



Record maker

Creek's latest OBH-15mk2 phono stage tested

Head start

Musical Fidelity's new HPAP headphone amplifier/preamplifier



Hi-Fi Choice

PASSION FOR SOUND

Issue No. 365

December 2012

£3.99

Power towers

Six of the best budget floorstanders compared

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Exclusive: Chord Electronics' new Chordette Index streamer



Denon DCD/PM-720AE

CD player and integrated amplifier

"The writing was on the wall for Napster"

The Year in Music: 2001, p94

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top products from Audiovector, DALI, Fidelity Audio, Hi-Fi Racks, Q Acoustics and many more...

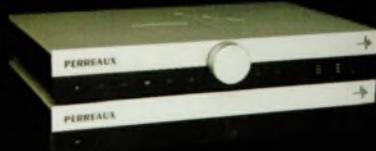


Ear this!

Philips' new Fidelio X1 flagship headphones

Perreaux DP32/100p

USB DAC preamplifier/power amplifier combo



QUE SERA, SERA

“Every particle of this speaker bespeaks the best of high-end.” Alan Sircom - Hi-fi +

“The most musical effortless loudspeaker we’ve heard in years.”

Jason Kennedy - Hi-Fi Choice The Collection

Long established as a range of high-performance loudspeakers worthy of the names of the famous luthiers of Cremona, Sonus faber’s phenomenal Guarneri, Amati and Stradivari redefined in their time the way a speaker matches its sonic presence to its aesthetics.

The Family has now matured with the latest generation starting with the monumental changes born with Guarneri evolution, and now **Amati Futura** looks as much to impending developments as does to an illustrious past.

Both the aesthetic and technical values of Sonus faber have sired this speaker, starting with a restyling that respects the lute-shaped form of the series, while refining it for even better performance.

But Sonus faber learns as much from its own efforts as it does the great woodworkers of yore: **Amati Futura** is one of the first models to exploit the Herculean R&D effort that was invested in the company’s monumental flagship model, ‘The Sonus faber’, and refined it even further with the ground breaking Aida.

Like its recently-introduced siblings, **Amati Futura** represents what is possible, while respecting what has mattered.



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BADGES EXPLAINED

OUR AWARDS



EDITOR'S CHOICE:
Awarded to those products that are judged to deliver reference-standard 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!



It can't have been that long ago when I last reviewed a group of budget floorstanding speakers – as I still have the mental scars to prove it. I can still recall the sinking feeling as I listened to one design after another, feeling sorry for anyone who ended up buying them...

How so? Well, it's relatively easy to engineer a good high end floorstander, but when the budget is cut to the bone, only the fittest designers survive! You're dealing with big boxes, which cost lots of money to make – and ship – and which are also prone to flexing more than a cheap tent at Glastonbury during a downpour. The result can be a chaotic bass, muddled midband and high frequencies to die of, not for!

What a nice surprise then, when I came to this month's collection. Much to my surprise, not one of the speakers – from Boston Acoustics, DALI, Mission, Monitor Audio, Q Acoustics and Tannoy – made a nasty noise. Quite the reverse, as the standards of the group were genuinely high. A new generation of cabinet and cone materials have given us a range of compact floorstanders that are decently open, smooth and clean sounding, with relatively few vices.

Of course, spending more money will still bring better sound – you'll hear greater clarity, insight and depth. But the point still stands that these big boxes will really let you enjoy the music, without distracting you by messing up things like tonality, timing and dynamics. And they all do this without costing a stupid amount of money. If that's not something to shout about in these straitened times, I don't know what is!

David Price Editor
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2
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from Adam Audio

3 5
NEW TENSOR Beta Mk 2
from Adam Audio

4
NEW TENSOR Alpha Mk 2
from Adam Audio



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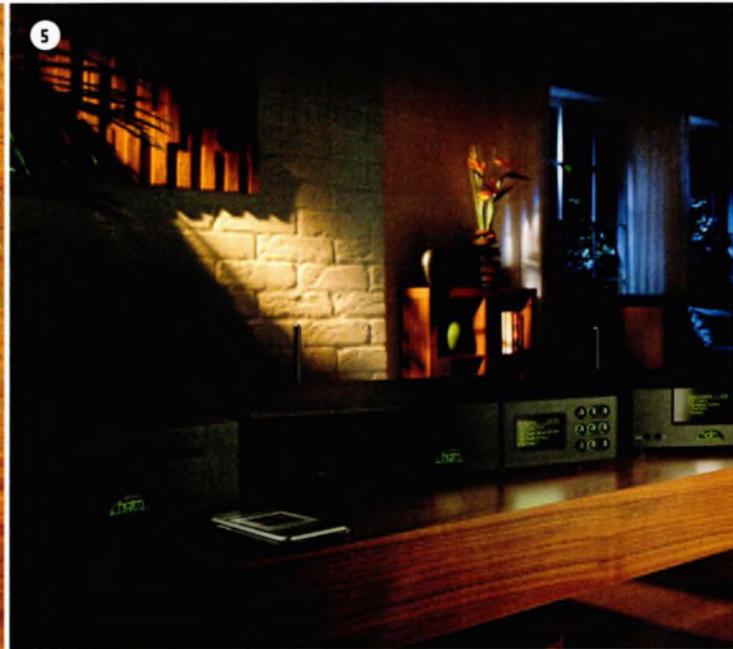
FOCAL

THE CHORD COMPANY

McIntosh
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naim
world class sound...



1 Utopia Reference series from Focal

2 Sarum Reference cables from The Chord Company

3 Full Product range from McIntosh

4 Full Product range from IsoTek

5 Full Product range from Naim



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“There’s a sense of timing and control that flatters the performance...”

Ed Selley: Denon DCD-720AE CD player/PMA-720AE amplifier p48

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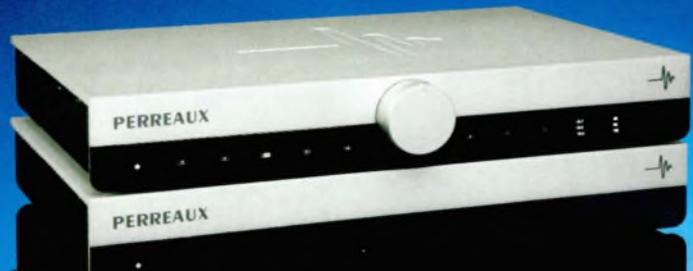
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Never miss an issue – turn to p38 for our latest subs offer

Audiofile

The latest industry news

Lite fantastic

Naim Audio's new UnitiLite all-in-one system caters for space-limited, streaming-curious CD owners, serious about sound. **David Price** takes it for a spin...

PRICE: £1,650-£1,895

AVAILABLE: NOW

CONTACT: 01722 426 600

WEB: NAIMAUDIO.COM

Naim Audio's Uniti range has grown in size once again, thanks to the addition of the new UnitiLite. The £1,650 one box music machine fits an interesting niche, as it combines an amplifier, streamer and CD player all in one.

At its launch at the Top Audio Show in Milan last month, Naim's Paul Stephenson explained that their market research had shown that many people are reticent to buy a streaming system because they don't want to abandon their Compact Disc collections at a stroke. The UnitiLite's build in tray-loading CD player means such potential purchasers have a crossover product that will let them retain their silver disc collection while getting them into streaming – at an affordable price. The original NaimUniti also offers such functionality, but at a premium.

The new UnitiLite comprises a CD player, MP3/iPod and USB memory stick playback, digital-to-analogue converter, 32-bit/192kHz network streaming and an integrated 50W amplifier in one slimline enclosure. The product can be connected to the Internet either via Ethernet or Wi-Fi, and is UPnP-enabled to stream audio stored on the home network and access Internet radio. There's also an optional FM/DAB module, which takes the total price up to £1,895.

First impressions of the new all-in-one system are of a neat design built to Naim's usual high standards – and one that offers a fine, and typically Naim, sound. Its small built-in screen makes it easier to use than some other rival designs which rely solely on remote controls and/or iDevice apps for displaying information on track name, volume, source selected, etc. – although the UnitiLite does of course offer remote functionality too, plus control via Naim's free-to-download n-Stream app from the iTunes store.

It plays a wide range of formats, including WAV, FLAC, Apple Lossless, AIFF, AAC, Windows-Media-formatted content, Ogg Vorbis and MP3 files from any suitable UPnP device or USB-connected storage device, with gapless playback available on all lossless file formats and most lossy formats. It also connects to iPods and plays out via their direct digital outputs, and there's a USB socket, too. There are five 24/192-capable digital inputs, and three analogue inputs.

Inside the box, Naim says much of the technology and/or circuit design comes from its higher priced streamers, rather than being an upsized version of what's in

the UnitiQute. This includes a high-quality Burr-Brown PCM 1793 DAC. Output power is claimed to be 50W RMS into 8 ohms, 75W into 4, and the UnitiLite is upgradeable with an external power amp. Vital statistics are 70x432x301mm (H x W x D), and 7.5kg.

For the record

JUST RECENTLY TUBE AMPLIFIERS HAVE SUDDENLY BECOME ALL THE RAGE, WITH A WIDE RANGE OF NEW NAMES SPRINGING UP TO CATER FOR THE DEMAND. But one company

that's certainly not new to the thermionic valve is Audio Research, which was producing high quality tube aspirated preamplifiers long before it became fashionable again.

It's something of a surprise then, that the marque has *not* had a valve phono stage in its product portfolio until now. To wit, the new LP1 is something of a departure for the company, in several ways.

First, it's a new size for the brand. The chassis is a compact 13" wide, by 8.6" deep, by 4.5" high. The front panel has the inset Audio Research logo with an engraved line completing the panel, but no handles. There are simply two switches for Power/Off and Mute/Operate. Also, the entire chassis is silver, as is the front panel – not a traditional look for ARC, then.

The LP1 has 47dB of gain, which is best suited to higher output (>1.0mV) moving coil cartridges, and moving magnets. It's actually a hybrid design utilising one 6H30 tube, special low noise J-FETs, a custom Audio Research designed power transformer (made in the USA), and multiple stages of regulation. The company says there is no overall feedback, and it is non-inverting. Inputs and outputs are single-ended.

As you might expect, the company says the sound is no less than "simply wonderful, with great transparency and a lovely tonal balance". Look out for a review in *Hi-Fi Choice* soon, to see how it stacks up. Audio Research says that full series production has only just begun, but it should be available by early October. The UK retail price has just been confirmed at £1,990 – for more information, point your web browser at www.absolutesounds.com.



Audio Research's brand new LP1 joins the swelling ranks of high end phono stages, this month...

First impressions are of a neat design, built to Naim's usual high standards, offering a fine sound...

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



“Ridiculously good in every
aspect of vinyl playback”
Diva IISP Michael Fremer, *Stereophile*, January 2011

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Hot stuff

Two high power, flagship tube amplifiers from Icon Audio

Icon Audio announces two new amplifiers – the MB845 MkIIIm monoblock and the Stereo 60P MkIIIm stereo power. Both include a built-in bias meter which is said to greatly simplify valve bias checking and adjustment, while the MB845 MkIIIm features separate loudspeaker taps for both four and eight ohms, allowing the amp to deliver a claimed 110W RMS into either load.

The Stereo 60P MkIIIm is a high-powered stereo amplifier designed, says Icon, to get the best performance from virtually any preamplifier whether it is valve, hybrid, transistor, transformer or passive. The Low Distortion Tertiary (LDT) output transformers and the KT120 valve combine to produce 80 watts per channel.

PRICE: MB845 MKIIIM £5,999.95 (PAIR), 60P MKIIIM £2,199.95 **AVAILABLE:** NOW **CONTACT:** 0116 244 0593 **WEB:** ICONAUDIO.COM



Four you

New CD player/DAC and amplifiers from Quad

Quad announces the launch of its new Platinum Series, including a CD player/DAC/preamp called the Platinum DMP and two power amplifiers – the Platinum Stereo and Platinum Mono.

The Platinum DMP (Digital Media Player) incorporates a CD transport constructed from diecast aluminium and ABS compound. Data is passed to twin Cirrus Logic 24-bit/192kHz Delta-Sigma D/A converters. In addition to CD, the DAC circuit can also handle audio data from external digital music sources, converting data of up to 24-bit/192kHz with, says Quad, minimum jitter and maximum accuracy.

There are six digital inputs (3x optical; 2x RCA; 1x USB) and four digital outputs (1x optical; 1x RCA; 1x BNC; 1x AES/EBU). Analogue outputs are provided in two forms: balanced XLR and single-ended RCA.

The Platinum Stereo is a stereo power amp that delivers 150W per channel into eight ohms, while the Platinum Mono is a monoblock design with a rating of 180W into eight ohms.

Both the Platinum Stereo and Platinum Mono sport connection terminals with a choice of balanced XLR and single-ended RCA inputs and rugged, gold-plated speaker terminals to accommodate single- or bi-wiring, according to the user's requirements.

Whether the Platinum DMP is partnered with a Platinum Stereo or a pair of Platinum Monos, the end result is reported to be a musical performance of beguiling power and finesse, brimming with dynamic contrast and subtle detail for an exceptionally realistic experience, no less!

The Platinum amps are claimed to be able to drive any loudspeaker the user chooses, while the Platinum DMP is said to treat external digital sources with the same exceptional level of fidelity as CDs that are placed within its drawer.

The company says that the range will be further expanded with the arrival of a separate preamplifier, the Platinum Pre, a little later this year.



PRICES: £2,499.95 EACH **AVAILABLE:** NOW **CONTACT:** 01480 447700 **WEB:** QUAD-HIFI.CO.UK

All white

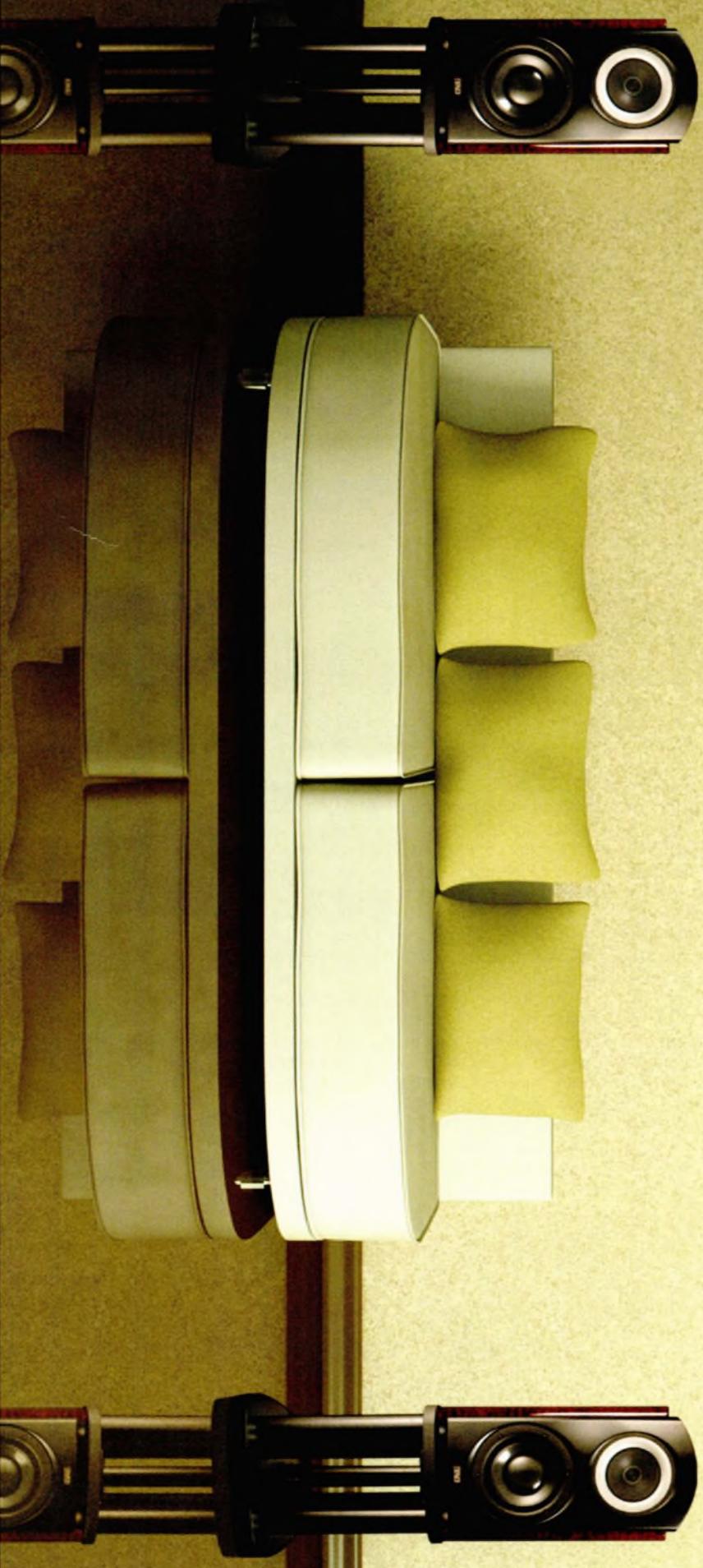
EISA AWARD WINNER, Focal's recently launched white Spirit One headphone, is claimed to be swiftly gaining traction in a growing market, and one where fashion is taking its toll on quality and performance, says the company.

The Spirit One is a lightweight closed-back circumaural headphone designed to keep out most external sounds and to be comfortable for the extended times they might be worn – such as on a transatlantic flight for example.

The lightweight (225g) Spirit One is constructed around a headband machined from aircraft grade aluminium. The drive units use neodymium magnets for maximum flux density and very lightweight, but rigid, 40mm mylar/titanium diaphragms. The connecting cord includes an aluminium iPhone, iPad and iPod remote control able to manage all essential functions including calls, volume, play/pause, previous or next track. focal.com



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Record maker

Four new wireless speaker products debut from TDK Life on Record

TDK Life on Record's four new wireless speaker products integrate Bluetooth technology to deliver a truly wireless audio experience, it's claimed. Now, audiophiles are free to utilise their mobile devices in any way they choose and still easily play music – no docking required.

The new line features a Wireless Weatherproof Speaker, (£199.99), Wireless Boombox (£279.99), Wireless Sound Cube (£299.99) and Wireless Charging Speaker (£tbc). All four offer an easy connection with Bluetooth A2DP enabled mobile devices in a wide variety of locations and settings. When used with a Bluetooth AAC enabled device, the products utilise AAC codec technology to deliver, says TDK, superior quality and near-lossless audio.

"With the new audio line, we've continued to deliver on hi-fi audio quality and connectivity, while making it as easy as possible for music lovers to listen to their favourite tracks," said Imation's Toshi Hokari, Executive Director, Global Product Management, Audio & Video Information.

PRICE: £199.99-£299.99 **AVAILABLE:** NOW **WEB:** TDKPERFORMANCE.COM



Monster mash

The classic cable brand moves into active loudspeakers

Monster's new ClarityHD Model One features a built-in digital amplifier and iPod dock. This all-in-one speaker system delivers, says Monster, an impressive level of high-definition sound for a modestly priced bookshelf-sized loudspeaker.

Available in gloss white and black, the ClarityHD includes a 6.5 inch bass driver with 4-layer voice coils for extended low end response. In addition to the iPod

dock, inputs include a mini-jack for smart phones, MP3 players and computers; a 1/4 inch TRS input for recording and DJ applications; RCA inputs for any audio or video device and a StreamCast port for future technologies, such as the optional Bluetooth module.

Monster's StreamCast HD Transmitter and Receiver kit allows users to wirelessly stream high-definition music throughout the home.

PRICE: £649.95 **AVAILABLE:** NOW **WEB:** MONSTERPRODUCTS.COM



Desk job

A compact desktop speaker system from sonoro audio

The new troy is a new compact desktop speaker system with a universal charger for smartphones, tablet PCs and mobile music devices, from German-based sonoro audio. It boasts two USB sockets for charging different gadgets, while the colour-coded top cover holds your device neatly in place, hiding away all of the cables, the company says. Audio is supplied from any mobile music device via the



auxiliary input using the provided stereo 3.5mm cable. Digital Signal Processing (DSP) gives troy a sound that belies its compact size, claims sonoro audio.

Weighing just 2 kg, troy is ideal around the home or in the office, and to suit any design environment it comes in a choice of four different felt finishes, namely Black, Green, Red or Grey.

PRICE: £149 **AVAILABLE:** NOW **CONTACT:** 0221 16 79 29 0 **WEB:** SONORO-AUDIO.COM

Yam, aha

The wireless world welcomes Yamaha's latest releases

A range of new products from Yamaha kicks off with a new CD player/streamer. The CDN-500 (£499.95) can stream over a DLNA network and access thousands of radio stations found on vTuner. Its USB functionality will also play back many audio formats including FLAC 24-bit/192kHz and Apple Lossless.

App controllable, it also features Yamaha's proprietary MusicPlay technology, which allows you to send music from your device using the App to your CDN-500.

There are five new additions to Yamaha's desktop audio range, including the TSX132 system (£349.95) which is compatible with CD, iPod, iPhone and iPad (via USB connection). You can listen to FM radio, DAB, DAB+, connect a USB stick with music on or connect an external music player. The TSX-B232 (£399.95) has all of the above, plus the benefit of Bluetooth wireless technology via smart phone, tablet, PC, Mac or netbook.

The MCR-042 (£299.95) is a shelf-sized component system with detachable speakers. Like the TSX product it's also compatible with CDs, iPods, iPhone and iPad and similarly is also available in a Bluetooth version, the MCR-B142 (£349.95).

Both the TSX and MCR series can be used with the new PDX-B11 portable speaker (£119.95). This has the added benefit of Bluetooth wireless technology, and is either battery or AC powered.

PRICE: £119.95-£499.95

AVAILABLE: NOW

CONTACT: 01908 368872

WEB: UK.YAMAHA.COM



Pure pleasure

PURE announces that its revolutionary touchscreen music streaming system, Sensia 200D Connect (£249.99), now comes in three new colours. In addition to black and white, it's also available in Mango, Burnt Orange and Lime Green.

Using Pure Stream technology, Android and iOS users can sit back and wirelessly play music and radio in great quality audio on their Sensia, or listen to worldwide Internet radio, digital radio and FM, hundreds of thousands of on-demand programmes and podcasts, and an exclusive library of evocative ambient sounds.

Other features include one touch and timed recording of live Internet or digital radio, 30W RMS digital sound via DSP-tuned Class-D amplifiers and custom designed full-range speakers. The 5.7inch colour touchscreen utilises smooth scrolling lists,

fast keyboard entry and responsive search facilities. There's an input for an iPod/MP3 player; two fully featured alarms; countdown timer; sleep timer and a headphone socket. Add the optional rechargeable Pure F1 battery pack to listen to Internet content anywhere within range of the Wi-Fi network or to digital and FM radio when further afield. pure.com



NEWS IN BRIEF

• **CHORD ELECTRONICS LAUNCHES TWO NEW HIGH-PERFORMANCE SUPPORTS.** The new Chordette Coupé (sleek and cut-down) Carry system (£420) has been re-engineered to maintain quality yet dramatically reduce the cost to the consumer, the company says. In the new Coupé Carry, the 'side ribs' of the existing Carry system have been replaced with a simpler and more elegant solution, based around a very high-quality Velcro system. The Coupé Carry is both secure and tough, and its one-size configuration is, says Chord, ready to house up to four units, providing elegant and easy storage whether at home or on the move.

The design changes bring the cost of the Coupé Carry system down from £1,590 for a four-unit design in the current Carry Case version, to just £420.

The new Choral Modular stand (£1,600) has been completely redesigned by Chord's engineering team to offer, what it refers to as a more elegant, more flexible and better-sounding solution to housing the Choral electronics. The new modular approach allows consumers to obtain a purpose-built support that offers the potential to expand should new Choral products be added at a future date.

Choral Modular is also, says Chord, a fantastic-sounding support, purpose-engineered to the highest standards and carefully machined from solid aircraft-grade aluminium. Available in silver and black, the Choral Modular stand also has two base options: a 'shelf' base designed for use on bookshelves, sideboards and desktops, etc., plus a 'stand' base with four Chord Integra 'legs' to enable perfect coupling to Chord's larger, standard-size units.

chordelectronics.com



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"Clarity is excellent, with a wealth of inner detail being presented to the ear"
HiFi Choice, review of M25, Oct. 2012 edition



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Stratford Upon Avon - Tel: 01789 414533

Sutton Coldfield - Tel: 0121 354 2311

Kiwi fruits



Channa Vithana samples the finely crafted, New Zealand-built Perreaux Audiant pre-power amplifier combination...

Dunedin-based Perreaux has been operating since the nineteen seventies, but has never really established a beachhead into the British hi-fi market, despite a number of distinguished products. The new DP32 preamplifier and 100p power amplifier might change this, as the combo represents an interesting and modern take on the traditional amplifier upgrade path.

The twist is Perreaux's inclusion of a sophisticated 32-bit DSS Sabre 9018 DAC inside the DP32 preamplifier –

similar to the device fitted to the highly regarded AudioLab M-DAC, but in the Perreaux guise the asynchronous USB input accepts 24-bit/192kHz signals, whereas the AudioLab currently only does 24/96kHz via USB. Effectively then, your four thousand (or so) pounds buys you a high quality DAC, preamplifier and power amplifier.

For a small company that does most work in-house, the design and build of the DP32 and 100p is very good indeed. The casework is solidly constructed with a superbly CNC machined and anodised finished

DETAILS

PRODUCT: Perreaux Audiant DP32
ORIGIN: New Zealand
TYPE: DAC/preamplifier
WEIGHT: 8kg
DIMENSIONS: (WxHxD) DP32 431x67x305mm
FEATURES:

- 1x balanced XLR and 2 x unbalanced RCA analogue inputs
- 1x line out RCA analogue recording output
- 1x switchable fixed or variable analogue XLR or RCA preamp output
- 2x optical digital inputs
- 2x coaxial digital inputs
- 1x AES/EBU digital input
- 1x 24-bit/192kHz asynchronous USB
- DAC sampling frequencies: 44.1kHz, 88.2kHz, 176.4kHz, 48kHz, 96kHz & 192kHz

aluminium top plate that wraps down to form the front fascia. The design work is most elegant – I particularly like the logo, which is finely machined on the top part of the aluminium casework not just the way it is crafted but also because it resembles a single clear pulse of an electrocardiogram – the heartbeat analogy is rather fitting for the music, I think...

Perreaux uses a touch-sensitive control system on these Audiant components, and in operation it works rather nicely and includes legends for the DAC sampling rates, so that DP32 will reveal exactly which sampling frequency is being processed. In operation, when you select an input it glows brighter – personally I found this quite intuitive to use, but those whose eyesight isn't good might miss a clear screen display.

The preamplifier's volume control is passive, and all source inputs are buffered to avoid sonically deleterious cross-contamination, says Perreaux. Connectivity is excellent, with optical, electrical (RCA), AES/EBU and USB digital inputs alongside two analogue inputs (one set in balanced XLR or



RCA) and RCA/XLR outputs.

Usefully, the DP32 can also be used as a standalone DAC with a fixed output switchable at the rear. In short, it's got everything you'd expect from a product such as this. When you figure in the cost of a good modern digital to analogue convertor, the DP32's price suddenly starts to look considerably better value for money.

At only 67mm high, the slimline design of both amplifiers is a winner for me, and sets Perreaux out from the crowd. This is important because in hi-fi showrooms, the Perreauxs will stand out – not for being unnecessarily flashy or blingy, but because they look and feel different. There are still way too many boxy, regulation-sized hi-fi separates, powder-coated or sprayed in standard issue black. Yet many manufacturers wonder why people aren't buying them!

The anodising used on the Perreaux casework is a much better way of finishing aluminium, because it is done through a special process which bonds to the metal rather than simply being a layer coated over the surface.

DETAILS

PRODUCT:
Perreaux Audiant
100p

ORIGIN:
New Zealand

TYPE:
power amplifier

WEIGHT: 12kg

DIMENSIONS:
(WxHxD)
431x67x286mm

FEATURES:

- 100W(8ohm)/
145W(4ohm)
(claimed)

- S/N Ratio: 120dB
(claimed)

- switchable
balanced XLR and
unbalanced RCA
phono socket inputs

DISTRIBUTOR:
Audio Emotion Ltd.

TELEPHONE:
+44(0) 1333 425 999

WEBSITE:
audioemotion.co.uk

This method is a longer lasting way of finishing bare metal, and in natural daylight looks superior to standard paint finishes, due to the very fine reflectivity of the anodised finish which subtly glistens!

The slimline design sets Perreaux out from the crowd, the amplifiers look and feel different...

The 100p is just how I like power amplifiers – simple and with the minimum of adornment externally. Round the back it sports a set of XLR or RCA sockets, and a single set of loudspeaker binding posts. It's fairly heavy at 12kg, especially considering its compact size, and claims an output of 100W (8ohm) and 145W (4ohm) using Perreaux's preferred MOSFET transistor amplifier modules. My only disappointment was the supplied remote controller, which doesn't match the quality of the main units' casework, feeling somewhat plasticky and cheap by comparison.

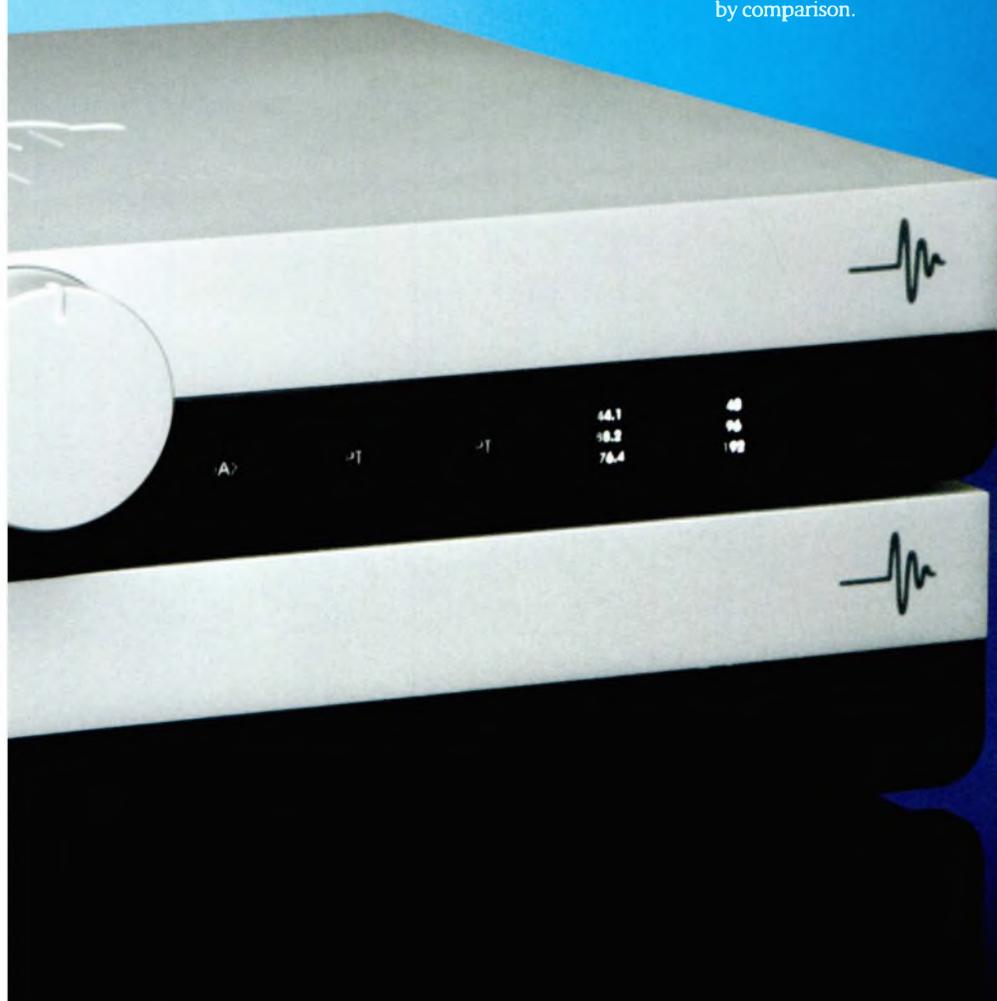
Sound quality

What's immediately striking about this Perreaux combination is the innate sense of control and precision. There's also a pervading, lilting sweetness to the sound that has a 'rightness' to it – music is always enjoyably listenable, and neither harsh like some transistor amplifiers nor saccharine like some valve designs. To me, this suggests a very well finessed solid-state design, bringing all the benefits of transistor technology (precision, power, neutrality) with none of the typical pitfalls (sterile sound, poor tonal colouring, forward midband). It's one of those famous combinations that let's you get on with enjoying the music, which is precisely what I did!

Starting with CD as a source, via my Densen B420, John Lee Hooker's sanguine title track from *The Healer* (with the fabulous Carlos Santana and his band accompanying) was expressed with a dynamic and tuneful musicality. I loved the way the very fast guitar phrasing of Santana intertwined with Hooker's richly intoned vocals. Percussion was also well placed within the music, being an integral part of how *The Healer* shifts in mood and harmony. With the duet *I'm in the Mood*, where Hooker and Bonnie Raitt trade their distinctive vocals and guitar riffs so beautifully, the music opened out superbly. I could easily concentrate on the quality of Raitt's playing, which created the sultry, late night feel of the song. It can sound a little reedy and insubstantial on lesser or compressed systems, but here it was wonderfully expressed with full-bodied timbre, and I could really appreciate the way she phrased the sequential layers of the slide parts.

Bob Marley's *Buffalo Soldier* on 24-bit/96kHz FLAC from Linn Records via my MacBook Pro connected with a Chord Co. SilverPlus USB cable was set to a very quiet and open backdrop indeed. Bass was both deep and tuneful, particularly with the percussive drum parts. Marley's vocals on this lyrically reflective yet rhythmically upbeat song were very good, and as a whole the music was lively and the melodic reggae grooves felt convincingly powerful and intricate at the same time.

I was able to compare CD and 24/192 FLAC versions of William Carter's collection of Fernando Sor's *Early Works* and Richard Tunncliffe's *Bach Cello Suites*, both from Linn Records. Here I preferred the analogue CD versions from my



Q&A

CHANNNA WITHANA SPOKE TO MARTIN VAN ROOYEN, MD OF PERREAUX...



CV: What power supply type and components is used by the DP32 and 100p, and why?

MVR: Our topologies are always linear. Consisting of custom designed and manufactured toroidal transformer, full bridge wave rectifier and high-quality smoothing capacitors across the DC output. Over the years we have carefully investigated the alternatives, but have always found them lacking. If you consider our product range and the applications that they are used for, there can be no justification for using alternative topologies. It is not as though we require a kilowatt of power. Quality over quantity is the more desirable attribute. A well-designed linear supply will remain the gold standard against which other topologies will forever be measured.

What type of passive volume control components are used in the DP32 and why?

There's a high-quality quad gang ALPS potentiometer, in conjunction with fully buffered inputs and outputs in the signal path. This in turn provides constant input and source impedances, regardless of the volume dial setting. Attenuation range is from -110dB to 0dB. The DP32 provides superior detail, dynamics and transparency emerging from a stark black background.

Out of the coaxial, optical and AES/EBU, which is the best sounding digital input into the DP32?

Optical is good, giving true electrical isolation, however the signal needs to pass through two conversion stages. Digital to optical at one end and then optical to digital at the other end. Better is coaxial using RCA interconnects. RCA, while not 75 ohm terminations, are popular, hence why they are used on the DP32. Better again is coaxial using true BNC connectors, because they are designed to present a true 75 Ohm impedance. Better again is AES/EBU – consider this to be the digital equivalent of a balanced interconnect. But best of all is USB, provided the computer is set up optimally.

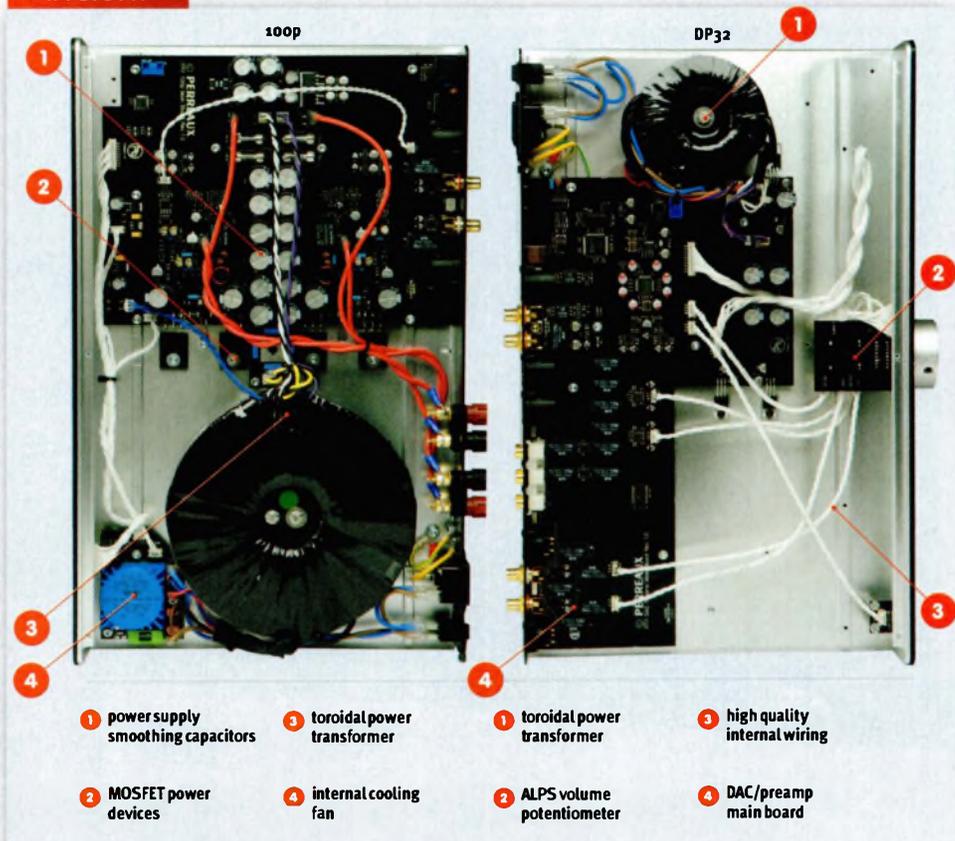
Densen disc spinner marginally, as they were harmonically richer when communicating the texture, phrasing and tone of the classical guitar on the William Carter recording, and the cello from the Bach Suite. However, the hi-res 24/192 versions via my MacBook Pro weren't convincingly outperformed, and although harmonically slightly less vibrant, were equal in timing and expressiveness. Indeed in either analogue CD or 24/192 FLAC I found this pre-power amplifier combination timed very well with classical music. It was expressive and emotive, allowing the identity of the music to remain intact along, yet it still imparted the underlying sweetness and solidity of the music.

Using an Onkyo C-733, the DP32's digital optical input performed superbly, with Duran Duran's *Ordinary World* being clearer and more dimensional through the DP32's DAC than from analogue. The guitar, strings and vocals lost a mechanical edge and were sweet and free

flowing. *Ordinary World* through the Onkyo's optical output was rather stunning actually, as it became the lilting, reflective piece it was always meant to be – just how I like it, rather than the unsubstantial piece it can sometimes sound like. The plaintive, emotional delivery from Simon Le Bon's vocals were better carried, and I could really hear the song's sense of loss and longing for something surer, as intoned in the lyrics. Beyond this, there was a greater sense of spatiality and linearity to the way the string sounds emphasised the shift in harmony. Here, in particular, the whole song felt 'out-of-box', as if the music was free of the confines of the hi-fi – great stuff!

I then tried the hard rock *Choice of Weapon* by The Cult, My Bloody Valentine's mercurial *Loveless* and the modern pop of *MDNA* by Madonna. Here the Perreaux combo was able to unravel the dense layers of guitar from the vocals in both the Cult and My Bloody Valentine

IN SIGHT



- 1 power supply smoothing capacitors
- 2 MOSFET power devices
- 3 toroidal power transformer
- 4 internal cooling fan
- 1 toroidal power transformer
- 2 ALPS volume potentiometer
- 3 high quality internal wiring
- 4 DAC/preamp main board

ON TEST

Perreaux's 'buffered passive' volume control is just that, for the analogue stage of the DP32 preamp offers unity gain – to achieve the rated 12V maximum output you'll need 12V at the input. Fortunately the 100p power amp requires just 1V (balanced in) for its rated 100W/8ohm output, so the nominal 2V available from today's digital sources will be sufficient for the DP32/100p combo. The DP32's DAC stage delivers a maximum 3.9V (re. 0dBfs) with the low 0.0001%/1kHz distortion (rising to 0.001% at

20kHz) that we've come to expect from this Sabre chip. Distortion through the analogue stage is lower still at ~0.00005%/1kHz (yes, four zeros!) and 0.0003%/20kHz. The DAC's A-wtd S/N ratio is very wide at 115dB (97dB in analogue mode, re. 0dBV) and the frequency response flat to -0.1dB/20kHz (48kHz digital in), -0.6dB/45kHz (96kHz) and -0.9dB/90kHz (192kHz). To cap off this fabulous performance, jitter is a vanishingly low 6-8psec with 24-bit inputs at 48/96kHz.

The 100p also bests its specification with a full 2x110W/8ohm and 2x165W/4ohm output rising to 135W, 240W, 370W and 350W into 8, 4, 2 and 1ohm loads under dynamic conditions. Distortion holds to 0.001% from 1W-100W through the midrange, rising to 0.018% at 20kHz while the response is flat to -0.2dB/10Hz and -1.5dB/100kHz. The 100p's output impedance is a usefully low 0.025ohm, the A-wtd S/N very wide at 95dB (re. 0dBW) and crosstalk less than -75dB from 20Hz-20kHz. **PM**

CONNECTIONS



- 1 RCA preamp output
- 2 XLR preamp output
- 3 RCA line input
- 4 XLR line input
- 5 coaxial digital input
- 6 USB digital input
- 7 RCA line input
- 8 loudspeaker output

albums very well, revealing the harmonics and expressive phrasing from both superbly. Vocals by The Cult's Ian Astbury and MBV's Bilinda Butcher were both really natural – the former's roaring, highly charged and textured blues-rock strains were finely yet solidly wrought, as were the ephemerally contrasting and gossamer tones of the latter.

If there's a pulsing rhythm (such as that found in Bob Marley's magnificent canon), the Perreuxs really want to boogie. Indeed, with Madonna's *MDNA* they were excellent, displaying superb timing from those exquisite electronic beats,

Together, the Perreux pre-power amplifier combination was able to give a totally immersive experience of a seminal piece of modern music...

and wonderful vocals working well together to form some cohesive and very enjoyable dance music. I found this somewhat surprising as I was expecting Madonna's electro-pop beats to be upfront and blatantly compressed sounding, but the Perreuxs handled the music with aplomb and just like the Dreadlocked Rasta's wonderfully expressive *Buffalo Soldier* before, here was a very synergistic match here I could forget about modern production and sound quality foibles for a while and immerse myself in the fluid and electrifying dance beats and melodies of *Girl Gone Wild* and *Gang Bang*. Both of these are rather better examples of The Material Girl's modern output, and the Perreux pre-power combination ably



CYRUS'S DAC XP+ PREAMPLIFIER at about £2,500 features digital inputs up to 24/192kHz and balanced outputs. Matched with two 8 Power amplifiers in mono mode, the price comes to just under £2,000 which is similar to the cost of the 100p. The 8 Power amplifiers, like the DAC XP+, can be upgraded with PSX-R power supplies at extra cost that also ups the power output from 60W to 110W (8ohms).

However, you have to go higher in the Cyrus range with the Mono X 200 at approximately £1,700 each to attain balanced XLR connection. Both Cyrus options will offer high-quality sound and be worthy of audition against the Perreuxs and while nicely crafted don't match the beautiful build quality of the DP32 or 100P.

Naim's new NAC-N172 XS streaming preamp costs about £1,650. This can have an additional FM/DAB tuner module fitted and offers streaming capability that the DP32 cannot. You can also connect it to a NAP 155 XS power amplifier (60W £1,150) or NAP 200 (70W £1,750) for example, both cheaper than the 100P. The Naim pre-power amp combo is also superbly built.

communicated this. It simply took it in its stride, without sounding in any way over analytical or boring.

Finally, a brief spell of electronica, to really test their mettle. Kraftwerk's *Tour de France Soundtracks* is one of the German band's finest moments (amongst a great many others, it must be said), and is an excellent test of any amplifier's ability to deliver large tracts of power, in a finessed way. This isn't your average modern electronic morass of limiting and compression. Instead, the sparse music is delicate and beguiling, yet very powerful. The Perreuxs were able to show it up as precisely this; there was no serious sense of compression, or of loss of control from the 100p power amp, while the DP32 preamplifier came over as consummately smooth and subtle. Together, they were able to give a wonderfully immersive experience of a seminal piece of modern music.

Our lab tests showed that this combination measures superbly, and gives very strong power delivery across a wide range of loads. But in absolute terms, the 100p power amp still misses a smidgen of bass grip, especially on dynamic peaks. However, only those in seriously large rooms with particularly inefficient loudspeakers should be troubled by this. Also, valve aficionados would never accuse it of sounding 'transistory' in the way that some rivals can, but it still lacks that last *nth* degree of liquidity across the midband, and a sense of seamless, boundless soundstaging which some tube amplifiers can conjure up. Overall though, it does exceptionally well as an all rounder.

Conclusion

These new Perreux electronics offer a heady combination of great sound, super build and fine ergonomics.

Vinyl fans can be safe in the knowledge that the analogue side of the DP32 preamplifier is extremely accomplished, while digital disciples can enjoy its excellent built-in DAC, which runs at up to 24/192 resolution very convincingly. Indeed, as our lab tests show, this pre-power pairing is a superbly engineered combo.

Factor in real, forensic attention to detail over the way the units are built and finished, plus the efforts paid to come up with something interesting in terms of ergonomics, and you have a brilliant package. ●

Hi-Fi Choice

OUR VERDICT - DP32

- SOUND QUALITY** ★★★★★ **LIKE:** Superbsonics; build; compactness and connectivity
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Display may not suit all tastes or needs. Remote feels cheap
- BUILD QUALITY** ★★★★★ **WE SAY:** Highly versatile preamplifier that should surprise and delight any purchaser
- FEATURES** ★★★★★

OVERALL



Hi-Fi Choice

OUR VERDICT - 100P

- SOUND QUALITY** ★★★★★ **LIKE:** Powerful yet clean and open sound; compact, minimalist design, compactness
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Nothing at the price...
- BUILD QUALITY** ★★★★★ **WE SAY:** Excellent high end power amplifier that matches the DP32 DAC/preamp perfectly
- FEATURES** ★★★★★

OVERALL



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

This month's loudspeaker group test is backed up by a comprehensive set of lab tests, explains **Keith Howard**...

GROUP TESTS

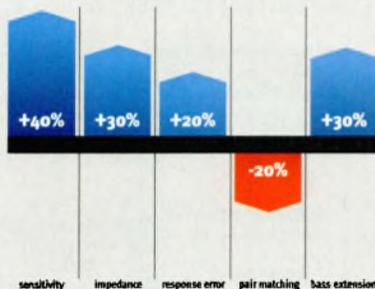
IN THE 1980S, you not only needed a bunch of expensive equipment to measure loudspeakers, you also needed a large anechoic chamber with thick sound absorbers covering the walls to remove reflections. That all changed when time-gated measurement techniques were introduced, allowing pseudo-anechoic measurements to be made in a normal room using a computer. Since then, the software has become so cheap that almost anyone, with an inexpensive measurement microphone and soundcard, can afford to measure speakers for themselves.

Still, to achieve the most accurate results you do need a costly, highly specified measurement microphone, and to analyse and interpret the results it helps to be able to write your own post-processing software – which is exactly what we do at *Hi-Fi Choice*!

The measurement microphone comprises a GRAS 40BE capsule, coupled with the same company's 26CB preamplifier and 12AL power supply. Together these achieve an extraordinary frequency response, much wider than that of most measurement microphones, specified as 4Hz-100kHz, 3dB. They feed a custom preamplifier built around the ultra-low distortion, ultra-low noise AD797 op-amp, and thereafter a carefully calibrated M-Audio Audiophile 192 soundcard.

ARTA software measures frequency responses using a periodic pink noise test signal, with dual-channel measurement removing the effects of the driving amplifier. An average of 10 consecutive measurements reduces any influence of environmental noise. LIMP software is used to measure impedance modulus and phase, via a connector box containing a high-precision series resistance.

RESULTS AT A GLANCE



SENSITIVITY

A speaker's sensitivity determines how loud the music is at a given volume control setting. We measure the sound pressure level achieved at a distance of 1m on axis for a pink noise input of 2.83Vrms over the frequency range 250Hz-20kHz, averaged for the review pair.

IMPEDANCE

A speaker's impedance determines how easy it is for an amplifier to drive it – high impedance is easier, low impedance harder. We quantify this by measuring the minimum EPDR (equivalent peak dissipation resistance) – the load resistance that would cause the same peak power dissipation in a Class B amplifier's output stage as the speaker does, over the frequency range 20Hz-20kHz.

RESPONSE ERROR

To deliver a neutral tonal balance and low coloration, a speaker must give an almost flat sound pressure response versus frequency on the listening axis.

We measure the difference between the highest and lowest output sound pressure level, in decibels, over the frequency range 250Hz-20kHz, using tenth-octave response smoothing.

PAIR MATCHING

In order to provide a stable stereo image and consistent tonal balance from both channels, a stereo pair of loudspeakers should have minimal disparity between their frequency responses. We measure the largest difference between the responses of the review pair, in decibels, over the frequency range 250Hz-20kHz, using tenth-octave response smoothing.



Measurement computer runs ARTA software for frequency response testing and LIMP software for impedance testing, plus custom-written code for post-processing of the results

BASS EXTENSION

Few speakers maintain their output down to the lowest audible frequency (nominally 20Hz), and bass extension has usually to be traded off against sensitivity and cabinet size. We measure bass extension using the near-field technique and then apply diffraction correction using the KHf tool in LspCAD. The quoted frequency is that at which the response has fallen by 6dB ref 200Hz.

REFERENCE SYSTEM

Compact Disc player:

- Cyrus CD 8 SEz

integrated amplifier:

- Musical Fidelity AMS35i

loudspeaker cable:

- Tellurium Q Black

TEST MUSIC

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listening Group test

FLOORSTANDERS £429.90-£499.99

Power towers

Producing deep bass in a relatively small space, you'd think floorstanders were the answer to every speaker buyer's dreams, but are they? **David Price** decides...

IN THE NINETEEN SEVENTIES, YOU'D FIND LARGE LOUDSPEAKERS DUMPED ON THE FLOOR.

In the eighties, small 'bookshelf' designs were in vogue, sitting on spindly metal stands. By the nineteen nineties however, the fashion had changed again and a new breed of box was born – the floorstander. Arguably, it was Mission's long-lost 753 that started the trend – a tall, thin, 'tower' design with a brace of mid/bass drive units. Today, it looks utterly anodyne, but back then it seemed the shape of things to come...

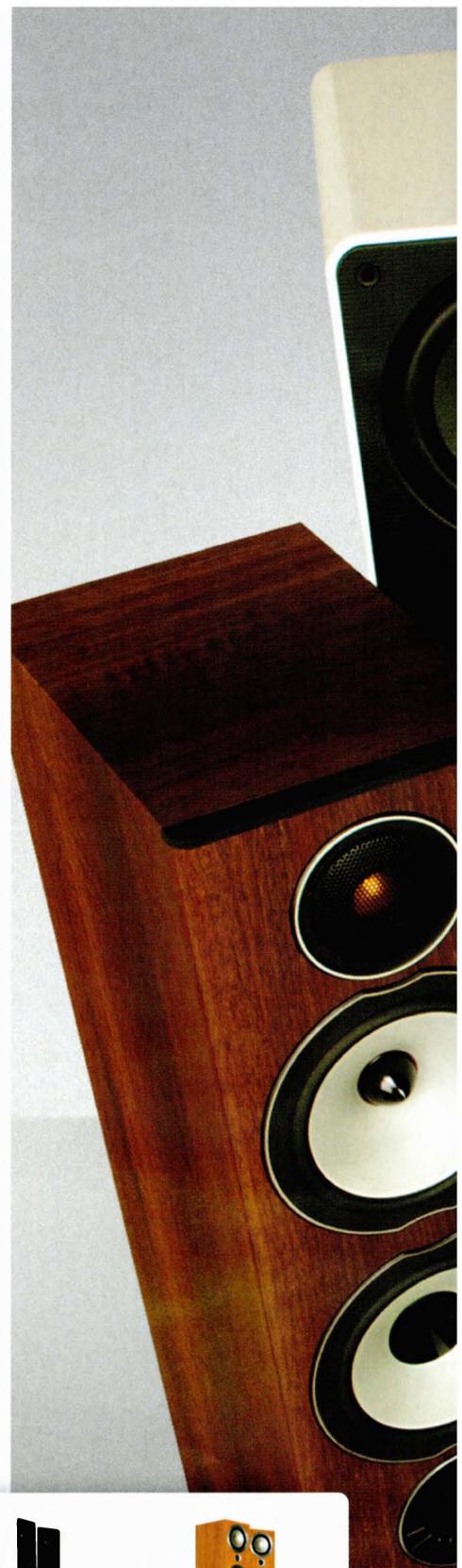
Ten years on, and perhaps the breed has lost its allure. True, you do get more bass from a floorstander with the same footprint as its standmount cousin, but people have twigged that the former often sounds *different*, rather than better. Those big cabinets, sometimes a metre or more high, are more prone to bending and/or vibrating than a standmounter made with the same materials. Put simply, a small box is much easier to make rigid, and to damp.

Lotus's Colin Chapman used to ask, why make a car big and powerful when you can get the same performance from something small and light...

There's also room-matching to consider. Even in my largish listening room, big floorstanders can deliver enough bass to get the doors rattling on their hinges – standmounters are often far better real world speaker solutions.

Recent advances in cabinet bracing and driver technology have pushed things forward

But all is *not* lost for the floorstander. Recent advances in cabinet bracing and drive unit technology have really pushed things forward, and as I found out during my listening, the results are rather encouraging. These budget standmounters are much better than the last crop I tested, several years back. Read on to see how they did...



ON TEST



Boston Acoustics A250 £449.90 p25

Not the most famous speaker brand here in the UK, but the company has been around for a long while and is currently pushing hard to make a name for itself with the mid-price M series. This budget A series still looks plush, and sounds it, too – many will be surprised.



DALI Zensor 5 £499.95 p27

One of Denmark's most well respected loudspeaker names, DALI should always be on your audition list. The new Zensor 5 is – like the Boston – a very compact design relative to the QAcoustics and Mission behemoths, but doesn't seem too bothered, all the same!



Mission MX-4 £499.95 p29

There was a time when Mission ruled the British loudspeaker market, but the company faded off the radar slightly and has just come back under new ownership. The big MX-4 is a newish design, aimed at 'heartland' Mission buyers seeking a big, bouncy sound...



Monitor Audio BX5 £499.90 p31

The largest floorstander in the company's budget range, the elegantly proportioned BX5 nevertheless manages to look luxurious, with serious attention to detail shown across all aspects of its design. Still, it faces tough competition; how does it fare?



QAcoustics £494.95 p33

Larger even than the monster Missions, the mighty Qs don't feel built down to a price. Our samples came finished in fancy piano gloss lacquer, but the 2050s can be bought even cheaper in the cooking black vinyl wrap finish. Lots of speaker for the money, then.



Tannoy Mercury v4 £429.90 p35

As hi-fi brands go, this one is unique, being as synonymous with speakers as Hoover is with vacuum cleaners. This is the company's cheapest floorstander, so unsurprisingly lacks Tannoy's trademark Dual Concentric drivers. But it still sounds seriously good.





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Boston Acoustics

A250 **£449.90**

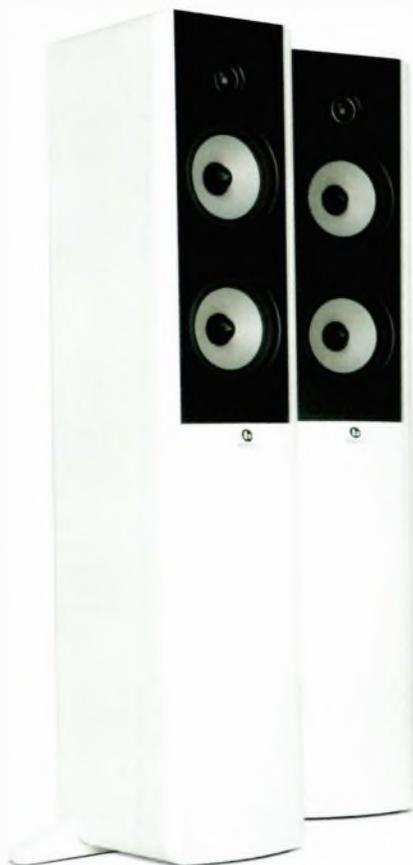
Not the UK's biggest speaker brand, but this company proves it has much to offer...

DETAILS

ORIGIN:
US/China
SIZE:
319x891x225mm
WEIGHT:
13.3kg
FEATURES:
 • 25mm tweeter
 • 2x133mm DCD mid/bass units
 • quoted amplifier power: 15-175W
DISTRIBUTOR:
D&M UK
TELEPHONE:
02990 279830
WEBSITE:
bostona.eu

From the company's entry-level range comes this two-way floorstander complete with twin 133mm DCD (ceramic/glass fibre polymer coned) drivers and a 25mm Kortec soft dome tweeter. Crossover frequency is at 2.5kHz, Boston says. It features extensive internal bracing, and feels surprisingly solid considering its diminutive dimensions. Overall finish is very good, with a very attractive white gloss lacquer.

The Bostons feature an interesting way of supporting themselves, with two rear spiked pillar feet pushing out from behind the cabinet. This gives a more secure footing than if the speakers simply had spikes underneath; it's an issue for small footprint column speakers, which can topple easily if they get a whack from a child, for example.



Sound quality

A surprisingly smooth and refined little loudspeaker. Intense's *Positive Notions* – a crunching slab of nineties drum and bass sounded open, even and decently musical, with an easy and tuneful bass for floorstanders so small. The A250s made a real effort to communicate what notes the bass synth was playing, rather than just alert you to its presence.

Midband is best described as 'pleasant' – not particularly transparent, but there was enough going on to pull me into the music. It integrated very well with the low frequencies, and I found that – despite the relative lack of bite – percussion still bounced along rhythmically. Imaging was very good indeed, the speakers disappearing into my largish listening room with relatively little fuss over placement.

High frequencies were decent but not exceptional. The absence of squawking on the track's saxophone work showed an innate smoothness, but hi-hats lacked any sort of authentic metallic bite, while there was a lack of atmosphere to the concert hall in Bach's *Brandenburg Concerto No.5* – high frequencies seemed curtailed. This also led Caravan's *Nine Feet Underground* to sound a little sedate; normally the track (via the so-so CD remaster) lunges out at the listener, but here it lost some of its urgency.

Yet despite the generally warm tonal balance, the A250 was never less than musically convincing – the music's rhythm seemed to lollop along, in a measured but highly enjoyable way. Indeed, I loved how the Bostons didn't force themselves on either the music or the listener, and just got on with having some fun.

The clever thing about these speakers is that they don't bite off more than they can chew. They're never invasive or uncouth, preferring simply to give a smooth, creamy view of the music. Ultimately, they sit on dynamic transients a touch too much, and the bass is a tad louche and uncontrolled, but neither is a particular problem considering the

sort of system they'll be used with. This sweet, forgiving nature is perfect for entry level systems.

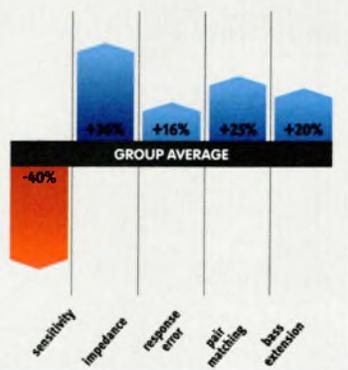
Overall then, speed freaks and detail obsessives might want more, but mainstream buyers will find the Boston A250s agreeable. They're 'nice' things to listen to, but not in the pejorative sense, bringing no nightmares over positioning, system matching and suitable music. Not the sort of speaker you'd put on the end of an expensive system then, but definitely one purposed for a sensible real-world sound.

ON TEST

Boston Acoustics' claim of 89dB sensitivity for the A250 is optimistic: our pink noise figure of 85.3dB suggests that 85dB is more realistic. But this lowest figure of the group reflects that the A250 has the highest impedance and hence is the easiest to drive, with a minimum EPDR of 3.4 ohms at 4.3kHz. On-axis frequency response errors of ± 4.8 dB and ± 4.2 dB, 200Hz-20kHz, are above the group average because a gentle decline in output up to 3.5 kHz is followed by a steeper rise to 20kHz, although the latter can be tamed by listening a little off-axis.

Pair matching over the same frequency range was highest in test at ± 1.6 dB due to disparities in tweeter output in the last audible octave; below 10kHz the matching was much tighter. The cumulative spectral decay waterfall shows fast initial energy decay, but some low-level resonances from 3-9kHz. KH

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

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

LIKE: Smooth, easy, musical sound; small size; finish; ease of drive
DISLIKE: Lack ultimate scale, grip, power and detail; slightly veiled
WE SAY: Fine general purpose small floorstander with an endearing personality

OVERALL



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DALI **Zensor 5** £499.95

This compact Danish-designed floorstanding speaker surprises with its sound...

DETAILS

ORIGIN:
Denmark/China
SIZE:
162x840x253mm
WEIGHT:
10kg
FEATURES:
 • 25mm tweeter
 • 2x133mm mid/bass drivers
 • quoted amplifier power 30-150W
DISTRIBUTOR:
DALI UK
TELEPHONE:
0845 644 3537
WEBSITE:
dali-speakers.com

Like the Bostons, these are relatively small floorstanders, with a two-way configuration, courtesy of a pair of 133mm mid/bass units and a 25mm tweeter. This time, the cone materials used are wood fibre, and the high frequencies are supplied via a textile dome, crossing over at a very similar 2.4kHz. Cabinets are finished in a combination of a high gloss lacquered front baffle and vinyl sides; the box itself is medium density fibreboard with internal bracing, as per all other designs here.

It's a well finished product, but nothing exceptional. The aluminium base confers a reasonable degree of solidity, and interestingly – unlike most here – it is only single wired. This is becoming something of a philosophical choice, and is not necessarily done on cost grounds.



Sound quality

Despite its diminutive stature, this is a big performer. For its size it has surprising control to the sound – the DALI appears to be hewn from solid. This is explained by several factors. First, its general sure-footedness means there's no sense muddle or haze on dynamic crescendos. Then there's the warm upper bass, which gives a little extra weight in the 100Hz region than most here. This is augmented further by a very smooth and demure treble. It's not in any sense bright, yet is still beautifully delicate and gives struck hi-hat cymbals a wonderful tonal quality – it seems able to capture the fundamental waveform without surrounding it in splash. In this respect, it's easily the best of group, being the equal of many a good ribbon tweeter, I'd say.

Even at highish listening levels, the finale of Caravan's *Nine Feet Underground*, a riot of screaming electric guitars and swirling drum kit work, stayed absolutely in focus without any smear. It let me hear right into the mix like no other loudspeaker here. Its classy bass and treble is further helped by a glass-clear, mirror-smooth midband. Everything comes across delicately and intricately resolved. It gets right into a recording and scavenges vast amounts of detail out it, while retaining its essential rhythmic and dynamic integrity. Oh, and that lovely mid is seamlessly connected to the top and bottom end.

But there's a catch. Despite being one of the nicest to listen to here, across all types of music, the small size of the Zensor is such that it doesn't – and cannot – move air like the larger Q Acoustics and Mission speakers. So at *really* high levels, when the aforementioned are just getting into their stride, doing fantastic things with the music, the DALIs begin to stumble and fall. So they're particularly good in some contexts, and not so hot in others.

If you have a small to medium sized room, they'll be brilliant, as they'll never become unruly – unlike the Qs or Missions, which need their

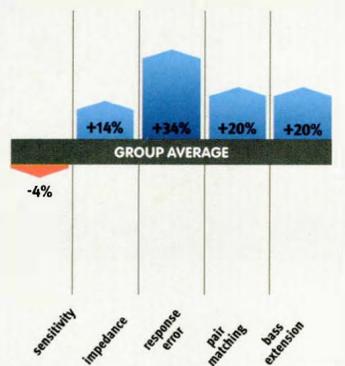
foam bungs deployed. The Zensors are far more amenable to small spaces. Here, they can superbly capture the soul of a recording. Overall, a deeply able loudspeaker, one that's musical but not showy, detailed but not analytical, smooth yet not dull. But you will need a suitably sized room and a top notch front end – or the Zensor 5 will simply remind you that you haven't got one! As such, this is well worth auditioning if you fit the above criteria, if not then look at more mainstream designs...

ON TEST

DALI's claim of 88dB sensitivity for the Zensor 5 agrees well with our measured pink noise figure of 88.3dB – a little below the group average. In compensation, a minimum EPDR of 2.7 ohms at a very high 20kHz indicates that the Dali is easy to drive. Frequency response errors, 200Hz-20kHz, are the highest here, principally because of a narrow dip in output from 2-5kHz, after which the treble output rises to almost 20kHz. The latter will be addressed by listening off-axis as DALI recommends, but the presence band dip – which is associated with a resonant ridge in the cumulative spectral decay waterfall – cannot be so easily cured.

Pair matching over the same frequency range was a little disappointing at ± 1.5 dB due to a disparity in tweeter sensitivities. Apart from the aforementioned resonance, initial energy decay was fast in the CSD waterfall. KH

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Sweet, subtle treble; smooth, open midband; tuneful bass; fine imaging and dynamics

VALUE FOR MONEY



DISLIKE: Runs out of puff before most others here; lost in a large room

BUILD QUALITY



FEATURES



WE SAY: Brilliant – in smaller spaces, and with serious systems!

OVERALL



white. it's the new black

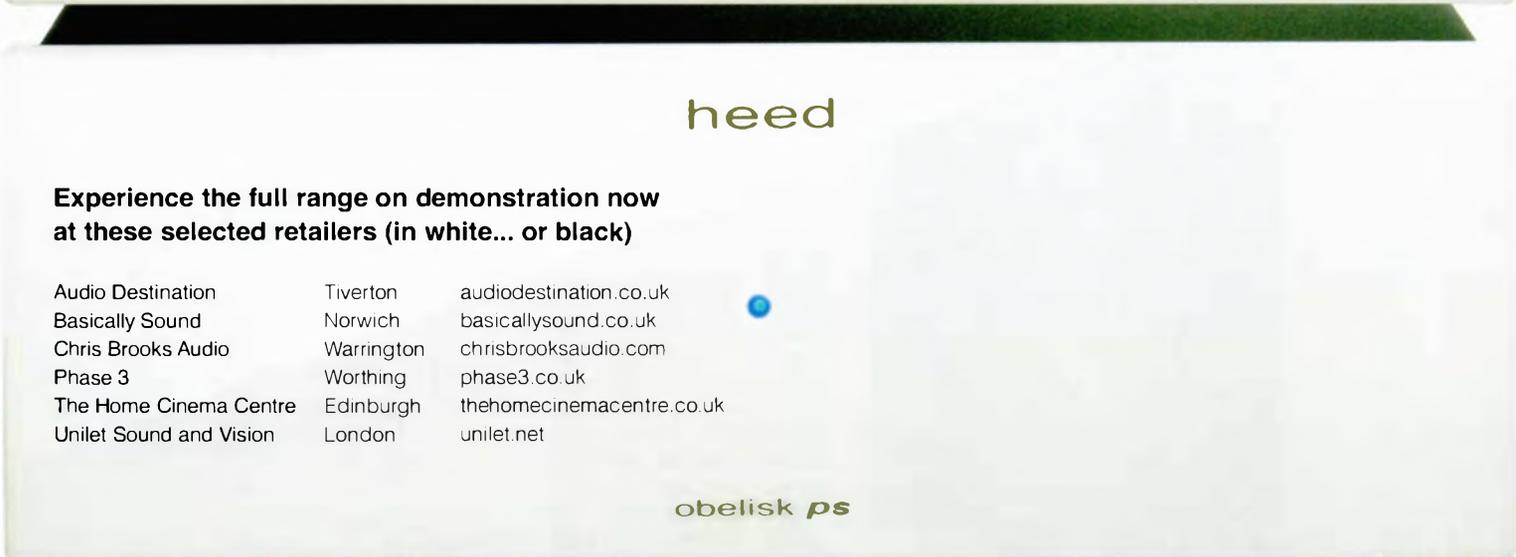


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Mission **MX-4** £499.95



Few have done so much to popularise floorstanders as Mission, how does its latest stack up?

► **DETAILS**

ORIGIN:
UK/China
SIZE:
206x965x360mm
WEIGHT:
23.7kg
FEATURES:
 • 25mm tweeter
 • 2x165mm Paramid mid/bass units
 • quoted amplifier power 25-150W
DISTRIBUTOR:
Mission
TELEPHONE:
01480 447700
WEBSITE:
mission.co.uk

The third two-way here, but this time with a lot more woodwork and larger drive units. The MX-4s sport a 25mm silk dome tweeter and twin 165mm 'DiaDrive' mid/bass units, crossing over at 2kHz. Mission says a Kapton voice-coil former is used in the larger drivers, with the company's Paramid cone in evidence. There's an in-grille wave guide, which means the speaker should always be listened to with the grilles on. Subsequent listening revealed the difference it makes, more of which later...

The large, heavy cabinet is one of the biggest here – you get an awful lot of MDF for your money. Finish is humble vinyl wrap, but you can't have real wood on a cabinet of this size, at this price, realistically. Bi-wirable terminals and a bass port are to be found around the back.

Sound quality

Here's an interesting speaker, combining the traits of a couple of other designs in the group to very impressive effect. Take the soft, fluffy musicality of the Bostons and add much of the scale, power and physicality of the Q Acoustics, and Mission MX-4 take a bow! These are big bangers, fully equipped to make a sizeable sound in most rooms – and so they do...

4hero's *Universal Love* was a joy, the MX-4s delivering a cavernous soundstage inside which an awful lot was going on. Happily, they didn't force it on the listener either, proving surprisingly refined in the way they dealt with the song's thumping electronic percussion. The intricate saxophone work on Intense's *Positive Notions* was very sweet, and duly projected well, better than most others here. It never grated tonally, yet seemed to hover well out of the boxes, tightly in the middle of the room. It was also better at hanging images behind the speaker plane than even the Q Acoustics. The result was a spacious, dimensional sound that let the music breathe.

Bass is amongst the best here, providing you don't drive the MX-4 too hard. There's plenty of power and extension, yet it doesn't bog down the music or set the room off. With the supplied foam bungs in, the sound thinned out and lost dimensionality, but as ever small rooms will gain more than they lose from these pieces of polyurethane. In absolute terms, it lacks the sheer determination of the Q Acoustics, which pump out vast tracts of low frequencies like their life depends on it, but it's still very generous and no less tuneful. The only downside is that doesn't go to such high levels as others here, before the onset of break-up.

At the opposite end of the frequency spectrum, the treble impressed – it's very sweet and subtle, although lacks the metallic bite of the Q Acoustics or the delicacy of the DALI. Like the Bostons, this speaker softens the rough edges off a recording, but more subtly. The result is a crisp,

atmospheric top end, but without the tears it can bring with cheap front ends and amplifiers.

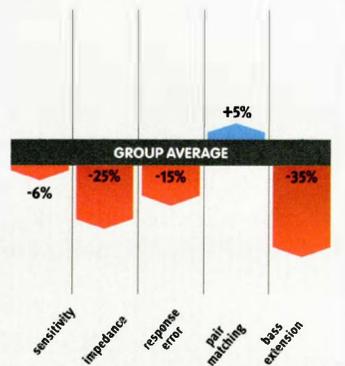
Overall, I found the Mission MX-4 to be very cohesive, all-of-a-piece sounding and with remarkably few sonic vices. Rather like a Lotus car, everything is *just* as good as it needs to be to do the job. So in absolute terms it's not perfect, but still really entertains and beguiles. The only real reservation is that – as our lab tests show – the Mission needs a muscular transistor amplifier to get the most from it; tube amps beware!

ON TEST

We measured an average pink noise sensitivity of 90.4dB for the MX-4s, which accords well with Mission's claim of 90dB. But Mission also specifies a nominal impedance of 8 ohms, which doesn't fit with the 2.9 ohms minimum modulus we measured, or the minimum EPDR of 1.1 ohms. Both these figures suggest that MX 4 is an unusually challenging speaker to drive – certainly the most difficult of this group. On-axis frequency response follows a mostly flat trend, hence the low ± 2.9 dB limits, 200Hz-20kHz, recorded for each of the review pair.

Their matching wasn't quite so impressive at ± 1.2 dB over the same frequency range, but the largest departures were above 10kHz. LF extension was best in group at 43Hz for -6dB ref 200Hz. The CSD waterfall shows fast initial energy decay across the spectrum with some low-level resonances visible at treble frequencies. KH

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY ★★★★★ **LIKE:** Spacious, musical sound; punchy bass; fine imaging
VALUE FOR MONEY ★★★★★ **DISLIKE:** Lacks ultimate detail resolution and subtly; tricky to drive
BUILD QUALITY ★★★★★ **WE SAY:** Genuinely enjoyable and entertaining speaker, well worth audition
FEATURES ★★★★★

OVERALL





Shanling CD-T2000

...brings SACD sound quality from regular CD!



SOUND QUALITY



VALUE FOR MONEY



BUILD QUALITY



FEATURES



OVERALL



“ Like most Shanling products, the CD-T2000 offers ‘battleship’ build quality and a very high standard of finish. ”

“ If this product were manufactured in the USA, it would probably cost three or four times what Shanling is asking here and at just under £2,000, makes it a veritable bargain. ”

“ Via the CD-T2000, cymbals reproduce with a lovely breathy openness that sounds like good analogue. ”

“ It delivers a smooth, natural, well-balanced sound that lets you hear the music as it was originally recorded. ”

“ ...the thought of going back to something ‘inferior’ once the review period was over was just too depressing to contemplate. ”

Jimmy Hughes - Hi Fi Choice, October 2011

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Monitor Audio **BX5** £499.90

From this respected British speaker brand comes a smart, compact floorstander...

DETAILS

- ORIGIN:** UK/China
- SIZE:** 215x868x282mm
- WEIGHT:** 12kg
- FEATURES:**
 - 25mm tweeter
 - 2x140mm C-CAM mid/bass units
 - quoted amplifier power 30-120W
- DISTRIBUTOR:** Monitor Audio
- TELEPHONE:** 01268 740580
- WEBSITE:** monitoraudio.co.uk

One of the better looking boxes in the group, this neat, compact speaker is a two-and-a-half way design with the compulsory 25mm dome tweeter (although this one is Monitor Audio's metal C-CAM type), and twin 140mm C-CAM metal sandwich mid/bass units. The single bolt-through design means the driver isn't fixed to the front baffle, so cannot transmit vibrations to the cabinet, the company says. The vinyl wrapped box looks rather classy considering its lack of wood veneer or piano lacquer, being better finished than most others here. Round the back, decent bi-wiring terminals are fitted.

The cabinet is dual ported, with one at the front and one at the back. This makes placement a little more sensitive than some here, I found, but nothing too onerous.



Sound quality

Only slightly larger than the Dalis, these floorstanders nevertheless gave a deeper and more extended low bass. Upper bass was a little lighter and midband more prominent, so it gave the impression of being brighter and more forward. This was further reinforced by a slightly less couth tweeter – although very good at the price, it didn't quite match the finesse of the DALI, but was perfectly in keeping with the rest of the group. The BX5 integrated well up and down the frequency spectrum, giving a speaker that had plenty of physical power and a pleasingly fast and exciting sound.

The midband was a real strength, being a good deal more detailed than most here. If anything it had a slightly 'cool' tonality to it, reminding me of the Q Acoustics, but you'd never call it hard. It had oodles of detail, taking a serious interest in the signal, and being fast and lithe it was able to make hay with the electronica of Intense's *Positive Notions* – things romped along apace, the BX5 thriving on the music's speed, drive and punch.

In terms of soundstaging, these speakers worked well, but weren't quite up there with the best – the Tannoy sounded far larger and more spacious. Instead, the BX5 concentrated its fire largely between and around the plane of the speakers. Here, it really did well, locating instruments in space very ably, and giving a satisfyingly large sound. It was, however, just a little more directional than some here – again most notably the Tannoy which seemed to throw a wide stereo image out whichever way it was pointing!

Rocking along to the strains of Caravan's *Nine Feet Underground*, and the BX5s showed off their obvious talents. Bass was decently strong and nicely supple – although not exceptional. Midband was impressively clean and devoid of clutter, allowing subtle elements in the mix to shine out better than the likes of Boston. Soundstaging again was good, if not quite Tannoy-esque



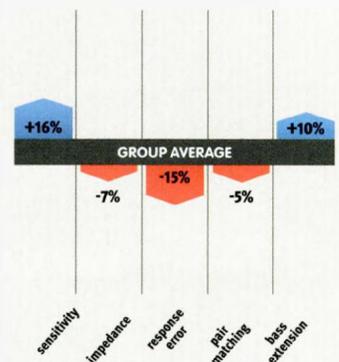
in its proportions. There was a pleasing sense of musical fluidity, but the BX5 didn't have the visceral thump of the Q Acoustics or Mission, or the infectious musical brio of the Tannoy.

Overall then, I found these speakers very good all rounders, without being best at anything in particular. This is no bad thing, as they'll appeal to a wide range of listeners who will doubtless really enjoy them, across a lot of music and in many different types of system. A jack of all trades and master of some.

ON TEST

Monitor Audio's claim of 90dB sensitivity for the BX5 is optimistic, the pink noise figure of 88.2dB we obtained from the review pair suggesting that 88dB would be more realistic. As would a nominal impedance of 4 ohms rather than the specified 8 ohms given that we recorded a minimum modulus of 3.4 ohms. Impedance phase angles are well controlled, though, so the minimum EPDR was 2.0 ohms at 118Hz, suggesting that the BX5 is not too challenging an amplifier load. A flat on-axis frequency response trend limited errors to ± 3.0 dB and ± 2.7 dB respectively, 200Hz-20kHz, and pair matching was in the top rank at just ± 0.6 dB over the same frequency range. LF extension was a little poorer than the group average at 57Hz for -6dB ref 200Hz. Fast energy decay across the spectrum dominates the CSD waterfall, but for a low-level resonant ridge at around 4kHz. KH

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Crisp, controlled, musically enjoyable sound; good looks
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** No particular vices, just doesn't excel at anyone thing...
- BUILD QUALITY** ★★★★★ **WESAY:** A very safe speaker bet; if you're looking for a consummate all rounder, here it is!
- FEATURES** ★★★★★

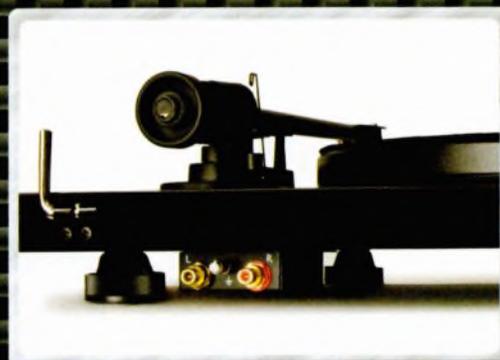
OVERALL



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Q Acoustics 2050i **£494.95**



A relative newcomer to the British speaker market, this company has won much acclaim of late...

DETAILS

- ORIGIN:**
EU/China
- SIZE:**
270x1006x321mm
- WEIGHT:**
21kg
- FEATURES:**
- 25mm tweeter
 - 2x165mm carbon fibre/ceramic mid/bass drivers, allied to a 25mm multi-layered cone tweeter carefully decoupled from the speaker's front baffle. The crossover has been revised, over the previous non-'i' variant; crossover point is 2.6kHz.
 - quoted amplifier power 25-150W
- DISTRIBUTOR:**
Q Acoustics
- TELEPHONE:**
01279 501111
- WEBSITE:**
qacoustics.co.uk

The flagship of the range, this is a suitably big bruiser, offering an enormous box for the price, larger even than the mighty Missions. It's a two-and-a-half way design with twin carbon fibre and ceramic coated 165mm mid/bass drivers, allied to a 25mm multi-layered cone tweeter carefully decoupled from the speaker's front baffle. The crossover has been revised, over the previous non-'i' variant; crossover point is 2.6kHz.

The version reviewed here is the piano gloss lacquer one, costing some £120 more than the cooking vinyl wrap. It's well worth the extra, as the finish is superb and the 2050i looks and feels like something costing closer to £1,000. The only downsides are the roughly surfaced plinths, and the fiddly underside location of the speaker terminals.



Sound quality

With most loudspeakers in this test, there was a sense that I had to make allowances for them, because of their lowly position in life. But from the word 'go' with the 2050is, I wasn't aware that I was listening to a budget box. Kicking off with the Intense drum'n'bass track, and I was reminded of the majesty of this sort of music; the scale of the 2050is' bass is enough for all but seriously large listening rooms. Indeed, in smaller ones you'll be needing the thoughtfully provided foam bungs – ultimately they sound far better without them. Suffice to say this loudspeaker's lows are almost subterranean. Bass doesn't just hover around gently in the background – on music like this it defines the sound, indeed it is the sound. And the 2050is recognised this, blasting out the bassline with breathtaking power and consummate ease. At the time of listening, I'd just come away from hearing some Wilson Audio Alexandria XLFs, and the 2050is didn't sound that much of a poor relation, downstairs!

Its low frequencies integrated very nicely with the midband too; these speakers appeared all as one, leading up to a wide open midrange that was bristling with detail. Indeed, the Qs really began to scavenge with the minute detail inside the recorded acoustic, placing strands in the mix tightly in space, rather than just consigning them to a generic, Phil Spector-like wall of sound. Lateral image location was excellent, second only to the Tannoys in this respect.

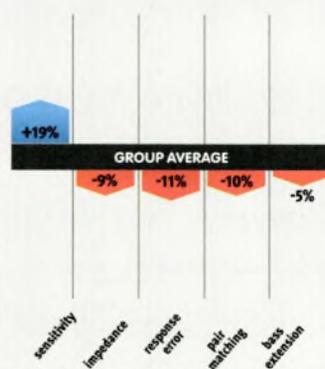
Tonally, midband proved smooth but searching. It has a slightly cool and dark quality to it – it's not like you're listening to a loudspeaker made of cotton candy, so don't expect it to flatter harsh sources. Like no other design here, it caught the gritty, metallic sound of a looped hi-hat from a drum machine – without ever descending into hardness. Indeed, treble integration proved as seamless as the bass, and the tweeter is a reasonably detailed, incisive unit. It's not quite up there with the DALI's HF unit, but was still very amenable.

Overall, the Q Acoustics 2050i is an exceptional budget loudspeaker, in a good and a bad way. Feed it a high quality source, a smooth but gutsy amp and give it a largish room, and it will amaze – performing way beyond its price class. But it with so-so systems in smaller rooms, it's less impressive – I'd imagine it can overdrive some listening spaces. It is not quite as warm and forgiving as some other loudspeakers tested here, not to mention the previous 2050, so match carefully. Largely brilliant, but make sure you listen first.

ON TEST

Q Acoustics claims 92dB sensitivity for the 2050i but our measured pink noise figure of 90.6dB suggests that figure is optimistic. The claimed 4 ohms nominal impedance, though, accords well with our measurement of a minimum modulus of 4.0 ohms. Quite high impedance phase angles caused the EPDR to dip to a minimum of 1.9 ohms but at a high 4.4kHz. Although the on-axis frequency response features a shallow presence band dip followed by gently rising upper treble output, errors of ± 2.9 dB and ± 3.3 dB, 200Hz-20kHz, were better than the group average, and pair matching over the same frequency range was a tight ± 0.9 dB. Bass extension of 52Hz for -6dB ref 200Hz slightly bettered the group average. Although the CSD waterfall shows fast initial energy decay, a cluster of low-level resonances is evident between 1.5kHz and 4kHz, with another ridge at 7kHz. KH

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Vast, grippy, powerful sound; excellent detailing; enthralling musicality
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Needs a largish room and a serious source to sing
- BUILD QUALITY** ★★★★★ **WE SAY:** Superb floorstander offering remarkable value
- FEATURES** ★★★★★

OVERALL



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Tannoy Mercury v4 **£429.90**

The entry-level floorstander from Britain's most iconic loudspeaker manufacturer...

DETAILS

- ORIGIN:** UK/China
SIZE: 204x970x281mm
WEIGHT: 14.2kg
FEATURES:
 • 25mm tweeter
 • 2x152mm fibre coated paper mid/bass units
 • quoted amplifier power 10-140W
DISTRIBUTOR: Tannoy
TELEPHONE: 01236 420199
WEBSITE: tannoy.com

No loudspeaker group test would be complete without a Tannoy, which is a brand that sports an amazing provenance. Even the company name has got into the dictionary, so synonymous is it with speakers. The Mercury v4 is the entry-level floorstander, lacking the trademark dual-concentric drive units of the higher range models. It's not the only design here to use a pair of mid/bass units and a single tweeter – the larger drivers are 152mm multi-fibre coated pulped paper cones, the smaller a nitro-urethane layer dampened woven polyester dome. Silver-plated copper wiring goes to a crossover that does the business at 2.6kHz. The large, substantial cabinet is an 18mm MDF affair with a vinyl wrap that looks alright but certainly wins no prizes for luxury.



Sound quality

Another very fine performer this, in an exceptional group. The Mercury sounded strangely redolent of a pair of Mercury M2s I had many, many years ago – wide, open, smooth and musical. A clever trick this, given the vastly different technologies in the respective loudspeakers; obviously Tannoy is still voicing its products to a very particular sound, and a winning one at that.

The v4s are not the largest in the group, but gave nothing away in scale to the vast Q Acoustics and towering Missions. Indeed, if anything these were the largest sounding of the group, having a huge left-to-right soundstage that none could match. They also push out of the box very assertively; female vocals in 4hero's *Universal Love* soared into the listening room, while the backing electronica hung impressively far back. On Love's *Andmoreagain*, Arthur Lee's voice was vast, almost as if Tannoy had sneaked in a finely balanced 5.1 system while I wasn't listening.

The other distinctive aspect of the Mercury's performance is its light, bouncy musicality. It doesn't make a meal of things, choosing instead to go straight for the rhythmic jugular. Again, I was taken aback by the fluidity of the bass guitar line on the Love track; what this speaker lacks in low end wallop it more than makes up for in the suppleness of its bass. This, allied to that gripping midband, means every piece of music is a chance to sing.

While the Q Acoustics are ultra-capable in a technical sense, the Tannoys truly outpaced them in the fun stakes, diving into the groove of Intense's *Positive Notions* like a puppy attacking a pond. But try to switch back on your critical faculties (not easy when you're having such a fine time) and you begin to notice the upper midband is just a touch too well lit, and the treble isn't the sweetest. The Mercury V4 isn't harsh, but it can provide a tonally lively performance on some types of music. So it will be best partnered with smooth front ends; no need



to pick a bright source as there's plenty of energy to be had further down the replay chain!

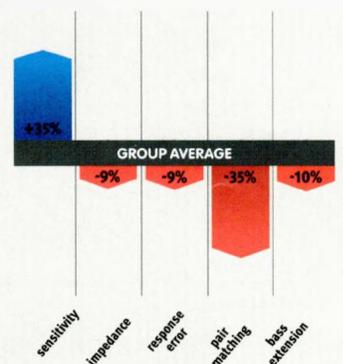
You only really notice this loudspeaker's foibles on classical music, when sober accuracy is the order of the day. Feed these boxes with rock music and the result is joyous – truly exuberant and genuinely uplifting – but Bach's *Fifth Brandenburg* came over as just a touch too hard.

The most charismatic design of the group, many will love it – but naturally do try before you buy.

ON TEST

Tannoy's claim of 91dB sensitivity for the V4 was amply supported by our measured pink noise figure of 91.5dB, making it the most sensitive speaker of the group. But as this is partly achieved through low impedance – we measured a minimum modulus of 3.3 ohms – the nominal impedance of 8 ohms is inappropriate. The EPDR dipped to a low of 1.9 ohms, but at a high 2.9kHz, so the V4 is not notably difficult to drive. On-axis frequency response has a flat trend to 5kHz followed by a hump in upper treble output but errors of ± 3.3 dB and ± 3.1 dB respectively, 200Hz-20kHz, are modest and pair matching over the same frequency range was good at ± 1.0 dB. Bass extension was close to the group average at 53Hz for -6dB ref 200Hz. Although the CSD waterfall is characterised by fast initial energy decay across the spectrum, there is a clear resonance at around 4kHz. KH

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Expansive soundstage; fine depth; musically exuberant; very easy to drive
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Lacks a little finesse; slight upper mid brightness; limited bass extension
- BUILD QUALITY** ★★★★★ **WE SAY:** Charismatic, love it or loathe it design
- FEATURES** ★★★★★

OVERALL



Group test verdict

David Price puts the this month's group testing into context. How do the contenders fare in the great scheme of things?

An unusual group test, this one. Normally there's a clear path from bad to good, better than best. This month I found every loudspeaker tested to be pleasing in its way, and most really rather good. Certainly, any concerns I had about budget floorstanders sounding a little ropery – as they often used to – soon disappeared when I put some power through them...

The Boston A250 was perhaps the least impressive, but was in *no* way a bad speaker. Clean, smooth, warm and gently musical – it proved a perfectly nice thing to listen to – but it lacked the detail, grip and focus of its price rivals here...

Next came a group of four, all in joint second place. The Mission MX-4 was one of the biggest and most expansive performers here, with loads of punch and pace. Overall it was a great listen, the only criticism being a slight lack of fine detail and finesse. Still, it's very much voiced in the classic Mission mould, meaning that very many buyers should take to it.

The Tannoy has a similar sound to the Mission in some respects, being big, bright and breezy. But it lacks some of the latter's punch and low end grip, plus a bit of fine detail. It makes up for it with a wonderfully wide and deep soundstage, and a compellingly musical nature. It's a lovely performer.

The Monitor Audio is more measured than both the Mission and the Tannoy; it grabs the music and presents in a very ordered and exacting way. It throws out masses of detail, yet really rocks when called upon so to do. It's a great all rounder, without excelling in any special way. If you think the strongest is defined by having the fewest weaknesses, then you've just found your winner!

The DALI is superb, equal of the best here, but only up to a point. At medium volumes in smaller listening rooms, it's a gem, with a wonderfully couth, refined and grown-up sound. Just don't expect it to rock your party as easily as some of the bigger boxes here.



The QAcoustics 2050i has great scale, power and poise, and is nicely musical, too. It's dynamic, images well and goes loud with relatively little power. Factor in that gorgeous piano gloss (optional) finish, and it's amazing value for money. Thing is, it does need a largish room to give of its best, and it won't tolerate poor source components and amps gladly. So do match carefully!

RESULTS AT A GLANCE

						
Make/model	Boston Acoustics A250	DALI Zensor 5	Mission MX-4	Monitor Audio BX5	Q Acoustics 2050i	Tannoy Mercury v4
Price	£449.90	£499.95	£499.95	£499.90	£494.95	£429.90
Sound	★★★★☆	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Value	★★★★☆	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Build	★★★★☆	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Features	★★★★☆	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Conclusion	★★★★☆	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Key features	Svelte looking, slimline floorstander with a nice, smooth, relaxing sound. Better in small rooms	Compact floorstander with a polished, detailed sound. Ideal for smaller rooms and good sources	Big speaker with a huge sound, makes music fun. Needs a powerful amp and a large room, though	Skilful all rounder with loads of detail and real musicality; impressive finish at the price, too	Large loudspeaker that's capable beyond its price point; power and poise aplenty; lavish finish, too	The most lyrical listen hear, with a vast soundstage, too. Lacks refinement, though
two-way design	yes	yes	no	no	no	yes
two-and-a-half way	no	no	yes	yes	yes	no
vinyl wrap finish	no	yes	yes	yes	yes (standard)	yes
piano lacquer gloss	yes	no	no	no	yes (option)	no
bi-wirable	no	yes	yes	yes	yes	yes

TRY WITH THESE

AMPLIFIER: Yamaha A-S500 £239

Not the last word in sophistication, but the Yamaha is decently refined and has oodles of power despite its low, low price. This means it's able to drive any loudspeaker here, with great confidence – and will also power a mighty fine party, too...



AMPLIFIER: Cyrus 6a £699

Not quite as punchy as the Yamaha, but the Cyrus brings sooo much more in terms of musicality, as well as far more organic, believable tonality. Smooth, fluid, dynamic and lyrical – it really makes music fun. It's also beautifully built, and a looker, too!



AMPLIFIER: Cambridge Audio 851a £1,199

If you need a powerful integrated amplifier, then it doesn't get much better than this. The 851a is loaded with facilities – including a USB input with built-in DAC for computer audio use. It has a huge, powerful sound that's bristling with detail.



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Stand and deliver

A system only sounds as good as the table that supports it – fact or fiction?
James Michael Hughes investigates the wonderful world of hi-fi furniture...

The Sound Organisation Table was, arguably, the first piece of audiophile furniture on the planet. Well, sort of. Actually, hi-fi furniture is as old as audio itself. In fact, audio was originally sold like furniture. Sound reproducing equipment was usually purchased because of its looks and its ability to sex-up the décor of your living room. Nothing new there eh, Linn Kiko owners?

Nowadays of course, most hi-fi equipment stands freely in the open air, but prior to the nineteen seventies, the fashion was for hi-fi equipment installed in cabinets so that only the front panel was visible. Hard to imagine it now, but almost every piece of hi-fi was designed so it could be flush-mounted into a console, as well as being used freestanding. Quad II power amplifiers were hidden inside slabs of oak that looked like chests of drawers, Garrard turntables nestled above, while most loudspeakers were often simply off-the-shelf units screwed into matching enclosures.

This may have been the highest watermark of the hi-fi spouse-acceptance factor, but it didn't do much for the sound. While a high quality

Sound Organisation – the original, and some say the best. Introduced the concept of audiophile system supports, gave a better sound than coffee tables...

nineteen fifties audio installation may have looked like it had been designed around the same time as the owner's Georgian suburban semi-detached, it would win no prizes for audiophile purity. Enthusiasts chose to mount their equipment in cabinets or consoles because it looked better and got rid of unsightly cables and wires – not because it made sonics any better.

So when, in the late nineteen seventies, Linn suggested that the Sondek LP12 turntable sounded better if placed on a lightweight coffee table, a few eyebrows were raised. Prior to this, most of us placed our turntables on a heavy solid support to shield it from vibration. But, the coffee table certainly seemed to work with the LP12. It didn't cause a sensation, as the hi-fi world was still relatively unattuned to the more complementary aspects of the hobby. Back then, the notion of using special cables seemed frankly rather odd, let alone bespoke equipment stands.

Metal mother

From this tiny seed however, a mighty oak would grow. And so it was that, by the early nineteen eighties, London-based Linn/Naim retailers The Sound Organisation had launched a purpose built turntable support. It was specifically intended for the LP12, and consisted of a square-section steel frame with four moveable support points.

At first, it was greeted with incredulity. Not the sort of cloying cynicism some cable refuseniks have for audiophile wiring these days, just a sense of surprise and puzzlement. It soon took off however, on a small scale, as The Sound Organisation was able to demonstrate the difference with every Linn Sondek it sold – or didn't as the case may have been!

On the very first Sound Org turntable table (as they were called back then), the support points used bolts. Later, these supports were replaced with upward-facing spikes brazed onto the frame. The idea behind the table was straightforward; a light but rigid frame supporting a thin platform made from particle



Mana Acoustics rack – took the Sound Org concept a stage further with stackable, higher mass metalwork...

board. Being slim and light, the platform did not store low-frequency energy.

It therefore acted as a high-pass filter, making the LP-12's suspension function more effective. At least, that's how we explained it at the time! There was no mistaking the fact that when placed on a Sound Org table, the Sondek *did* sound fresher and more detailed, giving a smoother cleaner, more relaxed sound. Bass seemed to go deeper, and stereo soundstaging was wider and more precise. Clarity improved, making complex music easier to follow. Comparing the sound produced by different equipment was something audiophiles had been doing for years. But the Sound Org table added a new twist to a familiar story.

In essence we were now listening to the effect one (passive) component was having on another. It wasn't like comparing turntable A with B and choosing a winner. For example; turntable A might well sound slightly superior to turntable B. But, when B was placed on a better support stand, it suddenly outperformed its rival...

This was a whole new paradigm. We suddenly realised how easily our perception of a product could be influenced by what it stood on.



Although originally designed for the Sondek, the Sound Org table worked its magic with other turntables. It also improved the sound of amplifiers, cassette decks, and (fast-forwarding a bit) CD players too...

Suddenly, it became *de rigeur* to have four or five Sound Org tables – one for each piece of kit. Inevitably, the Sound Org table brought forth a whole rash of imitators. Most of them were ‘Me Too’ copies from people trying to get in on the act, taking certain aspects from the original design without quite equalling it.

Mana mania

In the late nineteen eighties however, one rival stand appeared that could and *did* offer something more; the Mana. Now here’s where it starts to get interesting. No question, the Mana table worked extremely well, but aspects of its design seemed to fly in the face of the basic principles established by the Sound Org table.

For starters, the Mana was a heavy rigid stand that used a solid L section steel frame, rather than a hollow square section tube. But it was the shelves that represented the most radical departure. The lower ones were made from a heavy MDF, while the upper shelf was fashioned from plate glass. Glass – eek!

Moreover – and here’s where it really starts to get weird – the Mana stand was designed to be stacked; one sub-section on top of the other. The best-sounding shelf was always the top one. So, given enough cash, and a tall enough ceiling, you could carry on stacking Mana tables and keep improving the sound of your hi-fi.

Even more than the Sound Org table, the Mana stand seemed to focus the music and improve tempo/timing. Bass was firmer and tauter, and overall there was an increased sense of stability and solidity. The sound was noticeably better-focused and more purposeful, with superior clarity and fine detail.

The improvement was noticeable with any component you chose to place on the Mana stand – be it turntable, CD player, or amplifier. At this point in time, the whole subject of support tables – and how/why they did what they did – began to look a shade confusing. Which approach was right?

Going back to Linn’s original ‘coffee table’ suggestion, the idea had been to use a rigid, but lightweight support that would not store energy at low frequencies, thereby preventing the equipment from being affected by all the nasty horrible LF resonances infiltrating our listening rooms.

We’d been thinking of support stands as decoupling devices – something that would filter out harmful vibrations by improving isolation. The Mana table clearly delivered great results sonically, but did not offer much (if any) decoupling. Indeed, more correctly, it served to mass-couple components to the floor. Scary!

Taking a stand

Should we have been so surprised by this? After all, isn’t one of the great things about hi-fi the fact that there are always half a dozen



Quadraspire Sunoku Vent – beautiful hi-fi furniture in the modern idiom, and it offers an appreciable sonic boost, too...

ways of doing the same thing? Quite often, each approach is diametrically opposite and conflicting, and everyone violently disagrees about what’s right.

As the nineteen eighties turned into the nineties, you started to see stands growing ever heavier and becoming more and more rigidly-coupled to the floor. At the same time,

It’s all too easy to overlook the importance of a good support stand, and take for granted the benefits offered

others were taking the opposite approach, trying to isolate as much as possible. The only winners were reviewers who did a roaring trade discussing this week’s ‘in’ support system.

Audio furniture was now being taken very seriously, and choosing the right support was considered crucial to getting a good sound. The Mana approach was particularly addictive, as you knew that a further worthwhile improvement could be had by adding another support on top of the one(s) you already had.

Back to the future

Just as hi-fi products come and go, so does hi-fi furniture. Mana ceased trading in the middle of the last decade, leaving room for several new brands, including Audiophile Furniture to Quadraspire, and latterly PAB and Hi-Fi Racks – all using slightly different approaches to produce real upgrades in sound. Townshend Electronics has continued to impress with its Seismic Sink platform and stands, too.

But perhaps the lessons of the past have been forgotten slightly; audio furniture seems not to be taken as seriously as it used to be in those heady Cold War days. And why bother? Your equipment still works regardless of what it’s placed on. Alas, it’s all too easy to overlook the importance of a good support stand, and take for granted the benefits offered. Instead, everyone’s gone cable crazy...

Only if you’ve witnessed someone demonstrate the sonic difference between a proper equipment support and an ordinary piece of furniture, will you appreciate how big

the improvement can be. Moreover, the nature of the improvement offered is something hard to achieve by other means; it’s something fundamental and profound.

In other words, that elusive extra ‘something’ that makes the music and performance sound involving and real may only be achieved when the equipment is properly sited on good support stands. Until this aspect is sorted out, your hi-fi system (regardless of who made it and what it cost) will only deliver a fraction of its capability. So before you lavish sums on kit and cables, think of where you’re going to put it. After all, you wouldn’t buy a Ferrari without a garage, now would you? ●

ABSOLUTELY PABULOUS

An interesting alternative take on the design of support stands and platforms comes from Polish manufacturer PAB. It offers a decoupling platform that suspends a marine-ply shelf via four pieces of string from a turret – one at each corner. Individual adjustment of each string allows the suspended shelf to be levelled.

The PAB platform is available in two versions to suit equipment of different mass, but the design principles remain the same. Although firmly supported, the shelf is free to move laterally. So, the equipment is decoupled without being isolated.

Sonically, the PAB platform seems to make the musical presentation more relaxed and ‘effortless’. Clarity and fine detail are significantly improved. In particular, you seem to get much better stereo imagery, with a greater sense of depth placement and positional accuracy. The sound seems smoother and at the same time richer and more colourful, being both easier to listen to and more involving. The improvement really has to be heard to be appreciated. There’s no loss of clarity or dynamics, but the presentation is definitely more flowing and delicate.

The PAB platform improves the sound of CD players and amplifiers, but (perhaps surprisingly) it also delivers a big difference with a laptop computer used as a music source. Again, there are noticeable gains in detail along with a more effortlessly-natural musical presentation.

PAB also make an equipment support stand that has two string-suspended shelves, with space at the top for a separate platform. Buying just a single platform for (say) an amplifier or CD player delivers very worthwhile benefits, but adding a couple more further-enhances the result. It’s my belief that most audiophiles, having experienced what one PAB platform does, will want to add a second or third. Essentially, the end result is a truer and more musical sound.

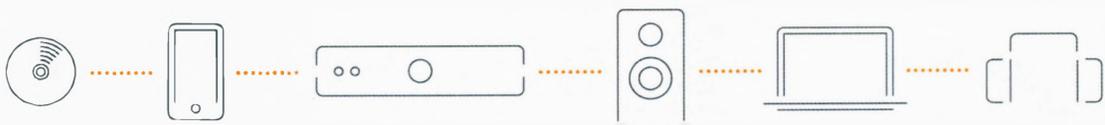


More than

alright,

jack.

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It's a little-known fact that the headphone jack output of your iDevice can give better audio quality than the docking connector. The headphone jack is designed and built for audio output, while the connector is more a jack of all trades - compromised by handling the power supply and charging alongside the music's delicate analogue and digital signals.

Armed with this knowledge, you are ready to maximise your equipment's potential, with the convenience of just one cable. Now, from the strong bloodline of all the Pulse cables, Vertere brings you D-Fi.

Specifically and correctly engineered, D-Fi gives you breathtaking performance from headphones, mobile devices, home computers and AV systems.

..... Put simply, D-Fi brings the music.

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The right note

Chord Electronics' Chordette Index is the company's first conventional streamer. Does it play well with *Jason Kennedy*?

Chord Electronics had a head start over the competition when it launched the first Chordette Gem streamer way back in 2006, but that was not a UPnP Wi-Fi streamer of the sort that all and sundry are getting into today. Rather, it was a Bluetooth device designed to stream signals from mobile phones. In many ways it was ahead of its time, not only in offering Bluetooth streaming but in using a mobile device as the source. But this approach does not have the same sound quality potential as UPnP

over Wi-Fi or Ethernet, so Chord has created the Chordette Index to fill what was an obvious gap in an otherwise expansive range of highly desirable separates.

Given the compact nature of Chordette casework – it's just over six inches wide – this was quite a challenge. Chord wanted to include a display screen, control keys and enough connectivity to make it practical. The company also wanted to make it sound as good as possible, so that its performance reflected the craftsmanship of the casework and the technological effort taken.

▣ DETAILS

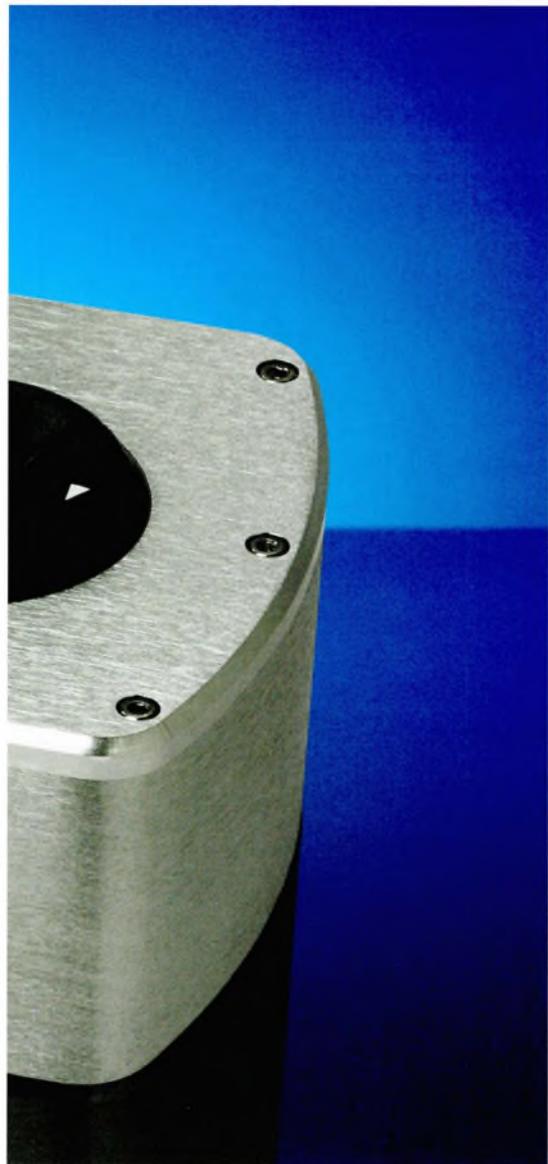
PRODUCT: Chord Electronics Chordette Index
ORIGIN: UK
TYPE: network player/streamer
WEIGHT: 0.4kg
DIMENSIONS: (HxWxD) 42x160x73mm
FEATURES:

- digital inputs: USB
- digital outputs: coax and TOSLINK
- analogue outputs: RCA phono variable
- network inputs: RJ45 ethernet, Wi-Fi antenna
- UPnP & DLNA compatible
- supported file formats (maximum 48kHz): WAV, FLAC, AAC, MP3, WMA

DISTRIBUTOR: Chord Electronics
TELEPHONE: 01622 721444
WEBSITE: chordelectronics.co.uk

The Index has a fair amount of features for such an obviously small and compact device. There is a USB input for thumb drives or FAT32 formatted hard drives, and both digital and analogue outputs, the latter having full volume control via the remote or the buttons on top. The remote or the app you use to select music with are far easier to change level with – the buttons on the unit itself do not operate continuously and, therefore, to change level by thirty units (approximately one decibel each) you need to press one no less than thirty times, which is frankly a bit silly! The same is true if you are trying to scroll through a large library – it soon becomes clear that the handset is a more useful tool than you might initially expect...

The remote control itself would appear to be inexpensive type, but housed within Chord's trademark, lavish, highly finished metalwork. Unusually then, it looks better than it feels – and its buttons are rather small. But it will let you scroll, change volume and navigate using direction buttons and there is a handy numerical keypad for the Internet radio presets.



The manufacturer recommends one called 8 Player (for Apple iOS devices) which set me back a princely £2.99 and lets you choose tracks, change volume and even search for tracks on attached network storage devices.

Internet radio comes courtesy of the popular vTuner service also favoured by Naim. This offers a huge range of stations (3,000), but finding the ones you want is a slightly painful affair that can involve scrolling through massive station lists. The more popular stations are easy to find but locating one of my favourites, FIP from Paris, involved working down through various menus until I got to France where they seem to have an awful lot of stations before you get to those starting with F. Locating BBC 6Music was easier, but attempting to stream on-demand shows for the listed DJs was not very fruitful.

The very high quality of metalwork helps to offset its greatest shortcoming for the hi-fi aficionado, specifically its inability to stream material with a sample rate above 48kHz. In practice this means that it's good for CD quality and below, which does not look very high tech in the general scheme of things. On the other hand it is what most of our music collections are made up of, so in logical terms it's realistic. Trouble is, in theory at least, one of the key benefits of file streaming rather than disc spinning is the access to higher quality material than the CD offers – and the Chord doesn't offer this option...

Sound quality

Listening got off to a slow start when I discovered that my usual Network Attached Storage drive (WD My Book Live) didn't work with the Index. Apparently, this is because of shortcomings with the Twonky media server found on this and many other NAS drives. This is a media server that I have never had difficulty using with streamers in the past. To get around this issue, Chord duly lent me an LG NAS drive that runs LG's own software and worked fine. And the Index also worked rather well with a Naim UnitiServe that came along

latterly, the content on which was also accessible with the 8 Player app.

When it came to using the Index with my usual selection of test tracks, 8 Player made it apparent that half of them were either of too high a sample rate or in an incompatible format. This proved frustrating, but possibly more for a reviewer than the likely customer of the Index? The lack of support for AIFF is the biggest barrier when it came to formats, and the inability to stream anything that one would describe as high resolution stopped me from playing a number of favourite pieces. Having taken this onboard, I stuck to the CD rips in WAV and FLAC and enjoyed the experience a great deal. The ability to change volume in small steps is useful when you are in the ballpark required, but a little slow if the level is too

There is a distinct musicality to the Index that makes you want to listen longer and longer

low or too high – 8 Player's volume slider is much better for big changes. I started out with the Index connected directly to my power amps using a Vertere Pulse C interconnect whose spritely character suits the Index's good sense of timing and muscular bass.

It sounds more like a CD player than most streamers, as a result of darker backgrounds and a slight shortfall in fine detail, which given that it was produced to take the place of a disc spinner in the Chordette range may not be a surprise (see the Q&A section). Indeed it's considerably more CD-like than a Mac and a DAC, albeit you can't access the Index's own DAC which might even imbue a laptop with this character. I restrained myself from suggesting that Chord add a digital input given the difficulty they had fitting in what's already there!

The digital volume control seems to work well, it doesn't undermine the imaging or detail resolution and offers usefully fine

The 8cm display on the Index is good enough to let you navigate a NAS drive, but this will require some patience if there is a lot of material on the disk, as you only get three lines of text on the LCD display. This is restrictive but, of course, it keeps the whole think compact – there's obviously a trade-off with a visually innovative and stylised device such as this, between form and function. It needn't be too tricky however – the nicest way to drive this streamer is with one of the many apps available for controlling NAS drives.

CONNECTIONS



Q&A

JASON KENNEDY SPOKE TO MATTHEW BARTLETT, PRODUCTION MANAGER AT CHORD ELECTRONICS...



JK: Chord were one of the first hi-fi companies to get into streaming, albeit using mobile phones via Bluetooth as a source. So what prompted you to move into this?

MB: In many respects the Chordette range, which had our Bluetooth products in, was way ahead of its time. It still is with groundbreaking models like the DSD-compatible QuteHD DAC. We are still fully behind Bluetooth streaming, as it still has many advantages over DLNA/UPnP streaming. However, we wanted to make a great-sounding network audio solution, using our D/A conversion expertise, for regions where Bluetooth wasn't practical. It took a huge investment, but now we have a great-sounding platform and masses of design experience that will enable us to create further class-leading streaming products, such as our forthcoming DSX1000...

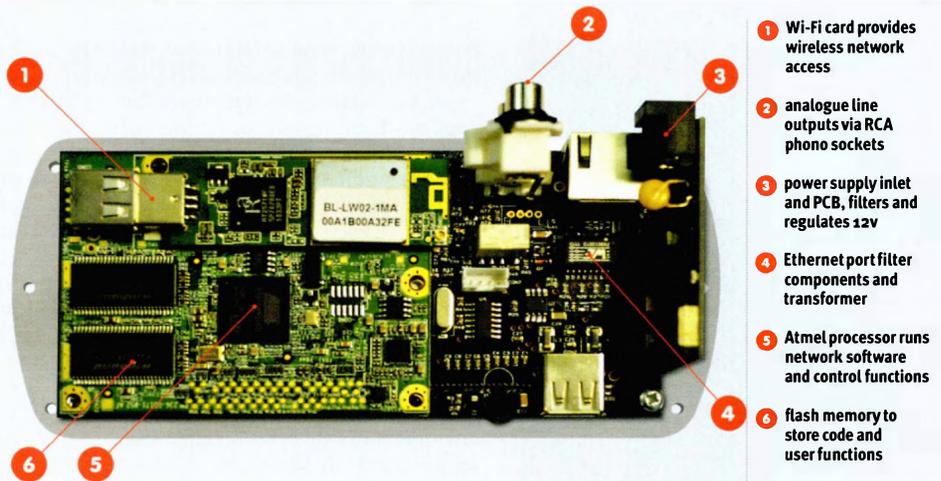
How did you go about creating the Index, did you do the hard work yourself or use an off the shelf solution such as Bridgeco?

We worked with another company (not Bridgeco) and used their expertise in networking and DLNA/UPnP support in conjunction with our own world-leading expertise and experience in digital audio. Now, just eighteen months later, we have a superb streamer that has incredible tech on the inside and is (hand) built to last here in the UK with all the famous Chord Electronics hallmarks.

Why does the Index not work with sample rates above 48kHz?

It's part of our boutique Chordette range. We've been asked for a CD player, but it wouldn't fit into the solid aluminium Chordette chassis, so in the streaming age, we created a great-sounding device capable of replaying CD-quality rips using all of our research and development knowledge gained with products such as the flagship Red Reference MkIII CD player. We concentrated on getting CD playback over a network perfected as far as possible, and will soon update to support 96kHz.

IN SIGHT



- 1 Wi-Fi card provides wireless network access
- 2 analogue line outputs via RCA phono sockets
- 3 power supply inlet and PCB, filters and regulates 12v
- 4 Ethernet port filter components and transformer
- 5 Atmel processor runs network software and control functions
- 6 flash memory to store code and user functions



THE CHORDETTE Index has plenty of competition in all but the cuteness stakes. If size is an issue there is the ubiquitous Squeezebox Touch to consider at about a quarter the price, a product that while not in the same musical league as the Index is probably equally revealing and has huge potential for upgrade.

More serious alternatives include the Cyrus Stream X, this doesn't have the DAC and analogue output of the Chord, but does have a far superior control system and a much more open and revealing sound. On equal terms with regard to onboard conversion are the Rotel RDG-1520 (£795), Marantz NA7004 (£600) and Cambridge Stream Magic 6 (£700). These aren't as compact but offer all the bells and whistles in the context of full hi-res support, which leaves only the Index's rather beguiling sound in its favour. Not forgetting the fact that it's the least expensive British streamer on the market, in practice then it's a fairly simple choice.

gradations of level so it could form a very neat single source system. That said, how many systems have only a streamer as a source these days? You can of course turn volume to maximum and use it as a normal line source.

The Index proved pretty good at revealing the quality of the incoming signal. For example, you can hear that the rips made on the Naim UnitiServe are of a higher calibre than usual. And it also differentiates well between formats, with WAV files clearly being superior to the almost hollow, weightless character of low bitrate MP3, but the differences between FLAC and WAV were very subtle. Some would say that this is because there isn't a difference, but with the better streamers it is clear that WAV is the more revealing format.

With both, however, there is a distinct musicality to the Index's performance that makes you want to listen longer and longer. This is something that eludes a number of more apparently transparent units and is the key quality for those of us that are into this game for the musical rewards. I found myself getting lost in Roy Harper's seventies classic *Stormcock*, his guitar playing is second to none and his voice in the front league too, it's not hard to hear why Jimmy Page and David Gilmour thought so much of him.

Conclusion

This is an interesting new product. In a world of steel-wrapped, powder coated, brushed aluminium fronted boxes, 435mm wide – the new Chord Chordette Index is wilfully different.

The streaming technology isn't bespoke Chord, but it's very well implemented, and set within a distinctively Chord Electronics platform, with the concomitant high quality and craftsmanship.

It is not without its foibles however, many of which you'd not find on a £250 Pioneer. The key hindrance is the incompatibility with Twonky Media, which is surely the most commonplace server on off-the-shelf NAS drives. As such, this is a real pain – something that will prevent a number of people even considering its purchase.

The high resolution playback – or lack thereof – issue is less pressing however, as it's due to be addressed with a future update, according to Chord. This will give the Index the potential to play 96kHz downloads, which is all most people should ever need. If the lack of 192kHz is a deal-breaker, then I'd politely suggest you keep it to yourself! Overall then, here's a beautifully presented, musically engaging, piece of kit. ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Musically engaging streamer in a very nice bit of British metalwork

VALUE FOR MONEY



DISLIKE: No hi-res support yet; doesn't work with Twonky media, limiting NAS choice

BUILD QUALITY



FEATURES



WESAY: Cute and musically engaging, with a fantastic finish

OVERALL



Bowers & Wilkins



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PM1 There are times when only music matters. When you want to forget the world and simply lose yourself in sound. The PM1 was designed for these moments. Its carbon-braced tweeter, Kevlar bass/midrange driver and Matrix™ braced cabinet combine to make everything else seem insignificant. It might just be the most refined small speaker we've ever built. **Listen and you'll see.**

www.bowers-wilkins.co.uk/pm1



Happy together

Denon's new DCD-720AE CD player and PMA-720AE amplifier are more than just a blissed aesthetic pairing, says **Ed Selley...**

Fresh from celebrating its centenary last year, renowned Japanese marque Denon hasn't been sitting on its laurels. With one of the larger product portfolios in the industry there is usually something being changed, but of particular relevance to us is the update of the stereo range. Fresh off the boat for your consideration is the PMA-720AE integrated amplifier and DCD-720AE CD player priced at £350 each...

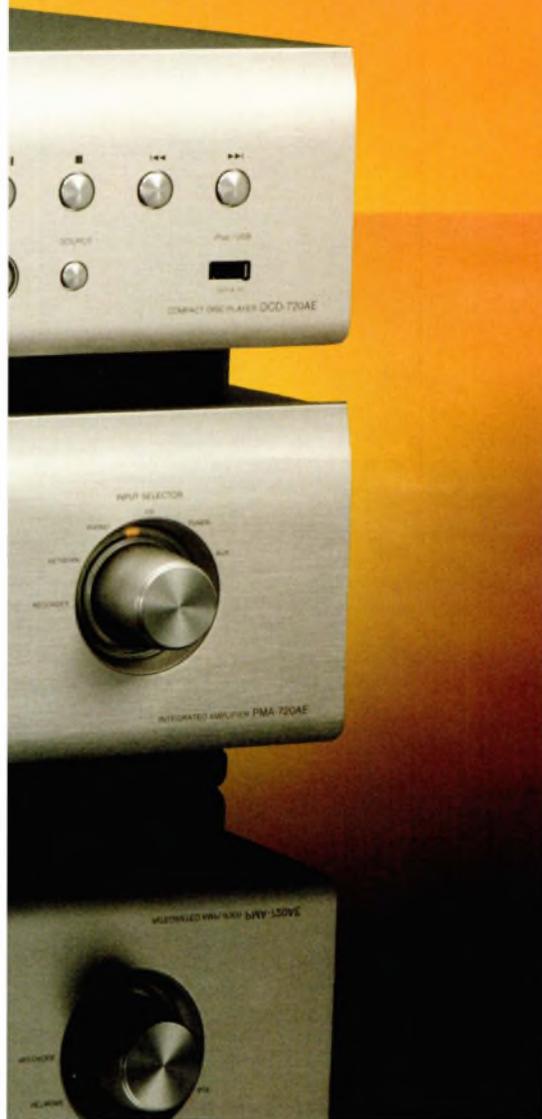
Not only does this seem impressive value, matters improve when you unbox the units and pour over the specifications. The PMA-720AE has a claimed output of 50 watts into 8 ohms and as well as four line inputs, there's a tape loop, moving magnet phono stage and a full suite of tone and balance controls. Further demonstrating that hairshirt minimalism isn't on the agenda, A/B speaker switching, a headphone amp and full remote control is also provided.

▶ DETAILS

PRODUCT: DCD-720AE and PMA-720AE
ORIGIN: Japan/China
TYPE: CD player and amp
WEIGHT: (DCD) 4.2kg (PMA) 7.1kg
DIMENSIONS: (WxHxD) (DCD) 434x107x279mm (PMA) 434x121x307mm
FEATURES: (DCD) formats CD, MP3, WMA • AL32 digital processing • 32-bit/192kHz DAC USB input • coaxial and optical digital input (PMA) quoted output power 50W(8 ohms) • 5 analogue audio inputs • MM phono stage
DISTRIBUTOR: Denon UK
TELEPHONE: 02890 279830
WEBSITE: denon.co.uk

Under the hood, Denon has provided the PMA-720AE with its proprietary Active High Current (AHC) system. This has evolved from the company's higher end amps and allows for a simple 'single push pull' circuit to provide the required power output. Combined with a matching high current power supply to deliver suitable power to use this circuit to best effect, the result is an amplifier that's up to the challenge of driving most loudspeakers likely to be partnered with it.

The matching DCD-720AE isn't short of firepower either. Denon has incorporated its AL32 processing system which upconverts CD's 16-bit digital datastream to 32-bits in an attempt to generate a smoother and more natural signal from the original. To this end, the DCD-720AE sports a 32-bit/192kHz capable DAC, to make the most of this signal. This doesn't give the Denon high resolution capability of course, as playback is strictly Red Book CD spec (16/44.1) only. A front panel USB socket allows the DCD-720AE to read MP3 and



leads which are fairly long. In any normal system, there will be a fair amount of slack cable left over to try and store neatly. IEC sockets would have been nicer.

Sound quality

Historically, I have generally enjoyed listening to Denon equipment. The house sound is always rich and solidly musical, if ever so slightly 'safe'. After partnering these new 720AEs with a pair of Mordaunt Short Mezzo 1s, it only took a few minutes of listening to the pair to realise that they have evolved somewhat. Denon hasn't thrown the baby out with the bathwater, but this pairing exhibits a leaner, more agile sound that lends this combo a liveliness that's extremely likeable.

Play something with reasonable tempo to it, like Depeche Mode's *Playing the Angel* and the Denon powers through *Precious* without a trace of bloat or overhang. There is a sense of timing and control that flatters the performance. This perceived agility doesn't seem to have been bought at the expense of bass depth either as there is a commendable low end shove as well.

This invigorating burst of speed hasn't been bought at the expense of the tonality and detail that I have historically found to be a Denon trump card. The stark guitar work of Fink's *Perfect Darkness* is captured with real conviction and all of the emotion of the piece completely intact. Push the pair extremely hard and they will harden up but they do so with reasonable grace, and they are unlikely to struggle in any normal room you place them in, providing you have a sensible pair of speakers.

Separating the two units and listening to them individually in more familiar systems reveals that the amplifier is the real star of the pair, while the CD must content itself with only being very good. The PMA-720AE retains the behavioural traits the pairing possessed when listened to together. It is detailed, lively and extremely entertaining. The AHC circuit seems to deliver on the design intention and having shown some potential with the Mordaunt Shorts,

I substituted a pair of more expensive and more revealing My Audio Design 1920s and things improved further. This bodes well for anyone likely to be bitten by the upgrade bug at a later date.

The other party piece of the PMA-720AE is the phono stage. This is a traditional fitment to Japanese integrated amps, but this one is far more than a ticked box on the specification sheet. Connecting a Rega RP6 revealed an impressively quiet, refined and detailed performer that is the easy equal of most budget phono stages that would be required if the amp wasn't thus equipped. Given it is included with the amp and also allows for a saving on cabling and rack space, this is a useful bonus. With the PMA-720AE sat between the considerably more expensive Rega and MAD, there was very little indication that it was the budget component in the trio.

The CD player is also a strong performer but does suffer from stiffer competition. The AL32 processing delivers a nicely fluid and natural performance that avoids any

Without a trace of overhang, there's a sense of timing and control that flatters the performance...

notion of a fatiguing digital fingerprint. The iPod connectivity also works well and manages to sound convincing and not too ruthless with compressed audio. In an absolute sense, there is a slight softness to the bass that is generally successfully covered by the amplifier but this is not especially pronounced.

More of an issue for the Denon are the other options available at the same price. The DCD-720AE has to compete against the ever increasing number of USB-capable digital to analogue converters – such as the superb Arcam rDAC that recently fared so well in our group test – which offer a route into high resolution audio when connected to a computer, and are

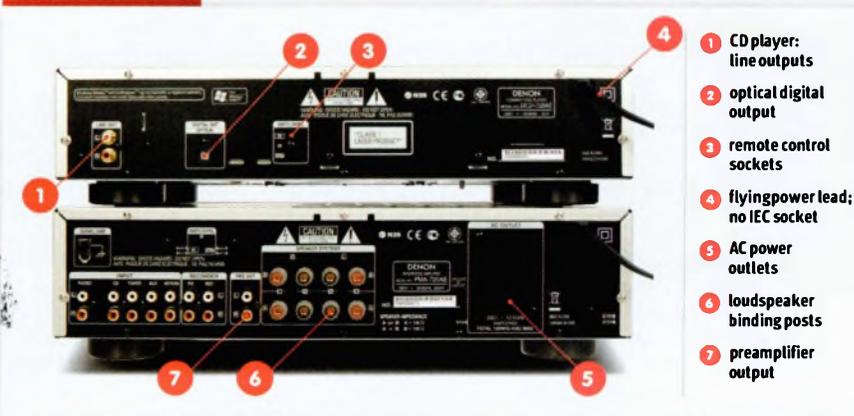
WMA files from a memory stick, or play files directly from an iPod or iPhone. Personally I'd have preferred a straight digital input, but the USB connection does offer some hope of protecting your CDs come the inevitable party.

Stacked together, the two units make a handsome couple. Denon's silver finish has the merest suggestion of champagne to it, which I like. And it gives them a slightly grown-up feel compared to price rivals. Styling is appealing too, both units being unmistakably Denon – they're rather handsome with their big controls and logical layout.

Build is good, at the price. Neither unit is especially heavy but they still manage to avoid feeling flimsy. The inexorable rise of costs means that it isn't possible to build an amp at this price in Japan any more, but Denon seems to have kept a tight grip on quality, and the usual tripping points for less expensive products like slackness in the controls are absent. The amp has also been fitted with new speaker terminals which are some of the best I have seen at the price point.

The news isn't all good though. The supplied remotes allow you to control most aspects of both units but neither is attractive or intuitive to use. Both units also have captive mains

CONNECTIONS



Q&A

ED SELLEY SPOKE WITH DENON'S ROGER BATCHELOR ABOUT THE 720AE COMBO...



ES: Is the 720 series an evolution of existing Denon thinking or a clean sheet design?

RB: The 720 series has evolved from the work done in designing previous 700-series models, and from all the experience gained over the years in developing two-channel products at affordable prices to suit a wide range of music tastes and different approaches to recording. We also took on board feedback from customers in order to improve the user interface, especially the remote controls.

Does Denon feel that stereo is still holding its own – especially at the sub £1,000 price point that many manufacturers have abandoned?

Very much so, notably in the UK and right across mainland Europe. There is still a strong demand from music fans for straight forward stereo products that perform well and are easy to use.

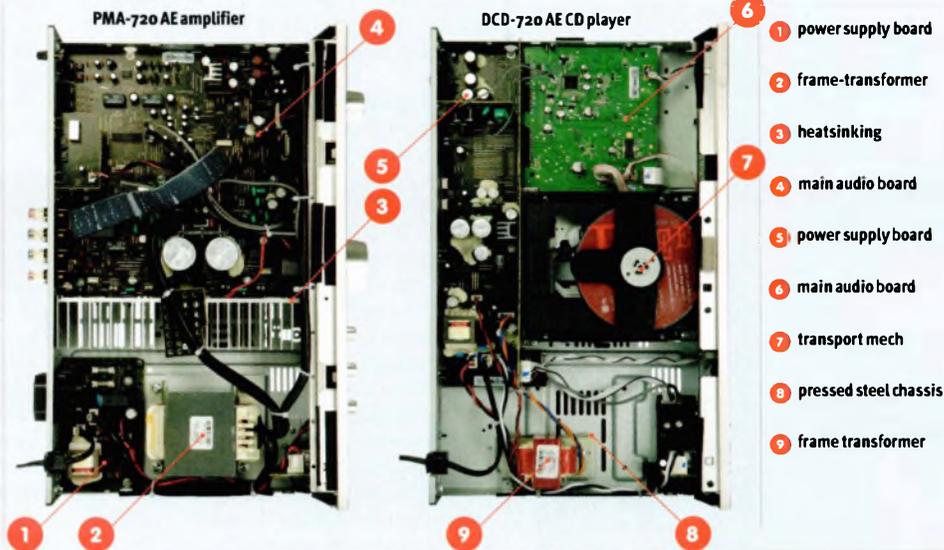
The 720 range contains both a network streamer and a CD player. Does Denon believe that CD will continue to be a viable category for the foreseeable future?

Yes, many people still have huge collections of music on CD and the format is often a very affordable way to buy a complete album these days. We see it continuing for the foreseeable future, in addition to all the other ways of storing and playing music.

As Denon does not manufacture loudspeakers, other than for its mini and micro systems, have you heard a particularly strong partner for the new 720AE series that you would recommend?

It is a very personal choice and we would suggest auditioning at least two pairs of speakers within your budget before purchasing. Being under the same ownership as sister company Boston Acoustics means that we work closely with the European speaker design team. As a result, for our demos we would partner the 720 series with a model like the Boston A250 floorstander, or the A26 bookshelf model.

IN SIGHT



AT THE £350 PER UNIT, the Denons face competition from other Japanese brands such as Marantz, Onkyo and Yamaha, all of whom produce amplifiers with similar specifications to the PMA-720AE, and from European designs such as NAD and Cambridge Audio who generally compete just above this price.

The PMA-270AE is as well built as any of them and has an extremely engaging sonic balance thanks to the AHC circuit. The excellent phono stage may tempt vinyl users, but equally the presence of a USB input on Cambridge Audio's 351A might be more interesting for computer audio fans.

The DCD-720AE faces the dedicated CD players from the same manufacturers, but also from DACs like Cambridge Audio's DACMagic Plus and Arcam's rDac, which offer the potential for high resolution audio playback and USB connectivity. The DCD-720AE is largely competitive with rival designs, but in a world where CD is not always the format of choice anymore, it faces stiff competition.

fitted with some equally impressive processing options. In the case of some competitors, they also offer useful features like wireless and Bluetooth connectivity – something that obviously this Denon CD spinner cannot stretch to.

The other challenge comes from Denon itself. As well as the matching amp, the other member of the 720 series is the DNP-720AE network audio player. With high resolution playback on offer, as well as Apple AirPlay and a built-in FM tuner, it does represent a tempting alternative to the CD player and one that any network-savvy customer might want to consider. Denon should be commended for offering both options though, and there is something to be said for the aesthetic and control benefits of having two units from the same manufacturer.

Conclusion

Taken as a pairing for £700, there's a huge amount to like about this Denon duo. Despite the excellent specification and comprehensive feature count, there is no serious compromise in either build quality or sonic performance. Given that this pairing could be up and running with suitable speakers for under £1,000, there is little question that they represent excellent value for money. More importantly they can do justice to loudspeakers that cost considerably more than £300.

Many customers will surely purchase the pair together, but taken on their own, the PMA-720AE amplifier is the star of the show. This is an impressive amplifier and only Rega's rather less comprehensively specified

Brio-R has impressed me as much under £500. With useful reserves of power, a lovely phono stage and surprisingly substantial build quality; it should be on anybody's shortlist. The partnering CD player finds itself facing stiffer competition, but acquires itself well and there is little doubt that they make a very capable partnership indeed. This combo then, is well worth auditioning. ●

Hi-Fi Choice

OUR VERDICT - DCD

SOUND QUALITY ★★★★★	LIKE: Natural and unforced sound; useful USB input
VALUE FOR MONEY ★★★★★	DISLIKE: Slight softness in the bass; no shortage of competition
BUILD QUALITY ★★★★★	WE SAY: Ideal partner for the matching amplifier, but doesn't have the field to itself...
FACILITIES ★★★★★	

OVERALL



Hi-Fi Choice

OUR VERDICT - PMA

SOUND QUALITY ★★★★★	LIKE: Lively and engaging sound; excellent feature set; good build
VALUE FOR MONEY ★★★★★	DISLIKE: Ugly remote; captive mains lead
BUILD QUALITY ★★★★★	WE SAY: Capable and consistently entertaining amplifier that works well with both digital and analogue sources
FACILITIES ★★★★★	

OVERALL



The Shape of Brilliance



DALI Introduces FAZON F5

- Award Winning High Definition Loudspeaker



FAZON F5 is the image of future loudspeaker design and performance, matching the varying moods and needs of your day. From sleepy radio listening in the morning and reflecting music enjoyment in the evening FAZON F5 gets shape into sound and sound into good shape.



IN ADMIRATION OF MUSIC





Great Danes

Channa Vithana reviews the stylish Si 1 Super standmount from Scandinavian loudspeaker specialists Audiovector...

Some things never change – especially if you're Audiovector. This relatively unknown (in the UK at least) company was born back in 1980, its first product being the Trapez – a distinctively shaped, slightly triangular loudspeaker, that was distinguished by its individual upgrade concept (IUC). Basically, the idea is that you can return the speaker to the factory for bespoke upgrades – rather than having to sell it and start all over again. The philosophy endures to this day, at the insistence of company founder and chief engineer Ole Klifoth...

For the past thirty two years, the company has grown steadily, regularly selling to existing customers who tend to develop a strong loyalty to the marque. And why not – it is distinctive and characterful, in its own endearing way. Today's Audiovectors are, of course, very different to those several decades back, but there's still an echo of what won the early designs so many friends, not least the IUC.

Having prior experience with this brand, it came as no surprise to see this DNA present in these latest Si 1 Super standmounts. Along with its crossover, the venting of the tweeter at the rear gives the Audiovector one of its distinctive sonic qualities – that of a wonderful widescreen spatiality that allows for a relatively vast canvas in comparison to its smallish cabinet size. Intriguingly, considering its high-frequency spatial qualities, the Audiovector still allowed every piece of music used to sound unique; to have distinct identity, instead of homogenising everything to sound the same, it didn't impose itself on the music.

The aforementioned Audiovector upgrade options are, I think, a really good strategy, both for the company (in keeping customers), but also in terms of sustainability in that you

can have better performance without having to sell on and/or buy another loudspeaker which would have cost more in materials for the manufacturer to produce and more of your money and time to buy. To this end Audiovector says that you can save approximately forty percent by upgrading with them compared to trading-in. The Si 1 Super sits one up from the standard Si 1, but can be upgraded with enhanced drive units, components and resultant (claimed) frequency response figures to Signature (£2,150), or Avantgarde (£3,250) and finally the Avantgarde Arreté (£3,900), these are full price figures – check with Audiovector's distributor for specific upgrade prices from model to model.

Build quality is *superlative*. It is elegantly styled and finished in classical Danish traditions of design, materiality and craftsmanship. There are some nice flourishes such as the magnetic fixings for the grilles and



► DETAILS

PRODUCT: Audiovector Si 1 Super
ORIGIN: Denmark
TYPE: standmount loudspeaker
WEIGHT: 10kg
DIMENSIONS: 370x190x260mm
FEATURES:
• specified sensitivity: 87dB
• specified impedance: 8 Ohm
• tweeter: rear-ported 25mm silk/carbon-fibre dome
• mid/bass: rear-ported glass-fibre/carbon-fibre sandwich cone with titanium voice-coil former
• curved 19mm fibreboard cabinet
• laminated reinforced front/rear baffles
• upgradable to higher specification
DISTRIBUTOR: Henley Designs
TELEPHONE: +44 (0)1235 511 166
WEBSITE: henleydesigns.co.uk

the machined logo to the three-point fixing for the drive-units. At the rear are two ports for the treble and mid/bass drivers, while there is also bi-wire/bi-amping facility with four binding-posts that Audiovector says is better than single-wiring for sound quality. The Si 1 Super speakers come in a choice of Maple, Cherry, Rosewood and Black Ash finishes at £1,700 and a very handsome looking Matte White for £1,830. There is also a matching curved top stand for the Si series at £500.

Sound quality

After a generous running in period, my listening started with classical music, in the form of John Ward's *Consort Music for Five and Six Viols: Phantasm*. This was presented in a strikingly clear and open manner with intricate detail into the interplay between the treble and tenor and bass viols – enticing stuff! Changing to the rather different and rather undeniably more populist strains of Vanessa Paradis' eponymous 1992 album, and it showed how the Audiovectors allowed the intrinsic

Jean Michel Jarre's *Oxygene 4* remaster was open and clear, yet highly enveloping

quality of the recording to come through intact. Here the lightweight yet enchantingly French accented vocals of Paradis were perfectly set within the sixties-styled pop-soul vibe from Lenny Kravitz. The slick and intricate drumming, and the deft interplay between instrumental and vocal melodies on *Be My Baby* and *Natural High* were really good, yet revealing enough to discern every sweeping melodic triumph, and the occasional note-imperfection, too!

Jean Michel Jarre's *Oxygene 4* from the fine-sounding *Essentials* remaster was open and clear, yet highly enveloping. It was rendered just right, immersing the listener in that famous melodic analogue soundbath so characteristic of Jarre's classic nineteen seventies era output. Neil Young's *If I Could Have Her Tonight* from his eponymous album was crisp, expressive and soulful. His trademark plaintive vocal delivery – where he sings with that curious sense of longing and whimsy – is mixed with some crunching folk-rock Americana from his backing band, with Young on guitar, piano, pipe organ and harpsichord. ►

Q&A

CHANNA VITHANA SPOKE TO AUDIOVECTOR'S CEO AND CHIEF ENGINEER OLE KLIFOTH...



HFC: How easy is it to upgrade the Si 1 to Signature, Avantgarde and Avantgarde Arreté status?

OK: The speakers will have to go to our factory in Copenhagen to have the upgrade carried out. They will be returned; upgraded, cleaned, small dents repaired and packed in new cartons with a full 5-year warranty.

What materials are used in the tweeter, and how do these provide good sound quality?

A 25mm dome made from silk and carbon-fibre makes sure that you get a detailed performance and a frequency response up to around 24kHz. Special low viscosity ferro-fluid is used to cool the coil. This reduces distortion and compression while keeping the transient response fast. Power rating is 1,000 watts, tone-burst for 1ms.

How does the vented port for the tweeter work, and why is it used?

Most companies fight with the rear radiation of the dome by absorbing it in transmission lines, in rear chambers or choose not to fight it at all. We invented an open back system where you use the rear radiation (intelligently we think) to create better soundstage and better dynamics...

What materials are used in the mid/bass drive-unit and why?

It uses a magnesium alloy chassis, which is very open in order to obtain good transient response. It has three fixing points because this is the ideal way to minimise driver/cabinet interaction distortion. The voice coil former is made from titanium. Certainly not the least expensive material, but again, a lot has been done to minimise compression related distortion. Titanium is non-magnetic, unlike aluminium and can, therefore, move freely. The magnet itself is optimised for lowest possible distortion. The membrane is a four-part sandwich construction, which lives up to the common ideal for membranes: light, stiff, dead. A combination of carbon-fibre and glass-fibre is laminated to a light and hard pulp membrane using glue.

HOW IT COMPARES

THE £1,700 AUDIOVECTOR sits between certain 'camps' of loudspeaker design when it comes to 'character' or lack thereof. For example, the Swedish designed, Chinese-made XTZ 99.36MKII floorstander at £1,050 and its lower priced standmount variant the 99.26MKII (about £700) both use a type of ribbon tweeter and when set to flat these loudspeakers have a clean, linear musicality and are superb with classical music. However, unlike the Audiovector they also sound a touch cold in the midrange; here, voice and some instruments sound a tad too homogenised. The XTZs are also harder to drive than the Audiovector demanding higher priced amplification than their upper budget status would otherwise suggest.

Audiosmile's wonderful little Kensai (usually £1,900, but at time of writing on offer at just over £1,500) is a more musically charismatic design than the XTZ models, and has a finer high frequency response than the Audiovector, if not quite as widescreen in its spread of sound into the room, or as deep. The Kensai has excellent bass tunefulness, and times superbly. It is, therefore, a little better than the Audiovector in this regard, but it has a much lower sensitivity at 83dB and lower 60hm impedance in comparison, so will be trickier to drive. You'll need a meaty transistor amplifier of around 80W RMS per channel, at the very least, to get the best from these. The Kensai, being smaller, is also rather less well suited to larger rooms than the Audiovector.

IN SIGHT



- 1 25mm silk/carbon-fibre dome tweeter
- 2 high quality, rigid front baffle
- 3 rear venting port for tweeter
- 4 bi-wirable speaker binding posts
- 5 carbon-fibre/glass fibre/pulp woofer
- 6 superb quality wood veneers

The Audiovectors captured this beautifully – there was precious little sense of compression, and a wide and capacious soundstage. At the same time, I found their tonality to be very good, with little sense of the drive units adding their own distinctive take on the proceedings. While the S1s are never going to give electrostatic levels of transparency, still they didn't interfere too much with the recording, letting its natural flavour pour forth into the listening room.

Given that they cost £1,700, you would quite rightly expect them to be neutral and open. But the S1s seemed to go just a little further than this, giving a window on to a musical world that few similarly priced loudspeakers can.

The obvious criticism is, of course, the relatively limited bass, and a certain tendency to sound slightly more dynamically compressed than some similarly priced floorstanders. For example, Monitor Audio's GX200 (which can be had for a whisker under £2,000) presented a slightly clearer midrange that benefitted vocals from Paradis and Young. But still I loved the Audiovectors' orderly, structured musicality – this was especially noticeable when listening to the instrumentation on the *Phantasm* classical piece. The Audiovectors proved superior in the way they were able to keep the identity of each strand of the music more intact, as well as giving a noticeably more open and spacious sound to the recorded acoustic.

Conclusion

Although there's nothing remarkable in the way the Audiovector Si 1 Super is designed – there's no headline-grabbing trick tweeter, novel cabinet design or special mid/bass unit – it is undoubtedly superbly engineered and obviously very well finessed too. The result is a loudspeaker that isn't flashy, showy or gimmicky – it just gets on with the job of letting the music seduce you.

It's possible to think of it as the loudspeaker equivalent of Michell's GyroDec turntable. This means it offers up a beautifully widescreen space for music to breathe freely, which is a feat considering the relative compactness of these boxes. These loudspeakers are superbly engineered and very elegantly designed, and are made all the better by Audiovector's IUC upgrades. There's much to like here, they're well worth an audition. ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Expansive soundstage; neutral tonality; build and finish; upgrade options

VALUE FOR MONEY



DISLIKE: Sensitive to cables; slightly veiled midrange with vocals

BUILD QUALITY



WE SAY: Superlative build and finish allied to a fine, widescreen sound

EASE OF DRIVE



OVERALL

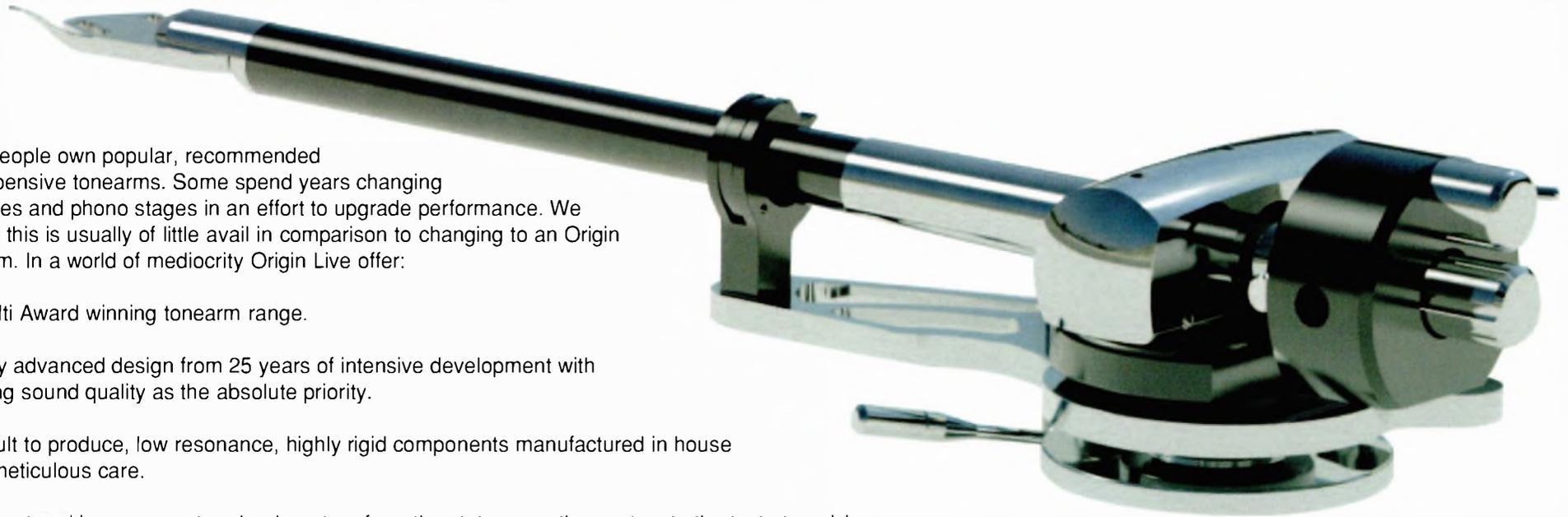


"HOW TO AVOID INEFFECTIVE CHOICES"

Many people own popular, recommended and expensive tonearms. Some spend years changing cartridges and phono stages in an effort to upgrade performance. We are told this is usually of little avail in comparison to changing to an Origin Live Arm. In a world of mediocrity Origin Live offer:

- A Multi Award winning tonearm range.
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Enterprise



Enterprise



Conqueror





Head start

Need an affordable preamplifier, and into headphones? Step forward Musical Fidelity's M1 HPAP, says **James Michael Hughes**...

Way back when in the nineteen seventies, most headphone sockets were fed from an amplifier's loudspeaker outputs via series resistors that attenuated the signal. This was essential with most moving-coil 'phones, lest the sound came out far too loud. Unfortunately, having resistors in the signal path meant the 'phones were not being driven from a low source impedance – something which adversely affected clarity and dynamics, as well as top-end smoothness and atmosphere.

The past ten or fifteen years have brought new headphones to market that are both highly revealing and difficult to drive. Headphone listening tends to be demanding; you get lots of detail, but also hear the slightest flaw or fault. Even the tiniest bit of hum or hiss tends to be very apparent. Also, the tracking of the volume control needs to be

super-accurate, especially at low levels, otherwise one channel may fade down before the other.

Musical Fidelity's Antony Michaelson is a lifelong fan of headphones and regularly uses them at home for critical/recreational listening. Hence, MF's emphasis on high-quality headphone amplifiers in its product line up over the years. It was this passion for cans that originally led him to develop a small pure Class A power amp specifically designed to drive headphones. He was so delighted with the result that he decided to add a headphone amp to his range of products. A compact high-quality amplifier with good power supply and short signal paths should deliver clean sound, improved fine detail and wider dynamics. These qualities neatly encapsulate the strengths of the M1 HPAP.

Of course, dedicated headphone amps are something of a niche

► DETAILS

PRODUCT: Musical Fidelity M1 HPAP

ORIGIN: UK/Taiwan

TYPE: headphone amplifier/line level preamp

WEIGHT: 3.4kg

DIMENSIONS: 220x300x100mm

FEATURES:
• provision for two sets of headphones
• USB connection

• line-level preamplifier
• internal power supply

DISTRIBUTOR: Musical Fidelity

TELEPHONE: 0208 900 2866

WEBSITE: musicalfidelity.com

product; their appeal is limited since many do not listen to headphones at home. Luckily, the HPAP has something else to offer. It performs superbly as a line-level preamplifier. The early HPA had no line output sockets, so you had to use one of its headphone outputs via an adaptor to drive your power amp. This proved a tad inelegant. So, later HPAs were furnished with a set of output sockets to allow connection to a power amp. With the HPAP (the P stands for preamp) you have what is, in effect, a simple preamplifier offering two line level inputs, a USB input, plus 1/4inch jack outputs for two sets of 'phones. A separate output drives your power amplifier, if need be. The HPAP is solidly-made and beautifully finished. The elegant metal casework exudes a classy understated appearance, and the controls operate smoothly and crisply.

Sound quality

To my ears, the HPAP's quality of sound invites comparison with preamps costing five or more times its modest £499 asking price. Make no mistake; the HPAP is real budget esoterica. It offers a taste of high end for silly money. This makes it worth buying, even if you don't own headphones, and never intend to buy a set. For example, those on a tight budget wanting to try USB audio from a computer (but having no USB input) should check out the HPAP. Headphone listening is of course a highly personal thing – not everyone



THE NEW MUSICAL FIDELITY HPAP is technically identical to the older HPA, save for the addition of an extra line input. It delivers a claimed 1.1W into 32 Ohms, with an output impedance of less than 1 ohm.

The HPAP is good at driving difficult loads. As a line preamplifier, the low source impedance of the output ensures it's able to work with long runs of cable between preamplifier and power amps.

Maximum output is a quoted 5.2V, and a frequency range of 15Hz to 75kHz (-3dB) is claimed. Noise is rated at less than 109dB 'A' weighted. Claimed distortion is extremely low – less than 0.008 percent from 10Hz to 20kHz.

The USB socket should accept CD, MP3, WAV, AAC, FLAC, and other audio file types. There's a built-in 48kHz 16-bit DAC with 8 times oversampling. The USB digital input is compatible with Windows 98, ME, 2000, XP, Vista, and 7, along with Mac OS X Snow Leopard, and later operating systems. Power consumption is around 25W. It can be powered from any mains voltage between 90V and 250V at 50/60Hz. If you don't mind its limited inputs, it's an effective little box.

enjoys the experience. However, with a dedicated amplifier of HPAP calibre, and a good set of headphones, superb results can be achieved at a very reasonable price. Compared to the quality of sound you might get from a typical amplifier (with its headphone socket padded down from the speaker output), the HPAP sounds cleaner and more purposeful, with greater immediacy and a wider dynamic range. Bass is firm, clean and very controlled. Tonally, the results are crisp, immediate and detailed. With all but the most inefficient headphones, the HPA has power to spare and can produce fairly high sound pressure levels.

Using a pair of old AKG K340s (an inefficient electrostatic-dynamic hybrid) I was actually able to turn the HPAP's volume control to maximum without encountering noticeable clipping distortion. The sound was loud, but not uncomfortably so. Being Pure Class A with low output impedance (less than one ohm) the HPAP is able to drive even pretty difficult headphones like the AKGs with relative ease.

The HPAP's noise levels are vanishingly low, regardless of level setting, and the left/right tracking of the volume control is excellent even at low settings. Used as a preamplifier, the HPAP has some restrictions – you've just two sets of line inputs. But for anyone on a tight budget wanting outstanding sonic results, such functional limitations are well worth putting up with. It sounds very clean and focused, with good detail and a wide dynamic range.

You can tell that signal paths are very short with the HPAP; there's a crisp, clean, direct quality about the sound that is unmistakable. The musical presentation is brilliantly

focused, with outstanding immediacy and keen attack. Even if you prefer another (more expensive) preamp to the HPAP, it's likely to be a close-run thing. The HPAP weaves its own spell, and needs no excuses making for it – it's that good.

While comparing the HPAP against the much more expensive Classe CP-800, and MF's own (discontinued) kW preamp, I was repeatedly impressed by the clarity and crisp directness of the HPAP's presentation. It really grabs your attention, and makes you sit up and listen. There's a holographic quality about the sound that makes voices and instruments project from the speaker boxes with impressive dimensionality.

The presentation will appeal to those who go for a lively and detailed sound...

Using headphones, I felt the CP-800 and HPAP sounded very close – with maybe a slight nod to the latter in terms of top-end cleanness and a richer, fuller bass. But it was a close call; the two sounded comparable. Obviously, bigger more costly preamps like the CP-800 are hugely more versatile, offering extras like tone controls, balanced inputs/outputs, built-in DACs, remote control, etc. You get your money's worth in more ways than one.

However, leaving aside the limitations and restrictions of the HPAP, it's very competitive in terms of sound quality. Partner it with MF's super little M1 PWR power amp, and you've a fabulous combination at a very reasonable price. Add a second M1 PWR power amp, and sonic performance improves still further,

creating a real giant-killer of an amplifier at a remarkably wallet-friendly price. You could pay a lot more without achieving anything like as good a sound.

Conclusion

For anyone serious about 'phones, Musical Fidelity's M1 HPAP is well worth a listen. It's a reasonably-priced, high-quality piece of kit that offers outstandingly good results from a small, neat package. The presentation is crisp and immediate, and will appeal to those who go for a lively detailed sort of sound that has lots of presence. Although tonally quite bright, the HPAP sounds very clean. It's sharp, but not 'thin' or lacking in substance.

Choose your headphones wisely, and you'll have a package that rivals the sonic performance of large expensive loudspeakers and amplifiers at a fraction of the price. And the HPAP delivers equally good results when used as a line-level preamplifier. You might have to pay over five times the HPAP's asking price to significantly better its sonic performance. If that isn't value, I don't know what is! ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Fine sound; outstanding value

VALUE FOR MONEY



DISLIKE: Very limited number of inputs

BUILD QUALITY



WE SAY: A high quality headphone amplifier that really rocks, and it's also a super line-level preamp, too!

FEATURES



OVERALL



CONNECTIONS



- 1 preamplifier output
- 2 line output
- 3 line input
- 4 USB digital input
- 5 IEC mains input

Drop into one of our **Top 20**

The Music Chain

Much is written about music and the musicians who entertain us, and we rightly exalt great musicians. But there is an interlinked chain of participants, two of which are I believe are crucial to our music scene in today's world.

For centuries the music chain was a very short one – composers or songwriters, musicians and listeners, and the judgement on quality was immediate.

Recording technologies have changed all this exponentially.

Today, we listen to most of our music from a recording and this gives recording engineers the opportunity to avoid poor acoustics, duff notes and off days. This, of course, means the chain has grown to include the recording engineers, the music distribution system (retailers or downloads), hi-fi manufacturers, hi-fi sellers and the hi-fi purchasers, the latter being the listeners.

I should start by saying that hi-fi has become an adulterated term that no longer has its original meaning because it's applied to much equipment that certainly should not be termed high-fidelity.

It's said that a chain is only as strong as its weakest link.

However, I believe there are two particularly strong

links that, if removed from the chain, would seriously damage the quality of recorded music. These are the audiophile, or hi-fi connoisseur, and the specialist hi-fi

retailer, the latter in nearly all cases also being the former because it's their interest that has driven them into their particular business. These are the people who most appreciate how exciting and involving music can be and how it can deliver an emotional experience.

Hi-Fi Connoisseurs

So why is the hi-fi connoisseur so important to the music industry? By their nature, audiophiles are generally avid music lovers who enhance their enjoyment through listening to music at its very best quality level, which means playing great recordings through hi-end hi-fi to achieve the most outstanding results.

Without the audiophile, the main driver for quality would probably be removed from the chain. Let's be honest, over recent years the majority of music listeners now settle for MP3 convenience and, therefore, mediocre sound quality, that is 'pre-ruined' music. If the pendulum ever swings so far that all but a few listen to highly compressed formats such as MP3, music producers will not waste their resources on producing high quality recordings because it would be commercially unnecessary, even if their recording engineers wanted to achieve the best they could. After all, an MP3 or AAC file, the iTunes default format, downloaded at 128 kbps (the most popular download speed), is about one-eleventh the size of a full resolution CD track, 1411 kbps, so the quality is inevitably far inferior. Information is irretrievably lost and the full dynamic

range is lacking. Using an iPod while jogging does not really raise a quality issue but playing low-resolution tracks through an iPod docking station that feeds into a decent hi-fi system, is a disaster area. It's rubbish quality made louder. Fortunately, there is still significant demand from audiophiles committed to sound quality to sustain the production of high quality recordings, but it would be a tragedy

if there weren't. For example, most classical recordings downloaded as an MP3 or AAC file are a complete waste of time because there is so much information missing that they are reduced to just the essence of a tune.

Specialist Hi-Fi Retailers

Just as essential a link in the chain as the hi-fi connoisseur is the specialist hi-fi retailer and the two are rightly dependent on each other. Without the specialist retailer the hi-end hi-fi manufacturer would have to rely on the internet and hi-fi magazine reviewers to try and assess the relative merits and performance of their products against that of their competitors – a notoriously unreliable decision making process. Specialist hi-fi retailers are constantly being offered new products for assessment and potential stocking and, as it is also their hobby as well as their livelihood, they are greatly interested in achieving the best performance and seeking out the most outstanding products and combinations. More than that though is their relationship with audiophiles for, if they are to stay in business, they must satisfy the most discerning customers in the industry. The reality is that audiophiles and specialist hi-fi retailers are essential to each other.



UK Hi-Fi Dealers near you



Future of Recorded Music

What are the future prospects of maintaining high quality music recordings? We must hope that audiophiles, or hi-fi connoisseurs, or perhaps most accurately described, music lovers, will continue to drive the demand for quality. But another important reason for hope within the mass-market is that there is no longer any over-riding reason for MP3 and AAC to have such a following. These formats were designed to overcome very slow download speeds and expensive memory capacity. These are not significant factors for most people now. Full resolution audio streaming, as well as CD quality downloads, are already available and will become the norm as the wider public becomes aware of the tremendous quality benefit. This has happened with HD TV so we know this awareness can grow rapidly. In the meantime, we must highly value hi-fi connoisseurs and specialist hi-fi retailers, of which the ones listed on this page represent the UK's finest. Specialist dealers know how to choose the products that combine as a superb system and how to get the best out of it by expert installation in the home. If there's a price premium over an internet purchase, it's probably a small one, but it's unquestionably worth the difference.



STAR QUALITIES

VALUE FOR MONEY.....	★ ★ ★ ★ ★
SERVICE.....	★ ★ ★ ★ ★
FACILITIES.....	★ ★ ★ ★ ★
VERDICT.....	★ ★ ★ ★ ★



OUR TOP 20 UK HI-FI DEALERS

SOUTH

Ashford, Kent

SOUNDCRAFT HI-FI
40 High Street.
t: 01233 624441
www.soundcraft-hifi.com

Chelmsford, Essex

RAYLEIGH HI-FI SOUND & VISION
216 Moulsham Street.
t: 01245 265245
www.rayleighhifi.com

E. Grinstead, W. Sussex

AUDIO DESIGNS
26 High Street.
t: 01342 328065
www.audiodesigns.co.uk

Kingston-upon-Thames

INFIDELITY
9 High Street,
Hampton Wick.
t: 020 8943 3530
www.infidelity.co.uk

Maidenhead

AUDIO VENUE
36 Queen Street.
t: 01628 633995
www.audiovenue.com

Norwich, Norfolk

MARTINS HI-FI
85-91 Ber Street.
t: 01603 627134
www.martinshifi.co.uk

Rayleigh, Essex

RAYLEIGH HI-FI
44a High Street.
t: 01268 779762
www.rayleighhifi.com

Southend-on-Sea, Essex

RAYLEIGH HI-FI SOUND & VISION
132/4 London Road.
t: 01702 435255
www.rayleighhifi.com

LONDON

Ealing

AUDIO VENUE
27 Bond Street.
t: 020 8567 8703
www.audiovenue.com

N1

GRAHAMS HI-FI
190a New North Road.
t: 020 7226 5500
www.grahams.co.uk

SW11

ORANGES & LEMONS
61/63 Webbs Road.
t: 020 7924 2043
www.oandlhifi.co.uk

SW20

O'BRIEN HI-FI
60 Durham Road.
t: 020 8946 1528
www.obrienhifi.com

SOUTH WEST

Bath

AUDIENCE
14 Broad Street.
t: 01225 333310
www.audience.org.uk

Exeter

GULLIFORD HI-FI
97 Sidwell Street.
t: 01392 491194
www.gullifordhifi.co.uk

MIDLANDS

Banbury

OVERTURE
3 Church Lane.
t: 01295 272158
www.overture.co.uk

Birmingham

MUSIC MATTERS
363 Hagley Road, Edgbaston.
t: 0121 429 2811
www.musicmatters.co.uk

Coventry

FRANK HARVEY
163 Spon Street.
t: 024 7652 5200
www.frankharvey.co.uk

Leicester

CYMBIOSIS
6 Hotel Street.
t: 0116 262 3754
www.cymbiosis.com

Nottingham

CASTLE SOUND & VISION
48/50 Maid Marian Way.
t: 0115 9584404
www.castlesoundvision.com

NORTH

Cheadle

THE AUDIO WORKS
14 Stockport Road.
t: 0161 428 7887
www.theaudioworks.co.uk

Chester

ACOUSTICA
17 Hoole Road.
t: 01244 344227
www.acoustica.co.uk

Hull

THE AUDIO ROOM
2 George Street, Hedon
t: 01482 891375
www.theaudiroom.co.uk

York

SOUND ORGANISATION
2 Gillygate.
t: 01904 627108
www.soundorg.co.uk

These specialist dealers have been selected because they are known to do an excellent job in guiding customers towards hi-fi that will give years of musical enjoyment and total satisfaction.



Power NAP

QNAP's TS-469 Pro is the latest arrival from one of the market's leading Network Attached Storage suppliers. *Patrick Cleasby* samples it...

It's taken a while, but roughly a decade after the first 'Squeezebox' emerged blinking into the world (called SlimDevices, back then), the inevitable is finally happening and the world seems to be migrating to computer-based audio in earnest. Suddenly, respectable people who'd never previously shown the slightest interest in the vagaries of hard disks (except when they go wrong) now find themselves peering at price lists and imagining a world where they've got umpteen terrabytes of music files in a box stored somewhere out of the way.

It doesn't just stop there, though. When you do start to play with serving audio to network players, you invariably move along a path from running Squeeze, Twonky or Asset on a computer, to simple NAS drives with embedded server

software like Western Digital's World Editions, and more recent connected offerings. After that, even if you don't know it yet, you will most likely end up wanting to run some kind of RAID-protected NAS unit...

In this market there are two leading contenders – Synology and QNAP, both of which supply wide ranges of server devices for home and small business uses. They are supplied without drives, so you put in the SATA drives of your choice (within the compatibility guidelines set out on the websites) – so don't forget to factor in disk costs. The TS-469 supports 6GB/s drives up to 4TB, so this four-slot machine could give you 16TB raw storage capacity at the moment. Beyond the basics, these devices can also seem frighteningly overloaded with functionality you will never use (iSCSI anyone?).

► DETAILS

PRODUCT: QNAP TS-469 Pro
ORIGIN: Taiwan
TYPE: RAID-capable NAS
WEIGHT: 3.65kg
DIMENSIONS: (WxHxD) 177x235x180mm
FEATURES:
• dual Core 2.13GHz Intel Atom processor
• 1GB RAM, expandable to 3GB
• dual Gigabit Ethernet
• 2 rear-mounted USB 3.0 ports
• 2 rear-mounted e-SATA ports
• 5 rear- and front-mounted USB 2.0 ports
• HDMI port for future use
DISTRIBUTOR: QNAP
TELEPHONE: 0203 608 1969
WEBSITE: qnap.com

This is true – they are – but they do give us various flavours of embedded music serving software, and vitally the ability to protect our valuable music collections against hard drive failure through the use of RAID technology.

Apologies for the acronymic overload, but the concept of RAID is an important one to get here. It stands for Redundant Array Of Inexpensive Disk and has been the central tenet of server storage resilience in corporate computing for the last three decades, while I have been working in the field. There are many more complex RAID schemes, but the basic three it is essential to grasp are as follows. RAID-0 (or striping) gives you no protection, but gives you speed by aggregating multiple disks' performance. RAID-1 (or mirroring) is sometimes used in home audio applications as it means that a pair of disks contain exactly the same information as each other, giving you full redundancy at the cost of half of your total capacity. RAID-5 is the most common server format. A portion of each disk is reserved for parity information, which means that any one disk can be reconstituted in the event of failure from the information saved across the others, at the loss of around one disk's worth of the set's capacity.

Becoming concerned that all the maintenance effort I had put into my beloved digital music collection was at risk of loss at any moment, my



YOUR KEY INTERACTION with a NAS unit is going to be through its web interface, and the QNAP's, while a tad technical for the uninitiated, exposes everything you need in a no-nonsense way. Competitors Synology go for a slightly prettier approach with their OS-like browser. Both have pretty straightforward auto-setup options for novices.

QNAP's Web File Manager – like a Windows Explorer for the NAS – is also a very useful tool which I feel scores over the Synology.

The cheaper QNAPs and Synologys rely on lights and beeps for status indication. One of the key improvements of the TS-469 is its full text LED status display, although this is only going to be useful to you during (hopefully) infrequent reboots.

If you're a geeky technician then you'll want the full detail of the QNAP approach, and probably the RAM expansion too. The more technophobic will surely prefer Synology, but you will still have to confront some very 'I.T.' concepts to get the most out of your NAS. Still, it's a lot easier than setting up than an expensive high end turntable!

own personal first leap into RAID-ed NAS territory was a mis-step, as going for the RAID protection line first, I got QNAP's (then) cheapest four disk solution, the now end-of-line TS-410. As with most things computer-ish, one should go for the most power one can afford – it will always prove useful later on. In short, the issue with the TS-410 was that running Logitech Media Server over a large collection was too much for the limited ARM processor and 512MB of fixed RAM, with attempts to refresh the database taking an unforgivable amount of time (days for a few changes)! Come back CD, all is forgiven, I muttered to myself...

General operations such as accessing one's collection via an SMB (Windows-type) share from the server in Windows Explorer on a PC or Finder on a Mac could also be compromised on an underpowered device. These machines are having to maintain the RAID volume in software, at the same time as running whatever network sharing you require, at the same time as running your choice of music server. That requires a lot of computing power to avoid stuttering on either the vital music streaming or slowdown on computer file access for additions or metadata changes.

QNAP's beefier, Intel Atom-powered devices were historically way more expensive, but with the arrival of the TS-469 Pro, the desirable aspects of the likes of the previous TS-459 Pro II are attainable at a much more reasonable price. The big step-ups are the power of the processor(s), the addition of USB 3.0 ports which make for a much speedier backup, (RAID should never be taken to be a replacement for backup!), and usefully a spare memory slot allowing the base 1GB of memory

to be taken up to 3GB in total with a 2GB chip. These can be found from some Amazon suppliers for less than £30 – a worthy insurance policy at that price. Some would argue that this amount of memory is overkill for audio applications, but do you want your NAS system to *never* have an excuse for not streaming successfully, or don't you?

As solid and well-built as its predecessors, boot up is the expected matter of minutes...

Once unboxed, you have to screw your hard disk drives of choice in to the four caddies provided, plug in the power which is now direct IEC in, connect either one or both of the Ethernet ports provided to your network via a router and fire it up. The TS-469 seems as solid as its predecessors, and boot up is the expected matter of minutes. The easiest way to administer it for the first time is to use the QNAP Qfinder application on either PC or Mac, and then follow the setup instructions for RAID-5 from the web client.

Under normal running conditions, the base 1GB memory easily accommodates Squeeze operation – but if you never want to be bothered by the slowing effects of some of the memory paging out to disk, expand it. Practically speaking, the benefits of this 2GB addition can be easily be seen in the graph of system memory usage under heavy load.

One of the joys of moving up from the lower QNAPs is that the drives simply transfer from one machine to another and are immediately understood as a valid RAID volume. This is not the case for every model

in the range however – so check the QNAP website for valid upgrade paths. Siting for noise and cooling is also an important consideration, but the intelligent fan means that disk activity noises will be your biggest bugbear.

In use

Fired up and piping The Band's *The Weight* via Ethernet into my Squeezebox Touch next door, the sonic presentation seemed an improvement over the previous system. For me, the primary assessment of musical quality from any Network Attached Storage device amounts to, 'is playback interruption-free, no matter what other activity is going on on the system'. With the TS-469 Pro, it is.

Finally, AV enthusiasts might be interested in the addition of an HDMI port to the rear of the TS-469 Pro. QNAP will soon be announcing an enhancement for the x69 series, allowing it not only to serve as a storage solution but also as a serious multimedia hub, providing high-definition video streaming and web surfing on the HD TV via HDMI, via a remote control or smart phone. Sounds promising. ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Reliable, glitch-free operation; decent build; handy text display

VALUE FOR MONEY



DISLIKE: Things will get even faster in future...

BUILD QUALITY



WE SAY: What you need for your audio streaming back-end is a solid, reliable and fast performer – and this is it!

FEATURES



OVERALL



CONNECTIONS

- 1 IEC power socket
- 2 security lock



- 3 HDMI for future use
- 4 RS232 interface lead
- 5 USB 3.0 socket
- 6 USB 2.0 socket
- 7 Ethernet socket
- 8 E-sata socket



OXYGENE

LESS IS MORE



Oxygene Integrated Amplifier



Oxygene CD Player

Every now and then something comes along that completely changes the way we perceive our needs. The new Oxygene range from Roksan Audio is just such a concept. Standing out as the company's new flagship, Oxygene incorporates unrivalled sound performance into a stylish housing with innovative touch-sensitive controls, resulting in a highly desirable package.

Available for demonstration from only the finest Hi-Fi Retailers, October 2012.

ROKSAN

Roksan Audio is distributed in the UK by Henley Designs Ltd.
W: www.henleydesigns.co.uk | T: 01235 511 166 | E: sales@henleydesigns.co.uk

Vinyl demand



Creek's popular budget phono stage has just had a major rework. **David Price** auditions the brand new OBH-15mk2...

Creek's first OBH-8 phono stage, launched back in the late nineteen nineties, cost well under two hundred pounds. Sonically, it was a revelation, offering real quality at a fraction of the price of the other established favourites. The OBH-15 followed a few years later – adding switchable moving magnet and moving coil operation – and continued to wow the budget end of the market. Now though, after some four years, it's been updated again. Creek's head of analogue engineering David Gamble has come up with what's described as a 'clean sheet' design using a discrete transistor moving-coil circuit, together with a moving-magnet stage with active RIAA equalisation.

Considering its modest £300 retail price, the new OBH-15mk2 is unusually flexible in terms of cartridge matching. It sports adjustable 40, 50, 60 and 70dB gain, input resistance and capacitance matching, plus switchable IEC roll-off – all done by tiny and rather fiddly dip switches on the underside of the unit. However, this is the least worst solution (at this price) as the alternative is to put them inside a closed case, which then requires five minutes fiddling with an Allen key to open.

The back panel sports a push-button MM/MC selector, and there are separate RCA phono sockets for either type of cartridge, so you can effectively hook up two turntables and switch between them. Creek says that a high gain MC version, for low output MC cartridges, is available to order – standard (quoted) gain is 37dB (MM) and 56dB (MC).

The new phono stage comes in the standard Creek OBH casework, which wins no prizes for style, but it is

decently finished at the price, and nicely screwed together with a 4mm aluminium front panel. Another benefit is that at just 150mm deep, it is small and unobtrusive, meaning it can be stowed away neatly behind an equipment rack, rather than displacing something else larger on your shelves. Still, wherever you put it, make sure it's away from vibration – putting in on the floor made it sound audibly worse.

The new phono stage is said to be able to drive longer cables, due to its low output impedance. It has discrete semiconductor circuitry for input and gain stages, with added improved open loop gain by cascading them, prior to the selector switch and combined passive RIAA circuit. Separate Burr-Brown professional grade low-noise op-amps are used for each channel, to buffer the output signal and provide a very low impedance drive to any preamp or integrated amplifier. Internally, the OBH-15 uses a glass-fibre double-sided, plated-through-hole printed circuit board and what Creek says are 'very high-grade components'.



DETAILS

PRODUCT:
Creek OBH-15mk2

ORIGIN:
UK

TYPE:
MM and MC
phono stage

DIMENSIONS:
(WxHxD)
150x100x66mm

WEIGHT:
3kg

FEATURES:
• quoted gain:
37dB MM,
56dB MC

• quoted distortion:
<0.03% MM
<0.05% MC

• quoted RIAA:
deviation
+/-0.5dB

• quoted input
sensitivity/
impedance:
3.5mV/47K
ohm/220pF (MM)
0.5mV/1000
ohm/3300pF (MC)

DISTRIBUTOR:
Creek

TELEPHONE:
01442 26 0146

WEBSITE:
creekaudio.com

The new phono stage is available in either black or (for the first time) silver, and comes supplied with a 24V, 30mA switched mode OBH-Uni power supply.

Sound quality

To those used to earlier Creek phono stages, there's nothing dramatically different in the OBH-15mk2, it's just better. You get a good deal more detail, superior depth, and a subtle but useful gain in overall musicality, which wasn't exactly lacking in the original incarnation...

If you're not familiar with Creek phono preamps, then you may be surprised by the sound, considering that lowly retail price. For example, cue up Yes's *Owner of a Lonely Heart* and you'll get a spacious soundstage, strong dynamics, lots of detail – that clever Trevor Horn production is a great showcase for the Creek's signal-scavenging skills. Bass is taut, midband clean and crisp, treble sparkling. Ultimately, there's a little flattening of depth perspective, and a faint clouding of the upper mid and treble, but it's still super at the price.

The mark 2 version brings a little more stage depth – 10cc's *I'm Mandy, Fly Me* was surprisingly capacious, the speakers disappearing into the room as only good vinyl can do. Vocals were very immediate, with no trace of nasality that can afflict budget phono stages. Better still, the Creek really carried the tune, stringing together the song's various strands to produce something truly uplifting. I was impressed with the power of the bass too, which pushed hard when called on so to do, but remained taut and tuneful.

This isn't the world's greatest phono preamp, but is amazingly capable considering its price. It will work with a cheap magnetic cartridge, yet sing with a good moving coil. Nothing near the price would sit above it on my shopping list. ●

Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Bouncy, musical sound; detail and grip; cartridge matching options; low price

VALUE FOR MONEY



DISLIKE: Nothing

BUILD QUALITY



WE SAY: Brilliant value no-nonsense phono stage suitable for a wide range of MM and MC cartridges; an essential audition

FEATURES



OVERALL



MUSICAL FIDELITY

M1 CLiC | UNIVERSAL MUSIC CONTROLLER

The M1 CLiC is a universal music controller for digital and analogue sources.



Simple control of the music you love

Network streamed music, wired or wireless connectivity, 2x USB, iPod interface, Internet radio, 3x digital & 3x analogue inputs, variable and fixed outputs.

Ear peace

David Price tries Philips' sweet sounding Fidelio X1, the company's new flagship audiophile headphones...

Time was when Philips was one of the mightiest consumer electronics companies to walk the face of the earth – or the High Street. Back in the nineteen eighties it was at its zenith, having just launched the Compact Disc with technology partner Sony. But sadly it basked just a little too long in all that reflected glory...

Now of course, in the early part of the 'teenies', it is Apple that can do no wrong. But before the dawn comes the darkest hour. Philips' halo had faded in the last decade, but its products coming out now are really beginning to impress again. And with the launch of the Philips Fidelio X1, so this trend continues.

The company hasn't been famed for its audiophile products of late, so the launch of the Fidelio range a couple of years back raised some eyebrows. Philips' new iPod docks were really rather good – it was obvious that some serious audio engineering had been going on in Eindhoven.

The third product in the Fidelio headphone range, the new X1 shares the natural and balanced sound of the L1 and M1 models, but uses an open-back design. It's an avowedly hi-fi product – you'll likely not see it plugged into an iPhone, unless its owner is making a special effort. To wit, it sports a three metre long oxygen-free crystal copper cable that's Kevlar reinforced and woven for low noise, terminating with an old-skool 6.3mm jack plug (a 3.5mm adapter is also provided).

The drive units are said to be specially developed, handpicked and matched 50mm affairs, being light in weight but large in diameter. A radial pattern in the diaphragm is said to prevent break-up. High power neodymium magnets and lightweight voice coils are used. The drivers are affixed to the inside of headphone cup using a tilted plate to align the speaker with the natural

angle of the ear canal, and then set into double-layered, machined aluminium, ear-shells.

The result is a very classy looking pair of headphones, and they're no less nice to wear, either. The comfy earpads are acoustically selected memory foam, covered in breathable velour fabric. These are conjoined by a lightweight mesh hammock, which sits beneath the main leather covered headband – it's a quite similar system to that used by the latest Audio Technicas. Continuing the luxury theme, the earcup frames are hewn from aluminium alloy. Overall, the £270 Fidelio X1 is as well screwed together as any headphone I've encountered under around £400.

Sound quality

Having reviewed a number of similarly priced hi-fi headphones recently, I was very interested in how these beautifully presented cans compared. The answer is very well – they can easily hold their headband up to Sennheiser's uber-popular HD650 and Audio-Technica's ATH-AD900 in terms of sonics.



DETAILS

PRODUCT:
Philips Fidelio X1
ORIGIN:
Holland/China
TYPE:
stereo headphones
WEIGHT:
430g
FEATURES:
• 50mm dynamic drivers
• quoted impedance: 30 ohm
• open-back design
• calf-hide headband
• velour padded earcups
DISTRIBUTOR:
Philips
TELEPHONE:
0844 338 0489
WEBSITE:
philips.co.uk

Indeed, the Fidelios are voiced midway between the two, and it's a very clever compromise.

Whereas the Sennheisers are a little full in the bass and opaque across the mid, and the Audio-Technicas clean and spry from bottom to top, the Philips bring some of the warmth and gentility of the former, with much of the forensic detail of the latter. The result is a very listenable set of cans, as I found on a my traditional torture track, Felt's *Southern State Tapestry*. Full of jangling Rickenbackers, with a particularly unromantic recording style, it can be hard work with some 'phones, but the Fidelio X1 remained smooth and silky. At the same time it really sprayed detail at the listener, showing its superb clarity and focus. Yet this was all done in a highly natural way, however.

Corduroy's *Don't Wait for Monday* is an easier task (because it's a better recording), and the X1s duly signposted the difference clearly. Here we got a wide range, bass-driven sound, with some beautifully silky hi-hat cymbal work up top. Vocals were icily clear, the grain of singer Ben Addison's voice superbly carried without ever descending into distortion. Ditto with the jazz tones of Herbie Hancock's *The Prisoner*, the Philips cans showing their smoothness, sophistication and insight into this lovely late nineteen-sixties Bluenote recording.

Overall, I came away quite beguiled by these new headphones. The Fidelio range isn't some fancy marketing concept; Philips have put real work into it and the results are now bearing fruit. The X1s deliver taut, fulsome bass, a spacious and detailed midband with real polish, and a grown-up treble that's never grating or over accentuated. Factor in the lovely build and they're undeniably excellent value. ●



Hi-Fi Choice

OUR VERDICT

SOUND QUALITY



LIKE: Finely built and finished; smooth, even and musical sound, with real clarity and insight, too

VALUE FOR MONEY



DISLIKE: Absolutely nothing at the price

BUILD QUALITY



WE SAY: Great new headphone from Philips impressive Fidelio range

FEATURES



OVERALL



Choice
exotica

DALI EPICON 6
LOUDSPEAKER £7,800





Soft machine

DALI new high end Epicon 6 loudspeaker sports clever drive unit and cabinet technology.

Jason Kennedy enjoys the gentle touch...

The Epicon series sits in penultimate place in DALI's extensive range just behind the mighty Megaline flagship. There are three Epicons. First is the standmount Epicon 2, which is a two-way. Then there's the 6 seen here, confusingly described as a 'two-and-a-half way plus half way' because of the ribbon supertweeter. And topping the line is the 8 with its dedicated midrange unit, alongside larger bass units than the 6, and which is effectively a three-way plus half way. All three are finished to a phenomenal standard, and the one they sent me matched that finish with its sound...

For Epicon, the company decided to get back to basics, with magnet technology in its cone drivers in an attempt to reduce distortion at this fundamental point. In order to do this, it developed its own software for assessing the behaviour of the voice coil in the magnetic gap that forms the heart of every drive unit's motor system. DALI also had to build a customised measurement set-up for profiling what this software actually achieved, and specifically to see what the magnetic flux did when parameters were changed. The company also brought in expertise from outside the audio industry to help in the quest to bring greater linearity to the transduction process, that is the turning of an electrical signal into a mechanical one that produces sound.

DALI identified a number of issues in this area, including the fact that inductance varies with the position of the coil in the magnetic gap. When the voice coil moves backwards, inductance (as seen by the amplifier) increases. When it moves forwards the opposite occurs and this makes the drive unit difficult to control. DALI's solution to this consists of two aluminium rings around the pole piece, which effectively linearise voice coil inductance.

The second source of distortion that the company has sought to eliminate is that the current running through the voice coil windings modulates the flux in the magnetic gap. That is, variations in the signal cause variations in the strength of the magnetic field that is trying to control the drive unit. The current in the voice coil generates its own flux, albeit at a relatively low level. After extensive research DALI discovered that, by using a granulated iron that's not dissimilar to composite stone in that both are made of fine particles bonded together. Perhaps surprisingly, this material can also be found in the injection mounts of a common rail diesel engine and DALI has called it SMC or soft magnetic compound.

SMC has very low electrical conductivity, and by placing it near the magnetic gap and the voice coil you get a 'substantial reduction' in

► DETAILS

PRODUCT:
DALI Epicon 6

Origin:
Denmark

Type:
floorstanding
loudspeaker

Weight:
29.8kg

Dimensions:
(WxHxD)
232x1025x441mm
plus base

FEATURES:

- sensitivity: 88dB
- nominal impedance: 5 Ohms
- HF driver:
29mm soft dome,
55mm ribbon
- mid/bass drivers:
2x 6.5inch

DISTRIBUTOR:
DALI

TELEPHONE:
0845 644 3537

WEBSITE:
dali-uk.co.uk

current-generated flux modulation, according to the research. Again this means greater magnetic linearity and thus more precise control. The company has produced a white paper with some colourful graphs to prove what it has achieved and if you are of a technical bent then it's worth looking up, but as ever the real proof is in the listening.

The Epicon 6 is a *superbly* finished loudspeaker in an elegant boat tail shape, the finish is the result of ten layers of lacquer which are applied prior to the machining for drive units, ports and terminals because it's so thick. The backbone of the cabinet is 53mm thick and attaches to six layers of laminated MDF that curve round to the 33mm front baffle.

What you can't see are the ventilation cut-outs on the inside around the main drivers, these are designed to assist air flow inside the cabinet, likewise the ports are placed directly behind the main drivers in order to minimise delay and optimise transient response.

The mid/bass drivers have a new generation of DALI's wood fibre cone which has a low loss surround, the company is anti damping because of the non-linearities it introduces,

Motor technology DALI has developed gives this speaker a clear advantage...

preferring to transmit energy rather than trying to turn it into heat.

The dome and ribbon that take care of treble between them are mounted in a diecast aluminium base which has separate enclosures for each driver. The larger-than-average 29mm lightweight dome covers most of the high frequency spectrum, and has fluid cooling for increased power handling. It hands over to a 55mm ribbon which rolls in fully by 15kHz and does the supertweetering. The crossover has its own enclosure in order to avoid the negative effects of pressure variations, the first time I've heard of this being an issue, but Lars Worre explains the logic [in Q&A].

Sound quality

Hooking up the Epicons, you can't help but notice the enormous, shiny binding posts and gold-plated linking bars for anyone not using two runs of cable. The posts I discovered have the ability to clamp a 4mm banana plug and the linking bars have the ability to shut down the sound.



Q&A

JASON KENNEDY SPOKE WITH DALI MD LARS WORRE ABOUT THE EPICON 6...



JK: How did you arrive at your Soft Magnetic Compound (SMC)?

LW: I think it's important to point out that the whole deal with our Linear Drive Magnet system is present when SMC is carefully matched with an optimised use of several aluminium rings. The extremely linear behaviour of inductance versus position/movement, the overall very well controlled inductance versus frequency, and the fact that the inductance is very moderate in itself, can only be obtained with this specific combination of technologies.

The SMC material was introduced through our partner Sintex. However it was just a couple of years ago that the mutual ability to mix our technologies into loudspeaker motors appeared. The material is pretty unique itself, but it is Sintex's ability to mould and bake the material into a sort of ceramic which really makes it interesting. They mould it in our proprietary tools, by which they can shape the proper geometry to combine with the aluminium rings.

Your gold plated links look fantastic but they let down the sound. Are you able to offer links made with your Cordial cable?

If you run single wiring, I recommend that you connect one conductor (let's say plus) to the upper terminal and the other connector (minus) to the lower connector. In that case the link bars sound pretty good, thanks to the material and plating used. We're not planning to do a Cordial wired link, not at least because many customers may prefer to use the cable type they're running from the amplifier.

The crossover has its own enclosure to avoid pressure variations, is this more significant than the effects of resonance on the components?

The purpose of a separate chamber is to eliminate microphonic pick-up, and we have this opportunity mainly on floor-standing speakers with enough internal volume. On Epicon it adds such a minimal extra percentage cost that it was almost a no-brainer.



THERE ARE A NUMBER of alternatives from companies that have as much R&D expertise as DALI, and also the ability to build and finish a speaker well.

For example, Bowers & Wilkins' 803 Diamond (£7,500) also has highly refined magnet systems in its three bass drivers, Kevlar midrange and diamond dome tweeter. This is the speaker to beat at the price, as it matches the Epicon 6 in both finish and technological innovation.

Another big name in the game is Focal, whose Electra 1038 Be (£7,349) also offers three bass drivers, midrange and a Beryllium dome tweeter in a visually striking cabinet that's capable of spectacular results.

One of my own personal favourites at this price is the PMC PB1i Signature, which is a similar size design to the DALI, but with a dedicated midrange dome and PMC's rather effective transmission line bass loading system. Its high sensitivity and power handling might be enough to outgun the Epicon's refinement.

This speaker sounds significantly better bi-wired than single wired, not entirely the fault of the linking bars, but previous experience has shown that the solid link approach (although great to look at) is not sonically beneficial and you're better off linking bi-wire terminals with speaker cable. The Epicon is internally wired with DALI's own Cordial cable and I would imagine this would be the best thing to use for a link – a point I put to the company when we spoke...

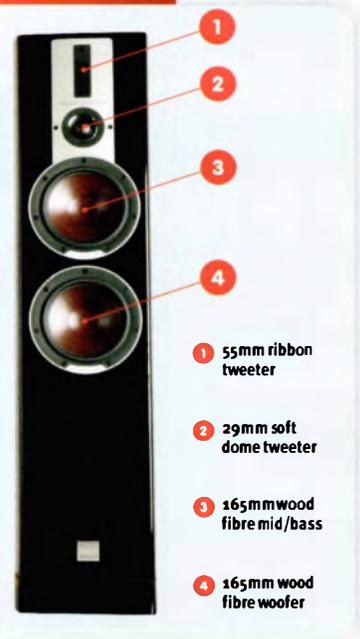
I connected the Epicon to my Valvet A3.5 monoblocks with twin runs of Townshend Isolda speaker cable and sat back for what turned out to be a very enjoyable listening experience. This is a totally effortless speaker. It's not soft or slow or laid back, it's just devoid of glare and grain and has vanishing levels of perceived distortion. This means that it responds to the signal in a swift and revealing fashion, letting you hear the character of the artist and the recording in full effect. Its presentation is replete with detail, the word comes up numerous times in my notes because there is so much to be heard in terms of leading edges, timbre and all the subtle nuances that go into turning a sound into a fully figured note.

One thing that struck me early on is the speed of the bass. It seems to have the nimbleness that one associates with midband, yet combines this with extension and power. This quality became even more obvious when I switched to the Leema Tucana integrated amp which has a lot more grip than the Class A Valvets. This combination produced a kick drum that palpably moves the air in the room, so much so that I decided to move the speakers a little further away from the wall such was the prodigiousness of the low end.

The Epicon has uncanny low end dynamics, and this combined with the easy resolution of the rest of the band makes for a thrilling musical experience that never threatens to fatigue. It's particularly good at recreating the atmosphere on a live recording, bringing the concert to your living room, a concert that may have happened decades ago at that.

In my case it was Frank Zappa playing *Yo' Mama* at Hammersmith Odeon in 1978. It may be that I haven't played this piece in a while, but it proved a transporting and emotional experience, the level of communication from musician to audience being extremely powerful. This speaker is exceptionally good

IN SIGHT



at relaying densely packed music in a coherent and easily appreciated fashion, you can hear what's going on across the band even if it's way down in the mix and especially if it's in the bass. Bass player Patrick O'Hearn's contributions to the *Yo' Mama* have never been more clear cut, it reminded me why he is held in such high regard by Zappa *cognoscenti*.

Conclusion

The Epicon 6 is a very impressive and musically revealing loudspeaker that is finished to a standard that even in the high end is above and beyond the call. The motor system technology that DALI has developed gives this speaker clear ability and puts the company in contention with the biggest names in the business. It's expensive, and it needs the right amplifier to sing, but 'twas ever thus. The point is that when you get the system sorted, this becomes a remarkable loudspeaker. ●

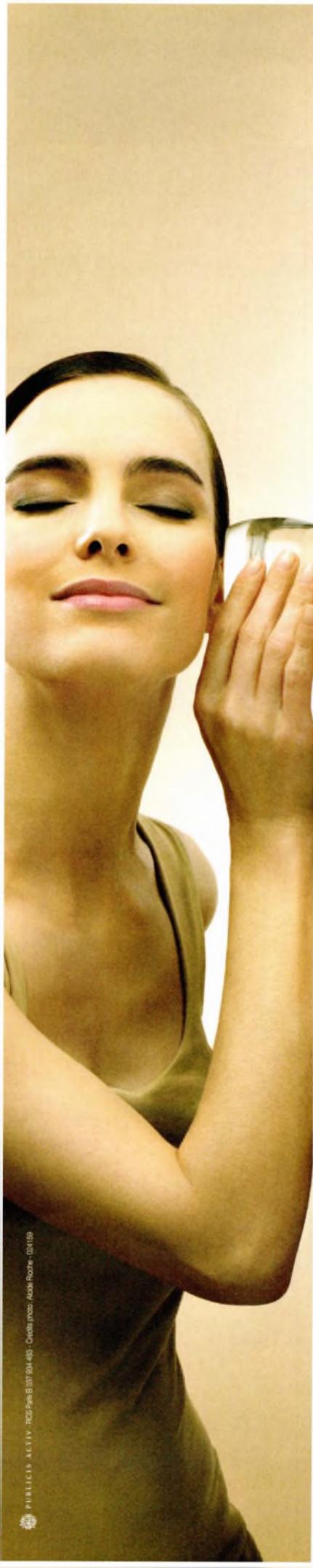
Hi-Fi Choice

OUR VERDICT

PERFORMANCE ★★★★★	LIKE: Very revealing, fast and capable of high levels without strain, superb finish
VALUE FOR MONEY ★★★★★	DISLIKE: Needs proper power to sound its best, bridging links on terminals let down sound quality
BUILD QUALITY ★★★★★	WE SAY: Beautifully clean and musical sound makes this a great high end buy
EASE OF DRIVE ★★★★★	

OVERALL





PACIFIC 3SA



iO2



ARCHIPEL 17 ICD



SANTORIN 25
SUBWOOFER

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THIS MONTH:



CHANNA VITHANA
EXPERTISE: REVIEWER

CV GOT LOST in music when he was young and has never recovered. With a background in design and architecture, he's been a published journalist for nearly a decade.



ED SELLEY
EXPERTISE: REVIEWER

FOR THE BEST PART of ten years, Ed was developing and supporting products from some of the biggest names in audio. Enjoys blogging about his favourite tunes too.



TIM JARMAN
EXPERTISE: ENGINEER

ELECTRONICS BOFFIN Tim drives a 1959 Beetle and maintains the best B&O resource on the internet. When he's not rebuilding faulty review kit, he enjoys scouring audiojumbles.



DAVID PRICE
EXPERTISE: EDITOR

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.

Yesterday and today

An old timer's tale of rediscovery... I was first into hi-fi when I was student back in the late seventies. A lack of money limited my purchases but, by working every summer and not spending too much on beer, I managed to put together a reasonable starter system (NAD 3140, Ariston deck with Linn Basik arm and Mission 700 speakers with QED 79 cable). By the mid-eighties I had a job and a bit more spare cash. I improved the arm on the Ariston and added a good quality MC cartridge.

I also splashed out a lot of cash (in eighties money that is) for a Cambridge A75/C75 pre-power amp setup (the NAD had died anyway) and some Ruark Swordsman Plus speakers. Vinyl still ruled the roost back then and I was very satisfied with my system – at evenings and weekends it was constantly in use. Next planned step was a Linn LP12+tonearm, however marriage and several house moves followed which meant the system ended up in the loft for the next twenty years!

Then eight months ago, after convincing She Who Must Be Obeyed that a hi-fi set up in the living room wouldn't interfere with the room's décor too much (does everyone else have these problems – trying to get their system passed by the in-house style police?), I decided it was time to resurrect my old hobby. Dragging the old system out of the loft the first upset was to find that the cones on my old 700s from my university days were completely rotted away, however on the good side, the Ruarks seemed to be okay; a couple of dents on the cabinet corners but they seemed intact. Next, the amp. Well it looked a bit tired with flaking plastic on a couple of buttons, and the phono MC switch just wouldn't stay in, but I connected it to a signal source (a CD player borrowed for the occasion because of the aforementioned phono switch problem) and amazingly it worked. In fact, it sounded okay!

I was on a roll. Next it was time to look at a new signal source.

I realised that vinyl probably wasn't the way to go mainly due to an almost complete lack of material, so I decided to not even bother getting the Ariston out of the loft and to buy some hi-fi mags and see what's what. In the couple of months while this was going on I'd taken to looking at the shelves in the newsagent, but gone were the vast selection of magazines that I'd read back in the 1980s. The only thing I could find was something called 'What something-or-other' which seemed to be more interested in cinema TV systems. Anyway I read a couple of issues and very quickly realised that things had changed a lot in the last twenty years and, to be honest, not for the better.

I was amazed at the changes. Twenty years ago it was about keeping things as simple as possible, even LED indicators were frowned upon, but now I find that amps are absolutely bursting with electronics and the most

Cambridge Audio Azur 340 – an excellent budget amp, but not better than a high end one from 20 years ago...

common signal source seems to be something with an 'i' at the start of its name plugged into a plastic housing! Wow! In my day amps were kept simple with huge power supplies and dirty great PCB tracks with thick signal wires; anything to keep signal distortion down and the signal pure.

Modern amps are now packed with ICs and ribbon cable and even have motorised pots! The suggestion that something made from plastic in a Chinese sweat shop, that can also make phone calls and take (poor) photographs could actually be mistaken as hi-fi was, frankly, unbelievable. After some research it was with a sigh of relief that I learnt that there are products out there which are a massive notch up above the plastic 'i' toys; still the digital route but maybe things had come on a bit in two decades.

Things had changed in the last twenty years, and not for the better...

I was then offered a stonking deal on a Cambridge NP30 and an Azur 340 amp – both brand new and never used. Reading a couple of reviews on 'the net' seemed to indicate that these would make a reasonable starting point and, at the price, it was hard to go wrong. I was also worried that the old A75/C75 pre-power amp wasn't going to last very long, but the Azur looked like it would make a usable alternative until I'd had a chance to look around for a something more prestigious.

Ironically, after acquiring the Azur amp, I lent the A75/C75 to a good local hi-fi shop (by now I'd discovered that there are still hi-fi shops out there). He phoned me up a week later to say my old Cambridge pre-power amp was absolutely amazing. He said there was nothing in his shop for less than a grand that could touch it. He did point out that some of the selector buttons and input stages were a bit iffy, but when connected up to a quality source



The boxer

CDs have been with us for thirty years now, and as a physical medium have changed very little. This may in part be restrictions of the Red Book specifications. I propose that CDs can and should be made in such a way as to give better sound. My suggestions are as follows:

(1) The playing side should be made from material that is slightly opaque – say five percent absorption per millimetre at the operating wavelength. This would give adequate strength of the main reflection (as in CDRs), yet significantly reduce the scatter reflections which have a much longer return path.

(2) The label side should be made from a very opaque, or solid colour material. This would potentially eliminate reflections of any light passing through the pit layer.

(3) The two sides would ideally be made from materials having significantly different speeds of sound – in order to increase self damping.

These first three suggestions could be introduced to CD manufacture using existing tooling at little, if any, additional cost. The next ones may be more appropriate for audiophile labels, however...

(4) Ideally the materials used would be denser than normal, in order to increase inertia and give less mechanical wow and flutter – leading to less digital jitter. Theoretically you could take this too far, but with practical materials I doubt it.

(5) Better self-damping should be achievable by inserting a thin absorbent layer between the pit layer and the label side. This should provide constrained layer damping – but would require additional tooling costs.

(6) Kind of obvious, but the CD should be precisely round and the track of pits correctly centred. The final disc would also benefit from being dynamically balanced (now there's an aftermarket service opportunity). Also the periphery should be machined to size, rather than pressed to aid these requirements.

The above ideas may already be in use somewhere that I am not aware of – other than that some of the better labels (e.g. Naim) seem to comply with my thoughts in (6) to some extent. Each one may only give a marginal improvement, but together they could be significant. These would all be applicable to any optical disc. I realise that the CD market is in decline, but think that trying these would still be worthwhile.

Developing them should be quite easy for any pressing facility with decent resources, and as mentioned the first three points could be implemented at minimal cost. Any thoughts?

Finally the name 'Boxer' for the concept, came from trying to give the CD transport the best chance of 'seeing what it wants to see and disregard the rest'. Sorry Mr Simon, I couldn't resist!

Alan Moore

DP says: Hi Alan, an interesting letter, arguing for better-made silver discs. Not sure if we'll see

such a thing, however, as I fear we're now in the final throws of the digital disc. I predict that within five years, CD will be very much a niche and/or a legacy format. It's sad in a way, but the music industry is, of course, an industry that sells music, and frankly it's much easier to sell it from a server. No pressing plants, boxing, warehousing, distribution, etc. I suspect there will be a wholesale migration away from physical media – and only then will people begin to remember how nice it was to handle a disc, and start to move back. Possibly our children's children?

TJ says: *The laser optics of a high-quality CD transport and the error correcting schemes in the decoding circuitry may make the effect of some of these changes marginal, however I do agree that there is value in making CDs which are both concentric and flat. If you monitor the waveforms around the spindle and focus servo circuits of a CD player as it runs it's amazing how large some of the corrections have to be to keep everything on track.*

Philips chose to bathe the disc in green light in its CD300 and CD303 (both fine sounding machines), so maybe there is something to be gained from optical tweaks. Is it time to go all nineteen nineties and get the green pens out again?

ES says: *The cynic in me suspects that the ship has already sailed for this particular format to see much in the way of grassroots improvements and that the potential gains are not going to be sufficiently great to warrant the effort. My experience with more recent CD players suggests that they are pretty resilient to the effects of reflection, and mechanical flutter is a non-issue on any remotely competently designed transport (In all honesty, I believe more qualify for this moniker than do not). The label colouring is potentially interesting – if nothing else because it offers the chance to release more visually distinctive discs.*

and speakers it was absolutely brilliant – in fact he was using it as his in-shop reference amp. It just goes to show that you don't need a tin box packed with electronics; a simple amp with a couple of MOSFETS and pair of huge toroidal transformers can still thrash the competition.

After six weeks I finally managed to get the amp back (he didn't want to let it go) and it's now on a shelf waiting for me to get the time to give it a good work over (replacing selector switches and the like). Meanwhile, the Azur is doing okay as I reacquaint myself with hi-fi and recorded music.

With the NP30 set up and running, the first thing I did was rip all of my CDs which I'd collected over the course of the nineteen nineties for playing in the car (in fact, I'd not purchased any new music at all for the last ten years). I had over a hundred albums and I spent a couple of days ripping them to MP3. What a mistake! It didn't take much reading around for me to see that going to a lossy format was a bad idea. So I then spent another weekend re-ripping them to FLAC.

I've done them all to 16-bit/44kHz and I really can't understand why people rip CDs to 24/96 (or higher). Let's face it, the original CD is 16/44, so taking up two or three times the storage space with a higher level seems a complete waste of time – you can't recreate resolution and signal that's not there! Anyway, I now had a working starter system with which to continue my re-education.

Then a couple of months ago, browsing the web, I amazingly discovered that *Hi-Fi Choice* is still around! Unbelievable! This was one of the mags I used to buy religiously every month back in the eighties and completely read from cover to cover. So I immediately signed up for a subscription and through a number of handy back issues quickly discovered that there is still real hi-fi out there and, judging by the articles, reviews and new products in each issue, it's still very much alive and active. Unfortunately, it does also seem that, just like it was twenty years ago, the system I would like to go for is still beyond my financial reach, but maybe that's a good thing; you always need something to strive (save up) for.

What I can't believe though is the amount of electronics and gizmos



packed into modern products; do you really need all this to play music? Does it honestly make the music sound better? I looked under the hood of an expensive amp the other day (£1,200) and I was amazed to see ribbon cable going from the front controls and pots back to the main PCB and running right over the power supply which was located in the middle of the main electronics. Ribbon cable! I can only imagine the signal degradation down that cable. The feedback from the local shop ref. listening tests on my old Cambridge pre-power amp would tend to suggest that perhaps things have gone a little too far with all of this complication.

A lot of this superfluous electronics can be removed from the products making them simpler and, in the process, this might actually make them better at what they are intended for i.e. to play music! The Azur amp and NP30 player both come with a remote control, but they're kept in the sideboard drawer along with the instruction manuals – as far as I'm concerned you certainly don't need a remote control with thirty-plus buttons on it and you really shouldn't need an instruction manual; if you do then it's too complicated for its primary function and that's to play music well...

So what are my conclusions on how the hi-fi world has changed in twenty years? Well, as I say, too much electronics and gadgets on the equipment, in my humble opinion it's not required. When a thirty year old amp that's been

Record shops and CD emporiums are becoming rarer than a 78RPM recording of Cherry Ripe!

in the loft for last twenty years can stack up quite nicely against good modern equivalents then this proves my point. You certainly don't need long ribbon cables, flashy diode displays, remote controls and boards packed with ICs. Even something which by necessity requires more in the electronics way like a media player could still probably benefit from simplifying. I can only imagine all of the interference being added to the primary signal and power supply by the RF and other cross-talk being generated.

The other big change is no record shops! In fact, it seems to be really hard trying to find anywhere where you can purchase high quality source music. The high street shops where you could browse the shelves and then come home clutching some new vinyl are gone. Even shops where you can buy CDs are disappearing fast. It all seems to be going towards poor quality downloads for people to play on their phone or on their 'i' gadget; do people honestly not care about decent quality when they play music? It seems they just want some quick transient noise to play out of their squeaky phone or their plastic Chinese docking station. Within a week it's deleted and replaced with another poor quality noise. Is this all that people care about? Maybe that's all the masses have ever wanted?

In my day the masses played their vinyl on some 'stereo' system box with speakers connected using some bell wire. Nowadays it's 128kbps MP3s on a mobile phone with tiny bud headphones you stuff in your ears

Woodpicker

Reading Channa Vithana's article about the beauty of wood used in various bits of hi-fi kit, and looking at the Wand tonearm photos reminded me that back in the nineteen sixties, I recall a pickup arm manufacturer using wood. I can't recall the name of the company involved, but in my mind's eye I see something along the lines of the Connoisseur range from that period (SAU1/SAU2)?

I imagine that the progress made with carbon-fibre over the years makes such designs redundant, but can also envisage how beautiful an arm of this type could look. Do you recall who made this arm and are there any other examples?

Roger Nicholls

MS says: I suspect you are thinking of the Grace 714 unipivot. Grace tonearms, especially the 'normal' G707, were a popular choice for the early Linn Sondek LP12 turntables, along with Supex 900 moving coil cartridges.

Grado also produced a tonearm called the Micro Control, I believe, with a wooden 'wand' section. Please note that neither this nor the Grace model is available new nowadays, although they do crop up on eBay.

The European-produced Reed P3 tonearm, which is available with a choice of different, exotic wooden arm tubes though UK distributor GT Audio, is about the only currently commercially available arm using wood in its construction of which I know.

CV says: Clearaudio, which I mentioned in the column, uses Panzerholz plywood in its turntables – and also does a range of tonearms called Satisfy that are nicely designed and made, and come in a variety of arm tube configurations which include aluminium, carbon fibre, and also ebony or satiné wood, the latter being particularly fetching and similar in hue to some of their wood bodied cartridges.



Organic audio: wood you buy a Clearaudio Satisfy?



or played through some plastic all-in-one base.

The difference twenty years ago though was that the same music source (vinyl) could also be purchased by someone who wanted to get more out of it on a high-quality system with a top-notch turntable and MC cartridge, low distortion pure amp, and excellent speakers. If the music source is no longer there then what hope for the serious hi-fi buff?

So where do you go for good quality music (I mean the source music)? There seem to be a couple of sites that advertise high-quality downloads, I'm talking 96kHz or better, but I really do wonder where the source comes from for

these high-resolution downloads? What is the source for these 96kHz (or higher) files? If it's just taken from a CD then that's just a waste of time and money (these HD downloads are really quite expensive). If it's music that's a couple of decades old that has been taken from some multi-track tape that's been in a store room for years then again does that justify 24/96? Where is the source that's good enough quality to justify taking to 24/96 or higher?

At the moment you might as well go to an online CD shop and pay a third of the price for the CD (while you still can buy CDs) and rip it yourself to 44kHz. Okay it's not going to be as good as a quality vinyl pressing, but if that's all there is to choose from. I just hope the current fashion with low-resolution music downloads is simply

Go to an online CD shop, pay a third of the price and rip it yourself to 44kHz

that – fashion – and the sources available for high-quality music files will grow. If it doesn't then the future for hi-fi doesn't look good.

Meanwhile I've got my eye on a Cambridge Stream Magic 6 and maybe an Azur 851 – that is unless I can find a good amp that doesn't light up like Blackpool Illuminations, and have more electronics inside than my office PC. Oh, and maybe I should spend a couple of days refurbishing the A75/C75?

Dr Steve Mace

DP says: Hi Steve – thanks for your long missive on how you've got back into hi-fi and music. Interestingly, I've got back into motorcycling recently, having been mad about it back in the eighties, and there are similar parallels. Bikes have got better in some ways, but not in others. It seems much of their evolution has been inspired by fashion rather than practicality; fairings don't keep the wind off you on sports bikes (whereas they once did), seats have got smaller and harder (meaning you have to rest more often) and fuel consumption has if anything gone up thanks to power sapping catalytic convertors. Meanwhile power outputs of some modern



A blast from the past! Channa Vithana still gets much pleasure from his classic Monitor Audio speakers

bikes haven't really risen for decades – Honda's latest CBR250R gives 26BHP, its 1983 equivalent, the VT250F gave nearly 40! Still, the latest machines have some very handy features – anti-lock brakes being more welcome even than a USB socket and a DAC on an amp!

My point is, that these days consumer products don't so much improve as change – invariably inspired by the vagaries of what the manufacturers perceive to be fashion. This wasn't always the way – a 1960s integrated amp and a 1980s one were designed and engineered in different ways, using very different technologies. Compare the spaghetti inside a hand wired, all discrete transistor Rogers Ravensbrook with the neat, IC-based Audiolab 8000a and you'll see what I mean.

By comparison, an eighties Audiolab versus – say – a 2012 Yamaha A-S2000 isn't a million miles apart in design terms. Just because something is new, nowadays, doesn't automatically mean it's going to be a step-change better than something from a couple of decades ago. This said, I now await the deluge of stories from readers arguing the opposite!

ES says: Modern electronics are undoubtedly 'busier' inside than their ancestors but I am not necessarily convinced it follows that the result is automatically going to result in poorer performance. While I agree that routing control cables over the power supply is not a cracking example of best practice, more considered routing of power and signal need not affect performance. Even back in the nineteen seventies, the interiors of many Japanese battleship amps were more crowded than their European counterparts, but were capable of excellent sonic results. And remotes? I for one won't be fighting convenience.

My system can now be driven by either an iPhone or iPad almost in its entirety. The guilt I felt about the additional idleness this allows, lasted about five minutes before I embraced the new century with both arms!

CV says: Your letter is a good example of the frustration and anxiety that can be part of the process of buying, and living with hi-fi in order to get a decent sound and some enjoyment also. New doesn't necessarily mean better and I sometimes use an old pair of Monitor Audio R952/MD loudspeakers designed by Robin Marshall, and produced in the late nineteen eighties.

They are, as you discuss with your examples of older designs, much simpler than some modern specimens, and specifically in this case all the better for it – they don't have a port and only have two components in the crossover and as a result do really tuneful (if limited) bass. These Monitor Audios sound really expressive and have musicality and vitality in spades where conversely, some modern designs do not. They're in a bit of a state, but like your Ruarks, have survived the test of time, because they still work rather well. However, they are not perfect – what is? And as such I have to live with their foibles – such as overly excitable high frequencies when used with some low/mid cost separates and mismatched loudspeaker cables.

It's hard to think of manufacturing where everything in a hi-fi component is 'scratch-built' i.e. all parts are made in one country, inclusive of all the raw materials, from locally

MS says: Low-quality downloads have been forced upon us by considerations other than ultimate sound quality. Not everyone has high speed broadband, for example, so downloading the Gigabytes that hi-res albums occupy is not an option for many people. Similarly, it is easier – and cheaper – in terms of storage and bandwidth for the suppliers to store and deliver tiny MP3 files occupying only a few Megabytes rather than the Gigabytes required by the higher resolution FLAC files.

You should note that the company, Cambridge Audio, has changed hands in the past thirty years and is a very different operation from the one that created your aged A75 and C75 amplifiers. And do not forget that most music starts life on a DAW (Digital Audio Workstation, a computer) these days; even if it ends up on vinyl it was 'digitised' beforehand, although it has likely been computer mixed and mastered – probably going through an analogue tape recorder – to introduce a touch of 'warmth' and 'character'.

sourced oil for plastics and copper and iron from a nearby colliery. So, when it comes to assessing a component's quality simply from where its made, I am not sure I can agree with you that Chinese (or wherever) manufacturing is no good. When you look at manufacturing in hi-fi, you might find that a product contains parts made from all over the place with suppliers coming from China, Germany and Japan for instance – I would suggest it's the quality of the engineering and implementation of the design that should be in question, not where something comes from. I do agree with you, however, that modern equipment is overly complex, with more to go wrong, and less easy to repair.

Current computer-based hi-res music ('the future') has a very long way yet to go before all can enjoy it for decades rather than just months or a few years – it is ironically stuck in very old-fashioned computer manufacturing processes – typically where product becomes out of date before being sold, isn't very reliable, and so far only uses 'last-gen' extraction up to 24/192 (like DVD-Audio used to) until that gets superseded also. At its worst, the relentless march of antiquated digital technology tends to clinically dismiss what makes us analogue hearing humans happy – whatever happened to the music?

Oppo-tunity

I am in market to upgrade my Marantz CD6200 CD player, and am stuck between the Oppo 95 and the Audiolab 8200. My main interest is the audio quality, so just because Oppo has Blu-ray and SACD is not so important. Which of the two or any other would you recommend?

Kerem Zorlu

DP says: Being in the happy position to have heard them back to back, I can confidently say that the Audiolab CD spinner sounds better than the Oppo by a country mile. That's not because the Oppo BDP-95 is a bad machine (it isn't), but that the Audiolab 8200CD is an exceptional one. A John Westlake design, it's packed with fancy Sabre DACs, has very finely honed filtering and was designed from day one to deliver

the musical goods. The Oppo has a superb, low-jitter transport, but it's fair to say the money hasn't all been spent on finessing its 16-bit CD sound.

Where the Audiolab is open, expansive, musical and tonally smooth, the Oppo is a little sterile, clinical and matter of fact – albeit decently detailed. As an SACD player, though, it's a bit nicer and, of course, plays Blu-ray discs with brilliant pictures.

Ivor complaint, the sequel...

I enjoyed your article on the anniversary of Compact Disc. Well researched, written and concise. I do, however, have to take you to task on one aspect. That is the last article, 'Speak Out', concerning Ivor Tiefenbrun's thoughts on Compact Disc.

Many are aware of his controversial views on audio, but to leave out any reference to Linn's own CD players made his comments unbalanced. Linn's CD12 CD player was, if reviewers comments are to be believed, one of the best CD players made. As Linn have now stopped producing CD players and moved onto streaming, perhaps Ivor wishes to forget his company's involvement!

M.G. Miles

DP says: I suspect Google has had to build a whole new server farm in the Nevada desert, to handle the extra volume of email generated by Ivor's little cameo in my CD feature a couple of months back! The man has not lost his (audiophile) mojo...

Hard times

My system is sounding too high-pitched and fatiguing. It comprises an Audiolab M-Dac, Chord Company CobraPlus, Naim Nait XS, Naim Nac-5 and B&W CM7. I have already put some money into making the room softer but it is not

Kremlin-ology

Would a British specced Linn Kremlin tuner function in the US? I am not concerned about the voltage conversion as this works with most Linn products, but I was told the UK's FM de-emphasis would render a UK Kremlin useless in the United States. Is this true?

Nick

TJ says: It wouldn't be useless but you may find that it sounds a little bright. A competent audio workshop should be able to remedy this fairly easily though if you find it to be a problem.

ES says: The greater levels of de-emphasis on the US system might affect performance (how much by might be down to experimentation) but I don't believe it will stop the unit working altogether. Of course, it might be worth seeing if a US board was still available?

The other problem as I understand it is that the tuning increments for the UK and the US are different. Having never used the Kremlin, I don't really know how fine a level of adjustment it offers, but if it is very fine, you should be able to hit the US increments by default.



enough. What would be the most obvious replacement in my system to make it work?

I normally listen to jazz/blues, rock and (rarely) classical music. I have to use the bass port in the CM7 because otherwise the bass goes bizarrely wild, but all the fun is gone. My budget is £1,500 tops, but I don't have to reach that limit. Please help!

Jamie

DP says: Blimey Charlie – what a dilemma! A searing treble and 'bizarrely wild' bass, how did that happen? Dare I ask if you ever brought a hi-fi dealer into your buying process? Did the thought

occur to you that listening to the whole lot together before parting with your hard-earned 'folding' may have been a savvy thing to do? Sorry for twisting the knife, Jamie, but it's only to make the point that you didn't need to get yourself into this mess in the first place!

My sense is that your B&W loudspeakers are – as it were – adding insult to audiophile injury. The Audiolab M-DAC, brilliant though it is, isn't the world's most sumptuous sounding source. It's smooth, but a tad tonally dry and not the sort of thing to partner to lighter, more sunny sounding ancillaries. The Naim amplifier is pretty even, but again



Oppo BDP-95 vs. Audiolab 8200CD: which one would you choose as your primary CD spinner?

it's not as deep and dark and velvety and the SuperNAIT, and the NAC-A5 cable is hardly going to sweeten things. See where I'm going with this.

Enter the B&W CM7, with its Kevlar midband driver that has, shall we say, a Kevlary sound to it – making things appear just a little more forward and upfront than perhaps they really are..

First, I suggest a bit more tweaking. Grilles back on the B&Ws please, and move them a little further away from the back walls. You can then remove your port bungs (which I think is what you're talking about); the bass shouldn't go wild anymore but it should richen out the sound. Next, buy some Tellurium Q Black speaker cable and interconnect; this is a very smooth and mellifluous wire, that will warm up the system's tonality very effectively, while sacrificing not one jot of musicality – indeed you should find this aspect of the sound improved. Finally, fiddle with the filters on the M-DAC; there are various settings and they're great for fine tuning your sound. Then, when you've done this, come back to us and I'll suggest a next step if things haven't improved in the way we both hope! Be warned though, it will likely involve a change of loudspeakers...

Can B&W's sparkling CM7 be made to sound smooth on the end of a Naim amplifier? Well, one can but try...



LETTER OF THE MONTH

WHERE HAVE ALL THE LADIES GONE?

I have been listening to various forms of recorded music for more years than I would wish to remember. As a teenager it was the local café with a bottle of 'Coke' that lasted for ages while we all listened to the latest tunes on the juke box. I always hoped that someone would play your favourite 'cos you were skint!

When I got married nearly forty years ago there were two things that I really wanted, one was a dog and the other a B&O. As far as I was concerned there was nothing better in the field of high fidelity than that famous Danish company. Unfortunately, I knew little about other available systems at the time and presumed that I was now an instant hi-fi expert as I had bought the best! How wrong can you be?

After going to various hi-fi shops over the last forty odd years I have of course upgraded the system as funds allowed, but in all that time the hi-fi in my living room is deemed as mine! In other words, another of his 'boy's toys'. Why is it that? Do women not hear the same things as the chaps, or is it deemed to be too technical for the fairer sex to appreciate and understand the pleasure a good hi-fi system can give?

One of my other pastimes is photography, and I sometimes go to the local camera club that is well supported by both genders. Many of the technical skills needed for taking good photos or understanding the various parts of editing tools such as Photoshop are often taught to us by the ladies, so I can only assume that the hi-fi industry and related mags are somewhat to blame. For example, why don't we see ads for the latest audio kits in the women's mags?

Case in point is, of course, that the famous Danish company previously mentioned does in fact advertise in glossy mags, but I bet if you asked a hundred women what they thought about the latest from Cyrus, Naim or Spendor, etc., you'll probably score a blank. So if there is a moral to this tale it must surely be that both the makers of the hi-fi kits and also the hi-fi magazines are 'shooting themselves in the foot' and losing a huge potential market. Come on everyone at my favourite hi-fi magazine, make a stand and get the ladies on board!

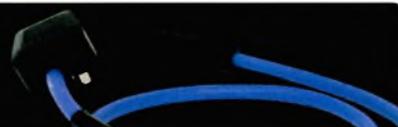
Mike Beattie

DP says: *Yes, it's sad but true. As my demo at the Bristol hi-fi show in February proved, women are just as able to hear the difference in the way systems play music (and indeed enjoy it), it's just that they're less interested in the kit itself. There's a moral there, somewhere. Suffice to say that at least B&O understand this...*



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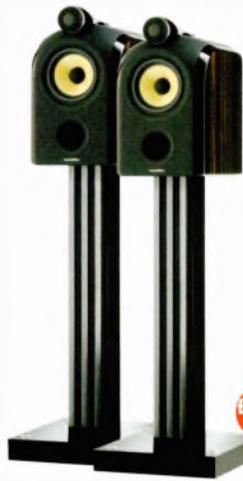
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SEVENoaks
SOUND & VISION

On the level

Every once in a while, a remaster comes along that rewrites the rules, says Prog fan **Patrick Cleasby**...

Emerson, Lake and Palmer aren't exactly under represented in the reiterations of the CD remastering stakes – but discerning fans will, up to now, have been seeking the original Manticore/Ariola German CD issues if they absolutely had to to evade the evils of excessive compression.

That situation may be about to change, happily. The first two titles, *ELP* and *Tarkus*, have just been released under a new licensing deal with Sony, and irony of ironies, the affordable (£10) three-disc packages offer a true stereo/surround DVD-Audio, alongside old-fashioned Compact Discs of the original and alternate albums.

This is *not* the first time Sony has had some product released on the SACD-nemesis format – some of its Dual Disc releases had real DVD-A sides, probably without them even noticing! This interesting precedent of proper DVD-A could be extended, if enough punters shell out for the start of a putative full Emerson, Lake and Palmer series.

How did all this come about? Die-hard Prog-watchers will not be surprised to learn that one Steven Wilson, late of Porcupine Tree was as instrumental in the surround and new stereo mixing as he has been for similar projects from King Crimson, Caravan and Jethro Tull. But in this case the influence extends further...

Here, I have to declare a personal interest. The ELP discs were authored by esteemed DVD-mastering last-man-standing Neil Wilkes at Opus Productions, as were all the latter Porcupine Tree and King Crimson-related products. I handle video and film transfers for many of those, but in this case I was not involved. So that's my conscience clear!

But in these days of forums and Twitter, no real inside knowledge is necessary to glean what happened with ELP. A conventional authoring house had failed to deliver the goods in attempting to author one of the despised audio DVD-Vs, devoid of hi-res surround sound and stereo (even though the latter should be achievable – shame on you Universal for Caravan's *In The Land Of Grey And Pink* Deluxe Edition). Mr. Wilson has made it clear that the reason these discs appeared as true DVD-A is that with his Prog Genius pull, he was able to argue that once the first attempt had failed, Mr Wilkes should execute the rescue job, and that it should be true DVD-Audio...

The upshot is that we now have the full fat stereo and surround *just* like the good old days.

But it's even better than that. Over the last few years, Mr Wilson has paid attention to the forums and the loudness wars backlash. He has realised that the audiophile market sector he is catering for, wants high resolution and dynamics, and as a consequence these deluxe edition projects are usually deluxe for the ears, too...

The ELP main CD masterings are by Andy Pearce, who in recent years has seemed almost unique in delivering deluxe edition rock remasters which are not harsh on the ears – Black Sabbath's *Heaven and Hell* being a good case in point. It is a real shame there was some shenanigans which meant some of his Thin Lizzy remasters didn't make the final deluxe releases, to be replaced by what one would only expect to be inferior 1996-vintage first remasters.

So while the CDs boast very respectable dynamic range figures, the DVD-As are, if anything, even more notable – they sound remarkably smooth. Wilson has insisted on transfers that are as 'flat' in EQ and compression terms as it is possible to be in this day and age. We should be looking forward to more such endeavours from both his own deep catalogue and those of the undisclosed others he is known to be attending to in between his new projects. It's an enticing prospect, for sure.

On a separate tack, one other recent indicator that someone else is getting the message is the bargain Roxy Music Complete Studio Recordings box set – a very reasonable (I think) fifty quid for all the studio albums and a couple of CDs of non-album stuff in beautifully undercooked masterings which may in some cases finally make those quarter-century old CDs redundant.

Bizarrely no mastering credit is featured, and my enquiries have thus far drawn a blank. Still, the fact it is Virgin/EMI, and so feels comparable to the Beatles 24-bit efforts, makes one begin to suspect the deft hand of Simon Gibson at the controls. One can only rue the fact that the original plans to include 24-bit flat transfers on DVD in the package mysteriously disappeared between announcement and fruition.

Similar issues have beset the soon-to-come James box set, which I'm eager to get my hands on. If that one shows any evidence of a foot being taken off the compression pedal, we will really know we are getting somewhere. Still, we digital audiophiles know our luck too well – so far, so much has been a let down.

While CDs boast very respectable dynamic range figures, these DVD-Audio discs are, if anything, even more notable. They sound remarkably smooth...



PATRICK CLEASBY

Tech go-to-guy, digital music obsessive and budding record collector

Good vibrations

In the first of two articles, **Richard Black** takes a closer look at the mysterious world of microphones...

The great majority of recorded music that we listen to has been recorded, at least partially, with microphones, which pick up sound vibrations in the air and turn them into electrical signals. If you've ever been within half a million miles of any pro-audio discussion, in real life or on the Internet, you'll know that microphones are a highly contentious topic, as least as much so as, say, LP turntables or loudspeakers. Let's have a look at some of the reasons why...

Historically, the first kind of microphone used for recording music was the carbon granule microphone, which survived in telephone applications until at least the nineteen eighties. It was never capable of very high fidelity and was soon superseded by two microphone types still in use today, the condenser and the ribbon. Plenty of other varieties have existed, and indeed the moving coil is still popular for close-up vocal work, as is shown by the enduring popularity of a handful of Shure models including the 'Unisphere' SM57 and its various descendents and copies. But condensers really rule the roost, with ribbons a weak second and others consigned to special applications.

'Condenser' is the old-fashioned word for a capacitor, and indeed condenser microphones consist, electrically, of a capacitor element. It's made of a stretched, electrically conductive, film behind which is a solid metal plate, with a small air gap between them. The film vibrates in sympathy with the air around it and this changes the value of the capacitance. If the capacitor is charged, changing the capacitance causes a change in voltage between the film and the backplate, which is picked up by a sensitive amplifier. There's a very slight variation on this called an 'electret condenser', in which the capacitor is effectively permanently charged: all other varieties of condenser require an externally applied polarisation voltage, which is connected via a very high value resistor so as to keep the condenser effectively under constant-charge conditions.

Because the signal off such a transducer is a small voltage and an absolutely tiny current, it requires an amplifier to be connected to it within the minimum possible distance – using any

length at all of cable would seriously attenuate the signal. So all condensers have some kind of amplifier built into them. This can be as simple as one or two transistors, or an op-amp (integrated circuit), or occasionally a valve of two. When someone says, "valve microphone", what they in fact mean is a condenser microphone with a valve amplifier in it. Funnily enough you can actually use a valve as a microphone but the results, being based on unintentional side-effects of the valve's operation, would barely be satisfactory for speech, never mind music.

A ribbon microphone uses a length of very thin aluminium foil, corrugated and suspended in the gap of a powerful magnet. Vibrating this ribbon causes a voltage to be produced across its ends by magnetic induction (the same principle that operates the generators on the national grid). The voltage is minuscule, but it is sourced from a very low impedance and in practically all ribbon mics ever made it is stepped up by a small signal transformer, again built into the microphone body. Very few ribbons also include an electronic amplifier but it's not common.

There's an important and fundamental difference between condenser and ribbon operation in that the former responds to pressure, while the latter responds to velocity – the actual movement of air. Pressure has no direction so a condenser is intrinsically omni-directional, while a ribbon naturally has maximum response fore and aft, but none to the sides (figure-8 response). In both cases this can be modified by acoustical means, and most condensers are made directional to some degree by careful inclusion of holes in the backplate.

The other important difference is in resonant characteristics of each type. A condenser diaphragm is just like a stretched drum-skin and has a resonance in the upper treble or near ultrasonic regions, which is usually quite effectively damped. A ribbon, by contrast, has a very low-frequency resonance somewhere around the lower limit of hearing. We'll look at how these resonances, and other factors, affect the sound of microphones in the next instalment...



The first type of microphone used for serious music recording survived in telephone applications until at least the nineteen eighties...



RICHARD BLACK
Prolific musician, recording engineer and reviewer

More than words



words
that count . . .



'It just sounds like music, like people, like a band having fun. I love the A6's. They're GRRRRREAT!' **Hi-Fi+ Issue 63 Feb 09**

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'The A6's are stunning.' **What Hi-Fi Feb 09**



A3



A5



A6



A9

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Squeezed out...

The need for hi-fi separates is dwindling, opines **Malcolm Steward**. But is this good news for the music enthusiasts...

Some audiophiles have expressed the opinion that the encroachment of computers into audio signals the end of the hi-fi world as we know it.

It's as though music stored on a hard disk is somehow worse than music stored on a good old Compact Disc...

One only hopes that these individuals do not take a look at what is happening in the wider world of audio, and see all of the paradigm changes currently occurring for music fans, or they'll soon become even more paranoid!

To begin with, there is *definitely* a move away from hi-fi separates right now. Look, for example, at the most recently released product from Linn – once the most uncompromising of hardcore audiophile companies. The Kiko system (reviewed in *HFC* 364) acknowledges, particularly through its HDMI connectivity, that the source of people's entertainment these days is changing. Folks now hear their music for the first time through the likes of YouTube, Spotify, and games or – heaven forbid – the *X Factor*. There's no more sitting patiently by the family radio on a Sunday evening waiting for the weekly run-down of 'the charts'! Those days, much like those of the FM tuner, are now confined to the rubbish bin. All my exposure to new music these days, for example, comes through the Internet, radio in particular.

It is interesting to note the declining interest in multi-component hi-fi systems: Linn's new Kiko is, like Naim Audio's burgeoning Uniti family, and Arcam's Solo range, an all-in-one, integrated system. Just add speakers and a network connection and you're in business – although the Kiko system comes with a pair of dedicated active loudspeakers.

Even more so, the popular Sonos system includes loudspeakers in the enclosures of its electronics, and the Logitech Squeezebox Touch – a fabulously popular gadget among audiophiles that must have sold in the millions of units – appears now to have been discontinued like the original and truly audiophile Squeezebox Transporter. Logitech instead appears to be concentrating on – not especially outstanding – computer loudspeakers.

Audiophile manufacturers have realised that the market for separates is rapidly diminishing. The man who once would have bought, say, a twelve component system of source, amplifiers and power supplies, now wants the same performance from a box or two, and no tangle of interconnect cables. In fact, he will most likely settle for slightly reduced performance nowadays if it means increased convenience

and ease of use. We appear to be moving into a time when "good enough" truly is good enough for the vast majority of audiophile buyers.

So, does this mean that the days of bleeding-edge-performance hi-fi are no more? I do not think so, but hi-fi might just become even more of a niche interest than it is now. We seem to be heading towards the 'Swiss Army Knife' approach to system building, which is surely not an entirely bad thing. The 'Swiss Army Knife' might well be flawed, its screwdrivers may not be the strongest you can buy and its knife blade might not be the sharpest, but it has a selection of them and provides a thingy for getting stones out of horses' hooves, so it is undeniably a useful and easily portable item. In truth, there is no reason not to make an all-in-one system that can genuinely outperform separates and offer superlative performance provided cost is not too much of a consideration, and the designer is intelligent and wary.

Please do not suggest though, doing away with the hi-fi and piling the amplifier, DACs, electronic crossovers and so on into the loudspeaker cabinets. That would not be a good idea for countless reasons: the sound of such a design would most likely suck, and the practicality of such an arrangement would leave much to be desired. I am not being disrespectful to Meridian, because that company has been building electronics into loudspeakers for decades and has learned the useful dodges along the way...

Integrated electronics are another matter. I recently reviewed the Linn Kiko and had a great time with the dinky little streamer/amplifier. I also have a Naim UnitiQute on my office desktop and a SuperNait in another room and am full of praise for the performance of both these integrated devices. Neither of them has ever left me desperately yearning for the performance of 'real hi-fi', so surely neither is too wide of the mark. I certainly have not yet joined the "good enough is good enough" camp – even though I must confess to owning a USB DAC!

We seem to be heading towards the 'Swiss Army Knife' approach to system building, which is surely not an entirely bad thing...



MALCOLM STEWARD
Classical music buff, audiophile
and hi-fi reviewer

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Electric avenues

As hi-fi migrates to computers, **Channa Vithana** looks at ways of sustaining an electronic future...

Recent news reports have suggested the possibility of DNA memory with huge quantities of data storage, more efficient than current methods (bbc.co.uk 22/05/2012). There were also stories of IBM testing a 12-atom magnetic memory bit, where it normally takes a million atoms to store one bit (bbc.co.uk 13/01/2012)! This is great news, not just for *Star Trek* geeks, but for normal people also – as the potential for reducing the size of our ever-increasing data storage and network needs is now more intriguing. However this is likely to take some time to see the light of day. If/when we get commercially marketed versions, will we have a product that has the lifespan of our own genetic material? Imagine something that can store years of music and last longer than the humble vinyl LP!

This would be amazing, but what of the large corporations who make millions from licensing and manufacturing in huge quantities? How will they make profits if data storage is no longer an issue? They might shift into other ventures, but there may also be a bottleneck to the progress and possibility of vast, gleaming digital avenues of limitless data and expansion, especially from companies who have already invested many millions in current data storage and related systems.

For once, governments can be on our side to combat possible blockages as they push for low carbon initiatives in manufacturing and construction. So in this way governments can strategically guide the way energy use (inclusive of data storage) is implemented. However, how can an individual or a company become more sustainable now?

Being more sustainable doesn't have to involve becoming the mad hermit at the end of the street who only lives by candlelight. Rather for a person or a corporation it can save money in running costs and lifespan of products, and increasing demand for long-term sustainable components or strategy, can also bring down prices through competition without the control of 'silicon cartels' that monopolise. With this in mind I canvassed Andy Smale of independent energy consultancy Expert Energy. Andy trained as a physicist and spent thirteen years in IT before becoming an energy consultant. Here are some of his thoughts on the subject...

How easy is it to find a sustainably powered/energy renewable web server/site?

Type in 'green web hosting' in Google and you are presented with a whole range of service

offerings, however a closer look reveals that 'green' is interpreted in different ways. For example: *Emissions offsetting* – trees are planted to offset the carbon emissions generated by running web servers. *Green energy sourcing* – conventional UK data centres run on standard 'green' electricity tariffs; *Renewables-powered data centres* – services are often outsourced to data centres in the USA run directly with solar panels or wind turbines, or in Iceland where geothermal and hydroelectric power is used to generate electricity renewably.

A succinct comparison of the environmental benefits of these three types of service is difficult, however a web service using a data centre run directly on a renewable electricity supply (as opposed to using a green tariff) is likely to be the one which generates the lowest emissions. Having said that, any of these options would probably have a lower impact than standard web hosting services. Bear in mind also that if you choose the offsetting option you could instead choose to go for a cheaper standard service, and pay the difference into a certified carbon-offsetting scheme.

What's the best method of recycling old computers/hard drives, etc.?

For most machines in typical home use, the carbon emissions associated with manufacturing a new PC are currently similar to those generated by powering it for a three-to-five year lifespan – these embedded emissions are concentrated in the manufacture of the CPU and graphics card, and as machines become both more efficient and more powerful, the balance of carbon emissions is tipping rapidly towards the embedded carbon and away from in-use energy consumption.

Therefore, it is becoming increasingly important to maintain your existing equipment for as long as possible – this will help prolong the life of many machines, as will upgrading to the latest OS. Once you decide your equipment is no longer suitable, then the best method of recycling is generally to pass them on for refurbishment or recycling. Manufacturers are obliged to take back their old equipment, however there are now plenty of charities which recondition old PCs to sell on or donate. Any unusable equipment should be recycled in accordance with the WEEE directive on electronic waste – this process will help to recover valuable metals and other materials to be fed back into the manufacturing process for new equipment.

Being more sustainable doesn't have to involve becoming the mad hermit at the end of the street who only lives by candlelight



CHANNA VITHANA
Reviewer, design aficionado and music fan

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The good life

Driving your turntable via a petrol generator. Is this one step too far in pursuit of a new hi-fi experience, asks **Tim Jarman?**

One thing that keeps hi-fi interesting for me is that there's always something different that you can try to see if it makes the listening to music more enjoyable or satisfying. Inspirations for this can come from many places, but for me the latest one came from the marginally successful indie rock band The Holloways. Their single *Generator* was released three times, peaking at Number One in the indie chart in October 2006 and June 2007, when it also reached number 14 in the singles charts.

It isn't a complex song and the chorus goes "I could get a record player/And a generator /Generate the music that makes you feel better". Well that was it, I had to try it, after all people spend hundreds (thousands?) on fancy cables these days to get the purest possible power supply and following this through to its natural conclusion, what could be better than your own personal source, completely unsullied by others? Working on a limited budget the first thing to do was to assemble a system. When it comes to small generators there is only one name – Honda, but their latest models are quite expensive and use 'inverter' technology to construct the output waveform.

The inverter, it transpires, is a form of switch mode power supply, and as I'm reluctant to let these anywhere near audio if I can help it, I decided instead to opt for something older and more mechanical. The classic design in this field turned out to be the E300, a compact 300 watt job which first appeared in the mid-nineteen sixties, and remained in production until relatively recently. Soichiro Honda himself had some personal input into its design, reputedly insisting for example that the handle should be of such a shape that when a man and a woman carried the machine together their hands should touch in the middle, for whatever reason!

With the generator chosen, all that was needed then was a record player. Since I didn't know how 'rough' the generator output would be I decided that something sturdy would be needed, ruling out anything with fancy motors and trick speed controllers. Again the Far East came to the rescue with a classic Pioneer PL-12D, a splendidly simple device which would probably survive a nuclear winter unscathed. There's a certain synergy here – a generator from the company that finished off the British motorcycle industry meets the turntable that ended the dominance of BSR and Garrard as the supplier of mainstream turntables. It has to be a match made in Japan!

With a similarly aged small Pioneer amplifier and a carefully chosen pair of speakers I was ready to pull the starting chord and try out The Holloways' claims. Things did not go well, the first problem being one of noise. Obviously the presence of toxic exhaust fumes meant that the generator had to be banished from the listening room, but even at the far end of the garden the din from the 55cc single cylinder engine was intrusive during the quiet parts of the music. Even a completely worn out motor or bearing in the turntable would be as nothing compared to the racket that comes from making your own electricity from petrol, it seems. The second problem was more subtle and was that the wow performance of the turntable became a function of the speed stability of the generator's engine, due to the synchronous Pioneer motor being locked to the 50Hz frequency of its AC supply.

The lag in the centrifugal regulator arrangement which controls the Honda's throttle ensured that performance in this respect was terrible (on par with 8 Track tapes, if you remember those!), although it did improve as the engine warmed up and began to run more evenly.

The experiment then was a failure – as I always knew it would be – but was fun and, at worst, leaves me with the possibility to do some listening the next time the grid is down. I've learned what a marvellous thing the mains supply is, silently and accurately powering our gear to a high standard, even though I bet most audiophiles don't think about it much.

Finally I've learned not to take hi-fi advice from one-hit wonders, but what does that leave to try next? How about finding out whether a Sony CDP-101 really can play a CD that's been covered in jam? Fear not, I'm on it!



Even a completely worn out motor or bearing in the turntable would be as nothing compared to the racket that comes from making your own electricity from petrol



TIM JARMAN
Electronics engineer, classic kit collector
and author of **Beocentral.com** and
Walkmancentral.com

One four all

Tim Jarman fondly remembers Bang & Olufsen's finest hour, the 1974 Beomaster 6000 Quadraphonic receiver...

Of all the hi-fi buzzwords of the nineteen seventies, 'Quadraphonic' must surely be the most evocative of an era of invention and creativity. Little over a decade after the coming of stereo had convinced listeners that they now needed two channels of amplification and two loudspeakers instead of one, the electronics manufacturers were again trying to promote a doubling in the amount of equipment that would be necessary to complete an audio system – something that was to their obvious advantage...

For a brief period in 1975 what was described as 'the four channel age' looked like it was going to be the direction that audio was travelling – until it didn't, of course. This did not stop the key players gearing up and offering suitable equipment, but unfortunately much of this was just too big, ugly and complicated to have any great appeal. And of course there were no less than *four* competing Quadraphonic LP formats, just to add to the confusion.

There were a few engineering high points of the Quadraphonic craze however, one being a very neat music centre from Philips which was made suitably compact by moving the power amplifiers into the loudspeakers (and using 'motional feedback' to control the cones with unprecedented precision on top of that). The other was surely Bang & Olufsen's Beosystem 6000.

The 6000, introduced to the UK late in 1974, was a purpose-built suite of Quadraphonic equipment of the highest possible quality. The centrepiece of this setup was the Beomaster 6000 4channel receiver, an elegant slab of European

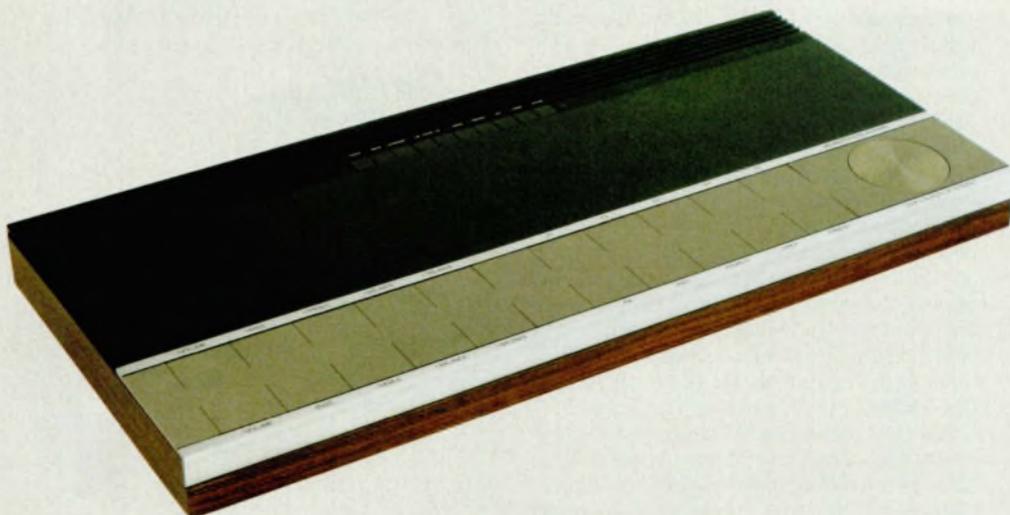
technology with which the Danes yet again trumped the Japanese and the Americans in terms of both performance and appearance. Supporting this was the Beogram 6000, a modified version of the now famous B&O linear tracking turntable fitted with an all-discrete CD-4 decoder and a specially designed moving iron cartridge tipped with a Pramanik diamond. At the other end of chain were four phase-linear wall mounted loudspeakers in slim cabinets known as Beovox P50s.

The company was justifiably proud of its statement piece in Quadraphonic reproduction, even going as far as commissioning a special CD-4 recoding of Mahler's *5th Symphony* on two LPs, a copy of which was included with every system sold.

JVC's CD-4 was considered to be the best LP-based Quadraphonic source, since it could produce four separate channels with a reasonable

degree of separation. Since the decoder for this was mounted in the turntable, the Beomaster 6000 4channel only needed to offer a group of four line level inputs to support it, which imposed no particular difficulties. However, the CBS 'SQ' matrix system was also popular; this did not require a special cartridge or turntable. To offer this option an SQ decoder module was fitted inside the Beomaster receiver which could be used with SQ-format FM broadcasts as well, although a regular service was never established in the UK. Provisions were made for a four channel tape recorder (although B&O never produced one) and a stereo phono stage was fitted for those who were happy with stereo and SQ. Being a receiver, there was of course a built-in radio section, covering the FM band only and offering five pre-tuned programmes. Finally the amplifier produced four times 40 watts with ease.

When Japanese receivers were large, sprawling, knob-festooned monsters, B&O's Beomaster 6000 must have looked like high art...



As well as being a versatile Quadraphonic receiver, the Beomaster 6000 4channel had a striking and novel user interface. Twenty fingers of brushed stainless steel formed the control keys for source selection and sound control and a large black surface running across the centre of the unit worked as a display window, illuminating to show only the functions which were relevant to the source being used.

From beneath the blackness came scales for volume, treble, bass and balance (in both dimensions) and when the free-tuning FM position was chosen a radio dial appeared, too. Switching out the AFC revealed a balance indicator and a tuning meter, both of which became invisible again once the tuning was locked on. The magnitude of each function was shown by a small red line which moved under motor power when the relevant key was pressed, either on the receiver or on the ultrasonic remote control unit.

Sound quality

Since the phono input can be switched to suit a line level source as well I started my listening session by connecting my Cyrus CD8 SE CD player to this input. This gives stereo reproduction through the front pair of loudspeakers (although it can be routed through all four if desired) which is an ideal way to get a handle on the 6000 4channel's character. Most B&O equipment of this period has a very consistent sonic signature, a sound which is slightly soft and warm but with plenty of drive and power. An uncluttered midband which gives a great insight into musical detail is another feature, this is what you get at most levels in the range, the expensive ones just go louder. The 6000 performs true to this form; the only divergence I noted was that the treble is slightly softer than usual.

Playing *Apron Strings* by Everything But The Girl seems like a task that the B&O was built for, its smooth and fluent with an architectural sound stage that seems solid enough to walk around. Tracy Thorn's vocals were presented with captivating detail, but don't think that this amplifier is too civilised to rock when asked to. Slotting in Tom Petty's *Freefalling* showed that the 6000 can drive along a bass line when asked to. The power just goes on and on, the only shortcoming being very slightly limited low-end precision,

which I believe comes from the dated AC-coupled amplifier topology – B&O's first DC coupled model was launched in the same year and amplifiers which work using the same principles are still the mainstay of the audio scene today.

You can't audition a Quadraphonic amplifier without hooking up an extra pair of loudspeakers and seeing what results. There is a dearth of SQ encoded material and much of what is available isn't particularly enticing to listen to, but some conventional tracks can give surprising results when passed through the decoder. One of these is *Art For Art's Sake* by 10cc and sure enough the Beomaster 6000 4channel was able to usefully deploy the rear loudspeakers by throwing some pieces on incidental percussion into the far corners of the room. Purists may sneer but it was a great deal of fun, until a time machine is perfected this is the best way to regain access to the mid-nineteen seventies without breaking any laws of physics!

B&O also offer an 'Ambio' mode which derives the difference between the left and right front channels and used this to drive both rear loudspeakers in mono. Using this

The Beomaster 6000 is surely a high point in 1970s hi-fi design

with care can move the sound picture further into the room from the main loudspeakers, but I found that it also dilutes the stereo image and creates an unnatural listening experience for those attuned to stereo. It's such a shame that of the multitude of surround sound formats that are available today none of them really lend themselves to Quadraphonic listening (4.0), otherwise I'm sure the Beomaster 6000 4channel would have put in a truly stunning performance in its originally intended role.

Given their leadership in FM tuner design, it comes as no surprise that B&O have made a first class job of the radio section of the Beomaster 6000 4channel. The circuit is similar to that used in its top stereo models of the day and is both very sensitive and highly stable. Many modern tuners sound mechanical and

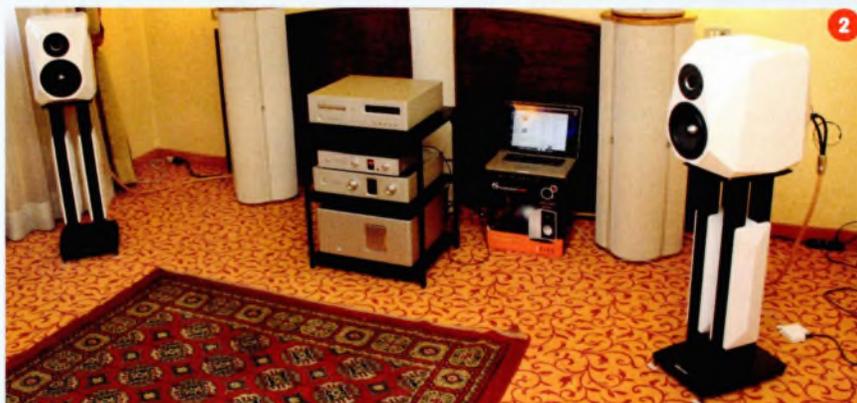
uninteresting, but the 6000's FM stages give a rich and enveloping flavour to any high-quality broadcast. BBC Radio 3 soon has you forgetting everything but the music with its fascinating textures and soundstage for example; this nearly forty year old design makes it look just so easy. BBC Radio 4's presenters benefit from the B&O's indulgence too, and sound warm and believable, in modern terms only the Micromega FM10 really comes close...

Today the Beomaster 6000 4channel is regarded as one of the most desirable B&O products of its era and prices are correspondingly high. A well preserved example in good working order can easily fetch £500, and sometimes more.

Unfortunately the 6000 4channel is none too reliable and due to its complex construction makes repairs difficult. One difficult issue is that when the drive belts for the audio control functions fail, practically the whole control assembly has to be dismantled to replace them. More seriously, the power amplifier printed circuit board can warp and touch the sides of the metal trough where it is mounted which leads to the destruction of the output transistors and many other parts. Everything is still available but accessibility is poor, inserting a strip of insulating material between the board and the metal-work can prevent this happening. It is also not uncommon to see the stainless steel keys curling upwards in an unsightly way which can be remedied by re-bonding the plastic fittings which are located beneath them (providing that they are all still inside the cabinet). Finally the many indicator lamps are connected in such a way that if one fails many are extinguished. It is best to replace them all if you are going to the not inconsiderable trouble of dismantling the set to replace one.

Conclusion

Even though it was a technical dead-end with some built-in flaws, the Beomaster 6000 4channel is surely a high point in nineteen seventies hi-fi design. Offering good performance with a revolutionary user interface and stunning good looks, it was as close as anyone got to making Quadraphony a domestically acceptable proposition. Its classic status today is well deserved, and its appeal can only grow as the decade is slowly rehabilitated and people realise what a unique time it was. ●



SHOW REPORT

Pizza excess

If all you need is everything, then you're likely to find at least some of it at Italy's Top Audio hi-fi show, says **David Price!**

Held at the Atahotel Quark in Milan, the Top Audio 2012 show sported over one hundred and twenty different brands exhibiting, from popular Japanese names to esoteric American ones, taking in plenty of weird and wonderful Italian marques along the way.

The show is best described as quirky, with some of the feeling of the UK National Audio Show, mixed in with a slither of the Munich show and a *souçon* of Las Vegas. There's a nice variety of kit, plus a refreshing lack of Munich bling or Vegas chintz.

It spans a wide price range, and there's even room for some classic kit and car audio, too.

The Quark is a relaxed place to spend the day, lacking the bustle of, say, the Bristol Marriot on a Saturday – and everyone enjoyed the friendly atmosphere. Being reasonably spacious, the larger rooms make for fewer close encounters of the sweaty kind with fellow showgoers, despite the fact that a claimed twenty thousand people attended over the duration. It's nice day out, and then there's always the bright lights of Milano should you crave a breath of fresh air!

1 YAMAHA

First shown at the IFA show in Berlin a week previously, Yamaha has taken the fabulous S2000 retro design a stage further. The new A-S3000 integrated amplifier sports a pair of VU power meters, while the CD-S3000 sports lots of fancy components and balanced outputs. Together they looked superb in a seventies-tastic way!

2 LUXMAN

Showing its complete 800 series system, this iconic Japanese brand seduced with its Class A amplifier complete with glowing level indicators, and DA-200 DAC. This is a 96kHz-capable design that is able to act as a preamp or line level DAC. Partnering was the Diapason Ástera loudspeaker, making a very nice noise.

3 PMC

Naim's SuperUniti powered the PMC Twenty range of speakers. All three models managed to sound lively and involving without tipping over into brightness. Bass response, as you might expect from a transmission line specialist, was extremely good too and the result was highly musically satisfying.

There's a nice variety of kit and a refreshing lack of Munich-style bling or Las Vegas glitz

4 MUSIC

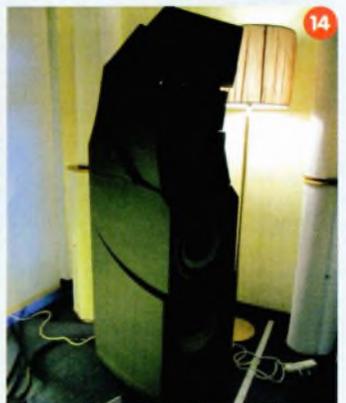
One sign of a healthy hi-fi show is decent music on sale. Top Audio had this in spades, with loads of vinyl and – interestingly – hi-res 24-bit/96kHz digital music sold on USB sticks. Absolutely no copies of *Jazz at the Pawnshop* were in evidence, despite my worst fears – *scorchio!*

5 MARANTZ

Marantz showed its Limited Edition 15 Series components, with upgraded internal components, together with the new Boston Acoustics M25 standmounters, toed-in in true Ken Ishiwata set-up style. Sound was surprisingly clean and open considering the speakers' diminutive dimensions.

6 CAMBRIDGE AUDIO

The Audio Partnership boys were demming their impressive, award



winning 851C CD player and matching 851A amplifier, partnered with small speakers courtesy of Swedish brand Guru. The QM10Two speakers made a very nice noise, even with the guys' rather 'leftfield' choice of demo music...

7 CLASSIC HI-FI

One surprise was the presence of classic hi-fi, or 'junk' as some people call it. Stacked amidst all manner of grot was this rare Marantz PM-5 amplifier, part of the company's late seventies high end ESOTEC range. Yours truly didn't bother to ask its price, lest he had to bin his clothes to make room in his suitcase...

8 ISOTEK

Keith Martin showed the effects of the company's range of mains treatment products, on a Primare and Bowers & Wilkins system. First he ran the system directly off the hotel mains before switching to the Evo 3 Polaris mains block and ultimately on to the mighty Genesis flagship conditioner. Big difference!

9 CANOR

The Slovakian valve amp gurus got a fine sound from the new £4,000 Canor TP134 integrated. Built around the EL34 valve and using a relay attenuator for volume instead of a more conventional pot, it sounded great with the partnering Atlas cables, especially with the new microporous PTFE dielectric.

10 REVOX

One of high end hi-fi's great names in the nineteen seventies, these days the company offers its M100 modular system. This allows customers to choose between sources including disc players, servers and Internet radio modules, which are then attached to digital amplifiers for a beautiful, bespoke system.

11 PEOPLE

One of the great things about the Top Audio show is the sort of folks you meet. While Vegas attracts starry-eyed young honeymooners and Munich middle-aged money men, it's nice to see some smiling senior citizens get out for the day

in the friendly environs of Italy's picturesque second city!

12 DUAL

Demonstrating turntables that look like they have fallen through a hole in time, the semi-automatic CS455-1 was a veritable kick up the eighties! The fit and finish of the products on display seemed to be in keeping with the classic models of yore, and I rather liked the counterpoint to the minimalism of modern designs.

13 FOCAL

The French-made 826 and 836 floorstanders have been given the limited edition treatment and sport a fabulous black or white piano veneer, but the flagship Grand Utopia is always a show stealer – standing over two metres tall and costing a trifling €130,000. Sound via a superb hi-res dem was staggering.

14 WILSON AUDIO

Along with Focal's Grand Utopias, the most impressive sound of the show came from the Wilson

Alexandria XLF speakers. They had less scale but more subtlety than the Focals, and enraptured a packed room of listeners down in the bowels of the building – just like finding a treasure trove buried at the bottom of the sea...

15 AVALON

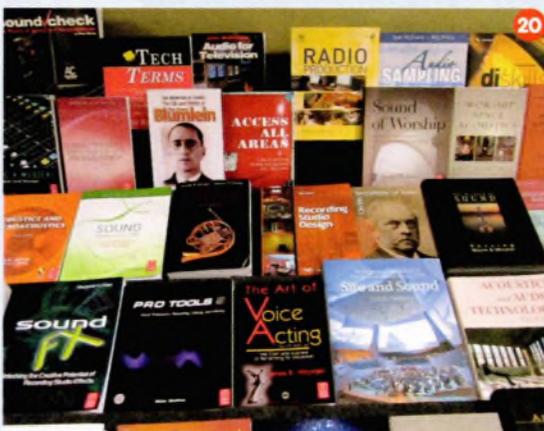
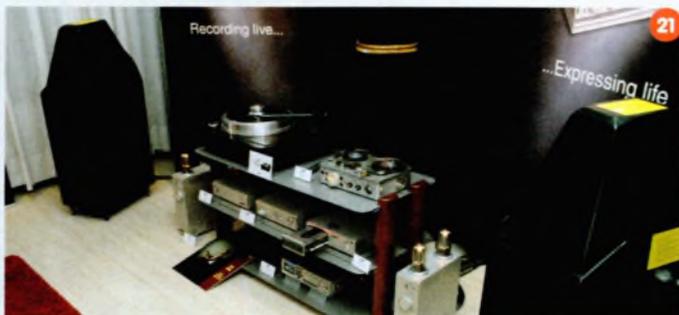
The IDEA is the smallest floorstander that the company makes, but connected to the Lamm Reference 2 preamplifier and Playback Designs CD player plus a power amplifier of uncertain origin, the result was anything but entry level. The room was gilded with some serious looking open reel tape machines, too.

16 MCINTOSH

Classic Tannoy Kensington SE floorstanders partnered some

SHOW REPORT

TOP AUDIO HI-FI, MILAN



delicious sounding McIntosh MC275 valve amps. The sound was bang up-to-date, pleasingly rich and full, and free of bloat or overhang. The matching MCD-301 SACD player was present, as was computer audio, but the best source was a Clearaudio Ovation turntable.

17 AXES

Let there be music! It hadn't escaped the notice of the show organisers that we weren't just here for the beer. Alongside this beautiful showcase of classic axes, one part of the basement had a massive room with a live jazz rock band performing on the Friday. It even made the B&W room sound quite sedate...

18 NEAT

Neat's XL10i is the flagship of the range and a very big beast indeed, complete with isobaric driver arrangements for better bass extension. Sure enough, it managed to rattle the roof even with the valve powered Lector electronics – together the system

delivered impressive lucidity with a rock-solid bottom end.

19 MERIDIAN

Meridian electronics are almost exclusively heard partnering the company's own active loudspeakers, so it was interesting to hear them with DALI Epicon 8s. With the mighty 808 CD player acting as source both with CD, and an Audio Core 200 media system, it delivered a disarming intimacy and delicacy.

20 INFO

Any show with a goodly amount of reading matter on sale is a good show – life's not just about shiny new electronics. And so it was with great interest that we found rows of books on everything from sampling theory to the life and times of Alan Blumlein. Sadly no copies of *Hi-Fi Choice*, we pray for them in their darkness.

21 NAGRA

This stunning IV-S open reel joined modern members of the Nagra

range – a PL-L preamp and VPA 845 valve monoblocks – and Wilson Sasha floorstanders. Vinyl came via a hefty EAT Forte turntable and Nagra's own CD Transport and DAC but the IV-S was the device running for most of the weekend.

22 BOWERS & WILKINS

No surprise to find B&W 802Ds being driven with Classe electronics, specifically a brace of CA-M300 monoblocks. In true "this one goes up to eleven" style, the guy demming the system was bouncing the volume control of the CD-800 preamp/processor off the end stops. It sounded loud and proud with an Avid Acutus front end.

23 D'AGOSTINO

Dan's Momentum monoblocks made an auspicious appearance, driving the Wilson Alexandra XLFs in conjunction with the new D'Agostino preamplifier. Sound was superlative, effortless and musical – and the styling of the preamplifier

isn't too shabby either, along with ergonomics to die for...

24 AUDIO NOTE

The new CD6T CD player, M10 Signature preamp, TT-3 turntable and GAKU-ON monoblocks will leave you with little change from £680,000. Many attendees laughed about this, until they went into the room and heard the system with their own ears. It was sublime, although the green table cloth didn't do anything for the ambience...

25 ICE COOL

A number of hi-fi shows sport car audio demos, Las Vegas being the big one. But while they're invariably toting Audi saloons or Porsche SUVs, trust Top Audio to have a beautifully preserved Citroën DS in its midst. The retrofitted sound system was as surprising as its host car's lack of rust – that's the Italian weather for you! ●

Just Listen To Our Clients Before You Listen To Us.

Dear Brian and Trevor,

All I can say is "wow" - my re-born LP12 is now installed, and I'm sitting in my office at home listening with a glass of wine. Well, I say "I" but actually I mean "we" because my ears tell me that Ella Fitzgerald is actually in the room with me! I knew I'd really be able to understand the difference when I got it back to the room and amp/speakers I've heard it on before, and indeed it's better by some significant margin. I can hear everything on this recording, and an already beautiful voice is now sublime. What a great experience from House of Linn. I can't imagine I'll ever want to visit a high-street hi-fi "dealer" again after this - from beginning to end, superb advice, service and workmanship, in a fantastically relaxed environment. Once again, thanks for taking me through the options for "my Dad's old record player", if you haven't guessed, I'm very pleased with the result of your work. (Incidentally feel absolutely free to quote me as a reference!)
Best regards, Adam. Derbyshire.

Hello Brian and Trevor,

To let you know our system is sounding great, better than ever. Anyone out there with Linn problems should seek out your assistance. Without your knowledge the whole system may have been boxed and forgotten, so thanks again for your help. Best wishes, Mark and Alex. Liverpool.

Hi Brian and Trevor,

Re: House of Linn.....wonderful! Just to let you know, not only is everything working well but it blows our old gear into the weeds. I was quite attached to my old Cyrus Amp however all I can say is...Cyrus R.I.P. Long Live Linn! We would both like to say Thank You....for the Brian and Trevor experience and kind hospitality whilst we were having our Linn LP12 upgraded and now the great addition of the Majik DSi.....never has our music sounded so good and involving. Sincerely, both of you were so attentive and knowledgeablewe'll be back, Take Care, Bob and Margaret. Ormskirk.

Hi Brian and Trevor,

Many thanks for your time and hospitality. What an improvement: not only more of everything (and more clearly) but a significantly more realistic portrayal of the interaction between the musicians/instruments, which makes greater sense of the music overall. I'm struck by the difference and it's still improving. Once again, what a pleasure to deal with you and will be in touch when circumstances next dictate. Best regards, Bob. Skelmersdale.

Hi Brian and Trevor,

Many thanks for an excellent day on Saturday and for providing refreshments etc. It was most certainly worth the drive to Manchester and I will be in contact later this week to confirm the order for the Klimax DS. Thanks once again for your help and advice. Best regards, Alan. London.

Hi Trevor and Brian,

Thanks for this and thanks again for the installation. I am very pleased - the Klimax DS sounds fabulous - it's hard to know what it's going to sound like in your own home until you get in there but I have to say that it's wonderful and I can't imagine not having it which after just a couple of days intense listening is saying something! All the best, Will. London.

Dear Brian and Trevor,

The improvement of my system is HUGE. Will recommend you to my friends and I would probably do business with you in the future, for example for a Linn DS, brand new or approved used of higher level. Have a nice summer and long hours of music listening :) Best regards, Steve. Gloucestershire.

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2001

It hardly seems a moment ago, but remembering the first year of the new millennium aproper shows us just how much things have changed. **Simon Berkovitch** embarks on a veritable time and space odyssey...

For 2001's comedy restaging of King (of the unfortunate typo) Cnut's most misinterpreted act, genuine Heavy Metal royalty landed the coveted role. During this year in music, Metallica plonked their jewel-encrusted thrones in the path of peer-to-peer file-sharing company Napster's advancing tide, commanding its technological waves to desist, forthwith. Talk about locking the stable door once the horse has already bolted...

So, it is 2001, and you're a Metallica fan who had shelled out plenty on the vinyl and CDs, stuck it to the man by wearing the band's edgy T-shirts and soaked up the rebellious live shows... and now can watch

Napster's P2P network where – horror of horrors! – Metallica's entire back catalogue was also available, *gratis*. Arguing that Napster was allowing users – presumably die-hard Metallica fans who already owned every last dreg of the band's anti-establishment 'product' and who would undoubtedly buy physical copies of the band's subsequent releases anyway – to steal from them (in the non-physical form of copyrighted MP3s), an outraged Metallica demanded a cool \$10 million in damages.

Following this, in 2001, the writing was on the wall for Napster. The P2P company was ordered to place a filter on its program under threat of being shut down and was also obliged to remove all copyrighted songs

Metallica had discovered that a demo of their track *I Disappear*, set to appear on the forthcoming *Mission: Impossible II* soundtrack – was already on the radio

your favourite metal gurus jettison every last shred of anti-authoritarian cool by taking a peer-to-peer (P2P) file sharing company to court over infringement of copyright.

Metallica, et al. v. Napster, Inc is the U.S. District Court copyright infringement case that began the previous year – and the first to see a musical act suing a P2P file-sharing company [see *To P2P or not to P2P? That is the Question*, p95].

A file sharing odyssey

The *über*-rich Californian metal band's beef was that, according to drummer Lars Ulrich's testimony, Metallica had discovered that a demo of their track *I Disappear*, set to appear on the forthcoming scintillating *Mission: Impossible II* soundtrack – was already on the radio. Instead of seeing this as free publicity, the band traced the leak back to a file on

by Metallica. Following this decision, other high-profile artists – including one Dr. Dre (of 'Beats by Dre' headphones fame) – jumped on Metallica's bandwagon, leading to the swift termination of a large number of Napster accounts...

A separate lawsuit from numerous major record labels eventually sounded the death knell for this, original, incarnation of Napster. The P2P site rose from its own ashes, however, and is now a legal, pay-per-song music-download site, although its thunder has been well and truly stolen by Apple, thanks to iTunes' domination of the high-quality digital music market.

Year Zero

So, the actions of a petulant Metallica effectively closed Pandora's Box, pulling out the file sharing weed by its evil roots?





2001: a webspace odyssey – it was the year Metallica took Napster to court and changed the shape of music forever...

▶ **SATAN'S SPOTIFY PLAYLIST**

Here's hoping there's a cold, dark place in Hell reserved for absolutely everybody involved in the creation of 2001's seemingly endless roll-call of relentlessly dreadful number one singles...

- Rui Da Silva *Touch Me*
- Jennifer Lopez *Love Don't Cost a Thing*
- Limp Bizkit *Rollin*
- Atomic Kitten *Whole Again*
- Shaggy (feat. Rikrok) *It Wasn't Me*
- HearSay *Pure and Simple; The Way To Your Love*
- Emma Bunton *What Took You So Long*
- Destiny's Child *Survivor*
- S Club 7 *Don't Stop Movin*
- Geri Halliwell *It's Raining Men*
- DJ Pied Piper *Do You Really Like It*
- Shaggy (feat. Rayvon) *Angel*
- Christina Aguilera, Lil' Kim, Mya and Pink Lady *Marmalade*
- Roger Sanchez *Another Chance*
- Robbie Williams *Eternity*
- Atomic Kitten *Eternal Flame*
- So Solid Crew *21 Seconds*
- 5ive *Let's Dance*
- Blue *Too Close*
- Bob the Builder *Mambo No. 5*
- DJ Otzi *Hey Baby*
- Kylie Minogue *Can't Get You Out of My Head*
- Afroman *Because I Got High*
- Westlife *Queen of My Heart; Uptown Girl*
- Blue *If You Come Back*
- S Club 7 *Have You Ever*
- Daniel Bedingfield *Gotta Get Thru This*
- Robbie Williams and Nicole Kidman *Somethin' Stupid*

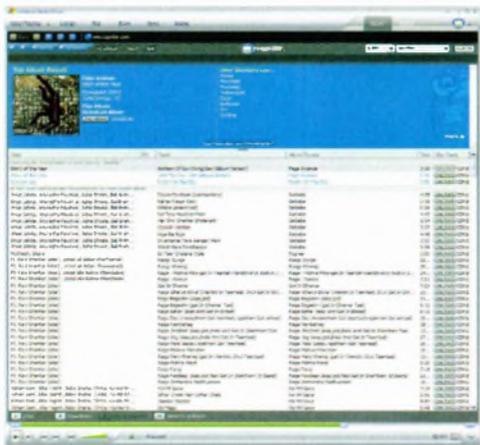
▶ **TO P2P OR NOT TO P2P? THAT IS THE QUESTION**

Peer-to-peer filesharing demystified and jargonbusted:

Peer-to-peer filesharing – or P2P for short – was at the heart of 2001's Metallica vs. Napster copyright case for good reason – in the wrong hands it's not exactly legal. Hence the first-gen of software – Napster – ended up going to the great P2P graveyard in the sky... or should that be The Cloud?

P2P filesharing allows folk to download media files – like music and films – using software that hunts out other connected computers containing all or part of a file and downloads from myriad sources. These 'peers' are computer systems linked together through the interweb.

It's relatively simple to join a network – all you need are an Internet connection and the relevant P2P software. And – voila! – the entire Metallica back catalogue can be yours, absolutely free. But you will be breaking the law of course...

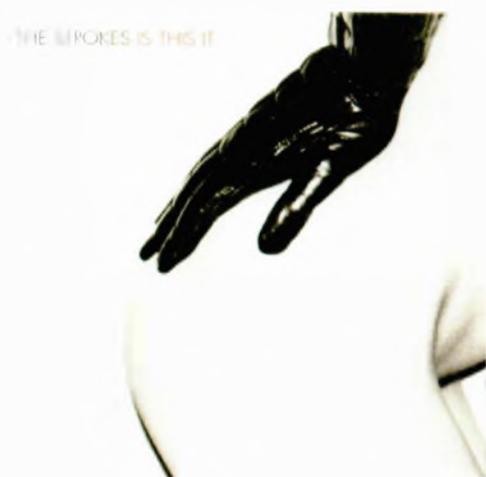


2001 was the effectively the end of the original incarnation of Napster, the 'free' P2P file sharing site...

Well, not exactly. At Napster's peak there were a not insubstantial 26 million users – and they would almost certainly find other ways and means to share out-of-print and live concert recordings of their favourite artists, amongst other things. *Metallica, et al. v. Napster, Inc* was also the first time that ordinary people – i.e. non-music obsessives – not only became aware of Napster and the concept of file sharing, but also of the challenge that high-quality MP3s were making to easily damaged, ugly Compact Discs. Metallica had effectively paid for a worldwide advertisement for the benefits of 2P2 sites. Basically then, it was Year Zero for file sharing, now firmly entrenched in the public consciousness. Way to go, Metallica! And so the money-driven music industry takes another hit where it hurts – the wallet – this time from one of its own cash cows.

For high-end hi-fi enthusiasts, 2001 was also Year Zero for networked music.

Straight outta nowhere came The Strokes, an unashamedly retro NYC guitar band...



With the advent of the snappily-named (not!) SlimDevices SliMP3, recorded music was making its long-term defection from physical media onto computer audio. Fast forward a decade and many Compact Disc players are becoming landfill...

Scraping the barrel

Back in 2001, the way in which music was being distributed and shared – either legally or illegally – was making its inevitable, relentless march forwards to the present day, where most physical media (with the exception of glorious vinyl, enjoying

The biggest crossover act of the year was The Strokes: a New York quintet in love with the late 70s' sounds of their home town

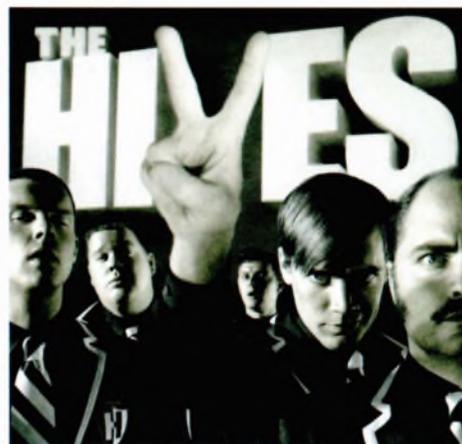
something of a twenty first century resurgence) is now going the way of the Dodo. But, ironically, much of the music of the time was looking backwards.

If you can bear it, have a peek at the near-exclusively god-awful singles that oozed their way to the top of the UK single's chart that year (see *Satan's Spotify playlist p91*). True artistic titans like Westlife, Geri Halliwell, Atomic Kitten and Robbie Williams all released execrable, phoned-in-from-the-yacht versions of songs from yesteryear – gems like *Uptown Girl* and *It's Raining Men* – that people had desperately being trying to erase from their memories since they came out in the first place. Recordings of barrels being scraped and cash registers singing would surely have been more appropriate as 45rpm releases!

The Garage Rock revival

But in some exceptional cases, casting a magpie eye over the past was no bad thing. The biggest crossover act of the year was The Strokes: an unashamedly retro, handsome to a man New York City quintet in love with the late seventies sounds of their home town; the Ramones, Lou Reed, Blondie and Television. Forget kack like 5ive: here was a proper boy band; one capable of delivering glorious tune after glorious tune, all penned by cool frontman Julian Casablancas. January's Debut EP *The Modern Age* – on the recently reactivated Rough Trade imprint; another nod to the perceived hipness of the late-70s–lit the touchpaper. August's debut album *Is This It* was the explosion: press and public alike went bonkers for The Strokes, hailing them the new saviours of Rock.

But could The Strokes live up to the hype? With eleven years' distance from its original release, it's not difficult to see why *Is This It* was definitely *it* in 2001. Clocking in at a taut, fat-free thirty six minutes (why outstay your welcome?), this album is all killer and



Just as Portishead's *Dummy* (above) had back in 1994, The Hives infectious debut album infiltrated the charts...

no filler, with exuberant singles *Last Nite* and *Hard To Explain* scarcely contained within its grooves.

The band swiftly went from relatively obscure music press darlings to the 'must-own coffee table CD album of the year for people who don't normally buy music'. Previous winners of this dubious accolade included Portishead – *Dummy* (1994) – and Air – *Moon Safari* (1998) – with both acts being temporarily stripped of some of their cool in the process.

Hate To Say I Told You So

The Strokes were no different, and the band's second album *Room on Fire* (2003) just couldn't live up to feverish expectations. The band may be at work on album number five in 2012, but you can already hear the whispered voices, "but, is it as good as *Is This It*?" Like Swedish garage rockers The Hives, who also infiltrated the charts with the none-more-infectious *Hate To Say I Told You So* the same year, The Strokes were also going to struggle to escape being stuck in 2001's afterglow.

Indeed, even by the release of The Strokes debut album in August, the Garage Rock crown may even have passed to another American back-to-basics combo – The White Stripes – who had also released one of the new decade's greatest albums that July with *White Blood Cells*... ●

WELCOME TO THE NORTH EAST

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Dual CS505, excellent starter deck	79	NAIM NAP90, excellent	199	Classe CDP102, excellent boxed	999	Martin Logan Design1, vgc boxed	1199
Project Phono box	49	Linn Klout, excellent very late model	1199	NAIM CDS2/XPS, excellent boxed	1499	Spendor S5e, excellent boxed	999
Pur: 701ES DAB Tuner, good condition	99	Arcam P90 Power amplifier	399	NAIM CDS1/PSU, excellent boxed	1999	Monitor Audio Silver 5, excellent boxed	199
NAIM NAT03, excellent	199	Unison Research P70, excellent boxed	1999	Esoteric DV50S, near mint boxed	1499	NAIM Intro 2, rosewood, superb condition boxed	249

Analogue

Audio Technica AT1100 tonearm, excellent	199
Boulder MS11/MS01 Phono Stage, vgc	1499
Clearaudio Unify tonearm, brand new	999
Clearaudio Concept1, mint boxed ex demo	875
Dais & Symx PU2 Audio Origami serviced, good order	399
EAR R34P Deluxe ex demo	1299
Graino Cartridges, various ex display	Call
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Heybrook T12 c/w Linn Bask LVX and K9	299
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Michell Gyro SE, HR Power supply, vgc boxed	899
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Musical Fidelity XLP5V3	199
Project Phono box 2, excellent	59
Project Essential and Debut, ex demo	Call
PS Audio GC1H Phono Stage ex demo	599
Quad 24P phono stage, as new boxed, weeks old	849
Rega RP1, ex demo	179
Rega Planar 3 Green boxed	249
Rega Fono MM boxed as new	99
Rega Planar 3, vgc boxed	249
Roksan IMS1 & DSU, superb, boxed	1750
Roksan Radius 5.2 ex demo	899
SME Silesis V, vgc boxed	1249
SME 3009/2, excellent from	149
Thorns ID25, SME 3009, SME Planit	399
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Townsend Rock 2, Rega tonearm vgc boxed	499
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Audio Note 1-Zero Tuner, excellent boxed	349
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Quad FM4, excellent late boxed unit	249
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Acuphase DP800/DC801 Transport/DAC, WOW!	11499
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Arcam Alpha 9P, excellent boxed	199
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Arcam Alpha 9, excellent DCS Ringdac player	299
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Linn Mimir, excellent reduced	199
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Monitor Audio Silver RX, various ex display	Call
NEA1 Motive 2, excellent boxed	549
O Acoustics 2000 series, various ex demo	Call
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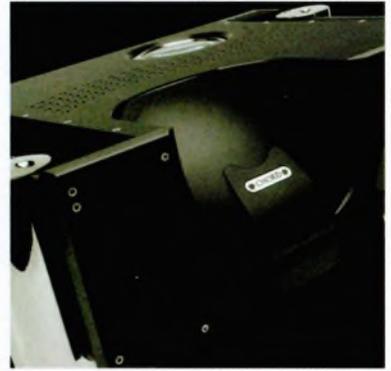
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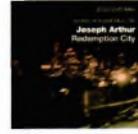
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100 Steve Miller Band
Children of the Future



101 Patricia Barber
Modern Call



101 Joseph Arthur
Redemption City

Music reviews

The latest music releases...

ALBUM OF THE MONTH



The Velvet Underground & Nico

The Velvet Underground & Nico

polydor.co.uk

★★★★★

Polydor

6 CD box set

ON ITS RELEASE IN EARLY 1967, the debut album by the Velvet Underground with the now iconic Andy Warhol-designed peel-off banana on the cover limped its way to number 171 in the American charts. Yet it went on to become one of the most influential albums in rock history, prompting Brian Eno's wry comment that although it may not have sold many copies, "everyone who bought it formed a band"!

Its commercial failure at the time was perhaps understandable. The record appeared as the world was embarking on the 'summer of love'. Yet instead of basking in west coast sunshine and wearing flowers in their hair, the Velvets slumped around in New York's seedy demi-monde, singing confrontationally about the dark, debauched

underbelly of sex and drugs and human relationships. You could tell that Lou Reed despised hippies with a seething rage, that the band's German-born singer Nico was more vampire junkie than earth mother, and that the Velvets were psychopathic rather than psychedelic.

They might have been part of the counter-culture; but they certainly were not marching in step with the Woodstock generation. Yet the record's subsequently ubiquitous influence is equally understandable, too, for ultimately darkness and debauchery proved more appealing subjects than peace 'n' love – at least to the cast of misfits and outsiders from whom so many of rock's most creatively interesting voices have been drawn down the years. This 45th anniversary release confirms that the record's noirish spell has

Ultimately, darkness and debauchery proved more appealing subjects than peace 'n' love

not faded with over-familiarity. Not by one seething, audacious iota.

Many audiophiles have long preferred the mono mix of the original album. It's presented here alongside the stereo mix and makes for an interesting comparison. Not everyone will favour the lo-fi quality and compression, but you can readily hear why so many are drawn to the tougher edge that comes with it.

But the main purpose of stretching the original ten tracks over six discs is to present the 1967 album as we know it – recorded in a day for a cost of \$3,000 – in the context of a two year arc in the band's development, stretching from previously unreleased recordings of rehearsals at Warhol's

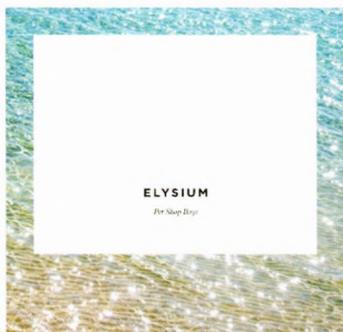
Factory, early alternate versions of the songs recorded at Scepter Studios in April 1966, a previously unavailable live concert by the original five-piece line-up recorded in Columbus, Ohio in November 1966 and on to Nico's solo album *Chelsea Girl*, released in October 1967, seven months after the Velvets' landmark disc, but featuring all of the band.

The remastering, tape transfer and digital assembly overseen by veteran producer Bill Levenson is highly skilled and although not all of the additional music here is great, there's a powerful fascination in tracking the group growing bolder and more experimental as the songs develop.

From the startling beauty of *Sunday Morning* to the cacophonous white noise of *European Son*, via the chugging beat and distorted guitars of *I'm Waiting For The Man* and the droning modal jazz weirdness of *Venus In Furs*, astonishingly this music still sounds ahead of its time. **NW**

The Velvet Underground & Nico was not originally a huge sales success...





Pet Shop Boys

Elysium

emimusic.com

★★★★★

EMI

CD

FOLLOWING FORAYS INTO BALLET AND FILM SOUNDTRACKS,

the archetypal English oddballs return with an album that sounds very much like classic Pet Shop Boys. Swirling synths, catchy tunes and arch, drily humorous lyrics – it's all here, and bizarrely, the pair show absolutely no sign of slowing down or becoming bored with doing what they do best – which is creating classic pop songs with a twist.

Standouts include *Leaving*, a sort of maudlin counterpart to *Domino Dancing*, and *Your Early Stuff*, which offers a window on the plight of the aging pop diva...

Sweeping *Behaviour*-style orchestral arrangements and, vocals only a little above a whisper but high in the mix, their classic sound is very much in evidence. Cleverly, it sounds almost as good when played quietly as it does when it's loud. The themes are so clearly articulated, the instruments so distinctly recorded, that it works through in any system. Classic pop, in other words. **DO**



FREDDIE MERCURY & MONTSERRAT CABALLE



BARCELONA

SPECIAL EDITION

Freddie Mercury and Montserrat Caballe

Barcelona

mercuryrecords.co.uk

★★★★★

Mercury

4 CD deluxe set; single CD; vinyl

FROM THEIR EARLIEST DAYS, Queen were always the most operatic of rock bands – and so it was not quite the leap across the great divide when lead singer Freddie Mercury teamed up with the Spanish soprano Montserrat Caballe. Their 1988 joint album proved to be an extraordinary collaboration; two divas of a very different stripe working in perfect harmony.

The one problem with the original release was that its ambition was compromised by the rushed circumstances of its recording. This 25th anniversary release features new arrangements for full eighty-piece orchestra by Stuart Morley, restoring the album to its full grandiosity of sound you'd imagine Mercury must have heard in his head. **NW**



Steve Miller Band

Children Of The Future

demonmusicgroup.co.uk

★★★★★

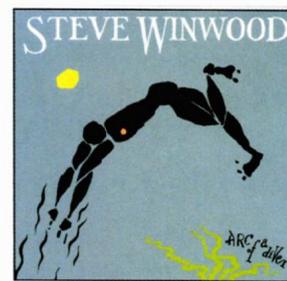
Edsel

CD

MILLER ARRIVED IN SAN FRANCISCO

just before 1967's 'summer of love' and was soon blowing everyone off stage with his virtuoso guitar playing and his supercharged electric blues band. But times were changing and Miller was quick to adapt, incorporating the full panoply of psychedelic sounds into his repertoire. His 1968 debut *Children Of The Future* is a period classic and after years of non-availability gets a hugely welcome reissue, along with four other fine albums recorded between 1968-70.

The first six tracks constitute the *Children Of The Future* suite. Full of ethereal voices, floating guitars and inventive sound effects, it represents perhaps the most cohesive achievement of Miller's career and ranks as one of the most enduring statements of west coast hippie idealism. **NW**



Steve Winwood

Arc Of A Diver

universal.com

★★★★★

Universal

CD

WINWOOD'S SECOND SOLO ALBUM

appeared in 1980 and found him ensconced in his home studio in glorious solitude, playing every note himself. Punk had passed him by, so that on its release *Arc Of A Diver* sounded refreshingly unencumbered by fad or fashion. This newly remastered and expanded edition includes a second disc containing instrumental versions and a BBC Radio 2 documentary about his illustrious career.

Yet even a musician as grounded in traditional rock values as Winwood was not entirely immune to the temptations of the 1980s – tinny drum machines and sterile synth keyboards, brashly over-glossed production and a fashionable 'modernism' that now sounds decidedly dated. **NW**

AUDIOPHILE VINYL

Syl Johnson Total Explosion purepleasurerecords.com



★★★★★

Hi Records/PP

180g vinyl

WE TRULY ARE NOT WORTHY of this Hi Records gem from 1975. Fans of Al Green will recognise the label as well as the song *Take Me To The River*, which heads up side

two of this horn-drenched soul classic. Syl Johnson started out singing with blues artists like Howlin' Wolf in the fifties and had hits in the sixties which later found new life on the hip hop scene of the nineties. Willie Mitchell, who also produced Green's biggest hits, is producer here, and the sound he creates shows just how solid a groove a well honed ten piece band plus strings can deliver.

This is a superb sounding pressing from a label that consistently does a first

class job. Mastering is by Kevin Gray who brings out the brilliance of the brass as well as the soulful energy of Johnson's voice. The recording sounds a bit older than it is, the bass lacks real weight and the treble doesn't extend all the way, but the sound is very much a part of the music.

What counts is that the playing is top notch and the production's slick and powerful. It's a pure soul sound of the sort that many contemporary artists would kill for. **JK**

HIGH
RESOLUTION
DOWNLOADSSteely Dan
Gaucho

linnrecords.com

★★★★☆

Linn/Universal

24-bit/96kHz



GAUCHO REPRESENTED the pinnacle of Steely Dan's recording studio perfectionism and obsessive

recording techniques, and you can detect that diligence in every note on every instrument in every song. It often seems as if they recorded each note individually and then tweaked them so that they fitted the arrangements perfectly.

As you might expect, this perfection means that the music often drifts close to being rather clinical, something that the hi-res recording cannot help but accentuate. I know many audiophiles love them but I think their 'over-polished' approach to the studio confirms the old adage about 'too much of a good thing'. **MS**

Joseph Arthur
Redemption City

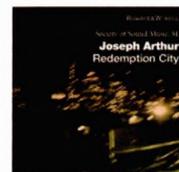
bowers-wilkins.co.uk

★★★★★

HOT PICK

B&W

24-bit/48kHz



A GIFTED LYRICIST, Joseph Arthur started out wanting to be a world-class fusion bass

player but, thankfully, accepted that he was not destined to be another Jaco Pastorius and that his true talent lay with songwriting.

He says, "I tried to make a spoken word album with some minimal, mostly electronic background but it wound up being a discovery of a different kind of songwriting and a playground for musical exploration".

His skilfully crafted melodies power along atop a groove created using Pro Tools, mixed with a Dangerous 2Bus unit, and mastered onto tape to give it additional warmth. This is a phenomenally good album. **MS**



Beethoven

The Nine Symphonies
West-Eastern Divan orch
Daniel Barenboim
deccaclassics.com

★★★★★

Decca

5 CD box set

WAS BEETHOVEN A GREAT

COMPOSER? You can't be too sure these days, given the number of fast nervy 'historical-instruments' performances of his music that sacrifice gravitas and profundity for speed and excitement. But, Barenboim clearly thinks Beethoven wrote great music, and his performances of the nine symphonies with the excellent West-Eastern Divan orchestra were among the high points of the 2012 Proms.

The recordings sound full and sonorous, with the orchestra set back in a spacious acoustic. The tonal balance is rich and warm, rather than bright and incisive, but clarity is good, and you often hear interesting and unusual detail. **JMH**



Gershwin

Rhapsody In Blue
Benjamin Grosvenor (Piano)
Royal Liverpool Phil. Orch
deccaclassics.com

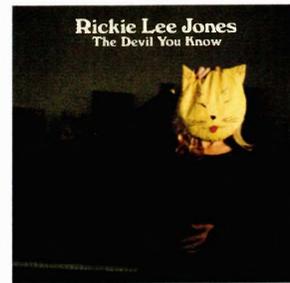
★★★★★

Decca

CD

BENJAMIN GROSVENOR'S first concerto recording gets off to a lively start with a crisply-paced account of Saint-Saens' popular beautifully-crafted 2nd Piano Concerto, and then moves on to Ravel's sparkling concerto in G with its bright jazzy overtones and glittering orchestration. Gershwin's *Rhapsody In Blue* is given in its original jazz band orchestration, and it receives a brilliantly extrovert performance.

Each piece with orchestra is separated by a short work for solo piano from the same composer. Grosvenor has a mercurial technique, and his playing is diamond-bright and very incisive. Decca's recording sounds clear and open, with good detail and clarity. Tonally, the sound is smooth, open, and naturally balanced; clear, detailed and dynamic. **JMH**



Rickie Lee Jones

The Devil You Know

concordmusicgroup.com

★★★★★

Concord/Decca

CD

HER BIGGEST HIT was over 30 years ago (*Chuck E's In Love* came out in 1979), but RLJ has plotted her own, occasionally wobbly course through the decades with integrity, innovation and no little style. As is her occasional wont, her latest is another clutch of idiosyncratic covers of some of her personal favourites. The mood this time is consistently elegiac throughout, even with pacier numbers such as *Sympathy For The Devil* and The Band's *The Weight*.

Sparse, acoustic and painfully heartfelt, this is a world away from the coffee table folk of today's often insipid clutch of singer songwriters. Rickie Lee sounds like she's lived each of these songs personally. It's an album of quiet, reflective communion, ideal for listening in a darkened room with a glass of your favourite poison. **DO**

BLU-RAY DVD

Patricia Barber Modern Cool premonitionrecords.com

HOT PICK



★★★★★ Premonition Records

5.1 DTS HD Master 24/96, 2.0 LPCM 24/192

THIS 1998 RELEASE by the doyenne of audiophile artists has been released on SACD, but as yet there is no high resolution download

available so this Blu-ray version with its 24-bit/192kHz PCM layer is theoretically the finest digital version you can buy. It's a music-only disc made with a system called Pure Audio that allows disc navigation without a screen and it sounds very fine indeed: powerful, dynamic and immensely rich in detail.

The music ain't bad either, rather often the best sounding cuts contain the dullest music, but Barber manages to sound good in both respects thanks to superb musicianship from

cohorts Michael Arnpol on bass, John McLean on guitar and Mark Walker on drums and percussion. Back up is provided by trumpet, udu (ceramic drum) and even a choir. It's cool stuff for the most part but occasionally lets rip, which gives those moments more impact. She is a master of dramatic contrast and knows that less is more when it comes to creating intensity – the way her voice soars against a simple backdrop on *Constantinople* is a great example. **JK**

Minitest

There are a variety of record cleaners on the market under £100, **Neville Roberts** tries a few...

Knosti

Disco Antistat Record Cleaning Machine

PRICE: £49.99 CONTACT: 01733 350878
WEBSITE: ANALOGUESEDUCTION.NET

I CAN'T STRESS ENOUGH the importance of cleaning your vinyl discs – even brand new ones. I've been using a Knosti Disco Antistat Record Cleaning Machine, available from Analogue Seduction, for several years now and find it works a treat. It is amazing how much dirt you get in the fluid after cleaning just a few records. After cleaning used records, especially those that have been purchased second-hand, it is a good idea to replace the inner sleeve. I use antistatic poly-lined paper sleeves that can also be supplied by Analogue Seduction.

The Disco Antistat machine is supplied with a large bottle of cleaning fluid and includes a funnel and filter paper so that the fluid can be poured back into the bottle and re-used at a later date. To clean any record up to LP size, the LP is clamped in a spindle that also protects the label from the cleaning fluid. The assembly is then inserted between two brushes housed within a bath containing the fluid. The disc is then rotated several times in both directions in the bath, and then removed and placed in the drying rack (which fits neatly underneath the bath when not in use) to dry. The clamp can then be removed ready to clean the next record.

You can look forward to a considerable reduction in surface noise and an improvement in clarity, even with brand new records.

VERDICT THE DISCO ANTISTAT does a very fine job and is excellent value for money.



LAST Factory Record Cleaning System

PRICE: £20 CONTACT: 01234 741152
WEBSITE: BRITISHAUDIO.CO.UK

THE LAST FACTORY was founded in 1979 by scientists who were interested in preserving their own record collections. Since then, the LAST product family has grown to include products that are designed to increase the life of all kinds of acoustical and video media, thereby helping individuals, institutions and the recording and broadcast industries to save and protect their vast libraries of recorded information.

The LAST product range is supplied by British Audio Products Online, who incidentally developed the highly regarded Moth professional record cleaning machines. Its Power Cleaner is specifically designed to remove pressing residues and contaminants left over from the manufacturing process, as well as an All-Purpose Cleaner for everyday use, which is safe to use routinely on vinyl as well as shellac 78s and this is the product reviewed here.

Apply three drops of cleaning fluid to the applicator (two are supplied), taking care to distribute the fluid evenly over the applicator with the bottle nozzle. The record is cleaned by moving the applicator in a sweeping motion twice around the record in the direction of the groove. Finally, remove excess dust from the applicator by rubbing the velvet across the ruffled cap of the cleaner bottle. Background noise while playing the record was considerably quieter than before cleaning.

VERDICT HIGHLY VERSATILE cleaning fluid that not only protects your records, but breathes new life into the sound.



Milty

Pro Super Exstatic Carbon Fibre

PRICE: £22.99 CONTACT: 0207 424 1960
WEBSITE: JUNO.CO.UK

ONE OF THE NICE THINGS about dry record cleaners is that they can be used routinely before and after every playing. They are usually of the velvet cleaning pad or the carbon-fibre brush type. I chose to review the Milty Pro Super Exstatic Carbon Fibre, available from Juno Records, because it has both! The theory behind this cleaner is that the hand-made carbon fibre brush lifts the dirt out of the record grooves and the velvet pad carries it off the surface. The cleaner also reduces static build-up on the record.

To use, simply rotate the record on the turntable and gently apply the carbon-fibre brush along the radius of the LP for two or three revolutions. Then press down a little more to bring the velvet pad into contact with the record surface and the pad will collect all the debris. Finally, move the brush off the record by sliding it along the radius and off the outside edge. I found that it does a far better job than the carbon-fibre brush I have been using for many years, judging by the amount of dust it collects from an apparently clean record! I also noted that far less fluff collected on my stylus after playing one side of an LP.

It even comes with a handy metal bracket that can be wall-mounted, and perfectly complements occasional cleaning using a wet cleaning product.

VERDICT THIS IS SOMETHING to have permanently sitting next to your record deck for convenient use each time a record is played.
★★★★★



Spin Clean Record Washer System MkII

PRICE: £80 CONTACT: 01235 511166
WEBSITE: HENLEYDESIGNS.CO.UK

THE SPIN CLEAN is another wet bath system and is supplied with replaceable velvet cleaning pads, rollers on which the record sits, drying cloths and a bottle of single-use concentrated cleaning fluid. Henley Designs is the UK importer. The manufacturer states that the unique formula cleaning fluid encapsulates the dirt that comes off the record and makes it sink to the bottom of the bath so it is not re-deposited onto records during the cleaning process. Bright yellow has been chosen for the colour of the Spin-Clean so that the dirt collecting at the bottom of the bath is clearly visible!

The rollers are placed in runners to suit the size of record being cleaned: LP, 78 or single. The bath is filled to a level mark with distilled water (or tap water if distilled is not available) and three capfuls of the concentrated cleaning fluid are added. Henley Designs actually suggest filling to 1mm above the level mark so that the record spins easier. This is a good idea as the LP is quite a tight fit between the velvet brushes. The record is turned three times in each direction, then removed and dried with the drying cloths.

The diluted cleaning fluid can clean 20-50 records (depending on how dirty they are) and the fluid can be stored in the unit for up to a week by fitting the supplied lid on the bath. ●

VERDICT EXPENSIVE, BUT DOES a fantastic job and it's amazing to see the dirt collected, even with apparently clean records.
★★★★★



I wish I'd known about the importance of cleaning vinyl in the 1970s when I used to return over 70 percent of my new purchases to the manufacturers due to noisy pressings. Quite apart from the

huge improvement in sound quality, cleaning also helps reduce the wear of your precious stylus and records.

All the four reviewed here did the job well, but two of them stood out as making

noticeably audible improvements – the Knosti and the Spin Clean. However, the other two are also great at removing dirt and fluff, and can easily be used routinely before every playing.

Hi-Fi Choice Reader Classified

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These pages are a must-read if you're thinking about buying used kit, or if you have hi-fi you want to sell. It's free to place an advertisement – simply submit your ad of up to 30 words, remembering to include your email, phone number and county.

The simplest way to send your ad is via email to: letters@hi-fichoice.co.uk or mail: **Reader Classified, Hi-Fi Choice, My Hobby Store Ltd, Hadlow House, 9 High Street, Green Street Green, Orpington, Kent BR6 6BG.**

Please note that this service is open to private advertisers only.

FOR SALE

B&W CDM1 NT standmount speakers (cherry), excellent condition, boxed, complete (£750) £350. **01702 520063 (Essex).**

ATC SCM7 loudspeakers (black ash), mint condition, boxed with manuals, (£610) £475. **07733 428736 or email: gill@gillbrears.plus.com (Huddersfield).**

RUSS ANDREWS Classic Powerkord with IsoTek 24ct gold Wattgate £75. **01484 427426 (W.Yorks).**

PMC GB1i floorstanding loudspeakers, (black) excellent sound, mint and boxed £800. **01474 352164 (Kent).**

FOCAL Spirit One headphones, high quality closed-back design, (HFC 5- star rating) £90, Atlas Equator Mk3 and Linn (black) high quality interconnect cables, both as new £30 each. **07971136711 (W.Yorks).**

WANTED mounting plate for Rega RB300 arm to Thorens 160s turntable. Trade or

private. **01772 687748 (Lancashire).**

NAIM CD3.5 CD player, new remote and CD securing puck, original packaging. Comes with interconnects VGC. **0740 2599050 (Northamptonshire).**

KRYSTAL KABLES audiophile silver mains lead, fitted with silver-plated mains plug and IEC (£95) £39, Russ Andrews Yello Powerkord (performance between Powermax and Classic Powerkord), fantastic upgrade (£50) £25, Sound style XS105 4-tier silver hi-fi rack, made under the Revolver badge, fantastic upgrade, slight cosmetic damage (£150) £35. **07981 025698 or email: chrisandelizabeth2001@yahoo.co.uk (Bristol).**

TRANSPARENT Reference speaker cable 10 ft (£6,000) £975, Nordost SPM Reference speaker cable 17ft, bi-wire, both ends factory terminated £1,200, Nordost SPM Reference balanced interconnect 1m,

boxed as new £450. **Email: booning4@hotmail.com (Co Wicklow).**

QUAD 77 series CD player, tuner and integrated amplifier (carbon), plus remote controller and two Quadlink cables, excellent, boxed (1 original, 2 elite boxes), including manuals £750 ono. **07791619099 or email: mikekkafas@hotmail.co.uk (NW London).**

IMF TLS50 transmission line speakers (teak), full working order and in very good condition including grilles £100, Epos ES22 speakers (Dark Cherry), 2 1/2 way small floorstanders, fabulous sounding speakers in very good condition including grilles. Buyer collects £450. **02920702134 or email: gareth.jones72@btinternet.com (Cardiff).**

TOM EVANS AUDIO MicroGroove plus phono preamp, superb sound, very good condition, set up for low output MC cartridge (100ohm R, 0.2microvolt).



PMC GB1i loudspeakers, excellent value for £800

(£850) £475 ovno. **07725 525001 or email: alan.strudwick@googlemail.com (South Wales).**

NAIM CDX-2, excellent condition and wonderful sound, Includes original packing, SNAIC, lead, puck and manual. £1,200. One owner, purchased new March 2009, collection preferred. **01252 312 663 or email: atj.harding@googlemail.com (Hampshire).**

CYRUS system: Pre VS2 £300, Dac X £675, CD 8X £475, 8 Power £750, PSX-Rs x2 @ £250 each, Cyrus 781 speakers, plus Nextel stands £320, Apollo 4-tier stand £75 ono on all, as a whole or parts; Valvesystem: Orange valve preamp £175, Audio Innovations power amp £750, Ayon CD 1 £600, LSA 1 Speakers £600, Atacama Equinox XL Pro 3-tier stand £200, Music Tools Entasis h50 speaker stands £450 ono on all, as a whole or parts, Vites SP102 Phono Stage £12,000 ono, superb performer/unmatched; cables for sale: Audience AU 24e 1.5m RCA interconnect £525, Audience AU24 Powercord 3m £795, Nordost Heimdall speaker wire 2m bi-wire pair £550, Nordost Heimdall RCA 0.6m X 2 £280 each, IsoTek Power Cord Premium mains cable 1.5m X 5 £50 each, XLO Type 1.1 Signature RCA £300, XLO HTP1 RCA 1m £35, XLO HT Pro Digital interconnect 1m £35, Furukawa FVVideo

RCA 1m £40, Furukawa FD Audio RCA 1m £35, Cyrus bi-wire speaker cable 2.5m £30, Tiffany CX-7B RCA 1m £30, Signal 7080 RCA interconnect 2x 1m £30, Signal 7081 RCA interconnect 1x 1m RCA set £25, 1x 1m RCA single £15, 1x 2.1m RCA set £35. **01825 841104 or email: mark.hanna@virgin.net (Lewes).**

AUDIOLAB 8000 CD player (silver), boxed, unused, remote control £250. **01483 271238 (Surrey).**

AUREX Micro System 15 (HFC 360) £300 including carriage, Marantz PM7001 amplifier, boxed, unused £185, JVC Q17 Direct drive £350, Sony TCK 611S cassette £45. **01708 457691 (Essex).**

QUAD 12L speakers [Birdseye Maple], excellent condition, complete with 2m Chord Rumour bi-wire speaker cables £195. **07986987380 (London).**

QUAD 67 CD player, remote control, instructions, boxed, immaculate condition. Recent service by Quad. Can dem £399. **0116 2812074 or 07890 884997 (London).**

ASH DESIGN Cosmic 4 AV rack (Rosewood), 4 glass shelves, double width unit. Isolation spikes and isolated shelves (£500) £170. **001273 309708 or email: pbnokes@hotmail.co.uk (East Sussex).**

CYRUS Pre Vs2 preamp (silver) £350 ono, Cyrus

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!

PSX-R power supply (silver), excellent upgrade for preamp £250 ono, or £500 the pair. **01889 575655 or email: derrick@forsters2.plus.com (Staffordshire).**

NAIM equipment (all Olive) series: 2x 250 monoblocks, £800 each, Naim NAC 52 preamp/supercap/SNAIC £1,800, Naim Hi-Cap £300, NAXO crossover £250. All boxed. **07968 735053 or email: d.mckeith@btinternet.com (Highland).**

USHER Dancer Mini 2 Diamond (walnut), immaculate condition, current model, boxed, manuals, will demo (£3,700) £2,450, Chord Odyssey 4 bi-wire, 4m pr speaker cables (£435) £150. Buyer collects. **01428 605002 or email: rogerssaunders@lineone.net (SW Surrey).**

SPENDOR S5e loudspeakers (cherry), 4 years old, very good condition, with boxes. £420. Buyer collects. **001268 774416 (Essex).**

VERTEX AQ pair of Moncayo speaker cables, 6m banana plugs £700, 2x Roraima mains leads in copper, £150 each, 2x Roraima mains cables, 1m (silver) £200 each. Buyer to collect. **007860 155521 (Middlesex).**

NAIM Nait 01 with Napst, both fitted with Russ Andrews small wooden cones. Both tuner and power supply as new, £800. **01179500429 or email: ron.watt@sky.com (Bristol).**

ATC SCM7 speakers, 6 months old, excellent condition, boxed, as new, fine sound (£610) £475. **07733 428736 (West Yorkshire).**

FOCAL Profile 908 standmount speakers (in Classic) with matching, dedicated S908 stands. Scratch on one side of speaker, but brand new grilles. Sonically perfect, Best Buy, HFC December 2005 (£1,600) £555. **01494 521359 or 07772 711432 (Bucks).**

TECHNICS SL1210 Mk2; Garrard 401 with plinth, no arm; Garrard power supply. All items in good condition, will accept sensible offers. **07910 312910 (London).**

OPERA Super Pavarotti speakers, real wood mahogany, excellent condition £175, QED XT400 X tube speaker cable, 2x 5m (as new) £75, Sumiko Blue Point No2, cartridge, 100 hours £45. **07800606892 or email: schandler@dopaq.co.uk (Worcestershire).**

WORLD AUDIO DESIGN K5881 valve power amplifier, mint condition, can email photos £375. **01424 446282/07972 341692 (East Sussex).**

ROGERS MLS4a speakers, Black Serial no; 5777, Good condition £200, Pink Triangle Export Rega RB300 arm, owned since new, black, great condition, nearly new bearing £600. Dynavector 10x5 £150 2yr. **07547897476 or email: paulginestri@hotmail.co.uk (East Sussex).**

MICHELL GyroDec SE, OEM RB300 tonearm, excellent condition, beautiful sound. £800 ono. Protective cover and instructions included. Buyer collects. **07831 410479 or email: glenn.moore@mac.com (Kent).**

MONITOR AUDIO Gold GX 300 speakers (piano black lacquer), boxes, in pristine condition. Purchased just after their launch last year (£3,000) £1,999. Buyer collects. **01249 892896 (Chippenham).**

OLIVE 03 music server, 18 months old, original packaging, excellent £400. Located North Yorks. **01642 680122 or email: steverobin@mac.com (North Yorks).**

YAMAHA NS1000 Monitor Speakers. Only few hours use, pair in perfect condition, clamps replaced with new Gold Posts. Rare Edition £1,200. Nordost Flatline Blue Heaven speaker cables, banana plugs one end, other unterminated. Stereo pairs 1x 4.5m (£1,030) and 1x 2.5m (£630). Unused/new. Bargain at £550, ono the lot. **01945 463077 or email: deregle1@aol.com (London).**

SUGDEN Mystro integrated amp, lightly used, boxed. Can be posted, £650. **01782 785734 (Staffordshire).**

VAN DEN HUL The Waterfall RCA interconnect 0.8m

£60, Chord Company Carnival Silver Screen speaker cable, 2x 4m lengths, terminated £30, Chord Company Chorus 2 RCA 1m £50, Chameleon Silver plus 1m and 0.5m, all boxed £40 each: **0121602 8349 (W Midlands).**

REGA Couple and Linn Black high-quality interconnect cables, both as new £30: **0121 602 8349 (W Midlands).**

ARCAM rDAC kw and wireless dongle, hardly used. Superb sound, either via USB, S/PDIF, optical or wirelessly, £380. Also battery PSU and charger £30: **07793749178 or email: david@veniceinfosite.com (London).**

KIMBER Select KS1030 1m pair £600, Kimber Monocle-xl 8ft pair speaker cable £500, original packaging: **01772 314151 or email: jamesmckendrick@btinternet.com (Preston).**

ACOUSTIC REALITY AR1001 Mono Blocks, Class D power amps, 1,000w. Silver, excellent condition £825 (pair), Cyrus Pre Vs2 preamp (brushed black), excellent condition, boxed and original accessories £350: **01223 890607 or email: m.overall@btinternet.com (Cambridge).**

TECHNICS SL7 parallel tracker classic turntable with sounds to shame many a modern deck. Pristine condition, hardly used and full working order £225: **07793749178 or email:**

david@veniceinfosite.com (London).

MUSICAL FIDELITY AMS35i, pure Class A integrated amplifier (black), boxed and mint, only 18 months old with 5 year guarantee, reluctant sale (£6,000) £4,500: **01303 863424 (Kent).**

CYRUS 1m and 50cm interconnects, RCA, used but like new and boxed. £70 and £55 resp. delivered: **0115 9288006 or email: Rolfjordan@gmail.com (Notts).**

ORIGIN LIVE Conqueror Mk3c tonearm, one year old, latest version, boxed, immaculate, genuine reason for sale, might p/ex for less expensive model, £2,000: **01323 728118 or email: alanchamberlain1@hotmail.com (East Sussex).**

JUNGSON JA88D amplifier Class A, new, excellent condition £900, but any reasonable offer considered: **07986124147 (Suffolk).**

MISSION Cyrus 2 amp (grey), Mission Cyrus PSX (black), Mission DAC 5 convertor. All leads and connections. Sensible offers please to: **01555 759124 or email: embt80@gmail.com (South Lanarkshire).**

ARCAM CD 36 boxed, as new with unused remote, buyer collects £550: **01329 668149 (Hants).**

MICHELL GyroDec SE, with RB300 arm in excellent condition £800 ono. Might consider part exchange: **01482 651963 or email: jazzevan@hotmail.com (Hull).**

SONY Walkman Pro WM6DC, VGC £200, Firestone Audio Fubar USB DAC, plus Power Supply as new £100, HRT Streamer II USB DAC 24-bit/96kHz, brand new £100: **Email: reisivictor25@gmail.com. (London).**

PMC SCM7 standmount speakers. 6 months old, mint boxed (£610) £475: **07733428736 or email: gill@gillbrears.plus.com (West Yorkshire).**

TECHNICS SL1210 Mk2 (no cartridge). Garrard 401 with plinth, no arm. Loricraft clone turntable power supply. All in good condition, will accept sensible offers: **0207 499 8729 (London).**

ARCAM system: A90 pre-power (2 x 90w); Pro 90 power, 192 CD player (all black), Chord Co. Chameleon silver interconnects, 3 pairs, Odyssey speaker cables for bi-amping, 4 pairs, Monitor Audio Gold GS20 speakers (walnut), new and boxed, (£5,000) £1,500: **0121 602 8349 (W Midlands).**

AUDIO-TECHNICA AT-OC9 MK3 MC cartridge, no mounting kit, just cartridge and box £300 ono: **07517 147056 or email: jameshollis@mac.com (London).**

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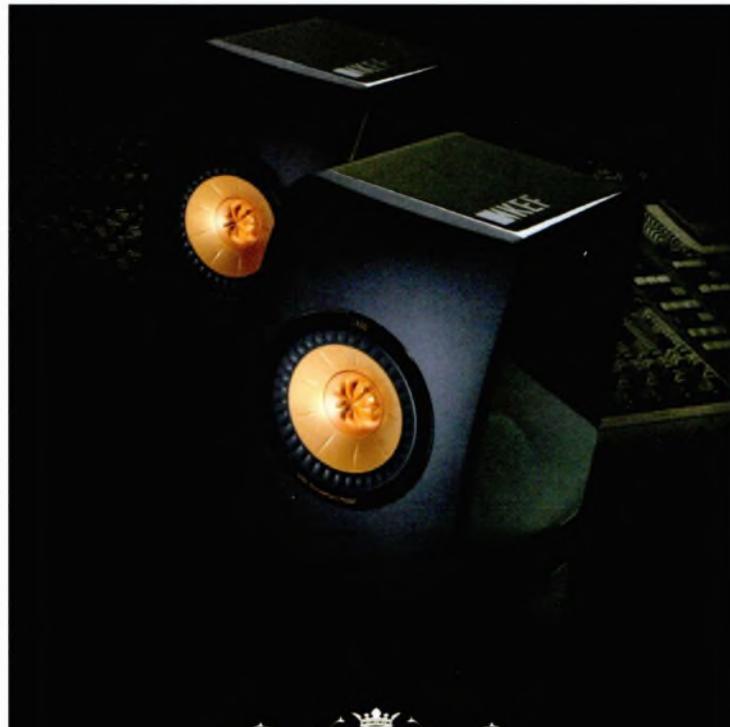
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Ed Selley brings you our pick of this month's top hi-fi websites...

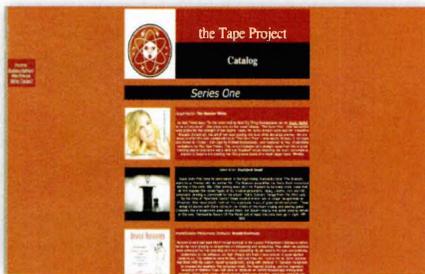


THE TAPE PROJECT

tapeproject.com

High-resolution digital and 180 gram vinyl are increasingly the *de facto* formats for the audiophile, but for a small but dedicated fraternity both of these formats cannot compete with reel-to-reel analogue tape for absolute high fidelity. Obviously there are few problems with this. Even if you have a suitable machine, your choice of material to listen to on it will be limited to your own recordings, won't it?

Enter the Tape Project. This comprises three men, some incredibly serious studio equipment and a deeply held desire to release their favourite music in their favourite format. Each album is clearly a labour of love and the choice is fairly limited, but if you are a jazz fan, there are some seminal releases. Now the bad news – reel-to-reel tape was never a mass market format and subscribing to a release of Tape Project albums will set you back a cool \$1,800 or roughly \$300 an album (plus international shipping), so only those with deep pockets need apply. The site also has a small but useful forum and some advice on reel-to-reel machines for anyone interested in getting started in this format – if not necessarily straight off with Tape Project albums.



HYPERION RECORDS

hyperion-records.co.uk

At the other end of the pricing scale for high-quality, high-resolution music, Hyperion records is a UK-based site offering a useful classical music catalogue. Founded in 1980 Hyperion and its budget sub label Helios describe themselves as “devoted to presenting high-quality recordings of music of all styles and from all periods from the twelfth century to the twenty-first.”

The site is pretty prosaic (and rather beige), but is easy to navigate and search. The download catalogue is available in FLAC and ALAC (Apple lossless), as well as MP3. For the non streamers, CD is also

usually available. A more limited number of releases are available as ‘studio masters’, which offer FLAC in a variety of resolutions from 16-bit/88.2kHz to 24/96.

Two things make Hyperion stand out from the crowd. The first is that the pricing for lossless downloads is very competitive with a considerable number of albums available for under £6 for a FLAC download. The second is the excellent explanation to newcomers what the terminology means, how the formats compare to one another and how they can best use the site. For classical fans, this is a site with some lovely albums that's well worth checking out.



FAT FINGERS

fatfingers.com

This is a bit of a departure for a site listed in Web Choice, but is undoubtedly useful for helping you pick up a hi-fi bargain. It achieves this by utilising the power of spelling mistakes. Intrigued? Read on...

Every day, thousands of eBay auctions go live that will never be viewed by anything like the number of people you might expect. The reason for this is that the keywords that people search for are misspelled. We might mock people for allowing this to happen but while spelling ‘Denon’ is one thing, ‘Electrocompaniet’ is more of a challenge.

Fat Fingers is a search engine that takes a keyword you enter and then performs an eBay search with the term misspelled in common ways. The result is that those ‘hidden’ auctions are viewable. Fewer visits by other people means fewer bids and a far greater chance of being able to pick up a bargain, be it a valve amp or a vacuum cleaner!



MOVE 2 DIGITAL

move2digital.com

Many people I speak to are increasingly enthusiastic about streaming media and the possibilities that it offers. An increasingly large number of these people also understand the nuts and bolts of the process and what they require in hardware terms to make a system work. The stumbling block is that they have neither the time nor inclination to turn a large CD collection into the necessary digital files.

Help is at hand in the form of Move 2 Digital, who will take your CD collection off your hands and rip it, complete with suitable track, album and artist tagging and the most accurate album art available to them. They can rip to a variety of formats including FLAC and ALAC and, for an additional fee, rip to two formats (for home and portable use).

With prices working out at about £1 per disc, this is far from the cheapest way of ripping your entire music collection, but if you are looking for a hassle-free way of getting up and running with streamed audio, Move 2 Digital allows you to ‘break the back’ of your collection and then rip additional discs yourself, as and when you buy them subsequently. ●





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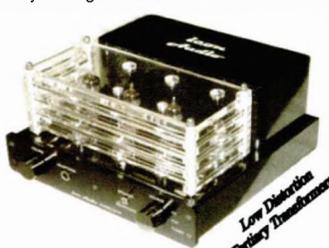
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The New MB30m Single Ended Mono Blocks



designed by David Shaw

Low Distortion Tertiary wound transformers

Shown with upgraded Treasure CV181s, Jensen copper foil in paper and oil capacitors

Absolute Simplicity 27w+27w UL or 16w+16w Triode

In recent times there has been renewed interest in valve amplifiers for their musical qualities. Single Ended* designs are interesting as they strip away a whole layer of components including the "phase splitter" valve, leaving the bare essentials of a valve amplifier to work their magic. But until now the power of many of these amplifiers has been limited to about nine watts unless exotic high power triodes are used, which are out of the reach of many people's pockets. Now unless you are using very efficient speakers nine Watts is just too low for many modern speakers in an averaged sized listening room.

The recent introduction of the Tung Sol KT120 super beam pentode gave us the opportunity to design a new amplifier using only two valves to obtain power of 16 Watts in Triode or 27 Watts in Ultralinear configuration. Designed with equal emphasis on Triode and Ultralinear this amplifier will provide very good volume levels with most loudspeakers having three times the power than a single 300B valve.

Because the MB30s are mono blocks they each get an independent power transformer, a valve rectifier and a custom designed choke, giving the best possible quality of power. A wide range of operating conditions are available including 8 Ohm and 4 Ohm speaker taps and low and high sensitivity for operation with or without a pre-amplifier. The output transformers are our own LDT tertiary wound type having excellent bandwidth and dynamics, together with low distortion. A built in meter allows a very simple way to check that the output valves are operating at their optimum value and best performance. This will also tell you when a valve is due for replacement.

There are also things we don't include like printed circuit boards and transistors both of which we feel degrade the performance of valve amplifiers. The MB30 is an ideal match to our MFV (Made For Valves) and new Full Range loudspeakers. See our website for details.

Our four cornerstones are **Quality Performance** and **Value**. And in the future, **Service** when you need it. In this age of "built in obsolescence" it may be unfashionable to talk about repairs and spares but our commitment to future service means you should be able to enjoy your amplifier for at least 20 years. All of our amplifiers are designed and finished in Leicester they are commissioned and serviced by the people that designed them so you can be sure of our quality control and long term performance. 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 hand made using "point to point" soldering without using printed circuit boards. We are convinced this sounds better. It also allows for easy servicing, upgrades and modifications. High quality components are used throughout.

*Using one output valve rather than the usual two in "push pull".

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Thoroughly Recommended

"I have been using twist speaker cable in my valve based system and it's a sonic bargain! Performance versus price is at either end of a very long scale, thoroughly recommended!"

David Brook, Mains Cables R Us - Huddersfield. www.mains-cables-r-us.co.uk

Incredible Balanced and Insightful Listen

"Twist: Again incredible balanced and insightful listen at and above it's price point, never bright and aggressive, always well timed and well spaced - able to allow the emotion and colours of the music through without having to break the bank..."

Sam Lowe, Phase 3 - Southampton. www.phase3southampton.co.uk

Very Popular with Customers

"We will now use this on our install and budget system as it is proving very popular with customers we have auditioned it to. An excellent cable at an affordable price."

Derek Rapkin, H.G. Rapkin - Northampton - www.hgrapkin.co.uk

Punches Well Above its Weight

"This is a good quality cable which punches well above its weight for its price and delivers a good quality sound. The high frequencies are crisp and the low level frequencies are delivered on a strong level!"

Steve, Rayleigh Hi-Fi - Chelmsford. www.rayleighhifi.com

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sales@blackrhodium.co.uk
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Musical Fidelity EB-50

Despite having bountiful laurels, Musical Fidelity isn't a company to rest on them. Its thirty-year story started with specialist products such as the Dr. Thomas preamplifier, then moved on to Class A integrated amplifiers (A1, A1000, etc.) and then latterly CD players – all highly acclaimed. Then just when it had established itself as a purveyor of high quality, slightly left-of-centre, premium priced electronics, off the company went on its first walk on the wild side. The X-series of tiny hi-fi 'widges', headphone amplifiers, line buffer stages, etc., raised eyebrows – and sales.

That was some fifteen years ago, but just when the buying public's facial furniture had returned to its rest position, so it's on the ascendent again – Roger Moore style – with this, the company's very first headphone. Well, it's an earphone. But a little bird tells us that this is merely the landing party, sent to establish a beach-head. Expect a full scale invasion of a range of full-size Musical Fidelity audiophile headgear in the next few months, including some very expensive and esoteric stuff, the sort of thing to wake Stax from its slumbers!

The EB-50 in-ear monitor (IEM), as it has been immodestly labelled by Mr Michaelson, is said to have been developed and designed by Musical Fidelity to offer the same level of performance as its high-end audio products. Given that Antony is a keen student of horology, and has a soft spot for small but perfectly formed things that you can wear (i.e. watches), you'd expect the EB-50 to be similarly conceived – and you'd be right. They're lovely things to look at and to touch. Granted, they're not the first ever beautifully built and finished in-ear phones (look to Sennheiser's IE 8 for this), but they're definitely special to have and to hold. But worth £150, when you can get a lovely pair of Sennheiser earbuds for under £30?

Musical Fidelity has gone to town with the engineering. Neodymium magnets feature in the 6mm balanced armature drive units, which themselves are set into multi-layer, anti-resonant material and in turn a non-resonant military-spec aluminium body. The 1.2m cable incorporates an in-line mic/mute control so that users with smartphones can take calls whilst listening to their music, and it's terminated with a gold-plated 3.5mm right-angled stereo mini jack plug. The usual selection of ear tips are included, no less than seven different sizes that should cater for everyone from Noddy to Big Ears. There's also a carrying pouch for travellers with more panache than yours truly, who chooses simply to wind his earphones around his Walkman, willy nilly. Overall weight is 28g, heavier than your usual plastic-fantastic earbud but not uncomfortable to wear, all the same...

The new EB-50 boasts a claimed "ruler-flat frequency response" from 10Hz to 20kHz, with a quoted impedance of 26 ohms, a little higher than price-rival Sennheiser IE60s, but certainly not an impossible drive for your average iPod...

Sound quality

The market for in-ear phones is wonderfully varied one, with the high bar set by the top Sennheisers. These are dramatically superior to the sort of dross that comes with your average music portable, but then again they're drastically more expensive, too. This is the rarefied world into which the EB-50 steps, and it doesn't do so gingerly. The new Musical Fidelity is a powerful sounding performer, with a bright and lively nature. It's certainly a bit more spirited than the rival Sennheiser, which has a crystalline clarity but lacks the rhythmic flow of its new British rival. For instance, Visioneers' *Come and Play in the Milky Night* had a wonderful groove to it, the squelchy synthesisers, gently strummed rhythm guitar chords and powerful beatbox backing making for a really poignant musical moment, when so many other in-ear designs simply sound analytical or – worse still – give you a headache.

I was impressed with the smoothness of this new earphone; it's not dull or coloured as a middling valve amplifier would be, but instead throws a bright, sparkling light over everything in the recording. However, this never descends into coarseness, even on the most strident material, such as *When You Sleep* by My Bloody Valentine. This tonal purity makes it great for orchestral musical, giving real insight into my favourite Deutsche Grammophon Karajan recording of Beethoven's *Pastoral*. There's real delicacy to individual instruments, and accuracy in spatial location too. Treble is very good by in-ear standards, extended and airy, without a hint of grain. Conversely, down in the bass region, all is well too – the EB-50 proved lithe and tuneful here, although extension of course depends on how well you've got it located in your lugholes!

Overall, an excellent addition to the Musical Fidelity roster – the company has never before done a headphone of any description, but it doesn't show. **DP**



► DETAILS

PRICE: £150
CONTACT:
0208 900 2866
WEBSITE:
MUSICALFIDELITY
.COM

OUR VERDICT





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Raidho C1.1 is a small, neatly perfectly proportioned loudspeaker. In spite of its limited size, the sound it produces is surprising at first, but harmonious at the same time. This model was developed on the basis of recognised theories of dimension, which Raidho put in practice to produce a beautiful cabinet, carried out in every detail, and superbly finished. The C1.1 is put together from hand-made units built from Raidho's Acoustic's patented technologies. Available in Black, White or Walnut burl finishes.

The two-piece baffle is made from 20mm aluminium with each driver assembled directly onto its rear face. The C1.1 is a new breed of small loudspeakers that uncompromisingly let you hear what your system and the musicians can do. Simply listen to a Raidho C1.1 for an impressive experience.

See what the great and good are saying about of the C1.1

"This emotional range is one of the last great frontiers in hi-fi -- and the C1.1s break new ground. At a time when systems in general and loudspeakers in particular seem to play things ever safer, opting for flat frequency response, resolution or some other technical parameter, at the expense of musical expression and involvement, the C1.1s are a welcome breath of fresh air. The challenge they represent for listeners comes in the form of a question, "Do you want to play it safe or are you feeling adventurous; do you want music to confirm what you already know or become a voyage of discovery?" Think carefully, because the wrong answer will generally prove expensive -- even if it might have seemed like the "safe" solution at the time. If it's adventure you want (or need), look no further than the C1.1s. Believe me, they'll take you on quite a trip!" Audio Beat Jan 09 2012 an article by Roy Gregory

"But for me the real star of the Show was the revised Raidho C1.1 bookshelf loudspeaker. There are subtle changes between this model and its C1.0 predecessor, but it took about a nanosecond to realise you were in the presence of greatness, even given the lofty company and its over-achieving predecessor. Alan Sircom's CES 2012 Show report issue 86 Hi-fi Plus

"the C1.1's were simply sensational" .. "had these two-way stand-mount speakers fallen within my purview, I would have nominated them for Best Sound of Show" Jonathan Valin from Absolute Sound at CES 2012. Who has since awarded the C1.1 The Absolute Sound's Golden Ear award

Call today to trade up to a Raidho C1.1 — Call 01775 761880



Jelco JAC-502 cable

Often overlooked is the importance of a top quality tonearm connecting cable to ensure that the delicate signal from your precious cartridge gets delivered to your phono stage intact! If your tonearm has an integral cable, then all well and good. If however, you have a socket in the base of your tonearm, then you will need a separate tonearm cable. Furthermore, you may not have the space beneath your tonearm to accommodate a straight plug and may require a right-angled connector. One such cable is the JAC-502 right angled cable manufactured by Jelco and supplied in the UK by ISOkinetik.

The Jelco JAC-502 tonearm cable is suitable for the Jelco SA-750D and SA-250 tonearms, as well as those made by Linn, Roksan, the newer SME and many other tonearms. The cable features a high-quality gold-plated 90 degree right-angle version of a standard 5-pin mini DIN connector. The cable is terminated in two gold-plated phono connectors and the cable is made of Neglex oxygen-free copper. There is also the essential earth lead that is separately connected to the DIN connector to ensure correct earthing of the tonearm and this should be connected to the earth point on your phono preamplifier.

In use

As with any interconnect cable, it is important to allow the cable to burn-in before assessment and I find the first ten hours are vitally important. After this period, I found the cable was very neutral, smooth and open-sounding and it made listening to music unalloyed joy.

Overall then, it's an extremely good value cable when you consider the quality of the connectors used and the lowish cost – highly recommended. **NR**



DETAILS

PRICE: £94.99
CONTACT:
0208 241 8890
WEBSITE:
CABEZON.EU

OUR VERDICT



Atlas Eos 4 power cord

The Eos, a new mains cable from Atlas, comes in a variety of guises and is therefore suitable for different plug pin connections for Europe, the US and the UK. The cable itself, like most Atlas products, is a well built, handsome yet unshowy design.

Atlas uses OFC (oxygen free copper) wiring within a Teflon dielectric insulation that the company says creates a barrier to RFI (radio frequency interference), for the removal of glare and haze. The plug is Atlas's own design made from very finely wrought and finished polycarbonate and its pins are highly polished copper-bronze that are plated in a visibly (and tactile to the touch) thick 1.25 microns of rhodium. Ergonomically, the plug is a triumph being much easier to handle and fit into and out of a socket than a standard shaped plug. The fuse holder is also easier to get at, being inside a removable external flap.

In use

Tried in comparison to a variety of mains cables, including a brand new 'freebie' that was run-in through the same period as the Atlas the results were very good. The Atlas provided a far clearer and more open sound in comparison to the freebie, which compressed the dynamics from the music and in comparison to the Atlas, sounded somewhat distorted where guitars and violins were concerned.

Compared to a Chord Company Power Chord, the Atlas proved considerably ahead in timing and sounded obviously clearer, which was an impressive result considering the Chord is one of the best of its type. Indeed the only area where the Chord was ahead was in depth perspective, with was only subtly better. Overall then, the Eos 4 is well worth auditioning. **CV**



DETAILS

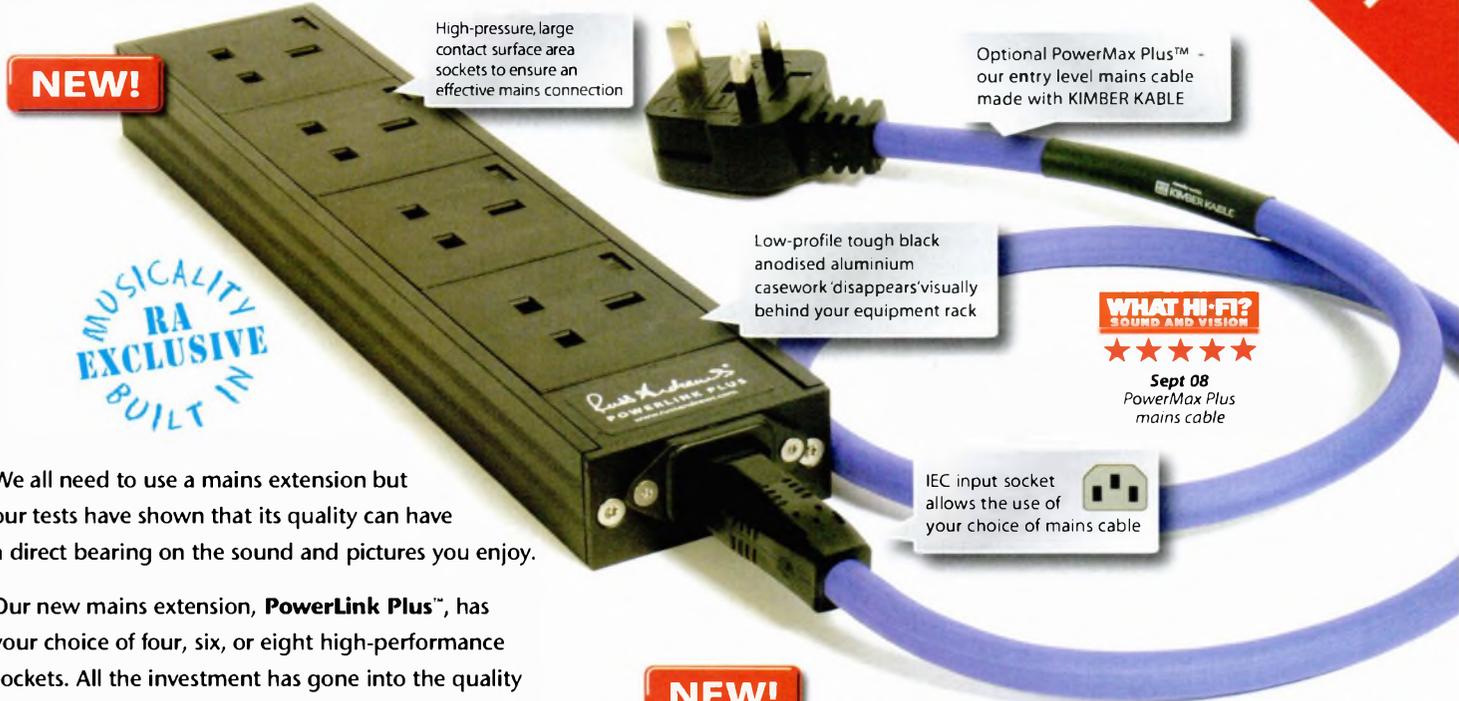
PRICE: £200
CONTACT:
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OUR VERDICT



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WHAT HI-FI? SOUND AND VISION



Sept 08
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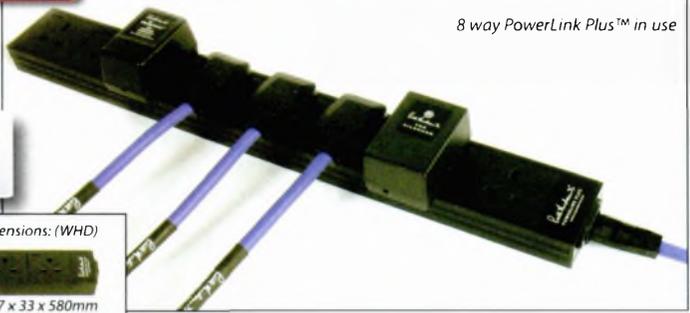
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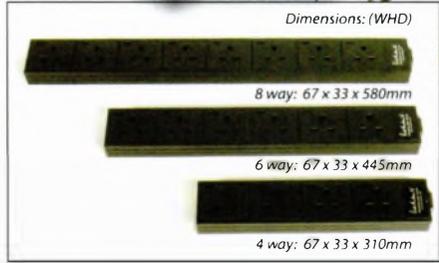
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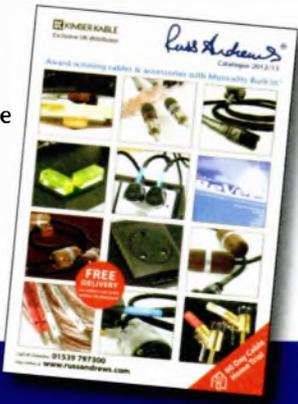
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Mains Cables R Us No 27 mains cable

The legendary Crump Asylum mains lead is an example of uncommon audiophile pragmatism: TG Audio Lab's Bob Crump kept trying aftermarket mains cables, but could never find one that performed better than the moulded cables that came with his Levinson amplifiers.

When he replaced the wall plugs the performance advanced even further. He then replaced the IEC connectors – a gold-plated MK Toughplug and a Martin Kaiser IEC connector – and used a length of Belden 13964 cable in a carbon-infused sheath to reject interference. The overall design of the MCRU No 27 differs only slightly from Crump's original. For example, the sheath drain wire is connected at only one end (the wall end).

In use

The Mains Cables R Us No 27 delivers an overall performance boost unlike most aftermarket cables, and for this reason I was happy to use the cryogenically-treated No 27 within my Naim Audio and Neat XL10 primary system, which does not truly appreciate aftermarket mains cables. Happily, with the No 27 feeding my preamplifier, the system simply delivered more of its usual musical coherence and communication, along with greater definition of micro-dynamics and nuances from the back of the soundstage.

That it promotes discernible, persuasive improvements within such a sensitive electronics set-up merits genuine commendation for me. **MS**



DETAILS
PRICE: £95
CONTACT:
07908 056978
WEBSITE:
MAINS-CABLES-
R-US.CO.UK



Pure Move 400D

Given the company's experience with DAB radio technology, from the very outset, you won't be surprised to hear that this little portable radio performs well. True, that's by DAB standards – which as we all know are far from perfect – it *still* seems a big deal for any DAB portable to get a signal, with any minor deviation from the ideal positioning of the telescopic aerial inducing the dreaded 'bubbling mud' sound. The Move 400D is little different in this respect, although the size of the antenna is smaller than previous generations, and it seems just a little bit more robust in its RF performance. So a qualified thumbs up then!

In truth, the performance of Pure radios was never in question – the problem was always the packaging. The company has sometimes come up with unattractive designs, which lack the effortless good looks or neat ergonomics of, say, rival Sonys or Revos. So it's great to find that this new radio is really rather impressive in this respect. Small and light, it sports a rugged, rubberised case with a neat slither of brushed aluminium trim up front.

The display (backlit, switchable) is comprehensive with scrolling radio text, time, signal strength and battery condition display – all you need. There's an alarm with automatic time zone adjustment and an input for an iPod/MP3 player. The rechargeable battery gives an excellent fifty hours of playback, and the radio itself supports DAB, DAB+, DMB-R, L-band and FM. Sound is good, but the small speaker means it's strictly for 'near field' use. An absolutely superb portable radio, my only question is 'what took 'em so long?' **DP**



DETAILS
PRICE: £89.95
WEBSITE:
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Q Acoustics Q7000 sub/sat system

Q Acoustics is the very definition of hitting the ground running. Not content with conventional box loudspeakers, the team was so confident that the Q7000 series – designed at least initially as a multichannel sub satellite system – can also deliver the goods in stereo, that it dispatched a set to *Hi-Fi Choice* for scrutiny...

The stereo iteration of the Q7000 comprises a pair of the Q7000LR satellites and the Q7000S subwoofer. The satellites are two-way designs and mount a 25mm ring radiator tweeter and a pair of 3inch mid bass drivers. These are arranged vertically in a tall and thin enclosure made out of aluminium that is damped internally to reduce potential resonance.

The enclosure is sealed and is attached to a foot at the bass that contains the terminals. These are push-to-release type and because they are contained within a relatively small space will preclude the use of 4mm plugs. The foot acts as the stand for the speaker, but can also be rotated around the joint to become a wall mount. This is a neat touch and makes what is already a very good value speaker even more wallet friendly. If you want a floorstand however, that will still set you back over £100, although given that you are likely to be considering such a system precisely because you can't have speakers on the floor, this might not be a problem.

Q Acoustics claims a frequency response of 95Hz to 20kHz for the Q7000LR, which is impressive for a relatively small driver and enclosure but still something that will require a subwoofer to be considered 'full range'. The Q7000S subwoofer that provides this low-end bolster is an interesting design that hides the 10 inch forward-firing driver and the relevant connections behind a completely removable side panel. Once replaced, this gives the Q7000S an appearance more like a suitcase than a subwoofer. Power comes courtesy of a 150w internal amplifier with frequency response quoted down to 30Hz.

I was delighted to see that the controls are mounted at the top of the unit. You might have thought that this would be self explanatory by now, but most competitors still insist on placing them on the rear of the unit. The fit and finish of all the units is excellent and is especially impressive considering the asking price. The Elipson Planet M and Planet subwoofer I tested recently (*HFC 361*) felt even more substantial and is arguably more attractive but do cost quite a bit more.

Sound quality

Sonically, the Q7000 goes a very long way to showing why Q Acoustics has such faith in it. Connected to an Audio Analogue Verdi Cento and Cambridge Audio DacMagic Plus, with my laptop acting as source, it shows integration and overall cohesion that is the key to success with sub sat systems.

In a fit of latent national pride, I picked up the *Isles of Wonder* CD of music from the opening ceremony.

Ripped to FLAC, the Q7000 handled the enormous dynamics of *And I Will Kiss* with real conviction and attack. The satellites manage to avoid sounding small or constrained, and even when required to handle massed voices, they rise to the challenge admirably. Perhaps as a result of their multichannel ancestry, I found then to have a relatively narrow listening sweet spot, but this did mean I found them to be excellent used near field where this focus was turned to their advantage. They managed to stay free of harshness even when pushed hard and tonality is excellent, too. Compared to some of their competition at £400-500, there is the slightest sense of some loss of detail in complicated pieces but this is not overly pronounced.

What competing bookshelf designs cannot compete with is the bass from Q7000S. This is deep, but vital for successful music reproduction, fast and detailed as well. With the complex analogue and digital layering of Dead Can Dance's *Song of the Stars*, there is a depth and general presence to the performance that is unusual in any £500 speaker solution. Really fast basslines can still outwit the Q7000S slightly, and an EQ 'notch filter' would have been welcome, but it remained convincing with the bulk of material I threw at it.

The Q7000 faces no shortage of competition from other sub/sat designs and the company's own conventional box speakers, but as a design it offers some useful features, and sonically gets an awful lot right. For a big sound in a small space, consider this. **ES**



▶ DETAILS

PRICE: £525
CONTACT:
01279 501111
WEBSITE:
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OUR VERDICT



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Winner of the prestigious Which? 'Best Retailer' Award 2010 and 'Best High Street Retailer' 2011, Richer Sounds has 52 high street stores right across the country, many of which have special audio rooms where their expert friendly staff will be happy to demonstrate the amazing features and sound quality of the new 2012 JB7 before you purchase.

The face behind the Brennan JB7 range.

Martin Brennan, who designed the JB7, has worked with Sir Clive Sinclair and Sir Alan Sugar and has designed over 20 silicon chips in his career. He was a real pioneer in the computer games industry - he played a central role in the design of the world's first 64 bit games computer.

The 2012 JB7 will link with a number of MP3 devices including the iPod Classic. For the complete list visit www.brennan.co.uk



brennan

If you prefer to order your choice of Brennan **DIRECT** simply visit the online shop at www.brennan.co.uk

A word about copyright "In 2006 the record companies said unequivocally that they are happy for you to load your own CDs onto a hard disk but the Advertising Standards Authority have asked us to tell you that it is unlawful to copy material without the permission of the copyright holder. Confused? Find out more and have your say at www.brennan.co.uk"

Russ Andrews Kimber SB-Ag USB cable

As the name suggests, this new Kimber USB cable uses pure silver conductors rather than the less expensive silver-plated copper of the standard Kimber offering. This more than doubles the price and comes in a brash blue outer casing so that you can spot it a mile off. The plugs have silver-plated copper conductors and the drain and shield wire is similarly plated. Connectors can be USB type B as found on most DACs or Mini B at the receive end, it's also possible to get a half metre length for £86.

In use

In my reference system, USB-Ag performed very well in terms of leading edge definition and timing, delivering a lot of detail – it make steel guitar strings sound extremely crisp, for example. It's not quite as 'in the room' as our reference Vertere D-Fi (HFC 361), which doesn't usually better competitors in this respect, but its timing is in the same ballpark and that's quite a feat.

USB-Ag is a shade on the sparse side tonally, emphasising attack more than decay, but it's more than up to the task of delivering a well scaled image. There's plenty of depth on acoustic recordings and all the sparkle of live instruments. It has a lot more focus and better timing than a standard Kimber USB, which means that it's easier to separate similar instruments and to appreciate what's going on at low levels. It also sounds quite a lot cleaner when you turn up the level thanks to reduced smearing.

All-in-all, this is a fine USB connection that brings a high level of precision and finesse to the computer audio experience at a reasonable price, especially if you put the computer near the DAC. **JK**



► DETAILS

PRICE: £142/1M
CONTACT:
01539 797300
WEBSITE:
RUSSANDREWS.COM

OUR VERDICT



Atlas Eos 4 Way power distribution Unit

One of a new range of mains products from Atlas, this four-way distribution unit is sturdily constructed in a sharply styled yet unpretentious box. The construction is a combination of steel, and layers of plastics that wrap the front and top of the unit. Unusually, the Atlas uses a chunkier 16 amp input and comes complete with a matching 16 amp EOS mains cable fitted with Atlas's own high-quality and ergonomic plug design made of polycarbonate with rhodium-plated pins for enhanced mains contact.

Each of the four sockets within the Atlas is separated from the main steel outer chassis with a subchassis and Atlas says that its casework rejects EMI (electromagnetic interference) and RFI (radio frequency interference), which can degrade sound quality.

Internally it is wired with Atlas's Eos 2 sq. mm mains cable, which is made from OFC (oxygen-free copper) and Teflon insulation. Each of the four sockets is separated and are 'star wired', say Atlas, to prevent cross contamination of mains from different products connected. However, the Distribution Unit is also 'star earthed' so that there is no difference between the sockets when connecting components to them say Atlas. Build quality is excellent throughout.

In use

The Atlas was found to be an excellent performer on audition, with fine timing, real tunefulness in the bass and a very clear and open midrange. High-frequencies were also superb, with sparkle, smoothness and air to all music used – violins, percussion and vocals came out very well, as did the ability to discern complex arrangements within classical music. Expensive, but effective. **CV**



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music first audio

Fidelity Audio No Noise Ultra SE mains filter

This is one of a number of quality mains filters, purifiers and spike clamps from Fidelity Audio. It is designed to solve two major problems. Firstly, it protects your equipment from the performance-degrading effects of mains-born surges and spikes and secondly, it filters out mains noise that is generated by household electrical equipment, such as refrigerators and washing machines.

The No Noise Ultra SE is fitted with the same technology as the Surge Clamp, which is the part of the circuit that reduces the spike activity that can saturate the mains transformers in your equipment. This latest version features larger-value filtering capacitors (10uF) than FA's previous model. In addition, these are higher specification audio-grade Mundorf capacitors to further improve the performance.

Technically, the filters feature both common and differential-mode filtering and three-pole, rapid-response clamping. The high-frequency filter circuit is at 2.4GHz, which is great for eliminating the noise from microwave ovens! The manufacturer recommends running the filter in for four hundred hours in order to realise the full benefits. This simply means leaving it plugged into a mains socket for two and a half weeks, or so! As with all audiophile components, this allows the capacitors to settle-in.

Sound quality

Plugging the filter into a spare mains socket next to my audio system completely eliminated the occasional click I hear when my refrigerator switches on and off. Background noise was also reduced and this results in a noticeable improvement in detail when listening to music. Vocals, especially sibilants, were appreciably smoother, so this comes very much recommended. **NR**



Hi-Fi Racks X220 stand

Hi-Fi racks has been making strong inroads with its range of solid wood stands and supports. This year it launched the X220 stand, so called because its main support structure consists of a cross section of wooden panels. It's a strong and attractive stand with 38mm thick top and bottom plates on a column that can be supplied in any height. It comes with a 185mm wide by 240mm deep top plate as standard, or for a £30 premium you can have a bespoke top plate to suit your preferred speaker. Our sample was 58cm high without spikes, the latter being custom made cone shape types that don't add a great deal of height to the stand. Hi-Fi Racks supplies discs to stop the spikes damaging wooden floors and small rubber feet that can be used top or bottom.

In use

Placed under a pair of PMC twenty:22 speakers with Blu-Tack on the corners the X220 had a slightly softening effect on the presentation compared to a slightly taller damped metal stand from Custom Design (FS104). Imaging is less precise, but it had a lovely relaxed warmth that is attractive with a precise speaker like this. A system that sounds a bit too etched would undoubtedly benefit from the smooth fluidity that it brings to the sound as well as the degree to which the soundstage is allowed to expand. This, combined with the undoubted appeal of hardwood make it an attractive option for those in search of domesticated audio furniture. **JK**



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Qmanager for iOS

Developments for QNAP NAS users from the Taiwanese storage company, such as the recently reviewed QiTunesAir, has indicated that it understands the home audio audience, even if it has yet to fully deliver the functionality. It has also debuted some well conceived general utility iOS apps, which can only make us hope for more improvements for QNAP on the Apple Touch platforms.

QNAP's first iPad foray – QMobile – was a disappointment from a music point of view as it only managed to make its jukebox functionality work for MP3, despite the fact that so many of us actually run FLAC libraries. So it's to be hoped that some of the thought put into Qmanager and its sister app Qfile is reversed back into the jukebox tablet app. Qmanager gives an iPhone-scale simple overview of system activities and monitoring, and the ability to perform simple administrative tasks including shutdown. Very useful.

Qfile gives a similarly small-scale file handling interface – like a mini-version of the Web File Manager. This app is less essential as this functionality would best be realised using all the display space available on iPad, but you can at least download FLAC files and 'Open with' FLAC player...

It's a mystery why QNAP didn't develop an iPad resolution version of these apps from the off, but Qmanager in particular is still serviceable when viewed blown up to full screen for the largest iDevice. It would just be nice to make full use of all that Retina display resolution. Come on chaps, quick as you can! **PC**



PICTURE COURTESY OF APPLE

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PRICE: £FREE

WEBSITE:

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Bigasoft Audio Convertor for Windows and OSX

In a field where many handy free conversion apps are available for the Mac platform, it would take a lot to make me part with some of my hard-earned for a conversion tool you actually have to buy! Bigasoft have a range of cross-platform conversion tools available for iDevice media manipulation, as well as the odd Blackberry utility, too. Its multi-format audio-specific program contains aspects of its other products, and a couple of possible near-USPs.

One ability which is often sought is the requirement to download YouTube clips and strip their audio – this tool makes that a breeze, with a simple 'Add' action to feed the appropriate URL into. Once loaded into the convertor's interface, rudimentary editing controls including basic video trims are available, as well as the fundamental audio conversion options.

The main event here is one that may be of particular use to Mac users – simple WMA conversion. While it is possible to make Quicktime understand Windows Media items by installing flip4mac plugins, it does not lend itself to easy album – or batch-type operation, sadly.

So I set out to establish how well the convertor dealt with a few albums' worth of WMA lossless from my distant past, but whereas more obvious formats worked fine, the convertor seemed to balk at WMA lossless on Mac.

The Mac operation feels like a Windows port rather than a natively-developed app, and the supplied wood-fee skin also seems distinctly un-Mac, but if the WMA lossless issue were fixed this would be worth another look. **PC**

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PRICE: £8.05

WEBSITE:

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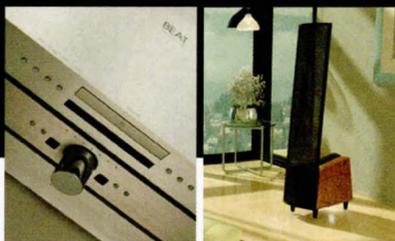
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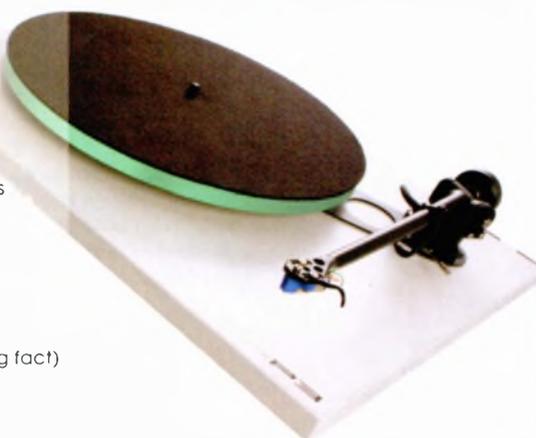


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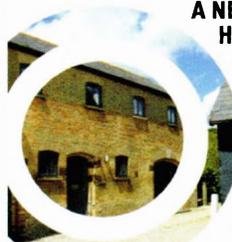
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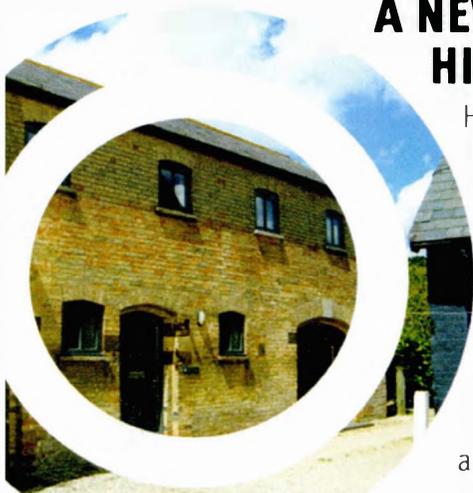
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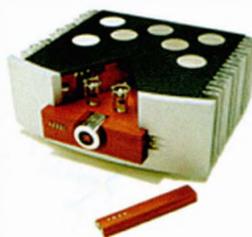
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HI-FI

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WE HEAR...

PIOSOUND IS NOT A NAME that slips off the tongue as easily as some, but it may soon become more familiar if the new Falcon, Eagle and Golden Eagle electrostatic loudspeakers are as good as they should be. A little bird at the Top Audio Show in Milan told *Hi-Fi Choice* that they'd had extensive design input from one of the audio industry's star designers. We can't reveal anymore just yet, but this should prove an interesting story...

HAVING GOT A CLOSER LOOK AT the new Audio-Technica AT-LP120, several tweaky turntable types are opining that it's eerily similar to the late, lamented Technics SL-1200. Indeed, the only real difference seems to be the top plate, which is now a gloss lacquered affair with rounded, bevelled edges. The platter, plinth, motor and undertray all appear identical. Could it be that Technics have sold the tooling to Japanese analogue specialists Audio-Technica?

FANS OF JACOB JENSEN WILL LOVE THE TANGENT FJORD. His design outfit has collaborated with the Danish speaker company to produce one of the most striking small music machines around. With CD player, motorised iPod dock, amp and speakers in one box, the £450 design is spookily redolent of nineteen eighties Bang & Olufsen, which is surely no bad thing!



THROUGH THE PAST, SMARTLY...



HI-FI CHOICE ISSUE 235
DECEMBER 2002
"A heavenly harvest of hi-fi", was the flowery language from editor Tim Bown in his introduction to all that's gorgeous in the audio world. This Christmas issue had plenty of ideas to fill the audiophile's Yuletide stocking, including CD systems, phono cartridges and multichannel amps. There was also an exclusive report on the welcome return of The Hi-Fi Show and AV Expo at Heathrow with a pick of the best kit on display and a sneak peek at what the future held in 2003. Hopefully those attendees from overseas hadn't booked their tickets with United Airlines, however, as the second largest aviation company in the world filed for bankruptcy in December 2002.



HI-FI CHOICE ISSUE 113
DECEMBER 1992
The problem facing editor Andy Benham twenty years ago was deciding how *HFC* was going to embrace the home cinema revolution. The answer was to launch a sister publication called *Home Entertainment*, a sadly short-lived publication that suggested however popular the idea is of turning your living room into an Odeon cinema is, it's audio that has longevity. To prove the point *HFC* had a Christmas gift for readers in the shape of a free cover-mounted 'audiophile' CD. Elsewhere in the world the famous Folies Bergere music hall in Paris closed, and a Greek oil tanker ran aground near the Spanish coast spewing most of its 80,000 tonnes of crude oil into the sea.



HI-FI CHOICE ISSUE 65
DECEMBER 1988
20 CD midi systems were seasonal offerings in this bumper Xmas issue. Alvin Gold had the task of sifting through 100 boxes of kit to find the group best buy, in this case a silver spinner from Sanyo. The concept of downloading music still seemed a trifle far fetched to dedicated vinyl lovers, so Paul Messenger opined on the future of satellites and their potential for the future of audio. But this utopian future for hi-fi fans was in complete contrast to the dystopian view on offer in the world news, thanks to the tragic blowing up of Pan Am Flight 103 over Lockerbie in Scotland, the Clapham Junction rail crash, and a catastrophic earthquake in Armenia.

As any serious vinylista knows, Cardas's Sweep LP is a vital tool in your turntable armoury,

offering as it does a workout for both your cartridge and the rest of the system. Designed to de-gauss a phono cartridge, it can bring about a subtle but useful sonic improvement.

Now though, Cardas has joined the twenty-first century with its new the Clarifier app, written by Josh Meredith. It sets out to do precisely the same thing via your iDevice. It is downloadable from Apple's App Store, and has been written for the screen size of an iPhone or iPod Touch, but can be installed and used on an iPad, too.

Costing a trifling 69p, it's considerably cheaper than the Cardas Sweep LP, but can make just as much sonic improvement - with potential gains in low level detailing, smoothness and overall dynamic range.

For more information, point your browser at Apple's App Store or click on www.cardas.com.

BACKCHAT NEEDS YOU!
Got any hi-fi hearsay? Do your audiophile duty by emailing news@hifichoice.co.uk

DESERT ISLAND DISCS

This month **Stefan Loorits**, sales manager, Guru Audio, chooses his favourite music...



YELLO TOUCH YELLO
My first album would have to be from Yello, as I've grown up and evolved with all their albums. Yello have dominated my listening hours over the years.



INFECTED MUSHROOM CONVERTING VEGETARIANS
Found on the Internet radio station Philo-somatika.com, it opened my eyes, ears and feet to that part of the underground dance scene.



TRENTEMØLLER THE CHRONICLES
He is a fantastic producer with a golden ear for sound quality. I'm a real dance addict and couldn't live without dancing - and this album.



MY BEATPORT.COM (HTTP://BEATPORT.COM/PLAYLIST)
This website contains hundreds of Techno, Electro, Breaks, Tech and Progressive-House tracks, even some new Dubstep. Highly recommended.



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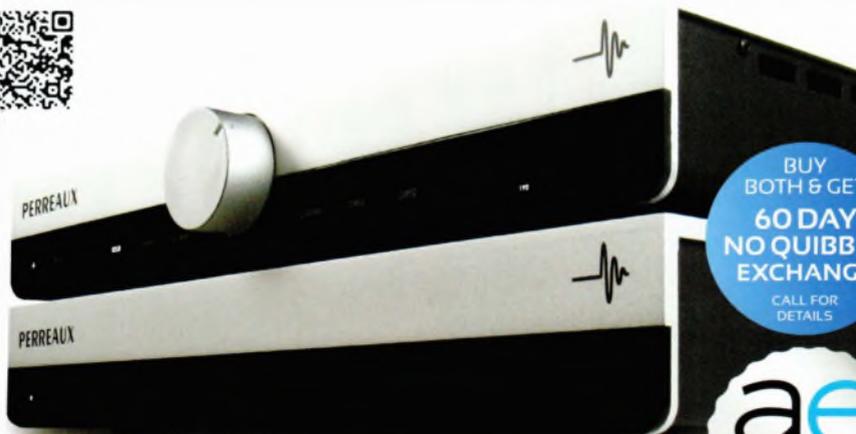
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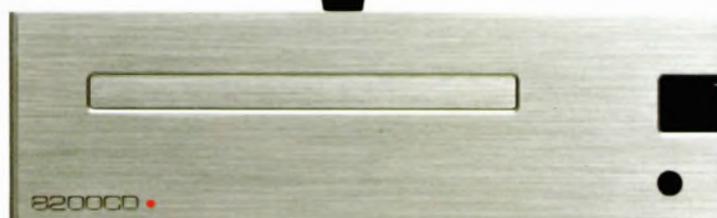
And the winner is...

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Monoblock Power Amplifier



Audiolab 8200AP
AV Preamp/Processor



Audiolab 8200T
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