

Easy to assemble unit providing a rigid and smart storage box for around 100 LPs



Milty Zerostat 3

PRICE: £55 TELEPHONE: 01279 501111 WEBSITE: goldring.co.uk



DETAILS

PRODUCT
Milty Zerostat 3

ORIGIN
China

TYPE
Antistatic gun

FEATURES
Neutralises static charges; ion indicator test device included

DISTRIBUTOR
Armour Home Electronics

A PERENNIAL PROBLEM facing the vinyl enthusiast is the static charge found on a record. This causes it to attract dust and dirt like a magnet. Furthermore, static causes annoying clicks as tiny sparks occur during playback. This is most apparent during dry weather and in centrally heated houses, which tend to have a dry atmosphere. The solution is to make sure the static charges on a record are neutralised before playing. This is where the Milty Zerostat 3 comes in.

Eat static

The Zerostat 3 works by producing a high voltage that is fed to a small metal spike, causing ions to be produced that spray out from the spike tip. The high voltage is produced by a crystal, and distorting it by squeezing a trigger results in the voltage being produced, as a consequence of the piezoelectric



effect. When the trigger is squeezed slowly and smoothly, a stream of positive ions is sprayed from the front, and a stream of negative ones is produced as the trigger is slowly relaxed. To discharge a record, hold it in mid-air with one hand and point the Zerostat 3 at the record from about 30cm away. Now smoothly squeeze and release the trigger in order to produce the positive and negative ions, which will discharge the surface of the record. A nice touch is the inclusion of an 'ion indicator'

test device, which is a neon bulb unit that clips on the front for checking that a high voltage is being produced.

I have used a Zerostat for many years and have found it to be very effective indeed. It is certainly the best device I have come across for neutralising static ●

VERDICT

Effective removal of static charges from a record make this a must have for vinylistas



Audio Origami Digital Stylus Scales

PRICE: £20 WEBSITE: audioorigami.co.uk



DETAILS

PRODUCT
Audio Origami
Digital Stylus Scales

ORIGIN
China

TYPE
Stylus balance

FEATURES
Accuracy of 0.01g up to 5g; calibration weight and case included; non-magnetic stainless steel stylus platform

DISTRIBUTOR
Audio Origami

OF ALL THE adjustments required of a turntable, one of the most critical is the stylus force. Unfortunately, many people simply rely on the 'playing weight' settings on the tonearm, but these are notoriously inaccurate. In addition, they require that the arm is perfectly level, which is done by eye and by sliding the counterbalance weight along the stub, before the zero point of the playing weight is set.

Weigh to go

A far better method is to use a stylus gauge to set the stylus force. These days we have electronic stylus gauges, which are far more accurate and easier to use than mechanical balances. This modestly priced digital gauge can measure to within 0.01g and can weigh up to 5g – more than enough for any modern cartridge.

Using the device is simple. Place the gauge on the turntable, wait until 0.00g is displayed and then lower the



stylus onto the weighing platform. When the display has stabilised, the weight is read from the display. A 5g calibration weight is also supplied to re-calibrate the scales if required, but I find it to be spot on after checking. The stylus platform is made from stainless steel and the gauge seems to be unaffected by the powerful magnets of my moving-coil cartridge, which I have found to be problematic when used with other digital scales.

Audio Origami's scales are suitable for all types of cartridges, are very easy to use and more accurate than a conventional balance. Which all adds up to make it a winning accessory for any vinyl collector ●

VERDICT

An excellent digital stylus balance that is extremely accurate and easy to use



AnalogueWorks Black Neoprene Rubber Turntable Gimp Mat

PRICE: £12 TELEPHONE: 01536 762211 WEBSITE: divineaudio.co.uk

DETAILS

PRODUCT
AnalogueWorks
Black Neoprene
Rubber Turntable
Gimp Mat

ORIGIN
UK

TYPE
Platter mat

FEATURES
Neoprene rubber
construction; 1.5mm
thick

DISTRIBUTOR
Divine Audio

THERE IS NO doubt that a platter mat can have a significant impact on sound quality. AnalogueWorks produces a range of turntable 'Gimp' (Good Idea, Modestly Priced) mats made from a variety of materials to suit most situations, including lightweight foam, cork and nitrile, silicone and the neoprene mat reviewed here. What is best for your needs will depend on the physical construction of the turntable and platter, as well as personal preference.

Flexible friend

The Black Neoprene Rubber Turntable Gimp Mat is extremely flexible and lays smoothly on a hard platter surface. The 298mm diameter mat is only 1.5mm thick. If no mat or one of a different thickness has previously been used, the VTA (Vertical Tracking Angle) of the stylus will have to be adjusted to accommodate the new

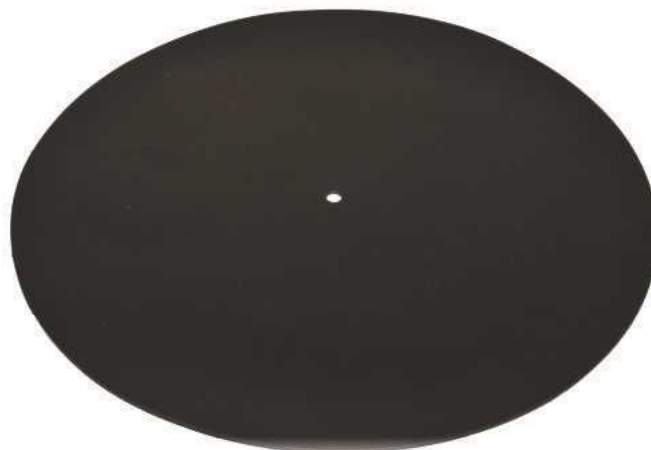
mat – to learn about this adjustment see *Guide to... HFC 384*. In general, turntable mats can help eliminate any slippage of the record during play and this mat, being made from Neoprene, has a high-friction surface to prevent such slippage. A record clamp should not, therefore, be required once the mat has been fitted. The choice of rubber will certainly suit metal platters as it helps dampen out any potential for ringing.

With the mat installed on my acrylic platter and playing a variety of musical genres, I find the sound

quality to be smooth and effortless with lovely clear highs. Vocals are well positioned in the soundstage and the bass response is well controlled. Listening to Laurent Garnier's *Back To My Roots*, the driving bass line is superbly tight and punchy. The overall impression is of a well-controlled sound with a firm bass response ●

VERDICT

A superb-value platter mat that is well made and gives sonic rewards



Mini test verdict

WHEN REVIEWING A group of incongruent items such as the ones we have here, there is a feeling of trying to compare apples with oranges. However, in their own right, everything here does an excellent job.

The Zomo VS-Box 100 Vinyl Record Storage unit from Analogue Seduction is very well made and is supplied with good-quality fittings. It is easy to assemble and the end product is extremely rigid and very smart. The wipe-clean surface looks classy and the variety of colours and wood effects available will enable it to fit in well in a range of settings.

AnalogueWorks' Black Neoprene Rubber Turntable Gimp Mat is also very well made and great value for money. It suits a wide range of

turntables, especially those with metal platters, as its rubber construction neutralises any ringing. The mat offers a smooth and refined sound overall and a particularly tight bass response.

The Milty Zerostat 3 is the latest incarnation of a tried and tested product that has proved itself to be very effective at neutralising static charges over the years. This new version includes an ion indicator, which allows you to see it working. It certainly beats my method of putting the Zerostat near my face and squeezing the trigger to feel the ion stream – a practice I'm certainly not advocating! It is extremely effective at discharging LPs, even in a very dry atmosphere.



Audio Origami's Digital Stylus Scale is well made, very accurate, easy to use and good value. It also seems to have been designed for the job, rather than just being a re-badged jewellery balance as some other digital stylus scales appear to be.



Setting up a tonearm and cartridge is one of the fiddlier jobs facing a vinyl enthusiast, but it is nevertheless one of the most important. Even with a stylus force gauge, it is important to start with the arm horizontal with the tracking force set to zero by adjusting the tonearm counterbalance weight. Next, set the tracking force according to the cartridge spec. Now it should be carefully aligned in the headshell using a cartridge alignment protractor.

The tracking force then needs to be rechecked and adjusted if necessary as even tiny movements of the cartridge will affect the tracking force.

Simply removing a record from its sleeve, especially on a dry day, is enough to induce a static charge on the surface, so it is always a good idea to discharge an LP after it has been placed on the platter. Also, don't forget to ensure the mat is clean beforehand as any dust will stick to the record.



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PMA-50



www.denon.co.uk



Rothwell

Headspace moving coil head amp

IF YOU ARE the owner of a moving-magnet phono stage, cartridge choices are limited to moving magnet or high-output moving-coil designs. A low-output moving coil-cart simply won't generate enough signal to work correctly with a moving-magnet only design. On the face of it, if you want to use one of these carts, your only option is to upgrade the phono stage. But there is another way...

It has long been possible to boost the gain of a low-output cartridge by using a step-up transformer. These provide the necessary gain to allow for a connection directly into a moving-magnet phono stage. Transformers have traditionally been relatively pricey and often quite challenging to incorporate into a system correctly. Now Rothwell Audio has taken the principles of the step-up transformer and created the Headspace to simplify the process.

Use your head

Instead of using transformers to create gain, the Headspace uses transistors. This means it not only produces varying levels of gain to suit different cartridges, unlike a conventional step-up, it is also possible to adjust its impedance to work better with the cartridge in question. This adjustment is done via two banks of dip switches – one per channel. The five switches can be adjusted to produce levels of gain between 10 and 27dB and impedance can be adjusted between 55ohm and 1.5kohm. As load and impedance adjustments are independent of one another, this means the Headspace is unusually flexible judged in comparison with a normal step-up.

The Rothwell is supplied in the same casework as the Simplex phono stage reviewed in *HFC* 407. This is relatively well finished for the asking price, but nothing to get too excited about. There are some nice touches like the rubber feet that provide damping while avoiding marking other devices and the



connections all feel sturdy and are usefully spaced out. Unlike transformer-based units, the Headspace needs a mains connection to function and power comes via a 24 volt wall-wart unit. The dip switches are accessed by removing the lid, which is a little involved but you shouldn't have to do it too often.

Initially using the Headspace as a conventional step-up transformer with a Goldring Legacy cartridge reveals it has some very positive performance attributes at the comparatively reasonable asking price. The Goldring has a low output at just 0.2mv and the recommended 100ohm impedance is often tricky to accommodate. With the Headspace connected to an Avid Pellar phono stage (*HFC* 363) set to MM, there is plenty of gain on offer and low noise levels at the same time. It manages to do a reasonable job of avoiding putting too much of itself into the sonic signature of the Pellar, but there is a very slight sweetness and midrange emphasis added that is very welcome, giving Public Service Broadcasting's *Sputnik* a pleasant touch of life and energy.

Substituting Cyrus' mighty Phono Signature (*HFC* 408) for the Avid and trying the Goldring via the Headspace and directly into a correctly set MC

input on the Cyrus shows that the Rothwell is a little noisier than the exceptionally quiet Phono Signature and there is some loss in the incredible fine detail that the Cyrus is able to find in recordings. That the £300 Headspace is in any way comparable, however, is impressive.

Head boy

Not, it must be said, as impressive as the performance of the Headspace running in low gain mode with high-output moving-coil cartridges. Used with the Hana EH (*HFC* 410), adding the Headspace is definitely better into the Pellar with the clarity and tonality improving and a greater sense of effortlessness apparent. Even with the Cyrus, it manages to provide an improvement over direct connection, suggesting that this is as much about being able to adjust the impedance of the Hana as presented to the Phono Signature.

This is undoubtedly a specialist piece of equipment, but one that makes a great deal of sense. If you have a high-quality moving-magnet phono stage, its ability to add gain and set impedance in a fuss-free and simple way is extremely useful and represents a very cost effective solution to the business of switching to moving coil. **ES**

DETAILS

PRICE
£299

WEBSITE
rothwellaudio
products.co.uk

OUR VERDICT





Apprentice MM
Phono stage
HFC
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NEW - MC1 Mk2
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String Suspension Concept SSC MagicPoint 100 isolation pucks

ONE NICE THING about isolation pucks is that they are extremely easy to fit as they just slide underneath equipment. The MagicPoint 100 is one of a range of three that is manufactured by SSC and is designed for use with heavy audio equipment and loudspeakers.

These new pucks are made with a high-quality anodised aluminium housing containing the SSC string suspension element, which is comprised of two rare earth magnets, aligned so that the poles are acting against each other. This is to allow for a higher weight load and ensure a significantly improved resonance control pattern. The vibrational energy generated by the audio equipment that the MagicPoints support is dissipated and so not transmitted into the equipment support, and *vice versa*. SSC claims the pucks will deliver

noticeable improvements in the soundstaging and dynamic realism.

That's magic

The pucks have felt contact pads on the top and bottom of the foot. They are designed to contact the equipment directly and should not be placed underneath existing feet. If existing screw-in feet are to be replaced, then the MagicPoint 200 is available with M4 threaded adapters. Alternatively, the MagicPoint 300 is fitted with a spike top. All three pucks are 50mm in diameter, 16mm high and claim to have a weight capacity of 20kg each.

Replacing the feet on my turntable isolation platform with the MagicPoint 100 pucks, I discover that



there is a cleaner and clearer top end. Vocals have a greater realism and the soundstage definitely seems greater front to back. Bass response is tight and beautifully controlled. Overall, there is a noticeable improvement of openness and spatiality.

These pucks are great value and should make a worthwhile addition to any serious audio system. **NR**

DETAILS

PRICE
£60 for a box of 4
TELEPHONE
0203 5442338
WEBSITE
nunudistribution.co.uk

OUR VERDICT



Lindy USB DAC and headphone amp

HI-RES AUDIO PLAYBACK for the price of a good night out seems like a bit of a stretch, but this is what Lindy claims its USB DAC offers. It has the choice of three digital inputs – coaxial, optical and USB-B. The USB input is a driverless USB 1-type that allows for the transfer of files up to 24-bit/96kHz, while the coaxial and optical connections support 24/192.

These inputs are made available to a pair of RCA outputs and a 3.5mm headphone socket. The RCA is fixed (and remains active with the headphone socket plugged in), but the headphone is adjustable via a small volume control.

Used via the RCA output, the Lindy manages to sound lively and energetic without tipping over into becoming thin or bright. Voices and instruments are well handled and there is a



reasonable amount of space and separation to the performance. Detail rendition is good rather than great and it is more of a 'big picture' style device and not unlikable for that.

Ear for detail

A spirited rendition of *Dirty Epic* by Underworld reveals that it doesn't have the most seismic bass, but the low end that there is has good detail and plenty of pace.

As a headphone amplifier, it is slightly less compelling. Possibly as a

result of having to make do with the voltage from the USB connection, it works best with sensitive headphones and earphones and never completely shakes a slightly hollow and hard-edged sound, which becomes more pronounced as you increase the volume. As an incredibly cost-effective means of getting a computer to talk to your audio system, however, this is an extremely capable piece of equipment and represents exceptional value for money. **ES**

DETAILS

PRICE
£50
TELEPHONE
01642 754000
WEBSITE
lindy.co.uk

OUR VERDICT



Super Size Sound

End user's experience with Maximum Supertweeters in his system.

For me the best placement was dead center top, in line with my tweeters, and at a level depth, flush with the front baffle of the main speakers.

With cables, connections and positioning all satisfied I spun my first critical tune and sat down for a listen..

..Wow.. The sound had changed, and not a tiny change either, quite a discernible change. The sound stage has grown, the whole sound has matured not just at the high frequency range but across the whole range! Vocals sound fuller and more correct, breaths on wind instruments were real, violin and strings in general sounds as real as I've heard on my system to date and atmosphere on live recordings were more perceptible. Without exception one of the best purchases I have made within Hi-Fi. If I could compare Hi-Fi to food it would be like adding a little bit of salt to the food, the flavour was always there, but the salt just makes the flavours stand out more and adds a further dimension to the complete flavour.

That's what the Maximum Supertweeters have done for my set up. Just as a well set up subwoofer adds to the fullness and roundness of the sound, the Supertweeter does the same also, just tailor the level to your preference and system matching and away you go.

Removing them after a few days has made the sound dull, flat and even two dimensional. Was that really what I was calling decent quality Hi-Fi a couple of weeks ago?! What I had thought was a pretty good sound was now without the Supertweeters only mediocre in terms of sound quality. The difference was a night and day one. So obviously they were welcomed with open arms and re-instated into the system once I had established there was a "gap" without them. On first play the smile returned to my face and I earnestly started to rummage through my

music collection to get another playlist together.

At which point I should also tell you that I found the effect was still there even at night time listening levels, but it does need a few decibels to be "magical".

My 15W per channel Leak valve amps had no problems with the load on top of my speakers and when using full range "horn" speakers, these Supertweeters are simply a must have item and being quite minimal in operation they don't seem to destroy the single driver sound of a good Lowther or Fostex, rather adding to it to give a fuller sound so long as you are careful with the volume level. Discretion is the key, and blending without over exuberance or understatement is a must and worth taking the time to tune in and get right because when you do, the sound is simply stunning...

...In conclusion, my humble opinion can only be used as a guide because we all hear differently and we all like a different sound. The Townsend Maximum Supertweeters are well executed, well made, capable, very discrete super tweeters. In my opinion in terms of user friendliness and sound they are the best passive super tweeters I have heard on the market today and the fact I have purchased a pair with my own hard earned money is testament to how good they are and the impact they have had on the sound of my system. I am not going to get into the "snake oil" debate because they work within my hearing range and with all of the formats I use. Lossless on the MacBook, DAB, Cd and analogue, vinyl and tape cassette all benefit from a fuller more emotional sound.



I'm sure my hearing doesn't extend much above 16kHz or so and yet the super tweeters work and work well for me.

I think transients, atmosphere, detail, attack and sustain all benefit as does timbre between instruments, sounds and especially vocals within the hearing range due to less distortion, less smearing and better definition at frequency extremes. Definitely not snake oil in my opinion..

..A worthwhile investment and I will not be returning them or selling them on.

*Many Thanks and keep the music musical..
Patrick Thomas.*



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Mark Grant Cables

15V Linear Power Supply Upgrade

IT IS A sad fact of life that many external power units supplied with components are not necessarily up to the job. This is sometimes where money is saved and it can often seem like a power supply has been included as a bit of an after thought.

A low-cost switched-mode PSU will negatively affect the performance of an audio device due to the ripple and noise that it generates. Even higher-quality PSUs can still limit the ability of the equipment to perform at its absolute best. This leads many to replace their supplied PSU with a good-quality linear option. Enter Mark Grant Cables, which supplies a range of linear PSUs with different output voltages and connectors to suit a wide range of equipment, from the old Squeezebox range of music players to more modern devices, such as the 15V 2.5A model tailored for an Alpha Design Labs GT40a USB DAC/ADC (*HFC 399*) here.

Power and the glory

This linear PSU has been given the snappy title of “BOTW Power & Precision ECO” or “Best of Two Worlds Power & Precision ECO”, referring to its dual-filtering design and high efficiency. It incorporates a dual-stage mains filter and an earth line choke to clean the incoming mains power from high-frequency noise pollution before it reaches the transformer. This is a custom-made, audio-grade toroidal design that incorporates high-quality electrostatic shielding. The voltage regulator inside is an energy-efficient design, as is the whole unit. This is claimed to make this linear PSU consume only slightly more electricity than the standard factory-supplied PSU. On the output, a split-current filter system has been fitted at the end of the DC cable to provide extra filtering.

The PSU comes with six DC plug tips and has three switch-selectable output voltages of 15V, 16V and ‘ACC’ so the unit can power a wide range of 15-16V audio equipment. The actual measured voltages are 14.7V, 15.7V and 16.3V respectively. The ‘ACC’ setting provides the extra



voltage for a Sbooster Ultra DC conditioner (which drops about 0.9V), and is available for an extra £40. The Sbooster Ultra is an active filter designed to reduce the ripple and noise of the linear PSU even further. As recommended by the supplier, I set the switch to the mid position for use with the GT40a when the Sbooster Ultra is fitted.

Kicking off with the *Allegro* from Albinoni’s *Concerto in C major for Oboe and Strings* Op.9 No.5 and swapping between the ADL power supply and the Mark Grant linear PSU, the sound with the linear PSU is more rounded and the soundstage is noticeably wider. The strings become smoother and better positioned. I then fit the Sbooster Ultra and find this improves matters significantly. It makes the music more authoritative, with greater clarity and realism and the playing of the oboe seems more melodic and flowing.

Moving on to a bit of techno in the shape of a CD-quality remix of *Whispers* by Deadmau5, the bass is far better and all of the electronic elements seem more in sync with the linear PSU. As with the previous piece, there seems to be more happening with the Sbooster fitted and the bass

is more extended and tighter. Next up, a 24-bit/192kHz FLAC recording of JS Bach’s *Mass in B Minor* performed by the Dunedin Consort. Switching to the linear PSU brings a whole new level of clarity to the performers’ voices and I feel they are more distinct and not at all like the choral mush that I had previously experienced with this recording. I consider that the choir is not just a bland ensemble of musicians, but rather a collection of soloists.

Keeping it real

To finish off, I turn to a fast-moving recording of The Brandt Brauer Frick Ensemble playing *Bop*. The pace of all the instruments, especially the piano, just goes up a notch and feels more real with the linear PSU.

This linear power supply upgrade certainly steps things up and the Sbooster Ultra is an excellent accessory to pair it with. Used with the ADL GT40a, music sounds better smoother and has significantly better imaging with a noticeably wider soundstage. String instruments are velvety smooth and bass lines are full yet tight, making this a worthy upgrade for many externally powered audio devices. **NR**

DETAILS

PRICE
£215

TELEPHONE
01482 887717

WEBSITE
markgrantcables.
co.uk

OUR VERDICT



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KLEI

gZero3 interconnects

THESE SLENDER AND visually unassuming cables employ Keith Louis Eichmann's gZero architecture, which is an evolution of his previous Ground nulling Circuitry (GnC). The gZero architecture is intended to reduce and control the effects of the earth wire on the signal wire. The design also allows the former to protect the latter from capacitive, inductive, EMI, RF and static charges. This is to facilitate a smooth and uninterrupted signal flow from one component to another. Unlike other designs where the earth and the signal conductors have identical characteristics, these cables are designed to have a calculated difference between the two. Understandably, exactly what this difference is, KL keeps under wraps, but the maker does say that each cable is comprised of conductors that have been hand wound to enhance the electron flow in the signal conductor without using any active components.

As time goes by

KL states that the manufacturing process requires precise calculation, hours of hand fabrication and several days of run-in on a professional cable burner. The latter point is very important since at least 450 hours of burn-in is recommended, so it is good that this is carried out at the factory. A settling time of at least 24 hours and preferably 60 hours is also recommended before the cables perform at their best. According to KL, this settling time is required each time the cables are unplugged and plugged back in.

The conductors employ highly annealed, mil-spec OFHC (Oxygen Free High Conductivity) copper and pure silver wire. The cables are fitted with KLEI Silver Harmony RCA plugs, which feature a thick silver plating on the pure copper signal pin and a solid silver earth pin single-point connection. I connect the gZero3s between my



phono stage and preamp and start listening to see if I can discern any improvement during the settling period. The bass response seems to firm up a little and extend downwards. The instrument focus also slightly improves.

Once they have settled in, I subject the interconnects to a wide range of music. Vladimir Ashkenazy playing Prokofiev's *Piano Concerto No.1* is superb and breathtaking. The piano is always a challenging instrument to reproduce well, but it is completely believable and realistic, and the energy of Ashkenazy's playing is beautifully conveyed. There is excellent image placement and clarity not only of the piano, but also the entire orchestra. The crescendos are full and open and the trumpet blasts are bright without sounding harsh. The piano is perfectly positioned in front of the orchestra, which itself is spread evenly across the soundstage.

Getting a bit more intimate, John Williams' guitar performance playing the second movement of Rodrigo's *Concierto De Aranjuez* with the

English Chamber Orchestra is delicate and enchanting. The gZero3s can certainly whisper when required to and right from the very start I am drawn deep into the stunning performance.

Feel the force

Thelma Houston singing *Got To Get You Into My Life* is forceful without being shouty in the slightest. The instrumental backing is rhythmic with a well controlled bass line and the timing is great. I sometimes feel the bass is almost too tight and maybe a touch reigned in, but that could just be a case of getting used to the gZero3s. As with the previous John Williams piece, the emotion in Houston's voice is quite splendidly conveyed.

Overall, the gZero3s combine a very tight and well-textured bass response with a lively top end. Vocal performances are also clear and have a good presence in the room. To summarise, these cables are really good all-round performers and are well worth an audition. **NR**

DETAILS

PRICE
£320 for 1m pair
TELEPHONE
01536 762211
WEBSITE
divineaudio.co.uk

OUR VERDICT



Dust & Grooves

By Eilon Paz

“A RECORD SHOULD captivate you. It should elicit an emotion. It should tell a story. There’s no better format for the dissemination of a song than the 7in 45rpm record. That will never change”. So says Ben Blackwell from Nashville, Tennessee, as he proudly poses with his hand-painted copy of the White Stripes’ *Lafayette Blues* single – one of only 15 produced in 1998, and his favourite from his collection. If like me you love looking through other people’s record libraries, this beautifully compiled book – consisting of photographs of some of the world’s biggest vinyl collectors with some of their favourite discs – will be right up your street. Consisting of just under 450 pages of stunning colour photographs, this hardback monster is the perfect coffee table reading matter for vinyl lovers everywhere

– although weighing in at a hefty 2.6kg, you’ll need to make sure your coffee table is reinforced.

Featuring a mixture of crate diggers, DJs, musicians, producers and collectors from across the world, *Dust & Grooves Adventures In Record Collecting* serves as a fitting celebration of all that’s good about the humble record and the joy that comes from both collecting and listening to it.

Picture perfect

Israeli-born photographer Eilon Paz is a self-confessed music nut, and his passion for the black stuff is clear to see in this glorious collection of photos that saw him embark on a five-year journey so that we can snoop inside the record rooms of vinyl champions such as Giles Peterson and King Britt alongside musicians like Mr Scruff, Cut Chemist, Four Tet,



Questlove and Colleen Murphy. Throw in a selection of interviews about the joys of vinyl, and you’ve got an ideal visual accompaniment to an afternoon’s listening – perfect. **JDW**

DETAILS

PRICE
\$54 (£37 approx)

WEBSITE
dustandgrooves.com

OUR VERDICT



One For All SV1820 Bluetooth music receiver

BLUETOOTH HAS BECOME a convenient way of wirelessly connecting devices to compatible speakers and even hi-fi amplifiers. Only a few years ago the short-range wireless codec was considered too lo-fi in sound quality terms to be worthwhile for hi-fi fans, but the introduction of aptX has upped audio quality standards considerably.

One For All is perhaps best known for its programmable handsets, but the SV1820 Bluetooth music receiver brings it to the attention of the audio market for anyone wanting to add the connectivity to a music system and listen to Spotify or Tidal music streaming services, for example.

The white plastic unit measures just 94 x 22 x 62mm (WxHxD) and is equipped with a Wolfson digital-to-analogue chipset that supports

24-bit/192kHz files. Optical digital and 3.5mm stereo jack analogue outputs are provided along with a 3.5mm-jack-to-jack cable and a Y-cable with RCA-to-3.5mm-jack socket adapter.

Hit and miss

The SV1820 can memorise up to eight Bluetooth devices and supports aptX. Pairing is easy and ‘OFA Music Receiver’ promptly appears on my smartphone. Wired to my amplifier using the analogue audio output,

Kristin Kontrol’s *X-Communicate* via Tidal is clean and has plenty of drive, and I’m impressed by how easy it is to unleash tracks and hear them through my hi-fi with no audible sacrifices. Switch to optical digital and the audio quality is just as strong.

It’s not all good news, though. Bluetooth range is less than the claimed 10m and to ensure signals remains robust I am unable to move more than a few meters from the receiver in my setup. **LD**



DETAILS

PRICE
£50

WEBSITE
oneforall.co.uk

OUR VERDICT



GROUND-BREAKING TOWNSHEND SEISMIC PODIUM

The Seismic Podium is designed to brake the acoustic connection between the floor and the speaker.

The Podium, together with the speaker, forms a low pass mechanical filter that prevents the passage of deleterious vibrations both to and from the speaker cabinet.

Break this link and the result is simply magical, the sound is transformed for every speaker, everywhere, every time.

The effect on the sound quality is outstanding. Everything sounds much cleaner and clearer, but for me the best improvement is the purity of tone of the strings when listening to classical music. Previously I couldn't enjoy listening to orchestral music because the violins sounded so 'dirty', and I have spent years trying to eliminate the problem by experimenting with different DACs, interconnects and speaker cables without any meaningful results. I only wish that I had bought them earlier! " RM



- Blocks ground borne vibration from entering the speakers.
- Blocks speaker generated vibration from entering the floor.
- Neighbour friendly due to elimination of structure borne sound.
- Huge reduction in bass boom.
- Clearer and much more tuneful sound.
- Far deeper and wider sound stage.
- Suitable for wood, tile or carpeted floors. No more spikes!
- Works on solid or suspended concrete and wood floors.
- Eliminates resonance between speaker-cabinet mass and floor.



Watch the demonstration video showing the effect of vibration on loudspeakers with and without Seismic Podium.

<http://goo.gl/Hy4boC>





DESTINATION:

SHEFFIELD

Steel City, this month's port of call, has racks aplenty to browse, from local legends to new kids on the block. **Simon Berkovitch** reports

Heading down the circuitous Snake Pass, taking in some glorious scenery along the way, *HFC* drops down into Sheffield, launch pad for the pop glamour of ABC, Human League and Pulp, the experimentalism of Cabaret Voltaire, legendary techno imprint Warp records, global superstars Arctic Monkeys and songwriter extraordinaire Richard Hawley. That's just the tip of the iceberg – like its Northern neighbours Manchester and Liverpool, Sheffield has an embarrassment of home-grown talent. And, pleasingly this supremely musical city is still home to plenty of vinyl emporia, providing inspiration for the next generation of musicians and collectors.

Our guide is occasional broadcaster, dedicated blogger and long-time crate-digger Gavin Hogg. A regular fixture of Glossop Record Club (*HFC* 382), at which Gavin curated a memorable evening celebrating the

music of The Smiths that drew attendees from as far as London, he recently moved to Sheffield from over the Pennines and has swiftly acquainted himself with the city's vinyl treasure troves. "I came to Sheffield from Manchester in the summer of 2015," he says, "and am still getting to know all the record shops here, so I can give you a fresh view of the record scene."

An occasional presenter on All FM's Charity Shop Classics show (*HFC* 401), Gavin finds it impossible to resist a thrift store or table-top sale for the more esoteric additions to his collection, but he still buys new releases, mainly from Bear Tree Records or Record Collector (see opposite). It's a habit that's hard to kick, as many of us will empathise. "I've been in love with records for as long as I can remember," Gavin says. "As a toddler I had a storybook with a built-in flexi-disc at the back. It came with a primitive stylus – basically a

darning needle – and you turned the flexi with your finger to hear the animal noises from the story. That sowed the seeds of my fascination with the magic of the grooves."

Gavin loves reading and writing about music almost as much as he enjoys listening to it: "I grew up reading Mark Ellen and David Hepworth in *Smash Hits* in the early eighties, progressed to the *Record Mirror*, *NME*, *Mojo* and then full circle, back to Ellen and Hepworth with *Word*." The latter is a particular passion of Gavin's who blogs about the much-missed magazine at Whole Hogg Blog (wholehoggblog.wordpress.com). "I have all 114 issues and am writing an overview of each one, interspersed with interviews with ex-writers, including Paul Du Noyer and Mark Ellen, about their recollections."

With the clock ticking, our tour begins with one of Sheffield's rite of passage vinyl institutions: the legendary Record Collector.

Record Collector

Established in 1978, Record Collector is the location for Richard Hawley's interview in excellent documentary film *Last Shop Standing*. Like Hawley, it's also something of a local legend. "When I told friends from Sheffield I was moving here, they told me to check out it out," says Gavin.

The shop is in Broomhill, a five-minute drive from the city centre and housed in two neighbouring stores: the smaller one is vinyl-only, while the adjacent space is floor-to-ceiling CDs and DVDs. Browsing either can be overwhelming, such is the amount of music on sale. Both sell a mixture of new and second-hand sounds and cover every genre. The record shop has a few boxes of cheap LPs for 99p, and there are more bargains to be found in the racks, with many half-price stickers on a range of releases. There's a massive classical music section in the CD store, and everything else in between – from spoken word to rock and roll via jazz and local artists. "It's so comprehensively stocked that it could be reopened as a museum," Gavin observes.

"Everything is priced competitively and I've not been able to visit once yet without coming away with something I hadn't realised I wanted – whether it's a Johnny and the Hurricanes greatest hits or a live album by Preslav Literary School."



Everything from rock and roll to more contemporary sounds, new and second-hand is stocked here



CONTACT
DETAILS

Record Collector
233-235 Fulwood Road,
Sheffield, S10 3BA
0114 2668493
recordcollectorsheffield.co.uk



Bear Tree

Nestled away in a craft workshop in the city centre's Orchard Square, "You'll find a shop that's even newer to Sheffield than I am," says Gavin. As befits a shop with a framed Sun Ra poster on the wall, the excellent Bear Tree specialises in the more cultish and experimental areas of music. A carefully selected soundtracks section also sets it apart from rival enterprises: it's the place to come and browse if you're a fan of Italian horror movies directed by the likes of Mario Bava and Dario Argento.

The standard genres of indie and classic rock have their sections, as do niche areas such as doom metal and library music, and every record has a description on the front, which makes spontaneous purchases easier. Bear Tree also sells records by local bands.

"My recent album purchases have been David Bowie's *Blackstar* and Ryley Walker's *Primrose Green*," Gavin says. "They also sell a small number of 7in singles, which are worth looking through. In the last few months I've come back home with some Delia Derbyshire discs, a limited edition blue vinyl single by [UK sixties psych act] Kaleidoscope and the reissue of Jack Wood's 1966 garage stomper *Born To Wander*, on Third Man Records. If you're a fan of The White Stripes, you'll find a lot of the band's and Jack's records in stock."



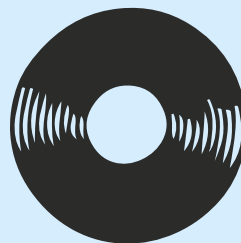
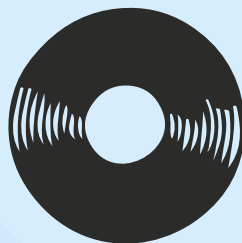
The selection of stock is carefully curated and Bear Tree also boasts a rather natty line in T-shirts



CONTACT
DETAILS

Bear Tree Records
Craft Workshop 5, Orchard Square
(Upstairs), Sheffield, S12FB
0114 2751309
beartreerecords.com





Spinning Discs

Located on the busy Chesterfield Road, the first thing that attracted me were the racks of cheap second-hand records. It's definitely a shop for bargain-seekers as well as new vinyl junkies. The prices for second-hand records start at a very reasonable 25p for singles, where I found a great rockabilly EP, and £1 for albums," says Gavin.

Another relative newbie, the shop has been open since April 2015 and has started to build a loyal base of regular customers. The records in the racks cover a broad range of classic rock, hip hop, metal, soul, Americana, indie and pop and there are also crates dedicated to country, dance, classical and reggae and dub. Four records next to each other in the 'O' section give a neat snapshot of the stock: Roy Orbison, Orbital, Beth Orton and Outkast. Spinning Discs also sells a lot of mainstream soundtrack albums, including several picture discs for Disney films as well as some more esoteric offerings from the Death Waltz Recording Company. It also sells 'Let's Get Physical' T-shirts, fresh coffee and Crosley portable turntables.

"Spinning Discs is a great shop to browse in," assesses Gavin. "You may not find much that will truly surprise you, but it has such a broad range that everyone should find something they like." Our guide certainly did: on our visit, he finally got round to buying Tune-Yards' *Nikki Nack* on red vinyl.



Indie gems share rack space with mainstream cuts



CONTACT DETAILS
Spinning Discs Sheffield
55 Chesterfield Road,
Sheffield, S8 0RL
07521 450111
spinningdiscssheffield.co.uk

Books on the Park

Located on the South side of Endcliffe Park is this essential port of call for vinyl junkies and bibliophiles. There are plenty of bargain books and records to browse before even entering the shop, and once inside, be prepared to set aside an afternoon to get stuck into the bulging shelves and crates.

All kinds of book genres are covered and there's a particularly well-stocked section on music, handily placed with the records and CDs in one of the rooms.

Since moving across the road to its current location just over four years ago, it started stocking vinyl. "If you're looking for affordable and offbeat records from around the world, this is a great place to visit," says Gavin. A deck with headphones enables customers to try before they buy.

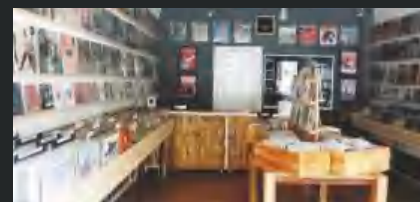
As well as plenty of music from around the globe, the shop's stock leans to the folk, country, Americana, bluegrass, classical and jazz end of the spectrum, although you can also find spoken word, rock, pop and prog. "There's plenty to interest you, if you are looking for something unusual that you may not have heard before," says Gavin. "I also spotted some long boxes of 7in singles under the racks, which were too daunting to begin digging through on this visit." The bulk of the CD selection is more mainstream but priced realistically, with many on sale for just £2.



Comedy LPs and spoken word oddities galore



CONTACT DETAILS
Books on the Park
749 Ecclesall Road,
Sheffield, S11 8TG
0114 2666364
rarekindrecords.co.uk



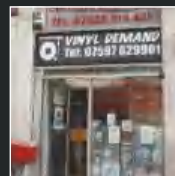
► MORE CRATES TO DIG

Our guide Gavin Hogg and Sheffield lad Simon Galloway reveal more favourite vinyl emporia picks in and around Steel City, also heading out to nearby Chesterfield and Barnsley



Tonearm Vinyl

"Tonearm in Walkley sells second-hand records. A regularly updated Facebook page informs followers of the latest stock. There's plenty of soul, indie, classic rock here, but most genres are covered."
tonearmvinyl.co.uk



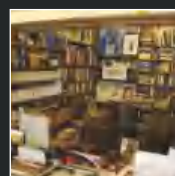
Vinyl Demand

"Vinyl Demand occupies a small premises in Charter Square in the city centre. It's packed with rock, pop, indie, punk, metal, soul, ska and much more – it's hard to know where to start."
07597 629901



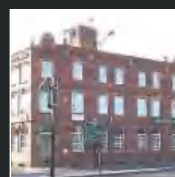
Record Junkee

"In Sheffield's centre, above Music Junkee, you'll find a large room with techno, house and dance records aplenty. It's the place to go if you are looking for any RSD 2015 products you missed."
recordjunkee.co.uk



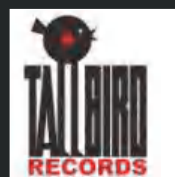
Rare and Racy

"This book and record shop opened in 1969 and is a great place to check out if you want something a little more esoteric. Sadly, it's earmarked for demolition, so get there while you still can."
rareandracy.co.uk



The Nichols Building

"Spread over two floors in Shalesmoor, this shrine to all things vintage is well worth a visit for dedicated diggers, with vinyl lurking in unexpected places from a number of different sellers."
thenicholsbuilding.co.uk/home



Tallbird Records

"Just to the south of Sheffield on Soresby Street in nearby Chesterfield. Named by its owner after her physical appearance, it opened in 2013, and sells a mixture of new and used vinyl."
tallbirdrecords.co.uk



Vinyl Underground

"Just to the North of Sheffield, upstairs at Peel Street Emporium in Barnsley, there's this well-stocked shop full of reasonably priced used records and a smattering of new releases."
01226 87232

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Audiolinc phono stage and line preamp REDUCED dem 599
Avid Ingenium c/w tonearm, excellent used 699
Avid Acutus Ref power supply dem 2499
Avid Volvere SP turntable, sealed box REDUCED new 2599
Bakoon EQA11r phono stage, boxed with stand used 1499
Benz Micro Glider, boxed plenty of life left used 499
Chord Chordette Dual, excellent boxed used 449
Chord Symphonic, sealed box new 2749
Clearaudio Unify Tonearm excellent boxed REDUCED used 599
Clearaudio Basic Symmetry Phono Stage REDUCED used 399
Consonance Cyber 40 Phono stage, excellent boxed used 599
Fidelity Research FR64S boxed, excellent used 1499
Garrard 401 in stunning oak plinth, SME cut used 799
Garrard 401, Jelco 750 12" arm, new plinth and lid used 1199
Graham Phantom Supreme, SME cut dem 2749
Graham Phantom Supreme 12", SME cut dem 3249
Graham Stee Fanfare Gramamp 3 used 179
Linn Sondek, Heed PSU, vgc boxed used 749
Linn Basik Plus, vgc+ used 149
Linn LP12, Ittok LVII used 899
Linn LP12, Kahn, Hercules, Trampolin used Call
Linn LP12, Armagedon 2, Aro, Prefix, superb used 2999
Linn Akiva, excellent boxed used 999
Logic DM101 /Alphason HR100s/MC15 super REDUCED used 699
Lyra Skala, excellent boxed used 2249
Michell Gyro Se, DC Motor, vgc boxed used 999
Michell Tecnoarm, vgc boxed used 399
Michell Gyro Export/QC, vgc boxed used 999
Michell Hydraulic Ref c/w Fluid arm, superb used 999
NAD C553/OEM Rega arm, Goldring 1012 cart used 199
NAIM Superline, excellent boxed used 1199
Nottingham Analogue DAIS, near mint, ex demo dem 3999
Oracle Delphi, mk1 c/w Zeta tonearm REDUCED used 899
Ortofon Cadenza Blue, plenty of life used 499
Project Phonobox SE phono stage, excellent value dem 99
Project RPM 10 turntable with arm and platform dem 849
Project Debut Carbon, near mint REDUCED dem 249
Project P2, arm and cart used 199
Rega Planar 2, vgc+ boxed used 179
Roksan TMS 2 with Reference PSU, boxed as new used 2899
SME 3009 improved, vgc+ used 199
SME V, in rare silver, excellent, boxed used 1499
SME V12, nr mint boxed used 2249
Thorens TD170 Auto excellent boxed REDUCED dem 229
Thorens TD150, fair condition, no arm, REDUCED used 79
Thorens TD160 original, boxed used 199
Thorens TD209 turntable package REDUCED dem 649
Thorens TD2030 Blue turntable new 999
Townshend Elite Rock c/w Excalibur/Merlin/Cover used 949
Transfiguration Temper W, great condition, used 699
Transfiguration Phoenix, excellent checked used 599
VDH Colibri M/C cartridge, as new boxed, REDUCED dem 2899
VDH Condor M/C cartridge as new boxed, REDUCED new 1899
VPI Scout, JMW arm excellent used 999
Wilson Benesch Act 1 Tonearm, nr mint superb used 799
Zeta Tonearm, excellent used 599

Radio/Recorders

Arcam Alpha 10DAB tuner, excellent used 149
Arcam T32 DAB Tuner, excellent boxed used 499
Axi Lab Series DAB tuner, scarce find used 349
Mitsubishi DA-F10, excellent used 249
Musical Fidelity ASDAB, sealed box used 499
NAIM NAT101 & SNAPs, excellent £500 NAIM service used 899
Nakamichi BX125e, good condition used 99
Nakamichi ST7e, rare tuner used 199
Pioneer RT707, just serviced, fantastic condition used 499
Quad FM4, vgc, serviced used 149
Revox PR99, crated, REDUCED used 749
Revox H1, just serviced, great condition, REDUCED used 449
Revox B77mk2, just serviced, great condition used Call
Rotel RD865, vgc, decent little cassette deck used 49
Sony MDS JB940, excellent minidisc recorder used 199
Tandberg TCD404a, superb! REDUCED used 449
TEAC CDRW 890, brand new sealed, due in used 599
TEAC X1000M, serviced, superb used 599
Technics RS1500 in flightcase near mint used 2499

Amplifiers

Arcam Alpha 8P, vgc+ boxed REDUCED used 179
ArtAudio Jola 520b, excellent used 3999
Audio Flight Pre and Flight 50 Class A power dem 3999
Audio Analogue Donizetti Power amplifier, superb used 1249
Audio Project ap60 integrated dem 249
Audio Research VS115, excellent boxed used 2499
Audio Research Ref 610 Monos, vgc boxed REDUCED used 12999
Audio Research DS1 200, just ARC serviced with remote used 2499
Audio Research D240 Power, excellent boxed used 749
Audio Research SP9 Preamp, VGC+, MM phono used 749
Audio Research Ref 3 Preamp, AS serviced, boxed used 3749
Audio Research LS2 Preamp, vgc used 899
Audio Research SP14 Preamp with phono, boxed used 999
BAT VK650se Preamp, remote, factory serviced 2016 used 2499
BAT VK65 Power Amplifier, excellent boxed used 1599
Beard P101, excellent boxed, just serviced, REDUCED used 699
Boulder 1010/1060 Pre/Power, near mint boxed used 10999
Cambridge Audio 840a Integrated used 399
Cambridge Audio 851 Power Amplifier used 799
Chord Electronics, Cyan Click Integrated amplifier used 1699
Chord Electronics, Mezzo 140 Power amplifier used 1999
Chord Electronics, Prima Preamp used 1299
Consonance Cyber 211 (Pavane), Monos, REDUCED dem 2749
Consonance Ref 8.8 Integrated, boxed, REDUCED dem 799
Cyrus XPD Preamp, excellent used 699
Cyrus 6DAC Integrated, boxed, REDUCED used 649
DarZee NHB108B, excellent £20+k new used 7999
Esoteric C03/A03, pre/power ex demo boxed dem 2999
Graaf GM50B Mk2 Integrated, ex dealer demo dem 2999
Jolida Envoy 211 Monoblocks, £7k new, superb, vgc used 1999
Lavarand C62/AP150 pre/power and interconnects used 5499
Krell KAV250a Power Amplifier, vgc+ boxed used 999
Krell KAV300i excellent with remote used 749
LFD L51 lineage, reasonable shape used 299
Linn Klimax Chakra 500 Twin, Dynamik PSU, boxed used 3499
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Marantz SM7, great retro power, REDUCED used 849
McIntosh C22/MC275 Commemorative, REDUCED used 6499
Meridian 501 preamp, excellent used 299
Meridian 551 Integrated, excellent used 399
Micromega IA100, great integrated, boxed REDUCED dem 449
Moon W7RS, excellent used 4499
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Musical Fidelity A308CR Preamp, excellent boxed used 799
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NAIM NAC92r, boxed remote excellent used 199
NAIM NAP250 (Olive), excellent boxed used 1199
NAIM NAP250/2, excellent boxed 2006 used 1499
NAIM NAP250/2, boxed, superb condition used 2499
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Talk Electronics Hurricane/Tornado Pre/Power used Call
Tandberg TPA3003 Power amplifier, excellent used 499
Tannoy TA1400, excellent boxed REDUCED used 499
TEAC Distinction A1000 Integrated, mint, REDUCED dem 549
Trio L07C preampifier good condition used 249
Vincent SAV200 6 Channel monster, REDUCED dem 699
XTC Pre 1 & Pow 2, Pre/Power combo, excellent used 799

Digital

Arcam IR DAC, Russ Andrews PSU excellent boxed used 399
Arcam CD37, excellent boxed, remote used 549
Arcam DV137, excellent used 149
Arcam iDAC, excellent used 269
Atoll 100SE DAC, excellent boxed new 299
Audio Analogue Crescendo, end of line new 499
Audio Analogue Paganini, excellent boxed dem 349
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Chord 'One' CD player excellent! used 1799
Consonance CD2.2, new sealed new Call
Crek Destiny CD player, boxed used 699
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Cyrus DAC XP, excellent boxed used 599
Cyrus Stream Xa, excellent with N remote used 699
Cyrus CD6Se, excellent, remote, boxed used 279
Cyrus CD6Se, excellent, remote, boxed used 399
Denon DNP720AE, near mint boxed used 199
EAR Acute 3, mint boxed dem 3749
Esoteric X03Se, near mint boxed, REDUCED used 1999
Leema Elements CD player sealed box, REDUCED new 699
Linn Karik 3, excellent boxed remote, REDUCED used 449
Linn Karik 3 CD player, remote excellent used 249
Marantz NA7004, remote, excellent boxed used 299
Marantz CD17, remote, excellent boxed used 299
Marantz CD5400, excellent remote used 99
Marantz CD6005, remote, boxed excellent used 249
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Meridian G07, excellent boxed, remote used 599
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Musical Fidelity M1 DAC, excellent boxed REDUCED used 199
Musical Fidelity A308CR CD, excellent boxed used 649
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Myrrad MC100, excellent used 99
NAD C524, excellent used 99
NAIM CDX2, Digital Out, near mint, boxed dem 2199
NAIM DAC, excellent boxed dem 1599
NAIM CD5, recent new laser, upgradeable dem 499
NAIM CD5X, recent new laser, upgradeable used 649
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Prima Luna Prologue 8, ex demo boxed, REDUCED dem 1199
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Rega Apollo R, excellent REDUCED used 399
Resolution Audio Opus 21, excellent crated used 1199
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Sansui WLD201 Streamer, mint boxed REDUCED used 119
Sony MDS-JB20 Minidisc, vgc used 899
Sugden Masterclass CD original version REDUCED used 199
Unison Research Unico CD, excellent valve output used 599
Wadia 6, excellent boxed, remote used 1499
Yamaha CDR-HD1300, excellent boxed used 249

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Musical Fidelity M1 HPAB dem 399
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EB Acoustics EB1, excellent, in black ash used 199
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WIN:

Yamaha MusicCast system and wireless speakers

Bring the magic of multi-room music to your home with this prize worth £1,600

It wasn't so long ago that the entire family would gather together to enjoy music in one room, and while sitting and listening to a crackly rendition of the Glen Miller Orchestra as father smokes a pipe and mother frets about what the neighbours think are very outdated concepts, individual members of the family still enjoy listening to music, but in their own space. Up until fairly recently this would've necessitated a separate system for every room, but now with the advent of multi-room one system can stream music anywhere in the house that you care to stick a set of speakers. All of which brings us rather neatly to Yamaha's answer to multi-room, MusicCast. Rather than design a range of speakers to form a line of products, MusicCast is a feature set that has been added to a selection of Yamaha's audio components allowing you

to assemble a multi-room setup that includes the elements you desire in the places you want them. In principle this means that buying a system like the MCR-N870D (pictured above) isn't just a way of filling one room with music, it's potentially the first step to filling the entire house.

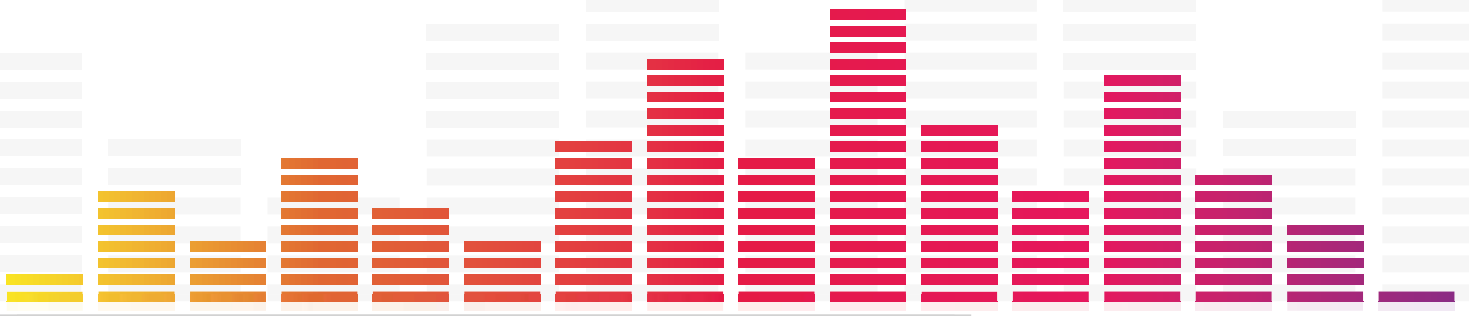
Part of the 'Grand Piano Craft' line of small separates, the MCR-N870D comprises the A-U670 integrated amplifier and the CD-NT670D CD network receiver. At first glance, this pairing is just another fairly ordinary amp and CD combo, but as we found out when we tested it back in *HFC* 408, it's so much more than that.

Featuring a USB input supporting sampling rates up to 24-bit/192kHz and DSD up to 5.6MHz, the A-U670 Class D amplifier boasts 2x 70W quoted power output. Meanwhile the CD-NT670D features a 24/192-capable network streamer and the ability to connect

to other MusicCast products – of which there are many – for music around the home.

The most immediately apparent aspect of the performance is that there is no shortage of power and headroom on offer. The system has no trouble going impressively loud and sounding free of any strain or edginess as it does so. There's a refinement and slight midrange warmth that flatters poor recordings, allowing them to sound fuller and smoother than they are – but tempers that with considerable treble energy that allows music to sound altogether more energetic. In short, we were impressed.

And thanks to the good folk at Yamaha, we've not only got a MCR-N870D system to giveaway, but we'll also throw in some wireless speakers in the shape of the £200 WX-030 and £400 ISX-80. Answer the fiendishly easy question online to be in with a chance of winning this fantastic prize.



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MCR-N870

Comprising a CD player (CD-NT670D), amplifier A-U670 and standmount loudspeakers (NS-BP401), this system is worth £1,000. It works supremely well as a standalone setup, but really comes into its own when used with other MusicCast devices.



WX-030

This compact wi-fi-enabled streaming speaker is worth £200 and can be tabletop or wall mounted. With its 90mm woofer, 30mm tweeter and a passive radiator, it has a surprisingly meaty sound considering its decidedly diminutive dimensions.



Restio ISX-80

Restio's compact 302mm square form can be placed on a shelf or wall mounted and is worth £400. It features dual 30mm soft dome tweeters and dual 80mm subwoofers, along with a built-in tuner and claims 2x 15W power output.

TO BE IN WITH A CHANCE OF WINNING, ANSWER THIS SIMPLE QUESTION:

What is Yamaha's innovative multi-room sound system called?

- A) MusicFast
- B) MusicLast
- C) MusicCast

HOW TO ENTER:

Visit our website at www.hifichoice.co.uk/competitions and follow the instructions to enter

To submit your entry to the Yamaha MusicCast competition, simply register using the online form and provide your answer to the question shown left. Please ensure you complete all required fields, including your email address, telephone number (including area code) and postal address. We regret we cannot take postal entrants.

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QUADRAL Chromium Style 8 floorstanding loudspeakers (black), 15 hours use £1,200 (£1,750). Buyer collects: **07748118310 or 01912815482. (Newcastle upon Tyne)**

TRIANGLE Zephyr XS floorstanding speakers, 91dB

sensitivity. Slight paint marks on both. Buyer collects: **01132933478** or email **julianbedford63@icloud.com (Leeds).**

YAMAHA AMP-501, Monitor Audio BX2 speakers, Denon DCD-F109 mini system, Denon 520 amp. Buyer collect, open to offers: **01977695385 (West Yorkshire).**

GARRARD 401, Rega RB250 O/L rear stub, Linn K9 cartridge spare stylus. Assembled on plinth. £650. Buyer collects: **01494451089 (High Wycombe).**

B&W PV1D active 400W DSP subwoofer, B&W CM two-way centre speaker 120W. Both white satin finish, unmarked, factory boxes and instructions £850: **01908376966 (Buckingham).**

ART AUDIO Concerto Mk 2 valve power amp, 60W per channel, cost £3K new £1,500. Quad 909 power amp, boxed £550: **01225706783 (Wiltshire).**

NEAT Motive 1 floorstander loudspeakers in cherrywood. Excellent condition £550 ono: **07816758688 (London).**

FOCAL Electra 1027BE speakers (burgundy). Excellent condition with original boxes (£4,000) £1,500 ono. Buyer collects: **07913236601** or email: **farrow_jim@hotmail.co.uk (Essex).**

HEED Obelisk Si Mk3 amplifier plus dedicated Sx power supply. Latest version with increased power output. In immaculate condition comes fully boxed. Cost £2,000 new will accept



AUDIO PHYSIC Virgo 5 speakers in maple, complete with original packaging, excellent condition £1,950: **01243582411 (West Sussex).**

£1,000: **01934521621** or email: **stemar2@me.com.**

MUSICAL FIDELITY M6i amplifier, silver, mint condition, smoke/pet-free environment with all packaging. Less than 100 hours use. RRP £2,500, would like £1,125: **01902884694** or email: **jukey39@yahoo.co.uk (West Midlands).**

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Metrum Acoustics Hex DAC with USB module. Cost new £2,500, asking £1,500:

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NAIM Flat Cap power supply. Little used. £150: **07785724849. (South Oxfordshire).**

NORDOST Blue Heaven Rev 2, 4m pair of speaker cables £375. Leema Pulse amp £750. Leema Pulse CD player £700. Sonneteer Champion amp £750: **07443859527 (Huddersfield).**

MUSICAL FIDELITY A5 cr preamp and 2x A5 cr power amps. All boxed, remote and manuals, mint condition, little use £650 each or £1,800 for all three: **07917591327 (Abbey Wood, London).**

DENSON Beat 400+ CD player, Sony Professional Walkman cassette player recorder £120 ono: **01623230472 (Ashfield, Notts).**

PROAC Response 2.5 speakers in mahogany, as new with original boxes £790: **07851190312 (Stafford).**

NORDOST Blue Heaven 2m pair of speaker cables, bargain at £100 ono: **01484427426 (Huddersfield).**

CREEK Evolution 5350 amp £425 boxed, Creek Evolution 2 CDP £175. Both silver, both remotes, power leads. Superb combination, selling due to upgrade it is: **07903578225** or email: **dibster1@yahoo.co.uk (Salford, Manchester).**

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YAMAHA NS10-M Studio loudspeakers, VGC £350, JBL L88 large monitors VGC £200, Thorens TD125-MK2, SME 3009 MK Improved, Grado Prestige Black, great example £495, Pro-Ject Phono Box SE MM/MC, mint £50. Buyer to collect: **01371850665** or email: **garyrobinson20@btinternet.com.**

SPENDOR SP2 (oiled walnut) and stands. Downsizing of home very



CYRUS CD6 black, very good condition with remote £100: **07730477564 (West Midlands).**

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!

reluctantly forces the sale of my much loved SP2s. £350. Buyer collects: **07814704344, or email glyn.s.foster@gmail.com (South Yorkshire).**

WILSON BENESCH Square Two floorstanders. New series 2 with flush mount drivers – brand new, never used and still in unopened boxes. Beautiful burr walnut, and lovely detailed sound. List £3,000, asking £2,300. Won't post – pick up or possible delivery: **07740 961647.**

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MUSICAL FIDELITY A3.2 RDS tuner £290. British built, boxed and without blemish. Covered and kept clean since unboxing. Very carefully and lightly used: **07500 804700 or email: imeldayates@hotmail.com (Cheshire).**

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oremail: redeye@talktalk.net (Isle of Wight).

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LAVARDIN IS integrated amplifier, purchased ex-demo from Audio Works Oct 2015. Mint condition. £900. Chord 2Qute DAC with Chord VEE3 BNC/RCA cable £700. All boxed: **01978769177 or email: cawarra@tiscali.co.uk (Wrexham).**

QUAD 22L floorstanding speakers, piano rosewood gloss finish. Immaculate condition as new. £250 ono: **07782 242190 or email: SUEBILLS53@yahoo.co.uk (Dudley, West Midlands).**

CAMBRIDGE AUDIO T55 tuner, silver, upgraded by Cambridge. Very good condition with box, manual, and circuit diagram. £35 plus carriage: **01275 872777 (North Somerset).**

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MICHELL Orbe SE (DC version)/Rega RB1000/Lyra Skala: £1,650. Krell S-350a CD player with Esoteric transport: £1,500: **07748 485668 or email: pbjernkl@yahoo.co.uk (London).**

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PRO-JECT 6 Perspex, Ortofon Blue cartridge. Arcam Solo: 2x 75W, CD, DAB. £550 each: **07866 334534 (Hants).**

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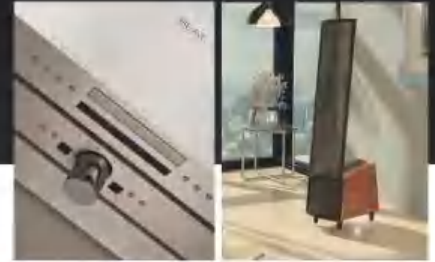
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