



## Cocktail X30

Serving up the perfect mix of CD ripping and streaming

## Cable talk

Atlas, The Chord Company, QED and Tellurium Q inside



# Hi-Fi Choice

PASSION FOR SOUND

Issue No. 383

April 2014

## Mighty CD plays on

Six disc spinners prove this is still the format of choice



## Hi-res on a budget?

Sony's stunning mini DAC/amp delivers hi-res for less



**NEW SERIES!**  
Build a better sounding system p116

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PRODUCTS ON TEST:

Cambridge Audio, Exposure, JBL, Quad, Rotel and Tannoy

## Focal chords

Find out why the floorstanding Aria 926s are right on song



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# LIVE IT

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Hi-Fi Choice, July 2012

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**Judith Owen** *Ebb & Flow*

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### OUR AWARDS



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



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



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



It's amazing how quickly time flies and another Sound & Vision – The Bristol Show rolls around again. This year's show saw attendance figures up across the three-day February event, which is a very encouraging sign that I hope is an indication of the end of these recessionary times.

There was an infectious buzz about this year's show that saw visitors in the mood to buy, and a genuine interest in getting back to hi-fi basics. The show's emphasis was more on real-world hi-fi setups than high-end components that are out of reach for many, although there were several fine examples of statement hi-fi on display too. See the Show Report on p120.

Playback formats used to dem products came in FLAC form for many and DSD for the few that can support it, but a pleasing number used vinyl to showcase products, and there seemed to be more opportunities to purchase records than in previous years – confirming the format's continuing popularity. There were plenty using CD as the playback format of choice too, and several exhibitors had CD models on their stands. Despite it being over 30 years since the launch of the format, CD continues to play on for the majority of hi-fi fans, and for six of the best models under £800 see this month's *Group Test* starting on p24.

The sharing of knowledge is a strong element of what many enjoy about visiting a hi-fi show, and our new series – starting on p116 – tackles just that in our guide to achieving system synergy. Tell us what topics you'd like to know about by writing to us at [letters@hifichoice.co.uk](mailto:letters@hifichoice.co.uk).

**Lee Dunkley** Editor

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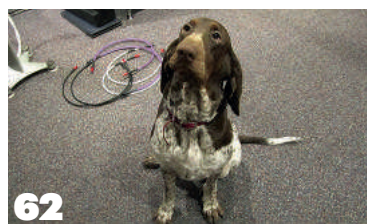
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"It's not just the components that make your system sound good, it's how they interact."

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**Never miss an issue – turn to p20 for our latest subs offer**

## Fifth element

Bowers & Wilkins updates its popular 600 Series with six revamped loudspeaker models

**PRICE:** £349–£1,149 **AVAILABLE:** NOW  
**CONTACT:** 01903 221500 **WEB:** BOWERS-WILKINS.CO.UK

**NOW INTO THEIR** fifth incarnation, the long-running 600 Series from B&W is brought bang up to date with the introduction of six revamped loudspeaker models. On display for the first time at the Bristol Sound & Vision Show in February, the maker says the new 600 Series of models are designed to be as equally at home with two-channel audiophiles as with multi-channel home cinema enthusiasts, with the inclusion of two all-new centre channel loudspeakers and three existing subwoofer models for hi-fi fans wanting to grow their system.

The revamped 600 Series benefits from tried-and-tested technologies filtered down from designs further up the B&W range, and incorporates Decoupled Double Dome (DDD) tweeter technology derived from its CM10 loudspeakers, as well as new dual layer aluminium bass drivers. The 683 floorstander (shown right) is the largest speaker in the new series and measures 180 x 985 x 364mm (WxHxD). Priced at £1,149, it is a three-way, front-ported design fitted with a 25mm

aluminium dome tweeter, 150mm Kevlar cone midrange and two 165mm aluminium bass drivers.

The slimline 684 is the next floorstander down, costing £799. It is a two-way system measuring 160 x 920 x 234mm (WxHxD) fitted with a 25mm aluminium dome tweeter and two 130mm Kevlar cone bass/midrange drivers.

Moving on to the two new 600 Series standmount loudspeakers comes the 685 and 686 models – measuring 190 x 345 x 324mm and 160 x 315 x 229mm (WxHxD) respectively. Both are two-way front-ported designs featuring the same 25mm aluminium dome tweeter as their floorstanding siblings. The 685 is fitted with a 165mm Kevlar bass/midrange driver and the 686 with a 130mm driver version. They are priced at £499 and £349 respectively.

Two matching HTM61 and HTM62 centre loudspeakers are also available priced at £549 and £349. All new 600 series models are available finished in a choice of black ash and white finishes. Look out for the first review of the 683s on these pages soon.

**The 600 Series benefits from tried-and-tested technologies filtered down from designs further up the range**







## COMMENT

### FORGET ABOUT IT

One of the joys of listening to music is discovering something that no one else has heard. It's never been easy, but if you're willing to put in the hard work, it's not impossible. Years ago it used to be the case that if you wanted to discover something new you needed to befriend the cool guy that worked behind the counter at your local Our Price or sit pen and paper at the ready listening to John Peel as he revealed the latest hot thing to come out of the Czechoslovakian grindcore scene.

Of course, the advent of the internet changed all of that, meaning that musicians making stuff in their bedrooms are just as likely to get your foot tapping as artists with million of pounds of record company money behind them. Throw into the mix the fact that there are countless ways to stream music on phones, tablets and computers, and it shouldn't really be that difficult to find something that's never been sampled before.

And yet, Spotify's data reveals that of the 20 million tunes available on its streaming service only 80% have been listened to at least once – this means that there are four million unheard songs waiting to be uncovered. And this is where the new streaming service Forgetify comes in. It's a terrible name, but a nice concept. Believing that it's a travesty that so much music is not being heard, founders Lane Jordan, J Hausmann and Nate Gagnon decided it was time to give "these neglected songs another way to reach our earholes".

To give it a go, log into Spotify, then visit Forgetify.com and click the 'Start Listening' button and you'll be able to hear a track that no one else on Spotify has ever heard. Once enjoyed (or not) it can then be shared via the usual social media channels and then you simply press the 'Next' button to repeat the process.

In the interest of exploration we gave Forgetify a try and felt a slight tingle of excitement as we became the first to enjoy the sonic charms offered up for our delectation. So what can we report? Well there's a lot of classical music on there and we even heard a Duke Ellington tune, but in truth there's an obvious reason why half this stuff hasn't seen the light of day, and much of it is unlikely to do so again... ▶





# Floorstanding Concepts

Q Acoustics unveils Concept 40 loudspeaker

**PRICE:** £1,000 **AVAILABLE:** MARCH  
**CONTACT:** 01279 501111 **WEB:** QACOUSTICS.CO.UK

**A YEAR ON** from the launch of the Q Acoustics Concept 20 standmount speaker comes the introduction of a floorstanding version called the Concept 40. Like the Editor's Choice badge-winning Concept 20 (issue 372) launched last year at Bristol, the new flagship model was seen for the first time at this year's show.

Heralded as a 'world-beating' loudspeaker, Q Acoustics' brand director Alex Munro said: "The introduction of the Concept 40 means music lovers can, for the first time,

enjoy that true 'high-end' experience, but at an affordable price."

The big brother to the Concept 20, the 40 is a two-way double woofer, bass reflex design with 125mm bass units accompanying a 25mm treble unit. Sensitivity is quoted at 90dB and recommended power is 25-150W. Measuring 170 x 972 x 288mm (WxHxD), the Concept 40s are constructed from Gelcore cabinets, offering extremely rigid and low resonances properties, and come in black or white lacquered finishes.



## IN BRIEF

### NAIM MAKES A STATEMENT

● Undoubtedly one of the biggest hi-fi stories to come out of CES held in Las Vegas in January is the news of the Naim Audio Statement NAC S1 preamplifier and NAP S1 mono power amplifiers. Set to arrive later this year, we're told that the NAC S1 features a completely new electronic design and that the NAP S1 mono power amplifiers each claim to be rated at 746W (one horse power) into 8ohms. Price looks set to be around £125,000. **NAIMAUDIO.COM**



## Monitor Audio Airstream

**PRICE:** £400 **AVAILABLE:** MARCH **CONTACT:** 01268 740580 **WEB:** MONITORAUDIO.CO.UK

In a world that's full of square or rectangular component boxes, shapely curves are a little unusual, although very appealing. Monitor Audio's new curvy and compact Airstream A100 is touted as an integrated amplifier enabled with wireless streaming technology.

The network-ready A100 connects to your home computer, smartphone, NAS drive or cloud-based storage service

to stream your music collection, as well as internet radio station via your connected device. Airplay is the headline feature here, offering streaming playback from any Apple device, but DLNA compatibility is also onboard. Supported file formats include AAC, ALAC, MP3, WMA, LPCM, Ogg Vorbis and FLAC.

The compact unit has a built-in Class A/B amplifier that claims to

deliver 50W per channel, and can be partnered with any speakers of your choosing or with the shapely pair of Monitor Audio MASS 10 speakers – below – sold separately.

Connectivity includes a RCA analogue input, S/PDIF optical input and a RCA pre/sub output.

Available in white or black finishes with contrasting side trims, the A100 can be placed in vertical or horizontal positions.





# "The Truth, nothing more, nothing less..."



"This level of performance,  
convenience and style makes for  
an award winning product."

Jeff Dorgay, *Tone Audio Magazine*, January 2013



"Oozes quality in both  
construction and sound"

Paul Rigby, *Hi Fi World*, March 2013



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**Fanthorpes**, Hepworth Arcade, SilverSt, Hull, East  
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**O'Brien Hi-fi**, 60 Durham Road, West Wimbledon,  
London Tel: 020 8946 1528

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

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# Twenty vision

PMC launches the new twenty.26 floorstander

**PRICE:** £5,750 **AVAILABLE:** APRIL  
**CONTACT:** 0870 4441044 **WEB:** PMC-SPEAKERS.COM

**ADDING TO PMC'S** twenty series comes another floorstander to join the already four-strong loudspeaker range. The new twenty.26 is the first three-way floorstanding model, and like the others in the series it features the familiar backwards-sloping cabinet design. Unveiled at The Bristol Show last month (see our Show Report starting on p120) the most noticeable thing that sets it apart from its siblings is the 50mm midrange driver sitting between the familiar twenty series tweeter and new 180mm bass driver. The new midrange is based around development of the fact.12 midrange driver, and integrates seamlessly with the other drivers, says PMC.

Claiming 86dB efficiency the 1,062mm-tall cabinets feature rigid 18-25mm-thick Medite walls, with extensive bracing to help reduce internal cabinet colourations, PMC tells us. The new twenty.26 is fitted with tri-wire terminals on the back and is available in oak, walnut, amarone and high-gloss black finishes.



## IN BRIEF

### ISOTEK EVO3 CONDITIONER



● We all know the importance of conditioning the mains power supply that feeds system components, and IsoTek has unveiled a six-way mains conditioning unit for just that purpose. The EVO3 is the successor to the GII Sigmas and features two high-current outlets incorporating Direct-Coupled technology for power hungry amplifiers. The remaining four 10A auto-sensing outlets supply optimal level conditioning for everything else, says the maker. The wiring is designed so that no two outlets are connected together, and every outlet has its own independent filter network and effectively the EVO3 operates as six conditioners in one box, the maker says. Anti surge protection is built in, and it comes in silver or black units priced at £2,295. **SOUNDFOWNDATIONS.CO.UK**

## Teac's retro music centre

**PRICE:** £450 **AVAILABLE:** NOW **CONTACT:** +49 (0) 8142 4208141 **WEB:** TEAC-AUDIO.EU

This unashamedly retro-looking product is Teac's LP-P1000 Music Centre, combining a turntable, CD player and AM/FM radio. The seventies throwback styling with woodgrain effect is available in black or cherry wood finishes. It is likely to receive many nostalgic glances, but Teac has revived the form and brought it bang up to date with the inclusion of Bluetooth wireless technology to enable

music streaming from today's smartphone and tablet devices.

The main feature of the LP-P1000 is the turntable fitted with tonearm, cartridge and rubber mat. The auto-return tonearm means you don't have to rush up from your seat before a record ends and the platter can playback vinyl at speeds of 33, 45 and 78rpm.

The CD player supports CD-R/RW and MP3/WMA formats, while the

tuner can store 20AM/20FM presets. There's a built-in digital clock and timer too.

The LP-P1000 comes with a pair of two-way bass-reflex bookshelf-sized loudspeakers for connection to the internal amplifier, which claims to offer 25W power output.

Line input connections are via RCAs and a 3.5mm minijack. A RCA output and 3.5mm headphone socket are also provided. ▶





# "I've got a feeling we're not in Kansas anymore..."

A voyage of musical discovery: Nuance. Emotion. Artistry. Over the decades, MartinLogan has produced loudspeakers with the sole purpose of getting you back to the music.

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



Harman adds five new stereo speaker models to its JBL range



# JBL Studio 2 line

New series of loudspeaker unveiled by Harman Group

**PRICE:** FROM £460-£760 **AVAILABLE:** NOW **CONTACT:** 01707 278113 **WEB:** UK.JBL.COM

**HARMAN GROUP HAS** introduced the Studio 2 range of loudspeaker models to its JBL family. The all-new lineup incorporates five loudspeakers with two standmount and three floorstanding models, alongside centre, surrounds and subwoofer models, offering flexible matching options for hi-fi aficionados that are looking to grow their two-channel setup into a multi-channel configuration.

Behind the speaker grilles all the models in the new line are fitted with distinctive horn tweeter

technology derived from JBL's Professional M2 Master Reference studio monitor loudspeakers, promising a 3D soundstage backed by deep powerful bass, says the maker. Two-way standmount models are priced at £460 per pair for the 220s and £600 for the 230s. The three-way floorstanders also start at £600 per pair for the 270s, and £700 and £760 for the 280 and 290 models respectively. Black or espresso wood grain finishes are available and can also be purchased as single speaker models.



# Intuitive speaker system

**PRICE:** £TBC **AVAILABLE:** TBC **WEB:** DAMSONAUDIO.COM

Touted as the world's first intuitive self-adjusting loudspeaker, Damson unveiled its latest Jetstream I line at CES in Las Vegas back in January. The new speaker line incorporates the company's Optimised Room Audio technology with multi-zone

functionality for a wireless audio system around the home using up to eight speakers.

Utilising DLNA technology to connect to home networks, the maker says the Jetstream I line can connect directly to a range of

music host devices. There are three Jetstream models to choose from including the portable I Midi, I Large and the flagship I Soundbar that incorporates two built-in subwoofers. Prices and availability are still to be confirmed.

## IN BRIEF



## CLASSIC RADIO

● The unapologetic vintage looks of Teac's SL-D930 retro radio are inspired by chrome-bedecked classic fifties American cars, says the maker. The visual nostalgia is only skin deep, however, as Bluetooth wireless connectivity is on board bringing the Teac bang up to date for streaming music from smartphones and tablet devices. It has a 40 preset AM/FM RDS radio tuner and a top-loading CD player with CD-R/RW and support for WMA and MP3 formats. The SL-D930 claims 20W from the Class D amp, and a digital clock with timer and snooze facility complete the features list. Available from mid-March.

**TEAC-AUDIO.EU**

## AUDEZE LAUNCH

● UK distributor Decent Audio has added two new Audeze (pronounced Odyssey) planar magnetic headphones to join its LCD line. The open-back LCD-X features ear cups made from polished anodised aluminium, while the LCD-XC is its first closed-back design with hand-made wooden enclosures. Both models are available with a choice of leather-free suede or genuine soft leather-covered earpads. Prices are £1,525 and £1,600 respectively.

**DECENTAUDIO.CO.UK**



# Webwatch

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



## Cambridge crush

For Valentines Cambridge Audio had a Minx Go plus romantic goodies up for grabs via its **#ilovecambridgeaudio** more than... image comp, with some hilarious and creative entries submitted via Facebook and Twitter. Feel the love at [bit.ly/1dO7b6z](http://bit.ly/1dO7b6z)



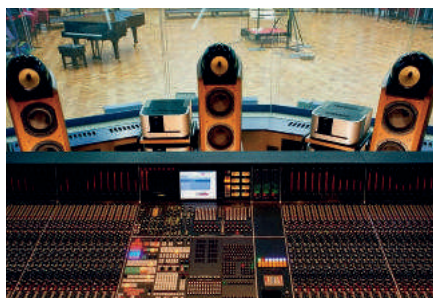
## Ear me now

Looking for a new set of headphones to blow those wet and windy winter blues away? Let Audio Technica's Gary Boss talk you through the updated M Series 're-mastered' range in this video created at California's NAMM Winter 2014 Show. Proper audiophile earmuffs indeed: [youtu.be/wTz08\\_4JB6w](http://youtu.be/wTz08_4JB6w)



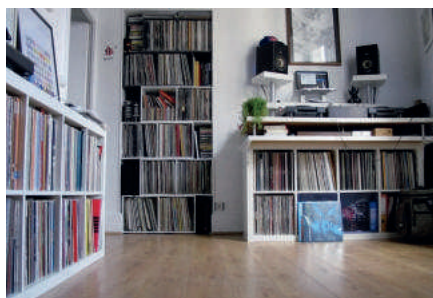
## Mine's on the 45

You've got to be a hardcore singles fan to invest in Simon Yorke's sleek new €2,500 turntable designed for 7in records only. "It won't play 12in LPs, CDs or oven-ready pizzas" states Simon's blog. Read more at: [blog.recordplayer.com/?p=55](http://blog.recordplayer.com/?p=55)



## Abbey residents

Not many brands can claim to be Abbey Road Studios' transducers of choice, but Bowers & Wilkins posted some pics of its Diamond series hard at work in the venue, along with its **#new600series** speaker range: [facebook.com/BowersWilkins](http://facebook.com/BowersWilkins)



## Show us your #shelfie

We've recently been enjoying the rise of the **#shelfie** in audio land: twitter pics of your music and hi-fi gear shown in all its arranged glory. Discogs has been setting the pace via its **#showyourcollection** **#shelfies** hashtags, through some enviously impressive hoards at [twitter.com/discogs](http://twitter.com/discogs)



## Shocking speakers

Do you sometimes feel your hi-fi system lacks a degree of musical spark? Check out this great fun YouTube video of some Tesla coils in full lightning flow as they weld their way through the *Inspector Gadget* theme tune: [youtu.be/Dk37D\\_tkCCc](http://youtu.be/Dk37D_tkCCc)

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## CHOICE TWEETS

**FORGOTIFY (@FORGOTIFY)**  
4 million songs on Spotify have never been played. Not even once. We're changing that.  
[forgotify.com](http://forgotify.com)



**MERIDIAN AUDIO (@MERIDIANAUDIO)**  
Be among the first to experience the new Special Edition series of DSP Digital Active Loudspeakers [#RoadShow](http://bit.ly/19YGnyj)

**CLASSIC ALBUM SUNDAYS (@CLASSICALBUMSUN)**  
Roses are red, vinyl is black, skip the bouquet and send me a stack... Amen to that!  
pinterest: <http://ow.ly/trstj>

**TANNOY RESIDENTIAL (@TANNOYHIFI)**  
Mercury V is the fifth generation of Tannoy's best selling Mercury series, offering performance and value for money  
[youtu.be/1blpsGxjml4](http://youtu.be/1blpsGxjml4)

**DISCOGS (@DISCOGS)**  
Check out the Top 30 Expensive Items in the **#Discogs** Marketplace for 12/13! [goo.gl/Ocmw4x](http://goo.gl/Ocmw4x) [pic.twitter.com/VpAHybV9pC](http://pic.twitter.com/VpAHybV9pC)

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**VPI INDUSTRIES (@VPIINDUSTRIES)**  
Classic Direct at CES! **#3D #vpi** [http://instagram.com/p/i\\_x7h\\_OCqN/](http://instagram.com/p/i_x7h_OCqN/)

**VINY LHUNT.COM (@VINY LHUNT)**  
A man won a lawsuit against his former landlord after a flood destroyed thousands of his **#vinyl** records: [bit.ly/1bbB7Yz](http://bit.ly/1bbB7Yz)

**PAUL GREEN HI-FI (@PAULGREENHIFI)**  
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**IN-DEPTH** FOCAL ARIA 926  
FLOORSTANDING LOUDSPEAKER £1,798





# Flax works

The secret's in the ingredients says **David Price**, who finds the Aria 926 floorstanding loudspeaker a most appetising listen

**W**hy is it that some steaks taste like sun-dried cardboard, while others are dripping with flavour and have the texture of warm butter? It's not that difficult a question to answer, is it? The finest food needs ingredients of the best quality, prepared in a skillful way that doesn't hide the natural goodness. And so it goes for loudspeakers too – no one ever made a great one with sub-par drive units and cabinets that weren't fit for purpose. But just like steak, even a good speaker can be ruined if it isn't cooked properly, or is badly served. Of course, if it doesn't use the right raw materials in the first place, it can never be right.

That's why Focal's announcement that it is using a different cone material in its new Aria 926 speaker is more significant than you might first think. This French company has spent much time looking into drive unit cone materials over the years, and has used markedly different formulations to many of its rivals as far back as the eighties. The material that a cone is made from is critical, as it's the contact point between the speaker and the air it is there to move. It affects the transient response of the driver (the ability to accelerate quickly to catch the leading edge of a note), its rigidity (the cone needs to behave like a piston, moving in and out without flex) and the resonance or lack thereof (the cone needs to be well damped so that it doesn't colour the sound).

Focal has traditionally used Polyglass for its lower-end designs and W sandwich cones for its premium Electra and Utopia ranges. First launched back in 1985, the former comprised a cellulose pulp cone for good damping, together with a layer of glass microspheres in order to increase the rigidity. But the 900 Aria showcases a new recipe – the French speaker specialist has cooked up a sandwich of glass fibre, a special type of textile fibre called flax and glass fibre again. Flax is said to have been around since the fourth century

BC, and used by the Egyptians as protective cloth for mummies, no less. As luck would have it, France is the main cultivator in Europe of flax fibre – principally in Flanders, Picardy, Normandy and the Pas-de-Calais region – and it is thought to be among the very best in the world. What the use of flax brings to the party is a way to damp the glass fibre; the latter material is very rigid and light (hence its popular use in sports cars), but it isn't the most acoustically inert. Flax is, however, so the two should make a happy combination.

The Aria 926 is more than just some bass/mid drivers, however. It also sports new tweeters with phase-optimised crossovers, plus a more classic and timeless look for the cabinets compared with the Chorus 800 series it replaces. Specifically, the new TNF high-frequency unit uses an aluminium/magnesium alloy inverted dome for low mass and high stiffness supported on Poron suspension, which is said to aid linearity and fitted with a front plate waveguide for decent dispersion. The bass and

## ► DETAILS

**PRODUCT**  
Focal Aria 926  
**ORIGIN**  
France  
**TYPE**  
Floorstanding loudspeaker  
**WEIGHT**  
25kg  
**DIMENSIONS**  
(WxHxD)  
294 x 1,035 x 371mm  
**FEATURES**  
• 1x 25mm Au/Mg TNF inverted dome tweeter  
• 1x 165mm and 2x 165mm flax mid and bass drivers  
• Quoted power handling: 40-250W  
• Quoted sensitivity: 91.5dB/1W/1m  
• Quoted frequency response: 45Hz-28kHz (+/- 3dB)  
**DISTRIBUTOR**  
Focal UK Ltd  
**TELEPHONE**  
0845 6602680  
**WEBSITE**  
focal.com

midrange drivers get special injected Zamak baskets and Klippel optimised motor systems. This three-way speaker runs the tweeter from a claimed 28kHz down to 2.4kHz, where it crosses over to the 165mm midrange driver, then at 290Hz two 165mm woofers start to come into play.

Compared with the old 800 series, the new 926's cabinets seem to have evolved just as much as its drive units. With a leatherette (PVC) finished front, real walnut veneered sides (gloss black is an option) and a glass top, this new loudspeaker presents itself well visually – as well as feeling rather classier than previous mid-price Focals. Although not as conservative as a Spendor A6R, for example, they're a lot more grown up and

## The new cone material gives a smoother and more subtle sound

less obviously 'styled' than before. The finish is very good, if not quite superlative, meaning these boxes will look classy wherever they are.

Inside the shell is a combination of 18mm and 24mm high-density fibreboard, with non-parallel sides and careful bracing. The cabs are loaded by a single bottom-mounted reflex port, and this works correctly when the supplied aluminium plinths are fitted. Inside, the



midrange and treble sections have their own sealed enclosures with non-parallel walls to minimise internal standing waves. Round the back, single-wired binding posts are to be found. Overall, the new Focal presents itself as a thoroughly modern and sophisticated speaker, and also proves easy to drive with amplifiers of fairly modest power – including tube designs.

## Sound quality

The Focal family sound is generally very fast, sharp and engaging; these speakers go loud without compression and punch hard on transients, making them lively listens. And the new 926 doesn't lose any of these good things, but it seems to do everything with a little more élan than you'd have got from the earlier 800 series. There's a sense that the new cone material gives a smoother and more subtle sound, yet it is no less detailed – indeed it's quite the reverse. I find the 926 to be a fine advertisement for its maker's new driver technology, sounding as it does 'all of a piece' and really rather natural. Certainly it's never screechy – as some rivals can

be – or dull. Instead, it strikes a considered balance that preserves all those key characteristics we know and love from Focal, yet seems to do things in a more mature and even-handed way than the company's past offerings at this price point.

The result is a big, expansive and open-sounding box that's smooth and detailed from bottom to top. Being a three-way, it feels like it has a lot in reserve, so when crunching crescendos arrive – such as that powerful electric guitar noodling by Bill Nelson in Be Bop Deluxe's *Modern Music* – there's no sense of the speaker sounding breathless and lapsing into stridency. At the same time, those flax cones invest the midband with a transparent feel, meaning it is better able to show the differences between recording studios than many other similarly priced boxes. The Be Bop Deluxe disc sounds a little bright and bracing, whereas Isaac Hayes' Stax-recorded *Shaft* is a whole lot warmer and more sumptuous – it's good to know the speakers aren't adding too large a sonic footprint.



Traditionally, Monitor Audio's £2,300 GX200 is the one to beat, and has a very lavish finish that's more impressive than the Focal. It's also a three-way design, but doesn't have the power and scale of the Focal. In return you get its lovely ribbon tweeter, which has a beautifully finely etched high frequency performance. It's also very transparent and detailed. The Spondor A6R (£2,495) gives a bigger sound than the MA that's very smooth and beguiling and natural, even more so than the Focal in some respects. The 926 has the edge on physical scale, but the Spondor has a wonderfully intricate and involving quality that keeps the 926 honest. As ever go and try all three before you buy, if you get the chance.

Tonally the 926 is a real gentleman, then. *Cafe Regio's*, which is a beautifully rich analogue track, is every bit as warm as it should be, yet shuffles along nicely without the sense that the speaker is losing the rhythmic plot. Although a little softer sounding, those flax cones are just as fast at capturing the attack transients of a snare drum rim shot or the dull pounding of the bass drum, and the result is an extremely enjoyable yet most unfatiguing listen. In absolute terms, there's just a little bit of warmth in the upper bass, which is always an issue with larger floorstanders that aren't hewn from granite. It's far from an unpleasant effect and indeed careful room placement minimises it further, but you'll hear tighter bass guitar sounds from chunkier speakers further up the Focal range.

You might think that with a slightly sweeter midband sound, the metal tweeter will stick out a little more than with previous Focal boxes, but it proves enjoyably smooth. Age of Love's eponymous single is an exquisite slice of trancey dance music, from the genre's halcyon days back in the nineties, and the 926s jump in with aplomb. At high volumes, this speaker is quite superb; distortion is so low that you can push it right up to the point that your flares start flapping, the Aria slamming out vast

## The finish is very good and the Arias will look classy wherever they are

tracks of full, tuneful bass without the merest hint of complaint. Across the mid, the 926 is excellent – fast and poised and wonderfully engaging – and treble glistens away with a lovely crisp yet smooth hi-hat sound.

The fact that all four drive units are matched up to one another so well makes for a very convincing stereo soundstage. Whether it is the epic rock of Genesis' *Los Endos* or the beautiful acoustic *Aerial Boundaries* by Michael Hedges, the Focals cope superbly for a sub-£2,000 speaker system in the tricky job of reproducing the spatiality of the original recording. Of course, higher-end designs – and particularly panel speakers like Quad's 2805 – do better, but the 926 is still very convincing. It seems to push forward beyond the plane of the speakers quite easily, but doesn't ram the music down your throat. And it can hang instruments back very convincingly,



**There'll be none of that bi-wiring here folks...**



## IN SIGHT



- 1 25mm inverted dome tweeter
- 2 165mm flax midrange driver
- 3 Adjustable levelling spike
- 4 Rear binding posts
- 5 Forward-firing bass port

## ON TEST

Focal claims a high 91.5dB sensitivity for the Aria 926, but our measured pink noise figure of 89dB suggest that this is rather optimistic. Very low impedance helps achieve this: despite the claimed 8ohms nominal figure, we recorded a minimum modulus of 2.9ohms – exactly as specified by Focal – at 113Hz. This is low even for a nominal 4ohms design. Impedance phase angles are high so the EPDR (equivalent peak dissipation resistance) dips to a very low 1.3ohms at 85Hz, indicating that the Aria 926 is a pretty tough load for its partnering amplifier. Forward frequency response, measured on the tweeter axis, was essentially

flat in trend up to 12kHz, above which output rises because of the low first breakup frequency of the TNF tweeter (at about 23kHz). As a result the response errors 200Hz-20kHz were rather high at  $\pm 5.2$ dB and  $\pm 5.3$ dB respectively whereas below 12kHz the response was flat to within  $\pm 2.0$ dB – an excellent result for a passive speaker. Pair matching error was also of the first rank at just  $\pm 0.5$ dB over the same frequency range. Bass extension (for -6dB ref 200Hz) was fair at 50Hz. The cumulative spectral decay waterfall shows fast initial energy decay and only low-level resonances in the treble. **KH**

too – with the overall effect of a very spacious and phase-coherent recorded acoustic.

## Conclusion

As a fan of Focal speakers, I have always been aware that they need a certain sort of source to partner them for best results; their upfront and engaging nature makes them lots of fun, but they won't flatter poor front ends gladly. Now though, the new flax cones make the latest mid-price Focal speakers far more amenable to a wide variety of systems. You no longer need to make excuses, and need worry less about partnering equipment. If the Aria 926 is anything to go by, this new cone material marks a step-change for the company. Overall then, these new floorstanders are an unqualified

success; I really enjoy my time with them and I would recommend them to anyone in the market for such a thing. With power, passion yet sophistication and breeding, there's a lot to like here ●

## Hi-FiChoice

### OUR VERDICT

#### SOUND QUALITY



**LIKE:** Easy sound, but with great speed and detail; build

#### VALUE FOR MONEY



**DISLIKE:** Nothing at the price

#### BUILD QUALITY



**WE SAY:** Highly capable, fine looking mid-price floorstanders

#### EASE OF DRIVE



#### OVERALL



## Q&A

### Raphael Triomphe

Home audio product manager, Focal



#### DP: Why did you decide to use flax in your new cones?

**RT:** A driver cone has to comply with three criteria – lightness in order to accelerate very quickly and then obtain a good sound definition, rigidity to minimise the distortion in the bass and finally good damping to obtain a neutral sound. Very quickly in the research, our engineers concluded that a mono material solution could not be used to reach the performance requested. So the composite solution in a sandwich construction was the only one to follow and flax as the core material was the ideal choice. It has fantastic structural properties, being naturally light because the fibre is hollow, the density of flax is very low and equal to 1.54. The rigidity of flax is very high, indeed the tensile elongation of the fibre is very low (1.5%) and the Young's modulus is similar to Kevlar. Flax is made of 80% cellulose, which is great for damping. This technology allows us to manufacture different types of cone for the midrange (light) and bass (stiff) units.

#### Why was aluminium/magnesium chosen for the tweeter?

Aluminium is a light material that provides good damping while the magnesium brings rigidity. This is three and a half times more rigid than titanium, the previous material used by Focal to make tweeter domes.

#### What's the thinking behind the styling of the 900 series?

The 'techno design' is over. For Aria we wanted to get rid of all the unnecessary touches and create a highly desirable acoustic object. That's why the driver screws have been covered by brushed metal rings and the front grille is now magnetic. Aria has been conceived as an elegant piece of home furnishing; simple, with great stature, quality materials and soft shapes, which will resist the passage of time. We used glass on the upper face because it is a very resistant material, and it brings a nice contrast with the matt-like finish of the front baffle.

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# How we test

Hi-Fi Choice employs the most rigorous test and measurement regime in the business. Here's how we do it...

## Unique group tests

This month's group test is supported by rigorous listening tests, backed up with objective lab testing

### CD PLAYERS GROUP TEST

**THE PROCESS OF** reliably auditioning six CD players isn't as straightforward as doing a single standalone review. Each machine is powered continuously for an extended period to ensure it is properly run in; players arrive from manufacturers in different states; some are box fresh and brand new, others have been well campaigned. This ensures that all have reasonable use before critical listening takes place. Next, the machines are assembled on matching equipment supports, so none get preferential positioning.

All players remain powered up with the same power cables and the listening begins. The four

test songs are chosen to provide a wide variation in recording quality, as well as different instruments and sounds. Each track is played several times, copious listening notes are made, and then the next CD player is auditioned. The process is repeated with the different songs until a definitive picture of the sound quality of the player is obtained. This is then swiftly written up while it is still fresh, and then finally a general assessment of the players' usability and quality is made, which prefaces the sound quality section in the printed review. The machines remain in the review system for several days after the test, for further reference.

### RESULTS AT A GLANCE

#### Output and impedance

+10

#### S/N ratio

+40

#### Distortion

0

#### Digital jitter

+50

#### Frequency response

+10

KEY: ■ Group average

■ % below average ■ % above average

#### OUTPUT LEVEL & IMPEDANCE

The typical output level of a CD player is 2V, but its ability to deliver this level at all frequencies is indicated by its output impedance.

#### SIGNAL-TO-NOISE RATIO

A direct representation of the player's A-weighted S/N ratio, measured in 3rd-octave bands from 20Hz-20kHz relative to its maximum output.

#### DISTORTION VS LEVEL & FREQUENCY

This value represents a measure of the distortion trend across both the entire audio band and over a full 100dB of the player's dynamic range.

#### DIGITAL JITTER

Jitter is any uncertainty in the timing of digital audio data as recovered by the CD transport and processed by the DAC. Converted to analogue audio, jitter manifests as a form of distortion.

#### FREQUENCY RESPONSE

A measure of the 'flatness' of the player's frequency response from 20Hz (low bass) to 20kHz (extreme treble) – the practical limits imposed by CD's specification.

### REFERENCE SYSTEM

#### AMPLIFIER:

Musical Fidelity M6500i

#### LOUDSPEAKERS:

Focal Aria 948

#### CABLES:

Mark Grant G2000HD interconnects  
Black Rhodium Tango speaker cables

#### EQUIPMENT SUPPORTS:

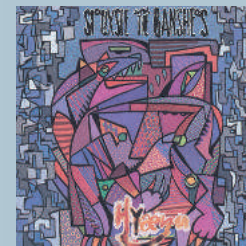
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### TEST MUSIC



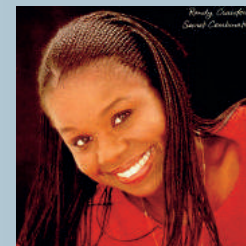
#### NEW ORDER

Technique  
Vanishing Point  
CD



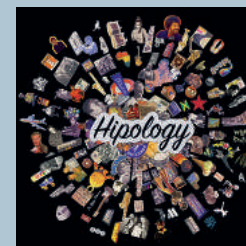
#### SIOUXSIE AND THE BANSHEES

Hyaena  
Swimming Horses  
CD



#### RANDY CRAWFORD

Secret Combination  
You Might Need Somebody  
CD



#### VISIONEERS

Hipology  
Come Feel The Milky Night  
CD



### OUR GROUP TESTS

and Lead Review are subject to exhaustive lab testing by Paul Miller using the QC Suite Functional Testing Station (left). Paul has tested more hi-fi equipment than any reviewer in the world, so you know you're in safe hands.

We don't publish pages of graphs, but we do understand the importance of transparency. So, readers may view full QC Suite test reports for our key reviews by clicking on the red download button on our website. [www.hifichoice.co.uk](http://www.hifichoice.co.uk)



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

## high fidelity

*noun*

the reproduction of sound with little  
or no distortion, giving a result as  
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# Group**test**

CD PLAYERS £300-£800

## 30 something

Over three decades after it was launched, new CD players continue to appear. **David Price** checks out six affordable models

**AT THE RIPE** old age of 32 years – and counting – the ubiquitous little silver disc continues to spin. Who'd have thought it? Will there ever be a future format that lasts this long again? I think not. Compact Disc continues to satisfy so many of us because it was able to gain traction before any rival formats arrived. For nearly 15 years, it was the only digital audio game in town.

**CDs are easy to play, don't require any fiddling around and sound really good**

Of course, SACD and DVD-A arrived at the end of the last century, expecting to usurp it. But the hapless powers behind it ensured that the public got confused and stuck with what they knew. The format war between the two incompatible new hi-res formats put the public off, just as the old video cassette wars of the

early eighties. Wasn't it Einstein's definition of madness to do the same thing repeatedly, but expect a different outcome?

CDs are easy to play, don't require any fiddling around and can sound really rather good if done properly. Indeed, just like vinyl towards the end of its expected life, CD has suddenly become quite palatable.

### The joy of six

The six models tested here range in price considerably, but all share the wealth of knowledge that we've amassed over CD's long lifespan. Designers know all about the need to minimise jitter and use decent DACs. Discoveries made by high-end companies some 20 years ago – such as Meridian with jitter and dCS with upsampling – have seeped down into basic CD player best practice, and are found in most machines here.

Are these latest budget boxes good enough to sway you into updating your existing player, or simply buying another one? Read on to find out... ►

### ON TEST



**Cambridge Audio Azur 651C** £350 **p27**  
Many regard this machine as far more capable than it has a right to be at this price point. Its design is surprisingly slick and it now has a rather attractive brushed aluminium fascia.



**Exposure 1010CD** £415 **p29**  
From a company that made its name with high-quality amps in the eighties, this attractively styled deck has some serious engineering inside and promises a lot at the price.



**Quad Elite CDS** £800 **p31**  
Stretching way back to the 66, Quad's spinners have always been popular, with a smooth, musical and engaging sound. The Elite CDS also sports the latest 24/192 upsampling DAC.



**Rega Apollo-R** £550 **p33**  
The original Apollo CD spinner arrived nine years ago. The latest R variant uses technology trickled down from the flagship Isis and Rega DAC, to give a uniquely styled disc spinner.



**Rotel RCD-1570** £700 **p35**  
Undeniably one of the best looking machines here, the slot-loading disc mechanism is a joy to use. But don't let its looks confuse you; serious attention has been paid to its sonics.



**TEAC CD-H750** £300 **p37**  
This company's silver disc spinners have acquired a great reputation over the years, and more recently Teac has done very well in the field of mini components too.











"Get up and drive your funky soul!"

James Brown

# The heart and soul of music

Precision; a new luxury loudspeaker range from Tannoy, built to deliver music as it was meant to be heard. With audiophile features such as double-magnet drivers, hand-built crossovers and mass-load cabinet tuning, Precision has music at its heart and soul. Across two stunning floorstanding models, a compact stand-mount and matching centre channel speaker, Precision delivers breath-taking detail and musical dynamics. Built around a brand new 6 inch (150 mm) version of Tannoy's world renowned Dual Concentric™ driver, the contemporary cabinets boast premium fit and finish in a choice of colours. Powerful, passionate and incredibly precise, Precision gets to the heart and soul of music like no other speaker in its class.

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# Cambridge Audio

## Azur 651C £350



Looking for a sassy CD player at a decent price, you say? Cambridge might be a good place to start...

### DETAILS

**PRODUCT**  
Cambridge Audio  
Azur 651C

**ORIGIN**  
UK/China

**TYPE**  
CD player

**WEIGHT**  
4.8kg

**DIMENSIONS**  
(WxHxD)  
430 x 85 x 305mm

**FEATURES**  
• Twin Wolfson  
WM8742 DACs  
• 1x RCA phono  
line output  
• 1x XLR balanced  
output  
• S3 custom CD  
servo mech

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Richer Sounds

**TELEPHONE**  
0333 9000093

**WEBSITE**  
cambridgeaudio.  
com

**A**bout 15 years ago, mainstream Japanese manufacturers left the budget hi-fi arena, leaving smaller specialists like Cambridge Audio to cater for cash-strapped audiophiles. The money no longer seemed to be in two-channel, so they all raced to the home entertainment side of the electronics market. However, Cambridge Audio thrived, producing a range of budget separates that sounded superb at their respective price points – even if they lacked some aesthetic and operational sophistication. This latest range addresses these latter issues, and the 651C feels pretty polished at the price, inside and out. It has a swish brushed aluminium case – way nicer than what it was offering even just a few years ago – and a crisp DFSTN (Double Film Super Twisted Nematic) display with full CD Text support. The disc tray is smooth acting and the machine is pleasant enough to use.

Inside, there's a good-quality mechanism with custom servo and master clock, and a toroidal transformer supplies power. All printed circuit boards use double-sided surface mount technology, eliminating wire links and giving ultra short signal paths, says the company. The unit has dual-layer damped feet to minimise the ingress of vibrations, and it has an 'eco-friendly' standby mode. The 651C has the usual optical and coaxial digital outputs round the

back, plus remote control socketry, and is available in a choice of black and silver finishes.

### Sound quality

Spending an extra £50 over the Teac (p37) buys you a substantial step up in sound. Whereas the Japanese player does a good job of making a nice noise – covering its tracks so as to disguise its failings – the 651C doesn't have those failings in the first place. As a result, you get a player that sounds richer and more rounded, and drills down into the detail better, slotting the musical information into place in a way the cheaper player can't.

For example, the New Order track sounds far more realistic and less processed. While the Teac's rendition is surely enjoyable, the Cambridge starts to tell you what is really going on. From the opening bars, the hi-hat sounds more metallic and less airbrushed; you sense that you can hear the full attack and sustain of the sound, and know when it falls away completely. As the first verse kicks in, the synthesisers' chiming harmonics are better conveyed and everything falls into place more cohesively. Again the sustain of the lead keyboards is better and this gives a sense of the song gliding along in a way that the cheaper player just can't muster.

The richer tonality of the Azur is again in evidence on the Siouxsie and The Banshees track, *Swimming Horses*. The piano work sparkles beautifully; the sound is lustrous and

### ON TEST

The next-to-most-affordable player in this month's test is the only model to offer a selection of digital filter modes. The Linear and Steep filters still have pre- and post-ringing artefacts in the time domain, but the former offers a constant (time coherent) group delay while the latter has a very sharp cut-off at the edge of the audioband (–4dB between 19 and 20kHz). The Minimum phase filter is arguably the most interesting because its time domain response has more post-event ringing but no pre-event ringing, which is subjectively preferable.

Its general performance is also first rate, offering a 2.3V output from a low 46ohm source impedance, a wide 109.5dB A-wtd S/N ratio and very low 120psec jitter. Distortion is also very well managed, not only plenty low enough at 0.003%, but also held to this value right across the 20Hz-20kHz frequency range. **PM**

### RESULTS AT A GLANCE

#### Output level & impedance

+10

#### Signal-to-noise ratio

+20

#### Distortion vs. level & freq.

–20

#### Digital jitter

+20

#### Frequency response

+50

KEY: ■ Group average  
■ % below average ■ % above average

more immersive, and the bass guitar gains extra heft. Vocals are better carried – more alive and emotive – and the song becomes more poignant and arresting to listen to. This rather overshadows the more subtle 'hi-fi' improvements, but they're still there all the same; stereo imaging is tighter and more focused and the soundstage is more expansive.

Indeed, by the overall standards of the group, this player comports itself very well – it's a very engaging machine that conveys the music in all its glory. The only obvious downside is a slight looseness in the bass compared with some of the more expensive machines. ▶

### Hi-Fi Choice

#### OUR VERDICT

##### SOUND QUALITY

★★★★★

LIKE: Wonderfully incisive and detailed sound; musical too

##### VALUE FOR MONEY

★★★★★

DISLIKE: No oil painting!

##### BUILD QUALITY

★★★★★

WE SAY: Serious attempt at making a budget audiophile CD player

##### FEATURES

★★★★★

##### OVERALL

★★★★★



**Hi-FiChoice**

£1,499  
excl stands

## OUR VERDICT

### SOUND QUALITY



**LIKE:** Powerful, well integrated and very refined performance; excellent build

### VALUE FOR MONEY



### BUILD QUALITY



### EASE OF DRIVE



**WE SAY:** A capable speaker with some impressive attributes

### OVERALL

**Morel Octave 6**



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## Exposure 1010CD £415

It's nearly half the price of the Quad Elite, but have too many corners been cut to bring the cost down?

### DETAILS

**PRODUCT**  
Exposure 1010CD

**ORIGIN**  
UK/Malaysia

**TYPE**  
CD player

**WEIGHT**  
5kg

**DIMENSIONS**  
(WxHxD)  
440 x 90 x 300mm

**FEATURES**  
• BurrBrown  
PCM1716 DAC  
• 1x RCA phono  
line output  
• 1x optical digital  
output  
• Drawer-loading  
CD drive

**DISTRIBUTOR**  
Exposure  
Electronics Ltd  
**TELEPHONE**  
01273 423877

**WEBSITE**  
exposurehifi.com

**M**any modern audiophiles will have first become acquainted with Exposure in the eighties, when the company established itself as the purveyor of high-quality transistor amplification. It was distinctive for not being as bright and bracing as the popular Naim sound, and yet a good deal more musical than many Japanese or American amps. Since then, Exposure has gained a broader outreach, making some very capable affordable separates while retaining its purist philosophy. The 1010CD personifies this; it's inexpensive in Exposure terms yet real attention has been paid to the design.

Construction is the usual steel box with anodised aluminium fascia plate. It's neat and purposeful, and has an easy-to-read blue vacuum fluorescent display – complete with eighties-style ‘music calendar’ – which can be turned off for better sound. Inside, a chunky 30VA custom toroidal transformer provides clean power to the circuitry, and feeds the double-sided PCB that sports decent signal path capacitors and a BurrBrown PCM1716 DAC chip. Round the back, there's the usual digital output – although this time only in Toslink optical form. A remote control is bundled. The Exposure is nice enough to use, but doesn't feel as expensively finished as rival machines; its fascia panel has ever so slightly sharp edges for example, so you can tell it has been built down to a price.

### Sound quality

Tonally the smoothest of this group, the Exposure sounds warm, rich and full, which will suit many budget systems very well – but there is a sense that it lacks a little bite and incision. In some ways it's a sort of synthesis between the silky but slightly opaque-sounding Teac (p37) and the richer, more incisive and engaging Cambridge Audio. It loses a little of the latter's detail and insight, although it adds a touch of warmth and polish. Interestingly, as well as a subtly different tonal balance, there's a presentational difference too, as the Exposure seats the listener a little further away – and higher up in the gods, as it were. The result is that instead of feeling right in the action, you get a better sense of perspective. Compared with the similarly priced Cambridge, it's a little less punk rock and a bit more stadium rock.

Take the New Order track for example. The opening drum sequence instantly marks out the Exposure as a little less forceful player; you don't get those electronic kick drums etched in-between your eyes! Instead, there's a slightly more standoffish sound, less immediate and less initially appealing. But within a second or so you start to notice the interplay between the snare and hi-hat, and it's done in a way that none of the cheaper players here quite manage. Even the excellent Azur, with all its cleverness, doesn't quite manage to catch these tiny

### ON TEST

Like the Teac player in this test, Exposure's 1010CD betrays a hint of PSU rectifier noise with peaks at 100Hz/-92dBV, 200Hz/-97dB, 300Hz/-107dB etc. Even with A-weighting these do impact on the overall S/N ratio, bringing it down from a potential 108dB closer to 102dB. Nevertheless the player's low-level resolution remains ‘better than 16-bit’ with errors of just  $\pm 0.5$ dB over a full 100dB dynamic range. Also like the Teac, these low frequency signals crop-up on the jitter spectrum, possibly contributing to the player's slightly warm overall balance.

Distortion is higher than with other players here, but at 0.001-0.0015% at its full 2.2V output (20Hz-20kHz), falling to 0.0008% at -10dBfs, THD could never be described as ‘high’! The 1010CD's response is very flat (a mere -0.13dB/20kHz turndown at 20kHz), but there is an increase in output impedance from 50ohm (mid) to 150ohm (bass). **PM**

### RESULTS AT A GLANCE

#### Output level & impedance

0

#### Signal-to-noise ratio

-40

#### Distortion vs. level & freq.

-30

#### Digital jitter

+10

#### Frequency response

+30

KEY: ■ Group average  
■ % below average ■ % above average

microdynamic inflections. Then the verse kicks in and it's initially a little less striking, but then again you begin to find the overall flow of the song highly enjoyable. There's a better sense of depth perspective than many other players here and the Exposure seems confident to hang backing instruments just where they should be – at the back.

The Visioneers track highlights the pleasing warmth of this player, and reminds us of the widescreen presentation. But inside the recorded acoustic, things aren't quite as tightly focused as with the Cambridge. It's certainly an enjoyable, pleasing player, but it's not perfect ●

### HIFIChoice

#### OUR VERDICT

##### SOUND QUALITY

★★★★★

**LIKE:** Warm, sophisticated sound; musicality

##### VALUE FOR MONEY

★★★★★

**DISLIKE:** Casing obviously built down to a price

##### BUILD QUALITY

★★★★★

**WE SAY:** Fine budget CD spinner with mature sonics

##### FEATURES

★★★★★

#### OVERALL

★★★★★





Apprentice MM  
Phono stage



SP2 floor standing  
Speakers - gloss



MC3 reference  
Phono stage



Apprentice TT

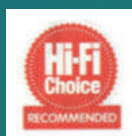


# TALK

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# Quad Elite CDS £800



It's the most expensive of the pack, but will its performance justify that price tag?

## DETAILS

**PRODUCT**  
Quad Elite CDS  
**ORIGIN**  
UK/China  
**TYPE**  
CD player  
**WEIGHT**  
4.5kg  
**DIMENSIONS**  
(WxHxD)  
321 x 70 x 310mm  
**FEATURES**  
• Crystal CS4398  
24-bit DAC  
• 1x RCA phono  
line output  
• Quad Link  
connector  
• Tray-loading  
CD drive  
**DISTRIBUTOR**  
International Audio  
Group Ltd  
**TELEPHONE**  
01480 452561  
**WEBSITE**  
quad-hifi.co.uk

**T**his is the latest version of Quad's CD player, and the most costly model in the Group Test. Quad CD players started in the mid eighties with the 66, which was targeted at buyers wanting a step up from budget machines, but was never intended to be a high-end machine. Quad silver disc spinners have always been overshadowed by the company's superb range of electrostatic loudspeakers, so its players are still less well known than perhaps they should be. The headline feature of the Elite CDS is the 24-bit/192kHz upsampling DAC fitted, replacing its predecessor's 24/96 converter.

The unit is a little unusual looking, having a three-quarter width sculpted aluminium case with crenellations at the back, and an understated fascia with the minimum of controls – just four to cover the transport functions and disc open/close. The display is basic but clear to read, although the rather wobbly disc tray lets the side down a bit at this price. Inside the CDS gets a new transport mechanism and servo system, custom designed by Quad engineers; track access is swift, but the button layout is confusing at first. A new master clock is fitted, as is the aforementioned Crystal CS4398 24-bit DAC. Quad says high-quality electronic components are specified, with multi-layer circuit boards. Round the back there are analogue outputs and proprietary Quad Link connectors, plus an IEC mains input.

## Sound quality

As soon as the Quad's laser lights the silver disc inside up, it becomes abundantly clear that this is a rather special-sounding device – one whose sonics are commensurate with its higher price. While this group has provided a few surprises, the Elite CDS restates the natural order of things with a beautifully detailed, delicate yet powerful sound. It is noticeably better than the excellent-value Rega (p33) and swish Rotel (p35) in most respects, and leaves the best of the budget machines – the Cambridge Audio – a good few furlongs behind.

Kicking off with the New Order track, and the opening few phrases display a wonderfully natural drum machine sound (if there is such a thing!), with an excellent sense of timing. The music isn't thumped out at the listener in a brutish way, but still manages to be tremendously impactful and invigorating. *Vanishing Point* can tend to sound really rather compressed and muddled, but here it is neither; the Quad signposts the snare drum accent playing once every four bars that the others here have either glossed over or completely missed. And yet it all seems so effortless and undramatic, the CDS shows no sense of strain. Behind the frenetic drum track glides some beautiful keyboard work, chiming like only early digital synths should. Vocals are gorgeously smooth yet float like clouds over the main mix,

## ON TEST

In many respects the technical performance of this Elite CDS bears a strong resemblance to that of Quad's costlier Platinum DMP CD player. Both offer a high 2.4V maximum output allied to a very wide 110dB A/wtd S/N ratio while jitter is suppressed to just 115psec – the measureable limit for CD's 16-bit data. Both players employ the minimum phase variant of the DAC's digital filter (reducing pre-ringing for more post-event ringing) but although their time domain behaviour looks the same, the CDS yields better attenuation of digital 'images' (-107dB versus -27dB).

The frequency response and output impedance are almost identical (-0.6dB/20kHz and 116ohm, respectively), which also suggests Quad is utilising a similar analogue stage in both players. When it comes to distortion, the CDS has the edge, offering a very low and impressively consistent 0.0007%-0.0008% from 20Hz-20kHz. **PM**

## RESULTS AT A GLANCE

### Output level & impedance

+10

### Signal-to-noise ratio

+30

### Distortion vs. level & freq.

+30

### Digital jitter

+30

### Frequency response

-20

KEY: ■ Group average  
■ % below average ■ % above average

rather than being submerged as with some other machines here. Most impressive of all is Peter Hook's bass guitar work; suddenly it appears effortlessly in front for all to hear, and wonderfully tuneful. Everything is set perfectly in its place in the mix, too.

The Randy Crawford track confirms that the Quad has the measure of the others, aside from the Rega perhaps. It is wonderfully spacious, with elements of the mix glistening out like stars in the night sky, in perfect focus. Rhythmically the song hangs together superbly, and the player's transparency allied to its innate smoothness makes for an effortless, but nonetheless engaging listen. ▶

## Hi-Fi Choice

### OUR VERDICT

#### SOUND QUALITY

★★★★★

**LIKE:** Wonderfully open, clean, natural sound; build quality

#### VALUE FOR MONEY

★★★★★

**DISLIKE:** Fiddly ergonomics; basic display and wobbly disc tray

#### BUILD QUALITY

★★★★★

**WE SAY:** Highly accomplished mid-price CD spinner

#### FEATURES

★★★★★

### OVERALL

★★★★★





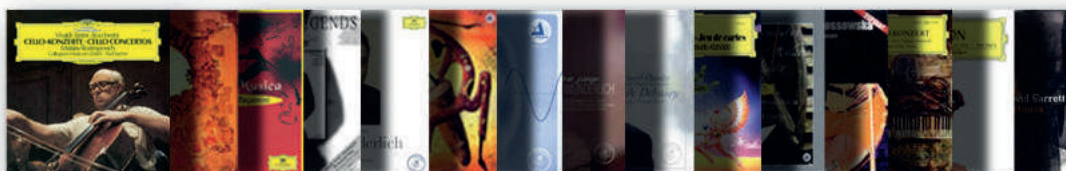
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# Rega Apollo-R £550



Looking like *Knightrider* and a joy to use, can the master record player maker come up trumps with CD?

## DETAILS

**PRODUCT**  
Rega Apollo-R  
**ORIGIN**  
UK

**TYPE**  
CD player

**WEIGHT**  
4.3kg

**DIMENSIONS**  
(WxHxD)  
220 x 90 x 320mm

**FEATURES**  
• Wolfson WM8742 DAC  
• 1x RCA phono line output  
• 1x XLR balanced output  
• Top-loading CD drive

**DISTRIBUTOR**  
Rega Research Ltd  
**WEBSITE**  
rega.co.uk

It is rare for companies that start out as turntable manufacturers to branch out into electronics, and then excel in making digital sources. The skill sets required for the two respective genres are very different, and hard to come by. Rega doesn't seem to have been dissuaded, however, and the Apollo-R turns out to be a striking product in several ways. The acrylic-fronted, aluminium casework is a delight, the top-loading mechanism a tactile joy, and the ergonomics excellent – it's a fine machine to use, surely the nicest here. Construction quality is superb at the price, and there's a choice of silver or black finishes complimented by a crisp red LED display, complete with retro 'music calendar'.

Inside, the company says lessons have been learned from its high-end Isis CD player and popular – HFC award-winning Rega DAC (issue 357). Since the original Apollo's launch in 2005, the printed circuit board layout has been tightened and a Wolfson WM8742 DAC fitted. Tweaking has been done to the power supplies feeding the CD processor, optical block and laser diode amplifier, and the analogue output stage has better op-amps fitted. It also runs the latest Rega software for controlling the optics; Rega says this improves sound noticeably. The user interface now gets its own dedicated processor for better stability; track access is super fast and smooth. A

remote is supplied, and round the back a coaxial digital output is fitted alongside standard analogue outs.

## Sound quality

There's nearly always one star performer in every round up, and this is it. However, as we'll discover, stars aren't always fully rounded things! Essentially, the Apollo-R is a brilliant-sounding silver disc spinner – it is mesmerisingly entertaining to listen to. It seems to unlock a whole extra layer of emotion in the music, as if to remind you that it isn't just hi-fi that you're listening to, but the expression of some poor musician's tortured inner soul. It makes everything an intense experience, and is guaranteed to keep even the most sleep-deprived night owl captivated on the edge of the sofa.

The beautiful Visioneers track appears to have about twice as much going on compared with when its heard on any other machine. That lovely sinuous bassline modulates up and down in a wonderfully hypnotic way, and the fat synths pulsate with an ease hitherto unheard. Indeed, even the excellent, but more costly, Quad seems a little standoffish in comparison. Likewise the Siouxsie and The Banshees song is amazingly dramatic – the Rega seems to pull the listener right in, on a rollercoaster ride. Rhythmically it proves brilliant, bouncing along like a rubber ball, making everything sound somehow interlinked to everything else. It's also

## ON TEST

This 'R' version of Rega's familiar Apollo CD player offers improvements in performance across the board. Most significant is the reduction in power supply-related jitter, down from 700psec to just 200psec in the 'R'. The output level is unchanged at 2.15V, but the A-wtd S/N ratio has widened from 102.9dB in the original model to 106.5dB here – a reflection of the superior Wolfson DACs and new analogue output stage.

Distortion is a little lower too, from 0.007% at peak output through the midrange (Apollo) to a mere 0.0005% here. This is a great result although, at lower digital signal levels, there's precious little difference in distortion between the old and new Apollo.

The Apollo-R has the very mildest bass roll-off of -0.2dB/20Hz and a similar -0.25dB shaving at 20kHz but, depending on choice of interconnect, the 550-600ohm output impedance may make more difference. **PM**

## RESULTS AT A GLANCE

### Output level & impedance

-20

### Signal-to-noise ratio

0

### Distortion vs. level & freq.

-20

### Digital jitter

-10

### Frequency response

-20

KEY: ■ Group average  
■ % below average ■ % above average

pretty dynamic too, really spotlighting the individual accents on the phrasing of the musicians.

However, it's not all hearts and flowers. The New Order track again sounds lovely, but closer inspection reveals some frailties, too. First, tonally it's not quite as smooth or as well defined as the Rotel or even the Cambridge Audio; texturally it still sounds just a little unsophisticated. Also, spatially it's rather challenged. Like all players here it is nicely expansive, but the Rega isn't very precise on its placement of images in the mix and doesn't seem quite as stable either. Nothing's perfect I suppose, but this sure is fun ●

## Hi-Fi Choice

### OUR VERDICT

#### SOUND QUALITY

★★★★★

#### VALUE FOR MONEY

★★★★★

#### BUILD QUALITY

★★★★★

#### FEATURES

★★★★★

#### OVERALL

★★★★★

**LIKE:** Riotously good fun to listen to; great ergonomics and build  
**DISLIKE:** Imaging not as tight as some rivals  
**WE SAY:** Charming, charismatic and compelling CD spinner

★★★★★



---

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# Rotel

## RCD-1570 £700



Rotel's been in the silver-disc spinning game now for over 30 years. Will experience prove to be the clincher?

### DETAILS

**PRODUCT**  
Rotel RCD-1570

**ORIGIN**  
Japan/China

**TYPE**  
CD player

**WEIGHT**  
6.7kg

**DIMENSIONS**  
(WxHxD)  
431 x 93 x 320mm

**FEATURES**  
• Wolfson WM8740 DAC  
• 1x RCA phono line output  
• 1x XLR balanced output  
• Slot-loading CD drive

**DISTRIBUTOR**  
Bowers & Wilkins

**TELEPHONE**  
01903 221500

**WEBSITE**  
rotel.co.uk

**H**ere's a company with something of a varied past. In the seventies it was making huge, chintzy hi-fi separates, but a decade later had become famous for stripped-down, minimalist products with the accent on sonics rather than frills. It has stuck with this, watching larger Japanese manufacturers fall by the wayside in pursuit of other markets, and now has a great reputation as a purveyor of affordable audiophile products. The player here is the successor to the boldly styled 1520, whose basic layout it shares. It sports a centrally mounted slot-loading CD drive, which works slickly. Indeed, it's classier to use than any of the other tray loaders here.

The feeling of sophistication continues when you look at the fascia, which is a lovely slice of brushed aluminium and the buttons are neatly laid out and positive in use. The vacuum fluorescent display lights up – predictably enough – in blue, and while it may be a rather cold colour it's easily readable. Inside, there's a Wolfson WM8740 digital filter and DAC chip, working up to 24/192 resolution. Operationally, the mechanism can be slightly noisier than the others here, and oddly it will recognise and display HDCDs (remember those?), but won't play them at their higher resolution! This is something of a ghostly feature, harking back to when Rotel made great HDCD players.

### Sound quality

The Rotel is a strong and assertive sounding CD player, with an animated, musical nature. The New Order track sounds highly energetic and forceful, with the RCD-1570 capturing the frenetic synthesiser work, chiming keyboard stabs and that busy, undulating bassline. It's a very compressed track, which makes it all the more difficult for budget CD players to shine, as there's so much going on, crammed claustrophobically into one small space. But this machine isn't fazed in the slightest, showing itself to have an extremely detailed midband bristling with detail. This is allied to a clean and crisp treble up top and partnered with a big, powerful bass down below; indeed its low-frequency power is the best of the group.

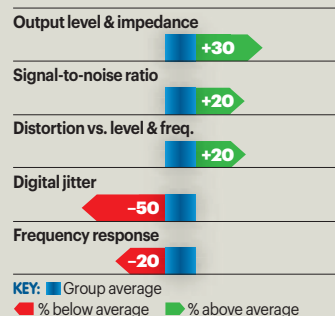
Moving to the more gentle strains of Randy Crawford, and there is a good deal of air and space to the proceedings, and the singer's stunning voice is really well carried tonally – sounding rich and breathy. Backing instruments time nicely and the song sounds polished and sophisticated in a way that all here except the Quad can't quite deliver. However, this song does show the Rotel to be a little mechanical sounding; at this price, this isn't a criticism so much as an observation, it's just that the song doesn't quite have the lovely organic flow of the Rega. All the instruments are beautifully rendered, but the whole doesn't quite gel together so

### ON TEST

This CD player employs a Wolfson WM8740 DAC, but Rotel's own analogue stage has been 'tuned' with a mild low frequency response roll-off amounting to -0.45dB/20Hz. Measured via its balanced XLR outputs it also shows a slight increase in harmonic distortion at these low frequencies (0.0024% at 1kHz to 0.016% at 20Hz) plus a slight increase in output impedance to 100ohm – technical features that may not be unrelated.

More important is the fact that distortion is largely unvarying through mid and very high frequencies. Also this player offers a wide 110dB A-wtd S/N ratio, once we compensate for the high 4.2V maximum outputs. Stereo separation is similarly wide at >105dB (20Hz-20kHz) and intermodulation distortion held very low at just 0.0002%. On the other hand jitter, both correlated and noise-like, is rather higher than typical for a player in this class at over 1,000psec. **PM**

### RESULTS AT A GLANCE



well. It's a very impressive-sounding machine, but not quite as seductive.

The Siouxsie and The Banshees track is breathtaking. Its powerful piano cadences, allied to the impactful drum work, are carried with blistering speed. The Rotel is a dynamic player, and never quite lets you forget this – there's a touch of melodrama to its presentation, which is a joy with powerful pop such as this. Lead singer Siouxsie's vocals are both haunting and ethereal, but lack just a touch of the warmth that the Rega seems to give them. In this instance, the Rotel's presentation seems to suit the song, and proves to be a compelling listen. ●



### Hi-Fi Choice

#### OUR VERDICT

**SOUND QUALITY**  
★★★★★ **LIKE:** Styling; build quality; slot-load drive; powerful sound

**VALUE FOR MONEY**  
★★★★★ **DISLIKE:** Lacks the romance of the best of the rest here

**BUILD QUALITY**  
★★★★★ **WE SAY:** Forceful and fun sounding mid-price machine

**FEATURES**  
★★★★★

#### OVERALL



# Bowers & Wilkins



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[www.bowers-wilkins.co.uk](http://www.bowers-wilkins.co.uk)





# Teac

## CD-H750 **£300**

Can Teac's renowned high-end connections help lift the cheapest player here to the number one spot?

### DETAILS

**PRODUCT**  
Teac CD-H750

**ORIGIN**  
Japan/China

**TYPE**  
CD player

**WEIGHT**  
4.3kg

**DIMENSIONS**  
(WxHxD)  
290 x 113 x 316mm

**FEATURES**  
• BurrBrown PCM1791A DAC  
• 1x RCA phono line output  
• 1x optical, 1x coaxial digital out  
• USB stick/iPod connectivity

**DISTRIBUTOR**  
Onkyo UK

**TELEPHONE**  
08712 0011996

**WEBSITE**  
teac-audio.eu

**E**soteric is Teac's high-end division and it's widely regarded as the maker of some of the world's best CD transports. It's a specialist in optical disc mechanisms and still supports many legacy products with spares and service – in other words, it takes them seriously. As you'd expect, with the trickle-down technology from its high-end division, Teac also has a fine reputation for CD spinners, but more recently has made its name in mini systems. The new CD-H750 follows this theme, coming in a very attractive half-width box, available in black or silver, that's surprisingly nicely finished considering its price. No expense appears to have been spared on its lavish brushed aluminium fascia with rounded corners and side panels, and the remote control even has a number keypad for direct track access.

The Teac boasts full integration with iDevices; it will play music files from them digitally through its own BurrBrown PCM1791A DAC, and display the track names. And its fascia-mounted USB socket even lets you record music out to a memory stick in MP3 format, or you can play music off the memory stick instead of using the built-in CD drive. It also has the usual coaxial and optical digital outputs should you wish to bypass the unit's internal DAC. The CD-H750 is a very versatile little bit of kit then, with the emphasis on convenience and flexibility, but how does it sound?

### Sound quality

In a word, good. Indeed, the Teac proves very impressive considering its price – in some ways it gives little away to the more highly priced players. What you get is a very smooth and sophisticated sound for a budget machine.

New Order's *Vanishing Point* is fascinating; the opening 16-bar section shows it to be smooth and devoid of nasties with no shrillness, edge or distortion. Hi-hats are silky, and singer Barney Sumner's slightly chilly vocals come over a little warmer than usual. The often harsh backing synths aren't unpleasant to listen to, lacking any sense of glare that often afflicts cheap digital players. Even more impressively, rhythms are really rather deftly handled; the interplay between the hi-hat and bass drum is better carried than expected.

Switching to Randy Crawford's *You Might Need Somebody*, and the Teac continues to surprise, delivering a really sweet and enjoyable rendition. All its sins are those of omission, which is to say that it doesn't quite have the low-level detail of the pricier machines here, but it never adds anything unpleasant. There is a sense that images are less tightly located in the mix than its fellow Group Test competitors, and this seems to provide a rather diffuse stereo soundstage, but it is still impressively wide from left to right. Overall dynamics are also slightly

### ON TEST

A hint of low frequency hum may be inaudible at -100dB below the player's peak 2.05V output but it does contribute about 60psec of overall jitter, bringing the total to a still perfectly reasonable 175psec. Harmonic distortion is very low indeed, even at the highest digital levels where the Teac suffers just 0.0005% through the midrange and 0.002% at 20kHz/OdBfs – improving still further to 0.001% at 20kHz/-30dBfs.

The 103dB A-wtd S/N ratio is about 6-7dB shy of the very best players here, but its low-level resolution remains very impressive indeed with errors of just  $\pm 0.2$ dB over a full 100dB dynamic range. The digital filter looks to be a conventional FIR type, but Teac's analogue output stage introduces some extra response 'shaping' with a gently rolled-off treble reaching -0.1dB/10kHz and -0.6dB/20kHz. The player's output impedance is only a little high at 415ohm. **PM**

### RESULTS AT A GLANCE

#### Output level & impedance

-10

#### Signal-to-noise ratio

-30

#### Distortion vs. level & freq.

+20

#### Digital jitter

0

#### Frequency response

-20

**KEY:** ■ Group average  
◀ % below average ▶ % above average

compressed, but the player makes up for this to an extent by being very good at conveying subtle rhythmic accenting. It is certainly no slouch.

Bass is a little lighter than some – the Visioneers' track *Come Feel the Milky Night* isn't quite as impactful, for example. At the other end of the spectrum, treble is slightly opaque and soft; it lacks some bite, definition and focus. But still it makes a very pleasing noise overall, the Teac showing itself capable of sewing all the strands of the mix together in a highly satisfying way. It's perhaps not the absolute equal of the others here then, but it remains great at the price all the same. ●

### HIFIChoice

#### OUR VERDICT

##### SOUND QUALITY

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

**LIKE:** Great styling; fine build; handy features; good sound

**DISLIKE:** Lacks detail and insight, but its price excuses this!

**WE SAY:** Lovely little player with a smooth, grown-up sound

#### OVERALL

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★

★★★★★



# Group test verdict

**David Price** gives some context to this month's six contenders and ranks each of the silver disc spinners according to how well they charmed his ears

**THIS WAS ALWAYS** going to be an interesting group, due to the wide span of prices. There just aren't that many new CD models being launched that are closer in price to run tests on – the market is beginning to dwindle.

The Teac finishes bottom, but this in no way reflects on its abilities – for the money it is superb. It's well made and finished, wonderfully versatile and sounds surprisingly svelte and sophisticated. An excellent showing, but last all the same!

At the price the Exposure does very well indeed with a lovely smooth and spacious sound. But it faces very stiff

competition, and it doesn't excel here. Still, if you have a bright system and need a classy-sounding front end, the 1010CD is perfect in this role.

The Cambridge Audio is the best of the budget machines. At the price it is fantastic, with a wonderfully involving and insightful sort of sound that excavates deep into the digital disc and throws out loads of detail. If the very best sound at £350 is your quest, then look no further.







The Rotel costs twice as much as the Cambridge, but is only about one third better – the sound is punchier and more detailed, with a solidity

and unflappability that makes it a pleasure to listen to. Buy this and you'll have an excellent disc spinner that's appreciably better than the cheaper machines here.

The runner up is the Quad. In absolute terms it is the best sounding here with wonderful clarity, focus and ease – it does so well yet appears to expend such little energy trying. Suddenly tracks that other machines struggle over seem so serene and musically satisfying. But the trouble is, its ergonomics aren't great, its styling is odd and the price is high.



Rega's Apollo-R is now entering its fourth year, and nothing has come along to worry it. At the price, it is remarkable, simply because it is such fun to listen to. Indeed, the Apollo-R is decidedly 'analogue' in the way it goes about making music and a worthy winner.

						
Make/model	Cambridge Audio Azur 651C	Exposure 1010CD	Quad Elite CDS	Rega Apollo-R	Rotel RCD-1570	Teac CD-H750
Price	£350	£415	£800	£550	£700	£300
Sound	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Value	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Build	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Features	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Overall	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
	Decent budget player with class-leading sound. Beats many pricier models	Highly sophisticated performer at the price, with a warm and sweet sound	Gorgeously open and musical sound meets odd styling and ergonomics	Great styling and ease of use combine with a wonderfully musical sound	Rock-solid build with even and weighty sound. An impressive player	Lovely styling, packaging and build allied to a smooth, sophisticated sound

## Key features

CD text	No	No	No	No	Yes	Yes
USB input	No	No	No	No	No	Yes
iPod input	No	No	No	No	No	Yes
RCA output	Yes	Yes	Yes	Yes	Yes	Yes
XLR output	No	No	No	No	Yes	No

## TRY WITH THESE

### INTEGRATED AMPLIFIER: Arcam FMJ A19 **£650**

An extremely capable mid-price integrated amplifier, the A19 gives a wonderfully warm and expansive sound considering its relatively modest price. It has plenty of power, lots of facilities, and should be able to drive any budget loudspeaker.



### LOUDSPEAKER: Q Acoustics 2050i **£460**

A largish floorstander for under £500, these represent excellent value for money. They have a big, powerful sound, and are nicely tuneful and musically engaging. Still, some think them on the warm side – making them ideally suited to relatively inexpensive digital sources.



### INTEGRATED AMPLIFIER: Cambridge Audio Azur 651A **£350**

Although this is purpose-designed to work with the Cambridge Audio Azur 651C tested here, it will also make a nice noise with any of the other group test candidates. It has a powerful and clear sound, with plenty of detail and a fair smattering of facilities too.







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**CYRUS • CD i / 8 DAC • CD PLAYER / AMPLIFIER / DAC**  
 With its 2 x 70 w power output and extended range of digital inputs, the 8 DAC amplifier is a great partner for the new CD i CD player.



**MARANTZ • CD6005 / PM6005 • CD / AMPLIFIER**  
 Replacing the 6004 models, the 6005 amp gains digital inputs using the same 24-bit/192kHz DAC as the CD player which now features enhanced USB playback and improved performance.



**AUDIOLAB • M-DAC • DAC / PREAMP**  
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**NAD • C 516BEE / C 316BEE • CD / AMPLIFIER**  
 Received an outstanding product award from Hi-Fi News magazine who described the C 316BEE as an "absolute barn-stormer of an amplifier". The C 516BEE is the perfect partner.



**ROTEL • RA-10 / RCD-12 • AMPLIFIER / CD**  
 Award-winning amplifier from Rotel. Delivers 40 Watts per channel and includes four line level inputs and a phono input. Ideal partner for the RCD-12 CD player.



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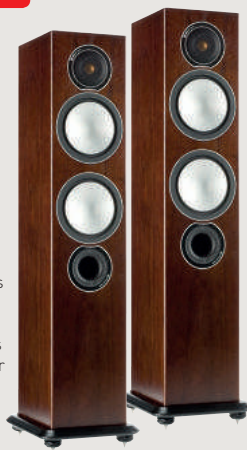
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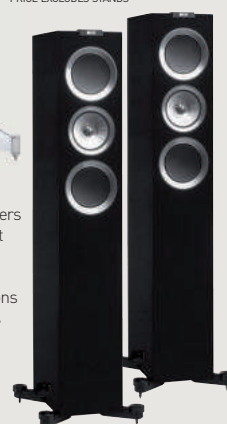
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# SEVENOAKS

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**Choice EXOTICA** HART AUDIO EVO1  
ACTIVE LOUDSPEAKER £7,495





# Matters of the Hart

A radical loudspeaker concept that challenges audio rules. **Chris Ward** sets sail to the Isle of Wight for an exclusive listen

**H**art Audio may not be a household name but David Hart's Isle of Wight-based business has a refreshing approach to audio design and high-quality UK manufacturing, as well as a growing number of passionate customers appreciating service and bespoke production. Hart Audio sells its speakers direct in the UK so you won't find its speakers at your local hi-fi dealer.

The new incarnation of the imposing EVO1 commands attention even when it's silent. Two large,

## The EVO1 offers lots of fine-tuning options and delivers a far dryer bass

understated enclosures per channel, each boasting a purposeful 12in driver hints that you're about to hear something different.

At the heart of the EVO1 is David's passionate belief that many traditional speaker designs are fundamentally compromised by underwhelming and highly coloured bass. This latest design sets out to fix this perceived compromise.

The EVO1 is based on a similar design brought out in 2010 without the lower 12in driver. The new version is claimed to build on the original's strengths while adding even greater bass extension and refinement. As before, it employs Tannoy-sourced primary drivers housed in extremely rigid, high-density fibreboard enclosures, hand assembled and seamlessly finished in a choice of real wood veneers.

At first glance this substantial twin box per channel design looks like a 'spot the difference' competition with a near identical pair of 12in Tannoy drivers located in a similar pair of

unfussy enclosures. Closer inspection of the front faces reveals that only the top driver contains Tannoy's dual-concentric tweeter with the new lower driver employing a form of bass port where the tweeter would be. Looking at the back of each box reveals more remarkable differences. Immediately apparent in the top unit is a beefy, built-in amplifier complete with cooling fins and control knobs covering phase, frequency contour, high and lower-level gain alongside balanced and unbalanced inputs and mains input. Around the back of the base cabinet is the biggest surprise – eight custom-commissioned 4.5in long-throw drivers neatly concealed, firing in phase with the primary 12in drivers, but rearwards.

David states that the top 12in driver "deserves to be left to focus on point-source treble and vital mid-band detail". The addition of the lower box to the 'stack' and additional drivers is, therefore, to focus exclusively on extended bass duties. There is minimal overlap in frequency response between top and bottom boxes, but the use of two near identical 12in drivers ensures that sound quality is highly coherent.

The two boxes are separated by four near rigid nitril rubber balls. These serve to decouple the two boxes by an intended amount. Four further steel balls are seated under the bottom box creating strong points of contact with the floor while enabling a degree of fine tuning in positioning.

The bottom box is arguably where the most radical audio thinking is happening. Internally, there is no damping material and baffles are claimed to be arranged to focus the bass energy generated by all lower drivers to a notional 'point source' flowing through the throat of the primary 12in driver.

This lower bass port is clearly vital to this new design, as David believes

### DETAILS

**PRODUCT**  
Hart Audio EVO1

**ORIGIN**  
UK

**TYPE**  
3/4-way, two box, active loudspeaker system

**WEIGHT**  
Head unit: 62kg, Bass module: 38kg

**DIMENSIONS**  
(WxHxD)  
425 x 1,250 x 425mm

**FEATURES**  
• 2x 12in primary drivers, 8x 4.5in bass drivers  
• Quoted sensitivity: 99dB top, 101dB bottom  
• Quoted impedance: 8ohms  
• 500W active amplification

**DISTRIBUTOR**  
Hart Audio

**TELEPHONE**  
01983 612924

**WEBSITE**  
hartaudio.com

that "trapped bass can only colour the output by exerting unwanted pressure on the cabinet walls and smearing vital detail".

### Sound quality

First impressions are of extraordinary bass somewhat leading the music, but a subtle tweak of the contour and gain controls on the rear amps soon arrives at a sound that works, to my ears. Purists may sniff at this tweakability, but there are many speakers guilty of over driving rooms, so this feels like a smart way to achieve a balanced sound in any listening environment.

Bass is highly extended, but with next to no flab or overhang. More impressively, it seems to have nothing to do with the boxes that generate it. With some traditional floorstanding designs, lower frequencies can be synthesised by flexing the cabinets themselves or tuning a port to resonate below the abilities of the drivers. In contrast, the EVO1 effortlessly goes through the bass gears down to near seismic depths. Playing James Blake's *Limit to Your Love* on CD feels like it could loosen your fillings and I can literally count the individual excursions of the bottom 12in driver on the lowest notes. Relishing in the bass abilities of these speakers, a spin of Kraftwerk's *Elektro-Kardiogramm* on vinyl fills my solar plexus with a real dread that I may be having a seizure myself; such is the impact on my vital organs. ▶

**Around the back you'll find knobs for tweaking the sound to suit your room**



## Q&A

### David Hart

Designer and owner of Hart Audio



**CW: The EVO1 is clearly a radical concept. What inspired you?**

**DH:** I believe the bass output of most designs is highly coloured and fundamentally compromises any hi-fidelity performance thereafter. I set out to extract all the natural bass from the drivers and enclosure. Trapped sound energy must be flexing the box and can only have a detrimental effect on the quality of the sound.

**Tell me more about the onboard amplification on the EVO1?**

The EVO1 with its active bass module and onboard amplifier will easily saturate any domestic space with bass. The amplifier measures 500W into the 8ohms of this two-box configuration. Add another box and this nearly doubles to 980W into 4ohms, but the amps have got plenty more to give. You'll run out of steam before they do!

**It must have been a big challenge integrating so many drivers?**

There was a fair bit of maths and physics to be done in the early days, but thereafter we experimented with numerous physical adjustments to baffles and crossover components. I trust my ears and those of valued 'golden-eared' friends. I wanted to perfectly balance the bass response of the bottom box with the output of the top box, and for me subjective listening will always be the acid test.

**So, are you addicted to huge bass?**

Not really. For me bass 'quality' is my primary objective. Poor-quality bass interferes with delicate midband and treble detail fundamentally spoiling the image and causing you to turn the volume down. Even at high bass output you can comfortably have a conversation over these speakers. You are also more likely to turn up the volume of this clean sound.

**How can people sample the EVO1?**

Existing customers are usually delighted to open their listening rooms and extol the virtues of their Hart Audio speakers. You'll get honest feedback and can experience real-world listening.

## IN SIGHT



This rock-solid soundstage is potentially the secret weapon of these speakers. You may be ready to be impressed by the quality of bass, but it's the quality of the uncluttered mid-band and lower treble detail delivered so effortlessly that really could catch you off-guard. Freeing the top drivers of any serious bass duties and extracting so much energy from the lower cabinet appears to have the effect of taking the cabinets out of the equation and reducing any smearing of micro-dynamics, so critical in reproducing the full emotional content in music.

## Conclusion

If you suspect that there is a lower octave missing from your music then you should audition these speakers. But it would be easy to turn to the EVO1 for bass quantity and miss the bass quality that's on offer. These are not brutal bruisers despite their brusque shape. Some potent speakers can create bass nodes that flap your trousers when overdriving a problematic room, but the EVO1 offers fine-tuning options and delivers a bass that just sounds more musical.

At £7,495 this speaker system isn't exactly cheap and many other rivals will impress at this price point and below. However, the EVO1 can be considered an awful lot of speaker for the money. Given Hart Audio's new commitment to direct sales you may even view the price as a bit of a bargain compared to its previous price through resellers.

The combined effect of high sensitivity, low cabinet colouration, a tuned set of sympathetic drivers and near bottomless active amplifier grunt adds up to a more subtle whole than one might expect. It's like a growling V8-powered muscle car idling effortlessly along at 30mph, just daring you to put your foot down. Safe driving! ●



The EVO1 has few direct competitors at this price point. Full-blown B&W 800 diamonds are considerably more money. Some audiophiles may experiment with the addition of active subwoofers to an existing speaker of choice, but are unlikely to achieve the coherence of the EVO1s. At this price, Audionote speakers could be a common audition, especially for valve lovers. Audionote can certainly give the EVO1s a run for their money in terms of sensitivity, build quality, delicacy and sheer communication, but they certainly won't reach down nearly as deep nor substantiate the price tag quite as convincingly.

This particular setup is fed by valves and I can identify a gentle warmth and slight softening to leading edges that comes with the amplification.

It would be easy to imagine that a passion for bass extension may have left this design a bit of a one-trick pony. Not so. This fast, deep tuneful bass is full of rich detail that clearly defines drum skins, organ pipes and the human voice. Playing a lossless rip of Buddy Holly's *True Love Ways* highlights a lightness of touch reproducing the difficult timbre of Holly's voice, making the speakers very strong at communicating the emotion within vocals.

If you're a fan of gentle chamber music or understated folk you will almost certainly not be drawn to the charms of the EVO1, but that will probably be to your loss.

Playing a quality rip of Foster the People's stripped-out acoustic version of *Pumped-Up Kicks* sends a shiver straight down my spine, such is the solidity and realistic air around the three-dimensional soundstage. Pinpoint vocals, meanwhile, and menacing muted guitar strumming are utterly locked in place.

## Hi-FiChoice

### OUR VERDICT

#### SOUND QUALITY



**LIKE:** Seismic, clean bass and rock-solid soundstage; build and finish.

#### VALUE FOR MONEY



**DISLIKE:** Footprint and weight.

#### BUILD QUALITY



#### EASE OF DRIVE



**WE SAY:** Truly original concept; it may be the only speaker you'll ever need!

#### OVERALL





Stunningly  
simple  
breathtakingly  
brilliant



Reach new sonic heights

cocktail **Audio** **X30**

High Fidelity Storage, Streamer and Server



# Return of the Jedi

Hi-res on a budget? **Andrew Simpson** asks if this mini DAC/amp marks a return to form for the daddy of digital audio

**L**ook who's back. And with a new range of dedicated separates aimed at bringing hi-res to the audiophile masses, it clearly means business. Given that Sony is the company that co-created CD's original Red Book standard and put the 'S' in S/PDIF, it's safe to assume that its new products will be based on a legacy of digital audio development.

This new range is also sensibly streamlined, with a handful of carefully considered separates spread across distinct product categories. There are the high-end TA-A1ES integrated amp and HAP-Z1ES media player, each costing £2,000 each.

While at the more affordable end of the market sit a couple of Astell&Kern-rivalling hi-res Walkmans and the UDA-1 you see before you.

Despite its meagre proportions, the UDA-1 is a versatile little unit that is essentially a mini integrated with an onboard DAC. It sports a range of digital inputs, including USB and S/PDIF, shared over coaxial and optical inputs. There's also a line-level analogue input, a set of loudspeaker outputs and a 6.3mm headphone jack, which auto-mutes the speakers when in use. Add to this a line-level output and you have a great-value starter product that you can build a system around, as funds allow.

## DETAILS

**PRODUCT**  
Sony UDA-1

**ORIGIN**  
Malaysia

**TYPE**  
USB DAC amplifier

**WEIGHT**  
4kg

**DIMENSIONS**  
(WxHxD)  
225 x 74 x 262mm

**FEATURES**

- In-built 2x 23W amplifier
- USB, S/PDIF and analogue inputs
- Support for ALAC/FLAC/WAV/AIFF/MP3/AAC/WMA up to 24-bit/192kHz
- DSD support

**DISTRIBUTOR**  
Sony Europe

**TELEPHONE**  
020 73652413

**WEBSITE**  
sony.co.uk

As you'd expect from the Japanese company that helped give us SACD's hi-res DSD protocol, the UDA-1 welcomes the most demanding audio formats. It happily accepts up to 24-bit/192kHz over its S/PDIF and rear USB socket (its front USB input is limited to 48kHz) across a range of file types including WAV, FLAC, ALAC and, naturally, DSD. And for those of us that dabble in a bit of MP3 streaming for the sake of convenience, the Digital Sound Enhancement Engine (DSEE) is on hand to help by claiming to restore high frequencies lost in compression and improving sound quality (see the Q&A boxout overleaf).

The UDA-1's DAC section is based around a finite impulse response (FIR) filter design and Sony has also specified acoustically tuned capacitors, an EI type transformer and newly developed carbon resistors for the amp's internals.

At 4kg it feels brick solid. And the way its 3mm-thick brushed alloy front fascia folds seamlessly into its top panel looks slick. The few controls adorning its front-panel are exceptionally well finished for hi-fi kit at any price, and hark back to Japanese stereo's glory days. Okay, the side-cheeks are plastic, but you can't tell unless you're up close. As well as a large volume knob, power and input selector buttons, the front





panel also hosts blue LEDs, denoting your selected input and incoming sample rate, for streams of 88.2kHz and above, although hardcore audiophiles may balk at sample rates of 88.2/96 and 176.4/192 being shared over the same LEDs. Either way, you'll need good eyesight to see what sampling rate ball park you're in, as the front panel's typography is really quite small.

Perhaps to help keep its dimensions compact, instead of flanks of passive heat sinks, the Sony comes equipped with an internal fan, which exhausts through its rear panel. Although I can't hear the fan in action or feel any vibration when touching the unit's

**The exemplary finish is a timely reminder of Sony's glory days**

casework, I do detect a very slight hum when the Sony is sat atop a hollow bookcase. Slipping a set of aftermarket sorbothane feet under its standard tootsies puts pay to this, as does moving it to a dedicated shelf within my solid oak hi-fi rack.

Setup is plain simple. Once hooked up to my laptop via USB, I'm prompted to install Sony's software, which takes a few seconds. Hitting play in iTunes tells me I'm connected, as the music begins to flow through my speakers. There's no fuss or lengthy manual of tedious set-up configurations to drag yourself through and once up and running, the credit-card sized remote controller is joy to use.

### Sound quality

The UDA-1 is a clean and consistent performer, that sits back and lets your speakers do the talking, without imparting too much of its own character. Hooked up to my laptop and feeding a pair of Q Acoustics 2020i bookshelf speakers it looks and sounds right at home. And as a discreet desktop add on it does a dandy job of turning a computer into a credible hi-fi source. I'm pleasantly surprised with how its front panel USB input sounds more than adequate when streaming a touch of Van Morrison from my smartphone, although to get the best out of it you should introduce it to some higher quality digital delights.

Not that the UDA-1 turns its nose up at the types of lossy formats it will most likely be called into duty to serve for many a listener. Justin Rutledge And The Junction Forty's *Too Sober To Sleep* heard at a lowly 256kbps obviously lacks the levels of enticing detail and finesse that its FLAC alternative boasts, but with the Sony operating in DSEE mode, instruments within the track gain more air around them, compared to

having DSEE switched off. This filter is a useful tool for improving MP3 type audio, by making it sound less hollow or opaque.

The DSEE's affect is also particularly noticeable through the headphone jack with the Rutledge album. While engaging the DSEE doesn't increase the music's sense of realism, it does push instruments deeper into the soundstage and helps to smooth sibilant edges. In this respect, the

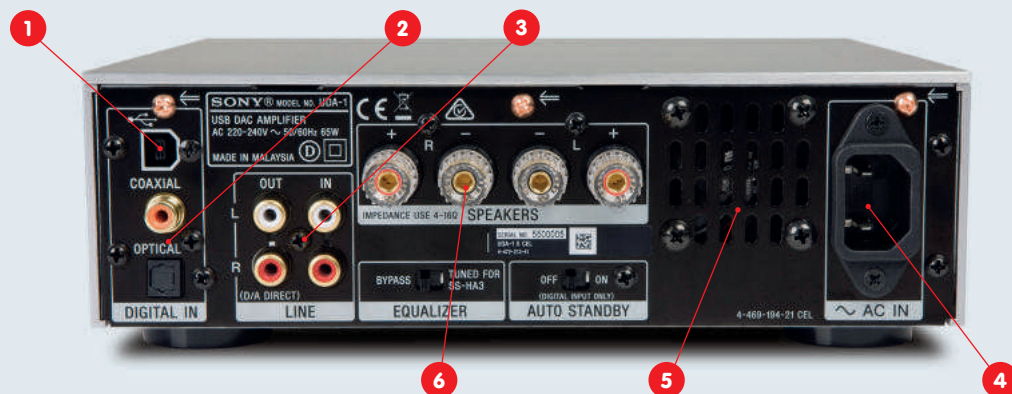
### It doesn't suffer when partnered with kit further up the audiophile ladder

DSEE's affect is like switching to a more dynamic and open-backed set of headphones.

Feeding the UDA-1 with better quality material makes the DSEE filter's contribution less obvious, and the music begins to sound more natural with it switched off, when streamed at CD-quality levels. With my CD player's S/PDIF supplying the UDA's coaxial socket with a 16-bit/44.1 recording of Terry Callier's *Dancing Girl*, the DAC gets into boogie mode. The soundstage seems a little deeper than it is wide, with the higher frequencies achieving a more panoramic scale than the midband's notes. While the UDA-1 ensures Callier's rhythm section nails the track's timing, bass and percussion stay well within the confines of the speaker plane. Although I'm guessing this is an intentional trade off to prevent the UDA-1 from spreading itself too thinly if attempting to push the soundstage's boundaries.

Although its sound is relatively contained, the performance is graceful across the frequency band, which makes it an easy listen. ▶

### CONNECTIONS



- 1 USB (type B) port
- 2 S/PDIF inputs (Toslink and RCA)
- 3 Analogue line in/out RCA sockets
- 4 Mains input
- 5 Low-noise fan
- 6 Speaker binding posts

## Q&A

**Eric Kingdon**

Technical manager, Sony UK



**AS: Why has Sony gone back to its audio roots and with this range of dedicated two-channel hi-fi?**

**EK:** Our heritage is in audio and since the launch of the classic TA-1120 integrated amplifier back in the early sixties, we have continued to develop high fidelity products. These were initially two channel and the range has since expanded to encompass a range of multichannel products. With the quantity of music files available in two-channel formats and the popularity of back catalogue material, stereo listening is still very popular.

**What makes the UDA-1 unique?**

It has a number of design elements and features which bring a new level of performance, including DSEE, comprehensive file compatibility up to DSD 5.6 and flexible use as a DAC, headphone and integrated amplifier.

**How does your Digital Sound Enhancement Engine (DSEE) technology work?**

Basically DSEE provides an improvement in the frequency domain response, by restoring lost components in the upper bandwidth. It also performs additional processing in the time domain of the signal. As a result, the waveform 'shape' is thus more representative of the original signal, due to the negative impact of the audio compression algorithm on low-level signal areas.

**What type of amplifier does the UDA-1 employ?**

We've specified a classic design approach for the amplifier to deliver a high grade of audio fidelity. It's a Class AB analogue amp using an emitter balanced transistor (EBT) with a cut off frequency of over 300kHz for the final transistor. It's also a twin mono format with separate left and right channels to eliminate channel interference.

**Will you be adding more products to your new hi-res range?**

We have plans for more high-resolution capable models, in different product categories... Watch this space!



**The UDA-1's compact design fits neatly into small spaces**

Changing the mood with Goldfrapp's *Tales Of Us* at 16/44.1, the final *Clay* track is void of digital harshness, and the resulting sonics ebb and flow from the speakers in mellow waves of an analogue nature. Timing is spot on, and the UDA-1 lets the track's progressive tempo become alluringly addictive. Bass sounds surprisingly weighty too, given the amp's modest

contribution of the MF amps as they drive my speakers with greater authority than the Sony's inbuilt amp can muster, the quality of its hi-res DAC shines through.

Knopfler's brooding vocals on *Redbud Tree* sound convincingly dense, with a dollop of Dylanesque nasal character. Equally engaging is the sound of the lead guitar, which has just the right amount of sustained echo as it falls back into the soundstage, emphasising the virtues of hi-res recordings done properly.

## Conclusion

As an introduction to the world of hi-res replay, the UDA-1 is a great value integrated starter package, with a DAC section that's ripe for feeding a grander system. Sound wise it's not a particularly bold performer and while some may crave more excitement, it provides a fatigue-free listen for long-term enjoyment ●

## The Sony does a dandy job of turning a computer into a credible hi-fi source

23W, although this track also reveals slight blurring in the lower frequencies.

With its line-outs feeding my Musical Fidelity M6 pre/power amps and Audiovector floorstanders, the Sony's mettle is put to the test. You'll note I'm using its line-outs to drive my M6 preamp instead of connecting it directly to the M6 power amp, because, despite the volume knob governing its speaker and headphone outputs, its line-level output is fixed and, therefore, unaffected by the UDA-1's volume control. So don't be fooled into trying to use it as a preamp to directly drive a separate power amp, unless you get kicks from exploding loudspeakers.

Streaming a 24/96 FLAC of Mark Knopfler's *Privateering* via this setup shows that it doesn't feel the pressure when partnered with kit picked from a few rungs further up the audiophile ladder. While I can clearly hear the



**HOW IT COMPARES**  
Audiolab's £400 Q-DAC with 24/192 streaming over USB is pick of the budget DAC bunch, and while it lacks loudspeaker outputs, it can be used as a preamp to drive a power amp directly (unlike the Sony). The Q-DAC also offers a headphone amp and seven sound filter settings. The Audiolab sounds more full-bodied than the Sony, and a tad more forward. Cambridge Audio's £600 Minx Xi does come with loudspeaker taps, and offers wireless streaming and internet radio to boot, although its limited to 96kHz and there's no preamp out. The Cambridge has a warmer tonality than the Sony and sounds more punchy.

## Hi-FiChoice

### OUR VERDICT

**SOUND QUALITY**



**VALUE FOR MONEY**



**BUILD QUALITY**



**FEATURES**



**OVERALL**



**LIKE:** Solid build; 192 and DSD playback; pre-out

**DISLIKE:** Slight lack of bass grip; internal fan

**WE SAY:** Great-value integrated with a classy DAC section and fuss-free setup





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[www.martinsifi.co.uk](http://www.martinsifi.co.uk)  
01603 627010

### LONDON

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[www.acoustica.co.uk](http://www.acoustica.co.uk)  
01244 344227

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[www.chrisbrooksaudio.com](http://www.chrisbrooksaudio.com)  
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### SOUTH EAST

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01233 624441

### SCOTLAND

**Glasgow Audio**  
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0141 332 4707

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01295 272158

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01865 790879

**Phase 3**  
Worthing  
[www.phase3.co](http://www.phase3.co)  
01903 245577

**The Sound Gallery**  
High Wycombe  
[www.soundgallery.co.uk](http://www.soundgallery.co.uk)  
01494 531682

### SOUTH WEST

**Gulliford Audio**  
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[www.gullifordhifi.co.uk](http://www.gullifordhifi.co.uk)  
01392 491194

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**clarity**  
clear advice



# Well served

All-in-one systems may not be the usual route to hi-fi nirvana, but **Lee Dunkley** discovers a potent mix with the X30

**M**usic centres combining record deck, cassette recorder and tuner were big business back in the late seventies through to the early eighties, with fans keen to enjoy music at home on all the main analogue formats of the day. Today in the mostly digital era the idea of the 'one box does it all' approach goes against serious audiophile thinking, with the general consensus being that dedicated components being assigned to specific tasks is the best way to guarantee pure, interference-free playback of your music collection.

With the world of audio moving towards streaming and downloads, we're told that the desire for physical digital media (CDs) is falling rapidly. So, what to do with that sizeable CD collection and how best to migrate to streaming are regular questions being asked by music fans looking to move

with the times to a less tangible music playback system. Enter Cocktail Audio's X30...

The X30 is probably best described as a 'music hub' and brings together CD ripper, HD music server, network streaming, internet radio, FM radio receiver and amplification duties in a single hi-fi separates-sized box – a modern day version of the seventies music centre, if you like. However, unlike the X10 – its half-sized older sibling (reviewed, *HFC* 353) – the X30 is a full-size unit that measures a fairly standard 435mm wide. Nevertheless it is a remarkably compact and well-formed unit that is considerably less bulky than you might imagine given all the duties it performs. Available in a choice of black or silver finishes, it feels rather nicely put together and sports a well finished 8mm-thick aluminium front panel. There is a minimal amount of

## DETAILS

**PRODUCT**  
Cocktail Audio X30

**ORIGIN**  
Korea

**TYPE**  
2TB music server system

**WEIGHT**  
5kg

**DIMENSIONS**  
(WxHxD)  
435 x 99 x 325mm

**FEATURES**  
• Storage: 2TB (256GB, 500GB, 1TB, 4TB options)  
• Formats: FLAC, MP3, WAV, OGG  
• Display: 5in TFT LCD panel  
• 50W quoted power output

**DISTRIBUTOR**  
Sygnifi Ltd

**TELEPHONE**  
01732 765157

**WEBSITE**  
sygnifi.co.uk

controls on the front face except for two rotary dials – one at either end – and four buttons for basic operation, meaning you can at least control the system without the need to use the remote. A disc-loading slot and a 5in screen are pretty much all that remain to catch the eye.

At first glance the LCD panel looks as though it is touch sensitive, and I instinctively go to prod one of the colourful icons to begin navigating the system. I'm not alone here and several family members attempt to operate the X30 in the same manner, but like me they quickly discover that finding your way around the X30's menu is performed using the rotary control and four buttons beneath to scroll through the system options.

There is a large remote control supplied, but it is festooned with buttons and has a somewhat illogical layout that takes some familiarisation and an occasional thumb through the manual to get to grips with the numerous facilities before operation can become anything like second nature. Alternatively you can dispense with the cumbersome remote and front-panel screen by using one of the downloadable apps that's freely available for tablet and smartphone devices to link the X30 to your networked music. Cocktail Audio recommends using Eyecon for Android and Kinsky for iOS devices.





I also try Sitecom, which is just as easy to install and operate, and instantly sees my networked music for streaming as well as the contents of the ripped CDs in the X30's music library. None of the apps are able to control the internal amplifier volume level, but Cocktail Audio says that a dedicated app offering full control of the X30 is planned in the future along with the inclusion of streaming services like Spotify.

Front panel connections run to a 6.35mm headphone jack, USB port and 3.5mm stereo input jack. Around the back you'll find a RCA input and output, optical and coaxial digital inputs, and optical, coaxial and

**It might look like it's touchscreen, but no amount of prodding at the LCD panel will activate the X30**

balanced AES/EBU XLR digital output connections – allowing users to upgrade the signal path to an external DAC or amplifier should they wish. Ethernet for wired network connectivity and two USB ports for memory stick or a wireless dongle – available as an optional extra – are also on hand. There's no USB type-B input to link direct from your laptop, unlike on the X10 – see Q&A overleaf. Additionally there is an HDMI output to display menus on a TV screen, as well as an antenna input for FM radio reception while a pair of binding posts allow the X30 to drive a pair of speakers via the internal amplifier.

HDD storage options range from 500GB up to a considerable 4TB, and a customised draw at the back provides an easy expansion slot with support for 2.5in and 3.5in SATA HDDs or 2.5in SSDs – solid state drives – offering silent operation for those audiophiles that are put off by the X30's low-level cooling fan whirr. It's not a particularly intrusive noise, but it is good to have the option of a silent drive, and helps to bolster its hi-fi credentials.

The X30 version supplied for this test comes fitted with a 2TB HDD, which Cocktail Audio says is enough space to accommodate 5,200 CDs ripped in FLAC or up to 12,000 CDs ripped in MP3 format at 320kbps quality. A greater number of discs can be stored with increased compression levels, but I wouldn't recommend going below 320kbps when ripping in MP3 quality.

Setting up the X30 is simple. I find the front panel controls and menu prompts to be intuitive enough to get through the initial installation and rip a selection of CDs without the help of the extensive instruction manual, and only require the remote control for its alphanumeric buttons when it comes to inputting the password to enable access to my home network.

The first icon on the left of the front panel display is Music DB, which contains the music library of ripped CDs contained on the hard drive. Pop a CD into the slot-loading mechanism and scroll to select the CD Play/Rip icon. With the track names on the screen sourced from the X30's internal database, hit the menu button and select whether to rip all or only selected tracks. Discs can be ripped as WAV, FLAC, OGG or MP3

**With plentiful storage options, this is one of the most versatile hubs around**

and are preset as the Audio Rip Format in the Setup menu.

Despite an overwhelming desire to transfer my entire CD collection onto the X30, I don't have the days to spare that are necessary for such a massive undertaking. Not that it is anything less than an easy and speedy process – with the discs ripped for this test taking under five minutes each. CD artwork can be quickly downloaded too, and there are several alternative links to album cover databases should the correct artwork not be found in the first search.

### Sound quality

There's something rather satisfying about having a handful of discs loaded and organised in one central location. It's almost a cathartic process going through the routine of ripping CD tracks, and the quality of the home-stored versions shows very promising results indeed.

With a pair of JBL Studio 270 floorstanders connected to the amplifier's speaker outputs there's barely any discernible difference between playback of the original CDs and the WAV or FLAC-ripped versions ▶

### CONNECTIONS



- 1 Speaker binding posts
- 2 FM aerial
- 3 Ethernet port
- 4 USB ports
- 5 RCA input
- 6 Coaxial & optical digital input
- 7 RCA output
- 8 Coaxial, optical AES/EBU XLR digital output

## Q&A

**Julian Cooke**

Business development, Sygnifi



**LD: What HDD expansion options are available to customers that want to add greater storage capacity at a later date?**

**JC:** The hard drive is easily replaced with a higher capacity drive. Replacing the drive is simple: undo the thumb screws on the drive bay cover and extract the drive. Fit the new drive into the tray and return to the X30.

Currently the maximum size is 4TB, but there are 500GB, 1TB and 2TB HDD as well as 256GB and 500GB SSD options available too. The Music DB can be restored to the new drive from a backup created before removing the old drive.

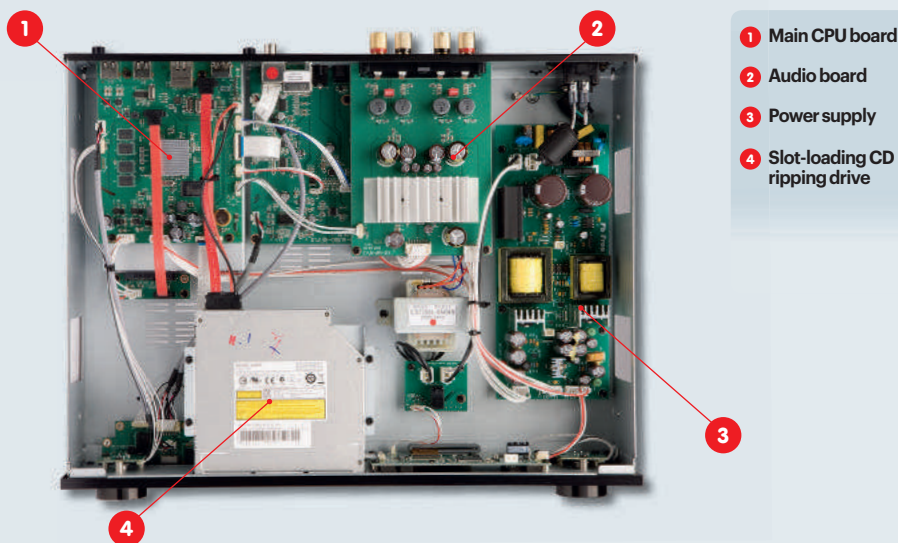
**The Cocktail Audio X10 includes a USB-B type input, but the X30 doesn't. Why not?**

We have found the USB-B type port on the X10 unnecessary and sometimes harmful as it allows users to alter the structure of the music database and so corrupting it. Importing, exporting and backing up music can all be achieved using the normal USB-A ports or via the network connections (Ethernet or wi-fi) to network-attached storage or a computer.

**Are there any plans to incorporate Bluetooth connectivity into the X30 in the future?**

Bluetooth is on our radar, however we found that it is possible using wi-fi to stream music from phones and tablets (Apple and Android for sure) to be played on the X30. There is a YouTube video demonstrating this on the internet. Similarly, using the Sitecom Media Player App for Android or Apple the music stored on the X30 can be played on any wi-fi-connected player, like a Libratone speaker – a neat multi-room solution!

## IN SIGHT



stored on the HDD. Music comes across in an effortless way, and the claimed 50W amplifier into 8ohms drives a pair of JBL floorstanders with surprising ease. The X30 perhaps doesn't have the strongest grip at the floorstander's bottom end, and a more powerful amp may help to tighten the slightly uncontrolled bass at higher volume levels, but it's an enjoyable performance all the same.

Hanz Zimmer's *Like a Dog Chasing Cars* is handled with remarkable dexterity, filling my medium-sized listening room with an enjoyable energy even if it's not the last word in vice-like grip with this particular speaker partnership. Volume levels are respectable and push a decent amount of energy into the room, and it's only as I crank the volume control up towards its upper limit that things begin to get uncomfortable with a more noticeable lack of control.

Trying out a MP3 recording at 320kbps immediately shows itself to be of noticeably inferior quality in audio terms with some considerable graininess on a rip of Radiohead's *Exit Music (For Film)* demonstrating a lack of definition and a lesser sense of the track's haunting sweep.

Radio quality is respectable over FM and the built-in tuner has decent sensitivity. Streamed radio broadcasts do a respectable job with the format, and the X30 manages to successfully mask the low data rates. A record facility places both FM and internet radio recordings in a folder on the HDD for playback later. There's no discernible degradation in audio quality terms, and timer recordings can be made of your favourite radio programmes too.

A 10-band graphic equaliser is provided should you feel the desire to tailor the X30's tonal output or compensate for any speaker or room deficiencies. There is even a handful of preset EQ settings to choose from – most of which sound truly ghastly.

The headphone jack on the front panel is a little on the noisy side, with some low-level background hum when hooking up a pair of headphones. It's a slight glitch in the X30's otherwise smoothly performing package, and headphone listeners should consider adding a dedicated amp for solo listening.

## Conclusion

The X30 is a flexible one-box solution. There are some operational glitches and idiosyncrasies that will no doubt be tackled in later firmware updates, and a dedicated remote interface is planned for iDevices. It plays hi-res music files up to 24/192kHz from a network and has plentiful storage options, making the X30 one of the most versatile hubs around ●



There are few models to rival the Cocktail Audio X30 in terms of flexibility at the price. There are cheaper and less-capacious alternatives to be found like the 500GB Brennan JB7 at £489 or Cocktail Audio's own X10 sibling for £469 with 2TB of storage. Both offer similar ripping duties with built-in amplification, but neither are as versatile as the X30. Alternative dedicated music servers with proven hi-fi credentials, better displays and navigational control can be found from the likes of Naim, Linn and Olive, but few manage to match the X30's all-round abilities.

## Hi-FiChoice

### OUR VERDICT

#### SOUND QUALITY

★★★★★

#### VALUE FOR MONEY

★★★★★

#### BUILD QUALITY

★★★★★

#### FEATURES

★★★★★

#### OVERALL

★★★★★

**LIKE:** Capacious storage options; flexibility; musically engaging

**DISLIKE:** Clunky interface; poor remote; needs time to master

**WE SAY:** Impressive storage, ripping and networking, but let down by interface







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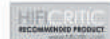
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# To the point

**David Price** is impressed by the razor sharp, laser-like focus of Tannoy's latest premium standmount speaker

**C**osting the considerable sum of £900, Tannoy's new Precision 6.1 has to be demonstrably better than the large number of cheaper standmounters around to attain serious success. It has to give at least a taste of greatness, if not the full culinary experience! Reflecting this, it is a purposefully styled product, with a design suggesting few compromises.

Being a Tannoy it has a Dual Concentric drive unit. And as anyone who's heard one knows, this is no bad thing. This one is said to have an extremely uniform sound radiation pattern that shows off the benefits of Tannoy's technology to best effect – the high frequency unit is mounted behind, and concentrically, with the

## The Tannoy is great at filling any small to medium-sized room with music

low-frequency unit. High frequencies radiate from the centre of the low-frequency unit through a carefully designed exponential horn. The result is a far wider on-axis area that you can listen from, and superior stereo projection. The crossover further time-aligns the two drivers, meaning that the sound appears to come from the same point-source just behind the drive unit.

To the untrained eye, the Precision 6.1's drive unit looks like a single full range design, and not a big one at that at 150mm in diameter. The outer mid/bass part sports a cone made from a selected blend of paper pulp fibres, and is chosen for its natural sound, says Tannoy. The cone has a rubber roll surround and a powerful double magnet bass motor system is used to give the driver high sensitivity and better dynamic range. The inset WideBand tweeter uses a titanium dome for high rigidity and low mass, and is said to be superior to aluminium in terms of where and how the response breaks up; "out of

harm's way", says Tannoy. A Tulip Waveguide is claimed to improve dispersion, with crossover of 1.6kHz.

The rear of the cabinet features a distinctive binding post panel, which has gold-plated binding posts. The company also offers its signature fifth terminal to earth the driver chassis to the amplifier ground, which is said to reduce RF interference.

Like almost all contemporary loudspeakers, the Precision is a bass-reflex design, which means it has a hole in the cabinet, for better efficiency at the expense of a slightly less manageable bass response. The port is at the rear, which means you have to be careful in placement. It needs to be at least 30cm out from the rear walls, I find, and toed-in slightly. This done, the 6.1 gives an even, wide and expansive sound with no response anomalies. In spite of all this, Tannoy's claim of 88dB 1W/1m sensitivity seems optimistic in my view; not particularly inefficient but you would struggle to get high volumes with a 20W valve amplifier; for example. I use a 60W Musical Fidelity X-150, which drives it nicely.

## Sound quality

This is a quintessential high-quality Tannoy that gives a wide, expansive and room-filling sound. It's not what you'd call tonally warm, but neither is it hard and steely; the balance is well judged and the general impression is one that is ever so slightly 'well lit' across the upper midband, but not excessively so. It picks out vocals, lead piano and guitar lines and throws them into the room with confidence, while at the same time not forcing the listener to take cover behind the sofa!

At higher frequencies, the mid/bass unit crosses over to the tweeter in a pretty orderly way, where you become aware that you are listening to a metal dome – it's not quite as smooth and well damped as a fabric dome, or as seamless and delicate as a ribbon. All the same, it integrates well and shares the same slightly 'vivid' character of the mid/bass unit. The result is an atmospheric and extended

## DETAILS

**PRODUCT**  
Tannoy Precision 6.1

**ORIGIN**  
UK/China

**TYPE**  
Standmount  
loudspeaker

**WEIGHT**  
7.3kg

**DIMENSIONS**  
(WxHxD)  
224 x 330 x 257mm

**FEATURES**  
• 25mm titanium  
dome tweeter  
• 150mm treated  
paper mid/bass  
driver

• Recommend  
amplifier power:  
20-150W

• Quoted sensitivity:  
88dB/1W/1m

• Quoted frequency  
response: 43Hz-  
35kHz (+/- 3dB)

**DISTRIBUTOR**  
Tannoy

**TELEPHONE**  
01236 420199

**WEBSITE**  
tannoy.com

treble. It's not coarse or hard and lends a lovely metallic twang to delicately struck hi-hat cymbals.

Its size means it's only going to give a finite amount of bass, which means that the very bottom notes of a bass guitar simply aren't there. That's fair enough, as you don't buy a relatively small standmounting speaker for guilty subterranean pleasures. But there are similarly sized standmounters that go slightly lower, or at least give the impression of doing so. What bass there is, is decently controlled and tuneful – it doesn't impede that lovely open midband, and prefers to sit back and add a bit of heft to percussion, to push the song along in a crisp and tidy manner.

The result is a clean and open speaker that images beautifully and seemingly disappears from your listening room. I kick off with Animal Nightlife's *Native Boy* and the Precisions romp along. Rhythmically, the cabinet stays out of the action to a large extent, with no untoward honking or booming, letting the Dual Concentric driver get its claws into the music. This it does very well, serving up a musically satisfying sound that bounces from the start of the track all the way to its very end. It gives a really enjoyable sense of there being a musical event, as opposed to just going through the motions. ▶

**The fifth terminal is for earthing the driver chassis to the amplifier ground**



## Q&A

**Tim Lount**

VP of Residential, Tannoy



**DP: What type of customer is the the Precision 6.1 aimed at?**

**TL:** It's actually the most purist model in the Precision range. The range overall differs from many previous Tannoy speaker series in that it uses 6in drivers throughout, from the 6.1 with its single 6in Dual Concentric unit up to the 6.4, which comprises four such drivers (DC, Aux Bass and two ABRs). Previous Tannoy series would have stepped up drive size from 6in to 8in above the 6.2 model. The strategic reason for this was simple – modern living is space-sensitive and if you can keep the baffle area and footprint of a speaker smaller, then it will have wider acceptance in living rooms.

**Who designed it?**

Tannoy's longstanding Chief Designer, Dr Paul Mills, headed up the Precision development programme.

**What are the benefits of a point source speaker?**

Low and high-frequency sound radiation is generated on the same axis. The high-frequency unit is mounted behind, and concentrically with the low-frequency unit. High-frequency sound radiates from the centre of the low-frequency unit through a carefully designed exponential horn. Low and high frequencies are, therefore, fully integrated at source, giving unique sound reproduction qualities. Also, the high-frequency unit does not obstruct the low-frequency unit in any way (a unique feature when compared with other point source or coaxial systems). Polar dispersion of sound is symmetrical in both horizontal and vertical planes. By careful crossover network design the virtual acoustic sources of the high and low-frequency units form a virtual point source. Measurements on other coaxial driver systems have indicated a lack of true time alignment. In the Tannoy Dual Concentric design the total sound appears to emanate from a single point source located slightly behind the drive unit, allowing the loudspeaker to recreate a full and accurate stereo image.

## IN SIGHT



- 1 150mm treated paper mid/bass driver
- 2 Rear bass port
- 3 Gold-plated binding posts

Feed the Tannoy some heavier and more challenging material, such as Genesis' *Dance on a Volcano*, and things are no less fun. The speaker has a good go at capturing Phil Collins' thunderous pan rolls and the bass drum is tight and taut. Again, the midband is finely etched and highly detailed, throwing out large amounts of information into the room with

does remind you you're not listening to a high end speaker! Also, on loud peaks, there's the slightest hint of dynamic compression, proving that no speaker with just a 6in bass driver and 11 litres inside is immune to the laws of physics.

## Conclusion

Overall, the Precision 6.1 is a charming little loudspeaker. Its imaging is class leading; it's one of the few boxes at this price that is truly able to leave its cabinet behind and offer an 'out of body experience'. It's great at filling any small to medium-sized room with music, and isn't too picky about where you sit in it. Its midband is its strong point – detailed, clean and projective – but the bass and treble don't let the side down, and the result is a nicely integrated speaker that's enjoyable to listen to. It times well, is decently dynamic and has a taut, tuneful bass. There are rival designs that do some other things better, but few are as good all round. It's a highly likeable and capable loudspeaker then, that's well worth considering ●

## A clean and open speaker that disappears from your listening room

heady abandon; the guitar work feels very intricate, and Collins' vocals are breathy and captivating. On this denser material at higher volumes there's a bit of compression, but that's the price you pay for a small speaker. Still, the Tannoy holds on more ably than many, and most importantly remains in control.

The beautifully lilting *I Hear You Now* from Jon and Vangelis shows other facets to the sound, good and bad. There's nice texturing to the lead synthesiser line and the cymbal and snare work is crisp, clean and wholly enjoyable. Jon Anderson's distinct falsetto voice is carried well too, the horn-loaded metal dome showing itself to be more couth than many. Again, it's a little light and forward towards the top of his vocal range, but nothing unpleasant. But the synthesised bass line does raise some issues; the Tannoy appears a little less extended than some, and at high volume levels there's just a trace of boxy colouration coming through. It's not worse than any other similarly priced standmounter I've heard, but it



**HOW IT COMPARES**  
Monitor Audio's GX50 (£950) is a similarly sized standmounter, but puts out a more measured and precise sound than the Tannoy. This is partly due to its superb ribbon tweeter, which is better than the metal dome of the Precision 6.1; it is wonderfully delicate and detailed, and spacious too, as well as lacking any edge. It disperses well, but can't match the Precision 6.1 in this respect, the latter throwing sound out into the room in a more exuberant way. The Tannoy is a bit more involving, giving a better sense of the natural flow of the music. But the Monitor Audio counters with a tauter and more precise bass, and more midrange detail.

## Hi-FiChoice

### OUR VERDICT

**SOUND QUALITY**



**LIKE:** Clean, spacious, detailed and engaging sound

**VALUE FOR MONEY**



**DISLIKE:** Limited bass extension; stiff competition

**BUILD QUALITY**



**WE SAY:** Beautifully presented, musically satisfying stand mounters

**EASE OF DRIVE**



**OVERALL**







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# The Halo effect

In today's preamplifier world, you've got to be all things to all men – and Parasound's P5 attempts precisely this, says **David Price**

**A** preamplifier's life is not a happy one. In the olden days, when mammoths roamed the wild planes and Duran Duran were at number one, its job was clear. A preamp sat in front of the power amp, because without it there was no way of getting music from your sound source. Music came from vinyl, and its meagre output was such that plugging it directly into a power amplifier would have produced all the power, as Captain Blackadder once said, of an asthmatic ant.

Nowadays though, we have phono stages that can provide a line-level output from LP records, and of course

CD players and DACs give one automatically. Many examples of either have built-in volume controls, therefore bypassing the need for a preamplifier completely. Suddenly the poor preamp is having an identity crisis, with many audiophiles questioning the need for one at all!

To add insult to injury, the best sounding preamp is no preamp. This means a lot of people bypass theirs completely, or use simple passive types. These don't always sound as good as active ones, so there's now a movement towards transformer types. Again, this takes people ever further away from the active electronic types of yesteryear...

## DETAILS

**PRODUCT**  
Parasound Halo P5

**ORIGIN**  
USA/Taiwan

**TYPE**  
DAC/preamplifier

**WEIGHT**  
6.3kg

**DIMENSIONS**  
(WxHxD)  
437 x 350 x 105mm

**FEATURES**  
• Burr-Brown PCM1798 DAC  
• 5x RCA phono line inputs  
• 1x balanced XLR input  
• MM/MC phono stage  
• Digital inputs: coaxial, optical, USB  
• 2.1-channel operation with subwoofer output

**DISTRIBUTOR**  
WESCO

**TELEPHONE**  
0161 7679043

**WEBSITE**  
parasound.com

Parasound's Halo P5 has a job on its hands then. It is a fully spec'd design, that's not too dissimilar visually from the big American and Japanese models made at the end of the seventies. It sports a wide expanse of brushed aluminium on its fascia, plus lots of knobs, buttons and sockets. It's as if Parasound has rejected the fashion for sparse, often passive, designs and gone back in time to the days when the preamp was one of hi-fi's big beasts.

To reassert its identity even more, to its five line-level RCA inputs you can add a full moving magnet and moving coil (with 100ohm or 47Kohm load) input, and a built-in digital-to-analogue converter. A Burr-Brown PCM1798 DAC chip is fitted inside, hooked up to a choice of USB, optical and coaxial inputs. The former runs up to 24-bit, 96kHz resolution and the latter 24/192.

The features just keep coming. It sports an analogue bass management system with high and low pass crossovers, a home theatre bypass input for surround sound integration, a front panel subwoofer level control, and a front panel auxiliary input with automatic +12dB gain stage. You also get defeatable bass and treble controls, headphone jack, fixed-level record output and even the option of snazzy rack mounting handles. It's fair to say then that this is a lavishly





equipped preamp with everything but the kitchen sink thrown in. Parasound's Richard Schram calls it, "a veritable Swiss Army knife", and he's not wrong.

Inside, carefully selected parts are used, including a motor-driven ALPS volume control potentiometer. Attention is said to have been paid to the power supply – an over specified and very low impedance 65W affair is used, as seen in the company's P 7, 7.1-channel analogue preamp. Low-noise parts are specified across the board and there are seven carefully laid out circuit boards. Burr-Brown's PCM1798 DAC is specified because it is "proven

**The design and build quality of this 'Swiss army knife' is great for the price**

workhorse that is incredibly reliable and sounds great", according to Parasound. Some won't like the fact that it doesn't run 24/192 via USB, but this was done to obviate the need for the installation of PC drivers, "adding a level of complexity we simply did not want" according to Schram. The company says that all incoming jitter on the digital inputs is significantly attenuated with an effective clock recovery system.

The unit is very well finished throughout, considering it's a sub-£1,000 preamp, phono stage and DAC in one. Those expecting Krell build will be disappointed, but more sensible sorts will feel it to be decently built. The slightly insubstantial painted steel top plate is just a little lacking in damping, and the plastic end cheeks let the otherwise lavish brushed aluminium fascia down a touch, but you've got to remind yourself this isn't a high-end device. Rear socketry is solid, and front controls move smoothly. The P5 will drive any power amplifier, but the company recommends its own A 21 and A 23 as ideal mates.

## Sound quality

The P5 is basically a nicely balanced device, offering a detailed, precise sound that is well extended at both frequency extremes. It takes a neutral – and in absolute terms slightly dispassionate – look at the music, and lets it play with minimal interference. This is, of course, exactly what a good preamplifier should do.

Cue up some classic seventies disco, such as Sheila B Devotion's (nee Chic) *Spacer*, and you're presented with a clean and open sound, the P5 seemingly going out of its way to throw up as much detail as it can, and string it together in a cohesive way. The track is well recorded, with some beautiful female vocals and a big, sumptuous bass. The Parasound

doesn't hide this, and is particularly impressive (considering its price) at conveying the grain and texture of the singer's voice. It doesn't thin it out unduly, or strip it of its subtlety. The result is an intimate feel to the song, which is just as it should be.

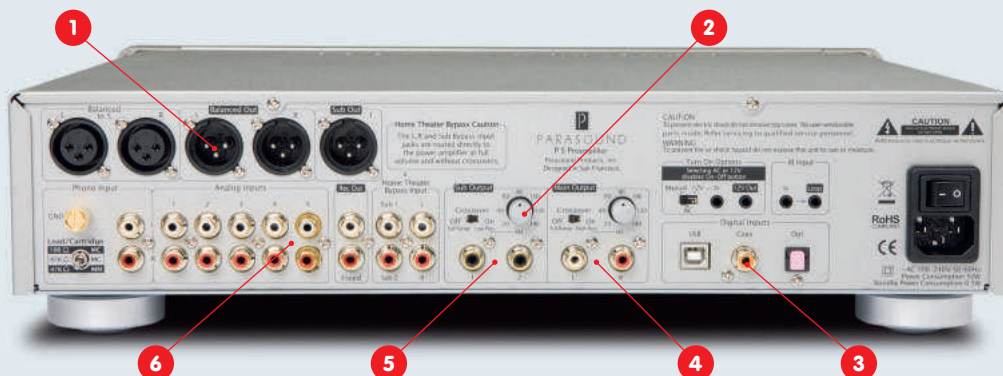
Meanwhile, the wonderful lead guitar of Nile Rodgers and Bernard Edwards' bass dance together, beautifully syncopated. While not the most riveting thing to listen to ever

## It sounds clean and detailed with an enjoyable and expressive nature

made, the P5 is certainly no slouch at rhythms. Indeed it has a well balanced, quietly confident sort of nature that never trips over itself when making music, no matter how frenetic it gets. Spatially, this preamp is good too – while it's not totally TARDIS-like in its breadth, it does have a usefully wide soundstage that fills the room with ease, and instruments are tightly located within. In absolute terms, you'd want more depth, but still at the price it's about as good as you could hope for a device of this type.

Switching to its internal DAC, and again the preamp does a decent job. Compared to a high-end DAC through its line inputs, the P5's own converter obviously isn't as good – it's a little tonally thin and lacks dynamics and rhythmic drive – but it still does very well as a £300 DAC (which is effectively what it replaces). You get a tidy and detailed sound, with surprisingly good texturing from massed strings in Beethoven's *Pastoral Symphony*, for example. It has a taut bass, and a nicely spacious and smooth treble, giving the impression that is a lot more than a cheap DAC ▶

## CONNECTIONS



- 1 XLR balanced output
- 2 Subwoofer level control
- 3 Coaxial digital input
- 4 Main output socket
- 5 Subwoofer output sockets
- 6 RCA line inputs

## Q&A

**Richard Schram**  
Parasound CEO



**DP: Who is the P5 aimed at?**

**RS:** We wanted to create a veritable 'Swiss army knife' for high-quality reproduction of vinyl, line-level sources, digital sources and seamless integration. It brings a number of Parasound's key technologies and design specialties into a single-box preamp that does almost everything today's audiophile could want. Our target buyer is the enthusiast looking for a modern high-performance preamp that encompasses sources from legacy to cutting edge.

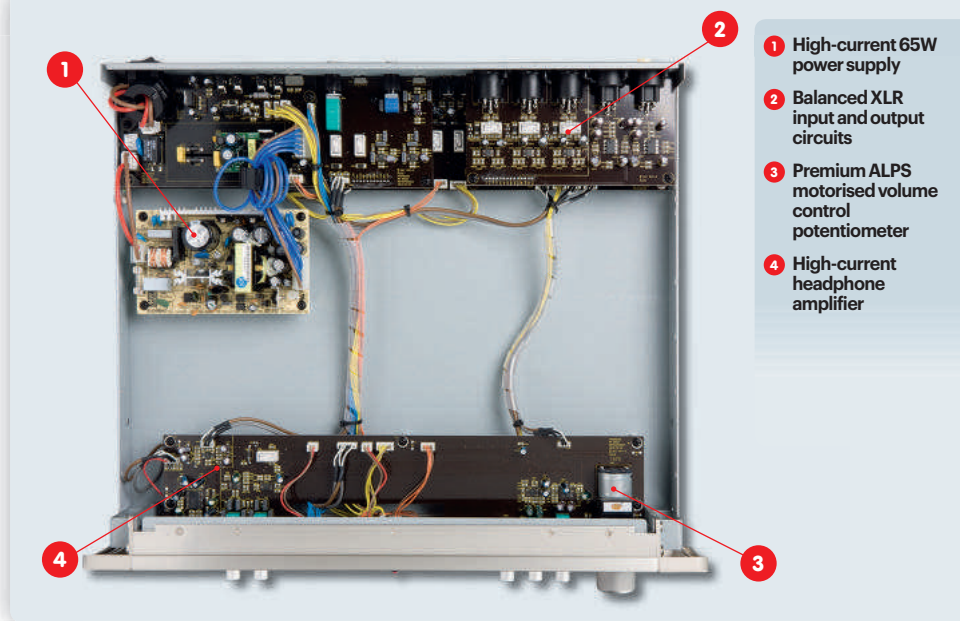
**Why is it a 2.1-channel design?**

Few people have the space for completely separate two-channel and surround sound systems. We wanted to offer a true audiophile two-channel preamp that could be seamlessly integrated into a multi-channel system. The P5's bypass and 2.1 modes allow the user to preserve the pure audiophile integrity of their stereo setup yet it also offers the ability to engage their surround sound system at the touch of a button.

**What is Parasound's background in pro audio?**

We didn't find pro audio, it found us! Our reputation for sound quality and dependability spread through the community of recording engineers, mixers, sound designers, producers, artists, orchestras, music conservatories, A&R people and the like. In April 2002 Rick McCallum, a producer for Lucasfilm, wrote that: "Parasound products were used during the sound design and editing phases of *Star Wars Episodes One and Two*. The transparency and accuracy of the sound enabled us to make critical sound decisions at every stage in the post-production process." Since then we have been heavily involved in pro-audio, but our roots and indeed the company's heart remain in the development of audiophile products for the home. Our products are also in use every day in the audio racks in the mixing studios at Pixar, Warner Bros, 20th Century Fox, Universal and Sony.

## IN SIGHT



- 1 High-current 65W power supply
- 2 Balanced XLR input and output circuits
- 3 Premium ALPS motorised volume control potentiometer
- 4 High-current headphone amplifier

chip thrown in at the last minute for convenience's sake. Whether via USB, coax or optical, it's an effective extra input and adds real value to the P5. For example, Arcam's irDAC outperforms it, but nowhere near enough to justify spending out that extra £400.

The other part of the Parasound's purchasing proposition is its phono stage, and again this is good, holding

solid-state preamplifier, one that is devoid of noise and has no unusual quirks. Even when run through a high-end power amplifier, the P5's couth and refined sound doesn't let the show down, even if it doesn't quite set pulses racing.

## Conclusion

On its own, as a £1,000 preamplifier, the Parasound P5 is very good, but not great. It is a substantial step up from the preamp sections of your average £500 amplifier, but doesn't offer a revelatory sound all the same. However, factor in the DAC and phono stage – and the fact that they don't disgrace themselves in the company of the line inputs – and you effectively have an excellent £300 preamp, £300 DAC and £300 phono stage in one box. This then makes the P5 a rather nice product, and really keen value too. If you're looking for a 'Swiss Army Knife' of an audio product, this won't disappoint ●



The Parasound P5's closest contemporaries are DACs with preamp functionality, like Naim's DAC-V1 (£1,250). This is a half-width design that's more solidly built than the Halo P5, but less well equipped and lacking a phono input. It sports a beautiful OLED display, on a handsome fascia, and inside there's a Burr-Brown PCM1791A DAC – not too dissimilar to the Parasound's. Sonically the Naim is more detailed, with a more engaging and upfront sound and a better defined and more three-dimensional soundstage. The P5 sounds a little dispassionate by comparison, but is still commendably smooth and enjoyable.

## The P5 seemingly goes out of its way to throw up as much detail as it can

its own against the sort of thing you can buy separately for £200 or so. It sounds much as the line inputs do, being clean and detailed with an enjoyable and expressive nature. Freeez's *Southern Freeez* is great fun, the P5 really carries the track's relaxed, warm and carefree sound, reminding me of the brilliance of this tune. Ultimately it lacks detail and finesse, but there's absolutely no sense of it being a cheap, last minute addition. It brings useful extra functionality, and will happily work with a turntable of the calibre of a Michell GyroDec, for example.

As a package then, the phono stage, DAC and line inputs of the preamp are well balanced and don't overshadow one another too much – although the line side of the Parasound is the most impressive by a meaningful margin. Its clean, crisp sound epitomises a well designed

## Hi-FiChoice

### OUR VERDICT

SOUND QUALITY



VALUE FOR MONEY



BUILD QUALITY



FEATURES



OVERALL



**LIKE:** Smooth, open sound; features; versatility; build

**DISLIKE:** Faces tough competition

**WE SAY:** Fine-sounding preamp that's a jack of all trades





# Two Head[amp]s Are Better Than One!

"A level of musical enjoyment beyond what its price tag suggests. Well engineered great sounding unit that brings music to life. Superbly musical... the best at its price."  
**Hi-Fi Choice**



Dedicated to MM and high output cartridges - the £260 Gram Amp 2 SE

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**Audio Video**



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## CHORD COMPANY HOUSE

## In tune

**David Price** visits The Chord Company and meets up with Technical Director Nigel Finn

**O**t wasn't the first company to come up with the idea of making special audiophile cables, and nor does The Chord Company claim to be. That honour goes to the likes of Supra in Sweden, Monster in the USA and later QED in Britain. However, the Salisbury outfit arrived just at the right time to transition the industry into the modern world we see today. When Sally Kennedy launched The Chord Company in 1985, the cable market was fairly embryonic, and the case had still not been universally made for the existence of audio interconnects. Many thought that such things were a futile and expensive distraction from the 'real' business of manufacturing 'real' hi-fi.

### Cables that measure identically, but differ in their construction will sound very different

Right from the start, The Chord Company avoided the hocus-pocus that some rivals indulged in. It sold basic, high-quality products in plain packaging, things that got the job done. Indeed, the very first Chrysalis cable rose to fame as a DIN-to-RCA interconnect to hook Naim Audio amplifiers up to the outside world, back when it was still using those funny German connections as an act of faith. The selling proposition was that instead of using a £5 adaptor and your existing poor-quality interconnect, you could spend £30 on something that sounded dramatically better. It worked!

"The company started on Sally's kitchen table and when I joined as a cable assembler

some years later, it was then based in the front two rooms of her house", remembers technical director Nigel Finn. "When I first went to meet her she gave me a set of cables to try. At the time I was just using whatever had come with my hi-fi components. The two things I remember very clearly were being astonished at the difference and improvement in sound and that her cables were marked for direction and, of course, I wanted to try them the other way round".

Nigel duly did this and was "truly surprised" at the difference. He is an accomplished musician and describes that early cable as being "like when a band gets a song right". He recalls the sound being far more involving. Interestingly, the mid-eighties were perhaps a less cynical time. Despite the idea of cables 'having a sound' being fairly new, he doesn't recall any accusations of snake oil from others in the industry. "We dealt with some really

wonderful dealers, all of whom were motivated by how good something sounded (musically) and I learnt a great deal from them", he remembers.

### Make a Naim for yourself

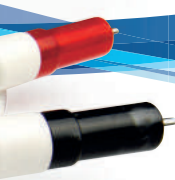
The Chrysalis is said to have been designed with the help of Naim Audio engineers and salespeople, and came in DIN, RCA and XLR variants, plus the DIN-to-2 minijack configuration for use with the iconic Sony Walkman. This cable made a big mark on the specialist UK hi-fi industry, not least because it came 'approved' from a large network of respected hi-fi dealers who also sold Naim amplifiers. Even if buyers had never heard of it before they went into their friendly local dealer, it would be used and the customer was then able to make his or her own mind up about its efficacy.

This was just as well as the Chrysalis was no oil painting. At that time, the



There may be only 23 employees, but in 2013 sales topped 63,500 cables





dour-looking wire came in a clear plastic bag with a small logo on the top card to which it was attached. There was no time to ogle the packaging's sensuous curves; you just pulled the cable out and threw the rest away. A bit like Rega at the time, The Chord Company made no effort in this department. Nigel Finn adds: "Not long after starting work for Sally, I was given a fairly expensive cable by a rival company. My first big lesson. It was big and fat and sexy. I rushed home with it, expecting big improvements and was shocked to find that it sounded a lot worse than the Chrysalis. All the detail went, but mostly it was the way it took the life out of music – an important lesson."

## Come together

Nigel joined in 1989, fairly early on in the company's rise and added an all-important extra pair of very finely tuned ears. Indeed, I sense that if he wasn't paid to design and test cables, he'd still be doing it as a hobby, while earning his living as a professional musician – but as it transpired, things happened the other way around. "From my twenties, most of my jobs were to finance the things musicians need to play in bands. I've been doing this ever since" he tells me.

His father had previous audio industry form, having worked for Mullard and Philips

in the embryonic days of hi-fi. He was an itinerant DIY-er, and enjoyed building valve amplifiers – which doubtless sounded very good if they had tubes from either of the aforementioned companies in them. "The childhood house was always full of music" Nigel adds. One thing he inherited was "a huge amount of experimentation".

This is something Nigel does to this day at The Chord Company, and he "begs, borrows or blags" cables and hardware of all sorts to listen to them. On visiting the company's factory on the edge of Salisbury Plain, I find a veritable cornucopia of hi-fi products –

## We dealt with some wonderful dealers motivated by how good something sounded

more than in your average hi-fi magazine listening room. Having reviewed shed loads of hi-fi equipment for the past 20 years, I have extensive hands-on experience with large numbers of products, but rarely meet a manufacturer with comparable knowledge. But in Nigel, I've met my match; he's an inveterate audiophile fiddler with masses of time spent at the hi-fi coalface!

Despite coming over as a gentle and charming man, Mr Finn doesn't dance around the point when he's talking cables. "What I think really helped was that the Chrysalis was such a good starting point. It's difficult to call a cable musical, but what the Chrysalis did do so well is get out of the way of rhythm and timing, so in other words you put it in the system and music sounded more like music. This made a great starting point. Anything we experimented with had to sound at least as coherent as the Chrysalis and add something extra as well. We did invest an awful lot of time in experimenting and listening and did an awful lot of research as well" he explains.

I get the sense that his research isn't overly theoretical, as he's not convinced that conventional measurement techniques are particularly useful. "Measuring differences is challenging, the challenge being working out what



A key part of a cables' success is choosing the right materials

to measure! There are certain cables that have fairly extreme measurements (inductance, capacitance, resistance) and in these cases, you could tie some of their performance characteristics down to these measurements. However, between these extremes it becomes much harder to make any relevance to the above measurements. You can produce cables that measure identically, but differ in their material construction and they will sound very different to each other. We do listen to every single change during the design and development process. We also get some of our dealers to listen and other manufacturers of hi-fi equipment as well. Ultimately, listening and our decision as a company decides on whether or not we produce a particular product."

## A design for life

Materials play a vital part in cable design, he tells me. For example, Nigel reckons that silver conductors are better able to carry dynamic information and timbre of individual instruments in a more accurate and neutral manner than copper. But the problem is that it seems to be "tonally extremely reactive" to the type of dielectric used, and for this reason it requires a lot of care to give of its best. FEP and PTFE dielectrics are commonly used by The Chord Company for silver or silver-plated copper applications, although the high-end Sarum uses foamed PTFE. The trick is in



Nigel remembers the early cables as being "like when a band gets a song right"

auditioning the cable until you get the most neutral tonal characteristic, he says.

However, isn't this all a bit too subjective? Isn't there a danger that many hours honing the tonal balance of a cable by trial and error simply produces a cable finely attuned to the reference system, and the music being listened to? Nigel is emphatic, "This goes completely against our approach to cable design and system building. A good cable should carry musical information as accurately as possible and impose as little tonal characteristic as well. There is a fundamental to music. If it is to work as it was intended, it requires musicians to play the right notes at the right time for the right length. This, simple as it sounds, is one of the things that cables can have a seriously dramatic effect on and yet many people fail even to check this simple parameter. If a cable has a very particular tonal characteristic then it might be perceived as being better for rock or better for classical, but this is wrong. It really is a cable's job just to carry the signal as accurately as possible, with as much protection from interference as possible and with as little influence on tone as possible. This will work for any music".

**I am struck not just by the extra detail afforded, but by the improvement in coherence**

For The Chord Company then, designing a cable is a process of looking at things 'in the round'. Nigel starts with a sense of how much the cable he is developing will retail for, and then takes the materials best able to deliver the maximum performance at the price, and then starts finessing them. He experiments with the conductor material and configuration, and its interaction with the dielectric, shielding and plugs, and trials these permutations using his ears and a variety of music and ancillary equipment.

This is an exhaustive process. On the day of my visit, I am invited to join him in the listening room, auditioning a variety of cables. The system comprises a Sony SCD-5400ES SACD which Nigel calls "an excellent transport", feeding a Naim DAC/XPS. A Bonnac Timpano and Alton pre-power amplifier do the heavy lifting, driving Eclipse TD712zs loudspeakers. A most fascinating combination, and nothing if not revealing – although Nigel has access

## DOING IT YOURSELF

The Chord Company invited me to make a cable, which – knowing my lack of manual dexterity – wasn't something I relished, but I valiantly had a go at lashing together an Anthem Reference. Happily, I managed not to kill anyone in the process – or accidentally remove or alter any of my own body parts – but did find it extremely difficult. Anyone used to soldering or cutting small things would have been able to do it far faster than me, and to a higher

standard. It's a fiddly job all right, and requires great concentration. I can now appreciate how labour intensive cable manufacturing is, and how much concentration it demands to do the job properly. Any prospective purchasers of The Chord Company's cables need not worry, the one I made was not boxed and dispatched to a dealer, so the company's normal high manufacturing standards are being maintained despite my intervention!



**1** Wire off the reel is taken and has its ends trimmed using this special machine



**2** The shielding is trimmed away using sharp pliers and then the ends of the conductors stripped away



**3** The ends of the conductors are threaded to the plug, which is then hand soldered



**4** The outer part of the plug is squashed around the dielectric for extra robustness



**5** The cable's outer sleeve is heat-cut using this special machine, ready for fitting



**6** The sleeve is pulled up to the end of the plug, and heat shrink is fitted using a special heat gun



**7** The cable is tested using purpose-built machinery to check its electrical integrity



**8** Finally the cable is auditioned in the reference system to make sure it sounds as it should



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When not running the company, Alan Gibb pitches in with dem room duties

to vast amounts of other kit. He plays several tracks from Canada's greatest rocker – the one and only Neil Young – and we run through different types of interconnect from my 'home made' Anthem to Sarum and then The Chord Company's flagship Sarum Tuned ARAY. I am struck not just by the extra detail afforded as the cable gets better, but by the amazing improvement in musical coherence.

## Making a difference

I wouldn't call myself a 'cable sceptic' – although I easily tire of the frothy hyperbole coming from many cable companies – but even I am surprised by the wonderful ease and flow of The Chord Company's high-end wires. The music just seems to 'fall out' of the loudspeakers, which themselves dissolve away, as opposed to sounding like they have been squeezed from a sort of musical toothpaste tube. Interestingly, there are clear and coherent improvements as Nigel dems ever more expensive designs. The entry-level interconnects are good, so much so that you're left wondering why you should bother spending more – until you hear the higher-end versions, that is. Hearing the Sarum Tuned ARAYs, I can only think that if I was doing this for a living, I wouldn't get any work done! Not only is there so much detail and clarity, the music flows ever more mellifluously. You can tell that Nigel doesn't just sit there on the listening room sofa reading the paper...

The Chord Company is very proud that it produces all of its analogue and digital interconnects at its Wiltshire factory. As you'd expect, the factory floor has a vast range of machines, all of which makes the

very fiddly process of hand-building every piece that little bit easier. Making cables to a consistently high standard is actually surprisingly time intensive and accounts for a good part of the cost of each product.

"On our more cost-effective cables, the designs are simpler than our higher-end products and we can use machines to cut and prepare prior to termination" Nigel explains. "This helps to keep production time down, but every analogue cable from Crimson VEE 3 upwards is ultimately prepared and terminated by hand. Every cable we make is also tested prior to packaging and despatch. What this means is that with a Crimson VEE 3 the build time is considerably less than say, for a Chorus Reference or a Tuned ARAY cable, which is entirely assembled by hand. In terms of differences, then, it comes to quality of materials, quality of shielding (a big deal for us) so cost is influenced both by materials and construction time", he adds.

Materials are sourced from all around the world, but The Chord Company tries to use

## No-one knows what sort of level of technological advance will happen over the next 10 years

local materials when possible. "Many cables are made in the UK, some of the very high-end wires are produced in the US and our entry-level wires are produced in the Far East", says Nigel. But he adds that more important than the country of origin is the relationship with the manufacturer. "Most of the companies who produce cables to our designs we've worked with for many, many years. This works really well for us, and means that these companies are prepared to build us samples and are prepared to carry on accepting seemingly small changes until we arrive at the design that we want. They also know that we will not accept anything we feel unhappy with."

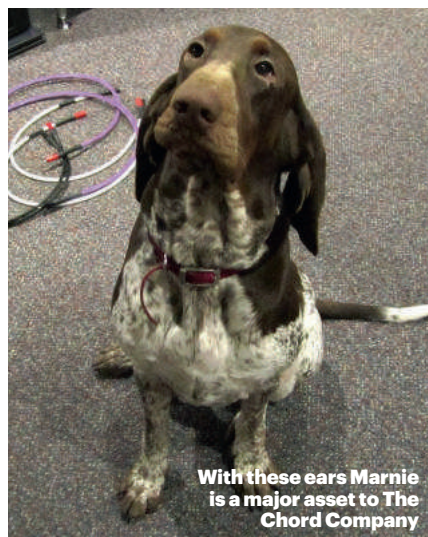
The company has changed premises several times in its life, its ever higher sales forcing a move. Today, it employs 23 people, and last year sold 63,500 interconnects and sets of speaker cables, not including a sizeable amount of unterminated wire. Today, it is run by Alan Gibb, a very affable gent with a retail background selling Linn in Glasgow. On the day I visit he is minding his beautiful dog Marnie, who lounges around the offices in-between scavenging for snacks. When

not as preoccupied with canine matters, Alan lends his ears as part of the product development process, as do many others. Indeed, there's a great sense of camaraderie at The Chord Company – everyone there comes over as relaxed and friendly, but focused. As a seasoned and close observer of many hi-fi manufacturers, this sort of congeniality is a very good sign.

## Mucking in

On occasion, customers can visit The Chord Company and are shown round and played music in the dem room, and the company "actively encourages" retailers it deals with to visit, too. They spend the morning making cables – as I do – which provides a powerful demonstration of the work the staff do. In the afternoon, it's over to the dem room for intensive listening. The company is also constantly running musical evenings with dealers, and is a keen participant at events such as the Bristol Sound and Vision show.

So where is the cable market going? Nigel reckons that's a difficult question. "No-one knows what sort of level of technological advance will happen over the next 10 years. Right now though, the best sounding and the most musical systems very definitely require cables and our Tuned ARAY cables are proving just how spectacular and genuinely musical hi-fi systems can be made to sound. I firmly believe that we will still be here in 10 years' time and hopefully making even better products. There is, and there will always be, a desire among the people to get involved and moved by the music they love" ●



With these ears Marnie is a major asset to The Chord Company



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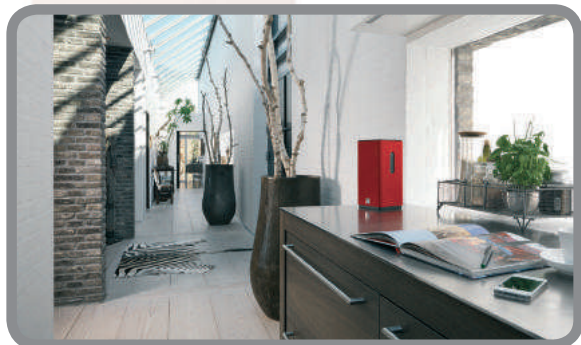
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## THIS MONTH



### ED SELLEY

#### EXPERTISE: REVIEWER

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



### NEVILLE ROBERTS

#### EXPERTISE: ENGINEER

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



### PATRICK CLEASBY

#### EXPERTISE: TECH GEEK

Patrick works in a high-level technical support role in the broadcast industry, when not fiddling with his networked music collection and a rapidly expanding shelf of vinyl LPs.



### DAVID PRICE

#### EXPERTISE: REVIEWER

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



### TIM JARMAN

#### EXPERTISE: ENGINEER

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

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## LETTER OF THE MONTH

### ✉ Riddle me this

I'm a digital subscriber and I am very pleased with the service. I have two questions

that are puzzling me. The first is that following the purchase of a solid oak hi-fi cabinet to replace an open rack (to hide the wires), my Russ Andrews DAC 1 found itself very close to my Cyrus 8VS2. Both bits of kit ran very warm and the sound was not great. Moving the DAC to another shelf restored the sound. Any ideas why?

Secondly why to my ears does my second-hand cheap Dell PC running Vortexbox/FLAC and connected to the DAC via a freebie USB cord sound better than my Cyrus CD7Q using Wireworld interconnects? The DAC is connected using van den Hul The First Ultimate. I have carried out A/B comparisons

using ripped CDs versus the original and the ripped CDs always sound better. Any comments welcomed please.

*Steve Young*

*Puysserampion, France*

**NR:** Hello Steve, It is very difficult to say what might be causing the problem with your Russ Andrews DAC, but I suspect it is picking up some interference that is polluting the digital signal, giving rise to jitter that the DAC has to correct. This interference may or may not be coming from your Cyrus amp, but I would be surprised if it was as it has a very good power supply employing a nice toroidal transformer. Your second question, in my opinion, is also due to jitter – or lack of! I have often come across this behaviour, where a ripped CD sounds better than the original! I believe that this is due to the fact that a CD is played in real time – the CD speed varies from around 460RPM at the start (when the

laser is near the centre of the CD) down to about 200RPM at the end when the laser is near the outermost edge in order to maintain a roughly constant data transfer rate. However, the output from the laser is never going to be perfectly timed and the error correction circuitry is going to have to do some re-clocking to get everything back in sync. Streaming the digital signal from a file on a computer means that the whole

## Why do my ripped CDs sound better than the original discs do?

file is invariably cached in memory and fed out at the correct rate, so one less thing for the DAC to correct for.

**PC:** If in doubt, always follow the manufacturer's siting guidelines – heat can obviously

impede the performance of integrated circuits. The preference for USB streaming of CD rips to native disc-based playback you describe is most likely accounted for by the usual assumed benefits of streaming – any error correction is written into the file at the point of the rip, (also any HDCD peak extension benefits) – as long as you use a good ripper. The awkward work is done in advance, not on the fly. As Neville explained, as you are no longer victim to the vicissitudes of the spinning disc one would expect lower levels of digital jitter in the system (dependent on CD playback platform, of course). In summary, it can take just as much effort to establish a flawless ripping and playback chain as it did in the olden days of analogue gear and its associated widgets – if you can demonstrate this result with a cheap and simple computer setup you have reached digital audio nirvana!



Steve's Russ Andrews and Cyrus don't react well to being placed too close together



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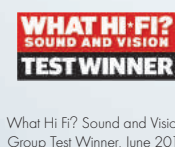
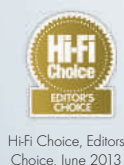
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### ► **Destiny's child**

I have been gradually upgrading my hi-fi system, one component at a time. At the moment my sources are a Creek Destiny 2 CD player and a Rega RP6 turntable/Pro-Ject Phono Box fed into a NAD C352 integrated amplifier. Speakers are Epos Elan 30. The amplifier is the last piece of the old system still in use. As much as I love this wonderful amp, I do feel it is holding back the true capabilities of the CD player and the turntable. The natural choice would be to replace the NAD C352 with a Creek Destiny 2 integrated amplifier. I have heard the Destiny 2/Elan 30 combo pairing at the dealer and there was a great synergy in the system.

Here lies my predicament. For nostalgic reason more than anything else, I would like to retain the NAD C352 in my setup, but achieve the performance level of the Creek Destiny 2 integrated (there or thereabouts). One way of doing this would be to split the NAD C352 to function as either a preamp or a power amp and add a better component to

supplement the amplification. These are my two options: NAD C352 as a power amp with Cyrus Pre DAC (or Pre XP d) handling the preamp duties. The Cyrus has digital inputs, which is useful. Or NAD C352 as a preamp with Exposure 3010S2 power amp driving the speakers.

### **I love my NAD C352, but also want to get a Creek Destiny 2**

Am I better off getting the Creek integrated to save myself from disappointment? I would love to hear your thoughts on these proposals.

**Logen Bharatham**  
Seremban, Malaysia

**DP:** I really think you're better off going for the Creek Destiny 2 amplifier, instead of trying to cling on to your NAD C352. You will find the latter is the limiting factor, either as a pre or a power amplifier. If I had to choose between the two – if you did opt to keep the NAD – I'd use it as a preamp, and get an Exposure power amp as you suggest. But why not just go for a Destiny 2,

or indeed the integrated amplifier version of the Exposure 3010S2? Both will have a much cleaner and more musical sound, with the Exposure being the more detailed of the two and the Creek being the sweeter.

**ES:** Sentimentality is a powerful force in hi-fi. I'm likely to use my Michell Gyrodec indefinitely given it was my engagement present from my wife! That said, it places some challenges on this system. The NAD will make a stronger power amp than a preamp so this is the way I would retain it. The Cyrus is a capable preamp and the digital inputs are useful, but if this is a factor, you might want to look at the Pro-Ject Pre Box RS Digital, which to my mind is a closer sonic match to the Creek.

### ► **Make it sssstop**

I have a problem with sibilance. My system comprises a Marantz CD6004 (used as a transport), a Rega DAC, Rega Brio R and Rega RS3 speakers. Digital interconnect is an Atlas Compass, analogue interconnects are Tellurium Q Blue, speaker cable is Tellurium Q Black and mains cables are Black Rhodium Cratos and Libra via a Merlin Funnelweb mains block. The Rega DAC is set on Filter 4. The room is furnished with rugs, heavy curtains, bookcases and chairs, but the speakers do have to be placed close to the rear wall (5cm) due to space. Speakers are all standing on small wooden discs on top of a laminate over concrete floor.

The system is about a year old and over that time I have been more aware of sharp, sibilant 'S' and 'T' sounds on records that I have not heard previously. Examples include Eagles (*Take it Easy*), Bruce Springsteen (*Growing Up*) and Simon and Garfunkel (*Sound of Silence*). I would say that I notice it on most recordings (and it is more



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## **DNM Resolution Stereo Solid Core Speaker Cable**

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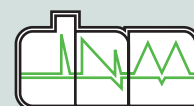
## **DNM Stereo Solid Core Interconnect Cable**

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### ➤ Trash or cash?

During the late seventies/early eighties I was really into hi-fi and went to great lengths to set myself up with separates, which seemed to be the thing to do at the time.

My set up was Sansui SR-222 MkII turntable, Sansui AU-217 II amp, Heybrook HB2 speakers. I subsequently added a Sony TC-WR 465 cassette deck and Pioneer TX-301L tuner.

I have finally decided to dispense with these items as I haven't used them for years and need to de-clutter.

Are they still worth selling, and if so by what means? I'm not into eBay so are they just past their time and only suitable for binning?

*John McDonald*

**LD:** Well, John, you'd be surprised how many people are on the lookout for good second-hand equipment – especially people on a limited budget who are just starting out on their hi-fi journey to audio

nirvana! I very much believe that there is a market for all those splendid pieces of 'pre-loved' audio equipment and probably the best audience will be people reading the pages of this very magazine, but don't have the funds available to buy the latest offerings. May I therefore suggest you avail yourself of the free *Hi-Fi Choice* Reader Classified private ads service (page 102) – you have nothing to lose and will also have the satisfaction of knowing that your equipment is likely to be going to a good home, rather than a crusher!

**TJ:** Even though you don't like it, eBay is a great way for trading hi-fi equipment like this – along with classified pages as Lee suggests. Local papers tend to get zero results and an Audiojumble table probably isn't worth the bother with only a small amount of equipment to sell. You should get a bid on most of this stuff on the 'Bay, a good tip is to have a look at similar equipment that is already listed to see what yours could make.

noticeable on the DACs other filter settings), but not on every 'S' or 'T' sound. I specifically bought the system as it didn't suffer from this issue. I have had an Audiolab 8200 CD (instead of the Marantz/Rega DAC combo) in the past and that was even worse. I guess it's just that the system is now fully run in (and the dealer's one wasn't) and I'm just hearing what's on the disc, but to be honest I do find it a big distraction from the rest

of the music; and I love the sound otherwise.

Is there a relatively inexpensive or simple fix that I can apply such as attenuators, proper speaker spike shoes or even an equaliser that might help reduce the sibilance? Any advice greatly appreciated.

*Alexander Prisco*

**DP:** Crikey – this is one of those really annoying ones, not least because your system isn't intrinsically a bright one and

**The USB sounds better on the CLiC than Ethernet, but why?**



There are alternatives to adding your hi-fi to landfill

Picture: Shutterstock

so shouldn't be doing this! I think the problem is the interaction between your loudspeakers and your floor. It is obviously acting as a giant acoustic reflector and the treble information is bouncing off it and arriving at your ear slightly behind the treble that reaches you from the tweeter directly. I would take the following steps – first, use your speakers with the grilles in place. Second, place them on sorbothane FoculPods instead of wooden discs, and third make sure you have a rug directly in front of each speaker. Also, make sure the speakers aren't firing indirectly at any windows; if so close the curtains. Good luck!

**to indicate reading/writing activity. When playing music from it on the CLiC, the LED flashes for about a second or so about five seconds from the end of the track it's playing. No flashing at all during the track. The CLiC must be downloading the entire track into the onboard memory, and playing from that. So it's not actually 'streaming' as such. When playing from the NAS via Ethernet cable, the hard drive indicator LEDs flash about every six seconds. So it is actually streaming via Ethernet. What do you think?**

*Alan Bridgens*

### ➤ Flash in the pan

Thanks for your reply to my letter printed in the January issue of *HFC*. Since then I think I have found the reason the USB port could be sounding better on the CLiC.

I bought a bigger capacity USB 3.0 stick, so I could hold more music on it and load it quicker. The new stick happens to have an LED

**NR:** At the risk of sounding like a long-playing record, Alan, I would suggest that the audible improvements are largely down to a reduction in jitter! Your NAS will be sending packets of data across your network to your CLiC and the data can pick up all sorts of interference along the way. The CLiC will, of course, buffer these packets and send them on to the DAC at the correct rate, ▶



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**Ed reckons Audiolab's M-DAC is well worth an audition**



but some error correction will likely be required. However, when your USB stick is plugged directly into the CLiC, it will download the entire track into the buffer a lot faster than over your Ethernet cable, thereby reducing greatly the opportunity for errors to creep in – hence your observation of the 5 second burst of activity as the CLiC fetches the next track to play. I notice an audible improvement when playing via USB compared to streaming over Ethernet and this is why I have all my digital music on a large capacity USB stick plugged directly into my Squeezebox Touch.

## ➤ DAC dilemma

I have Rotel 02 series pre and 2 power amps, CD player, tuner and Rega P2 turntable bi-amped to Spendor S5e speakers using Chord Carnival bi-wire cable. My room is 5.5 x 4m. I'm thinking of buying a DAC and have been recommended a Chord at £990. Do I need to spend that much? It will be used for CD only, I'm not interested in streaming. I Would welcome your advice.

*Gordon Jave*

**ES:** At the very least it would be worth trying to listen to the Rega DAC, Audiolab M-DAC and even the Cambridge Audio DacMagic Plus at rather less than £990 to see if they give the improvements you are looking for before moving up to the Chord.

**NR:** Assuming your CD player is the Rotel RCD-02, Gordon, I believe it has a very reasonable Burr-Brown DAC fitted inside, so you will certainly need to

upgrade to something good in order to hear some significant sonic improvements. The Chord is certainly a fantastic-sounding DAC, but only you can decide if it is worth the cost for your requirements. What I would say is that even though you are not contemplating streaming music, you may consider an internet radio in the future (it sounds better than any DAB tuner) or indeed other digital sources, so it may work out as a good investment for the future.

## ➤ Boom room

While at a recent gig in Manchester (Warpaint – excellent vocals, amazing drummer) I was struck with the polarised sound quality. The depth and kick of the drum kit was epic. Even at the Academy, which I don't much care for as a venue. When the bass player kicked in with her Rickenbacker, the trouble started.

In hi-fi terms it was booming, boxy, resonant... horrible. I don't doubt that some of it was a certain midbass frequency that excited the room too much. But it was the boxiness of the bass boom that struck me and got me thinking. A typical band's setup: drums miked up, guitars plugged to amps and keyboards amplified too. All such instruments emit bass or mid tones to a greater or lesser extent. All this sound is amplified and thrown at our ears by what? Loudspeakers in boxes. At the best concerts they use huge arrays of speakers. All boxes. I doubt any of us have ever heard a bass guitar

(electric, of course) that's not been played via an amp with a speaker in a box. Although many amp combos have an open-backed box, but still...

Most PA speakers are not inert. Not in any way to the same standard of a small stand-mounted monitor or

## Mid bass tones sound boxy because they emit from boxes

mid-priced floorstander. So what's the issue? Why are we trying to both make the sound 'less boxy' while also trying to sound 'just like the live concert'?

It strikes me as a rather strange dichotomy that as purists we're striving for something that's actually false. Mid bass tones sound boxy because they are emitted by boxes. What are your thoughts?

*Tim Klapproth, Chorley*

**PC:** I speak as a bass player who has always coveted a Ricky 4001 (blame Geddy Lee...) but maybe the problem is summarised by your use of the words 'mid bass'. If there is one term to describe the high-voiced, twangy Rickenbacker sound it might be 'boxy'. Expansive it ain't, and I've long been struck by the fact that – with the honourable exception of Lemmy and Chris Squire, both of whom in their different ways built their signature sounds on that nasal tone – most of those who embark 4001-equipped on stage pretty rapidly change course back to Jazzes, P-bass, Stingrays etc.

If you really want a full bottom end, Fender (or its followers) is where it's at. Even the sainted Geddy played through Steinberger and WAL for a decade and then went back to Jazz variants these last 20 or so years.

As a purist I want my Yes and Rush albums to sound just as reedy in the bass as they originally were. As a gig goer I have one prayer. Please don't compress it digitally on the desk so that it sounds 'just like' the album. I was horrified five years ago to find a lovely Richard Hawley gig at the Royal Albert Hall rendered almost unbearable due to this most unwelcome modern phenomenon. Ultimately it's all down to the taste and competence (and refusal to join the herd) of the front-of-house soundman.



**PC reckons the Rickenbacker's sound is boxy...**

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# Bristol fashion

These days it's not just anorak-wearing geeks that attend hi-fi shows. **Lee Dunkley** observes a sea change in the demographic and hopes this is the start of a new trend

**T**here are very few women interested in hi-fi. True? Like plumbing and car maintenance, hi-fi is typically a male-dominated pursuit and the majority of women appear to view our collection of carefully selected hi-fi components as something that needs occasional dusting rather than the finely tuned instruments that feed our music passion.

I have visited numerous households over the years where speakers were chosen so that a particular lamp or photo frame could easily be placed on top. Indeed I've even witnessed the laws of speaker placement being carelessly pushed aside because a nest of occasional tables has taken up permanent residence in the perfect spot resulting in placement becoming so distorted that the crucial stereo 'hot spot' – equidistant from the centre of the speakers – ends up being somewhere off the end of the sofa. Of course, my generalisation is intended to be inflammatory, but my own experience does seem to suggest that many women simply don't understand or share our passion for hi-fi, particularly when it comes to deciding where it should be placed in the home.

The hi-fi industry is pretty much dominated by men, so it came as a pleasant surprise to see more women than usual at this year's Sound & Vision – The Bristol Show, held at the end of February. Visitor numbers were up on recent

## Women have hearing at least as sensitive as men, if not more so...

years with more couples visiting the show – now into its 27th year – and sharing the experience than ever before. Being half-term, and despite seeing a rare sunny day outside, several families with young children could be seen mooching around the show's hallways. From my casual observations the adults seemed to be encouraging the young folk to take sound seriously to get them interested at an early age. Admirable work. The few I saw certainly looked content to wander in and out of the demo rooms, lapping up the sights and sounds of the products on show and generally enjoying the bustling atmosphere.

As a hi-fi and AV enthusiast I've spoken to many people – both men and women – who say they are unable to hear a significant difference between the sound quality of a docking station and a full-blown hi-fi system that employs floorstanding speakers. The same people are often also seemingly unable to distinguish between standard-definition DVDs and high-definition Blu-rays, but I digress. Rather than being unable to hear or see the difference as they claim, I believe it's more a case that they are unable

to appreciate the differences and are not bothered enough by the potential quality gains that so many of us get obsessive over.

They are often more happy to simply enjoy content in whatever way it's delivered, and manage to somehow filter out the poor quality issues that plagues audiophiles and home cinema enthusiasts alike. Quality isn't an issue for them, instead the music or the action taking place in front of them and how the device that it's played on looks tend to be a far higher priority. This isn't always the case, however.



**Hi-fi shows have been a man's domain, but the times could be about to change**

## Sisters are doing it for themselves

I have been on countless blind listening panel tests over more years than I care to mention. The listening panels usually comprise five members with a mix of both men and women. As 'audio experts' listening panel members generally come from the world of sound recording or broadcasting, and they are usually highly accomplished musicians as well as regular live music goers. Under blind test conditions products are rated individually followed by a discussion at the end of the process giving a panel consensus opinion. You see women *are* able to judge sound quality as well as the next man.

I hope we have some female readers out there, but in a year of being back on the mag all of the queries sent into our letter pages have been from men. It's clear that women like music just as much as we do. They purchase as much if not more music than us, but it seems the majority are more likely to listen to it on a mobile device through the tiny little speakers or plug it into a docking station, rather than a dedicated hi-fi system.

In an industry that's characterised by ads featuring women looking sultry and seductive wearing the latest headphones or draped sexily over a sofa next to a new line of speakers, surely the industry is guilty of alienating half of its potential audience? If my observations of the show at Bristol are anything to go by, the signs are good for the year ahead. Women have hearing at least as sensitive as men, and arguably even more so, meaning there's a whole new market just waiting to be tapped into ●



**LEE DUNKLEY**  
Hi-Fi Choice editor

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# Computer says no!

**David Price** laments the inconvenience of modern digital music players, makes an astonishing confession and finds an excellent exception to the rule

I'll let you into a guilty secret. It's something I wouldn't normally boast about, but I'm afraid that – in the context of what I am going to say – it has to come out. I still use Compact Cassette. An embarrassed silence resounds around the hi-fi world, as industry movers and shakers recoil in horror. So let me get my retaliation in first.

You see, it's still so – well – convenient. Yes, I realise that reels of metal-coated plastic tape, slowly spooling from one to the other in a machine full of springs, switches, motors, belts and gears, isn't the last word in technology. But that doesn't stop it being so darned convenient.

Cassette was designed in 1963 by Philips, and then had its fate hammered out with Sony. When Eindhoven met Tokyo, one tried to sell the other the licence to make the hardware, but the latter declined, using a rival system that Grundig was developing as leverage. Philips still realised it needed Sony, so in the end gave its design away free in 1965, when the Compact Cassette name was made official.

My first player arrived about 12 years after all of this; it was a beautifully built portable Philips N2214 and was treasured. Bought in the late seventies, it served me proud and vast amounts of my music was preserved for posterity on it. In 2014, some 35 years later, I can still listen to any of this music I like – at home, in my car or on the move – whenever I want.

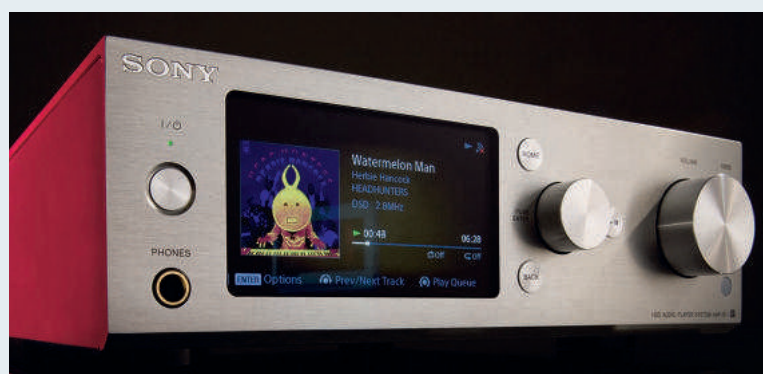
**We're beginning to get the sort of convenience tape offered back in 1979**

Oh, and off-air radio recordings of the Radio One Top 40 – if the nostalgia kick is really strong. Just because

cassette is technologically obsolete that doesn't stop it still being amazingly handy. And subsequent replacements – Digital Compact Cassette, MiniDisc, CD-R and MP3 – just haven't had either the universality or the staying power of this slice of pocketable plastic perfection! Since the death of cassette as a mainstream mass music carrier, we've all been trying to find our own way to replace it.

The big moment came in the middle of the last decade, when Apple turned iTunes into a going concern, and mated it perfectly to its iPod portable player. Then the hi-fi industry bent over backwards to make crossover devices to bring it into the audiophile ecosystem, with only moderate success. Now though, the device itself is dissolving – we've all got smartphones that play music, and our music is on PCs, so the iPod is going the way of the dodo.

Last month I reviewed Sony's HAP-S1. This new music system was interesting because it's the first digital player I've found that works in a truly intuitive, common sense



**Sony's excellent: HAP-S1, just like a cassette...**

way – it reminded me of a sort of latter-day cassette deck. Buy it, unbox it, power it up and it takes over. The little Sony begins to send all your music files over to its 500GB hard drive. If you've got a lot, it can take a while, but you can still play the HAP-S1 while it's doing this. Then, when done, you have your entire digital music library backed up on the Sony, and instantly accessible.

There's no fiddling around. Once you've transferred the music (by Ethernet or wi-fi), then you don't need to worry about your wireless network being up or down or busy, because the Sony plays your music like a CD jukebox. It's untroubled by formats – so you can have the equivalent of TDK D (MP3), AD (AAC), SA (WAV) or MA-R (hi-res FLAC) – all there and it will simply sound ever better depending on your file resolution. If you put more music onto your computer, the Sony will transfer it over in the background, without you even knowing. In short, it's fuss-free, upgradable and universal – just like cassette was.

## Tape that and party

Now, with my Sony Xperia smartphone and a Bluetooth link to a modern car hi-fi, I can play all my music any time, any place and anywhere. Finally, we're beginning to get the sort of convenience and scalability that cassette offered back in 1979. It's bizarre to think that for all our clever modern digital devices, things aren't as joined-up as they were a generation ago.

The Sony HAP-S1 and its source-only audiophile bigger brother the HAP-Z1ES are brilliant products in my view, offering what I have always wanted from a music hardware and software chain – seamless, easy connectivity, portability and the potential for superb sound if you can be bothered. Far more intuitive than fiddling around with iPad controllers and network links to play a single song, they remind us that progress sometimes takes longer than you'd think! ●



**DAVID PRICE**  
Hi-Fi Choice writer

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# Spot the difference

People can tell the difference between McDonalds and steak or a Ford Escort and a Lamborghini, so why can't they do the same when it comes to hi-fi asks **David Vivian**

**W**e all know people who like music, but listen to their stash of CDs, LPs or whatever on a piece of junk. Until recently, my girlfriend was one of them. Apathy doesn't cut it as an excuse, but it is pervasive and a powerful force for mediocrity.

In my early days as a hi-fi writer, I would fight the 'good hi-fi' fight until I was purple in the face. Being a car journalist too, I tried to get people to think of the digital information on a CD as they would petrol. Fuel a Ford Escort and it'll get you from A to B. Fuel a Lamborghini Countach with the same stuff and it'll blow your mind. The point I was endeavouring to make was that it would be a strange world if the price of recorded music was determined on an individual basis by the percentage of fidelity your replay equipment could achieve. Present proof that your system couldn't resolve a lovers' tiff and Coldplay's entire back catalogue would be yours for pennies (OK, bad example).

Back in the real world, most homes' music collections represent an investment spread over many years, in some cases a hefty one. Why, then, would anyone wilfully want to realise only a fraction of that hard-earned potential for life-affirming enjoyment by playing it on something the cat has more interest in than any other member of the family? Well, take your pick: TV is too fascinating. All life beyond

## The idea that hi-fi is exclusively a hobby for hardware geeks is fatuous

perhaps most tragically: I love my music, but hi-fi is for audiophile nut jobs who've got 'super hearing'. Why spend all that money when I wouldn't be able to hear the difference anyway? Let's kill that one stone dead. If you can tell the difference between an answerphone message and a real person, you can appreciate a good hi-fi.

Yet more fatuous is the idea that hi-fi is exclusively a hobby for a minority of obsessed hardware geeks with too much time on their hands, too much disposable in their wallets and regular ear syringe appointments logged in their diaries. Now, such individuals undoubtedly exist. And around them the satirically skewered stereotype (if you'll forgive the pun) has evolved. But it's an image that obscures the real phenomenon of the past 40 years: the democratisation of hi-fi sound. It's all linked. We should, by way of thanks, doff our hats to the hardest of hardest of hard-boiled, well-heeled enthusiasts (and even the less well-heeled enthusiasts who have gone without for the

love of music reproduced to within a gnat's crotchet of measured perfection). Without them the high end wouldn't exist. And without the high end, and its ability to constantly recalibrate the fine gradations at the sharp end of diminishing returns, neither would affordable kit's ability to constantly lower the price at which it begins.

Which brings me to my girlfriend, Amanda. Amanda loves music. She's learning to play the saxophone. In a previous relationship she even knew what hi-fi dealer demo room coffee tasted like. And yet, in the four years we've been together, she has listened to her extensive music collection and the jazz CDs I've lent her on a slab of cheap white plastic with creaky moving parts that looks as if it came as a gift with a McDonald's Happy Meal. The sort any self-respecting kid would leave in the box. Uniquely for something with no bass, mid-range or treble, it managed to make a noise from which it was possible (just) to deduce the genre of the CD being played. Amanda and I would look at one another, shake our heads and, more often than not, wander off.

## Time for change

Until, just after Christmas, we could stand it no longer. For the modest sum of £300, Amanda purchased a Denon DM39 micro system, a pair of Cambridge Audio S30 speakers and two 3m runs of QED Micro speaker cable. After a hunt through the cardboard boxes in my garage, I unearthed an old, but still remarkably shiny, pair of Atacama Apollo 24in stands. With a slab of Blu-Tac, unpacking the system, making the necessary speaker/top-plate interface and general 'setting-up' took all of 10 minutes. My state of mild shock lasted rather longer.

No, the CDs we played (note the plural) didn't blow the roof off. By the standards of the system *Breaking Bad's* Jesse Pinkman bought himself with a sack load of crystal meth money, it wasn't "da bomb", or anything close. But it was real hi-fi, real music: dynamic, subtly textured, well organised, articulate, transparent and, above all, unerringly musical. Three-hundred quid, 10 minutes. Rocket science it ain't ●



**It might not be the crème de la crème, but the new Denon system is a vast improvement**



**DAVID VIVIAN**  
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# Going back to my roots

Music has been a constant love for **Jake Day-Williams** and how he's listened to it has changed a lot over the years, but who'd have thought he'd come full circle?

**F**ashions come and go and it's this, we're told, that makes up the rich tapestry of life. Anyone that knows me well will attest that I don't really follow fashion as such – although I'd argue that I have my own unique, timeless sense of style, no one else seems to agree. But one thing that has changed throughout my meaningless existence on earth is the way that I've consumed and listened to music.

Like most of you I'd imagine, my formative years were soundtracked by the vinyl that my parents were listening to when I was a nipper. I fondly remember hearing the Spice Girls and Take That drifting up through the floor into my room. Okay, so I lie – I'm not the sprightly twentysomething I'd like to think I am anymore – it was The Beatles, Stones, Beach Boys, Queen and Simon and Garfunkel. In fact, one of my earliest memories is of hearing Tchaikovsky's *1812 Overture* at full volume while a thunder storm thrashed outside, and being thrilled by the sheer visceral power of it all, and to this day I always think of it whenever I hear thunder, but I digress...

Like most youngsters growing up in the seventies, the first music machine I ever owned was a bulky cassette recorder and I split my time between taping my own chat shows with my toddler brother and tunes that I liked off the radio. My parents did treat me to the occasional album and even vinyl that I could play on their stereo (for the record, my first 7in was Musical Youth's *Pass the Dutchie*), but it wasn't until I was in my teens that I got my own midi system.

A clunky, boxy affair, it featured a double cassette deck (yes!!), a radio tuner and best of all a turntable. Made by some Chinese company called something like Panasony or Sonysonic, it was far from what you, dear reader, would regard as a high-fidelity music machine, but it was my pride and joy and I loved it.

I very quickly lost interest in buying albums and singles on cassette and fell in love with vinyl. I loved the big artwork and the way that the disc collected fluff, which I had to carefully clean off the needle with a small brush. I'd like to be able to claim to have been won over by the sound, but the truth is what I liked most was the fact that I could try and scratch records like the hip-hop DJs I'd seen on the telly whose sound I would grow to fall in love with. It goes without saying that as a 10-year-old boy in my bedroom in Gravesend I posed no threat to the likes of Grand Master Flash, but I could dream.

Vinyl continued to be a major influence as I grew into later adolescence. Despite the arrival of a new indestructible format called Compact Disc, I stuck to my guns and steadfastly refused to join the digital revolution. That is, until the arrival of the MiniDisc. Here was a format that allowed

me to put together compilations of my favourite tunes like I'd done before with tape, but they sounded incredible and – best of all – my MiniDisc player had a remote control so I could skip through tracks that I didn't want to listen to. It sounds daft now, but I was blown away by the innovation of having a controller on my portable music player.

If you think I was excited by the arrival of a remote control, you can only imagine how thrilled I was when the iPod came along. Suddenly I could carry all of my record collection in my pocket and listen to it whenever I fancied. Having spent time trying my hand as a DJ, I'd grown tired of having to select the records I wanted to play out and then lug them all in a hefty flightcase with me – now I could carry the whole lot in my pocket. Perhaps the thing that I liked most about the iPod was the shuffle mode. Suddenly the Pixies rubbed shoulders with The Orb, De La Soul and the Velvet Underground in a quirky mishmash of styles that even John Peel's radio show struggled to match.

## Random access memories

Like many music lovers, I quickly tired of the iPod. I found the shuffle mode wasn't as random as I'd hoped and that certain artists were always popping up – I grew tired of the same Bjork, Pavement and Roots Manuva tunes that I'd previously loved, as they seemed to be playing every five minutes. I missed the artwork of my records, the feel of the vinyl in my hand and the fluff and that little brush.

Last week I decided that enough was enough and I decided to make a change. I climbed into my loft and at great personal risk manoeuvred my vinyl and turntable back down into the house. I've been listening to them pretty much non-stop ever since and though I've got the music duplicated on my iPod, I feel the same excited thrill I did when I first listened to it as a teenager all them years ago. I'll still listen to the iPod in the car or when I'm out and about, but this time I think the vinyl's back for good ●



The record player and the albums are out of the loft and Jake feels 15 again

**I quickly tired of the iPod and found the shuffle mode wasn't as random as I hoped**

and even vinyl that I could play on their stereo (for the record, my first 7in was Musical Youth's *Pass the Dutchie*), but it wasn't until I



**JAKE DAY-WILLIAMS**  
Hi-Fi Choice  
production editor

# Minitest

IEC MAINS CABLES £150-£165

It's time to ditch the kettle leads and clean up your electricity with these IEC mains cables. Sparky **Neville Roberts** investigates



## ISOKINETIK Melody 2

PRICE: £150 for 1m CONTACT: 0208 2418890 WEBSITE: [isokinetik.co.uk](http://isokinetik.co.uk)

**THIS IS THE** high-current version of the Melody 2, which features a solidly made Cardas 3455R IEC connector with silver-plated pure copper pins and a coating of Rhodium for additional robustness. My review sample is fitted with an audiophile-quality MK mains plug (with a see-through cover – I love it!).

The heavy-duty, high purity OFC conductors are shielded from RFI by a copper screen that shunts the unwanted RFI to earth. The cable assembly is protected from microphony by the vibration-resistant braid. ISOKINETIK has found that vibration-induced noise can be generated in the power cables and the proprietary braid addresses this problem. An additional layer of

heatshrink at both ends of the cable ensures that it is robust around these areas of potentially higher wear.

Swapping between a standard IEC kettle lead and the Melody 2 on my preamp demonstrates the Melody 2 delivers a fuller and more compelling sound. There is a discernible ease in the way the music is reproduced and the music seems to flow more effortlessly. There is also a noticeable reduction in the noise floor, resulting in the quiet sections of the music sounding even quieter!

### VERDICT

A superb cable with top quality connectors that enables a system to deliver compelling music



## MCRU No. 5

PRICE: £165 for 1m CONTACT: 07908 056978 WEBSITE: [mcru.co.uk](http://mcru.co.uk)

**DELIVERING A HIGH** current as rapidly as possible to power-hungry components is the design philosophy behind this lead. In order to achieve this, MCRU developed it using a new cable with 4mm-thick individual conductors instead of the usual 2 or 2.5mm thickness. The cable is also screened with an active earth shield to prevent pick up of RFI.

The No. 5 is terminated at each end with high-quality Furutech connectors. MCRU considers that these provide a good sonic match for the cable, which uses OFC conductors. The Furutech mains plug and IEC are also made from copper, which is second only to silver for being the best conductor of electrons.

The mains plug is fitted with an AMR audiophile fuse and filters have also been added to both the mains plug and the IEC connector. The

filters are actually ferrite rings that have been fitted to all the conductors, which is an effective way of suppressing RFI by dissipating it in the ferrite ceramic. The No. 5 is available in a variety of lengths starting from 1m. It is also available fitted with a Schuko EU mains plug or a USA Nema plug at no extra charge.

This is certainly a chunky, but great-looking cable. When connected to my valve CD player or my preamp I find that the No.5 makes a noticeable improvement to the clarity and imaging when compared with a traditional kettle lead. The word 'refinement' is the one that comes to mind with this mains lead. In addition, the bass seems fuller and more extended, while the background seems quieter as well – amazing! It is certainly a huge improvement over a standard mains lead.



### VERDICT

A beautifully made cable fitted with filters and premium connectors that really delivers







A lot of noise is generated by electrical equipment in the house and all this EMI (electro-magnetic interference) and RFI (radio frequency interference) gets superimposed on mains in your local ring main and can be picked up by the mains leads themselves. Furthermore, any poor connection can generate noise caused by micro-arcing. All the connectors and internal components, therefore, need to make good electrical contact, including the

mains plug, its internal fuse and the IEC connector. Anything that stops all this noise getting to your hi-fi equipment has got to be a good thing and that's where mains leads come in. High-quality leads are designed to reject this noise and also offer a low impedance to the mains voltage.

All the suppliers here offer cables of different lengths, but for the purpose of this roundup all review samples are 1m cables.

## The Chord Company Power Chord

**PRICE:** £150 for 1m **CONTACT:** 01980 625700 **WEBSITE:** chord.co.uk

**THIS SNAZZY PURPLE** cable has shielding from high frequencies and vibration damping. Evidently, it wasn't until Chord produced its Signature speaker cable that it felt it could make a mains cable with a consistent performance. It discovered that the routing of the conductors in the IEC and mains plugs has an effect on quality.

The conductors of the Power Chord are made from three 14 AWG high purity multi-strand copper wires are arranged as parallel conductors and insulated in PVC. The cable is fitted with a dual-layer high-frequency effective braid and foil combination shield. Careful attention has been paid to the routing of the internal wires within the IEC and special 13A UK mains connectors.

When I swap a standard kettle lead with the Power Chord on my preamplifier power supply, I find a palpable improvement to the clarity

and the dynamic range of the performances. Music also seems to be lifted further from the background, making it feel altogether clearer (this is probably a result of the screening doing its job well), and I certainly get a greater sense of realism to the sound. I find similar improvements when I fit the Power Chord to my CD player and here I detect that the bass is also a little tighter and better controlled. In particular, bass drums feel tighter and deeper. There is also

more punch when the felt-headed sticks strike the drum membrane during drum-rolls.

Although fitted with a fairly standard IEC plug, this is a well-made cable that can deliver tangible improvements to a system's sound.

### VERDICT

A great-looking mains cable that delivers greater realism, dynamics and bass response



## Russ Andrews PowerKord-100

**PRICE:** £150 for 1m **CONTACT:** 01539 797300 **WEBSITE:** russandrews.com

**THIS IS THE** first in the range of PowerKords from Russ Andrews and is designed to be an effective partner for source components like CD and Blu-ray players, turntables, preamps, integrated amplifiers and home cinema equipment.

The PowerKord-100 builds on the success of the woven design and features a thicker earth, which is more than twice the size of the one used in previous PowerKords. The larger gauge earth serves to expand the woven cable into what the company calls its new wide-format woven geometry.

It is encapsulated in an improved noise-reduction sleeving, which uses a combination of two strand thicknesses to achieve flexibility and a softer, more tactile feel to the cable. The eight, hyper-pure copper Kimber Cable conductors are separately

insulated and arranged in Kimber's new wide-format woven geometry.

Given that the cable has a pretty conventional MK mains plug, it is fitted with a good Russ Andrews fuse and a super-quality Wattgate 320i IEC connector that has been subjected to DCT (Deep Cryogenic Treatment). Russ Andrews has found that applying this treatment results in a sound that is smoother, more three-dimensional and less 'closed in'. The 13A mains fuse features a proprietary plating and fuse wire and has been subjected to DCT.

When I fit the PowerKord to my CD player, I do indeed notice a subtle improvement in imaging, and instrument placement within the sound stage is more focussed and precise. I also find a slight increase in dynamics with some recordings – in particular with CDs.



### VERDICT

With its Kimber weave cable geometry this cable yields benefits in imaging and dynamics



van den Hul<sup>®</sup>

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your ears



FLAMINGO  
audio  
moving sounds

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web: [www.flamingoaudio.co.uk](http://www.flamingoaudio.co.uk)

## Flamingo Audio Dealer Network

ADAMS & JARRETT, East Sussex, TN37 6NH  
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ANALOGUE SEDUCTION, Cambridgeshire, PE 1TF  
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CUSTOM CABLE SERVICE, Surrey, KT3 4BY  
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DIVINE AUDIO LTD, Northamptonshire, NN14 2SW  
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Tel: 0155 475 0262, [www.emporiumhifi.com](http://www.emporiumhifi.com)

ERIC WILEY, West Yorkshire, WF10 5BS  
Tel: 0197 755 6774, [www.ericwiley.co.uk](http://www.ericwiley.co.uk)

FUTURESHOP LTD, Herts., WD6 2BW  
Tel: 020 8905 1555, [www.futureshop.co.uk](http://www.futureshop.co.uk)

HIFI SOUND LTD, Stockton on Tees, TS18 1BZ  
Tel: 0845 601 9390, [www.hifisound.co.uk](http://www.hifisound.co.uk)

HUDDERSFIELD HI-FI, West Yorkshire, HD1 2PT  
Tel: 0148 442 4000, [www.audiovation.co.uk](http://www.audiovation.co.uk)

INSPIRE HI-FI, Derbyshire, S43 3QE  
Tel: 0124 647 2222, [www.inspirehifi.co.uk](http://www.inspirehifi.co.uk)

JORDAN ACOUSTICS, Dorset BH23 6BB,  
Tel: 01202 911 886, [www.jordanacoustics.co.uk](http://www.jordanacoustics.co.uk)

MIDLAND AUDIO EXCHANGE, Worcestershire DY9 9TD,  
Tel: 01562 731100, [www.midlandaudiox-change.co.uk](http://www.midlandaudiox-change.co.uk)

MOTH GROUP, Bedfordshire, MK45 3HT  
Tel: 01234 741152, [www.britishaudio.co.uk](http://www.britishaudio.co.uk)

PAUL GREEN HI-FI LTD, Bath, BA1 3JN  
Tel: 0122 531 6197, [www.paulgreenhifi.co.uk](http://www.paulgreenhifi.co.uk)

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Tel: 0187 227 3215, [www.senso-systems.co.uk](http://www.senso-systems.co.uk)

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# Van den Hul The Wave/ CS-122 Hybrid £310

From Holland comes this long-established cable specialist, with an impressive pairing

## DETAILS

**PRODUCT**  
Cable loom

**ORIGIN**  
Netherlands

**TYPE**  
Interconnect/  
speaker cable

### FEATURES

- Interconnect: silver-plated copper with Hülliflex jacket
- Speaker cable: silver-plated copper and carbon hybrid speaker cable with Hülliflex jacket
- Prices: interconnect £130/1m, speaker cable £20 per metre untermated

**DISTRIBUTOR**

Flamingo Audio

**TELEPHONE**

07833 955014

**WEBSITE**

vandenhul.com

**F**rom a company that has made itself a great name for the fine moving coil cartridges it makes, comes a vast range of interconnects and speaker cables. The Wave is towards the more affordable end of this, and is another silver-plated, copper cable featuring a “massive” 0.9mm central conductor of oxygen-free copper. A specially foamed dielectric insulation material is said to minimise high frequency signal attenuation. The outer and inner layer are made of the same material as the central conductor, which is described as a “triple shield” that is said to aid interference suppression. As with all van den Hul cables, it is covered in the company’s own ‘Hülliflex’ cable jacket, which is claimed to be both environmentally friendly and contain no halogens.

The CS-122 Hybrid is an updated version of one of vdH’s classic speaker cables, and sports two conductors made of 147 strands of 0.16mm diameter, high-purity, matched-crystal oxygen-free copper with a very dense pure-silver coating, alongside a carbon saturated layer that is said to

improve the sound. The cable jacket is also made of Hülliflex and is described as “a very attractive matt cream colour”. During the debrief one of our panelists counters: “it looks like something you see in a hospital”!

## Sound quality

From the opening bars of the Beethoven piece, it is obvious that what we are dealing with here is special. For the first time in the test, the sound hangs back from the speakers and dissolves into the room, rather than appearing to come from two points in space – which is what happens to a greater or lesser extent with the other looms. Indeed, the transparency of these cables is superb, but it isn’t transparency at the expense of musicality, as the vdH loom also has a wonderfully mellifluous quality to it that sees the music ebbing and flowing in a seductive and arresting manner.

The Paul Simon track is proof positive of the way these cables are able to let the singer’s real intentions flood out – every vocal inflection is carried beautifully, giving a mesmeric quality to the music. Sure, all the detail is there, but the bigger picture isn’t lost in the process of rendering it.

The first track is startlingly different to most of the other cable looms, in the way the decay on the voice seems to hang on, rather than ‘falling off a cliff’ with most of the others. The vocals are expressive and dynamic, and this is set over a backing that suddenly takes on an urgent, snappy quality to it – when previously the musicians seem to just be going through the motions. It is amazing how the same beats sound so different, as if they’ve been set free.

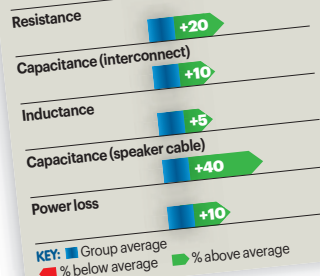
Soundstage width isn’t as good as some here though; this is where the

## ON TEST

In common with the Atlas Asymmetric interconnect, vdH’s The Wave is also a 75ohm coaxial type and so lends itself to both ‘analogue’ and ‘digital’ (S/PDIF) duties. This common geometry is reflected in the similarly low inductance and capacitance of the two interconnects although vdH’s greater conductor area lends it a very slightly lower 45mohm/m loop resistance.

VdH’s partnering CS-122 speaker cable, now in ‘Hybrid’ guise with mixed metal and carbon conductors is a very different beast from the original CS-122 that I tested for Hi-Fi Choice over 21 years ago. The spaced, figure-of-eight geometry means the 1.0µm/m series inductance is unchanged, but the improved dielectric means capacitance is half what it was at just 17pF/m. Resistance has also been cut by a factor of nearly 3x at 11.4mohm/m, further improving the achievable amp/speaker damping factor. **PM**

## RESULTS AT A GLANCE



vdH falls slightly short; it isn’t constrained or shut in, just not quite as expansive as – say – the Tellurium Q. That said, depth perspective is brilliant, “The first cable I’m hearing with front-to-back dimensionality,” says one panelist. Tonally it is pretty even – maybe just a touch on the dark and velvety side, but certainly not as sepia-tinged as the Tellurium Q.

The overall effect is of an absolutely stellar cable combination and one that’s an essential audition for anyone that’s in the market for such a thing. The great thing is that it’s not really all that characterful, it’s just very unobtrusive and lets the music’s true flavour come flooding out. ●

## Hi-Fi Choice

### OUR VERDICT

**SOUND QUALITY**

★★★★★

**VALUE FOR MONEY**

★★★★★

**BUILD QUALITY**

★★★★★

**FEATURES**

★★★★★

**OVERALL**

★★★★★

**LIKE:** Very musical, engaging sound; open and detailed

**DISLIKE:** Slightly constrained stage width

**WE SAY:** Superb value cable loom, one that’s an essential audition



# The long run

**David Price** tells the story of the once ubiquitous Creek CAS4040 – the budget audiophile amplifier of choice back in the eighties

**A**t the beginning of the eighties, the greatest hi-fi success story was the NAD 3020. This little integrated amplifier made a huge impact on the budget hi-fi market, and rightly so. Introduced in 1979, it sounded far better than anything else at the price and offered a range of facilities focused on getting the best possible sound. And the NAD had it all its own way until out of the blue came the Creek Audio Systems CAS4040.

Designer Michael Creek was already a veteran of the industry, having worked for (Sir) Alan Sugar at Ambit International and his father's audio company, the Wyndsor Recording Co Ltd. "This was a business model for everything I did later as the similarity to hi-fi equipment was very close", he remembers. He was a classic example of someone who'd done every role, pretty much joining as the tea boy; he'd been a stock controller, component buyer, the factory manager and then a production engineer. He also had a passion for hi-fi, including the affordable open reel and cassette tape decks, amps and tuners that Wyndsor made.

Mike left his dad's company and finally formed Creek Audio Systems

in 1981. His new amplifier put out 30W RMS per channel, and was, "based upon an upgraded version of a 10W power amp circuit employed at Wyndsor in 1976. I needed to beef up the power output stage and generally improve the design. The output transistors were 12A Darlingtonos from Philips Semiconductors; the Wyndsor used a discrete Darlington output stage while the Creek had

**It was gratifying to show the press that they had misjudged me**

much bigger integrated ones, for simplicity and ruggedness. That drive circuitry was virtually unique to Wyndsor", Mike says.

The first Creek integrated put out a decent if not exceptional amount of power then, but like the NAD could drive 'real life' speaker loads well and it proved a hit among independent specialist hi-fi dealers. It gave them a rival to the mighty NAD, but sounded different because it wasn't engineered in the same way. "I didn't want a NAD, by another name. I wanted to

do something unique and that is what the 4040 was. A unique design for the power amp in a case that was far slimmer than the norm at the time" he recalls.

## A frosty reception

The 4040 didn't meet with an initial rapturous press reception. "My first review suggested that, although there was 'nothing intrinsically wrong with the 4040, it would be 'safer' to buy from a more established company'! But it was gratifying to show the press that they had misjudged me", Michael Creek remembers.

A tuner soon followed, and to everyone's surprise – as tuners aren't easy to do well – this clean-sheet design sounded superb; the CAS3040 consolidated the company's success. He consulted his friend Tom Woodford, who at the time was promoting a range of Philips FM radio ICs that the company didn't use. He recommended some excellent chips and the 4040 eventually gained a radio stablemate in the summer of 1983. "It produced a beautiful sound and was broadly loved by everyone that heard it", recalls Mike.

Creek Audio – like so many British companies from the seventies and





eighties – effectively started in spare room. Mike had bought enough parts to make just 100 amps, with a £4,000 bank loan. His back-up plan was to sell the amplifiers via *Exchange and Mart* if he couldn't get any hi-fi dealers on board. Happily he didn't need to use it because its appearance at the Swiss Cottage Audio T hi-fi show in 1982 went down a treat. "I couldn't make them fast enough", he says.

Creek duly had the opposite problem; too many orders and not enough parts, which meant he had to go back to his bank manager and look to get the amp built by an outside contractor. He found Michael van der Molen – a one-time rival to Wyndson – and duly did a deal. In the first nine months of 1982 he managed to build and sell about 1,000 amplifiers in the UK, and some overseas. The following year he was "cooking on gas" – sales increased by 700% – and by 1985 the company was selling 1,200 amps and 350 tuners a month.

The CAS4040 had a lovely, sweet and musical sort of sound, tonally far smoother than rival Japanese amplifiers, and even the rich NAD seemed a bit steely and mechanical by comparison. It was no valve amplifier, of course, but by the standards of its Japanese rivals, which were quite cerebral and dry in nature – and sometimes infused with upper midband glare that afflicts mediocre solid-state – it might as well have been. Music seemed to bounce along in a most enjoyable way, although in absolute terms the Creek was a little opaque and soft.

The company's response to this was the CAS4140, which did two things. First, slightly tweaked componentry made it put out a true 40W RMS per channel, which was just about the

minimum any eighties amplifier needed to be truly universal; lots of loudspeakers of that time had very poor sensitivity (lest we forget, Celestion's original SL6 made just 82dB per watt at one metre!). Second, it removed the tone controls, which for most people were a useless distraction anyway; cutting these out of the circuit made for more detail and grip. This really consolidated the company's product range, and gave its competition something to think about – by 1985 it had Mission's Cyrus 1 and Arcam's Alpha 1 to worry about, along with Nitech's CA202 and a newly strengthened NAD 3130.

### Leave it out

"Leaving the tone controls out of the 4040 was not simple, as they were an intrinsic part of the power amp circuit, embedded into its feedback circuitry," remembers Mike.

"Therefore, the first 4140 in fact used a simpler power amp circuit, with lower open loop gain, to avoid stability problems caused by deleting the tone controls. The 4140 had an improved phono stage, larger mains toroidal transformer and bigger power supply capacitor. About a year later, we developed the mainstream 4140, which wasn't referred to as mk2 initially. It was in fact a completely different product, in that it was a more conventional circuit design. It could produce more power into lower impedance loads", reveals Creek.

Creek Audio Systems sold over 25,000 CAS4040s and over 5,000 4140s and the same amount of CAS3040, CAS3140 and T40 tuners between 1982 and 1991. But Mike found himself a victim of his own success, "we couldn't grow sufficiently fast and it was a challenge to keep potential customers waiting for up to

**Though not fired by Sir Alan, Mike Creek cut his teeth under him**



### BUYING

The first Creek CAS4040 was sold on the 31st March 1982 to Audio Projects in Leeds, and retailed for just £99. The amplifier was gently refined over the years, with the S2 version coming from a desire to eliminate some reliability issues with the S1 circuit caused by ST power transistor failure. Philips stopped supplying Creek and so the move was made to ST parts, which began to fail, so swapping to another brand cured the problem. However, Mike Creek had by then developed a "more conventional circuit configuration" using bigger transistors running on a split power supply rail, instead of the "cute single rail amp for the S1". That meant it had no output capacitors and limited the number of coupling capacitors also. In 1990 the S3 improved the performance of the input stage by adding an active constant current source, which improved the measured performance and increased the power supply rejection ratio, which reduced residual hum. On sonic grounds, the later the better, although there are some nostalgists who hanker after the original sound of the early CAS4040s. Prices are under £100 for any, so take your pick!

six months". His wife had health problems, and he had an eight year old son, and "the strain made for some poor business choices". So he was happy when Mordaunt Short offered to acquire the company for the TGI group.

"I continued to work for them for two and a half years as chief designer but was asked to leave at the end of my contract", Mike remembers. Along with three ex-customers, he duly bought his brand back in 1993.

The CAS3040 tuner was soon revised to the 3140, and in 1989 it became the T40 with an improved AFC circuit. The later CAS4040S2 amplifier got an improved output stage with a different brand of power transistors, and the later S3 mainly improved the performance of the input stage by adding an active constant current source, which reduced residual hum. This came during the Mordaunt Short years back in 1990.

After various labyrinthine corporate changes, Mike is back running Creek Audio Ltd and also the Epos loudspeaker brand. The company recently introduced the Evolution 50A, a £750 design which is the spiritual successor to the long, lost CAS4040. Michael agrees, "In a strange way it has become so, due to its size, weight and excellent press reviews everywhere, so yes I suppose it is a 21st century version of the Creek original". And amazingly, it doesn't sound that different either, so he must be doing something right after all those years ●



# The future sound of Dorset

The Future of Audio strives to make systems that you'll fall in love with. **Ed Selley** pays a visit and ends up smitten

**O**ne of the challenges that is currently facing dealers is how to stand out from the crowd. Even though there are fewer around than there used to be, when a strong web presence is not too difficult to achieve, they no longer have a territory to themselves and come into competition with stores some distance away as customers hunt down their perfect system. A desirable solution for dealers is to build a portfolio of unique products that compel customers to seek them out. This is much harder than it sounds, though – the challenge is having something distinctive enough to stand out from the crowd, but still well-known enough to attract attention in the first place.

Matthew Scott at The Future of Audio has adopted this approach with enthusiasm as a means of differentiating his store in a region where there are several competing dealers. The Poole-based concern has assembled a portfolio of products that gives it a unique online presence.

## Poole party

This doesn't prevent it from competing at all the key price points you might expect a dealer to, with the ability to produce CD, computer audio and vinyl-based systems. Supported by NuNu distribution, I settle down to listen to three dealer systems showcasing CD, vinyl and computer audio to see how this approach pans out.



## THE EXPERT



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## System test music



**UNKLE**  
*Where Did The Night Fall?*  
CD



**ZOLA JESUS & THE MIVOS QUARTET**  
*Versions*  
Vinyl



**KRAFTWERK**  
*Minimum Maximum*  
Hi-res FLAC



## System 1 – Little and large

**THE FIRST SYSTEM** of the day is an intriguing combination of compact but clever electronics partnered with a pair of sizable but benign speakers. The result is a striking-looking partnership that offers considerable ability on paper. But how does it work in practice?

Bel Canto has carved itself a well-earned reputation for small units that deliver big sounds and specification. One of the reasons that it has been able to do this is its early adoption of Class D amplification with the corresponding reduction in the space that this takes up. At first glance, what you see here is a CD player and integrated amplifier, but as with many Bel Canto units it isn't quite as simple a division of labour as that.

### Bel of the ball

The CD3t is a rare beast in this day and age in that it is a dedicated CD transport. The chassis contains a slot-loading mechanism with attendant controls and a choice of AES and S/PDIF outputs to send the signal on. This means that the partnering C5i is more than a simple integrated amp. True, it has an analogue input and a moving magnet phono stage to make use of the 60W amp, but it also has no less than five digital inputs, which make use of an internal DAC. This DAC is busier than it looks because the analogue inputs are routed through it too, in order to allow the volume to operate in the digital domain as well. Impressively, all this condenses down into two solid but compact units that side by side only occupy the space of a single unit.

This is good because it gives you more space to accommodate the whopping Cabasse Bora. This is a burly standmount (and I think that standmount is definitely a fairer description than bookshelf in this case) standing half a metre tall. Although the design of Bora is relatively restrained by Cabasse standards, it makes use of the company's considerable skill in coaxial drivers in that it features the 'BC13' tweeter that is in fact two drivers in one, which makes the Bora a three-way design rather than the more conventional two. With some clever technology being brought to bear, does this system realise the potential of it?

Kicking off with UNKLE's raucous *Where Did The Night Fall?* on CD, the system makes an immediate case for itself. The rough edges of *Ablivion* are still apparent, although the presentation of the Bora in particular keeps it from becoming harsh or overly forward. At the same time, the potent low end and real attack that this album features is perfectly reproduced. As you might expect from a big speaker with an 8in driver, the Bora has genuinely deep bass, but there is also bags of detail and useful control to it, too.

With the rather more refined presentation of Emily Barker and the Red Clay Halo's *Almanac*, the system is better able to show the impressive tonality that it has. The texture it brings to Barker's voice is unfailingly believable and tremendously engaging. For a system that is notionally 'digital', there is a complete absence of harshness or brightness and combined with the Cabasse speakers there is a depth and space to the presentation that is almost analogue in the way that you perceive it. This allows the detail retrieval and tonal realism to be spread out into a soundstage that has both depth and width to it. They might be big speakers, but the Boras are able to disappear into the mix when they really need to.

Indeed, this system is one that puts very little of itself into the performance. You don't sit there thinking "Oh, that's definitely the amp making the difference" because the overall result is so harmonious. There certainly isn't the sense that the C5i is a convenience choice combining as it does both the amplification and decoding. Instead



The Bora is a big but very benign speaker

you revel in how fabulously cohesive and well balanced this performance is. I've heard systems where the electronics and speakers notionally come from the same company that don't gel together as well as these units do. When you consider the solid build, handsome appearance and the flexibility that this setup offers, you have a system that is well worth hunting out and one that sets a high bar for the more expensive efforts.

- 1 CABASSE BORA THREE-WAY SPEAKERS £2,250
  - 2 BEL CANTO CD3T CD TRANSPORT £1,350
  - 3 BEL CANTO C5i AMP/DAC/MM £1,800
- TOTAL SYSTEM PRICE: £5,400**



The Bel Cantos offer flexible connectivity and a very engaging sound



### System 2 – Lucy in the sky with dazzlers

**THE NEXT SYSTEM** showcases The Future of Audio's grasp of analogue with an intriguing combination that includes two up-and-coming brands in charge of amplification and a new deck from one of the most well-known names in the turntable business.

The Funk Firm has been with us for several years now and is the brainchild of Arthur Khoubesserian who first came to prominence as the man behind the Pink Triangle range. Funk Firm turntables are highly regarded, but rather different in appearance to their Pink Triangle ancestors. The Little Super Deck, however, has more than a little PT in its styling and has been designed to be the smallest way of packaging the deck and partnering F5 tonearm together. A measure of Paul's confidence in the LSD is his choice of £1,195 Ortofon Cadenza Blue cartridge to partner a £1,400 deck.

The electronics for the system come courtesy of Sonateer in the form of the Sedley phono stage and Renaissance with the RAP03 preamp and RA02 monoblocks. All four boxes are slim, minimalist and reasonably priced, but cumulatively offer impressive flexibility and plenty of power as well as a feeling of bombproof construction. The RA02 monoblocks might 'only' be 50W a side, but never feel wanting for power. The RAP03 preamp has seen some recent revisions to the design and now sports a display and volume buttons rather than the original knob, but is still a simple yet effective design.

#### Ohhhh, Vienna

The speakers are rather more unusual. Vienna-based Brodmann Acoustics designs its speakers around similar principles to the pianos it also builds. This means the cabinet is designed to be part of the emitting area. The FS (Festival Shelf) is the smallest speaker in the range, but still adheres to these principles presenting as it does only a visible tweeter to the world. They certainly look unusual, but how do these Austrian virtuosos partner with the rest of the system?

Showing no mercy and selecting the densely packed production of the Hidden Orchestra's *Archipelago* shows that this system has some serious ability. The way these fast and complex rhythms hang together

is arresting and staggeringly accomplished. Every beat is perfect and there isn't the slightest trace of bloat or overhang to it.

If this timing and agility were the summation of the system's ability it would still be noteworthy, but the way it goes about making music as a whole is tremendous. The tonality is superbly and unambiguously believable with the lead clarinet in *Hidden* having a texture to it that is simply spellbinding. When it gets some voices to play with in the form of the pared-back vocals of Zola Jesus and the Mivos Quartet, the system doesn't disappoint. The minimalist clutch of musicians lose none of their presence, but have to take second stage to Danilova's powerful voice.

In many ways there are some similarities to the first system in that it is greater than the sum of its parts, but the sheer ability of the Funk Firm deck shines through even in these exalted surroundings. Put simply the LSD is so utterly cohesive, it is entirely unfazed by whatever you throw at it. There is a simple and honest musicality to the Funk that is often beyond far more expensive turntables. The Brodmanns also impress. There is a sense that they have been designed more with tonality than outright speed in mind – and make no mistake they reward with a fine portrayal of voices and instruments – but on the end of the no-nonsense ability of the Renaissance trio they can dance, too.

The result is a truly excellent all-rounder. There are no genres I can see proving beyond the exceptional capability that these electronics offer. I'm sure that you could add a very capable digital source to make further use of it, but with a deck as good as the Funk in there already, I can't see it enjoying that much use in the face of this analogue masterclass. This system is a convincing demonstration that synergy of already good components yields great results.

- 1 FUNK FIRM LSD/F5 TURNTABLE/ARM £1,400
  - 2 ORTOFON CADENZA BLUE MOVING COIL CARTRIDGE £1,195
  - 3 SONNETEER SEDLEY MM/MC PHONO STAGE £650
  - 4 RENAISSANCE RAP03 PRE AMPLIFIER £995
  - 5 RENAISSANCE RA02 (X2) MONOBLOCKS £1,695 PER PAIR
  - 6 BRODMANN FS SPEAKERS/STANDS £2,850
- TOTAL SYSTEM PRICE: £8,785**



Three Brit brands from a minimalist masterpiece



The Brodmann looks unusual, but works really well with the electronics



## System 3 – TAD's the way to do it

### TECHNICAL AUDIO DEVICES

Laboratories (TAD for short) is unusual in that it has no single area in which it specialises, preferring instead to develop complete systems inhouse. There is always a danger that this will lead to overstretch, but there seems to be little danger of that here. The DA1000 DAC is the newest addition to the company portfolio and offers 192kHz capability and the must-have feature of the moment, DSD support. As a fully functioning preamp, the DA1000 serves as both source and preamp and looks genuinely fantastic while it does so – those gently sloped top edges are gorgeous in the metal.

With the preamp duties taken care of, the DA1000 is connected directly to an M2500 stereo power amplifier, which puts out a hefty 150W of power via a completely symmetrical output circuit. Like the DAC, the M2500 is another beautiful piece of industrial design with the contrasting casework helping to break up the substantial dimensions and it is as exactly screwed together as its digital brother.

### TAD's entertainment

TAD's final speciality is speakers. The CR1 is the smallest model in the range (CR in this instance standing for Compact Reference), but this is hardly a shrinking violet. A three-way design that features an 8in bass, 6in midbass with a 1.4in tweeter mounted concentrically in it, the CR1 is a burly speaker, especially with the dedicated stand. The finish is as impressive as the electronics and the whole system oozes professionalism, but how does it sound?

With a laptop connected to the DA1000 via USB, the TAD takes only a few seconds of the hi-res download of Kraftwerk's *Minimum Maximum* to show that its approach is one that should be taken very seriously. Like all good examples of high-end audio, this system has an effortlessness to it that makes even the enormous soundstage of

*Elektro Kardiogram* sound composed and utterly under control. This is achieved without robbing the piece of its scale and power. The CR1 is capable of a tremendously fast yet immensely deep low-end that means that this system can move with the best of them.

The refinement of the three Technical Audio Devices components working as one and the way it slows down to present the simplicity of Mark Knopfler's *Privateering* is truly fantastic. The scale that the system is capable of still aids this piece even though it is a far simpler undertaking than the Kraftwerk album. The weight to the vocals is absolutely superb and when you close your eyes you are taken out of the confines of the listening room and placed smack bang in front of Knopfler.

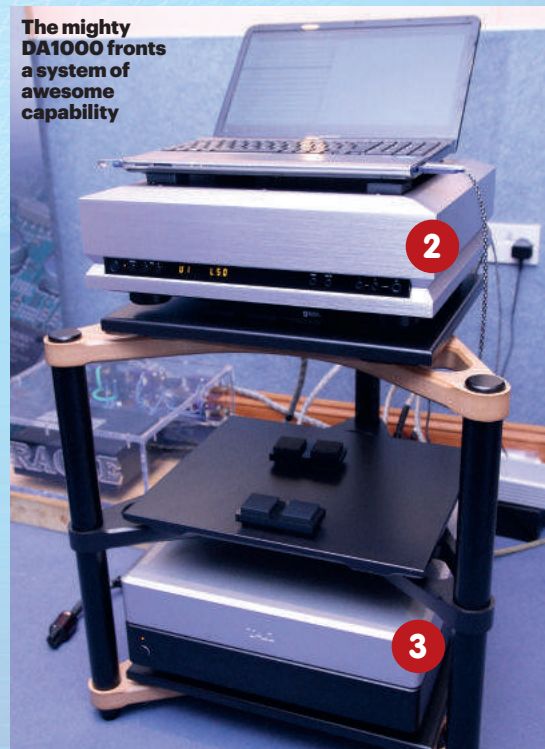
The DA1000 might be the least expensive part of the system (I'm not going to describe it as the cheapest, though, that's probably a bridge too far), but in many ways it is the most impressive. The presentation is utterly free of hardness or any trace of the brightness that can make digital fatiguing and at the same time, it genuinely feels like it is up to the task of replacing your preamp. That it can perform these two roles so well while costing much less than the other components in the system and still feel like it will last the rest of a long and healthy life means that this is a DAC to pay attention to.

This is no disrespect to the other components, however. Any company that sets out to build complete systems from input to loudspeaker is worthy of respect and this is a system where you would happily go all-in with TAD not simply out of a sense of brand loyalty, but because this is a trio of components that can go toe to toe with any mix-and-match equivalent and come out on top. What a phenomenal way to end the day!

- 1 TAD CR1 THREE-WAY SPEAKERS (EX STANDS) £33,995
  - 2 TAD DA1000 DAC/PRE AMPLIFIER £11,995
  - 3 TAD M2500 POWER AMPLIFIER £17,995
- TOTAL SYSTEM PRICE: £63,985**



The CR1 might be the smallest TAD speaker, but it packs a hefty punch



The mighty DA1000 fronts a system of awesome capability



The Future of Audio is a bold name for any dealer to choose, but Matthew's approach can genuinely be seen to be something of a departure from the norm. Assembling a portfolio that in many ways does without the 'household name' that might add a touch of familiarity

for a customer is a bold move, but the three systems on display here are an elegant demonstration that the brands in use are capable of truly exceptional results across all the major format types a dealer is expected to deliver in 2014. More important than the individual

greatness – and make no mistake, the Funk, Brodmann and TAD DAC are products I'd love to spend more time with – the systems are even more capable than their single components while proving compact and easy to live with. If this is the future, sign me up.



LABELLED WITH LOVE



# Harvest

In the first of our series of label profiles, **Simon Berkovitch** feasts at the Harvest festival – a cornucopia of underground treats

**F**or many record collectors, the quintessential UK underground label is Harvest. It set up shop in the same year that man first walked on the moon and is still active today. Harvest's classic decade spans 1969-1979, taking in acts as diverse as the improvised stoner minimalism of Third Ear Band at one end of the scale and the inventive post-punk of Wire at the other.

Some of the label's bigger, more successful acts, such as Pink Floyd, ELO, The Move and Deep Purple (whose *The Book of Taliesyn* was the first album released on Harvest in July 1969)

bankrolled Harvest's more esoteric releases – such as LPs from acid folk act Forest and performance poet and Cream lyricist Pete Brown (& Piblokto!) – which scarcely troubled the charts. Many of these obscure artists' records on Harvest now change hands for serious money.

A glance at Harvest's early seventies roster makes it clear that the term 'progressive' referred to a broad church. More psychedelically inclined acts such as The Battered Ornaments were bedfellows with progressive folk artists (Michael Chapman; Roy Harper; Alan Sorrenti), hard rock groups (Deep Purple), keyboard-heavy

prog (Quatermass), blues rock power trios (Bakerloo), arty glam rock (Be-Bop Deluxe), quirky singer songwriters (Kevin Ayers) and even English folk revival legend Shirley Collins, who recorded two remarkable LPs for the label with her sister Dolly – *Anthems in Eden* and *Love, Death and the Lady*.

The job of looking after EMI's progressive subsidiary – launched to cater for the demand for the emerging trend of underground rock music and to compete with rivals Philips' and Decca's Vertigo and Deram labels – was handed to producers Norman Smith (best known for his work with Pink

Floyd) and Malcolm Jones. Label head Jones also helped produce one of the first wave of Harvest's greatest albums – former Floyd Syd Barrett's outsider classic *The Madcap Laughs*. A sub-label, Harvest Heritage, was launched in the mid-seventies, handling reissues from both the label and parent company EMI.

No Harvest release was complete without suitably lavish packaging. Artwork for the beautiful, predominantly gatefold sleeves was handled by Storm Thorgerson's Hipgnosis design studio – most famous for the instantly recognisable sleeve for Pink Floyd's mega-selling *The Dark Side of the Moon*.



# Pink Floyd

Progressive experimentation before heading to the *Dark Side*

**D**ouble album *Ummagumma* (1969) marks Pink Floyd's transition from psychedelic pop to progressive rock. It's the group's first on Harvest, the last being *The Final Cut* (1985), which was also the final record to feature Roger Waters.

The first disc is a glimpse into how a late sixties Floyd concert would have sounded, with elongated versions of earlier material showing the quartet at their improvisational peak. The second LP allots each of the four Floyds half a side each for solo studio experiments. Classically trained Rick Wright contributes a piano and Mellotron extravaganza, *Sisyphus*. Nick Mason's *The Grand Vizier's Garden Party* is typical of the spirit of the times featuring a lengthy percussion solo. Dave Gilmour's *The Narrow Way* sees the guitarist overdubbing to play every instrument himself.

It's Waters' contributions that are arguably the most successful,

however. *Granchester Meadows* is an acoustic meditation on the Cambridge countryside, embellished with tape loops of chirping birds. Startling panning – as the sound of a fly being chased and swatted breaks the bucolic reverie – invades proceedings, and the track morphs into the fabulously titled *Several Species of Small Furry Animals Gathered Together in a Cave and Grooving With A Pict*,

## The deepest Pink Floyd ventured into avant-garde waters

an experiment in treated vocals and tape effects.

Individually and collectively, *Ummagumma* was the deepest Pink Floyd ventured into avant-garde waters. The following year's album *Atom Heart Mother* began to sow the seeds for 1973's all-conquering *The Dark Side of the Moon*.

**Ummagumma's 'ad-infinity' sleeve is the Droste effect in full**



# Kevin Ayers

Gloriously odd ditties from the ex-Soft Machinist

**A**fter splitting from cult underground group The Soft Machine at the end of an American tour supporting The Jimi Hendrix Experience, bassist Kevin Ayers decamped to Ibiza, resurfacing for 1969's fabulous *Joy of a Toy*, the first of a fruitful – yet erratic – series of LPs recorded for the label.

This was one of the first albums released on Harvest – and one of the best. Delightful songs such as *Girl on a Swing* and *The Lady Rachel* were a curious fusion of pastoral and whimsical elements.

Follow up *Shooting at the Moon* (1970) was more avant-garde, featuring both free saxophonist Lol Coxhill and teenage prodigy Mike Oldfield in The Whole World, the fluctuating backing group Ayers had assembled.

Subsequent albums *Whatever She Brings Swesing* (1971), featuring members of Gong, and *Bananamour* (1973),

including the excellent Nico tribute *Decadance*, complete the quartet of Ayers' most acclaimed work, documenting the artist at his commercial, yet underground, best.

His last releases for Harvest were *Yes We Have No Mañanas* (*So Get Your Mañanas Today*)

## One of the first and best albums on the label

and the appropriately titled *Odd Ditties* (both 1976), a roundup of singles and previously unreleased material.

Mainstream popularity simply wasn't him, and as the seventies dimmed he largely disappeared from view, enjoying one last hurrah, *The Unfairground* (2007), with the help of younger indie musicians such as Teenage Fanclub and Ladybug Transistor. Sadly, Kevin Ayers died in 2013.

**Debut solo album *Joy of a Toy* also features Robert Wyatt**



# Michael Chapman

A fully qualified survivor with 30-odd albums under his belt

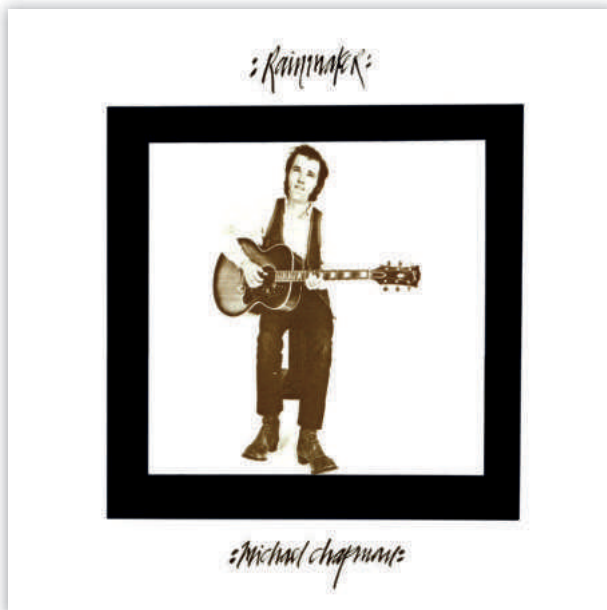
**S**ongwriter and improvisational guitarist extraordinaire Michael Chapman has enjoyed an astonishing renaissance in recent years, making records that rival the classic Harvest years (1969-1972) for their invention, experimentation and dexterity.

Chapman was part of the same sixties folk circuit as fellow travellers Roy Harper and John Martyn. Debut album *Rainmaker* (1969) is a fabulous mix of gruff-voiced, emotive songs and spiralling, fingerpicked instrumental workouts, drawing the influences of blues, jazz, folk and raga into his orbit. The comparison to legendary American guitarist John Fahey is not made lightly.

Follow-up *Fully Qualified Survivor* (1970) contains Chapman's best known song, the endearing *Postcards of Scarborough*. It's also

noteworthy for the distinctive fretwork of a young Mick Ronson, pre-Spiders From Mars fame, and Paul Buckmaster's haunting cello.

*Window* (1970) and his final release for Harvest, *Wrecked Again* (1972) saw a move away from folk towards a Memphis-inspired sound.



## Wire

Expanding Harvest's horizons to embrace inventive post-punk

**T**he appearance of Wire on a label that was perceived as a haven for progressive hippies is as appropriate as it is initially incongruous. The group stood apart from the reductionist hoards of punk, subverting and reconstructing rock and roll to their own ends – making them a deeply suitable act for the label.

The first of the group's Harvest LPs, *Pink Flag* (1977), may be more superficially punk in style than subsequent albums *Chairs Missing* (1978) and *154* (1979), but it nonetheless tears at the fabric of the genre: *Field Day For The Sundays* lasts a mere 28 seconds, for example.

Synthesisers and lengthier song structures crept into the mix for the next album *Chairs Missing*, which was released the following year. Home to classic Wire songs *Practice Makes Perfect*, *I Am the*

*Fly* and near-hit single *Outdoor Miner*, it's rightfully regarded as a post-punk classic.

The last album for Harvest, *154* followed its predecessor's

adventurous template while embracing further sonic experimentation – a tradition that Wire has continued to uphold to the present day.



### ► SHOPPING LIST

Here are eight of Harvest's finest long-players – a broad church of prog, folk, glam, rock, punk and the fabulously unclassifiable



**Kevin Ayers**  
*Shooting At The Moon*  
Quirky, melodic ballads sit alongside madcap experiments on the Soft Machine bassist's second LP.



**Third Ear Band**  
*Alchemy*  
Improvised raga-inspired zone outs from London's free music scene. Recorded three mighty albums for Harvest.



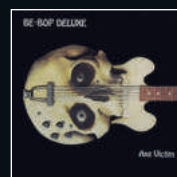
**Various Artists**  
*Picnic - A Breath of Fresh Air*  
An eclectic label sampler. Includes previously unreleased Ummagumma casualty *Embryo*



**Deep Purple**  
*In Rock*  
Satisfyingly pompous hard rock housed an all-time-classic gatefold from way back in 1970.



**Alan Sorrenti**  
*Aria*  
Over the top Euro prog-folk from 1972. Imagine if you can a mystic Italian version of Peter Hammill.



**Be-Bop Deluxe**  
*Axe Victim*  
Glorious Ziggy Stardust rip off from 1974 that goes heavy on the Bill Nelson guitar heroics.



**The Saints**  
*(I'm) Stranded*  
These Australian Punks are most welcome guests at the Harvest festival and this 1977 release still stands the test of time.



**Syd Barrett**  
*Opel*  
A great collection of outtakes and rarities that was still keeping the Harvest flag flying in the late eighties.





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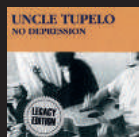
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# Musicreviews



**ALBUM  
OF THE  
MONTH**



## **Little Feat** Rad Gumbo: The Complete Warner Bros. Years 1971-1990

★★★★★

13-CD box set **Rhino**

**LITTLE FEAT MAY** just have been the all-time, perfect American band. It's hard to explain why, because the reasons for their greatness lie principally in the fact that it is almost impossible to define or pin them down. Were they a down and dirty southern-fried boogie band or a bunch of serious, beard-stroking jazz-funk fusionists? Slick Californian canyon rockers or visionary roots radicals who thought nothing of mixing blues, country and soul flavours into their eclectic brand of indigenous rock 'n' roll? The answer – and why they were so special and arguably unique – is that their 'rad gumbo' made them all of these things and more. And for the most part the 'more' was their inspirational leader, songwriter, singer and guitarist Lowell George, one of the most gifted musicians to emerge from the richly creative milieu of late-sixties American rock. George guided the band from their eponymous 1971 debut through

seven studio albums and one of the most potent live albums ever recorded until their break up in 1979. He should have gone on to enjoy a stellar solo career, but he died of a heart attack, aged 34, halfway through his first solo tour in 1979. Little Feat subsequently reformed in the late eighties, but while they could play as well as ever, without George's inspiration and songwriting they were a pale shadow of their former glory.

Presented in an attractive clamshell box, this 13-disc comprehensive career retrospective includes the seven studio albums recorded with George in the seventies, the brilliant 1978 live album *Waiting for Columbus* expanded over two discs, two further discs of outtakes and rarities and the two albums made by the reformed group without George, *Let It Roll* (1988) and *Representing The Mambo* (1990). With the exception of the last two discs, it's all pretty much essential stuff. George

dominates the early albums such as *Sailin' Shoes* (1972) and *Dixie Chicken* (1973) with his warm, soulful voice, virtuoso guitar playing and unforgettable songs. From the raw country of *Willin'* to the joyous rush of *Easy To Slip* and the strutting southern boogie of *Rock and Roll Doctor*, the sound is slick and polished, but somehow feels visceral and earthy at the same time. By the mid-seventies on albums such as *The Last Record Album* (1975) and *Tine Loves A Hero* (1977) the rest of the group, particularly second guitarist Paul Barrere and keyboardist Bill Payne, were pushing Little Feat in the direction of a jazzier, more improvisational hybrid full of rich textures and complex time signatures, although George still contributed several of the best songs, including *Long Distance Love* and *Down Below The Borderline*. Quite simply they made some of the funkiest, freakiest, most radical rock 'n' roll ever. **NW** ►





## Al Green

Let's Stay Together

★★★★★

CD

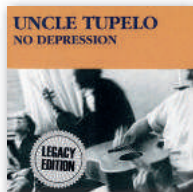
Fat Possum

**SOUL MUSIC IN** 1972 found the likes of Marvin Gaye, Stevie Wonder and Curtis Mayfield all at the top of their game. But nobody had really emerged as a successor to the most soulful voice of them all, Otis Redding, who died in a 1967 plane crash. The crown eventually passed to Green, who five years later topped the singles charts with the sublime *Let's Stay Together*. The album of the same name – now remastered – remains an all-time classic.

## Al Green's intense voice rides the slinky rhythms as if making love to the music

Green's honeyed voice ranges from smooth falsetto to funky growl, sophisticated and yet grittily rooted in authentic southern blues and gospel. Producer Willie Mitchell knew exactly how best to showcase his talents with a simmering soundbed of kick drums and hi-hats, floating Hammond B3 organ, riffing horns and lush strings played by the hottest session crew in Memphis as Green's intense voice rides the slinky rhythms as if making love to the music. **NW**

## MUSICREVIEWS



### Uncle Tupelo

No Depression:  
The Legacy Edition

★★★★★

Two CD expanded edition

Sony

**COUNTRY MUSIC BACK** in the early nineties was dominated by Garth Brooks, while on the other side of the musical coin indie rock was about to be eclipsed by a new movement called grunge. Enter Uncle Tupelo, a bunch of kids from the rust bowls of Illinois with a debut album that managed to combine the two; wistful melodies accented by mandolins and pedal steel that harked back to Hank Williams hitched to stinging rock guitars. The album birthed a movement that came to be known as alt-country. Now augmented by a second disc of demos and out takes, it still sounds invigoratingly fresh and bold. **NW**



### Judith Owen

Ebb & Flow

★★★★★

[www.judithowen.net](http://www.judithowen.net)

**JUDITH OWEN'S STYLE** harks back to the classic singer-songwriters of the seventies – think Carole King jamming with James Taylor at Joni Mitchell's place and you won't be far off. Perhaps that's no coincidence, since band members Russ Kunkel (drums), Lee Sklar (bass) and Waddy Wachtel (guitar) played on albums by all those greats. Their tastefully executed chops are very much in evidence and provide the perfect support for her delicate piano flavours and breathy vocal delivery. She manages the trick of wrapping up heartfelt emotions in beautifully shiny melodies with seductively enticing arrangements. **DO**



HOT PICK

## Ann Peebles

I Can't Stand The Rain

★★★★★

CD

Fat Possum

**ANN PEEBLES' URGENT**, impassioned voice is a hallmark of classic seventies soul. Backed by the veteran Hi Records rhythm and string sections who saw service with Al Green and OV Wright on their biggest hits, and produced by legendary R'n'B mastermind Willie Mitchell, her poised, insistent vocals soared, entreated, scolded and cajoled with equal fervour on a string of hits. Her five classic Hi Records albums have been re-released and while they all contain gems, 1974's *I Can't Stand The Rain* offers the best value for money, with at least two solid-gold classics (penned by Peebles and her husband Don Bryant) in the title track and *I'm Gonna Tear Your Playhouse Down*. **DO**



Do you agree with our reviewers?  
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some of this month's tunes at  
[www.hifichoice.co.uk](http://www.hifichoice.co.uk)

## AUDIOFILE VINYL

★★★★★

### Otis Rush

Right Place, Wrong Time

180g vinyl

Bullfrog/PurePleasure

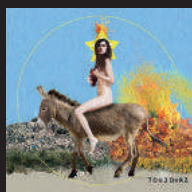


**RECORDED FOR** CAPITOL in 1971, but not released until five years later, this is considered a highlight of Rush's four decade career and it's not hard to hear why. His style is reminiscent of fellow Chicago bluesmen Buddy Guy and Albert King, with a thin-toned guitar sound and plenty of string bending. Much of this album is pacey, rocking blues with backing by brass, organ, piano and rhythm, all the players of which are as solid as you like, I particularly like the subtle piano of Mark Naftalin.

The sound is big thanks to the size of the band and some restraint when it comes to limiting/compression, which is rare for the genre. It was recorded at Wally Heider's San Francisco studio where CSNY, the Steve Miller Band and Creedence Clearwater Revival made some of their classic albums. Rush was a consummate blues guitarist and singer that much is clear, his style was perhaps not quite distinctive enough to achieve the prominence of Guy and perhaps there is some truth in the album title, because he deserved to do better. The playing on many of these numbers is first class and on *Lonely Man* and the instrumental *Easy Go* it's clearly on a par with the best in class. **JK**



## HIGH RESOLUTION **DOWNLOADS**



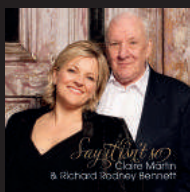
**Sabina**  
Toujours



ALAC 24-bit 44.1kHz

**Naim label**

**THE FORMER SINGER** with electro-punk outfit Brazilian Girls did time as the vocal foil of flamenco jazz guitar virtuoso Antonio Forcione, proving that she can deliver a smooth and seductive tone when she wants to. Here she opts for a more confrontational stance with more attitude. Blending electro pop with grungy garage rock, it sounds like it would have done if Nico had hooked up with a Parisian Lou Reed in the eighties. **DO**



**Claire Martin**  
Say It Isn't So



FLAC 24bit 96kHz

**Linn Records**

**THE FIRST LADY** of British jazz turns her gilded vocal chords to the songs of Irving Berlin here and captures the best of her collaboration with the late Richard Rodney Bennett. The pair's New York tribute to the classic American songwriter called *A Couple of Swells* somehow seemed a more appropriate title for these deft, classy, piano-led interpretations of classics like *Steppin' Out* and deliciously funny Big Apple time capsules like *He Ain't Got Rhythm*. **DO**



**Grieg: perfect for evoking waterfalls, apparently...**

**HOT PICK**

**Grieg** Holberg Suite; Two Elegiac Melodies; Erotik; String Quartet, Australian Chamber Orchestra, Richard Tognetti



1877 SACD

**BIS**

**HERE'S AN IMPRESSIVE** collection of Grieg's music for string orchestra, very well recorded. The disc begins with an arrangement of Grieg's *G Minor String Quartet*. The full body of strings lends the music greater colour and a wider range of dynamic extremes. It also demonstrates the vitality and virtuosity of the players, who perform the work with great verve and passion. The popular *Holberg suite* is likewise played with impressive vivacity, while the *Two Elegiac melodies* are suitably emotional and heart rending. Massed strings are always a challenge to record and reproduce, but BIS has come up with a recording that combines warmth with clarity and brilliance with sweetness. **JH**



**Alfredo Catalani**  
Ero e Leandro  
(Symphonic Poem):  
Contemplazione; Il  
Mattino, Orchestra  
Sinfonica di Roma,  
Francesco La Vecchia



8.573074 CD

**Naxos**

**ALFREDO CATALANI IS** remembered for just one work – the opera *La Wally* – but he wrote other things, including some attractive orchestral pieces. The main work here is a dramatic, richly scored symphonic poem based on the Hero and Leander legend. *Contemplazione* is a rich, slow movement that's very lyrical and ardent, without being heavy or overly serious. The disc ends with *Il Mattino* a 'Sinfonia Romantica' here receiving its world premiere recording. The playing of the Rome orchestra is very good and the recording sounds excellent, with fine range and detail allowing you to savour the subtleties of Catalani's scoring. **JH**

## **BLU-RAY DVD**



**Springsteen & I**  
Bruce Springsteen

**EAGLE VISION**



**HOT PICK**

Exec produced by Ridley Scott, this is a homage to the high priest of showmen rock 'n' rollers. It's made by and of the people who have been influenced and inspired by Springsteen.

It's more watchable than most rockumentaries because of the variety of user content interspersed with live footage, albeit of variable quality. There are many three word sum ups including one old lady's "happy, handsome and hot". It's great viewing even for non fans and reveals that while Bruce is indeed almighty he's also a fellow human being at heart. **JK**

## Nature's Dragonfly



## Our **DRAGONFLY**



**Both shown actual size ... in their natural habitat.**

**audioquest.**

audioquest.com/DragonFly

# Hi-Fi Choice Reader Classified

Welcome to *Hi-Fi Choice* Reader Classified, a free private ads service for buying and selling second-hand hi-fi components.

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## FOR SALE

**EAR** 834 Delux preamp £900 ONO. AVI S2000M preamp £400 ONO. AVI S2000M Tuner £300 ONO: **07890 896819 (Cumbria).**

**HMV** X1119 valve radio from the 1950s in wooden cabinet. 19.5 x 14.5 x 10in (wxhxd). Still in perfect working order, but preset buttons need some cleaning and an aerial is required. £60 ONO: **07941 387692 (Kent).**

**FERGUSON** Hill FH001 transparent speakers – some scuffs £5,000. Sonus faber Cremona speakers in maple – mint condition £5,000. Buyer collects. **07973 205158. (Watford)**

**NAIM** NAC 82 + 2 Hi-Caps, Naim NAt02 tuner: **01623 230472 (Notts).**

**DENON** RCD-M39DAB, Denon RCD-M38DAB, Dali Zensor 1 speakers, Tannoy Vi Mercury standmount speakers, QAcoustics 20101 standmount speakers, Wharfedale 9.1 standmount speakers. All boxed, buyer to collect.

Open to offers: **01977 695385 (West Yorkshire).**

**NAIM** NAP 90, NAC 92, CD 3.5, Flatcap, boxes and book £1,125. KEF Ref 104.2, boxes £500. Soundstyle WG3A/V AV unit £150. Mission 753F, boxes £175: **07770 601097 (Hants).**

**NAIM** CD 51 CD player as new. Bargain at £425. Pro-Ject headphone amplifier in box as new £60: **07973 426291 (Birmingham).**

**QUAD** II Mono valve amps/Quad 22. Pair Quad II amps unused since complete overhaul by Quad. Preamp Quad-modified for tape/CD. Complete with mains lead and bulgin plug £795: **07747 636965.**

**MARANTZ** PM6004 amp £165. Sony NS700 SACD/DVD player £45. Denon 1906 AV receiver £75. KEF 'Eggs' 1005 5.1-surround speaker system £150. Aiwa ADF700 cassette deck £20. All excellent condition: **01691 610589 (Shropshire).**

**SUGDEN** A21A Class A integrated amplifier. Latest

model, little used in second system £950: **01952 728773 (Shropshire).**

**AUDIOLAB** 8200CD CD player for sale in black, in excellent condition. Superbly transparent sound £400 ONO. Nordost Red Dawn 1m RCA interconnects £115: **01484 427426 (West Yorkshire).**

**DALI** Royal Menuet II speakers. Good condition, boxed with manual £150 ONO: **01326 374797 (Cornwall).**

**MARANTZ** 6004 amp, CD. Dali Icon speakers. Cambridge 650T tuner. Two years old VGC £550: **01273 500173 (East Sussex).**

**RUSS ANDREWS** Kimber Kable Hero HB Ultraplate phono analogue interconnect 0.5m. Boxed as new £299 (save £100): **0780 0606892 or email: schandler@dpag.co.uk (Worcestershire).**

**ARCAM** A38 integrated amplifier £960; Aracam CD37 CD Player £960; Aracam T32 FM/DAB tuner



This Naim Nait XS amplifier is just one of many bargains you could treat yourself to this month

£400. All units have a black finish and are in as-new condition (unmarked) and perfect working order. Each unit comes with remote control, mains lead, manual and box. The A38 and CD37 both retail at £1,600 and the T32 at £674: **023 80738935 or email: golf3385@hotmail.co.uk.**

**TURNTABLE** with Aux input - Direct Transfer to SD Card/USB, + hi-fi use, plus manuals. Can demo, £45: **01661 823606 or email: grant.darras@gmail.com (Northumberland).**

**MARANTZ** PM7200KI amplifier comes with remote control. Very good condition and in full working order £320: **07505920373 or email: byardley1294@hotmail.co.uk.**

**POWER** supply for Class A amplifiers, self contained, suits John Linsley Hood's or any low-power Class A amplifier, £279. Pair of used SEAS 10in drivers, £99: **0207 4998729.**

**SENNHEISER** HD650 headphones boxed, excellent condition £120: **01708 344334 or email: j.\_McPherson@btinternet.com. (Essex)**

**LIVING VOICE** Avatar 2 loudspeakers Santos Rosewood, perfect condition, one owner 4 years old, boxes and ownership manual included, £2,500 ONO: **01933 355989 or email samej.**

**ellis@gmail.com (Northants).**

**NORDOST** Flatline Blue Heaven speaker cables. Stereo pairs 1x4.5m (cost £1,030) and 1x2.5m (cost £630). Unused/new. Bargain at £550 the lot: **01945 463077 or email: deregle1@aol.com.**

**PMC** DB1+ Speakers, light oak, excellent condition, will demo, boxed, no cables, buyer collects, £220: **01483 891925 (Guildford).**

**CYRUS** Mono Xamplifiers (pair) in quartz silver £1,200. Arcam FMJ T32 DAB/FM tuner silver £400 OVNO. Both items with original boxes and manuals and are in mint condition. Bryston BCD 1 complete with BR 2 remote and Bryston BP 1 preamp. Both items 17in in silver. £3,000 the pair or will split if required. Both items bought new in April 2011 and come with original boxes and manuals and are in mint condition: **07967152114 or email martin.dunn@btinternet.com (Aberdare).**

**JK** DAC32 little used. Giant killer battery-powered DAC gives stunning sound, huge dynamics, great bass and detail, with special USB cable included. USB in/phono out only £275: **07793 749178 or email: kingjuancho@yahoo.com (London).**

**QUAD** ESL57 Electrostatic Speakers. Perfect working order, checked by Bowers & Wilkins 2011. One careful

**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!



owner from new. Manual, bills and history, very good condition £550. Can demonstrate: **07786 497303 (London)**.

**NAIM** XS amplifier, mint condition, very musical, boxed, remote, power cable, £750: **01275 462948 (North Somerset)**.

**RADFORD** STA25 series 3-valve power amplifier, all silver soldered. It's been cherished for the last 15 years £850. Silver High Breed Epitome 8 interconnects with phonos £40. Fuber USB DAC/ADC converter £50. Fubar Supplier improved power supply: £50: **02476 679165 or email: woodbine@hotmail.co.uk**.

**KIMBER** Crystal Copper interconnect with 16dB attenuation (£184) £65. Audio-Technica moving coil cartridge AT-F5/OCC hardly used £45: **02476 711668 (Coventry)**.

**AUDIOLAB** 8200CD £600 ONO. Few months old. Call for a demo: **01661 823606 or email: grant.darras@gmail.com (Northumberland)**.

**RUSS ANDREWS** Signature Powerkords x2, 1m length. Wattgate 350I AG IEC Plug (RRP £440) £290 each or £570 for both. Cheaper if collected: **01902 884694 or email jukey39@yahoo.co.uk (Dudley)**.

**ROGERS** Studio 7 speakers, walnut. Atacama Stands. Affordable valve amplifier (EL 34). Sony XA20ES CD Player. Sony STD777ES DAB/FM tuner. Gold fascias, VGC. Complete system £1,200 or will separate: **02476 711668**.

**ROKSAN** Kandy K2 amp and CD player (Silver) £350 each. Monitor Audio RX6 speakers (Walnut) £450. (Sell separately or as a complete system for £1,000). Also Naim CD5i £500. All mint. Buyer collects: email: **neiltoons1980@gmail.com (North Kent)**.

**QED** Performance digital coaxial interconnect 1m (new) £35, Russ Andrews Powerkord 100 1m (new) £130, Monster High Resolution Video RCA Cable 1M (used) £10. Postage paid: **07971 394793 (S. Hants)**.

**LINN** LP12 turntable. Full Inspire "Vivid" upgrade plus Audio Origami lead. Beautiful walnut plinth. Ittok LV11 arm with Dynavector DV20XL cartridge – 10/12 hours only. Photos and more details on request. £1,750. Postage in Inspire packaging is available at cost: **028 417 64088 or email: poppyfleur@btinternet.com (Northern Ireland)**.

**REGA** RS3 speakers for sale. Excellent condition, cherry finish. £375. Buyer to collect: **07940 659 384 or email: davidwhatley9@gmail.com (Brighton)**.

**SENNHEISER** HD 800, the critically acclaimed headphones, just over 12 months old, in perfect condition, complete with instructions and box £595 (£995 new): **01303 863424 (Kent)**.

**SPENDOR** HSA-1 standmount speakers. Matched pair in Zebrano finish with matching Zebrano stands. Mint condition. £800. Buyer collects: **07930 397120 (London)**.

**WANTED** Open reel tape recorder Brenell Mark 6 Type M tape recorder model to accommodate 10.5in (27cm) diameter reels. Must be in excellent and working condition: **01453 764750 (Gloucestershire)**.

**SME** 3009 II improved S2 two headshells. Standard and heavy counterweights. Ortofon cartridge. Boxed with manual. Excellent condition £150. Ditton 15XR speakers good working order £20: **01494 451089 (High Wycombe)**.

**ECA** high-end MM phono stage £80. Atacama speaker stands £40, Atacama 4-shelf hi-fi rack £100. Both supplied with spikes and feet. Excellent condition: **07710 256440 or email: eadymike@gmail.com (East Sussex)**.

**PRO-JECT** RPM5 turntable with Ortofon 2M Red cartridge. Excellent condition £300 ONO. Buyer to collect: **01909 489684 (Workshop)**.

**LINN** QED and Monster AV cables for sale owing to change of room. Some

brand new. 1M phono-8M optical lengths: **01457 871622 (Lancs)**.

**CARDAS** Cross 1m pair RCA interconnects £145, 1 set of 4 Stillpoints resonance support feet, including additional risers £145 and Vertex AQ Silver Jaya mains conditioner £265: **01202 515474 or email: johnlangley17@talktalk.net (Dorset)**.

**JK** DAC32 little used. Giant killer battery-powered DAC gives stunning sound, huge dynamics, great bass and detail, with special USB cable included. USB in/phono out only. £360: **07793 749178 or email: kingjuancho@yahoo.com (London)**.

**LINN** LP12 with SME 309 Magnesium tonearm and Goldring elite cartridge: £950, will split. Pro-Ject phono box SE: £50. TDL Studio 0.5 speakers with plinths: £160: **020 8847 4796 (West London)**.

**NAD** M51 DAC/pre-amp £1,100 (£1,500 new.) Cambridge Blu-ray player 650BD £150. Theta Intrepid power amp £1,400. All immaculate: **07722 871945 or email: martin.summers@ymail.com (SW London)**.

**GRAVES** Audio (GA) Coalesce Balanced XLR Interconnects. Excellent condition, extremely high-quality interconnect. Cryogenetically treated copper. In original presentation box. (£380

new) £160 ONO. Contact me for photos. AT (@)-Tunes SB+ Audiophile Streamer. Two-box, very high-end version of Logitech Squeezebox 3. Huge power supply and very high-quality DAC. Sounds superb and in excellent condition. (£1,000 new) £350 ONO: **02380 601515 or email: bridgens11@btinternet.com (Eastleigh, Hants)**.

**CLARITY** 09 high mass turntable with Rega RB1000 arm made by Claro Audio. Three years old, mint condition, boxed (£2,100) £950, good reviews: **07905 348812**.

**KEF** LS3/5A Reference Series, Rosewood, near mint, including manuals. Rogers ABI Bass Extenders, Rosewood, excellent condition £1,500. Buyer collects: **01371 850665 (Essex)**.

**NAIM** LNAC 82 x2 Hi-Caps: **01623 230472 (Notts)**.

**GARRARD** four-speed stereo sound record player in mahogany with Elac speakers, £40: **07775 958325 (Leeds)**.

**CYRUS** 781 speakers + Nextel Stands £320, Music Tools Entasis h50 Speaker Stands £410, Vitus SP102 phono stage £12,500 ONO – superb performer/unmatched. Audience AU 24e 1.5m RCA Interconnect £525,

Audience AU24 Powercord 3m £795. Nordost Heimdall RCA 0.6m X2 £280 each. Isotek Power Cord Premium Mains Cable 1.5m X2 £50 each. XLO HTP1 RCA 1m £35, Cyrus bi-wire speaker cable 2.5m £30. Signal 7080 RCA interconnect 2x 1m £30, Signal 7081 RCA interconnect 1x 1m RCA set £25, 1x 1m RCA single £15, 1x 2.1m RCA set £35: **01825 841104 or email: mark.hanna@virgin.net**.

**KUDOS** X2 speakers £700. Naim Nait XS amplifier with sonic bliss PSU and Flashback Cables Y Performance cable £700. Both boxed in excellent condition: **07791339784 (Nottingham)**.

**YAMAHA** AX863SE 7.2 AV Amp with KEF 5005 6.1 surround sound system with REL acoustics quake sub-woofer. Excellent Condition. Boxed with manuals. £400 ONO: **01772 719653 (Preston)**.

**QUAD** 22 + 2 MA II valve mono amplifiers unboxed/unused since Quad service and 22 tone capacitor modification Sept 2010. With invoices, mains lead and 2-pin Bulgin plug. £795: **07747 63 69 65 (Wiltshire)**.

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# Aedle

## Valkyrie VK-1 headphones

**THE ONGOING BOOM** in headphone sales has led to a huge number of brands entering the sector to try their luck. The headphones that result are very different in the nature of the components that go into them and the styling varies wildly between the deeply prosaic and extremely elegant. Sitting firmly in the elegant camp is the Aedle Valkyrie VK-1.

Although the name Aedle is Scandinavian, it is based in France and the VK-1 is assembled there too. The Valkyrie is the only model in the range and has been in development for some years. Aedle claims that besides a single piece of competitor analysis undertaken at the start of the process, the VK-1 was developed without much attention being paid to the wider market. This makes the final product rather prescient as it is a perfectly sized example of a 'hybrid' design that is as happy being used on the move as it is at home.

Internally, the VK-1 is built around a pair of 40mm titanium drivers, which were selected in a lengthy audition process before being modified further to meet Aedle's requirements. These are placed in fairly compact enclosures that are vented via two small slits at the front of the housing. They leak very little noise, meaning that the VK-1 is suitable for use on the move. Less suited for this is the supplied cord, which although detachable does not have any form of inline remote or microphone for easy control of a mobile. You do get a smart sealable bag to keep them in, however.

### Ride of the Valkyries

The two main ingredients of the VK-1 are leather and aluminium, but – adopting my best Marks and Spencer's voice – this is not just any old aluminium and leather. The T6066 billet is developed for the aviation industry, while the leather is sourced from Argentinian sheep and is completely free of nicks and imperfections. Combined with the minimalist, but striking industrial design, the result is a pair of headphones that more than



anything else at the price feels bespoke. They are comfortable too – the headband is a single piece of manganese steel that adapts to the size of your head and combined with the separately adjusted mounts on the earpads, the VK-1 should fit most heads comfortably.

In performance terms, there is much to like about how the Aedle goes about making music. Although the sensitivity of the design is not desperately high, it should be easy enough to drive with most smartphones and tablets and will be no problem at all for a dedicated headphone amplifier. The sonic performance of the VK-1 is very likeable, too. At first, the performance can come across as slightly laid back, but after some time listening the detail is all there, while the top end is smooth and extremely forgiving, making the Aedle a very capable partner across a wide range of material. Voices in particular sound rich, unforced and natural and they manage the neat trick of ensuring that they come across as detailed and the undoubted focus of what you're listening to without ever sounding separated from the music as a whole.

The other apparent attribute is an excellent sense of scale with larger pieces of music. They manage to produce a commendable reproduction of the space that multiple performers are in and their relationship to one

another. There is even an impression of soundstage, which is impressive given how close the drivers are to your ear. The final piece of the puzzle is a surprisingly potent low end that sounds bigger than you might expect from such a slight pair of headphones. Against these very likeable traits there's only a slight sense that the VK-1 is not as lively and rhythmically capable as some rivals at the price. The Aedle never feels sluggish or bloated, but up-tempo material doesn't have quite the same drive and excitement that it does with some of the competition.

### Beauty and the beats

This should not detract too much from what is a very fine pair of headphones. The Aedle is an even handed and very capable partner with a wide variety of music and if you can live without the last few percent of drive and excitement, it is likely to be a very capable hybrid headphone. Beyond the sound quality, though, the stunning appearance and wonderful design are likely to win it many friends. In an increasingly crowded field of designs, this one feels more than the sum of its parts and most impressively, none of the beauty has been bought at the cost of usability or comfort. As an all round package, this makes the Aedle Valkyrie VK-1 too good to ignore. **ES**

#### DETAILS

**PRICE**  
£300

**WEBSITE**  
aedle.net

#### OUR VERDICT



## Oscars Audio Headphone stand

**HEADPHONES ARE NOT** the most decorative of objects to have on display next to your audio equipment. They are designed to sit on your head, not on a table or shelf! However, they have to be put somewhere when not in use and leaving them lying around makes them vulnerable to damage if they should fall on the floor.

One solution to the problem is to file them away in a drawer, but that can be quite inconvenient. Also, the headphone cable can easily become tangled and damaged. A far better solution is to sit the headphones on a purpose-made support, and that is where the Oscars Audio headphone stand from MCRU comes in.

This headphone stand is made from solid wood, which is very evident as the grain is consistent throughout each of the pieces of wood used to build the unit. The

stand is substantially constructed and weighs in at just under 1.2kg, so it will support the heaviest of headphones without running any risk of toppling over. Each stand is made from three pieces: the base, the vertical support and a 1in diameter rod from which the headphones are hung. As well as being glued, the vertical support is additionally secured to the base with a large screw inserted from the underside, thus making it extremely rigid.

### Stand and deliver

The stands are available in a variety of woods, including American black walnut (called Maude, as seen here), ash and oak. They can also be supplied as a plywood of American black walnut, ash or Zebrano veneers.

These are high-quality stands that are beautifully made and will certainly look the business next to



your hi-fi equipment. They are suitable for use with virtually all headphones and, given their high quality, I consider them to be great value for money and an ideal solution to an age-old problem. **NR**

### DETAILS

**PRICE**  
From £15, £60  
for Maude

**CONTACT**  
07908 056978

**WEBSITE**  
mcruc.co.uk

### OUR VERDICT



## Atlas Cables Ascent 3.5 MKII speaker cable



**RECENTLY RELEASED FROM** the Scottish-based cable manufacturer, Atlas Cables, is the entry point product in the Reference range – the Ascent 3.5 MKII loudspeaker cable.

The cable uses Atlas' Ohno Continuous Cast (OCC) 7N 99.99999% pure copper technology, where each strand is 'pulled' from a single copper crystal and the Ascent 3.5 MKII uses a 3.5mm<sup>2</sup> cross section of this stranded copper to create its conductors. For the dielectric, Atlas uses Fluorinated Ethylene Propylene (FEP), which is a type of Teflon that mitigates the velocity of signal issues that cheaper dielectric materials exhibit. The lower melting point of FEP critically also allows the perfect crystalline structure of OCC copper to be maintained during the manufacturing process.

The cables are terminated in either Atlas' own expanding rhodium plugs

(which are reviewed here) or OCC spade connectors. Both connectors employ cold-weld technology where no solder is used so that the integrity of the signal is maintained from the cable through to the terminal. Atlas helpfully includes an Allen key for the rhodium plugs so that you can ensure they are fully tightened onto the cable.

### Burn baby burn

As with any audiophile cable, the Ascent 3.5 MKIIs need to be burnt-in for several hours before they can reach their full potential. To this end, Atlas helpfully includes a burn-in and demagnetizing CD, which can be left on repeat to do this for you. The CD contains a 10-minute track of assorted noises that cover the whole frequency



band and range from low-frequency single sine waves to multiple tones, which is a 'stressful' signal for cables – as well as for your ears. I would strongly recommend going out for the day and leaving it running while your cables run in at home!

After running in, I test the cables with a variety of music and they are really excellent. The imaging is superb and the sound is open and transparent. There is no sibilance to high frequencies and low-level detail is clear. Recommended even at the high price. **NR**

### DETAILS

**PRICE**  
£795 for a 2 metre  
cable pair plus £200  
per additional metre

**CONTACT**  
01563 572666

**WEBSITE**  
atlas-cables.com

### OUR VERDICT





# Primare NP30 – The luxury link for high resolution streaming



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## Your listening room and a jet engine – what problem do they share?

**“Wow” and  
“That’s amazing”  
LISTENERS’ REACTIONS  
AT RECENT SHOWS  
TO THE PANEL  
DEMONSTRATIONS**

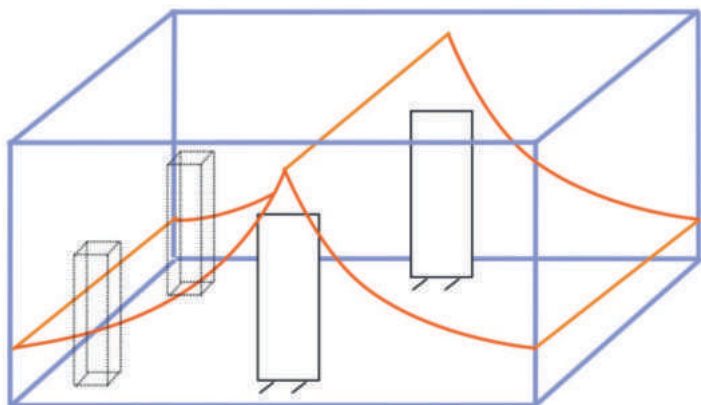
**Both cause a lot of unwanted noise – but they’re treatable with thousands of carefully calculated holes.**

In the Airbus jet engine the front compressor noise is cut down with a special micro-perforated lining for the air intake.

In your listening room “old” **sound waves** that slop from end to end, and side to side – like water in a fish tank that’s moved – can be *quietened* in a similar way.

All the time you are listening the speakers project “new” sound into a space still filled with music from a few milliseconds before. New and old **intermodulate** and your room destroys an amazing amount of fine detail.

You are propagating “new” music signals into “old” air. Think of the interference between fresh waves that break on a beach and meet the previous retreating wave.



Air movement reaches peak **velocity** in the middle of the room (only end-to-end shown here) where the panels are most effective

**The solution** – When you energise the room with a music signal thousands of carefully-calculated micro-perforations in the **LeadingEdge** panels create turbulence as the air, slopping to and fro between walls, passes over their surfaces. We hear air pressure changes as excess bass at the room boundaries, where the air is at zero *particle velocity* and maximum pressure change. It reaches maximum velocity (and zero pressure change!) in the centre of the room where the perforations create **aerodynamic drag** and the panels absorb this velocity energy into an internal honeycomb.

**This principle of creating aerodynamic drag**, that removes unwanted energy *across the spectrum*, is far more effective than using conventional foam-filled panels that work only at narrow frequency bands.

Significantly, *drag increases with the square of the velocity – when the velocity doubles, the drag increases four times!*

In this way, the LeadingEdge panels are “reactive” – the more unwanted energy bouncing round the room, the more effective they become.

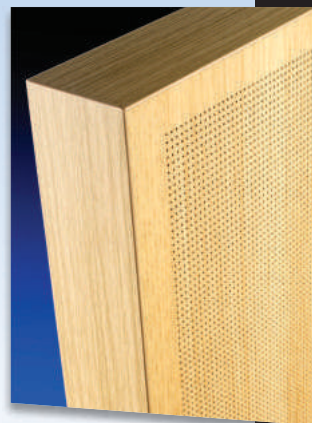
Visitors to our rooms at shows this year were truly astonished as we played music and first covered then uncovered the panels.

There were spontaneous reactions like “Wow” and “That’s amazing!”

Panels are available in different sizes and three standard finishes: Cherry, White, and Light Oak though almost any finish can be ordered to match décor.

But you say, “I couldn’t possibly fit those into my living room.” Perhaps not free-standing ones but had you considered they can be wall-mounted and become part of the room design, even a feature with a beautiful, rich veneer finish?

An ideal solution is to place panels on the ceiling, where they absorb energy from all directions. In this room with 60% glass windows and hardwood floors the panels are a feature, with recessed lighting. The result is a quiet, comfortable room despite all those hard surfaces.



*Thousands of micro-perforations create “aerodynamic drag” to absorb energy*



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**CD:** Accustic Arts, Bel Canto, dCS, Gamut, Resolution Audio, Vertex AQ dac-I. **Vinyl:** Aesthetix, Clearaudio, Graham, Spiral Groove, Transfiguration. **Tuners:** Magnum Dynalab. **Amplifiers:** Accustic Arts, Aesthetix, Bel Canto, CAT, Gamut, Sonneteer, Storm Audio, VTL. **Loudspeakers:** Avalon, Gamut, Kawero!, NEAT, Totem. **Cables:** Chord Co., DNМ, Nordost, Siltech, Tellurium, VertexAQ. **Mains:** Aletheia, Vertex AQ. **Supports:** Arcici, Black Ravioli, Hi-Fi Racks, LeadingEdge, Stands Unique, Vertex AQ

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

01225 874728





# Tellurium Q

## Blue USB cable

**CABLE POLITICS ARE** funny. Most people can hear the difference, and willingly factor them into the overall budget when buying a hi-fi system. Some can't and scream "the emperor's new clothes", or suchlike! Others recognise that speaker cables and analogue interconnects make a difference, but can't see how digital ones would. If you think about it, digital cables – which work at far higher frequencies – should be more susceptible to quality variations than analogue ones. After all, they're a tougher engineering challenge.

Tellurium Q has a new range of digital cables. The Blue USB tested here is the company's entry-level product, designed to connect your computer to a USB-equipped DAC. Unlike a great many rivals, the company doesn't reveal any of its design characteristics, as it is worried about loss of intellectual

property. I suspect this is more about marketing than plagiarism, as any self-respecting cable pirate could quickly reverse engineer it. But what's not in dispute is that it's a well-made wire with decent quality plugs. The cable's tacky rubbery outer sheath is well damped, so it won't transmit vibration into either DAC or PC.

### Here's to Blue

Hooked between an Apple MacBook Pro and a dCS Debussy digital-to-analogue converter, the Blue USB gives an obvious improvement in sound quality to a stock, generic USB cable. Admittedly the latter costs pounds, not hundreds, but

there is an appreciable improvement in the general smoothness and ease of the sound. For example, Kate Bush's *Snowflake* at 24/96 comes over with slightly less grain; it seems to lose a slightly mechanical quality to it, the dCS DAC being able to flow better and conjure up a more natural sounding recorded acoustic. Pianos sound fractionally less brittle, and appear to have less of generic texture to them. If you have a decent DAC, this should prove a genuinely worthwhile upgrade, and thus represents fine value for money despite the profusion of cheap and (not so) cheerful USB cables for far less money. **DP**



### DETAILS

**PRICE**  
£186 (1m)  
**CONTACT**  
01458 251997  
**WEBSITE**  
telluriumq.com

### OUR VERDICT

★★★★★



# QED

## Signature Audio 40 interconnect



**THERE'S NO DENYING** QED's leading role in the British cable market over the past 40 years – a whole nation of audiophiles grew up with QED 79-strand speaker cable in the eighties, likely between a NAD amp and a pair of KEF Codas! To commemorate its anniversary, it has a new range of interconnects. Between you and me dear reader, word is that they were developed after *HFC*'s epic 12-way interconnect Group Test that ran in issue 362 back in 2012; QED took a good listen to the winners and came back with this.

The Signature 40 is a beautifully packaged product, and immaculately turned out with its translucent sheathing showing the braided electromagnetic shielding around it. QED's beautiful Rhodium-plated Analoc plugs look like jewellery, and are said to provide a high-purity copper connection without the use

of bulky brass plug bodies. They're soldered to silver-plated 99.999% oxygen-free copper conductors in a Teflon dielectric, in an asymmetric twisted pair configuration and a Zn/Mn ferrite jacket is used. Finally the whole cable is cryogenically treated.

### Dressed to impress

Here's a genuinely impressive sounding audio interconnect. Although not completely translucent, the new Signature is open and detailed like few others at the price, with a light, spry sort of sound that captures the energy of the music in its full glory. Tonally, it's very close to neutral, but comes across as just a little 'well lit' in absolute terms,



pepping up otherwise lacklustre recordings or systems by a fraction. It has strong and taut bass, happily lacking in overhang or smear, and a crisp and incisive midband that lets the elements in the mix hang in their respective positions in space with ease. It doesn't crowd out things, offering a nice spacious soundstage where there's room for the music to breathe. Treble is sweet and airy, too. Overall then, this new cable is an excellent performer at the price, right across the board. **DP**

### DETAILS

**PRICE**  
£199 (1m)  
**CONTACT**  
0844 8008528  
**WEBSITE**  
qed.co.uk

### OUR VERDICT

★★★★★

# Bayan Audio

## Soundbook wireless speaker



**A DECADE OR** two into the future, I predict that audiophiles will talk in terms of the 'pre-wireless era' when referring to hi-fi as we currently know it. Right now, there are a few early-to-market iPod gadgets that work wirelessly, plus a handful of domestic wi-fi music streamers and some hands-free phone devices, but it's fair to say that the technology hasn't completely taken over. That's all set to change, however, and this – the second-generation of wireless devices is leading the charge.

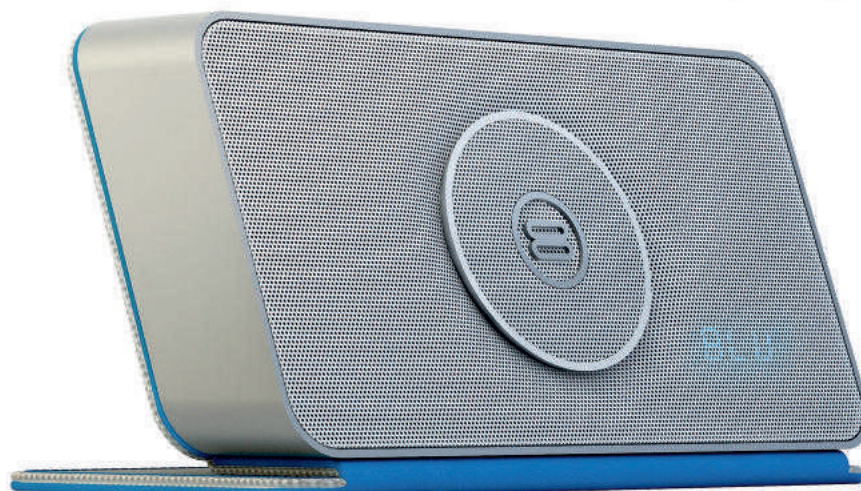
It's hard to explain to children that until the mid-part of the twentieth century, people playing music had to replace their record player needles after each track. And so it will be considered bizarre some years from now that we once had cables connecting our components. It really is a new world we're entering.

One strange thing, however, is that unlike in the eighties, when new technology appeared on expensive products and then trickled down (ie Compact Disc players), most of the wireless action seems to have taken place at the opposite end of the market. I remember reviewing some Bluetooth headphones about four years ago, and they were absolutely awful in every possible way – cheap and nasty didn't describe them. Somehow the technology seems to be creeping upmarket – as products like this clearly demonstrate.

### The look of love

Basically, it's a humble Bluetooth speaker, but that's a little over simplistic. Designed in the UK, it has a finely surfaced aluminium case and ballistic nylon cloth flip-back case and stand; there's a tasteful choice of burnt orange and charcoal, or turquoise and silver colour schemes. The industrial design is neat and the 160 x 88 x 38mm (WxHxD) case size is just big enough to get any sort of meaningful sound out of, while not being too big to move around.

The company has also taken the sonic side seriously, too. Two 25mm long-throw neodymium drivers and a single 50mm passive bass radiator



are used, giving a claimed frequency response of 70Hz to 20kHz. A 15W stereo Class D amplifier is used, and this mates to a Li-ion rechargeable battery, which gives around 10 hours of playback when used with the supplied USB charger. A 3.5mm minijack line-in is fitted and there's also the choice of its built-in FM radio (with integral antenna) source or aptX (a2dp) Bluetooth.

Unusually, a 3.5mm minijack socket is fitted for audio output to headphones or other active speakers. The unit automatically senses the power input, from 100V to 240V, 50 or 60Hz – ideal for travellers. TDMA noise rejection is fitted, said to eliminate interference from other electrical equipment nearby.

For something that's about the size of an old Sony Betamax video tape, the Soundbook goes pretty loud. It is, and always will be, a small portable speaker, but it has a good stab at sounding big and is certainly an order of magnitude better than my iDevices' internal transducers. With bass-heavy pop music it delivers high enough volumes to fill a small bedroom or bathroom, but will still push speech easily out in a larger kitchen or living room. When the going gets tough – such as the bassy Visioneers' *Come Play in the Milky Night*, you need to drop the volume down to about three quarters from maximum otherwise

you can hear the drivers hitting their end stops. Still, at this volume level you're really cooking on gas!

The Bayan has a nice sound, although you'd never call it hi-fi. It's a step down from the likes of an Arcam rCube for example, but then it's far cheaper and smaller. It gives a decently crisp, smooth performance with a quite warm bass. Treble is extended for this type of unit, and the midband has a good deal of detail and punch.

### Lucky dip

The Soundbook bobs along with the slick pop of Daft Punk's *Get Lucky*, showing itself to be nice to listen to; it completely transforms any Bluetooth device – phone, tablet, etc – although your £10,000 hi-fi won't be going anywhere soon! FM sound is good, but the unit needs to be near a window if you live in a poor reception area – it's not the most sensitive of tuners. Sonically, the auxiliary input was the best of the lot, providing you hook it up to a really good sound source.

Overall this is a very nice little portable speaker, about as good as you'll get considering its excellent design and build, convenience and fine sonics. It won't replace specialist stereo systems, but it's a lovely thing to leave on a desktop or sling in a travel bag along with your iPad. **DP**

### DETAILS

**PRICE**  
£150

**CONTACT**  
0844 8003480

**WEBSITE**  
bayanaudio.com

### OUR VERDICT







# Mavros Interconnects & Speaker Cables

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*HiFi World, July 2013*

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# JBL

## Synchros S700 headphones

**IT SEEMED LIKE** almost an eternity. From the seventies to the end of the last decade, only a few established manufacturers sold headphones. Japanese giants made some, as did a few German and American specialists, but that was your lot. Now though, everyone is doing it. And that's perhaps the trouble, because so many of the new models reaching the market come from companies with no experience; essentially they're branding operations to cash in on the current craze for cans. JBL isn't famous for its 'phones, but its sister company AKG is – both are part of the Harman Group – and the company has a huge and respected track record designing and building loudspeakers, which are another kind of transducer, albeit slightly bigger! So the JBL range deserves to be taken seriously in a way that many do not, but it will still live or die by its quality and performance all the same.

### Keeping it real

The S700 looks and feels state of the art, ultra-modern. It has iDevice functionality and built-in LiveStage DSP which the company says “delivers a more realistic sound experience” – more of which later. This feature is made possible by its own internal Li-ion battery, rechargeable by USB in around two hours, although you can, of course, run it in passive mode.

It's available in two colour schemes, Onyx and Glacier (black or white), and is very nicely built. I've tried too many 'plastic fantastic' headphones of late, so am delighted to find the ear cups are diecast aluminium. It confers rigidity that plastic can't, and gives a better sound. A well padded steel headband holds things together, and the leather ear cup trim is nice. The quality of construction is excellent, making your average pair of Sennheiser HD650s look positively plasticky. Despite the rugged build they're light and unlike Sennheisers, it doesn't feel like you've just placed your head in a vice, either.



The S700 comes supplied with a neat vinyl case, and a USB charging cable (which charges via the single 3.5mm socket on the left ear cup), and a choice of two audio cables to suit your audio source; both have an inline remote control and microphone, one intended for iOS devices and the other for Android devices. Should you wish to listen in powered mode, I find it manages about 15 hours before it needs another recharge. The centre of the left ear cup toggles the power on and off, so it's straightforward to use.

In passive mode, I am impressed by the new JBL S700. This is a clean and crisp sounding headphone, with a strong bass (echoing the sonic signature of the company's loudspeakers), and a lively, engaging midband. It doesn't have the refinement and sophistication of the Philips Fidelio X1, or the intimacy of the Sennheiser HD650s, for example, but what it does have is an infectious musical *joie de vivre* that neither of the aforementioned rivals quite attain. It's bouncy, fast and musically engaging, making it fun to listen to. Much of this comes from the excellent bass, which is very strong but never overblown, and tight and punchy. Although the balance is a little bassy compared with some, you don't get the sense that it detracts from the rest of the music.

The midband is fairly transparent, it succeeds mostly through its lithe

handling of leading edges, which gives the S700 a peppy feel. It's pretty dynamic too, compressing things far less than some other designs at the price. Treble is good as well – crisp, extended and satisfyingly spacious; JBL claims the frequency response of the S700 to be 10Hz to 22kHz and I have no particular reason to doubt this. Generally speaking you wouldn't call this particularly refined up top, but it works well enough. For example, hi hat cymbals have their distinctive metallic 'zing' but don't grate like some Grados. The LiveStage DSP is less successful, in my view. It can make some music sound bigger, wider and more punchy, but it does sound a tad artificial and can bring about some odd phasey effects with some sorts of music, as well as adding a bit of upper midband glare. It works nicely with low bit-rate MP3s, livening them up usefully, but audiophiles will be happier with it switched off.

### Surprise surprise

Overall then, this is a surprisingly enjoyable new headphone that's versatile and beautifully built and presented. Anyone thinking that just because it's active it can't succeed in purist hi-fi terms may well be surprised. Anyone in the market for a £300 headphone should audition it if they possibly can. **DP**

#### DETAILS

**PRICE**  
£300

**CONTACT**  
01707 278113

**WEBSITE**  
uk.jbl.com

#### OUR VERDICT

★★★★★

# Okki Nokki

## Record Cleaning Machine

**I AM ASHAMED** to say that it took far too many years for me to realise the importance of cleaning records properly. Many decades ago when I was building my collection, I assumed new records were in pristine condition and that all that was required was a quick squirt from an anti-static gun, followed by a gentle brush to remove surface dust before playing. As a consequence, I was frequently disappointed by what I thought were noisy pressings. In reality, it was most probably the effect of residual mould-release agent in the grooves and a thorough wet clean was all that was needed. Of course, all records, whatever their age, require a good wet clean from time to time in order to remove accumulated dirt in the grooves.

Wet cleaners available on the market today fall broadly into three categories: manual, record cleaning baths and record cleaning machines (RCMs). An RCM should offer the best solution as it vacuums off the dirty fluid after cleaning to ensure that dirt deep in the grooves now suspended in the cleaning fluid is removed and the record is dried at the same time. Of course, this all comes at a price, but one of the more reasonably priced RCMs available is the Okki Nokki RCM and a new model has just been released in the UK.

### Dutch courage

The new Dutch-designed Okki Nokki (Okki Nokki means OK in parts of Holland!) has been re-designed internally to incorporate extra safety features and is much quieter than the previous model. It includes a vacuum system and liquid reservoir and is encased in a compact aluminium chassis. The forward and reverse turntable motion allows for quiet and effective groove scrubbing when used with the supplied goat-hair cleaning brush. Once cleaned, the record is vacuumed using the aluminium suction arm, which removes the residual dirt and fluid and transfers it into the internal liquid reservoir.



The reservoir has a sensor that will shut off the machine when full. The Okki Nokki is supplied with a vacuum tube for 12in records, but tubes for 10in and 7in are also available. The new lightweight design is available in black or white finish and the case is made from plastic and aluminium to give increased stability. The turntable supports the whole record during the cleaning process, to avoid any risk of damage while cleaning.

The Okki Nokki is very well made and uses high-quality components. The turntable motor is extremely quiet and the noisiest part of the cleaning process is, as you would expect, when the vacuum is switched on. However, this isn't unduly noisy and quieter than I anticipated.

I first mix the bottle of concentrated cleaner supplied with the device with a litre of purified water and then return a small amount to the bottle, which then acts as an applicator. The detailed instructions supplied with the Okki Nokki would make you think it is quite an involved process, but it's beautifully simple.

I test the RCM with a new record that exhibits some slight muffled crackle in the background when played. After applying the fluid and 'scrubbing' in both directions for three revolutions each way, the powerful vacuum then cleans off the entire surface in one further revolution and

a final spin leaves the surface bone dry. I repeat this method with the second side and then play the record again. Amazingly, I find that the background noise has completely disappeared, supporting my view that it resulted from manufacturing residue, such as mould-release agent. The dynamic range also improves, but this could be the result of a lack of background noise making the quiet sections sound further away from the crescendos.

### Do the dirty

Next up is a recent purchase of a second-hand LP of Laurindo Almeida's *Ole! Bossa Nova!*, a 1963 stereo recording in superb condition. After cleaning, I perceive greater clarity and realism with the reproduction – the band seems to be right in my sitting room – nice! I do, of course, put the record in a new polyethylene inner sleeve to avoid contaminating the surface with the dirt lurking in the old sleeve. I then proceed to clean a further 20 records before emptying the fluid reservoir. I am amazed to see how brown it is in colour, so it is clearly doing its stuff!

I can find little to criticise with the Okki Nokki – it does a super job and records can be played immediately or replaced in their sleeves after cleaning. It's an excellent investment for any serious vinyl collector. **NR**

#### DETAILS

**PRICE**  
£399 + £65 for optional dust cover

**CONTACT**  
01579 363603

**WEBSITE**  
okkinokki.co.uk

#### OUR VERDICT





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# System matching

Part of the key to a successful setup is finding the perfect partnership, here's how...

**I**t's funny how much time and money can be devoted to buying hi-fi systems without stopping to consider one of the most critical determining factors for sound quality – that of amplifier-speaker matching.

How many of us spend any real time contemplating the electrical match between our amplifiers and the loudspeakers we've chosen to partner them with? Ironically though, this is key to getting a serious sound from your hi-fi. You'll never get the best out of your amp if you're forcing it to huff and puff driving unsuitable speakers, and nor will you ever hear your loudspeakers sing with an amplifier that was chosen without regard to whether it could drive them properly.

## Perfect partnership

It's hard to overstate the importance of this relationship between the two prime movers of your hi-fi system. One good analogy is that of trying to steer a car with sweaty hands sliding around a plasticky steering wheel. Another is trying to walk on sheet ice with shoes better suited to ballet dancing. These are two 'interfaces' where the contact points are simply not right for one another – they can't work at anything near optimum efficiency – and consequently the job can't get done right. The same goes when partnering a mismatched stereo

amplifier and loudspeakers, often resulting in bad sound.

To get the chemistry right between amplifier and speaker, you've first got to focus on the physics. This is, of course, because speakers make noise by moving air; they're transducers that convert electrical energy from your amp into a physical form. How much sound they produce (the amount of air they move), depends on a number of things. First, the design of the loudspeaker. In simple terms, designing a speaker is about weighing

**You'll never get the best from your amp if you're driving unsuitable speakers**

up factors such as sensitivity, bass extension and transient speed. The art is in the compromise between these factors and indeed the finest sounding speakers are those that often require the most artful compromises!

Sensitivity is the amount of sound a speaker produces from a given amount of power. This is a function of the drive unit design and the cabinet loading type, plus the size of the cabinet. These factors really must be considered by anyone thinking about purchasing a loudspeaker, or trying to match one to an existing amplifier.

Conventional drive units come in all sorts, some have powerful, efficient magnets and motor designs and others don't. From a buyer's viewpoint these aren't easy to tell apart, but one thing to look out for is the type of cone material used. This has a direct effect on sound; heavier materials will need more amplifier power to move the same amount of air. By contrast, paper is light so needs relatively little power; this was popular in the sixties when amps were mostly low powered.

These days, Kevlar (used in B&W speakers, for example) along with carbon fibre, glass fibre and aerogel, also make for speakers that convert power to sound efficiently.

## In the air tonight

A key factor determining speaker sensitivity is the type of cabinet loading used by the loudspeaker. This is chosen by the designer to get the sound characteristics he's trying to achieve with his chosen drive units. Many hi-fi speakers are reflex ported (ie with a hole or slot in the cabinet, known as a 'port'). Ports allow drive units to move air more easily, in general terms giving higher sound levels for each watt of power fed in. Some designers choose infinite baffle cabinets, where the speaker box is sealed to the outside world. This can give a tighter bass in some rooms, but tends to drink up more power. So as a

**Many smaller speakers require more powerful amps than larger, more efficient designs**