

# New Cyrus amps: our verdict

Mono X is the most powerful yet. So can it transform *your* system?

# Next-gen DACs compared

Tomorrow's brightest stars revealed: Arcam, Lavry, Chord, Benchmark and more



# Hi-Fi Choice

**PASSION FOR SOUND**

www.hifichoice.co.uk

Issue No. **341**

January 2011

**£3.99**

# Krell's belle

**EXCLUSIVE**

## Secrets of the studio

Why we love Quincy Jones's Signature AKG headphone



## New Linn line-up

Discover the new 2011 range inside

**The best for less: high-end dreams come true with new £2,700 CD player**



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carefully selected treasures including: Peachtree Audio, Mission, Olive and much more

# PLUS

## Are you sitting on a vinyl goldmine?

Find out what it's worth and how to cash in

## COMPETITION WIN!

One of three Quadraspire racks total value **£1,560**

## Denon turntable spectacular

Read the *only* review of Denon's new 100th anniversary range



# "The best nearfield speakers I have ever heard."

Günter Pauler, Stockfisch Records on Amphion Argon3.



Would you like to hear what Mr. Pauler from Stockfisch Records hears in his studio? Now you have access to the same speakers that are used in the recording process of some of the all time audiophile reference recordings.

Even if Mr. Pauler feels Argon3 are the best nearfield speakers he has ever heard, Argon3's were designed to work best in normal acoustically non-treated rooms, where most of the audiophiles enjoy their music.

More information on Amphion products on [www.amphion.fi](http://www.amphion.fi)

# Hi-Fi Choice

PASSION FOR SOUND

## YOUR EXPERTS



**PAUL MESSENGER**  
**EXPERTISE:** SPEAKERS

**PAUL** is the UK's foremost expert on loudspeakers. Having worked as a speaker designer and reviewer for over 30 years Paul is internationally recognised for his ability to assess loudspeaker performance, and report on developments in the field.



**JIMMY HUGHES**  
**EXPERTISE:** SYSTEM OPTIMISATION

**JIMMY** has been involved in hi-fi for over 40 years. His knowledge of tweaking and optimising systems is unrivalled in the hi-fi industry and he brings enormous expertise to the pages of Hi-Fi Choice. If anyone can help you improve your set-up, it's him.



**RICHARD BLACK**  
**EXPERTISE:** TECHNOLOGY

**RICHARD** writes exclusively for *HFC* and brings his experience as a successful musician and recording engineer to the title. As Technical Consultant, he's our authority on tech testing, ensuring that our verdicts are beyond compare.



**ED SELLEY**  
**EXPERTISE:** TROUBLESHOOTING

**ED** has spent the best part of decade selling, developing and supporting products from some of the biggest names in audio. As *HFC*'s troubleshooter, he is on hand to help you answer your questions and help you create that perfect system.



**ALVIN GOLD**  
**EXPERTISE:** PERFORMANCE AUDIO

**ALVIN** is an internationally respected audio reviewer who has contributed to a huge range of magazines over the years. He has a very full 30 years of reviewing under his belt and has a passion for both high-performance and high-end hi-fi.



**JASON KENNEDY**  
**EXPERTISE:** TURNTABLES

**JASON** edited *Hi-Fi Choice* through the Brit-pop era and relinquished the helm after 17 years on the title. A hi-fi addict since his twenties, Jason fell for the beauty of vinyl and has never looked back. He's here to help you get the best from your LPs.



**MALCOLM STEWARD**  
**EXPERTISE:** EMERGING TECH

**MALCOLM** is a legend in hi-fi magazine circles. A former editor of *Hi-Fi Review* he was one of the best-known and most outspoken reviewers of the 1980s and 1990s. He now writes exclusively for *Hi-Fi Choice* and he loves being 'back'.

# Welcome...

www.hifichoice.co.uk Issue No. **341** January 2011



With its dark nights and uninviting temperatures, winter brings with it the hi-fi 'season'; a time to stay indoors with warm, glowing valve amps, a stack of CDs and shelves full of vintage vinyl. In this, the last issue before Christmas, we've thought carefully about how to help you get the best out of both your system and your holiday time over the festive period.

Richard Black has undertaken an exhaustive *Blind-Listening Group Test* on DACs – this year's hottest upgrade – giving you enough time to hint at family members for gift ideas and elsewhere, 'vinyl doctor' Simon Berkovitch has compiled an excellent guide to help you value (and sell) your surplus CDs and LPs in this ripping age of digitisation. But if you're still clinging onto physical media, then check out our exclusive review of Krell's £2,695 S-350a CD player on p56.

*Dan*

**Dan George** Editor  
dan.george@futurenet.com

FUTURE PUBLISHING, 2 BALCOMBE STREET,  
LONDON NW1 6NW +44 (0)20 7042 4000

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**HI-FI CHOICE** is passionate about high-fidelity. We're dedicated to the very highest standards of sound reproduction. Our commitment is to bring you the most reliable, in-depth hi-fi equipment tests anywhere and we're backed by the UK's biggest technology publisher. Our expert writers will help you get the most from your hi-fi and guide you towards the best-performing products for your budget. Our passion is your passion.



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## Vinyl Destination



### SME 20/2a

This finely engineered precision turntable offers a new listening experience from your treasured vinyl and 78's. Massive construction, extensional damping of major surfaces and lack of vibration from moving parts ensure tightly controlled detailed sound and stable stereo imaging.

The Model 20/2 weighs approximately 18.2kg and this is especially significant in relation to its size because in meeting the requirements of mass and stiffness it is density that matters, a point that is often overlooked, because sheer size can be impressive!



### Allnic H-3000

Tired of noisy, non involving phono stages that leave you reaching for the CD remote?

If you desire a phono stage to showcase the best of your cartridges virtues, then the reference H-3000 from Allnic Audio is essential.

The H-3000 is the most musically satisfying phono stage in the world. LCR equalization technology, transformer coupled, patented Gel damping sockets for low microphonics, 4 tonearm inputs, balanced and single ended outputs and an outboard tube power supply that we encourage tube rolling with. Wonderful 4 gain level transformers allowing 22, 26, 28 and 32 db gain increments with resistive loading allowing use of all your cartridges! Flexibility, good looks, outstanding performance all in one package. A new standard.

ALLNIC



### Transfiguration Orpheus

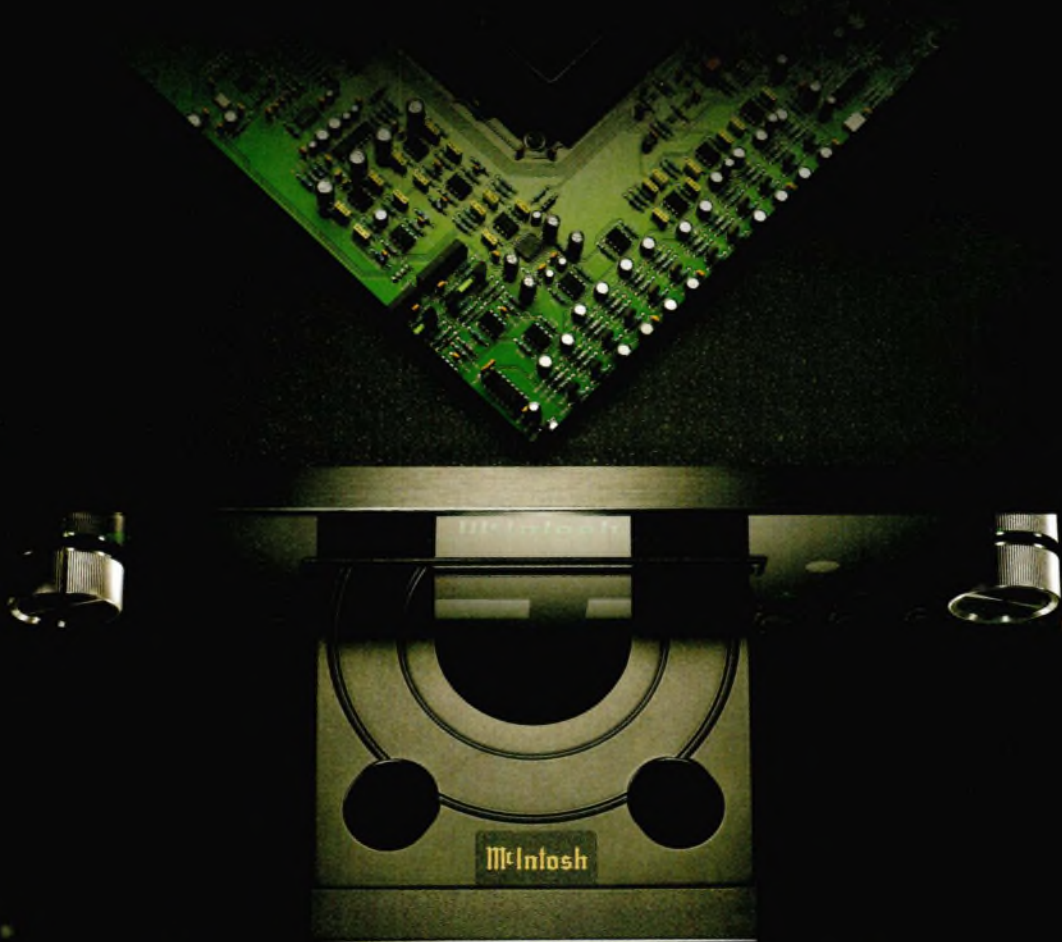
The Transfiguration Orpheus is the pinnacle of the Transfiguration range. It presents the music in your record grooves in the purest, most crystal clear way you can imagine.

Like all Transfiguration designs, the Orpheus incorporates an ultra-tight magnet coil coupling. The coils aren't merely close; they're literally inside the ring magnet, with coil-magnetic proximity of only a few thousandths of an inch. With dynamic mass minimised and coil saturation eliminated, Transfiguration cartridges maintain extremely fast and accurate response to groove movements.

The Orpheus features a boron cantilever, newly developed for a natural sound, a low-mass Ogura PA stylus tip, and ultra grade 7N copper coils.

Transfiguration

**Ask about our special packages on tonearms, cartridges and phono stages when purchasing your turntable.**



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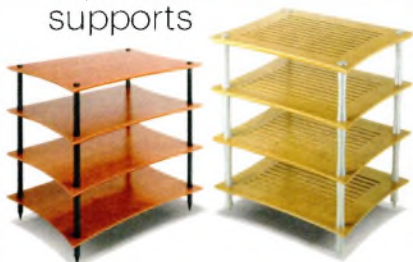
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CD Players/Turtables/Phono cartridges/  
Radio tuners/Headphones/Integrated &  
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Equipment supports **UPDATED MONTHLY**



### WIN!

**39** Quadraspire equipment supports

WORTH  
£1,560

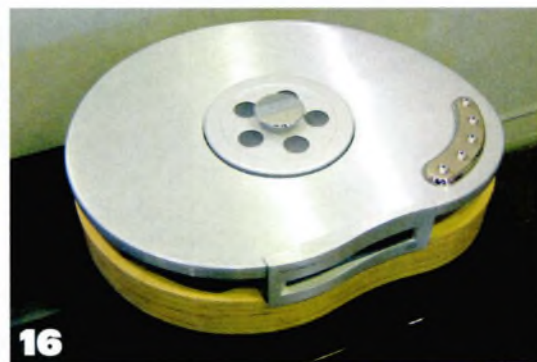


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Tube Imp valve tester

**101\_IDAPT**

Universal Charger

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# Audiofile

All the latest news and views from the hi-fi industry



One year after its widely reported decision to abandon the production of CD players, Linn is adding more soil to CD's grave with the release of the new Akurate range.

The products include the Akurate DS streamer, the Kontrol preamplifier, a matching power amplifier and loudspeaker range. All utilise the same restyled casework featuring a machined front panel, thicker top plate and new feet. The feet are actually taller than before, which means that Linn has been able to move the power switches to the front underside, while making the units slimmer looking. The units also incorporate Linn's Dynamik switch-mode power supply system.

The DS builds on the specification of the previous Akurate. It supports the full range of formats, both compressed and uncompressed, as well as an upgraded clock for better data regulation. A digital output is also included for the first time. Decoding is via a pair

of DACs 'selected for their musicality' into either balanced or unbalanced outputs.

The Kontrol preamp is designed to complement the DS and supports both balanced and unbalanced inputs. Linn has put considerable effort into the suppression of crosstalk and cable-induced RFI.

As well as a very sophisticated input selection system, the Kontrol also removes the power and ground from all inputs not in use at the time. And while Linn may have abandoned the CD, vinyl is still supported with a moving magnet and moving coil phono stage.

The matching power amp makes use of Linn's Chakra ultra linear power amplifier technology, to produce 111 watts into eight ohms, rising to 200 watts into four ohms.

The Akurate speakers benefit from an improved base and a choice of two new wood finishes in polished and unpolished form, with a choice of over 200 lacquered finishes available to special order ●



# Linn's new line-up

Full revamp for Linn range includes improved media streamer and new amplifiers

PRICE: £3,250-4,500  
 AVAILABLE: NOW  
 CONTACT: 0141 307 7777  
 WEB: LINN.CO.UK

Linn is adding more soil to the grave of CD with the release of the new Akurate range



|| ▶ SLEEP

LINN AKURATE DS



- SOURCE + SLEEP

AUX

LINN AKURATE KONTROL



LINN AKURATE 2200

## ACTIV LIFESTYLE

**LINN HAS** long championed the active loudspeaker concept and the Akurate components are able to function in this manner. Once set up as an active system, the crossover is placed in front of the power amplification, which means that each driver is driven directly by an amplification channel.

Linn argues that this is better configured to handle feedback from the speakers and the changes that result in performance through component temperature change.

Vienna  
acoustics

Beethoven Baby Grand in Piano Black

## Passionate About Music?

From 'Bookshelf' loudspeakers to floor standing arrangements, Vienna Acoustics ensure any style of music is fully realised.

# T+A

HiFi designed and built in Germany

T+A products embody everything you expect from German manufacturing, but the development process is extraordinary.

Driven by physicists, T+A have pioneered many ground-breaking concepts, meaning you can enjoy some of the finest sounding hi-fi in the world.



The **Music Player** combines a CD player, together with the ability to stream music from a computer. Features include a streaming client, high end CD player, iPod interface, digital inputs, internet radio and FM radio. The Music Player is a versatile and exceptional source component.



The **Power Plant** is a powerful integrated amplifier that simply exudes power and offers wonderful sound.

This Power Plant delivers 2 x 240 Watts per channel (4 Ohm) and also includes the unique T+A build quality.

For further information on these two exciting brands contact:

AUDYUS Distribution

Telephone: +44 (0)1480 270550

Web: [www.audyus.co.uk](http://www.audyus.co.uk)

Email: [sales@audyus.co.uk](mailto:sales@audyus.co.uk)

## Titanic effort

Cabasse unveils remarkable €80,000 L'Ocean loudspeaker

**C**abasse has announced its first full digital loudspeaker system, in the shape of the remarkable-looking L'Ocean.

This stunningly designed speaker makes use of both the amazing aesthetics and the three-way coaxial drive unit of the flagship La Sphere. This driver is then mated to an all-new 380mm honeycomb dome woofer in an arrangement that places all four drivers on axis.

The four drivers are powered by an impressive 2,250 watts of amplification per speaker. This is divided in increments between the drivers, ranging from 250 watts for the tweeter to 1,000 watts for the bass driver. L'Ocean then makes use of the CRCS (Cabasse Room Compensation System). This, according to Cabasse, 'enables easy automatic adaptation of the loudspeaker's response to the acoustics of the room through parametric modules' – which simply means that the L'Ocean can be tuned to the behaviour of a room with considerable accuracy.



**PRICE:** €80,000 **AVAILABLE:** EARLY 2011  
**CONTACT:** 01224 585713 **WEB:** CABASSE.COM/EN



### A bigger Bang

**BANG & OLUFSEN** has just launched the BeoSound 8 dock. Designed to be equally at home with the iPad as well as the iPod Touch or iPhone, the BeoSound 8 also features USB and analogue line inputs for increased flexibility.

In order to offer consistently strong performance, the BeoSound 8 makes use of a three-position 'manual room adaptation switch', which allows for flexible placement in various sized spaces. Additionally, there's a wall bracket option and black and silver finishes are also available, along with a selection of fabric driver covers in various colours.

The twin-driver enclosures contain a five-inch mid-bass driver and a three-quarter-inch tweeter, powered by the now traditional Bang & Olufsen class D amplification.

**PRICE:** £895 **AVAILABLE:** NOW  
**CONTACT:** + 45 96 845 100  
**WEB:** BANG-OLUFSEN.COM

## Cayin and able

Full range of valve amplifiers, CD players and tuners comes to the UK

**C**ayin Audio products have been available in Europe for some time now, but thanks to Audio Sanctum, they are now available to buy in the UK.

The range is entirely valve-based and comprises integrated and pre/power amplifiers, CD players, tuners and a very intriguing-looking all-in-one radio.

While many of the models are of a conventional open-chassis type, there are also the retro-looking, wood-chassis amps and CD player (pictured). Look out for reviews here in the pages of *Hi-Fi Choice*.



**PRICE:** £464-£6,599 **AVAILABLE:** NOW  
**CONTACT:** 07517 889738 **WEB:** AUDIOSANCTUM.CO.UK

### Triple celebration

**TRIANGLE** has decided to celebrate thirty years in audio with limited edition versions of the Antal and Comete loudspeakers. Finished in an elegant piano black, the speakers also feature considerable internal revisions. These include a solid-aluminium tweeter horn from the Magellan series, detailed improvements to both the midrange and bass drivers and upgraded wiring in the pursuit of higher overall performance over the non-anniversary models.



**PRICE:** £999-1,899  
**AVAILABLE:** NOW  
**CONTACT:** 0033 323 753 821  
**WEB:** TRIANGLE.FR.COM/EN

# CYRUS

## Award Winning Amplifier

The Cyrus 6 XP integrated amplifier continues to outperform its rivals and has won the What Hi-Fi Sound and Vision 2010 Stereo Amplifier 'Product of the Year' award for the second year running. To celebrate this phenomenal success we are proud to launch the new 6 XPd.

The 6 XPd has all of the features and legacy of the 6 XP but also benefits from five digital inputs that include a USB port. This DAC enhanced amplifier means that you can play music directly from a PC or MAC. Simply connect your computer to the USB socket on the amplifier and you can enjoy the convenience of great sounding music directly from your PC music library.



### New 6 XPd

Integrated amplifier & digital system hub

Cyrus DACs are arguably the best in the world and provide a stunning hi-fi solution for many digital sources including CD players, digitally stored music, video game consoles and set-top boxes to name but a few. For more information visit [www.cyrusaudio.com](http://www.cyrusaudio.com)



### Did You Know

If you already own one of our integrated amplifiers, our flexible upgrade philosophy means that you can upgrade your current amplifier to one of our latest DAC enhanced models.



SE technology award



SE CD player of the year



CD 8 SE CD player of the year



Cyrus 8 XP, November '09



Designed manufactured and supported in England by Cyrus.

For the latest news on products or to download a brochure, please visit [www.cyrusaudio.com](http://www.cyrusaudio.com)

Cyrus sales 01480 435577

# PURE hi-fi heaven

PURE's digital iPod dock breaks new price and tech ground at just £75 for a hi-fi transport

**P**URE has drastically lowered the price of digital iPod transports with the launch of its i-20, a dock with the all-important optical and coaxial outputs for connection to an external DAC.

It also goes a stage further in extracting a digital signal from an iPod for conversion via an onboard Cirrus 4353 24-bit/192 KHz DAC, with high-precision, low jitter clock. This delivers 'true hi-fi audio performance levels', including signal-to-noise and distortion measurements. This outputs via a pair of RCA phono outputs.

The i-20 offers a full range of video output options as well, including a composite video plug, S-video and component video via dedicated cables.

Finally, as might be expected, the i-20 is fully controllable via a supplied handset.



**PRICE:** £75 **AVAILABLE:** NOW **CONTACT:** 0845 148 9001 **WEB:** PURE.COM



## Roth's child

**ROTH AV** has announced a complete revision to its OLi speaker range. The five models keep the same competitive pricing as their predecessors, but offer a number of changes for improved performance.

The range includes the standmount OLi10 and OLi20 and the floorstanding OLi 30, 40 and 50 models. All feature Roth's proprietary DALtech. According to Roth, DALtech 'aims to eliminate distortion caused by the speaker's own energy, with the strategic placement of acoustic damping within the speaker cabinet.'

Another interesting feature of the range-topping OLi50, is the use of a 50mm ribbon tweeter for high-frequency work, which is rarely seen in speakers at this price point. The entire OLi range is also available in a choice of black or birds-eye maple finishes.

**PRICE:** £109-£799 **AVAILABLE:** NOW  
**CONTACT:** 07534 026939  
**WEB:** ROTH.CO.UK

# Student sounds

£200 amp joins TEAC entry-level range

**T**EAAC has announced the A-R630 integrated stereo amplifier, an ideal partner to the T-R650DAB tuner we reviewed in *HFC* 340. The amp has an impressive spec for the £200 asking price, including 50 watts per channel, full remote operation, four line inputs, two tape loops, a phono stage and bypassable tone and balance controls.

**PRICE:** £200 **AVAILABLE:** NOW  
**CONTACT:** 0845 130 2511 **WEB:** TEAC.CO.UK



## NEWS IN BRIEF

A selection of news-breaking stories on everything hi-fi



• **MICHELL** has announced a limited edition Gyrodec. Only 99 Gyro SEducation's will be built. They feature an all-black finish and a unique clamp. [michell-engineering.co.uk/](http://michell-engineering.co.uk/)



• **RUSS ANDREWS** has upgraded the Reference and Signature Superkord to include Sawyers Disc technology, which should further reduce RFI interference. [russandrews.com](http://russandrews.com)



• **ARMOUR HOME** has just launched the world's smallest internet radio, the Q2. Featuring no controls, the Q2 is controlled by tilting or rotating the unit. [q2radio.co.uk](http://q2radio.co.uk)



• **KIMBER'S** new range of Hero interconnects are available in copper, hybrid and silver versions and 0.5 and one-metre lengths. [russandrews.com](http://russandrews.com)



• **PROFIGOLD** has expanded its range of iPod and iPad cabling. The PROI 2302 is designed to offer high-performance quality when connected to external systems. [profigold.com](http://profigold.com)

# Monos for less

MonoPulse now more affordable than ever with new compact range

**M**onoPulse has been hard at work creating a new entry-level product to widen the overall appeal of its entire range.

The Model C is a compact shelf or standmount loudspeaker – the first from the company. The

profile is still relatively large for a standmount design at 46cm tall, but within this enclosure is the same ferrofluid-cooled, silk-dome HF unit, as included in the more expensive MonoPulse models. This is partnered with kevlar cone 135mm MF/LF units with four-layer voice coils.

MonoPulse claims considerable power handling of 250 watts and it says 'all the MonoPulse soundstage realism.'

The hand-built enclosures are available in sixty different colour combinations, that should allow the Model C to blend aesthetically into most environments.



PRICE: £995 AVAILABLE: NOW CONTACT: 07785 558238 WEB: MONOPULSE.CO.UK

## DESERT ISLAND DISCS

*Phil Hansen*, of Red Sheep Communications, lists his favourites



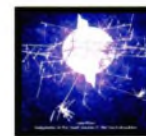
**VAN HALEN**  
1984  
I was 15 and on holiday in the USA when Jump and Panama were being played non-stop on the radio. It's the album that first got me into rock music and I haven't looked back since.



**IRON MAIDEN**  
SEVENTH SON OF A SEVENTH SON  
For me the pinnacle of this seminal band's career. It is the culmination of all that went before and everything fits together perfectly.



**ELBOW**  
SELDDOM SEEN KID  
A band many years in the making that slogged away, never quite making it until this album won the Mercury prize hit and then they were everywhere.



**MARILLION**  
HAPPINESS IS THE ROAD, VOL 2  
Not the band you think they are! Superb musicians who write beautifully crafted songs. Listen to Happiness... and have your views changed.



## a class above

With the same innovations as KEF's revolutionary Concept Blade technology showcase, the all-new Q Series from KEF performs like speakers from a higher price class in terms of realism, musicality and off-axis dispersion.

### Q Series

#### All new Uni-Q array.

Sweet, spacious and true, wherever you sit

A large vented tweeter in the centre of the bass/midrange driver, with a 'tangerine' waveguide and unique Z-flex surround to combine unrivalled dispersion with generous travel for the aluminium MF/LF cone.

#### Advanced bass technologies.

Deeper, tighter and more accurate bass

Inside the fashionably rectilinear cabinets, the new bass driver combines a rigid superlight cone with a massive vented magnet assembly and an oversized voice coil for exceptional sensitivity and distortion-free power handling.

#### Total system design.

A holistic approach, with no compromises.

These advanced new drivers only need first order crossovers, maximising fluency and transparency, and KEF's legendary attention to detail extends from innovations for easier bi-wiring to environment-friendly finishes.



1



2



SHOW REPORT

# Salon Hi-Fi 2010, Paris

**Alvin Gold** is more excited than a visitor to the Moulin Rouge, given the entertainment on offer at this year's Paris Salon Hi-Fi show

**T**he successor to the Festival du Son, the Salon Hi-Fi Home Cinema show is now well established at the Pullman Paris Rive Gauche ex-Sofitel hotel. The show was well attended and there was plenty to see and enjoy from some of the world's best-known hi-fi brands.

If you wanted valve amps, horn speakers and all things vinyl, they were there in their usual profusion, but there was also plenty of impressive hi-tech kit too, ranging

from iPod accessories to full-on multiroom systems, much of it being wireless.

What did stand out, however, was the sheer range of talent on show, as well as the French ability to make hi-tech a part of everyday life. It's a success story for which the Salon Hi-Fi show remains unrivalled throughout Europe. It may be a simple geographical factor, but lots of French hi-fi has found favour with UK audiophiles in the past. Perhaps we're not too dissimilar?

## 1 TRIANGLE COLOR RANGE

To fit in with the new look Color loudspeaker range, this standmount is small, affordable – and colourful. It weighs 4.5kg, handles up to 100 watts and pushes out decibels by the bucket-load, thanks to its 90dB sensitivity. It could also become a very convincing and slightly upmarket entry in the Wharfedale Diamond category.

We suggested to the Triangle technical team that they consider a self-powered version, that could be connected to a computer, like the Bowers and Wilkins MM-1.

**“Valve amps, horn speakers and all things vinyl, were there in their usual profusion.”**

## 2 WATERFALL SERIO

France-based glass loudspeaker specialist Waterfall was showing its

smallest loudspeaker yet, the Serio (above right), which slots in below the well-established Hurricane and generates surprisingly credible noises when it's not being driven too hard from its diminutive 125x125 x 85mm frame. Weight is a mere 1kg and it has a glass main structure. It's also available in black, white or silver, as well as in 2.1 channel or 5.1 channel combinations.

## 3 STORMAUDIO V35 AND V55

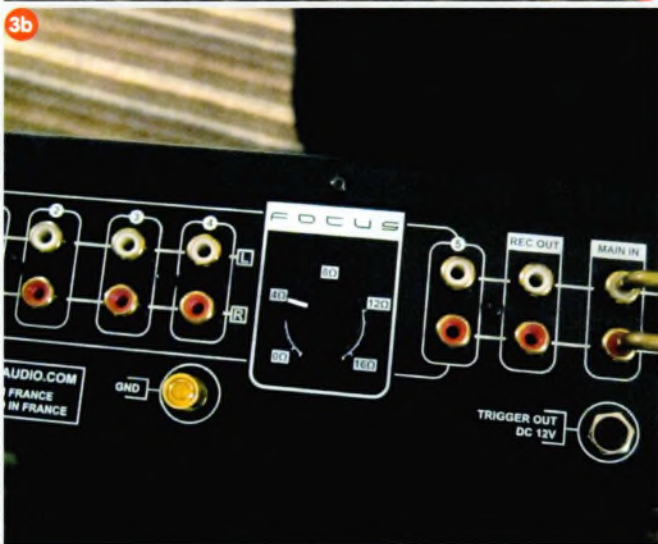
StormAudio is a French manufacturer of that most elusive and rare of beasts – technically innovative amplifiers. Central to the story is StormFocus analogue circuitry which claims to eliminate phase distortions endemic with most amplifiers. The sound can be very effectively fine-tuned with the StormFocus control on the back panel.

Different power levels are available (2 x 70 watts or 2 x 170 watts) and they're available in a choice of attractive finishes.





3a



3b

#### 4 SOLEDGE MAESTRO AND TENOR

Gorgeous and undeniably elegant hi-tech, as only the French know how. The Maestro is a wireless server with a built-in motorised tip-up hinged screen. Internal storage is 500GB and all the usual bells and whistles are included, such as a powerful search facility.

The Tenor is the matching wireless receiver and 100-watt power amplifier that is designed to stand vertically adjacent to your speakers. Distribution is currently being planned for 2011 and prices are still to be confirmed.

#### 5 LEEDH C ACOUSTICAL BEAUTY

Given this speaker's bizarre appearance, it actually sounds much better than one might expect. The result of an unusual cross-fertilisation between an ex-Audax engineer and the University of Maine, it's a clean sheet product in which most of the traditional

loudspeaker design paradigms have been ditched in favour of a motor assembly based around rare earth magnets (conventional designs use hysteresis inducing iron pole pieces). The speaker is modular and can be upgraded with additional bass modules.

#### 6 MICROMEGA AS-400

Attracting considerable interest at the show, this new model from Micromega is based on the established IA-400 amplifier, with the addition of Airstream wireless streaming technology which has been re-engineered from the ground up for this model.

Although still based on the core functionality of Apple's Airport Express, the claim is all-round improved audio performance across the host network, with improvements made to the power supply, the main module, the master clock and the analogue circuits south of the D/A.



4a

4b



5



6



7

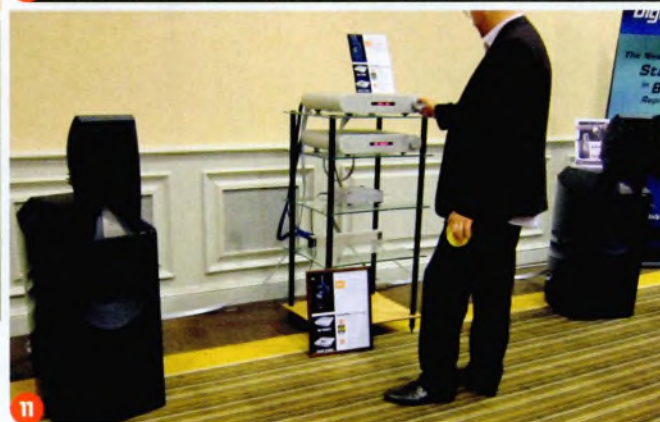
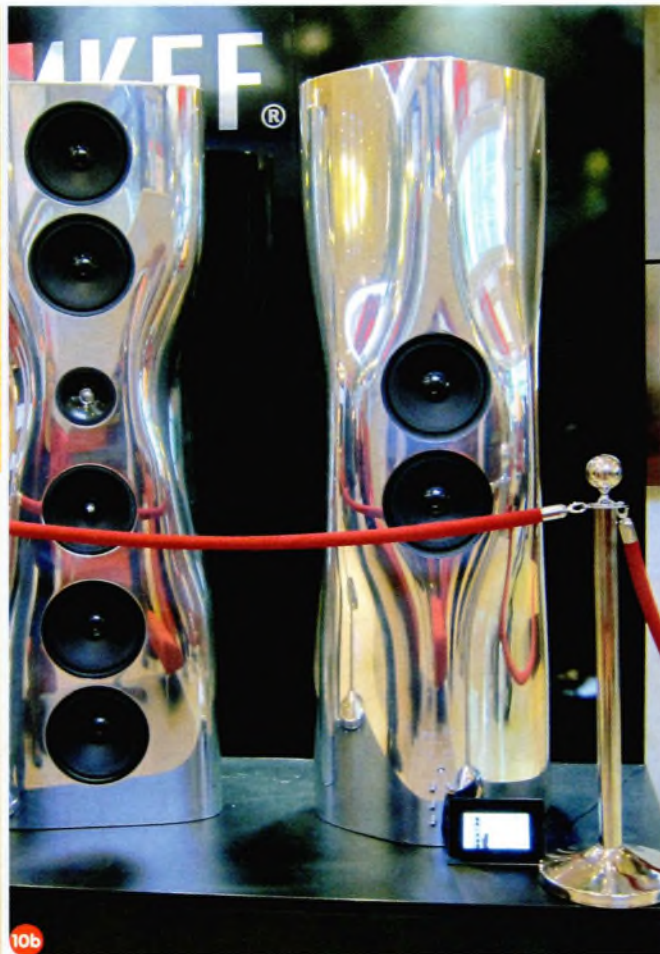
#### 7 ACCUPHASE DP-510, E-560 AND T-1100

Accuphase is one of those brands that is widely acknowledged as producing kit of a high standard, but for some unaccountable reason it has always eluded the prominence it deserves, or gets in some other countries.

Here is a trio of characteristic models: the DP-510 is a high-grade no-frills CD player; the E-560 is a Class A amplifier with a MOSFET output stage; while the T-1100 is a purist FM tuner of sophisticated design. They are not, however, currently available in the UK.

# SHOW REPORT

## SALON HI-FI 2010, PARIS



### 8 CLASSE CT-M600

One of the first Classe products in recent years to break away from the familiar smoothly rounded format with one-piece facia and side panels, the CT-M600 is a 600-watt audiophile monoblock designed for flexible rack-mounting and is aimed at the custom-install market. It is fitted with a 'noiseless' fan as heat management can be an issue with rack-mounted amplifiers. A Delta range version with the familiar rounded casework will follow.

### 9 CLASSE CT-SSP AND CLASSE CT-5300

Classe's new CT-SSP preamp/stroke processor and the CT-5300 multichannel power amp

should be of interest to anyone on the market for high-grade multichannel, including audio discs recorded with Dolby True HD or DTS Master Audio.

It is essentially an upgraded SSP-800, but in more conventional packaging (conventional for anyone except Classe that is), but with the same internal LCD screen which makes light work of system set up.

The matching CT5300 is a similar repackaging exercise and there will be Delta series versions very soon, with the familiar smoothly rounded casework.

### 10 KEF MUON AND NEW SERIES UNI-Q

KEF had a prominent role at the Paris show, headlined by the

fabulous Muon loudspeaker (10b) static display and more significantly in the real world by the latest iteration on the new Q series.

The design centres on ideas, derived in part from technologies developed during the long-running KEF Project Blade programme – a search for the ultimate speaker design.

Principal claims revolve around enhanced power handling, new surrounds, driver resonances postponed to higher frequencies and minimalist low order crossovers

– all designed to add up to better sound quality.

### 11 JBL PROJECT ARRAY

JBL was drawing on its public address credentials with this hard-hitting speaker. It's not meant to be the polite face of reproduced audio, but to reproduce the scale and excitement long available to its professional customer base in a firm just barely tamed for use in the home.

Project Array speakers are available in various configurations for different requirements, bought to you by the team responsible for the K2.



# Audiostyle *n.* hi-fi equipment that looks and feels as good as it sounds



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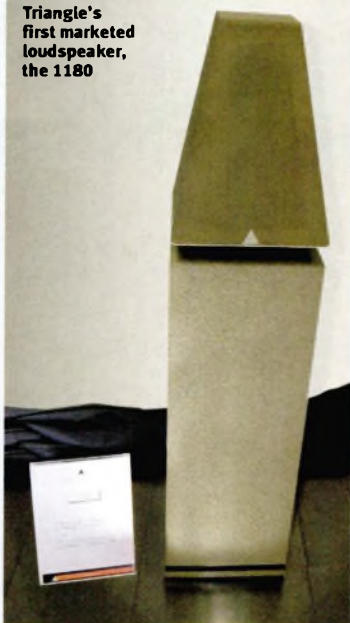
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Triangle's first marketed loudspeaker, the 1180



**12 VIENNA ACOUSTICS KLIMT SERIES THE MUSIC**

Named after the painter, this the impressive senior stereo model in the Reference Klimt series. It's known simply as The Music and gave a great account of itself in an admittedly large, impressive room. With its revolutionary Flat-Spider cone midrange and silk dome tweeter, the speaker is time-aligned across the whole audio band and is technically innovative in other ways, too. Sadly, however, its availability in the UK is far from widespread.

**13 OPERA CONSONANCE CYBER-100 SIGNATURE**

One of the highlights of the many species of valve amplification on offer at the show is this beer-budget model, whose low pricing is

attributable to the fact that it is manufactured in China. The Cyber 100 boasts a 2 x 40-watt output using Chinese-made 300B clones and five line inputs. It gives every appearance of being well made and finished – though looks may not tell the whole story.

**14 OPERA CONSONANCE DROPLET**

More from this Chinese-made, high-value brand is this striking Droplet CD player. We tested the Mini Droplet in HFC 332 and it remains one of the best-looking players for the money. It has a Delta Sigma 24-bit /192kHz upsampling DAC, as well as a balanced XLR and a single-ended output from its fully balanced valve output stage. It is also available in a choice colours and finishes.

Although a number of the products that we've touched upon in this report are not currently available in the UK, French dealers are only a short hop away by Eurostar. In fact, some audiophiles already source certain brands from northern France and even Belgium, in preference to buying from the 'trickier' distributors in Britain.

The Paris show is just as easy to access with an atmosphere that's quietly confident, even though there's no escaping the fact that the industry isn't finding it easy going right now.

Fortunately, there was plenty of innovation and, being French, a lot of emphasis on contemporary style and design. Hi-tech and novel technology was also showcased impressively – again a typical French way – the StormAudio amplifiers being a case in point. ●

# PLATINUM


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# A bit part

**Richard Black** looks at music at its most fundamental level, as humble ones and zeros before the transition to analogue

In our *Blind-listening Group Test* last month (*HFC* 340), we included an Arcam SACD player (CD37), which uses a DAC chip from Wolfson, capable of converting either PCM (CD) or DSD (SACD) digital audio formats into analogue in their native mode. In this month's *Opinion* column, we feel this subject deserves a little more exploration.

PCM (Pulse Code Modulation) is the original digital audio format. 44,100 times a second (for CD), the audio signal on each channel is 'sampled' and its instantaneous value is encoded as a 16-bit 'word' of data. These words are then stored in some suitable way and presented to the DAC for conversion back to analogue. It's a very efficient system, mathematically and, in practice, can come very close to its theoretical limits of performance. There's nothing sacred about the sampling rate or word length and higher resolution audio, for instance, typically uses 96,000 samples per second at 24-bit precision, but with exactly the same basic operation.

But when CD was conceived, the ADC and DAC chips all worked intrinsically to multi-bit precision, which made them very demanding for accuracy in manufacture and calibration. 16 bits translated to decimal notation is one part in 65536, which is a very high accuracy to achieve and maintain in real-world hardware.

24 bits is one part in about four million, a hopeless target. Before long, chip designers realised that other ways of converting data looked more promising and 'low-bit' convertors became more common. These converted the PCM data to one-bit format, sampling at a very much higher frequency (64 or 128 times the basic sampling rate was common), but to only one-bit of precision. Using tricks, including dithering and noise-shaping, this could achieve at least as good a performance as multi-bit conversion, but without the requirements for absolute accuracy in the hardware.

**Arcam's CD37 CD player. This *HFC Recommended* badge winner makes good use of its Wolfson WM8741 chip**



## Bit-twiddling

The original idea of DSD (Direct Stream Digital) was to store the audio data in the one-bit format commonly used at the time for first-stage conversion from analogue, thus eliminating some 'bit-twiddling' which was needed to convert one-bit to multi-bit audio and back. So far, so good – but the irony was that by the time SACD was launched, one-bit conversion had largely bitten the dust in favour of what is sometimes called 'multi-bit sigma-delta', or more generally 'mid-bit' conversion.

It stands to reason that if audio can be converted and/or stored in 16/24-bit or one-bit format, something in the middle will work too. Why not, for instance, three or four bits? Three bits is one part in eight – put another way, a choice of eight different states. One manufacturer's mid-bit scheme used 11 states, or 'three-and-a-half bits' as the literature accurately, but confusingly, put it.

This may seem wantonly bizarre, but there are all sorts of trade-offs here and, in practice, it turns out that mid-bit systems give a very good balance of accuracy, power consumption and more arcane matters such as idle-tone generation. The first mid-bit DAC we can recall, was from dCS (a firm whose products have consistently been at the front of the pack for technical performance), but these days it's hard to find a DAC chip that doesn't work this way.

As a result, bit-twiddling is normally required for both DSD and PCM conversion. And, in fact, it occurs in the Wolfson WM8741, the chip used in the Arcam CD37. The crucial point is that there is no intermediate PCM stage between DSD input and mid-bit conversion for the actual DAC at the core of the chip. That's all to the good, but it remains true that DACs without any sort of format conversion are now pretty much confined to maintenance or new, old stock parts. But we're not inclined to get stressed about the odd bit of number-crunching. It's a well-understood science and there are much greater ills to worry about in audio. ●

When CD was conceived, the ADC and DAC chips all worked intrinsically to multi-bit precision, which made them very demanding for accuracy in manufacture and calibration



**RICHARD BLACK**

A musician and recording engineer, Richard knows a thing or two about hi-fi – he's been writing about it for over two decades

### WHAT DO YOU THINK?

Is the DAC chip the be-all and end-all of CD replay?

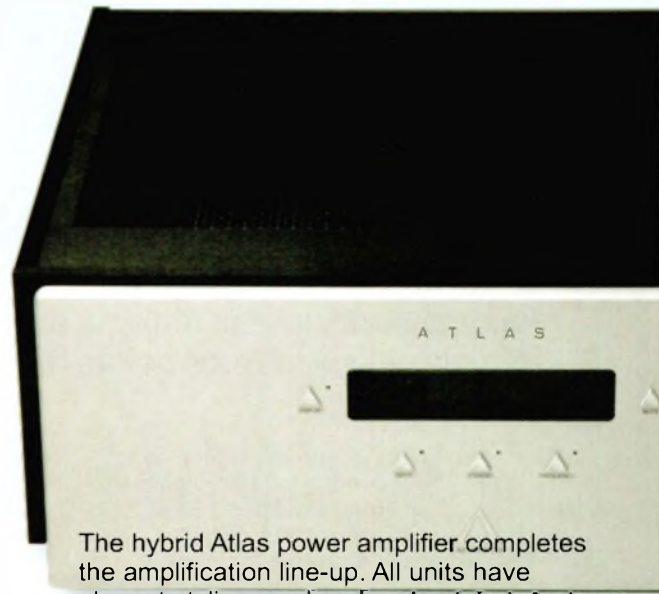
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What do you listen to?

≈ COOL GALES

We're often asked this question. At Cool Gales, we're fortunate to be able to audition a huge range of high-end hi-fi gear, from the well-known "usual suspects" to obscure exotics, from components with eye-watering price tags to those that are eminently affordable, from classic vintage gear to the latest cutting edge.

Little wonder, then, that our customers frequently ask us to distil our experience, curious to know what exactly we fire up in the evening when we want to listen to music.



The hybrid Atlas power amplifier completes the amplification line-up. All units have elegant styling, cool and understated. And at our recent Bath hi-fi show, Jim introduced to the UK his first source component, the Romulus CD player, with a valve output stage. Look for the launch later this year, when reviewers again will struggle with superlatives.



Well, it will come as no surprise to frequent visitors here that Aesthetix electronics often feature in our main system. Designed and manufactured in California, Aesthetix components are based on valve (tube) technology, with microprocessor controls for ultimate configuration capability and remote control convenience. In a market where many competitors strive for high resolution above all else, sometimes painfully so, Jim White, Aesthetix founder and chief designer, manages the rarest of balancing acts: without forgoing any musical detail, he offers tone, tone, and more tone.

The Aesthetix Rhea and Rhea Signature phono stages, often the starting point for our Aesthetix customers, typify the experience. *The Absolute Sound* described the Rhea with three words, "open," "transparent," and "uncoloured", adding that it imparts "a sense of palpability and immediacy that recalls the magic of live music."

Of the Aesthetix Calypso and Calypso Signature linestages, *Stereophile* said simply, "That's how live music sounds."



What do *you* listen to? If your system beguiled at first, but now proves tiring over a evening's listening, why not give us a call on 0800 043 6710?

We can arrange for an audition either here at Cool Gales or in your home. For more information, reviews, and brochure downloads, visit [www.coolgales.com/aesthetix](http://www.coolgales.com/aesthetix)



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# Tablets are the cure

Remote controls are boring. But what if they could reveal internet-levels of album and artist info? **Ed Selley** looks in

Virtually everything that we review at *HFC*, barring turntables and minimalist amplifiers, is supplied with a remote control of some description. The remote is so ubiquitous that we will generally only comment if it is absent. Generally, a remote will be 'system-driving'. If you buy a matching amp and CD player, the handset will control both units. This has been the state of affairs for some years now but lately, it has been showing signs of change. Now remotes are being asked to do different things and perform new functions.

The reason for these changes is primarily down to the arrival of the computer and the ancillary components that make use of them. Controlling these devices properly has two distinct challenges for any remote handset. The first, is that unless specifically designed, the standard method of control – infrared – may not be available. The second, is that the device itself may be tucked away and not able to provide visual or audible feedback about what it is doing. As such, the natural solution to this is the two-way remote.

## Two ways about it

The two-way remote solves a number of issues and also opens up some interesting possibilities. They generally operate over Wi-Fi, which removes the need for the device to be in line of sight and able to receive IR. As devices are addressed separately, a single remote can be used to control multiple devices by selecting them respectively. Equally, as the remote is able to receive data over wireless, as well as send it, the device being controlled can supply a great deal more information about what it is doing than can be seen simply by looking at it. A good example of this sort of device is the Sonos CR200, which can control and receive feedback from a complete Sonos system. It is a breeze to use and has a solid build. Elegant as the Sonos is, the £280 cost is a significant price to pay for this functionality.

There is also the problem that smaller manufacturers will be reticent about tooling-up to build such a specific device. Happily, the answer lies in turning an Apple device, be it iPod Touch, iPhone or iPad into a two-way remote. Naim has used this to good effect on the UnitiQute (*HFC* 339) and other streaming devices are being supplied from the off, with their own apps.

Additionally, third-party suppliers are starting to supply aftermarket control options for some of the more common devices on the market.

Perhaps, the most ambitious of these is iPeng. This is an aftermarket program that allows for control of a Squeezebox over an Apple device. It works beautifully and will supply a huge amount of additional information back to the user. I am not for a minute forgetting that the Apple devices are not being given away free, but they will, at least, perform many other functions beyond that of a two-way remote. Additionally, the Apple devices are able to control as many devices as you can download apps for. The next logical step, of course, is an App that allows for existing remote devices to be collated on a single screen for a very cohesive universal learning remote.

It is the information going back to the remote that could be the key to the success of these devices going forward. Critics of downloaded and streamed media have continuously pointed out that the lack of physical album with notes, lyrics and other information is a big detractor to the concept. From a personal level, the idea of having this information available to me on an easy-to-read remote would compensate.

Indeed, the idea that live albums could be complemented with video of the event and similar goodies might even eclipse the joy of a good vinyl gatefold. The idea of combining control with feedback will allow you to improve the control of your system and, in time, might recapture some of the joys of proper artwork and album information. Couch potatoes such as myself have never been happier. ●

**All the control you need and a far more pleasing thing to look at than some rubber buttons**

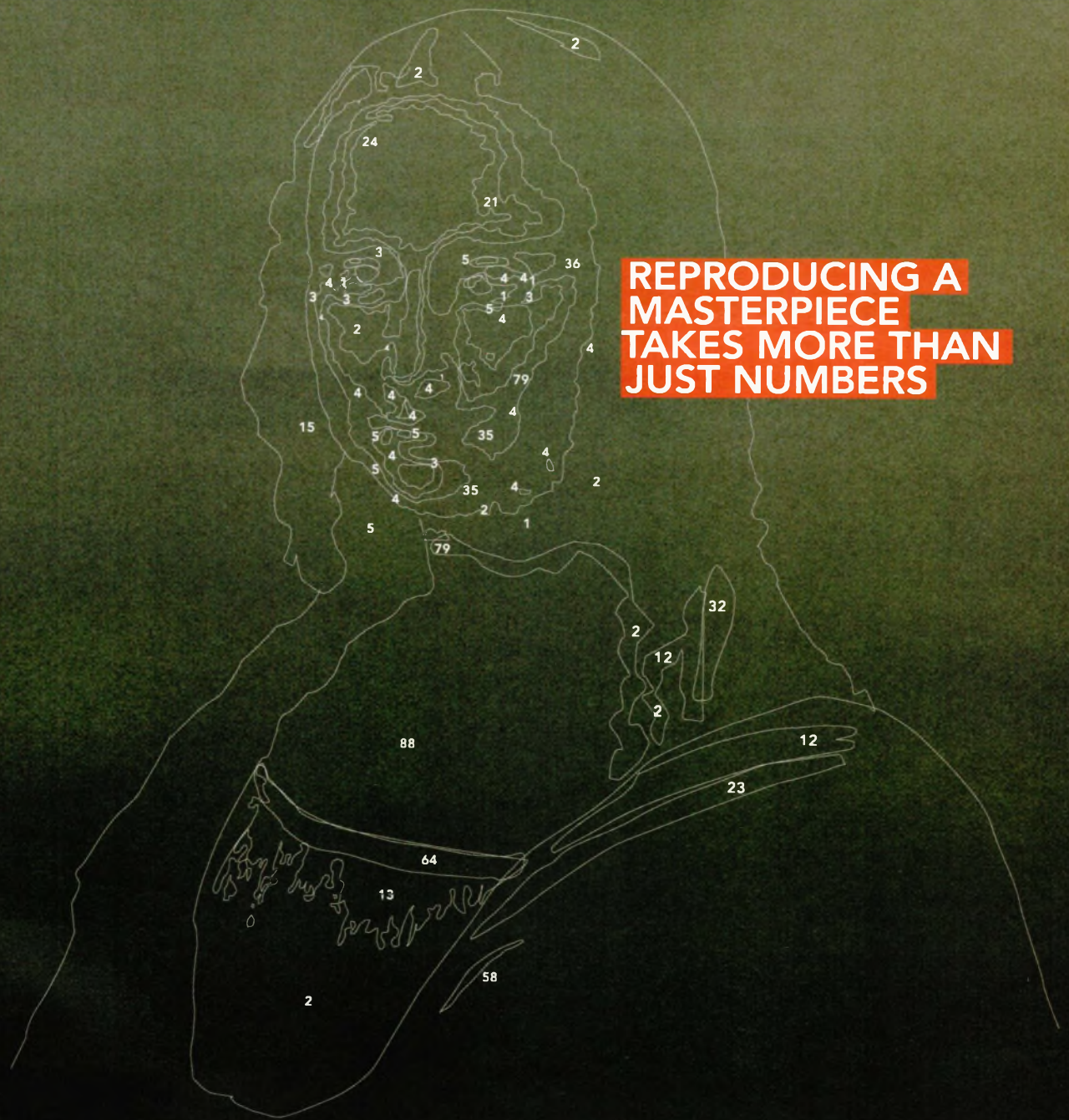


**ED SELLEY**  
Ed worked in retail before joining some of the biggest names in the hi-fi industry creating and supporting audio products

## WHAT DO YOU THINK?

Can next-generation controls replace physical media?  
Email us now: [hifichoice@futurenet.com](mailto:hifichoice@futurenet.com)

Critics of downloaded and streamed media have continuously pointed out that the lack of physical album with notes, lyrics and other information is a big detractor to the concept



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# Goodmans Maxim

As the first small loudspeaker, the Goodmans Maxim altered the course of hi-fi history, recalls *Jimmy Hughes*

The wide spread use of stereophonic sound in the late 1950s had a seismic impact on the world of high-fidelity. Suddenly, it was possible to enjoy the spatial placement of voices and instruments and experience a soundstage with genuine width and depth.

But there were downsides. Aside from added costs, the main stumbling block was loudspeaker size. In the days of single-speaker mono, most enthusiasts would have had a fairly large loudspeaker. However, while one big speaker might have been feasible, having two was completely out of the question for many.

In spring 1964, Goodmans launched the Maxim – the first ‘bookshelf’ high-fidelity loudspeaker. Created by Ted Jordan, it was an interesting ground-breaking design that effectively re-wrote the rule book; the first small speaker to offer a big sound. For many, it made stereo domestically acceptable – and affordable.

The Maxim’s secret was its ‘long-throw’ bass unit which compensated for the small size of the bass driver and cabinet, allowing the cone to move back and forth over a considerable distance. The magnet on the tiny bass driver was amazingly huge and because of the large cone excursion, it was sometimes two or three times longer than usual.

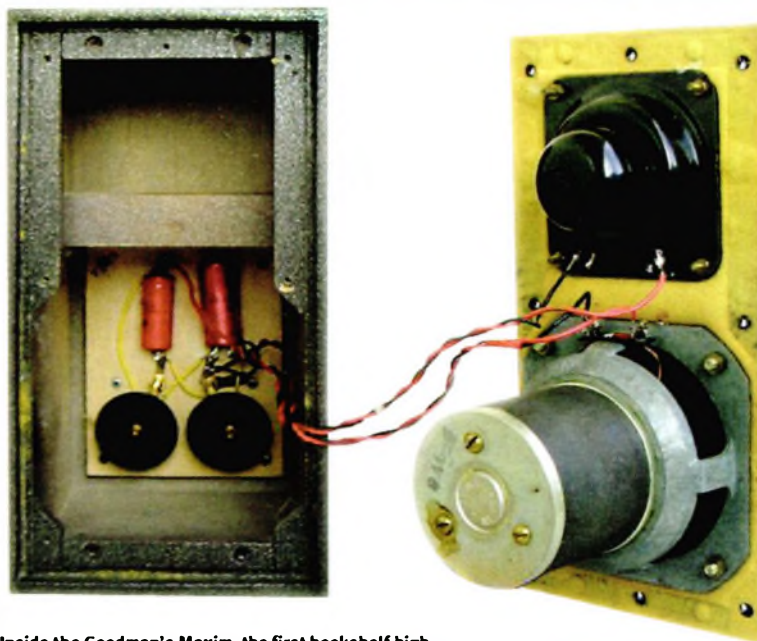
This had never been done before, and it enabled the Maxim to deliver surprisingly deep powerful bass for a small speaker. Even more amazing, the magnet was made from Alnico – a material that would become scarce and prohibitively expensive by the end of the 1960s.

The cabinet measured just 250x180x130mm, and was a sealed ‘Infinite Baffle’ type. The Maxim was probably the first hi-fi speaker that seriously sacrificed efficiency (sensitivity) to provide extended bass performance. Consequently, low frequencies went down to a creditable 45Hz.

While a single Maxim in mono wasn’t terribly impressive, a pair of Maxims, spaced well apart in stereo created a broad deep soundstage that had surprising presence and weight. Many listeners – mesmerised by hearing stereo for the first time – judged Maxims in stereo superior to a bigger (and better!) single speaker in mono.

## Groovy, man

On a personal note, the original Maxim was my first introduction to hi-fi stereo. I bought mine second-hand from an Austin Powers lookalike, living in a groovy West London bedsit around 1970. The room had dimmed coloured lights, a smell of incense and a hippy chick wafing



Inside the Goodman's Maxim, the first bookshelf high-fidelity stereo loudspeaker

about in a Kaftan. Audio T's demo room it certainly wasn't!

I could hear music playing, but couldn't see any speakers. "Where are they, Man?" I enquired, trying to sound cool. The owner gestured to a bookshelf just above the bed – and there were my Maxims; sandwiched between rows of books! I paid the colossal asking price of £25, made my excuses and left.

Today, a pair of original working Maxims in good cosmetic condition might cost you between £300 – £350 on eBay. But, actually, the Maxim wasn't always so revered. In the early '70s, they didn't enjoy a fabled reputation – back then, you bought them because they were small and cheap.

The Maxim's paper cone high-frequency driver could sound rough and edgy and power handling was limited, despite needing a reasonably powerful amplifier due to lack of efficiency. Also, there were issues with the long-throw bass unit gradually becoming decentred, creating a rasping noise as the voice coil scraped the magnet.

But, at its best, the Maxim sounded very open and well balanced. Having a small bass unit avoided problems with cone breakup and the small cabinet was very rigid and non-resonant. It was a flawed, but nonetheless ground-breaking and immensely influential design – and one that spawned thousands of pretenders to the throne. ●

I bought my Maxims second-hand from an Austin Powers lookalike, living in a groovy West London bedsit around 1970



JIMMY HUGHES

A hi-fi enthusiast for four decades, Jimmy's knowledge of system-matching and record-collecting are unmatched in the industry

## WHAT DO YOU THINK?

Are you old enough to remember the Maxim? What was your first speaker? Email us now: [hifichoice@futurenet.com](mailto:hifichoice@futurenet.com)

# How many CDs do you own but never play?

Store, browse and listen to your complete CD collection on the revolutionary Brennan.

## What's the point in owning hundreds of CDs worth thousands of pounds if you never listen to them?

The problem with CDs is that it's quicker to make a cup of coffee than dip into a CD. Try timing how long it takes to pick a CD, load it in the CD player, play a snippet from a track or two, eject it and put it back where it came from. Then there is the problem of finding music. The print on a CD spine is tiny. What if the track is on a compilation CD? What if the CD is in the car? Then there is the clutter.

You need to keep your CDs near the player or you won't play them. So you are forced to share your living space with literally hundreds of cheap plastic boxes. CDs are great but you have to keep putting them in the player - that's why Martin Brennan invented the Brennan JB7.



It's a CD player with a hard disk that stores up to 5,000 CDs.

The Brennan saves space and clutter and delivers near immediate access to an entire music collection. JB7 owners rediscover then fall in love with their music again simply because the Brennan makes it so accessible.

The Brennan also records from vinyl and cassette so you can enjoy your entire music collection but keep the originals in another room or retire them to the attic.

## Small enough to pick up with one hand yet big enough for a lifetime of music, the Brennan JB7 is one man's brilliant idea for everyone's forgotten music.

Martin Brennan, who designed JB7, has a degree in Physics from Cambridge University.

He has worked with Sir Clive Sinclair and Sir Alan Sugar.

Martin 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 Konix Multi System and co-designed the Atari Jaguar - the worlds first 64 bit games computer.

Ever since CDs were invented Martin wanted a CD player that would hold his entire CD collection.

He wanted something as simple to use as a light switch but at the same time something that would let him find a particular track without leaving the armchair - and he also wanted something that could rattle the windows when he was in the mood.



Martin Brennan

**"Mr. Brennan you're a genius, the JB7 is truly a wonderful thing"**

Mr D. Hallows, Bath.

## Key features:

- Browse albums by spinning the volume knob - push to play
- Delete tracks you don't like
- Display track names as they play
- Seven rainbow colour coded playlists
- Segue function blends one track into the next
- One touch record from vinyl, cassette or radio
- One button plays the entire music collection at random
- Use it with existing hi-fi or on its own
- Plays MP3 downloads - future proof
- Clock with alarm
- 60 Watt, 4.8 x 16 x 22 cm steel and aluminium construction
- Backup music to external USB hard disk for safe keeping
- Credit card size remote control

*JB7 is small enough for a bedside table. It fits in really well on a desk and because it has a remote you could put it under the TV or on a shelf.*

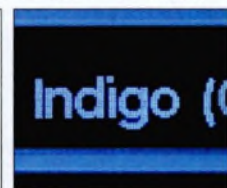


## There's so much more to a Brennan.



### Feelgood button.

Late home from work or friends round for coffee? Simply press this button and the JB7 will play your CD collection at random so you can unwind or entertain at leisure.



### Themed playlists.

Select tracks from your collection, give them a colour like red for romance or blue for relaxation then click on that colour on the remote and the JB7 will play them in sequence.



### Quick to load.

It takes just two button presses to load a CD and just 3-4 minutes to rip it onto the internal hard drive. So you can comfortably load between 20 and 30 in an evening.



### Vinyl and Cassettes?

You can record both onto the JB7 as if it were a very large tape recorder. All you will need is a 3.5mm stereo jack, twin phono lead, adapter or connector.



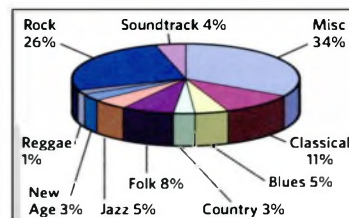
### Play from your iPod.

To play music from your iPod simply place it in an Apple Universal Dock and connect it to the JB7. Then use the Apple remote to control your iPod.



### Keep your music safe.

Just in case of a breakdown, the JB7 enables you to back up your entire music collection onto an external hard drive so you don't have to spend time re-loading.



## Massive CD database

The chart shows how the JB7's 2.4 million CD database divides into 10 broad categories. The classical genre alone contains 250,000 CDs - that's 1.5 miles of different CDs side by side. Most of your CDs will be in the database.

**brennan**

To order your Brennan JB7 or for more details call



**NEW**

**"Huge fun to use"**

Daily Mail



**Over 10,000 sold. Lots of happy customers.**

*"Until you actually own a Brennan or at least see one operating, you can't really put into words how wonderful and amazing it is.*

*You wonder how something so small, compact and stylish can do so much! In the past, there were many times when I wanted to listen to music but couldn't decide what I wanted to listen to. Now, with the touch of a button on the Brennan, it randomly plays music and I no longer have to make such decisions by myself. It makes them for me."*

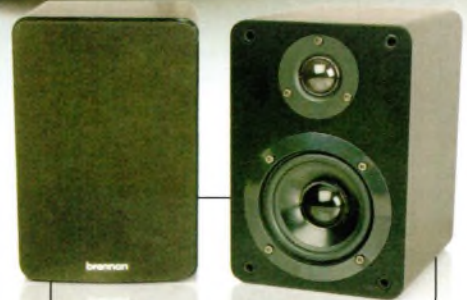
Mr G. Patterson, Northern Ireland

**Choose the Brennan that's right for you.**

The Brennan JB7 is available in two colours, Cobalt Blue and Titanium Metallic and three disk sizes depending on the size of your CD collection. The 160GB version will hold 1600 compressed CD's, the bigger 320GB version 3200 compressed CD's and the latest 500GB model 5000 compressed CD's. All are available with or without matching Brennan speakers.

**Money back guarantee - you've nothing to lose.**

If the Brennan JB7 isn't right for you, give us a call and we will collect it and give you a full refund - we can even arrange collection from a place of work.



**Choice of speakers.**

The Brennan JB7 will work perfectly with your existing speakers however you may wish to purchase a pair of Brennan BSP50's as they have been specifically designed to match the JB7's size and power.

If you do decide to use your own speakers they should ideally be 8 ohm and rated to handle 60 Watts for short periods but in reality, customers find that the Brennan JB7 works with pretty much anything.

**To order your choice of Brennan JB7 and optional speakers or for more details, call now on 0844 561 0443, or fill in and return the coupon below. Want to know more visit the website at [www.brennan.co.uk](http://www.brennan.co.uk) for more details.**

Maximum call charge for BT customers is 5p a minute. Calls from other networks may vary. Delivery is normally within 28 days. Send completed coupon to Brennan, 3GA Ltd, St.John's Innovation Centre, Cowley road, Cambridge CB4 0WS.

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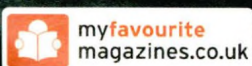
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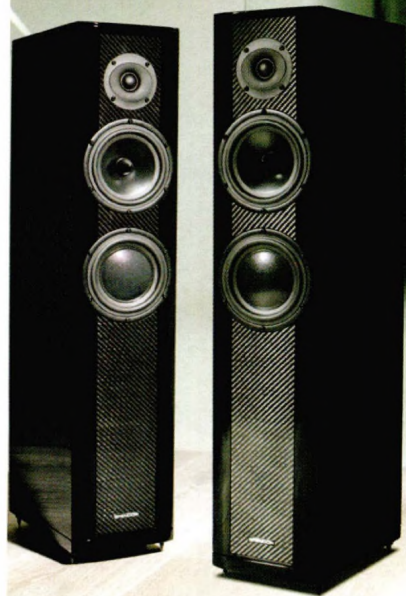
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# Letters

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Get in touch! email us at [hifichoice@futurenet.com](mailto:hifichoice@futurenet.com)  
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## Statement of fact

While I understand that loudspeaker pricing is largely determined by the market, I still believe that the bottom line should reflect the material value of the product.

A recent example would be the critically acclaimed PMC fact 8, a speaker which does not even bear price comparison with others from the same label. A basic two-way speaker that does not involve esoteric materials, or in-house driver production can scarcely be justified at over 4k, even allowing for the 'engineering miracle' of transmission-line loading.

Compared to similarly priced speakers from other medium-sized companies (eg Mordaunt-Short Performance 6, Monitor Audio PL200), this seems like poor value for money. If PMC is able to produce the perfect



**Award winners will work in many systems, but always check with dealers**

transducer in such a simple package, is it deliberately designing its 'entry-level' range to sound inferior?

Whenever we enlightened audiophiles lament society's ignorance of high-quality music reproduction, we should consider the message we are sending to the casual observer when we celebrate 20th Century technology at 21st Century prices.

**John Burke, via email**

**HFC** The question of value remains extremely subjective especially at these relatively elevated price points. We do feel that your evaluation of the material content of the fact.8

(HFC 327) is, perhaps, over simplified though. Transmission loading is indeed not an 'engineering miracle.' It is, however, a difficult thing to perfect and the construction of a cabinet that incorporates it will be more expensive than one that does not.

Equally, the adjustable crossover of the fact.8 is more sophisticated than the designs used in the vast of majority of the competition and the room-tuning it allows contributes towards the very high overall performance.

The technology of the fact.8 is, perhaps, more conventional than some other speakers available, but they are nonetheless sophisticated speakers.

Visually, the fact.8 can look slightly prosaic in photos, but the actual fit and finish of the speaker is absolutely superb and the equal of the

more visually dramatic Monitor Audio and Mordaunt-Short. This very high-quality of finish is considerably superior to the less expensive models in the PMC range, which do tend to reflect on the professional heritage of the brand and goes some way to explaining the cost difference.

Finally, unlike the Performance 6 (HFC 308), or PL200 (HFC 330), the fact.8 is made in the UK. At Hi-Fi Choice, we do not take the country of origin into account when delivering our verdicts, but the higher costs of UK manufacture will affect value calculations.

## All-star line up

Looking through the recent Awards issue (HFC 339), I was surprised that having selected various winners in the categories, no effort was made to suggest systems made from the winners. For those of us in the market for complete systems, this would have been very helpful as it would hopefully give some pointers as to where we ought to be looking in terms of a complete system.

Jimmy Hughes' article on system-matching only treated us to the revelation that partnering 20-watt amplifier-insensitive speakers is not going to be a good idea, which I suspect most people knew already. So are you going to make any effort to create award-based systems?

**Nick Banyard, via email**

**HFC** We have generally decided against taking winners from various categories and sticking them together in the expectation that the systems that result will also be great. We review equipment within systems that are designed to be sympathetic to the performance of the item

**The PMC fact.8 loudspeaker, winner of an HFC Ed's Choice badge**



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under test and this is not going to be the case with systems assembled purely from award-winners. Had the Puresound A10 (HFC 331) won in the amplifier category, this year's award-winning speakers would not be an ideal match, however talented.

That said, our Products of the Year have been selected because their talents are likely to make themselves felt in virtually any system that they are placed in. So if you were looking for any of the products we selected in this category, these would slot well into most systems.

Our Product of the Year, the Pro-Ject 6 Perspex (HFC 338), in particular, would be able to sit equally happily in a low-power valve system as a high-power solid-state, with all combinations in between. Ultimately a dealer will be best placed to make sensible recommendations for partnering our award winners and getting the absolute best out of them.

### Feline good

With reference to Letters in HFC 338, I've sent a picture of our cat. He loves my Sonus faber Cremonas, as do I and has never scratched them. I hope you like the combination.

**Bob van der Wardt, via email**

**HFC** There seems to be a correlation between cats and hi-fi, although we admire the agility of this one to make it to the top of a floorstander without injuring itself or the speaker.

HFC's Ed Selley, spends most evenings watching television 'through' his cat, who has long taken a shine to his centre speaker. Keep sending in your cat pics.



Waiting for a supertweeter!

## LETTER OF THE MONTH

### Peace of mind



**A decade of warranty remains a rare thing in audio circles**

**I READ** the review of the Teufel T500 (HFC 340) and was delighted to see that a manufacturer has the confidence to offer a ten-year warranty on a relatively inexpensive loudspeaker. I find it less encouraging in this day and age that with a very few exceptions, most manufacturers are content to offer only a one or two-year warranty on products that often cost thousands of pounds.

If Teufel can offer ten years on a six-hundred pound model, I would be very interested to see what reasons manufacturers would give for being unable to match that on products that cost several times as much.

**Talal Lashab, via email**

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# Sound quality that'll blow your socks off?

Are widely accepted music formats undermining the quality of the music we listen to on a daily basis?

## 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 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. 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 of different brands for their potential customers – 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 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.



## 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, CD quality, downloads are already available and should become the norm as long as the general public can be made 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.

## OUR TOP 20 UK HI-FI DEALERS

These 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.

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#### Colchester

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#### Kingston-upon-Thames

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www.infidelity.co.uk

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www.audiovenue.com

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“ 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. ”

## STAR QUALITIES

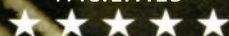
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# How we test

Hi-Fi Choice employs the most rigorous test and measurement regime in the business and here we explain why our definitive verdicts count



## Hi-fi reviews

No other magazine offers a more reliable standard of hi-fi testing. Technical Consultant **Richard Black** explains...

### EXPERT TESTING

FOR OVER THREE decades, *Hi-Fi Choice* has been trusted for its combination of subjective and technical review expertise. The crucial consideration for any audio component is how it sounds, but it is important to back this up with laboratory measurements for many reasons – everything from the wish to check basic performance to the possibility of uncovering peculiar behaviour under conditions, perhaps slightly different from those of the subjective tests.

#### Listening

Subjective testing doesn't necessarily require the world's sharpest ears. What's more important is the experience to analyse the sound arriving from the hi-fi and this is where our subjective reviewers come in: they have been listening critically to audio equipment for aeons and have learned to identify the characteristics that make kit informative, involving or just plain dull.

#### Measurement

But even the most experienced listener, with a stack of familiar recordings heard in familiar surroundings, can't always know what is causing a particular

characteristic in the sound. Brightness, for instance, may be a function of frequency response or distortion and this is where measurements come in. We analyse a range of parameters to see just where the correlation lies between sound and design. Our test equipment has been tried, tested and added to over the years and again our experience with it is unrivalled.

#### Straightforward presentation

We call on that experience to boil down the measurements to simple bar charts, which show at a glance how well a component behaves relative to others in its category. It's this combination of subjective and technical expertise that makes our reviews the most useful in the field.

“crucial consideration for any audio component is how it sounds, but it is important to back this up with laboratory measurements...”

#### OUR AWARDS



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



**RECOMMENDED:** The products we feel meet a certain high standard of performance



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## STATE-OF-THE-ART HI-FI TECH

HFC's test equipment is the most advanced kit available



AT HI-FI CHOICE, we have access to some of the most advanced test equipment currently available on the market, including the Audio Precision APx585, which you'll find in the labs of many top hi-fi manufacturers. The 585 can be configured to test a variety of key hi-fi products, such as amplifiers, CD players/DACs and – with the help of a specially-calibrated microphone – loudspeakers.

In conjunction with some conventional lab equipment at our disposal, the 585 will also be used to test analogue playback equipment including phono stages and turntables. These objective measurements – which conform to recognised industry standards – are designed to complement subjective evaluations such as the listening panels organised by our internationally respected reviewers.

The standard of our test facilities is unrivalled in the UK press. Quite simply, no other magazine offers this level of cutting-edge testing, making the verdicts in *Hi-Fi Choice* the only ones you can really trust.

# Unrivalled group tests

*Hi-Fi Choice* is the only magazine to offer blind-listening group tests, fully backed up with objective data

## BLIND-LISTENING TESTS

**THIS CRUCIAL** test involves relatively rapid-fire comparisons of the test units for a panel of three listeners who are not aware of which product they are listening to. Levels are accurately matched and the test is conducted with the minimum of distractions, playing the same programme through each system while the listeners take notes of whatever pleases or bothers them.

In this way, an evaluation free of prejudices based on brand, price or appearance can be made, while the different tastes and sensitivities of each listener help round out the analysis and make it more widely applicable. Occasional repeats of kit give a 'sanity check', while years of experience help make the process efficient and reliable.

## SIGHTED LISTENING

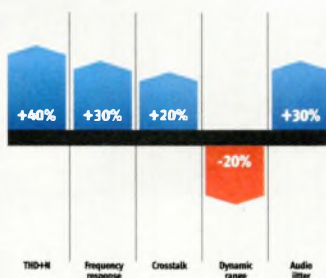
**IN ADDITION** to the 'blind' test, the author also spends a longer period listening to each system with various items of partnering equipment and a wider range of music. Apart from the obvious fact that this is how most people listen most of the time, this also has the advantage that interesting aspects of the sound can be investigated and different musical

styles tried out to see what works, not to mention experimenting with such variables as listening level.

Long-term reference pieces of equipment (some from past reviews) get substituted for the kit under test from time to time, in order to check on performance relative to the rest of the audio world, while recordings made by the author provide a live reference.

## TECH LABS

### RESULTS AT A GLANCE



**FOR THIS MONTH'S DAC** *Blind-listening Group Test*, we pressed into service the APx585 audio analyser (see opposite). This highly sophisticated PC-controlled instrument can simulate many items of lab equipment, including an oscilloscope, audio voltmeter, chart recorder, phase monitor and test signal/sweep generator. For DACs, the APx585 is used in conjunction with a specially created *Hi-Fi Choice* lab test disc to measure a number of key performance criteria. There are five of these – which are summarised for each of the reviewed products using our unique bargraph system. Anything out of the ordinary is commented on in the lab report which compares like with like across the whole six-way group.

### THD+N

We measure DAC performance using 16-bit/44kHz signals. Part of our testing procedure involves measuring THD+N with much lower-level signals (-20dBFS and -60dBFS). THD+N will increase as signal level decreases.

### FREQUENCY RESPONSE

You should expect a flat frequency response from 20Hz to 20kHz. The Tech Labs measure this by conducting a sweep between these two frequencies and monitoring the output.

### CROSSTALK

We measure leakage from the left channel to the right and vice versa. The higher the figure, the better. There should be little difference between the two figures and what's listed here is the average of the two.

### DYNAMIC RANGE

This spec expresses the difference between the highest amplitude, distortion-free signal a DAC can output using a 16-bit/44kHz signal (a sine-wave is used here). The higher the figure, the better. In theory, a 16-bit signal has a dynamic range of 96dB.

### AUDIO JITTER

This term is applied to distortion caused specifically by the instability in the 'clock', which controls the data-flow to the digital-to-analog chips. It's a subtle effect, but can contribute to sonic veiling.

### TESTING EQUIPMENT USED

- Source:**  
 • Cambridge Audio Azur 640C CD player  
 • Samsung NC10 laptop computer  
**Amplifiers:**  
 • Exposure 3010 integrated  
 • EAR 802 preamp/519 power amps  
**Speakers:**  
 • ATC SCM20  
 • Bowers and Wilkins 803s  
**Cables:**  
 Furukawa, Kimber, Wireworld

### TEST MUSIC USED

LED ZEPPELIN: BLACK DOG



OTIS REDDING: THE DOCK OF THE BAY



RACHMANINOV: SYMPHONIC DANCES



## THIS ISSUE'S BLIND PANEL

This month's panel of experienced listeners from within the industry are:



**PHIL HANSEN**  
**JOB:** RED SHEEP COMMUNICATIONS  
**PHIL IS A PR** and marketing consultant, having previously worked as a marketing manager in hi-fi manufacturing.



**GEOFF MEADS**  
**JOB:** MANAGING DIRECTOR, PRESTO AV LTD  
**WITH TWENTY** years of industry experience in technical sales and marketing, Geoff now runs Presto AV Ltd, a training company whose clients include CEDIA, BADA and a number of other manufacturers, distributors and retailers.



**ED SELLEY**  
**JOB:** HFC STAFF WRITER  
**ED HAS SPENT** the best part of a decade selling, developing and supporting audio products. He now works full-time with HFC.

## DEFINITIVE VERDICTS

No other magazine offers an equivalent listening programme

Few, if any, magazines in the world can equal our dedication and thoroughness in combining blind and sighted listening with extensive lab tests and detailed internal examination of equipment passing through our hands. Each of these is equally important and it's not just that we do them – we also bring to the table decades of audio experience.

Our listeners in the *Blind-Listening Group Tests* for example, are experts from within the hi-fi industry. Each and everyone of them is used to listening critically during product development and initial product testing. In fact, many of them also get involved in making recordings and their own music.

One of these is HFC's Technical Consultant Richard Black, who has been involved with designing, testing and evaluating audio equipment for a quarter of a century.

It's the culmination of all the aspects mentioned on these pages that makes for the most reliable hi-fi verdicts in the business.

TESTED THIS MONTH: DACS  
**TURN OVER NOW!**

# CANTON®

## Chrono SL Series

Demand more from life

**Do you love life and value that special "je ne sais quoi"?**

Then you should get to know the Chrono SL Series. These loudspeakers offer stylish luxury with outstanding sound quality and just a hint of extravagance. At the same time they set new standards in their class for components and craftsmanship. Diamond-machined aluminium trim rings and the lavish cabinet are just one element of the Chrono SL Series. Outstanding sound properties and a huge acoustic range complete the story.

*"This is such a beautifully styled, finished and presented loudspeaker, it clearly comes from a major brand with plenty of muscle."*

*"Voices in general and speech, in particular, sound very clear and articulate, even when the speakers are playing very quietly."*

*"Image focus and lateral positioning is exceptionally precise."*

Hi-Fi Choice

*"The Chrono SL580 DC delivers an exceptionally clean overall sound"*

Hi-Fi Choice



# WIN!

## QUADRASPIRE EQUIPMENT SUPPORTS

TOTAL PRIZE  
**£1,560**

**TO WIN** one of these superb, racks, please answer the following question:

**To reduce resonance, the Sunoko-Vent T rack uses ?**

**A: slats B: slots C: slugs**

Please text your answer to Quad A, B or C to 87474 or visit [futurecomps.co.uk/QUAD](http://futurecomps.co.uk/QUAD) and follow the instructions, leaving your selected answer and details where prompted

To celebrate a fifteen-year association with equipment support manufacturer Quadraspire, we're pleased to announce not just one, but *three* prizes in this month's competition.

The first reader to be pulled out of the hat with the correct answer will receive a Sunoko-Vent T rack (below right), which was the overall winner in the Best Support category at the 2010 *Hi-Fi Choice Awards (HFC 339)*.

This amazing rack (worth £800) uses a clever system of slots to reduce resonance and improve ventilation for all shelf-mounted components.

The second and third lucky names to be drawn will each win a Quadraspire Q4EVO rack (below left) worth £380. The Q4EVO makes use of much of the same technology that allows the Sunoko-Vent T to shine, but at a more cost-effective price point.



**TERMS AND CONDITIONS** To enter the Quadraspire competition, you can either (a) text your answer to 87474 at any time between 09.12.10 and 05.01.11, or (b) enter online at [www.futurecomps.co.uk/quad](http://www.futurecomps.co.uk/quad) with your entry being received between 09.12.10 and 05.01.11. By sending your entry you agree to these competition rules and you confirm you are happy to receive details of future offers and promotions from Future Publishing Limited and carefully selected third parties. If you do not want to receive information relating to future offers and promotions, please include the word STOP at the end of your text message or at the end of your postal entry. Texts will be charged at £1.00 plus your standard network tariff rate.

By taking part in a Competition, you agree to be bound by the Competition Rules, which are summarised below but can be viewed in full at [www.futurenet.com/futureonline/competitionrules.asp](http://www.futurenet.com/futureonline/competitionrules.asp). Late or incomplete entries will be disqualified. Proof of posting (if relevant) shall not be deemed proof of delivery. Entries must be submitted by an individual (not via any agency or similar) and, unless otherwise stated, are limited to one per household. The Company reserves the right in its sole discretion to substitute any prize with cash or a prize of comparable value. Unless otherwise stated, the Competition is open to all GB residents of 18 years and over, except employees of Future Publishing and any party involved in the competition or their households.

By entering a Competition you give permission to use your name, likeness and personal information in connection with the Competition and for promotional purposes. All entries will become the property of the Company upon receipt and will not be returned. You warrant that the Competition entry is entirely your own work and not copied or adapted from any other source. If you are a winner, you may have to provide additional information. Details of winners will be available on request within three months of the closing date. If you are a winner, receipt by you of any prize is conditional upon you complying with (amongst other things) the Competition Rules. You acknowledge and agree that neither the Company nor any associated third parties shall have any liability to you in connection with your use and/or possession of your prize.

# Blind-listening Group test

DACS £300-£1,028

## Upgrade your hi-fi system today

DACs have proved to be 2010's smartest upgrade. **Richard Black** and our blind-listening panel test six important new models set to reign in 2011

**THE RENAISSANCE OF THE DAC** is clearly in full flow, with new models appearing at quite a rate. What's rather exciting is that some of these use whole new ways of connecting to an emerging breed of sources, as is shown most clearly in this group by the Chord Chordette Peach.

This nifty device can use the Bluetooth 'Advanced Audio Distribution Profile' to receive audio from mobile phones and Bluetooth-enabled music players (the iPod Touch comes to mind). With so many people now carrying around a substantial part of their recorded music collection on such devices, this ability to link it to a hi-fi system is clearly something to welcome.

Arcam's rDAC has wireless connectivity too, though of a different nature and also as an add-on (which we didn't try on this occasion). And four of the six DACs in this group can connect via USB, making them perfect devices to interfacing a computer to a hi-fi, generally with a big sonic leg-up compared to the computer's analogue outputs. The rDAC even extends USB to 96kHz sampling for the full hi-res effect.

We're all for getting computers into the realm of decent sound, but what of the more 'familiar' ways of connecting up? Do DACs still have a place appended to CD players, for instance? The answer to that obviously depends on the CD

**"The DACs tested here all use technology which has crept ahead of yesteryear's components."**

player's vintage, but as we see it there's a lot to be said for upgrading an elderly player in this way. It can't really be claimed with a straight face that digital replay is advancing in leaps and bounds, but the DACs tested here all use the latest technology which has, indeed, crept ahead of yesteryear's components.

Then there's the business of connecting to other digital-output devices, including DVD players (often pretty iffy on the audio front) and DAB tuners. Read on to discover what to buy and spend in 2011.



**PRICING**  
Five of our six DACs are closely spaced in the £750-£1,000 region, with just the Arcam coming in substantially under that figure. In part, this is due to Arcam's faith in sales, leading to economies of scale that don't translate into internal skimping, though it clearly lacks the overkill power supply, for instance, of some of them.

Features vary between the units and you'll find later that we've scored them all the same on this front. Significantly, all are of modest dimensions, a major cost saving.



### ON TEST



**Arcam rDAC £300 P43**  
Officially part of Arcam's 'Solo' range, this dinky device conceals two envelope-pushing technologies: a whole new way of connecting via USB, which promises to beat that interface's infamous jitter and the option of wireless connection to computer sources. That apart, it is well equipped with high-performance components, and looks set to be a very practical heart of a digital system.



**Benchmark DAC1 £950 P45**  
Something of a pro-audio legend in audiophile circles, the DAC1 offers only the basic digital audio interfaces, but adds twin headphone outputs and a volume control, potentially making it the preamp as well as the DAC in a simple system. Word is that it is one of the finest-sounding DACs around and its compatibility with 192kHz digital sources makes it a natural for ultra-high-resolution systems.



**Chord Electronics Chordette Peach £799 P47**  
This 'son of the DAC64', as it seems to the eye, has far more conventional D-A circuitry than its illustrious forbear, but adds Bluetooth A2DP connectivity. It is designed as part of the new Chordette range of miniature components and looks a million dollars as part of it, but its appeal is not limited to all-Chord systems by any means.



**Lavry DA10 £1,028 P49**  
Another pro-oriented device, this time without even phono-socket outputs. Lavry has an enviable reputation for sound quality and is proud of its jitter-reduction technology which should make the DA10 particularly insensitive to the source feeding it. With a useful array of extra features, including a volume control and unusually generous maximum output, it's a DAC capable of filling many roles.



**PS Audio Digital Link III £899 P51**  
Mains specialist PS Audio has a long track record in DACs and this one seeks to build on that with a basic line-up of features and technology allied to careful design of ancillary circuits. Like many of the units here it includes pro-style balanced digital in and analogue out, but its natural home is clearly the domestic system and its smart looks help to endear it.



**Stello DA100 Signature £750 P53**  
Another DAC offering an unusual type of input, in this case the I2S interface. Sadly, few sources are able to use the connection, but all the other usual favours are catered for and again there's a balanced output available. Stello has taken the trouble to implement all the analogue circuits with large through-hole components, which helps to maintain sonic purity.





# FURUTECH

Pure Transmission Technology

Refinement Has a New Name  
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# ADL

ALPHA DESIGN LABS

## Introducing Alpha Design Labs

Furutech is justifiably proud of its reputation for engineering, build quality and performance, and has won the loyal support of audio enthusiasts worldwide for their finely made and beautiful sounding cables and audio accessories. Now Furutech greatly expands its reach with a new entry-level line called ADL (Alpha Design Labs). ADL was created by Furutech to imbue its Pure Transmission Technology into carefully engineered innovative designs that everyone can afford. ADL components and cables are made with the same dedication to total resonance control and refinement as all of Furutech's many cables and accessories.



ALPHA Line - Plus

ALPHA Line - 1

ALPHA Line - 2

## ADL GT40 USB DAC with Phono stage!

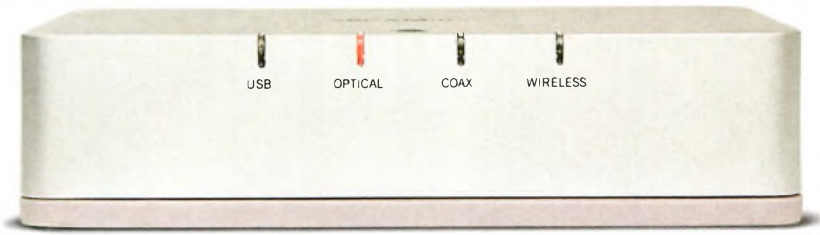


The GT40 records vinyl and other analog sources at 16/44.1 or 24/96 using its bidirectional USB connection and switchable Line, Phono MM/MC analog inputs, plus it features L/R analog outputs, a separate headphone amplifier, gold-plated Teflon-insulated RCA jacks in a high-quality aluminum chassis with a beautifully machined volume knob. CD Redbook 16/44.1 and especially 24/96 files reveal a vivid, captivating sound unheard of at this price.



Alpha design Labs Tokyo Japan  
service@adl-av.com www.adl-av.com

**Sound Fowndations**  
25 New Road, Blackwater  
Camberley, Surrey, GU17 9AY Great Britain  
Tel : +44(0) 1276 501 392 info@soundfowndations.co.uk



# Arcam rDAC £300

Arcam's long-awaited rDAC holds its own, despite the low price and strong competition

## DETAILS

- Origin:** UK/China
- Weight:** 1kg
- Dimensions:** (WxHxD) 160x40x110mm
- Features:**
  - Coaxial, optical, USB digital inputs
  - Optional wireless USB input
  - Single unbalanced output
- Distributor:** Arcam
- Telephone:** 01223 203200
- Website:** [arcam.co.uk](http://arcam.co.uk)

**A**rcam clearly expects to sell quite a few rDACs: the clues are not only in the cast metal case, but also in the amount of original thought that's gone into the electronics design. Getting a basic DAC together is not that difficult – buy the right integrated circuits, follow the instructions and bingo!

Arcam, however, has chosen to go one better than anything available from standard parts and has implemented a previously unseen method of USB digital audio interface, using an 'asynchronous isochronous' system licensed from the boffins at DCS.

Never mind the confusing nomenclature. The point of this system is to avoid the necessity of somehow locking the DAC to the data coming down the USB line, which will certainly be incredibly jittery and may be at an inaccurate sampling rate.

Basically, the rDAC sends a request for data and fills up a buffer with what arrives, sending another request as the buffer empties. This simple expedient ensures that the rDAC maintains control of sample rate and clock accuracy, giving excellent jitter performance, something that's hard (though in our experience not impossible) to achieve otherwise. It also works with 96kHz sampling audio, something few other DACs can currently offer.

Inside the dinky little unit there's pretty much the usual kind of IC line-up, obviously with a couple of differences on the USB input side. The actual DAC chip is one of Wolfson's highest-performance parts. Power is from a small switch-mode wall-wart. Three inputs are provided (optical, electrical, USB), plus an optional fourth wireless one, which at £75, allows you to use not just a computer, but also a mobile phone as a music source. The single control on the top of the unit cycles through inputs, which light green when locked.

## Sound quality

If this DAC didn't entirely set our 'blind' listeners on fire, it should still be remembered that it was the cheapest in the group by quite a margin. Even so, it attracted plenty of positive comments.

Opinion seemed slightly divided over instrumental reproduction, including both percussion and melodic instruments. One listener felt the balance was a little too keen on the midrange, another found the bass very well extended. But there's no sign of any treble exaggeration or harshness, which is a good thing.

It seems that the Arcam 'house sound' is present in this DAC's slight reluctance to get too much 'down and dirty'. Its performance with rock is good, but not the most energetic on the planet and it has good rhythmic

solidity but doesn't necessarily do the foot-tapping thing to the highest degree. It's also good for string quartets and ballads, as well as weird noises from experimental indie-pop bands. It handles it all with an easy aplomb that, we feel, comfortably makes up for any shortcomings in its list of achievements. The USB input does indeed sound as good as any other and we have no hesitation in recommending this as fine value hi-fi.

## TECH LABS

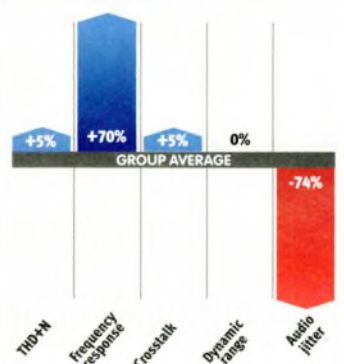
### LAB REPORT

The r-DAC measured very well against the competition. We noted a ruler-flat frequency response. Variations were well below the group test average at +/-0.09dB. This would suggest an even-handed sound characteristic that does not favour any one particular part of the frequency bandwidth.

Internal jitter was prominent in this DAC and we measured 708.6ps. This is a poor measurement. There are also timing errors in the data stream that are making it to the analogue outputs. It is also worth noting that we measured low THD+N and low crosstalk in this unit.

Overall, signal path purity was good and at £300, this Arcam performs exceptionally well, technically.

### RESULTS AT A GLANCE



## Hi-Fi Choice

### OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Good all-rounder that gets to the gist of any music
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Not the liveliest ever and could do with more rhythmic urgency
- BUILD QUALITY** ★★★★★ **WE SAY:** A delightful and user-friendly unit which really does get the best out of USB
- FEATURES** ★★★★★

### OVERALL



# 99 of a kind



Following on from the success of the GyroDec Odyssey, we are delighted to be introducing the new limited edition Gyro SEduction

Finished in the unique 'blue steel' and black finish, the Gyro SEduction combines many of the upgrades offered to the standard Gyro SE such as HR Power Supply, matching record clamp and black TechnoArm.

With only 99 units available world-wide, be quick to secure your unique opportunity to own this Gyro SE Super Deck.

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# Benchmark DAC1 £950



There never was a more apt brand name for a company that revived the DAC and ensured its reputation

#### DETAILS

Origin:  
USA

Weight:  
1.6kg

Dimensions:  
(WxHxD)  
250x45x240mm

#### Features:

- Coaxial (BNC), optical, balanced digital inputs
  - Balanced and unbalanced audio outputs
  - Calibrated or variable output level
  - Twin headphone output
- Distributor:  
SCV London
- Telephone:  
020 8418 1470
- Website:  
benchmarkmedia.com

**B**enchmark was one of the firms that spearheaded the current DAC revival, a few years back. In fact, it's not so much the firm itself that did it, more its reputation which went before it via the internet in true 'viral' fashion. Internet fads can, of course, crop up around all sorts of unlikely products and services, but the reality of the DAC1 is pretty much the epitome of solid engineering.

You may or may not like the front panel appearance, but the stuff inside is almost a check-list of audiophile must-haves: all-linear power supply; top-quality digital receiver; sample-rate converter and DAC chips.

Now we said in the Arcam review that getting a basic DAC together doesn't necessarily involve much more than putting the right parts in place, but it's the detail that really matters, which will show up in the listening and lab tests. This is also true in the headphone output stage, which isn't your usual op-amp-and-a-couple-of-resistors afterthought.

Benchmark has provided the DAC1 with a couple of very high-performance dedicated integrated circuits for headphone driving, which boast specifications so far in advance of what's actually required for the job that it's unlikely they will be a serious limiting factor. No complaints there!

As befits a device which is clearly conceived with the audio professional

in mind, there are pro touches, such as balanced output alongside the phono sockets, AES/EBU digital input, and the choice of calibrated output level (adjustable via rear-panel trimpots) or variable, via the front panel control. Build quality is excellent and operation is simplicity itself. Benchmark makes special mention of its 'UltraLock' jitter-reduction system: we don't have details of how it works, but it seems effective.

### Sound quality

If there was one aspect of this DAC's performance that caused the odd mild reservation, it's in the scale of the sound. It's not so much the business of imaging that seems to be at issue here, more the overall effect that's a combination of imaging with dynamics and tonal fullness.

It is possible, though, that this is, in reality, a symptom of the DAC1's extreme cleanliness and purity of character. It does sometimes happen that very clean audio sounds a little underwhelming in the short term, simply because we expect (from past experience) a touch of roughness at high levels and when it's not there we assume the worst.

It certainly has plenty of detail and an admirably neutral tonal balance. Imaging is precise and stable and there is a believable sense of 'air' around performers. In addition, there is a real sense of life and energy in

the music, something which our listeners appreciated in all of the musical extracts presented. Equally in Led Zeppelin and Rachmaninov, the DAC1 captures the rhythmic quality and 'drive' of the music, allowing the emotion full rein and ensuring that it is never a boring listen.

Incidentally, we can't let this review pass without also complimenting the headphone output, which is very fine indeed and for regular users of 'cans' makes an already attractive proposition look very tempting indeed.

### TECH LABS

#### LAB REPORT

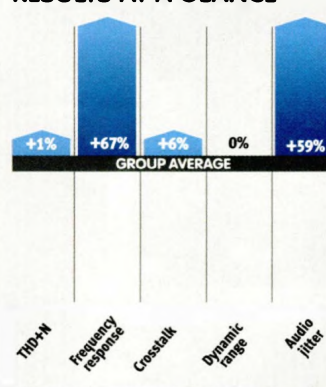
The Benchmark DAC1 took first place for best overall measurements. Frequency response variations were very low at +/-0.1dB. Users should not notice any sound irregularities.

Jitter in the signal path was outstandingly low, we measured 168.4ps. Such a low measurement suggests that the engineers have paid careful attention to minimizing signal-timing variations in this DAC.

There was also a good channel separation in this DAC and we measured -94dB crosstalk. In addition, we noted low THD+N levels and a wide dynamic range.

Overall, this is a high-quality DAC that is extremely accomplished.

#### RESULTS AT A GLANCE



### Hi-Fi Choice

#### OUR VERDICT

##### SOUND QUALITY

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

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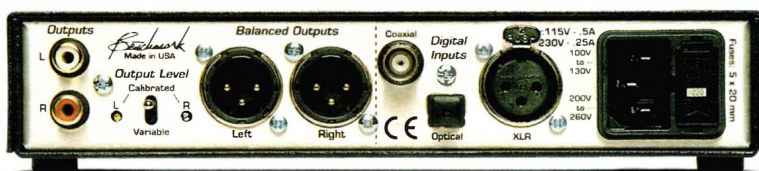
★★★★★

**LIKE:** Very clean sound with plenty of detail, and also good rhythmic drive.

**DISLIKE:** Possibly a little too clean for some

**WE SAY:** Despite the lack of USB in, this could form the heart of a digital-source system of distinctly classy nature

#### OVERALL





## Introducing the new Olive 4HD. Choice without compromise.

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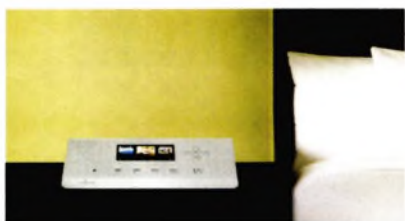
Find the music you want - fast.



Use the high-resolution touchscreen to select by genre, artist or album; flip through album covers; do a quick search; or save internet radio stations as favorites.

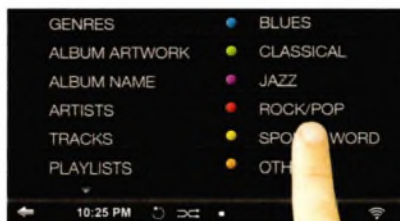


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Connect multi-room Olive 2 Hi-Fi Players to a wired or wireless home network and you can access your music library and enjoy it in high fidelity in every room of your home.

Easily integrates with your current system.



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olive

\* Olive 4HD Music Server, from around £2200 at great Hi-Fi stores nationwide

Distributed in the UK by;

Henley Designs

01235 511166

[www.henleydesigns.co.uk](http://www.henleydesigns.co.uk)



# Chord Electronics Chordette Peach £799

The Peach has everything going for it – Chord Electronics' excellent track record for DAC technology and Bluetooth

## DETAILS

Origin:  
UK

Weight:  
0.4kg

Dimensions:  
(WxHxD)  
160x40x70mm

Features:  
• Coaxial (BNC),  
optical, USB,  
Bluetooth (wireless)  
inputs

• Single unbalanced  
output

• Bluetooth A2DP,  
APT-X compatible

Distributor:  
Chord Electronics

Telephone:  
01622 721444

Website:  
chordelectronics.co.uk

**F**ollowing in the footsteps of the Chordette Gem, which brought Chord's DAC expertise to a lower-budget audience, as well as the company's unique Bluetooth technology, the Peach is basically a Gem with electrical and optical S/PDIF inputs added. The circuit board inside actually bears the legend 'Gem Mk 2' and comes in the same small case – a shrunk version of the legendary DAC64 finished, in this case, in fetching red.

The Bluetooth input is interesting, as it uses the 'advanced audio distribution profile' (A2DP) feature of the Bluetooth standard to stream higher-quality audio than is normally allowed by this dedicated short-range wireless system. It's not actually lossless, but when used with the APT-X codec, the quality is pretty decent. The point is to allow not only computers, but also mobile phones, to stream data conveniently to the main hi-fi, without wiring things up.

Inside the Peach, an implausibly thin screened cable connects a socket for the Bluetooth antenna to a tiny sub-assembly with Chord's own receiver circuitry. This then feeds the main circuit board, also the home of the usual digital input chips and the DAC chip. The latter is a recent part which not only converts to analogue

but includes line driver circuits which remove the need for separate op-amps to drive the output sockets.

We love the milled-from-solid aluminium case and the overall look is very appealing. It's obvious which socket on the rear is which (and you can't confuse analogue with digital as the latter uses a BNC connector), but it's far from obvious which input is selected as the rotary switch is unlabelled. Note that the USB input is limited to 48kHz sampling rate.

## Sound quality

Connected via the usual S/PDIF, this DAC was well-liked, but didn't entirely escape criticism. Sifting through their notes, we noticed that a very slight lack of clarity, precision and focus was the main issue. In the Led Zeppelin track, for instance, one listener found it energetic, lively and fully in tune with the musical aims, while another missed some energy and commitment. Our Otis Redding number drew comments about vocals sounding clear and lifelike but backed by an unusually recessed and constrained band, while the classical vocal track seemed to be just a little rough compared to the presentation heard from some of this group.

It's worth noting that in our sighted listening, we found this a relatively 'characterful' DAC which, however,

## TECH LABS

### LAB REPORT

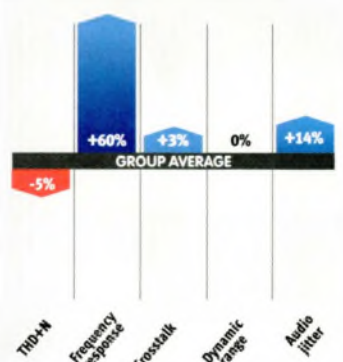
This pint-sized DAC holds its own against the competition in this group test. The Chordette, in terms of measurement results, was very accomplished.

We measured a +/- 0.12dB frequency response, which is the minimal amount. No one part of the frequency bandwidth should be overly emphasized.

Jitter was below the group average at 350.8ps. In the group test this jitter measurement was good, but in reality, this jitter measurement is actually poor. There are timing variations in the signal path creating jitter.

Overall, this little DAC has low levels of distortion, crosstalk and a wide dynamic range and fairs quite well against the competition.

### RESULTS AT A GLANCE



## Hi-Fi Choice

### OUR VERDICT

SOUND QUALITY



**LIKE:** Characterful in a good way – always engaging and lively, with generally good detail.

VALUE FOR MONEY



**DISLIKE:** Not always the most revealing and lacks a little focus.

BUILD QUALITY



FEATURES



**WE SAY:** The ease with which mobile devices can be hooked up wirelessly

### OVERALL





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# Lavry DA10 **£1,028**



At the top end of our group test price range, this DAC achieves everything that's expected of it and a little bit more

## DETAILS

- Origin:** USA
- Weight:** 2kg
- Dimensions:** (WxHxD) 200x45x250mm
- Features:**
  - Coaxial, optical, balanced digital inputs
  - Balanced analogue outputs
  - Headphone output
  - Adjustable output level
  - Switchable polarity
- Distributor:** Bigger Boat
- Telephone:** 07813 760287
- Website:** lavryengineering.com

**B**ack in *HFC316*, we found plenty to like about this well-featured, pro-oriented DAC and since two years is quite a long time in digital audio, we thought it might be worth another outing against the newest comers. It doesn't have phono sockets on it, but it does have a rather neat feature inside: you can configure each of pins 2 and 3 on the XLR outputs to be 'hot' or ground, thus ensuring compatibility with unbalanced systems by the simple expedient of plugging in adaptors which would otherwise short half the signal to ground and probably upset the circuit.

Both flavours of S/PDIF, plus AES/EBU make up the inputs. Selection is by a three-way switch, which may be old tech, but has the virtue of being completely unambiguous and easy to check visually. Other front-panel controls include stereo/mono, polarity inversion (always useful to have that somewhere in a system) and three different settings for the Phase-Locked Loop which latches on to the incoming data stream: 'Crystal' should be best and 'Wide' the most forgiving, but we couldn't spot much practical difference with any kit we tried hooking up.

The other useful feature is adjustable output level in 1dB steps. Purists will be interested to know that this is

done in the analogue domain, after the D-A conversion. It's more use for calibration than listening, though, especially as there's no remote.

Inside the DA10 is a roll-call of high-specification chips and it's all very neatly put together. The internal power supply is a switch-mode type.

## Sound quality

In general, it's clearly an exceptionally honest piece of audio equipment, which tells it like it is, warts and all, with no concession to euphony – or to individual tastes. As such, it's liable to engender more respect than love in some listeners, but others will definitely love it to bits.

In the latter category is clearly one of our blind listeners, who praised the improved definition and solidity in the tone of piano and a whole new level of detail in the orchestral track, plus excellent dynamics, a fine sense of scale and well-defined soundstage.

On the other hand, another listener found the overall effect a little too forward and immediate, with voices which he felt came dangerously close to shouting at him. Otis Redding's backing band seemed to be struggling for domination over the singer, while Rachmaninov's music seemed unduly urgent and less beautiful than before.

There's no need to agonise over how to reconcile these opinions: they are classic reactions to ultra-clean audio. Some folks just don't want



that. There's every reason to allow the existence of personal taste in sound reproduction equipment (why else do ultra-high-end components vary so noticeably?), accepting that kit like this which imposes next to no character on the sound is only one version of audio nirvana.

As our main listening system is often used to evaluate recordings made only hours ago, we are able to affirm that this is one of the most effortlessly revealing DACs we've ever heard and apparently utterly indifferent to the source, too. Excellent!

## TECH LABS

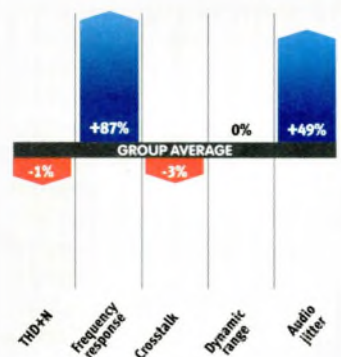
### LAB REPORT

The Lavry is a professional level DAC that has a wide variation of user options. We measured every aspect of it, to get the best picture of how it performs on paper.

Overall, we found the DA10 to be very good. It has the best frequency response measurement of the group and we measured +/-0.04dB variation in response. This is an excellent measurement.

Jitter levels were also notably low at 210ps. Crosstalk and distortion levels were a little below the group average, but nonetheless were still very good. If you are looking for a pro level product, then the DA10 is one of your best choices.

### RESULTS AT A GLANCE



## Hi-Fi Choice

### OUR VERDICT

#### SOUND QUALITY



**LIKE:** Superbly unflustered and impeccably detailed

#### VALUE FOR MONEY



**DISLIKE:** Can be ruthlessly revealing of deficiencies in once-admired recordings

#### BUILD QUALITY



#### FEATURES



**WE SAY:** Analysis like this isn't everyone's taste but it should at least be heard

### OVERALL



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# PS Audio Digital Link III £899

Even with its conventional engineering, this no-nonsense DAC excels in terms of both its price and its performance

## DETAILS

**Origin:** USA  
**Weight:** 3.5kg  
**Dimensions:** (WxHxD) 220x75x350mm  
**Features:**  
• Coaxial, optical, USB digital inputs  
• Balanced and unbalanced analogue outputs  
• Upsampling to 96kHz/192kHz  
**Distributor:** Signature Systems  
**Telephone:** 020 8480 3333  
**Website:** psaudio.com

**P**S Audio may be better known these days in the UK as a mains treatment specialist, but the company is proud of its heritage in digital audio, its DACs going back over two decades now. This well-established model is little brother to the 'Perfect Wave' but, unlike that network- and internet-enabled product, it is simply a DAC, with the usual S/PDIF inputs and a single USB socket.

The manufacturer makes no particularly remarkable claims for the technology of this DAC and indeed internal inspection reveals that it is a classic bit of no-nonsense electronics engineering. The key integrated circuits – DAC chip, sample-rate converter, digital receivers – are standard parts of very good performance and the audio circuitry is conventional, too.

It's clear that significant effort has been put into the power supply, though, and the transformer is a large item capable of powering a small integrated amp, aided and abetted by considerably more power supply capacitance than most DACs can offer, plus plenty of regulation, too.

As so often, it's the details that make the difference and while the

basic specification of modern integrated circuits is often stunning, achieving that specification in practice requires careful thought and planning.

The Digital Link III offers selectable upsampling to 96kHz and 192kHz. We tried both and didn't really hear much difference, so we left it at 192kHz. Input selection is intelligent, scanning all three inputs and locking automatically to the one actually receiving data.

## Sound quality

Overall, this was probably the favourite among the six, at least according to our expert listeners, who were notably united in liking just about everything it did. It has that rare knack of presenting a great amount of detail, leavened with just enough euphonious character to keep just about everyone happy.

It offers a generous and well-defined soundstage and very good integration between the various ranges and the instruments playing in them. And, perhaps most importantly, it seems to have immense adaptability – it is able to get right into the swing of any kind of music.

Among other desirable qualities that came out in our listening

## TECH LABS

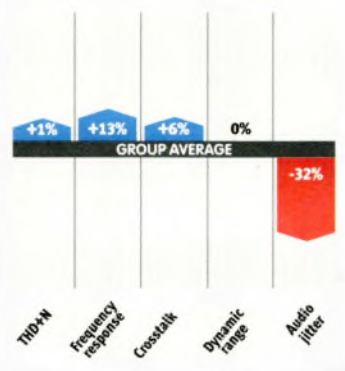
### LAB REPORT

The PS Audio measured commendably against the others in this group test. Its technical performance didn't stand out, but was still very good. It has a relatively flat frequency response and variations in response were moderate at +/- 0.26dB.

We measured -94dB crosstalk levels, which equates to good channel separation internally. The only poor data we retrieved from this product was its jitter levels.

At 536.6ps, this DAC has some timing variations in the signal path. Take the jitter measurement out of the equation, and we have a very talented DAC from a technical standpoint.

## RESULTS AT A GLANCE



## Hi-Fi Choice

### OUR VERDICT

**SOUND QUALITY** ★★★★★ **LIKE:** A knack of adapting effortlessly to the requirements of any music

**VALUE FOR MONEY** ★★★★★ **DISLIKE:** Very slightly loses out on the analysis front

**BUILD QUALITY** ★★★★★ **WE SAY:** A simple, no-fuss product that just sounds great and, at its price, is something of a bargain

**FEATURES** ★★★★★

### OVERALL



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[www.audio-t.co.uk](http://www.audio-t.co.uk)





# Stello DA100 Signature £750

Stello is creating quite a buzz with its range of features and unforgettable performance levels

## DETAILS

- Origin:** Korea
- Weight:** 3.5kg
- Dimensions:** (WxHxD) 215x55x290mm
- Features:**
  - Coaxial, optical, balanced, USB, I2S digital inputs
  - Balanced and unbalanced analogue outputs
  - Upsampling to 96kHz/192kHz/off
- Distributor:** Vivid Audio
- Telephone:** 01903 530005
- Website:** aprilmusic.com

**K**orean manufacturer April Music maintains different brands for its different ranges, with Stello generally offering mid-price equipment that's always very smartly turned out and, in the case of the 100 Series, efficiently cased in half-width aluminium housings like this one.

It's a pretty straightforward proposition, but with one interesting and unusual addition in the form of the I2S input. This interface has been around for a while, though it's fair to say it hasn't exactly caught on like wildfire. Its big attraction is that it carries separate clock and data signals, which gives the potential to reduce jitter as the clock no longer has to be recovered from the data.

The other surprise in this DAC is its construction. We've become completely accustomed to surface-mount components inside audio kit of all kinds, especially digital, but Stello has managed to source through-hole components for practically every job on the board. The exceptions include the critical DAC chip, plus the sample-rate converter and the digital input receiver (so most of the important functionality, if we're honest), but every single analogue part is a good old through-hole device of generous dimensions.

The theme of component quality is maintained by the use of good-quality plastic film capacitors at all audio-signal positions, while the power supply is also well equipped. Upsampling is optional and can be set to 96kHz or 192kHz (we slightly preferred it left off). Incidentally, contrary to claims in Stello's literature, the USB input is only capable of receiving sample rates up to 48kHz.

## Sound quality

This DAC makes a lot of the right noises and it seems from our listeners' notes that they largely enjoyed their experience of it. A quick, but honest summary would seem to be that it is good at small-scale music and also at presenting the big picture.

Certainly there's good pace in the sound and plenty of verve with any lively natured music. Our Otis Redding track, which undeniably shows its age a little on any system, became positively nostalgic for a couple of our listeners, although it's clearly not strictly accurate. The opening of the Led Zeppelin track had fantastically present cymbal and drums, though precision and definition did wilt a little when the entire band got going.

In the classical music tracks, which should have very good imaging, there

was a slight sense of the performers being a little confined in space. They were all clear to hear, but the acoustic seemed reduced in size and the overall scale of the music was reduced along with it.

On the other hand, the immediacy of the Stello's presentation did no harm at all in keeping up excitement and this is just one of the aspects that make this a DAC one could easily listen to long-term. It's not quite for everyone, but it does get the adrenaline flowing and we can imagine many listeners falling for it in a big way.

## TECH LABS

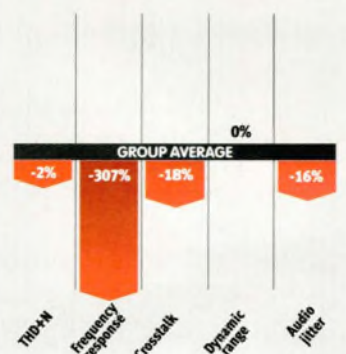
### LAB REPORT

The Stello DA100 performed the worst of the group. There are significant variations in frequency response and we measured a response of +/-1.22dB. Based on these results users will notice some prominent sound anomalies.

Crosstalk levels were well below the group average at -73dB. Internal jitter was also quite high at 473ps. This is a poor measurement based on our scale.

Not all was bad with this DAC, we measured low THD+N levels and a wide dynamic range. But in a highly competitive group test, the DA100 comes in last based on the technical data.

## RESULTS AT A GLANCE



## Hi-Fi Choice

### OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Generally good at maintaining the excitement of a great performance
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Can be a bit too warm and fuzzy at times
- BUILD QUALITY** ★★★★★ **WE SAY:** Overall, a very enjoyable piece of kit to listen to
- FEATURES** ★★★★★

### OVERALL



# Lab conclusions

The competition between our six DACs was a close call, but in the end, a combination of technical versatility and sound performance decided the winners

## TECH LABS

Competition was stiff in our DAC *Blind-listening Group Test* this month. As our readers know, testing can be a little bit of an enigma sometimes. It's easy to assume that the best measurements equate to the best sound, but this isn't always the case. Sometimes the poorest technical performers sound better.

So why do we measure products? Simply because we believe that technical data helps tell the whole story about a product.

This month, the tests showed, for example, that the Benchmark DAC1, produced the best overall technical

results in our test lab. It had the lowest jitter levels, frequency response variations were minimal and crosstalk was good at -94dB. The technical results that we measured were very good and in this case equated to excellent sound quality, too.

Close behind was the PS Audio Digital Link III and Lavry DA10. Both of these products measured commendably. The Digital Link III fell short in the jitter category by a wide margin, while DA10 faltered in the crosstalk and THD+N category. Nonetheless, these DACs caught the attention of our panel. Both had superb sound quality.

Coming in at the back of the pack are the Arcam and Stello. From a technical standpoint the rDAC measured quite well, while on the other hand the DA100s technical measurements were the worst of the group. The panel felt that while they both sounded good, they fell short compared to the competition. In last place comes the Chord Electronics Chordette Peach. In the lab this product measured well, but fell short in sound quality.

It was hard for our panel to decide on a winner. In the end, it was decided that the Benchmark DAC1 ticked all the right buttons and edged out the competition.









Our six DACs offer a variety of connections to receive and output signals and any purchasing decisions you make will, in part, depend on what you require in your system.

The Arcam, Chord, PS Audio and Stello all support USB, which will make connection to a PC a simpler task. The Stello, Benchmark and Lavry will accept digital over a balanced AES socket.

The DACs also feature conventional RCA phono outputs, but the Benchmark, Lavry, PS Audio and Stello also output over balanced XLR sockets, beneficial when connecting to a suitably equipped amplifier.

## RESULTS AT A GLANCE

						
Make/model	Arcam rDAC	Benchmark DAC1	Chord Electronics Chordette Peach	Lavry DA10	PS Audio Digital Link III	Stello DA100 Signature
Price	£300	£950	£799	£1,028	£899	£750
Sound	★★★★☆	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Value	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Build	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Features	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Overall	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Conclusion	A delightful and user-friendly unit which really does get the best out of its USB connection	Despite the lack of USB, this could be the heart of a digital-source system of a distinctly classy nature	The ease with which mobile devices can be hooked up wirelessly is a definite asset	Superbly unflustered and impeccably detailed, but can be ruthless with old recordings	A simple no-fuss product that just sounds great and, at its price, is something of a bargain	Good at maintaining the excitement of a recording and is an enjoyable piece of kit to listen to

### Key features

	Arcam	Benchmark	Chord	Lavry	PS Audio	Stello
S/PDIF inputs elec/opt	1/1	1/1	1/1	1/1	1/1	1/1
Other inputs	USB	XLR	Wireless	XLR	XLR, USB	XLR, USB, 12S
Balanced output	No	Yes	No	Yes	Yes	Yes
Max sample rate (S/PDIF)	96kHz	192kHz	96kHz	96kHz	192kHz	96kHz
Variable output	No	Yes	No	Yes	No	No

### Lab conclusions

E = Excellent | AA = Above average | A = average | BA = average | P = poor

	Arcam	Benchmark	Chord	Lavry	PS Audio	Stello
THD+N	2.02% A	2.01% A	2.04% A	2.05% A	2.01% A	2.07% A
Frequency response	+/-0.09dB A	+/-0.1dB A	+/-0.12dB A	+/-0.04dB E	+/-0.26dB A	+/-1.22dB P
Crosstalk	-96dB A	-94dB A	-92dB A	-86dB BA	-94dB A	-73dB P
Dynamic range	96.0dB E	96.0dB E	96dB E	96.0dB E	96dB E	96dB E
Audio jitter	708.6ps P	168.4ps E	350.8ps P	210ps AA	536.6 P	473ps P

# Blind-listening verdicts

Our unsighted listening panel has revealed the future stars of 2011 – those products destined to transform ageing source components and PC audio everywhere

**THAT THIS PROVED** a very hard group to rank should be evident from the very close numerical scores we gave the various DACs. Frankly, they're all good equipment and the comparisons in sound are not vast. The differences in features are just as likely to be a decider for many, with the USB input of the PS Audio Digital Link III, for instance, giving it a useful lead over the equally adept Benchmark and Lavry units. (Though don't forget that USB-S/PDIF convertors exist.)

Because of its price (about one-third of the others), the Arcam rDAC was always going to be up against some stiff competition, but we're glad we included it, as its performance in the *Blind-listening Group Test* was by no means a disaster. Its inclusion of a whole new way of receiving jitter-free USB audio is admirable and the wireless option makes it a very attractive option. For value, it arguably carries the crown here.

Chord Electronics' Chordette Peach actually scored lowest overall, a fact we're slightly embarrassed about because it lost points in each area

for quite small details – tough but, we feel, fair. Even so, it does sound very appealing and it certainly looks distinctive.

Stello's DA100 Signature scored on aggregate the same as the Arcam, falling just short of the high standards from the three American contenders here. Again, it's still a good component – and like the Chord, obviously well suited to its manufacturer's other components, in this case because of the I2S input as well as the looks.

But the good ol' US of A can rejoice this time, with Benchmark, Lavry and PS Audio all earning maximum points for sound. They don't all sound alike, though the Benchmark and Lavry are actually quite close, but they do all sound great: detailed, lifelike, full of energy, tonally neutral and extended... what more do you want?

In the end, deciding on an overall winner came down to price, features and hi-fi friendliness, as we felt the sound of all three was nothing short of excellent. ●

## THE WINNER IS...

**THE BENCHMARK DAC1 sells for a little more than the PS and a little less than the Lavry unit and seems to us to balance studio and audiophile sound admirably.**

**We also feel that the specification is amongst the best here. There is no USB socket (although a version is available with USB) but the three digital inputs, volume control and the excellent headphone socket are a fine and comprehensive feature set and give the Benchmark considerable flexibility in use and application.**

**It has detail to die for and its general presentation is clean almost to a fault. So much so, indeed, that some listeners will find it unprepossessing at first. We do urge you to persevere, though, because over a longer period one soon comes to realise that one is hearing familiar recordings as never before. In a good way!**



Want to build a system around our winners? We've cherry-picked some of the most compatible partners for our cutting-edge DACs

### AMPLIFIER: Cambridge Audio 840A £800

A long-standing favourite of ours, not least because of the flexibility it offers. The 840A includes a pair of balanced inputs that will benefit four of our six DACs. There are, of course, six extra inputs as well. Sonically, this is still a strong-performing amplifier. We like the excellent tonality and strong bass extension that helps obtain good results from even small speakers. Throw in a power output able to drive most loads to just about any listening level and you have a veritable bargain.



### LOUDSPEAKER: ATC SCM16A £2,376

For those of you with a pro audio leaning, the volume control-equipped Benchmark and Lavry could be connected directly to these active standmounts to function as digital preamps. And the ATCs offer quite the incentive to do so. These are fantastically detailed speakers with superb pace and timing. Their built in 250-watt amplification gives them phenomenal punch and grip for a comparatively small speaker.



### LOUDSPEAKER: Sonus faber Cremona Auditorium £3,350

For those looking for something a little less utilitarian than the ATC (and something that allows you to choose your own amplifier), the Sonus faber could be it. These are some of the most attractive and beautifully built speakers on sale today. All of which would be irrelevant, if the sonic performance was below par, but the Cremona rewards with a detailed and vibrant performance with effortless soundstaging





# Eastern promise

Krell's expanding eastern-made, entry-level range heralds a new era of affordability for the high-end marque. *Alvin Gold* looks in

**U** Krell not only epitomises the American high end, the company practically invented it: the brand is quintessentially macho, solid, muscular and aspirational, as well as being reassuringly expensive with build quality that often seems utterly, and gloriously over the top. The very idea of a budget Krell range is a kind of oxymoron, but even Krell is not immune to what's happening in the

wider world. If ever the time was ripe for an affordable range of Krell products, the current global economic slowdown has provided the perfect opportunity.

## The real thing

Tested here is the entry-level S-350a, which is a CD-only player. The closely related S-350av adds DVD playback (upscaled to 1080p) and the claim is that it does so without

## DETAILS

**PRODUCT:** Krell S-350a  
**Origin:** USA/China  
**Type:** Compact disc player  
**Weight:** 11.4kg  
**Dimensions:** (WxHxD) 438x104x450mm  
**Key Features:**

- Compatible with CD-DA, CD-ROM, MP3-CD
- Modular design, internally upgradable for DVD replay
- TEAC-Esoteric slot-loading mechanism
- 24bit/192kHz differential mode D/A converter for each channel 12V trigger I/O

**Distributor:** Absolute Sounds  
**Phone:** 020 8971 3909  
**WEBSITE:** krellonline.com

compromise to CD playback performance. We discovered it performs as we describe below, as a CD player that is already built around a DVD mechanism. Put a DVD in the player and see for yourself.

As a CD player, the S-350a is straightforward. It has all the usual search and repeat modes, a neat and very simple backlit LCD display and you can extract the analogue audio signal in single-ended or balanced forms, using XLR sockets on the back. But the player will deliver electrical digital outputs in (optical) TOSLINK or (electrical) S/PDIF form and it will also accept external digital signals, again both optical and electrical. It will even accept high-resolution signals – up to 96kHz anyway, which is the limit for the connector types used.

The player is also equipped with 12V trigger in and outputs and an RC-5 input, which can be used to integrate the player with system controllers from AMX, Crestron and the like. It's also equipped with an





RS-232 socket for external comms, but there is no HDMI output and the AV version of the S-350 is limited to composite and S-video, which will hamstring the player as a high-performance video source component.

Internally, the S-350a is well specified, with a massive power supply section and solid build quality. It is also compatible with CD-DA, CD-R/RW and MP3 CD media. Having being made outside of the USA was not used as an excuse for second-rate construction.

Unlike previous generation Krell products, dating from their introduction in the early '80s, the S-350a is made in China, though the design comes as usual from the Krell R&D labs at Krell HQ in Connecticut.

The player takes advantage of hardware developments that were originally introduced to service the computer market. The most obvious of these is the player's slot-loading mechanism, which is becoming increasingly common instead of the more traditional loading drawer.

**“No one could ever reasonably claim that the player is anything less than immaculately built and presented.”**

We first saw samples of Chinese-made Krell components two or (perhaps) three years ago at CES – the world's largest consumer electronics shindig in Las Vegas – where we found Dan Agostino (co-founder and then CEO of Krell), with some prototypes, exuding a child-like enthusiasm about the fact that he was able to send the Chinese factory a set of drawings and circuit diagrams and within a few months receive back, as if by magic, a fully sorted and working product.

As far as we know, the products he had at the time never appeared on the market. They were tryouts. But he was clearly impressed with what was possible and the importer

sent us a sample of the matching S-300 amplifier to try out with the review player, which provided the perfect opportunity to see how they would interact.

#### **Krell's bells**

The S-350a is shockingly heavy – the only way to explain the 11.4kg deadweight in a CD player is the inclusion of a typically Krell scale power supply with a massive toroidal transformer of a capacity more appropriate to an amplifier than a CD player – though unusually robust external metalwork is also part of the equation. No one could reasonably claim that the player is anything less than immaculately built and presented.

As usual with Krell, the S-350a has a plethora of small control buttons, far too many to take in at a single glance, which for many will make operation using the supplied remote control more natural. But in its favour, the native control set is positive and gives good tactile



#### **TALKING POINT**

**THE KRELL** won't play SACD, despite using a D/A converter chip, which is itself DSD-compatible. Almost all of the Burr-Brown Advanced Segment DACs, except both PCM and DSD data. For the few that come in PCM-only formats as well as PCM/DSD, there is no difference in performance.

Followers of Krell will know that the company has suffered from the unreliability and poor availability of some of the earlier SACD mechanisms it used and so it has now decided to pull the plug on the format with all new and forthcoming disc players.

## Q&A...

WE SPOKE WITH BILL MCKIEGAN, PRESIDENT OF KRELL INDUSTRIES



**HFC:** Why use a slot-loading mechanism? Did the use of such a mechanism cause any design problems or issues?

**BM:** Internally, a disc is handled the same way whether it is brought into the unit via a tray or a slot. The benefits of the slot-loading mechanism we are using is that the buffer is employed after the data is read from the disc. Instead of the data being used from the disc directly, it is sent to a buffer. This 7.5-sec buffer provides a safe haven for the data, isolating it from drive-reading errors and any externally caused vibrational errors that might corrupt the data. In conjunction with our proprietary jitter-reduction module, we present the most precise signal to the digital circuitry. This is the same system that is used in our flagship Evolution 525a CD player.

**Are there any restrictions, for example, in the use of non-standard disc sizes or shapes?**

There are no restrictions, the S-350a can play 12cm and 8cm discs.

**Can you describe the power supply topology? – this seems to be where a lot of work and expense has gone**

The power supply is classic Krell in that it appears to be overkill for a source unit. In reality, it is what is necessary to deliver top-end performance. Technology-wise, it is a linear design with a discrete cascode error amplifier for the analogue audio stage regulators. This provides extremely tight voltage-regulation. The high-current regulators are a low-dropout voltage design and use Schottky rectifiers in the input supply for higher efficiency and lower heat dissipation than typical linear supplies.

**There's no headphone socket or CD-Text facility. Why is that?**

We didn't feel we could do justice to headphone-listening by simply adding a headphone jack. We would rather leave a feature off than to do it poorly. In the case of CD-Text, it is simply not supported by the decoder we are using.

## HIDDEN TECH



- 1 Inhaler-style CD drive
- 2 Very generous, high-performance torroidal transformer
- 3 Shielded mains supply
- 4 Digital input board
- 5 Complex output stage
- 6 Servo board including DVD control

feedback through the fingertips.

The dimmable backlit LCD display is clear and uncomplicated, though it tends to switch to the negative when viewed from oblique angles. The player handles discs quietly and without so much as a hint of temperament, in fact, the only features we missed and would have liked to have seen were a headphone socket and, perhaps, CD Text (see interview with Krell's Bill McKiegan, left).

Taking all the pluses and minuses into account, including sound quality which is discussed separately, this player represents exceptional value. It is not just the most affordable way of joining the exclusive Krell owners' club, this is a player that delivers, well beyond what might have been expected.

### Even and articulate

The S-350a was supplied for test with a sample of the matching S-300 integrated amplifier and the prognosis is unequivocal; they work brilliantly, separately and together.

Both units – the CD player and the matching amplifier – achieve a very high standard, much higher, in fact, than we had anticipated. There are some obvious mechanical

elements of the performance available from this player (and indeed the matching S-300 amplifier) that come across clearly at an early stage. The midband, for example, is very smooth, even and articulate, and essentially free of the flatness and lack of perspectives endemic with many lesser players, as well as some of Krell's early disc-playing hardware.

By the same token, the treble sounds well integrated and highly detailed and the bass is more full-bodied than many earlier generations of Krell players. Discs are handled efficiently, with rapid track access and virtually no sound from the internal mechanism, or the spinning discs themselves. The additive result of these factors is that the Krell is easier to listen to for extended periods and is more believable, too.

Overall it does a fine job of CD replay and it extracts a commitment and passion that is unusual from compact disc. Imagery is handled in an unusually three-dimensional way. Image depths are fully painted-in and the player's bass is particularly deep and potent, too.

**CONNECTIONS**



- 1** Expansion port for video-equipped model
- 2** Separatetop panel, side panels and bottom plate for rigid construction
- 3** Choice of unbalanced and balanced outputs
- 4** Digital inputs and outputs
- 5** Third-party control connections for integration

We were particularly impressed by the way it handled such material as Mary Coughlan's *Moon Over Bourbon Street*, which came across with such obvious depth and such exquisite world-weariness, it was almost too much to bear. The top end is clean, with a convincing sense of air and space, which was shown clearly with a range of recordings, including the exquisite purity of Christianne Stotijn's mezzo in Brahms' *Alto Rhapsody* and Mahler's Rickert-Lieder from an Onyx album originally given away as a freebie magazine cover-mount.

This album usually reproduces well. The difference here is that the Krell made the best of what was clearly a well-conceived recording and performance, by adding a sense of air and presence that other replay systems often fail to resolve. This is the difference between plain good sound quality and a performance (with the emphasis on that word) that causes the hairs to rise on the back of the neck.

This album also demonstrated another element of the Krell: it's ability to create a very precisely delineated stereo soundstage, with properly fleshed-out depth and a beautifully articulated sense of scale and spaciousness. But this is certainly not limited to this one recording, or even a select group of them. There was a similar quality in musically unrelated material, one example from many being the album *Raising Sand* from the improbable combination of Alison Krauss and Robert Plant.

It was even more apparent, or at least more dramatically so, with some more obviously heavy-duty material, including a Signum Classics live recording (in London's Royal Festival Hall) of Schoenberg's massive oratorio *Guerre-Lieder*. The player's ability to bring off testing recordings like this without sounding excessively dense or congested, yet without loss of weight or impact, marks the S-350a out as special. By comparison, many other broadly comparable



**THE S-350A** player is easy to build systems around. It is clearly well-matched with the S-300 integrated amplifier, and not just because they are an aesthetic match, but also because they speak in a similar voice: with boldness, and conviction and because they are capable of resolving the architecture of the material they play. The matching amplifier seems very close to true high-end audiophile standards and is a perfect partner.

players tend to sound flat and are difficult to become involved in, but lack of involvement was not a factor with the Krell.

**Straightforward and practical**

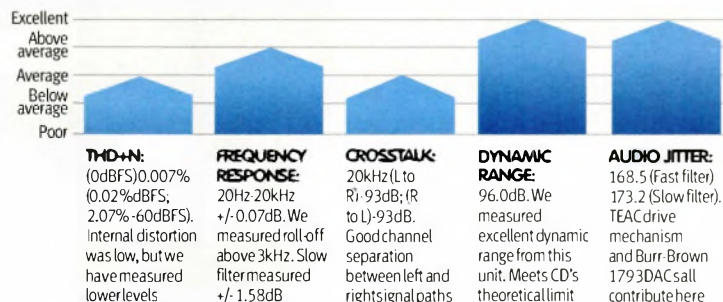
The S-350a speaks for itself. This is a straightforward, practical player that supports balanced audio and is well-enough endowed to drive compact disc a long way towards the limits of the format.

The DVD version of the player (which costs considerably more) is less convincing. Yes, the ability to upgrade the player to full DVD status is a neat trick, but it won't handle Blu-ray discs and it won't talk down an HDMI pipe, which ultimately makes this version of the player of limited value.

The minor criticisms described elsewhere in this article – no headphone socket and no CD Text – are far outweighed by what it does and does well as a dedicated audio player. It looks as if the switch from West to East with this range has done little to upset the Krell reputation. ●

**TECH LABS**

**RESULTS AT A GLANCE**



**Hi-Fi Choice**

**OUR VERDICT**

- SOUND QUALITY** ★★★★★ **LIKE:** Well specified player with straightforward control system and readable display
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** No headphone socket; no CD-Text
- BUILD QUALITY** ★★★★★ **WE SAY:** Accomplished CD player with real breeding underpinning its excellent performance
- FEATURES** ★★★★★

**OVERALL**



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# Mission possible

**Ed Selley** gears up to test drive the new MX5, a low-cost, high-value speaker that's as easy to drive as its sporty Mazda namesake

**M**ission has a long-held reputation for producing keenly priced entry-level speakers and its brand new MX series pitches in to this hotly contested area. The six-strong range includes three standmount and three floorstanding models, of which the MX5 is the largest and costliest.

And 'large' is a word that will certainly cross the mind of anyone unboxing a pair of MX5s. Standing a few centimetres over a metre tall (when fitted with spikes), this is one of the largest sub-£1,000 speakers we have seen in quite a while. So much so, that we would encourage any buyer to see a pair in the flesh before taking them home.

The MX5 uses three six-inch drivers paired with a one-inch tweeter. These drivers are fitted with covers that incorporate built-in wave guides, something which Mission claims allows the speaker to perform at its best with the covers on. We tested them in this manner, although this was partly due to the fact that the covers looked as if they needed considerable force to remove.

## Fit for a king

The fit and finish is of a commendable standard for the price. Detailing – like the large spiked plinth fitted to the base of each speaker and the terminal blocks – all feels sturdy and well thought out. The black ash finish is good with no visible seams or joins and the overall impression is of a well-constructed product.

There is certainly a sense that you're getting a lot of speaker for the money. The large, black, multiple driver design, for example, does have a faintly aggressive air to it, suggesting that it will be at its best when most ballistic.

## Tower of power

In practice, the MX5 is far more refined than the menacing exterior might suggest. Thanks to a claimed

sensitivity of 90dB, the MX5 should not prove a problem to most amps it is likely to be paired with. Given an output of 60 watts or more, the MX5 will generate more than adequate listening levels for most rooms, immaterial of size.

The construction of the MX5 suggests a prodigious low end and, in practice, the MX5 has commendable bass weight. What is more of a surprise is the speed and agility of the low end and how well it integrates with the upper and midrange frequencies.

The MX5 will follow fast and complex bass lines with accuracy and vigour, at the same time avoiding the sense of more subtle information being overwhelmed by it.

## DETAILS

**Product:**  
Mission MX5  
**Origin:**  
UK/China  
**Type:**  
Three-way floorstanding bass reflex  
**Weight:**  
28.3kg (each)  
**Dimensions:**  
(WxHxD)  
250x995x390mm  
**Features:**  
• Covers fitted with waveguides for optimal performance whilst fitted  
• Bi-wirable/bi-ampable  
• Twin reflex ports  
**Distributor:**  
Mission  
**Contact:**  
01480 447700  
**Website:**  
mission.co.uk



## Forgiving nature

Tonality is generally good: voices and instruments sound commendably real and believable. Thanks, in part, to the strong bass response, there is also an appreciable scale and soundstage to most recordings. Placed more than two metres apart, the MX5 will present a coherent space with artists and instruments believably placed within it.

Absolute detail retrieval is good rather than great; there is a sense that the MX5 is giving the bigger picture, rather than presenting every last facet of the performance.

Incidental details, such as audience response in live recordings or the aside of one musician to another, can be lost (when more exacting speakers will find them), but the overall sense of the recording is well captured. This does help make the MX5 forgiving of poor recordings, however it will make even very dire productions sound relatively together and enjoyable. This seems to play well across many musical styles and the MX5 rarely fails to be an enjoyable listen with virtually all genres of music.

## Cohesive-sounding

The sheer size of the MX5 is, perhaps, the biggest restriction to an unconditional recommendation. It may simply be too large to work correctly in smaller rooms, where two-channel equipment can often find itself. But, if you can accommodate a speaker of this size, the MX5 has much to recommend it.

This is a well thought out and cohesive-sounding loudspeaker, with impressive scale and dynamics. It also presents a sufficiently easy load that should make it compatible with the majority of amplifiers.

In the final analysis, the MX5 is a very likeable speaker and puts Mission firmly back in the sub-£1,000 speaker challenge. ●

## Hi-Fi Choice

### OUR VERDICT

**SOUND QUALITY**  
★★★★★  
**VALUE FOR MONEY**  
★★★★★  
**BUILD QUALITY**  
★★★★★  
**EASE OF DRIVE**  
★★★★★

**LIKE:** Good value, easy to drive with good sound quality  
**DISLIKE:** Maybe too large for some; don't the most detailed  
**WE SAY:** An engaging listen. Certainly worth an audition, if you have the room

### OVERALL





# Peachy sounds

Peachtree Audio is a brand for those in the know. Available in the UK at last, **Malcolm Steward** tries its innovative Nova amplifier/DAC

**Y**ou certainly seem to get your money's worth with the Peachtree Nova: a valve and solid-state preamplifier, a Class A headphone amplifier, 80 watts of power amplification and a high-quality DAC, all in a single, art deco-style enclosure with a swish wooden surround in a piano black, Rosewood (pictured) or Cherry finish.

Remove a panel on the rear of the enclosure and you have an aperture into which you can slot a Sonos ZP-90 ZonePlayer, in effect very tidily turning the hybrid Nova into a

wireless integrated amplifier for your Sonos system. It is already starting to sound like the ideal heart of an office or study system...

## Solid-state circuitry

One of the Nova's most unusual features is a switch on its remote control, labeled 'TUBE'. When you use the Nova as an integrated amplifier, preamp, or as a headphone amplifier, you can use this switch to choose between a solid-state or a Class A valve-based input stage. If you select the latter, a blue LED illuminates the valve-viewing

## DETAILS

**PRODUCT:** Peachtree Audio Nova

**ORIGIN:** USA

**TYPE:** Hybrid amplifier/DAC

**WEIGHT:** 11.8kg

**DIMENSIONS:** (WxHxD) 375x127x356mm

**FEATURES:**

- Valve for reducing digital glare
- Switchable DAC filter

- Storage space for Sonos ZP-90 or Squeezebox Touch

- Signal lock indicator on input buttons

**DISTRIBUTOR:** Computers Unlimited

**TELEPHONE:** 020 8200 8282

**WEBSITE:** [signalpathint.com](http://signalpathint.com)

window in the front panel of the Nova. The valve in question is a Russian-made 6922 triode.

The Nova's preamp section has both variable and fixed-level outputs (with the fixed outputs being driven only by solid-state circuitry), making it easy to use the Nova to drive an outboard power amplifier or subwoofer, if you so desire. There is also an AV bypass facility, whereby the Nova can be connected to an AV processor and simply used to drive the front, left and right channels for improved sound quality.

You can also use the Nova as a standalone headphone amplifier. When you plug your headphones into the relevant socket, the speakers are effectively automatically muted when the Class A/B power amplifier stage disengages.

The Nova can also be used as a 24-bit/96kHz standalone DAC that, according to some critics, bears comparison to dedicated high-end DAC designs. That is a bold claim to make for the DAC in an all-in-one-type device that costs half of what you might expect to pay for a top-notch, dedicated DAC. Either



**MAKING COMPARISONS** with the Nova is difficult because it is such an individual product. We doubt it is possible to replicate exactly what it offers in another single box set-up. The closest is probably the Naim Uniti. This does not have a valve preamp, but it does offer an integral streaming facility without any need to connect a Sonos – or other – network device and it includes a very high-quality, multi-input D/A converter. What is more, it also has FM and DAB tuners along with an internet radio player. And do not forget its integral CD player.

The Uniti does cost more (£2,000), but if you wanted those extra facilities with the Nova you would probably end up paying more than that difference in price. If you're prepared to forego the CD, you could narrow the price gap with the UnitiQute.

overly affected by noise from imperfect earthing arrangements and switched-mode power supplies. The USB input, which only operates at 16/44.1 and 16/48, is galvanically isolated to eliminate computer power supply noise that frequently travels along the USB ground plane and provokes jitter. Finally, the DAC offers two filter slopes, 'Slow' and 'Sharp', that can be selected by a rear panel switch. Peachtree says that 'Sharp' gives better laboratory results, but many audiophiles prefer the 'Slow' setting. The switch is designed

**“The Nova is a well-equipped little device to run a study or home office system.”**

primarily to take the harsh edge off heavily compressed digital signals. That it is relegated to the rear panel suggests an element of 'set it and forget it' rather than it being designed for constant use.

**A joy to operate**

The Nova is not a hideously expensive item, but just looking at it gives the impression that it might damage your bank account a whole lot more than it actually does. What is more, the days when audiophiles did not care about the way their hi-fi looked have long since vanished. Partly for that reason, we opine that the Nova is among the ever-expanding range of products – such as the Naim Uniti and Linn Majik DS-1 – that are destined to find a place in the home office or study, where their all-in-

some critics have very questionable standards or the Nova's DAC is truly something special.

The D/A stage employs an ESS 9006 Sabre chip with a patented jitter-reduction circuit and a 24/96 upsampling processor. This was chosen, not just for its performance

under ideal circumstances, but also for how it performs when being fed less-than-perfect signals. This is a valid real-world situation that the Nova will likely encounter regularly.

The DAC is powered by 11 regulated supplies and each digital input uses transformer coupling to avoid being

**CONNECTIONS**



- 1 Good quality three-way binding posts
- 2 Adjustable mains voltage
- 3 Adjustable filter settings
- 4 Analogue line inputs
- 5 USB, optical and coaxial digital inputs
- 6 Space for Sonos module

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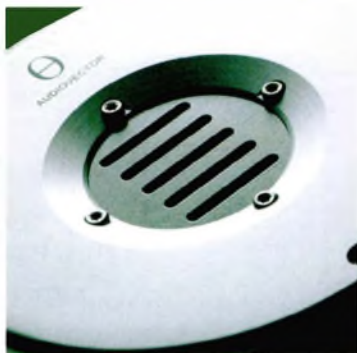
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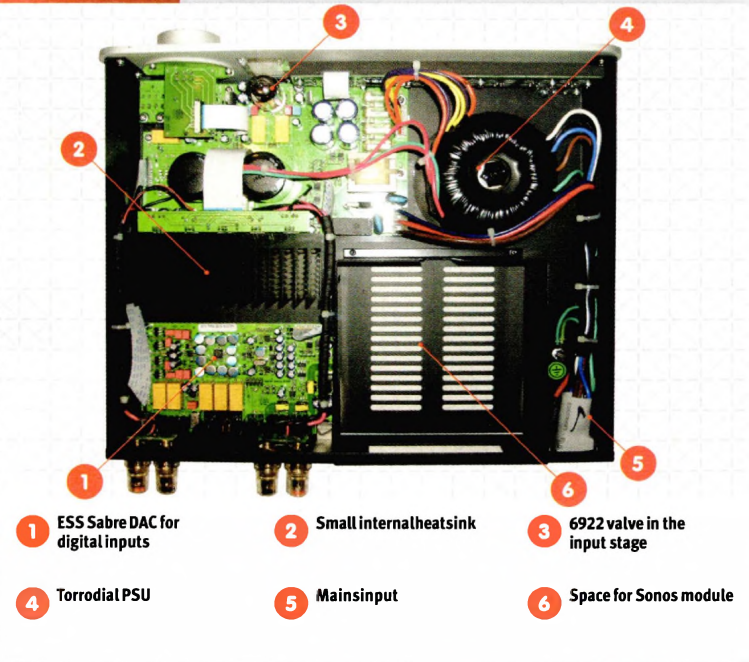


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**HIDDEN TECH**



**SYSTEM BUILDING**

There is not much to concern anyone who wants to assemble a system around the Nova, other than what speakers will best suit it. Peachtree manufactures its own designs (formerly under the era brand name) and we can highly rate the company's inexpensive D5 mini monitors.

We did our listening with the Mordaunt-Short Performance 2s, which sounded very neutral, but are probably put out of the running by their price and size, particularly if you want a compact office system.

Something inexpensive and none-too-large, like the Q Acoustics 1020i, Mordaunt-Short 902i, or Wharfedale Diamond 9 would make a suitable near-field monitor for most home office spaces.

You might also like to try the distinctive-looking, Arcam Muso, which was designed to work with an all-in-one style device and so presents the driving amplifier with a sensible impedance and load. The Nova tended to run rather warm in our room, so the last thing it needs is a difficult-to-drive loudspeaker.

Taking this stage out brought more energy, enthusiasm and precision to his performance, better conveying the timbre of the bouncing harmonics he regularly features in his playing. Nonetheless, even with all the 'wrong' settings there was nothing unpleasant or offensive about the delivery of the Nova: it just lacked a little drama and precision.

Compared to a really top-flight DAC, much of the hyperbole written about the Nova is revealed as uncritical fawning. For example, the Nova DAC is not about to knock our Naim DAC off its perch. In comparison, it sounds subdued and murky, with little of the more expensive DAC's ability to reveal the layering, note shape and imagery in even a simple recording. This sort of sycophancy does products no favours at all. It would have been better to make more sensible comparisons to, say, the DACMagic, with which it is realistically more in competition.

The best piece of advice we can give any buyer, though, is to keep their finger away from that TUBE button. It even managed to sap the gusto from The Proclaimers' vociferous *500 Miles*.

**Stiff competition**

The Nova is a well-equipped little device to run a study or home office system, although we question the worth of the switchable filter and valve (no true audiophile feature). The DAC and headphone amplifier are worthwhile space-saving and convenient inclusions and the main amplifier is a capable design.

The Nova might be streets ahead of most computer vendor audio 'solutions', but it faces stiff competition from the Arcam Solo Neo, Linn Majik DS-I, Naim Uniti and UnitiQute. If you avoid the hype written by the bloggers 'n' blaggers, you might approach this enjoyable little product with more realistic expectations. ●

oneness is a real benefit in terms of reducing clutter.

The DAC in the Nova was designed by the highly respected engineer, John Westlake, the man behind revered products such as the Pink Triangle DaCapo and the budget Cambridge Audio ISOMagic and DACmagic. This association could well explain why the Nova is so highly regarded as a DAC in many quarters.

The Nova is a joy to operate. For example, if it is in standby mode, there is no need to push the standby button to wake it up because selecting any input will bring it to life.

**Easy-going**

We auditioned the Nova using the digital outputs of a Naim UnitiServe and a Logitech Touch, as well as the analogue output of an Olive 03HD (see page 74), along

with a pair of Mordaunt-Short Performance 2 loudspeakers.

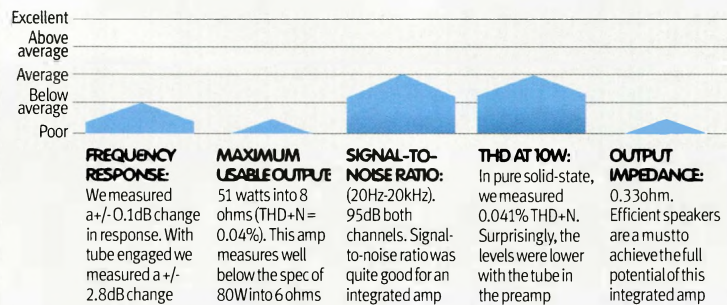
It exhibits an easy-going balance, with a reasonably well-detailed, but rather splashy top end and warm, friendly bass playing on Cornershop's *Brimful of Asha*, through the SB Touch. It sounded more aggressive and fiery, however, playing Lenny Kravitz' *It is a Love Revolution* through the Olive.

Switching the filter to its 'Slow' setting and engaging the valve in the preamplifier rendered Lenny's sound more tonally palatable and better controlled, firmed-up Cornershop's low frequencies and gave its treble an increased impression of detail.

Nils Lofgren's performance on *Keith Don't Go* from his *Acoustic Live* album, through all the sources, sounded rather lacklustre with muted dynamics on his voice and guitar, with the TUBE circuit engaged.

**TECH LABS**

**RESULTS AT A GLANCE**



**Hi-Fi Choice**

**OUR VERDICT**

**SOUND QUALITY** ★★★★★ **LIKE:** This is a fine 'heart' for a computerised desktop system

**VALUE FOR MONEY** ★★★★★ **DISLIKE:** The Tube and switchable filters are unnecessary features

**BUILD QUALITY** ★★★★★ **WE SAY:** The Nova is a fine and very useful little product, but it cannot make MP3s sound like CDs

**FEATURES** ★★★★★

**OVERALL**





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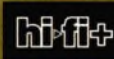
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# Rivals: beat it

**Richard Black** discovers a top-class newcomer from AKG that's been developed with music legend Quincy Jones and it shows

**A**KG has enlisted the help of legendary music producer god, Quincy Jones, with its new range of high-quality headphones.

Musicians endorse all sorts of things and for all sorts of reasons, and even good ones don't necessarily have good sonic taste – we can vouch for that from personal experience.

But we are much less inclined to be cynical about AKG's gesture of donating a share of the proceeds from these headphones to Jones's foundation which aims to make music education 'an ongoing part of the lives of American children'. We're all for that.

And we're all for new, high-quality headphones. We've been properly spoiled recently by some memorably fine models from Grado, Sennheiser and Audio-Technica and we're in the mood for more.

## New tech

AKG has a good track record and we've fond memories of models going back decades. With the new Q701, features that stand out in the specification include flat-wire voice coils and two-layer diaphragms. Both of these are relatively common in loudspeakers, but the smaller dimensions of headphone drive units make them harder to implement and AKG must have spent some time over the microscope working these out.

Flat wire allows voice coils to be wound more efficiently, with less wasted space, than the usual round wire, while diaphragms using two-layer construction can be quite less resonant and, therefore, more accurate-sounding than most single-layer techniques will allow.

## Built to last

There's a wild choice of colours in addition to the silver samples pictured – go to [akg.com](http://akg.com) and check out the lime green option! Build quality is of a high standard for the

asking price. The earcups are metal, as is the inside of the headband, which is covered in real leather: we found it a little hard on our (admittedly bald) head, but this is quite a comfortable headphone, self-adjusting thanks to cunning elastic support of the earpieces. The lead is replaceable (you even get a spare) and is almost completely immune to mechanical noise transmission, one of our pet hates.

## DETAILS

**PRODUCT:**  
AKG Q701  
**ORIGIN:**  
Austria  
**TYPE:**  
Dynamic headphone  
**WEIGHT:**  
235g  
**FEATURES:**  
• Impedance 62 ohms  
• Detachable cable  
• Open back  
• Circumaural  
**DISTRIBUTOR:**  
Harman International  
**TELEPHONE:**  
01707 278113  
**WEBSITE:**  
[akg.com](http://akg.com)

## Live aid

Headphones, even more than loudspeakers, can get away with murder if one listens to them for long enough to get acclimatised. To put it another way, first impressions are very important – that's when you really hear the colorations. We were, therefore, most impressed when we put these on and were greeted by some delightfully natural tonal balance. For best effect, we deliberately opened the listening with a recording made two hours earlier, of which we could still remember the live sound very clearly. The Q701 didn't quite bring back the colour of the carpet or the smell of the upholstery in the recording venue, but it did recreate remarkably faithfully the voices, the piano, the hall ambience and even the passing traffic!

## HD800: time to worry?

Just as welcome, it did nothing to boost the mild hiss on the recording, something that a great many headphones do – hiss and sibilants in general. Again, one can quickly get used to that, but it's still inclined to produce headaches over long listening sessions. By contrast, this headphone, if anything, just got better the longer we listened.

To cut a long and very pleasant story short, it is actually everything AKG claims it is. In a word, accurate. If we have one very slight quibble it is over what seems to us the slightest trace of hardness in the upper bass, but otherwise we just loved the tonal balance (deep bass is glorious, and quite effortless), the detail, the imaging and the general sense that real music is happening somewhere right in front of one's seat.

Rhythm is great, dynamics are vast, complex textures are handled with the same unflappable calm as a solo. Good recordings sound great, bad ones sound, well, as good as they're going to. Quincy Jones? He's the man! ●



## Hi-Fi Choice

### OUR VERDICT

#### SOUND QUALITY



**LIKE:** Simply gorgeous sound, very close to our Sennheiser favourites but half the price

#### VALUE FOR MONEY



**DISLIKE:** Very minor upper-bass hardness

#### BUILD QUALITY



**WE SAY:** A welcome addition to the ranks of the world's finest transducers

#### FEATURES



### OVERALL





# Raising the bar

Cyrus has created a 300-watt monster amp inside its trademark shoebox casework.

**Jason Kennedy** hears it reign-in the high end

**C**yrus is not a brand that we associate with high-power amplifiers. It made its name with compact integrated designs that were renowned for their agility and musicality rather than muscle. But times clearly change and, while Cyrus still uses half-width magnesium casework, what it puts inside them is completely different.

The Mono X 300 is a total refinement of the Mono X that preceded it. We would be impressed if anyone could fit a 300-watt class D

switching amplifier into a Cyrus case, let alone one with a linear power supply. So what gives?

## High achievement

This amp is not merely about power either, the avoidance of global feedback in the circuitry marks it out as a rarity in the transistor amp universe. Others utilise this mode of operation (Ayre and Vitus Audio among them) and if you were to check the prices charged by these brands it will be apparent that the Mono X 300 looks like good value.

## DETAILS

**PRODUCT:**  
Cyrus Mono X 300

**ORIGIN:**  
UK

**TYPE:**  
Monoblock power amplifier

**WEIGHT:**  
6.4kg

**DIMENSIONS:**  
(WxHxD)  
215x75x365mm

**FEATURES:**  
• Output:  
225watts/8 ohms,  
365watts/4 ohms

• Zero global feedback  
• Inputs: RCA phono,  
XLR balanced  
• Control connection:  
RS232

• Cyrus MC BUS

**DISTRIBUTOR:**  
Cyrus Audio

**TELEPHONE:**  
01480 435577

**WEBSITE:**  
cyrusaudio.com

The zero-feedback circuit allows the front and rear stages of the amplifier to work independently, so the corrections required in the high-powered output stage do not influence what's going on at the input stage. Cyrus cites the main benefit to be very low noise, especially through the midband where we are naturally most sensitive to distortion.

This is not the first zero-feedback power amp from the company. The first one appeared seven years ago and has been modified and upgraded in production. For the Mono X 300 and the more affordable X 200, Cyrus has completely redone the circuit board layout and earthing, while replacing the transformers with examples that run more efficiently at standby.

Confusingly, the X 300 is not strictly a 300-watt amplifier, but rather achieves that output into loads between eight and four ohms, which tallies with the dynamic impedance of most loudspeakers.

As well as the usual on/off switch there is an input button to toggle between RCA and XLR inputs, you



can also power up using the Cyrus MC BUS system or a 'music sense' mode that does what it says on the tin. The amp has two small fans that operate if it's pushed hard for an extended period, but they were not audible while we were giving the amps a good thrashing.

### Boxing clever

The build quality is consistent with that seen across the Cyrus range, a line-up which starts out at just over £500 for the 6 Power, the least expensive power amp. This means that it lacks the bling of other amps at the price, but its worth considering that you pay a high price for the casework on most high-end products. By amortising the cost of its die-cast magnesium casework across so many products, Cyrus is able to offer considerably better value than most in this sector.

There aren't many high-powered monoblocks available at this price, but there are quite a few more powerful stereo amps to beat, not least Bryston's 4B SST2 (£4,500) and the slightly dearer Krell S275 (£5,795). Of course, power is no indication of quality and Naim's NAP 300 (£6,100) would probably give the Cyrus a musical run for its money.

### Jumping jive

The Mono X 300 does not sound like a high-power amplifier – it doesn't have the grip and muscularity of a Bryston or a Krell, what it has instead is quite an astonishing degree of transparency. We heard things on



**We spoke to Cyrus MD Peter Bartlett about the Mono X300**  
**HFC: What's the physical and sonic difference between the Mono X 200 and 300?**

**PB:** The tuning is slightly different, but the big difference is that the power amplifier is driven by a much bigger transformer. Sonically the dynamic scale of the X 300 is larger. The more power you have the better the system will sound.

**HFC: Did you consider a machined case to increase bling?**

**PB:** It already has £100,000 worth of die-cast tooling in it. The reason for this investment is that components sound better in a low resonance case and a die-cast magnesium case is the best environment to put a hi-fi component in.

Because magnesium is not ferrous, electromagnetic fields around the components are able to pass-through the case. A die-cast magnesium chassis is a truly audiophile way of engineering any product.

discs that have been reference points for years that have not been apparent before, it's quite uncanny really that this can be achieved with 'just' a power amp.

The new Townshend Glastonbury Pre preamp we had on loan had more than a little to do with this, but it was in use with our reference power amp before the X 300s turned up. In some respects these amps can sound soft, but this is because they deliver all the harmonics of the instrument or voice along with the fundamentals.

All this finesse would not be so engaging if the timing did not hit the mark, but put on a punctual track like *Fit Song* by Cornelius and you know that speed is not an issue. Muscular amps are never able to

**“This extraordinary amp will give you both the minutiae and thrill of the music and puts Cyrus into the top league.”**

deliver the degree of nimbleness on offer here and do not have the ability to make the music come alive. *Thug Angels* by Wyclef Jean is a bombastic track that needs both power and speed and these amps jump both those hurdles.

### Music thrills

In all honesty, we thought that Cyrus had gone too far by making a power amp at this price, but we have been pleasantly surprised at how well the job has been done. The Mono X 300 maintains the company's characteristic musicality and adds a degree of definition that is higher than most we have heard.

This is an extraordinary amplifier in a case that we have come to think of as ordinary, but which clearly does not hamper results. It will give you both the minutiae and the thrill of the music and puts Cyrus into the top league in no uncertain terms. ●

## Hi-Fi Choice

### OUR VERDICT

#### SOUND QUALITY



**LIKE:** Speed and resolution have rarely been combined so effectively

#### VALUE FOR MONEY



**DISLIKE:** The XLR connector is difficult to remove and it doesn't quite look the money

#### BUILD QUALITY



#### FEATURES



**WE SAY:** You'd be hard pressed to find more resolution at the price

#### OVERALL



## CONNECTIONS



1 BFA speaker connectors

2 Balanced input

3 RCA input/output and loop connection

4 Mains input

5 Cooling fans

6 R2232 socket for custom install and control

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# Your music, consolidated

**Malcolm Steward** discovers the ideal music server for first-timers and those who don't want to get bogged down with computers and networks

**T**he Olive 03HD has a sharply focused band of customers in its sights. It wants to appeal to those people who realise that music stored on hard disk is definitely the way forward, but who have no inclination to become computer network aficionados and who simply do not want to mess about with computers.

In short, it is a plug and play solution for those who have no idea what plug and play technology is, nor how it works. And the design could fairly be described as bare-bones. In fact, even an ardent technophobe ought to find it the simplest introduction they've ever come across to computer audio.

## CD ripper

The simplicity is evident the moment you unbox the 03HD. There's nothing to do, bar connecting the mains cable; fitting a pair of analogue interconnects between it and your amplifier and then connecting a Cat5 network patch cable, in order to give the unit access to your network and the internet.

Power-up the Olive and it discovers the network automatically. There is no wireless connection with the 03HD, so that does away with one set-up complication for those who are not comfortable with networking. It also conveniently does away with problems that novice users might encounter with wi-fi, if they opted for

## DETAILS

**PRODUCT:**  
Olive 03HD  
**ORIGIN:** USA  
**TYPE:** Music server  
**WEIGHT:**  
4.7kg  
**DIMENSIONS:**  
(WxHxD)  
430x70x310mm  
**FEATURES:**

- Control via Touch-screen, fascia buttons, remote handset or iPhone app
- Auto-ripping of CDs
- 500GB internal storage
- Single analogue output only
- USB connection for back-up

**DISTRIBUTOR:**  
Henley Designs  
**TELEPHONE:**  
01235 511166  
**WEBSITE:**  
oliveus.com

it... but let us not get involved with the potential pitfalls of wi-fi, which is another story entirely.

Those who do not enjoy using their laptops to poke around in a server's innards will simply use the integral CD ripper to copy CDs to the 500GB hard disk inside the 03HD. Choices of how you rip CDs can be made through the display, with uncompressed WAV for anyone who wants a smallish collection of pristine-quality files (around 1,500 CDs), or default-rate FLAC for those who are content with compressed (although not lossily compressed) archive-standard files. For those who are not unduly concerned about audio quality, the 03HD will also rip to 128-bit AAC, or 128/320-bit MP3.

**“The music played flawlessly with no glitches, stuttering or interruptions.”**

The internal DAC is a Cirrus Logic design, that will handle signals up to 24-bit/192kHz, even though CD rips on the 03HD will only be 16-bit/44.1kHz. The unit can access shared network storage, where you might well have high-resolution downloads stored.



Externally, there is little to distinguish the 03HD from the 4HD (HFC 333). The rake-fronted styling is the same, but the assembly of the 03HD is more cost-effective and the casework is steel rather than the aluminium used on the 4HD. There are also fewer connections and no digital or HDMI sockets. Olive felt that neither facility was appropriate for its target market.

The 03HD has the same polished Maestro user interface as its more expensive big brother... but it feels slightly more responsive. There is also a free iPhone/iPad app for

those who regard laziness as a full-time occupation. As seems to be the way with such apps, it is by far the easiest way to control players and servers.

**Heath Robinson**

This unit is built down to a price, so one should not expect too much in the way of fantastic looks. In fact, a not-especially-close inspection reveals a host of screws (secure fastenings, is probably a better description) holding it together. As a result, two words spring to

mind: Heath and Robinson. And donning an aesthete's cap we would certainly question the choice of gaudy Day-Glo yellow as the colour for the plastic surround to the CD loading slot. Internally, however, things look a lot better. There is a quality TEAC CD-RW mechanism for importing and exporting CDs and an ultra-quiet Western Digital AV hard disk for storing ripped CDs – up to 1,500 uncompressed albums. The CD-RW unit is also exceedingly quiet in operation: even when it's ripping a disc,

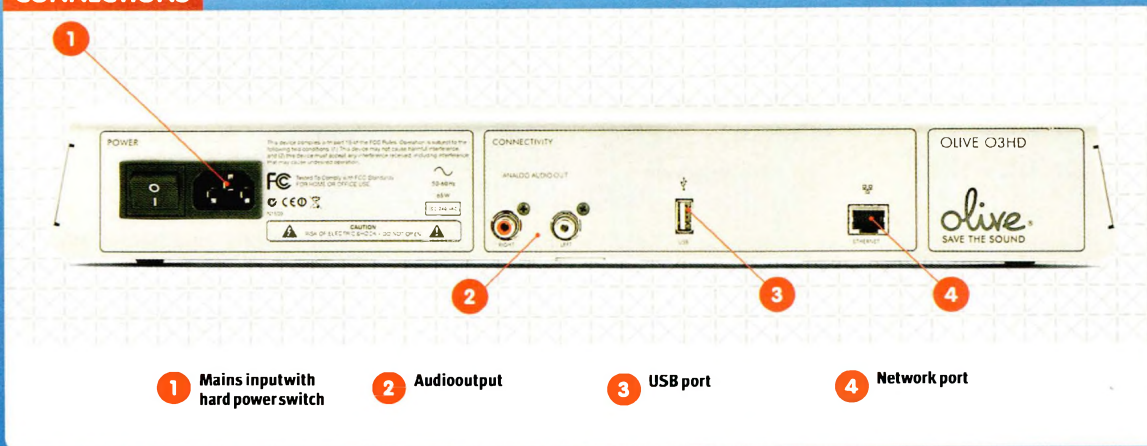
**HOW IT COMPARES**

**THERE REALLY** are not many components to which one can compare the Olive 03HD, because there is very little else offering the same facilities at such an economical price.

Naim's least-expensive hard-disk ripper/player is the UnitiServe and that costs twice as much as the 03HD. It has no touch-screen display, so you also need an additional device to operate it.

If keeping costs down truly is an issue you might be best to take the Squeezebox Touch and Vortexbox Appliance route, which offers respectable performance. It is not a single-box 'solution', but you might find it an advantage being able to park the Vortexbox out of the way and just having the tiny SB Touch on your system rack.

**CONNECTIONS**



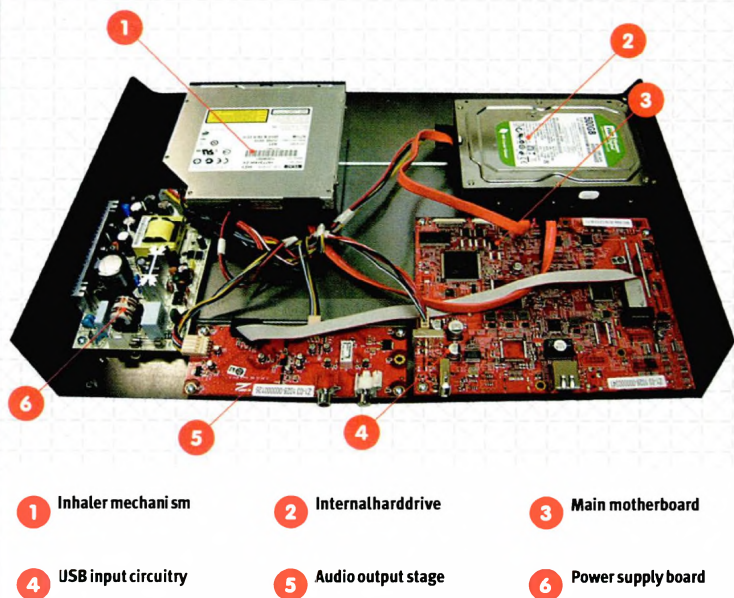
1 Mains input with hard power switch

2 Audio output

3 USB port

4 Network port

HIDDEN TECH



the noise level barely reached 45dB at the mouth of the phlegm-coloured slot. By comparison, the fan in a laptop produces 55dB!

Because there is an iPhone app to control the O3HD, you only really need access it to rip discs, so you could easily park it on the bottom shelf of your equipment rack if you want to hide it from view. Or you could simply buy the black version, where the fixings are not quite as obvious as they are on the silver version.

Big brother

The Olive O3HD (like its bigger brother, the O4HD) is a musically persuasive player, following in the British tradition of pace, rhythm and timing. However, it is also highly detailed in an American high-end fashion. All round, it is remarkably capable when you

consider what it offers at its bargain-basement price.

We were keen to test its performance with 24-bit/192kHz material stored on a NAS, which would show up any failings in the UPnP transport and DAC side of things. To do this, we played the William Carter album, *Fernando Sor Early Works* and found nothing about which to complain. The music played flawlessly with no glitches, stuttering or interruptions. It also displayed all its expected chiaroscuro and subtle drama and Carter's guitar technique was magnificently documented – his mastery of dynamics, was vividly portrayed. The distinctive timbre of his baroque instrument was beautifully rendered: even the sound of his fingers sliding along the neck and the harmonics he picks had their own characteristic and individual signatures.

SYSTEM-BUILDING

THE OLIVE O3HD is not exactly a bank-breaker, but that does not mean that it does not deserve careful system matching. If you want to extract the best performance from it you should invest in genuinely musical partnering equipment such as the Naim SUPERNAIT amplifier and Neat Petite SX loudspeakers and give both a chance to work to their full potential with appropriate supports and cables.

We used Partington Dreadnought speaker stands, Quadraspire Sunoko Vent equipment racking and The Chord Company interconnects and Epic speaker cables.

Pay attention to how you set up all this equipment and you will be rewarded with a performance that will comfortably exceed your expectations. Be sure to set-up the O3HD to rip in FLAC format to get the best performance with the least impact upon your hard-disk capacity.

Bringing out the individual character of particular voices and instruments seems to be a strongpoint of the O3HD, something that was demonstrated by the 24-bit/96kHz recording of singer/songwriter Dawn Langstroth, *Highwire*. There was nothing forced or 'uncomfortable' about this detailing, because the voicing of the O3HD seemed ideally judged to let it all integrate perfectly: the highs, while being expressive and revealing were not too hot or oppressive, while the LF had a pleasant warmth and sense of power without being overwhelming, along with fine articulation.

The O3HD maintains its balanced tonality and revealing, empathetic nature playing CD-resolution rips from its local hard disk. It easily discriminated between decent-quality and less well-recorded discs. Even so, it always does its best to reveal all the musical information and performance that it could scavenge.

Finally, we appear to have neglected the internet radio facility, which is always a useful feature and one that sounds rather fine, if not truly audiophile quality, on the O3HD.

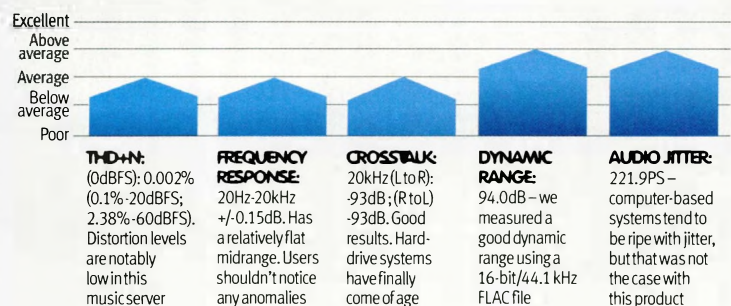
Twonky media manager

It would be churlish to pick fault with the Olive O3HD. For not a great deal of money, you get a fine CD-ripper, very respectable playback quality and very decent sounding internet radio – at the higher data rates – thrown in for good measure.

The CD storage will be adequate for most folks, but the O3HD will access network storage and play back from it – provided you can install Twonky media manager on the NAS, which is not difficult – so you have the facility for adding huge amounts of extra storage, if you need it. ●

TECH LABS

RESULTS AT A GLANCE



Hi-Fi Choice

OUR VERDICT

**SOUND QUALITY** ★★★★★ **LIKE:** This is a great, no-nonsense, starter music server

**VALUE FOR MONEY** ★★★★★ **DISLIKE:** The industrial design doesn't work as well at this price level

**BUILD QUALITY** ★★★★★ **WESAY:** It is not going to win any beauty prizes, but it is certainly a winner in all other respects

**FEATURES** ★★★★★

OVERALL





David Price Hi Fi World

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Janine Elliot HI FI News - The Missing Link Family of Cables.... -

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# Minus the middleman

Direct-selling newcomer EB Acoustics offers fine value by cutting out the traditional dealer. **Paul Messenger** bypasses the dem room for a listen

**A** new name to most readers, EB Acoustics is no relation to PMC (which lists an EB1i in its product portfolio), but is actually part of Worcester-based Arcaydis.

Unlike its parent company, the two EB Acoustics models are only available direct from the manufacturer, controversially bypassing the traditional dealer and his demo room and hence saving a significant chunk of money. Essentially, it's a strategy to cope with the influence of the internet in boosting 'mail order' hi-fi sales. A 30-day money-back guarantee is offered, to cope with the uncertainty of buying 'deaf' (though you'll have to pay for the carriage!)

## Sealed-box loading

Superficially a simple and relatively large two-way standmount of around 20 litres, the EB2 is beautifully finished and decorated in a natural oak real-wood veneer (or gloss-black oak). The neat flush-mounted drivers include a 170mm bass/mid unit with a 110mm doped paper cone, while a 25mm fabric dome tweeter is loaded by a short horn.

However, in two key respects the EB2 does differ significantly from the norm. First, there's no reflex port. Instead this speaker uses sealed-box loading, which is not unknown, but is certainly very rare these days and has significant implications for the bass alignment and performance.

Sealed-box loading has (presumably) fallen out of favour because it absorbs rather than uses the sound radiated from the rear of the cone. And while the end result will have less peak bass output,

it will also have a more gentle roll-off, with greater phase accuracy and ultimate extension.

Secondly, acknowledging that the enclosure is the most important part of a hi-fi speaker (its radiating surface area is much greater than the drive units), the box has a 12mm plywood carcass covered in a further 6mm of MDF beneath the veneer, with further internal bituminous pad panel damping.

## Behind the scenes

EB Acoustics doesn't provide much detail in its specifications, but its claim for an 87dB sensitivity rating looks about right. It's not a high figure, but it should be seen in the context of a very easy-to-drive amplifier load, as well as fine bass extension.

The driver/box resonance is around 64Hz, and below this point output will roll off at 6dB/octave, but room gain will provide good compensation, so that the

## DETAILS

**PRODUCT:**  
EB Acoustics EB2

**ORIGIN:**  
UK

**TYPE:**  
Two-way  
standmount

**WEIGHT:**  
9kg

**DIMENSIONS:**  
(WxHxD)  
225x450x300mm

**FEATURES:**  
• Twin terminal  
pairs for bi-wiring/  
bi-amping

• 170mm bass/mid  
driver with 110mm  
doped paper cone

• 25mm fabric dome  
tweeter with short  
horn loading

• Composite dual-  
layer enclosure

• Sealed-box loading

**DISTRIBUTOR:**  
EB Acoustics

**TELEPHONE:**  
01562 865788

**WEBSITE:**  
ebacoustics.com

ultimate in-room extension is a very respectable -8dB at 20Hz.

The overall tonal balance holds within +/-5dB right across the band, which is very impressive under in-room conditions. Apart from inevitable bass unevenness, plus a dip around 330Hz and a prominent zone 700-900Hz, the response is very flat, with no trace of a dip around the 2.3kHz crossover.

## Forward character

In performance, it only took a few seconds to appreciate the influence of the two key features that we mentioned earlier. The bass is dry, quick and extended and cabinet coloration is particularly well controlled.

While the bass end is clean and extended, its dry nature and freedom from box coloration do tend to leave the upper mid and treble a little exposed. The minor peak around 800Hz seen in the in-room measurements and the lack of a presence zone dip, helps to define a slightly forward overall character that delivers plenty of detail, but which can, unfortunately, become a little aggressive as the volume is increased.

## Dynamic expression

Close-to-wall siting will boost the mid-bass, but also leaves output in the upper bass and lower midband rather lacking. Low (480mm) stands in free space gave the best bass alignment.

Dynamic expression is rather weak, but imaging is spacious and well focused, helped by the wide dynamic range.

As a large standmount that reminds one of the value of serious enclosure engineering and sealed-box loading, the EB2 looks decent value. Its character might not suit those who like their music loud, but it's a real seducer at modest levels. ●



## Hi-Fi Choice

### OUR VERDICT

**SOUND QUALITY**  
★★★★★ **LIKE:** Fine neutrality, good time coherence and imaging, with very low box coloration

**VALUE FOR MONEY**  
★★★★★ **DISLIKE:** Lacks dynamic expression and can sound aggressive

**BUILD QUALITY**  
★★★★★ **WE SAY:** Composite enclosure gives a very clean and neutral sound

**EASE OF DRIVE**  
★★★★★

### OVERALL





# Tales from the tube

Adding a valve amplifier to a CD player is an interesting equation. **Jason Kennedy** seeks an answer with the new Icon Audio CDX1

**W**e've seen plenty of CD players with valves, but we haven't seen any that look as though they're giving a valve amp a piggyback. Icon Audio makes a large range of glass-powered amplifiers. It has also been responsible for a number of CD

players in the past, but none that were this hardcore.

And that's why the output stage on the CDX1 has its own hard-wired chassis and valve power supply. In fact, the CDX1's designer David Shaw wanted to make a proper output stage, rather than the usual

## ▶ DETAILS

**PRODUCT:** Icon CDX1  
**ORIGIN:** China  
**TYPE:** CD player  
**WEIGHT:** 16kg  
**DIMENSIONS:** (WxHxD) 435x150x370mm  
**FEATURES:**

- DAC AK4394 24-bit/192kHz
- Class A triode output stage
- Valve regulator and rectifier
- Jensen copper foil caps

**DISTRIBUTOR:** Icon Audio  
**TELEPHONE:** 0116 244 0593  
**WEBSITE:** [iconaudio.com](http://iconaudio.com)

addition of small triodes to a regular transistor circuit.

## Best valve ever

The separation of digital and analogue sections is pretty comprehensive in this player, Shaw has designed an output stage in the style of an amplifier rather than a source, which explains why it's so obvious on the machine. It has a choke-regulated power supply with valve regulation, courtesy of the brightly glowing 0A3, providing the HT voltage and absorbing RF noise.

The smaller E280 is a valve rectifier and provides a slow start warm-up for the big 6SN7 output devices. Avoiding what's described as 'cathode stripping' has a very positive effect on valve life. The 6SN7 is described by Icon as 'probably the best sounding hi-fi valve ever' which is a controversial statement in the





context of more fashionable valves like the 300B. But David Shaw is very keen on this device and uses it to drive big 845 triodes in the company's most aspirational power amplifier, the MB 845 MkII. The actual valves supplied with this Signature version of the player are Shuguang Treasure Series CV-181Zs which are a rather more expensive equivalent of the 6SN7.

The two black lumps that flank the glassware are transformers, one is a choke regulator which supplies the rectifier and the other is the mains transformer.

The player itself is an off-the-shelf Chinese machine, with a Philips mechanism that was chosen because David wanted something that was devoid of surface-mount circuit boards and because it's solidly built. The steel casework is indeed heavier gauge than usual, which must help when it comes to supporting the transformers on its top. Being solid also helps keep resonance under control, which is always a good thing. The DAC is an AK4394, a 24-bit/192kHz upsampling type.

The CDX1 actually has three sets of outputs on its rear end, one marked 'valve output' and another two in RCA phono and XLR forms just marked 'output'. The latter it turns out connects to the standard transistor output stage, so for obvious reasons you are encouraged to use the pair of RCAs hooked up to the glowing parts. The digital side of the player can be accessed via a pair of inputs for coaxial and optical connections, while digital output is only available via an optical



**THE 6SN7** is a dual-triode valve that should technically be called 6SN7GT (for 'glass tube') as the earliest examples were in a metal case. It was developed by RCA and first produced in 1941, remaining in production in the US and Europe until the mid-eighties and now being made in Russia and China. David Shaw says that it's the most rugged valve of its type and the only one that he will buy secondhand for this reason. While it has been superseded by the smaller and, therefore, cheaper ECC83, it has various advantages over this valve thanks to its large octal base and electronic properties.

A third of the 18,000-plus tubes in the ENIAC computer were 6SN7s and even more rugged variants were used extensively in military electronics up until the transistor era.

TOSLINK connector, but if you want something to use as a CD transport there are numerous more affordable options on the market.

### The glass war

The CDX1's build quality is not as slick as some at the price, but neither is it crude. In fact, with the copper plate under the valves and the signature plate it looks rather good. The front panel is anodised, aluminium and is cleanly designed, while the lump of amplification on the back marks the player as something out of the ordinary. The remote is an off-the-shelf type, but that's usually the case and it's attractive enough with an aluminium facing and rubberised finish. What's more, it has direct-track access and

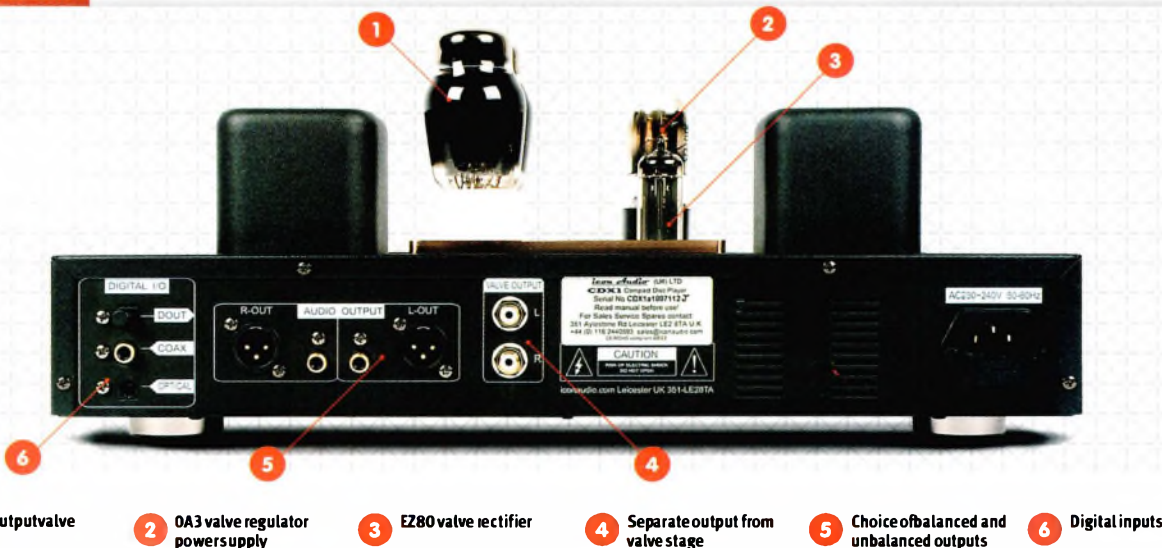
**“The 6SN7 is described as ‘probably the best-sounding hi-fi valve ever’ which is controversial.”**

that most important of all keys: eject. We also like the way that the digital inputs can be selected via a toggle switch on the front.

The David Shaw Signature version of the CDX1 costs £350 more than its standard brother, for which you get the aforementioned Shuguang premium valves and Jensen copper foil in paper capacitors, huge handmade devices that are claimed to have a very positive effect on the end result.

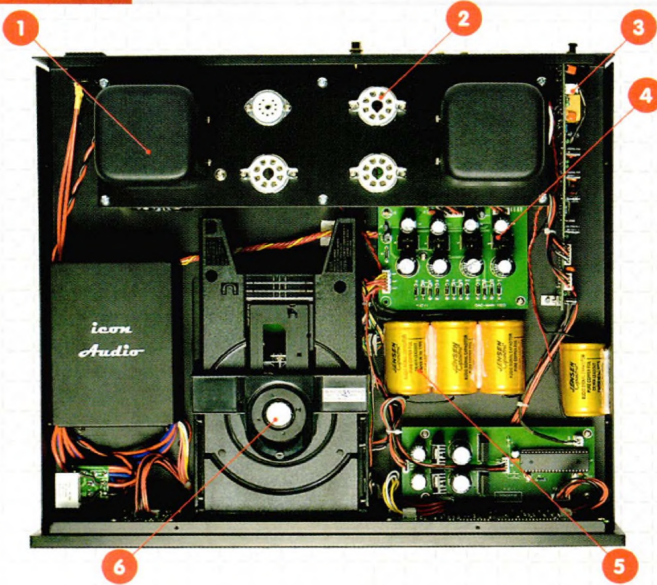
There are a few tube-powered CD players available in this price range

### CONNECTIONS



- 1 6SN7 output valve
- 2 OA3 valve regulator power supply
- 3 EZ80 valve rectifier
- 4 Separate output from valve stage
- 5 Choice of balanced and unbalanced outputs
- 6 Digital inputs

**HIDDEN TECH**



- 1 Choke-regulated power supply
- 2 Ceramic seats for valves
- 3 Digital input board
- 4 DAC board
- 5 High-quality signal caps
- 6 CD transport

but none have fared terribly well in our tests. The Audio Analogue Rossini VT 2.0 (£1,200), Prima Luna Prologue 8 (£1,500) and Shanling CD2000 (£1,000) all failed to garner recommendation. The hybrid players that we have liked from Copland, Consonance and Ayon are all rather more expensive. The Icon is closer to the latter two in terms of sound, but has more features by way of its digital inputs and beefier output tubes. While size is clearly not a major issue it does, in Icon's opinion, make for a longer lifespan, which is reassuring.

**It's no fool**

The CDX1's sound has many classic valve qualities; it is relaxed, smooth and spacious with some emphasis on

the midrange, but not quite the bass extension of solid-state players. Its own solid-state output has more bass power, but a considerably less vivacious presentation. There is no shortage of life in the valve output's sound and with transistor amplification and evenly balanced speakers, this makes for a vital and entertaining result. A result that varies quite considerably with recordings, with one seeming a little overly laid back and the next coming through with remarkably clarity.

It likes a good recording, that's for sure and isn't fooled by studio trickery, inasmuch as the less-manipulated discs sound cleaner and more open than those that have been engineered to sound pure and open in-the-box (that box being a

**SYSTEM-BUILDING**

**WE ASKED** David Shaw to recommend components that could be used with the Icon CDX1 to build a system that would be price appropriate and yet able to reveal the CD player's qualities. As Icon Audio makes both amplifiers and loudspeakers, he chose components that he has designed himself. As these will have been 'voiced' to work together in the first place, they are a logical choice for the end user.

Of the many amplifiers in the range, David chose the Stereo 40 MkIII at £1,200, this 40-watt integrated can be had with KT88 or EL34 output valves and offers either triode or ultralinear operation. It shares many of the design features of the CDX1, including feedback-free operation, choke regulation and valve rectification.

The MFV2 loudspeaker (£750) is a standout that as the MVF 'made for valves' acronym suggests is a lot easier to drive than your average compact loudspeaker and therefore well suited to the amplifier.

computer running Pro-Tools or similar). So Keith Jarrett and Charlie Haden's *Jasmine* is totally effortless, yet solid and real, sounding totally in-room through a suitably capable system.

While valves do not measure all that well in signal-to-noise terms (see Tech Labs), they manage to present a subjectively more dynamic result than their 'quieter' solid-state brethren. This was immediately apparent with a fine recording of Schubert lieder, where the dynamic range of the voice required a bit of gain riding, so that we weren't pinned to the back wall.

Simpler material like this works better than full orchestral extravaganzas, where the strings can harden up a little when things let rip, but there's no denying the drama of a piece like Beethoven's 7th in the Icon's hands.

The bass may not be weighty, but it is very articulate and you can easily follow bass lines. Some get distinctly cleaner in these circumstances and there's a strong argument for this balance in terms of musicality. There's no shortfall in drive or tautness and you can enjoy the timbre of instruments and voices without trying.

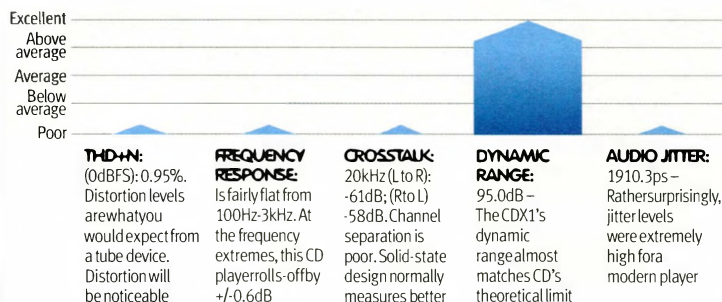
**Music vibes**

This player brings a degree of humanity to CD that is quite uncommon, particularly at this price. It does emphasise the midband a little and this means you can understand lyrics easily. This transparency, combined with a fluid and relaxed presentation, makes for great listening. It's very easy to relax and tune in to the music.

It's not a soft or cozy player and give it something chunky (like Wyclef Jean's *Thug Angels*), turn the wick up and the place will start jumping. The CDX1 has a remarkable balance of sound, build and features at the price and makes much of the competition seem just a little bit dull. ●

**TECH LABS**

**RESULTS AT A GLANCE**



**Hi-Fi Choice**

**OUR VERDICT**

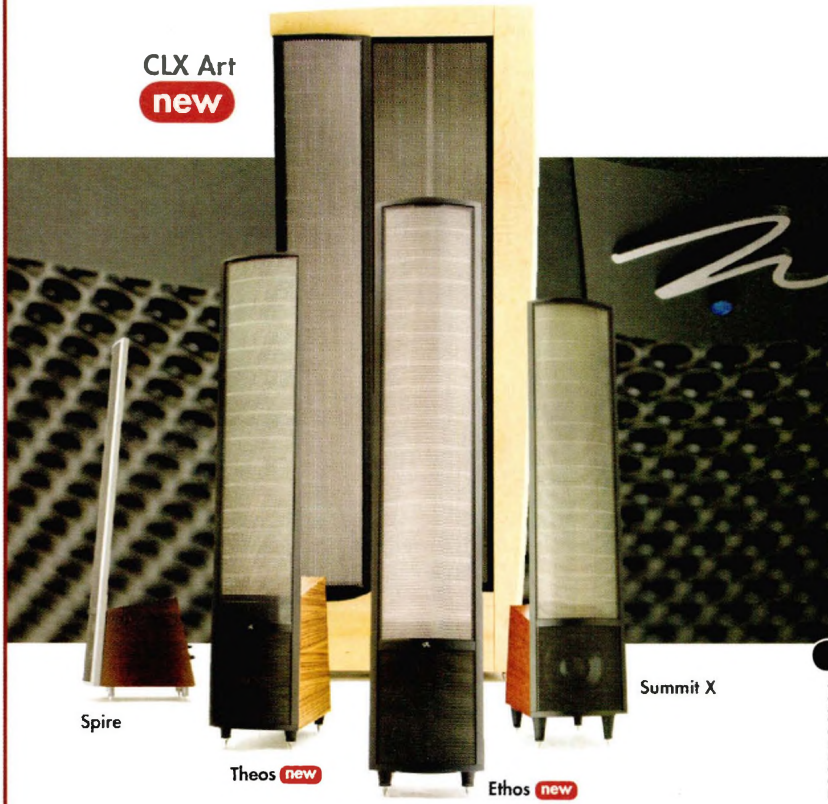
- SOUND QUALITY** ★★★★★ **LIKE:** Open, vital sound with very high listenability factor plus build
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Needs a bit more rack height than your average disc spinner, but otherwise what's not to like?
- BUILD QUALITY** ★★★★★ **WE SAY:** This mature valve combo sounds very easy on the ears
- FEATURES** ★★★★★

**OVERALL**



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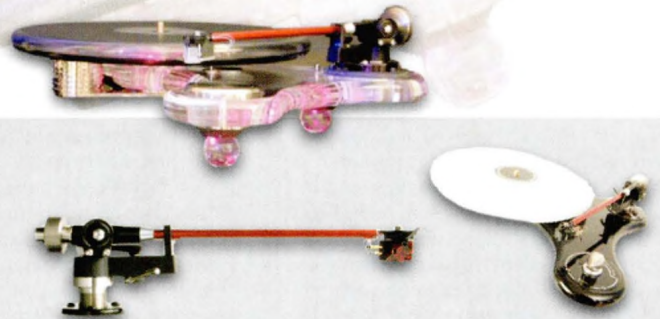
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# CASH IN THE ATTIC

With more and more of us archiving CD and vinyl to music libraries on hard discs, is there really a need to hoard so much physical media? Turning surplus albums into cash creates space and funds future upgrades. **Simon Berkovitch** investigates the variety of convenient options open to people looking to cash in on vinyl's popularity

**O**t's a common story. The treasured LP collection of your youth was relegated to a creaking loft or some dusty cupboard as you embraced the CD format back in the 1980s. Now you're one of the growing ranks of our readership who have wholeheartedly embraced the convenience of the digital age, largely listening to CD albums that have been losslessly ripped to hard drives for playback. And once that CD album has been ripped, is there any real need to hoard the CD and packaging?

There could be considerable space opened up in your listening room where those towers of plastic jewel cases ominously loom. So why not break with the past and clear out the clutter of older formats?

This may be too bold a suggestion for some – particularly the vinyl aficionados out there – but if minimalism is more your bag than sentiment, read on: we're going to reveal your options for selling records and CDs and addressing some popular misconceptions about the process. This guide aims to point you in the right direction if you are planning on selling off elements of your collection. After all, the extra cash you may well generate could contribute to your next kit upgrade, further improving the sound of your set-up.

## Hit the shops

So, having made your decision to 'go Zen', how do you go about selling your CD and LP collection? What are the best ways to connect with other enthusiasts? What is the best marketplace for your particular genres of choice? That thousands of collectors from

all over Europe recently descended on London for the two-day MusicMania record fair (13-14 November) is certainly a testament to LP and CD's enduring appeal, so the buyers are definitely out there (see [vip24.com](http://vip24.com) for more details of upcoming fairs – with a single table starting at about £90, this could also be an option if you are confident about the excellent condition and collectability of your collection).

Depending on your approach – the quick sale or the long term investment – there are various ways in which you can go about off loading your collection, one of the most straightforward being a flick through your Yellow Pages or a quick trip to Google...

As our previous feature on the longevity of vinyl was keen to point out, there may be fewer second-hand record shops now in existence as consumption moves ever onward to digital, but many of these spaces are still definitely going concerns. New generations of buyers are being inspired by vinyl in the same way that you once were. A flick through your local business pages or some appropriate keywords in Google is bound to tell you what used stores can be found in your area.

Unless you have a gargantuan collection of vinyl to sell, most shops' buyers will encourage you to bring your collection into the store – and it's always best to call ahead first to check that the relevant expert is available. Identification may also be required – we're dealing in second-hand goods, after all. Some stores will cherry-pick your collection, making offers on what they consider the most saleable records for them. Other shops – like London's Music and

Goods Exchange – don't turn anything away, as long as it's legal – so you may want to hang onto those Frank Zappa and Pink Floyd vinyl bootlegs for now (although some stores will deal in them as some vintage pressings are highly collectible in themselves).

Whatever the second-hand record store's approach to buying, the outcome will generally be the same: you'll be offered a percentage of what they anticipate selling them for. Maybe they will offer you a higher rate in trade, encouraging you to exchange records from the store instead of a hit to their till. If it's a quick and easy off-load that you are after, selling your collection this way is the best option for you – just bear in mind that there are two important factors in the amount of money you may be offered – collectability and condition.

It's important to stress that buying and selling second-hand records is not an exact science. A first pressing, Vertigo 'swirl' label copy of Black Sabbath's *Paranoid* LP (laminated gatefold with company inner sleeve, naturally) graded as VG (Very Good) is much more desirable than a Ex (Excellent) condition, barcoded, single-later pressing of the same LP, for example. Yes, it's ultimately the music that matters most, but

**“The extra cash you can generate from selling bits of your collection could contribute to your next important kit upgrade.”**



Off the shelf... and into the racks: Selling your LP and CDs into your local record store is one option, but you could always throw yourself into the world of eBay

Picture credits: Simon Berkovitch, Matt Robbins



the sound of a first pressing is generally considered to pack more punch than 1980s rereleases. Plus, the original artefact is much cooler, isn't it?

## CDs to landfill

But what about your CDs? You may have a more pressing need to sell them as the relevant information is now losslessly archived on your hard drive? Again, there are no hard and fast rules, but the vast majority of compact discs are rapidly depreciating in value. Landfill could be made from the sheer volume of CD albums from the likes of Oasis and Radiohead that eventually find themselves unsold for even fifty pence in dusty shops. Second-hand stores can now also be increasingly picky about condition – the playing surface of the disc should be unmarked to maximise the chance of them wanting it. For the majority of the mainstream, however, perhaps a donation to a local charity shop would be a worthwhile gesture?

That said, some CDs still change hands for reasonable amounts of money – RCA issues of Bowie CDs sometimes hit the £20-£25 mark. It's a fickle market, mind: the deleted, original CD of Beach Boy Dennis Wilson's acclaimed solo album *Pacific Ocean Blue* used to change hands north of £60, but the recent, expanded reissue has completely killed off this earlier edition's value.

CD-R is the format of choice for many musicians operating in avant garde circles, often releasing exceptionally limited editions that are snapped up by their fanbases. CD-Rs (and even DVD-Rs) by the fabulously titled Sunburned Hand of the Man and Vibracathedral Orchestra on the bands own labels tend not to lose their value, for example.

We've barely scratched the surface of a complicated and often contradictory subject, but we'd recommend a browse of the Discogs website ([discogs.com](http://discogs.com); see more on p87) for an basic price hunt to see what desirable CDs may lurk in your collection.

**“If your mono vinyl copy of *Sgt Pepper's Lonely Hearts Club Band* looks like an ice rink, it's unlikely you'll be retiring early.”**

But surely all those old LPs by The Beatles and The Who that have been gathering dust in the loft are worth a bomb, though? As David Brent wisely said, don't assume. Vinyl, CD and DVD buyer Andrew Orr, at London's Music and Goods Exchange, sets the record straight: “It sometimes feels that people think we buy records and CDs by weight as opposed to what they actually are,” he sighs. “Condition is very important. Theoretically expensive records in price guides are almost worthless if they've not been looked after, stored poorly or played on a knackered stylus. Yes, these records have clearly been enjoyed by their owners, but they retain little of their resale value. If your mono vinyl copy of *Sgt Pepper's Lonely Hearts Club Band* looks like an ice rink, it's unlikely you'll be retiring early.”

That old doesn't necessarily equal valuable is an important point well made, and also one that sheds light on one of the ways in which you can find out how desirable your vinyl collection is – the price guide. Such a tome is vitally important if you're considering selling your records privately. Why not invest the time and do it yourself? Done properly, the fiscal rewards could well be a lot greater than selling your collection as a job lot to a shop.

## Price Guide

The first point of call for any buyer, seller or dealer when it comes to pricing information and the rarity of vinyl is the *Record Collector Rare Record Price Guide*. Edited by Ian Shirley with contributions

## VINYL SELLING HINTS AND TIPS:



- The more information the better
- Grade visually and aurally
- Use a good digital camera for photos
- Is it a first pressing? Don't mislead
- Deal with queries graciously
- Offer a postage discount with bulk orders
- Be prompt with posting and always obtain proof of postage
- Use the sturdiest record mailers you can find
- Offer the service you'd want to receive yourself
- Leave honest feedback about each transaction you make

## VINYL STORAGE

Don't break your heart – carefully consider where you plan to store records for sale at a future date. Being left lying around in a dusty loft or in a warm cupboard isn't good for them!

Record grooves are also susceptible to mould, so avoid damp spaces. We'd suggest separating the vinyl from the cover (to avoid seam splitting) and placing both LP and sleeve in a soft, custom-made plastic sleeve (available in 12-inch sizes) and storing upright.

If you plan to leave the records for an exceptionally long period of time, years even, we'd recommend checking on them every now and again – once records have mould in the grooves, their days are numbered (although professional vacuum pump cleaners certainly improve the sound quality of vintage vinyl).

### DETAILS

**PRODUCT:** Keith Monks Classic Mk.IIc  
**PRICE:** £2,895  
**TYPE:** Record-cleaning machine  
**TELEPHONE:** 01983 857079  
**WEBSITE:** [keithmonks-rcm.co.uk](http://keithmonks-rcm.co.uk)



### DETAILS

**PRODUCT:** Moth Mk.II  
**PRICE:** £500  
**TYPE:** Wet record cleaner  
**TELEPHONE:** 01234 741152  
**WEBSITE:** [britishaudio.co.uk](http://britishaudio.co.uk)



### DETAILS

**PRODUCT:** Hanss Acoustic RC20  
**PRICE:** £564  
**TYPE:** Record-cleaning machine  
**TELEPHONE:** 02084 621379  
**WEBSITE:** [hanssacoustics.com](http://hanssacoustics.com)



Clockwise from here: condition is key when selling vinyl and CDs to second hand record stores; record fair tables can be secured from £90; the soft PVC sleeves – your album's best friend; out with the old and in with the new – why not spend the proceeds of selling your old CDs and vinyl at independent record stores like Rough Trade?



fail to generate decent reputations, so be methodical about your approach and reap your rewards.

## Expansive discography

In the shadow of eBay, but another massively useful tool, is the Discogs website that we suggested you check out in brief earlier on. This site is a heroic attempt to list the entire worldwide discographies of artists on its database – some going when you consider the prodigious work rate of the likes of Prince and Paul McCartney, for example. Most genres are listed in this expansive work in progress. The site is also a haven for sellers. You've tracked down the particular record that you're interested in on the site and the page gives you an option to click and see how many are for sale through the site.

Unlike eBay, Discogs is a fixed-price auction, so it's as simple as shopping on Amazon. If you have fixed ideas about how much you are prepared to let your individual slabs of collectable vinyl go for, this may be a better option than eBay (although you could always set a reserve).

As we suggested earlier, there is no exact science to selling vinyl and CDs and prices can definitely fluctuate. But, if you've your heart set on a clutter-busting exercise to generate some extra capital for that next kit upgrade, there are plenty of options available to the seller – it all depends on whether you want a quick sale or are willing to put in the time and effort required to make a success of selling bits and pieces from your collection online. But whatever you decide, good luck with the downsize – your listening room's creaking shelves will thank you for it. ●

from Genesis to Van der Graaf Generator and beyond – that were previously geographically out of reach. To see how prices can fluctuate – as we asserted previously, record-buying and selling is in no way an exact science – have a look at popsike.com. Type in an artist's name and album to discover what previous copies have changed hands for on auction sites like eBay – and in certain cases, records have sold in excess of the recommended prices in the *Record Collector* guide.

If you intend to sell on The Bay, be prepared to put in time and effort to maximise your revenue. Setting up a user profile is a quick and simple process – as is opening a PayPal account (paypal.co.uk), essential for the eBay experience – but it's a longer one to build up your user rating. The eBay community is reliant on feedback from both buyer and seller to continue to thrive, so how can a new seller make both an impact and a good start? We've outlined our top ten eBay vinyl selling tips in the box on p86 for newcomers to enjoy their experience more, but key areas to consider are accurate descriptions of the cosmetic appearance of both the LP and the sleeve, an accurate description of the audio quality of the record and reasonable postage and packing rates. Solid communication is also important – keep your successful bidder informed as to his or her purchase's status – as is good, solid packaging to minimise the risk of breakage.

Perhaps the most obvious, but often overlooked, piece of eBay advice is to sell as you would like to receive. There isn't a vinyl enthusiast who doesn't have at least one eBay horror story of a record that arrives at its destination in some truly flimsy packaging, wholly inappropriate for a vinyl record. These are the sellers who ultimately

from a roll-call of trusted experts, the 2012 edition of the guide is now available (£27.95 from high street booksellers or currently less from amazon.co.uk). It's among the most authoritative voices on the subject of rare records pressed in the UK. Updated each edition to reflect the changes in the vinyl-buying market, if you're planning on selling your records privately, this book is an essential purchase. You'll learn about grading terms (vital information if you're planning to be taken seriously by collectors) and get to grips with some of more common terms you may come across thanks to a useful glossary. No such book as the definitive guide exists, but buying and selling vinyl without this institution is almost inconceivable.

The single most significant change to the way that vinyl records are bought and sold is eBay (ebay.co.uk). It's not hard to see how and why: suddenly, a scarce LP in stasis on the wall of a record shop, reliant on passing trade, now has an international client base. Enthusiasts in the Russian Federation, for example, now have greater access to UK pressings of classic rock acts –









**91** **Tom Petty and The Heartbreakers**  
Damn the Torpedoes



**91** **Justin Adams & Juldeh Camara**  
The Afrobilly Sessions



**91** **Jennifer Higdon**  
The Singing Rooms

# Music reviews

Hi-Fi Choice's pick of the latest high-quality music releases

## ALBUM OF THE MONTH



HOT PICK

### Paul McCartney & Wings

Band On The Run

concordmusicgroup.com

★★★★★

Concord

Single remastered CD; 3-disc special and 4-disc deluxe editions; 2-disc 180gm vinyl; MP3 download

**MCCARTNEY'S SOLO** career now spans more than 20 studio albums and in excess of 200 songs, so it's a measure of how significant *Band On The Run* looms in his post-Beatles oeuvre, that he's still playing five of its original nine compositions on his current tour.

Further evidence that it remains his finest hour, *sans* John, George and Ringo comes in its selection as the first release in the *Paul McCartney Archive Collection*, an ambitious reissue programme that will eventually chronicle every twist and turn of his 40-year solo flight. At the time of *BOTR*'s release in 1973, McCartney's stock was surprisingly low.

Wings were not The Beatles and the presence of his wife Linda in the band was regarded with suspicion. The high-minded

Lennon was widely seen as the 'cool' ex-Beatle and Macca as a lightweight MOR stylist, reduced to hacking out wimpish ditties such as the 1972 single, *Mary Had A Little Lamb*. The first two Wings albums had also sold disappointingly, neither reaching higher than five in the British charts. Then the band's guitarist and drummer quit days before Wings flew to Lagos, Nigeria, to record *Band On The Run*, leaving Macca with only wife Linda and band member Denny Laine for company. Things got worse when they were mugged at knifepoint in Lagos and thieves stole the demo tapes.

Yet out of this adversity, McCartney fashioned a creative, critical and commercial triumph, an exquisitely arranged mini-suite

“Lennon was seen as the ‘cool’ Beatle and Macca as a lightweight stylist.”

of songs, full of nuance, craft, energy and a playfulness which recalled the magic last heard on The Beatles' *Abbey Road*.

*Band On The Run* is, in the loosest sense, a concept album, on which McCartney exploits the analogy between the 'outsider' myths of the rock star and the outlaw (the Eagles, of course, did something similar that same year with *Desperado*). Themes of flight, escape and freedom dominate, perhaps mirroring McCartney's own attempt to break the shackles of being an ex-Beatle – most evidently in the line 'If we ever get out of here,' on the title track.

These lyrics are married to some of his finest melodies, whether he's roaring with abandon on *Jet* and *Let Me Roll It* or unleashing his sunny pop sensibilities on *Bluebird* and the title track.

Sonically, the album is a near-perfect example of McCartney's mastery of studio technique and his multi-instrumental overdubbing abilities, made clearer than ever by the warm and dynamic remastering, carried out by the *Abbey Road* team which recently overhauled The Beatles' catalogue.

Plenty of bonus tracks, including the brilliant non-album single *Helen Wheels*, plus other rarities and out-takes complete the picture in the various different configurations to suit every pocket, which have now become customary with such a major reissue. **NW**  
**Standout tracks:** *Jet*; *Helen Wheels*; *Band on the Run*; *Picasso's Last Words*



A young McCartney embarks on his solo career



## George Harrison and Ravi Shankar

Collaborations

darkhorserecords.com

★★★★

Dark Horse

4-CD box set

**HARRISON SIGNED** the Indian sitar maestro Ravi Shankar to his Dark Horse Records label in 1973 and over the next 25 years they released a number of collaborative projects, which remain surprisingly little known by either Beatles fans or world music enthusiasts.

This varied and eclectic box set puts their joint work back in the public domain and features both classical Indian instrumentalists and western rock/jazz musicians, including not only Harrison, but Ringo Starr, Tom Scott, Klaus Voormann, Jim Keltner and Billy Preston. What emerges is just how wonderfully open Harrison and Shankar were to each other's culture and how successfully they married western accessibility and eastern spirituality.

The classical Indian music pieces are pleasing enough, but the major revelation comes in the music from an album originally released in 1973 as *Shankar Family & Friends* and unavailable for years unless you were prepared to pay silly money. The title suggests another traditional Indian set, but nothing could be further from the truth, including the Shankar-composed 27-minute suite *Dream/Nightmare/Dawn*, a thrilling fusion between Indian classicism and King Crimson-style experimental jazz/prog rock. **NW**  
**Standout tracks:** Suite: Dream/Nightmare/Dawn; I Am Missing You; Raga Jait



## The Jesus and Mary Chain

Upside Down: The Best Of Music Club Deluxe

demonmusicgroup.co.uk

★★★★

Music Club

2-CDs

**ON THE 25TH** anniversary of their era-defining debut album, *Psychocandy*, this set collects together 44 key tracks and easily displaces the earlier compilation, *21 Singles*, as the definitive anthology. All of those singles are here, of course, but they're augmented with the most significant album tracks and rarities.

Time has been kind to the Reid brothers, for their feedback-drenched, reverberating wall of sound has regained its sense of danger and urgent tumult. The band also had a genuine pop sensibility, too, heard to best effect on *Just Like Honey*, among many others. **NW**  
**Standout tracks:** Just Like Honey; April Skies; You Trip Me Up; Reverence



## David Sylvian

Sleepwalkers

samadhissound.com

★★★★

Samadhissound

CD

**UNLIKE HIS NEW** romantic peers, David Sylvian has refused to be held by the limitations of that rather superficial eighties era when tinny synths and bad drum machines ruled the day. From his first solo album in 1984 to now, Sylvian has refused to rest on the laurels of Japan, instead swimming in new and experimental waters with the likes of Can's Holger Czukay and most successfully with the great Ryuichi Sakamoto.

Having decamped to America, married then divorced, he has been widening his palette to include a myriad of pop, improvisatory and classical musicians. *Sleepwalkers* compiles the best of them including the incredible *World Citizen*. **MP**  
**Standout tracks:** Angels; World Citizen; Playground Martyrs



## Brian Eno

Small Craft On A Milk Sea

warp.net/brian-eno

★★★★

Opal/Warp

LP/2-CD Box Set/WAV

**ENO HASN'T REALLY** delivered a proper album of instrumental music since 1992's *The Shutov Assembly*.

On this significant release he collaborates with experimental electronic musicians Jon Hopkins and Leo Abrahams.

The languid opening tracks, especially *Emerald and Lime*, draw us back to those exquisite melodies on such 1970s Eno classics as *Another Green World*. But quickly we are plunged into the sound-world of Aphex Twin as hard industrial noises jam up against Eno's more sonorous tones. The final third of this remarkable 48-minute work returns us to his reflective ambiances. **MP**

**Standout tracks:** Emerald and Lime; Complex Heaven; Paleosonic

### AUDIOPHILE VINYL

## Joan Armatrading Joan Armatrading

speakerscorner.de



★★★★ Spkr's Corner/A&M

180g vinyl

**IT WAS THIRD** time lucky for Joan Armatrading in 1976, with this Glyn Johns-produced eponymous album, and her first for A&M. The first successful black 'British'

(she was born in St. Kitts) female artist, Armatrading combines a raw vitality with a softer side on the hit single *Love And Affection*, that can only really be heard on one other track here.

The rest of the album reveals some very strong songwriting, with well-constructed tunes played to a high level by members of Gallagher & Lyle among others. It has a new wave feel despite the slightly early vintage – Johns was clearly ahead of the curve at this point and Armatrading's tough style fits in perfectly.

While clearly a professional production, this is less polished than others of the era; the sound has a bit more edge and decent dynamics for a mainstream production. The strings seem a little saccharin, but are undoubtedly well-engineered. Drums, often by Kenney Jones, are well captured as is acoustic guitar, which even overshadows the voice on *Like Fire*.

The dovetailing of great material and sound mean it's not hard to hear why this was Armatrading's best seller. **JK**  
**Standout tracks:** Love and Affection; Tall In The Saddle

## HIGH-RESOLUTION DOWNLOADS

## Aidan Moffat And The Best-ofs

How to get to Heaven from Scotland

linnrecords.com

★★★★

Chemical/Linn

24-bit/48kHz stereo



**THIS IS THE FIRST** full band record from Aidan Moffat since the demise of Arab Strap.

Too many people have him marked down as a miserabilist, the same fate that befell Morrissey and The Smiths but this album should put that notion firmly to rest. Songs like *Oh Men!* and *That's Just Love* are positively joyful, while Moffat's writing betrays a keen, albeit wicked, sense of humour.

The major benefit of the 24-bit/48kHz recording, is that it conveys Moffat's voice so convincingly and with such clarity. He is a talented songwriter and this persuasive recording allows his lyricism to emerge with unmistakable clarity. **MS**

**Standout tracks:** Oh Men!; Living With You Now

## Justin Adams &amp; Juldeh Camara

The AfroBilby Sessions

bowers-wilkins.com

★★★★

B &amp; W Society of Sound

24-bit/48kHz stereo

HOT PICK



**THE SOUND OF** the musical styles of West (London) meeting West (Africa): imagine late-era Clash bumping into Ali

Farka Touré. The music demonstrates vividly how contemporary black American music, the blues in particular, has its roots in African styles and it is fascinating to hear how seamlessly Adams' electric guitar and Camara's Gambian riti (a single-string fiddle) combine so harmoniously.

The 24-bit/48kHz recording captures the raw, earthy sound that guitarist/producer Adams, who has previously worked with Robert Plant's and Jah Wobble's bands, was keen to obtain. The distorted tone of his Les Paul is beautifully rendered and replete with glorious, ringing overtones. **MS**

**Standout tracks:** Fuloni Coochie Man; Kele Kele



## The Golden Gate Quartet

Incredible

dixiefrog.com

★★★★

Dixiefrog

CD

**ARGUABLY THE BEST** known of all male gospel quartets, the GGQ has been going since 1937 and with current leader, tenor Clyde Wright, since 1954. Celebrity fans over the years have included Elvis and Duke Ellington and they've influenced many of the greats of rock 'n' roll with their close harmonies, impeccable phrasing and instantly accessible interpretations of spiritual standards and more recently Wright's originals.

In the current line-up of the GGQ, the passion for which they're renowned is clearly in evidence. The sound is much plusher than their earlier recordings, but the sheer joy of the vocal performances easily win through. **DO**

**Standout tracks:** I Want To Be Ready; Cry Sometime



## Michel van der Aa

Spaces of Blank

disquietmedia.net

★★★★

Disquiet Media

CD

**NETHERLANDS-BASED** Michel van der Aa started his career as a recording engineer before getting into composition and while the music on this disc doesn't have an identifiable narrative, it still remains gripping music-making, performed by an impressive cast, including the Royal Concertgebouw orchestra, with support from one of the world's finest young mezzo-sopranos, Christianne Stotijn.

The Disquiet label was set up in Holland to act as a showcase for Michel van der Aa's music specifically. With its use of electronic-derived sounds, the engineering is more than usually tactile in feel, which makes it easier to separate out the various component strands that make up the whole. **AG**

**Standout track:** Three Windows



## Jennifer Higdon

The Singing Rooms

telarc.com

★★★★★

Telarc

CD/SACD

**PHILADELPHIA'S JENNIFER** Higdon, holds the Rock Chair of Composition Studies at the Curtis Institute of Music. The scoring of *The Singing Rooms* for violin, chorus and orchestra, is extremely unusual, but finely balanced and effective as a kind of choral violin concerto.

Although contemporary, it easily bears repeated listening. *PraiseMaker* by Alvin Singleton is a choral work, but with no solo violin part and generally less ambitious scoring though the highly individualistic use of orchestral bells recalls Britten's *Peter Grimes*.

Musically, it is gripping and comes highly recommended, not least thanks to the pellucid purity of its sound. **AG**

**Standout track:** Three Windows

BLU-RAY DVD

Tom Petty and The Heartbreakers Damn The Torpedoes [tompetty.com](http://tompetty.com)

HOT PICK

★★★★★ Universal/Geffen

Blu-ray LPCM, Dolby Digital, DTS-HD Master

**IN 1979** the MCA label got itself off the ground with Tom Petty's third and, as it turned out, most successful album. It fuses the styles of

the Byrds, the Rolling Stones and Television to form an urgent and driving sound of its own, that despite the long hair that we see in two videos is distinctly new wave (one guy is wearing a skinny tie just so that you know).

The first eight tunes of the original album are the strongest, but the extras include *Casa Dega* (in studio and demo versions) which is very good. Live versions of *Shadow Of A Doubt* and *Don't Do Me Like That* are also included among seven previously unreleased numbers.

In a stereo system, the LPCM track is the only one that really works because the DTS needs a .1 sub channel to stop it being too lean and this is quite a forward recording in the first place.

Producer Jimmy Lovine was clearly going for a cutting-edge sound that would jump out of the radio and he certainly succeeds. It's clean though, so it doesn't sound too abrasive and many of the extra tracks have a fuller, presumably remixed sound. **JK**

**Standout tracks:** Refugee; Don't Do Me Like That

# It's like 1970 again

Exclusive! We're the *only* magazine to spin Denon's new 1970s' inspired 100th-anniversary turntable, so **Malcolm Steward** built a glossy system around it

**A** normal reaction from audiophiles, faced with a Denon DP-A100 turntable is probably something along the lines of: "I never knew Denon made turntables... When did they start doing that, then?" Most would, however, be surprised to learn that Denon released Japan's first gramophone as far back as 1910. What's more, the unashamedly retro-looking, hand-crafted DP-A100 is also a celebration of the company's 100th anniversary.

The vintage appearance is quite deliberate and is most likely a respectful nod in the direction of the radio stations who became very keen supporters of the company's early, high-performance and high-reliability, direct-drive designs.

In 1970, the turntables began using a Denon-developed, high-torque, AC motor, whose speed was controlled by a servo, detecting precision magnetic markings around the perimeter of the platter. This technology distanced Denon from conventional idler-wheel and belt-drive turntables and earned the company the reputation as the brand for broadcast users.

Despite – or, maybe, because of – its popularity with DJs and broadcast professionals it was also keenly bought by the public, albeit having been slightly adapted for consumer use. It is worth noting that radio stations and DJs require very different things from a record player than a domestic user. For instance, the DP-A100 reaches its terminal rotational velocity in 0.3 seconds, which is vital in a broadcast studio, but is not a facility of any great importance to the average Joe relaxing at home with a few LPs.

It will also come as a real surprise to anyone who has only experience of today's lightweight turntables

– the likes of Rega and Pro-Ject, for example – that the substantial Denon DP-A100 tips the scales at just short of 16kg (32lbs or thereabouts) which is enough to shake your discs – those in your spine rather than those in your vinyl collection.

The turntable uses the same direct-drive technology 'that' claims Denon, 'has delivered cogging-free, high-precision rotation for 40 years.' The company also opines that 'Equipped with the DL-A100 cartridge, the DP-A100 is capable of masterfully reproducing the energy and beauty of analogue discs.'

Actually, the DL-A100 is not too dissimilar to the much-loved £100 budget special DL-103 high-output moving coil, but in a transparent body and with a £499 price tag.

**"The DP-A100 is capable of reproducing the energy and beauty of analogue discs."**

## Japanese beauty

None of this withstanding, there is a distinct beauty and appeal about retro Japanese turntables (especially shiny new modern recreations of those early models) that instils real joy into any record player enthusiast fortunate enough to spend time with one. You cannot fail to be impressed when the weighty platter – fabricated from die-cast aluminium with silicon rubber 'on reverse side to absorb vibration' – accelerates from standstill to 33rpm in less than half-a-second and then comes to a halt just as quickly.

It is also easy to become misty-eyed and all nostalgic over that blast-from-the-past S-shaped



tonearm, with its detachable headshell. These elements, which are just plain wrong according to current wisdom about the arrangement, simply do not matter: that cartridge spacer introducing a degree of compliance into the mounting in the headshell is a prime example. Indeed, the equally compliant detachable headshell itself, which has been out of favour with audiophiles for several decades, seems not to matter, here.

You almost shift into making allowances mode rather as you do, say, when driving a classic car with drum brakes. Rather than

BEAUTIFUL SYSTEMS  
DENON/MORDAUNT-SHORT





1

DENON

2

MORDAUNT-SHORT



**LEFT: Mordaunt-Short's Performance 2 is a welcome sonic and aesthetic match**

**RIGHT: The hand-crafted DP-A100: ideal for pop-pickers everywhere**

**BELOW: Eighty classy watts from Denon's £2,500 PMA-A100**

**“There is a distinct beauty and appeal about retro Japanese turntables”**

hard and where you knock, either causes the stylus to lose contact with the groove or results in a resonant boom issuing from the speakers. But, hey, it is all part of that back-to-the-seventies experience and it is not a major problem if you are careful. Nonetheless, the DP-A100 is inherently more stable than any turntable with a suspended sub-chassis.

Denon reckons the 80-watts PMA-A100 integrated amplifier is 'the fruit of many years of Denon audio technology development'. It states: 'To improve further the expressiveness of its sound quality, the amplifier inherits the UHC-MOS (Ultra High Current Metal Oxide Semiconductor) single push-pull output circuit and features a newly engineered construction, forming a solid foundation for a pure, clean sound.' That solid foundation is presumably why the amplifier weighs in at a substantial 25kg!

Denon continues that the remote-controllable PMA-A100 integrated includes 'special anniversary tuning,

complain about their lack of ability to detach your retinas with the stopping power of today's disks, you just drive more sedately and press the brake pedal harder and earlier than you would in a contemporary vehicle.

### **Tonearms and isolation...**

The tonearm struck us as being quite charmingly contradictory. While it contains the aforementioned compliant elements, it also has a very precise arrangement for fine-tuning the cartridge VTA. There is a graduated ring around the base of the arm pillar: flicking a small locking lever and rotating the ring elevates and lowers the main bearing assembly, providing fine adjustment of the Vertical Tracking Angle.

A cynic might ask why Denon bothers, but thoughts about turntable design were very different in the 1970s. One aspect that has definitely improved in the intervening 30 or 40 years is isolation. Rapping, or indeed tapping, on the plinth of the DP-A100, depending upon how



**COMPONENTS**



**1 DENON DP-A100 DIRECT DRIVE TURNTABLE £2,500**  
**DENON DL-A100 MOVING COIL CARTRIDGE £500**

A modern day, special edition of an old school, direct drive turntable. All the 1970's elements are there, including an S-shaped tonearm with a detachable headshell



**2 DENON PMA-A100 INTEGRATED AMPLIFIER £2,500**

A rather more contemporary integrated amplifier to sit alongside the Anniversary turntable. It also has defeatable tone controls for those who still cannot live without them



**3 MORDAUNT-SHORT PERFORMANCE 2 £2,495**

Thoroughly modern Mordaunt-Short Performance 2 standmounts provide a neutral-sounding loudspeaker with which to audition the Denon duo

superior construction and parts, including a larger, upgraded speaker terminal, cast-iron footing for less vibration and higher sound quality, as well as the 100th anniversary signature badge affixed to the fascia.'

Each PMA-A100 in the collection has been hand-tested and tuned by Denon engineers and boasts 'wide range play capability for an SACD'. This is a bit of a waste, if that is all it is for, as SACD has hardly captured the record-buying public's imagination.

Additionally, each PMA-A100 comes with a five-year warranty and a certificate of authenticity signed by the chief production engineer who hand-crafted the product. Also

included is a glossy 'brand book' that explores the history of Denon and adds an element of what marketers call post-purchase reassurance to the package. In other words it enhances the feel-good factor and makes you glad you bought it.

**Speaker sense**

We auditioned the Denon Anniversary components with Mordaunt-Short Performance 2 loudspeakers and matching stands, connected to the PMA-A100 with The Chord Company's Epic Super Twin loudspeaker cable.

This elegant, two-way speaker was selected for its clean, but not



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02890 279830

**WEBSITES:**  
denon.co.uk  
mordauntshort.com

clinical presentation, crisp detailing, dynamic energy and pleasingly natural balance. Naturally we listened to the line-level inputs, as well as the switch-selectable moving magnet/moving coil phono input.

The Gwynneth Herbert vinyl album, *All The Ghosts*, was presented differently to how it appears on, say, a Well Tempered Lab Amadeus GTa: the balance appeared to have shifted towards the lighter end of the spectrum. Herbert's voice was explicitly and delicately portrayed: when singing very quietly her voice still had a reasonable quotient of passion and expression.

The system balance gained greater low-end authority when we spent more time optimising the speaker alignment: getting the toe-in on the Performance 2 just so made a dramatic improvement to the balance and the stereo imagery.

The DP-A100/PMA-A100 and P2s seem to add very little, if anything, in the way of euphony. And for many people, this is exactly what a hi-fi system should do. Nothing. If a recording is dry, then that is how it will sound through this system.

If you enjoy a pristine, detailed presentation then this might be just the set-up for you. Although very little escapes its notice, the downside is that it can sound quite analytical at times, as though it is beginning to lose touch with the music's rhythmical flow.

That, perhaps, is the only concern with this set-up: whether it occasionally sacrifices its grip on the music in its quest for more detail. But if you have an unrequited love for 1970s hi-fi, do not let that stop you one little bit. ●







# 5

## Year warranty

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# Help & advice

We've got the answers to everything you've ever wanted to know about hi-fi and weren't afraid to ask. Email us now at [hifichoice@futurenet.com](mailto:hifichoice@futurenet.com) or write to: **Hi-Fi Choice Q&A, Future Publishing Ltd, 2 Balcombe Street, London NW1 6NW**

## YOUR EXPERTS



### PAUL MESSENGER

**EXPERTISE:** LOUDSPEAKERS

**HAVING WORKED** on both sides of the audio industry for over 30 years, as loudspeaker designer and reviewer, Paul is ideally placed to offer thorough, in-depth analysis of every speaker reviewed, as well as cutting-edge developments in the field.



### JIMMY HUGHES

**EXPERTISE:** SYSTEM OPTIMISATION

**AS EVERY** audiophile knows, there's so much more to getting a system to sing than merely throwing components together. Jimmy Hughes has spent 40 years tweaking and optimising systems, as well as voraciously collecting records.



### RICHARD BLACK

**EXPERTISE:** TECHNOLOGY

**WRITING EXCLUSIVELY** for HFC, Richard brings his experience as a successful musician and recording engineer to bear in our rigorous *Blind-Listening Group Test*. As our technical consultant, Richard is the authority on HFC's test and measurement.



### ED SELLEY

**EXPERTISE:** DIGITAL AUDIO

**RESIDENT IN** the audio industry for over a decade, Ed has considerable experience of both CD and SACD formats on disc, as well as an increasing personal interest in streamed high-resolution audio and network based systems.



### ALVIN GOLD

**EXPERTISE:** HIGH-END

**HAVING WRITTEN** for a huge range of magazines, both internationally and in Britain, Alvin has a very full 30 years of reviewing under his belt. A guru of all component types, he's now extending his expertise by building PCs for audio too.



### JASON KENNEDY

**EXPERTISE:** TURNTABLES

**ANOTHER EDITOR**, Jason opted to become a freelance contributor when he relinquished the helm of HFC after 17 years on the magazine. A hi-fi addict since his twenties, Jason fell for the beauty of vinyl and has never looked back.

## ASK US A QUESTION TODAY!

Our experts are on hand to answer your questions. Whether you're looking for future-proof upgrades, advice or help with your current set-up, our two-channel Einsteins have all the necessary expertise and several hundred years of combined audio knowledge to slake your thirst and support your passion for perfect sound. Email your questions now: [hifichoice@futurenet.com](mailto:hifichoice@futurenet.com)

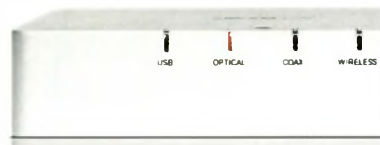
## QUESTION OF THE MONTH

**Q** I'm looking at adding PC connectivity to my system via either a DAC or CD player over USB. I'm confused by references to 'asynchronous' and '24-bit/96kHz capability' - what works best?  
*Stuart Sellers, via email*

**A** With very few exceptions, all USBs fitted to DACs will work when connected to a PC and asked to stream audio. There are differences, however. Asynchronous USB uses a separate precision clock to reduce the (often very high) level of jitter on the USB signal and improve sound quality.

24-bit/96kHz-capable USB is potentially useful for high-resolution downloads, although at the moment there are not very many of these

to concern yourself with. And the implementation of the USB is not the be-all-and-end-all of performance, a good USB performance will be overshadowed, if the DAC itself is not so hot.



## Feel Linn groovy

**Q** My system is a 1985 Linn Sondek LP12, Basik Plus/K9, NAD 3120 (1986), M-Audio studioophile BX-8a monitors and a Marantz SA7001 CD player.

I have a dilemma; I can either pay £950 to get the Majik PSU fitted to the LP12, plus a service, a new motor, a new Linn Adikt cartridge, 45 rpm adaptor and a quadrasphere wall shelf for the Linn, or buy a new Rega Planar 3 with the Rega cartridge, ext PSU and Rega wall-mounted shelf for £750.

As the Linn LP12 does not appear in your recommended items, but the Rega 3 does, which will give me the very best sound and is the Linn worth another £200, compared to the Rega?

*Michael Moore, via email*

**A** We did test the entry-level 'Majik' version of the LP12 in HFC 310 and rather liked it. It is hard to place the LP12 on a



Could it be Majik?

recommended list when versions of it are available for between £2,000 and £10,000! On balance, we would keep the Linn, but would instead look at some of the aftermarket parts available for the LP12.

The Hercules PSU from Stamford Audio and one of the Ortofon 2M cartridges would give good performance for less money and allow for 45rpm playback without the adaptor. The resulting deck could be upgraded further in time and would be competitive with the Planar 3.

## Award-winning Rotel

**Q** Though I have read your reviews on the Rotel pre and power amp (HFC 336) and the Arcam A38 (HFC 332), I am totally lost as to which one I should purchase (along with the Dynaudio X16 speakers). My current CD player is the Arcam CD 192 and I listen to all kinds of music, except pure jazz and soprano, so I need flexibility.

*Colin Thompson, via email*

**Q** I am interested in upgrading my present amplifier (Exposure 3010) and was very impressed with what you said about



The HFC award-winning Rotel RC1580/RB1582 combo

the Rotel pre and power combination. My CD player is a Creek Destiny 2 and my speakers are Castle Conway 3. Would this amplifier work well with the Creek CD player and, as I'm hoping to upgrade my speakers to the Audiovector S3 Super, would these also complement the Rotel and, in turn, be a good match for my CD player?

**Steve Jones, via email**

**A** We love the RC1580/RB1582 combination and think it is still the best all-rounder at the price point and demands an audition. This is not to say that it is a perfect fit in all systems, especially since the Arcam A38 was edged out of the Awards by the Rotel.

In Colin's case, we would suggest that you demo it first, given the presence of a Arcam CD player already in yours system to see if it is a better overall match.

## DACs the way I like it

**Q** I'm currently using a budget Sony CD player as my method of playing CDs through my Denon 2809 AV receiver via QED Reference interconnects.

I am well aware that the Sony is the weak link, but finances haven't permitted me to upgrade in the last two years. I have a budget of up to £400 and was wondering if I should get a new CD player, or a DAC with USB to connect my iMac to the amp (all of my music is lossless .aiff).

I was somewhat taken by the Pro-Ject CD Box (reviewed in HFC 338), but I'm also aware of the high praise that products like the Cambridge DacMagic and the HRT Streamer are getting. I listen to a bit of everything, from the heaviest of metal to the calmest of classical, so I'd like something that can perform well with all styles of music.

**Keith Doe, via email**

**A** Our gut feeling is towards a DAC. You have already done the time-consuming part of ripping music to a computer, so the DAC option gives you more 'bang for your buck', as you will not be paying for a transport mechanism or the like. You also have a huge range of choices

available to you. We like the Pro-Ject DAC Box FL, but the performance is very distinctive. So much so, that we would urge you to demo it first before handing over any cash. The Pro-Ject is also a single-input design.

Right at the top of your budget, the Arcam rDac (HFC 338) deserves an audition. It has the best USB implementation we have seen at the price and offers more flexibility in terms of inputs. It is also beautifully built, which might not matter sonically, but is never a bad thing!

## A lot of bottle

**Q** I am from Singapore and have been reading HFC for many years. My friend is giving up a VTL i-85 and I have snapped it up. I would like to know what speakers go best with this amp?

My music taste is mostly vocals and pop and my budget is around £2,000. I would also prefer a bookshelf to a floorstander due to space constraints.

**Robin, via email**

**A** The healthy power output of the VTL would do a fine job partnered with the classic Spendor SP3/1R2, which is well within budget. But if you can stretch yourself a little, the Mordaunt-Short Performance 2 would be an ideal match, as it combines reasonable sensitivity with a very expressive sound that allows the excitement and life of valve amplification to shine through.

## The valve-friendly Performance 2 speaker



# THE HI-FI CHOICE GUIDE TO: LEVEL-MATCHING INPUTS

EXPERT  
ADVICE



**ANY SYSTEM** with more than one source will potentially suffer from a level imbalance problem when changing between sources. This can be an annoyance – if the levels are very different, rather hair-raising – but it can also affect system performance, either by requiring very high outputs from the amplifier and risking distortion, or equally by meaning the amplifier never makes it out of the audio equivalent of first gear.

Some manufacturers, such as Arcam and Cambridge Audio, build adjustable input levels into their amplifiers. This means that you can reduce the sensitivity of the inputs being used by high-output sources.

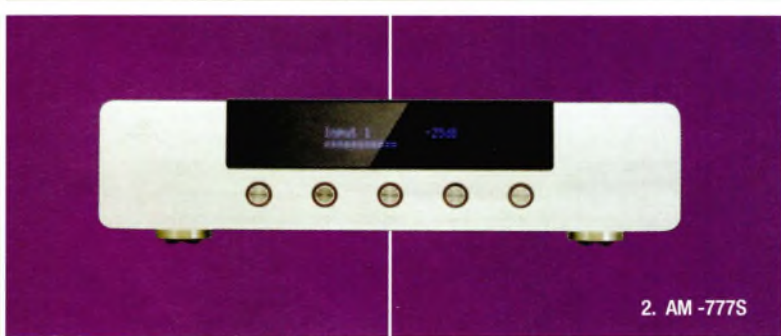
For amplifiers that are not similarly equipped, you can buy separate attenuators from companies such as Rothwell, or interconnects that have varying levels of attenuation to allow better level-matching.

Sources that are too quiet can be equally problematic. The usual culprit here is turntables, particularly if you are using an external phono stage. If you're adding a turntable to an existing system, make sure that the level it produces – as a result of the cartridge output and the sensitivity of the phono stage – generates an output level that is sufficient for your amplifier to shine. ●



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1. **AMR** Compact Disk Processor CD-777    2. **AMR** Pre-Main Amplifier AM-777    3. **AMR** Phono Stage PH-77



2. AM -777S



3. PH-77T



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1. CD-777B

# Minitest

Richard Black gets festive and reveals four of his favourite accessories from 2010

## Blue Horizon Clean-IT

PRICE: £20 CONTACT: 01276 501 392  
WEBSITE: BLUEHORIZONIDEAS.COM

**BLUE HORIZON** is a fairly new arrival on the accessories scene and has probably made most impact with its 'ProBurn' cable burn-in device. Clean-IT is rather more mundane; a clear fluid intended to clean electrical contacts, specifically in audio systems. There are other cleaners around that claim to do exactly the same job, but this one seems different from those we've seen before. It has as a base, some organic solvent with a distinctive smell and you simply paint it on to connectors with the brush attached to the cap, then wipe it off with the supplied microfibre cloth. That it does something is evident from the dirty residue left on the cloth when wiping particularly elderly connectors!

We tried it on various phono plugs and sockets, mains connectors and speaker terminals, with results that varied from nothing we could hear (on relatively new, but well-used speaker terminals) to well worth the expense and trouble (old and visibly tarnished phono leads). We weren't sure about the mains connections, in general: some older speaker terminals certainly benefitted a little. But it's small-signal connections that seem to benefit most, with the sound opening out a little in terms of space and gaining in detail and definition. It's not night and day stuff, but it's persuasive enough to make us want to give it a go every once in a while, to make sure the system's at its best. Incidentally, we also did some measurements which suggested contact resistance was halved, so it's certainly no Christmas fairy story!

**VERDICT** AN INEXPENSIVE and quick tweak, which does just what it claims to, cleaning up the sound by a small, but significant amount

★★★★★



## Furutech PC-2 optical disc cleaner

PRICE: £35 CONTACT: 01276 501392  
WEBSITE: FURUTECH.COM

**FURUTECH HAS BEEN** an increasingly familiar figure in the world of tweaks recently, thanks to a range that includes cables, mains connectors and more esoteric devices such as an LP-flattening oven, a sort of Corby trouser press for vinyl. The PC-2 looks pretty ordinary and there are lots of bottles of fluid allegedly ideal for cleaning CDs, DVDs and other flavours of optical disc. This one, however, caught our attention because its makeup is unusual. Instead of using organic solvents (which do remove most contaminants, but are frequently bad for the environment, bad for the user and are alleged to induce or worsen static charge problems) this one uses a 'combination of enzymes and ions' – in other words it is a biological cleaner. We recall the good results we've had with a couple of those on LPs. Furutech packages this water-based fluid in a handy puffer bottle and throws in an exceptionally soft micro-fibre cloth to use with it.

In terms of removing visible contamination it works as well as any, though when we tested disc error-rate we found it no more effective than a clean shirt-tail (!) – both restored error rates to the levels before (deliberate) contamination of the test disc. And yet we were convinced that discs both pristine and well-used gained just a little extra precision and lifelike immediacy after PC-2 treatment. It's not a major effect, but like so many tweaks it's the sort of thing one feels reluctant to forego, having once heard it. Application takes very little time and a bottle seems set to treat several dozen discs, making it inexpensive to use.

**VERDICT** CERTAINLY DOES the business in terms of basic cleaning, but even apparently clean discs seem to sound just a little fresher and more natural

★★★★★

## Moth Tube Imp valve tester

PRICE: £299 CONTACT: 01234 741152  
WEBSITE: BRITISHAUDIO.CO.UK

**FEW AREAS OF HI-FI** are as apt for tweaking as valve amplifiers. At the very least, changing valves is easy since they almost invariably plug in and out. Alternative and/or upgrade valve types are widely available for the commonest varieties. Valves wear out, too, making replacement a maintenance job (though for most signal valves a life of several years should certainly be expected). But how can one check the characteristics of a valve? Not only is it good to be able to check basic performance, but in many circuits it is highly desirable for both sections of a double triode (and double triodes are by far the commonest varieties in audio use) to be well matched. Enter the Tube Imp. It brings the power of modern integrated circuits to the business of valve testing and with remarkably little fuss allows you to test all the main parameters of normal, double triodes – gain, transconductance and current at various settings.

Ideally, you still need to know something about the valve type you're testing and the circuit it goes in, but the supplied instructions make it easy enough to do a basic test. And there is no denying the benefits of putting a really good valve in any decent circuit – benefits that can readily be both heard and measured. We tried a couple of phono amps, one line preamp and a power amp, all of which used variations of the common ECC81/2/3 types in different configurations and, in each case, were easily able to correlate overall performance with conformance of the valve to the original data sheet.

**VERDICT** **PERHAPS A LITTLE** upmarket for a true 'stocking filler', but shared with a few valve-loving friends it could prove extremely useful and excellent value



## IDAPT Universal Charger

PRICE: £40  
WEBSITE: IDAPTWEB.COM

Here's an accessory which neither makes nor modifies sound, yet we reckon a great number of audiophiles will want to know about it. It's quite simply a battery charger, but it has an important difference from most of its ilk in that it can charge a wide variety of kit, up to four items at a time. It's a highly ingenious design which has interchangeable 'tips' suited to various battery-powered devices in common use: six are supplied with the unit and a couple of dozen more are available at add-ons for around £6 each. Obviously there's one for Apple iPod/iPhone devices and the other standard types are mini- and micro-USB and versions for common phones from Nokia, Sony Ericsson and Samsung. There's an A-style USB socket on the side of the unit as well. Among the optional tips is one for AA/AAA batteries, which we could definitely find use for. The tips are slightly spring-loaded to give some protection against knocks when devices are being charged.

What we really like about this is its all-round practicality. It's a single unit that sits neatly on a shelf or table and plugs into the mains (no wall-wart!) and you can't easily lose it like a small dedicated charger. The tips are clearly labelled so you know what's what, and when each device is fully charged the LED in front of it changes from red to green. It may not change the sound of your hi-fi, but it'll put you in a much better frame of mind to appreciate it! ●

**VERDICT** **A SIMPLE, but brilliant** solution to an everyday problem in the age of mobile electronics. There should be one at the foot of every Christmas tree



There are plenty of reasons to enjoy Christmas, prominent among them the chance to treat oneself (or, if you're really lucky, be treated by an understanding friend or relative) to

some of those hi-fi accessories that one could easily persuade oneself one could live without. These four, however, cover a broad spectrum and all clearly achieve what they claim to. It's always nice, on

those long winter evenings, to know one has attended to a few more of the little details that help make a fine audio system the joy it should be.

Merry Christmas!



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**FOR SALE**

**SHANLING** CDT 100 CD player. Valve or solid-state output, valve headphone output. Onboard preamp if required. Mint condition, boxed with manual. New (£1,650) £550. Can email photos if required. **01424446282 (Sussex).**

**GARRARD** 401 £1,000ono. Turntable power supply £300ono. Technics Equaliser £150. Class A amplifier power supply £300ono. Arcam 9 power amplifier £250ono. Maplin 50-watt board £25. **020 7499 8729 (Cambridgeshire).**

**SME** Model 10 precision turntable with Series V tonearm (£5,700) £3,200. One owner, superb condition, will demonstrate, photos available. Original packaging. Buyer collects. **01604 410726 or 07711 702836 (Northants).**

**DENON** CD player DCD1500mk11, immaculate, hardly used since new, very good sound and build quality, £125 or £200 with my TDL RTL 3 transmission

line speakers. **07751 537148 (Oxon).**

**DYNAUDIO** Master Evidence, Cherrywood and Gloss Black. Very rare opportunity to own a pair of superb speakers. Excellent condition £28,000 ono (£78,400 new) photos available. [email white-a64@sky.com](mailto:emailwhite-a64@sky.com) or **07970 028771 (South Bucks).**

**QUAD** II Forty Monoblocks in unmarked, as new condition. Svetlana Cryogenically treated KT88 valve upgrade. Absolutely fantastic condition. Boxed with manuals cost £4,000. accept £1,850. **02380 224003 (Southampton).**

**AYRE** CX7 silver CD player, very lightly used, mint condition, boxed, looks and sounds wonderful, genuine sale. Latest version costs over £2,400, bargain at £1,200 **07851 715446 (Watford).**

**SONY** 7.1 AV amp/receiver STR-DN1000, black, 7x85 watts per channel, 4 in 1 out HDMI, auto calibration,

tuner, DTS-HD, True HD, DTS-Es etc, purchased Dec 09, hardly used £190. **01843 586261 (Kent).**

**DYNAUDIO** Contour S3.4, Piano Black excellent condition £2,250 ovno (£5,060). Pair of B&W SCMS surround speakers, Black Ash, perfect condition £850ovno. Primare amp 30.1 very good condition £500ovno. Arcam FMJ CD36 silver, excellent condition £575ovno. Email [white-a64@sky.com](mailto:white-a64@sky.com) or **07970028771 (South Bucks).**

**MERIDIAN** 504 FM tuner lightly used, in pristine condition. Complete with user guide. (£660) £350 ono. **07841 011397 (Leeds).**

**ART AUDIO** Maestro Valve monoblocs x2. 50 watts each and ART valve preamp VP1, vgc, serviced recently by ArtAudio (with new valves). Original around £9,500. Px £2,500. Can demo. **01476 579201 (Grantham).**

**T+A** Pulsar 1230R CD player (silver) immaculate



Bowers &amp; Wilkins CM1

condition, recently serviced includes remote. (£1,800) £700 can demonstrate. Also, Exposure 3010 Integrated and power amplifiers, condition as above £400 each **01482 887409 (East Yorkshire).**

**BOWERS & WILKINS** CM1 eight months old, mint, original packaging including stands £250. [gregory@469btinternet.co.uk](mailto:gregory@469btinternet.co.uk) **01757 289375 (Selby).**

**MERIDIAN** 508.24 CD player, £400; Primare A30.1 100-watt amp, £400; Sennheiser HD595 headphones, £50; Sony MDS-JE780 Minidisc, £50; Videologic DRX-601E DAB tuner, £40. Cash only, buyer collects. **01428 605002 (S.W. Surrey).**

**PROAC** Tablette EBT loudspeakers with matching sand-filled stands, teak finish. Good clean sound. Excellent value £200 email; [wombat.jr@tiscali.co.uk](mailto:wombat.jr@tiscali.co.uk) **01923 855359 (Herts).**

**ART AUDIO** 'Diavolo' 300B SE amp (11+11w), polished stainless-steel chassis with gold anodised trims £1,600. Sony SACD player (SCD 555ES), champagne finish £350, can demo. **01454 414361 or email beedeel@yahoo.co.uk (Bristol).**

**ROTEL** CD930AX CD player, Rotel RA930AX amp, NAD533 turntable, Infinity REF11 speakers. Excellent condition. Complete set £250 or will split. **0151 3427860 (Merseyside).**

**OPPO** DV-980H DVD/SACD player, excellent condition £75. HDMI cable 5m £10 **0208951 3178 (London).**

**SPENDOR** S3 in maple £325. Chord DAC 64 mint, boxed £800. Naim NAC 82 plus NAC SC (2001) Kboards mint, boxed, £800. Naim HI-Cap (chrome bumper) mint £300. **07729 620621 (Worcs).**

**RINGMAT** 330 MK11 XLR 3mm record support £20. **01202 515474 (Bournemouth).**

**FERRANTI** Type A1016, EKKO Model U363, Phillips Type 151U, Pye Ref069009, Cossor Melody Maker. All valve radios, £40 each. **01684 290581 (West Midlands).**

**SHARP** GF555 twin-tape, radio, speakers, internal amp, battery and mains (silver) £75 ono. Panasonic RXDS45, CD, tape, radio, mains and battery, £35ono. **01684 290581 (West Midlands).**

**NAKAMICHI** CR 7E. Hardly used, cosmetically excellent. No remote. £600 ono. **020 7485 5077 (daytime)** or email [peter@ccmusic.co.uk](mailto:peter@ccmusic.co.uk) (London).

**WANTED** Cyrus CD 6s and Cyrus 6vs2 in mint condition and at a reasonable price **01753 523350 email.jamesjd@yahoo.co.uk (Berkshire).**

**NAIM** NaitXS amplifier (£1,380) £880. CD5i CD player (£915) £600, or both £1,450. PMC DB1i speakers, walnut,

**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!



For sale / Wanted

(£985) £600. Equipment purchased March '10. All mint condition, boxed. **01233 713250 (Kent).**

**BLACK RHODIUM** Polar Illusion metre pair stereo interconnect, deep cryogenic version. *Hi-Fi Choice* award winner, cost £250, sell £125 **01243 528010 (West Sussex).**

**SIMONYORKE** S7 record player and Koetsu coral £8,500. Finite Elemente MR HD07 four-shelves £3,250, MR HD09 amp stand £600. **01237 473057 (North Devon).**

**RUSS ANDREWS** mains cables, filters, Kimber and digital interconnects. Other items including active studio monitors, too many to list, all mint condition. **01902 884694 (Dudley).**

**AUDIO SYNTHESIS** Passion 8m passive preamp. Excellent condition, boxed with remote control, manual and transformer p.s. £595 **01628626085 (Berkshire).**

**AUDIOPHILE BASE** hi-fi support system, incorporating vibration control technology. Four platforms (£800) £200. **janhud16@talktalk.net 01270 624008 (Cheshire)**

**NAIM** DVD 5 CD/DVD player, hardly used £695, 112x preamp £229, 150x power amplifier 2008 £479, or £649 for the pair. All mint/boxed. **01984 640588. (Somerset)**

**ATC** 50a active speakers, good condition, rosewood (£9,500) £2,500, Stax 3050 Mk2 headphones and stand, silver, immaculate (£850) £500, New vinyl at 40% of RRP. For list, **01453 519700. (Gloucester)**

**REGA** P3 turntable and RB300 arm, Elys cartridge. Boxed, excellent condition. Recent motor upgrade. Arm new and cartridge light use, £375. **07843 762212 or atj.harding@googlemail.com (Hants).**

**PRO-JECT** record deck and Pro-ject phono amp, Musical Fidelity XA-1 preamp, Arcam Alpha 9 CD player, Arcam P60 power amp, Rogers Studio 5 speakers. Includes all power cords (Russ Andrews) and cables/speaker stands and equipment stand. (£3,700) £1,400ono. Must be

heard. **00353 87 637 6623 (Co Wicklow, Ireland).**

**MUSICAL FIDELITY** Tri-Vista 21 DAC, less than 200 hours use. Excellent condition, boxed with manual. £540 **07905 312191. (Cheshire).**

**ROGUEAUDIO** 88 valve power amp, fully overhauled and modified by Definitive Audio two years ago, absolute stunner! £1,000 ovno. **07905 312191. (Cheshire).**

**VARIOUS COMPONENTS:** Arcam alpha 9 power amplifier 9P, £250. Maplin amplifier boards, 50w/8R, 70w/4R, four available, £25 each. AvonMusic prototype power supply for Class A power amplifiers, £225. AvonMusic prototype power supply for Garrard 4/301 Thorens TD124, £225. Garrard 401 chassis and plinth, £700. Technics SL1210 Mk2 £250. **020 749 98729 (London).**

**PRIMARE** SPA21 amplifier, recommended almost as good in stereo as the I30, mint, remote and manual, two years old £1,100 plus shipping. **00353 86 8127103 or michael.ograde@gmx.co.uk (Ireland).**

**NAKAMICHI** CR3E £150. Nakamichi CR4E £195. Dunlop Systemdeck 2 £185. Audiolab 8000A £90. All good condition. No offers please. **07513039966. (Dorset).**

**MONITOR AUDIO** Silver RS6 (oak) for sale £300. Just run-in. **01501 820875 (Scotland).**

**TANNOY** DC6t speakers (oak) excellent £500. **01501 820875 (Scotland).**

**MJ ACOUSTICS** Pro 50 Mk11 subwoofer £175ono (Excellent condition). **01562 638119 or email mike222@blueyonder.co.uk (Worcestershire).**

**TEAC** VRDS-T1 transport (includes Trichord upgrade £400) receipt kept, manual, remote, boxed £275. **01384 293955. (West Midlands).**

**WANTED** Reel-to-reel tape recorder, Sony TC 377 or similar. Must be in good working order. **01633 421906 (Newport).**

**RUSS ANDREWS** Powermax Plus mains cable. Big improvement for little money.

*Hi-Fi Choice* Best Buy. Clean, precise sound. (£45) now £20. **07981 025698 (Bristol).**

**ARCAM** A38 integrated amp £895. CD37 player £795. Denon TU1800 FM/DAB tuner £150. All in good condition, with boxes. **023 8073 8935 or email: golf3385@hotmail.co.uk (Southampton).**

**MUSICAL FIDELITY** EI00 integrated amp, piano black, excellent condition, digital and phono outputs £250. Aurum Cantus Leisure 5 speakers piano rosewood £495. Unison Research S6 valve integrated amp. £750 **02380 224003 (Southampton).**

**MUSICAL FIDELITY** P180 (Mosfet) power amp, with choke-regulated power supply. Condition is excellent and was one of *Hi-Fi World's* favorites: "powerful and refined". £525. **07972 341692 / 01424 446282. (East Sussex).**

**CABASSE** mt30 Antigua standmount speakers in wenge (black). Brand new won in competition (£460) £325. Kimber monoclex speaker cable, 13-feet, WBT slant bananas (approx £1,600) £675. **01933 405875 (Northants).**

**CYRUS** CDXT SE transport player (black), one-year old, boxed as new. Can demo. **02476 667877/07887 540082 (Coventry).**

**PRIMARE** CDI10 one-box CD player, 70w amp and DAB. Boxed with manual and remote. Russ Andrews Torlyte platform (£1,320)

£650 **017919025005 (Sussex).**

**TACT/LYNGDORF** SDA1 2175 integrated amp, superb quality and performance, 200watts, (silver), boxed (£1,895) £795. **07776143890 (Southampton).**

**DALI** Ikon6 loudspeakers. Unmarked with instructions. £250. **01255 675115 (Frinton-on-Sea, Essex).**

**GRADO** PS1000 headphones, brand new, boxed with warranty, won in competition, £1,200ono. **0115 9397413 (Derbyshire).**

**ARCAM** Alpha 10 DAVE, award-winning stereo amplifier, with factory-fitted Dolby Digital/DTS module, in excellent condition, with remote and original packaging, £450ono. **Alpha10@reticulum.demon.co.uk (Cams / Beds border).**

**AUDIOQUEST** Columbia XLR 1m interconnects, boxed, 48v DBS stunning high-end cables, immaculate and in original case (£400) £175. **07876 226999 (Surrey).**

**MARANTZ** CD 5003 CD player, black, pitch control and CD text, as new (£280) £100 no offers. **01268 415 017 (Basildon).**

**YAMAHA** B2 and C2 pre and power amp, 160 watts per channel, £50 or

offers. **steve.paton100@googlemail.com (Cumbria).**

**WANTED:** Top-quality hi-fi separates and complete systems, fast, friendly response and willing to travel/pay cash. **07815 892458 (Colchester).**

**MONITOR AUDIO** RS6, natural oak, just run-in £300. Tannoy DC6T, oak, immaculate £500. **01501 820875 (Lanarkshire).**

**CHORD** Signature speaker cable, 2m pair, £275. Chord 1m Indigo Plus RCA pair, £475. Chord signature Links, two pair, £25. **07970 012450 (Hampshire).**

**AUDIO RESEARCH** LS2b preamp, original box, (£3,000) £780. Theta Pearl transport and Probasic 3a DAC (£4,750) £1,250. **07973 220663 (Leicestershire).**

**RUARK TALISMAN** Mk1 speakers with soft-dome tweeters, cherry finish, very good condition, £240. **01425 613983 (Hampshire).**

**PS AUDIO** phones, one year old, immaculate condition, manual, remote, boxes, £495. **01737 779938 or 01306 884107 (Surrey).**

**MUSICAL FIDELITY** A1 CD Pro Player, two years old, mint, boxed. Philips Pro 2 mechanism. Top-loader, £650. Original Pi Foundation stands circa 1990, 18-inch-high, top plate 7.5in square, sand-and-shot-filled, buyer collects, £150. **07789 712775 (Hampshire).**

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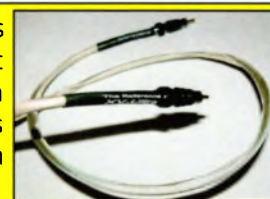
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### Announcement

Signal Collection, LLC (TSC), a specialty distributor of fine audio equipment and manufacturer of highly regarded audiophile cables, announces today that it will no longer be using the "STEREOVOX" moniker due to issues surrounding that trademark, and has adopted use of the name Stereolab™ in its place. Available now is the XV-Ultra Reference digital, the Draco RX RCA and XLR interconnects and Diablo LS loudspeaker cable

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C2.0

C1.0 and stand

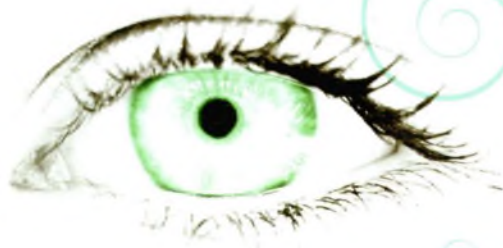


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# Hi-Fi Choice

## Buyer's Guide



Welcome to the *Hi-Fi Choice Buyer's Guide* – the ultimate directory to the very best high-performance hi-fi gear that you can buy. Here, you'll find our favourite current products listed under easy-to-use categories, with up-to-date pricing and trustworthy verdicts.

### Reviews you can trust

*Hi-Fi Choice* test results are the most reliable in the business. We employ the UK's most respected hi-fi journalists and use the most stringent techniques to ensure our ratings are the ones you can trust. All the equipment we rate most highly is contained within these pages, from CD and vinyl to the latest disc players, amplifiers, tuners and loudspeakers.

### Reviews online

We've also included *techradar* listings where our reviews appear online.

To access selected *Hi-Fi Choice* reviews, simply type: [techradar.com/](http://techradar.com/) into your browser, followed by the six-digit number printed in the first column of our *Buyer's Guide*.

### How to use this guide

The *Hi-Fi Choice Buyer's Guide* is the best way to make a shortlist of components to audition. Pick the ones that best suit your taste and budget, then consult our *Dealer Classified* section to find specialist outlets where you can try them with your favourite music and test discs.

## BADGES EXPLAINED

### OUR AWARDS



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



**RECOMMENDED:** The products we feel meet a certain high standard of performance



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

### NEW ENTRIES...

Every month, our buying bible is updated to include our latest reviews. These new entries are highlighted in yellow and reflect the very best reviews from the previous issue.

## SOURCE COMPONENTS

### 108 \_ CD players

Whether CD or SACD, we list the very best players for the job

### 111 \_ Turntables

Everything is listed here, from a £190 Pro-Ject to a £115k Continuum

### 111 \_ Phono cartridges

The best in both magnetic and moving coil cartridges

### 113 \_ Radio tuners

Surf the airwaves with any one of these carefully selected tuners

### 113 \_ Headphones

Badge-winning headphones for your personal listening pleasure



## AMPLIFIERS

### 115 \_ Stereo amplifiers

Our pick of the world's best one-box integrated amplifiers

### 115 \_ Pre/power amps

For those occasions when two boxes seem better than one



## CABLES

### 117 \_ Interconnects

Our favourite cables for transferring delicate signals are all here

### 117 \_ Speaker cables

Priced per metre, these are our top recommendations for home use



## LOUDSPEAKERS

### 119 \_ Stereo speakers

An invaluable guide to the best loudspeakers for your electronics

## STANDS & SUPPORTS

### 123 \_ Equipment supports

Our selection of the best equipment supports for your precious kit

### 123 \_ Speaker stands

Stands come in all shapes, sizes and prices, so take your pick from our list



## DEALER CLASSIFIED

### 125 \_ Dealer guide

A veritable *pot pourri* of hi-fi dealer classified advertisements

### 129 \_ Dealer directory

For all your hi-fi wants, check our index of independent hi-fi dealerships



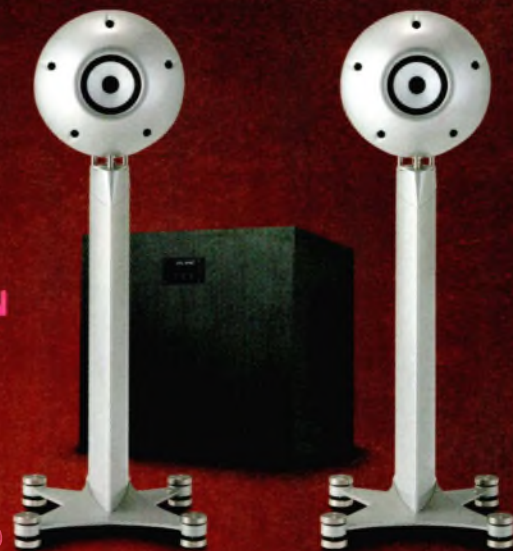


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W171i **TRANSPORT** \*  
W151 **AMPLIFIER/DAC** \*



➔ **W381 MEDIA PLAYER** \*

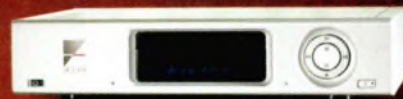
The 381 delivers world-class performance at a very attractive price and it is their first optical disc transport capable of playing Flac, MP3, and WMA audio data from your download collection.

Ayre



➔ **QB-9 USB DAC** \*

Connect the Ayre QB-9 to your computer and you have a killer combination that will frighten all but the most esoteric CD Players.



➔ **DX-5 UNIVERSAL A/V ENGINE** \* **NEW!**

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BADGES KEY: RECOMMENDED = ● EDITOR'S CHOICE = ● GROUP TEST WINNER = ● BEST BUY = ●

## CD players



Any one of these fine players will make sweet music for years to come

### Up to £1,000

Badge	Product	Price	Comments	SACD compatible	ELEC dig output	OPT dig output	CD-RW compatible	BAL analogue out	Headphone socket	Variable output	Issue number
●	<b>Audio Analogue Crescendo</b>	599	Simple player that's clear and communicative with the appropriate partnering equipment		●	●	●	●	●	●	329
●	<b>Audiolab 8200CD</b>	700	No SACD support, but excellent detail, neutrality and communication		●	●	●	●	●	●	340
●	<b>Cambridge Audio Azur 650BD</b>	400	Musical, precise, involving and with great energy at a superb price		●	●	●				340
●	<b>Denon DCD-1510AE</b>	900	If the SACD format is what you're into, then this player is capable of some impressive sounds	●	●	●					335
●	<b>Harman/Kardon HD990</b>	550	Highly detailed with excellent extension at both extremes and impressive resolution	/594818	●	●	●	●			323
●	<b>Marantz SA7003</b>	600	Highly civilised sound may not be to all tastes, but there's plenty of detail to be heard		●	●	●			●	323
●	<b>Marantz Pearl Lite SA-KI</b>	899	A key CD/SACD player at an attractive price, with support for digital		●	●	●				338
●	<b>Micromega CD-10</b>	799	The cheapest in the range, the CD-10 has been fine-tuned to please the audiophile		●	●					328
●	<b>Moon CD.5</b>	999	Admirably energetic music-maker from this very well-built player		●	●	●			●	335
●	<b>NAD C545BEE</b>	350	Apart from slight lack of bass control, sound is very fine indeed – treble is beautifully detailed		●	●	●			●	322
●	<b>Naim CD5i</b>	895	Its competent musical performance exceeds the expectations of an entry-level player						●		307
	<b>Pro-Ject CD Box</b>	300	This player belies both its size and its price with sounds worthy of a decent mid-range system		●	●	●	●			338
●	<b>Roksan Kandy K2</b>	899	State-of-the-art technology and precision engineering produces a fine CD performance		●	●	●				335
●	<b>Rotel RCD-1520</b>	695	Lacks optical digital output, but feature-count is fine and sound quality is expressive and open	/608305	●	●					323

### Above £1,000

Badge	Product	Price	Comments	SACD compatible	ELEC dig output	OPT dig output	CD-RW compatible	BAL analogue out	Headphone socket	Variable output	Issue number
●	<b>Arcam CD37</b>	1,300	Excellent detail and imaging, neutral tonality and above-average bass resolution	/395096	●	●	●				340
●	<b>Audio Research CD5</b>	5,055	Audibly better than most CD players on the market – assertive and very dynamic	/455309	●	●			●		312
●	<b>Consonance Droplet CDP3.1</b>	1,995	A CD player which gets to the nub of what music is about. Engages the listener every time		●	●					322
●	<b>Copland CDA 825</b>	3,985	This a highly revealing player that delivers music in a realistically engaging form		●				●		332
●	<b>Creek Destiny</b>	1,400	This player presents the music and nothing but the music and is thoroughly recommended		●	●	●				328
●	<b>Cyrus Audio CD 8 SE</b>	1,200	A highly civilised player which can, nevertheless, deal convincingly with raw music	/399370	●	●	●				323
●	<b>Denon DCD-2010AE</b>	1,700	Well equipped, finely detailed and with good support for compressed audio and iPod		●	●	●				328
●	<b>EMM Labs XDS1</b>	18,995	Very high-performance two channel only player with the option of a standalone D/A converter		●	●	●	●	●	●	327
●	<b>Leema Stream III</b>	1,495	This is a superb CD player that improves on the performance of its predecessor, the Stream		●	●					339
●	<b>Marantz UD 8004</b>	2,450	Sophisticated and highly capable universal player that just about does it all		●	●	●	●	●		336
●	<b>Meridian 808.3 Signature</b>	10,000	Extraordinarily revealing and open CD player with a first-class performance level		●	●			●		339
●	<b>Micromega CD-20</b>	1,249	No SACD, unfortunately, but without doubt one of the better mainstream players		●	●					332
●	<b>Mimetism 20.1</b>	5,107	An impressive player that produces a very convincing and musical sound		●	●					330
●	<b>Moon CD3.3</b>	2,200	Excellent detail and a fine choice for those who like their music straight from source	/594609	●	●					328
●	<b>Moon 750D</b>	7,950	Very few CD players can extract as much information off the disc as the 750D		●	●	●				331
●	<b>Naim CD5 XS</b>	1,790	Its composure and openness results in a musical performance that is extremely seductive		●	●	●				334
●	<b>Rega Isis</b>	5,998	A magnificently musical CD player at a realistic price. USB input is a useful addition		●	●	●				329
●	<b>Resolution Audio Cantata</b>	5,995	CD player/streamer that's revealing enough to set it far apart from the competition		●	●	●		●		336
●	<b>Roksan Caspian M2</b>	1,600	This impressively engineered CD player is punchy and dynamic, with excellent timing		●	●	●		●		338
●	<b>Theta Compli Blu</b>	2,998	A very accomplished universal player with support for Blu-ray and HDMI		●	●	●	●	●		337

**SPECS KEY** **SACD COMPATIBLE** Plays high-resolution SACD discs in two-channel mode. **ELEC DIGITAL OUTPUT** Electrical coaxial output for digital connection to a DAC or digital recorder. **OPT DIGITAL OUTPUT** Optical Toslink output for digital connection to a DAC or digital recorder. **CD-RW COMPATIBLE** Will play CD-RW (rewritable) discs, most CD players can cope with CD-Rs. **CD TEXT** Will display album and track titles from inserted disc. **BAL ANALOGUE OUT** Balanced XLR output connections for similarly equipped amplifiers. **HEADPHONE SOCKET** Quarter inch (6.3mm) headphone jack fitted to the CD player. **VARIABLE OUTPUT** Player features both fixed level and variable, volume adjustable outputs.



After 5 years in production, the Dino is still one of the most popular phono stages around. Highly versatile with accessible switches on the baseplate to facilitate a wide range cartridges.

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Suspension subchassis  
Speeds  
Supplied with arm  
Issue number

Badge	Product	Price	Comments				
●	<b>Clearaudio Concept</b>	1,100	One of the easiest ways of getting into analogue, with excellent results for the price			33/45	● ● ● 338
●	<b>Continuum Caliburn</b>	125,000	Luxury turntable with state-of-the-art design includes Cobra tonearm and Castellon stand	/587169	33/45/78		● ● ● 320
●	<b>Dr Feickert Woodpecker</b>	2,995	Offers superb bass, excellent build quality and range of arm choices		33/45		● ● ● 335
●	<b>The Funk Firm Funk V2</b>	1,390	Not only as beguiling as those that preceded it, this turntable is also more substantial to boot		33/45		● ● ● 324
●	<b>The Funk Firm Saffire</b>	2,450	Individual design and a sound that's refined and neutral with strong timing and dynamics		33/45		● opt opt 309
●	<b>Hanss Acoustic T-30</b>	3,600	The only multi-armbase deck in its price range, it boasts image stability and precise bass		33/45		● opt opt 331
●	<b>Lumley Heliosphere</b>	2,495	A distinctive-looking turntable with a unique sound and a performance that reflects your vinyl	/560765	33/45		opt opt 319
●	<b>Michell Tecnodec</b>	608	Needs careful partnering but can deliver a very sophisticated result for the money		33/45		opt 309
●	<b>Michell Gyro SE</b>	1,140	A marriage of shot-putter-strength, build quality and robust audio		33/45		● ● ● 338
●	<b>Pro-Ject RPM-1 Genie 3</b>	190	The Genie is that rare thing of a product with good looks, fine build and excellent sound		33/45		● ● ● 332
●	<b>Pro-Ject 6 Perspex</b>	1,280	Plenty of detail and good rhythmic qualities (arm included)		33/45/78		● ● ● 338
●	<b>Pro-Ject X-Pack</b>	1,000	Combines very strong elements (Ortofon Rondo Red) a killer package with top sound and value		33/45		● ● ● 309
●	<b>Rega P3-24</b>	390	Very competent, uncoloured and musical, improved by £148 outboard electronic power supply		33/45	opt	● ● 298
●	<b>Roksan Radius 5.2</b>	1,399	Sophisticated design with accomplished sound quality, excellent imagery and good isolation		33/45		● ● ● 338
●	<b>SRM Arezzo</b>	699	The Arezzo is an excellent source component for those wanting a superb turntable for vinyl replay	/625025	33/45		● ● ● 325
●	<b>Townshend Rock 7</b>	1,720	Has the ability to pull detail out of a vinyl groove, making it the most resolute turntable at its price		33/45		● ● ● 324
●	<b>Townshend Rock V/Excalibur II</b>	7,000	If you want to hear everything that's on a record then there's no better machine for the job		33/45		● ● ● 307

# Phono cartridges

MM and MC recommendations



Badge	Product	Price	Comments				
●	<b>Dynavector Karat 17D3</b>	699	One of the most thrilling-sounding cartridges on the market				● ● ● 334
●	<b>Goldring Legacy</b>	595	An MC cartridge better suited to the smoother-sounding turntable, it unearths a mountain of detail				● ● ● 328
●	<b> Grado Prestige Gold 1</b>	150	Unusually assured 'presence' region is the basis of a beautifully musical and involving presentation				● ● ● 338
●	<b>Ortofon Rondo Red</b>	385	Delivers detail, power and resolution and makes a good case for its price				● ● ● 307
●	<b>Ortofon Cadenza Red</b>	750	There's much to admire in this cartridge's fine detail and unfussy presentation				● ● ● 330
●	<b>Ortofon Vivo Red</b>	200	Never less than musically convincing, this all-in-one cartridge is remarkably capable				● ● ● 338
●	<b>van den Hul MC One Special</b>	699	A gorgeous cartridge that's worth the price every time you hear a familiar track in a whole new light				● ● ● 235
●	<b>van den Hul Condor XCM</b>	2,400	A stunning cartridge with stereo imaging, dynamics and resolution to die for				● ● ● 265

www.techradar.com  
Replaceable stylus  
MM  
MC  
Issue number

# Phono stages

Make your turntable sing



Badge	Product	Price	Comments				
●	<b>Cambridge Audio 640P</b>	100	An outrageously good bargain that suits budget systems, but can confidently survive upgrades				● ● ● 305
●	<b>Lehmann Audio Black Cube</b>	335	This phono amp is a very distinguished performer with an MM source				● ● ● 335
●	<b>Linn Upharik</b>	1,850	Exceptional sound quality, the Upharik could easily win over the next generation of LP enthusiasts				● ● ● 334
●	<b>Pro-Ject Tube Box SE II</b>	435	The big picture is the most evident thing here, but the finer details are there, too				● ● ● 335
●	<b>Soundsmith Strain Gauge</b>	6,100	Revolutionary kit assembly that rewrites the rules about vinyl playback	/618387			● ● ● 324

www.techradar.com  
MM phono inputs  
MC phono inputs  
Adj impedance  
Adj gain  
Issue number

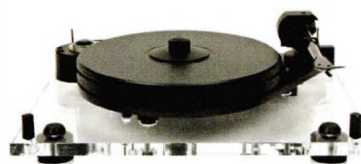
**SPECS KEY SPEEDS** Speeds offered in rpm. **SUSP SUBCHASSIS** Turntables with a sprung or suspended support for the platter and arm. **SWITCHABLE SPEED CHANGE** Some decks require manual lifting of the belt from one pulley to another to change speed, but not these ones. **SUPPLIED WITH ARM** Deck is supplied complete with tonearm – some require a separate purchase in this department, but the dealer will fit it for you. **SUPPLIED WITH CARTRIDGE** Some decks are supplied with a starter cartridge and this is included in the price shown. **MM** Moving magnet cartridge – see amp and phono stage features to match this type. **MC** Moving coil cartridge – see amp and phono stage features to match this type. **REPLACEABLE STYLUS** Some cartridges have separate styli for ease of replacement, but it compromises sound quality.

## HFC TOP PICKS



### Dynavector Karat 17D3 £699

The 17D3 gets very close to the results achieved with MCs at twice the price and few can touch it in terms of sheer musicality and resolution of detail



### Pro-Ject 6 Perspex £1,280

Our Product of the Year 2010. A winning combination of open and even-handed sound, handsome design and excellent build quality



### Dr Feickert An. Woodpecker £2,995

A very flexible and well-thought-out deck that offers brilliant build quality and excellent bass. Able to work with a wide variety of arms, too



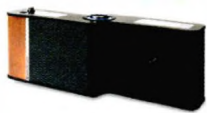
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## Radio tuners

Surf the airwaves with these carefully selected tuners

### FM tuners

Badge	Product	Price	Comments	www.techradar.com	Wavebands	Presets	Sig. Strength Meter RDS	Rot. tuning knob Remote control	Issue number
●	<b>Creek Audio Evolution</b>	350	Sound is detailed, cohesive and extended both tonally and spatially – very classy		FM, AM	80	● ●	●	308
●	<b>NAD C426</b>	220	If you aren't already wedded to DAB, then this is a very attractive purchase		FM, AM	80	●	●	339
●	<b>T+A T1210R</b>	1,200	High-end looks are matched by the sound, which is detailed and sophisticated		FM	100	●		283

### DAB/FM tuners

●	<b>Arcam FMJ T32</b>	600	A highly cost-effective way of optimising the airwaves. iPod functionality is a bonus	/59242	DAB, FM	100	● ● ● ●		319
●	<b>Onkyo T-455DAB</b>	400	Admirably free of grain or obvious tonal blemishes, this tuner achieves a high standard		DAB	40	● ● ● ●		298

### DAB/FM portables

●	<b>Monitor Audio Airstream 10</b>	225	The range of features on this DAB/FM/Internet radio is certainly impressive	/636713	DAB, FM, Web	4	●	●	337
●	<b>Pure Move</b>	80	A feature-packed, beautifully built DAB/FM radio that is a pleasure to use	/608367	DAB, FM	20	●		323
●	<b>Pure Sensia</b>	250	One of the smartest table radios around, offering wireless computer-sourced music		DAB, FM, Web	40	● ●		331
●	<b>Tivoli Networks+</b>	495	FM reception is excellent and a cut above everything else this radio has to offer		DAB, FM, Web	5	● ●		337
●	<b>Vita Audio R1 MkII</b>	160	Limited to DAB/FM and line inputs, but the sound quality is very good		DAB, FM, Web	10	● ●		337
●	<b>Vita Audio R2i</b>	300	Very smartly built with a sound that's full-bodied, neutral and detailed	/611865	DAB, FM	30	●	●	323

**SPECS KEY** **WAVEBANDS** Which bands are supported: FM, M – medium wave, L – long wave, DAB – digital audio broadcasting. **PRESETS** How many stations can be stored in memory. **RDS** Radio Data System – station names and program titles can be displayed among other facilities (FM only, DAB has more comprehensive display potential). **REMOTE CONTROL** For the couch potato. **SIGNAL STRENGTH METER** Useful for setting up an aerial. **ROTARY TUNING KNOB** An ergonomic alternative to buttons.

## Headphones

Audiophile solutions for home and travel use



Badge	Product	Price	Comments	www.techradar.com	Electrostatic	Supra-aural	Circumaural	Open/Closed back	3.5mm Jack adaptor	Weight (grams)	Issue number
●	<b>Audio Technica ATH-AD500</b>	100	Bulky, but comfortable, this headphone offers a generous spread of virtues							260	333
●	<b>Audio Technica ATH-W1000X</b>	649	Fine advert for the virtues of closed-back headphones, with great bass and background noise reduction					●		350	334
●	<b>Beyerdynamic DT770</b>	179	One of the most tonally satisfying closed-back headphones around with excellent detail					● ●		270	333
●	<b>Beyerdynamic T1</b>	880	A characterful, enjoyable music-maker with a detailed, weighty sound					●			331
●	<b>Bowers and Wilkins P5</b>	250	A superb headphone with B&W's sound and build quality sealing the deal					● ●		195	333
●	<b>Grado SR60i</b>	100	A strong contender with out-of-class sound in most areas: a brilliant budget all-rounder	/603478	●			●		210	322
●	<b>Grado SR80i</b>	120	A beautifully neutral and open-sounding headphone that's lively and energetic too					●			322
●	<b>Grado GS1000i</b>	1,100	A superb transducer, capable of astonishingly high performance standards	/624782							325
●	<b>Grado PS1000</b>	1,795	Offer excellent detail and effortless dynamics, but they can be heavy to wear after a while					● ●		500	329
●	<b>Sennheiser HD380</b>	140	This model offers good sound and is a worthy alternative to in-ear monitors					● ●			327
●	<b>Sennheiser HD650</b>	330	Clear and detailed, with very natural tonality through bass and midrange with just a little coloration					●		275	312
●	<b>Sennheiser HD800</b>	1,000	These headphones will convert loudspeaker listeners to the delights of personal stereo performance	/619269	● ●			●		350	324

**SPECS KEY** **ELECTROSTATIC** Uses electrostatic film instead of more common cone or dome dynamics. **SUPRA-AURAL** Earpads sit on ear rather than around it. **CIRCUMAURAL** Earpads rest on the head around the ears. **OPEN BACK** Vented capsules let sound in and out. **CLOSED BACK (●)** Sealed capsules. **WEIGHT** In grams. **3.5MM JACK ADAPTOR** Allows connection to personal stereos, computers etc.

### HFC TOP PICKS



#### **Bowers & Wilkins P5 £250**

The P5 is a no-brainer for iPhone users but this well built and attractive design should be able to win friends from outside the Apple camp as well



#### **PURE Sensia £250**

PURE's ground-breaking touch-screen DAB radio has changed the way we interact with radio forever and sets the standard for innovation



#### **Beyerdynamic T1 £880**

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## Amplifiers



Our pick of the best one-box amps out there

**Up to £1,000**

Badge	Product	Price	Comments	www.techradar.com	Line inputs	Phono input	Remote control	Headphone socket	Power output (watts)	Issue number
●	<b>Audio Analogue Crescendo</b>	599	In a room of appropriate dimensions, this amplifier has real musical presence					●	50	329
●	<b>Cambridge Audio 840A v2</b>	800	A chunky powerhouse with features aplenty, this amp offers detail and delicacy (silver finish)				●	●	120	327
●	<b>Denon DCD-1510AE</b>	900	Offers a taste of high-end excellence at an affordable price				●	●	70	335
●	<b>Marantz Pearl Lite PM-KI</b>	899	Great all-rounder and attractively priced, the PM-KI transcends its £899 price				●	●	70	338
●	<b>Moon 1.5</b>	999	A likeable amp in many ways, with admirable bass, treble and imaging				●	●	60	321
●	<b>NAD C3226BEE</b>	320	Unusually confident into awkward loads and very assured especially in bass. Treble a touch recessed	/603281			●	●	50	322
●	<b>Puresound A10</b>	685	A superbly involving valve amp at a very competitive price and with genuinely excellent results						10	331

**Above £1,000**

●	<b>Arcam A38</b>	1,480	A winning combination of sonic virtues including highly developed detail and musicality				opt	●	100	332
●	<b>Astin Trew AT2000PLUS</b>	1,740	If you prefer timbral and timing qualities of music to its bone-crunching potential, this is a contender					●	65	332
●	<b>Audio Analogue Puccini Settanta</b>	1,450	Detailed and lively, particularly in the upper octaves, but lacks a little bass extension				●	●	160	320
●	<b>Creek 5350 Evolution</b>	1,075	One of the most attractive amps in its price range, with a sound that's immediately satisfying				●	●	120	334
●	<b>Denon PMA-2010AE</b>	1,700	High-class, well-equipped integrated, with a performance that is muscular, refined and detailed				●	●	80	328
●	<b>Electrocompaniet PI-2</b>	1,600	A superb all-rounder, with insight on one hand and effortless musical flow on the other				●		100	327
●	<b>Electrocompaniet EC15</b>	2,750	Big, characterful and beautifully built amp, with equally big and unforced sound						120	340
●	<b>Gryphon Atilla</b>	6,995	Exceptional subtlety and definition, has enough power to cope with just about anything musical						100	328
●	<b>Leema Pulse III</b>	1,495	Offers a clean, smooth sound and has an unusually wide array of inputs				●	●	150	339
●	<b>Leema Tucana II</b>	3,425	Highly featured, well-built and not short of power, this is a highly resolute and organic amp	/612396				●	148	323
●	<b>Luxman L550A-II</b>	3,000	An accomplished all-rounder that's able to handle virtually any system				●	●	20	335
●	<b>Micromega IA-100</b>	1,125	Fast and fluid performer that brings a touch of panache to its role				●	●	100	332
●	<b>Mimetism 15.2</b>	5,415	A powerful amplifier with great dynamics and high resolution that's rare even at this price						180	330
●	<b>MSB Platinum M200</b>	13,656	This amplifier's devastatingly good all-round sound quality sets a benchmark that few will approach	/603452						322
●	<b>Musical Fidelity M3I</b>	1,000	Extremely engaging performer, this power amp boasts excellent sonics and solid build				●		70	337
●	<b>Myryad MX12080</b>	1,200	Sound is more assured at the top of the frequency range, though bass is melodious and detailed					●	80	327
●	<b>NAD 375BEE</b>	1,000	A good, solid amplifier that is fundamentally musical and gives a great bang for your buck	/625323			●	●	150	325
●	<b>Roksan Caspian M2</b>	1,600	This muscular-sounding amplifier is load tolerant and more powerful in practice					●	85	338
●	<b>Unison Research Unico Nuovo</b>	1,650	A truly successful marriage between tubes and solid-state amplification						100	339

## Pre/power amplifiers



Separate boxes can bring clear advantages

**Up to £2,000**

Badge	Product	Price	Comments	www.techradar.com	Line inputs	Phono input	Remote control	Headphone socket	Power output (watts)	Issue number
●	<b>Cambridge Audio Azur 840E/840W</b>	2,000	Enterprising technology delivers a pre/power combo that always sounds detailed and controlled					opt	200	309
●	<b>NAD C165BEE/C275BEE</b>	1,550	An alternative to the usual integrated route and one that offers flexibility and fine sound				●	●	130	336

**Above £2,000**

●	<b>Audio Research DS450</b>	7,000	Power amp features a very neutral transparent sound with lots of power and low-running temperature					●	2	450	337
●	<b>Bryston BP16/ 2B SST2</b>	5,700	Preamp and power amp combo offers superb sound quality	/608649			●	opt	100	323	
●	<b>Bryston BP26</b>	3,670	Cracking preamp brings detailed results				●	opt		308	
●	<b>Chord Prima/Mezzo 140</b>	7,135	Small, muscular, beautifully made and styled, and sounds like a dream				●	●	120	269	
●	<b>Classé CP-700/CA-M400</b>	9,200	Pre plus mono power combo with superb build, huge power and enormous flexibility				●	opt	400	293	
●	<b>Cyrus Pre XP D/B power</b>	2,225	Detailed and subtle, with little character added to sound				●		60	336	
●	<b>Digital Do Main Ba-1</b>	6,495	By recreating the V-FET, DDM has built one of the most thrilling amplifiers on the market				●		300	327	
●	<b>Mark Levinson No. 326S</b>	8,000	Excellent USB implementation, natural sound and solid build. Excellent performance levels				●	●		338	
●	<b>Musical Fidelity M6PRE/PRX</b>	4,998	For those wanting a powerful high-end pre/power combo at a realistic price, this is a fantastic package				●	●	260	340	
●	<b>Roksan Caspian M1</b>	2,800	A powerful and enjoyable-sounding amplifier combo that brings out the strengths of its CD player				●	●	85	307	
●	<b>Rotel RC158/RB1582</b>	2,100	It looks high-end and it really sounds the part, too				●	●	200	336	
●	<b>Trilogy 909/990</b>	10,390	Extremely musical valve-based pairing with hybrid power and beautiful finish	/625226			●	●	100	325	

**SPECS KEY** **LINE INPUTS** Input sockets for source components with a line level output: CD players, DVD players, tape decks, tuners, phono stages etc. **PHONO INPUT** Input sockets and on-board phono stage for a cartridge. Either MM (moving magnet) or MC (moving coil), occasionally both. **REMOTE CONTROL** A remote control is supplied with the amplifier. **HEADPHONE SOCKET** To drive your cans with. **POWER OUTPUT** Manufacturer's rated output in watts per channel.

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# Cables

Cables really can make a difference, especially our top recommendations



www.techradar.com  
Stranded  
Solid core  
Copper  
Silver  
Digital cable type  
Issue number

Badge	Product	Price	Comments	Stranded	Solid core	Copper	Silver	Digital cable type	Issue number
●	<b>Audioquest Sidewinder</b>	45	A detailed cable, with fine tonality and excellent rhythm		●		●		297
●	<b>Black Rhodium Prelude</b>	90	Practical and sensibly priced all-rounder that seems happily compatible with a wide range of kit		●		●		293
●	<b>Black Rhodium Coda</b>	150	Superb bass with neutral and detailed midrange, treble sweet with occasional slight constriction		●		●		298
●	<b>Black Rhodium Polar Illusion</b>	250	A good all-rounder, with clear and purposeful bass and particularly fine treble		●		●		321
●	<b>Cambridge Azur Reference</b>	50	Performance wouldn't shame a cable at twice the price: especially adept in the treble		●		●		296
●	<b>Chord Co. Indigo Plus</b>	995	Costly, and high-class cable needs running in, but this is a finely detailed design overall	/608313	●				323
●	<b>Clearer Audio Silver-line</b>	283	Complex, well-screened cable which offers good sound all round with exceptional bass		●		●		279
●	<b>CrystalCable Piccolo</b>	348	Thin, tougher than it looks, has some qualities of a solid-core type – resolution, focus and articulation			●		●	294
●	<b>Kimber Timbre</b>	145	A very neutral cable that will complement even very upmarket systems			●		●	312
●	<b>Monster M350i</b>	45	Few cables at this price reveal so much about the recording space.		●		●		281
●	<b>Monster M1000i</b>	230	Very capable, with only a hint of bass dryness to set against excellent results elsewhere		●		●		284
●	<b>Nordost Wyrewizard Dream</b>	110	Slight lack of precision in extreme treble, otherwise detailed and neutral with authoritative bass			●	●		303
●	<b>Oehlbach NF214</b>	63	The bass is a matter of taste, but suits many smaller speakers with good mid and treble		●		●		281
●	<b>QED Signature Audio S</b>	190	Mellifluous and rounded, this cable is a great choice for lovers of the human voice			●		●	332
●	<b>Supra EFF-IX</b>	77	Lively sounding which maintains a high level of detail and neutrality, musically, a great all-rounder		●		●		306
●	<b>Townshend Isolda DCT100</b>	99	Particularly enjoyable cohesion and naturalness that makes for great listener involvement			●	●		312
●	<b>van den Hul The Wave</b>	125	Neutral, with a hint of upper-bass richness: images seem to reside slightly further away than most		●		●		312

## Digital interconnects

●	<b>Atlas Mavros</b>	285	By any reckoning this is a very revealing wire			●	●		E 336
●	<b>Kimber DV-30</b>	59	A superb performer that lacks very little, even when compared to Kimber's high-end models		●		●		E 317
●	<b>van den Hul The Wave</b>	65	The results this cable achieves are excellent and it scores highly for value			●	●		E 336

## Speaker cables (price per metre)

●	<b>Atlas Hyper 1.5</b>	12.5	Don't look to this cable to beef up the bass, but at higher frequencies is revelatory at the price		●		●		299
●	<b>Atlas Ascent 2.0</b>	60	A highly analytical cable and very fine detail across the board		●		●		294
●	<b>Black Rhodium Jive</b>	14	Bi-wire cable which is full of sonic virtues. It's highly practical, too				●		339
●	<b>CrystalCable Piccolo</b>	1,395	A chip off the old block, has a similarly fast, fluid and subtle sound (price - 3 metre pair)			●		●	302
●	<b>Kimber 4VS</b>	155	In the right system, this cable is a good choice (price reflects 2.5 metre terminated pair)		●		●		329
●	<b>Monster MCX-1s</b>	5	Notable for its bass, perhaps a touch overdone at times but could be a good foil to small speakers		●		●		280
●	<b>Nordost Heimdall</b>	185	Alternative to Valhalla, silver-plated, micro-monofilament construction, suitable for exacting systems		●		●		278
●	<b>QED X-Tube XT300</b>	12.5	A natural and controlled-sounding cable that's cost-effective for mid-priced systems			●	●		310
●	<b>QED Revelation</b>	15	Sensibly priced, this cable offers a performance which is a step-up from budget types		●		●		318
●	<b>Townshend Isolda DCT</b>	50	Cryogenically treated 'impedance-matched' cable with stabilising components added			●	●		241
●	<b>van den Hul The Teatrack</b>	35	A bi-wire cable with a sound that's impeccably timed, neutral and full of detail			●	●		339
●	<b>Wireworld Solstice 52</b>	25	Rather bulky and awkward, but performance amply justifies it with superb bass solidity		●		●		310
●	<b>Wireworld Oasis 6</b>	40	Excellent bass with tunefulness and extension all first-rate. Awkward to handle, though	/617560	●				324

**SPECS KEY** **STRANDED** Cable has a number of (usually) twisted strands to conduct the signal. **SOLID CORE** Cable has one or more individually insulated strands to conduct the signal. **COPPER** Material used to form the conducting element of the cable. **SILVER** Alternative material used to form the conducting element of the cable. **DIGITAL CABLE TYPE** E – electrical, O – optical. Cables are one metre length unless otherwise stated.

## HFC TOP PICKS



**van den Hul The Teatrack £33 per metre**  
Curious name aside, this bi-wire cable has assured bass and a positive sense of rhythm whilst extracting an impressive amount of detail



**Kimber 4VS £133 (2.5 metre pair)**  
A wonderfully natural performer that makes itself unobtrusive and lets music take centre stage. The fit and finish is extremely high as well



**QED Signature Audio S £190 (1 metre)**  
The Signature Audio S has the rare ability to impart no sonic signature of its own to the equipment it connects to, getting you even closer to the music

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**BADGES KEY:** RECOMMENDED = ● EDITOR'S CHOICE = ● GROUP TEST WINNER = ● BEST BUY = ●

# Stereo speakers

The most influential link in the chain



Size: width, height, depth (cm)  
www.techradar.com  
Bass from floorstander  
Ease of fitting  
Close-to-wall free space  
Issue number

Up to £1,000		Price	Comments							
Badge	Product									
●	<b>Acoustic Energy Aegis Neo 3</b>	363	Pretty, neutral floorstander sounds open with wide dynamic range and good bass weight		20,905.24	●	A	24	●	294
●	<b>Acoustic Energy Radiance 1</b>	600	Limited bass, power handling and dynamics, but exceptional mid-to-treble voicing		18,532.25	●	A	33	●	325
●	<b>Amphion Ion L</b>	900	Sharp styling, fine mid/treble coherence a sweet treble, but less happy bass alignment		16,232,26,5	●	A	40	●	310
●	<b>ATC SCM11</b>	867	A very fine little speaker t-at its best with natural recordings where it adds little		21,38,25	●	A	55	●	293
●	<b>AudioPro Avanti A.10</b>	350	A tough and effective little speaker – overall balance is quite smooth and even		19,29,26	●	A+	38	●	319
●	<b>Bowers and Wilkins CM1</b>	488	Luxury miniature has laid-back sound, low coloration and fine imaging, but weak dynamics		16,5,28,28	●	A	40	●	279
●	<b>Bowers and Wilkins 684</b>	699	A fine all-rounder at a realistic price, has a smooth, even and nicely open balance	/483503	20,91,30	●	A	22	●	315
●	<b>Castle Knight 2</b>	400	A true resurgence for the Castle brand, the Knight 2 has a beguiling sound quality		20,38,33,5	●	A+	42	●	338
●	<b>DALI Ikon 6</b>	999	Needs care with setup, impressively transparent and obsessively detailed sound		19,100,33	●	A	37	●	271
●	<b>Dynaudio DM 2/10</b>	880	Has fine dynamics, grip, bass and headroom and is well mannered		27,5,45,35	●	A	22	●	299
●	<b>Focal Chorus 706V</b>	389	Advanced drivers deliver an even, healthy dynamic expression and tension		22,39,25	●	A	27	●	319
●	<b>Focal Chorus 726V</b>	950	Compact and realistically priced, the Chorus 726V is a good all-round performer		22,99,37,5	●	A	25	●	325
●	<b>JBL Studio L880</b>	700	Good value floorstander with neutrality, massive headroom and plenty of punch		22,99,37	●	A	25	●	275
●	<b>KEF iQ50</b>	599	Looks cute and very discreet, with spacious imaging, good balance and a sweet treble	/483527	17,5,81,5,26	●	A	23	●	315
●	<b>Monitor Audio BR2</b>	230	Good-looking standmount has a muscular sound with superior coherence		18,5,35,25	●	A-	30	●	294
●	<b>Monitor Audio BR5</b>	450	Not the best dressed in its class, but detailed, bold-sounding and good value		17,85,25	●	A-	36	●	293
●	<b>Monitor Audio Silver RS8</b>	850	Bold, dynamic sound, it's an easy load that works well in larger rooms		90,18,27	●	A	33	●	276
●	<b>Monitor Audio GS10</b>	900	More neutral tonally than some recent MAs, the GS10 is easy to drive		20,36,27	●	A-	40	●	284
●	<b>PMCD B1i</b>	985	Could be more neutral, but a very effective musical communicator		15,5,29,23,4	●	A+	30	●	334
●	<b>ProAc Tablette Ref Eight</b>	704	Stunning standmount with electrostatic-like imagery. Its brother is even better!		15,27,23	●	A+	40	●	267
●	<b>Q Acoustics 1010</b>	110	Neatly styled miniature has limited bass and power handling, fine midband voicing		15,21,5,19,5	●	A	48	●	286
●	<b>Q Acoustics 1020i</b>	140	Outstanding value, smooth well-balanced and lively sound makes a fine communicator	/516273	17,5,25,26,5	●	A+	60	●	318
●	<b>Rega RS1</b>	390	Clever close-to-wall speaker has a fine coherence and good communication skills		15,32,23,6	●	A	23	●	319
●	<b>Russ Andrews SP-1</b>	352	This tweaked Focal 705V RA has a sound that is immediate, engaging and, and great fun		192,31,5,24,8	●	A+	65	●	309
●	<b>Spendor S3/5R</b>	750	Lacks dynamic muscle and loudness potential, smooth neutrality and good bass extension		16,5,30,5,190	●	A	25	●	310
●	<b>Tannoy Revolution DC4T</b>	599	Ultra-compact, lacks bass weight and dynamic tension, but sounds open and coherent	488857	15,85,16	●	A	40	●	316
●	<b>Tannoy Revolution DC6</b>	900	Pretty compact standmount, delivering a lively bass and smooth, coherent midband		23,36,5,23	●	A	40	●	307
●	<b>Teufel T500</b>	568	Good value, solid build and an extended warranty		19,5x10,5x32,5	●	A-	●	●	340
●	<b>Wharfedale Diamond 10.5</b>	480	Despite the price, the 10.5 ticks many of the boxes, with superior voice band coherence	/636778	22,88,30	●	A-	50	●	326

**Above £1,000**

●	<b>Adam Audio Tensor Delta</b>	8,400	This active loudspeaker brings a powerful range of capabilities to its performance		33,56,34	●	A	50	●	329
●	<b>AE Energy Radiance 2</b>	1,000	This speaker boasts fine neutrality, sweet top, fine imaging and wide dynamic range		18,5,92,25	●	A	30	●	334
●	<b>AE Energy Radiance 3</b>	1,500	This speaker's effective enclosure ensures a wide dynamic range and a very clean sound	/587236	23,92,29,7	●	A	27	●	320
●	<b>AE AE1 MkII</b>	2,000	This speaker has a lovely midband smoothness and superior image focus		18,5,31,25	●	A	24	●	337
●	<b>Amphion Argon 3L</b>	2,300	Solid build ensures an impressively clean sound with loads of bass and fine neutrality		19,92,5,30,5	●	A	44	●	322
●	<b>Aspara HL6</b>	4,300	Acoustic material sounds great and there are many strengths in design and performance		18,5,93,34,5	●	A	●	●	332
●	<b>ATC SCM16A</b>	2,376	Makes a great case for the active speaker. Includes built-in amps and is good value		27,45,33	●	ACT	42	●	300
●	<b>Audioplan Kontrapunkt IVB</b>	2,898	Boasts exceptional stereo imaging and mid-through treble coherence		16,35,26	●	A	45	●	329
●	<b>Audiovector S3 Super</b>	2,600	Useful ability to upgrade, offers good musical communication and stereo imaging		19,103,31	●	A	50	●	328
●	<b>Aurousal VS</b>	1,650	Fine coherence and imaging of a single driver system, extra help at the frequency extremes	/479149	21,5,107,5,26,8	●	A	20	●	314
●	<b>AVIADM9</b>	1,125	Active mini-monitors that are exceptionally accurate and dynamic sounding		20,30,26	●	ACT	60	●	301
●	<b>Bowers and Wilkins CM9</b>	1,760	Tall, elegant, expressive midband and expansive, but well-controlled bass	/597244	20,102,5,32	●	A	60	●	321
●	<b>Bowers and Wilkins 802</b>	11,500	This high-end speaker has an airy, spacious midband, with clean bass reproduction		36,8,138,56,3	●	A	27	●	337
●	<b>Cabasse Bora</b>	2,200	A real enthusiast's choice with high sensitivity, strong bass and powerful dynamics	/618354	33,27,50	●	A	52	●	324
●	<b>Focal Chorus 816 V</b>	1,099	Fine, warm balance, superior dynamics and a sweet top end, but could be smoother		28,100,37,5	●	A+	20	●	288
●	<b>Focal Chorus 826 V</b>	1,349	Times nicely, goes loud with ease and will produce precise imaging if appropriately set up		28,104,37,5	●	A	45	●	287
●	<b>Focal Chorus 816WSE</b>	1,499	The W cone makes some qualities associated with Focal's high-end models more competitive		99,8,28,2,37,5	●	A+	39	●	308
●	<b>Focal Chorus 826W LE</b>	1,879	Focal has turbo charged the 826 resulting in lots of energy, excitement and fine detail		28,2,103,8,37,5	●	A	●	●	330
●	<b>Focal Electra 1027 Be</b>	4,399	Outstanding mid and top with fine delicacy, low coloration, but lacks some bass grip and drive		26,5,111,35	●	A-	25	●	276
●	<b>Free FS1</b>	3,500	An elegant design with the minimum of wiring. Wireless with Sonos or Airport Express		16,8,27	●	ACT	35	●	301
●	<b>Gamut Phi5</b>	3,040	Lovely discreet floorstander has excellent sound and several very clever engineering touches		17,100,24	●	A	20	●	305
●	<b>Green Mountain Audio Rio</b>	2,000	Fabulously tight timing and coherence makes for a very expressive and musical performer		20,8,40,6,34,9	●	A	80	●	332



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## Stereo speakers (continued)

Shapes and sizes for every budget

Badge	Product	Price	Comments	www.techradar.com	Size - width, height, depth (cm)	Floorstander	Bass from (Hz)	Ease of drive	Free space	Close to wall	Issue number
●	<b>Guru QM10</b>	1,595	A very clever close-to-wall standmount with fine imaging, that sounds a lot bigger than it looks	/465869	30,25,23,2	●	A	26	●	●	317
●	<b>Jamo R 907</b>	6,600	Arguably the more 'chummy' of Jamo's dipole flagships, powerful bass and open midrange	/498515	44,118,9,7	●	A	30	●	●	317
●	<b>JBL Everest DD66000</b>	44,000	Awesome performance in the true meaning of the word & exceptional musical communication		111,96,5,47	●	A	50	●	●	331
●	<b>Kudos X2</b>	1,350	Attractive presentation alongside a lively sound makes for an involving experience		16,6,78,20,6	●		27	●	●	337
●	<b>Kudos Cardea C2</b>	1,950	This floorstander is a fine all-round performer with fine voicing and neutrality		20,92,5,27	●		23	●	●	322
●	<b>Magico V2</b>	18,000	High pricing derives this speaker's superb painstaking engineering & impressive performance	/624700	25,5,115,30	●	A	32	●	●	325
●	<b>Magneplan Magneplanar 1.6</b>	2,500	Great with acoustic and classical material, this dipole panel speaker has superb sound quality		48,1,65,5	●	A	43	●	●	329
●	<b>Mission 796</b>	1,300	Clean, open and detailed, smooth, relaxed loudspeaker does exactly what it says on the box	/594834	20,6,99,8,31,8	●	A	25	●	●	321
●	<b>Monopulse 42A</b>	1,995	Oddball styling, fine bass-to-mid balance and dynamics and superb voice coherence		26,11,0,25	●	A	25	●	●	302
●	<b>Monitor Audio PL200</b>	4,750	A costly, but beautifully presented loudspeaker with outstanding voicing and character		25,5,100,28,5	●	A-		●	●	330
●	<b>Mordaunt-Short Perf 6 LE</b>	4,799	Striking moulded enclosure minimises coloration, overall balance is smooth, neutral and open		24,11,5,43	●	A	22	●	●	308
●	<b>Neat Momentum 3i</b>	1,790	Sounds bigger than it looks, with good coherence and an impressively wide dynamic range		22,38,27	●	A-	23	●	●	302
●	<b>Opera Callas</b>	3,195	Technically innovative multi-tweeter system, this is a grown up and articulate performer	/429144	23,37,5,34			32	●	●	311
●	<b>Opera Seconda</b>	1,995	Fine styling and finish, plus very superior voicing, if a shade lacking in warmth		24,10,2,5,31,5	●	A	20	●	●	314
●	<b>Pioneer S-2EX-W</b>	5,200	This speaker offers superb midband neutrality and exceptional clarity	/587272	29,1,56,5,42,5	●	A	37	●	●	320
●	<b>PMC GB1i</b>	1,525	Fine voice reproduction, overall agility and well-judged balance		15,5,8,2,34	●	A	40	●	●	337
●	<b>PMC FB1i</b>	2,100	A floorstander that boasts impressive bass extension and a smooth sweet top end	/429594	20,100,30	●	A	20	●	●	329
●	<b>PMCFact .8</b>	4,600	Beautiful styling, alongside a superb all-round sound with a notably wide dynamic range		15,5,10,5,38	●	A	55	●	●	327
●	<b>PMC IB2i</b>	8,900	Delivers a top-class sound quality, fine imaging and exceptional dynamic grip	/617595	33,74,46,5	●	A	25	●	●	324
●	<b>PSB Synchrony One</b>	3,500	Slim and discreet floorstander that delivers superb sound quality and flexible bass	/516267	22,10,9,32,5	●	A	45	●	●	318
●	<b>Revel F32</b>	3,200	Meticulously balanced, tonally neutral design makes for a taut, well disciplined sound		22,10,5,39	●	A	20	●	●	256
●	<b>Revolver Screen 3</b>	2,799	Visually dramatic and very successful in delivering genuine high-quality hi-fi sound		50,140,11		A	35	●	●	329
●	<b>Roksan Caspian FR-5</b>	2,475	Sharp-looking speaker sounds exceptionally open and lively without aggression		20,100,25	●	A	22	●	●	290
●	<b>Sonus faber Luito Monitor</b>	1,690	Subtly designed, elegant-sounding package, especially with good recordings	/603221	18,5,3,33,5		A-	55	●	●	322
●	<b>Sonus faber Minima Vintage</b>	2,490	Easy, graceful-sounding compact, a natural for acoustic material at moderate volume levels	/455417	20,3,3,27,5		A-	55	●	●	312
●	<b>Sonus faber Cremona Audit.</b>	3,350	Open, exciting and with surprisingly good bass, this is 'The Little Speaker That Could'		20,3,5,37		A	50	●	●	305
●	<b>Spendor SA1</b>	1,295	Very high-quality sub-miniature with notably superior sound		16,5,30,5,19		A	30	●	●	334
●	<b>Spendor SP3/1R2</b>	1,600	Conservative styling, superb neutrality and coherence with unusually low coloration		22,40,28		A	37	●	●	317
●	<b>Tannoy Definition DC10T</b>	5,000	Classy speaker has massive base, high sensitivity and precise image focus	/608326	34,11,2,5,32	●	A+	35	●	●	323
●	<b>Totem Sttaf</b>	1,695	This speaker delivers good scale with a fine midband		16x85x24,2	●	A		●	●	340
●	<b>Triangle Genese Lyrr</b>	3,300	A well-balanced speaker with generous sensitivity, fine imaging and good expressiveness		23,30,3,11,3,3	●	A	30	●	●	338
●	<b>Teufel Ultima 800</b>	2,498	Exceptional value for money due to direct sales and easy system-matching		22,98,37	●	A	42	●	●	335
●	<b>Vivid Audio K1</b>	14,495	With a subtle, fast and wide bandwidth, this speaker is one of the finest on the planet	/625361	28,130,46		A	35	●	●	325
●	<b>Wilson Benesch Curve</b>	5,383	Much (but not all) of the ACT's performance in a much more compact and affordable package		23,91,37	●	A	28	●	●	254
●	<b>Wharfedale Opus</b>	1,500	Great material value and a solid, if bright and forward sound. Has great loudness potential		26,100,5,41	●	A	23	●	●	314
●	<b>Yamaha Soavo 2</b>	1,200	Cunningly crafted with a beautiful balance that always sounds lively, open and involving		22,38,35		A	28	●	●	296
●	<b>Zu Essence</b>	3,750	Realism and communication skills are more than compensation for balance shortcomings		30,5,1,25,30,5	●	A	25	●	●	327

**SPECS KEY** **SIZE W,H,D (CM)** Width, height and depth of one cabinet in centimetres. **FLOORSTANDER** Speakers that don't require stands. **EASE OF DRIVE** How much power the amplifier needs (approximately) to drive the loudspeaker effectively. **A+** 25 watts plus **A** 50 watts plus **A-** 100 watts plus **ACT** Active – the speaker has its own in-built amplifier. **BASS FROM** How low the speaker goes – the smaller the number the deeper the bass. **FREE SPACE** The speakers work best away from wall(s). **CLOSE TO WALL** The speakers will work best when up against a wall (but avoid corners).

## HFC TOP PICKS

**Castle Knight 2 £400**

The Knight 2 continues in the great Castle tradition of excellent finish and solid build and climbs to the top of the pile with excellent sonic performance

**Focal Chorus 826W LE £1,879**

Focal has taken the 826 and turbocharged it, keeping the virtues of the stock model but with increased energy, excitement and detail

**PMC Fact 8 £4,600**

A fantastic combination of elegant design, well-thought out room-tuning features and superb sonic performance. A 2010 Product of the Year nominee

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**BADGES KEY:** RECOMMENDED = ● EDITOR'S CHOICE = ● GROUP TEST WINNER = ● BEST BUY = ●

## Equipment supports

Hi-fi equipment supports come in all shapes and sizes



Badge	Product	Price	Comments	Top plate size (cm) Height (cm)	Number of shelves Welded	Shelf type	Issue number
	<b>Atacama Equinox</b>	409	Stable, modular design with style and excellent bass transients	81 50,50	● 4	Glass	217
●	<b>Audiophile Base Std Supp't</b>	1,200	Expensive and quite bulky, but sound is unusually detailed and resonance-free	57 46,35	● 3	MDF	302
●	<b>Blok Stax 300</b>	180	A simple and effective design that gives some useful isolation across most of the audio band	40,46	● 3	MDF	334
●	<b>Custom Design Inert Matt</b>	70	Isolation platform can improve the sound of hi-fi components, but is a bit small for most kit	40x25		Metal	311
	<b>Custom Design XL4</b>	380	Simple construction pays off in smart looks. Sound contribution is minimal	60,42	● 4	Glass	293
	<b>Custom Design Milan</b>	509	Good-looking stand with nothing more to complain of than slight muddying of detail	57 48,39	● 4	Glass	302
●	<b>Hi-Fi Racks Podium</b>	500	A keenly priced piece of high-class furniture that also happens to sound great	59,5		Wood	320
●	<b>Isonoe Isolation feet</b>	98	A set of four isolation feet that are ideally suited to microphonic kit like turntables			Alloy	327
	<b>Partington Minim</b>	470	Adds its own character to rock, but to the detriment of acoustic sounds	78 45,37	● 5	Glass	302
●	<b>Quadraspire QX25 Support</b>	25	Beautifully simple design, cheap and easy to use. Excellent with CD players			Acrylic	327
●	<b>Quadraspire Sunoko-Vent T</b>	800	The sound is detailed and largely uncoloured, while the design is rigid and beautifully veneered	59,47	● 4	MDF	334
	<b>Russ Andrews Torlyte Rack</b>	988	Attractive modular system made of very light Torlyte: a touch of added warmth is its only vice	68 54,49	● 4	Torlyte	240
●	<b>Townshend VSSS</b>	1,380	This attractive Seismic Sink retains the same excellent vibration-killing sound quality	76 35,50	● 4	Glass	273

## Speaker stands

Not all stands are made equal - try one of our top buys



Badge	Product	Price	Comments	Top plate size (cm) Height (cm)	Number of shelves Welded	Shelf type	Issue number
	<b>Anvil Sound Display Stand</b>	229	A variety of smart looks available – sound is clear and precise	50 20,17	● 1		293
●	<b>Custom Design RS300</b>	110	An attractive stand whose lack of coloration suits it to high-resolution systems	56 16,5,18	● 1		281
●	<b>Custom Design SQ404</b>	220	Robust four-pillar design gives very low coloration and maximises performance	61 18,16,3	● 4		283
●	<b>Partington Ansa 60</b>	119	Elegant flat-packer 'disappears' sonically; restrained but neutral and coherent	62 18,15	● 4		232
●	<b>Partington Dreadnought BS</b>	299	Sound is better defined in almost all areas than cheaper, slimmer stands can offer	62 17,23	● 5		309
●	<b>Partington Heavi II</b>	499	Robust to the nth degree, this stand helps produce very precise bass and upper frequencies	53 31,22	● 6		287

**SPECS KEY** **HEIGHT (CM)** Height of equipment support and speaker stand (not including spikes) in centimetres. **TOP PLATE SIZE (CM)** Width by depth of the supporting platform(s). Single figures indicate a square platform (Speakers generally overhang top plates). **FILLABLE** The stand can be mass-loaded with sand and/or lead to stop ringing. **WELDED** As opposed to bolt-together construction. **NUMBER OF SHELVES** To put your kit on (different configurations are often available). **NUMBER OF LEGS** That support the stand. **SHELF TYPE** Material that shelves are made of.

### HFC TOP PICKS



**Partington Dreadnought BS £300**  
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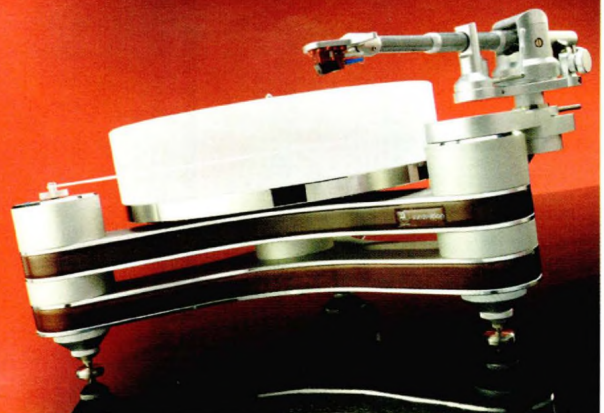
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**Art Editor** Corin Skeggs, corin.skeggs@futurenet.com  
**Production Editor** Richard Holliss, richard.holliss@futurenet.com  
**Staff Writer** Ed Selley, ed.selley@futurenet.com

**CONTRIBUTORS**

**Technical Consultant** Richard Black, Alvin Gold, Jason Kennedy, Paul Messenger, Dave Oliver, Nigel Williamson, Malcolm Steward, Dominic Todd, Simon Berkovitch, Mark Prendergast, Kevin Emden

**Photography** Rob Monk, Kevin Nixon, Will Ireland  
**Group Senior Editor** Nick Merritt  
**Group Art Editor** Rodney Dive  
**Creative Director** Bob Abbott  
**Design Director** Matthew Williams  
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**ADVERTISING**

**Advertising Sales Director** Rob Elms, 020 7042 4272 rob.elms@futurenet.com  
**Advertising Sales Manager Tech** Charlie Said 020 7042 4142 charlie.said@futurenet.com  
**Senior Sales AV Group** Michael Carrington 020 7042 4206 michael.carrington@futurenet.com  
**Senior Sales Executive** Julian Tozer, 020 7042 4273 julian.tozer@futurenet.com  
**Sales Executive** Richard Jewels, 020 7042 4265 richard.jewels@futurenet.com  
**Inserts and Direct Marketing Manager** Nick Weatherall 020 7042 4155 nick.weatherall@futurenet.com  
**London Sales Director** Malcolm Stoodley, malcolm.stoodley@futurenet.com

**MARKETING**

**Marketing Manager** Libby Brook, libby.brook@futurenet.com  
**Brand Marketing Director** Matt Woods, matt.woods@futurenet.com

**CIRCULATION**

**Circulation Manager** John Beeson, john.beeson@futurenet.com  
**Circulation & Trade Marketing Director** Rachael Cock, rachael.cock@futurenet.com

**PRINT & PRODUCTION**

**Production Manager** Ralph Stringer, ralph.stringer@futurenet.com  
**Production Coordinator** Roberta Lealand, roberta.lealand@futurenet.com  
**Senior Ad Production Coordinator** Gemma O'Riordan, gemma.oriordan@futurenet.com  
**Head of Production** Richard Mason, richard.mason@futurenet.com

**LICENSING**

**Head of International Licensing** Tim Hudson, +44(0)1225 442244 tim.hudson@futurenet.com

**FUTURE PUBLISHING LIMITED**

**Group Publisher** Pat Eggington  
**Chief Operating Officer** Simon Wear  
**Chief Executive** Mark Wood

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**Chief Executive** Steve Spring  
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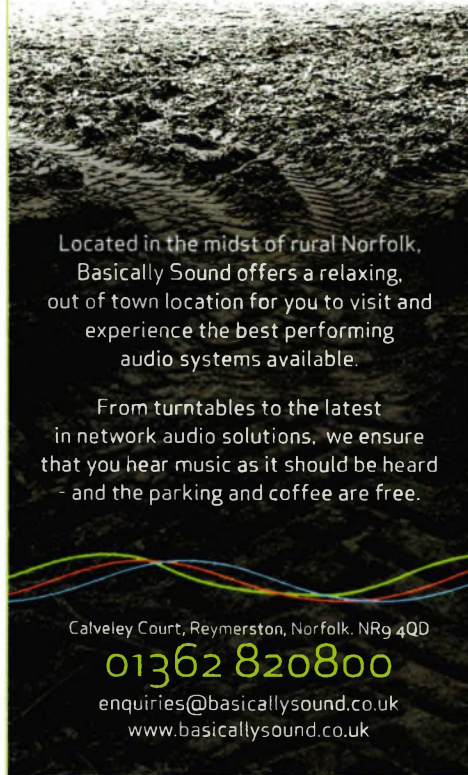
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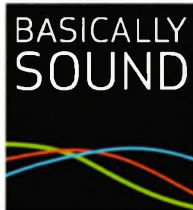
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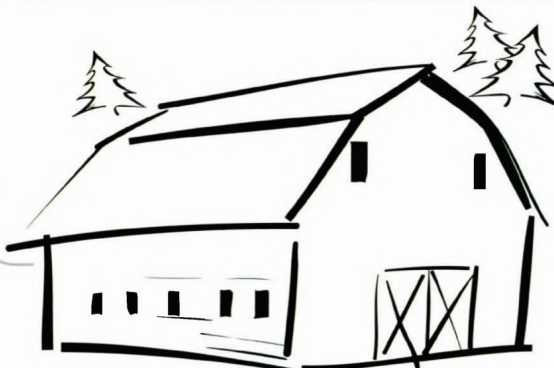
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# 40,000 discs to RIP

In a new six-part series, super-collector *Jimmy Hughes* looks at the technology available to archive his incredible LP and CD catalogue

**F**rom the early 20th century to the present day, the preferred method of music playback in the home has invariably involved some sort of disc – from shellac 78s, though to the microgroove LP and the laser-read CD. Remarkably, the disc has been the dominant medium for over 100 years.

The robust fuss-free CD saw off the sensitive, fragile LP because it offered very good quality and a reliable, easy-to-handle user-interface. Even those who felt CD didn't sound quite as good as the best LPs played on an expensive turntable eventually capitulated – CD made us all lazy!

But recent BPI figures show sales of CDs in the UK have dropped by about 20% since 2001. The rise of illegal file sharing has been a factor here, but so too has the end of what might be called the 'digital replacement cycle', where people bought CDs to replace their old LPs and tapes.

## Physical attraction

Speaking as someone who still buys quite a few CDs each month (25 or more, on average), I'm facing the prospect of dwindling releases. Downloads are an alternative, but – for all the many benefits – it doesn't feel the same as buying an album and actually having the recording in a physical form. It's like owning a copy.

On the other hand, living in a medium-sized flat with a collection of something like 15-20,000 CDs (and as many LPs) I'm rapidly running out of room! CDs and LPs dominate my living area. So the thought of being able to download discs (or rip existing CDs) to a hard drive and save space is a siren call that's hard to ignore...

It makes perfect logical sense to take this route. But, practical or not, psychologically I find it difficult to accept music being stored on a computer hard drive; somehow, it just doesn't feel right. I think of recorded music as a physical thing; an entity in itself. And the album artwork is an important part of the experience.

Buying music in a physical form (whether on LP or CD) crystallizes it. Music, being sound, has no physical substance. Putting it out in album form, with artwork and words, makes it solid – gives it being. That's why, when someone mentions a famous album, you immediately 'see' the sleeve.

## Downloads aren't 'real', are they

By this reckoning, LPs and CDs are far more 'real' than downloads. But, suppose music is downloaded in a high-resolution format that exceeds the quality offered by CD; isn't that more real? After all, ultimately it's the

experience of hearing music that counts – not things like artwork or packaging. This is the big dilemma for music lovers!

Downloads represent a new paradigm for music lovers. Those of us used to buying music in a physical form need to change the way we view things. Many will not want to do so – partly because we're creatures of habit, but also perhaps because we sense that downloads might eventually end our love-affair with physical media.

The Convenience factor – coupled with higher technical quality – creates a powerful attraction. Once the cost of downloaded material eventually drops (why should one pay the same price for an album-download as one does for the CD or SACD?), then we'll witness the Perfect Storm that will sink CD.

Of course, those of us with existing large collections of music don't necessarily have to embrace the change. Speaking personally, I already own enough recordings to last several lifetimes – I don't need any more. Still, the question remains – are the positive benefits of downloads and hard-drive music storage simply too powerful to resist?

Over the next few issues, I'll explore various options to try to answer this. I hope you can join me as I get to grips with the latest music servers, iPods and digital docks to see if hard disc storage can ever compare to the 'real' thing. With 40,000 albums to rip, an early verdict would be a blessing. ●

**If Jimmy Hughes ever opened his flat to the buying public, retirement could come quickly!**

Psychologically, I find it difficult to accept music being stored on a computer hard drive; it doesn't feel right



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A hi-fi enthusiast for four decades, Jimmy's knowledge of system-matching and record-collecting are unmatched in the industry

## WHAT DO YOU THINK?

Place your bets! Will Jimmy endorse new-age hi-fi, or will physical media shine through? Email us now: [hi-fichoice@futurenet.com](mailto:hi-fichoice@futurenet.com)



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