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Hi-Fi Choice

PASSION FOR SOUND

Issue No. 391

December 2014

Stand tall

Six floorstanders to raise the roof!

EXCLUSIVE
hi-fi show
preview
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PRODUCTS ON TEST:

Bose, B&W, Elac, Focal, Hegel & Polk Audio

Super tune

Optimise iTunes for hi-res audio playback



Groovy love

Hot Flamenca deck to make your vinyl sizzle

Music maestro

The best new releases, plus jazz legend Impulse! Records profile

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EXTREME?

IT IS NOW!



audioquest



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headphones



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Elac
Air-X 403
wireless
loudspeaker

Music reviews



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Marianne Faithfull Give My Love to London

BADGES EXPLAINED

OUR AWARDS



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



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



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



Welcome to the December 2014 issue of your favourite hi-fi magazine. Okay, you may well be reading this in late October and understandably not quite ready to start thinking about the festive season just yet, so there's plenty of hot new hi-fi kit and audio tweaks to get excited about in the pages that follow, from Naim's ultra-stylish all-in-one mu-so hi-fi system to more traditional separates components from the likes of Acoustic Energy, Yamaha and Norwegian newcomer Hegel. All are certain to keep your hi-fi passion alight and your music sounding great over the long, dark winter nights that lay ahead. Hey, there may even be something you can add to your Christmas wish list after all, or even a gift idea for someone that loves to listen to music as much as you do.

If it's inspirational or even aspirational hi-fi you're after, then this is indeed a fantastic time of year. The hi-fi show season is well under way, and what's more the high-end Hi-Fi Show returns to the Beaumont House Estate, Old Windsor for the second year running. Hosted by our sister magazine *Hi-Fi News & Record Review* and AVTech Media, the two-day, high-end audio event held on the weekend of 1 and 2 November will showcase a spectacular lineup of hi-fi for audiophiles and music lovers alike. With informative demonstrations by industry specialists, it looks set to be a spectacular audio event that you won't want to miss – see page 16 for the full show preview and ticket information. See you there!

Lee Dunkley Editor

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“With just a few simple mouse clicks you can make iTunes ripe for hi-res music files”

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Never miss an issue – turn to p114 for our latest subs offer

Welcome back

The legendary Technics audio brand is set to return just in time for its 50th anniversary

PRICE: TBC **AVAILABLE:** DECEMBER **WEB:** TECHNICS.COM/UK

AFTER YEARS IN the wilderness missing in action, a legend of the hi-fi world is making a welcome return. We are of course talking about the reappearance of Japanese hi-fi brand Technics, whose resurrection caused something of a stir in audio circles at the recent IFA show in Berlin, thanks to the launch of two quite distinct new ranges.

First up is the more affordable Premium Class C700 series (pictured below), which includes the SU-C700 integrated amplifier, ST-C700 network audio player and SL-C700 compact disc player. The SU-C700 amplifier has three coaxial inputs, optical and analogue inputs as well as a USB port. There's no mention of output watts per channel just yet, but Technics hasn't forgotten vinyl fans and will include a MM phone stage. The ST-C700 network audio player is compatible with music file formats up to 24/192 and 32/192 with DSD files. It has USB A and B inputs along with coaxial, optical and RCA outputs and will offer aptX Bluetooth support.

The SL-C700 CD player features twin Burr-Brown PCM1795 DACs and connections include optical, coaxial and RCA outputs. The C700 components are accompanied by the SB-C700 standmounted speakers fitted with a point-source 19mm aluminium dome tweeter and 160mm mid bass driver.

Perhaps of more interest to hi-fi aficionados is the Reference Class R1 series. The piano black floorstanding SB-R1 speakers weigh in at 76kg and boast six drivers: a 25mm carbon graphite dome tweeter and 160mm point-source midrange with four 160mm bass drivers. The SU-R1 network audio control is set to handle music file formats up to 24/192 and 32/384 with DSD files, and boasts a wealth of connections. At the time of writing there was no info on the likely output power of the SE-R1 amplifier, but we can tell you that it weighs in at hefty 55kg and has bi-wiring speaker terminals. Prices are also yet to be announced, but both ranges will be released in Europe first in December.



Technics' resurrection caused something of a stir in audio circles at the recent IFA show in Berlin



COMMENT

THE GREAT MUSIC GIVEAWAY

"Music has become tap water, a utility, where for me it's a sacred thing, so I'm a little offended" said Paul David Hewson (aka Bono) speaking to *US Today* back in 2009 when he was asked about how illegal downloading was going to lead to the end of music as we know it. Fast forward five years and owners of iPhones across the world woke up to find that a free version of U2's latest album, *Songs Of Innocence*, was now in their iTunes library, whether they wanted it or not. So what's changed? Why is the self-proclaimed saviour of the free world now happy to give his music away for nothing? After all, isn't it supposed to be sacred or something?

Far be it from us to suggest that Bono lets out more hot air than an industrial-strength hair dryer, but it's quite a jump from lambasting those that illegally share and download music to then give the stuff away for free anyway (in an arrangement that sees his band suckling from the corporate teat of the beast that is Apple). Whether or not the fact that Bono and his band mates are able to offer up their latest magnum opus for free indicates that they have more money than sense or that there are still plenty of ways to make bucketloads of cash in the music industry are debates for another time, but this appears to be a precedent that could change the way music is distributed, and it's a rather sinister-looking one.

It's not so much that Big Brother is watching us on this occasion, but it is as though he's trying to tell us what we should be listening to. In the same way that we take time, effort and money putting together the perfect system, the music that's played on it should be carefully considered and hunted down with serious thought and consideration. We don't need to be told what we should listen to and we certainly don't want it quietly sneaked onto our devices while we sleep without us knowing. What next, people listening to our phone calls, reading our texts and monitoring our web use... ▶



Urbanite cans

Introducing Sennheiser's new on-ear and over-ear headphone range, plus some new in-ears too

PRICE: £90-£200 **AVAILABLE:** NOW
WEB: SENNHEISER.CO.UK

HEADPHONE SPECIALIST SENNHEISER has introduced a new in-ear addition to its Momentum range and its new Urbanite headphones at the IFA show in Berlin. The £90 Momentum In-Ear is available in two variants (one optimised for Apple iOS and one for Android and Windows smart devices). It features new proprietary transducer technology developed by Sennheiser to provide a powerful bass response, detailed vocal projection and a great sound stage, claims the manufacturer.

The on-ear Urbanite and over-ear Urbanite XL are also designed with bass as a major consideration for those that "like their tunes heavy", while ensuring decent levels of clarity throughout the frequency range, we're told. Like the Momentum In-Ear, the Urbanites are available optimised for Apple or Android/Windows and come in black, sand, denim and 'nation' finishes for the former and black and denim for the latter. An olive version of the Urbanite XL and a plum variant of the Urbanite is also available for Apple users. Prices vary according to finish from £150 to £200.



IN BRIEF

MEET THE NEW R1 DAB+ RADIO



Now into its third generation, Ruark's R1 is the product that marked the company's transition from loudspeakers to compact audio systems. Though the cabinet of the iconic table radio looks similar to previous models, the R1 mkIII now incorporates Bluetooth for wireless audio streaming and a USB port for charging of portable devices. There's a switchable aux input for MP3 players or other devices alongside DAB, DAB+ and FM tuner. The R1 also incorporates a new OLED display and Rotodial control system for easier operation. It's available now in rich walnut veneer with a choice of soft white or black lacquers for £199. **RUARKAUDIO.COM**

Sony unveils Hi-Res goodies

PRICE: £170-£549 **AVAILABLE:** NOW
CONTACT: 0207 3652810 **WEB:** SONY.CO.UK

Sony's assault on the world of hi-fi continues with a new series of products aimed at getting the best out of high-resolution music.

Claimed to be the world's smallest and lightest hi-res audio player, the new Walkman NWZ-A15 boasts a 16GB memory and compatibility with FLAC, Apple lossless (ALAC), MP3, AAC, HE-AAC, WMA and linear PCM (WAV) or AIFF files. Digital Sound Enhancement Engine HX technology is on hand to upscale compressed sources to surpass CD quality by recreating lost high-frequency information, Sony claims, and battery life is quoted at 30 hours for hi-res sources and 50 hours for plain old MP3. It's available now for £170.

For those that want to listen to hi-res audio without disturbing others, there's the MDR-Z7 closed-back headphones that envelop the ears. Fitted with a 70mm HD driver unit the cans claim a frequency range of 4Hz to 100kHz. They cost £549.

Alternatively, there's the MDR-1ADAC closed-back cans, which incorporate an integrated DAC accepting signals up to 24/192 or DSD files. They are charged via USB, offer up to 7.5 hours of listening and cost £249.

Finally, the PHA-3AC headphone amplifier handles up to 32/384 DSD music files from your device's digital output to provide what Sony claims is a spacious, three-dimensional soundstage. It's yours for £549.

The PHA-3AC headphone amplifier, Walkman NWZ-A15 and MDR-1ADAC headphones



“The Truth, nothing more, nothing less...”



“This level of performance,
convenience and style makes for
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Jeff Dorgay, Tone Audio Magazine, January 2013



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Paul Rigby, Hi Fi World, March 2013



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O'Brien Hi-fi, 60 Durham Road, West Wimbledon,
London Tel: 020 8946 1528

The Audioworks, 14 Stockport Road, Cheadle,
Cheshire, SK8 2AA Tel: 0161 428 7887

www.avidhifi.co.uk

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Icon's new triode amp

Designed as a birthday gift to himself, founder David Shaw believes he's struck gold

PRICE: £12,500 PER PAIR **AVAILABLE:** LATE 2014
CONTACT: 0116 2440593 **WEB:** ICONAUDIO.COM

DESCRIBED BY ICON Audio's founder, David Shaw, as fulfilling a lifelong ambition, the MB81 monoblocks were given their first public airing at the National Audio Show. David tells us that he's worked long and hard to overcome triodes' biggest weakness: limited power output. After discovering a quantity of "new old stock" Russian GU81 transmitter valves, Shaw has constructed a final pre-production prototype that's thought to be the world's first push-pull GU81 amplifier.

At 260mm high and weighing in 1kg each, the GU81 is being heralded by Icon as a truly majestic valve that's been hand picked for its combination of fine resolution, enthralling musicality and immense power. The result is a Pure Class A triode front end combined with hand-wired, silver-plated pure copper PTFE audio cable claimed to deliver 200W RMS into 8ohms. Icon Audio plans to produce the monoblock amplifiers in limited numbers, but a launch date is yet to be confirmed.



IN BRIEF



PROTECT YOUR CHORD HUGO

Designed specifically for owners of Chord Electronic's Hugo DAC/headphone amplifier, comes this luxurious leather case. Available in black leather or natural tan finishes it's been designed to allow full access to Hugo's controls, LED indicators and in/outputs while ensuring your DAC stays protected when out and about. There's a series of elasticated webbing straps for attaching your portable device of choice, allowing access to touchscreens and controls and it's available now for £99. **CHORDELECTRONICS.CO.UK**

Denon's new HEOS range

PRICE: £249-£499 **AVAILABLE:** NOW
CONTACT: 02890 279830 **WEB:** HEOSBYDENON.COM

Denon has unveiled a trio of wireless loudspeakers designed for use around the home. With the family name of HEOS, they are claimed to be simple to connect to an existing wi-fi network for streaming of music from portable devices, PCs, Macs and NAS drives.

The entry-level HEOS 3 is the smallest offering (pictured third from left). It has dual Class D digital amplifiers and two full-range precision drivers inside its ported enclosure. Designed for smaller spaces it can be positioned either horizontally or vertically and it's available to buy for £249.

Next up is the £349 HEOS 5 (pictured second from left), which

incorporates two precision tweeters, two mid/bass speakers and a passive radiator. Each of the four active drivers is powered by its own dedicated Class D amplifier and the speaker is compatible with high-resolution lossless audio files.

Completing the trio is the HEOS 7 (£499), which Denon informs us is able to fill even the largest open spaces. Boasting dual mid-woofers, dual precision tweeters, dual passive radiators and an active subwoofer, it again includes Class D digital amplifiers for each of the active drivers. Like the other HEOS speakers, sound is optimised via a suite of precision DSP acoustical processing algorithms that -

according to Denon - originated in the recording studio. All speakers can be operated by the HEOS app, which allows you to control multiple speakers separately or play the same music across the entire house. The app is available free for Android and Apple smart devices.

Completing the lineup is the HEOS Link (£299) and HEOS Amp (£399). The Link is a stereo preamplifier (far right), that can be plugged into existing hi-fi to allow it to connect to a home network. The HEOS Amp, meanwhile, is a 100W per channel Class D amplifier for connection to existing loudspeakers. Find out more at: youtube.com/watch?v=sWrisxa3YAw.



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Black Rhodium

Cable manufacturer releases five new speaker wires

PRICE: £375-£2,400 **AVAILABLE:** NOW
CONTACT: 01332 342233 **WEB:** BLACKRHODIUM.CO.UK

CABLE SPECIALIST BLACK Rhodium has announced details of a quintet of new wires for hooking your speakers up to your system. They all come in a choice of 3m or 5m lengths, and combine the technical construction of the Twirl (tested *HFC* 387) and Samba cables.

First off is the Iris (£375/£475), which is terminated with Rhodium-plated 'Z' connectors, chosen for their superior sound quality. The Solo DCT++CS (£900/£1,200) is the first Black Rhodium speaker cable to use the company's Crystal Sound process, which claims sonic

benefits. The Samba VS-1 (£599/£733) boasts Vibration Stabiliser tech to limit distortion and comes with Rhodium-plated banana plugs. Meanwhile, the Duet DCT++CS is available as single (£1,300/£1,800) or bi-wire (£1,450/£1,950) options and also has Vibration Stabiliser and Anti RFI/EMI technology to minimise distortion. Finally, the Athena DCT++CS (£1,600/£2,400) utilises thicker insulation to reduce low transient phase distortion. For more in-depth details on all these speaker cables, check out its website.



IN BRIEF



NEW X BLOCKS

● Russ Andrews Accessories has unveiled a brace of new mains extensions with built-in Silencer technology to complement the already successful X2 Block. The X4 Block and X6 Block are designed to supply connection for up to four or six pieces of equipment respectively and feature high-performance Ultra Sockets with DCT-treated nickel-plated high pressure contacts. Each Block is also fitted with SuperClamp surge protection, while the aforementioned Silencer main filter suppresses interference from devices like refrigerators and cheap switched-mode power supplies. They're available to buy now and cost £259 and £349 respectively.
RUSSANDREWS.COM



ROOMPLAYER+

● The latest series of updates to Simple Audio's Roomplayer+ includes the addition of Qobuz – the hi-res audio streaming website. This means that Roomplayer+ owners will now be able to stream hi-res audio files at resolutions as high as 16-bit/44.1kHz as well as playing any 'Studio Master Quality' tracks purchased and downloaded from the Qobuz store at their full 24-bit/192kHz resolution. Additional updates mean that Roomplayer+ owners will also benefit from improvements to the way NAS drives are handled and character support for UTF-8. The version 3.3 update is available now.
SIMPLEAUDIO.COM



Kudos' new floorstander

PRICE: £2,145 **AVAILABLE:** NOW **CONTACT:** 0845 4586698 **WEB:** KUDOSAUDIO.COM

Featuring the same high-quality tweeter as its smaller X2 'baby floorstander' sibling (reviewed back in *HFC* 347) the new X3 is somewhat larger and boasts a new main driver. Constructed from a mixture of paper and reed fibres, the new 18cm driver is claimed to improve transient and dynamic response alongside overall clarity. It features a copper-clad aluminium voice coil and copper shorting ring and like the tweeter, is manufactured by Norwegian specialist SEAS. The cabinet itself is constructed from 18mm high-density MDF and is tuned to minimise colouration and time smear. There's a reflex port situated at the bottom of the cabinet and all internal wiring comes courtesy of The Chord Company's Sarsen loudspeaker cable.

The X3 has a claimed sensitivity of 88dB, impedance of 8ohms and boasts a frequency response of 30Hz to 25kHz according to Kudos. Designer Derek Gilligan told *HFC*: "We developed the X3 to be easy to drive and to bring out the best in a wide variety of music". Available to buy now, it comes in a choice of lovingly-crafted cherry, walnut, rosenut, oak, black or satin white finishes.

Webwatch

Andrew Simpson casts an expert eye over his pick of the best hi-fi websites and online content



YouTube #SennheiserUrbanite
We can't stop laughing at these **#EarLove** videos from **@SennheiserUSA** featuring a walking, talking headphone declaring its undying love for a massive comedy ear to promote its latest cans. See: youtube.com/watch?v=wHYcza8E3g8



Making vinyl

Want to know how vinyl is made? Then head on over to The Vinyl Factory's website for a picture-led walk through from growing the master stampers through to selecting disc centre labels. A superb insight into how much work goes into producing this legendary format: bit.ly/1vnB6bO



Instagram Grado glamour
Instagramers and headphone fans should head on over to Grado's new channel to see stunning pics and latest giveaways showing why this family-owned business' distinctive style makes its cans stand out from the crowd. Why not post a pic of your prized Grados? instagram.com/gradolabs



Twitter Ruark rewards
Ruark Audio has updated its R1 adding Bluetooth streaming, and to celebrate it's giving away a special edition Alison Moyet signed R1. Simply RT and share on Twitter and Facebook before 30 Nov to take part: twitter.com/ruarkaudio



Twitter Blogs from the hi-fi lounge

Bedfordshire's Hi-Fi Lounge is all about the customer experience and its Tumblr blog shows why its community is as important as the hardware. With entries from show coverage to product open days, there's plenty to get involved in. A recommended read: hifilounge.tumblr.com/archive



YouTube Sound vibrations
Top marks to **@PMCSpeakers** for recommending this fascinating YouTube video from Abe Davis' Research in its tweets exploring how video can be used to recover sound by capturing visual vibrations when sound waves hit everyday objects: youtube.com/watch?v=FKXOucXB4a8

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Celebrate the retro - today is Cassette Store Day! Check out the exclusive releases - cassettestoday.co.uk **#CSD2014** pic.twitter.com/ExCv4QAa4r

MUSIC FIRST AUDIO (@MUSICFIRSTAUDIO)
Today I joined twitter. Hello Music lovers.

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@linnproducts has announced the new Akudorik Speakers and Exaktbox! On dem in the next few days, arrange a visit!

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HIFIX (@FRANKHARVEYHIFI)
FRANK HARVEY OPEN DAY... ARE YOU EXCITED?... Saturday 29th November is the day this year, so stick it in your diary fb.me/1VqF5NBVv

STONEAUDIO.CO.UK (@STONEAUDIO)
Calling all Naim customers: New **@NaimAudio** App for iOS available to download now, love it...

DIVERSE VINYL (@DIVERSEVINYL)
Thanks to everyone who came along to our stall **@AudioShowUK** over weekend. It was nice to see all the show regulars out in force!

NEBULA NINE (@NEBULANINE)
Nebula Nine & **@AudioLounge** summary of **@AudioShowUK** : Best in show goes to **@TannoyHiFi @WilsonAudio @dCSonlythemusic** pic.twitter.com/7fzFDuaEND

CAMBRIDGE AUDIO (@CAMBRIDGEAUDIO)
Ever found yourself wondering "Do I need a DAC?" Then we wrote this for you: t.co/eNvgDDBuah

CHORD ELECTRONICS (@CHORDAUDIO)
Hot DSX1000/CPA3000/SPM1200MKII system on dem at Home Media, Maidstone, our local hi-fi shop! goo.gl/qGybWu

Polk RTi Series

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RTi A1

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LAST YEAR'S SHOW...



Wilson Audio's director of sales Peter McGrath (left) and Absolute Sounds' Ricardo Franassovici with Wilson Alexia



The Hi-Fi Show 2013 provided the first opportunity for UK enthusiasts to experience the cream of the high-end



Songstress Eleanor McEvoy entranced privileged show visitors with her half-hour live performances

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- Greece – Hxos Eikova
- Hungary – Sztereo Sound & Vision
- Italy – AUDIOreview
- Norway – Watt
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- Spain – AV Premium
- Sweden – Hifi & Musik
- Ukraine – Stereo & Video



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Workshops



John Bamford
Hi-Fi News magazine



Alan Sircom
Hi-Fi+ magazine



Matthias Bode
Stereo magazine



Paul Miller
Hi-Fi News magazine

Hi-fi magazine editors and key contributors will present a series of *Hi-Fi News* Workshops, hosted by exhibiting manufacturers and distributors. Can you hear the difference between WAV and FLAC files? Wondered how loudspeaker time alignment affects imaging? Want to hear the difference between Ethernet cables? All these topics and more besides will be explored in our unique Workshops.

Box of delights

David Price lives a life of style and sophistication with Naim's new mu-so compact hi-fi system





There have always been mass market consumer audio products, and there has always been hi-fi. Several decades back the two were clearly delineated, but nowadays we're seeing the mass consumer electronics market – now catered for by the likes of Apple – moving upmarket and eating into entry-level hi-fi products. Hi-fi manufacturers are now fighting back, making quality 'lifestyle' products like this one.

Traditionally, the high-end audio (as opposed to 'hi-fi') market was the sole province of Bang & Olufsen, with a minor supporting role played by Bose. This is in effect where Naim has aimed the mu-so – at savvy, style-conscious music lovers who can't be doing with the clutter of separates in their compact, bijou apartments. In truth, it's an audacious push; just because you're a great hi-fi brand doesn't mean you have the necessary

It retains a sense of rhythmic integrity that seems to defy the laws of physics

skill set to take on a company like B&O that has produced some sublime designs that sound decent and are nicer to use than anything anyone else has ever made.

Effectively, this is a box with loudspeakers, amplifiers, DSP and a network-enabled preamp all built in. To my knowledge, it's the second Class D design the company has done, the first being the (fine sounding) Naim for Bentley auto installation. It streams music from network-attached storage, smartphones, tablets, USB sticks and ye olde MP3 players, and can work as a standalone system or part of a multi-room setup.

Music comes via AirPlay (from Apple iDevices), or from the UPnP streamer. There's also aptX Bluetooth, which is what many will use. It plays internet radio and works with Spotify Connect. There's also a USB socket (which can play out the digital signal from an iPhone, iPad, iPod – or off a USB stick). There's an optical digital input too for DVD players, gaming consoles etc. and a 3.5mm analogue input, although disappointingly no RCA phono sockets.

As our main picture shows, the mu-so sports six drive units behind its front grille (which is removed in the photo). The complement includes two tweeters, twin midband drivers and two elliptical 'figure of eight' bass

▶ DETAILS

- PRODUCT**
Naim mu-so
- ORIGIN**
UK/China
- TYPE**
One-box system
- WEIGHT**
13kg
- DIMENSIONS**
(WxHxD)
628 x 120 x 256mm
- FEATURES**
 - UPnP; aptX; AirPlay; wi-fi
 - Ethernet; USB type-A; optical digital and 3.5mm analogue inputs
 - 24-bit/192kHz DAC
 - Claimed output power: 6x 75W
 - Support for WAV, FLAC and AIFF (24/192); ALAC (24/96); MP3; AAC; OGG and WMA
- DISTRIBUTOR**
Naim Audio Ltd
- TELEPHONE**
01722 426600
- WEBSITE**
naimaudio.com



units; the latter chosen to maximise the cone size despite the slimline dimensions of the front baffle. In a nod to the famous Linn/Naim 'Six Packs' of the eighties, they are actively driven by six (STMicroelectronics TA516B/STA311B 75W Class D) amplifiers. The mu-so's cabinet is reflex-loaded with a ribbed and flared port.

Clever digital signal processing is featured in the brain of the mu-so; a 32-bit Cirrus logic CS47024 DSP

The mu-so proves able to image way beyond its own physical boundaries

chip runs code that has been custom designed by Naim engineers. As well as tying together the active speaker drivers, it gives optimised equalisation settings for two different positions within a room – close to and away from the rear wall. It also features a loudness compensation curve to address the way the human ear fails to hear low bass or high treble at low volumes.

Naim says the design of the mu-so shares some formal elements of the company's top Statement series of amplifiers. The quality of the materials and there's an echo of classic B&O in the wide expanses of brushed aluminium and the silver heat sink that runs from one end of the case to the other. The touch-

sensitive volume control, with its ring of bead blasted, anodised aluminium is an interesting feature too – and like Spinal Tap's guitar amps, it goes up to 11! The unit comes with a black speaker grille as standard, but there are Deep Blue, Burnt Orange and Vibrant Red options for an additional £70.

Design statement

The packaging of the mu-so was designed by Naim engineers in conjunction with a consultant professor from Queen Mary, University of London. Given the wide variety of functions it has, and the relatively compact space, this was more of a challenge than you might think. On one hand there was a need to offer a largely unimpeded enclosure for the loudspeaker drive units, and on the other there was a lot of space required for the amplification and preamp sections. One result of the collaboration, says Naim, is the patent-pending embedded wi-fi antenna system, where two hidden printed-circuit slot antennae – one between the bass drivers and one inside the rear heat sink – work in combination with a dual-channel diversity receiver to give a better wi-fi link, despite the mu-so's metallic shell.

Getting going is relatively easy if you've got the quick start guide, although nigh-on impossible without it; there's a precise procedure to follow to get it talking to your network and/or devices

wirelessly. Another challenge is placement; it's a pretty large product for a one-box system, and puts a great deal of energy into the surface it's sitting on, especially at high volumes – so you don't want to place it on a rickety chair! I find that it needs a firm foundation for the tightest bass.

Sound quality

I haven't heard anything quite like the mu-so before. Of course it isn't a large, expansive two-channel separates system, but nor does it give anything like the sort of shut-in sound you get from other one-box designs. Instead the baby Naim inhabits a different world, one that fills a medium-sized room with sound in an effortless way despite not being a full-sized system. Not only that, it isn't just 'sound' that it makes, but a convincingly musical performance that has an integrity and a rightness that you don't expect from a single box such as this.

I discover that the mu-so is too good to secrete just anywhere in the room; it works best a good way from rear or side walls, where it can breathe properly. The bass never booms, but is nicest about 50cm out into free air, with the unit firing in the direction of the listener roughly at ear level. This done it gives you a commanding performance, seeming to do the reverse of the 'music squeezed through a toothpaste tube' effect. Its front speaker baffle is small, yet the scale of the music completely belies this. It has a TARDIS-like quality, except the other way around where what comes out is far larger than from where it came.

Tonally it's surprisingly neutral when correctly sited. Bass is really taut and a good deal more extended than you might expect, although you never get the subterranean growl of the bass line from Supertramp's *Child Of Vision* that you'd find in a full-sized hi-fi. Its ability to reproduce the middle and upper notes of the bassline is excellent, though, as well as conveying the keyboard work of Roger Hodgson in a crisp, undiluted way. The talent that the Naim has at distinguishing between different strands of the mix regardless of how loud or quiet they're playing marks it out – I've never heard any similarly priced or sized one-box system do the same. Its combination of clarity and power is genuinely special.

The midrange isn't as expansive or as translucent as a separates system, but again it's so much better than a normal one-box offering. It lets you follow the flow of the music, listen



The mu-so has no direct competitors, but probably its closest rival is the Bose Wave music system III. £680 buys you this ageing but commercially very successful unit, complete with an additional Bluetooth adaptor. It sports a CD player, DAB/FM/AM radio and non-aptX Bluetooth from mobile devices. It is extremely easy to use for pretty much anyone. In contrast, the Naim needs more perusal of the instruction manual, but the upside is the dramatically better sound. Actually, the Bose sounds better than you would think just by looking at it, but it's still no match for the Naim which completely outclasses it in terms of clarity, scale, detail, and overall musicality. The mu-so is on a higher level to the Wave system in every respect, aside from brand awareness.

IN SIGHT

TOP VIEW

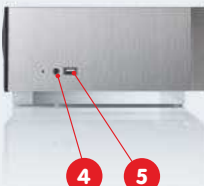


BOTTOM VIEW



- 1 Touch-sensitive interface
- 2 Ethernet port
- 3 DC power socket
- 4 Optical digital input
- 5 USB input

SIDE VIEW



WIRELESS TECH

Key to the mu-so's appeal is its wireless connectivity. Naim has established itself as the provider of excellent uPnP streaming products, and the mu-so benefits from this; whether via wired (Ethernet) or wireless (wi-fi), it sounds excellent regardless of resolution. It proves a brilliant partner to a RipNAS, offering speedy and glitch-free access to my burgeoning digital music library. The optical digital input goes up to 96kHz, and sounds no less good; it's ideal for porting the sound of a Blu-ray player, for

example. You can also play CDs this way and I get excellent results from a standalone CD transport, although most users will think this is overkill. The analogue input is good too, and it makes a nice noise with the USB input fed by an Apple iPad. Speaking of which, there's a neat app for iOS and Android devices that makes it much easier – and nicer – to use than manually or via the remote. It also gives easy access to Naim Radio presets and Spotify Connect, as well as extended metadata from your NAS device.

into the mix and enjoy things just as you should. Indeed it's remarkably uncompressed and unconstrained; you can even feed it pounding house music like *Who's In The House* by The Beatmasters, and it doesn't get flustered. It goes loud and retains a sense of rhythmic integrity and dynamic ease that seems to defy the laws of physics. Because of this, music seems easier to listen to than you'd expect from something this size. At first there's a sense of subconscious confusion while your ears attune to what they're hearing, rather than what you expect to hear.

Feed it a Deutsche Grammophon recording of Beethoven's *Pastoral Symphony* and even this type of programme material comes over in an impressively natural, unalloyed way. Of course, it can't reproduce the space and the scale of the recording in its entirety, but it does capture the textural feel of the orchestra as well as the flow of the music that it's playing. It's also good at signposting differences in dynamics, so you can really sense how the music broods then builds up to a crescendo. The treble performance of the mu-so surprises here too, giving a spacious feel and marking out the recorded

acoustic well in spatial terms. Again, the unit proves able to image way beyond its own physical boundaries.

Conclusion

There's no doubt in my mind that the mu-so is a superb product; it's no substitute for a full-size hi-fi and doesn't set out to be, yet it provides music from a one-box system of a clarity and power that is absolutely exceptional.

Factor in its excellent wireless and streaming capabilities and it's an extremely persuasive package – for Generation X and Y alike ●

Hi-FiChoice

OUR VERDICT

- SOUND QUALITY**
★★★★★ **LIKE:** Sound quality; stylish packaging; connectivity; build and finish
- VALUE FOR MONEY**
★★★★★ **DISLIKE:** Styling won't win everyone over; wireless setup not intuitive
- BUILD QUALITY**
★★★★★ **WESAY:** Brilliant one-box music system with quality to spare
- FEATURES**
★★★★★

OVERALL



Q&A

Ryan Latham,
Communications director,
Naim Audio



DP: What type of customer is the mu-so aimed at?

RL: It's an elegant multi-room solution for our existing Naim streaming product owners and a complete digital music system that we hope will appeal to new customers looking for performance from a single box. Who knows, maybe they will get the bug and go on to discover other Classic or Uniti products? So Naim hasn't shifted to a new ground, on the contrary we continue to develop two-channel products for our core music-loving audience. If you want evidence of this just look at Statement, our flagship amplification system; we invest more in R&D today than ever before.

What rivals would you say that the mu-so is gunning for?

Mu-so was actually conceived as a high-performance, feature-rich all-in-one system, constructed from high-quality honest materials. The vision was to create a true Naim sound from a single small enclosure. A great product for new and existing customers, rather than focusing on what others are doing. Having said that, I've heard quite a few of the other products in this category and I think mu-so is stunning in terms of performance, no comparison!

What's most special about it?

The overall industrial design, which defies the built-in technology. For example, the patent-pending wi-fi antenna is built into the heat sink and the fastenings are hidden to help create a seamless aesthetic. I could list several more examples, but if you ask me for one stand-out feature it would have to be the touch interface and volume control. Not only is it mechanically beautiful, but it provides a direct connection between the user and the product. We felt that was essential, not only for control, but also to provide a joyful tactility that is missing in many app-controlled systems.

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

FLOORSTANDING LOUDSPEAKERS GROUP TEST

A loudspeaker will never sound at its best when factory fresh from the box, and will need time to free up properly to reach optimum performance. All six floorstanders here were given a minimum of 72 hours with the Isotek *Full System Enhancer* CD on repeat, plus an additional two days of music before any listening commenced.

Auditioning is done in the main listening room over a period of a week, during which time optimal placement is experimented with extensively. Each speaker is initially placed close to the rear wall and moved out into the room until the bass response is judged to be as even as possible. In the case with models that come supplied with foam bungs, these are tried in and

out. Toe-in is also experimented with; generally a few degrees is applied, which snaps the stereo image into focus and opens up the treble. When a final position is arrived at, the speakers are placed on Townshend Audio Seismic Speaker Platforms for better decoupling from the room than with conventional spikes. This long process ensures each loudspeaker is performing at its very best in the room.

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



BLIND LISTENING TESTS

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

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

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

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

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

REFERENCE SYSTEM

CD TRANSPORT
Cyrus CD Xt Signature

DAC
Chord Electronics Hugo

AMPLIFIER
Exposure 3010S2

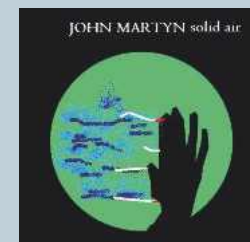
EQUIPMENT SUPPORTS
Quadraspire
Townshend Audio Seismic
Speaker Platform

TEST MUSIC

808 STATE
Ninety
Ancodia



JOHN MARTYN
Solid Air
Solid Air



JAMES TAYLOR QUARTET
Wait A Minute
Wait A Minute



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Ordinary World





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Group**test**

FLOORSTANDING LOUDSPEAKERS £400-£900

Take the floor

Thinking of moving to a floorstander?

David Price tries six mid-priced models

THE MOVE TO floorstanders first became popular in the nineties as hi-fi fans embraced the new range of big speakers offering larger cabinet volumes in a fairly compact footprint. The trend was arguably triggered by the introduction of Mission's 'tower' design loudspeakers with just about every speaker brand of the day following in the British maker's ground-breaking steps.

Many of the first floorstanding models were based on smaller standmounted speaker designs with the same drivers placed in larger cabinets a metre or so high. These new designs offered an appealing package to hi-fi fans as they were capable of delivering deeper bass with physical scale and power, thanks to the higher volume of air inside the cabinets that was far greater than their standmounted speaker equivalents. People quickly began to realise that another advantage to the floorstander was that they often sounded far less compressed and more open than their bookshelf siblings. They were invariably more

efficient too – making them easier to drive and go loud with the same amount of amplifier power – which was a very attractive bonus for many hi-fi fans using valve amplifiers and party animals alike.

Brace for life

For a while it seemed that the floorstander was indeed the shape of speakers to come, but big cabinets can be difficult to keep rigid over larger areas and subtle bends and vibrations of the enclosures caused by the movement of air can result in unwanted distortions if not sufficiently braced. Happily, internal cabinet bracing techniques and driver technology has really moved forward in recent years, and the results of the latest batch of floorstanders is very encouraging indeed. Despite advances, room placement is still the biggest consideration you'll need to make. Many of the models overleaf are front-ported designs but they will still perform at their best away from walls. To find out which models are likely to fit your room best, read on...

ON TEST



Acoustic Energy AE103 £550 p27

This well-executed British-designed floorstander has a build quality that's well above its price point and a specification that partners nicely done anodised aluminium cones with a soft fabric dome tweeter.



Bowers & Wilkins 684 S2 £800 p29

The second incarnation of the 684 is thinner than its predecessor thanks to the use of smaller drive units still utilising the brand's characteristic woven Kevlar cones. But how does the heavily tweaked S2 design fare against price rivals here?



Cambridge Audio Aeromax 6 £900 p31

Just 18 months after the launch of its Aero range comes the revamped Aeromax, complete with shiny cabinets, improved internal bracing and driver enhancements. It's the most costly model here, but will that be enough to take the spoils?



Dali Zensor 7 £730 p33

One of Denmark's most respected loudspeaker makers, Dali should always be on your audition list. The Zensor range has been around for a few years, and the 7 is its range topper with 7in mid/bass drivers, making it the largest model here.



PSB Speakers Imagine X1T £750 p35

It's the first time we've seen a model from PSB Speakers participate in one of our roundups, but this slim model from the Canadian-based brand's Imagine series looks ideally placed to do well against these similarly priced rivals.



Roth OLi RA4 £400 p37

Roth is perhaps better known for its desktop speakers, surround packages and DAB radios, but joins the hi-fi ranks here with what is arguably the group's most stylish model. How does it perform alongside more established hi-fi brands?





Lars & Ivan



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Acoustic Energy

AE103 £550

Although it's one of the smallest floorstanders here, this compact box gives nothing away in quality

DETAILS

PRODUCT
Acoustic Energy
AE103

ORIGIN
UK/China

TYPE
2-way floorstander

WEIGHT
14kg

DIMENSIONS
(WxHxD)
185 x 850 x 280mm

FEATURES
● 28mm fabric dome tweeter
● 2x 110mm aluminium bass units
● Quoted sensitivity: 89dB/1W/1m

DISTRIBUTOR
Henley Designs

TELEPHONE
01235 511166

WEBSITE
acoustic-energy.co.uk

Despite being the least physically imposing design of the group, you'd never think it's any way less well built than the others here; it's a heavy and sturdy speaker for its size. The gently sloping front baffle gives it a distinctive appearance and the bright metal trim rings around the drivers lend a classy look.

This is a very well executed small floorstander, offering a lot for the price. Our AE 103 comes in vinyl-wrap walnut, but it is done well and black and gloss white are options too. The drive units are bolted into the well damped, rigid cabinet and loaded by the manufacturer's trademark, distinctive slot-shaped reflex port. This is at the bottom of the front baffle, which is a wholly good idea because it makes the speakers far less sensitive to placement near boundary walls; I find that they work well as close as 20cm

from a rear wall. Round the back you get a single pair of non-bi-wirable binding terminals.

Sound quality

The AE 103 has a bright, snappy and enjoyable sound that has a naturally musical nature and a good bit of power for when required. It's decently tight, taut and composed. One listen to 808 State's *Ancodia*, and you're in no doubt that it's quite a different animal to many others here.

You can hear the tweeter adding just a little liveliness to the proceedings; hi-hats and the top harmonics from snare drums seem a lot better lit. By the general standards of the group, though, tonal balance falls around the middle; not too sharp or too soft. Bass has a good deal of bounce and extension; it doesn't go quite as low and nor does it quite have the effortless feel that larger loudspeakers like the Cambridge and Dali have, but it's not too far off. The only real letdown is a slight muddling of the attack transients on some of the complex, looped, sequenced electronic bass; there's a bridge about two thirds of the way through the track when the AE 103 seems to momentarily lose its composure in the low frequencies.

Generally it proves a great dance music speaker, and works really well with other types of music. *Ordinary World* displays a good tonality with plenty of space to the recorded acoustic. It certainly doesn't seem as compressed as some, although ultimately the Cambridge Audio does better. In speakers there's no substitute for cabinet size when it comes to delivering a large, easy sound and the AE 103 is a prisoner of its petite dimensions. *Solid Air* shows a good tonality, but again the tweeter lends the music an edge that gives the balance a boost in some respects. It's a fine speaker and responds well to good amplifiers and sources. Properly set up you can enjoy its good rhythms and dynamics, and sense of musical flow. A seriously impressive performer at the price ●

GAME CHANGER

Acoustic Energy made its name back in the late eighties with the AE1. This seminal mini-monitor was a game changer, because it introduced metal cones to a popular size and price class. The AE 103 also runs anodised aluminium cones, but they're a good deal more sophisticated than the first AE speaker in their general detailing. This cone material is rigid and gives crisp, detailed, finely etched sound – it's still fairly unusual to use metal mid/bass units these days, and this goes some way to explaining the speaker's distinct character. It runs two mid/bass drivers together, making it a two-way design but able to shift more air than if it sported just the one 110mm drive unit. The 28mm tweeter isn't the usual aluminium dome you'd expect to find on a budget-to-mid priced design; instead it's a fabric dome, which should have a generally smoother and softer nature than a metal equivalent.



The distinctive bass port is classic AE

Hi-Fi Choice

OUR VERDICT

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

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

BUILD QUALITY
★★★★★ **WE SAY:** Great value compact affordable floorstander

EASE OF DRIVE
★★★★★

OVERALL



ortofon

accuracy in sound



Q uintet

Since 1948 Ortofon have introduced nearly 100 different moving coil pick-up cartridges to the hi-fi market. Their latest models in this long and proud heritage are the Quintet Series.

All Quintet cartridges use the same ABS thermoplastic bodies and neodymium magnets, but each model in the range has its own sonic expression that reflects its status. From the well-rounded **Quintet Red**, through the smooth **Quintet Blue** and spacious yet dynamic **Quintet Bronze** up to the pure audio excellence of the **Quintet Black**, this series offers something for every discerning listener at a very attractive price.

The Quintet Series also includes a true-mono cartridge, for accurate reproduction of older mono recordings.



Distributed by Henley Designs Ltd.

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Bowers & Wilkins

684 S2 **£800**

This latest version of B&W's popular mid-size model is slimmed down and souped up, or so it would seem

DETAILS

PRODUCT
Bowers & Wilkins
684 S2

ORIGIN
UK/China

TYPE
2-way floorstander

WEIGHT
14.2kg

DIMENSIONS
(WxHxD)
160 x 920 x 234mm

FEATURES
• 25mm aluminium dome tweeter
• 2x 130mm Kevlar mid/bass cone
• Quoted sensitivity: 87dB/1W/1m

DISTRIBUTOR
B&W Group Ltd

TELEPHONE
0800 2321513

WEBSITE
bowers-wilkins.co.uk

It's rather unusual to see loudspeakers downsize, or at least the drive units inside of them – the usual direction of travel is the other way. But in its second incarnation, B&W's popular 684 has slimmed down a bit. It is now thinner than before – or less wide to be precise. This is possible due to the use of 130mm mid/bass drivers, instead of the 165mm units used before. This decision may well have been taken for sound reasons of customer preference, but on the face of it is sonically counter intuitive, because – as B&W's flagship 801 shows – there's no substitute for size if it's done properly! The Series 2 speaker has been heavily tweaked, though (see box out). It's a decently presented design, but the vinyl wrap finish does seem pretty low rent compared with the sumptuous gloss of the Cambridge Audio for example, although the cabinet is unusually well

braced and inert by the standards of the rest of the group. It also works well close to rear walls.

Sound quality

This latest evolution of the 684 seems a bit tighter and tauter than what preceded it, and there's more composure, detail and refinement. It's not dramatic, but the speaker has moved to a slightly more modern and less sumptuous sound, yet remains a classy, sophisticated performer. Tonally it doesn't have the wallop of the Dali, though. It's not a speaker with a big bass, and lacks the Danish design's effortless ease. There's more of a sense of the music being squeezed out than you get with the effortless flow of the Cambridge Audio too; the 684 S2 can't make up the difference in cabinet volume and drive unit size. Still, its excellent innate balance, allied to a clean and fairly open midband and nice, silky treble makes short work of the 808 State track. It's not a great recording, but the B&W isn't put off and delivers a very coherent sound. It proves strong across all areas; bass is fairly limited, but still nicely tuneful and it integrates well with the detailed midband. It follows the rhythms well and gives a real taste of its dynamics.

The James Taylor Quartet's *Wait A Minute* rolls along at a fair rate and is expressive and satisfying. Tonally smooth, you nevertheless get the sense that it is just a little coloured. Soundstaging is good, wide and with well-defined images within the mix.

Solid Air also reveals the 684 S2 to be really rather good at dynamics; in this respect it's one of the best in the group. While it can't thunder like the Dali with its big bass units, it can and does signpost the differences between gently strummed guitar and heavily plucked strings, for example. In other words, this speaker lets the music's emotion flow forth in a more immediate way than most here. It may not be able convey the physicality of the music, but it sure can do the intensity. A fine product, but not unassailable ●



KEVLAR KNOW-HOW

The drive unit material that B&W is most famous for is woven Kevlar. It's strong stuff, as wearers of bullet-proof jackets will attest. Kevlar is fairly light, very rigid and capable of excellent results, as heard in the company's top 800 series. In the 600 series you get smaller versions of the driver, in this case two 130mm mid/bass drivers working in tandem. The company says the voice coils in these units have got smaller to aid sensitivity, and the drivers now also come with anti-resonance plug dustcaps, which is a technology taken from the high-end PM1 speakers, said to improve piston movement inside the voice coil. The aluminium Decoupled Double Dome tweeter is claimed to be especially rigid, and sits in a gel-filled cavity decoupled from the surrounding cabinet. It uses an aluminium dome, and we believe this one sounds particularly good.

Get set for bi-wiring with these rugged binding posts



Hi-Fi Choice

OUR VERDICT

- | | |
|---------------------------------|---|
| SOUND QUALITY
★★★★★ | LIKE: Lithe musical sound; detailed midband; silky treble |
| VALUE FOR MONEY
★★★★★ | DISLIKE: Lacks physicality of some others here; so-so vinyl wrap |
| BUILD QUALITY
★★★★★ | WE SAY: Fine contemporary floorstander with broad appeal |
| EASE OF DRIVE
★★★★★ | |

OVERALL



Let the voice of Naim take you
inside the music

naimaudio.com



Mu-so is our first wireless music system. Finely tuned by our specialist engineers in England, its powerful digital brain delivers the most exceptional quality in sound, commanding 450 watts of power through six custom-designed speakers, to create an experience of music that has to be heard to be believed.

Features: Airplay, Bluetooth®/aptX® Spotify Connect® UPhP™ (access your stored music), Internet Radio, USB, Analogue and Digital inputs, Apple iOS and Android App for complete control.

Go Deeper



John Lewis | Selected Apple stores | www.apple.com | Specialist Naim retailers

AirPlay is a trademark of Apple Inc.

Cambridge Audio Aeromax 6 **£900**

With some extensive tweaking to what's fundamentally a sound design, this new floorstander should impress

DETAILS

PRODUCT
Cambridge Audio
Aeromax 6

ORIGIN
UK/China

TYPE
2.5-way
floorstander

WEIGHT
17kg

DIMENSIONS
(WxHxD)
240 x 980 x 344mm

FEATURES
● 46mm BMR treble/
mid driver
● 2x 165mm doped
paper bass drive
● Quoted sensitivity:
90dB/1W/1m

DISTRIBUTOR
Richer Sounds

TELEPHONE
0333 9000093

WEBSITE
cambridgeaudio.
com

Barely 18 months since Cambridge Audio launched its Aero range of loudspeakers, and it has got a revamp and a new name. My abiding impression of the Aero 6 floorstander is of a great budget box with a unique sound, but a little too soft and fluffy. The new Aeromax has tightened up, though; it was understandable that designer Dominic Baker paid so much attention to the original's novel drive unit complement, but now he's had time to refine the rest of the speaker and the result is that the cabinets are now better braced. No less profound is the fitment of the latest fourth generation Balanced Mode Radiator (BMR), which partners with twin bass drivers. Married to this is better OFC internal wiring and upgraded speaker terminals. What you get is an almost uniquely even sound, totally devoid of the sort of peaks and lumpiness in

the midband that all but the very best boxes suffer from. It really is uncanny, and the mods make it even easier to enjoy. This large loudspeaker works well close to a rear wall, but if you have the space it excels around 50cm into the room with the bung removed.

Sound quality

The basic sound of the Aeromax 6 is very smooth, satisfyingly musical and eerily unlike every other loudspeaker here and indeed many others, too! The first choice to make is whether to use the supplied foam bung in the bass port; in my room I fit it because it tightens up the bass. As mentioned earlier, this is less necessary if you're able to run them away from the rear wall, otherwise I'd advise that you keep it in. This done, the Aeromax 6 delivers a superb rendition of 808 State's *Ancodia*; showing off an almost holographic soundstage, cathedral-like in its breadth.

The speaker never comes out and bites you across the midband, meaning it's remarkably relaxing to listen to, yet can never be called boring. It oozes detail that's subtle and unexpectedly fine at the price.

This is plenty of fun, but better still the Cambridge Audio proves highly adept at playing rhythms. This trait it shares with its predecessor, only more so; the 'max' is faster, tighter, tauter and has less overhang in the bass. It's also more expressive, and carries dynamic inflections – better than its predecessor and indeed every other speaker in this group.

The String Quartet's cover of *Ordinary World* comes across with greater emotional poignancy than all the other boxes here. The acoustic guitar finery of John Martyn's *Solid Air* shows that the Aeromax isn't beyond criticism; it has a slightly 'papery' tone that can't carry the widest range of sounds from ice cold to sumptuously warm; everything is a little sweet and soft regardless of the original recording. So it may not quite have the glassy clarity of higher-end loudspeakers, but still proves a joy to listen to and to own ●

THE MAGIC OF BMR

Many speaker companies have fancy acronyms for rather mundane variations on the standard moving coil driver, but the BMR (Balanced Mode Radiator) is radical and clever; it gives far better dispersion and should be more linear and lower in distortion too. The Aeromax gets the latest version of this relatively new design in a 50mm size, and its response stretches from the high treble all the way down to the upper bass. The brilliance of this is that its wide range obviates the need for a crossover in the presence region, which is where the human ear is most sensitive; it takes phase problems out of the equation in the midband and gives an electrostatic-like sound in some respects. It's tonally very smooth, being made of light but stiff paper. Two 165mm pulp bass drivers take over at 250Hz. They integrate well with the BMR and give a seamless sound with a taut and tuneful bass.



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Wonderfully smooth, open, even sound; scale; musicality

VALUE FOR MONEY
★★★★★ **DISLIKE:** Nothing at the price

BUILD QUALITY
★★★★★ **WE SAY:** Superb affordable floorstander, that's refined beyond its price

EASE OF DRIVE
★★★★★

OVERALL



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Dali

Zensor 7 £730

If size is everything, then this big floorstander is likely to appeal. But does its sound match its bulk?

DETAILS

PRODUCT
Dali Zensor 7

ORIGIN
Denmark/China

TYPE
2.5-way
floorstander

WEIGHT
14.9kg

DIMENSIONS
(WxHxD)
257 x 994 x 320mm

FEATURES
● 25mm textile
dome tweeter
● 2 x 175mm wood
fibre bass cones
● Quoted sensitivity:
90dB/1W/1m

DISTRIBUTOR
Dali UK Ltd

TELEPHONE
0845 6443537

WEBSITE
dali-uk.co.uk

Top of the Zensor range, this is also one of the tallest and most attractive boxes in the group, looking clean and modern, although some won't like its width – something that some buyers seem dead set against for aesthetic reasons. The fashion is to have ultra narrow boxes, and the large 7in (175mm) diameter mid/bass drivers in the Zensor 7 make this impossible. No other speaker here has such large units – though they're still small by the standards of a generation ago. Its gloss lacquered finish extends only to the front baffle, and this is spoiled by not having magnetic grille attachments. The rest of the cabinet is plain old eighties-style vinyl wrap. The big cabinet is reasonably rigid although it doesn't quite sound dead when you rap it with your knuckles. The aluminium plinth (not shown) gives a stable base for the speaker,

though. I find that it works best just a little further into the room than most and that it proves very easy to drive.

Sound quality

Like the Aeromax 6, its sound is distinctive; unsurprisingly it's the bass that sets it apart; those big woofers lend the Zensor a physical presence that no other speaker here has. But it's not just a big boomy bass; it's powerful, but doesn't sound bloated or underdamped. Rather like a large-engined luxury saloon car, the Dali delivers this power effortlessly, not falling over itself to tell you how much force it's blessed with. The result is an easy, tuneful low end that confers a sense of effortless weight on everything it plays. This is most apparent on the 808 State track, where it makes the other speakers – bar the Cambridge Audio – sound asthmatic. It has a fluid low end and can't be forced to lose control, no matter how loud you turn up the volume. Sadly, when it crosses over to its tweeter in the midband, things begin to sound a little less linear. The String Quartet track sees it lose a bit of tonal accuracy in the upper midband and it sounds a little forward and fizzy; not dramatically so, but it is still a world away from the Aeromax 6's beautiful treatment of this region.

I also find dynamics just a little curtailed, and here it sounds like the cabinets. At first acquaintance this speaker sounds bouncy and fun, but when there is strong dynamic accenting on a track – such as the guitar phrasing on *Solid Air* – it has a tendency to sit on peaks just a little. Within its performance envelope it sounds great, but feed it dynamic music and material with lots of micro dynamic inflections and it's less impressive. It is a little lacking in low-level detail, too. It sets up a big, bouncy sound – with a decently wide soundstage from left to right – but take it outside its comfort zone and it reveals some of its flaws, such as a lack of low-level detail, compression and a rather 'samey' tonality. It's enjoyable, but not quite the best ●

HAVE IT LARGE

Nearly a metre high and wider than all the others, this is the big boy of the group down to the twin 175mm mid/bass units, which are the largest among their peers. These big woofers give better sensitivity than smaller diameter drivers, and are aided in this by Dali's wood fibre cones, which we have found to have an appealing tonality in other Dali speakers too. Being light, well damped yet rigid, it gives a distinctive sound that's recognisably different to all of the other drivers here. It's very dark sounding – which is a good thing for a midrange and low-frequency driver, because it doesn't introduce obvious resonances by itself. Also unusual is the particular textile material that Dali has used in the 25mm dome tweeter, where many often use metal; it also makes for a distinctly different sound and integrates very nicely with the larger drivers sitting below it on that large front baffle.



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★ **LIKE:** Large, easy, powerful sound; efficient

VALUE FOR MONEY
★★★★★ **DISLIKE:** So-so finish

BUILD QUALITY
★★★★☆ **WESAY:** Big-hearted, affable sounding floorstander

EASE OF DRIVE
★★★★★

OVERALL

★★★★★

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PSB Speakers

Imagine X1T £750

All the way from Canada comes this attractive and relatively compact mid-price floorstander

DETAILS

PRODUCT
PSB Speakers
Imagine X1T

ORIGIN
Canada/China

TYPE
2.5-way
floorstander

WEIGHT
17.3kg

DIMENSIONS
(WxHxD)
208 x 874 x 395mm

FEATURES
● 25mm titanium
dome tweeter
● 2x 133mm ceramic
polypropylene cone
● Quoted sensitivity:
90dB/1W/1m

DISTRIBUTOR
Sevenoaks Sound
& Vision

TELEPHONE
01732 740944

WEBSITE
psbspeakers.com

Certainly one of the slimmer designs in the group, the PSB sports a rather mediocre black vinyl finish, allied to what's a pretty lightly braced and/or thin-walled cabinet that doesn't exactly exude a feeling of quality. Standing it next to the AE 103, you'd think the Acoustic Energy was the £750 product, not this. Although the speaker weighs a decent amount, somehow this hasn't translated into a feeling of solidity. The only way it redeems itself is a particularly sturdy metal base, which affixes to decent spikes. The crossover sports bi-wirable terminals, with gold-plated links for those unwilling to spring additional cash on speaker cable. There's a largish front-mounted reflex port, which makes these boxes relatively easy to position for a ported speaker. They don't require more than 30cm from the rear wall to sound balanced. They're also efficient by the

standards of the group, going loud with smallish amounts of power.

Sound quality

This is a good sounding box with real ability, but has been 'voiced' to give the public what it wants. And what it wants apparently is a big, fulsome bottom end, a spacious midband and tweeter that makes a shiny, sparkly sound – regardless of the instruments or voices it's asked to reproduce. In short, the X1T is like a hot hatch car; unrefined but eager, and little the worse for it.

It devours the 808 State track; it's a dance classic and the PSB obviously likes to party. It wins no prizes for smoothness and sophistication though, rather than the chilled Martini that is the Cambridge Audio this is more like a can of Red Bull. The sound isn't lovely to the taste, but is fun and certainly likes to rock out a tune! Starting with the bass, it's big, grumbles a lot and seems to like thumping regardless of what's being played. The midband is physically wide, but a little opaque and doesn't pull you in as well as most; instead it chooses to shout the music out at you; it's a little lively in the upper presence region, but never gets harsh. This segues well into a bright and explicit treble, but it lacks subtlety from its tweeter. Still, it makes hi-hats ring like bells in the night.

Moving to some more gentle acoustic music and the X1T shows it's a little further from its comfort zone. It makes short shrift of *Ordinary World*, choosing not to bother too much about conveying the delicate texture of the instruments. It's not as good as tracking the dynamic accenting of the playing either, but still serves up a big, meaty sound that is never unpleasant – however unsophisticated it is. It does the same with *Solid Air*, and actually hangs on to those guitar harmonics better than expected, giving a fairly full and fruity sound with lots of thrum to the instrument – and just a little too much to John Martyn's voice too! Not a bad speaker; unpretentious fun ●

CLAY'S THE WAY

This floorstander comes with another driver complement – there's no one single pattern emerging in the group as to the type of tweeter that is matched to another type of mid/bass driver. In the PSB's case, two 133mm clay/ceramic reinforced polypropylene cones are fitted. Polyprop is an old loudspeaker material, first pioneered in the seventies, although these cones are radically improved with unusual clay/ceramic reinforcement. Interestingly they run in two-and-a-half way mode, with the twin mid/bass units working in tandem at the lowest frequencies, but crossing over at different frequencies to reduce the load on both. These match up to a 25mm titanium dome tweeter, which is – in theory at least – quite 'old school' now; they were very popular in the eighties. The tweeter is modern, of course, but doesn't prove to be the smoothest or most sophisticated metal dome here on audition.



Stick the PSBs about 30cm away from the rear wall for best results



HIFIChoice

OUR VERDICT

SOUND QUALITY
★★★★★

VALUE FOR MONEY
★★★★★

BUILD QUALITY
★★★★★

EASE OF DRIVE
★★★★★

OVERALL
★★★★★

LIKE: Solid, weighty nature; ease of drive

DISLIKE: Poor finish; middling build; crude sound

WE SAY: Fun-sounding floorstander that is outclassed by more sophisticated rivals

MUSICAL FIDELITY

MF-100

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Roth

OLiRA4 £400

The most affordable in the group, can this big box hold its own in this more rarefied company?

DETAILS

PRODUCT
Roth OLi RA4

ORIGIN
UK/China

TYPE
2-way floorstander

WEIGHT
16.5kg

DIMENSIONS
(WxHxD)
210 x 962 x 323mm

FEATURES

- 25mm silk dome tweeter
- 2x 165mm woven fibreglass bass cones
- Quoted sensitivity: 86dB/1W/1m

DISTRIBUTOR
Roth AV Ltd

TELEPHONE
01753 682782

WEBSITE
rothaudio.co.uk



Making a name for itself from its decent affordable audio components such as soundbars, desktop speakers and DAB radios, Roth is now starting to move a little more upmarket. And this is its flagship hi-fi loudspeaker – even though it's the cheapest in the group. At first glance it is an impressive offering; it's got a very clean look with a familiar modern styling. The matt black finish isn't bad considering the price, although on closer inspection you can see where corners have been cut – the reflex port insert comes loose on one of the samples. It's a conventional two-way design voiced by Richard Allen with a fairly thin-walled MDF cabinet covered in vinyl, with a silk dome tweeter and twin mid/bass units set behind a plastic front baffle. It sits on a basic metal plinth (not shown) into which spikes are screwed. It proves the least sensitive

of the group, so you'll need a reasonably powerful amp (50W or more) to get the best from it.

Sound quality

The tidy styling of the Roth belies its modest price, but as soon as you plug it in the secret is out. It's not a bad speaker, but it's a lot cheaper than the others and sounds it. The balance isn't unpleasant – it's not too far away from the smooth, even Cambridge Audio – and doesn't shout out at you in any particular frequency region. Listen a little more, however, and you begin to realise the midband is more opaque than the others. While the Dali, AE, B&W and Cambridge all peer deep into the recorded acoustic of *Solid Air*, the Roth leaves you unsure about what's really going on. You get all the basic musical clues, and with it a pleasant sound, but there's a lack of insight. This applies across the board, from dynamics to the way the rhythms are pulled together, and sounds muddled.

This is more evident with the murky mix of the 808 State track. Here the bassline, which modulates up and down in a normally rather breezy way, sounds leaden. The snare drums and rim shots are a little flat, and their timing appears smeared. Treble is poor, lacking sparkle and air, although it is never harsh, which is commendable for a £400 floorstander. Overall the sound is a little diffuse; imaging isn't bad, but is too centred around the plane of the speakers, while depth perspective is lacking.

James Taylor Quartet's *Wait A Minute* sounds less impactful compared with the others. The Roth doesn't offend, it just seems unable to give an accurate picture of what's going on. Tonally it's too homogeneous and lacks realistic timbral resolution – in its place is a pleasant, but slightly plasticky feel with no sense of the listener being able to tell the characteristic sounds of different recorded acoustics. Although not unacceptable, this is a modest speaker that's well worth auditioning if your budget won't stretch beyond £400 ●

ACE OF BASS

The Roth seems extremely well put together at the price, and the drive unit complement reflects this; two 165mm mid/bass units run in tandem, and this relatively small floorstander has been tuned to go all the way down to 40Hz (claimed). This makes for good bass extension, but the trade off is efficiency and the 86dB (quoted) figure means the speaker will need a beefy solid-state amplifier to get the best from it. The cone material chosen for both drivers is woven fibreglass, which is a rigid formulation that tends to have a certain sound all of its very own. At this price you'd expect a cheap metal dome tweeter, but Roth has fitted a rather nice 25mm silk dome affair, which proves well behaved and obviously less bright than some in the group. The drive unit lineup is decent enough, but another weak link in the loudspeaker chain is the cabinet, which is a little resonant.



The woven fibreglass bass cones have a sound of their own



HIFIChoice

OUR VERDICT

SOUND QUALITY
★★★★★

VALUE FOR MONEY
★★★★★

BUILD QUALITY
★★★★★

EASE OF DRIVE
★★★★★

OVERALL
★★★★★

LIKE: Inoffensive balance; neat styling; low price

DISLIKE: Opaque midband; unrefined treble

WE SAY: Cheap and cheerful speaker; struggles in this company

Group test verdict

After a week of exhaustive listening tests the results are in, but before he puts his feet up for a well-earned brew, it's over to **David Price** for the results

A COUPLE OF the loudspeakers here lack any exceptionally enjoyable hi-fi facets. To an extent this is reflected in the broad range of prices seen in the group, but it cannot be completely explained by this.

Finishing in sixth place is the most affordable model in the group. The Roth is very attractive and decently finished at the price, but faces stiff competition against other £400 designs, let alone some of the models at around twice the cost in this roundup. It is pleasant to listen to, but a little muddled in the final analysis, and lacks some musical insight.

In fifth place comes the PSB, which is a bit costly given it's performance here; it simply cannot compete in value terms with the other members of the group or indeed the wider market. It's good fun to listen to, if a bit exuberant, but is likely to make more casual buyers happy – aside from its lofty price tag.

In joint third place come the B&W and Dali. They both offer a good sound for the money, but their characters are distinctively different and the choice between them will come down to the buyer's taste, music preference, source and

amplifier. The Dali is the bigger, smoother, sweeter performer, with a lovely sumptuous bass and a very relaxed, powerful air. It's not the most dynamic, and doesn't have lots of detail either – and this is where the B&W comes in. It has a fundamentally smaller scale sound, but what there is, is tidier, tauter, faster and more refined. Both are mighty fine speakers.

The Acoustic Energy is the runner up; it's small but perfectly formed with a bright, breezy, open and musical sound and surprisingly inexpensive too. Great value!



WINNER

The Cambridge Audio Aeromax 6 is the most costly here, but it is clearly better than all the others in many ways. Its unique BMR driver gives a big open window to the music, and integrates superbly with the bass drivers. It is very nicely made and finished at the price.



Make/model Acoustic Energy AE 103 Bowers & Wilkins 684 S2 Cambridge Audio Aeromax 6 Dali Zensor 7 PSB Speakers Imagine X1T Roth OLi RA4

	Acoustic Energy AE 103	Bowers & Wilkins 684 S2	Cambridge Audio Aeromax 6	Dali Zensor 7	PSB Speakers Imagine X1T	Roth OLi RA4
Price	£550	£800	£900	£730	£750	£400
Sound	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Value	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Build	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Ease of drive	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Overall	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Key features	Excellent value floorstander with a fine sound from a compact box	Sophisticated package, but lacks ultimate power and finish is below par	Superbly balanced floorstander with a sound that's a joy to listen to	Big, ballsy floorstander with easy, enjoyable musical nature	Exuberant fun and always ready to party, but lacks detail and depth	Pleasant but veiled sound, but mediocre build can't compete with pricier rivals

	Acoustic Energy AE 103	Bowers & Wilkins 684 S2	Cambridge Audio Aeromax 6	Dali Zensor 7	PSB Speakers Imagine X1T	Roth OLi RA4
2-way	Yes	Yes	No	No	No	Yes
2.5-way	No	No	Yes	Yes	Yes	No
Tweeter type	Fabric dome	Metal dome	BMR	Fabric dome	Metal dome	Fabric dome
Bi-wiring	No	Yes	No	No	Yes	Yes
Plinth	No	Yes	Yes	Yes	No	Yes

TRY WITH THESE

CD PLAYER:
Audiolab 8200CD **£800 HFC 340**

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QED Reference Audio 40/
Signature Revelation
£100 and £17/m HFC 387

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INTEGRATED AMPLIFIER:
Creek Evolution 50A **£750 HFC 370**

One of our favourite affordable integrated amplifiers, the Creek has a wonderfully open and musical sound – one that's far better than the price suggests. It would prove an excellent partner for any of the floorstanders here, and has lots of power and fine dynamics.



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SOUND AND VISION
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AWARDS 2013
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SOUND AND VISION
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WHAT HI-FI?
SOUND AND VISION
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OR LESS



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AWARDS 2013
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NAD • D 3020 AMPLIFIER / DAC

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



£399
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AWARDS 2013
ARCAM irDAC
BEST DAC

ARCAM • irDAC • DAC

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AWARDS 2013
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BEST CD PLAYER

NEW £1499
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Received an outstanding product award from Hi-Fi News magazine who described the C 316BEE as an "absolute barn-stormer of an amplifier". The C 516BEE is the perfect partner.



£599
OR LESS

WHAT HI-FI?
AWARDS 2013
AUDIOLAB M-DAC
BEST DAC

AUDIOLAB • M-DAC • DAC / PREAMP

Award-winning DAC featuring a USB input with asynchronous data processing along with two coaxial and optical digital inputs. High-res 24-bit/192kHz music files can be played via its coaxial input.



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WHAT HI-FI?
AWARDS 2013
MARANTZ CD6005
BEST CD PLAYER

ESSAV .COM

MARANTZ • CD6005 / PM6005 • CD / AMPLIFIER

Replacing the 6004 models, the 6005 amp gains digital inputs using the same 24-bit/192kHz DAC as the CD player which now features enhanced USB playback and improved performance.



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ROKSAN • K3 • CD / AMPLIFIER

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AWARDS 2013
ROKSAN CASPIAN M2
BEST CD PLAYER

£1899
OR LESS

ROKSAN • CASPIAN M2 • CD / AMPLIFIER

The M2 amp boasts 85wpc and five line inputs while the matching CD features a 24-bit DAC plus dedicated power supplies for the outputs.



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NAD • M51 • DAC

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WHAT HI-FI?
AWARDS 2013
DENON D-M39DAB
BEST CD PLAYER

DENON • D-M39DAB • CD / DAB SYSTEM

This micro component system gives you clean dramatic sound, and more life to iPod and iPhone music libraries via its digital USB input. Includes DAB/DAB+/FM tuner.



ESSAV .COM

WHAT HI-FI?
AWARDS 2013
MARANTZ M-CR610
BEST CD PLAYER

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Price excludes stands



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SOUND QUALITY
PRICE/PERFORMANCE
MUSIC TECHNOLOGY
Price excludes stands



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

£349.95 OR LESS
WHAT Hi-Fi? AWARDS 2013
PRICE/PERFORMANCE
SOUND QUALITY
MUSIC TECHNOLOGY
Price excludes stands

BOWERS & WILKINS 683 S2

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£999 OR LESS



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KEF • LS50
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SOUND QUALITY
PRICE/PERFORMANCE
MUSIC TECHNOLOGY



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PRICE/PERFORMANCE
MUSIC TECHNOLOGY

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PRICE/PERFORMANCE
MUSIC TECHNOLOGY

B&W • P7 HEADPHONES



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SOUND QUALITY
PRICE/PERFORMANCE
MUSIC TECHNOLOGY

GRADO • SR325e HEADPHONES



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NEW £559 OR LESS



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£229 OR LESS

SENNHEISER MOMENTUM HEADPHONES



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Get funky

With its unique approach to vinyl replay, **Andrew Simpson** finds out why the new Flamenca could set your heart on fire

When The Funk Firm releases a new turntable, you can expect innovation to be high on the agenda. Challenging the norms of turntable design is what company founder Arthur Khoubesserian is all about. Let's not forget that this is the man who some decades ago first introduced novel ideas like fitting DC motors to belt drive decks alongside acrylic platters for placing your LPs on *sans* mat. Back then this was truly leftfield thinking, but now it's commonplace on many of today's high-end vinyl spinners, showing that Arthur was clearly ahead of the game.

But that was then, and AK's Pink Triangle decks of the day have since

passed into audiophile legend. Since the early noughties, Arthur has been channelling his hi-fi energies into The Funk Firm, which has gained an impressive reputation for its visually striking decks with alternative drive systems and mould-breaking tonearms.

Despite its conventional looks which are more in keeping with its £1,440 Little Super Deck sibling than the distinctive curves of the Vector and Saffire models, the entry-level Flamenca continues to live the Funk ethos, thanks to some unique features.

Like the LSD, the Flamenca sports a glass platter. But unlike the LSD, it eschews Funk's proprietary vector belt drive system of a motor with two slave pulleys for a more conventional

▶ DETAILS

PRODUCT
The Funk Firm
Flamenca

ORIGIN
UK

TYPE
Belt-drive turntable
with tonearm

WEIGHT
5.4kg

DIMENSIONS
(WxHxD)
414 x 110 x 320mm

FEATURES
● 33 and 45rpm
electronic speed
change
● 12V DC motor
● Funk F6 thread
bearing tonearm
● External wall
wart PSU
● Removable
dust cover

DISTRIBUTOR
The Funk Firm

TELEPHONE
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WEBSITE
thefunkfirm.co.uk

periphery belt drive from a single motor pulley. I say conventional, but as with most things Funk, the basics have been carefully considered for maximum sonics. The motor is intentionally cited at the deck's front left corner because Funk believes putting a motor at the rear of a platter allows motor and/or structural vibration to travel along the belt causing the cartridge to vibrate side to side. However, putting the motor pulley in line with the tonearm allows these same vibrations to instead travel down the arm tube that's held firm by the bearing.

In another effort to minimise vibration and noise entering into the replay chain, the Flamenca gets a 12V DC servo controlled motor to aid smooth and silent running. Speed is controlled electronically via a knurled silver knob for 33.3 and 45rpm, with discreet trim pots for speed fine tuning.

For spinning duties the deck's 10mm-thick glass platter rests on a finely engineered steel plate with a case-hardened spindle that turns against a steel ball sitting at the base of a close-tolerance brass bearing sleeve. The deck's 25mm-thick plinth is made from three layers of MDF



bonded together to aid damping, while four chunky rubberised circular feet give stable support.

Completing the package is Funk's F6 tonearm, which unlike the usual gimballed or unipivot designs employs a thread bearing, whereby the arm tube is effectively suspended from a polymer loop. This loop connects to a single polymer thread inside the arm, which exits through the bottom of the tube where it attaches to the lower bearing housing to hold it steady. The arm tube itself is made from aircraft-grade aluminium with a threaded low-slung steel counterweight at one end and an acrylic head with separate cartridge mounting plate at the other. The arm's mounting is of the conventional Rega type and at £370 on its own, the F6 is a perfectly positioned upgrade for budget decks in need of an alternative approach. And while you'll need a steady hand to keep the arm still during cartridge installation, its design has lots of easy adjustment including for arm height, via a simple recessed hex-headed clamp for fuss-free fine tuning.

The deck comes with a thick felt mat as standard and Funk also includes an

inhouse 3mm Achromat with our test rig, costing £57 extra. Set up is without drama. The hardest part is fitting the round section rubber belt around the platter which takes a bit of perseverance, but once on stays put.

Sound quality

After an hour's run in, a quick strobe test reveals our sample to be bang on the money at both 33.3 and 45rpm without need for extra speed trimming. The next task is to decide which platter mat to go for, and a few laps of Donald Fagen's *Ruby Baby* finds the answer. Supplementing the thick felt mat for the Achromat gives a more dynamic sound with crisper edges to the piano notes and better instrument separation. It costs more, but on clarity grounds the Achromat is a wise upgrade.

It's difficult to describe the Funk's sonic palate because its strengths lie in transparency, without adding too much of its own personality. I often hear decks that are voiced to bring certain elements to the fore, be it a more pronounced midrange or tempered treble. And if these elements are to your liking then these decks will no doubt tick your personal boxes. The Funk, however, stakes a less obvious claim for a particular type of performance, by striving for a balanced sound without overly favouring any element of the soundstage or its presentation. Armed with an Ortofon 2M Blue pick-up (*HFC* 375) and plumbed into my Primare R32 phono stage, the Flamenca nails its lack of colouration to the mast via Joy Division's *New Dawn Fades* from an original pressing of the *Unknown Pleasures* album. This

track can often wrong foot an unsuspecting deck as with turntables favouring a rockier and more polished presentation it can sound raw, but devoid of character. While more laid-back machines let the track's murky tones saturate the mix, removing the edgy nature of Curtis' no-holds-barred vocals, the Flamenca leans to neither side and instead presents the song evenly, which really drives home why Martin Hannett's

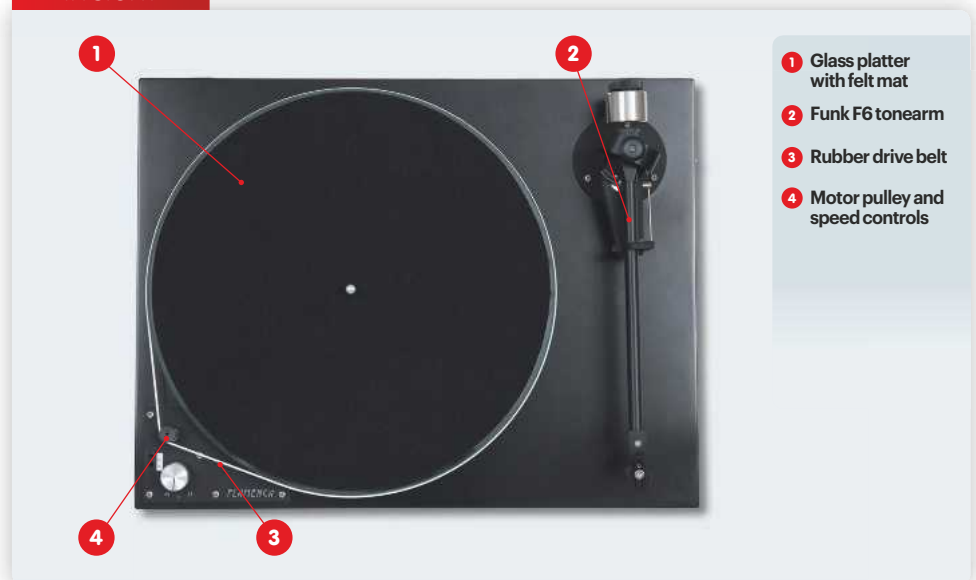
There is a definite sense with the Funk of letting the music speak for itself

distinctive production was so crucial to the band's unique sound. Guitars are conveyed with just the right amount of body and tonal appetite, and it's the content of their long drawn-out notes that the Funk subtly brings out, which breathes life into the music. Meanwhile the rapid drum strikes are rendered with a clean, short echo, before falling away into the darkness of the soundstage, behind my Dynaudio Focus 260 floorstanders' physical footprint.

While the Funk's imaging isn't as ultimately precise as some of its similarly priced stable mates, the way it really opens up the soundstage is beyond many of its peers. Taking the Flamenca to the next level with a Benz Micro ACE SH MC (£595) reveals the Funk's underlying capabilities. On PJ Harvey's *The Glorious Land* from *Let England Shake*, the Funk lets the bugle call out from far back within the mix and with a

The Funk Firm Flamenca also comes in a Hot Magenta finish for extra flair

IN SIGHT



- 1 Glass platter with felt mat
- 2 Funk F6 tonearm
- 3 Rubber drive belt
- 4 Motor pulley and speed controls

Q&A

Arthur Khoubesserian
The Funk Firm founder



AS: How did the Flamenca deck come about?

AK: Our Little Super Deck is gaining quite a reputation as something of a giant killer, our distributors wanted to see what we could do for a more entry-level deck. Bolt together a cheap motor, arm and so on and, "Oh, look... a(nother) 'me-too' turntable". Where's the fun? It's just not Funk's style, is it.

Designing something new, to a tight budget is never easy. Factor in pushing the performance envelope... Now that's a real challenge. In Flamenca we believe we've more than risen to it.

What's the reasoning behind the periphery belt drive?

Peripheral drive uses less tension from the belt, equals less load on the motor, equals a longer service life; no sub-platter keeps prices down.

Why have you opted for a thread bearing design with the supplied F6 tonearm?

We all know: "The turntable comes first?" Well ignore arms at your peril! It's the arm that *holds* our cartridge, our 'music-maker'. Bad arm equals bad music and they are bad where the ear is most critical. Arms are responsible for the 'naturalness' (or not!) of reproduction.

Threads give F6 (and F6.5) a totally new take on arm performance at this essentially entry-level point of the market, and it's executed in a technically correct way, including for azimuth – it all helps. My best advice? Just listen. There is much to explore and learn here.

Funk is famous for constantly innovating, so what's next?

FX3 is a new inhouse F.X braced reference arm replacing FXR II, which is still available as an upgrade for Rega owners. Christmas, however, sees the launch of a totally new, cutting edge flagship arm, the AK47.



The 3mm Achromat costs £57, but is a worthwhile upgrade option

HOW IT COMPARES

Obvious rivalry comes from June's *Group Test (HFC 385)*. Rega's £475 glass-plattered RP3 boasts plinth-bracing tech and an RB303 arm, alongside an AC motor with manual speed change. Pro-Ject's £425 Debut Carbon Spirit SB gets an acrylic platter, DC motor with electronic speed change, carbon fibre arm and 2M Red. Both offer great VFM with more conventional gimballed tonearms instead of the Funk's thread bearing, which gives a more open sound with less bass.

At £795 and packing its own phono stage, headphone amp and 2M Red, VPI's warm sounding Nomad (HFC 390) is superb value. But you'll be restricted to using its onboard phono stage.

natural echo as it sweeps across the far regions of the soundstage, before the rhythm guitar's ringing notes flow from my speakers without constraint. And when the vocals kick in there's plenty of space around them as they float across the air. The Flamenca's sound is far from forward and it seems to want to push the music upwards and outwards, rather than straight at the listener, which also adds to its sense of openness and lack

The way the Funk really opens up the soundstage is beyond many peers

of congestion. Whether this is down to the minimum resistance thread bearing arm allowing its partnering cartridge more freedom to express itself I can't say, but there is a definite sense of letting the music speak for itself about this deck, that's reminiscent of how a unipivot arm presents the music.

Returning to the Donald Fagen album via the opening *I.G.Y* track reveals the bass to be fast and, well, funky. And while this track reveals that the Funk's low end doesn't have the chest pummeling power of some

of its heavyweight counterparts, the bass it does render is tight, rhythmical and upbeat.

Conclusion

Looks-wise the Flamenca certainly doesn't stand out from the crowd as much as other decks from The Funk Firm's stable. But it only takes a few minutes of hearing it to know that the Flamenca is blessed with what makes the Funk brand so unique. It's transparent and airy sound is very inviting and when partnered with the right pick-up to get the best out of its thread bearing arm, you'll be rewarded with an open window into the music ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Open and transparent sound; simple yet clever tonearm design
VALUE FOR MONEY ★★★★☆	DISLIKE: Belt can be fiddly to fit; not for hardcore bass junkies
BUILD QUALITY ★★★★★	WE SAY: Deceptively conventional looks hide a turntable of true sonic merit
FEATURES ★★★★★	
OVERALL ★★★★★	



Brown Sugar



Chord Epic Twin speaker cable
HI-FI Choice Sept 2014

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In the Air tonight

David Price is freed from the constraints of cables as he auditions Elac's new wireless Air-X 403 standmount loudspeaker

There are umpteen wireless speakers around now, but what makes the Air-X 403 interesting is that it's aimed at serious audiophiles and yet is (relatively) affordable. Starting at £2,499 for these entry-level 403s plus £349 for the base station, there's also the option of the larger 407 floorstanders for £4,299.

Elac makes very fine loudspeakers and has done some pioneering work especially with tweeter technology over the years. So we're not talking

about a consumer electronics company sticking its wireless tech into any old pair of transducers here! They are effectively active, wireless versions of the highly capable BS 403 passive standmounter. The question is, how well has the company implemented the wireless side and the active amplification?

The speakers contain the Air-X Amp, which the Air-X Base station sends the music to. The latter is the central control unit to which a wide variety of sources and output signals can be

DETAILS

PRODUCT
Elac Air-X 403
ORIGIN
Germany/China
TYPE
2-way standmount loudspeaker with 24/48 wireless
WEIGHT
7.8kg
DIMENSIONS
(WxHxD)
166 x 308 x 280mm
FEATURES
● Jet 5 tweeter, 150mm AS-XR mid/bass driver
● Claimed power: 2x150W into 4ohms
● 2x optical; 1x USB; 1x RCA phono; 1x 3.5mm analogue inputs
DISTRIBUTOR
Hi-Fi Network
TELEPHONE
01285 643088
WEBSITE
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connected. Music is losslessly transmitted at 24-bit/48kHz, which is better than CD but not quite top resolution digital. The amplifiers used inside are Class AB. Without getting too deterministic, many believe that Class D is a less satisfactory sounding way of amplifying a signal in musical terms, so it's interesting that Elac has opted to take the long way home and gone for the less easy option. One insider told me that the Jet tweeter didn't sound good enough when engineers tried Class D amplifier modules, so AB it was. The combined output is claimed to be 150W (into 4ohms), and an internal 56-bit DSP chip allows tweaking of the sound to suit the listener's environment.

Air time

The drive unit compliment includes the latest-generation Elac Jet 5 tweeter, with a 150mm AS-XR bass/mid driver sporting an interesting crystal pattern aluminium and paper sandwich cone. It's said to have an additional strut at the coil former centre in addition to the convention central connection. Crossover is at a fairly standard (for a two-way

speaker) 2.7kHz. The cabinet is as per the BS 403; a solid affair with an immaculate piano lacquer finish, it has a downward-firing bass reflect port and an integral plinth assembly.

The Air-X 403 can be used as a conventional active loudspeaker; there are balanced XLR and phono sockets on the back so you can drive it direct from an analogue preamplifier should you wish. But there's also the wireless option and for this you'll need to spend an additional £350 for the Air-X Base station. Via SMSC DWAM 83 modules, it runs a 2.4GHz lossless KlearNet wireless network between it and the loudspeakers. It's

The Air-X is worth auditioning if you're looking to live in a world without wires

very stable and has a range of up to 50m, which should be sufficient for all but the biggest listening rooms.

The base station sports a range of digital and analogue inputs. There's the usual USB and optical digital, as well as analogue via RCA phonos and a 3.5mm minijack. However, oddly there is no coaxial digital (which precludes my Sony Blu-ray player from working with it), and nor is there Bluetooth. In fairness, there is an additional Bluetooth module available for £120, but it is odd that it isn't built in given that most active speaker systems now have this facility. I hope that the next-generation base station has these extra inputs, as it rather limits its appeal.

Sound quality

One bonus of the system that Elac uses is that it offers true multi-room capability. The base unit acts as the central controller and can connect an almost unlimited number of Air-X loudspeakers, to which up to four signals in three zones can be transmitted. I try an additional pair of Air-X 407s added to the network, and test them out playing either the same source as I have the 403s playing, or a different one. In both cases the system is seamless and the wireless connection is faultless; it's a very elegant implementation of the technology, and far better than some other slightly shaky systems that I've come across.

The problem with some wireless loudspeakers can be that they're often wireless first, and speakers second – or indeed loudspeakers last. This is something that most certainly does

not afflict the Air-X 403. As soon as you start listening it's clear that this is a fine hi-fi design – which also happens to have the option of active, wireless operation. You can hear the essence of the BS 403 very, very easily; because this is what the Air-X version is, but with added functionality. All of which means that you get a very smooth, delicate, detailed sound that you would never call boring. In short, the Air-X version comes very close to offering the best of both worlds.

Fed by the base station, in turn running from the optical output of a high-end Sony optical disc transport, the Elac system turns in an excellent performance – one that I wasn't quite expecting considering it's being run in wireless mode. The 403 is a smallish standmounter, but doesn't sound anywhere near as compact as it looks. It is able to fill a largish listening room with big, confident sound with an ease that I wouldn't normally expect. Furthermore – and this is possibly at least in part due to its active operation – there is no sense of the music being squeezed through a toothpaste tube, as is sometimes the case with small speakers. The stock BS 403 is rather inefficient, and needs a powerful transistor amplifier to give of its best, but here in active mode it is relaxed, expansive and surprisingly easy – a bit like a smallish car with a big, torquey engine crammed under the hood.

James Taylor Quartet's *Stepping Into My Life* is a lovely late nineties slice of gentle soulful funk – or acid jazz as it was once called. The Air-X 403 shows the recording in all its finery;

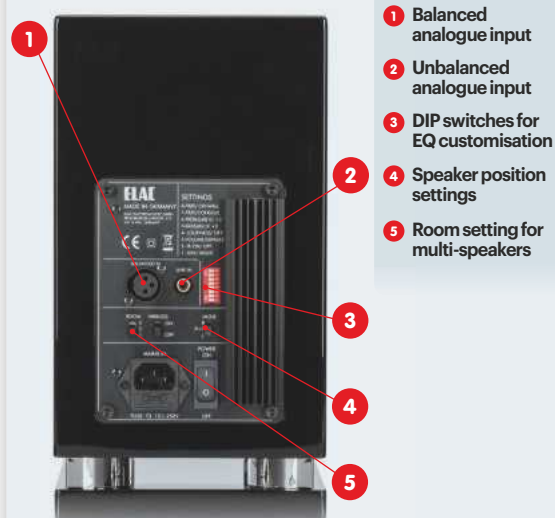
There are no interconnecting leads between left and right speaker; the base unit beams signals directly



it's laid back and warm, and so the Elac system is too. There's very little sense of the cabinets inducing boom or of the speaker having a sweet spot in the bass; that downward-firing port seems to work well.

A quick flick over to the 407 floorstanding version that I have to hand shows it is missing an octave or so of bass, but you won't really miss this if you stick with the 403. Like many standmount versions of floorstanders, it also has a rhythmic sleight of hand to its low frequencies that the floorstander doesn't seem to possess. The bigger box is in no way bad in its ability to convey how the song pushes along, but still the

CONNECTIONS



Q&A

Max Lowe
Hi-Fi Network



DP: Why has Elac chosen to go down the wireless speaker route?

ML: Products like Sonos have already established there is a huge market demand for the breed. Air-X gives the customer an audiophile choice, compromising neither the sound quality nor the flexibility.

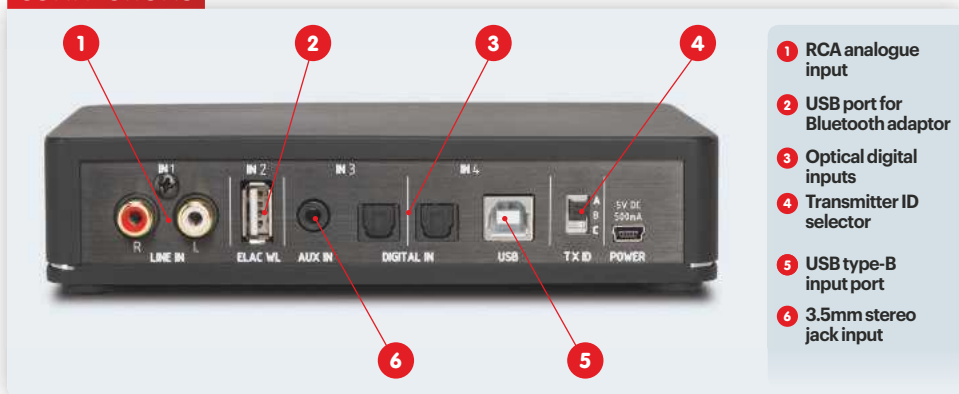
What do you think Elac can do better than the rest?

We put a strong focus on a multi-room setup. The user can run four stereo streams at full quality (24-bit/48kHz lossless) to four independent stereo pairs of Air-X speakers simultaneously. So the user can listen to the TV sound in his living room, radio in the kitchen and to CD in the study, all in parallel. The analogue inputs on the Air-X speakers allow you to use them as standard powered speakers or as studio room equalisation functionality, so that the user can adjust the speaker to its location and position.

Can you tell us more about the Digital Signal Processing involved?

We use the ADAU1701 DSP chip from Analogue Devices for all signal processing. The digital signal coming from the wireless module is fed into the DSP directly, the analogue signals of both analogue inputs are first A/D-converted and then mixed together to the digital signals coming from the wireless module inside the DSP. Then the signal processing is done, and this includes dynamic loudness functionality, speaker equalisation, room equalisation and bass/treble. Afterwards the signal is split by the crossover into up to four separate streams (so, the DSP gives us the possibility to realise speaker designs of up to four-way speakers). Last, the signal runs through limiters before it is D/A-converted and fed into four anti-aliasing filters in the analogue domain and output to Class A/B amplifiers.

CONNECTIONS



little one seems to be a little less troubled by the sort of room positioning issues that effect bigger speakers. *Stepping Into My Life* gets into a quick, propulsive groove and makes listening fun.

Next I feed it something a little more intense, Supertramp's *Child Of Vision*. This is a slightly forward sounding album, even the LP version is a little bright, but the Air-X 403 keeps a good balance. Yes, there is definitely a more brilliant light cast on the upper midband than with the

The Air-X 403 doesn't sound anywhere near as compact as it looks

James Taylor Quartet track, and the greater dynamics really make themselves apparent, but the Elac speaker system keeps everything well controlled. Bass is punchy – if not terribly extended, the midband clean and spacious and the treble smooth and wonderfully sophisticated. Indeed, the excellent recording quality of this Supertramp song illustrates just how sweet sounding that Jet tweeter is. I've heard several evolutions of this Elac high-frequency unit and this seems the best yet; it sparkles with detail and has a wonderful sense of space, but still never sounds bland or over smooth. It's a great part of the team!

Running from my MacBook Pro into the USB input is no less impressive, with Beethoven's *Sixth Symphony* sounding expansive with excellently resolved low-level detail and fine imaging. It places instruments accurately and boldly, giving a commanding feel and even makes a good stab at recreating the concert hall's sense of perspective.

The active speakers are better still when fed direct, bypassing wireless.

Interestingly though, there isn't a massive jump forward in sound, suggesting that the wireless has been done very well. Instead there is a subtle improvement in grip and low-level detail, with a slight deepening of the soundstage. Going back to wireless, this time feeding the base station with an analogue input from an Audiolab 8200CD player, again gives very good results – it remains smooth and surprisingly detailed, showing that it doesn't treat analogue signals as a poor relation. The Texas Instruments PCM1803 A/D converter is obviously a quality item, like the rest of the system.

Conclusion

An excellent product, your money buys you a very fine loudspeaker with built in preamplifier, DAC, wireless transmission system and power amplifiers for £2,850. You'd struggle to match this in value terms as an all-in package; finding a decent integrated to drive the speakers would cost £1,000 or more on its own. So the new Air-X comes heartily recommended and is well worth auditioning if you're looking to live in a world without wires. Its sound is in a different league; the Elac is one of the best sounding wireless solutions on sale right now ●



HOW IT COMPARES

There are very few direct rivals for the Elac Air-X 403, which is a sign in itself of how advanced this product is. The important point here is that the Elac is truly wireless, at least in a sense that there are no interconnecting leads between left and right speaker; the base unit beams the signal to both speakers directly. The only wires you'll need are AC mains supplies – via standard IEC cables – going into each. Another big difference is that the Elac doesn't play out music from a UPnP streamer; you'll need to buy a standalone network music player to do this. It means the Elac is less versatile, but is reassuringly geared to the conventional hi-fi world.

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Crisp, clean, smooth sound; robust wireless

VALUE FOR MONEY ★★★★★ **DISLIKE:** No coaxial digital in or aptX Bluetooth as standard

BUILD QUALITY ★★★★★ **WE SAY:** Serious sounding active standmount loudspeakers with 24-bit/48kHz wireless

FEATURES ★★★★★

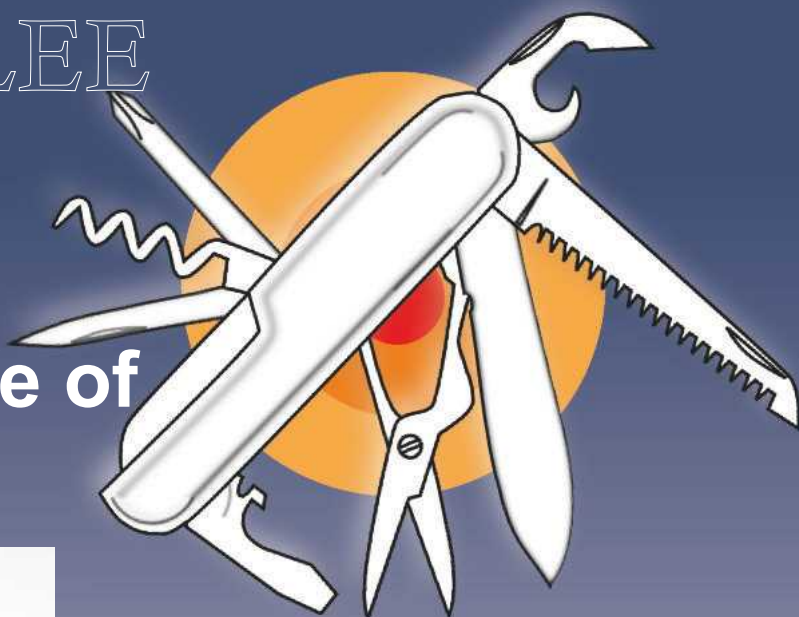
OVERALL



GRAHAM SLEE

Bitzie

The Swiss Army Knife of USB DACs



The Bitzie is:

- a high quality USB DAC
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- a USB preamp
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Equally at home on the road, or as part of a desktop or main hi-fi system, the Bitzie is all about the music.

"I wasn't so much listening as fully immersed.

There's a great sense of space and depth and it's difficult to turn the thing off and go to bed.

The Bitzie is bags of fun, but watch for bags under the eyes."

Lauri Cular

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Use it to add USB to your existing DAC. Transformer isolated coaxial S/PDIF and "Toslink" optical S/PDIF outputs.

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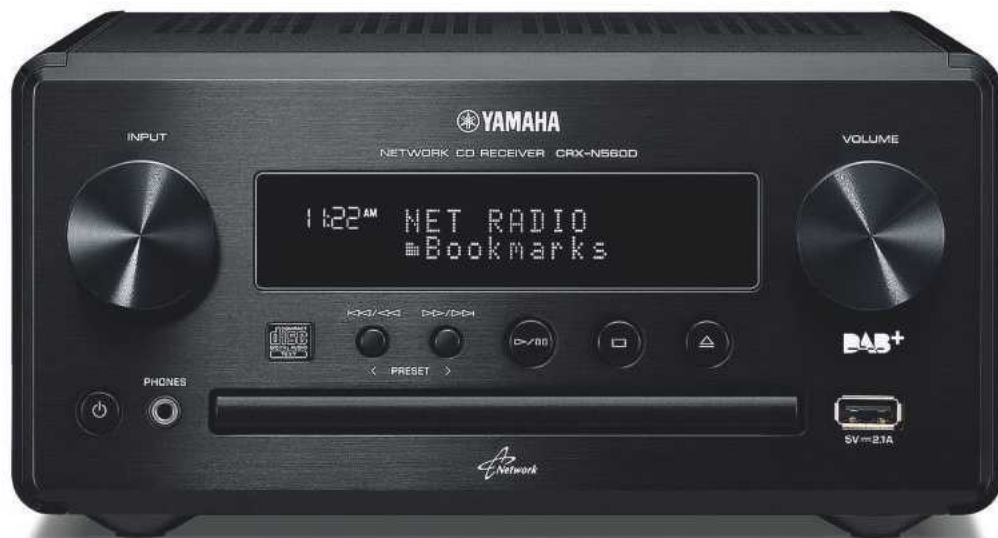
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Little Houghton
Barnsley, S72 0HS
Tel: 01909 - 568739

Superior Performance Hi-Fi Products



Enter the stream age

With comprehensive networking this micro system shows that good things can come in small packages, reckons **David Holes**

Of you're looking for a compact, micro hi-fi system that covers all the bases, then the Yamaha CRX-N560D could well be the answer. It's petite in size, but manages to pack a lot of functionality into its rather diminutive frame.

The N560D is a new model in Yamaha's PianoCraft series and comes with an onboard CD player and DAB/DAB+/FM tuners, but its network streaming capabilities are what really sets it apart, greatly expanding your listening options beyond these more traditional formats.

Its Ethernet socket gives you access to the online and networking world, but it lacks the built-in wi-fi I was hoping to see. Unfortunately, this severely limits your placement options and, unless you're planning on sitting it within a cable length of your home router, you're going to need the optional YWA-10 adapter (£90) too. This gives you the missing wireless connectivity that's essential on a product of this type.

Once it's linked to your home network your options are extensive. You can listen to music held on your PC or network storage device (NAS), plus stream material from online sources. It uses the vTuner internet radio service, which gives you access to thousands of global internet radio stations. It's compatible with FLAC/WAV 24-bit/192kHz hi-res material and also features Apple's AirPlay so you can stream your own stored music from your iOS smartphone or tablet. In addition, if you've got the Spotify app on your smartphone you can stream songs to the system using Spotify Connect.

It's a smart-looking piece of kit that's clearly well built, but its svelte size means there isn't room for too many controls. Thankfully, Yamaha has resisted the temptation to overcomplicate things, keeping the front-panel layout pleasingly minimalist and uncluttered, with a large, bright display that's easy to read. Simple twin rotary dials for selecting the input and adjusting the

volume sit alongside well-designed push-button playback controls that are easy to find your way around. The only other additions to the front panel are a headphone output and a USB input for quick connection of an iPod, iPhone, iPad or USB stick.

Around the back there's the network connector and DC power output for either the wireless or alternative Bluetooth adapter (YBA-11) that costs £50. You'll also find both optical and coaxial digital inputs for linking to your TV or Blu-ray player, good-quality speaker binding posts, two analogue inputs and a sub output.

The CRX-N560D is reassuringly simple to set up, with decent instructions that take you through the process in a step-by-step manner that gets you up and running quickly. Sometimes configuring wi-fi systems can be an absolute nightmare and I approach the YWA-10 wireless adapter with some trepidation. However, hooking it up to the main unit and getting it to link to my home network is surprisingly swift and hassle-free and I am soon streaming music from my PC and dialling up internet radio stations from around the world.

The remote control is long and thin, but well balanced and sensibly laid out, with reasonably sized buttons that are intuitive to use. You can also download Yamaha's free Network Player Controller app to your smartphone, which gives you the ability to select the audio source and control playback of the tunes you want to hear. It's both iOS and Android OS compatible, works really well and is a delight to use.

The CRX-N560D comes with a trailing wire aerial, but as I often find

DETAILS

PRODUCT
Yamaha
CRX-N560D

ORIGIN
Malaysia

TYPE
Micro system

WEIGHT
2.7kg

DIMENSIONS
215 x 110 x 288mm
(WxHxD)

FEATURES

- Network streaming
- Optical and coaxial line-in
- FLAC/WAV 24-bit/192kHz compatible
- FM/DAB/DAB+
- USB input for iOS devices or memory stick

DISTRIBUTOR
Yamaha UK

TELEPHONE
0844 811116

WEBSITE
uk.yamaha.com

You can buy the head unit on its own or as the MCR-N560D system with speakers, costing £500

with these, it's not really up to the job of delivering decent DAB reception unless you happen to live in a really strong signal zone. I live in an urban area with reasonable signal strength, but have to plug in a higher gain indoor aerial to avoid dropouts – it's likely that most owners will have to do likewise.

Having said that, the unboxing and set-up procedure is rapid and straightforward. It only takes me half an hour to have it up and running.

Sound quality

There's no doubt that this micro system is a highly versatile animal. The head unit is available on its own or you can buy it as the MCR-N560D package with a pair of Yamaha NS-BP182 speakers – these two-way units with removable grilles incorporate a 120mm cone woofer and 30mm soft dome tweeter, and use Yamaha's Vibration Control Cabinet Structure (VCCS), which is designed to do away with unwanted cabinet vibration.

I try the head unit with the supplied speakers first and have to admit that I am really rather disappointed. As separate entities they're available for a relatively cheap £100, but unfortunately are a good example of getting precisely what you pay for. They are definitely the weakest link here and, sadly, let the rest of the system down.

Starting off with some classical from Holst's *Planets Suite – Jupiter* – and some weaknesses are quickly exposed. The introductory strings section sounds scratchy and lacks clarity and the whole movement is uninspiring and lacklustre. Hit the

speakers with some heavy rock, such as Black Sabbath's *Heaven And Hell*, and their lack of bass is woefully apparent too – I know they're only small boxes, but I've heard much better from budget bookshelf models of a similar size.

Listening to stirring, anthemic tracks like Coldplay's *Viva La Vida* should have the hairs standing up on the back of my neck, but it's a strangely uninvolved experience with the Yamaha speakers in place. It's the same whether streaming hi-res downloads or listening to digital radio – there's something missing. It's not just the lack of bass, but a general mid-range confusion that means the music fails to draw me in.

Crank up the volume and Black Sabbath's *Neon Knights* will have you rocking

Swap the packaged speakers for a decent pair of hi-fi speakers and it's a completely different story. I try the system with a pair of the award-winning Q Acoustics Concept 20s (HFC 372) and the transformation is immediately apparent. OK, at £350 plus an extra £200 for the dedicated stands, they can't be described as budget models, but they show what the CRX-N560D is truly capable of when not hamstrung by that crucial, final stage in the audio chain.

I was concerned that the Yamaha wouldn't have the oomph to drive them properly, but I needn't have worried as the 32W (claimed) digital amps are up to the job.

With the Concept 20s in place, the bass comes flooding back and extends down low. Crank up the volume and Black Sabbath's *Neon Knights* will have you rocking again. The start of U2's *Zoo Station*, with its growling guitars and punchy drums, can give any system a good workout and the N560D handles it with aplomb.

Annie Lennox's pure vocals on Eurythmics' *I've Got An Angel* truly soar, without any hint of shrillness. String sections in classical pieces, such as Stravinsky's *Rite Of Spring*, lose the harsh edge that was all too apparent previously and the whole audio range sounds less hampered and muddled. We know that the Concept 20s are excellent speakers and they allow the CRX-N560D to shine. The wonderful clarity and open 3D soundstaging that they offer is very obvious here, showing that this Yamaha head unit is sonically very capable when partnered with a decent pair of standmount speakers

Conclusion

If you're on the lookout for a compact, high-quality micro hi-fi that can 'do it all' and give you the option of playing music from a wide variety of sources in virtually any format, then the versatile CRX-N560D may provide the answer. It's a well-built unit that's been carefully thought through and for such a multifaceted device it's surprisingly simple to set up and use. Yamaha has got many things right, though the lack of integrated wi-fi is disappointing at the price and it's pretty inevitable that you'll also have to fork out an extra £90 for the optional adapter. But, that aside, I'm mightily impressed by its performance – so long as you partner the head unit with a decent set of hi-fi standmounted speakers like the Q Acoustics Concept 20s – and you'll have a cracking micro system that will stand you in good stead for many years to come ●

CONNECTIONS



- 1 DAB/FM aerial
- 2 USB input
- 3 Ethernet port
- 4 Decent quality binding posts
- 5 Subwoofer output
- 6 RCA stereo analogue inputs
- 7 Optical and coaxial digital inputs

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY
★★★★★

VALUE FOR MONEY
★★★★★

BUILD QUALITY
★★★★★

FEATURES
★★★★★

OVERALL
★★★★★

LIKE: Compact, highly versatile system; can sound good with decent speakers

DISLIKE: Lack of integrated wi-fi or Bluetooth without extra cost

WE SAY: Great micro hi-fi that potentially covers lots of bases



Northern exposure

Chris Ward discovers the pleasures of understated Norwegian hi-fi as he takes Hegel's single-box amplifier/DAC for a spin

It might not be a household name, but Hegel has a considerable reputation in its home country of Norway and is increasingly winning favour with dealers and customers further afield. The company has a strong technology pedigree and its approach to its extensive audio product range is to do things rather differently from the norm. Unsatisfied with some of the supposed limitations of digital signal handling and transistor amplification, Hegel has gone back to the drawing board for the manufacturing of the H80.

This is an integrated amplifier and DAC in one box that is setting its stall out to offer convenience and quality.

This is common in many budget integrated amps but is less usual as a customer's budget increases, with many audiophiles opting for separate amp and DAC at this price point. Given DAC technology is moving at such a pace, is there an inherent risk that this in-built DAC could soon look outmoded by newer separates with the latest bells and whistles?

Build quality feels of a very high standard and the sturdiness of the casework and connections around the back suggest quality engineering. Looking inside the amp further confirms a high build quality and Hegel is keen to underline how much attention it pays to the hand-matching of certain key

components. I like the understated design, but suspect others might want more controls, display information and a headphone amp stage. Its plain face and use of three vibration-absorbing feet suggest that maximum attention has gone into what's under the bonnet and how it sounds. The remote provided is, however, a disappointment. All controls are there and it works faultlessly, even changing tracks on my MacBook Pro remotely, but it comes across as a bit of an afterthought and doesn't feel right alongside such a well-built amp. An alternative can be bought for £100.

Connectivity is extensive. Twin pairs of RCA inputs are joined by rarer balanced XLR connections to offer three analogue inputs. Digitally, the H80 boasts two coaxial, two optical and a single non-asynchronous USB input. Coaxial and optical digital inputs are claimed to operate up to 24-bit/192kHz with the USB input topping out at 24-bit/96kHz.

Choosing the less commonly used adaptive, 'non-asynchronous' USB is a perfect example of how Hegel has complete confidence in blazing its own trail. Similarly the DAC employed in the H80 is a Texas Instruments PCM1754 selected explicitly for its sonic characteristics. Hegel isn't afraid to buck the traditional audio design trends and these less obvious technological

DETAILS

PRODUCT
Hegel H80

ORIGIN
Norway

TYPE
Integrated amplifier with USB DAC

WEIGHT
12kg

DIMENSIONS
(WxHxD)
430 x 80 x 310mm

FEATURES

- Claimed power output: 2x 75W into 8ohms
- Digital inputs: 2 coaxial; 2 optical; 1 USB
- Analogue inputs: 2 unbalanced RCA; 1 balanced XLR
- TI PCM1754 24-bit/192kHz DAC

DISTRIBUTOR
Hegel Music Systems

TELEPHONE
0047 22605660

WEBSITE
www.hegel.com



choices underline the belief it can give us better music playback by carefully optimising digital, pre-amp and power amplification into one box.

The design of the Hegel is about as minimal as it gets

Sound quality

Playing a CD of Spacehog's *In The Meantime* via analogue RCA inputs, the immediate impression is of detail and control. Bass is firm without overhang and the noise floor feels vanishingly low, allowing quieter high frequencies to sing out against a dark backdrop. But this amp is not dark at all. Quite the opposite, it feels like it's cleaning my music sources and removing distortion and noise I didn't know I had got used to. It comes

across as neutral, eager and upbeat and I'm hugely impressed how this transistor-based design combines new levels of detail and dynamic grip with the smooth, transparent delivery more usually associated with valves. Sources I know well come through cleanly with improved dynamism and almost no colouration.

Swapping to the balanced XLR inputs and all these virtues become even stronger with a little extra width to sound staging and a touch more 'boogie factor'. Bass is full but never overblown, partly I believe because of the very high 'damping factor' that Hegel claims for its amplifiers. This is an older hi-fi measure (popular in the sixties and seventies) that is not commonly used these days, but in this instance I can tell that part of the bass quality comes from the grip the amp has on the speakers from its impedance, rather than raw 'watt power' alone. Think of it as engine torque rather than horsepower getting you quickly away from the traffic lights.

Keeping the same track, I swap to the digital inputs. I can now detect a marked difference when the internal DAC is employed and also between the different digital inputs. On the coaxial inputs in particular, significant new detail is revealed, especially around higher frequency information. Sometimes DACs that err on the side of explicit detail can sound dry, or at worst 'glassy'. Not so here, the H80 DAC is just dredging more detail from my digital sources in a way that retains sweetness and fluidity. Being picky I'd say this extra detail has a mild effect of seeming to flatten the stereo image front to back and occasionally sounding a touch busy on more complex music, but the extra detail will win many over.

The optical input comes across as a touch more relaxed and some may prefer this digital choice, particularly

on weaker digital recordings. To my ear, however, the USB input feels less accomplished and a bit more simplistic and less free flowing than the other digital inputs. Some standalone DACs will give marginally better soundstage depth and imaging and more fine control over playback, but overall the DAC is highly capable and extremely well integrated within the amplifier.

Playing a lossless rip of Paolo Nutini's *Scream (Funk Your Life Up)*

A high transparency, high grip amp that can be considered a steal for the money

confirms the austere looks aren't matched by a reserved presentation of music. This is an amplifier that locks into a groove and gets feet tapping. Bass is solid and convincing, and the more I listen to it, the more I appreciate its quality. Some may hanker for a more fulsome bass or more 'fruitiness' to the deepest notes, but I think some bigger bass can often be a side effect from a slight lack of control. The bass qualities are very well judged and deep notes start and stop on a pin head and lower register instruments feel realistic and present.

Switching to Maria Doyle Kennedy's beguiling, emotive and stripped-back rendition of *How You Remind Me* on CD ably demonstrates that the H80 delivers subtle vocals superbly. And where some lower cost transistor amps can sometimes be criticised for drying out female voices, the H80 has a very light touch and an almost valve-like silkiness and transparency to the delivery of the finest upper mid band detail from Maria's captivating performance.

The combination of a high damping factor gripping the speakers and low

CONNECTIONS



- 1 Variable line outputs
- 2 Gold-plated binding posts
- 3 Optical digital inputs
- 4 Coaxial digital inputs
- 5 Neutrik balanced XLR inputs
- 6 RCA inputs

Q&A

Anders Ertzeid

Sales manager,
Hegel Music Systems



CW: Who is the H80 aimed at?

AE: A typical H80 customer may be an audio enthusiast or just someone with an interest in music and quality. They appreciate our connectivity, dynamic sound and value for money.

Is there a simple way to understand your SoundEngine technology?

We started by turning the concept of amplifier design 180° to have a design that does not amplify distortion. Most conventional amplifiers to a greater or lesser extent send the signal backwards – this creates a stable amplifier, but one that will amplify mistakes. Our patented SoundEngine design marries low distortion and stability and also means you can use any Hegel amp to drive tough loads.

Is it getting trickle-down benefits from your higher-spec models?

Absolutely. The preamp has lots of the P20 in it and the hand-matching of FET transistors in the input stage was designed for the P30/H30 to eliminate higher order harmonic distortion and increase reliability.

Did you listen to much music during the design process of the H80?

Yes, we combine the use of ears and measurement tools for design. The group that listens does not know what another 'measurement group' found. We then go back and forth between the groups to optimise sound and measured performance.

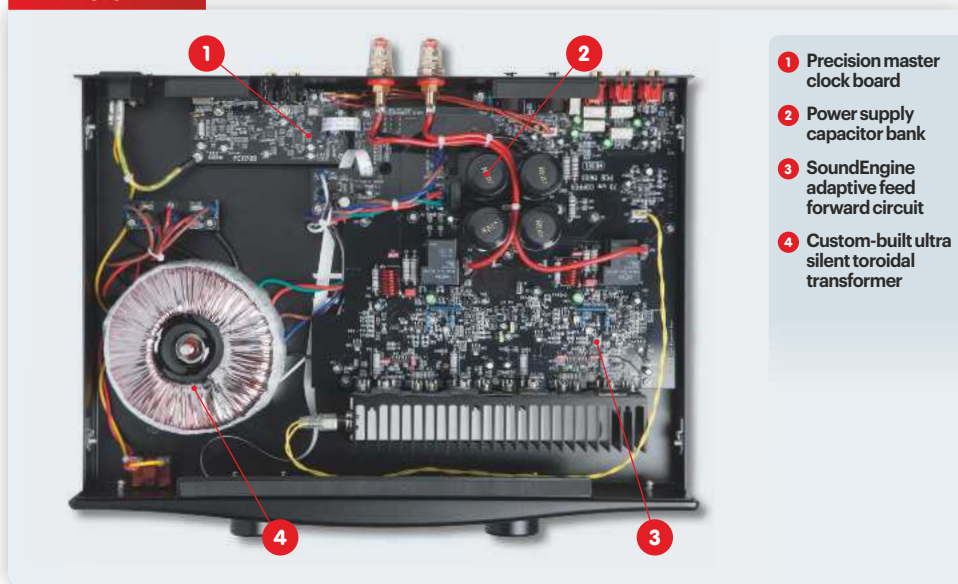
Why is a higher damping factor important for Hegel?

It's essential to be able to drive big speakers with confidence. It also makes our amplifiers sound highly dynamic with excellent bass control.

Why is your one-box approach better than separates?

Separates are great, but come at a price. At this level, the cost of the casing, shipping, packaging and quality interconnections would take a huge percentage of the budget. We think we can give customers better performance and value for money from a single box. Plus many people don't want a huge stack of hi-fi gear.

IN SIGHT



- 1 Precision master clock board
- 2 Power supply capacitor bank
- 3 SoundEngine adaptive feed forward circuit
- 4 Custom-built ultra silent toroidal transformer

distortion releasing new micro-dynamic detail gives me a fresh perspective to all the tracks I pick, be they jazz, classical or rock. At first it's almost as if the cleanliness of the sound suggests that familiar tracks have been subtly re-mastered or I'm listening to an alternative recording session in a slightly different room acoustic. But this effect is soon followed by the realisation that these are the tracks I know so well, just apparently with a small amount of analogue or digital 'grime' removed.

Conclusion

Blowing some cobwebs out with Rage Against the Machine's *Fistful Of Steel* I go through every single input using a CD transport, external DAC and MacBook Pro all providing signals concurrently. At this point it's easy to realise that a music lover can tailor the sound of their system or individual tracks through the H80 connectivity they select. However, many standalone DACs now commonly come with different digital filters to tweak the output signal and this does not. Nor does it have a headphone output or means to upload new software, or display any sample-rate information when fed digital signals. So, is it a bit mean spirited in the feature count and just ripe to have its DAC outmoded by the next digital breakthrough? The H80 would certainly benefit from some USB updatability and a few more customer-facing features, but this misses its point. It is a slice of genuine high-end hi-fi at a cracking price and I suspect Hegel has been very generous in the internal features integrated into this single understated box.

This amplifier feels like it's successfully addressing noise and distortion in fundamentally new ways. It may be an entry-level product in Hegel's product range, but it is clearly benefitting from trickle-down technologies found on more superior machines further up the range. Used daily for two weeks of intensive reviewing, I never once hanker for more convenience or quality. Hegel has integrated a capable DAC, highly sensitive preamp and radical power output stages in one box in a way that adds up to far more than the sum of its parts. And it's done this at a very sensible price. It comes across as a low noise, low distortion, high transparency, high grip amplifier that can be considered a steal for the money. You could go down a separates route for the same price, but you'd need to spend a fair chunk of the budget on quality interconnects and power cables and even then I'm not sure you'd approach this level of joined-up music making ●

HOW IT COMPARES

Cyrus and Peachtree Audio both optimise DAC and integrated amps around this price point and both will boast longer feature lists and more future-proofing, but I wouldn't expect either to achieve the H80's levels of transparency, speaker control and dynamic detail. Equally, with £1,350 to spend, pairing an Audiolab M-DAC or Arcam rDac and any one of a number of talented sub £750 integrated amps like a Creek Evolution 50A or Arcam FMJ A19 (plus budget set aside for interconnects) could appear to offer more flexibility, but again, I'd expect hearing the H80 alongside these separates to reveal that Hegel could well have the musical edge, unlocking more natural sounding detail and bass control.

Hi-FiChoice

OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** High transparency and grip; valve-like finesse
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Cheap remote control; lack of digital info or filters; limited features
- BUILD QUALITY** ★★★★★ **WE SAY:** A hugely talented integrated performer that gets to the heart of the music
- FEATURES** ★★★★★

OVERALL





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Born in the USA

Polk's RTiA1 isn't the newest small speaker design you can buy, but it's been big in the US for years. **David Vivian** takes a listen

What's the best kind of hi-fi product? The only problem with a dreamy vision of 'the-one-that-gets-you-closest-to-hi-fi-heaven' is the painfully high price tag or, worse still, a speech bubble that reads: "if you have to ask the price, you can't afford it". Life's cruel. Fortunately for most of us, there are more hi-fi designers and engineers tasked with wringing the last drop of performance from every pound you spend than those chasing sonic Shangri-La at any cost. As Ross Walker, son of Quad founder Peter Walker, once told me: "Any fool can design a great-sounding amplifier for £30,000, the trick is to do it for £300."

The same goes for speakers. Who wouldn't want to hear a seven-foot

20-driver behemoth that costs as much as a Ferrari 458 Speciale? What the world really wants, though, is a £299 budget two-way standmount that, for the money, hits it out of the park. Although profit margins on compact, inexpensive speakers are comparatively tiny, as a hook to get the musically inclined into 'real' hi-fi and the company's more expensive and lavishly engineered boxes, their importance is hard to overestimate. It's why excellence beyond the call of duty at the affordable end of the speaker market battles so hard for our attention. And it's why, far from rushing to get a better pair of speakers, people often end up hanging onto their £200-300 purchases through several front-end upgrades.

▶ DETAILS

PRODUCT
Polk Audio RTiA1

ORIGIN
USA/China

TYPE
Two-way
standmount
loudspeaker

WEIGHT
5.4kg

DIMENSIONS
(WxHxD)
187 x 305 x 292mm

FEATURES
● 25mm silk polymer
composite dome
tweeter, 133mm
polymer composite
bass driver
● Quoted sensitivity:
89dB/1W/1m
● Quoted power
handling: 125W

DISTRIBUTOR
D&M Audiovisual
Ltd

TELEPHONE
02890 279830

WEBSITE
polkaudio.com

Although relatively new to the UK, Polk's £299 RTiA1 bookshelf model – the smallest two-way in its mid-priced range – has been wowing American customers since 2008, which is a lengthy spell for a speaker design these days and a sterling endorsement of its design. True, you won't find a fashionably flush and screw-less driver presentation, but the cabinet's curved cheeks and glossy hardwood veneer are rare at the price and give the Polks a generally classy appearance and feel.

Beneath the real wood veneer, the enclosure – just 31cm tall, but 26cm deep – is made from 20mm-thick MDF, front ported and magnetically shielded. The tapered back is a function of what Polk calls Damped Asymmetric Hex Laminated Isolation – in other words, a more rigid, acoustically inert cabinet that yields fewer panel resonances.

The bi-wireable two-way driver complement comprises a 25mm silk/polymer-composite dome tweeter and a 130mm polymer/mineral-composite bass mid unit. Both units were designed with the assistance of Polk's Dynamic Balance technology, which uses a full-field heterodyning laser interferometer system to analyse and minimise driver resonance. Also chasing down unwanted contributions, Polk's Power Port technology seeks to reduce port noise, or 'chuffing'. A dispersing cone is placed at the mouth of the port on the rear, and is designed to improve the air flow in the same

That glossy hardwood design gives the Polks a classy appearance

way that a long, flared port would do on a larger floorstanding speaker. The claimed result is lower turbulence at the mouth of the port and a corresponding reduction in distortion.

Then there's Acoustic Resonance Control technology, which requires a second port on the front to resonate at the same frequency as the enclosure's internal depth resonance. As the radiation of the front and rear ports are out of phase with the drive-unit output, resonance peaks should be suppressed.

The RTIA1s sit securely atop my Slate Audio 24in stands, but their back panels are fitted with wall brackets if you want to liberate the floor space and don't mind inevitably sacrificing some of the A1's sonic potential. Toe them in a few degrees and, although the speakers 'warm up' after a few hours of play, the results straight out of the box are strikingly good.

Sound quality

I'll try to explain what I think Polk has done to make the A1s sound the way they do, which – in several respects – is quite different to British price rivals from the likes of KEF, Monitor Audio and B&W. Whatever benefits accumulated by the various anti-resonance measures – and I suspect

they are significant – these speakers have been voiced with extreme skill for a specific result. The mid-range is beautifully presented and subtly spotlighted to achieve a tremendous sense of hear-through clarity and detail. Tonal colours seem slightly saturated, giving a richness and tactility to instruments and vocals you simply don't expect from a speaker of this size or price. Likewise, the speed and expressive reach of the dynamics are almost scarily good. Better still, it's all

The Polks are righteously even handed with all types of music

securely grounded with an agile, supple bass performance that, while far from visceral, is taut and tuneful.

The A1's ability to present fine detail in a musically coherent yet uninhibited manner while bypassing the kind of forensic analysis that can sometimes let structural elements of the music dominate at the expense of tonal texture and timbral shading is a rare joy. Here you get it all in a way that appears to be completely unforced and

natural. For instance, jazz pianist Joe Sample's muscular two-fisted keyboard runs on the classic track *Carmel* always sound impressively clean, crisp and focused on my ever-engaging Monitor Audio Bronze BX2s. But through the A1s, the tumbling notes seem punchier and pacier, more pristine yet more harmonically replete. Similarly, Amy Whitehouse's voice on *F**k Me Pumps* gains aerobically as well as emotionally. It's simply a more powerful presence.

The speaker's imaging skills are of an equally high order. Given a bit of space to breathe (at least a foot from back and side walls, preferably more) soundscapes are convincingly proportioned, as deep as they are wide. Musicians, singers and instruments have easily discerned spatial relationships and, once again, a sense of palpable physicality that's hard to credit given the A1's modest size and price. Grand piano, the undoing of many a small speaker, holds no fear for the plucky Polks. They even make a decent fist of giving some weight and harmonic structure to the lower octaves. In short, they're a bit addictive.

Conclusion

Would you know what I meant if I said the Polk RTIA1s like having fun? Remarkably uncoloured, but far from neutral in the dull sense, they are righteously even handed with all types of music and, despite obvious physical limitations, sound expansive and expensive with great bass and dazzling midband insight. Crucially, they're alive to the pulse of the music and endowed with a keen instinct for nailing its necessary beauty. If their presentation is ever so slightly hyped, it's in a good way that draws you in and entertains.

Elegant design, real wood finish, ease of drive and general unfussiness about placement only add to my feeling that the best kind of hi-fi product is a bargain. You're looking at one right here. I recommend a listen ●

CONNECTIONS



- 1 Wall-mounting fixing plate
- 2 Rear-firing bass port
- 3 Wall-mounting spacing feet
- 4 4mm bi-wire speaker terminals

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★	LIKE: Midband insight; tuneful bass; fine timing and musical communication
VALUE FOR MONEY ★★★★★	DISLIKE: Slightly hyped sound
BUILD QUALITY ★★★★★	WE SAY: Highly enjoyable and characterful standmount that hardly puts a foot wrong
EASE OF DRIVE ★★★★★	

OVERALL





Lotta bottle

When it comes to reviewing 'no expense spared' valve amplifiers, only one man's up to the job. Step forward **Neville Roberts**

Getting a valve phono stage to work well is no easy task when you bear in mind that on the quieter parts of a record, the output from a moving coil cartridge may only be about a millionth of a volt. This needs to be amplified up to a standard line-level output of around 1.2Vrms, so for a start the whole circuit and power supply needs to be as quiet as a mouse. Then the stage itself also has to be first rate and stable under all operating conditions. As a result, designing a high-end model can be quite an undertaking, but Icon Audio has met this challenge head on with the PS3 MKII.

The first thing to get right is the power supply. In order to achieve maximum isolation of the mains components (including the mains transformer), the PSU is housed in a separate enclosure. It is an all-valve

design using an oversized power transformer and a full wave valve EZ80 rectifier. The output from this feeds into a hefty smoothing circuit to eliminate all traces of hum from the supply. This circuit employs two weighty chokes (effectively half of a transformer), which is the best way to do this. Just having a very clean DC supply is not good enough for the demands of a phono stage – it also has to be very accurately controlled. This is achieved by no less than three more glass bottles, namely an EL84 pentode, an ECC83 double-triode and a cold-cathode OA2 voltage reference valve.

The phono stage itself uses four ECC88 double-triode valves in a very elegant circuit, called a double cascode amplifier, to provide the high gain and low-noise performance required for excellent detail and sound staging. This circuit offers a

DETAILS

PRODUCT
Icon Audio PS3 MKII Signature

ORIGIN
UK

TYPE
MM and MC phono stage

WEIGHT
Phono stage: 4kg
Power supply: 7kg

DIMENSIONS
(WxHxD)
148 x 165 x 342mm

FEATURES
● Built-in volume control
● Stereo/mono switch
● Valve rectified and regulated power supply
● Passive RIAA stage in a zero-feedback design

DISTRIBUTOR
Icon Audio

TELEPHONE
0116 2440593

WEBSITE
iconaudio.com

very wide bandwidth without the need for any feedback, which reduces distortion. Also included at this point is a very high quality passive RIAA equalisation circuit.

Finally, the output is buffered with a lovely 6SN7 double-triode to provide a low (50ohm) output impedance, so the phono stage will be able to feed virtually any preamp. Incidentally, the 6SN7 was introduced in 1941 and is still considered by many to be one of the best sounding audio valves ever.

Although the phono stage is only required to produce a volt or so of output, its design could actually generate voltages of up to 40V before clipping, so it has a massive headroom and will certainly never bat an eyelid at the loudest of organ stops – or heavy metal for that matter! The MC input uses Icon Audio's own hand-wound moving coil toroidal transformers. Icon considers that transformers offer superior performance over a transistor circuit for providing the extra x10 amplification and impedance matching that's required.

The phono stage is all hand wired point-to-point, meaning that no printed circuit boards are used. This means that components can be easily changed or upgraded if you wish. Many audiophile components have been used in the circuit, such as silver wire in a PTFE dielectric audio cable,

Admit it, you'd love to have these glowing bottles on your hi-fi rack

as well as gold-plated input and output connectors. The Signature version reviewed here uses Jensen paper-in-oil capacitors and special valves, but the standard version still uses Solen/SCR polypropylene audio-grade capacitors. As a result, the standard MM-only version costs £1,899 while the MM and MC version will set you back £2,099.

Both boxes are beautifully finished in a matt-black metal enclosure topped with a gorgeous copper-coloured metal plate. The transformers are enclosed in a matching black metal screen. The amplifier front panel has the MM/MC selector that switches between two sets of inputs so two turntables can be supported, one with a MM cartridge and the other with either a MM or MC cartridge. There is also an Alps Blue volume control and a stereo/mono switch. The switch is an excellent inclusion as it will reduce noise levels when listening to mono recordings.

Sound quality

While allowing the PS3 Signature to warm up for my listening session, I select some material from my LP collection. The first thing to say is that, as expected with all the supply smoothing, there is no trace of hum (or hiss for that matter) even when I put my ear up close to my loudspeakers. I set the volume control on the PS3 to its maximum level, so it is effectively out of circuit and I am now ready to listen to the first LP – a superb recording of Prokofiev's *Piano Concerto No. 2* played by Vladimir Ashkenazy and the London Symphony Orchestra. I am instantly struck by the enormous soundstage – the PS3 has turned my sitting room into a TARDIS! Both the side-to-side and the front-to-back imaging far exceeds what I have been used to with this recording. Having said that, all the instruments are well focused

and there is no tendency to blur their position. The piano sounds full and rich with splendid detail and realism.

Next onto the turntable is a copy of JS Bach's *Partita No. 1* by Trevor Pinnock. The solo harpsichord again displays a lot of detail and clarity and I have a real sense of being totally involved with the performance. In other words, I feel as though Trevor is playing this in my sitting room especially for me!

I then turn to another recording of a full orchestra – Haydn's *Symphony No. 35* by L'Estro Armonico & Derek Solomons. This performance gives a full sound with instrumentation that is rich and multi-dimensional. The soundstage in no way seems restricted to the area between the

The build is superb and the sound quality is about as good as it gets

loudspeakers. There is a huge amount of detail in the upper registers and the exciting content of the music is really well conveyed to the listener.

Ramping up the tempo with Jean Michel Jarre's *Equinoxe* demonstrates a good dynamic range with a crisp top end and meaty bass. The PS3 MKII Signature simply doesn't seem to hold anything back from the recording, letting rip with a fast and detailed performance that is enormously engaging.

For vocals, I decide to give *Don't Misunderstand* by Thelma Houston a spin. This recording demonstrates the perfectly proportioned front-to-back positioning of the singer out in front with the instruments playing behind. Again, the sheer energy and enthusiasm of the performance is splendidly conveyed to the listener, and the performance is captivating.

Finishing off with some baroque music, a fantastic recording of Vivaldi's *Opus 3* concertos, *L'Estro Armonico* performed by The Academy of Saint Martin-in-the-Fields directed by Neville Marriner is both compelling and enchanting. I recently attended a concert at Saint Martin-in-the-Fields and noted that you can occasionally hear the traffic outside during a concert. This accounts for the occasional rumble of a lorry driving past in the background on the recording, which is reproduced with spectacular clarity!

Conclusion

In the interests of balance, I have to admit that I'm not a big fan of potentiometers as volume controls on high-end equipment and would much prefer to see a stepped attenuator fitted in its place, as a potentiometer can often be a potential source for introducing noise and distortion into the signal path. Given that this phono stage is likely to be used in conjunction with a preamplifier, I think it is unnecessary to have a volume control anyway, except perhaps to pre-set the output to a level that is comparable with other sources in your system. For this purpose, a simple coarse stepped attenuator with just a few steps will be more than adequate for the job. Of course, one could easily be fitted if required. Also, Icon Audio is happy to replace the volume control with a pair of fixed resistors fitted internally, and this service is offered free of charge.

Having said that, the PS3 MKII Signature is a very impressive-sounding phono stage. I hesitate to over do the superlatives, but the build quality is really superb and the sound quality is about as good as it gets. I genuinely can't fault it sonically. Oh and it looks fantastic too, and its appearance surely merits pride of place on any hi-fi rack ●

CONNECTIONS



- 1 6SN7 double-triode output valve
- 2 ECC88 double-triode amplifier valve
- 3 IEC mains input socket
- 4 Moving coil step-up transformer
- 5 Earth binding post for record deck
- 6 MM and MC inputs

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Superb sound quality

VALUE FOR MONEY ★★★★★ **DISLIKE:** Would have preferred a stepped attenuator instead of a potentiometer for the volume control

BUILD QUALITY ★★★★★ **WE SAY:** One of the finest sounding phono stages available

FEATURES ★★★★★

OVERALL



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hi-fi |'hī'fī| informal
adjective
of, used for, or relating to the reproduction of music or other sound with high fidelity.
noun (pl. -fis |'ha 'faizl)

high fidelity

noun

the reproduction of sound with little or no distortion, giving a result as similar to the original as possible.



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Fabriqu  en France:
Focal's vast Saint-
Etienne factory

FOCAL points

David Price speaks to G rard Chr tien, head of one of the hi-fi world's most successful loudspeaker manufacturers, Focal

Our story starts back in 1979 with audiophile and loudspeaker designer Jacques Mahul. He'd shown an interest in speakers from an early age and went on to specialise in drive units. Jacques was living in Paris, and writing for *L'Audiophile* magazine in the capacity of its driver expert, when he decided to get into manufacturing. "Before starting Focal, he had developed some bookshelf speakers under the JMlab brand, such as the very first DB13 model," explains Focal Managing Director G rard Chr tien. "Focal was dedicated to the drivers and JMlab to the speakers. At that time having two brands helped develop the driver business, which needs a critical size. The first customer for Focal was Jim Rodgers, followed by many high-end small manufacturers."

Initial turnover was very small. Based in Saint- tienne on the premises of his father's precision engineering company, the business grew and grew. It began to make a name

for itself for using innovative driver cone materials. "There were so many driver makers in the eighties," remembers Chr tien. "He was offering an alternative to the standard Audax and Siare designs, and he aimed at high efficiency, which was in the French tradition rather than the more power-hungry designs that were coming out of the UK at the time. The idea was to increase the magnet power and decrease the mass of the moving parts. To get high rigidity and low mass, he developed the sandwich cone; the first patent was granted in 1986, a Kevlar sandwich. So the cone material became a strong Focal differentiation. Most speaker companies had

Focal's philosophy is to always eliminate problems at the mechanical source

no chance to work at such a level, one which needed a true industrial structure, so they instead worked with cabinets and crossovers."

The earliest JMlab speakers, such as the DB13 and DB20, were compact bookshelf designs using a dual voice coil Audax driver to reinforce the bass response. A few years later, and the company had begun to evolve its sound towards what mainstream customers wanted – such as buyers at chain stores like FNAC – towards high efficiency, ease of drive and an expressive sound. "The JMlab DB19 is the archetype", G rard tells me. "The main competitor at that time was Cabasse; by the beginning of the nineties JMlab was becoming the market leader in France with a mainstream offer."

Whereas the JMlab loudspeaker brand was aiming across a broad spectrum of the speaker market, the Focal drive unit business was "a different story". Here it was targeting at "more high-end oriented clients such as Wilson Audio and many other small high-end brands, which disappeared since." Focal also appealed strongly to the DIY market with a range of complete kits with sophisticated and expensive drivers. In parallel, Focal started to develop car audio driver units and some pro audio drivers too, which were also high efficiency oriented. "The main competitor at the beginning of the nineties was Dynaudio, which addressed the same markets."

Grand designs

Jacques Mahul's strategy had been to make JMlab the market leader in France; he was steering the company to do mainstream, high-volume products, but of good quality too. So early JMlab speakers were mid-price bookshelf designs; it wasn't until the nineties that the brand began to move upmarket – even if the drivers inside were from a sister brand that was regarded as a far more high-end product.

Looking to expand, in 1990 Mahul brought in G rard Chr tien as Managing Director; the pair had known one another since 1977 and had become "very close". As well as being an engineer, Chr tien had edited *L'Audiophile* magazine for many years prior to this, and had developed "other activities around the magazine" such as a DIY store for special audio components, and a line of electronics with Jean Hiraga. "It was clearly the beginning of a high-end orientation for JMlab, with for example the Vega loudspeaker", explains Chr tien.



The first DB13 loudspeaker developed by Jacques Mahul

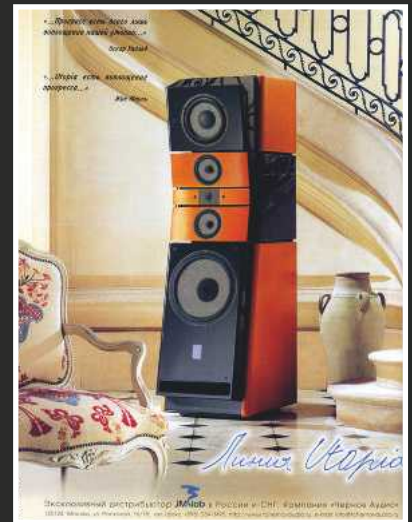


Jacques Mahul (left) and Gérard Chrétien are the main men behind Focal's success

GRAND DESIGN

Starting out as JMLab's "ultimate demonstrator", the purpose of the 260kg Grande Utopia was to make a testbed to validate new drive unit materials. It was a four-way design with separate cabinets and focused time alignment due to the size. No-compromise components appeared in the crossover, as there were no cost issues, and it was a prototype. The speaker caused Mahul to move to the idea of using beryllium for the inverted tweeter dome. "It pushed the limits we had with titanium", says Chrétien. "Much work had been done on the magnetic circuits such as 'power flower' for the midrange and the 'focus ring' on the first beryllium tweeter. The second-generation Grande Utopia was launched in 2002 with a huge gain in the treble due to the beryllium benefit. In 2008 we launched the third generation with the adjustable electromagnet EM woofer, the improved IAL2 Beryllium tweeter, new laser-cut W cones and with the new iconic design coming from the adjustable focus time alignment."

He describes the Focal sound as: "beyond the dynamics, timbre and spatial accuracy, we are obsessed with the quality of the midrange – balancing harmonic richness, finesse, a touch of silk. But it is important to have an overall voluptuous sound with a sensual texture, too".



All of Focal drivers are bespoke, meticulously made and use a range of innovative materials



From 1992 to 2000, the company's turnover increased three-fold, as its speakers became ever better and more popular in export markets. It was during this period that Focal JMLab began to make an appearance on the UK hi-fi scene, which as any foreign speaker manufacturer will tell you, is easier said than done. New markets were found across Europe, Southeast Asia and North America, and the brand began to win awards.

Chrétien explains that it wasn't until the arrival of the Grande Utopia in 1995 that the world's press really sat up and took notice, though. "In the early nineties we had developed new sandwich cones that had become the W cones and were experimenting with new materials for inverted dome tweeters such as diamond (which we didn't use in the end because its mass was inconsistent with our philosophy of high efficiency). To validate the subjective input of such new stuff we had to imagine an extreme prototype speaker, and in March 1995 we introduced the concept of the first Grande Utopia. This was the beginning of a new adventure."

The next generation

2002 was a big year for the company; not only did it launch its second-generation Grande Utopia, but it relocated its factory to where it is now – in Saint-Étienne. Shortly after, the tongue-twisting name was shortened from Focal-JMLab to simply Focal in 2005, the company's product range that's on sale today began to take shape. The hi-fi products begin with the entry-level Chorus line, then go up to Aria, Electra (where the beryllium tweeter and W cones are introduced) and then finally Utopia.

Interestingly, Focal has just launched a range of Easya wireless loudspeakers, too – which could be the shape of things to come.

All Focal products are entirely designed and developed in France, and most of the production is carried out at the factory in Saint-Étienne, where around 200 people work. Gérard Chrétien says that, "the key point was to be able to maintain our driver production in France. In the early part of the last decade we relocated the production of our entry-level loudspeaker drivers for reasons of quality. That was the beginning of a virtuous circle, where we reached a critical size of more than 1,000 drivers per day. We could employ people and train the skills that have since become the best developers. Computer simulation is a first step, but ultimately you have to deal with the chemistry of the glues, materials science, expertise in magnetism. Prototype, prototype, prototype! Without production tools you cannot innovate in the driver field. As for the Utopia cabinets, nobody else was able to manage such a design, so we had to do the job in France!"

Having the research and development done on the same site as production has proved invaluable, because Focal's philosophy is to always eliminate problems at the mechanical source (ie the drive unit) rather than trying to compensate for it later on down the line in the crossover. "Electrical correction is always a poor solution, at the end there is always the transducer with its limitations," insists Gérard. When problems are found during the development phase then the manufacturing resources of the factory allow engineers to quickly design them out, rather than having to wait weeks or months for the redesigned drivers to ship over from China, for example.

The new Flax cone was first seen on the 900 Aria range



propagates sound superbly and is highly linear. At the more affordable end of the market, Focal's new TNF high-frequency unit uses an aluminium/magnesium alloy inverted dome for low mass and high stiffness, supported on Poron suspension to aid linearity. It's also fitted with a front plate waveguide for decent dispersion. The result is a very effective driver, and to my ears it's one of the best tweeters at the price.

My visit to Focal showed me just how large the site is, with everything from drive cone and magnet assembly manufacture to crossovers done on site, as well as research and development. What came over was the company's enduring interest in, and passion for, cone materials and drive motor systems. The new W sandwich cone used in Focal's high-end speakers is something the company is very proud of, claiming it to be "an unrivalled solution in terms of low mass/high rigidity/huge internal damping. Like Lego, we can adjust the response at the source by acting on the thickness of the foam, the density of the glass fibre, the number of layers. The only limitation is the cost, because it can only be manufactured by hand", says Chrétien.

Flax the way to do it

In the more affordable model ranges, this year has seen a move away from Polyglass cones, first introduced way back in 1985. This comprised a cellulose pulp cone for good damping, together with a layer of glass microspheres in order to increase the rigidity. Now though, the new Flax cone – first seen on the 900 Aria range – is a sandwich of glass fibre and a special type of textile fibre. Flax was found to be an ideal damping material for the glass fibre, giving the overall effect of a light but rigid cone that's able to give excellent pistonic motion without breakup, yet it is relatively light too. "We searched for years for less expensive alternatives to the W sandwich, that would allow for automation of the manufacturing process of the sandwich structure. Christophe Sicaud, the new CEO, coming from the tennis industry, came up with the basic idea of using flax in 2011."

At the high end, Focal is, of course, famous for its pure beryllium tweeters. The idea of using this material isn't new – Yamaha used it on its NS1000 series of reference monitors – but the manufacturing process and design of the Focal unit is quite different. It makes the most out of the amazingly low weight of the metal, along with its innate rigidity. Two years of research and development produced a tweeter able to cover over five octaves (1kHz–40kHz), no less. Seven times more rigid than titanium or aluminium, it

While Focal drive units are innovative, the company follows a very conservative path in respect of the general cabinet design of its loudspeakers. For example, every speaker is reflex ported – as is the fashion these days – because, "if one wants to combine high efficiency and reasonable dimensions the bass reflex remains the best candidate", says Chrétien. Also, the company has stuck resolutely to the box idiom. "If one wants to combine high efficiency and reasonable dimensions then electrodynamic transducers are best. Furthermore, it is our historical expertise that we have amassed over 30 years,

Everything from drive cone and magnet assembly to crossovers is done on the site

we haven't stopped improving it over 30 years. Somewhat like the car engine!" In 2011, Focal took many industry observers by surprise when it merged with Naim Audio Limited – the famous Salisbury-based English hi-fi manufacturer. The two brands remain independent with their own philosophies and product ranges, although they have consolidated some aspects such as sharing resources at hi-fi shows. "Both brands retain control of their production, a key point for innovation, an issue of critical size also," says Gérard. "In the audio industry today there are two key areas of expertise, digital and acoustical, and these are becoming ever more intertwined. In this sense, Focal and Naim makes a great deal of sense!"

The two companies have obviously thought long and hard about future hi-fi and audio markets, and there's an obvious synergy with Naim's streaming and amplifier expertise and Focal's loudspeaker know-how, to make complete systems in a variety of guises. "Focal speakers – like everyone

FOCAL FIRSTS

- 1981 – Inverted dome tweeter
- 1986 – K2 Polykevlar sandwich cone
- 1988 – Polyglass cone
- 1995 – 'W' sandwich cone
- 2002 – Beryllium tweeter (inverted)
- 2007 – Tweeter Al-Mg
- 2013 – Flax membrane cone

Sandwich cones use a combination of materials



else's – are changing," explains Chrétien. "We have to take into account the expectations of consumers. Beyond classic hi-fi designs, we listen more than ever to music, nomadically. Whether it is in the car, or from our internet set-top box. Our crusade is to bring respectful 'acoustic solutions' for music. Our recent developments with headphones or the Dimension soundbar are good examples of our thinking", he concludes.

Bon voyage

Focal is an interesting company, with a wide range of highly capable products and no small degree of innovation. The loudspeakers combine real engineering depth with a touch of Gallic flair, and have a distinctive and enjoyable sound right across the various ranges. The speakers are generally highly efficient and in this respect are way ahead of their time; users of low-powered Class A solid-state and tube amplifiers will find them especially amenable. At the same time, the company's partnership with Naim is bound to take it on an interesting new journey. *Bon voyage, chaps!* ●



The Spirit headphones are a new direction for Focal

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“A distinct cleaning up of the sound...
“A marked benefit for dynamic range, a consequence of lowering the noise floor, as well as a refinement and a general opening up of the soundstage”

IsoTek EV03 Premier, Hi-Fi Choice, March 2013

EV03 Premier

IsoTek's most affordable power cable has at its core three 2sqmm conductors made from 99.9999% OFC (oxygen-free copper) and coated in silver to aid conductivity, with a Teflon FEP dielectric extruded over each conductor. A cotton filler is used to give the cable internal strength and reduce microphony whilst maintaining dielectric performance. The cable is terminated with high-quality 24ct gold connectors, designed and manufactured by IsoTek rather than bought off the shelf. No similarly priced power cable is constructed to such a high specification, with correspondingly impressive benefits to sound and picture quality.

- 24ct gold connectors
- Silver plated OFC conductors
- Teflon FEP dielectric
- 16A current capability
- C15, C19 and C7 IEC options
- 1.5m standard length

EV03 Polaris

Cost effective high-performance power distribution strip that cleans Common and Differential Mode noise from the mains as well as offering surge and spike protection.



“More space, lower noise and greater resolution... An increase in timing precision, depth of bass and a much greater sense of musical flow”

IsoTek EV03 Polaris, Hi-Fi Choice, March 2013



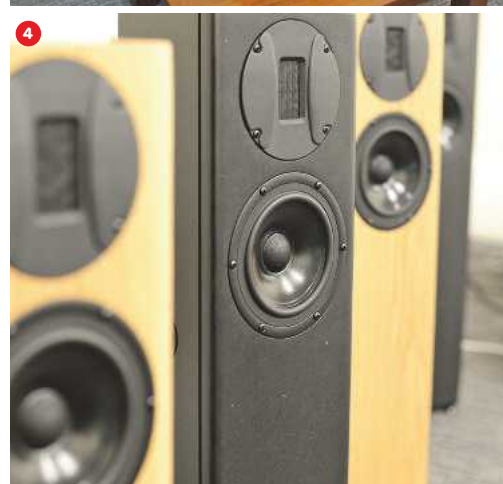
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Show time!

What better way to kick-start Autumn than with a hi-fi expo? **Chris Ward** guides us around the National Audio Show

IT'S THE WEEKEND of 20-21 September and the National Audio Show returns to Whittlebury Hall, near Towcester. Attendance is good and the mix of over 40 small rooms and larger suites soon buzzes with lively discussion and energetic systems. Exhibitors range from small accessory suppliers to high-end manufacturers as well as specialist dealers with a host of quality brands.

Playback formats at this year's show major on high-resolution digital files, both on hard drives and streamed, but a decent amount of vinyl and the odd smattering of CD are all on song.

That's entertainment

As well as the hi-fi itself, the event also hosts regular seminars that run through the weekend with various audio experts giving plenty of advice on everything from setting up a turntable to demystifying computer

audio. Live performances from some talented singer-songwriters entertain the attendees in hi-fi downtime and Classic Album Sundays returns with the knowledgeable and passionate Colleen 'Cosmo' Murphy bringing some new insights to favourite albums from Marvin Gaye, Jeff Buckley, Nick Drake and Fleetwood Mac – all played through an Audio Note system.

Recording engineer Mike Valentine's unique blend of humour, audio experience and quality recordings is refreshing as always, and this year he treats visitors to excerpts of his new 'direct cut' LP of Vivaldi's *Four Seasons* with no digital equipment being used between live musicians, valve microphones and live cutting of the record surface.

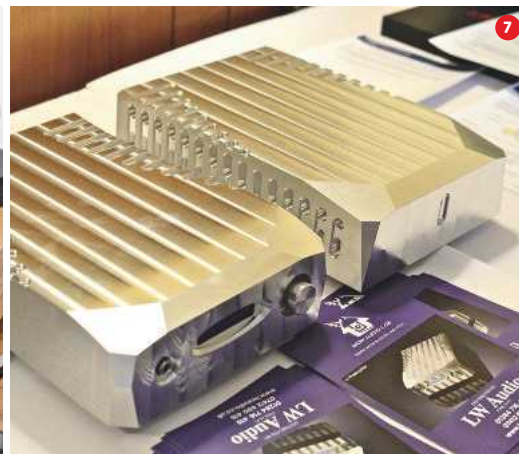
There are plenty of new and noteworthy products on show. Here are just a few of the highlights.

1 Henley designs shows off three new Pro-Ject turntables. The RPM 1 Carbon (centre) is available now at £325. The RPM 3 Carbon (right) at £599 and RPM 5 Carbon (left) at £899 are both available for Xmas.

2 Roksan presents its new K3 CD and K3 integrated amplifier (£1,250 each) in three evocative colours – anthracite, charcoal or opium. It's a brand new design that's described as "a grown-up K2".



6



7

3 Icon Audio's new 50kg MB 81PP triode amplifiers light up the room. Priced at £12,500 a pair, they are available to order now.

4 Royd Audio's new Troubadour speakers feature ribbon and paper drivers housed in a refreshing range of colours and finishes. Priced at £999 to £1,199 according to finish. Available now.

5 Ortons Audio Visual has the first UK showing of KEF's Blade 2 – 66 percent the size of full Blades at 75 percent the price. KEF's smaller sibling can now fit in any domestic setting. Yours for £15,000.



8



9

6 Newcomer, Divine Audio unveils its beefy 'Fatboy' prototype turntable with deep birch plinth, 10kg platter and a price tag of around £2,000. It's shown here fitted with Origin Live Zephyr Arm.

7 LW Audio shows wOw Audio Lab's L1 preamp and M1 stereo amp. Stunning milled aluminium casework shrouds promising electronics. Available now to order at £4,199 and £3,799 respectively.

8 New to the UK, GamuT's RS7 floorstanders create vivid images in the Sound Foundations room. Hand-crafted woods adorn this statement three-way design. Available now from £23,990.

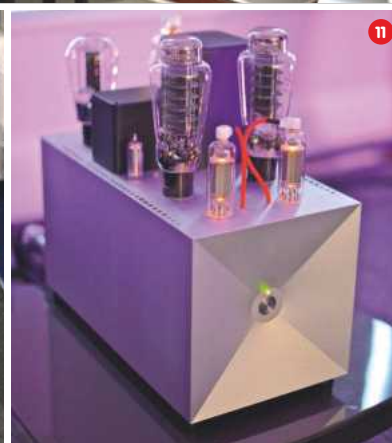
9 Sound Foundations shows off the Clearaudio Statement TT1i parallel tracking tonearm. Engineered aluminium and 'bulletproof' Panzerholz wood combine in a unique design, from £15,500.

10 Russ Andrews' newest distribution block promises advanced, high-end balanced power in a home-friendly box. It's available now for £3,599.

11 Hi-Fi Guy powers up its elegant Bulgarian-made Thrax 'Spartacus' valve amps. Featuring 70W of triode power they soon boss some flagship Tannoy into making some sweet sounds.



10



11

12 With launch imminent, Divine Audio has a brand new Northern Fidelity Lead Audio DAC on show. With wireless connection and 32-bit/384kHz resolution, it's rumoured to be at an affordable price.

13 Ortons has the first UK showing of Musical Fidelity's Nu-Vista 800 amp. Based on the legendary Titan amplifier, £7,999 gets you 300W of muscle that works well with the Blade 2s.

14 In eye-catching yellow, Audio Note's 'Jinro' integrated amplifier (Baby Ongaku) catches everyone's eye. With 18W of Class A 211 triode valve magic, it costs £16,500 excluding sunglasses.



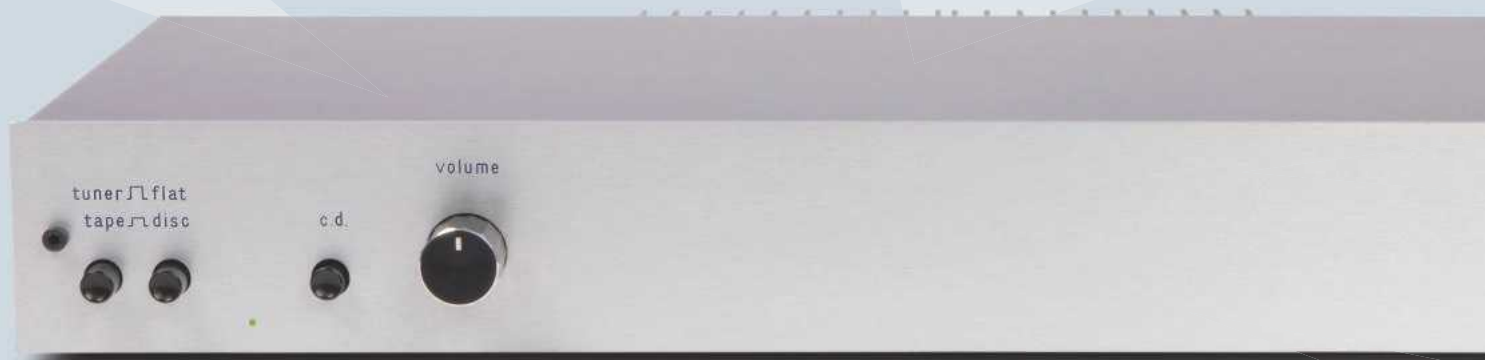
12



14



13



Myst-ery solved

David Price tells the weird and wonderful tale of one of the eighties' most interesting integrated amplifiers – the Myst tma3

We were trying to achieve an amplifier that was properly made”, says Michael Maloney. “At the end of the seventies when we came into being, the quality of the components was pretty poor. They were still using old carbon resistors and electrolytic capacitors in the signal path, printed circuit boards were still made of Bakelite. We were one of the first to use one percent metal film resistors, we used beautiful capacitors – polypropylene, polystyrene capacitors. There weren't any mica capacitors in that at all, we had glass-fibre printed circuit boards, and we had the latest Japanese transistors, we had the first MOSFETs, which were paraded as the replacement for valves...”

The company was Myst, and he was a young man in love with music. He had recently graduated from university with a degree in Perceptual Neuropsychology. He was highly skilled in electronics, but his lack of conventional schooling led him to believe, correctly, that electronic components had their own sonic signatures. Such revolutionary thinking was reflected in the design and execution of the new tma3, which sounded dramatically better than most rivals at or anywhere near its £250 retail price.

Michael preached minimalism – fewer fripperies on the outside of the amp and better engineering inside – and practiced it too. The tma3 sported just a power switch, volume control knob and source selection buttons. “I can distinctly remember when I was a schoolboy,” says Maloney, “and I saw a hi-fi magazine and on the front was an Italian amplifier called the Galactron, and I saw the back panel and there must have been upwards of a hundred

The Celestion SL6 and the tma3 went together hand-in-glove

phono sockets, and that got me going. Because I thought that this is entirely unnecessary, really. All that we want is something to play records. We don't need all these dials, just a simple input and output, and make it well, make it beautiful and make it to last. And that was the start of the thought of going into audio.”

After leaving the University of Saint Andrews, Michael went to work for Chum Kersting in Norwood, making some of the “leading” valve amplifier output transformers of the time. He was keen to learn the art of this, as he

was interested in building his own valve amplifier. Indeed, the very first Myst product – the Stage-Life – was precisely this. Sadly, Chum was taken ill with a stroke, and so just around the corner from his company in Norwood, Michael started Myst with his partner Mary Guillaume. “We needed a factory to work in,” he told me, “and in those days the Welsh Development Agency was offering houses and factories in their new town, which they had called Newtown, in mid-Wales. Anyone could take a house and a factory for a very reasonable weekly rent, so we thought let's have a look.” They did, but didn't like it, so they drove back to London through Herefordshire and found themselves beguiled. “Mary and I looked at that and thought, that's where we want to live!”

The couple ended up in Weobley, where they – and Myst Ltd – reside to this day. “It was just big enough to have a beautiful listening room with blue velvet drapes, and a big brick pillar that I built to put all the equipment on. And then at the back there were two rooms we could assemble equipment in, and we got two ladies from the village to come in and assemble things and that was the start of Myst”, confides Michael.

The newly set-up factory and office building, sitting within sight of the



Brecon Beacons, began producing the new integrated amplifier – and it was marketed as, “not simply another budget amplifier”.

If you thought the Myst integrated was something of a walk on the wild side, stylistically or conceptually, you should have seen what had come before. The Myst G-Ohm pre/power amplifier garnered a reputation for its excellent sound, but won no prizes for ease of use or contemporary styling.

What all Myst products shared was their excellent build quality; it wasn't all about showing off the ‘perceived’ cost of the product, rather the focus was on the general calibre of the materials; circuit design and components were top notch considering the price, and everything was very lovingly put together.

The tma3 was basically a smaller, more compact one-box (432 x 220 x 55mm) G-Ohm with a less over-the-top power supply.

Pretty on the inside

Inside, the Myst integrated is a lovely thing to look at. Back in 1983, your average Japanese amplifier was a riot of wiring, with vast numbers of sub-boards going here there and everywhere and the usual rather plain frame-type power transformer. The Myst showed very careful attention to earthing, being star earthed years before it became fashionable. The wiring was neat and the signal paths kept short. Mains power came courtesy of a large, high-quality toroidal mains transformer with separate power rails for preamp and power amplifier sections.

The more you drilled down into the tma3, the more you saw loving attention to detail. The volume control was a high-quality ALPS

potentiometer, compliantly mounted to reduce mechanical vibration. Excellent one percent tolerance polystyrene capacitors and metal film resistors popped up in the phono card (there was a choice of MM or MC), and circuit boards were neatly laid out high-quality affairs. The preamp-to-power amp connection used high grade polycarbonate capacitors, and the power amp itself was closely based on a classic Hitachi circuit with just five transistors and Hitachi 2SK226/2SJ82 MOSFET output devices coupled to the loudspeakers via a 2.5amp quick-blow fuse. The quality was superb, and the reliability too. “Nobody’s ever phoned me up and said you’ve sold me a piece of junk”, says Maloney.

The quoted power output, claimed by the manufacturer to be 35W RMS per channel into 8ohms, sounds modest now, but was pretty feisty by the standards of the early eighties.

Everything is clean and extremely detailed with superb soundstaging

It certainly wasn't bad, lest we forget Naim's Nait integrated which appeared around the same time struggled to make 20W. Still, on the other hand another new similarly priced amplifier launched around that time. Audiolab's 8000A punched out 50W RMS into 8ohms, making it a veritable power house. Whatever the raw numbers suggest, in real life the Myst came over as a strong and gutsy performer considering its diminutive size and unremarkable rated power; there was certainly a sense that it was good at current driving when called upon so to do.

Michael Maloney says, “the Quad ESL-63s were the best sounding

Celestion's SL6 loudspeakers were used as a reference



MYSTERIES OF THE UNIVERSE

Myst was an eccentric company, and you've got to love all the silliness that surrounds it. The first Stage-Life valve amplifier, launched in 1981, came in two shades of brown. The 1982 G-Ohm surfaced in a brown and champagne gold colour scheme. Then the tma3 a year later arrived in silver and blue, although an option of all-black was offered and most of the tma3s ended up being sold in this livery – for this you'd have to add around £25 to the purchase price. If the tma3's dimensions seem especially familiar to you, then you may have owned a pair of Celestion SL6s – the amp's casework is identical to the sand-filled metal uprights in the SL6 stands; indeed the latter was inspired by the former! The best Myst legend is the Wellard loudspeaker – an amazing mid-sized studio monitor that the company sold to the great and the good of the British music scene in the mid-to-late eighties. Everyone from Phil Collins to Stock, Aitken and Waterman bought a pair, and this was what took the company in a different trajectory, away from the domestic hi-fi industry.

loudspeakers of the time, by a mile. The tma3 had the MOSFETs, the best power supply and the big toroidal transformer, and it would drive Quad Electrostatics the way they were meant to be driven. They were half the cost of a house in those days, dramatically expensive, so I don't think many people bought tma3s to drive Quads. We used the Celestion SL6 as a reference, and these and the tma3 went together hand-in-glove. It was a very tricky speaker to drive, but Celestion heard the amp in action and we began to get involved in an active version of the SL6. It was never a production thing, it was a skunkworks project. We had one power amp driving the two drivers, one for the woofer, one for the tweeter – and that was beautiful!”

Action stations

In action, the Myst tma3 still sounds excellent. It's a punchy integrated that comfortably exceeds its quoted 35W-per-channel rating (50W-per-side would be more like it) and is especially good at driving low loads. It has a tight grip on loudspeaker bass cones with a damping factor of 110, and further up everything is clean and extremely detailed with superb soundstaging. Yet it is never analytical – it has real musical coherence, making it a joy to listen to in its own, calm, measured and accurate way. The phono stage is very good, and there was a range of MM or MC plug-in cards available to buy back then. Interestingly, the CD input bypasses the preamp section and effectively runs through just the volume control and power amp – and sounds great as a result ●



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THIS MONTH



ED SELLEY

EXPERTISE: REVIEWER

For the best part of 10 years, Ed was developing and supporting products from some of the biggest names in audio. He enjoys blogging about his favourite tunes, too.



NEVILLE ROBERTS

EXPERTISE: ENGINEER

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



ANDREW SIMPSON

EXPERTISE: REVIEWER

Andrew's been passionate about hi-fi since he was a wee nipper. When not obsessing over his next upgrade, he can be usually found under the bonnet of his 1973 MG Midget.



CHRIS WARD

EXPERTISE: REVIEWER

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



DAVID PRICE

EXPERTISE: REVIEWER

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

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



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► Music matters

I agree with Nigel Williamson when he says that music is often used as a distraction by people going about their daily routines. (Make Time For Music, HFC 389) I also believe that great music deserves our full attention; so when I take the time to listen, that is all I do.

I am lucky as I can do this on a regular basis. My wife works on a Saturday night,

Is there any real advantage in getting myself a headphone amp?

leaving me home alone. So between 6:45 and 11:00pm I can play whatever I like as loud as I like, without disturbing anyone.

In the early seventies, I heard a state-of-the-art, high-end hi-fi. It was my 'eureka' moment. But it was almost 20 years of marriage, mortgages and children with sticky fingers before I had the confidence to spend real money on real hi-fi, confident that I could come home and it wouldn't be covered in jam.

I bought my first real hi-fi in 1992 and since then I have upgraded or replaced all the components at least once. My current system, although some way off high-end,

sounds better than anything else I am likely to hear, and provides a means of escape from life's little trivialities. It is without doubt money well spent. What other electrical appliances could ever hope to bring such pleasure?

But times are changing. My wife is as they say, 'looking to spend more time with her TV'. So I found your review of headphones (HFC 388) very timely. I haven't stayed married for 32 years without compromising, so this looks like the way forward. It should allow us both to enjoy a Saturday night together (well in the same building). I get my listening time and she watches TV.

Is a separate headphone amplifier a necessity for all headphones, or will some speaker amplifiers do the job just as well?

Chris Barker, Colchester

A headphone amp, like Oppo's HA-1 (on test last month) can make a world of difference

DP: Nice sentiments Chris. You don't specify which cans you're using, but if you're yet to buy then you may be amazed by how good the Jays v-Jays are; they're small portables and cost under £30, but have a supremely coherent and enjoyable sound. The answer to your question is that no, unless you have unusual headphones that present a particularly hard load, you shouldn't have any trouble powering them from most integrated amplifiers. However, you can get better sound and also the ability to drive stiff headphone loads with a top-notch standalone headphone amp. My suggestion here is Musical Fidelity's M1HPAP – it's extremely powerful and stable and is one of the best I've heard that is priced for mere mortals such as you and I. Better is available, but you will need to spend far more to be able to enjoy it.

NR: Hello Chris, to answer your question it is always difficult to generalise about equipment facilities as it does depend on the actual item. However I agree with DP that a purpose-made headphone amplifier is likely to offer better performance as it has been designed specifically for the job. Usually, a headphone socket on a power amplifier simply takes the speaker output and attenuates it down to a level suitable for powering a pair of dynamic headphones. A headphone amp is of much lower power and designed to suit headphones of a wide range of impedances, rather than the usual 4 or 8ohms of a loudspeaker. Of course, if your amp already has a headphone





Andrew used the Primare R32 phono stage for the cartridge Group Test in HFC 389

socket, then the best advice would be to get used to your new headphones with this and then see if you can borrow a headphone amp and decide for yourself if it is worth the extra investment. For what it's worth, I have a separate (valve) headphone amplifier with tapped output transformers that I can match to the impedance of my headphones and it sounds absolutely fantastic!

➤ Take the stage

I really enjoyed reading your review of six phono cartridges in issue 389 as I am currently considering

Can you advise me on the best tonearm and cartridge to get?

upgrading my Ortofon 2M Red. The winner of the group was the Ortofon Quintet Blue, which is a great result for me if I want to stick with the Ortofon family. However, I noticed that the Quintet was the only low output MC cartridge and so was presumably tested with a MC phono stage whereas all the other cartridges would have required or worked with a MM phono stage.

Could the result simply have reflected a better

quality MC phono stage over the MM phono stage used? In other words how did you ensure that the different phono stages used did not influence the result? Of course, it could be that you simply played the Quintet through a MM phono stage despite its low output. If this is the case please let me know as it will prevent me needing to sell my current MM phono stage to buy a MC one if I switch over to the Quintet. Currently I use a Naim StageLine phono stage, which has different versions for MC and MM cartridges.

Bill Sturman

AS: Hi Bill, good to hear you found the Phono Stage Group Test informative. All six cartridges were tested using my reference Primare R32 phono stage, which caters for both MM and MC cartridges, and with a range of loading options for the latter. This meant I was able to match the recommended 20ohm load of the Quintet Blue during the test using the Primare. I deliberately used this phono stage for exactly the reasons that you describe, so that I'd have a level playing field upon which to test the cartridges. At £850, the Primare is of sufficient quality to get the best out of all the pick-ups on test, without getting in the way. If you are looking to go down the MC route and

you're currently using an MM phono stage that you're happy with, rather than replace your MM stage you could also consider adding a MC step-up transformer into the mix to get the MC's signal up, such as a Graham Slee Elevator (£640).

I was really impressed with the Quintet Blue during the test. As you'll have seen, it doesn't look the most sophisticated cartridge from the outside, but it tracked extremely well and delivered fantastic results across the board. That said, it was a closely fought contest, and the Grado and Sumiko models certainly weren't too far behind, so if you like a more lively presentation look towards the Sumiko, and for a warmer presentation try the Grado. To me the Ortofon sits somewhere in the middle.

➤ Time for change

Hi there, I wonder if you can help me? I am looking to upgrade my system over the next six months and am wondering what's best to get for what I have? My turntable is an Avid Ingenium with Rega tonearm and the 2M Blue Ortofon, an Arcam FMJ A19 amp and a pair of B&W 685 S2s. I want to upgrade the tonearm and cartridge as in the next few weeks I'm hoping to treat myself to the Avid Pellar phono stage and hope that this will give me more options when it comes



Ed reckons the Tabriz Zi remains one of the most underrated sub-£1,000 tonearms available

TWITTER QUERIES

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Built in p/stage #headphone amp & @Ortofon MM: #vpiindustries Nomad = perfect intro to #viny! bit.ly/1DC3pcc



Dj Tee @terrence_hinton
Sep 26
@HiFiChoiceMag @Ortofon @vpiindustries do they have a video to see how it works

Hi-Fi Choice
@HiFiChoiceMag Sep 26
@terrence_hinton @Ortofon there's a few on @vpiindustries website <http://bit.ly/1wNiZx1> it's 1 of the best plug'n'play decks we've tested

Dj Tee @terrence_hinton
Sep 26
@HiFiChoiceMag @Ortofon @vpiindustries kool

Livesey @Liveseytv Oct 2
@HiFiChoiceMag Thinking of getting a new TT, will the Nomad work my Cambridge 651 amp? Read I'd need to buy a phono stage as well, any tips?

Hi-Fi Choice
@HiFiChoiceMag Oct 2
@Liveseytv no need to buy a p/stage as the @vpiindustries incs one built in. Will plug straight in to your @CambridgeAudio (if its the 651A)

Livesey @Liveseytv Oct 2
@HiFiChoiceMag @vpiindustries @CambridgeAudio Thats brilliant, cheers... So am I limited to the 2M Red cart?

Hi-Fi Choice
@HiFiChoiceMag Oct 2
@Liveseytv @vpiindustries @CambridgeAudio it comes supplied/ matched to the p/stage, so best to upgrade to another 2M model. Read the review!

Livesey @Liveseytv Oct 2
@HiFiChoiceMag @vpiindustries @CambridgeAudio Lovely, I will do. Cheers!

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Powerful Dynamic Natural



New entry level HEGEL H80 integrated amplifier:

More powerful, less additives, more inputs, more possibilities... But still that addictive HEGEL sound.

HiFi+ (UK 2014):

"It's a well-built, deceptively powerful amplifier with an excellent digital audio stage. 'It fights well above it's weight' is a cliché of the highest order, but it really applies here. Excellent!"

- Alan Sircom - Editor

The Absolute Sound (USA 2014):

"I hope more people will participate in the deeper enjoyment of music in their homes because products like the H80 make it more accessible. The H80 is the real deal...and a sweet deal, too." - Kirk Midstkog - Reviewer

HiFi & Musik (Sweden 2013):

"It will take a while for me to recover after this. This may be the best value for the money I have reviewed in my career." - Jonas Bryngelsson - Editor

Lyd & Bilde (Norway 2013):

"Home run (klokkeren inntertier)! To say that HEGEL did it right with the H80 is an understatement. AMPLIFIER OF THE YEAR" - Lasse Svendsen - Editor



Derby: Musicraft

Edinburgh: Loud & Clear

Kent: Igloo Audio

Hegel: www.hegel.com



Chris suggests Cambridge Audio's Azur 651C would be a good match for Mark's Marantz

to MC cartridges. I listen to all sorts of different kinds of music, but indie and electronic mostly. If you could give me some advice for each I'd be very grateful as I really want to get the most from my system.

In regard to pricing, no more than £1,000 for tonearm and £600 for cartridge. So far I'm leaning towards the Roksan Tabriz Zi for tonearm and Dynavector DV-20 X2 for cartridge. Any help is much appreciated, love the mag!

Shane Dorrian, by email

ES: Hi Shane, the Tabriz remains one of the most underrated arms under £1,000 but you would need to have a look at the Audio Note Arm 1 and 2, which also fit the Ingenium perfectly and offer sparkling performance. Rega's own RB808 isn't really that much of a looker, but it is a big step forward over the Rega you have in situ at the moment. The Dynavector is a fine cartridge too, but Clearaudio's Concept, Benz's Ace and the Zyx R-50 are excellent as well.

LETTER OF THE MONTH

Look North
I really love the magazine and am particularly interested in the Dealer Systems

feature. However, I am from the Lincolnshire area and haven't seen anything close to me featured. I feel you seem to always publish dealers within the south of England, and would like to nominate The Audio Rooms, which is based in Saville Street, Hull.

You walk into its two-storey shop and straight away you

When are you going to do a Dealer System in Lincolnshire?

do not feel pressured at all, the staff there are friendly, listen to your needs, and also take your price range into consideration. They make you feel welcome, invite you to listen to whatever system they have playing in the demo room, you can be sat there for however long you wish to

with still no pressure, which to me is fantastic customer relations. You leave there still feeling not pressured into buying if you haven't bought anything.

I think the shop really deserves to be visited and recognised for the outstanding work that is done there.

I would ever so much appreciate it if you could give this some consideration as it does deserve recognition, and not only that it would give readers of your mag in Lincolnshire like myself some pride.

Richard Tombs

ES: Dealer visits over the last year or so have been a little parochial because I've been limited in the distance I can travel thanks to my son and his childcare requirements, but my most recent foray took me down to the Cornish border and we have some other visits planned rather further afield. I'll put your recommendation into action for future visits as Hull is not too tricky from north Bucks with a bit of planning.

Upgrade time?

I have a dilemma that I hope you can help me with. I want to buy a new Marantz CD player and am looking at the 4004 and 4005 models. I currently have a loyal Marantz CD52 Mk 2 model, which I paid £320 for it all them years ago. Can you tell me please if either of these two models have the same spec as my current older model? The main reason I ask is that the tray on the front has stopped working. I am willing to get it repaired as the rest of the player

Ed's Dealer features are going further afield, and this month he heads off to Cornwall (p90)

HINTS & TIPS

ERADICATING HUM

This can often be a problem when connecting up a separates system, especially when it is comprised of units from different manufacturers. Inducted hum can also be picked up by sensitive audio components and leads from nearby sources, like mains transformers and cables.

Hum that occurs when you connect a new piece of equipment to your system or when connecting up your hi-fi for the first time is usually the result of an earth loop. This happens when the return signal path or equipment is earthed at more than one point. Solving this problem is a bit hit and miss, but first locate the offending item by unplugging each piece of equipment from the mains until the hum disappears. Then unplug the interconnects and re-connect the mains lead – there should still be no hum and you have found the source of the loop. Never be tempted to remove the earth connection from the mains plug as this can result in safety issues. Instead, try disconnecting the earth connection in both phono plugs at the source end of the interconnects and that should cure the problem.

Induced hum can be cured by moving interconnects away from mains leads and also moving sensitive equipment, like phono amplifiers, away from power amplifiers that have large mains transformers.



NOISY CONNECTOR PLUGS

Phono plugs tend to be left plugged in to equipment and may remain undisturbed for years. Unfortunately, plugs and sockets tend to corrode and oxidise over time and this occurs a lot faster with cheaper ones that don't have any plating. Then if the plug is disturbed, for example when moving, corrosion or dust may interfere with the electrical contact. This can result in all sorts of bad behaviour from your system, ranging from poor imaging and one channel sounding quieter than the other to audible distortion and nasty cracking coming from the speakers.

Simply unplugging and plugging in a connector can help with keeping the contact surfaces clean, but a far better approach is to conduct routine maintenance. There are many contact cleaners available, such as Servisol or specialist cleaners that include a lubricant and an oxide preventative such as DeoxIT, so while you have the cables unplugged, give all the plugs and sockets a good clean. It is a very good idea to conduct an annual spring clean of your system involving a quick squirt of a cleaner on each plug before inserting it back in the socket. This will reward you with trouble-free listening all year.

DEALER SYSTEMS TAVROCK AUDIO

Devonly sounds

It may be a relatively new system, but Ed Selby's discovery, Tavrock Audio, can do great things.

Connecting up a new hi-fi system can be a daunting task, especially if you're not sure what you're doing. That's why Ed Selby, the founder of Tavrock Audio, has created a new system that makes it so easy to get the most out of your hi-fi.

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Ed Selby's hi-fi system is a true masterpiece. It's a system that has been designed to last, and it's a system that has been designed to sound like a legend. It's a system that has been designed to last, and it's a system that has been designed to sound like a legend.

DEALER SYSTEMS TAVROCK AUDIO

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* Bordeaux finish shown



KEF's LS50s might hold the answer to Kostantinos' woes

works well. I know technology has moved on, but this model was with Phillips at the time with good components fitted.

Mark Davies, by email

NR: Hi Mark, I'm not familiar with either the 4004 or 4005 models, but I do know the CD52 and it is a fantastic CD player, especially if it has the audiophile upgrades fitted. It may well be worth seeing if the tray problem is a simple repair job. I believe that this is a fairly common problem with this CD player (which uses a Philips CDM4 swing-arm CD transport and tray) with failure of the teeth on the motor-driven gear wheel that engage with a rack on the CD tray. If you cannot find a repairer to look it over for you, you can often get parts from ebay if you fancy having a go yourself – after all, you have nothing to lose!

CW: I hear you Mark. The Marantz CD52 Mk 2 was my first serious CD player back in the early nineties and while my daughter has now inherited it, I bought a back-up CD52 Mk 2 on ebay for the princely sum of £35.99. So, if you're on a tight budget, I suspect that finding another cherished one would probably be cheaper than a

repair. As you'll know, it is a very smooth player and if this is what you're yearning for, you may find that modern Marantz players, while still smooth, will be far more revealing. Technology has moved on and the specs will not be the same.

Budget players from Marantz now include the CD6005 at a similar price that you paid all those years back, and Richer Sounds may have some CD5004 players at a lower cost. This may, however, be the time to listen to some other brands like Cambridge Audio and Rega. If your amplifier is also from the early nineties, you may find that a Cambridge Audio player like the Azur 351C or Azur 651C will still sound smooth despite being far more insightful and revealing. If, however, you want a more analogue sound and the budget will stretch, you could audition a Rega Apollo-R player.

➤ **Warm me up**

I have a Yamaha AS-500 and a Marantz CD 6004 connected with a pair of Focal 726 Vs (model 2012). Although I like the sound of my system for the first two hours, it is getting tiring in the high frequencies. I believe that my amplifier is a little bright sounding and my speakers are bright too because they don't seem to be driven well (too much emphasis on the highs and the bass is left behind) because of the amp. I don't want to change my speakers because they are pricey, so it is better, I think, to change the amplifier for a new one that will bring big, refined and smooth sound in the

My amplifier is too bright and I want one with a warmer sound...

high frequencies. Can you suggest some warm-sounding amplifiers (or brand names) or would a DAC solve the problem? My budget is £1,000. Thanks in advance.

Kostantinos Manetos, Athens

CW: This is a common issue, but I'd like to challenge your thinking a little Kostantinos. Your Marantz CD source is already on the smooth, warmer side of things, and the Yamaha

amp is probably on the brighter side of the equation, but there is a danger that selecting a new amplifier to warm your sound may just be covering issues in your speakers. Focal speakers of the recent past can come across as very revealing but occasionally harsh, especially at higher volumes. Adding a DAC may only make things worse as this could just extract more treble detail. As an experiment, see if a friendly local dealer will allow you to audition a warmer amp and alternative speakers. For a warmer amp with more grip on your speakers you could look to a Marantz PM8005 amp or Musical Fidelity M3i, if available in Athens. For speakers, stick with the Focals if you love them with alternative amplification, but maybe try something very different like KEF LS50s (*HFC* 384) on decent stands – they may have similar insight to the Focals, but potentially with a more neutral delivery and a scale of sound that could surprise you. And if none of these options gives you the quality of warmth you seek, then maybe you should explore what an entry-level integrated valve amplifier sounds like.

ES: The amp that springs to mind straightaway is Creek's magnificent Evolution 50A (*HFC* 370), which will grab the Focals by the scruff of the neck and deliver a performance that is packed full of detail, but free of any harshness or aggression. It is also built like a Swiss watch.

COMPETITION WINNERS

Back in the September issue we ran a competition offering seven readers the chance to win Arcam DACs. The first correct answers pulled from the lucky *HFC* hat were: P Wheatman, B Kingsford, A Bowler, S Cole, AP Reed, J Dawson and A Sutherland. The winners of October's Monitor Audio prizes are: C Corrigan, J Morris and T Batten. Congratulations to you all. Your prizes should be making their way to you very soon, hope you enjoy them!



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The show must go on

With the long summer a distant memory it's time to head out to hear some of the best hi-fi the world has to offer. **Lee Dunkley** is getting just a little bit excited

As the nights draw in and the memory of the long summer days of 2014 fade like the falling leaves from the trees, there's nothing quite like a hi-fi show to pick you up and provide welcome refuge from the never ending list of household chores and garden clear up projects that seem to demand our attention at this time of year. As any audio fan knows, this is the time that the hi-fi industry gets into full swing as audiophiles and music fans alike clamber to get out of the wind and rain and head inside to the comfort and shelter of some far flung hotel's warm exhibition space. Here we'll gather to see and (more importantly) hear the latest and greatest hi-fi offerings the industry has to show off. It's an alluring prospect that feeds our passion for sound in a convivial atmosphere and in the comforting knowledge that we are among like-minded individuals who share our quest for the very best in audio quality, but also a welcome distraction from getting on with the chores at home.

A flick through the hi-fi press reveals numerous events and shows being held across the country at this time of year. But it's pretty much acknowledged that the National Audio Show held at Whittlebury Hall near Towcester, Northamptonshire in late September is the one that kick starts the show season in the UK – see our full *Show Report*, starting on page 66.

Hi-fi shows have traditionally been about displaying the latest range of audio products in small rooms with barely any

The Hi-Fi Show is the best opportunity to experience the finest audio brands

space for more than a handful of visitors to see what's going on inside. Often navigating your way around can feel like trying to find your way around an impenetrable maze, with walls of people around every corner. Visitors walk in and out as they please, sometimes making a swift retreat if the demo room is too crowded to comfortably see what's on display, or perhaps they take an instant dislike to an exhibitor's musical taste. I've witnessed this first hand on numerous occasions, and have traipsed up and down flights of stairs and along more corridors to small exhibition spaces than I care to mention.

The problem is it's too easy to make a snap decision on a room and vote with your feet – meaning that you might miss out on the star of the show. In this kind of environment there's little opportunity to sit and listen to a product in a relaxed and controlled way like you would in your own listening room, or to hear about the background of a product from the experts that developed it. Is this really what a hi-fi show is all about?

Should we really be treated like cattle being steered through narrow gates in and out of crowded rooms where it's nigh on impossible to see what's going on? Surely not! Thankfully, the times they are changing, and a new breed of hi-fi show is emerging with a move towards bigger demo rooms with the space to engage greater visitor numbers as well as provide informative demos that captivate audiences in their mutual passion for all things audio.

I was lucky enough to experience this first hand last year when I attended the very first speciality high-end audio event, organised by our sister title *Hi-Fi News & Record Review* and AVTech Media. The two-day Hi-Fi Show showcased the international hi-fi world's finest audio equipment in 22 suites with an impressive series of presentations and demos. It was mostly high-end hi-fi for sure, with many of the products well out of financial reach for the likes of myself and the majority of *Hi-Fi Choice* readers, I'm sure. Even so there was something for everyone to get excited about, and I recall there being a chill out zone to provide a welcome break for when those high-end price tags got a bit too much.

Show me the honey

I'm pleased to say that the Hi-Fi Show is returning for a second year to the sumptuous grounds of the Beaumont Estate Old Windsor on 1-2 November, and with even more exhibitor brands on display – many of which will be showcasing UK exclusives (see page 16 for full show preview details). Whether your pockets go deep enough is really neither here nor there. For me the Hi-Fi Show is the best opportunity we have in the UK to experience first hand some of the finest audio brands in the world under one roof and in some of the most relaxing and best-sounding demo rooms of any show I've heard. With demonstrations conducted by the most appropriate people of all – the designers and makers of the products themselves – what would you rather be doing when the first weekend in November comes around? Digging the vegetable patch, clearing leaves from the grass or maybe cleaning the windows? Perhaps I'll see you there... ●



With more room to properly enjoy what's on show, the Hi-Fi Show is a must



LEE DUNKLEY
Hi-Fi Choice editor

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Fight for power

EU laws banning power-hungry domestic appliances might seem innocuous enough, but with hoovers and hairdryers in the firing line where does it end, asks **David Price**

Hi-fi fashions come and go. From the wind-up gramophones our great grandfathers used, to the large teak veneered radiograms that dominated the drawing rooms of the fifties and sixties – complete with mono valve amplifiers smouldering inside – the way we listen to music has changed, and indeed always will.

While those early mechanical, horn-loaded record players of the thirties used no power at all (except a bit of elbow grease to crank the handle to wind up the spring), it took until the seventies – some 40 or more years later – for music reproduction systems to step down again into being low power consumers. The invention of the transistor, and the migration away from thermionic valves, meant that by the time The Beatles had split up, audio systems were finally using only small amounts of electricity.

The nineties and noughties then pulled back the other way. Valve amps came back into fashion and power-hungry Class A solid-state amps gathered quite a following. Keeping the transistors powered up all the time meant your room got a lot hotter, as did the electric bill. This decade has seen a retrenchment, though; electronics manufacturers know the writing is on the wall for hi-fi powerhouses. Like car manufacturers in the seventies, wary of intrusive safety and fuel consumption legislation, today's hi-fi designers are

There will be a bureaucrat in Brussels eyeing up valve amplifiers...

beginning to factor in the increasing weight of rules and regulations about how much power things are allowed to consume. For this reason, ultra-low power Class D is suddenly all the rage.

Our membership of the European Union means we have little control over what we as a nation can say about many things – and environmental legislation is but one example. In the old days, when valve amps roamed the earth, a sternly worded letter to your local MP could cause our lawmakers to think twice. After all, MPs depend on your votes, don't they? But not so in the EU...

All just hot air

Last month, so-called "powerful" vacuum cleaners were banned by Brussels, and hair dryers are next. It's being justified under the banner of reducing carbon emissions, but given that the UK is responsible for under two percent (and falling) of the world's CO2 emissions, dirtier carpets in Dagenham or flustered hairdressers in Fairford aren't going to offset the carbon emissions from the soaring number of new coal-fired power stations being built in China every

month. The UK government was party to the negotiations proposing this ban, but it isn't the brainchild of any of our political parties in particular, so don't bother complaining to them about the absurdity of it all.

Most people won't be bothered. James Dyson recently (correctly) stated that the power consumption of a vacuum cleaner isn't the final arbiter of its suction power. But this isn't the point – to paraphrase the Manic Street Preachers, if you tolerate this then your hi-fi will be next! In all seriousness, if EU law now extends its tentacles into the most prosaic of household electrical devices, where will it stop? And why should we assume it will desist before it reaches hi-fi? You can bet your cellar full of fine French wine that there will be one bureaucrat in Brussels eyeing up valve amplifiers, convinced that he is doing the world a favour by stopping audiophiles from drawing more current than they need.

I'm worried that a good push-pull valve amplifier, which burns around 200W at idle and over twice that at full power may one day be declared illegal by some faceless Eurocrat. And then no sooner have these gone, then they will be coming for your Class A and then your Class AB transistor amplifiers, too. This may sound alarmist, but it's a drip-by-drip approach. As every year passes, ever more of what civil servants call government 'competencies' (ie what our own national government is allowed to legislate over, by Brussels) are removed from us.

We used to live in a country where what was decided was broadly the will of the people. Of course, there have always been profound exceptions to this, but the rule nevertheless stands. The laws that we lived by were made by people we voted in – and whom we could vote out. Now, that's no longer the case, we're in a dangerous place. It's an anti-democratic trend, because we can no longer deliver a summary 'good riddance' to lawmakers who screw things up. As someone whose ears tell him that the best sounding amplifiers are either valve powered or heavily Class A-biased solid state, I am just a little bit more frightened for hi-fi's future than I was before my right to buy a power guzzling vacuum cleaner was removed ●



Could valve amplifiers be next on the list of banned 'eco-unfriendly' appliances?



DAVID PRICE
Hi-Fi Choice writer

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Power and the glory

In the ever unfolding world of network streaming it's not always immediately obvious which parts of the system are the most important as **Jason Kennedy** discovers

There's nowt stranger than computer audio, not a well-known phrase yet, but it's time will come. I use a network streamer as my main source for most reviewing work so am familiar with the vagaries of the breed, their high sensitivity to what you support them with for instance and the differences introduced by things like Ethernet cables that really shouldn't make a difference, but inconveniently do. It's only recently, however, that the importance of the NAS drive or server that supplies the raw data for a streamer has become obvious.

I use a Naim Unitiserve, which rips discs and acts as network attached storage (NAS) in my system. It's undoubtedly a fine piece of kit that sounds considerably better than more affordable NAS solutions from computer brands. But it runs off an external switched mode power supply, the only one in the entire Naim range as far as I'm aware. I did ask why Naim hasn't offered a power supply upgrade in the way that it does with its amplifiers, but it would seem not to be a high priority at present, I guess Naim has been diverted with Statement and mu-so (see page 18) down in R&D of late. So when MCRU got Nick Gorham of Longdog Audio to design a linear power supply for the Unitiserve I was very interested. It turned out to be quite a substantial lump, half width, but taller than the

The phrase 'gob smacked' comes to mind to describe the results heard

power supplies are as important at this stage as they are elsewhere. The noise floor dropped through the floor, so to speak, suddenly you could hear more, transparency clearly increased and left me wondering how.

It might be worth reminding those yet to dive into this field that the signal does not go straight from the server to the streamer, it has to go through a commercial-grade 'switch' on the way. Otherwise it would not be a network. And these switches are built to a very tight budget and always have switch mode supplies, I have a filter between mine and the mains in an attempt to keep the grunge it emits at bay. Despite this, the MCRU PSU opens up the soundstage and provides considerably improved solidity of image in the context of a more relaxed presentation. Crucially for Naim aficionados it does not undermine timing as has been the case with third-party supplies in the past, a fact confirmed by a member of the Salisbury inner circle no less.

The next product that came my way in this field was the CAD CAT or Computer Audio Transport, this is a hardcore audio PC running JRiver and built to ridiculously high standards. It even has off-board power supplies from Teddy Pardo – who also makes a Unitiserve PSU albeit not a linear one. The CAT was created to partner CAD's 1543 USB DAC and has an audiophile USB output board, in that combination it works extremely well indeed as you'd expect of a device costing north of five grand. Being a computer it also has an Ethernet connection and can operate as a NAS, an SSD-equipped OTT NAS, but a data server nonetheless. Selecting the CAT as the source for data with the NDS opened the window even more than the Unitiserve with MCRU supply, significantly more in fact. The phrase 'gob smacked' comes to mind to describe the results heard with this pairing, it is deathly quiet and totally devoid of even the faintest whiff of digital glare. Streaming systems are far better than CD players in this regard anyway, but to an analogue addict the digital will usually be obvious, here things were starting to sound as effortless and serene as reel-to-reel. Timing is spot on, but so natural that you take it for granted. Imaging is totally real, reach-out-and-touch-it solid and tone is about as convincing as the day the track was originally laid down.

The price of perfection

Around this time, Chord Company sent over a length of its Sarum TA Ethernet cable. It's eye-wateringly pricey, but in a revealing system (ie expensive) makes a very good case for itself. I initially tried it between switch and streamer, this theoretically being the most important link. It increased the sense of space and bass extension, but was not an overall upgrade so I swapped it over to sit between the Unitiserve and switch. This was considerably more beneficial, the pace tightened up and the music escaped the bounds of the speakers quite dramatically.

All of which shows that where networking is concerned you can't take anything for granted, not least the quality of power feeding every part of the system. So where am I going to get a linear supply for a Netgear switch? ●



Jason's Naim Unitiserve was given a new lease of life by MCRU's PSU



JASON KENNEDY
Hi-Fi Choice writer

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Reclaiming the past

Did recordings sound bad in the seventies because they weren't done well, or was it more to do with the equipment we had back then? **Jimmy Hughes** investigates

When I got my first hi-fi back in the seventies, one thing immediately became obvious; the huge variation in sound quality between different LP pressings and recordings. Some things sounded great, while others sounded terrible. As a lover of classical music, I soon realised the importance of buying recent recordings from the main labels to ensure the best technical quality. That meant paying top-price. But most times the difference in sound quality was worth the extra dosh.

At the time it all seemed perfectly sane. Good hi-fi is revealing and must, therefore, show up faults and flaws. There was even a kind of perverse logic that said; the worse things sounded, the 'better' the hi-fi system – it was simply revealing more of the truth.

Things have come full circle. Today, sound quality differences between newer and older recordings seem to matter much less. Now you find record companies reissuing mono and stereo material side by side, often not identifying which is which. Is anyone bothered?

People now want to listen to recordings for the music or the performer, hardly worrying about when it was recorded, or whether the sound is stereo or mono, digital or analogue. I too am much less concerned about the provenance of a recording than I once was. But in the seventies and eighties things were very different. If the sound didn't reach a

Being satisfied explains why we're less gung-ho for the latest improvements

only certain things sounded acceptable.

Today I enjoy a much wider range of material without sound quality getting in the way. It's not a question of tolerating poor recordings, 'absolute quality' simply isn't such a big issue any more.

I suspect many listeners my age find the same. That's why there's been such a sea change in the way older recordings are marketed – especially with classical music. Even mono stuff from the fifties is now saleable in a way that simply wasn't possible in the seventies and eighties.

From a purely musical perspective that's great. But is it good for hi-fi? Being dissatisfied and wanting something better is the engine that drives our desire to upgrade, and feeds the urge to improve what we have. Take that away, and the hunger for better falters.

For many of us, hi-fi was (and is) a quest – a journey towards sonic perfection. But, with many of us now probably as close to 'perfection' as makes no difference,

we're faced with two choices; keep searching for more or be satisfied and enjoy the music.

Over the years, I've made many changes to my hi-fi system. Of course, we want equipment that's impressive – something able to produce deep massive lows, and crisp clean highs. We want awesome dynamic contrasts. And transients that bite so hard you almost see the teeth marks...

Just recently, I gave Herbert von Karajan's early sixties recording of Stravinsky's *Rite of Spring* a spin. With its massive dynamics and powerful percussion, it really highlights the sonic advances made in recording these past 60 years. The *Rite* is a work that cries out for the very best sound. So it's interesting to listen to an old version that – while quite well recorded for its time – is now far from state of the art. In the past, the sonic limitations of DG's recording always acted as a barrier to enjoyment. But not now.

Hearing it again, I was able to enjoy von K's performance without sonic limitations being an issue. Inevitably, playing a more recent digital recording forcibly demonstrates the massive advances made in recording technology. But this old recording still gave immense pleasure.

So – what makes this sort of enjoyment possible? Essentially, it boils down to your hi-fi being able to strike a balance between revealing what's right with a recording, without over emphasising what's wrong.

Is being happy a good thing?

Typically today's hi-fi does that sort of thing much better than it used to. It seems much less dependent on the absolute quality/limitations of the source than before and better able to make the most of whatever recording is played. So, if today we're generally happier with our hi-fi than enthusiasts 20 years ago were, that's a good thing. But it has a downside. Being 'satisfied' explains why we're less gung-ho for the latest hot improvements; less bothered about continually upgrading.

Sure, part of me wants to hear a vast life-changing improvement. Yet at the same time I don't want the improvement to be so off the scale it renders all my old recordings unlistenable. Essentially, I just want to enjoy the music without worrying about the sound ●



Herbert von Karajan's recording of *The Rites Of Spring* still sounds as good as ever



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Set the record straight

Nigel Williamson has become reacquainted with a long lost friend, and if recent record sales are anything to go by, he's not the only one getting back into the black stuff

I walked past my local Oxfam shop the other day and noticed in the window a display of second-hand vinyl LPs – most of which I had once owned. None was priced at less than £20 and some were two or three times that. Intrigued, I went into the shop and got talking to the manager. She told me that professional record dealers routinely scour charity shops for bargain vinyl to sell at a profit and Oxfam now has specialist valuers that advise on the worth of 'pre-used' LPs to help the charity maximise its profit.

When I got home I went up into the attic and pulled down several boxes of obsolete vinyl, unplayed in several decades, and began to grow misty eyed at the happy memories contained within the grooves. Then I started doing a little research and discovered, as most *HFC* readers probably know, that apart from streaming services, vinyl is the only medium for delivering recorded music that is growing, while sales of CDs and MP3 downloads are continuing to slump.

Now I'm aware that *HFC* caters for those who have never stopped listening to vinyl and that many who make music from Ry Cooder to Neil Young claim that the 33rpm vinyl long player is still the bench mark for quality sound reproduction. But the extent of the vinyl renaissance over the last year is still staggering. Vinyl pressing plants are

A recent survey found that sales are being driven by 18 to 24-year-olds

struggling to keep up with the demand and United Pressing, the largest plant in America, which 50 years ago stamped out The Beatles' first US 45rpm single, is running 24 hours a day, six days a week and has just purchased 16 additional presses to help it cope.

Last year, vinyl sales in America exceeded six million – which may not sound a huge amount, but is a remarkable 600 percent increase on 2007, when vinyl sales struggled to reach one million. The figures for 2014 are said to be 40 percent up on last year and on target to represent 3 percent of all music sales. A similar pattern is evident in Britain, where 2013 vinyl sales were 100 percent up on 2012 and this year should top the one million mark for the first time in almost two decades.

So why is vinyl on the rise? Partly nostalgia, for sure, and no doubt there is a whiff of hipster-elitism, involved, too. Revealingly a recent survey found that the phenomenon is largely being driven by 18 to 24-year-olds who recognise that there is a sense of romance to an LP with its aesthetically pleasing artwork that the CD and download

have never been able to recapture. The same survey found that a quarter of vinyl buyers don't actually play the discs but merely collect them as accessories.

But there is more to it than that. Jay Millar, who directs operations at United Pressing, calls digital formats "the peak of the convenient" and vinyl "the peak of the experience". Neil Young puts it even more vividly. In his autobiography *Waging Heavy Peace* he complains that digital formats mean that "many young people have never heard what I have heard." He believes that only vinyl (and possibly his new digital hi-res Pono player, the launch of which appears to have been delayed yet again), can capture the true experience of music as "a storm on the senses, weather for the soul, deeper than deep, wider than wide". It's hard to resist a claim as richly poetic as that.

Vinyl may be destined to remain a niche market, but it is increasingly seen by labels as one they cannot ignore. Many record companies won't schedule a release date for a new album from a major artist until they know they can get a vinyl edition pressed in time for parallel release.

All White on the night

One of the key movers in the vinyl boom has been Jack White, whose album *Lazaretto* I reviewed as a CD release in this magazine earlier this year. What I was unaware of at the time was the Ultra LP vinyl special issue, which is packed with novel features, including one side that plays from the centre to the edge. The regular vinyl version of *Lazaretto* shifted 40,000 copies in the first week of release, more than any album since 1991.

Whether vinyl genuinely has a long-term future, I remain unsure. Bill Flanagan of VH1 is sceptical. "Everything comes back once before it goes away forever," he says. "It might be the last gasp of an expiring culture before we all get sucked into the cloud."

But if it is a last gasp, I've decided to join it and am now researching the purchase of the first turntable I will have owned in almost 20 years. Whether my ears tell me it is a richer listening experience we will have to wait to find out. But at the very least, I want to see that Jack White LP playing outwards from the centre to its edge! ●



Jack White's *Lazaretto* has been a phenomenally popular record



NIGEL WILLIAMSON
Hi-Fi Choice writer

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Big in Japan

The Far East is one of the most exciting places a hi-fi enthusiast can visit, but as **Jake Day-Williams** reveals it's not necessarily all about the next big thing

One of the best things about this job – apart from getting to spend the majority of your working day concentrating on your passion – is travelling to foreign climes to visit manufacturers around the globe. Whether it's being given a guided tour around a factory in Poland or being taken to a super-hip warehouse in Berlin for the launch of a pair of headphones, it's a serious perk. Over the years I've been lucky enough to visit everywhere from Hungary to Switzerland, with flying visits to Iceland and the US thrown in for good measure. I seem to remember one day I was even lucky enough to visit Weybridge, but let's try and forget that one, shall we?

At the risk of being the source of enormous envy, one of the countries I've visited the most – and without doubt enjoyed returning to – is Japan. I can quite honestly say it's one of the strangest, most beautiful and bewildering countries I've ever been privileged enough to go to and I love it. Whether it be the impenetrable language, the indistinguishable food or the fact that it's like being in *Blade Runner* the whole time you're there – there really is nowhere else on earth quite like it. And the fact it has a healthy smattering of manufacturers also helps.

Quite aside from the factories, consumer electronics shows and manufacturers I've visited there, Japan is a place

While UK music sales are declining, the opposite is happening in Japan

worth going to just to see with your own eyes the cultural differences between there and good old Blighty. For the most part, the stereotypes are true, and just a ride on the tube acts as a microcosmic snapshot of Japanese culture. Everyone's super polite, every station has its own cutesy theme tune and strange animated character to help you identify it and everyone has their nose buried in either a manga comic book or some sort of futuristic handheld device. The first time I visited Japan over 10 years ago, I was blown away by the fact that A) they had 3G everywhere on the underground so that you could be online pretty much all the time, and B) that everyone seemed to be openly using tablets and expensive handheld devices to read, play games etc. "This sort of thing would never happen in England" I remember wisely thinking to myself.

But I digress. For the hi-fi enthusiast, the most exciting thing about visiting Japan – and the Akihabara district in Tokyo in particular – is the wealth of music and equipment that you can find, well, everywhere. Shopping is split into two distinct types: shiny huge department stores and small

grubby markets that (again) look like something from *Blade Runner*. The former are huge six or seven-storey buildings devoted entirely to technology – imagine a John Lewis or Debenhams stacked to the rafters with TVs, mobile phones and laptops and you're close. In truth these places aren't hugely exciting to the hi-fi enthusiast, it's the markets where the real action can be found. Here you'll find shops and stalls devoted to specific requirements with everything from RCA connectors (literally millions of the things) to transformers, capacitors and valves. For hi-fi fans it's like wandering into an Aladdin's cave, and it's difficult to leave without bags of booty and an empty wallet.

Shiny surprise

Another area where Japan is starkly different to here is music, but not in the way that you might imagine. While in the UK music sales are declining faster than Tesco's profits and stores like HMV are becoming increasingly rare, the exact opposite is happening in the land of the rising sun. Tower Records is the big store in Japan and business is booming, with 85 stores nationwide (compared with none in its home in the US – they were all closed in 2006). Digital sales are in serious decline, falling from \$1 billion in 2009 to \$400 million last year, and streaming services like Spotify are practically non-existent.

Perhaps most surprising of all, the humble CD is enjoying something of a resurgence. Sales currently account for 85 percent of all music that's bought, compared to a measly 65 percent here in the UK. So why is it that these tech-savvy people insist on sticking with the discs that we're all ditching in droves? One theory is that it's something to do with what the Japanese call *jake-gai* (literally "buy jacket"). Loosely translated this means a love of physical products over non-physical ones – for example cold, hard cash is much more popular than using a credit card. Like so many things in Japan, it's an idea that seems entirely alien to many of us, but given the choice of vinyl and CD over a download, I'm 100 percent with them ●



Consumer electronics stores in Japan can be up to six or seven storeys high



JAKE DAY-WILLIAMS
Hi-Fi Choice
production editor

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Devonly sounds

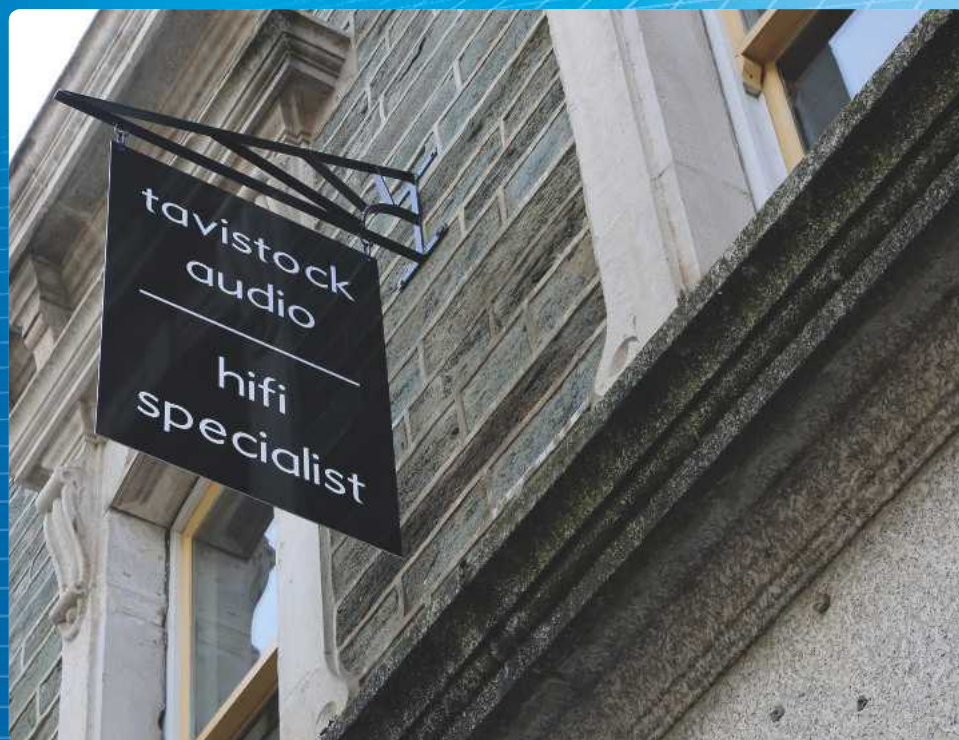
It may be a relatively new concern, but **Ed Selley** discovers Tavistock Audio can do great things

Conventional wisdom dictates that setting up a bricks and mortar hi-fi dealership at all, let alone in the teeth of a recession is bravery bordering on foolhardiness. To then choose a high street location in a town of a mere 11,000 souls would seem almost suicidal. Bob Hesketh, founder and owner of Tavistock Audio is an eloquent riposte to the doom mongers. After many years working in retail he set up shop in 2008 as the country headed for the doldrums. Now, six years later, he has moved to a new larger premises – still on the high street – and is looking to expand his brand portfolio. The upper story space is airy, elegant and exactly what

an audio dealer should be looking to achieve in this day and age.

Naim that tune

Before he was involved in selling hi-fi Bob worked for Naim and so it comes as no surprise that the Salisbury brand acts as the lynchpin of his current portfolio although it is ably supplanted by brands such as Quad, Audiolab and Yamaha. As such, the three systems all make use of Naim electronics at different price points and are supported by other parts of Bob's portfolio. Tempting though the wilds of Dartmoor and the lovely Tavistock are, this is an enticing enough trio for me to leave them be and instead settle down for a listen.



THE EXPERT



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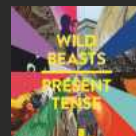
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System test music



WILD BEASTS
Present Tense
Vinyl



JACK WHITE
Lazaretto
CD



MARK LANEGAN BAND
Blues Funeral
Vinyl

System 1 – The holy trinity

THIS COMPACT TRIO of electronics hails from three of the UK's leading brands and they embody their respective company philosophies at sensible price points, but with little compromise. In the form you see them here the system is strictly analogue only, but there are plenty of inputs spare for use with other sources. This being said, if vinyl is your thing you might stick to a single input.

The TecnoDec is the smallest model in the Michell lineup and also by far the simplest. It does without the suspension and plinth options that the larger models use and there is only a single armboard drilled for the old and new Rega mounts. This gives it a minimalist elegance that belies the relatively sensible price. When partnered with the company's Tecnoarm – a sort of *Six Million Dollar Man* version of the Rega RB250 – the impression is of a piece of equipment that trades frills for thrills. And the addition of an Audio-Technica ATF7 cartridge does little to change this.

The Supernait 2 is slightly more ornate than the Michell, but this new version of Naim's biggest integrated amplifier conveys a similar sense of purpose to it. With 80W and five inputs split over both DIN and RCA hookups, there is no shortage of grunt or connections, but the removal of the digital inputs from the original gives it a single mindedness that suggests the casework is not so much encasing the internals as it is constraining them. The Supernait 2 in modern Naim fashion has no phono stage so a StageLine S phono stage takes up the slack. This draws power from the Supernait 2 making it very cost effective in this context as no power supply is required.

Dress to impress

Of all the components in the system, the PMC twenty.23 might be the most 'dressed' but this is only in relation to the pro audio side of PMC's offerings. I've remarked before that the twenty series is a very clever piece of industrial design in that it is entirely room friendly, but they manage to convey that the traditional PMC calling cards of transmission line bass and hefty cabinet are still all there.

This means that when you stick on Wild Beast's *Present Tense* with its

deep bass lines underpinning soaring vocals and shimmering electronic sounds, this system has a grip over the performance that's key to keeping everything under control and sounding as it should. The rumbles of *Wanderlust* are felt as much as heard and they start and stop with metronomic precision. Above this controlled seismology, the rest of the piece opens out and fills the space in front of you with a rock solid and believable sense of the piece.

You don't need electronic indie music to appreciate the control and cohesion that this system possesses, though. With the slower, moodier *Blues Funeral* by the Mark Lanegan Band, the same pin-sharp timing and effortlessness mean that every single

The impression is of a piece of equipment that trades frills for thrills

detail is there to be heard, but never given unnatural prominence. This is the key to something you'll spend hours in front of rather than using it for a quick but fatiguing blast from time to time. Indeed, even with the wick right up, there isn't the slightest trace of harshness or aggression to the performance. It grows in size and scale right up to the likely moment the police come to take it away.

The TecnoDec might be the entry-level Michell, but the sense of energy and vast soundstage that the brand is known for are well represented. This gives the Supernait a perfect signal to work its drive and sense of nigh-on unburstable energy on and send to the PMC, which delivers the message intact and underpinned by that low-end shove that considerably larger speakers can fail to deliver. In normal listening, you won't sit there relentlessly trying to analyse what part of the system is doing what because you'll likely be sat there grinning ear to ear at a performance that is ridiculously fun.

- 1 MICHELL TECNODEC £735
 - 2 MICHELL TECNOARM £585
 - 3 NAIM STAGELINE S £340
 - 4 NAIM SUPERNAIT 2 £2,859
 - 5 PMC TWENTY.23 £2,300
- AUDIO-TECHNICA ATF7 £300
CHORD EPIC SPEAKER CABLE
TOTAL £7,119



Three, it would appear, really is the magic number



Transmission line bass, check. Hefty cabinet, check. It can only be PMC

System 2 – NAP time

IT MIGHT BE only a small jump in price terms over the first system – a demonstration that digital can still be more cost effective than analogue – but this system puts you into the realms of ‘real’ Naim, with pre and power amps and perhaps most Naimy of all, the external power supply. This is then partnered with loudspeakers that conceal some serious talents behind a superficially simple design.

The digital front end in this system is Naim’s most affordable player. The CD5si is the latest version of the long-running 5 Series components and while its presence here is partially down to customer demands on Bob’s loan stock, he feels it is more than up to the job. All the design features that define Naim players are present, from the heavily damped casework to the minimal green on black display to the wonderful ‘bendy’ tray that gives a sense of occasion to loading a disc.

The amplification comes courtesy of the NAC 202 preamp with NAP 200 power amplifier. Bob feels this is a real value pairing in the Naim lineup. The addition of the recently revised HiCap power supply (now in ‘DR’ spec) for the preamp allows the NAP 200 to concentrate on the business of being a power amplifier and gives the preamp a dedicated power supply that would benefit any add ons like a Stageline.

Maximum kudos

The speaker that Bob has selected to partner this ensemble is the Kudos C2. Like the 202/200 combination, he is adamant that this well-proportioned floorstander is the happiest blend of price and performance in the whole Kudos range. On the face of it, the C2 seems simple enough with a two-way driver configuration of 25mm tweeter and 18cm mid bass driver developed inhouse with a single downward-firing port. Like the accompanying electronics it is handsome and well finished with entirely sensible proportions for a UK living room. Like system one, this is a setup that won’t trouble your living space and will look extremely smart in situ.

The similarities don’t end there because like the first system, the chances of these electronics sitting being decorative are minimal. Jack White’s *Lazaretto* is instantly

arresting. The curious but head nodding timing of *Three Women* is reproduced with the vigour that it really needs to sound like it should. The recording isn’t the most flawless, but the Naim and Kudos manage to keep the rough edges intact without losing the life and energy that the album delivers so effectively.

When you play a disc with better production values like Nils Lofgren’s *Acoustic Live*, the marvellous combination of deep, controlled bass and open, expansive and almost liquid-smooth top end is shown to best effect. The CD5si more than rewards Bob’s confidence in it and while I am not foolish enough to ever call a whisker over a grand ‘cheap,’ this is a hugely capable CD player for the money and one that slots into the equipment perfectly.

The undoubted star of the show is the Kudos C2. I haven’t always been a standup fan of the Kudos product line, but I find myself again in complete agreement with Bob over what is clearly a gem of a speaker. Given the quality of signal the Naim’s excel at and making full use of that legendary power delivery, the C2 is quite staggeringly good. There is a tonal sweetness that never affects the sense of accuracy or realism, but instead creates that desire to keep listening long after you should go to bed and allows for ‘significant’ volume levels to be run without any signs of strain or harshness. To round off these talents, the bass response is simply phenomenal. As mentioned earlier, there is nothing more sophisticated than a downward-firing port at play, but the good folks at Kudos have worked wonders with it.

A final enthusiastic blast of Goldfrapp’s *Strict Machine* is a compelling demonstration of all this system does well. That rumbling synth line resonates in the chest while Allison Goldfrapp’s vocals soar over the top with an almost liquid smoothness. This is another system with an effortless blend of real-world practicality, significant upgrade options and most importantly addictive audio performance.

- 1 NAIM CD5SI £1,040
 - 2 NAIM NAC 202 £1,970
 - 3 NAIM HICAP DR £1,250
 - 4 NAIM NAP 200 £1,925
 - 5 KUDOS C2 £2,450
- NAIM NAC SPEAKER CABLE A5
TOTAL £8,635

A big sound from a setup with real-world proportions



The Kudos C2: a happy blend of price and performance

System 3 – Gyrotory system

IT MIGHT BE a significant jump in price, but this stems from there being two sources present and considerably more expensive speakers in play in this setup. In the flesh, the same combination of sensible dimensions and appealing aesthetics are apparent here as they are in the first two and in the case of one piece of source equipment, it is arguable that ‘appealing aesthetics’ tips over into outright art.

This is because the Michell GyroDec remains one of the most beautiful examples of design that has ever graced the audio industry. Every aspect of it is functional, but the lines and proportions are just ‘right’ in a way that very little else can match. The version here is the naked ‘spider edition’ with an SME 309 tonearm, which for me is one of the happiest partners out there for the Gyro. The addition of Ortofon’s 2M Black is a flawless cherry topping on a lovely analogue cake.

As with the other systems, a full complement of Naim electronics provides both a second source in the form of the CDX2 CD player and amplification with a NAC 282 preamp. The NAP 250 power amp and SuperCap Power supply complete the quartet. As with the first system, there’s no phono stage fitted and uses Naim’s StageLine, in this case an N model designed for high output cartridges like the Ortofon 2M Black.

Lights, camera ACTION

For speakers, Bob opted for Wilson Benesch’s A.C.T. floorstanders. The A.C.T. is in some respects less visually dramatic than some newer Wilson Benesch speakers, but the proportions are almost golden ratio perfect and the brand’s mastery of carbon fibre is plain to see.

Just 30 seconds of The Hidden Orchestra’s *Archipelago* is enough to show why the Michell is more than just a piece of sculpture. Some of the same traits that marked out the TecnoDec are present in the performance – the soundstage is vast and effortlessly populated by

musicians and instruments, but the bigger Gyro digs deeper and aided by that magnificent SME arm finds details in the bass that would escape your attention otherwise. There is an argument; made truly compelling by spending some time in its company, that the Gyro and 309 partnered with a cartridge of your preference is all the turntable that most of us would ever realistically need.

This high praise makes the ability of the CDX2 to compete on even terms more impressive still. When given the same tracks from *Lazaretto*, the CD player builds on the positives of the CD5Si sounding a little bigger and with a little more definition and scale. The benefits of moving another rung up the Naim hierarchy are subtle, but you find that this collection manages that same sense of unburstable performance and immense dynamic range, but manages to be ‘more’ in every sense of the word.

In part, they need to be because the A.C.T. remains one of the most capable speakers I’ve spent any time with at resolving the information they are given. They are not ruthless; they don’t actively seek out imperfections in music, but they effortlessly reveal absolutely everything that they are given. Their greater size gives them a sense of scale and low-end drive that makes music more of an event. There is no arguing that this is a significant jump in price, but this is indisputably a high-end piece. What makes this system especially impressive is that it makes only marginally greater demands on space than the first system does. Like that system, it balances being truly hi-fi with genuine real-world joy.

- 1 MICHELL GYRO SE WITH ORBE CLAMP £1,350
 - 2 SME 309 £1,200
 - 3 NAIM STAGELINE N £340
 - 4 NAIM CDX2 £4,050
 - 5 NAIM NAC 282 £4,225
 - 6 NAIM SUPERCAP DR £3,950
 - 7 NAIM NAP 250 £3,395
 - 8 WILSON BENESCH A.C.T. £12,000
- ORTOFON 2M BLACK £500
WITCH HAT SPEAKER CABLE
TOTAL £31,010



The Gyro aptly sits atop the system like the jewel in a crown



The A.C.T.s are effortlessly revealing with a stunning low end



It quickly becomes clear that the reason why Bob has managed to grow a business in the grip of a recession is down to a depth of experience with his products that allows him to pair and partner them in ways that allow for maximum bang for your buck and

real-world enjoyment. With Naim in particular he has a passion and understanding that people are willing to travel for and so, why not set up shop somewhere pleasant?

With his new premises up and running and intentions to expand his portfolio

further, it is hard not to admire Bob’s drive and determination to push Tavistock Audio to greater heights and prominence. On the strength of the sheer musical ability of the three systems I heard on the day, you wouldn’t want to bet against him.

LABELLED WITH LOVE



Impulse! Records

In this month's label primer, **Simon Berkovitch** prepares to really swing, baby, as he shares his supreme love for the house that 'Trane built

December marks the fiftieth anniversary of the recording of one of the greatest jazz cuts of all time: saxophonist extraordinaire John Coltrane's *A Love Supreme*, released in 1965. The most iconic release of Impulse! Records' fabulous catalogue, Miles Davis' former sideman's spiritual, boundary-breaking classic sold in considerable quantities on release – Impulse!'s biggest success – establishing the no-compromise label as “the house that 'Trane built”.

The foundations of Impulse! were laid by producer Creed Taylor in 1960. The A&R

manager's first signings read like a *Who's Who* of jazz luminaries. Triumphs include *Out Of The Blue* (1960) by Gil Evans, famous for his arrangements with Miles, Ray Charles' debut *Genius + Soul = Jazz*, and Oliver Nelson's sublime *The Blues And The Abstract Truth* (both 1961).

Taylor's tenure with Impulse! is as significant as it is brief. He handed the reigns to producer Bob Thiele that year, heading off to run another legendary label: Verve. Thiele's arrival ushered in the label's classic era. Impulse! became home to many of the most free-thinking, boundary-demolishing musicians of the era, its LPs providing an

inspiring soundtrack to a period of dramatic social change in the United States.

Freedom was the greatest gift Thiele gave to his signings – a canon that includes titans such as Elvin Jones and Charles Mingus. In turn, Impulse! musicians gifted turntables with some of the most enduring, righteous music of any genre. John Coltrane and his wife Alice, Pharoah Sanders, Archie Shepp, Albert Ayler... these and other vanguards of the burgeoning free jazz movement all railed against the boundaries of music. As the label's discography attests, there was no shortage of talent on Impulse! Records.

As the seventies were about to break, Ed Michel took the helm, leading Impulse! further into the avant-garde with Charlie Haden and Carla Bley's *Liberation Music Orchestra* (1969) and reissues from Sun Ra – including his classic *Space Is The Place* (1973) – as well as, weirdly, Genesis' second album *Trespass* (1970) in the US.

Despite burning brightly for a decade and a half, the game was up for Impulse! by the end of the seventies. It may now solely exist as a reissue-only label, but those incendiary sixties and seventies recordings still fuel a vibrant contemporary free jazz scene around the world.

John Coltrane

The legendary jazz saxophonist and Impulse! Records figurehead

After an acclaimed solo album for Atlantic, *Giant Steps*, and the commercial and artistic success of his first quartet outing *My Favourite Things* (both 1960; Atlantic), the fearsome “sheets of sound” improviser’s star was truly in the ascendancy.

Signing to Impulse! at the start of the new decade, Coltrane embarked on a remarkable run of albums that blazed a trail for new music until his death in 1967.

Africa/Brass (1961) was the first of many LPs for the label and its big band sound marked a change of stylistic direction, not to mention more eclectic instrumentation. Among the masterful recordings he made in the early sixties, the beautiful *Ballads* (1961) and *Duke Ellington & John Coltrane* (1962) stand out, but it’s *A Love Supreme* (1965) that’s the most famous.

Arguably the pinnacle of his achievements, it fused the hard bop style of his early recordings with his interest in free jazz.

Despite the experimental nature of the four-part spiritual suite, it remains one of the most influential and well-known jazz recordings of the sixties.

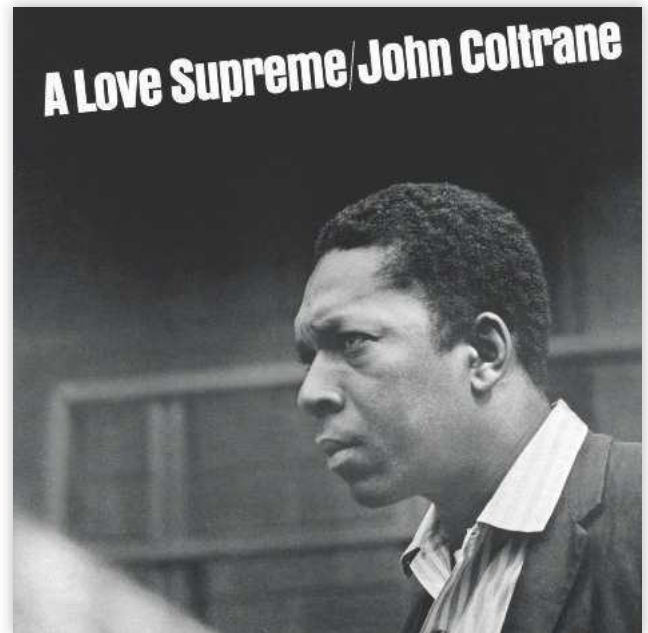
Coltrane plunged deeper into the avant-garde with subsequent excellent releases, influenced by and influencing players such as Ornette Coleman, Sun Ra and Albert Ayler. With explosive

A Love Supreme is the pinnacle of his achievements

recordings such as *Ascension* (1965) and *Meditations* (1966), Impulse! established itself as a haven for sonic experimentation.

Plenty of excellent unreleased recordings, including 1965’s free jazz blow-out *Om*, *Interstellar Space* (a 1967 set with drummer Rachid Ali) and *Stellar Regions* (recorded in 1967; released in 1995) have all emerged since Coltrane’s passing.

Coltrane also served his time with Miles and Monk



Alice Coltrane

The keeper of John’s flame and an extraordinary musician in her own right

John’s wife may have been a superb multi-instrumentalist in her own right, but her talent has only really been appreciated in the last decade or so.

Alice has a remarkable body of work, with her most significant recordings made for Impulse! Records. She walked a spiritual path, exploring Indian classical music and Stravinsky compositions, adding these fantastic elements to her already broad musical palette. She also kept the work of her late husband in the public eye on albums such as *Cosmic Music*, released posthumously in 1968 under both their names.

Replacing McCoy Tyner as pianist in John Coltrane’s quartet, she appears on some of her husband’s most vital Impulse! albums, including *Live At The Village Vanguard Again!* (1966) and *Expression* (1967).

A Monastic Trio (1968), recorded as a tribute to John,

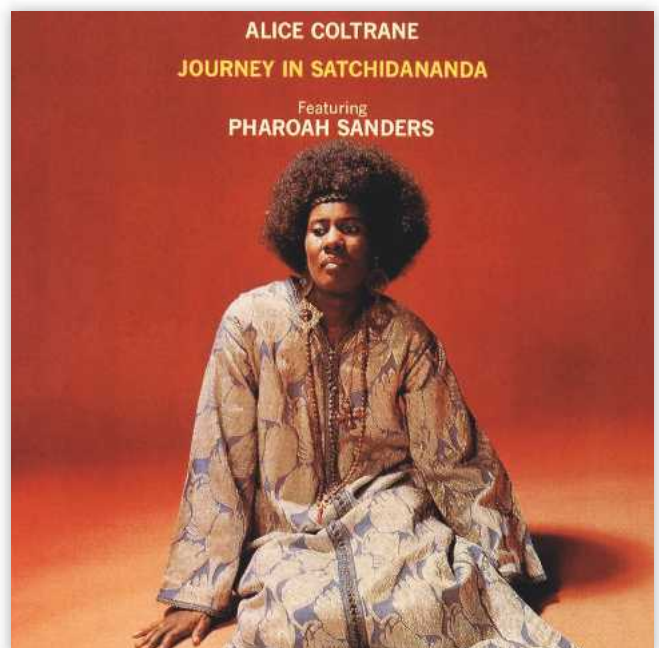
begins a run of incredible recordings for Impulse! The titles of the solo records Alice released between 1968 and 1973 – such as *Universal Consciousness* and *World Galaxy* – hint at the mysterious musical majesty barely contained within their grooves.

She kept the work of her husband in the public eye

But it’s 1970’s exceptional *Journey in Satchidananda* on which her reputation is built – a glorious blend of tamboura, oud, Charlie Haden’s bass, Pharoah Sanders’ mournful sax and Alice’s rippling harp and piano. If you seek out only one of her recordings, make this the one.

A comeback album of sorts, *Astral Meditations* was released on the revived Impulse! label in 2004. Sadly, she died in 2007.

Multi-talented Alice was a pianist, organist, harpist and composer



Pharoah Sanders

The Son to John Coltrane's 'Father' – a pioneer of spiritual music

There are few jazz musicians that Pharoah Sanders hasn't blessed with his rare talent – from Don Cherry to Sun Ra. Free saxophonist Albert Ayler famously said "Trane was the Father; Pharoah was the Son; I am the Holy Ghost", providing the uninitiated with some inkling of Sanders' improvisational chops and maverick spirit.

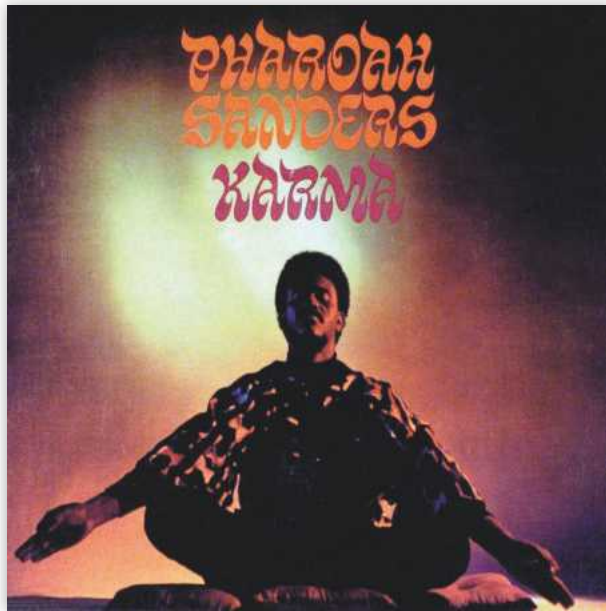
Sanders was a prolific artist for Impulse!, starting with 1966's fantastic *Tauhid*, also featuring the rumbustious guitar of Sonny Sharrock, with *Love In Us All* (1973) ending the run for the label.

Other key contributions to Impulse!'s discography of quality include 1970's propulsive *Deaf, Dumb, Blind* (*Summun Bukmun Umyun*) and the pull-no-punches *Black Unity* (1971).

But Pharoah Sanders' most legendary work is one of the cornerstones of free jazz:

1969's *Karma*. Home to the deathless *The Creator Has A Masterplan*, with Leon Thomas on percussion and vocals, the album is a combination of

'energy music' and spirituality. The result was a brilliant record as challenging as it is meditative, helping to birth the spiritual jazz movement.



Charles Mingus

Beautiful sounds from "the angry man of jazz"

Despite a reputation as a difficult, sometimes violent bandleader, Charles Mingus' output for Impulse! Records was nothing less than beautiful, so perhaps the end justifies the means.

His first recording for the label, *The Black Saint And The Sinner Lady* (1963) was an ambitious work that its creator referred to as "ethnic folk-dance music". Mingus overdubbed instrumentation to realise his vast musical vision. It's a record that is regarded as one of the greatest achievements in jazz orchestration.

The following year's *Mingus Mingus Mingus Mingus* contained six 'greatest hits' – works that he would revisit on subsequent albums, or revamps of some of his best-known compositions (including *Goodbye Pork Pie Hat*, reworked here as *Theme For Lester Young*).

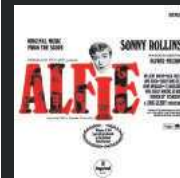
The same year's *Mingus Plays Piano* is a stylistic departure and perhaps his most tender work. Known for his ensemble recordings, this lovely album is

just piano and vocals, plucking "spontaneous compositions and improvisations" out of the air and selecting a few moving covers, like *Body And Soul*.



► SHOPPING LIST

Irreverent blogger and Impulse! Records collector Matt Robbins (32rpm.blogspot.com) picks eight favourites from the legendary label



Sonny Rollins

Alfie

"Music from the film. The perfect accompaniment to a post-Sunday roast sit-down. Bring your own slippers."



Elvin Jones and Richard Davis

Heavy Sounds

"A contender for the best-ever Impulse! sleeve. Sonically, this quartet carries no excess baggage."



Ornette Coleman

Ornette at 12

"One of only two albums recorded for Impulse!, this features both Charlie Haden and Ornette's 12-year-old son."



Charlie Haden

Liberation Music Orchestra

"Under the gaze of Carla Bley, this supergroup moulds a concept album about the Spanish Civil War."



Marion Brown

Sweet Earth Flying

"Marion returned to Impulse! with a bang, detonating a Mellotron-infused space saga. Pensive, delicate and frazzled."



Albert Ayler

The Last Album

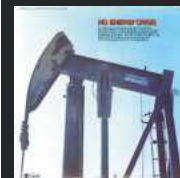
"Released in 1971, posthumously, this is a heavy, unrelenting saxophone assault. Expect bagpipes. No, really."



Archie Shepp

Attica Blues

"Choosing one Archie Shepp cut is hard, but you can't go wrong with this awesome outing: masterful, spiritual jazz."



Various Artists

No Energy Crisis

A brilliant compilation, worth seeking out for Pharoah Sanders' wall of skronk *Red, White and Green* alone."

icon Audio

Stereo 60 MkIII M KT150 Integrated Amplifier



"It knows few equals and in these value conscious days makes it a pearl almost beyond price" Roy Gregory

hi-fi+

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STEREO 60 MKIII
KT150 £2599.95



OUTSTANDING - amongst the best.

VERDICT

A lovely sound with plenty of power and adjustability. A well developed design.



designed by David Shaw

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As a company run by Hi Fi enthusiasts we regularly evaluate our amplifiers to ensure they are the best of their kind. Whilst we do not make changes for change sake, if we can make a significant improvement to the sound quality and reliability we will do so. The new MK III version of the Stereo 60 now comes with several improvements in sound and performance, and build quality. This is our biggest integrated amplifier. It is ideal for someone wanting a very dynamic fast sound. It has a big power supply, big output transformers, and uses the excellent new KT120/KT150, and comes with many features. An excellent alternative to a transistor amplifier, the ST60III will deliver the finest detail of modern recordings in a more vivid way and present jazz and rock music without harshness.

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Now with "Easy Bias" Meter We think of our amplifiers as musical instruments. Like a piano needs occasional tuning, big amplifiers need the bias checking. This way you can be sure of 100% performance all of the time. Simple with our "easy bias" meter. If the pointer is in the "black" it's correct! Also useful to check if your valves are worn or faulty. Long term performance is important to us and this useful aid will take the guesswork out of maintaining your amplifier.

Attractive Valve cover Most valve amplifier covers look as though they were done as a cost saving after thought, and don't exactly enhance the look of the amplifier. They are rarely seen in advertisements. We think that something you will use every day should look attractive. That's why we use 18 pieces of laser cut Perspex assembled with a further 20 precision components. See picture on our website.

Our new series of "Low Distortion Tertiary" output transformers are the best we have ever made, enabling us to reduce global feedback by about 40%. All our amplifiers are designed and finished in Leicester. Warranty and service is done by the engineers that designed them so you can be sure of long term performance. We incorporate a "standby" switch in order to protect those precious cathodes from damage until they have warmed up. All of our amplifiers are hand made using "point to point" soldering without using printed circuit boards. We are convinced this sounds better. It allows for very easy servicing, upgrades and modifications. Remote controlled volume included for fine tuning your listening. High quality components are used throughout including an "ALPS" volume control, silver plated PTFE audio cable SCR capacitors audiophile resistors. A choke regulated power supply adds a richness to the sound quality that silicon devices alone cannot do. Recording loop included. In short we have created an amplifier of excellent flexibility and quality which retains the qualities traditional of traditional design and performance. Bespoke upgrades available including silver/copper capacitors, valves and design. (*Excluding EL34)

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AC/HFN/76

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AC/HFN/83



100 Anna Phoebe
Between The Shadow
And The Soul



101 Claire Martin
Time And Place

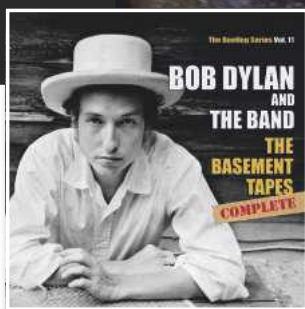


101 Karl Richter
Revealing Bach

Musicreviews



**ALBUM
OF THE
MONTH**



Bob Dylan and The Band

The Basement Tapes Complete:
The Bootleg Series Vol. II

★★★★★

Six-CD box set **Sony**

BACK IN 1967 Robert Allen Zimmerman was holed up in rural Woodstock, recovering from a motorcycle accident which either nearly killed him or saved his life by creating the space in which he could slow down. As he recovered, Dylan took to walking his daughter to the school bus stop every morning and then sometime around noon, would drive the short distance to Big Pink, the house The Band had rented nearby as a club house and rehearsal space.

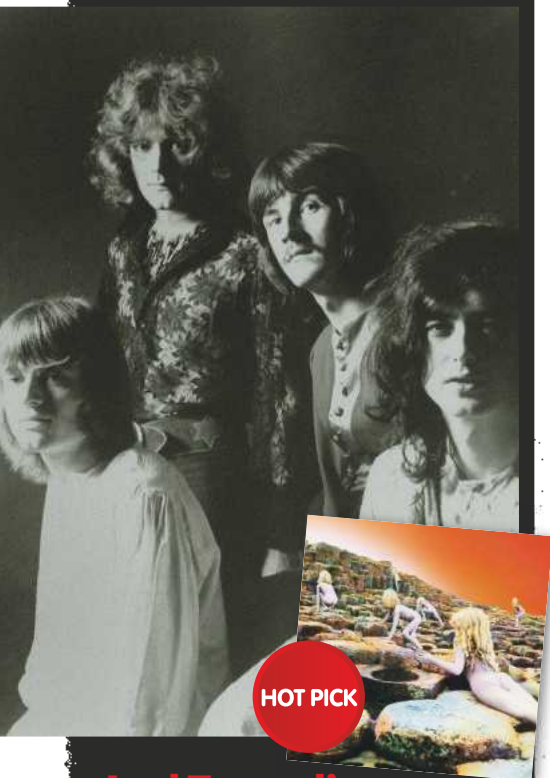
In the basement, keyboardist Garth Hudson set up a reel-to-reel recorder and with the windows open to let in the country air and a dog called Hamlet sleeping on the studio floor, Dylan and The Band began jamming. Recording up to 15 songs a day, Dylan's own new compositions nestled alongside dozens of old folk ballads and vernacular songs, creating a treasure trove that resembles an alternative roots version of the Great American

Songbook. The sessions became known as *The Basement Tapes* and swiftly took on a mythical aura. Selected highlights appeared on a double LP in 1975, but they were merely a taster. Now Hudson has been back to the original reels and unearthed 138 tracks, so that for the first time the full extent of what has long been regarded as Dylan's 'Holy Grail' can be heard in all its magnificent, musty, homespun and sometimes ramshackle glory.

Recorded on two-track with four mics mixed down to a stereo pair and the sound leaking from one mic to another, the setup was basic – but it is this that creates the relaxed and informal feel. Dylan and The Band weren't making an album and never intended the world to hear what they were doing. They were simply playing for the joy of it and any lack of polish is more than compensated by the convivial warmth and intimate honesty. That said, the skilful mastering here represents a significant

upgrade on the quality of the various bootlegs issued over the years. It's also important to remember the context. In the summer of 1967, the musical world was going psychedelic and acid-rock ruled. Dylan had helped to create the revolution with the 'wild mercury sound' he perfected on *Highway 61 Revisited* and *Blonde On Blonde*. But *The Basement Tapes* ushered in a counter-revolution of its own, a gritty, back-to-the-roots movement that led to The Band's *Music From Big Pink* and Dylan's *John Wesley Harding* and birthed country rock, roots rock and the Americana phenomenon of today. Some of the songs will be familiar – *I Shall Be Released*, *This Wheel's On Fire* and *The Mighty Quinn*. But the revelations lie in hearing Dylan covering the likes of Johnny Cash, Hank Williams, Curtis Mayfield and Tim Hardin and dipping his bucket so deep into the profound well of traditional songs. **NW**

MUSICREVIEWS



HOT PICK

Led Zeppelin

Led Zeppelin IV Deluxe Edition

★★★★★

Two CDs

Rhino

AFTER THE FIRST three Led Zep albums got the expanded two disc treatment earlier this year, here comes the behemoth – the second-biggest selling British album ever, remastered by Jimmy Page and augmented by a second disc that includes previously unheard alternative mixes of each of the original album's eight tracks. The band's fifth album, *Houses Of The Holy*, is simultaneously released in a similarly expanded version. But *IV* was Zep's

So do the 'new' versions of the original tracks add anything? Sadly the answer is no

Himalayan peak and by comparison its follow up barely got above the tree line. So do the 'new' versions of the original tracks add anything to what made the original so memorable? Sadly the answer is no. *Battle Of Evermore* and *Going To California* sound disarmingly like the Incredible String Band, while the main difference in the fabled 'alternative' Sunset Sound mix of *Stairway To Heaven* is that it simply sounds muddier. **NW**



Marianne Faithfull
Give My Love To London

★★★★★

CD

Dramatico

SIX MONTHS OUT of action with a broken back might sound like a nightmare to mere mortals like you or I, but it left Marianne Faithfull plenty of time to think and write. And in so doing she's come up with her most mordant set of lyrics since the edgy melodrama of 1979's career highlight *Broken English*. A cast of high-profile collaborators including Roger Waters, Nick Cave, Steve Earle and Brian Eno flesh out the vision of an admirably non-sentimental musical love letter, both to the city where she lived for so many years and to her more youthful self, sent from ripe maturity in Paris where she now resides. **NW**



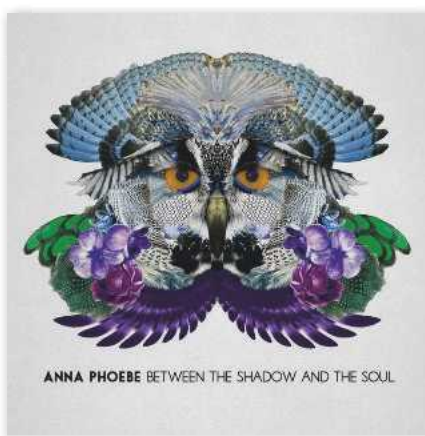
The Flaming Lips
With A Little Help From My Friends

★★★★★

CD

Bella Union

WAYNE COYNE'S MEN have never lacked ambition and while it's not unusual to cover tracks from one of the most popular albums ever, it's a little different to attempt it in its entirety, and with the help of a list of collaborators including Miley Cyrus, Moby, My Morning Jacket, Dinosaur Jnr's J Mascis, MGMT and more. As you might expect, the results are eclectic, innovative, never predictable and not always successful. The dreamy approach to *A Day In The Life* including spoken vocals by La Cyrus is unsettlingly weird and the distorted vocals on *With A Little Help From My Friends* grate, but it's a small price to pay for an intriguing collection. **DO**



Anna Phoebe

Between The Shadow And The Soul

★★★★★

CD

Anna Phoebe Music

THE 'VIOLIN VIXEN rock chick' is known for her high-energy theatrical shows with all the stadium rock trimmings. There's no hint of toning things down for her third solo album although the prog rock influences are blended with a range of additional sounds from around the world. Writing with half-Moroccan guitarist and classical Indian music scholar Nicolas Rizzi she has produced a range of tunes that fizz and sputter with energy and innovation.

Flying-fingered glissandos, crashing drums and screaming electric guitar solos are blended with tabla, Moroccan melodies and off-kilter rhythms to create a new blend of world music. **DO**



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

AUDIOFILE VINYL

★★★★★

HOT PICK

Various artists
Chasing The Dragon

180g vinyl

Chasing The Dragon



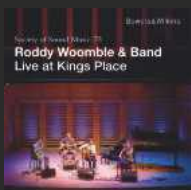
RECORDED AND PRODUCED by film maker and vintage mic enthusiast Mike Valentine, this euphemistically titled release is the long awaited vinyl pressing

of a stunning selection of recordings. Valentine made them using a Nagra D 24/96 and a Studer half-inch analogue tape recorder fed by Neumann valve-powered microphones. He is particularly fond of the Decca Tree technique for mic placement, which seems to be rather good at picking up the ambiance of the venue and the

vibrancy of the instruments. Bach's *Cello Suite No.1* played by Justin Pearson, is recorded inside a church and again in the graveyard outside, with birdsong in the background.

Most of the material is classical, but there is an improv on piano by Bruce Davidson and the finale of Duke Ellington's *Caravan* by a live jazz trio. It's the fully acoustic pieces that stand out here, but the whole album is very impressive, with the combination of old and new technologies proving particularly effective at revealing timbre and reverberation, not to mention dynamics. I'm not generally a fan of audiophile recordings, but this one is so impressive that I have to make an exception. **JK**

HIGH RESOLUTION **DOWNLOADS**



Roddy Woomble & Band Live At King's Place



FLAC 24-Bit/96kHz

B&W Society of Sound

BACKED BY ACOUSTIC guitar, fiddle (the excellent Hannah Fisher), piano and electric bass, this is a gently intense set of tunes that ranges from the introspection of *A New Day Has Begun* to the rollicking fiddle-fuelled foot stompers like *Roll Along* and many points in between. Influences include an obvious love for his local Scottish folk, but also a penchant for the wide open spaces of Americana and his evocative voice never puts a foot wrong. **DO**



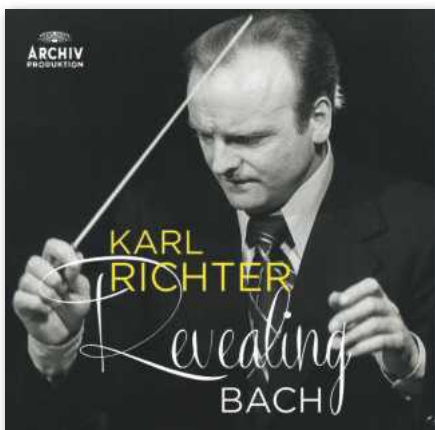
Claire Martin Time And Place



FLAC/ALAC 24-bit/192kHz

Linn Records

WHETHER OR NOT you consider Martin to be the 'first lady of British jazz', she's certainly one of the most prolific. She's backed on most of these tracks by the Montpellier Cello Quartet and turns in an eclectic mix of standards and surprises, from Thelonius Monk's *Round Midnight* to Bowie's *The Man Who Sold The World*. Her mellifluous voice snakes between the cello harmonies with immense grace and taste throughout. **DO**



Karl Richter

Revealing Bach

HOT PICK

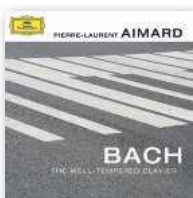


18 CDs

Archiv

FOR LP COLLECTORS in the sixties and seventies, Karl Richter was without question the world's principle Bach interpreter. He favoured a full cantabile string sound - worlds away from the lean 'salt and pepper' tonality of period instrument bands. These 18 CDs contain a fair cross section of his many Bach recordings for Archiv - among them, the Brandenburg concertos and Orchestral Suites. Richter's prowess as organist (superb!), harpsichordist and chamber musician is also covered. The simple honest sincerity of his approach and the beautiful sound he created still impress. The recordings sound very well for their age and need no excuses. Irresistible! **JH**

**Bach's the way
(aha, aha) I like it...**



Bach The Well-Tempered Clavier (Book 1) Pierre-Laurent Aimard - piano



2 CDs

DG

HERE IS A beautifully realised set of Bach's *Well Tempered Clavier* performed on the piano. Aimard's playing is wonderfully articulate, and impressively clear and incisive. But it's also intensely alive and very musical. Everything emerges with impressive naturalness and inevitability - as though this were the only way to play Bach. DG's recording is very open and clear, presenting a sound that is lucid and immediate, without being too close or dry. The sound is crisper than Pollini's 2009 set of these same works for DG - less reverberant and better focused, as well as being more natural, tonally. **JH**

BLU-RAY DVD **★★★★★**

Diana Krall Live In Paris

Blu-ray

Eagle Vision



Recorded in late 2001 and awarded a Grammy two years later, this finds the audiophile's favourite jazz chick in the company of top-notch musicians and an orchestra. It's an immensely polished performance and highlights include a fine rendition of *The Look Of Love*, a song that Krall squeezes some feeling into - something that she's usually better at doing with the keyboard. The sound matches the performance and is very slick if a little smooth around the edges, but this means it can be played at an appropriate volume with ease. **JK**

Nature's Dragonfly



Our DRAGONFLY



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size ... in their natural
habitat.**

audioquest.

audioquest.com/DragonFly

Minitest

NOISE-CANCELLING HEADPHONES £180-£300

It's oh so quiet

Adrian Justins isolates his ears from the unwelcome sounds of the metropolis with four cans capable of noise cancellation

All headphones offer a degree of passive noise reduction and some cut high-frequency sounds by around 20dB via the padded ear-cushions. With active noise cancelling, ambient sounds on planes, trains and buses need no longer be a sonic spoiler. Active models such as the four on test here can cut a further 20dB or so by using an inbuilt microphone and amplifier to generate their own soundfield that is near

identical to the incoming sound, but its phase is diametrically opposite. Your ears listen to both, with the phase of the actively generated one cancelling out the incoming sound. This is called destructive interference.

There is a trade off to be made in that the noise cancellation affects the quality of the sound produced by the headphones. At 5,000 feet up in the air or in a noisy train you might prefer the feeling of isolation, even if it is slightly tainted. Another benefit is

that using noise-cancelling headphones reduces fatigue on longer journeys. Some people even use them without music simply to enjoy a quieter environment.

For this test I spent a day on London's Victoria Line using an iPhone 5 with standard-resolution music by artists including The Manic Street Preachers and a Sony NWZ-F886 Walkman, playing Martin Garrix's *Animals*, plus hi-res music by artists including Diana Krall.

Audio-Technica ATH-ANC9

PRICE: £279 CONTACT: 0113 2771441 WEBSITE: eu.audio-technica.com

DETAILS

PRODUCT
Audio-Technica
ATH-ANC9

ORIGIN
Japan/China

TYPE
Over-ear active
noise-cancelling
headphones

WEIGHT
220g

DRIVER
40mm

ACCESSORIES
1.2m cable; 1.2m
inline cable; 6.3mm
stereo adapter;
airline adapter; AAA
battery; hard case

DISTRIBUTOR
Audio-Technica Ltd

BUCKING THE EXTERNAL

charging trend these headphones feature one cup with a housing for a AAA battery. You can reckon on getting around 20 hours of noise-cancelling usage from a rechargeable NiMH battery, 25 hours from an alkaline and 35 hours from a lithium type. These cans have 40mm drivers and uniquely offer three noise reduction modes for different environments – Airplane, Office and Study. Study mode cuts 85 percent of ambient noise at 200Hz, Office mode is 95 percent at 300Hz, Airplane mode is 95 percent at 200Hz. Accessories cover all the usual bases with a hard case, 6.3mm jack adapter, two-pin airline adapter and two 1.2m cables (one with inline mic). Memory foam and soft faux leather covers feature prominently, providing good comfort to the over-ear cups and adjustable headband. Build quality is excellent, as is adjustability. Audible beeps enable sight-free selection of

the listening modes, with the selector adjacent to the power switch on the left can.

Punch drunk

Steely Dan's *Time Out Of Mind* from *Gaucho* is as punchy as 10 rounds with Mike Tyson, the higher frequencies of the cymbals are especially prominent and Donald Fagen's vocals are smooth and engaging. It's a similar story with Martin Garrix's *Animals*, where the electro popping is pin sharp, but the bass is less fulsome than you might expect. With Diana Krall's *My Love Is the double bass* doesn't twang as much as it can do and the lower frequencies feel a tad damped. The presentation lacks a bit of warmth with the vocals in The Manics' *Show Me The Wonder* verging on brightness and lacking authority. Despite a delay when switching between modes, noise cancelling works very well, but without music the hum is audible ●



VERDICT

Noise cancelling is effective, but there's a noticeable hum between tracks



Bose QuietComfort 3

PRICE: £300 CONTACT: 0808 1688572 WEBSITE: bose.co.uk

DETAILS

PRODUCT

Bose
QuietComfort 3

ORIGIN
USA/China

TYPE
On-ear active
noise-cancelling
headphones

WEIGHT
137g

DRIVER
23mm

ACCESSORIES
168cm inline cable;
168cm detachable
cable; airline
adapter; battery
charger;
Rechargeable
lithium-ion battery;
carrying case

DISTRIBUTOR
Bose Ltd

WITH LIGHTWEIGHT COMPONENTS

including leatherette-covered ear cups and a soft headband, the QuietComfort 3s feel very comfortable. They're designed so that the cups rotate and the band twists easily to achieve a perfect fit on your head. Once in place they are almost as unnoticeable as wearing a watch. The on-ear design does mean they are less able to isolate background noise than the Audio-Technica's and the Creatives. The right ear cup houses a proprietary rechargeable battery that can only be replenished with power using an external mains charger. A major caveat is that the headphones only operate in noise-cancelling mode and don't work at all without being switched on. You can expect to complete 25 hours of noise-cancelled listening between charges and multiple adapters are provided for globe trotting executives. The ear cups rotate flat for storing in the hard



case, along with the 1.5m cord, inline cord and dual-pin airline adapter.

Airy godmother

The sound is terrifically airy and effortlessly powerful. The prologue from *West Side Story* is energetic, rhythmic and dynamically balanced. Spatially, everything sounds like it's in the right place, and this gives quieter passages audibility without having to increase the volume (useful with classical music). More hectic music has decent clarity, The Manic's *Show Me The Wonder* is well presented with the vocals, trumpet, guitars and

percussion all given an equal footing. Bass retrieval is especially good, the double bass thronging nicely to Krall's *My Love* complementing perfectly her rich vocals, but with the Manic's *Anthem For A Lost Cause* the bass tends to boom. In terms of noise cancelling, low frequencies are reasonably attenuated and only the slightest hum is audible ●

VERDICT

Excellent noise cancelling and a satisfying sound, hampered only by battery-only use



Sennheiser MM 450-X Travel

PRICE: £250 CONTACT: 01494 551551 WEBSITE: en-uk.sennheiser.com

DETAILS

PRODUCT
Sennheiser
MM 450-X Travel

ORIGIN
Germany/China

TYPE
On-ear active
noise-cancelling
Bluetooth
headphones

WEIGHT
105g

DRIVER
25mm

ACCESSORIES
140cm detachable
cable; airline
adapter; 80cm
charger cable;
USB wall charger
adapter; case

DISTRIBUTOR
Sennheiser UK Ltd

THESE ARE THE most versatile headphones in terms of storage as not only can the ear cups rotate to lay flat, but the headband is hinged at both ends allowing the whole thing to fold into a neat size for easy storage.

The cans are similar to the Bose in that they combine memory foam padding with leatherette covers and they sit on the ear. The headband is a tad stiffer so that the fit is tighter, but they are the lightest here and feel comfortable. A removable battery provides the power and charging (2 hours) takes place with the battery in situ, connected by USB either to a laptop or the mains (a four-pin adapter is provided).

The MM 450-X Travel offers Bluetooth wireless connectivity with CD-quality aptX streaming and remote device control by pressing buttons on the right cup. Using Bluetooth halves the battery life to 10 hours, but you can use the cans if the battery dies with the cable and

without noise cancelling. Another useful feature for ordering a G and T on a flight is that a quick press of the noise cancelling button mutes the music and amplifies external sounds.

Get a buzz

Noise cancelling is effective but lacks refinement, generating a slight background buzz, although this is less noticeable when using Bluetooth. Aside from a slight clinical edge audio quality is very good. Higher frequencies sparkle and vocals are the prominent feature of *I Miss The Tokyo Skyline* by the Manics. The double bass of Krall's *My Love Is* throngs elegantly and the finger clicks resonate effectively. Garrix's *Animals* is punchy and clean with the bass remaining taught throughout ●



VERDICT

Clinical but powerful sound, the buzz when using a cable is mostly eliminated via Bluetooth



Creative Aurvana Gold

PRICE: £180 CONTACT: +353 1 8975700 WEBSITE: uk.creative.com

DETAILS

PRODUCT

Creative Aurvana Gold

ORIGIN

Singapore/China

TYPE

Over-ear active noise-cancelling Bluetooth headphones

WEIGHT

300g

DRIVER

40mm

ACCESSORIES

1.2m detachable cable; airline adapter; 1m USB charger cable; soft carrying case

DISTRIBUTOR

Creative Labs Ireland Ltd

THESE ARE SOLID, substantial headphones, weighing just shy of 300g they need to be well padded and indeed they are. The attenuation provided by the noise cancelling seems marginal, but combined with the almost air-tight seal of the cans the noise reduction is very good, with Creative claiming a 90 percent reduction in exterior sounds.

The size and fit means that wearing these cans in warm conditions can lead to hot ears. The headphones have a non-removable battery that can only be charged by USB (a cable is provided, but no mains adapter). Using Bluetooth and noise cancelling yields around 10 hours of use. The Aurvana Gold has some unusual features including audible messages when powering on and off and the ability to connect to two mobile devices at the same time, allowing you to watch a movie on an iPad and receive a call from a mobile phone.

You can also share your sounds with a companion that's wearing a second set of Creative headphones.

Spot the difference

The sound is markedly different to the other three models here, noise cancelling has much less of a signature, making it more relaxed and restrained, so that the bass is prominent but by the same token is a tad muffled, as with Krall's *My Love Is*. Higher frequencies are much warmer than the others, but Krall's vocals don't reach as high, and the flute in the prologue to *West Side Story* isn't that polished. The imaging is very good, with the xylophone pinging to the left, drums in the middle and horns on the right and everything fits together nicely. Garrix's *Animals* also comes together well and shows their suitability for electro pop ●



VERDICT

Excellent sound isolation combines with a warm sound that lacks energy



Mini test verdict

IN FOURTH PLACE is the Sennheiser MM 450-X Travel, which is an on-ear model with the convenience of Bluetooth connectivity that works well. Comfy and practical with USB mains or laptop charging, they are the most compact when folded up and stored in a bag. Their main weakness is the sound quality when noise cancelling is activated, which causes a slight background buzz, especially when using the audio cable rather than Bluetooth.

In third place are the Creative Aurvana Golds, which dare to be different by providing unexpected benefits such as the ability to share their sounds with a second pair of cans and a feature that means you can connect by Bluetooth to two sources at the same time. They're

big and cosy and they do a good job of shutting out unwanted noise, but that tight fit means your ears get warm over time. Performance-wise they do a terrific job in terms of sonic imaging and they have warm, natural sound. The issue is the amount of muffling caused by the noise cancelling.

In second spot are the Audio-Technica ATH-ANC9s. These have a handy selector to vary the amount of

noise cancelling according to your surroundings and come with plenty of travelling accessories. They offer good comfort and deliver a clean and crisp sound, if a little unrefined, but lose out on the top spot to the Bose QuietComfort 3s because of a slightly audible hum caused by the noise cancelling.



WINNER

The Bose QuietComfort 3s are expensive and can't be used passively. Also, the battery has to be removed and placed in the external charger. But they are the most impressive performer, unfettered by the noise cancelling and capable of delivering a dynamic and detailed sound while effectively cutting out external noise. A great buy for those looking to shut out the noisy world.



HELP & ADVICE

Active noise cancelling requires some form of electrical power, and the type of battery is critical. Regular AA or AAA batteries are less common and arguably the least economical, but at least these are readily available. USB charging is more versatile when a laptop or mains source is available, but means the cans can't be used in noise-cancelling mode during charging and some models can't even be used in passive mode.

Over-ear headphones produce superior passive sound isolation, however this doesn't automatically translate into a better sound once the electronics come into play as noise cancelling is a somewhat imprecise art and you're sure to experience some degree of muffling at the least. Listening to the headphones without music playing will give you an idea of the sonic footprint imposed, but this will be skewed by the ambient sound.

Objects of Desire



TAD C600 Pre-Amplifier



Creaktiv Midi Reference Audio Rack



Creaktiv Amplifier Base



TAD - DA1000 21st Century Music Center



Brodmann Festival Shelf Speaker
& Vienna Classic Floorstanding Speaker



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Linn Sondek, Lingo, Naim Aro, superb used 2499	Chapter Audio Couplet Power Amplifier dem 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	KeF Q05, excellent boxed used 249
Linn Sondek, Basic plus, Vahalla, G1042, VGC+ used 699	Chord Electronics Mezzo 140, excellent dem 1499	Consonance Cyber 211 monos c/w Pavane valves dem 499	KeF Q100, brand new, sealed box used 249
Linn Sondek, Grace 707, basic plus, VGC+ used 149	Conrad Johnson Premier 18, boxed with remote dem 1799	Consonance Cyber 211 monos c/w Pavane valves dem 499	KeF TDM34 Dipoles used 199
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Linn Sondek, Ekos, Lingo, boxed used 2249	Cyrus SmartPower, excellent used 279	Consonance Cyber 211 monos c/w Pavane valves dem 499	Linn Keosa, fair in black, REDUCED used 199
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Linn Sondek, Ittok, Vahalla, vgc+ used 899	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Cirkus, Vahalla, front mount motor used 299	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Lingo, Naim Aro, superb used 2499	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Basic plus, Vahalla, G1042, VGC+ used 699	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Grace 707, basic plus, VGC+ used 149	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Ekos, Lingo, boxed used 2249	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Ittok, Vahalla, vgc+ used 899	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Cirkus, Vahalla, front mount motor used 299	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Lingo, Naim Aro, superb used 2499	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Basic plus, Vahalla, G1042, VGC+ used 699	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Grace 707, basic plus, VGC+ used 149	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Ekos, Lingo, boxed used 2249	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Ittok, Vahalla, vgc+ used 899	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Cirkus, Vahalla, front mount motor used 299	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Lingo, Naim Aro, superb used 2499	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w Pavane valves dem 499	Nola K0 speakers in black dem 4000
Linn Sondek, Basic plus, Vahalla, G1042, VGC+ used 699	Leema Tucana 2 integrated amp in black used 1999	Consonance Cyber 211 monos c/w	

Focal

Spirit One S headphones

IF THE LUCRATIVE sum that recently flooded into Dr Dre's bank account from Apple is anything to go by, it seems as if the world, his wife and their screaming teenage kids all want a pair of headphones. And not always for the purpose of enjoying music in sonic isolation from a telly that's belting out *Games Of Thrones* in the living room or a washing machine that vibrates like Beyoncé's hips in the kitchen.

Most headphones are used in public where image is often (sadly) as important as performance. As such, Focal's original mobile headphone, the £180 Spirit One, is available in Beats-ish white or red and is aimed at the younger buyer with relatively deep pockets.

The Spirit One S is the fourth member of Focal's headphone portfolio, but unlike the original Spirit One only comes in an audiophile-esque slate grey finish, although it retains Focal's distinctive bright red mesh driver cover.

Tight fit

But the changes aren't merely cosmetic. For starters the ear cups are bigger and more comfortable, although they add weight (overall the Spirit One S is 280g vs 225g for the Spirit One). I find these some of the best fitting cans I've ever tried, they even stay in place when I bound down the escalators at Oxford Circus tube. The headband slides purposefully in and out while the cups pivot on two hinges, which enables perfect vertical alignment, and the faux leather cushioning is spot on. With a closed-back design, sound isolation is great, thanks to the close fit and thick padding – no need for noise cancellation here.

Impedance remains at 32ohms and sensitivity is claimed at 104dB (SPL/1mW @ 1kHz), but there are technical improvements with a newly developed 40mm driver with Mylar cones and a titanium dome. Changes include a larger, stiffer diaphragm for a higher dynamic range with lower distortion.

Focal has changed the type of inline remote control to a more



basic type that loses the volume adjustment control in favour of universal control of Android and Windows smartphones.

The headphones seem very solidly built and the plastic finish is classy enough to give the appearance of brushed metal. My only concern is that the plastic hinges could crack if subjected to a lot of use.

The finishing touches are certainly impressive. Heavy duty, gold-plated 3.5mm plugs are used to terminate the 1.4m-long OFC cable (removable so it can be replaced) and Focal provides a twin-plug airline adapter, 6.5mm jack and two cases, one semi-hard and one soft.

For my listening test I concentrate on using the Spirit One S with an iPhone 5 at home as well as on the tube in London, where I get stuck into Depeche Mode's *Ultra*. What strikes me straightaway is a purposeful, dynamic delivery. They have more energy than Mo Farah in full flow, and they suck you in with an alluring and mesmerising sound. The mid-range is especially prominent. Dave Gahan's vocals in *The Bottom Line* are smooth and rounded, underpinned by a nicely timed bass line. *Barrel Of A Gun* is a cacophonous and complex rock song that inferior headphones struggle to handle, but the

presentation is assured and refined with all the elements of the track sounding well defined. At the start of *Home*, the bass pounds emphatically, backing up the cans' claims to an extended bass response, while Martin Gore's vocals are resonant and well rounded. You can crank the volume up and the cans retain their acoustic integrity (though they tend to sound a bit bright), which, combined with their excellent isolation makes them well suited to use on noisy trains.

Ace of base

Back at home base, I test them with Meridian's Explorer headphone DAC. The Spirit One S proves a natural bedfellow for hi-res downloads, Fleetwood Mac's *Family Man* in a 24/96 remaster is so clean and polished it reveals unexpected detail in the treble of the guitar riff, while the low-level backing vocals have a stronger presence than I've heard on inferior headphones.

These aren't the warmest, most natural sounding headphones, there's a hint of brightness at the top end and the soundstage is a little cramped. But for the money they are very impressive and are especially well suited in terms of comfort and performance to use on the go. **AJ**

DETAILS

PRICE
£150
CONTACT
(+33) 477 435700
WEBSITE
focal.com

OUR VERDICT





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KLE Innovations

Silver and Pure Harmony RCA plugs

IT'S 60 YEARS since the original phono plug was designed by RCA. Now, hot on the heels of the entry-level Copper Harmony RCA plugs from KLE Innovations (HFC 388), come the Silver Harmony and Pure Harmony RCA plugs.

The Eichmann Bullet RCA plug has gained a well-deserved reputation as a high-quality phono plug. One of its features is that, along with the likes of WBT, it has a single-point earth return contact. However, since the success of the Bullet, Keith Louis Eichmann (aka KL), the man behind the Eichmann Bullet, has launched KLE Innovations in Australia to produce a brand new range of products, including the Harmony RCA Plug. The range is the result of a project aimed at developing the design of the Bullet in order to improve conductivity and signal integrity across the connection.

Both the Silver and Pure Harmony build on the design philosophy of the Copper Harmony plugs, but use different materials for the contacts. All of the Harmony range has an easy snap-like connection to a standard phono socket. The high melting point thermoplastic polymer housing assembly uses two grub screws (a small Allen key is required, but not supplied) and a small rubber collar to retain and secure the cable. Internally, tag-shaped connections for the signal and earth facilitate the soldering of a wide range of cable types and configurations.

Heavy metal

The entry-level Copper Harmonys employ silver-plating over pure copper conductors for the signal and earth pins. Moving up in the range, the Silver Harmonys are identical, but use an earth connection made from solid silver and a thicker silver plating on the signal pin. As a result, the conductivity is increased. Finally, in the Pure Harmonys, both the signal and the earth pins are made from solid silver. For the purposes of the test and in the interests of consistency, I fit all the plugs in turn



to a set of interconnect cables made from Neotech STDST-24 UP-OCC stranded silver wire in Teflon sleeving and solder the plugs to the wire using Mundorf 3.8 percent silver solder. Soldering is a piece of cake, thanks to the good design of the internal tags.

However, I do have one or two questions still running around my head, so I consult with the man himself. Thanks to an introduction from the UK importers, Black Rhodium, I put a few questions to KL. I first ask him how the new Harmonys differ from the famous Eichmann Bullets. He explains that the main differences are in the materials and the internal layout of the pins. The Silver Bullet utilises machinable silver (<96 percent IACS), the Copper Bullet utilises machinable tellurium copper (<95 percent IACS) and the basic Bullet utilises machinable brass (<28 percent IACS). The Harmonys use proprietary formula (and, so, secret) metals for the pins to offer enhanced conductivity and improve their physical strength. Furthermore, the internal connections feature an anti-shorting shield and are arranged to maximise the distance from each other in order to minimise inductive, capacitive and EMF effects.

I then ask why he made the earth pin from solid silver in the Silver

Harmony plugs, rather than the signal pin. KL points out that the relationship between the signal and earth pin metals is not straightforward and this design is to achieve the best price/performance ratio. I note that the earth pin extends up into the body and has a threaded section that engages with the plug housing, although the housing is plastic on all the models. Is he planning on having a metal sleeve version in the future? He replies that he's considering a future housing that will ensure star-point grounding to minimise the metal housing's coaxial effects.

Enough talk

So much for the theory, the proof of the pudding is how they sound. After running them in, I find that in comparison with the Copper Harmonys, the Silvers offer similarly excellent imaging, but seem to offer improved clarity and transparency to the sound. The Pure Harmonys appear to take this improvement a stage further by opening up the sound stage. Bass drums also have better attack.

In my opinion, the Silver and Pure Harmony plugs are superb value for money, work extremely well and so come highly recommended. **NR**

DETAILS

PRICE
Silver Harmony: £70,
Pure Harmony: £90
(pack of four)

CONTACT
01332 342233

WEBSITE
blackrhodium.
co.uk/klei

OUR VERDICT



Russ Andrews Kimber D60 digital RCA cable



PHONO CABLES ARE often sold in pairs, but what if you only want one cable for connecting up the digital output from, say, your CD player to the digital input of an external DAC? What you need is a single cable fitted with RCA phono connectors and optimised for digital signals, rather than analogue. One such cable is the Kimber D60 Digital RCA Cable from Russ Andrews.

While digital cables can work well as analogue audio and video interconnects, analogue audio cables may not necessarily work satisfactorily for video or digital interconnects because they may not have the required 75ohms characteristic impedance. A cable won't work in a digital application if its bandwidth is not above a certain threshold since a poor high-frequency characteristic can result in timing errors in the digital signal

– and that means jitter. This means the subsequent digital processor then has to cope with these errors, which ultimately degrades the resultant audio signals.

DACs all folks

The D60 is a digital and video interconnect that is designed for connecting a CD player or streamer to a DAC or for use in your home cinema system. As it has been designed for high-frequency signals, it also can be used as a composite video cable.

It makes use of a hyper-pure silver conductor surrounded by two helically wound shields separated by air-articulated Teflon insulation. It is terminated with Kimber Ultraplate RCA phono plugs. As with most high-quality cables, the D60 is directional and to ensure that it is connected correctly, the heatshrink fitted to the phono plug at one end

has a serial number on it and should be plugged into the source component. In addition, a label with an arrow printed on it is fitted at the other end to indicate the direction of flow.

The Kimber D60 is a beautifully made cable that effortlessly conveys the digital signal from my CD to an external DAC and is one to consider if you're looking for a premium-quality digital interconnect. **NR**

DETAILS

PRICE
From £201 for 0.5m
CONTACT
01539 797300
WEBSITE
russandrews.com

OUR VERDICT



Bayan Audio Soundbook Go portable speaker

THIS IS BAYAN Audio's smallest and most affordable portable Bluetooth speaker so far. Like previous models it has a lean-back design, which serves to direct the sound upwards from its two 1in long-throw neodymium drivers when it's placed on a desktop. At 480g and 16cm wide, it is compact and light enough to carry around with ease.

Ready, steady, go...

Build and design quality are both excellent, with a smart contemporary plastic wrap round the perimeter, durable grille on the front and suede-like effect on the rear and cover. With Bluetooth 4.0 on board, it can also be used as a speakerphone.

On the rear are a micro USB charge socket, 3.5mm aux line in and NFC pairing point. Fully charged, you can expect around seven hours of use. The 15W stereo output is complemented by a 2in passive bass radiator and Bayan

claims a frequency range extending from 40Hz to 20kHz.

For a speaker of such a small size, the Soundbook Go delivers an impressively crisp and punchy sound. The bass is full, tight and meshes well with the front drivers. *Billie Jean*, downsampled to AAC from 24/96 has plenty of verve with outstanding clarity to the strings and Michael

Jackson's higher register vocals. Similarly, David Byrne's voice in *This Must Be The Place* is nicely tempered and the guitar bounds along with plenty of gusto and refinement.

Although the speaker lacks a broad soundfield, it otherwise works especially well in a desktop scenario and is also good for use outdoors or in a hotel room. **AJ**



DETAILS

PRICE
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CONTACT
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WEBSITE
bayanaudio.com

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MCRU

Linear Power Supply for Chord's QuteHD DAC

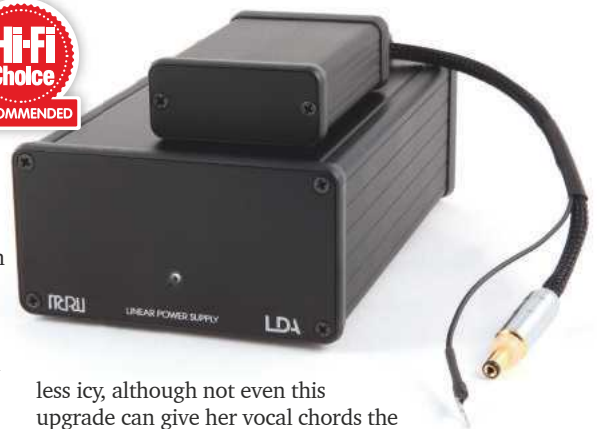
THIS IS A variation on a highly successful theme. MCRU has a wide range of upgrade power supplies for DACs – from the Arcam rDAC to the Audiolab M-DAC and beyond. The product is the brainchild of Nick Gorham of Longdog Audio and sold via MCRU. The casework is finely finished aluminium and comes in a choice of silver or black.

This one is designed to upgrade the Chord Electronics Chordette QuteHD DAC (HFC 368), which is sold with a small 12V DC 'wall wart' unit. The MCRU delivers a regulated 12V supply, with regulators in both boxes. The second one is based on a low-noise, multi-stage filtered voltage reference, a low-noise error amplifier and a high-current, low-resistance MOSFET.

This box makes the QuteHD an even nicer listening experience, which is really saying something. Even via the stock PSU it's superb, with an exceptionally musical character and a fulsome tonality. But compared with the MCRU unit, it seems grainy, less transparent, more forced, less spacious – although it's still extremely listenable. In other words, substituting this MCRU unit brings a major improvement across the board.

Feel the warmth

A 24/96 WAV of Kate Bush's *Snowflake* gets a major boost. It's warmer and more natural sounding. The piano is more believable, engulfing and expansive; the listener feels closer and better immersed. Kate's sublime vocals are just a little



less icy, although not even this upgrade can give her vocal chords the texture of Aretha Franklin! Bass takes on a little more weight, yet is more supple and tuneful and follows the phrasing of the music better. The Qute's tonality blossoms and its soundstage widens, giving a truly arresting performance – hard to believe from a modest, miniature DAC such as this. I wouldn't go as far as saying it takes the QuteHD beyond the Hugo's level, but it certainly matches it in a more mellifluous and romantic way, making a great DAC better still. **DP**

DETAILS

PRICE
£225
CONTACT
07908 056978
WEBSITE
mcru.co.uk

OUR VERDICT



Onkyo

ES-CTI300 headphones

WHEN WE REVIEWED the Onkyo ES-HF300(S) on-ear headphones in issue 375 we were impressed, but one gripe was the lack of an in-line remote control. Step forward the ES-CTI300, now incorporating iOS-certified controls in the form of a slim three-button unit with integrated microphone. This allows Apple owners to adjust the volume, skip tracks or take phone calls.

The headphones now come in black or silver with leatherette ear pads. My silver version with chocolate-coloured pads looks excellent. It's supplied with a soft-lined carrying pouch and folds flat for easy transportation.

The detachable lead is made from oxygen-free 6N copper cabling, with gold-plated MMCX connections. They're fiddly and need a fair amount of pressure to get them to pop into place – it takes me several attempts. The lead length is also quite short at

1.2m. It's fine for use on the move, but restricting for home listening.

Build quality is top notch and the lines are clean and uncluttered. The cans are easy to adjust, fairly light at 235g and feel comfortable on your head. Importantly for those around you there's hardly any sound leakage.

Ear for detail

With the same design and aluminium-encased 40mm titanium drivers as the ES-HF300, they sound very similar. The first thing you notice is the fantastic level of detail. It's a clear, precise sound with no sense of harshness, even when you push them to high levels. The drivers are fast paced and high-tempo material is handled accurately without fuss.

Behind the drivers sit two chambers that deliver oodles of bass. I like lots of bass, but I wonder if some might find it slightly overwhelming. The



soundstage is open and convincing, but like their predecessors they can be overly revealing of the limitations of lower bit-rate material – not ideal for cans designed for portable use.

Overall then, the ES-CTI300 headphones are a logical choice for any Apple device with a sound that's largely successful. They're stylish, light and comfortable and have a lot to offer as travel companions. **DH**

DETAILS

PRICE
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CONTACT
08712 001996
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OUR VERDICT



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Getting the best out of iTunes

iTunes hasn't always been geared up for audiophiles, but with a few simple tweaks it can still offer your hi-fi a sterling service

Since its launch in 2001, Apple's iTunes has delighted and frustrated music lovers and audiophiles in equal measure. Its intuitively organised filing system and simple syncing to Apple's pocket players and smartphones gives it obvious appeal, making it the digital media player of choice for the masses. While for us audiophiles, Apple's predilection for lower bit-rate file types with poor sound quality has always seemed its Achilles' heel. But with computer audio's move into home hi-fi territory, iTunes has evolved from just an iPod add-on to become a viable proposition for hi-fi fans looking to introduce a laptop into their systems.

When iTunes first beat a path to our desktops, MP3 was the order of the day as it placed quantity in terms of the volume of songs you can store on a portable device over sound quality, by using codecs employing lossy compression to make files smaller. These days, though, with the move to hi-res audio streaming and the launch

of iPod-conquering compacts from the likes of Astell & Kern and Neil Young's hotly anticipated Pono, iTunes has had to up its game to meet the demands for better quality digital music, whether in the home or on the move. And to uncover all that the iTunes media player now has to offer it's worth spending a bit of time getting to grips with the various options within the platform to guarantee your library is set up for a quality audio experience.

Source quality

So where to start? You'll firstly need to download the latest version of iTunes to benefit from all the latest bells and whistles (which is iTunes 11.4 at the time of writing). You can download the latest version of iTunes from Apple's website at apple.com/uk/itunes/download/. If you're already running iTunes on a Mac or PC, you can check that you have the latest version by opening iTunes and selecting Check for Updates from the Help tab in the top menu bar.

As with everything hi-fi, the old adage of 'rubbish in rubbish out' still applies and in iTunes' case there are two key principals to follow to make certain your library is optimised for maximum audio quality. The first is to make sure the music that's destined for your library is of good audio quality in the first place, and the second is to check that iTunes isn't using lossy compression that's robbing data when importing music into your library.

While the quality of iTunes software has come some way in the last decade, the file quality of the music on offer through the iTunes Store hasn't. With internet rumours of iTunes offering hi-res 24-bit tracks yet to come true, the store's downloads are still being offered at a maximum of only 256kbps, which is woefully low given the average CD track is around 900kbps. So you're inevitably better off buying music on CD for ripping into your library, or downloading from dedicated music sites offering hi-res audio at and above CD quality, such as

hdrtracks.co.uk, highresaudio.com, linnrecords.com and naimlabel.com.

Next you need to select how you want to import music so that it's captured at maximum resolution. From the Edit menu dropdown in the top-left corner (the square box icon next to a small arrow) head to Preferences and select Import Settings from the General tab. For maximum sound quality WAV, AIFF or Apple Lossless (ALAC) are the formats to choose from, with ALAC being Apple's FLAC equivalent. Like FLAC, ALAC uses a compression method that reduces file size while claiming no loss of information. Most hi-res online music stores now offer ALAC files alongside their FLAC counterparts up to 24-bit/192kHz, so if iTunes is your library of choice these are probably the files to go for, as iTunes does not support FLAC. You can still add FLAC files to your library, but iTunes won't play them (see Alternatives box).

With a few simple mouse clicks you can make iTunes ripe for hi-res

You can, of course, have a range of files of the multiple types supported by iTunes within your library at once, so there's no reason why your legacy MP3s can't rub shoulders with your hi-res ALACs, saving you the hassle of re-ripping CDs imported back when lossy formats were your only option.

Easy viewing

Choosing how you organise and view your library is also important, as there's no point growing your digital music collection if you then spend more time searching for tracks rather than playing them. If you're the

owner of a library that hosts many examples of the same track in alternative formats, it's crucial to know which version you're playing. Therefore, showing file type, bit depth, bit-rate and sample rate at a glance for each track is vital, and thankfully iTunes library lets you choose from a range of information 'fields' to display when searching via the Songs tab. When in this view, simply right-click on the top menu bar that contains the song title and artist to choose the fields you'd like displayed (note file type is listed as Kind). You can then drag and drop these new columns into the order you'd like them as you would in an Excel spreadsheet.

If you want to access file type information when accessing tracks from other views within iTunes such as via the Album or Artist screens, right-clicking a track's title and selecting Get info displays everything you need to know, right down to the version of iTunes you imported the track with. It's also worth playing around with the View settings in each main tab (Songs/Albums/Artists/Genres/Playlists) to customise how you'd like each area to look, as there are lots of options and layouts to choose from.

Shrinking when syncing

While having a library of hi-res files the size of *War And Peace* will meet your domestic hi-fi needs for better sound quality, adding files of these epic proportions to your iPod or smartphone will inevitably use up some serious storage space when syncing at their native resolution. As an example, the average track size of U2's latest album released through iTunes at 256kbps is 9MB, which seems tiny when compared to a single hi-res track at 24-bit/192kHz such as those on Claire Martin's *Too Much In*

ITUNES ALTERNATIVES

The versatility and restrictions of iTunes has spawned plenty of alternative media library packages alongside standalone software designed to run 'over' iTunes while addressing some of the problems of its perceived shortcomings.

For the PC brigade, foobar2000 is an alternative free software package that's well regarded for its universal file format support (including FLAC) and ability to get bit-perfect data out of your PC that isn't tampered with by your soundcard. It also boasts a wide range of features for organising music files and a highly customisable design, which out of the box can look a little intimidating if you're new to the world of digital audio, but once you get the hang of it you can create very slick interface that tells you everything you need to know.

For \$50 the alternative is JRiver, which takes the programming hassle out of the equation and gives you an iTunes-like experience off the shelf, while offering you full control of your audio output alongside file support for FLAC, ALAC and a wide range of other platforms. Originally designed for PC users, JRiver launched for Mac in 2013 and publishes regular upgrades. Using alternative software needn't mean re-ripping your CDs or having separate music libraries as these platforms can be configured to draw from the same music library as your iTunes account – consider this like having different people taking books from the same shelves in the same library. And if you want to store FLAC files within your iTunes library, the easiest way is to manually add them as computer files within the iTunes media folders, where iTunes will simply ignore them but they'll be organised with the rest of your music for playback on other software platforms.



For Mac users there's even more choice with paid platforms that build on iTunes while promising sonic improvements from the likes of Amarra, BitPerfect, Decibel, Audirvana – which boasts its own cataloguing system – and Fidelia (pictured above), which sports a traditional hi-fi separates-like screen to boot.

Most of these paid platforms can be downloaded for free for a trial period, so if you are considering going down one of these routes it's certainly worth experimenting with a selection on your computer to see which one brings you the best combination of user-friendly software and an intuitive interface while delivering the sonic goods. What's more you can still run iTunes alongside any of these packages for feeding your portable player while acting as a dotting librarian and taking care of file management, giving you the best of both worlds in terms of file management and sound quality.

Love To Care (Linn Records) that weigh in at up to 220MB each. Thankfully help is at hand via iTunes customisable sync settings, which allow large files to be compressed on the fly when syncing to your portable player, meaning you're able to copy tracks to your iDevice at lower bit-rates, trading some audio quality for more song capacity.

To do this, with your iPod/iPhone/iPad connected to your computer and iTunes running, open your device's tab, select Summary from the main menu and scroll down to Options. Tick the Convert higher bit-rate songs to box and select from either 256/192/128kbps, with 256 being the best of the three for sound quality.

Storage solutions

Building a hi-res music library means that before long your computer's hard drive could be buckling under the weight of all those big files and you may need to invest in an external





hard drive to store your music on, which means moving your library's files while continuing to use your computer to access, organise and play your music. To do this select Preferences from the Edit menu and click the Advanced icon, which displays where your music files are currently stored. The Change button lets you specify where you'd like to move your files to while keeping them organised in their current folder structure, and Apple's website provides step-by-step instructions for Mac (support.apple.com/kb/HT1449) and PC (support.apple.com/kb/HT1364) when setting up an external hard drive for your library files.

Outputting

The last piece of the puzzle lies in getting your iTunes library to feed your hi-res files to your hi-fi system. This can be done via traditional hard wiring cables or via wi-fi streaming – AirPlay is an easy way to stream providing your partnering amp or streamer has an AirPlay receiver inside. For the hard-wiring method, it's likely that you'll be plumbing your computer into an external DAC and if you're running iTunes on a PC, it's worth checking that the bit depth and sample rate you're outputting at the

PC end is what your DAC is receiving, as the more recent versions of Windows don't allow iTunes to bypass your computer's soundcard settings. This means that your PC may change the music signal to your computer's default settings as it leaves your USB port, and you may then have to adjust your computer's output settings to the native resolution of the music that

Internet rumours of iTunes offering hi-res 24-bit tracks are still yet to come true

you're playing. To do this head to the advanced options in your computer's sound settings and select the bit depth and sample rate of the music you're playing while disabling other sound enhancement features.

If your hi-fi devices have AirPlay installed, iTunes should recognise these automatically when they're powered up. Look for the AirPlay icon appearing on your iTunes menu bar. This allows you to select which device to stream to. Although Apple remains rather tight-lipped about AirPlay's limits, we've managed to stream up to 24-bit/96kHz over AirPlay, making this

HOW THE FORMATS COMPARE

Using a standard 16-bit/44kHz CD track ripped to iTunes in all five file formats reveals the differences in file size and bit-rate for lossy, lossless and uncompressed codecs

FILE TYPE	BIT-RATE (KBPS)	SAMPLE RATE (KHZ)	BIT DEPTH	FILE SIZE (MB)
AAC	256	44.1	16	6.9
AIFF	1411	44.1	16	32.9
ALAC	909	44.1	16	21.2
MP3	256	44.1	16	6
WAV	1411	44.1	16	32.9

FILE TYPES EXPLAINED

The latest version of iTunes supports a range of file formats, from space saving low-res MP3s to seriously powerful codecs that take a carbon copy of your CDs and hi-res files. Here's a handy summary of what you can choose from:



AAC

Advanced Audio Coding (AAC) is a lossy audio codec designed as the successor to MP3, claiming better sound quality at similar bit-rates. It's also the default audio format for YouTube, iPhone, iPod, iPad and a range of gaming and mobile phone audio platforms.

AIFF

Audio Interchange File Format (AIFF) was developed by Apple in 1988 and uses uncompressed pulse-code modulation (PCM). There's also a compressed variant of AIFF known as AIFF-C or AIFC, which can sometimes be recognised by an .aifc file extension, although these can also appear with the standard .aiff or aif extension, so check for higher bit-rates to know you're playing uncompressed files. Like WAVs, being uncompressed means AIFF files will demand much more hard drive space than their lossy and lossless equivalents.

ALAC

Apple Lossless Audio Codec is Apple's most recently developed converter. After keeping it as a proprietary format from its inception in 2004, Apple made the codec available open source and royalty-free in 2011. Like AAC, ALAC data is stored within an MP4 container, but it employs different encoding in a lossless (not lossy) format that uses a linear prediction method, similar to FLAC. Many music sites now offer ALAC files alongside their FLAC equivalents up to the same 24-bit/192kHz levels. Because of their lossless compression, ALAC (and FLAC) files claim to give the same audio quality as their WAV/AIFF equivalents, while requiring significantly less hard drive space.

MP3

Abbreviated from 'MPEG Audio Layer III', MP3 coding employs lossy data compression that's based on an algorithm designed to greatly reduce the amount of data needed to 'represent' an audio recording while sounding like a faithful reproduction of the original file, allowing for much smaller file sizes. The compression works by reducing certain parts of sound considered to be beyond the hearing of most people, although in reality hearing MP3 files on any half decent hi-fi quickly reveals their sonic shortcomings.

WAV

Waveform Audio File Format (WAVE or WAV due to its .wav extension) is a Microsoft/IBM audio file format standard for storing audio bitstreams on PCs. It's the main format used on Windows systems for raw, usually uncompressed audio encoded in the linear pulse-code modulation (LPCM) format. LPCM is also the standard format for audio CDs, which store two-channel LPCM audio at 16-bit/44.1kHz, so ripping CDs as WAVs arguably gives you the most faithful reproduction, although many audiophiles also argue that there is no difference in sound quality between WAV and ALAC/FLAC files.

a viable streaming alternative, so it's worth looking for this functionality when the time comes for a DAC or streamer upgrade, or an all-in-one digital player/amplifier such as those that were featured in last month's *Group Test*.

While as an audiophile's software of choice iTunes is far from perfect, what this guide reveals is that with a few simple mouse clicks you can still make sure it's ripe for feeding your system a hi-res diet while giving your pocket player as much music as it can handle. Happy configuring! ●

NEXT TIME: Guide to looking after your record collection so that it performs at its very best for many years to come

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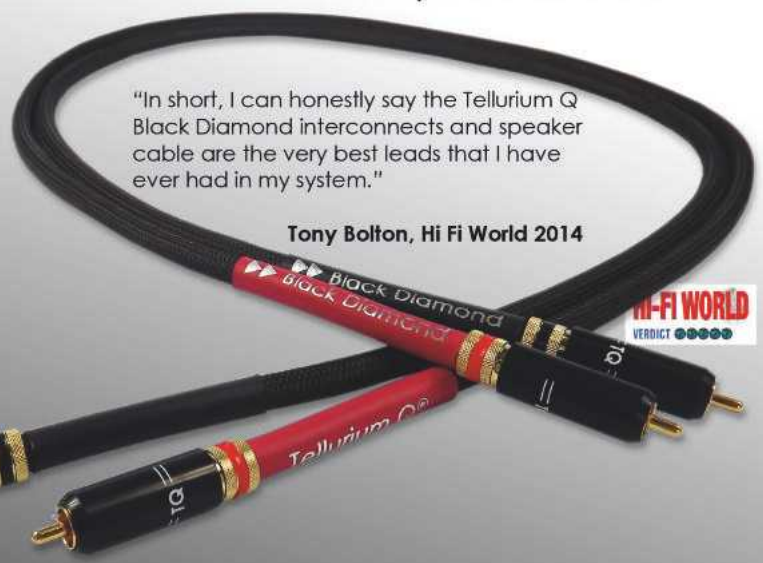


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KIMBER 8TC speaker cable, 3.5m, banana terminated, excellent condition £200: **01432850184 (Hereford).**

CLEARER AUDIO Digital Silverline RCA-RCA 1m @ £75, 3m @ £125, great reviews: **01235762171 (Oxon).**

LINN Sondek LP12, Origin Live electronics, on base with levelling feet, Rega arm, Origin Live modifications, nearest offer £500. Buyer collects: **07734505626 (Devon).**

ARCAM Solo 5.1 movie AV SACD, Arcam serviced in July, boxed accessories (£2,000 new) £475. Marantz CD 63 player £50. Nakamichi BX2 cassette deck £65: **01708457691 (Essex).**

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VPI Scout2/JPM9 arm/Linn Klyde. £1,400 onvo: **02084649055 billmilla@virginmedia.com (Bromley).**

DYNAUDIO DM2/7 stand-mount speakers, 12 months old, black ash, boxed as new, £350: **07956959032 or email: waynebtully@gmail.com (Redhill, Surrey).**

BROADSWORD speakers. Biwire terminals with Target



REGA RP3 turntable plus RB 303 arm with Elys 2 cartridge £350: **01782785734 (Staffordshire).**

stands £90: **01825722936 (Lewes, East Sussex).**

ACOUSTIC PRECISION EIKOS CD player fully upgraded by Tom Evans two years ago to his very latest specification including external power supply for both digital and analogue sections at a cost of £3,600, asking £985. Little used since upgrade: **01202515474 or email: johnlangley17@talktalk.net.**

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RUSS ANDREWS signature powerkords x2, 1m each, fitted with 350i ag iec. Cost £365, will accept £30 each or both for £50. Buyer collects: **01724853357 stuartwoodstu@hotmail.com (Scunthorpe).**

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LINN Basik turntable, includes Akito arm and instruction book, in very good

condition £250. Collection only: **07958739227 or email: sharpe@interalpha.co.uk (West Sussex).**

COPLAND integrated amplifier CSA-14 £475 onvo: **01424773404 or 07999828283 (Hastings, East Sussex).**

BOSTON ACOUSTIC Xa26 cherry, £120 Wharfedale Diamond 9.1 walnut, £70, Wharfedale Diamond 10.1 black, £100 all boxed and in good condition, any trial, buyer collects: **01933626185 or email: royroife@hotmail.co.uk (Northants).**

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B&W DM601 S2 speakers, ash black, mint condition with box and manual. Collection only, happy to demo (RRP £200) £100: **01902884694 or email: jukey39@yahoo.co.uk (West Midlands).**

JPS Superconductor FX. 1m, locking RCA plugs £100. Clearer Audio Silverline Optimus 75 coax 0.5m £100. JPS Ultra Conductor bi-wire speaker cable, 4.7m, two connectors at amp end, four connectors at speaker end £230. Two-box DNM Series 2A preamp. Two RCA line level inputs and moving coil input £350 onvo: **01296437314 or email: jez35@btinternet.com (Bucks).**



MONITOR AUDIO Audio Apex speakers. 4x A10 and 1x A40 £1,100. Rel B3 subwoofer, black £450. Marantz CD6000K1 CD player, black £50, or £1,500 for the lot: **01341423028 or email: chrisandkev@btinternet.com (Gwynedd).**

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!



ACOUSTIC ENERGY Radiance One speaker, ash, boxed. Cost £599 new. £320 with three year warranty: **01475 529216**.

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ROKSAN Kandy K2 int. amplifier, black, 17 months old, as new and boxed. £595. Would prefer demo and collection to posting: **0113 2188797 (Leeds)**.

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ATACAMA Eris Eco 5.0 rack, brand new, unused. Silver with dark oak shelves (bamboo) £300. Base 225mm, mid and top 175mm. Collection only: **079388 35982 (Middlesex)**.

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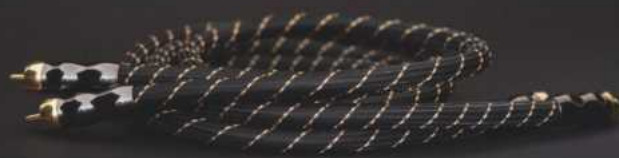
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WE HEAR...

ONE OF THE FINEST-SOUNDING NEW PHONO stages on the market is now on sale. We hear that Music First Audio's new Reference MM Phono Stage is a collaboration with Longdog Audio. The latter provided a very high quality low-noise pentode-based line-driving stage, which is wedded to an inductive equalisation network using Music First Audio's many years of coil winding expertise.

HAMPSHIRE-BASED HI-FI HANGAR HAS MOVED into new premises at No.2 Woolmer Way, Bordon, East Hampshire GU35 9QF. If you're down that way and into classic hi-fi then this is a must-see venue, complete with its themed seventies-style 'listening lounge'. It is also about to launch its own-brand turntable, complete with very high quality build, retro styling and at a surprisingly affordable price.

ASTELL & KERN HASN'T RESTED ON ITS extensive collection of portable, high-resolution laurels. It has tweaked its popular AK100 player, which now appears in mark II guise (£800), while the AK120 mark II (£1,500) gets a touchscreen user interface, balanced outputs, wi-fi streaming and a new Cyrus Logic DAC. Additional storage means it can now hold up to 128GB.

JAPANESE MANUFACTURER FOSTEX ISN'T that well known in the UK, but has been responsible for some fine designs in the past five decades or so, especially in the pro audio sphere. We hear that it has one of the most interesting sounding headphone amplifiers of the year coming up – the portable, battery-powered HPVI (£399), which has a tube output stage!

THROUGH THE PAST, SMARTLY...



HI-FI CHOICE ISSUE 149 DECEMBER 1995

Like digging up a time capsule in your garden and discovering long-forgotten relics that seem somehow incongruous in our current futuristic world, flipping back to the December 1995 issue throws up a decidedly dated looking feature called *Hi-fi On The Net*. The informative piece revealed that: "Using the internet means that you can connect to computers on the other side of the world from the comfort of your living room" before adding: "Things move fast on the internet. When I did a search about six months ago it revealed barely 10 sites relating to hi-fi or audio. Now there are listings of more than 100!". Exciting times indeed. Among the smattering of manufacturer and dealer websites, our feature suggests that early adopters point their browsers towards the "excellent" Suzanne's Totally Bitchin' Kit. Tragically the site no longer operates today...

Meanwhile, December was a slow news month, with the only event of any real significance being the lowest temperature ever in the UK being recorded. For the record it was -27.2°C.



HI-FI CHOICE ISSUE 248 DECEMBER 2003

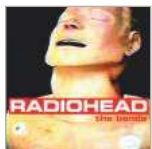
"20 years ago the audio industry faced a revolution prompted by the introduction of CD" wrote Paul Miller as he prepared to put five 'new format disc players' through their paces. "We are facing a quieter revolution now as the CD is being made to sound rather antiquated by the extra bandwidth, resolution and channels of DVD-Audio and SACD". The decks battling it out for the top spot included the Arcam Diva DV89, Denon DVD-2900, Marantz DV8400, Pioneer DV-565A and Sony DVP-NS999ES. Though a close thing between the Pioneer and Denon, in the end the latter came out on top thanks to its "warm and thoroughly agreeable sound that grows on you making it ideal for both short and long-term listening".

Elsewhere Donald Rumsfeld won the Foot In Mouth award for stating: "As we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns – the ones we don't know we don't know." What was he going on about? We don't know...



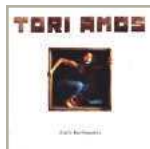
DESERT ISLAND DISCS

This month **Mark Groom** from Analogue Works picks four of his all-time favourite long players...



RADIOHEAD THE BENDS

This is my favourite album of all time. It's perfect from start to finish. I've seen them live lots and when they play stuff from *The Bends* I get goose bumps.



TORI AMOS LITTLE EARTHQUAKES

I love female vocalists, but Tori Amos is one of my favourites and I always come back to this. She seems to be able to really touch my soul.



PJ HARVEY DRY

I just love the energy in this first album. Her vocals are so raw and the band back it up perfectly with driving guitars and drums, what's not to like?



STONE ROSES STONE ROSES

This always takes me back to days slacking off at college. It just grooves along, from *I Wanna Be Adored* to the outstanding *I Am The Resurrection*. Pure genius.

Hi-Fi Choice

PASSION FOR SOUND

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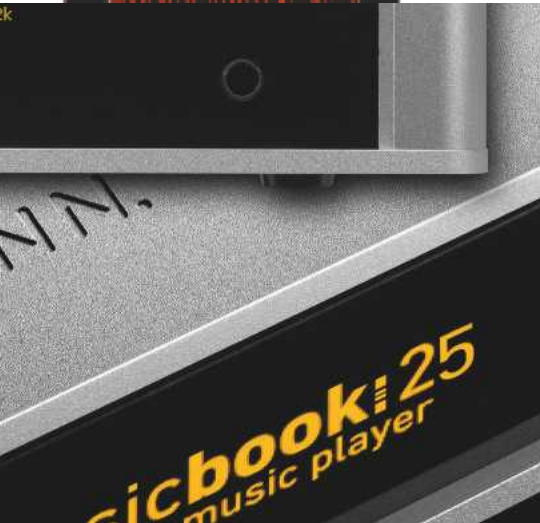


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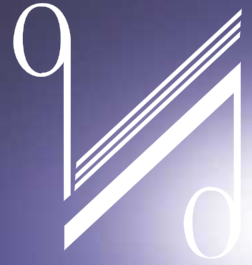
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