



# DAC attack!

Blind test: Arcam, Burson, CEntrance, Jolida, Fidelity Audio and Rega DACs

# Retro

Pink Triangle's Pink Linnk – the ultimate Linn Sondek mod?



# Hi-Fi Choice

PASSION FOR SOUND

www.hifi

Issue No. 357

April 2012

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**NEW**  
7 pages of  
top tweaks!  
See p111

# Small wonders

NEAT Iota ribbon speakers and Musical Fidelity M1 PWR amp

## Pod power

Four premium iPod docks from Arcam, B&W Monitor Audio and NAD

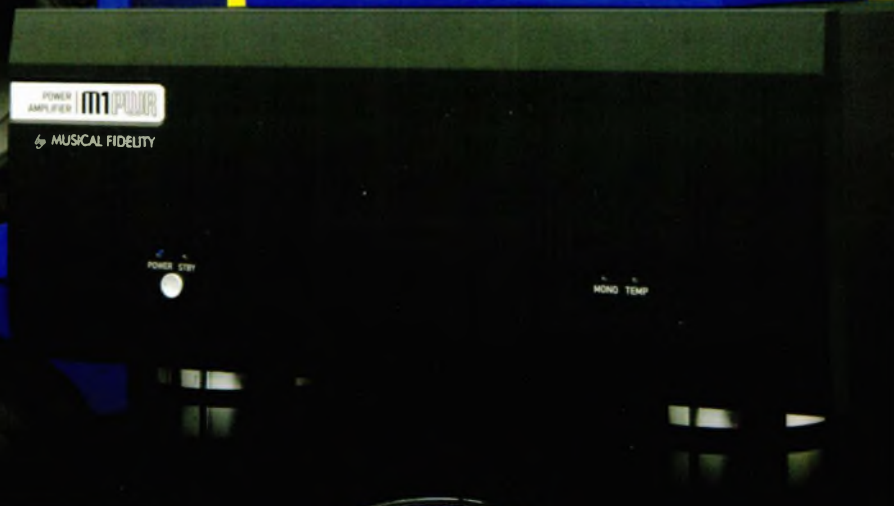


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## Ciao bella!

Unison Research's stylish Simply Italy integrated amplifier



## Carbon dating

We meet the enigmatic Wilson Benesch!



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# THERE'S ONLY ONE THING YOU WON'T FIND IN A **MAGICO** SPEAKER. COMPROMISE.

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*Stereophile (Q5)*

*'This has to be the best speaker in the world'*

*Hi-Fi+ (Q5)*

*'It sounds so much like the real thing it will take your  
breath away'*

*The Absolute Sound (Q5)*

*'This speaker is wholly remarkable in just about  
every sense'*

*Hi-Fi Choice (Q5)*

*'Once heard, the Q3 experience is not easily forgotten'*

*Hi-Fi News (Q3)*

**M**agico's extraordinary Q5 loudspeaker is rigorously designed to leave absolutely nothing to chance. Every detail of this meticulously engineered tour de force has been researched, analysed and deconstructed to ensure it delivers the purest, most natural sound possible - wonderfully expressive yet unerringly accurate.

Magico's supreme attention to detail ensures each speaker utilises the very best materials: machined entirely from aluminium and brass, the enclosure's combination of mass and stiffness forms the bedrock of the Q5's undiluted, distortion-free sound. The MBe-1 Beryllium dome tweeter reaches far beyond the bounds of human hearing, while the bass and midrange cones combine layers of Magico's proprietary Nano-Tec™ carbon fibre composite with a Rohacell core to push dynamic sound to the limits. The speaker's simple, elegant exterior belies the complexity of its construction - each pair of Q5s takes nearly a week to build.

The result of this unstinting engineering excellence is unequivocal mastery across the entire audio spectrum; a complete absence of compromise that brings music to life with effortless, unbound realism. So, too, the Q5's new siblings: the smaller floorstanding Q3 and standmount Q1. Exceptional sound born from superior technology and engineering - Magico pushes the boundaries to deliver, perhaps, the finest loudspeakers ever made.

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Awarded to those products that are judged to deliver reference-standard performance



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



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



In terms of great hi-fi comebacks we have known, surely the humble DAC is hard to beat?

Let's not forget that the last time we saw these little boxes in any great number was way back in the late nineteen eighties, just when everyone started experimenting with the (then) red hot technology of Compact Disc.

Companies such as Arcam, Linn and Meridian carved a niche for the separate digital-to-analogue convertor; here was a way you could upgrade your CD player without having to buy an expensive new transport.

If we'd known *then* how many digital sources DACs would have to contend with *now* however, we'd have been shocked to our very shoulder pads. Everything from satellite boxes and PlayStations to computers benefit from decent digital conversion, which is why the latest designs are amazingly versatile. And the sound has moved on apace, too...

While 16-bit CD only has a limited amount of data to work with, modern DACs also let you play out high resolution files off computers and/or Blu-ray, too. You'd think that with the latest chipsets inside, they'd all sound much of a muchness, but I was amazed to discover in this month's *Blind-listening Group Test*, huge differences between similarly priced products. Turn to p22 for more.

Meanwhile on p111, you'll find our brand new Choice Extras section, where you'll find seven pages of great hi-fi gadgets, widgets and tweaks. Of course, you should always buy the best kit you can possibly afford, but investing in a few carefully selected accessories will help make it sing. Enjoy!

**David Price** Editor  
david.price@hifichoice.co.uk



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**Bricasti M1 DAC**

"It isn't often that a new name enters the audiophile arena with a product of such outstanding quality. However you look at it - construction, engineering, test bench performance, sound quality - the M1 hits the spot."

*Ken Kessler - Hi-Fi News, June 2011*

**Bricasti M1 DAC**

"The precision and sheer detail of the sound it delivers puts it right at the top table of high-end DACs. Don't expect magic, but you do get fireworks."

*Alan Sircom - Hi-Fi+ Issue 84*



**IsoTek Syncro Mains Lead**

"Syncro delivers serious improvements... It's really not a question of whether to purchase, but when."

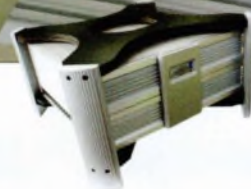
*Hi-Fi Piac, Hungary*



**IsoTek Super Titan Mains Conditioner**

"Yes, the Super Titan might cost a pretty penny but this is one of those high-end components which is actually worth every penny..."

*Hi-Fi World, July 2011 (awarded 5 globes)*



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### Wilson Benesch Vector Floorstanding Speaker

The Vector is a 2.5 way, highly optimised, advanced materials technology, floorstanding loudspeaker. Incorporating Wilson Benesch's advanced engineering and design, the Vector delivers a musical performance that pulls you into the music you love like few other speakers can.



### Wilson Benesch Vertex Standmount Speaker

The Vertex is a 2-way highly optimised advanced materials technology stand mounted loudspeaker. Unlike many stand mounted designs, the Vertex and its stand, work in harmony to reproduce music as faithful to the original as possible.

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### Nagra 300B Triode Valve Integrated Amplifier

Celebrating its 60th anniversary, Swiss company Nagra, famous for its precision audio engineering, has introduced a hybrid tube amp that breathes new life into the classic 300B triode valve. Beautiful to behold and sublime to hear.



## Jordan Acoustics are specialists in *World Class Audio Systems*

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Building a true high-end system is not about collecting brands based on reviews. It is about finding a true synergy between components that sound magical together. That palpable reproduction, full of dynamics and realism just how the original artist intended. Fingers on frets, breathing of vocalists, the tautness of a drum skin... the devil is in the detail. **That's why we love great hi-fi and that's exactly why you should give us a call.**

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**Feature:** digital audio – past, present & future



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**Never miss an issue – turn to p39 for our latest subs offer**

# Japan air line

Pioneer's new Nipponese network players support Apple's AirPlay as well as playing music files from a variety of sources and formats, including 24-bit/192kHz files, says **David Price**...

**PRICE:** N-30 £349.99; N-50 £499.99

**AVAILABLE:** NOW

**CONTACT:** 0870 600 1539

**WEB:** PIONEER.CO.UK





**F**ollowing the vogue for wireless-capable network music players, Pioneer has landed two new models in the UK. The N-30 and N-50 support Apple's AirPlay and offer the ability to play music files from a variety of sources and formats, including high-resolution 24-bit/192 kHz audio files.

Whether it's off computer, NAS drives, hard disk, USB, iPod, iPhone or iPad, the new Pioneers will play it, from 24/192 hi-res FLAC and WAV files, to MP3 and MPEG-4 AAC compressed audio files. Apple's AirPlay onboard means that users have complete access to, control and playback of, their entire iTunes music library, too, with song information and album art simultaneously displayed on the full-colour 2.4 inch QVGA LCD display. It also enables content to be streamed across the network directly to the unit from an iPod Touch, iPhone or iPad.

A high-accuracy master clock is fitted to both units, said to minimise jitter, and there are short audio signal paths for optimum analogue sound. The premium priced N-50 adds an asynchronous USB DAC, allowing direct USB connection with a PC or laptop, without having to access the home network. There's also an Auto Level Control to deliver consistent volume levels between tracks and Pioneer's Sound Retriever technology to improve the sound quality of compressed

music formats, the company claims. Hi-bit 32 Audio Processing is said to expand the input digital word length to create a natural, 'analogue-like' waveform, it's claimed. "Selected audiophile parts" and a double-layered chassis, discrete digital/analogue power supply with twin transformers and gold-plated terminals complete the N-50's long list of features.

Both units can work with Pioneer's iControl app, a freely downloadable Pioneer application that lets an iPod touch or iPhone be used as a remote for controlling the network audio player's various functions. Pioneer also offers a dedicated Control app

## Users have complete access to their entire iTunes music library

for Android smartphones. Air Jam is also available free from Apple's App Store, an iPod touch/iPhone application developed by Pioneer which enables the user to stream music from up to four iPad, iPod touch and iPhone devices through Bluetooth connection. Air Jam also transmits metadata such as song title and album name, and lets users buy songs from iTunes; it's also available for Android smartphones, too.



### SPOTLIGHT

#### WHAT IS AIRPLAY?

Previously called AirTunes (when audio-only), it's a wireless technology developed by Apple that lets you play media from any device running iOS 4.2 onwards, such as an Apple iPod, iPhone or a computer running iTunes, wirelessly to another device. As AirTunes originally came out in 2004, it's far from new, and AirPlay as it's currently constituted appeared in 2010 – but it's only recently that it has started catching on.

## Young ones (and noughts)

**NEIL YOUNG** is no stranger to controversy, both artistically and in his opinions on the music industry in general. True to form then, he recently made a very strong case for top-quality digital music playback at a music industry conference. "It's not that digital is bad or inferior, it's that the way it's being used isn't doing justice to the art," he said. "The convenience of the digital age has forced people to choose between quality and convenience, but they shouldn't have to make that choice," he exclaimed.

"Steve Jobs was a pioneer of digital music, but when he went home he listened to vinyl," the rock legend said at AllThingsD's Dive Into Media Conference last month in Southern California. Young was reportedly outspoken in his criticism of low res digital downloads, and how they spoil people's enjoyment of music, and he again celebrated the high levels of sound quality possible from the vinyl LP.

Surprisingly perhaps, he appeared to endorse music file sharing, saying at the conference that the Internet is "the new radio, and radio as gone", arguing that online music piracy is now how music gets around. He explained that in his view, record companies are becoming obsolete, with the advent of iTunes and Amazon as new ways of purchasing and choosing music.

Still, modern formats like MP3 do not represent the original sound of the music, Young said. He declared that, "my goal is to rescue the art form that I've been practicing for the past fifty years... We live in a digital age and unfortunately it's degrading our music, not improving it".

**WEB:** NEILYOUNG.COM



Photo: Nick Eberbeck, Neil Young singing at a concert November 29, 1974 in Houston, Texas

# THE FIFTY

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# Power point

Quad's new Elite QSP stereo power amp is the 909 replacement

**T**he new Elite QSP (Quad Stereo Power) includes upgraded internal components and innovative new circuitry to deliver a higher level of audio performance than the much-loved 909 it replaces, says Quad.

A key part of the design is the company's proprietary 'Current Dumping' technology, which is an evolution of that which first appeared in the 405 some forty years ago.

A high-quality, low-power Class A amplifier provides superior sound at lower levels, bolstered by a high-power current dumping section to deliver muscle to keep the speakers under control when needed.

New PCB layouts, screened signal paths, custom-made transformers and shielding to protect the amplifier boards from mains hum all contribute, says Quad, to an overall design that delivers a clean, unsullied technical performance and an excellent dynamic range.

Despite its relatively compact size for a power amplifier, the Elite QSP has plenty of juice on tap – a claimed 140W per channel into 8 ohms and 250W into 4. Simple, solid and classy on the outside and clever within, Quad says its new Elite QSP maintains the company's traditional place at the forefront of modern amplifier design.



**PRICE:** £1,200 **AVAILABLE:** NOW **CONTACT:** 01480 447700 **WEB:** QUAD-HIFI.CO.UK

## Broadcast news

Burmester's new DAC is A2DP Bluetooth-ready

**T**he Burmester 113 is a brand new upsampling digital-to-analogue convertor that supports wireless data transmission. It has two digital inputs and two analogue outputs, plus Bluetooth and a USB input, with switchable sampling rates (48kHz, 96kHz and 192kHz). The Bluetooth is the superior A2DP type, able to stream music from phones, laptops, etc., in relatively good quality, although it is not lossless.

The 113 offers switchable phase reversal, a fully DC-coupled signal path with no coupling capacitors in the way of the signal, a so-called 'green' power supply using less than 1W in standby mode, and galvanic isolation between the analogue and digital sections. Watch out for a review in *Hi-Fi Choice* magazine soon!



**PRICES:** £2,350 **AVAILABLE:** NOW **CONTACT:** +49 030 78 79 68 **WEB:** BURMESTER.DE



### Vinyl archiver

**AUDIOFREAKS ANNOUNCES** the arrival of the LineStreamer+ (£299) from High Resolution Technologies, which is said to be specifically designed for vinyl junkies with large record collections that they'd like to transfer to computer.

It's a high-performance external sound card that connects between a computer and any line-level analogue source. The LineStreamer+ is USB connected and powered, and allows anyone to digitise any analogue source at a level of quality previously unavailable, says Audiofreaks. With its asynchronous USB transceiver and 24-bit analogue-to-digital convertor, it's a complete single-box solution.

The LineStreamer+ uses native Audio Class 1.0 drivers (present in all modern PC, Mac and Linux computers). Simply connect it to your computer via a USB cable, select the LineStreamer+ and you're ready to go...

[audiofreaks.co.uk](http://audiofreaks.co.uk)



### The right notes

**CHORD ELECTRONICS** has launched its first-ever music streamer. The Index (£990) will find and play stored music on a hard drive, networked computer or USB drive. It's said to be compatible with almost any file format including FLAC, WMA, AAC, WAV and MP3. It also offers internet radio using the vTuner service, which currently gives more than 10,000 commercial-free stations and over 15,000 related podcasts.

Full control of the Index using a tablet computer or smartphone is available as the unit supports many of the major control apps on the market. The streamer offers both Wi-Fi and wired Ethernet functionality and includes a fascia-mounted USB input, digital coaxial and optical outputs, plus RCA analogue outputs. Its compact dimensions and DLNA technology make it easy to install anywhere in the home.

[chordelectronics.co.uk](http://chordelectronics.co.uk)

## The best has become more affordable.

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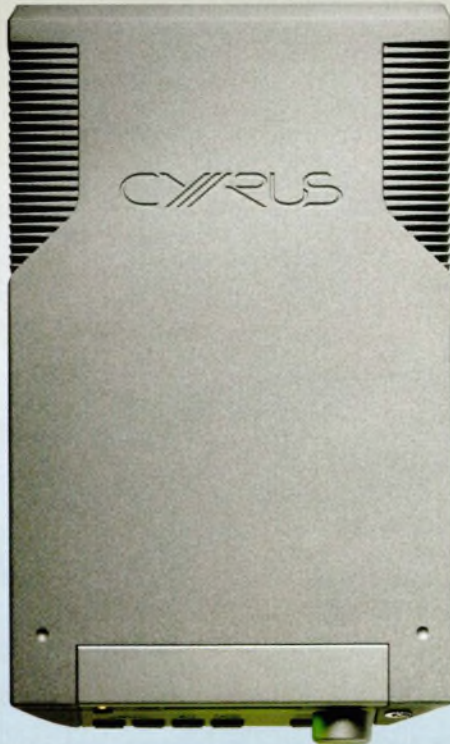
# Do it yourself

Cyrus Audio's new range of electronics has something for everyone...

**C**yrus Audio has announced a new range of customisable amplifiers allowing buyers to create their own 'ideal' hi-fi system, it's claimed. Each of the new models lets customers choose their own specification from a range of twelve options.

In addition to standard features such as the low-resonance aluminium diecast chassis, LCD custom display, IR remote system control handset and updated, latest generation components, customers can choose between two power options (2x 40 watts and 2x 70 watts), a five-input DAC card, and the opportunity to upgrade the existing DAC-equipped models to the higher spec Qx 192kHz upsampling model. 8 Series models can also add an outboard Power supply PSX-R for improved resolution and performance, the company says.

Prices start at just £699 for the new Cyrus 6a integrated amplifier and then go to £899 for a Cyrus 6 DAC, £1,200 for a Cyrus 8a amp, £1,400 for a Cyrus 8 DAC and finally £1,700 for a Cyrus 8 Qx DAC. The company is also repositioning the prices of its matching CD players to complement the new amplifier range, so things now start at £599 for the Cyrus CD T (Transport), while the Cyrus CD XT SE2 (Transport) costs £1,500, the Cyrus CD 6 SE2 is £699 and the Cyrus CD 8 SE2 is now £1,200.



**PRICE:** FROM £699-£1,700 **AVAILABLE:** NOW **CONTACT:** 01480 435577 **WEB:** CYRUSAUDIO.COM

## Good cause

In-ear phones designed to aid health charity

**A** portion of the proceeds from sales of Monster's, new iSport Livestrong branded in-ear headphones will be donated to the Lance Armstrong Foundation, created in 1997 by the cancer survivor and champion cyclist, to assist people affected by cancer, the company says.

These sweatproof and washable in-ear headphones feature Livestrong's iconic bright yellow on both the cable and earpieces, a proprietary in-ear clip anchor system, which fits the curve of the inner ear securely and a secure, custom-fit audio seal.

The headphones also feature the Company's ControlTalk, an in-line control system that gives users music and movie playback control of their smartphones, without having to reach into their pocket for the handset or device.



**PRICE:** TBA **AVAILABLE:** NOW  
**WEB:** MONSTERPRODUCTS.COM

# Loewe is in the air

New AirPlay-compatible streaming loudspeaker system

**L**oewe's new premium-priced compact Air Speaker employs AirPlay technology to wirelessly stream your entire iTunes library throughout your home. Users can also operate the Air Speaker – as well as access iTunes and the likes of device-stored music services, such as Spotify – via their iPad, iPhone, and iPod Touch. In terms of sonic technology, it comprises two subwoofers, two tweeters and two midrange speakers and boasts a total power of 80 watts.

This configuration, claims Loewe, delivers superior levels of sound quality as well as volume – all in contrast to the Air Speaker's modest dimensions, it's claimed. There's also the usual auxiliary-in port and a USB interface, allowing direct connection of iPods and iPhones, as well as other suitably equipped devices.



**PRICE:** £649 **AVAILABLE:** NOW **CONTACT:** 020 7368 1100 **WEB:** LOEWE.TV/UK

# Heed this

A blast from hi-fi's past, as Hungarian brand Heed returns to the UK

**H**ere's a name that some might remember. Heed Audio is coming back to the UK market, with a new range of electronics bearing the Obelisk name. The company claims that its amplification gives tube-like sonic characteristics from solid-state, with the benefit of high-power output and reliability that it brings.

Thirty years on and the design of the Obelisk integrated amplifier has undergone several updates and improvements, but in its current guise the Obelisk Si remains faithful to the design philosophy of the original, the company says. Now joined by a preamplifier, plus stereo and mono power amplifiers and optional outboard power supplies, the range covers all requirements

from a simple integrated amplifier to a multi-unit preamp, power supply and multiple mono power amp systems, for both active and passive amplification of large speakers.

There's a new Obelisk DT CD transport and Obelisk DA digital-to-analogue converter. The latter, which can handle up to five inputs at up to 24-bit/192kHz resolution, is said to form the heart of a multi-source digital audio system which can take digital feeds from the CD transport, computer, media server, DAB tuner or satellite box. Heed says that the combination of the Obelisk Si integrated amplifier and Obelisk DA DAC offers "audiophile quality in a compact desktop audio system".



PRICE: £TBA AVAILABLE: NOW WEB: HEEDAUDIO.CO.UK

## Egg-cellent sound

**THE ECLIPSE TD** hi-fi loudspeaker range comprises the flagship 7 series, classic 5 series and compact 3 series. These new models including the TH508 Mk 3 (pictured) markedly upgrade the original core model 5 Series line, the company says.

Features include new full-range drivers for wider frequency response, higher efficiency and improved impulse response, plus enlarged speaker enclosures for wider bandwidth and newly developed stands for easier angle adjustment of the speaker heads. They also give greater flexibility in adjustment angles to facilitate ceiling and wall mounting.

With these new loudspeakers, the Japanese manufacturer has retained all the strengths of the current models, while evolving them further for what the company claims is increased flexibility in use. A new glass-fibre driver with high stiffness and flexibility for reduced internal loss, an optimised voice-coil design for stronger magnetic flux and enlarged enclosure for wider frequency response, further augment the performance level, it's said.

[eclipse-td.co.uk](http://eclipse-td.co.uk)



## Test tubes

**GERMAN MANUFACTURER** Elrog has found new ways to improve both the technical and sound characteristics of the famous 845 and 211 audio power valves, it says. After two years of development, a new mesh design and methane-free vacuum was evolved. New, pure materials for the graphite anode, and an extensive technical procedure for the cleaning of the anode, were also applied. The improved cathode now delivers stronger current, is shatterproof (thanks to this special treatment) and has a longer life span, it is claimed.

Together, these design features lead, say Elrog, to "an unbelievable sound quality, as well as astonishing speed and dynamics in music reproduction". Finally, before being used in high-end amplifiers the tubes undergo stringent safety checks by a computer-controlled measuring system.

[madengland.com](http://madengland.com)

## NEWS IN BRIEF

• **ISOTEK'S** new CD aims to improve the sound of audio systems by ensuring they're set up correctly and ready to perform at their best. *The Ultimate System Set-Up Disc* comprises 20 tracks to test key elements of two-channel system performance. It includes a selection of music from the Opus3 audiophile record label, together with specially prepared sounds and test tones to help with speaker positioning and system optimisation. Look out for our review next month! [isoteksystems.com](http://isoteksystems.com)



• **BLACK RHODIUM** claim that its new TWIST speaker cable makes the experience of listening to music a pleasure thanks to its natural open sound on vocals. The cable combines features from its top-of-the-range Ninja cable, including DCT, silver plating and heavy gauge wire and, as its name implies, is 'twisted' to prevent airborne radio frequency interference. Prices range from £71 (3m) to £85 (5m). Unterminated, it's £3.50 per metre. [blackrhodium.co.uk](http://blackrhodium.co.uk)



# SME

# MODEL 20/3



This finely engineered precision turntable is built to the same exacting standard and incorporates many design features originated for the Model 20/12. Massive construction, extensional damping of major surfaces and lack of vibration from moving parts ensures exceptional detail, resolution and uncoloured performance.

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# Design for life



Class D promises much, but doesn't always deliver. So what of Musical Fidelity's brand new M1 PWR amplifier? *Jimmy Hughes* decides...

**C**lass D amplification has been around for donkeys' years – it's not, as some suggest, a recent phenomenon. Indeed, the benefits are well known; in a world of rising energy prices it's extremely efficient, drinking very little power and producing negligible heat. In turn, this means relatively high amounts

of power can be obtained in fairly small spaces.

Trouble is, the sound quality of Class D amplifiers has been patchy; more miss than hit until quite recently. This has allowed a sort of 'hi-fi urban myth' to arise, which states that Class D amps sound bad. Not true – it's as ridiculous as saying all vinyl is soft and sumptuous, or

## DETAILS

**PRODUCT:**  
Musical Fidelity M1 PWR

**ORIGIN:**  
UK/Taiwan

**TYPE:**  
power amplifier

**WEIGHT:**  
3.9kg

**DIMENSIONS:**  
(WxHxD)  
220x100x315mm

**FEATURES:**  
• unbalanced RCA phono inputs  
• RCA loop output

• switchable bridgable operation  
• power: 90w to 250w  
AC 50/60Hz

**DISTRIBUTOR:**  
Musical Fidelity

**TELEPHONE:**  
0208 900 2866

**WEBSITE:**  
musicalfidelity.com

all valve amps are cosy and warm. As ever in life, it's not just what you do, it's how you do it.

Until now, Musical Fidelity has resisted the temptation 'to do a D'. They've championed more conventional amps, including the superb pure Class A AMS35i integrated (as used by editor DP) and AMS100 power, as well as the humungulous Class AB Titan. But now, as if from nowhere, the new M1 PWR Class D power amp appears, promising serious sonics at an extremely attractive price. Moreover, it's not just another 'me too' product, as it sports one of the first ever implementations of the Texas Instruments power module; in a world of derivative designs, the M1 is unique.

A compact stereo power amp offering around 65 watts into 8 ohms and (see *Lab Report*), it's also possible to use two M1 power amps as a stereo pair – there's a





switch on the back to facilitate this. The result is increased power output; a claimed 100W (8 ohms) or 200W (4 ohms), and improved sound if the manufacturer's views are anything to go by...

Overall, build is very good, with nicely-finished high-quality metalwork and a 10mm-thick alloy front panel. However, weighing in at just 3.9kg, the M1 PWR does not offer the 'battleship'-build standards of MF's more expensive products. It's well-made, sounds good, and takes up very little space. But it's no behemoth – and indeed it could never be, with little need for acres of iron to sink the heat it doesn't produce!

The mains transformer is matchbox-sized – amazingly tiny given the output power on offer. Indeed, it would probably be considered 'small' if found in a preamp. **But don't be fooled; it's only because Class D achieves such high-operating efficiency that such things are feasible.** Those who 'listen with their eyes', considering things like weight, physical bulk and/or extravagant build quality, may be

disappointed by the M1 PWR's lack of heft. But, listen without prejudice, and you'll surely agree that the amp turns in an impressive performance. It's a superbly

## Listen without prejudice and you'll surely agree that the amp turns in an impressive performance...

practical design – small, neat, and low-maintenance in every sense.

I started listening to one M1 PWR in stereo, replacing my regular MF kW-750. A few years ago, the kW-750 was Musical Fidelity's flagship power amp. Although no longer made, MF regards it as one of its finest creations. Indeed, company founder Antony Michaelson still uses this amplifier in his home system. Delivering 750W into 8 ohms, and well over 1,000W into 4 ohms, the kW-750 is an immensely powerful beast. It's big – and heavy. How big? Well, its outboard power

transformers alone are housed in a box that's larger than two M1 PWRs combined. If made today, a kW-750 might easily retail for over £10k. Not exactly your average iPod dock, then...

### First listen

Given the high cost and lavish engineering of the kW-750, how might something as comparatively modest as the M1 PWR compare? The answer is – unexpectedly well. Sonically, the M1 PWR is not quite as refined as the kW-750, but the gap is surprisingly small – and certainly not reflected by the *huge* difference in price.

The M1 PWR sounds clean, fresh, and open, displaying a natural tonal balance and conveying a fine portrayal of dynamics. It is well-balanced and crisply detailed, giving the impression of having ample power in reserve. Tonally, it delivers a lean, lucid presentation of great clarity and transparency.

It's not exactly a rich, warm beguiling sort of sound, yet neither is it stark or over-bright. It's maybe a tad on the cool side of neutral, but only just. What immediately strikes you is the honest purity of the sound – clean, detailed, transparent, and open. It's impressively effortless too.

Bass is full and firm, but the kW-750's sheer bottom-end heft is not matched. It feels as though the speakers aren't moving quite so much air with the M1 PWR in the driving seat. The kW-750 amp is a shade more opulent. It has a certain magic the younger, less-expensive pretender doesn't quite equal. But, it's curious; once you've been listening to the M1 PWR for an hour or so, such distinctions start to become a little hazy. After a while, one starts to have doubts. Was the kW-750 really that much better? It certainly seemed so when the change-over was made, but then again the M1 PWR casts its own spell.

Indeed it really has a charm all its own, and punches well above its weight. After a few pleasurable hours spent in its company, you're almost persuaded it's fully equal to its bigger brother. Of course, the M1 PWR is flattering to deceive; if pushed *really* hard, the bigger amp's extra muscle starts to tell. Put simply, a kW-750 does not flinch.

Yet the M1 PWR's purity and lucidity are deeply impressive. Unlike some low-powered tube amplifiers that really operate close to the edge, the M1 PWR always gives the impression of being in control. Clarity is outstanding. It's very good at sorting out difficult 'congested' recordings because it sounds so clean.

### Congestion charge

Listening to *Martha Wainwright's Piaf Record (Sans Fusils Ni Souliers a Paris)* via the M1 PWR proved highly instructive. The recording captures the intimacy of a dozen people playing live in a small venue, and conveys plenty of emotion.

MONO TEMP

## Q&A...

JIMMY HUGHES SPOKE WITH MF'S  
FOUNDER ANTONY MICHAELSON



**JH:** What are the advantages and benefits of Class D operation?

**AM:** It generates very little heat so doesn't require large heatsinks, saving a great deal of space/volume and weight. The power supplies typically operate at high frequencies (100kHz to 300kHz) and consequently use much smaller transformers. This does not mean they have less capacity; they're smaller because they operate much more efficiently. Size doesn't always count!

**What about noise?**

Any power supply noise is about three octaves above human hearing limits and is, therefore, inaudible to all, but bats. Because there is no audible power supply noise, the sound is cleaner and more revealing. However, this cuts both ways; not only is it revealing of limitations in your source material, it also highlights any shortcomings in the amplifier design.

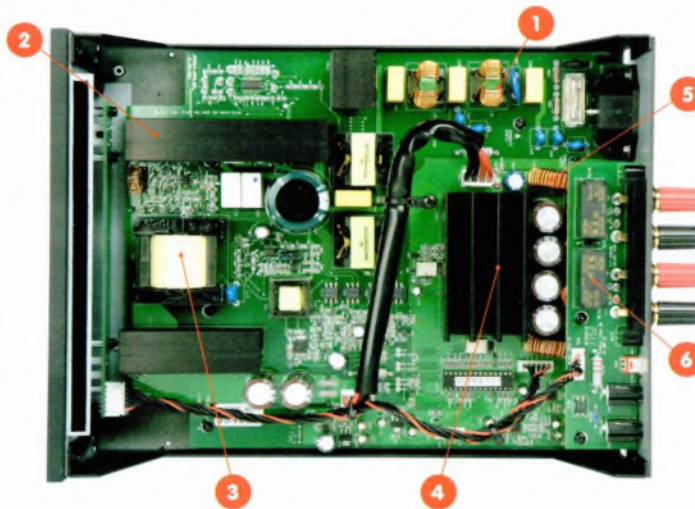
**Would you say there are any particularly challenging aspects to Class D design, or is it the same ballpark as Class A (for which you're famous), or even Class AB?**

How much space have we got! Musical Fidelity has an enviable record when it comes to making amplifiers with low distortion, excellent stability and exceptional load-driving ability. Such things are not easy to achieve in Class D, and it took much time and effort before we felt we had something worthy of the Musical Fidelity name. It offers very low wideband distortion, and output power doubles into 4 ohms, not common.

**Class D has had a long and chequered history, but it's getting better all the time. Do you think it's going to be the future?**

Possibly, but that's not to say all other forms of amplifier will become redundant. The M1 is a great performer, and terrific value, but, in truth, it is not as silkily refined as its great, great grandfathers, the AMS50 and AMS100.

## IN SIGHT



- 1 two-stage mains input filtering and bridge rectifier
- 2 power factor correction circuit feeds the main switched-mode PSU
- 3 switched-mode power transformer with final rectification
- 4 powersupply caps and TI's Class D amp under heatsink
- 5 output filter inductors (a feature of all Class D amps)
- 6 Relays switch between stereo and mono amp configuration

## ON TEST

As promised, the combination of a switched-mode power supply and PWM (Class D) power amplifier yields great efficiency – the M1 PWR idling at just 5W and drawing a mere 84W from the wall with one channel delivering 65W/8ohm. Class D amps are more efficient the closer they are driven to full output, reaching 80% in stereo mode here. Musical Fidelity's use of PFC (Power Factor Correction) also helps, indeed about 90% of what you see in our inside shot (above) is 'power supply' with Texas

Instruments' Class D amp living under a small heatsink (caption 4).

Another feature of Class D output stages is their load tolerance, at least in terms of power. So, not only does the M1 PWR exceed its 65W specification at 70W/8ohm but this increases to a full 137W/4ohm, very close indeed to a perfect doubling of output. 'Payback' comes in the form of zero dynamic headroom, so the M1 PWR offers 70W, 137W and 227W into 8, 4 and 2ohm loads under both continuous or dynamic conditions.

Distortion is certainly not as low as with MF's other amps and increases with frequency from ~0.035% in the midrange to 0.6% at 20kHz. Neither is it as 'quiet', affording an A-wtd S/N ratio of 78dB (re. 1W/8ohm).

Like other bridged Class D designs, the M1 PWR's treble frequency response is influenced by the speaker load – into 8ohm it's 'bright' at +0.75dB/20kHz, while into a lower 4ohm it's a sweeter -0.5dB. So it's important to demo the M1 PWR with your own speakers if possible. **PM**



**FOR US, THE M1 PWR's principal virtue is its exceptional purity and lucidity. Midband is very good, while treble is crystal-clear. The bottom end is, perhaps, slightly leaner and less voluminous than regular Class A or A/B amplifiers. However, it wouldn't be fair to say deep bass is lacking or curtailed. The kW750 delivered fuller more powerful low frequencies, and delivered more 'dimensional' highs. The bigger amp has a more 3D 'out of the box' soundstage, while the M1 PWR is a very revealing amplifier, yet it proved surprisingly clean on recordings with flaws. While it doesn't hide faults, it does not exaggerate them either.**

Recorded in NYC, the production is very good. Technically, the sound is mostly excellent, yet sometimes things become a tad congested. Why? Probably because that's how it actually sounded at the time the music was being performed.

Martha Wainwright's voice can sound a little edgy and strained. She occasionally forces her tone to emphasise a musical point – during *L'Accordeoniste* (track 4), for example. Edith Piaf herself had a rather hard voice, and Wainwright is not aiming at a pretty sound.

The recording gives us a mix of the voice direct (as picked up by the main microphone), coloured by the main PA system to add a little extra ambience. Inevitably, a degree of tonal hardness/edge is introduced – just as there would be live.

At times, the sound lacks smoothness and refinement. Then, all of sudden, things change; a different group of instruments is used, and everything is beautifully clean again. The great thing about the M1 PWR is the way it lets you distinguish all this.

By not adding its own grunge, and not artificially smoothing things over, it allows you to hear the music

more or less exactly as it was recorded/played. It neither flatters nor exaggerates. You feel you're hearing things exactly as they were when originally recorded

## Two become one

Adding a second M1 PWR enhances sonic performance still further, increasing output power from a quoted 65W to 100W, so that dynamic contrasts are widened. A single M1 PWR sounds extremely good, but adding a second sounds even better. You can start with one, and then buy another when funds permit. There appears to be little or no warm-up time. The sound is excellent when you first switch on, and doesn't seem to alter much during extended use. Again, this stands in stark contrast to big hot-running Class A designs, which definitely sound better after they reach their normal, sizzlingly high operating temperature.

The input is single-ended (unbalanced) only. Having balanced inputs as an option would have been a nice extra, but this omission is unlikely to be a deal-breaker for most users at this price, if we're honest. There's a loop output (basically a

**CONNECTIONS**



- 1 RCA phono analogue audio inputs; alas no balanced XLRs!
- 2 trigger sockets for use with system remote controls
- 3 two-way switch between stereo and bridged mono mode
- 4 2 pairs of speaker binding posts; mono-wire only
- 5 IEC mains input; responds well to aftermarket cables
- 6 loop out, handy for subwoofer connection

phono socket wired in parallel with the input socket) which would allow a sub woofer to be connected.

One final twist in our listening comparisons between the kW-750 and the M1 PWR occurred with a change of listening distance from the loudspeakers. When we sat close to the speakers, the M1 PWR's cleanness and clarity proved hugely advantageous.

Maybe it's fanciful, but it sounds as though the signal path in the M1 PWR is shorter, with fewer breaks in the chain. Sonically, Devialet's D-Premier created a similar impression of purity. The kW-750's signal path has many more 'interfaces', so Class D simplicity wins here.

However, when we sat further back from the speakers, something interesting happened; the kW-750's ability to conjour up a broader more dimensional soundstage came strongly to the fore. The bigger amplifier now had something definite over the young pretender.

Sonic differences between near-field and mid-field listening are usually thought of as a loudspeaker thing. But, subjectively it impacts on one's impressions of the other components, too. In the writer's room, the optimum listening distance is about three to four metres.

At this distance, a more convincing impression of depth and three dimensional holographic soundstaging is created. Near-field listening produces a tighter more focused bass, and enables you to hear subtle phase information between the two channels better. Unfortunately, the ability to create a holographic stereo image that exists beyond, above and behind the loudspeaker boundaries is often diluted as you sit closer. The latter arrangement gives you a drier more 'direct' sound.

When heard at a distance of about three to four metres from the loudspeakers, the

kW-750 created a more tangible impression of real musicians playing in a defined space, compared to the M1 PWR. But this difference became noticeably less apparent as you moved closer to the loudspeakers, I found.

**Conclusion**

Lest we forget, a few years ago, Class D amplifiers would have been laughed at as 'lo-fi' by most enthusiasts. This wasn't

**The M1 PWR is an outstanding amplifier at a very reasonable price. Go hear it for yourself...**

without some justification of course, thanks to a distinctly mechanical sound and a general lack of tonal accuracy. But such views are no longer justifiable, as those days are gone. As expensive products like the Devialet D-Premier have forcibly demonstrated for example, a well-designed Class D amplifier is capable of comparing favourably with the best Class A and/or AB designs. That's not to say every 'D-type' is this good, but there's no longer any sense that the medium shapes the message.

While it remains true that big, expensive, no-compromise Class A giants like Musical Fidelity's own AMS-50 and AMS-100 reproduce music with a gorgeous three dimensional velvety richness that remains special and unique, the M1 PWR's crisp clear lucidity is attractive too. The more you listen, the more the M1's presentation grows on you. In has a character of its own, and it's not unendearing.

Although it wouldn't be true to say an M1 PWR beats something like a kW-750,

it does exhibit a clarity that in some ways improves on the bigger amp – a sort of immediacy and 'directness' that's very engaging, musically. The M1 PWR is very enjoyable to listen to then, and does not leave you feeling unsatisfied. Bigger amps like the kW-750 sound a tad more sophisticated; subtler and more finely shaded. But the M1's directness is engaging too. It's different, rather than worse.

The only caveat is that with this amplifier, more than Musical Fidelity's big bruisers, you'll need to audition it with your own loudspeakers. As our lab measurements show, the electrical load the speakers present to the amplifier has a greater impact on the performance of this little power amp than it would, say, on the aforementioned kW-750. That's why we don't keep banging on about the importance of getting a proper demo – of trying before buying – for nothing.

In my system, and to my ears, I really did find myself rather beguiled by this little box. It's no overstatement to say that the new Musical Fidelity M1 PWR is an outstanding amplifier at a very reasonable price. Go hear it for yourself. ●

**HifiChoice**

**OUR VERDICT**

<b>SOUND QUALITY</b> ★★★★★	<b>LIKE:</b> Very clean and transparent sound; small size; great value
<b>VALUE FOR MONEY</b> ★★★★★	<b>DISLIKE:</b> Balanced input connections would be nice, but lack is excusable given the modest price
<b>BUILD QUALITY</b> ★★★★★	<b>WE SAY:</b> Exceptional performance in a compact, affordable package
<b>FEATURES</b> ★★★★★	

**OVERALL**  
★★★★★

Perform

Outperform

At Vertere our belief is that by identifying the critical components of a Hi-Fi system and improving them across all their key performance areas will allow the music to flow naturally, communicate and have an emotive presence.

Pulse, the ultimate analogue audio cable system is merely the first step towards our realisation of being the closest to audio perfection that is achievable.



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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

Hi-Fi Choice is the only magazine to offer *Blind-Listening Group Tests*, backed up with an objective lab testing procedure

### BLIND-LISTENING TESTS

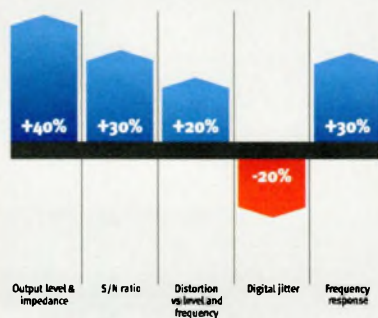
**THIS CRUCIAL** process, carefully controlled and yet sufficiently relaxed that our listeners do not feel that they're being tested, forms the heart of our Group Test review. Our panel of three listeners are not aware of the brand or price of the product they are listening to, but they are able to choose their own music selection and decide upon the initial listening level at the beginning of the first session.

This level is accurately matched from product to product throughout subsequent sessions so that subjective impressions of 'louder' or 'quieter' sounding separates helps inform us of their inherent character. Regular breaks keep our listeners refreshed while the sessions are

conducted with the minimum of distractions, playing the same programme through each system while they take notes of whatever pleases or bothers them. Our panel are encouraged to discuss their impressions after each session and the consensus, or otherwise, forms the basis of our reported Sound Quality section.

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

### RESULTS AT A GLANCE



#### OUTPUT LEVEL & IMPEDANCE

The typical output level of a DAC is 2V but its ability to deliver this level at all frequencies through long cables or into all amplifiers is indicated by its output impedance.

#### SIGNAL-TO-NOISE RATIO

This is a direct representation of the DAC's A-weighted Signal-to-Noise (S/N) ratio, measured in 3rd-octave bands from 20Hz-20kHz relative to its maximum output.

#### DISTORTION VS LEVEL AND FREQUENCY

Rather than quote a single figure for distortion at one frequency and level, this value represents a measure of the distortion trend across both the entire audio band and over a full 100dB of the DAC's dynamic range.

#### DIGITAL JITTER

Jitter is caused by an uncertainty in the timing of digital audio data as it is recovered and processed by the DAC. Once converted to analogue audio at the output, jitter manifests as a very particular form of distortion.

#### FREQUENCY RESPONSE

This is a measure the 'flatness' of the DAC's frequency response up to 20kHz with 44.1kHz/48kHz digital inputs and to 40kHz with hi-res 96kHz/192kHz sources.



#### 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)

## HOW WE TEST

### THIS MONTH'S LISTENING PANEL



**ESTHER LUI** (LEFT) **CHOIR MISTRESS** of St. Martin-in-the-Fields, Esther was an accomplished professional pianist in her native China.

**CONRAD MAS** (MIDDLE) **MANAGING DIRECTOR** of Avid HiFi, Conrad built up his company from a tiny turntable maker to a successful separates brand.

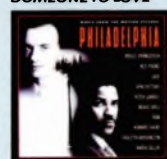
**CHANNA VITHANA** (RIGHT) **JOURNALIST** and hi-fi writer, Channa has reviewed audio for a decade, with the emphasis on musicality and design.

#### REFERENCESYSTEM

- Disc player:
  - Oppo BDP-95 (Audiocom modified)
- Amplification:
  - Musical Fidelity AMS35i
- Loudspeakers:
  - Quad 989
- Equipment supports:
  - Quadraspire

#### TEST MUSIC

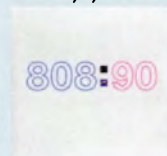
**SADE**  
*PLEASE SEND ME  
SOMEONE TO LOVE*



**COLDPLAY**  
*UP IN FLAMES*



**808 STATE**  
*FACIFIC 707*



**JULIAN LLOYD WEBER**  
*EVENING SONGS*



**STEELY DAN**  
*RIKKI DON'T LOSE THAT  
NUMBER*



# Blind-listening Group test

DACS £300-£750

## Digital watch

From CD transports and digiboxes to streamers and PlayStations, there's never been more of a need to own a decent DAC. **David Price** tries six affordable options...

### DO YOU REMEMBER THE EIGHTIES?

Just three or four years after CD enjoyed its UK launch, we were reading about these strange, fantastical devices called 'DACs'. Along with a 'CD transport', we learned from the magazines of the day that a standalone 'digital-to-analogue convertor' was suddenly the best way to get hi-fi sound from your shiny, cutting-edge digital audio discs...

In the same way that you split a preamp and a power amplifier, or the turntable into its component parts of motor unit and tonearm, so the CD player could be broken up into separate boxes better designed to do the job.

True enough, but at the time it was overkill; it's only now that the profusion of digital sources means you're really at a loss without a separate DAC box. So much so that the latest generation of CD players, such as the Audiolab 8200CDQ and Cambridge Audio 851C aren't so much CD players as DACs with CD drives built in. Suddenly, the humble digital-to-analogue convertor's time has come.

And now there's another good reason to buy one; the world's going computer audio crazy, and these latest designs have USB functionality. Plug your PC or Mac in and it will play out your music files at far higher quality than you could ever expect from your computer's analogue line out.

**It's only now that the profusion of digital sources means you're at a loss without a DAC...**

So – whether you're simply seeking a more modern way to play your CDs via your existing CD player (used as a transport), or attempting to upgrade that nasty DAC built-in to your DVD or Blu-ray player, want more punch from your PlayStation or crave a superior sounding streamer to the one you've got now (without having to change the streamer itself) – it's time to think DACs! Read on to find out what's possible...

### ON TEST



**Arcam rDAC**  
£300 **p25**

One of the very first standalone DACs ever made – the Arcam Black Box – was the distant ancestor of this little bit of kit. It's a lovely piece of industrial design, with a fine USB interface and decent componentry inside, at a rock-bottom price. A persuasive purchasing proposition...



**Burson DA-160**  
£750 **p27**

A new name to the UK, this premium-priced Australian designed product certainly looks the part. Completely devoid of gimmicks, there's very little special to note, aside from the fact that it's a very well engineered and thoroughly executed product with a sense of quality throughout.



**Centrance DACmini**  
£650 **p29**

It's a DAC that looks like a Mac mini – geddit? Yes, very good. But aside from the obvious physical resemblance to the computer whose name it playfully apes, this little box boasts a USB interface plus a selection of other inputs, and a front panel headphone socket and volume control. Versatile.



**Fidelity Audio DAC-150**  
£545 **p34**

From a relatively new name in hi-fi comes this immaculately well-presented DAC that offers far more than you'd expect at the price; a large alphanumeric display, a headphone amplifier and socket and preamp functionality. It's well made, UK manufactured and promises a lot sonically, too.



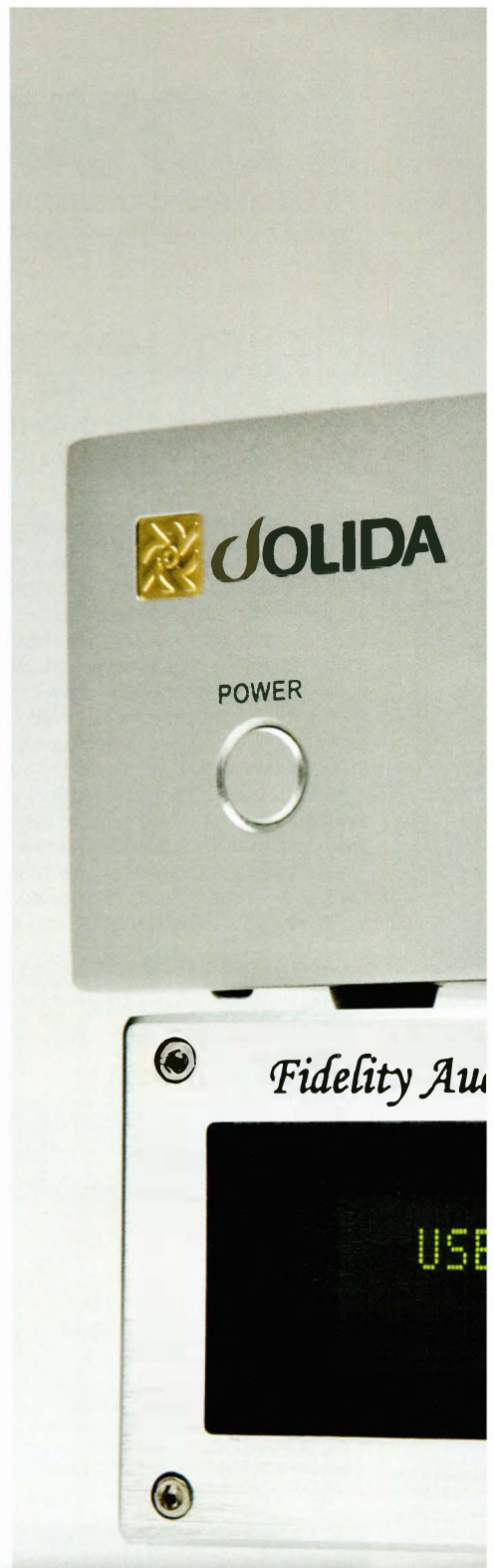
**Jolida FX Tube DAC**  
£440 **p33**

If it's a Jolida then it must have valves in there somewhere, and you don't need to look too hard to spot two humble 12AX7s under the hood. Indeed Jolida thoughtfully provide a clear top to let you see them glowing away before you! The rest of the DAC is pretty standard stuff, however. Good value, though...



**Rega DAC**  
£500 **p35**

No prizes for the name, but the ever imaginative boys from Southend have come up with a powerful proposition for just £500; it's heavy, remarkably well built considering its modest price and brimming with inputs, including USB. Can it live up to the company's reputation for serious sonics?





# K2 Series

by Roksan Audio

"In short, the K2 system delivers musical delicacy and drama in flawlessly balanced proportion... That it looks so polished and presentable is an added bonus."

- Hi-Fi Choice, January 2009



# M2 Series

by Roksan Audio

"The Roksan has solid stereo imagery and helps the ear interpret delicate ambient information ."

- Hi-Fi Choice, November 2010 (Integrated Amplifier and CD Player)



# ROKSAN

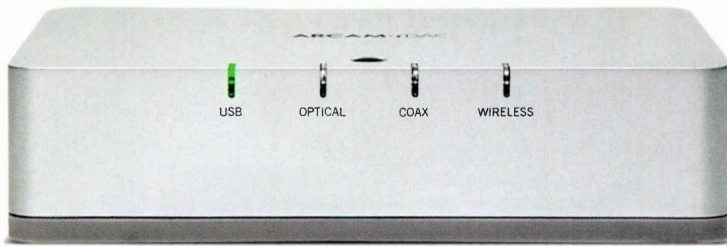
*Technology Driven by Emotions*

The M2 Stereo Power Amplifier is available in most Roksan M2 Stockists now!

Roksan Audio is distributed in the UK by Henley Designs Ltd.

Web: [www.henleydesigns.co.uk](http://www.henleydesigns.co.uk) - Tel: 01235 511 166 - Email: [sales@henleydesigns.co.uk](mailto:sales@henleydesigns.co.uk)





# Arcam rDAC £300



Looks to die for, superlative build, great feature count and serious sonics – what’s not to like?

## DETAILS

- ORIGIN:** UK  
**TYPE:** DAC  
**WEIGHT:** 1.2kg  
**DIMENSIONS:** (WxHxD) 160x40x111mm  
**FEATURES:**
- Wolfson WM8741 DAC chip
  - coaxial digital input
  - optical digital input
  - asynchronous USB input
  - 1 pair RCA line outputs
  - offboard power supply
- DISTRIBUTOR:** Arcam  
**TELEPHONE:** 01223 203200  
**WEBSITE:** arcam.co.uk

**T**his DAC gives you a lot for the money, despite being so modestly proportioned. Seemingly hewn from a solid block of aluminium, its build quality is something that would shame many products at five times the price, and the styling and ergonomics are superb, too. A single central source selector works in conjunction with a bank of LEDs, which glow different colours to denote whether there’s a source locked on or not.

Round the back, a single pair of RCA phono line outs are offered (no balanced XLRs but you can’t have everything), plus coaxial, optical and USB inputs, along with DC power in for the separately cased off-board switch-mode power supply. There’s a single rear-mounted master power switch. Inside, a Wolfson WM8741 DAC chip does the sound generating honours, and there’s also asynchronous USB functionality licensed from DCS too (as seen on the £7,500 Debussy DAC).

## Sound quality

There was some doubt about the Arcam beforehand on my part – was it unfair of me to throw it in with a group of more expensive DACs? The verdict of the listening panel was an emphatic ‘no’, for the rDAC was a star from the off. “Open, expansive and three dimensional”, exclaimed

one panelist, chomping at the bit to show his appreciation. “A no brainer, chalk and cheese compared to some of the others here”, said another.

The little Arcam proved immediately likeable – loveable, in fact. Why? Because, “music is brought to life”, said one listener. Punchy, vivid and unrelentingly good fun to listen to, the rDAC seemed to be the digital equivalent of a good espresso coffee, injecting a sparkle into the proceedings without giving you a headache.

Its work with 808 State’s ‘Pacific’ pretty much summed it up; it made the track bounce along as if on springs; whereas several others made it appear leaden and laboured. Interestingly though, this wasn’t achieved through any artificial edge – while the Arcam was light and bright in terms of tonal balance, it was by no means hard or edgy. Instead, its fundamentally correct handling of rhythms and microdynamics made the music motor along apace.

Everyone celebrated its midband, which threw light on instruments; “you can feel the airiness of the cello” said one panellist on hearing the Julian Lloyd Weber piece. Another applauded its stage depth on the Sade track, along with excellent pin-point location of the lead vocal. Everything was so well resolved for a DAC of its price. This

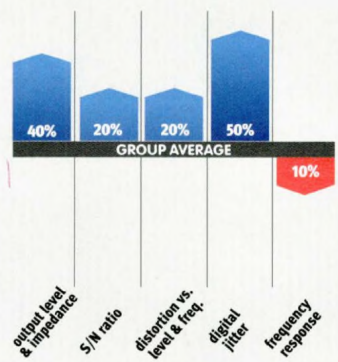
lead to the general sense that the music was very expressive; the Arcam painting its picture in big, bold brush strokes. And unlike some others, via USB its performance didn’t drop back at all, sounding just as animated and detailed.

In ultimate terms it lacked the finesse of the Fidelity Audio, Rega and CEntrance; treble was ever so slightly less finessed and the bass lacked real low-end weight, but it didn’t seem to matter – as this was a spirited and charismatic performance that loved to get into the groove.

## ON TEST

Not the costliest but certainly one of the cleanest-performing DACs in our group, the rDAC offers a high 2.3V maximum output, wide 109dB A-wtd S/N ratio, low 460hm output impedance and very uniform 0.002% distortion from 1kHz-20kHz. While distortion rises at low bass frequencies to 0.016%/20Hz, Arcam has nevertheless done a fine job unifying its S/PDIF and USB performance thanks largely to its implementation of dCS’s asynchronous USB interface. As such, the S/PDIF and USB responses are also entirely consistent with 44.1kHz/48kHz sources (flat to within ±0.02dB from 20Hz-20kHz) and 96kHz sources (gentle roll-off of -2dB/30kHz and -25dB/40kHz). There’s a similar early roll-out with hi-res 192kHz content delivered via S/PDIF which reaches -20dB/70kHz instead of stretching out to 90kHz. Correlated jitter is very low at ~70psec (S/PDIF) and just ~20psec via USB. **PM**

## RESULTS AT A GLANCE



## Hi-Fi Choice

### OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Feisty, musical sound, super styling & build; strong USB, price
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Nothing
- BUILD QUALITY** ★★★★★ **WE SAY:** Barnstorming little box that frankly shouldn't be so competent across the board at its low, low price
- FEATURES** ★★★★★

### OVERALL



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# Burson Audio DA-160 £750

Fine build quality and a decent range of inputs – that’s the DAC from Down Under!

## DETAILS

- ORIGIN:**  
Australia
- TYPE:**  
DAC
- WEIGHT:**  
5kg
- DIMENSIONS:**  
(WxHxD)  
180x80x250mm
- FEATURES:**
- Burr-Brown PCM1793 DAC chip
  - 2x USB inputs
  - coaxial digital input
  - optical digital input
  - 2 pairs RCA line outputs
- DISTRIBUTOR:**  
Item Audio
- TELEPHONE:**  
01782 621225
- WEBSITE:**  
itemaudio.com

**I**t’s a new name to the UK, but Burson has been going strong in its native Australia for over fifteen years. Perhaps that’s why the DA-160 looks and feels such a solid bit of kit; unlike so many unknown brands here, they’re not a Chinese company that set up shop last Tuesday on a whim and a prayer.

Finish is generally excellent, with very finely finished aluminium casework, although we weren’t so sure about the exposed allen bolt heads. The front panel is simple, with two buttons; one for the digital input selector, which toggles between coaxial, optical and its two USB inputs; the other toggles between two output levels; line plus +6dB. Round the back, the corresponding socketry is to be found, plus a mains IEC and a power on/off switch. Inside, the company has produced a discrete design with no op-amps.

## Sound quality

The panel was unanimous; here was a “totally inoffensive” sounding design that singularly failed to charm the listeners. “The only redeeming feature was its nice vocal and instrumental texture”, said one panellist – and he was right. The Burson was never harsh, and offered a degree of insight into the timbre of

the instruments it played, capturing the ‘surfacing’ of the sound well. But that’s about where the good news ended – with overall musicality scoring very low. “Timing was poor” one listener opined; another said “it seemed to airbrush everything over, sounding like background music in a lift”. Another called it “oversmooth, with nothing much happening”. Certainly the feisty, lively Pacific 707 track was taken down a gear or two, suddenly sounding ploddy and uninteresting.

A more polite way would be to say it didn’t capture the joy of a musical performance; the sound was very dry and analytical, bright and open sounding to a point, but there seemed to be distinct cut-off points to the soundstage both left to right and front to back. Ditto tonally, where the high treble seemed to fall off a cliff, so to speak, with the high harmonics of classical music instruments being ‘lopped off’. This relatively charmless nature, allied to a fairly constrained recorded acoustic, plus its flat and lifeless rhythms and dynamics, made it, “a cure for insomnia”, as one listener rather unobliquely put it.

Its best side was its even tonal balance; only the lack of a screechy treble or a thin, reedy bass – plus

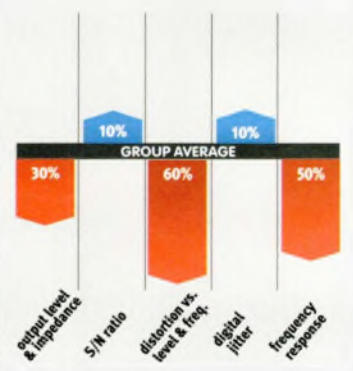
that decent textural detailing – kept it in the running with classical music, where its tracks were covered far more convincingly, and it at last began to make some sense.

The Burson proved quite music-dependent, then. Kept away from pop, rock or dance it was listenable, giving a tidy, cerebral sound that some buyers will take to. But out of its comfort zone the panel unanimously felt it didn’t hold a candle to even the cheapest Arcam DAC here, which was disappointing given its premium price.

## ON TEST

We tested two samples of the DA-160, both showing much higher than the specified <math>0.001\%</math> distortion at 0.04-0.06% (left) and 0.21-0.22% (right) across the audio range at its maximum (high setting) 1.9V output. The 106dB A-wtd S/N ratio is wider than Burson’s spec, but the 975ohm output impedance is higher while its frequency response failed to stretch to the quoted 5Hz-35kHz (-1dB). In practice while the bass end is flat and extended, there’s a treble roll-off amounting to -1.5dB/20kHz (48kHz dig in) and -4.8dB/35kHz (96kHz). Nevertheless, the DA-160 does handle 24-bit/192kHz digital inputs with USB up to 96kHz even if jitter here is both complex and high at 1775psec. Jitter via coax/optical is much lower at 410psec (48kHz) and just 180psec (96kHz). Internal inspection of the DA-160 reveals a bespoke design engineered with great dedication, so these results are slightly disappointing. **PM**

## RESULTS AT A GLANCE



## Hi-Fi Choice

### OUR VERDICT

- SOUND QUALITY**  
★ ★ ★ ☆ ☆ ☆ **LIKE:** Decent finish, attention to detail
- VALUE FOR MONEY**  
★ ★ ★ ☆ ☆ ☆ **DISLIKE:** Lifeless sound that fails to inspire
- BUILD QUALITY**  
★ ★ ★ ★ ★ ☆ **WE SAY:** A disappointing performer considering the obvious care taken in the design of this DAC
- FEATURES**  
★ ★ ★ ★ ☆ ☆

### OVERALL





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1 0 2  
SYSTEM

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[www.soundcrafthifi.com](http://www.soundcrafthifi.com)

**Cabasse**



# CEntrance DACmini CX £650



The name sounds like a Mac, and it's styled to match the computer of the same name, but what of the sound?

## DETAILS

- ORIGIN:** USA
- TYPE:** DAC/headphone amp
- WEIGHT:** 4.5kg
- DIMENSIONS:** (WxHxD) 164x42x164mm
- FEATURES:**
  - USB input
  - coaxial digital input
  - optical digital input
  - 1 pair RCA line inputs
  - 1 pair RCA line outputs
  - 6.3mm headphone output
- DISTRIBUTOR:** Item Audio
- TELEPHONE:** 01782 621225
- WEBSITE:** itemaudio.com

**C**uriously proportioned, you'd almost think the designers of this little bit of kit had taken inspiration from a certain premium computer with a sound-a-like title! The upshot is that the DACmini looks like a bespoke table-top partner to the Apple of nearly the same name.

It's fairly well made, with a silver machined aluminium alloy case that's even compartmentalised inside to keep vital sections nicely screened; galvanic isolation is also featured. Black finish is said to be a forthcoming option. The front panel has a single largish volume knob, which controls the output level of the 6.3mm headphone jack; a £330 option turns it into a fully fledged preamp. The rear panel features a pair of RCA analogue inputs, a pair of analogue outs, plus coaxial, optical and USB digital ins which are all switchable from the front panel. CEntrance makes great play of its driverless USB input.

## Sound quality

This DAC sounded as distinct as it looked; indeed it actually lead one panelist to call it, "totally different to any other here". Its combination of a very well judged tonal balance (not too euphonic, yet not as thin as some others here), allied to very impressive musicality made it one of the top performers of the group.

Again and again, panelists talked in terms of the DACmini having a clean and detailed yet musically enjoyable sound. It didn't matter what music you fed it, the little box just got on with unwrapping the detail and letting it flow forth in a relaxed but enjoyable way. In some ways most reminiscent of the Fidelity Audio in its nature, but with added sparkle and low bass power, the CEntrance DACmini never intruded on the musical proceedings, preferring instead to be a simple conduit for them, making for a fluid sound.

"Overall a very good tonal balance", one panellist opined. Indeed in some ways it was one of the best; low frequencies were strong with the thumping kick drums of 808 State, yet upper treble was extended in a way none of the others quite managed, lending the Steely Dan track a super sense of air. This proved "very revealing" on the Julian Lloyd Weber track; indeed one panellist described it as "superb on classical", catching the sense of the music in a way that made all the other DACs here sound stodgy or woolly, no less...

It wasn't judged quite so highly on rock or pop, but still fared well. "There was a nice openness about this DAC", said one listener, and this sums it up. The stage depth wasn't quite as good as the best here, and there was just a touch of

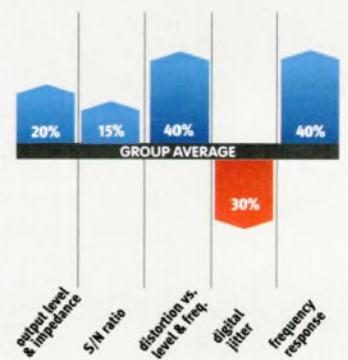


stridency to Coldplay vocals at times, and a slight lack of dynamic clout to the proceedings, but this aside the CEntrance took the listeners present right inside the recordings in a way that made most other DACs here sound opaque. On USB it nudged higher still; whereas the panel preferred the Rega via coaxial, the CEntrance's excellent USB performance pushed it ahead ever so slightly, with even more detail and insight. A great product that really does warrant its highish price.

## ON TEST

While CEntrance claims '192kHz/24-bit performance over S/PDIF', we found 192kHz inputs were downsampled to 96kHz but with poorer overall performance than that achieved with native 24-bit/96kHz data. Its USB input, however, handles files right up to 24-bit/96kHz. Jitter is rather high at 1800psec via S/PDIF and USB but this is linked to an extremely low-rate 8Hz modulation that's probably less significant than the raw figure suggests. The S/N is an impressive and consistent 108-109dB across all inputs while its response with 96kHz and 192kHz files is flat to -1.2dB/45kHz. The 44.1kHz/48kHz responses are absolutely ruler flat to within ±0.01dB over the 20Hz-20kHz audio range. This and the low-ish 300hm output impedance are worthy of mention as is its low distortion, the DACmini offering the lowest 20kHz THD in our test at just 0.0005%. Great stuff, in parts. **PM**

## RESULTS AT A GLANCE



## Hi-Fi Choice

### OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Powerful, open sound, useful facilities, decent build
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Mac mini lookalike styling not for everyone
- BUILD QUALITY** ★★★★★ **WE SAY:** Genuinely capable performer with interesting feature count
- FEATURES** ★★★★★

### OVERALL



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# Fidelity Audio DAC-150 £545



A relative newcomer to the DAC market, this flexible and affordable little box proved a pleasant surprise.

## DETAILS

- ORIGIN:** UK
- TYPE:** DAC preamp
- WEIGHT:** 2.6kg
- DIMENSIONS:** (WxHxD) 190x72x335mm
- FEATURES:**
  - Crystal CS4396 DAC chip
  - 1 pair RCA preamp outputs
  - 1 pair RCA line outputs
  - 1 pair RCA line inputs
  - coaxial digital input
  - optical digital input
  - asynchronous USB digital input
- DISTRIBUTOR:** Fidelity Audio
- TELEPHONE:** 01302 563124
- WEBSITE:** fidelityaudio.co.uk

**T**his quality of build and the sheer versatility of features wasn't expected at the modest retail price of this product. It doesn't win prizes for style like the Arcam or finish like the Burson, but there's no denying it's a lot for your money.

It uses a vacuum fluorescent alphanumeric display for navigation, working with a rotary knob that toggles between sub-menus. The unit can be set to run as a DAC only, or a preamp and/or headphone amp. It all works well and there's nothing to complain about, save the slightly agricultural quality of finish on the back panel, but that's being churlish considering its price!

Inside, a Crystal CS4396 DAC chip does the number-crunching duties (giving a maximum of 24-bit/96kHz resolution, although considering the paucity of 192kHz music files, that's no great shakes), and Fidelity Audio use 'audio grade op-amps in the analogue output stage. A full Class A headphone output stage is fitted. A 30-day money back guarantee is offered, plus a two-year warranty.

## Sound quality

A very high bar was set by this contender, offering as it did a wide, open, subtle and detailed sound with absolutely no sign of its being a budget product. All members of the listening panel, and indeed myself

who was also paying close – albeit unofficial – attention, were struck by its expansive rendition of the recorded acoustic in the Sade track. Comments such as “spacious” kept being made, as did complimentary remarks on its sonic finesse.

Vocal texture and instrumental separation were marked very high, the Fidelity Audio scoring well on the finesse with which it reproduced the Steely Dan track. “Fluid” and “effortless” were two other recurring themes, the 150 seeming to gracefully follow the pace of the music without ever seemingly trying too hard. “A nice boogie” from one of the panellists summed it up here.

With the electronic strains of 808 State, the song really bopped along; the DAC caught the complex interleaving of all the strands in the mix, and let them sing independently of one another – there was little sense of some being subsumed behind others. Imaging was strong and clear, and the music was allowed to bounce along in an enjoyable fashion. There was lots going on, but still the panel felt that the Fidelity Audio sounded couth, polished and in control at all times.

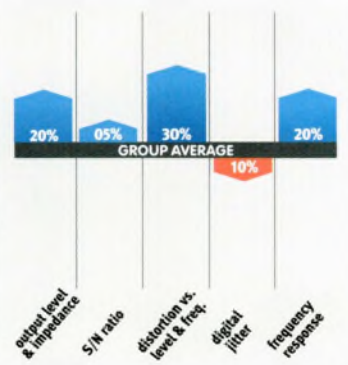
Tonally, this was quite a full sounding device; most others in the group had a little less bass heft and a touch more bite to the treble. This balance will suit most budget systems – the sort of environment



## ON TEST

While Fidelity Audio's DAC-150 only handles up to 24-bit/96kHz streams via S/PDIF, its asynchronous USB interface matches this performance, delivering a full 2V output with a 104dB A-wtd S/N ratio and very respectable 0.0006% distortion through the midrange. Distortion drops to as low as 0.0003% when the DACs and analogue output stage are less 'stressed' at -10dBfs while, at very high frequencies, it remains as low as 0.0008%, only very fractionally higher than that achieved by the Centrance. Low level linearity is good to ±0.2dB over a full 100dB dynamic range through all inputs while the frequency response with 48kHz/96kHz data is flat to -0.13dB/20kHz and -0.5dB/40kHz, respectively. Digital jitter separates the S/PDIF and USB interfaces, 840ps via the former but both higher and considerably untidier at 1050ps via the latter. This will be enough to give S/PDIF the edge. **PM**

## RESULTS AT A GLANCE



## Hi-Fi Choice

### OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Couth, polished sound, nice rhythms, flexibility, value
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Its subtle musicality won't excite everyone
- BUILD QUALITY** ★★★★★ **WE SAY:** Great little do-it-all DAC for not very much money. Well worth investigating
- FEATURES** ★★★★★

### OVERALL



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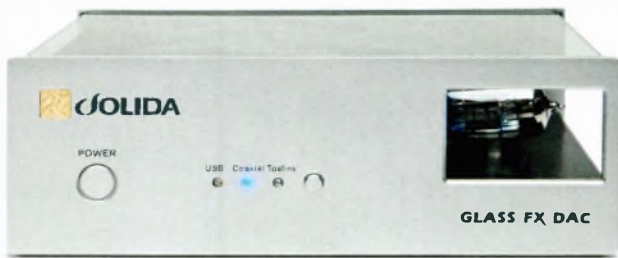
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\* Offer expires: 31<sup>st</sup> August, 2012





# Jolida Glass FX Tube DAC £440

A budget DAC with a difference, this one will please those who like their hi-fi to glow in the dark...

## DETAILS

- ORIGIN:**  
USA/China
- TYPE:**  
DAC
- WEIGHT:**  
3kg
- DIMENSIONS:**  
(WxHxD)  
203x76x177mm
- FEATURES:**
- Burr-Brown PCM1793 DAC
  - 1 pair RCA line outputs
  - coaxial digital input
  - optical digital input
  - USB digital input
  - 1 ground terminal
- DISTRIBUTOR:**  
Aired Audio
- TELEPHONE:**  
01452 385573
- WEBSITE:**  
airedaudio.co.uk

**N**ever let it be said that Jolida don't do things differently. Here we have a very affordable DAC that sports two little 12AX7 tubes buffering the audio output. The glowing bottles supplied are very modest examples of the breed; Jolida would say that you're welcome to 'roll' the tubes and put better ones in, for superior sound. However, for the purposes of this test, we stayed with the stock valves, of course.

It's certainly a strikingly styled product, one of the most distinctive of the group – respect due to the company for not going down the 'just another small black box' route. It's suprisingly well screwed together for its price, but then again it does only cost £440, so don't expect a dCS! In front, a simple button toggles between inputs; behind there's there usual associated socketry. Inside, Jolida use a Burr-Brown PCM17983 DAC chip and ESA Clarity capacitors, nothing particularly fancy.

## Sound quality

Interestingly, no panelist picked up on the small amount of residual hum coming out of the Jolida, but from where I was sitting it was clearly audible. The panel all agreed it was expansive sounding though, with one even saying "it has a kind of headphone feeling". The open,

clear and fairly comfortable sound was repeatedly commented on, but not universally liked. Indeed another listener thought it would make good background music, as it was "fairly boring and lifeless".

Tonal balance was decent enough; slightly warmish perhaps, but this wasn't the cause for concern. Instead it was the relatively lumpy rhythms that disappointed; the Jolida lacked natural bounce. Instead it almost followed the music along, rather than engaging with it. On the Sade track for example, it was described as having "a large image, lots of height and width but no depth"; low end punch was lacking, so unable to push the song along. Upper bass was, if anything, ever so slightly warm, but still dynamics were lacking, making the DAC sound full bodied, but lacking passion or pace.

This was particularly evident with powerful pop; Coldplay didn't go down well, and the shuffling rhythms of 808 State were a tad club footed. The sinuous bass, so animated on the Arcam, just sounded breathless and banal. Still, that nice wide midband at least gave the track some scale, even if it didn't impress in any other way. "I was getting a bit depressed, thinking can we skip this one", commented one of our lovely helpful panelists!

Still, some might regard this in a positive way; here's a DAC you can

listen to late at night without it forcing itself on your attentions.

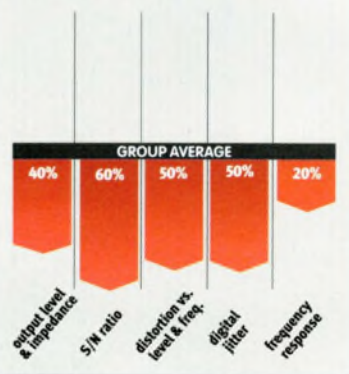
Across all inputs it gave a mellow sound that proved very inoffensive, yet totally uninspiring. Treble was a little lacking in definition, but decently smooth, while bass was present yet not particularly correct.

"I think women would like it", said our female panelist, "it's quite open, and clear and comforting – relaxing for easy listening". The men were eager to move on, one calling it "elevator music", the other uttering something less diplomatic.

## ON TEST

Jolida seems to have mixed up the spec. for its Glass FX Tube DAC: response measured at 1W and power consumption rated 90W at standby – not likely! Neither is the implication that this DAC accepts 24-bit/192kHz inputs when, in practice, only streams up to 96kHz are locked via the S/PDIF inputs and up to 16-bit/48kHz via USB. The 2.2V maximum output is the same from either digital input as is the poor 79dB A-wtd S/N ratio – a function of hum and noise from, presumably, the tube stage and which impacts on the DAC's low-level resolution below 14-bits or so. Its very high 1.7kohm output impedance implies a greater-than-average sensitivity to choice of analogue interconnect while its idealised response still shows a bass roll-off amounting to -1.9dB/20Hz. Finally, harmonic distortion is comparable to that of the Burson DA-160 at -0.1-0.3% over the top 10dB of its dynamic range but PSU IM/jitter is higher at -1600ps. PM

## RESULTS AT A GLANCE



## Hi-Fi Choice

### OUR VERDICT

- SOUND QUALITY** ★★★★★  
**VALUE FOR MONEY** ★★★★★  
**BUILD QUALITY** ★★★★★  
**FEATURES** ★★★★★
- LIKE:** Wide soundstage, interesting styling, tube-rolling potential
- DISLIKE:** Plodding rhythms, uninspiring dynamics
- WE SAY:** Not as impressive as other Jolidas we've tried; a sedate, insipid sound

### OVERALL



# Our new winter collection

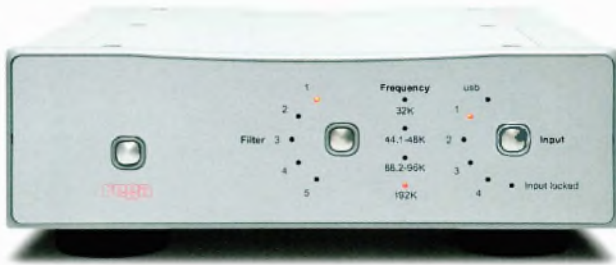
- Stax SR-009 earspeaker, a new reference in electrostatic technology and listening
- Esoteric P-02 CD/SACD transport with 24 bit/352.8 kHz output capability
- Ayre QA-9 high resolution analogue to digital converter
- Lyra Atlas a new moving coil reference
- Esoteric D-02 dual mono digital to analogue converter with 24 bit/352.8 kHz input and asynchronous USB input
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# Rega DAC £500



Don't be fooled by the unimaginative name; here's one of the most charismatic performers at or near its price...

## DETAILS

- ORIGIN:** UK
- TYPE:** DAC
- WEIGHT:** 4kg
- DIMENSIONS:** (WxHxD) 215x80x270mm
- FEATURES:**
  - twin Wolfson WM8742 DACs
  - 5 switchable digital filters
  - 1 pair RCA line outputs
  - 2x coaxial digital input
  - 2x optical digital input
  - USB digital input
- DISTRIBUTOR:** Rega Research Ltd.
- TELEPHONE:** 01702 333071
- WEBSITE:** rega.co.uk

Unexpectedly well made, considering its modest retail price, the Rega felt like a big metal brick compared to some other DACs here. Finish was good, too, and we liked the front panel design which displayed the input, sampling frequency and user-selectable digital filter settings (five different ones are offered; we used Filter Four for most of the listening).

Inside it's an eye-opener, with designer Terry Bateman's traditional circuitboard inscriptions raising a smile ("best used with EL84 valves"; is that Terry or the Rega DAC?). Twin paralleled up Wolfson WM8742 DAC chips are used, plus a sprinkling of audiophile components with names like Nichicon. A toroidal transformer is fitted, with separate power feeds to the Wolfson digital receiver and PLL circuitry.

## Sound quality

Just the first few opening bars of Sade had the panelists raising their eyebrows, Roger Moore-style. The Rega was, in no uncertain terms, the best DAC here. It sounded exuberantly musical in a way that none of the others managed – only the Arcam gave a whiff of what the Rega was able to do. The contrast between the Rega DAC and the Burson, for example, was striking; night and day wouldn't begin to

describe the rather large musical gulf between the two!

"The best DAC, it's got what (the Arcam) has but is cleaner and more open", said one panelist. "Everything sounds rich, vibrant, punchy", said another. "Presents the music as itself, doesn't embellish", said the third. It produced a string of compliments, no matter what music we played; "Coldplay was excellent", "Steely Dan was superb", "808 State was the best I've heard".

Tonally, the Rega was clean and open, yet had warmth and body to it; there was no obvious coloration, yet it didn't 'thin' the sound like some others. "The best balanced of all", one panelist described it, with everything being instinctively right. Bass was big, but more importantly it was fluid and expressive in a way none of the others were. Treble was as refined and finessed as the best of the rest, while the midband communicated instrumental timbre extremely well on the Julian Lloyd Weber track.

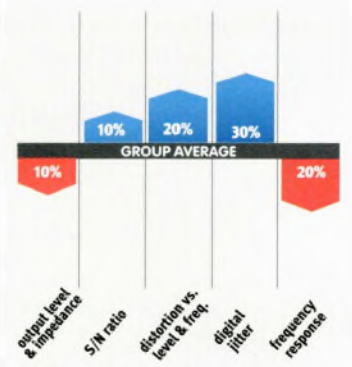
In absolute hi-fi terms, one listener believed the first DAC (Arcam) to be fractionally better on stage depth, but otherwise the Rega was very accomplished at imparting the recorded acoustic, which one person described as "extremely well organised". Treble wasn't quite



## ON TEST

Of Rega's five filter settings the apodising filters 4/5 are the most interesting. These trade unnatural pre-ringing for more post-event ringing (a more agreeable phenomenon), while rolling the response from  $-2.4\text{dB}/30\text{kHz}$  to  $-4.5\text{dB}/30\text{kHz}$  (96kHz digital input, Filter 1 versus 5). The flattest response at 96kHz+ is achieved with Filter 3 but this 'brickwall' filter is the most traditional of the bunch. Otherwise Rega's DAC offers a minimum 0.0007% distortion through the midrange, increasing to a mere 0.0016% at 20kHz/-20dBfs. The S/N ratio is spot-on spec at 105.9dB (98dB via USB) but jitter is slightly higher than expected (though not high) at 250psec (24-bit/48kHz), mainly through PSU-related sidebands, and 505psec (24-bit/96kHz) from a specific 15Hz clock (inter)modulation. All sample rates from 32-192kHz are handled correctly via Rega's S/PDIF inputs although USB is limited to 48kHz. PM

## RESULTS AT A GLANCE



## Hi-Fi Choice

### OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Gorgeously musical and exuberant sound is a hoot to listen to! Fine build, facilities and input selection, too
- VALUE FOR MONEY** ★★★★★
- BUILD QUALITY** ★★★★★ **DISLIKE:** USB input only works up to 48kHz
- FEATURES** ★★★★★ **WE SAY:** Right now, the very best DAC we've heard at or near the price

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**DEVIALET**  
AT OXFORD AUDIO

# Blind-listening verdicts

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



**WINNER**  
The biggest surprise of all was the Rega DAC. From the first notes of the first bar of practically every piece of music we played, it was clear it was in another league. It was as if the music had dropped a happy pill and suddenly everything was fun-packed, shiny and new. It has a musical exuberance which has to be heard to be believed; its low £500 price is even more remarkable.

Before I organised this test, there was a voice in the back of my head warning me – just *how* different could a bunch of cheap DACs sound?

I had visions of myself and the listening panel scratching our heads as we desperately tried to pick up on infinitesimally small differences. Then I'd have to labour at the keyboard for hours, employing the very loosest journalistic licence to make it an easily readable review...

Erm, I needn't have worried. Differences were *very* marked across the group, even between designs costing within £50 of one another. And neither is this a group where everyone does well; some were poor.

The Burson was the biggest disappointment; it was clean and had decent texture, but was about as exciting to listen to as a late night debate in the House of Lords. Each of the panel members agreed that it had few redeeming features, sadly.

The Jolida came next; it wasn't as charming as the JD1501 amp I reviewed a couple of months back (*HFC* 355), although it had some merit. We liked its expansive soundstage, although tonally it was a bit murky; I wanted to drop some decent tubes inside it, which could well have opened the sound up, but that wouldn't have been fair. We were listening to stock products on this occasion, after all!

Fidelity Audio's DAC-150 was really loved by one panelist in particular, and the others certainly respected it. It's a fine sounding, subtle, well-specified performer; I feel this has hidden depths and hope to spend more time with it in future.

The CEntrance was excellent – open, expansive and detailed, it made most others sound veiled and slow. It's the sort of thing you could use in high-end systems and not find wanting.

The Arcam was amazing; aside from a very slight lack of finesse it was an absolute star – oodles of passion, power and poise, plus gorgeous looks, build and an unexpectedly capable USB input. All for £300 – wow!

## RESULTS AT A GLANCE

Make/model	Arcam rDAC	Burson Audio DA-160	CEntrance DACmini	Fidelity Audio DAC-150	Jolida FX Tube DAC	Rega DAC
Price	£300	£750	£650	£545	£445	£500
Sound	★★★★★	★★★★☆	★★★★★	★★★★★	★★★★★	★★★★★
Value	★★★★★	★★★★☆	★★★★★	★★★★★	★★★★★	★★★★★
Build	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Features	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Conclusion	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
	Barnstorming little box with a feisty, musical sound, super build, and strong USB	Has a lifeless sound that fails to inspire, considering the care taken in its design	Has a powerful, open sound and is a genuinely capable performer. Styling is not to every taste	Great little do-it-all DAC for a budget price, although its subtle musicality won't suit all	A wide soundstage, and interesting styling; it's not as impressive as some of its peers, though	Musically exuberant with fine build and input selection. It's the best at the price

### Key features

Dig inputs: elec/opt	1/1	1/1	1/1	1/1	1/1	2/2
Digital input USB	Yes	Yes	Yes	Yes	Yes	Yes
Balanced output	No	No	No	No	No	No
Remote control	No	No	No	No	No	No
Headphone output	No	No	Yes	Yes	No	No

## TRY WITH THESE

### CD TRANSPORT: Cyrus CD Transport **£599**

If you're not happy to use your existing silver disc spinner, possibly due to its impending death due to old age, then this is a good investment to partner any of these DACs. The Cyrus has a bespoke mechanism, with long-term parts backup, is very well made and offers a crisp, detailed sound.



### DIGITAL STREAMER: Logitech Squeezebox Touch **£199**

A game changing product. Before the 'Touch', network music players were fiddly things with rubbish displays, as easy to use as a nineteen eighties Psion organiser. The new Squeezebox is a breeze to work, its only problem being a very so-so sound. Stick one of these DACs on the end of it though, and it's suddenly a fine listen.



### COMPUTER: Apple Mac Mini **£529**

There are umpteen ways to get computer audio up and running; a simple one is to buy one of these, and run a USB lead or a mini-digital optical lead from it to any of these DACs. You can then play your music via iTunes and/or any one of many other software player applications, some of which claim far superior sonics. Computer audio this way is dead simple; no longer just a geek's fantasy playground!



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# Pulse

As CD reaches its thirtieth birthday, **Richard Black** looks at the past, present and future of digital audio...

**I**t's hard to say exactly when digital audio was invented. The principle of representing an analogue electronic signal with ones and noughts goes back many decades, and the maths behind it runs further still, to the 17th century. Perhaps the nearest we can get to defining the moment of its invention is the first description of Pulse Code Modulation, the basic principle behind it, by an engineer called Alec Reeves in 1938. Substantial work was done to make it a practical reality by Claude Shannon, who is mentioned in many textbooks in terms such as 'the father of digital signalling'. And thanks to Reeves and Shannon, the use of digital encoding was known in telephony from the 1940s.

Sending a more-or-less recognisable voice signal down a phone line is one thing, while reproducing a music recording in sufficient quality to be enjoyable is another. For this, digital music recording had to wait until the 1970s. The first commercial music recording to be made digitally dates from 1977, when Tom Stockham used custom electronics feeding an instrumentation recorder (recording on magnetic tape, of course – there wasn't

much else!), with a sampling rate of 50kHz and 16-bit resolution. Within a couple of years, Denon had introduced its own digital audio recording system, and 3M got one going around the same time.

There was no way of issuing digital recordings direct to the public at that time, so the best record labels could do was advertise 'Recorded Digitally' on LP sleeves! Engineers were working away in several companies though, with the aim of producing a viable domestic digital replay system. Just thirty years ago the fruit of their labour (happily standardised world-wide, something that has signally failed to happen with most formats since) was launched as 'Compact Disc'. Opinion has been divided ever since as to whether this was the brightest, or the darkest, day in audio history!

### Laser love

The CD audio format was principally the work of Sony and Philips. The latter was all set to launch it as a 14-bit format, but Sony insisted on 16 bits. It was also widely reported at the time that Sony's founding president, Akio Morita, personally decreed a minimum 72-minute playing time capacity for the discs,

on the basis that a typical performance of Beethoven's *Ninth Symphony* (his favourite piece of music) lasted that long. The optical basis of the disc had been developed originally for the analogue Laserdisc system, and both Sony and Philips had developed digital versions of this.

Finally in 1982 in Japan, Sony and Philips launched domestic CD players simultaneously. At about £500 (equivalent to roughly £1,500 today) they weren't exactly cheap, but compared well with midrange audiophile turntables. The Compact Discs themselves cost considerably more than LPs, something like double depending on label and title, and there weren't all that many of them at first. But never mind the practicalities; with the benefit of hindsight, how did the comparison stack up sonically?

Well, the great conductor Herbert von Karajan was in the vanguard of the pro-digital camp, famously declaring, 'all else is gaslight' after hearing his first digital recording. Cynics were quick to point out that his record label, Deutsche Grammophon, was heavily promoting CD, but he wasn't alone. Many classical-music record critics came down

1938

**digital  
recording**

1982



**DAT**  
Digital Audio Tape

**PCM**

1977

**COMPACT  
disc**



1987



strongly in favour of digital. On the other hand, there were plenty of audiophiles who found the new arrival somewhere between vile and abominable. The American pianist, recording engineer and university lecturer James Boyk, had T-shirts printed with the slogan 'Digital finishes what the transistor began' and, while one might have completely misinterpreted that without context, the American audiophile world got the point right enough! Digital recordings were accused of sounding harsh, unmusical and downright unattractive...

There were also plenty of technical arguments advanced as to why digital 'couldn't' work. Most of these hinged on two main factors; first, the inter-sample interval of 22 microseconds

## Digital recordings were accused of sounding harsh, unmusical and downright unattractive...

gave inadequate time resolution in the sound, and second, the digital sampling system only worked for continuous tones, not transients, which of course, are absolutely crucial in music and indeed any interesting or informative sound. Unfortunately both of these points (which you still sometimes hear brought up now) fell down on the practical demonstration front. No one really ever produced convincing evidence of either.

### Better days

As time went on, people's resistance to digital audio declined. Part of the reason for this was simply that sound quality of digital recordings and replay systems improved. Although the arguments for gross imperfections in the system proved unfounded, several more subtle (but significant) sources of distortion were identified and to a large extent dealt with. Some of the earliest CD players, for instance, had very poor bad anti-aliasing filters which suffered every kind of audio ailment under the sun. Philips (and Philips-based, e.g. Marantz, Meridian and so on) players used oversampling

filters from day one and it didn't take long for the world to realise that this was the way forward.

Later, jitter was fingered as a source of degradation before the 1980s were out and, while not always quite as good as it might be, is seldom a major issue these days. And 'Alias-Intermodulation Distortion', first described in 1998 by one Richard Black, has at least been eliminated in a few CD players and DACs. Meanwhile, at the other end of the chain, recording engineers learned just how to maximise the potential of digital recording.

Still, the limited bandwidth was a cause for concern among many in both the audiophile and recording camps, and when higher sampling-rate recording became possible,

there was no shortage of enthusiasm for it. Professional systems in the earliest days used similar sample rates as CD itself, but 24-bit/96kHz recording started to creep in during the nineteen nineties. This gave the pros some margin for processing and tweaking, but as soon as the audiophiles learned of its existence they began to clamour for some too...

### Meet the new boss

A new system came along around the same time, one-bit recording. Manufacturers of the integrated circuits that convert analogue to digital and back had realised quite early on that there are various advantages (often relating to such prosaic matters as power consumption) in encoding at a very high-sampling rate with not many bits, up to and including just one bit, which can give just as much information about a waveform as conventional multi-bit encoding, if the sampling rate is high enough.

One-bit encoding and decoding duly became popular, leading several commentators to suggest that the one-bit data stream might

### PRO PERSPECTIVE

We polled five industry insiders for their views on digital audio, asking them these same four questions:

- 1 Is analogue recording still valid in 2012?
- 2 Do you find standard CD satisfactory as a digital format?
- 3 SACD and DVD-Audio: are these real improvements?
- 4 Do you think the future holds any promise for quality recording?

TIM DE PARAVICINI  
EAR Yoshino



Since the 1960s, Tim has been involved in audio, hi-fi, bespoke recording equipment and recording live sound. He pioneered the highest-quality analogue format ever used, one-inch tape for stereo.

- 1 Very much so. Still time-proof!
- 2 Satisfactory but see next answer...
- 3 Yes, SACD with its DSD method is very nearly the ideal way, if it goes up another octave. It's fairly popular in Japan and DSD downloads are beginning to happen.
- 4 Yes, if people try to listen and do it well. High-speed DSD has the intrinsic linearity of PWM with 5.632 MHz sampling. I know that editing with DSD is a problem, but it's not insoluble.

TONY FAULKNER

Classical music recording engineer



Widely respected as one of the UK's leading classical engineers, Tony has been at the forefront of hi-res digital since its inception.

- 1 Yes. A 1st generation Studer A80 15ips recording sounds great!
- 2 In context it delivers conveniently what is required for most listening and is much better than MP3.
- 3 Sonically they offered advantages. As formats, unappealing to the general marketplace. DSD is troublesome for studios and some audiophile equipment.
- 4 Hi-res downloads have big potential. Low financial risk for record companies.

1993



AAC

1997

1999



SUPER AUDIO CD



2000

as well be recorded unmodified, giving advantages in terms of frequency response and freedom from digital processing. This became known as Direct Stream Digital (DSD), and it was chosen by Sony as the system of choice for Super Audio Compact Disc (SACD).

Unfortunately, true to the great tradition of hi-fi, other manufacturers backed 24-bit/96kHz recording for various DVD implementations including DVD-Audio, and a format war ensued. It's fair to say that DVD-A never really caught on, but it was clear all along that both systems offered higher technical performance than CD. What wasn't quite so clear was the extent to which this translated into better sound. Opinions continue to differ even now, with many thinking DVD-A to be technically better but SACD somehow subjectively more musical.

### Loss-t in space

While DVD-A and SACD fought it out on the high-end front, a more insidious newcomer presented a threat to the whole concept of pristine digital sound quality. The idea of using 'data compression' (more accurately termed 'data reduction') to encode audio using less bits than one 'appears' to need goes back a long way, certainly to the nineteen seventies.

In the eighties it was applied to music recordings, the basis being that the human ear doesn't pick out all the detail in a recording and can easily be fooled into thinking it's heard stuff which it hasn't. At the same time, the relatively ordered structure of real music allows some data reduction without apparent loss of information. Combining these two factors, engineers came up with systems to reduce by up to 90 per cent the amount of storage space required for music recordings, while still rather optimistically claiming 'CD quality'...

MP3 was the first and most famous of these, though its successor AAC is fast catching up thanks to its adoption by Apple. At best, quality is reasonably high, although seldom what most audiophiles would consider blameless. But these systems have sown the seeds of the non-physical nature of music storage – put

## Digital had to get worse to get better. If it hadn't gone to computers via MP3, we'd never have hi-res now

it on your home computer, transfer it to your portable player, leave it 'in the cloud'... The term 'paradigm shift' is horribly over-used but this really is one. Digital music is just bits, wherever they're stored.

### The only way is up!

With the Internet speeding up year by year, and data storage getting ever cheaper, we soon won't have to rely on lossy compression for non-local storage. Losslessly compressed sound (full CD quality, or better) can easily be received faster than real time down a broadband connection. Audiophile recording labels already offer hi-res downloads, and my own feeling is that this will eventually go mass-market, if only as a way of persuading us to buy ever-faster broadband. A century of audio history shows conclusively that the best is never good enough, and the same logic dictates that DAC performance will continue to improve, if only incrementally.

Most of us have come to terms with the idea that bits are bits wherever they are stored. This is great, as because digital music is no longer tied to a physical format, it's able to be improved without the expense of selling an entirely new generation of machines to play the new format on – as with the attempted transition to SACD. Instead, a tweak of the firmware in a routine computer update, and/or a new codec here or there, gives the possibility of ever better digital sound. In a sense, digital audio had to get worse to get better – if it hadn't migrated to computers via MP3, we'd never have 24-bit/96kHz FLAC now.

So, cheerily, we can look forward to a great future for digital audio. But whether it's subjectively better than analogue yet? Well that, as they say, is another story. ●

## PRO PERSPECTIVE

### BEN BEAUMONT



*Training and product manager at Cambridge Audio*

Cambridge is one of the UK's biggest hi-fi brands, with a product range that covers CD, hi-res and streaming audio products for every available format.

- 1 It still sounds fantastic and serves as a benchmark which digital recordings can/should aspire to.
- 2 I do love having artwork to thumb through, but replicating this on an iPad is even better than a CD case for me!
- 3 It's difficult to understand their relevance now lossless music can be stored/played back more conveniently.
- 4 Yes – with the cost of HDD storage dropping, music fans can now store high-quality lossless recordings without the worry of filling up their hard drives.

### JAN-ERIC PERSSON



*Proprietor, Opus 3 record label*

Since 1976, Jan-Eric's recordings have been acclaimed as some of the most lifelike ever made, be they analogue or digital.

- 1 Digital processors have become much better in the last decade and I think DSD has equalled analogue. Soon we will begin making analogue master copies, in response to demand. Yes, it's still valid.
- 2 No, not really. For me, the solution was SACD.
- 3 SACD is the most versatile format we have. DSD is still the best digital format.
- 4 Kids are listening on their iPods, etc., but that music is mostly secondary to lots of other things they're doing at the same time: this is not a good promise for the future!

### STEVE HARRIS



*Naim Audio, PR*

Steve has long been involved, not only in hi-fi (both analogue and digital), but in making highly-regarded recordings.

- 1 Analogue recording is still extremely good. It's quite different from good digital recording, so it's up to the engineer/producer/artists to make the decision.
- 2 Decent 16-bit/44.1kHz from CD is very satisfying, but most recordings are generally 24-bit resolution and we would prefer them in their native form.
- 3 Playing the discs themselves can be very unsatisfying musically, but 'rips' of some of these discs sound rather good.
- 4 We have fears about the trend towards mastering for cheap radios, for MP3, for quantity not quality. There is a current trend of catering for our niche high-quality market at premium prices for high profit, and this gives me some hope, but only if they get the product right...

2001



2011

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# Absolutely Fabio!

As one charismatic Italian departs, another arrives. **Jimmy Hughes** says 'ciao' to Unison Research's Simply Italy tube integrated...

**J**ust in case you hadn't noticed, 2011 marked the 150th anniversary of Italy's unification as a nation. Well, to commemorate this important event, Unison Research has released a new integrated valve amplifier, a single-ended design offering a claimed 12 watts per channel from EL-34 output tubes.

In producing Simply Italy, the company aimed to produce a high-quality low-powered amplifier that offers superb sound quality at an affordable price. It arrived *chez moi* with impeccable timing, just as Fabio

Capello said 'arrivederci' to his England football team manager job. But there any similarities end – Simply Italy is not a strict, inflexible disciplinarian, but a rather warm, friendly, enchanting type, I found!

The circuit design is actually based on an older Unison Research model – the Simply Two. Commercially, the Simply Two was incredibly successful, with more than 10,000 units being produced – those were the days! Most were sold in the Far East, where the amp enjoyed a cult following.

Simply Italy is a revised Simply Two, using what are said to be better

## ▶ DETAILS

**PRODUCT:** Unison Research Simply Italy  
**ORIGIN:** Italy  
**TYPE:** Single-ended stereo integrated tube amplifier  
**WEIGHT:** 15kg  
**DIMENSIONS:** (WxHxD) 260x190 x350mm  
**FEATURES:**  
• four tubes – 2x EL-34 (6CA7) and 2x ECC-82 (12AU7)  
• output: 12W per channel (claimed)  
• output impedance: 6 Ohm  
• inputs: 5 pairs of RCA phono line inputs  
• outputs: 1 stereo pair of loudspeaker binding posts  
**DISTRIBUTOR:** UKD  
**TELEPHONE:** 01753 652669  
**WEBSITE:** ukd.co.uk

components, and featuring a number of enhancements which Unison Research claims result in improved sound. Styling has been completely revamped, but the amplifier remains a simple purist design with five line inputs, plus knobs for volume and input selection.

Facilities are fairly Spartan. There are five unbalanced line-level inputs, a tape output, plus a single set of loudspeaker outputs. Russian Tung-Sol ECC82 and EL34 tubes are used – one each per channel. Volume control is a motorised ALPS potentiometer, allowing remote adjustment of loudness levels via the supplied handset.

Build quality is very good, with metal casework and some stylish trim to break-up the amplifier's somewhat boxy shape. Svelte it isn't, but the styling has an attractive retro vibe that pleases the eye. The solid metal knobs feel good, and the wooden inserts add a dash of subtle elegance.

## Sound quality

Unlike some tube amps, there are no bias pots to adjust – so this works pretty much out of the box. There's a two position switch which alters the



amount of negative feedback applied, with a choice of 1.8dB or 5dB. The lower setting produces a brighter, livelier and more forward sort of sound, while the higher setting sounds smoother and more refined. There's a slight drop in gain with the higher feedback setting. Which sounds best is down to personal taste. Choosing the lower setting gives a slight increase in output level, while delivering a fractionally more assertive sound. The higher setting is smoother and warmer, creating a more integrated homogenous end result.

With only very modest power output, you'll need to use the Simply Italy with sensitive speakers unless listening in a small room. I'd say at least 90dB/1W/1m is necessary – with 93dB to 96dB a safer bet. However, much depends on the size of your listening room, the sort of music you like, and how loud you prefer to listen.

I used speakers of around 93dB sensitivity in a fairly large room, and – for the most part – achieved ample volume levels. Nevertheless, you have to be a bit careful. My regular amplifier – Musical Fidelity's kW-750 – offers a massive 750W per channel, and therefore has power to spare!

That the little Simply Italy stood its ground against such a beast is quite an achievement. For much of the time, the smaller amp seemed to match the bigger one every step of the way. It offered comparable refinement and (if anything) a slightly richer, silkier tonality. The music always seemed to have

plenty of impact and detail. It was only when I inched the volume a notch or so too high that things deteriorated, though it wasn't always easy to tell. The Simply Italy is one of those low-powered tube amps that covers-up its limitations very skilfully. It doesn't shriek or fall apart when pushed hard.

Drive the amp too aggressively though, and you'll soon hit the buffers. When you do, things coarsen, and compress slightly, becoming a tad grainy and rough. You don't experience the hard-clipping or total breakup that a comparable solid-state amplifier would suffer; there's just a sense of congestion, a lack of ease.

Because the sound is typically so smooth and refined, it can be something of a shock when things suddenly lose their poise. Often, the merest reduction in volume level is enough to restore equilibrium. Subjectively, the drop in volume may seem virtually imperceptible, but it takes the amplifier out of the danger zone.

## The Simply Italy has a deliciously liquid sort of midband that's smooth, round and full...

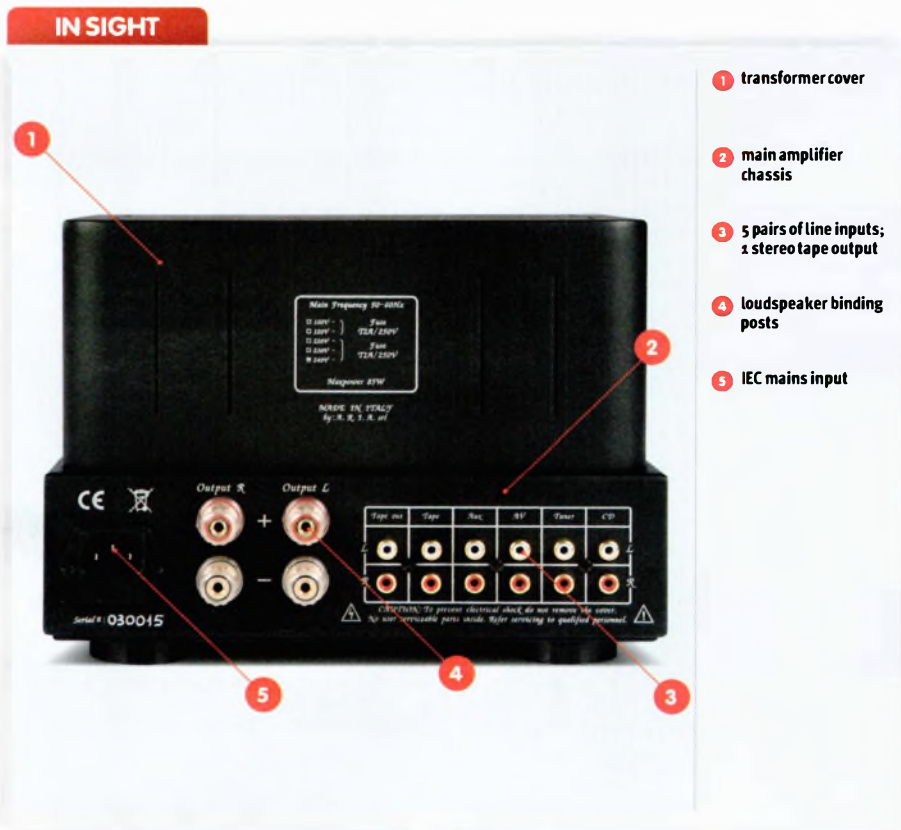
As is often the case with amplifiers having a transformer-coupled output stage, the Simply Italy sounds beautifully integrated and very well balanced tonally. Treble is crisp and immediate, yet spacious and homogenous. There's no sense of the highs 'leading' the midband and bass.

Speaking of midrange, the Simply Italy has a deliciously liquid sort of midband performance that's smooth, round, and full. Bass is big-bodied and clean, with reasonable power and extension despite the lack of muscle. On most music most of the time, you're hardly aware power output is limited to just 12W, given you're using the right speakers.

Playing an early stereo recording of Mozart piano concertos with Clara Haskill, it was gratifying to note the manner in which the Simply Italy managed to bring out lots of detail and tonal allure without emphasising a slight thinness in the violin tone due to the age of the recording. Piano tone sounded bright and articulate, with good attack.

On rock and pop, the sound was solid and full-bodied. The Simply Italy can deliver a surprisingly gutsy sound on such music – because pop and rock recordings are compressed and lacking in wide dynamic extremes. So, while the sound may seem powerful and assertive, the amplifier isn't actually being pushed that hard.

Choral music is a killer of small amplifiers, though. Reproducing a large work like the Verdi *Requiem* is very challenging for a low-wattage design. The power required is huge, and having lots of voices (each at a



## Q&A

JIMMY HUGHES TALKS TO UNISON RESEARCH'S PROFESSOR GIANNI SACCHETTI



### JH: What was your aim when designing the Simply Italy?

GS: It was created to provide serious audiophiles with a small and relatively inexpensive but high-quality amplifier to use in a second stereo system, or even in your main system with loudspeakers of particularly high efficiency.

### Technically speaking, is there anything interesting or unusual about the circuit design?

In order to obtain a high level of sonic performance every technological solution possible was employed. For example, the use of ionic polarisation of the preamp-stage valves. This allows the input circuit to be completely decoupled from the anode output circuit. Very important, too, is the output transformer, designed and manufactured so as to achieve extended linear bandwidth with minimal phase shift from less than 30Hz to over 30kHz. The feedback circuit allows the user to choose between two different values. This enables a better interface between amp and loudspeaker, so that users can fine-tune things to suit their taste.

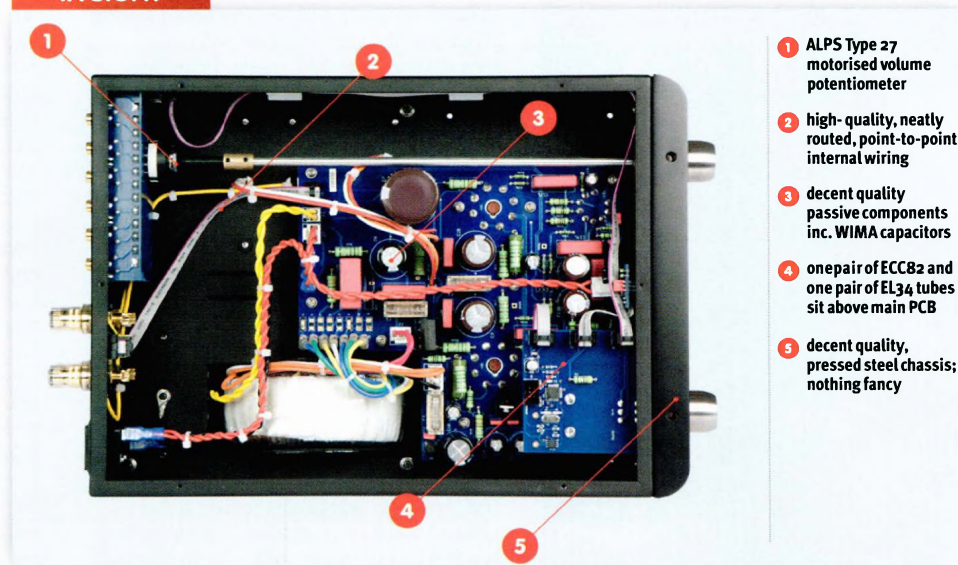
### What influenced your choice of tubes?

The valves used in this amplifier are the classic ECC-82 and EL-34 types. The sound derived from these two valves is particularly involving and at the same time musically convincing. The onset of clipping as the power limit is exceeded is very soft, and hardly perceptible – very important. Our choice of these valves is also influenced by the easy availability of both NOS types and those in current production.

### Any interesting/unusual/exotic internal components used?

Simply Italy is unusual for an amplifier with this amount of output power to use transformers – both for the power supply and output – normally associated with much greater power capacity. Moreover, our use of high-quality WIMA capacitors and an ALPS type 27 motorised potentiometer contributes to the exceptional level of sound quality offered.

## IN SIGHT



- 1 ALPS Type 27 motorised volume potentiometer
- 2 high-quality, neatly routed, point-to-point internal wiring
- 3 decent quality passive components inc. WIMA capacitors
- 4 one pair of ECC82 and one pair of EL34 tubes sit above main PCB
- 5 decent quality, pressed steel chassis; nothing fancy



**WHILE FEW WILL find serious fault with the Simply Italy in terms of sound quality, not everyone owns efficient loudspeakers that can make the most of its limited power output. If you fancy tubes, but want something much more powerful and energetic, consider the superb Icon Audio Stereo 60 Mk III which offers a meaty 65W.**

Another alternative might be Audio Analogue's Verdi Cento, a tube/transistor hybrid which offers around 70W and an MM/MC phono input for vinyl lovers. Both these amplifiers deliver a more immediate sound than the Simply Italy, but you'll forgo some of the latter's refined sophistication.

For those with extremely efficient speakers, there's always Audio Note's plucky little iZero integrated, which offers just 8W, but sounds very open and refined. Between these extremes, PrimaLuna's Prologue Two sets a high standard, being clean, refined, and reasonably powerful. Decision, Decisions!

fractionally different pitch) makes intermodulation distortion easy to hear. With John Eliot Gardiner's DG/Archiv recording of Beethoven's *Missa Solemnis*, finding the right volume control setting proved critical. When set even just a fraction too high, the sound quickly became congested during loud choral passages, losing its transparency and depth.

Yet listening to an orchestral recording of Liszt – the piano concertos and a couple of symphonic poems – with Denis Matsuev and the Russian National Orchestra on RCA – it was amazing to hear how gutsy and powerful the Simply Italy sounded. On this recording, the amp performed with absolute assurance, sounding hugely impressive.

So, given sensitive speakers, and careful adjustment of the volume control, it should be possible to achieve a room-filling sound on most types of music with the Simply Italy – though female soprano voice and massed choral music remain extremely challenging.

Fortunately, other types of music are less demanding. The amplifier is still being pushed to its limits, but subjectively you're much less aware of the fact. And that's what counts. It's the impression that's important – not the gritty reality taking place under the bonnet as the amplifier attempts to drive the speakers.

Being a tube amp, the Simply Italy runs warm. Because the tubes are exposed, most of the heat dissipates into the air. Even after the amp's been on for several hours the casework doesn't get especially warm. For those worried about exposed tubes, there's an optional

cage that fits over the front to afford extra protection. Warm-up time is fairly swift. You don't have to wait ages for the amp to hit its stride. Unison Research says it takes about fifteen minutes for the Simply Italy to sound at its best, and I agree. If there are any further sonic improvements after a quarter of an hour or so, they're fairly subtle.

Mechanically, a slight amount of transformer buzz is just audible with your ear close to the chassis, but once you move a few feet away this becomes difficult, if not impossible, to detect. Hum and hiss are very low, and should be inaudible, but there's some crosstalk between inputs, more than one usually experiences.

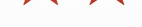
## Conclusion

The little Unison Research performs brilliantly, if you don't push it beyond its confines, and that's the attraction. Like top Italian footballers, you have to spend quite a lot more to find something offering comprehensively higher all-round quality. ●

## Hi-Fi Choice

### OUR VERDICT

#### SOUND QUALITY



**LIKE:** Rich open transparent sound; relatively small size; great value

**DISLIKE:** Limited output power

**WE SAY:** Excellent sound and attractive retro looks from a compact, affordable design

#### OVERALL



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# Back to the future

Offering bang-up-to-date styling with a name steeped in hi-fi history, the new Thorens TD 2015 turntable has a lot to give, says *Tim Jarman*

**T**horens turntables have been a favourite of the LP listener for many decades, and some of the earlier models are still coveted today. The TD 2015 and TD 2035 are the latest additions to the bloodline and are very distinctive, both built on visually arresting acrylic plinths with all working parts on display. They share many components, such as the motor, its control system and the arm (a Thorens TP 92), but the TD 2015 is the lighter and cheaper of the two.

Apart from a phono cartridge, the machine comes complete and ready

to run – but as some assembly and adjustment is required, absolute beginners may still need some help from their dealer to get everything running sweetly.

For as long as I can remember, polished clear acrylic has had a deep cultural link with all things futuristic, to the extent that anything made from it cannot help but look ultra-modern. The magic still works with the TD 2015, even though its sole purpose is to play a music format which is now over sixty years old.

A committee meeting at Thorens has clearly identified all the styling

## DETAILS

**PRODUCT:** Thorens TD 2015  
**ORIGIN:** Germany  
**TYPE:** manual turntable  
**WEIGHT:** 11kg  
**DIMENSIONS:** (WxHxD) 420x140x330mm  
**FEATURES:**

- 33/45 rpm belt drive
- free-standing motor
- solid acrylic plinth
- separate electronic speed control unit
- Thorens TP92 tonearm

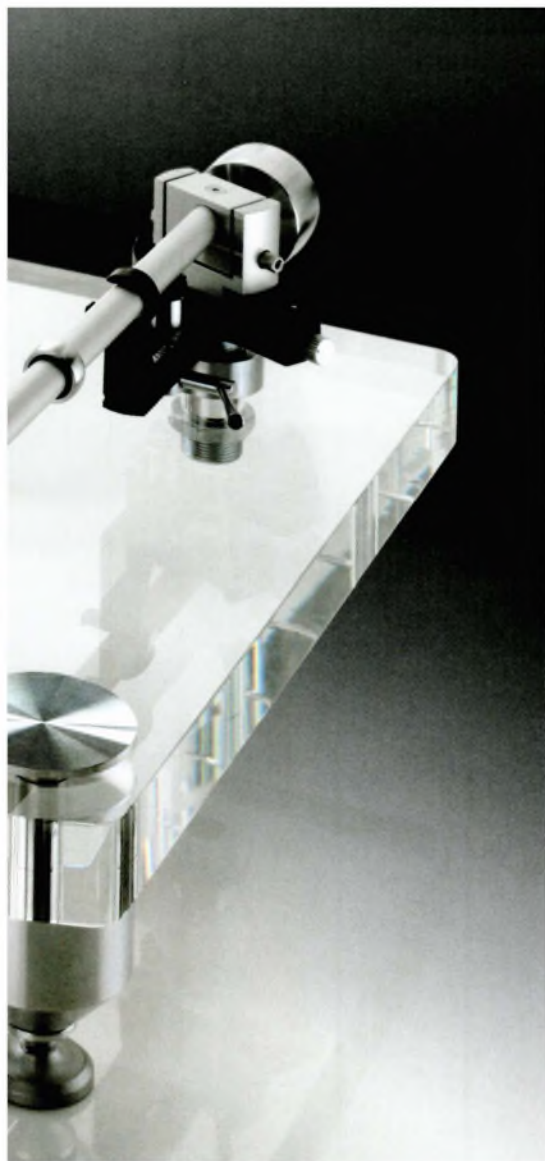
**DISTRIBUTOR:** UKD  
**TELEPHONE:** 01753 652669  
**WEBSITE:** ukd.co.uk

traits that today's turntable now requires, and ensured that they're included in the design of the TD 2015. Three cylindrical pillars with pointy feet supporting the plinth? Check. A heavy platter driven by an exposed and very thin belt? Check. A separate, free standing motor with an external control unit? Check. A nicely 'architectural' looking tonearm with an underslung counterweight? You get the idea...

This is every bit the turntable for the second decade of the twenty first century then, yet beneath the glitz it couldn't be more traditional. Take the motor, for example, which sits inside an aluminium cylinder that has a neatly drilled pulley on the top and looks like a giant pepper pot. It rattles when you shake it, too, for inside is 700g of lead shot, presumably for stability.

Also inside is the same Philips-type AC synchronous motor that has been spinning LPs since the nineteen seventies – it seems that some things cannot be improved upon! The motor is driven by two external units, a control module (which has the start/stop and 33/45 rpm selector switches on it) and a separate mains





The tonearm is also quite traditional, a circular aluminium tube with a sturdy, but conventional pivot assembly. A rubber-mounted damping ring mid-way along the arm is, perhaps, a novelty, as is the previously mentioned low slung counterweight. While I'm sure that this was an integral part of the arm design, the method by which the weight is mounted, a short length of ordinary steel studding screwed into the arm's pivot block, looks a bit home-made, an impression which is only enhanced by the stub of the arm tube sticking out above it.

A reservation I have about the tonearm is that even with this new review sample, the plastic rest had already begun to mark the metal tube, something that I would find highly annoying were the turntable mine. The manual explains the setting up procedure clearly and most of it is easy, except that the counterweight does not have a calibrated scale so you have to use the fiddly stylus balance which comes with the machine.

More of a nuisance is the anti-skating, which as is carefully pointed out requires individual adjustment for whichever cartridge you choose. Again the scale is uncalibrated and so the use of a test record (and presumably some sort of measuring equipment to go with it) is advised, this point in particular will require the help of a well-equipped dealer's workshop to get things right, or many cycles of trial and error. VIA (vertical tracking angle) on the other hand couldn't be easier and once set up the arm as a whole is particularly easy to cue and handle.

The last key component, the platter, is 300mm in diameter and weighs 3.7kg (as opposed to 6kg for the pricier TD 2035). In the modern style it is thick (23mm) and there is extra damping material is fitted on the underside. The supplied mat is made from something which looks like synthetic baize, but isn't particularly grippy; again if

the TD 2015 were to become a permanent part of my system it wouldn't be long before I started trying some alternatives.

There is little in the way of suspension built into the plinth, the feet do contain soft rubber blocks which have a tiny bit of 'give', but placement for machines such as this is still critical. The motor, too, has compliant pads underneath, but the supporting shelf ideally should be well-damped and heavy for the isolation to be effective. The motor initially struggles to spin up the heavy platter from standstill and visibly cogs as it tries, but silence and smoothness do prevail once everything is correctly up to speed.

### Sound quality

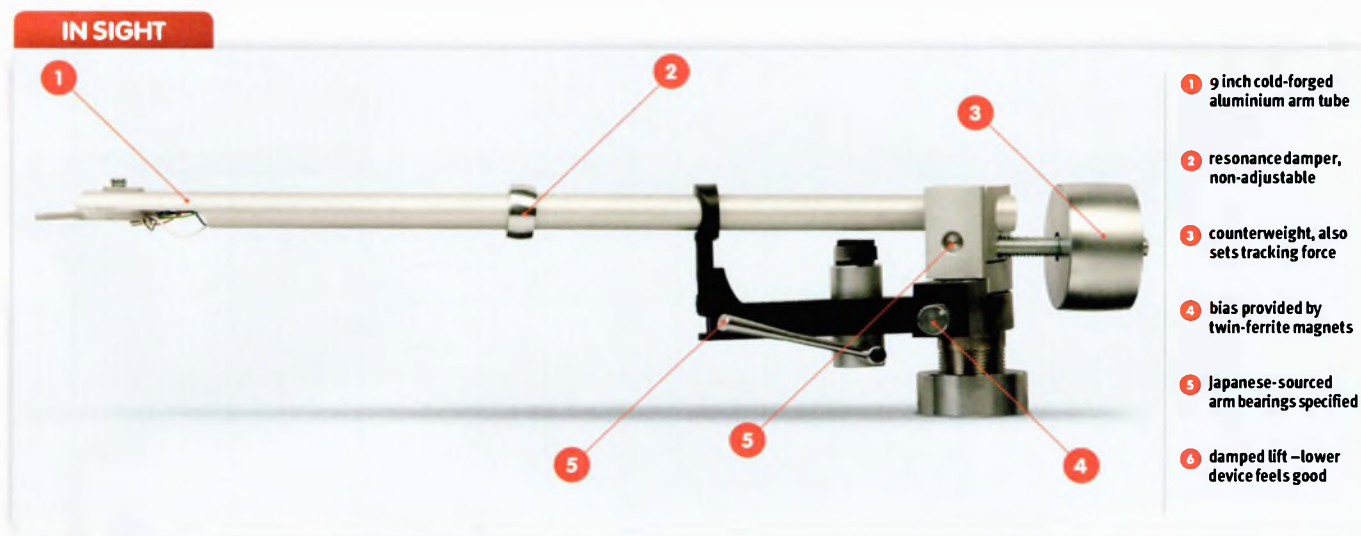
For auditioning I used an Ortofon 2M Bronze cartridge (I generally have a preference for moving magnets), Arcam FMJ A38 integrated amplifier and a pair of Monitor Audio PL 100 loudspeakers. Following an hour's warm-up, a quick speed check with a test record showed a speed error of just over one per cent on both

## A very convincing performance, well-paced and satisfyingly clean with plenty of punch

speeds – but even after this was trimmed out, the familiar belt drive 'ebb and flow' remained visible on the bars on a strobe disc, which swayed gently from side to side at a slow rate; you need a better servo arrangement, the like of which you find on quartz-locked direct drive turntables, to fully combat this effect completely.

The session kicked off with Paul Simon's *Graceland* album, and I was immediately aware that the TD 2015 has a lean sound; some turntables can place a halo around each note as the various parts resonate, but

transformer. The control module generates the drive signal for the motor electronically, but it isn't quartz locked, so it's worth noting that for absolute speed accuracy the technically minded listener may well have to make occasional use of the two well-labelled preset controls inside, in conjunction with a strobe disc or a test record. Some will think this to be an unnecessary fiddle on a premium product.



## Q&A

DAVID PRICE SPEAKS TO  
THOREN'S HEINZ ROHRER



**DP: What's the design objective of the new deck?**

**HR:** The Acrylic Series TD 2010 and TD 2030 had been successful in the market for over five years, so we wanted to move the design along. The designer is Helmut Thiele, who alongside the technicians at our factory South of Stuttgart, was responsible for making a number of technical improvements, especially the motor steering unit.

**Are there any special engineering details of note?**

I would like to highlight the use of Thorens' first in-house tonearm in twenty five years, also designed by Thiele. This arm was originally developed for the TD 309, but various tests confirmed that the Thorens TP 92 arm gives even better performance with high-end turntables. Feedback from press, dealers and consumers confirms that they like the ease of azimuth and VTA adjustment.

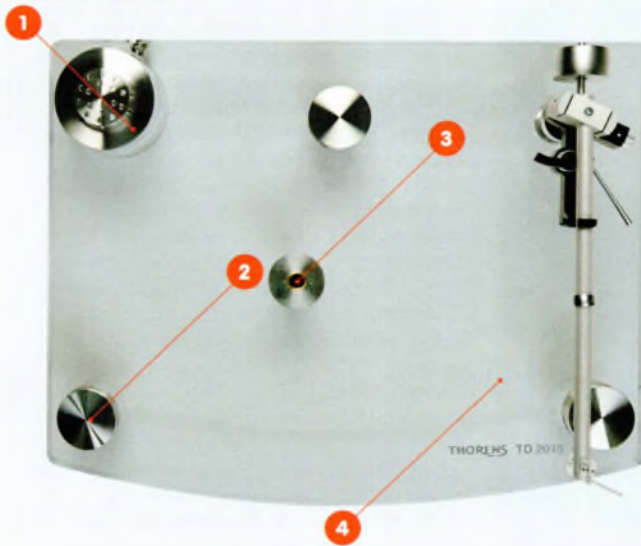
**How would you characterise the turntable's sound?**

Thorens Acrylic Series turntables are surprisingly fast, lively and dynamic, with good clarity and a pleasing tonal balance over a wide frequency spectrum. Bass is taut, but always articulate and tuneful. These characteristics are the consequence of the design, the materials and construction employed both in the turntable and the TP92 tonearm. Outright accuracy is, of course, important, but so too is the ability of a turntable to portray other less definable but equally important things, such as a rich and varied tonal palette, micro-dynamic contrasts and a generous soundstage.

**How is the 2015 different to other Thorens products?**

The new Acrylic Series styling represents a move away from the older traditional values of what we might call 'classic' Thorens. The 2015 and 2035 are bright, appealing products and should find favour with a wider modern audience. But in no way does this imply a compromise to the core value of sound quality.

## IN SIGHT



- 1 AC synchronous motor via rubber belt drive; trad Thorens!
- 2 three 'special' damping feet provide vibration isolation
- 3 main bearing supports the 3.7kg acrylic platter
- 4 25mm-thick acrylic plinth comes in a choice of colours



**FINE THOUGH** the Thorens is, it faces some very stiff competition. Michell's GyroDec offers superior build and better speed stability for around £1,500, although you'll have to specify a tonearm (Michell can supply the matching Tecnoarm for £495) and it's a bit fiddly to set up.

If it's an all-in-one turntable package you want, then look to the Rega P9 (£2,600), which again has a more detailed, stable sound and is easier to set-up, although it looks a bit prosaic by comparison. The Inspire Eclipse SE with Inspire 700 arm is another deck worth an audition at around £2,300, with an open and crisp sound.

the Thorens doesn't – it is very matter of fact. This predictably gives a good degree of musical insight which revealed the full measure of detail in the track *Gumboots*, whose instrumentation is complex and multi-layered. With so much going on, many turntables get caught out and beyond a certain level turn everything into mush – but not the TD 2015, which in this respect made things look easy. A natural with commercial township jive then, but how would it fair with other musical styles?

A collection of Chopin's *Nocturnes* was next up, this is a record that really challenges a turntable (especially a belt driven one) since long, isolated piano notes hang endlessly in the air and so invite scrutiny. Again the TD 2015 was able to render each keystroke without adding any haze around the sounds, but the limited very low-frequency speed stability did begin to make itself felt, not as obvious pitch changes, but as a slight jumbling of the implied differences between each note, a subtle effect which for me only years of conditioning by perfect frequency stability of Compact Disc has brought into focus.

With both the zany and the completely pure ends of the musical spectrum covered, I found myself looking for something completely conventional and found it in the album *Scenes From The Southside* by Bruce Hornsby and The Range. Here the Thorens gives a very convincing performance, well-paced and satisfyingly clean with plenty of punch, but without the sort

of suffocating warmth that some turntables can supply.

Big productions with a brisk tempo and lots of detail to comb through seem to be what the Thorens TD2015 is built for, and it deals with them well. As such it would be a good, albeit not inexpensive, introduction to the LP format for anyone.

## Conclusion

Combining striking modern visuals with well-proven engineering good sense and built to a high standard, it's hard not to like the TD 2015. Although not 'state-of-the-art' in any one area, it is nevertheless a carefully resolved implementation of what a modern turntable should be and, as a bonus, looks tough enough to give many years of listening pleasure.

Carefully positioned and well set up, it gives a good measure of the LP experience for a price that's not unreasonable when the very high quality of finish is considered. ●

## Hi-Fi Choice

### OUR VERDICT

- |                                 |   |
|---------------------------------|---|
| <b>SOUND QUALITY</b><br>★★★★★   | <b>LIKE:</b> Super looks, sensible design, pleasant to operate; Thorens badge |
| <b>VALUE FOR MONEY</b><br>★★★★★ | <b>DISLIKE:</b> Slippery mat, low rate wow, faces stiff competition!          |
| <b>BUILD QUALITY</b><br>★★★★★   | <b>WE SAY:</b> A fine premium turntable, both capable and presentable         |
| <b>FEATURES</b><br>★★★★★        |   |

### OVERALL



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Geometry  
Series

# Look sharp



**Channa Vithana** reviews the crisply styled 99.36MKII floorstanding loudspeaker from Swedish brand XTZ...

**C**onventionally ported loudspeakers make life easier for amplifiers in terms of load, and can sound larger than the cabinet they are machined out of. But some believe they can also sound congested and lack musical timing, particularly when reproducing bass lines, compared to well designed infinite baffle (non-port) models. With its somewhat unimaginatively named 99.36MKII, XTZ has tried to give the best of both worlds with a cabinet sporting three ports, each with a foam bung, and a set of plugs that can tailor the high and low frequency response.

Consequently you can set the XTZ to 'flat' response with '0dB' outputs for both treble and bass; the intention is that with ports suitably dressed, you get close to an infinite baffle design – and indeed this was my preferred set-up. You also have the choice of up-to tri-wire/ tri-amping with a set of six binding posts per loudspeaker.

For such a flexibly engineered design, the XTZ is a looker, especially in lustrous piano black with excellent build quality and finish all round. However, I would have preferred an equally beautifully styled floor fixing, not necessarily a plinth, but perhaps a set of machined alloy feet that splay elegantly outwards to provide better stability, especially on carpets.

## Sound Quality

For listening, I used a Densen B-330 power amplifier & DP-04 MC phono stage fed through a Creek passive preamplifier sourced by an Origin Live Resolution turntable and Transfiguration cartridge. I found that when playing the driving, highly melodic pop-rock of the eponymous *Ladyhawke* (2008) LP, the music was very focused with fine overall cohesion. Bass lines from *Dusk Till Dawn* were finely reproduced with

convincing tunefulness, and I could easily hear the phrasing and layering of the playing. Intelligibility of the instruments was excellent; all the notes were clearly communicated.

Pip Brown's guitar playing and beautiful vocals and backing harmonies were also well placed and exactly reproduced, with clear communication of the different emotional shifts within *Oh My*. The XTZ proved well able to scythe through the complex layers of melodies from keyboards, drums, bass, guitar and vocals. The

## DETAILS

- PRODUCT:** XTZ 99.36 MKII Piano  
**ORIGIN:** Sweden/Far East  
**TYPE:** 2.5 way floorstanding loudspeaker  
**WEIGHT:** 27kg  
**DIMENSIONS:** (WxHxD) 200x1000x320MM  
**FEATURES:**  
 • specified sensitivity: 89dB  
 • specified impedance: 4-8ohms  
 • tweeter: aluminium sandwich ribbon  
 • mid-bass driver: 6.5inch magnesium SEAS Excel  
 • bass driver: 6.5inch coated paper SEAS  
**DISTRIBUTOR:** Audio Sanctum  
**TELEPHONE:** 01623 857 707  
**WEBSITE:** audiosanctum.co.uk

*Ladyhawke* LP was never less than clear, neutral and reproduced with fine dynamic range. Given the relatively modest price of these big speakers, I was impressed.

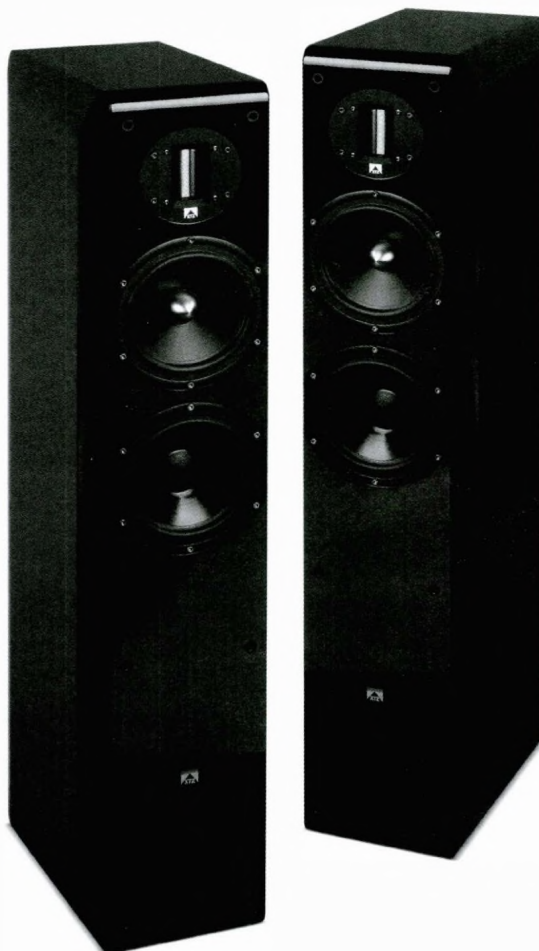
The Kodály: *Háry János suite* (1984) played by the London Philharmonic Orchestra and conducted by Klaus Tennstedt again came over with excellent intelligibility, and from a rhythmic point of view, the music flowed nicely. It allowed a nuanced portrayal of the music without cloying congestion. Again, this loudspeaker proved dynamically capable – I heard the orchestration swell from quiet to loud with ease.

Listening to Al Jarreau's lovely *Could You Believe?* from *Meet Me in London* (1998/2002) by Antonio Forcione and Sabina Scuibba was a delight. The XTZ floorstander gave a seamless flow of vocal and guitar lines, as well as playing double bass fluidly and investing everything with fine timbre. Sabine Scuibba's particular vocal intonations were given room to be expressed clearly, so that even her delicate whispers were heard in sharp relief.

Indeed, this speaker proved so good that my only real critical remark is of a slightly soft sounding upper-midrange that can make it sound reserved with the wrong ancillaries, lacking bite. Others however will find this a boon, given the profusion of 'well lit' digital sources that ram music at you!

## Conclusion

The XTZ 99.36 Mk II is a beautifully designed and finished loudspeaker, and one that opens up a deep and inviting window into the music. Ideal for long-term listening, it's both smooth of tone and unflappable when handling musical dynamics. It does however need high-quality, powerful amplification to give of its best. Weak and/or poor sounding amplifiers will never do it justice. ●



## Hi-Fi Choice

### OUR VERDICT

- SOUND QUALITY** ★★★★★ **LIKE:** Superbly built, elegantly designed; tuneful bass, delicate timbre
- VALUE FOR MONEY** ★★★★★ **DISLIKE:** Needs powerful, top quality amplifier; stable flooring for siting required
- BUILD QUALITY** ★★★★★ **WE SAY:** Beautiful, poised and unflappable loudspeakers that require careful system-matching
- EASE OF DRIVE** ★★★★★

### OVERALL



# The New Guru

*"This remains one of the most enjoyable and engaging little loudspeakers on the market. It has a direct line to the melody, as well as the overall emotion of the musical event. It opens a window on the soul of the creator – which is something that only the best equipment can deliver."*

Jason Kennedy, Hi Fi Choice Feb 2012

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# Focal points

It's always interesting when a major speaker brand starts making headphones too.

**Malcolm Steward** rates Focal's Spirit one...

**F**rench hi-fi specialist Focal is best known for its behemoth Utopia loudspeakers, so it's not a name that one normally associates with headphones. But two or more years ago, the company decided to bring its considerable loudspeaker voicing skills to a range of 'phones designed for the mobile user. The first of these to appear is the Focal Spirit One you see before you...

I tested them with my iPhone and Apple lossless files on the move, and with my Naim UnitiQute and FLACs in the office, comparing them to other headphones aimed particularly at iPad/iPhone/iPod users. (The connecting lead includes an in-line remote control to allow wearers still to use their iPhone for calls while listening to music.)

The Spirit One is a lightweight closed back circumaural type, designed to be sonically accurate while keeping out the majority of external sounds. As the design is intended primarily for use on the move, Focal carried out extensive research to develop what it considers to be the ideal balance for security, sonic performance, and comfort when worn for extended periods.

Many headphones today seem voiced solely to impress upon initial listening, however their bloated bass and turbocharged treble soon become wearisome, so Focal used its experience with studio monitors to deliver a balance that better reflects what is heard in a recording studio. It is fair to say that the design has been successful in this respect.

Although the Spirit Ones were engineered for performance, they are not unattractive and are comfortable to wear, even for prolonged periods. They are light in weight – at 225g – and feature an articulated headband engineered from aircraft-grade aluminium for its lightness, durability, and resistance to atmospheric pollution, apparently. The design of

the earpiece and headband encourages the pods containing the drive units to be pushed squarely against the ears of the wearer, delivering optimal sound while maintaining user comfort and minimising sound leakage.

## Sound Quality

The sound of the Spirit Ones is refined, subtle, expressive, dynamic, detailed and rewardingly communicative. Their inspired voicing is best demonstrated by tracks featuring taxing female vocals, where their control and polished tonality mean that multi-layering of a breathy female voice over percussion, for example, poses no obstacle. They are transparent and revealing, thoroughly content when handling a veritable welter of high-frequency information. These 'phones never approach sounding brittle, brash, or unnaturally bright, so there is no 'tizz'. The opposite end of the spectrum is equally informative yet controlled; the Spirit One handled the low-frequency wallop of Jaco Pastorius' fretless 1960 Fender Jazz

## DETAILS

**PRODUCT:**  
Focal Spirit One  
**ORIGIN:**  
France  
**TYPE:**  
Closed, circumaural headphone  
**WEIGHT:**  
225g  
**FEATURES:**  
• impedance 32 ohms (quoted)  
• sensitivity: 104dB SPL/1mW @ 1kHz (quoted)  
• frequency response 6Hz-22kHz (quoted)  
**DISTRIBUTOR:**  
Focal  
**TELEPHONE:**  
0845 6602680  
**WEBSITE:**  
focal.com

in an appropriately masterly fashion. This authority came as a result of the headphone's ability to portray note shape accurately. Notes had precise and rapid attack and equally clear-cut release, so there was no possibility of any boom or wallowing.

All round it's a very clever acoustic design. The music, although detailed, dynamic and having presence, never seemed uncomfortably close. It 'kept its distance' and did not approach closer than the pinna. It never felt as though it was being injected directly into your ear canal, which is an inherent and, as far as I'm concerned, annoying problem with bud and in-ear designs.

In terms of detail, the Spirit One excelled, even with mixes as relentless as *This is It* from Staind's album *Illusion of Progress*. Even the power chording from the distortion-laden, down-tuned guitars could not make the band's metal sound the slightest bit murky or muddy. Indeed, when, say, the bass and rhythm players were playing a similar progression or melody there was never any confusion as to who was playing what; the instruments remained distinct and separate. The tonal quality and detailing of this metal mix also had the pristine clarity of a true audiophile recording, except, of course, that Aaron Lewis' impassioned vocal was replete with genuine emotion and feeling.

The finest part of the Spirit One's performance was the way it knitted all these elements and qualities together to imbue music with integrity, coherence and credibility. It presented a persuasive and exciting portrayal of music and one that fully engaged the listener.

Another vital consideration is that one can enjoy this optimal engagement without the discomfort of hot, sweaty ears. The Spirit One, therefore, receives a definite no-hesitation recommendation. ●



## Hi-Fi Choice

### OUR VERDICT

#### SOUND QUALITY



**LIKE:** A brilliant solution to the problem of audiophile sound on the move

#### VALUE FOR MONEY



**DISLIKE:** Supplied lead is fine for an iPhone, but not always long enough at home

#### BUILD QUALITY



#### FEATURES



**WE SAY:** Good enough to make you want to listen to headphones again!

#### OVERALL



# MUSICAL FIDELITY

## M1 CLiC Universal Music Controller

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# Swans way

New to the UK, Swans is making inroads into the audiophile speaker market. **Tim Jarman** takes a closer look at its affordable standmount...

**H**iVi Research, which produces Swans loudspeakers, offers a truly vast range of models, but has only recently started to market them in the UK. The D2.1SE seen here is a small standmount enclosure with a 5 inch plastic coned, rubber-edged woofer and a 1 inch cloth dome tweeter, both of which are designed by HiVi.

Bass output is bolstered by a port at the rear and two sets of binding posts are provided for bi-wiring or bi-amping. The cabinets are made from three-quarter inch veneered fibreboard and are internally braced, while each driver has its own completely independent crossover. The two are joined only by the straps across the terminals at the back (should you choose to use them).

An amplifier with a power output of between 10 and 120 watts is recommended, but with a quoted sensitivity of 86dB/1w/1m (low, but not disastrously so), I'd recommend pairing them with a transistor amplifier of 40 watts or more for realistic sound levels.

For my listening tests I used an Arcam FMJ A38, a very fine 100 watt integrated, which was more than capable of driving the Swans.

The cabinets are tidily finished, if unadventurously styled. The quality of the materials used is decent and even, and although they don't feel particularly luxurious I don't think that at the price point there's anything to complain about.

## Sound quality

Cloth-dome tweeters were once all the rage, but you don't see so many these days. This is a shame perhaps, since when done well I am a big fan – the harsh and searing treble that often comes from metal and plastic domes isn't my thing! Those in the D2.1SE are certainly

not harsh, indeed for some musical styles they are perhaps just that bit too soft. Even searching my music collection for the brightest sounding recordings, I still found them a tad subdued overall.

Neneh Cherry can introduce the hi-hat in *Buffalo Stance* as many times as she likes, but the Swans won't let you hear it quite in its entirety. Still, the speaker did make a nice noise all the same; her vocals stood out from the mix nicely in a manner that two-way loudspeakers often struggle to convey. I also thought the imaging to be competent for a



## DETAILS

**PRODUCT:** Swans D2.1SE  
**ORIGIN:** USA/China  
**TYPE:** 2-way standmount loudspeaker  
**WEIGHT:** 13kg  
**DIMENSIONS:** (WxHxD) 305x390x205mm  
**FEATURES:**  
 • 5 inch plastic-coned woofer  
 • 1 inch cloth dome tweeter  
 • Rear bass port  
 • Bi-wirable  
**DISTRIBUTOR:** Item Audio  
**TELEPHONE:** 01782 621225  
**WEBSITE:** itemaudio.com

small loudspeaker, although at high levels it could become a little blurred.

With dance-oriented pop tracks, you're also aware of the bass, which is pleasingly heavy given the size of the cabinet. This comes as a surprise as the woofer cones feel stiff and well damped, but the answer is in the port, of course. A rearwards-firing port tends to exaggerate the bass lift that results from corner or wall placement, but even with the loudspeakers placed well out into the room I got the impression that I was listening to it just a *little* more than I'd have liked.

If your choice of music suits this then it's great, as there's loads of easy, unforced low-frequency energy across a broad soundstage, but as ever there's a price to pay. Quantity is one thing, but control is another, and the Swans aren't so tight down south. Prefab Sprout's *The Sound of Crying*, for example, showed a touch of port noise which wasn't present with my reference Monitor Audio PL100 standmounts of a similar size. This makes the Swans a bit paradoxical; it's quite small, yet still needs to be placed well out into the room to get the best from the bass.

## Conclusion

This loudspeaker really surprised me, as compact standmounts often have harsh, violent treble from excitable, hyperactive tweeters and bass often charitably called 'dry' when 'absent' would be a better word. Here though, we have the opposite bias, which in system-building terms solves a different set of problems.

Although it's more coloured than many, I can still see this loudspeaker as being just the thing to tame a hi-fi that's too bright. It would also work well adding some weight to a system lacking in warmth or scale. I'd recommend tall stands and open placement for best results, when there is much to enjoy. ●

## Hi-Fi Choice

### OUR VERDICT

**SOUND QUALITY** ★★★★★ **LIKE:** Smooth treble, tidy appearance and fine build  
**VALUE FOR MONEY** ★★★★★ **DISLIKE:** Bass could be better controlled; smooth treble suits bright systems  
**BUILD QUALITY** ★★★★★ **WESAY:** A decent contender at the price, if you like its weighty sound  
**EASE OF DRIVE** ★★★★★

### OVERALL



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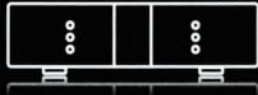
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# Play for today

Not all audio player applications are created equal, finds **Patrick Cleasby**, as he installs Sonic Studio's Amarra...

**T**he advent of high-resolution digital downloads from the likes of B&W and HDTracks.com has not just spurred on the wireless hi-fi craze, but also prompted many to seek the optimum direct computer connection route to hi-res heaven. There are plenty of computer audiophiles who make the effort to conquer the mysteries of WASAPI and install third-party USB audio drivers for Windows 7, but for many the concentration has been on the use of the Mac, with its frequently driverless support for Class 2 asynchronous USB DACs. Another key reason many audiophiles choose the Mac is the widely perceived gold standard status of the audio player Amarra from Sonic Studio. The application has been around for some time with professional origins in the audio engine of Sonic's pro mastering systems. This pricey Mac-only programme is now used by many high-end kit manufacturers to demo their wares, and by audiophiles who can afford it.

Amarra is available in three variants, tiered by small increments in sample rate and EQ functionality; Junior (£82/96kHz), Mini (£213/192kHz) and the fully specified Amarra package (£493/384kHz). Euro-pricing is from pro distributor Media Arte at store.mintavsystems.com; slightly enhanced dollar prices for non-US customers are available from sonicstudio.com.

The prices above are winter discounts available for the first quarter of the year, and a fourteen-day trial is available for all options.

One of Amarra's main selling points is its deep integration and symbiotic relationship with iTunes. If you have been keeping your lossless audio as the purist's optimum WAV or FLAC in iTunes, this is the playback solution for you, as Amarra sits on top of it and pipes the music out of your system in the best way possible.

Amarra's specific claim to excellence is that it ensures optimum audio performance by *not* using Apple's CoreAudio framework. This brings its own headaches as exposure to the whims of Apple developers' under-the-hood changes between major OSX releases can affect sound quality. OSX Lion will work with Amarra, but the user consensus is that Snow Leopard, specifically 10.6.8 sounds better.

Just like Windows, the Mac is not without its issues in its handling of the higher and more arcane sampling rates. But for the last couple of years the vital 'Audio Midi Setup' OSX Utility app has indicated the current

## DETAILS

**PRODUCT:**  
Sonic Studio Amarra

**ORIGIN:**  
USA

**TYPE:**  
audiophile player  
(Mac only)

**FEATURES:**  
• bit/sample  
rate: 16-32-bit/  
44.1-384kHz  
(see text)

• bypasses  
Apple's CoreAudio  
processing

• uses Apple iTunes  
front end

**DISTRIBUTOR:**  
Media Arte

**WEBSITE:**  
store.  
mintavsystems.com

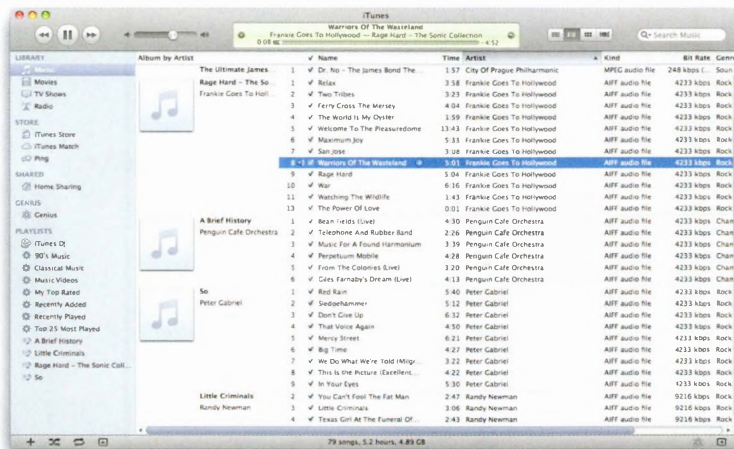
hardware's support for the 88.2kHz sampling (and its multiples) with which HDTracks are now flooding the market. As ever, settings in this app are vital to ensure use of the correct sample rate for the material, and Amarra has a menu option to go straight to this vital utility. Their website also has plentiful recommendations on how to set up your base Mac system (fresh install, no other apps, turn Spotlight off, SSD system disk preferred, etc.).

## Sound quality

It will take a while to get set up in 100 per cent Sonic Studio-recommended style, but the fruits of all the tweakery necessary to optimise and operate this hybrid system are audibly worthwhile. To ensure the full benefit of the 24-bit/192kHz capabilities, I tested with an RME Fireface UFX interface on the recommended Mac OSX 10.6.8. Test pieces spanned a wide assortment of 24/192 and 24/88.2 high-resolution files.

Working up from non-specialist apps to Amarra, the step changes were very apparent. In basic video-and-all VLC, the sound is congested and digitally sharp. Mozilla's *Songbird* brought a little more musicality, but Amarra pulled out music far more smoothly and in an almost analogue-like manner. There was the sense that, rather than a sonic mush, the information on the recording was now being rendered smoothly, with incredible soundstaging and midband detail.

Of course there are cheaper options available, but Amarra does demonstrate its sonic excellence on auditioning, and its iTunes-linked functionality will be invaluable for a great many computer audiophiles. For the brave and deep-pocketed Mac user then, it's well worth the trial download. Just don't be surprised if you wind up paying for it! ●



## Hi-Fi Choice

### OUR VERDICT

#### SOUND QUALITY



**LIKE:** Seamless iTunes integration; excellent sonics

#### VALUE FOR MONEY



**DISLIKE:** Really rather expensive; alas no PC variant yet...

#### BUILD QUALITY



**WESAY:** Excellent bespoke high-end media player for Macs, but you'll have to pay for it!

#### FEATURES



#### OVERALL





# Blue notes



Don't be fooled by its diminutive dimensions, says **Malcolm Steward**. Neat's Iota standmount proves that big things do come in small packages...

**R**ecently, several well-respected loudspeaker manufacturers have taken to producing models designed for desktop use. And why not? Most of us spend far more time sitting at our desks than we do sitting in front of our hi-fi systems. Why, then, should we be obliged to listen to low-grade audio merely because we are not in the room that houses our hi-fi? And, if truth be told, while nobody can beat the computer industry on savage pricing, it isn't in the same league when it comes to matters of producing high audio quality.

My office conveniently houses a couple of NAS drives and the network connections to my music room and the internet, and so makes an ideal place from which to administer my music network. To do this effectively, I need a fine quality audio system on my desktop. To this end, I have a Naim UnitiQute streamer/amplifier installed next to my desk. This feeds whatever speakers I happen to have on my desktop and also supplies Internet Radio and amplifies the beeps and farts from my desktop computer. I also have my Cambridge Audio iD100 iPhone dock and charger hooked up to the Qute.

One of those well-respected loudspeaker manufacturers to have taken to producing models designed for desktop use is Neat Acoustics. The last model the company launched was the impressively enormous, Ultimatum XL10, a £15,000-plus floorstander, while the model under consideration here is the £650 Iota.

This is a decidedly *smaller* loudspeaker, designed specifically for situations in which size – or lack thereof – matters. The design exploits boundary reinforcement and so requires placement close to a wall or, in my situation, on a desktop, which provides some bolstering of low frequencies. Suitability to bookshelf

placement, and a supplied pair of matching single-pillar stands, also meant the Iota could be used in my music room as well as my office.

The speaker is a two-way bass reflex design, housed in a high-quality 2.6 litre internally damped MDF enclosure. The main drive unit is a close relative of that in the Motive range, a 100mm polypropylene cone with a ferrite magnet assembly. Tweeter is a 50mm vertical planar magnetic ribbon unit. Neat says that this unit is critical to the design because it lends the whole speaker its essential character and musical integrity. "In this context," continues Neat "the tweeter's strengths of superb dynamic contrast and accurate tonal colour are well matched to those of the main drive unit".

The manufacturer considers the Iota ideally suited to the currently *en vogue*, all-in-one streaming products. I am inclined to agree; despite its low sensitivity figure of 84dB, the wee speaker worked fine in my smallish office powered by a 40 watt Naim UnitiQute, and could deliver volume levels that most people would find uncomfortable. I imagine that it

## DETAILS

**PRODUCT:**  
Neat Acoustics Iota  
**ORIGIN:**  
UK  
**TYPE:**  
desktop  
loudspeaker  
**WEIGHT:**  
3kg  
**DIMENSIONS:**  
(WxHxD)  
200x130 x165mm  
**FEATURES:**  
• 2-way bass reflex enclosure  
• 6 ohms nominal impedance  
• 84dB/1 watt quoted sensitivity  
• recommended amplifier power 25–100 watts  
• 50mm vertical planar magnetic ribbon tweeter  
**DISTRIBUTOR:**  
Neat Acoustics Ltd  
**TELEPHONE:**  
01833 631021  
**WEBSITE:**  
neat.co.uk

would equally well accompany the Linn Majik DS-M and comfortably outperform the Majik 109 speakers, which I have to say I did not especially enjoy when I reviewed the Linn system recently. I parked the Iotas on Partington Topper cones to elevate their baffles slightly, and connected them with Tellurium Q Blue speaker cables. Although not compulsory, the speakers are designed for horizontal placement, either with their HF units innermost or outermost, the latter being the configuration I preferred and adopted for most of this review.

Finally, a note for the fashion-conscious desktop audiophile; the Iota is available in two Standard finishes, Satin White and Satin Black. It can also be supplied in Flame Red, Zinc Yellow and Ultramarine Blue.

## Sound Quality

These baby Neats – the maker refers to them as 'Super-Micros' – have that wonderful ease of communication that makes their larger siblings so special; the Iotas may not have the dynamic compass or bandwidth of speakers like the Ultimatum XLS or

## The performance of the Iota truly belies the diminutive proportions of the loudspeaker...

XL6, but the voicing and character, albeit slightly reduced in scale, remain comparable. They sing just as fluently and persuasively, and the nuance and subtlety they convey is outstanding for a tiny 'desktop' speaker, I feel.

The performance of the Iota truly belies the diminutive proportions of the loudspeaker. Instruments and voices are not miniaturised, but appear as full-bodied and as solid as you would expect from any reputable desktop monitor. In truth, the performance exceeds what one might expect from such a design; not only does the Iota tell you what the musicians are doing, it also lets you know whether they are having fun doing it, and if so, to what extent.

These little boxes will put a smile on your face every time you play a worthwhile album. Alison Krauss & Union Station's *Paper Airplane* never failed to transform me into a blissed out hillbilly with its peerless Bluegrass playing and its poignant harmony stacks.

There is obviously no real bass fundamental action going on here

As the badging suggests, the Iota was also designed to work horizontally



## Q&A

MALCOLM STEWARD SPOKE TO NEAT DESIGNER BOB SURGEONER ABOUT HIS NEW IOTA SPEAKER



**MS:** Without giving away any secrets, how did you create the illusion of a full-range portrayal of a piano and bass from such a tiny enclosure?

**BS:** The brief for the Iota was to produce a genuine musical experience from as small an enclosure as possible. With all my designs, it's an iterative process based on listening to music and making changes to every aspect (drive units, crossover, tuning, cabinet) based purely on what we're hearing. The tuning of the cabinet is particularly important here. There is little in the way of genuine low-frequency fundamentals from the Iota, so the tuning is a psychoacoustic device to guide the listener to the conclusion that there is more going on than is actually there.

**The Iota impressed me with its brilliant vocal articulation. Is that a result of using the ribbon tweeter?**

The Iota certainly owes much of its organic portrayal of the human voice to this tweeter. The choice of tweeter has always been very important in my loudspeakers, as we believe that it defines the character of the whole speaker and gives it its voice. Although the tweeter in the Iota looks like a ribbon, and sounds like a ribbon, it is actually a planar magnetic area-drive unit, similar in principle to the super-tweeters used in our Ultimatum series speakers. The Iota is actually made from very high-quality components which wouldn't be out of place in speakers costing several times more.

**Just how simple is the crossover? It does not sound as if there is one there at all...**

Part of the challenge with this project was to fit the crossover components into the available internal space. The crossover is a three element design, plus damping and attenuating resistors. Most Neat crossovers are variants of this format. There is a first order filter feeding the bass/midrange unit, using a physically very large LCOFC air-cored inductor. The tweeter signal is supplied through a second order filter using just a polypropylene film capacitor and a LCOFC air-cored inductor. So the crossover is simple, but the execution proved quite tricky in this instance.

## IN SIGHT



- 1 small, stiff MDF cabinets come in a choice of colours
- 2 super smooth 50mm planar magnetic area drive tweeter
- 3 sideways badge shows it is meant for horizontal sitting
- 4 bass is aided by a large rear port and near-boundary use
- 5 simple pair of gold-plated binding posts; no bi-wiring here!
- 6 100mm diameter polypropylene coned mid/bass driver

## HOW IT COMPARES

**THE IOTA** compares very favourably with most desktop systems. Primarily this is so because it does not, like many such other designs, incorporate a subwoofer. Subs can be tuned to integrate smoothly, yet never seem quite to disappear entirely. The result is that the problems they create often outweigh those that they solve, and you lose more on the roundabout than you gain on the swings, so to speak. The Iota does not suffer any apparent shortfall in the lower frequencies; it will not of course produce deep bass fundamentals but the speaker's voicing is so robust and fulfilling that one can enjoy organ music or Jaco Pastorius' bass through it and not feel shortchanged. Nevertheless, it is not balanced so heavily such that it wallows constantly, which is something one often has to tolerate with other, slightly larger, warmer-sounding, desktop designs.

but you don't miss it. There's a credible facsimile of bass present; the Iota's brilliant voicing convinces you that you are not losing out anywhere. If you listen to Keith Jarrett, for example, he still plays a concert grand piano and not a £60 Fisher Price Laugh & Learn Baby Grand!

The Iota produces a credible and crisply defined stereo image that is not restricted in its width or depth by the speaker enclosures. This and its timbral integrity make it really accommodating for jazz fans.

Subtle musical detail is fluently and readily conveyed by the Iotas. There is no sense of forced transparency about their presentation; it is strikingly natural and such detail flows with astounding lucidity, just as it does with the company's larger models. The dynamics of this tiny speaker are amazing and are especially impressive at the lower end of the scale playing quietly yet in a highly revealing fashion with disdainful ease.

The Iota's dexterity with acoustic instruments and recording spaces affords the speaker an empathy for classical recordings, too. The polish and finesse of the drivers ensures the faithful recreation of instrumental timbre, in particular, this is noticeable with violins, which have attack and bite but are never reduced to sounding raw or steely. When a section of the orchestra plays there is also a tangible impression of the volume of air above that part of the orchestra being energised.

The Iota has the knack of focusing the listener's attention on the strong points of any particular piece of music. I, for example, am especially keen on James McMurtry's lyrical songwriting and, when listening to *Just Us Kids* noticed that the speaker seemed to shine an intense light on his lyrics, bringing out the humour, insight and perception in every one of his skilfully crafted phrases. This happened without any artifice, so I suspect that the speaker's overall clarity and dynamic accuracy simply allowed my brain to focus easily on that particular aspect of the recording.

In short, no matter what sort of music you enjoy, and provided you have a decent front-end and amplifier, it's fair to say that the Iota will communicate its musical message as well as many a larger loudspeaker can manage. ●

## Hi-Fi Choice

### OUR VERDICT

**SOUND QUALITY**



**VALUE FOR MONEY**



**BUILD QUALITY**



**EASE OF DRIVE**



**OVERALL**



**LIKE:** Eminently musical and communicative, the Iota delights!

**DISLIKE:** Low sensitivity will be an issue for some

**WE SAY:** Thoroughly excellent sounding micro-monitor that will grace any audiophile's desktop

## New VTL valve amps, an all-singing system – and a little something extra ...

New show  
New kit!  
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At the new Oatlands Park show (24-25 March) we shall be launching in the UK the new **VTL MB-185 SERIES III SIGNATURE** mono block valve amplifiers.

In the rest of the system there will be more familiar items:

- the dCS one-box upsampling CD/SACD player
- the dCS U-Clock with its 24/192 kHz USB input
- the VTL TL-6.5 valve preamp
- the Focal Scala Utopia loudspeakers

– and also the less familiar **LEADING EDGE** equipment racks that hide their extraordinary vibration-absorbing, RFI/EMI shielding and acoustic treatment skills under a furniture-quality finish – and, of course as always, Vertex AQ mains cleaning and cables to complete the system.

The new MB-185 amp, now fully-balanced, has many component upgrades and improved controls to give a sweeter, more musical top and mid-range and a quick taut bass.

A key innovation, taken from the MB-450, is

VTL MB-185 Series III  
Signature valve amplifier

the variable **DAMPING FACTOR** feedback that adjusts output impedance to the listener's taste and offers improved control of loudspeaker loads.

Overall the MB-185 is more musically coherent than the Series II and the improved power supplies keep it stable into demanding loads, such as electrostatic speakers, and with complex music that makes lesser amps wilt.

Other important changes are the switch to the naturally organic-sounding EL34 valves and the inclusion of premium Mundorf silver/oil capacitors, all contributing to the amp's ideal combination of musicality with dynamics and drive.

One well-established feature is VTL's clever **SMART TUBE** technology, microprocessor-controlled, that maintains stable bias and screen voltage supplies to the output valves, a key reason for the outstanding reliability of VTL amplifiers.

The **LEADING EDGE** equipment racks are the ideal blend of truly high-end audio performance and domestic harmony.

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- panels underneath to absorb airborne sound pressure
- isolation from external vibration on adjustable feet.

Performance gains from a Leading Edge rack are huge, *beating almost any other component upgrade* and allowing the system to perform at its best, maximising the investment made in the major 'boxes'.

The well-established **dCS Puccini** player and complementary U-Clock have been praised around the world *'I can't overstate how much I enjoyed music through the Puccini/U-Clock; it was absolutely enthralling on CD, SACD and high resolution sources. This is a digital front end I could live with for the rest of my life.'* Robert Harley, The Absolute Sound

The outstanding **FOCAL UTOPIA** Beryllium tweeter is lighter, and faster, than one of diamond. Bass cones are a light, self-damping construction with low colouration, needing little correction in the crossover. Result? An involving, exciting, musical, dynamic speaker.

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# Super trooper

Naim's new SuperUniti is an all-in-one system heavily armed to combat conventional separates, says **Malcolm Steward**...

**A**s an all-in-one device that combines the functions of the SuperNait integrated amplifier with the UnitiQute network audio player, should Naim not have called this device the SuperQute?

Regardless, the £3,250 SuperUniti actually is something of a UnitiQute on steroids with all the 80 watt muscle and DAC (up to 32-bit/192 kHz capable depending on format) of the SuperNait tucked inside its reference series casework, alongside a comprehensive list of sources and features. There is no CD transport as per the original Uniti.

Included, though, is an integrated wireless UPnP network stream player, a USB audio player, an iPod and iPhone docking facility, an internet radio, DAB radio, FM radio, a 10-input digital and analogue preamplifier, a digital-to-analogue converter, and an alarm clock.

Naim is not being in the least reserved when it comes to describing the SuperUniti. Its performance, the company says, is reference level, something along the lines of the SuperNait. This integrated has proven to me it is more than up to the task of driving 'difficult' loudspeakers with ease; its quoted 80W output is said to become 120W at 4 ohms. The amplifier, more importantly, can deliver current by the bucket-load when called upon so

to do. It's certainly *not* one of those amplifiers that struggles for breath when faced with the loudspeaker equivalent of a steep incline, I found.

It's not all about performance, though. SuperUniti delivers high-quality audio with commodity-like ease of use. Control is either by the supplied remote handset, through the fascia buttons or, for the least effort and ultimate slickness, Naim's n-Stream app for Apple iOS devices; the latter is a real boon.

## Sound quality

Listening to the SuperUniti proved a thoroughly rewarding experience, one that comfortably exceeded expectations. For example, Aaron Lewis' vocals on *Town Line* had real meaning and convincing authority – his singing was intensely persuasive.

Similarly, Zoe Muth and The Lost High Rollers' *Starlight Hotel* sounded like the pure modern country it is, but it nonetheless betrayed its wide variety of modern, non-country influences. Even the phrasing on the guitar runs did not always sound one hundred per cent country. Yet, the SuperUniti proved consistently capable of making the hairs on the back of my neck bristle...

As one would expect, the SuperUniti is fully up to speed in the

## DETAILS

**PRODUCT:** Naim SuperUniti  
**ORIGIN:** UK  
**TYPE:** all-in-one system  
**WEIGHT:** 12.8kg  
**DIMENSION:** (WxHxD) 432x87x314mm  
**FEATURES:**  
 • analogue inputs: 2x RCA phono, DIN, 3.5mm minijack  
 • analogue outputs: RCA phono line, DIN pre-out, 2x subwoofer  
 • digital inputs: 2x coaxial, 3x Toslink, 1x mini Toslink  
**quoted power:** 80W/Bohms  
**radio:** internet, FM, DAB  
 • formats: Internet radio (WMA, MP3 Streams, MMS) Playlists (M3U, PLS) MP3, M4A, AAC (up to 320 kbps, CBR/VBR), Apple Lossless (from iPod)  
 • Windows Media – formatted content (up to 320 kbps) LPCM16/24, WAV, FLAC, Ogg Vorbis, AIFF  
**DISTRIBUTOR:** Naim Audio  
**TELEPHONE:** 01722 426 600  
**WEBSITE:** naimaudio.com

timing department. Its propulsive drive is a match for pretty much any other component from the company; it's certainly up there with the SuperNait in terms of its portrayal of rhythms. It is particularly convincing when the rhythm is not overtly stated, as on tracks like Colin Hay's *Send Somebody* from the album *Gathering Mercury*. It was equally convincing with more temporally intricate, syncopated music such as *Weibayuwu* from Aurelio Martinez' *Garifuna Afro-Combo* album.

Naim's representative strongly suggested that I try the digital output of the SuperUniti, feeding a stream through the Naim DAC into my reference-level system. When I tried the SuperUniti like this, effectively with it operating in place of a high-end source, I have to admit that it was far more capable than I expected. Its ability to communicate seemed greatly magnified and it truly confirmed to listeners, for example, that Staind was using vintage instruments throughout its *Illusion of Progress* album. The primitive beauty of those 1960s and 1970s Fender and Gibson guitars, and the drum-kit, was lucidly portrayed.

The SuperUniti/DAC combination displayed phenomenal finesse and poise. The Toad Lickers from Thomas Dolby's album *A Map of the Floating City* demonstrated just how adept the combination was at unpicking a mix and extracting from it the finest sliver of detail or dynamic nuance.

Subtlety and finesse are definitely strong points of the SuperUniti. Its sympathetic portrayal of gentle, simple music, such as the Gillian Welch album, *The Harrow & The Harvest*, was mesmerising from start to finish.

## Conclusion

Very good, then! I think it would be unfair to describe the new Naim SuperUniti merely as a hi-fi bargain, for it is a truly fluent maker of music. ●



**Hi-Fi Choice**

**OUR VERDICT**

**SOUND QUALITY** ★★★★★ **LIKE:** Superb rhythms, strong power delivery, features and connectivity

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

**BUILD QUALITY** ★★★★★ **WESAY:** Superb one box offering powerful, incisive sound, allied to excellent build quality, ease-of-use and features

**FEATURES** ★★★★★

## OVERALL





# Modern love



With its lavish gloss finish and premium build quality, Usher's Dancer Mini-Two is eminently fanciable, says **Jason Kennedy**...

**U**sher is a Taiwanese company that makes a large range of superbly finished loudspeakers at what appear to be extremely competitive prices. They are designed by American speaker legend Joseph D'Appolito, and Tsai Lien-Shui, who heads Usher's R&D.

You would have to spend twice as much on a speaker built in Europe or North America to get the standard of fit and finish seen on The Dancer Mini-Two. But as we all know, appearance is not everything with audio components – more important is whether these loudspeakers sound as good as they look. Do they make the sonic grade?

The Dancer Mini models sit at the bottom of Usher's Diamond range, which is nine-strong and includes the flagship 123 kilo BE-20 Diamond, which shares the diamond DMD dome tweeter that gives the range its name. Unlike Bowers & Wilkins' diamond dome, the Usher DMD tweeter is not pure diamond, but a laminate of an amorphous 'diamond-like' mix of carbon sp3 and sp2 and metal. The hybrid carbon layers are bonded to either side of a proprietary metal alloy substrate to form a 32mm dome. The theory behind the design being that the metal element 'tames all the diamond layers' unfavourable sonic traits', while retaining the high rigidity that the material is renowned for, the company says.

While not as heavy as its biggest brother, this is still a substantial loudspeaker; a state of affairs that's exacerbated by the plinth which is made out of cast iron, no less! The combination of speaker and plinth weighs over 57 kilos and stands on large cones which have threaded holes for spikes, if your floor can take that sort of pressure. The speaker is over four feet high and, therefore, makes its presence known, but the very high-quality of finish and boat-tail shape mean that it's

less of an intrusion than other large loudspeakers.

The cabinet shape is achieved by bending laminated layers using steam and pressure, with the layers being glued and electrically fused together, so that they retain the shape. This makes for a rigid enclosure, a state of affairs that's reinforced by the 50mm-thick front baffle. Inside the box is a skeletal frame to further increase stiffness. The plinth may be heavy, but the cabinet is heavier still!

Perhaps, unsurprisingly, given its creator, the drive units are arranged D'Appolito style with two mid/bass units either side of the tweeter. It's a two-way, so both woofers do the same thing and the cabinet is loaded by a hybrid of bass reflex and transmission line systems that vents through a rectangular port at the bottom of the front baffle. The main drivers are made by Usher and called 8948A; they have 125mm paper cones in a 177mm (7-inch) chassis and rather than domes in the centre there is an inverted pulp dome.

The DMD tweeter is protected by a mesh grille and the speaker is supplied with two circular cloth grilles that attach directly to pins on the woofer surrounds, which looks good. Bi-wire cable terminals are substantial gold-plated affairs arranged vertically on a gold anodised panel, attention to detail is as strong here as on the rest of the speaker. The specs claim that

## DETAILS

**PRODUCT:** Usher Dancer Mini-Two  
**ORIGIN:** Taiwan  
**TYPE:** floorstanding two-way loudspeaker  
**WEIGHT:** 57.5kg  
**DIMENSIONS:** (WxHxD) 340x1,237x500mm  
**FEATURES:**  
• quoted sensitivity: 90dB  
• quoted nominal impedance: 4 ohms  
• drive units: 2x 7-inch mid/bass, 1.25-inch tweeter  
• crossover frequency: 2.7kHz  
**DISTRIBUTOR:** Hi Fidelity  
**TELEPHONE:** 01382 540402  
**WEBSITE:** hi-fidelityuk.co.uk

sensitivity is 90dB at 4 ohms, which equates to 87dB at the usual 8 ohm quoted figure, so you don't need a powerhouse to drive them, but neither are they a typically valve-friendly load. We'd suggest at least 60 watts of transistor power to get them properly animated.

Usher apparently goes to great lengths to ensure good pair matching, quoting a figure of 0.2dB, which seems uncannily close.

Apparently, drive units are matched as pairs or fours prior to construction, in order to meet this stringent spec.

## Sound quality

Using the Dancer Mini-Two with a Leema Tucana amplifier and Townshend Isolda DCT cables, my initial impression was of a slightly unusual tonal balance; they are rich through the upper bass and midband, and this can make them sound a little closed in. They are *extremely* smooth however, and totally devoid of rough edges or grain – and when this quality is combined with a remarkable definition of leading edges the result is highly engaging.

With an amplifier like the Tucana there is no shortage of power – the bottom end is very substantial thanks to the heavyweight plinth, plus the size of the speaker as a whole. These factors combine to deliver the drama of Led Zeppelin's *Dazed and Confused* (from the live *How the West Was Won* DVD-A) to good effect. The soundstage is not as open as it could be, but the quality of timing means that you get a good idea of just how powerful and thrilling it must have been to see this seminal band in its heyday.

Moving the loudspeaker around relative to the rear and side walls does make a difference to the sense of thickness through the mid-bass. I was able to achieve a little more openness by pulling them further into the room and it's likely that in a bigger space that this characteristic could be enhanced. One thing that did help was to move over to DNM speaker cables; this proved to be a



## Q&A

JASON KENNEDY SPOKE WITH HUGH UNSWORTH OF USHER DISTRIBUTOR HI-FIDELITY UK.



**JH:** How long has Usher been making loudspeakers?

**HU:** The company was established in Taiwan in 1972 by a Mr Tsai, so it's been going a good long while!

**Is there any particular type or make of amplification and/or loudspeaker cable that you recommend for this speaker?**

How long is a piece of string? They're reasonably sensitive, and I've heard them with 7 watt valve amps using eight 300Bs that sounded absolutely stunning. Then again, I've heard them working well with things that have a good deal more power; essentially good current swing is what counts. I found them always to be very transparent speakers, by which I mean that if it's quality in then it's quality out. I've used them with Crowns, and I've tried them with some earlier Krells and recently some rather good valve amps from a company I'm in negotiation with from a distribution point of view. Actually I've never given valves much credence before, but they have a warmth and silkiness that is very attractive, especially through these speakers.

**Do you know what type of metal Usher uses in the DMD tweeter?**

Usher doesn't disclose the precise material it employs, but like all the drive units in the Dancer Mini 2, it's made in-house, in an incredible manufacturing facility.

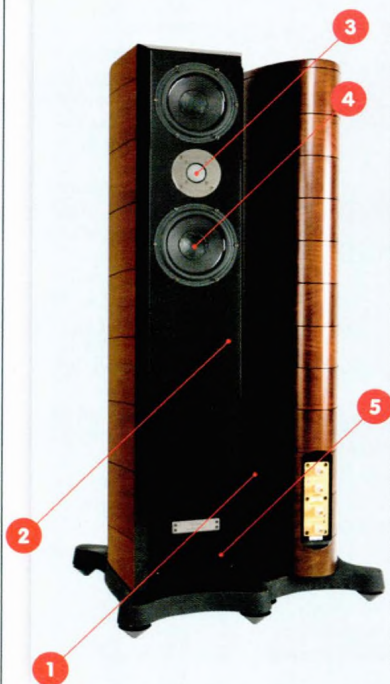
**I am particularly struck by the superlative quality of finish to the cabinets; what standard finishes are available?**

Simply two; maple and walnut.

**What's been on the Hi-fidelity stereo most of all, this past year?**

Pink's *Funhouse*. I went to the concert twice at the O2. The band with the mad blonde acrobat lady. Another band I'd say is equally as good is IQ, if you like prog rock get yourself some IQ! It's like an amalgamation of some of the best bands from back in the day. I recommend their album *Frequency*. Now that is an album you need to get, and it's available on vinyl!

## IN SIGHT



- 1 cabinetry is superb, quality of the wood veneer outstanding
- 2 50mm thick front baffle reinforces cabinet rigidity
- 3 32mm 'diamond-like' carbon dome tweeter unique to Usher
- 4 twin 125mm paper mid/bass drivers in D'Appolito layout
- 5 hybrid reflex/transmission line loading is used



**I WAS ABLE** to directly compare the Usher with PMC's relatively new twenty24 floorstander, which is another two-way design at a similar price point of £3,100. The contrast could not really be greater than between these two speakers – where the Usher is warm and smooth with a big, deep bass, the PMC is more open, vivid and upfront. Bass is lighter and less extended, but the British speaker offers greater timbral resolution and dynamics at that end of the spectrum thanks to considerable nimbleness.

The PMC is slightly more efficient, and sounds even more so thanks to its directness. However, if you like the rich balance of the Taiwanese speaker, you might call the PMC dry and in some rooms, and/or with some ancillaries, I can imagine that its relaxed sound and good timing would make it highly appealing.

happy combination that revealed more of the life force in the music thanks to the Usher's undoubtedly impressive speed.

Antonio Forcione's rendition of *Take 5* (from the 24-bit/192kHz remaster of *Meet Me in London*, Naim Label) sounds live and direct, his playing clearly spectacular and the phrasing of singer Sabina Sciubba readily easy to enjoy.

The Usher opens up as you wind up the volume, which is nice if you like to play at higher levels, but less useful if you don't. Most systems with sufficient headroom sound better at higher levels, but few of us can or want to listen like this all the time.

Another key factor with any loudspeaker is the match with the amplifier, and I found one that seemed to suit this particular speaker better than my Leema, namely the new MSB S200 power amp with Townshend Audio's Allegri passive pre. This is an expensive combo, but an undoubtedly revealing and engaging one that managed to deliver a more even-handed and enticing sound through the Usher.

Bass is clearly a strong point of the Usher Dancer Mini-Two and I enjoyed the deep timbre of double bass on Samuel Yirga's *Habasha Sessions*, which underpins the piano playing of the band leader and gives the soundstage a sense of realism and presence. The image could have more scale, however, and its warm



balance inclines to a more cosy presentation that suits some types of material better than others.

Joni Mitchell's *Shadows and Light* album is a very vibrant and live experience and it managed to press the Ushers to opening up and letting their hair down, but this doesn't seem to be a natural tendency on their part. To fully give of their best, they need an excellent source, a large, grippy and powerful amplifier and a fair sized room to boot.

## Conclusion

In a world of often hard and stark-sounding modern transducers, Usher's Dancer Mini-Two is something of a treat for those looking for a smooth, warm and restrained design that doesn't assault you. For precisely this reason alone, many will surely love it.

Others won't take to it, and while the rich balance becomes very easy to familiarise yourself to, the slightly polite rendition of rhythms and dynamics may not excite thrill-seekers. That said, get a serious source, punchy amplifier and a big room, then pump some power in and it does get into the groove.

Overall, it's a lovely loudspeaker that's smooth, svelte and sophisticated – I'd recommend you take a good listen if you're looking for a seriously classy floorstander just shy of the super-fi bracket. ●

## Hi-Fi Choice

### OUR VERDICT

#### SOUND QUALITY



#### VALUE FOR MONEY



#### BUILD QUALITY



#### EASE OF DRIVE



**LIKE:** Superlative build, tonal warmth, solid bottom end, decent timing

**DISLIKE:** Rich balance means it lacks ultimate transparency

**WE SAY:** Polished product that will appeal to those seeking a smooth and sophisticated sound

### OVERALL





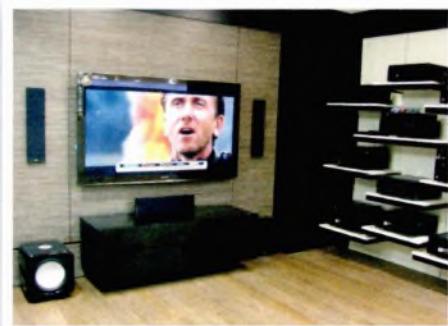
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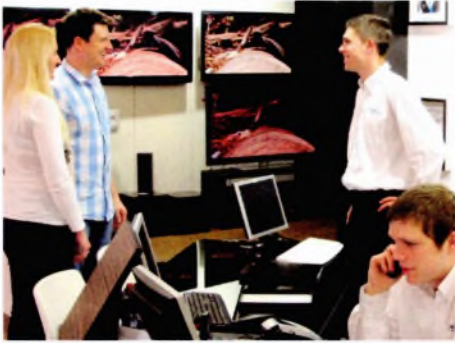


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**MONITOR AUDIO GOLD GX**

Monitor Audio's new Gold GX speakers use technology that has filtered down from their flagship Platinum PL range. The range comprises two standmounts, two floorstanders, two centre speakers, a pair of surround speakers and a single subwoofer.



**BOWERS & WILKINS**  
PM1

This luxury, compact loudspeaker is the latest in a long line of Bowers & Wilkins audiophile mini monitors. It offers an extremely high-quality audio performance and features several technological innovations including a new tweeter and groundbreaking cabinet design.

**KEF AUDIO**  
R SERIES

Using trickle-down technology from the company's flagship Blade speakers, the R Series comprises standmount, floorstanding centre, surround and subwoofer models.



**PMC**  
TWENTY RANGE

The twenty series is the next generation of elegant, hand-crafted British loudspeakers that follow in the lineage of worldwide acclaimed PMC designs. The 4 models use PMC's innovative ATL™ technology, providing a supremely rich and detailed performance ideally suited to all styles and sizes of interior.

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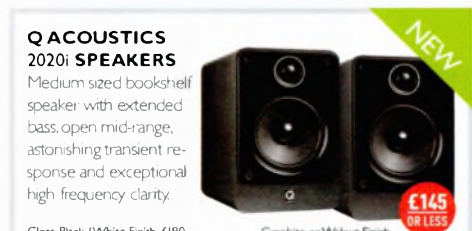
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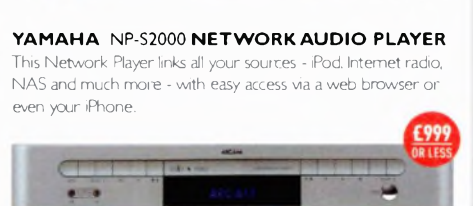
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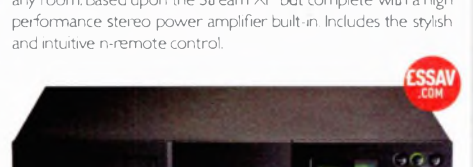
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**CHANNA VITHANA**  
**EXPERTISE:** REVIEWER

**CV GOT** lost in music back in 1980 and has never recovered. With a background in design and architecture, he's been a published journalist for nearly a decade.



**ED SELLEY**  
**EXPERTISE:** REVIEWER

**ES HAS SPENT** the best part of ten years selling, developing and supporting products from some of the biggest names in audio. Enjoys blogging about his favourite tunes too...



**TIM JARMAN**  
**EXPERTISE:** ENGINEER

**TJ IS AN** electronics engineer by day and a hi-fi enthusiast by night. Doesn't own a mobile phone, enjoys fixing and collecting all types of vintage hi-fi.



**PATRICK CLEASBY**  
**EXPERTISE:** TECH GEEK

**PC WORKS** as a high-level tech support for the BBC, when not fiddling with the latest network music players and his newly discovered LP record collection.

### Digital dilemma

Currently, I'm replacing components on my twenty year old hi-fi system, starting with a Rega Brio-R. Being an Apple enthusiast, quite a lot of music is stored in either iTunes or on a hard disk connected to an Airport Extreme. Several iPhones, iPads and iPods are also spread through the house.

So how do I connect this to the hi-fi system, within an economical price range? On the one hand I like the Squeezebox Touch or the Cambridge Audio NP30, but these lack a high-quality output, unless you connect this to a DAC. When going for a DAC, you're good to connect a Mac Book or iPod, but you miss access to Internet radio access or the networked hard disk. Isn't there a good system combining both functions?

**Jerry Boetens, via email**

**PC says** Key decisions here are deciding which way to jump on the various components of network music – format, NAS, player and control. From a confirmed Mac-head it may come as a surprise that I would advise you to consider freeing yourself from the Apple/iTunes tyranny. Accurately ripped FLAC or WAV will better iTunes files, a dedicated Network Attached Storage (NAS) hard disk will free you from computer dependence, and even an unmodified and DAC-less Squeezebox Touch will produce a better sound than an Airport Express.

The key decision is whether to back Logitech Media Server (LMS) or a more generic UPnP server. Have a play with LMS and Twonky Server on your Mac before you spend any money. Both can be persuaded to stream existing iTunes stuff before you move to a NAS, and with some Firefly cunning you should be able to pipe the new stuff back into iTunes. In either case, iPads etcetera, can be pressed into service for control, whether you choose IPeng HD for LMS, or PlugPlayer for UPnP.

Always remember that these can also turn your iDevices into network players, and consider specialised internet radio apps, too. I suspect you will eventually resign yourself to the need for a discrete DAC (we've tested six in this issue – so have a think!), as this is how all high-quality sound ends up, and if you retain the MacBook as a source you can always gain your desired Internet radio and network playback using the likes of Squeezeplay for Mac. I would recommend you trying the HRT Streamer II+ as your USB DAC, and its iStreamer for

**Digital dilemma:** Cambridge Audio's Sonata NP30 streamer should really drive a DAC, shouldn't it?

your iDevices if they need to be plugged in, too.

**ES says** If your budget can stretch to it, my recommendation would be the Marantz NA7004 streamer. This is a fine sounding unit in its own right and is one of the most capable digital front ends under £1,000. It then offers AirPlay to cater for wireless equipped iPods (and direct connectivity for those that don't), excellent Internet radio and digital inputs to connect other items. For me this is the best one-stop solution there is, although if you could stomach two boxes, a Squeezebox Touch and Rega DAC combination would take some beating!

### Key change

I recently saw a test of the Metrum Octave DAC online (which received excellent reviews) and wondered if this would be a suitable product for you to test. Metrum is a Dutch company and probably not of interest to you from an advertising perspective, but it might interest your readers.

**Markus Grou, via email**

**DP says** Thanks Markus – we'll call one in for review for you.



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**Pop music**

Referring to your letter of the month in HFC 355 (February 2012) and subsequent reply by DP. I, too, am seriously impressed by the same things as Mr Green in relation to digital sourced music.

What I'm not so impressed by is the total lack of any mention of the shortcomings of vinyl, either by Mr Green or more importantly by DP. Being in my fifties, I remember all too well the problems of dust, static, fluff, set up, lack of good track selection, scratches, feedback, warped records and poor quality pressings...

I also recall having to decide which side of the album you wanted to listen to; waiting for that scratch you know is coming and all those other niggles that seem, as if by magic, to have disappeared in the last thirty years!

Is the definition of 'realistic nature of sound' now supposed to include background noise, clicks, pops, static, scratches and all of the above? I do not wish to re-ignite any digital /vinyl debate, but in reviews no mention is made of the above or even such mundane things as dust covers on turntables; maybe dust and crud are now better trained?

Digital is continuously lambasted at every opportunity, yet vinyl seems to get away scott free, why is that?

**Alan Pitchford, via email**

**PC says** A man after my own heart! If only hi-res digital were pervasive maybe we could all forget about vinyl!

**TJ says** Different formats have features which are subjectively annoying in different ways. All analogue sources, for example, suffer from background noise and speed instability to some extent and most exhibit a non-flat frequency response, too.

Digital audio claims to solve these problems, but brings additional ones of its

own, namely a specific upper limit to the level of detail that can be recorded (set by the number of bits and the sampling frequency) and with compression-based systems, an arbitrary loss of much of the music data.

When LPs and cassettes were the only realistic domestic formats, it was only natural to dwell on their shortcomings and to hope that new technology would come and eradicate them, but now we can compare both methods side-by-side and see which set of compromises we would prefer to tolerate. For me, it's analogue every time!

**CV says** I usually only have problems with noisy vinyl, when it comes to playing secondhand LPs (properly cleaned first, of course) with unknown provenance (i.e. how well they have been

## Digital is lambasted, yet vinyl seems to get away scott free, why is that?

cared for). So, as long as an LP hasn't been used as a frisbee in a cigarette-smoke infested hovel lined with sandpaper, it shouldn't cause too many problems.

Like all LP lovers I keep my precious vinyl in the best condition possible, usually having bought them new where possible and cleaned, and within good quality anti-static sleeves afterwards. And, I completely refuse to play anyone-else's vinyl with my cartridge to avoid any potential damage to it.

But alas, even the most careful of visual checks to a supposedly clean looking secondhand LP can't always reveal that hidden

scratch or indeed pop. I am not too bothered by just one or two scratches as long as the record plays well and the tonearm doesn't look like it's bouncing on a trampoline. I have only really encountered very high levels of noise from a minority of cartridges, tonearms and phono stages. Dust is a problem and keeping the surface of a record deck clean is a pain, but the rewards are plentiful – like enjoying a slow and relaxing glass of wine after dinner, for some of us, the ritual is worth it!

**ES says** I would agree that vinyl might from time to time get a bit of a free ride but equally, I read some of your comments and wonder if we are talking about the same format! I am by no means a neatness fetishist (as my wife will sadly attest), but I have no difficulty keeping my records free of detritus with nothing more sophisticated than a cleaning brush. Equally, the amount of surface noise I get back from records is negligible.

In return, I am usually treated to a performance that has taken considerable effort on my part to match with digital. That said, you won't find much in the way of vocal criticism of digital from me. The last few years have seen genuine improvements in digital sources at all price points and the rise of the high-resolution download has me very excited, indeed.



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## Relight my fire

Firstly I must congratulate you on a great magazine. It has rekindled my interest in hi-fi once again, and luckily I now have around £4,000 to upgrade my system, which consists of the following: Project RPM 9.1 turntable, Dynavector 10x5 cartridge, Marantz PM7200 amp, Rotel RCD 991 CD player, Ruark Tallysman II speakers, and a Hi-Fi Racks Podium Ref support stand (room size 17x14ft).

I love the analogue sound, rather than digital, so tend to listen to vinyl mostly. My interests in music range from ABBA to modern dance, R&B, etc., so I will need an all-rounder. I am looking to upgrade the amplifier and CD player, plus I will need a phono stage to get the best out of my record player.

I am considering a valve amp, as I used to own an Audio Innovations S500 amp many years ago, including the Prima Luna Prologue II, or the Icon Audio 60 Mk 3 (especially as you can switch it to Triode mode). I am not too concerned about power as I live in a flat, but I need to ensure that the amp has sufficient drive for the speakers. Would it be best to go for a valve-based CD player, such as the Unison Unico CDE, as well? Your recommendations would be much appreciated

**Paul Ginestri, via email**

**ES says** I believe that it is possible to have too much of a good thing with valve-based equipment, so would definitely advocate trying any valve output CD player in conjunction with a valve amplifier. Valve output stages generally exist to obviate the more 'digital' characteristics of CD players. The quality of recent digital hardware makes

this less important than it perhaps once was, so I would not rule out our usual suspects from recent issues like the barnstorming Rega Apollo-R CD player (HFC 356).

If you do want to try valves, my choice would be the fabulous Shanling CD-T2000 (HFC 350), which would partner well with the Icon or the Prima Luna.

**DP says** If it's a tube amp you're after, then the excellent Prima Luna Prologue One is something to consider seriously; it did very well in last month's Blind-listening Group Test (HFC 356) and I spoke very highly of its smooth, creamy, but solid and architectural sound. If it's solid-state, then Roksan's Caspian M2 is a tour-de-force, sounding in

## I am considering a valve amp, as I used to own an Audio Innovations S500

some ways almost more valve-like than the Prologue One! It's got loads of power and grip as you'd expect from a tranny amp, but is quite rich tonally and wonderfully musically lucid; this would be my choice.

Audition the matching Caspian CD player (it's bound to be good), but consider buying a Rega DAC for your Rotel instead. This would be a cheap way to get all your digital sources sounding great. Finally, for a phono stage look to either ANT Audio's Kora 3T SE (solid-state) or Icon Audio's PS2 (tube); these are both absolutely super mid-price designs, the first of which is tighter and tauter, the second being quite a lot sweeter and more expansive.

**Vinyl demand:** SME's M2-9 is a fine tonearm, but works best with moving magnet cartridges, DP reckons...



## Gain stage

I have been reading your magazine for a few months to get an idea on how to configure my first stereo system, which I am planning to purchase next month and keep for many years to come.

My listening area is the living room of my apartment, measuring 5x7m. The speakers that I'm particularly interested in are the PMC FB1 or the new twenty.24, after reading the recent review of the twenty.23 in HFC 354, which is highly rated.

I am also interested in an integrated amplifier, complete with a DAC, to pair with a Dune Max or the Oppo BDP-93. Unfortunately, I can't find a retailer where I can try all of this equipment together.

The integrated amplifiers that I have narrowed down and are available where I live include:

- 1) Bryston B100SST (awesome 20 year warranty with the PMC).
- 2) Naim SuperUniti (not quite a fair comparison, but the streaming capabilities are welcomed).
- 3) Bel Canto C5j (small, but is it powerful enough?)
- 4) Sim Audio I3.3.
- 5) Harman Kardon 990.

In your opinion, which one would bring out the best of the PMC speakers? Please could you also recommend some good-value speaker cables and digital interconnects to go with the system too?

**Gary Tan, via email**

**CV says** Hi Gary, I would look at the Bryston first, as PMC have used them within their active loudspeakers and would form a good match.

In my experience, Bryston amplifiers are enjoyably neutral (i.e. not clinical or too controlling/controlle) and would make for satisfying long-term listening and use. I would also suggest looking into the Moon (Sim Audio) I-3.3 (now named 340i), as this will offer a slightly more characterful sound in comparison to the Bryston, which will provide you

with an interesting choice. I use the original I-3 and it is a very musical integrated with excellent timing—but no DAC.

**ES says** The PMC range does not represent a very difficult load for most modern amplification and the designs you mention would all be capable of the task. PMC clearly feels that Bryston has much to offer its products as it acts as its distributor, but the B100 is the most expensive of the lot.

The Bel Canto could be the ideal candidate, as it has a warmth that would partner well with the PMC, as well as considerable flexibility. Just to muddy the waters still further, don't forget the deeply talented Primare I22 and Leema Pulse III, both of which would also work well and sport digital inputs

## Vinyl demand

I really enjoy the magazine and I would really value your advice as to the upgrade path to focus on with my current system.

I have a Thorens 160B MkII that I bought in timewarp condition. I fitted the SRM tech upgrade kit and had the table completely rebuilt by the wonderful John Chinnock at Godstone Hi-Fi, who installed and aligned my SME M2-9 on an acrylic armboard. The cartridge is a Grado Gold, amplified through an integral MM phono stage in an Exposure 2010S2. Speakers are Neat Motive 3s, while the speaker cable is an Atlas Hyper 2.0 with jumpers of the same.

I purchased the SME arm with the intention of upgrading the table in a few years time to an SME 10, for example. The sound I have in my concrete floor (15x11ft) room is smooth and warm, at times exciting and sufficiently detailed to keep me listening to album after album. Bass extension is limited from the speakers, but as I live in a flat it's a compromise anyway. I don't want to lose the warm sound completely, but would like greater separation, a wider and deeper soundstage and more excitement!



So the question is, would I take a night and day step with something like an Ortofon 2M Black or would I need to go further towards maybe a Musicmaker Moving Iron cartridge? Or would I be better investing in a stand-alone phono stage, one with MC capability, and ultimately an MC cart to use with the auxiliary input on the Exposure? And if so, would the MM Icon Audio PS2 be a positive solution with the opportunity to add a step up later? Or a power amp for the Exposure?

Subjectivity aside, I would value your insights as to the best way to spend my hard-earned cash to build on what I have!

**Steve Howe, via email**

**DP says** *The fact that you've got an SME M2-9 tells me that you're not going to get too far down the moving-coil cartridge road. It's a fine arm, but it suits moving-magnet cartridges better, in my experience. Whereas, if you're serious about MCs, it's time to buy a 309. So, the question then becomes which MM, and which phono stage. My preference would be the Ortofon 2M Black,*

## Would I be better investing in a stand-alone phono stage with MC capability?

*which has a wonderfully clean, clear and open sound with great swathes of detail. The Music Maker is more foggy and diffuse in my view, although it is more romantic and fluid across the midband rhythmically. I'd still say go for the Ortofon and partner it with the Icon Audio PS2, which would be a great synergistic match. When you've got this far, come back to us for your next upgrading advice.*

### Warm words

My system (Audiolab 8000CD CD player, 8000Q preamp 8000 mono amp, Monitor Audio RS1 speakers, QED silver anniversary speaker cable, Audioquest interconnect, Technics SL 1200 MkII turntable and Atacama stands) can sound bright with certain CDs, so I'm looking at possibly a deeper, smoother budget floorstanding loudspeaker. Or, as funds are tight, should I just change the speaker cable

**Warm words: Q Acoustics 2050i loudspeakers will give a smooth, wide sound for surprisingly little cash...**



and upgrade the speaker stands?  
**Jason Hall, via email**

**ES says** *I The smooth, rich sounding Q Acoustics 2050i floorstanders are a great idea, and will certainly be smoother than your current RS1s. But in your position, I suspect that the fundamentally lean sound of the 8000 pre and monoblocks will still imprint their character on any loudspeakers, and probably over-match any tonal changes from cabling or supports.*

*So by all means, make the move but don't be surprised if it's only half of what you want; ultimately you'll have to investigate warmer amplification such as Roksan's*

*Caspian M2 integrated, which will be a dramatic step-change upwards, I think.*

### Small talk

I would like to buy a compact system for the bedroom, so that I can listen to music through my Sennheiser HD 650 headphones. I want to source this system by losslessly ripping my CD collection to a hard drive. Access to FM or Internet radio would be nice, but is not essential.

The Cocktail Audio X10 seems to fit the bill well, which I could use to feed a quality DAC/headphone amp such as the Audiolab M-DAC. Would this system feed the headphones as well as my

Cambridge Audio 840C/Creek OBH-21 SE? And if not, what alternative would you recommend?

A one-box system would be preferred – two boxes would be okay, but not more. My budget is up to £1,500.

**Dave Houghton, via email**

**CV says** *Hi Dave, I can suggest one simple, but very worthwhile upgrade in the form of the Cardas Headphone Cable for the HD650. These cables make a very musical step-up by improving the timing and resolution of the Sennheisers which in standard form can sound a bit sluggish – this combination works superbly with the Creek OBH-21 SE. You can check on [www.audioreaks.co.uk](http://www.audioreaks.co.uk)*

## I would like to buy a compact system for the bedroom, so that I can listen to music

*cardas.com for more details and also with the UK distributor at [www.audioreaks.co.uk](http://www.audioreaks.co.uk)*

**DP says** *My choice would be the Arcam Solo Mini. To my ears this is one of the very best sounding (and most elegant) small systems, and drives the HD650s very well. You could feed it with the likes of a Cambridge NP30 stream, to play out your music files off your NAS drive. Alternatively you could add an Arcam rDAC and play off your computer via the rDAC's excellent asynchronous USB input.*



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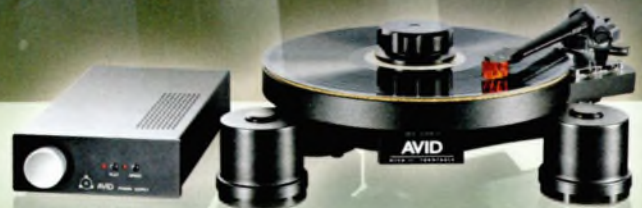
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### Missing link

I was a little surprised to read in *HFC* 355, *Blind-listening Group Test*, p33, that there is no way to connect the Myriad Mi one-box system to a computer. Using one of the TOSlink digital inputs with a UCA222 Behringer USB interface, for example, would elegantly solve the problem of getting a digital throughput to the Myriad Mi unit from a laptop or PC holding the desired music files.

**Nathan Gricks, via email**

**ES says** *Hi Nathan, I agree that there are various solutions for connecting the Myriad, but the test had to compare it against devices that can offer this solution without requiring additional equipment, and our commentary reflected this.*



PICTURE COURTESY OF APPLE

### Tape head

I prefer cassette portables to MP3s, due to a richer, warmer, more organic sound. The only real drawback is due to interference from mobile phones, which is annoying!

**Graham Patterson, via email**

**ES says** *As the person almost certainly listening to that mobile phone, I'm very sorry, but I'm certainly not switching it off for eighties throwbacks!*

**DP says** *How dare you Mr Selley, sir? My Walkman Pro versus your iPhone at dawn. Lock and load!*

### Digital denier?

In addition to reading hi-fi magazines such as yours, I also read a computer magazine. In the latest issue, there is a letter from a reader about digitally downloaded music, in which he asks if he can sell the digital files that he has paid for, but does not now wish to keep. He mentions that he can of course legally sell his unwanted CDs, DVDs, tapes or indeed, books. The law allows an 'original' of something to be resold. But digital downloads have no physical presence and are viewed in law as a 'copy of an original', so cannot be resold. Indeed, the only way they could be resold is for the hardware that they are stored on to be sold with them! And even this could break the terms and conditions of contract. So digital downloads appear to have no second-hand value at all, under current law.

This doesn't bother me in the least, as I *only* want music on physical media and will never buy downloads! So, 'old, dead' CDs and LPs, or even tapes are fine for me; as long as I can buy them! When I can't anymore, I'll stop buying music altogether. Is that what the music industry wants? No, actually what the greedy entertainment industry really wants is for us to pay every time we play a track or album. They would love to have downloads that expire after a given time, so we would have to re-buy them!

**Rod Theobald, via email**

**DP says** *Hmmm, controversial! I take your point but I think you have to look at it in the round, Ron. The music industry is facing an assault on its traditional revenue stream, and its response is to try to figure out a way ahead, which is fair enough.*

*If we didn't buy music (CDs, downloads or whatever), there would be a vast array of musical talent we'd simply never be able to hear. So they do – at their best – have a real chance to act as a force for good. At their worst, well the less said the better about X Factor! So I'm not sure if it's fair to call them 'greedy'; in some ways yes, but then again this is the same business that brought us the mighty Beatles, Stones, Who, Led Zeppelin, etc.*

*As for formats, digital downloads are all the rage, but they're not compulsory; many people (myself include) still prefer a hard copy; others like Patrick Cleasby simply don't give a hoot not to have one; he once described himself as "a death of physical media kind of guy"! Each unto their own, I say.*

*Frankly I'll be sticking with vinyl for serious listening, CD for general listening and cassette for in-car use for a while to come. I've got quite a lot of music on hard drive, but listen to it mostly via my ageing Sony NW-A818 digital portable, and it sounds fine. But maybe the best value format right now is a well-preserved pre-recorded cassette from a second-hand shop, for around 50p a pop? As Oscar Wilde once said, "I can resist anything except temptation"!*

### Back to black

I am a little disconcerted about all the coverage of digital in your magazine. While I think *Hi-Fi Choice* is generally a very good publication, I do think there is a bit too much unquestioning faith in the medium; it's almost as if you've reached a settled view that digital is good, desirable and almost an end in itself. It reminds me of the topic of climate change, where one side is trying to assert that the debate is over and that there's nothing to discuss, investigate or research any longer. For the want of a better expression, I find this sort of thing to be a bit fascistic.

Digital audio, let's not forget, came about not as the automatic answer to the world's audiophile

it was good enough to tell you how impressive those early digital recordings were?

When CD arrived those immortal Philips words, "pure perfect sound forever" appeared, and we still remember them today. In the great pantheon of advertising, that's nearly as memorable as Murray Walker's "A Mars a day helps you work, rest and play"! Then DAT appeared and that was better, then HDCD appeared and that was better, then SACD and DVD-Audio, and they were all better, too. Just shows how daft that original Philips catchphrase was, and illustrates my point about marketing.

Now, of course, network music is all rage, and all the hi-fi magazines are falling over themselves to cover it. The message seems to be that it's all amazing and wonderful, and the way the world is going. Well I've tried a few of these (friends of mine have 'invested' in them) and I have come to two conclusions:

First, the ownership experience of these networked black box devices is a sullen and depressing one. Hardware conflicts, software conflicts, router woes, playback glitches, frustrating delays as you tell the darned thing to play and then it has to think about it for five minutes, then crashes – you get the picture?

Second, that much vaunted 24-bit/192kHz capability is a nonsense. There are hardly any 24/192 files around anyway, and half of those have been upsampled from 24/96 anyway (if what some say is true). And those that are, *Jazz at the Pawnshop*-type recordings, for example, no one wants. Third, the sound of 24/192 (or 24/96) still isn't a patch on a half decent turntable. If it's hi res you want, then there are about a trillion LPs out there, often selling for pennies, and they'll give better sound than a fancy router.

So I'd implore you to take vinyl more seriously, and give more coverage to good old black plastic. Digital is okay but it's not the best way to listen to music, even in the flavour of the month networked 24/192 hi res form. Let's all go back to black!

**Robin Gillard, via email**

**DP says** *Hi Robin – good points, all. From a personal point of view, I still do the bulk of my listening on vinyl. It is, in so many cases, a higher resolution format than CD.*

### If it's hi-res you want, then there are about a trillion LPs out there...

problems, but because it was a new consumer technology the big companies saw a way of making more money.

In saying this I am admitting my age, but I still haven't forgotten the hype around those early Denon PCM recordings of classical music, proudly heralded in magazines such as *Gramophone* in the nineteen seventies, which had everyone talking. The point being, of course, that at the time the only way of listening to digital recordings was via an LP pressing. If analogue was so bad, how come



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*Audio Beat Jan 09 2012 an article by Roy Gregory*

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Indeed I like demonstrating (to my friends), a Steely Dan track of mine on CD, then an SACD, then finally on LP. The fun is that they can all hear how much better the SACD is over the CD, but when we go to vinyl they invariably prepare themselves for the sound to get worse, not better as it actually does. So you'll get no argument there from me.

However, just because vinyl still delivers the sonic goods, usual caveats applying (properly set up, decent pressings, etc.), that doesn't mean we should ignore the onward march of digital.

Indeed, yours truly has spent the last twenty years moaning in print about how inadequate CD was as a high-end music replay source, so it would be ridiculous of me now to be scathing of hi-res via network music players.

Compact Disc, in my view, is a fine music carrier; indeed now it's days are numbered I've all of a sudden become quite nostalgic. But it was always meant to be a good sounding, mass market format with convenience and durability as key considerations. However, if you look at the vinyl LP, it doesn't do so well on those last two scores.

You're right to say that a lot of network music playing is buggy and glitchy and sometimes fiddly to set up; anything that involves a computer network invites trouble! But most people, once they've got the system working, tend to find it's perfectly useable. The biggest downside for me is that lack of physical media; I for one still love that ritual of slotting a silver disc into a machine, or dropping a black one on to it.

Hi-Fi Choice will continue to cover networked audio; it's where the world is going. But there will always be a place in our heart for vinyl, and indeed a very large place in my house to store them.

**Steely Dan, a fave demo disc for DP on CD, SACD and vinyl...**



## LETTER OF THE MONTH

PRIZE WINNER!



**I READ BACK CHAT, WE HEAR...** (p130, HFC356) and I have to say I sympathise with what the Cambridge Audio staff are saying. I am not new to networks (but I'm far from an expert), and wanting to set up a streaming server to my hi-fi made me bite the bullet and purchase a Marantz NA7004 (due to the new low price) and a Synology DS212j NAS for storage.

I had already purchased dBpoweramp for the purpose of ripping, and the CDs I had started were stored on my PC. After initial set up and a weekend of copying my collection to the NAS, I tried to get the two devices to talk to each other, but they wouldn't!

After reading through the Synology forums 'media server/file sharing', it seems the NAS likes to run for so long (around 30 mins) then hibernate. I turned off HDD hibernation, but this did nothing as far as my problem goes.

The only way for these two to play nicely together is to turn them both on at the same time, then select 'music server' on the Marantz. If you then leave the system looking at your media files it will play them indefinitely, the minute you navigate away to, say the internet radio, you lose the option to view the NAS. Another restart is then required. I have tried all the normal network fixes, I have removed everything from the network except the Marantz, NAS and the router...

This situation reminds me of when they started selling routers in PC World as a plug and play device (your normal household didn't have somebody who could set up a Firewall and port forwarding). It seems to me that UPnP isn't yet good enough (or not implemented well enough) for the devices to be simply plugged in and left to 'play' with each other just yet, sadly! ●

**Mick McClennon, via email**

**DP says** You have my sympathy, Mick. You and an awful lot of other people who are having similar problems. The truth is that there are all kinds of issues that cause some home networks and/or routers to go wobbly, and it's very difficult to get to the bottom of such things without a PhD in digital systems and/or a day spent on the manufacturer's helpline. It's early days yet, and networked music isn't always quite as easy as it promises to be. That's why it's all the more important to find a good dealer who can help.

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# Blind leading the deaf?

The politics of group listening tests have divided audiophiles over the years. **David Price** shares his thoughts...

One of the greatest debates to rage in audiophile circles is over blind-listening tests. Internet audio forums are full of outspoken arguments about their respective rights and wrongs, with people taking surprisingly extreme positions on either side, it seems. Either they're the only way of ever getting an accurate assessment of a piece of kit, or a ridiculous sham with the appearance of neutrality, yet none of the practice...

Why were blind tests conceived in the first place? Well, I think it's fair to say that people have favourite brands. Certain folk like certain types of product, always have done, always will. Also, the prices and/or look of a product can sway people's judgement, at least subconsciously. If the product listening is done blind however, no one knows what to expect, and suddenly people are at the mercy of their ears, and not their brand preconceptions – that's the theory anyway.

Fair enough, but detractors would argue that they're hardly exhaustive. After all, how can you reliably get the feel for a bit of kit if it's only heard for a relatively short time? Aren't you supposed to go home and live with the product(s) for weeks on end, set them up meticulously and give your all to find their innermost secrets? After all, you'd hardly take a new Ferrari sports car for a first gear crawl around the nearest housing estate for five minutes before making a definitive buying decision, would you?

## Profound differences

Having done countless single-person sighted group tests over the years, and now also regularly doing them blind, I feel I can finally speak with some authority on the subject. My traditional objections to blind tests were always the aforementioned ones; they don't let you get right into the soul of the product, in the way that a long, protracted conventional review might. But as is so often the case, the theory isn't as important as the practice – and if the blind test is done carefully, it can prove something of a revelation.

The accuracy of the results, I've found, is more down to the quality of preparation than the actual type of test conducted. You can get reliable results from sighted tests done properly, and so too with blind listening panels – providing of course that they're properly conducted. But what the latter can do that the former can't however, is remove any preconceptions from the review process.

I must say that, impartial as I like to think I am (I realise I may be alone in that conceit), I'm already finding myself surprised by some brands doing well that frankly I'd thought – with twenty years subjective reviewing experience – wouldn't...

All this has led me to conclude that sweeping statements for or against blind listening tests are about as useful as Mrs. Merton's fatuous 'heated debates' (remember Caroline Aherne's comic character from the nineteen nineties?) The answer is, of course, it ain't what you do, it's the way that you do it.

It's perfectly possible to run a chaotic blind test, one that has the listening panel confused and spooked. Having just run a blind test for this issue, and having been on the panel in the last, I can see how easy it is to do things wrong.

That didn't happen of course, thanks to meticulous pre-planning and helpful advice from veteran *Hi-Fi Choice* blind-test panelists from the nineteen eighties. They helped me get everything spot on; the music, the mood, the system and the levels. I used a high-end multimeter to measure the AC voltage of the loudspeaker terminals, while playing a test tone every time a product was changed, to ensure we got exactly the same output from each source. We subsequently ran through six DACs with five pieces of music, and all heard profound differences.

If you're not convinced about the efficacy of blind tests, then why not try one for yourself? Get some friends to bring around some kit, and appoint one of them as the 'director', swapping the sources around. Structure it carefully and level-match each source as you swap them. Give everyone pens and paper to write down their findings. Compare notes at the end of each session, and then crack open a bottle of vino at the end as you discuss your findings. It might surprise you, just like it did me. Indeed you may even be amazed by what it was that was making such a nice noise behind you!



Sweeping statements for or against blind listening tests are useless – the answer is of course that it ain't what you do, it's the way that you do it...



**DAVID PRICE**  
Audiophile, record collector and  
*Hi-Fi Choice* editor

## WHAT DO YOU THINK?

Ever tried your own blind listening tests?  
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# Full service mystery

How easy is it to get your precious hi-fi kit repaired these days?

**Richard Black** talks modern machine maintenance...

**A**fter a couple of days spent fixing various older bits of hi-fi for myself and friends, it's made me reflect on the changes in serviceability of equipment over the years. Plenty of audio equipment from the 1960s, even the 1950s (and in some cases well before World War 2), is still going strong and, subject to availability of a few critical parts, can be kept going almost for ever. Will the same be true of today's equipment in 2062?

There is an undeniable trend in modern electronics, and indeed mechanical equipment too, towards increased difficulty of repair. Extreme examples turn up, such as the car which apparently needs a two-hour strip-down to replace a headlamp bulb. Even neglecting such eyebrow-raisers, a cursory comparison between a Leak valve amp of the 1960s and a current Arcam, say, will show even the least technically-minded why the former is likely to be easier to fix. There are simply far fewer components in there, and they are all easily accessible and replaceable.

I know whereof I speak here: I've worked on so many Leak amplifiers over the years that at one time I reckoned I could fix some of the models with my eyes shut (perhaps not wise, mind you, with killer voltages present). But it's a not insignificant point that a lot of them needed fixing. Again, this is a general trend. Modern devices simply don't need as much repairing as older ones did. Think back, if you're old enough, to cars of the nineteen sixties and seventies. You just expected that the odd thing would go wrong, but it was likely to be something that meant you could still limp to a garage, or fix at the roadside with minimal tools and parts...

On the other hand, today's breakdowns seem more likely to be absolute and, to the unskilled, completely baffling. To keep our Leak example, an output valve failure wouldn't necessarily be heard immediately, but maximum power without distortion would be considerably

reduced and, on inspection, one would quickly spot that one valve looked all wrong – misty on the inside of the glass and possibly cracked. Many modern amps have sophisticated protection circuits which, on detecting a fault condition, will cause a complete shutdown, so you've no idea what's up.

## Testing 1,2,3...

Similar comparisons can be made between LP and CD players. If the former stops working properly, it's likely to take nothing more than visual inspection and a little common sense to work out what's wrong. With CD, on the other hand, one needs several grands'-worth of test equipment to diagnose all but the simplest failures. And never mind diagnosis, repair is not a simple matter on modern circuit boards full of surface-mounted components, so small that removing and replacing them is a feat beyond the patience of most repairers.

But components themselves are getting more reliable as the years go by, and assemblies of them are also generally very reliable due to high levels of automation in assembly and testing. Protection circuits help, and the use of computer-aided design allows designers to simulate and thereby mitigate various kinds of fault and distress conditions (short circuits, high temperatures, etc.) before any hardware is built.

My own experience suggests that an increasing proportion of faults are caused by the simplest things, very often connectors, sensors and anything with electrical contacts such as switches, relays and mechanical volume controls. These usually aren't too hard to find and replace, and the increased reliability of the core of most electronic devices should, I reckon, help make today's equipment just as long-lasting as any. Frankly, the biggest enemy of that is simply the consumer mentality of "oh, it's broken, let's throw it away". That may be appropriate to a £50 ghetto-blaster, but decent hi-fi can still offer an impressive life expectancy.

Many modern amps have sophisticated protection circuits which, on detecting a fault condition, will cause a complete shutdown, so you've no idea what's going on...



**RICHARD BLACK**  
Prolific musician, talented recording engineer and experienced reviewer

## WHAT DO YOU THINK?

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# Alright on the night

**Jimmy Hughes** ponders the art of building a system that gives great results, whatever it's asked to do...

**Y**ou're not singing any more... The jazz trumpeter and band leader Harry James used to say he never compared bands – only nights. In other words, great musical performances are partly a question of luck – of everything being 'right' on a certain evening. A squad of players might well perform gloriously one night, and then badly the next.

Twenty or so years ago, Harry James' words more or less summed up my feelings about the way most hi-fi systems performed – mine included. On form, things could sound amazing and inspiring. But there'd also be nights when the sound would seem thick, leaden, and anything but inspiring. Very frustrating...

It's a bit like football. Premier League clubs can play brilliantly in the Champion's league midweek, holding their own against the likes of Barca or Real, only to lose 3-0 against Scunthorpe in the Carling Cup come Saturday. Players, who looked skilful a few days earlier, suddenly seem slow and unable to perform.

There's a lesson in this. When I think back to the way my hi-fi systems from the distant past sounded, they were good at the delicate intricate stuff – excelling in terms of refinement, finesse, and dynamic contrasts. Unfortunately, performance was much less good when reproducing recordings deficient in these key qualities...

In football parlance, my hi-fi was no good at Winning Ugly. When a highly skilled team gets beaten by one much less skilful, it's usually because the physicality of the less skilful team stops the superior team from performing at their best. Skilful players are hustled and harried, and prevented from settling. In much the same way, a rough, noisy, congested recording stops many a hi-fi system dead in its tracks. The end-result is musically unsatisfying because you mostly hear what's wrong with the recording, not what's right with it. What's needed is a means of containing the bad things, while maximising the good...

## Good against bad

A really well-adjusted hi-fi system enables hidden attributes to surface – even when reproducing technically 'poor' recordings. It does this by being unfazed by the bad things (noise, distortion, lack of frequency range, lack of separation), while making sure that any positive attributes are brought to the fore. This doesn't necessarily mean that faults are glossed over or hidden. Rather, it's about achieving a balance of good against bad. If there's enough 'good' in the

sound, the 'bad' has much less effect on your enjoyment of the music. It's like a football team with a solid defence that scores goals given the slightest opportunity.

Since the early nineteen nineties, the nucleus of my system hasn't changed much. I still have the same loudspeakers, for example. Yet the sound has changed dramatically. Hopefully, music that requires delicacy and subtle tonality is still reproduced accurately, but technically 'poor' recordings no longer cause the problems they once did.

While it's not easy to say exactly how all this has come about, it definitely isn't down to a couple of astute/lucky changes, or the result of buying one or two 'star' players. Rather, it's been achieved through a considerable number of small, but significant number of improvements, leading to a profound change overall. I've tried to select individual components that work well together as a team in order to create a result greater than the sum-of-the-parts. By real high-end standards, nothing I use is particularly outstanding. There are no obvious 'stars' to speak of. Yet the end result is (I think) pretty good.

It's the sonic equivalent of a football squad that plays cohesively, regardless of individual skills. When the going gets tough, it hunkers down, keeps its shape, and grinds out a result. The sound is impressive on recordings of outstanding technical quality, yet there's no panic or collapse given something less good.

Of course, you can always castigate 'poor quality recordings' when your hi-fi fails to please – and many enthusiasts do. But that's like a football manager blaming the pitch when his team loses a match they ought to have won! The state of the pitch may not have helped, but it was the players' inability to cope that led to defeat.



You can always castigate 'poor quality recordings' when your hi-fi fails to please. But that's like a football manager blaming the pitch when his team loses a match they ought to have won!



**JIMMY HUGHES**  
Classical music buff, sage audiophile and hi-fi reviewer of four decades standing

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# Freaking out

**Channa Vithana** delves into the musical delights of famed producer and guitarist Nile Rodgers...

I have just finished reading *Le Freak*, the superb autobiography of Nile Rodgers, who may have come to your attention as one of the creative musical forces behind the hugely popular seventies disco band Chic, and latterly as a highly successful record producer.

I had known most of his musical output prior to reading the book and although definitely a fan was a little cautious, as having just recovered from the brilliant *Life* by Keith Richards, and still reeling from the sheer decadence of *The Dirt* by Motley Crüe, I wasn't sure if I was ready to absorb more *outré* celebrity stories segued between tales of classic albums. Fortunately, if you are prepared for a good read and even if you are familiar with the music, possibly little can prepare you for his early childhood experiences which combine the shocking and hilarious with epic ease.

The work that Nile Rodgers and his late, long-time musical partner Bernard 'Nard' Edwards contributed to the face of popular music cannot be underestimated, as Rodgers (guitar) and Edwards (bass), along with Tony Thomson (drums) formed what I consider to be one of the finest rhythm sections in popular recorded music – those grooves are truly infectious. Their rhythms are not merely 'tight' – lots of good bands who can play can do that – rather they form music that is transcendent in the way a song is propulsive, swells and moves along, whatever the genre.

## Like a virgin

Chic was primarily a disco group, and very successful commercially, too. However, Nile Rodgers and Bernard Edwards also produced the commercial and critical successes for Sister Sledge and the comeback hit album *Diana* (1980) by Diana Ross – a move away from disco into more pop territory. Rodgers subsequently worked as a producer on the biggest selling albums so far by David Bowie – *Let's Dance* (1983) and Madonna's *Like a Virgin* (1984). In *Le Freak*, Rodgers intimates that he was at his best when both artist and himself had their backs against the wall – where both Bowie and Rodgers didn't have a record deal when they made the rock-pop crossover *Let's Dance* and that Madonna was just a moderately successful, but still very upcoming singer who funded the game-changing recording of *Like a Virgin* (that would subsequently transform her into a megastar) with her own money – so the pressure was on!

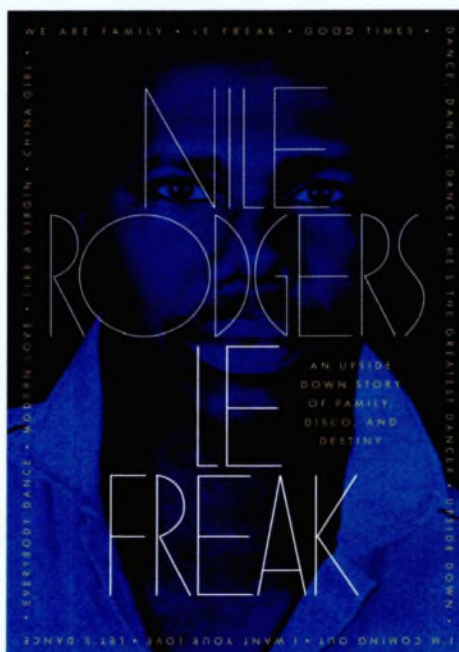
I adore these artists; particularly their albums recorded with Rodgers, because they each have

an innate musicality that I keep returning to. If you want to appreciate bass for more than just low-frequencies, then I would suggest listening to the Chic, Diana Ross and (yes, really) the Madonna albums. If you want to know how rhythm can be more than patterns of backing beats, then listen carefully to when Rodgers and Edwards play – it's like the light and shade in music. Rodgers' rhythm guitar parts artfully slice through the mix to form a great propulsive impetus, while the otherworldly, multifaceted bass lines of Edwards follow with sheer delight.

You may scoff at the inclusion of *Like a Virgin*, but it remains a favourite test album as Madonna's vocals are quite different to her deeper, more varied, multi-layered techniques used in later albums, and are difficult to reproduce without sounding bizarre – indeed in *Le Freak* Rodgers describes the difficulty he had with a very determined Madonna insistent on recording the title track in those familiar high-pitched vocals.

Nile Rodgers is an inspiration, and is a favourite amongst guitarists like Johnny Marr and Bernard Sumner (New Order). Put some of his music on next time you listen to your system – perhaps the second Bowie comeback album (*Black Tie White Noise*, 1993)? Or how about the zippy title track to *Cosmic Thing* by the B-52s? His music simply delights, and if your system is half decent it will, too!

Nile Rodgers is an inspiration, and a favourite among guitarists... His music simply delights, and if your system is half-decent, it will too!



CHANNA VITHANA  
Reviewer, design aficionado and music fan

## WHAT DO YOU THINK?

Nile Rodgers; sublime exponent of his art or overrated prima donna?  
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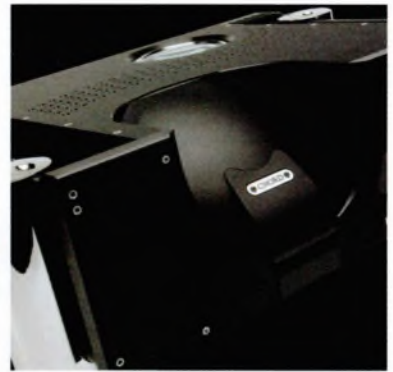
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# Silver dream machines

For **Tim Jarman** the demise of the CD is bad news. He waxes lyrical over the diminutive silver disc on its thirtieth anniversary...

**T**he year is young, and still full of mystery. I'm currently wondering to myself what the most important thing is that could happen in 2012? Perhaps it's the very sad end of UHF analogue TV transmissions in the UK, something that doesn't improve the sum total of humanity one iota in my view. Or what about those wretched Olympic games – call me a grouch but I'm not enormously enthused by the prospect of thousands of people running around in circles for pieces of gold, silver and bronze, in some recently rebuilt part of London. No, for me, the watershed moment is surely the thirtieth anniversary of the Compact Disc, that most versatile and still strangely futuristic audio format!

Let's not forget, back in 1982 CD was *astounding*. A combination of the expertise in laser optics that Philips had built up during the Laservision video disc project, and Sony's mastery of Denon's PCM digital audio system gave it technical integrity by the bucketload and the gleaming holographic surface of the amazingly small discs lent it dramatic visual appeal. The industry's reaction was predictable, joy by those who could make the machines, and who therefore saw a huge market opening up in front of them, and horror by those who couldn't and could now see the writing on the wall for the turntable as a mass-produced object.

Compact Disc was where hi-fi turned professional; the technology was just too exacting for those without massive budgets to jump on board, until the arrival of completely engineered OEM packages from Philips and latterly cheap CD-ROM drives which could be screwed into fancy boxes.

A Philips CD100, the first player to be available in the UK, is one of my most treasured possessions and the fact that it still works perfectly is a testament to the care with which these early machines were built. In sound quality terms it still has much to offer; in some strange way these early 14bit, 4 times oversampling models offer a more natural and pleasurable digital experience than the upsampled 32-bit DACs of today.

## Red Book CD

So what are CD's real limitations? Well, controversially perhaps, I'm yet to be convinced that 16-bit is not enough; schoolboy mathematics reveals that each digital step in this domain is 43 micro volts or 0.0015 per cent of the nominal 2V RMS maximum output that CD players provide. Go much beyond that and whatever you achieve is lost below the noise

floor of the rest of the recording and replay process. A more serious problem is the low sampling rate; 44.1kHz to produce a 20kHz-wide audio spectrum is hardly generous but even these speeds, along with the volume of digital data which they generated, really pushed the limits of the digital technology of the early nineteen eighties. Sampling rates are always a compromise and we are still nowhere near the ideal of equal temporal and amplitude resolution per cycle at the highest frequency of interest. To do this for a 16-bit system, it would require a sampling rate of 1.3GHz!

Had the control of the Red Book CD standard been in my hands all those years ago, I'd have suggested that the next step should have been a 16-bit system with a basic sampling rate of something like 176.4kHz (e.g. four times more than 44.1), thus maintaining the possibility of a system which was at least in part compatible with the massive amount of CD hardware that exists today, rather than the diversions and commercial blind alleys that were DVD Audio and SACD, interesting as they were...

Yes, I know it's unfashionable to say such things, but even after three decades, CD is still something of a 'gold standard' in audio. Yes there is higher resolution material available to download but this remains very much a minority activity, the 256kbps compressed format which iTunes Match offers is more likely to become the norm with the great majority of listeners for the next few years at least. Who'd have thought in the early nineteen nineties, when audiophiles were screaming for higher quality digital formats than CD could offer, that the next major move would actually be lower fi, not higher?

So, far from being outmoded, it seems that Compact Disc is still more than good enough for the *average* music consumer. It just goes to show what an amazing piece of work it was. I for one most certainly will not be moving *en masse* to digital downloads just yet.



The most important thing in 2012 is surely the thirtieth anniversary of the Compact Disc, that most versatile and still strangely futuristic audio format!



**TIM JARMAN**

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

## WHAT DO YOU THINK?

CD – good riddance to bad rubbish or digital's finest hour?  
[letters@hifichoice.co.uk](mailto:letters@hifichoice.co.uk)

# Pink Linnkage

There's no shortage of Linn Sondek modification packages these days, but Pink Triangle's Pink Linnk was both the original and one of the best, argues **Malcolm Steward...**

**B**ack in their heyday, turntables were highly political items, telling you much – though not necessarily the entire truth – about the character of their makers, owners and users. In 1990 the Linn Sondek LP12 with its Valhalla power supply board was the market leader in UK high-end terms, outselling all competitors including the diametrically opposed – politically, philosophically and in engineering terms – Pink Triangle.

It's fair to say that neither company was – outwardly, at least – respectful towards the other, and the likelihood of any co-operation or joint venture-style operations between them or their products seemed so unlikely as to be completely off even the maddest radar. No one anticipated or expected the surprise that was waiting around the corner, or how audacious that surprise would be...

In November 1990 Linn released an upgrade for the LP12 – the external Lingo power supply. This was expensive, raising the price of an afromosia finished deck from £598 to £1,084. As such it truly was a major upgrade, elevating the performance of the Valhalla LP12 to a significantly higher level, and enabling 45rpm operation electronically without any need for the inconvenient spindle-sleeve, which needed the platter removing to fit it just so that one could play 45rpm discs.

The onboard Valhalla circuitry used to take the raw mains input, boost it, clean it, then reduce it to power the turntable motor. Although the motor supply was 'cleaned' it remained susceptible to fluctuations in the mains input. The motor feed could swing upwards by as much as 3 Volts,

and at subsonic frequencies electrical garbage could pass through unfiltered to disturb the motor. Similarly beat frequency on the mains could reach the motor. The Valhalla supply offered a large improvement over the basic circuitry it replaced, but did not provide solutions to all the problems of driving the deck consistently.

The Lingo supply addressed these problems, and a few more besides. Its two amplifiers were DC coupled to the turntable motor which – unlike those in Valhalla decks – now had both its phases actively driven. The feed to the motor was still at 50Hz but the drive voltage had been lowered from 80 Volts to 60 Volts. As with the Linn Axis turntable, the start-up voltage was higher in order to get the platter rotating, but once that had been accomplished the voltage dropped back to a lower level. That was a double-edged sword; the lower voltage meant less motor vibration was fed into the turntable system, but it also meant that the system was more vulnerable to external vibration influencing the platter drive. To resolve this compromise, listening tests played the deciding role in selecting what voltage was finally used.

## The missing linnk

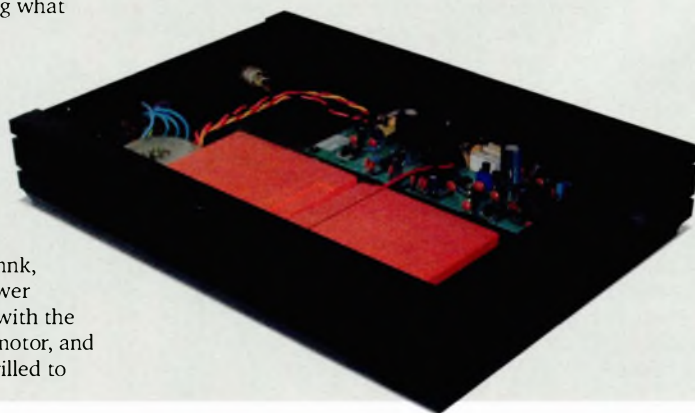
Quietly, and shortly after the arrival of the Linn Lingo, another external power supply kit arrived for the Sondek, this time from Linn's arch rivals Pink Triangle. Called the Pink Linnk, this consisted of a FACE power supply similar to that used with the PT Too, a replacement DC motor, and a stainless steel top plate drilled to

reposition the motor. The FACE supply fed the motor with a low distortion voltage, which was isolated from the vagaries of the mains by a transformer and a battery pack. In effect, the battery was charging off the mains when the supply was switched off, and, when it was switched on, the battery ceased charging and powered the turntable. Like the Lingo, the FACE also supported 45rpm without any need to fit an adaptor to the motor spindle.

The reason for repositioning the motor, explained Pink Triangle, was that motor vibration entered the platter through the drive belt and, in the conventionally arranged LP12, that vibration travelled across the platter at right angles to the pickup cartridge, causing it to produce an output. In the Pink Linnk, any vibration travelled through the system along a vector parallel to the cartridge, resulting in no side to side motion being introduced into the stylus assembly. So, there was no spurious output from the cartridge.

Since the start of the 1990s, Linn has produced a number of upgrades to the LP12, but two decades ago the Lingo was the bleeding edge option,

**The FACE battery power supply was an integral part of the Pink Linnk package...**







the *ne plus ultra*. The Pink Linnk kit tried to make the LP12 perform better in those areas in which it excelled – Pink Triangle was adamant that it never wanted to Pinkify the Linn, reasoning that if you preferred the way the PT sounded then you would buy a PT turntable rather than an LP12. In my view, the Pink Linnk succeeded magnificently.

### Sound advice

I had both turntables at home simultaneously for a month or more for comparison. I fitted both with arm pillars for the Naim Aro unipivot that was my reference tonearm then, which enabled me quickly to swap the same armtube and cartridge between the decks to facilitate comparisons. I used two such armtubes, one fitted with my then regular Linn Troika cartridge, and another sporting a Kiseki Blackheart.

From the outset, the differences between the two decks and the Valhalla LP12, which preceded the Lingo, were readily apparent. For instance, both Pink Linnk and Lingo extracted a great deal more information from the turntable than had been heard before. Both extended its dynamic register markedly over the former standard. But the manner in which the two upgrades performed these feats differed. And there were other often subtle differences in presentation, which were nonetheless significant.

I had, for example, recently acquired a second-hand copy of the Free album *Fire and Water*; I had wanted an original 1970 pressing but had to settle for a reissue vintage copy released to celebrate an Island Records anniversary. I was disappointed with the album's sound on the Valhalla deck. It lacked the sparkle and vitality of the earlier pressing I had once owned. The second-hand copy also exhibited a fair degree of surface noise.

Played on the Lingo LP12 the album showed a marked

improvement in terms of 'cleanliness', resulting in the exposure of more musical information, detail, and dynamics. But still I wasn't satisfied. Enter the Pink Linnk stage left, to the accompaniment of "Oh I Wept"! From the outset of this track the deck sounded more vital and dynamic – not in terms of extremes of dynamic scale but in its gradation of amplitude levels. Silence, for example, appeared to be more silent.

To make a comparison to digital systems, the Pink Linnk seemed to be operating with more bits than the Lingo, allowing it finer resolution of subtle inflections and nuances in the music. It also appeared to be getting more information off the record. This

Overall sound was larger, more muscular and solidly rooted...

manifested itself in subtle ways – drum kit had a greater sense of fullness and richer timbre, and instruments had more sense of space around them. The overall performance seemed larger, more muscular and solidly rooted. Paul Rodgers' voice was more expressive than on the Lingo, and the track as a whole had more of a persuasive emotional flow; highs and lows were more dramatic, creating greater contrast between the extremes of tension and release.

Ultimately, some time after having delivered this bombshell, Pink Triangle ceased trading and, a few years later, co-founder and chief designer, Arthur Khoubessarian

A new top plate with repositioned motor mounting, was the most striking visual difference to standard...

### OTHER LP12 UPGRADES

Perhaps the best known popular alternative to either of the above was the Naim Armageddon. This was a simple device supplied in a Hi-Cap sized, half-width Naim enclosure. Naim never intended it to be a commercial product, but dealers and reviewers who heard the design were so impressed that they convinced the company to offer it for sale, which Naim eventually did. The Armageddon consisted of a massive toroidal transformer, one resistor and a couple of capacitors, and was, despite its simplicity and low-part-count, a worthy rival to the Lingo. I liked much of what it did, and indeed preferred it in parts to the Lingo, but settled on the Pink Linnk to purchase. One has to remember that the power supply was just one part of the turntable package and one's preference could be influenced by the tonearm and cartridge used. Most Ekos owners, for example, tended to prefer the Lingo, while many Aro owners chose the Armageddon.

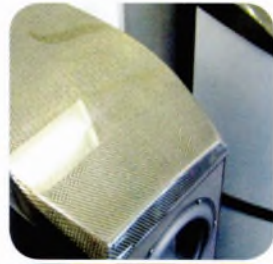
returned to hi-fi and established The Funk Firm, one of whose primary products alongside its own-branded turntables and tonearm, was the Vector modified LP12, which incorporated a Funk-built top plate, balsa and carbon fibre subchassis, and DC-power supply and motor. In mid-2007 I retired my Pink Linnk and replaced it with a fully Vector-kitted Funk LP12, which was still a Linn Sondek, only more so, just as the Pink Linnk had been sixteen years before!

You can still find Pink Linnk LP12s around these days, as a good number of decks were modded. It's a special device, maybe not *absolutely* cutting edge anymore, but a well preserved one is hard not to love. The Pink Linnk LP12 will always have a place in Sondek folklore for being one of the most radical, audacious and sonically successful modifications – remember it this way. ●

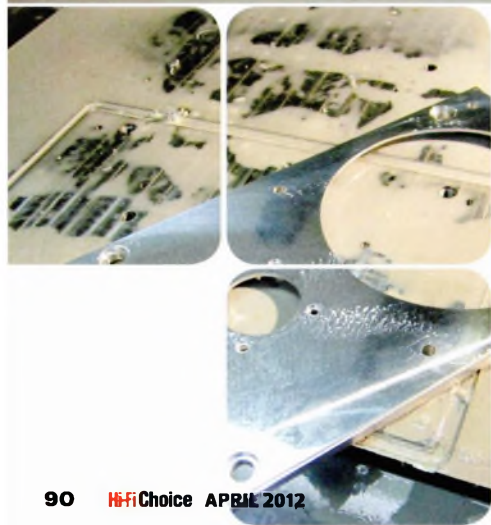
### WHAT DO YOU THINK?

Ever heard a Pink Linnk'd LP12? Prefer it to the stock Lingo? Write and tell us at [letters@hifichoice.co.uk](mailto:letters@hifichoice.co.uk)

**THE INSIDER**  
WILSON BENESCH



Craig Milnes shows how light such a massive carbon fibre composite speaker cabinet is!



Factory listening room is the old boardroom of the Bachelors food company!

# Material world

subsequently joined soon after as managing director, whilst Chris Ward is the Head Engineer and CAD whiz. A true family affair, son Luke Milnes now works as marketing director, too. Along with fifteen designers, technicians and engineers (most of whom have been at the company for many years), the other vital ingredient is the city that the company chooses for its home. As the saying goes, you can take Wilson Benesch products out of Sheffield, but you can't take Sheffield out of Wilson Benesch!

"It's a world leading centre of excellence in materials technology, with manufacturing expertise and a skills base that dates back to the first days of the Industrial revolution", says Christina. "By way of example, today, Rolls Royce, large sectors of the nuclear industry and Boeing Aerospace have major Research Centres here. It's a major university city, with excellent locally trained staff and collaborations under the Knowledge Transfer Partnership (KTP) with the Universities." Craig is a little less expansive, "WB is made in Sheffield and belongs here", he intones.

Along with the city, the other key constituent of Wilson Benesch's unique DNA is research and development. Some hi-fi companies make do with a man in a box room with a screwdriver, hacksaw and a bit of four by two. Not so here, though. The company has invested vast sums in researching different ways to do things, and different materials to do them with. Indeed Wilson Benesch's whole story is dominated by its work with novel, often exotic materials.

For example, back in 1990, the first Wilson Benesch turntable sported what's said to be the world's first advanced composite carbon fibre chassis. When most rivals were using pressed steel or plain wood, WB used an ultra-light material that didn't store energy, had controllable resonances and was super-strong. Craig Milnes, a qualified engineer who then studied fine art, knew this all too well.

"Much like a musical instrument we proved that whatever the material was that was selected to make the record player, it would be heard. To reduce this noise or distortion to its lowest level our work pointed to the need for low mass and high stiffness. On paper there was no option but to find out more about carbon fibre", he told me.

"In retrospect it all seems obvious and we are still astonished that no one else had done anything in this field. Low-mass and high-stiffness equals the highest first resonant frequency; add to that a plethora of other benefits like massive levels of self-damping and the ability to control the direction of energy flow through the material, and you are in a different world of opportunities that transforms the way you design. We are now living in the age of advanced composites and they are going to transform every product on the planet."

Given the suitability of carbon composites for front ends, it logically followed they'd be ideal for loudspeakers too. So what followed next, 1994's A.C.T. One loudspeaker, used 'Advanced Composite Technology'.

Wilson Benesch is a British hi-fi manufacturer with a difference, setting great store by the processes used to make its unique products, says **David Price**

**T**his might sound a little simplistic, but it's not so wide of the mark. There are two ways to survive in the audio industry – an easy one and a not-so-easy one...

The former is simple; catch on quickly to what customers appear to want and give it to them fast. Don't obsess on the quality, it's all about the feature count. And fancy adverts and sharp-suited PRs don't come cheap, so best save a few bob on making the kit in the most inexpensive way possible. Follow the fashion of the moment and the audio market is there for the taking – or so the theory goes!

The latter is a tad more tricky. Indeed it's not recommended for those after instant returns on their investment. Design things that are intrinsically right, build them beautifully and trust that discerning people want to buy them. It's a tough and tortuous path to take, one with many twists and turns. I think you can guess which path Wilson Benesch chose...

Founded in 1989 by Craig Milnes (who's also the principal design director, ideas man and research co-ordinator), Christina Milnes



Luke Milnes is the latest member of the Wilson Benesch team



Indeed, its development was part funded by HM Government's Department of Trade and Industry, as had been the turntable and tonearm. Around a year of work from "numerous engineers from a wide variety of technologies including advanced composites engineering and acoustic design", yielded serious results. Although not so unusual looking now (a testament to its futuristic design), it was the first speaker to use a sloping top to reduce room interactions, as well as being the first to exploit a curved advanced composite structure based upon carbon fibre.

"Aesthetics is an important engineering concern because if it doesn't look right, it usually isn't right," said Craig. "The curve is simple geometry that imparts benefits to all structures, but especially ones made in advanced carbon composites. It is incredibly important in acoustics, of course, and we have avoided flat panels in our high-end designs from day one", he adds.

### Curve form

This set the blueprint for a range of loudspeakers that continues to this day, along with the bespoke drive units that they house. In 1999, WB applied for SMART funding to develop a new driver; one of the reasons they succeeded in their application was their investment in manufacturing.

"It's impossible to get anyone to make these kind of components at a commercially viable price, which is why you don't see carbon fibre systems everywhere. The process sees design as the left hand and manufacture as the right; only when the two work together do you function optimally", says Craig.

Christina adds that it's, "all about being in control... quality, consistency, lead times, material costs, everything is constantly under scrutiny. Having this degree of control allows us to deliver something that is unique and represents outstanding value for money".

A two year, £250,000 programme resulted in the Tactic drive unit, born out of the need to create a "multi-role" driver that could be used both as a midrange drive unit, a bass unit and/or part of an clamshell Isobaric bass array.



## The curve form was until then the stuff of science fiction, only otherwise seen on F1 racing car tubs!

It sported a special Isotactic Polypropylene cone material, developed with physicist Professor Ian Ward of Leeds University. This new driver quickly started appearing in a range of loudspeakers, such as 1999's Actor and Orator which used more affordable MDF in an innovative way, introducing curved cabinets. Meanwhile the Bishop speaker used an array of four Tactic drivers in Isobaric formation.

The A.C.T. Two that followed used the company's own drivers in the One's striking cabinet architecture. Soon after, the Discovery brought the driver in Isobaric form to a compact standmounting chassis. 2002's Arc was smaller still, while the A.C.T. abandoned MDF for steel and carbon fibre to produce a large floorstander of striking style and sonics. Wilson Benesch were on a run, and the curve form



later that year brought the company up to its modern idiom, with a single curved carbon fibre monocoque; this was until then the stuff of science fiction, only otherwise seen on F1 racing car tubs!

### Exotic arcs

A new turntable arrived in 1999. Despite an apparently declining market for vinyl LPs, the company proved its commitment to the format with simple but elegant engineering in the Circle. The new A.C.T. 0.5 tonearm offered a more affordable pick-up arm package and the Ply brought carbon fibre to moving coil cartridges for the first time; all together the package was known as Full Circle.

In 2005 WB began working on its next, second loudspeaker drive unit. What was to become the Torus subwoofer in 2006, used a complex carbon Polyethylene Tetrafluoride technology capable of supporting one hundred thousand of times its own mass, it is claimed. The carbon was woven exclusively for Wilson Benesch to achieve the complex curve with fibre direction naturally orientated exactly according to stress lines.

It presaged another burst of activity on loudspeakers, which brought the Square series. Ironically, the exotic arcs of Wilson Benesch loudspeaker cabinets, along with those expensive materials and construction methods, alienated a number of potential purchasers in some of the world's more conservative loudspeaker markets.

For this reason, 2007's Square speakers attempted to give the super-clear, low coloration sound the company was famous for, but in a more conventional package. "It was a major design challenge," confesses Craig.

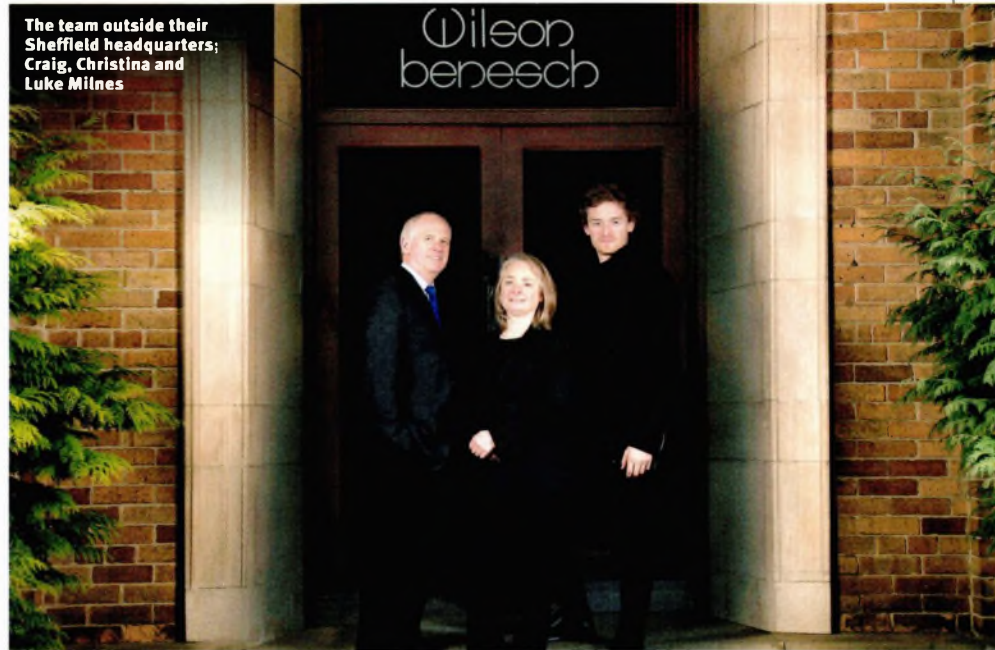


Cross section shows unique construction of loudspeakers

"We went back to basics and accepted the limits that rectilinear geometry and traditional materials impose, but addressed problems in new ways as in the case of the energy absorber on the rear of the cabinet. We also applied engineering concepts to the internal walls; critical damping courtesy of visco elastically bonded metal damping pads of various mass."

The company invested in new CNC machines and a new technology called Resin Transfer Mould Technology. For this, WB turned to an enigmatic organisation called SCEPTRE which was set up during World War 2 to do applied research into advanced technologies. Wilson Benesch was the fourth company in the UK to invest in this new manufacturing technology. The other three were the Ministry of Defence, McLaren and Lotus cars. Wilson Benesch has spent the last twelve years developing this, and now claims to be one of the best in the world.

Having developed its own low bass and mid/bass drive units, it made sense for the company to fashion its own tweeter. Trouble was, the Scanspeak item used would prove hard to replace. In 2011, WB came up with the Semisphere. Craig says that the Scan designs had moved away from the sound that the company had always liked. "We accelerated our developments, and arrived at an elegant solution, which is a hybrid with some



The team outside their Sheffield headquarters; Craig, Christina and Luke Milnes

characteristics of a hard dome and some of a soft dome tweeter".

In 2008, the arrestingly beautiful Nanotube one tone arm arrived, using carbon fibre Nanotubes whose hollow cylinders of atoms are 50,000 times thinner than a human hair; they are said to have unique structural, electrical and chemical properties. An upgrade to the Tactic drive unit appeared soon after, offering stronger rare earth magnets for a sensitivity increase of 3dB.

The Geometry Series of 2011 (the Vertex standmounter and Vector floorstander) uses no internal bracing, which makes for a greater internal volume than would otherwise be available. It's only been possible due to the company's super-stiff monocoque structure and materials. With the new Tactic II mid/bass driver and Semisphere, it's the purest expression of the Wilson Benesch art.

The new flagship Cardinal loudspeaker launched later this year, will be Wilson Benesch's most important product to date. It employs "ground breaking, patent applied for technologies", Craig says. Signature carbon fibre structures will contrast with 30kg sections of several alloys, and the Isobaric concept will see a further incarnation "but like nothing anyone has seen before", he adds.

Every Wilson Benesch product I've heard presents music with startling clarity. It comes at you with blistering speed from a velvety-black backdrop. Dynamics are incredible and the detailing always surprises and delights. Now, having visited the company, met the people and taken a closer look at the materials and processes used, I can see why. ●

### HOMeward BOUND

**Sheffield feels quite different to other great English cities. Partly because of its dramatic location, within the valleys of the river Don and its four tributaries, and partly because it's imbued with a profound sense of history. Famous for being the world centre of steel production in the 19th century, it still maintains a fondness for industry which simply passes by many other English cities. It's a suitably atmospheric background for the Wilson Benesch manufacturing facility.**

**Previously the headquarters of Bachelors Foods, the red brick factory building is a strange mix of faded Industrial Revolution-era glory and ultra high technology – thanks to the manufacturing processes that go on inside, including state-of-the-art CNC machines, an RTM carbon composite suite and the latest computer aided design systems. Every component is manufactured using high precision tooling and advanced moulding.**



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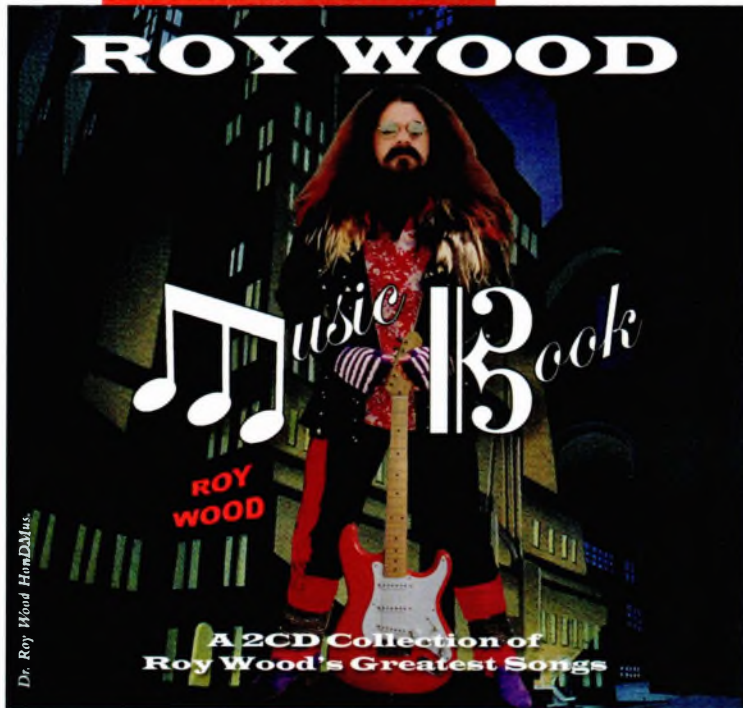


**97 Charlie Winston**  
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# Music reviews

Our pick of the latest music releases

## ALBUM OF THE MONTH



**Roy Wood**  
Music Book

emi.com

★★★★

2-CD

EMI

**UNDERNEATH THE WAR PAINT** and the rainbow-hued hair, Roy Wood at his peak was one of British pop music's most intriguingly talented pop mavericks. His ability to pen unforgettable pop songs first emerged in the late 1960s with The Move, a band that borrowed from a rich Beatles/Kinks/Who heritage and then came up with its own uniquely wonderful take on the genre, via hits such as *Fire Brigade* and *I Can Hear The Grass Grow*. That Wood was too expansive a talent for the constraints of a conventional bass-drums-guitar line-up was evident when he next formed the Electric Light Orchestra in order to indulge his penchant for more experimental, classically-influenced arrangements. He soon abandoned ELO to Jeff Lynne and formed Wizzard, who for

a while rivalled Slade as purveyors of good time glam-rock. There were also some unfairly neglected solo albums such as *Bounders* (1973) and *Mustard* (1975). Every aspect of his long and varied career is represented in this 36-track remastered anthology, personally selected by Wood. With odd modesty, he represents a couple of his best songs for the Move with versions by other artists (Status Quo thrashing through *I Can Hear The Grass Grow* and Nancy Sinatra singing *Flowers In The Rain*; "I prefer them to ours", he says simply). The inclusion of such covers might have made the collection less cohesive. Instead it proves to be a smart way of highlighting Wood's sumptuous skills as a masterful writer of the classic three-minute pop song.

*Music Book* offers a fascinating insight into a majorly underrated talent...

Wood's choice of his own career highlights is wilfully – but delightfully – leftfield. Most will feel The Move are under-represented and when they are here, it is not always in the original studio versions. The lovely 1969 hit *Blackberry Way* has been retooled with a new string arrangement; *Fire Brigade* has been completely re-recorded; the quirky, Kinks-like *Chinatown* is heard in an unfamiliar live version. Wood's brief sojourn with the ELO is covered by the beautiful classical guitar-and-cello arrangement he called *First Movement*, when it appeared on the band's 1971 debut album. If Wizzard's 1970s hits such as *R U Red E 2 Rock* today sound dated, the material from his solo albums from the period is a revelation. Songs such as *Forever*

and *Oh What A Shame* are overlooked gems of consummate songcraft, drawing on such diverse influences as Motown and the Beach Boys respectively, or Syd Barrett/ Kevin Ayers English eccentricity. Equally fascinating are a brace of tracks from a mid-1970s jazz-rock experiment which his record company refused to release at the time. This makes it hard not to conclude that the formulaic pop hits of Wizzard were merely a commercial ruse on Wood's part in order to be able to sustain his far more interesting solo projects. By the 1980s he was experimenting with synths and adding a children's choir. As a career overview, *Music Book* offers a fascinating insight into a majorly underrated talent, whose songwriting spanned pop classicism and genuine innovation. In his bestwork when the two came together, he was nigh on unbeatable. **NW Standout tracks:** *Blackberry Way*; *Fire Brigade*; *First Movement*





**Amy Winehouse**  
Lioness: Hidden Treasures  
universalmusic.com

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5-CD 'Immersion' box set / 2-CD edition

**THE LAST TWO** troubled years of Amy Winehouse's eventful life may have been busy, but on the evidence of this posthumous release, she didn't spend much of them in the recording studio.

Of the odds and sods pulled together by producer Salaam Remi there are several which barely pass muster as demos (a throwaway light *Girl From Ipanema*, an inessential *Will You Still Love Me Tomorrow*) and alternate versions of songs she'd already recorded (the original, much slower, and less good, version of *Tears Dry On Their Own*).

All the songs have been polished up so that they're approaching a semblance of consistency, but the duet with Tony Bennett (*Body And Soul*) and one of just two genuinely new tracks here, *Between The Cheats*, are the ones that stand out. It's a shame that she was able to produce so little new material and that these incomplete glimpses should stand as the last testament of her remarkable talent. **DO**

**Standout tracks:** *Between The Cheats*, *Body And Soul*



**Genesis**  
From Genesis To Revelation  
repertoirerecords.com

★★★★☆ **Repertoire**  
CD

**RECORDED WHEN** they had just left Charterhouse school, Genesis's debut album reportedly sold a paltry 650 copies on its 1969 release. The main value of this remastered reissue is that it is the only Genesis album that was not included in the otherwise comprehensive box set of the Peter Gabriel-led version of the group in 2008.

Producer Jonathan King presented the 13 songs as a 'concept' loosely based on biblical themes. He also added strings and horns, apparently against the band's wishes. In many ways it's a gauche record with a strong whiff of the sixth form common room. But the seeds of Gabriel's songwriting genius are clearly evident. **NW**  
**Standout tracks:** *Am I Very Wrong?*, *One Day*, *Silent Sun*



**Manfred Mann**  
Earth Band 40th Anniversary box set  
sony.com

★★★★☆ **Arvato**  
21-CD box set

**BY THE START OF THE 1970S**, Manfred Mann had turned his back on his *Top Of The Pops* past and 'gone prog'. Formed in 1971, the Earth Band has been the primary vehicle for those visionary jazz-rock/prog guitars and Moog synthesiser fusions ever since.

A total of 21 CDs recorded over four decades offers enormous sonic variety. But although there is a fair amount of instrumental noodling, Mann never forgot the importance of melody. Later experiments with African and other styles sound impressively ahead of their time, too. The heft (and cost) of this collection means it's for committed fans only, but it's a mightily impressive body of work. **NW**  
**Standout tracks:** *Blinded By The Light*; *Davy's On The Road Again*



**Smashing Pumpkins**  
Siamese Dream  
harmoniamundi.com

★★★★☆ **EMI/Virgin**  
2-CD

**RELEASED IN 1993**, when it seemed the entire rock world was worshipping at the feet of Kurt Cobain, the second album from Billy Corgan's grunge-flecked Chicago crew remains the Pumpkins' defining statement. With Nirvana producer Butch Vig co-directing, Corgan and his band fashioned an ambitious amalgam of Seattle murkiness and Cheap Trick-style triumphal stadium rock.

The influence of heavy metal, American garage/punk and, inevitably, Nirvana, are all self-evident in the savage riffing, the dense and distorted guitars, squalling feedback and fuzzy textures. No wonder Hüsker Dü's Bob Mould once called them "the grunge Monkees". **NW**  
**Standout tracks:** *Cherub Rock*, *Soya*, *Disarm*, *Today*

## AUDIOPHILE VINYL

**Johnny Winter** Johnny Winter purplepleasurerecords.com



★★★★☆ **CBS/Pure Pleasure**

180g vinyl  
**JOHNNY WINTER** is one of the most respected American musicians to come out of the blues boom of the mid sixties. He played with some of the great

originators of the form including **Muddy Waters** and **Willie Dixon** and this, his second release, was made with a relatively unknown rhythm section and a whole lot of energy.

It's a mix of original and standard tunes including a very nice rendition of *Good Morning Little School Girl* where the trio is expanded with saxophone from brother Edgar, even if Winter's voice is not particularly strong. He makes up for this with cracking guitar work that energises pretty much every

track on the album. The guitar is usually electric, but there are some fine acoustic pieces as well, including a twin guitar version of **Robert Johnson's** *When You Got A Good Friend*.

His singing is at its best when he's not trying too hard, as on the final number *Two Steps From The Blues*. This is an album for blues aficionados rather than rock lovers, but one that any fan of Strat abuse will appreciate. **JK**  
**Standout tracks:** *Mean Mistreater*; *When You Got A Good Friend*



# HIGH-RESOLUTION DOWNLOADS

## Antonio Forcione and Sabina Sciubba

Meet Me In London

naimlabel.com

★★★★★

NaimLabel

24-bit/192kHz



**MEET ME IN LONDON** has long been Naim's best-selling title. So it came as no surprise when the company

selected it to be its first 'super high-definition' release. Guitarist Antonio Forcione and singer Sabina Sciubba's combined performance is exquisite.

To preserve the integrity of the recording, Naim began the remastering process with the original, 14-year-old analogue master tapes. These were transferred to 24-bit/192kHz WAV files on hard disk, which were converted back onto new tape for mixing on a Neve analogue desk. Every possible care seems to have been taken to extract the utmost sonic performance from those original masters. **MS**

**Standout tracks:** Take Five; Could You Believe

## Charlie Winston

Running Still

bowers-wilkins.co.uk

★★★★★

B&W

24-bit/48kHz



**THIS IS** Winston's second release for B&W, and the young singer-songwriter confessed, "My

sole objective was to engage people's feet first and slowly rise to the mind. So by the time they get absorbed in the lyrics, they're fully engaged but realise there's something more going on". It's a clever idea – and one that seems to work – 'concealing' intelligent lyrics behind a catchy tune.

The 24-bit recording is delightfully open and revealing, and well up to usual B&W standards. It's easy to unravel the rather theatrical – in places – mixes and arrangements because this music is several cuts above par-for-the-course singin' 'n' strummin'. **MS**

**Standout tracks:** Speak To Me; Until You're Satisfied



## Jefferson Airplane

Jefferson Airplane

sony.com

★★★★★

Sony

CD

**THE CLASSIC AIRPLANE** line-up hadn't played together in 17 years when they reconvened in 1989 for an album and tour, nostalgically intended to recapture the freewheeling spirit of 1967. Sadly, the Airplane never got back together again and the world was a poorer place without them.

The 1980s production values may be a long way from the summer of love, but much of what originally made the Airplane great was still present – in particular, the thrilling blend of voices and styles that stems from having three contrasting songwriters. The critical reception on its release was poor, but it's one of those records that sounds far better today than anyone recognised at the time. **NW**

**Standout tracks:** Summer Of Love; Too Many Years; Madeleine Street



## E J Moeran, John Ireland

Works For Orchestra  
Royal Scottish Nat. orch  
(conductor Martin Yates)

duttonvocalion.co.uk

★★★★★

Dutton

CD

**ANOTHER HUGELY** interesting release from the enterprising Dutton Epoch label, including as it does three unfinished works – newly completed. The real 'find' here is Martin Yates' completion of Moeran's Second Symphony, while the Ireland piece is wonderfully lyrical and very atmospheric. Moeran's *Overture For A Festival* brings the disc to a rousing conclusion.

The 24-bit digital recording sounds open and natural, with a wide dynamic range and plenty of impact and detail. The balance is fairly spacious, but not quite as 'distanced' as the Chandos recording of Moeran's symphony conducted by Vernon Handley. **JH**

**Standout track:** 2 (2nd symphony, 2nd movement)



## Albeniz

Iberia  
Paris Conservatoire orch.  
(conductor Jean Morel)

decca.com

★★★★★

Decca

CD

**MOREL'S RECORDING** of Albeniz' *Iberia* suite was one of RCA's early Living Stereo titles. The original two-LP set enjoyed a reputation among audiophiles for vivid sound quality, and now (at long last) the recording finally appears on CD coupled with Ravel's *Rhapsodie Espagnole*, and some Bizet/Chabrier pieces. The playing is vigorous and spirited, and the music brilliant and colourful.

Despite being over half-a-century old, the recording still offers plenty of impact, with some impressive stereo. While most classical labels keep reissuing the same old stuff, Decca are bringing out things never released on CD before. **JH**

**Standout track:** Corpus Christi Let Me Down Easy

## BLU-RAY DVD

### The Doors Mr Mojo Risin': The Story of LA Woman eagle-rock.com



★★★★★ Eagle Vision

DTS-HD Master Audio 5.1, Dolby Digital 5.1, LPCM 2.0

**LA WOMAN** was the Doors' last album and for many their best. It was certainly the most mature and bluesy work that they produced

and its standout track *Riders On The Storm* has proved almost as enduring as *Light My Fire*. As this documentary reveals, it was made not in a professional recording studio but in engineer Bruce Botnick's rehearsal studio, a familiar place to the band and one where they could relax and focus on the music.

This film features input from the surviving members of the band, as well as from Botnick and others involved at the time. It reminds you just how good the songs on this album are and reveals that the

band had some help from Elvis Presley's bass player Jerry Scheff, no less.

While there is a reasonable amount of live and studio footage, it would have been nice to have had some spoken word from Morrison who died within months of finishing the album. It has some interesting insights about Ray Manzarek's influences (Chopin, among other things) and gives you a good idea of why this was always going to be their swansong. **JK**

**Standout tracks:** Riders On The Storm; LA Woman

# Virtuoso composition

System-matching maestro *Ed Selley* finds that this Cyrus/Vienna Acoustics partnership conducts itself in a most musical fashion...

**T**he hi-fi industry lives on unwritten rules. One of the most enduring is the notion that if you want extensive functionality, your box count is likely to increase. Another is that if you want large amounts of power, the physical size of your system will also have to go up. Acceptance of these two statements is nigh on absolute, and has been for years. Almost as durable is the notion that big sounding speakers must be big themselves.

What then, are we to make of this system? Here we have three boxes that offer extensive functionality and a Herculean power output, yet collectively they could easily occupy one shelf of a conventional hi-fi rack. Not quite a brace of Krells, then!

It is capable of staggering results with almost every piece of music at almost every volume level...

They are joined by a pair of loudspeakers that themselves do their very best to subvert the laws of physics. The result is a visually elegant combination that may also be one of the most forward thinking systems on the market today.

## Coming on Stream

Cyrus has been building its equipment into smaller boxes than everyone else for decades now, but recently it's been even more inventive than most in blurring the boundaries of functionality that any given component should be capable of. There is no finer example of this than the £2,000 Stream XP which forms the brain of this system. This is at the

## COMPONENTS



### 1 CYRUS STREAM XP £2,000

Flagship of the Cyrus streaming range, the Stream XP mates a 24-bit/96kHz-capable network streamer with digital inputs and a preamp. Can be connected directly to the company's power amps for a more compact system.



### 2 CYRUS MONO X300 £2,500 (EACH)

Like the Stream XP, the X300 is the top of the Cyrus power amplifier range. A zero feedback Class A/B design capable of a claimed 235 watts into 8 ohms, rising to the all-important 300 as impedance drops.

### 3 VIENNA ACOUSTICS BEETHOVEN BABY GRAND £3,300

A diminutive version of the range-topping Beethoven Concert Grand, the Baby Grand makes use of the same XPP driver technology and heavily braced cabinet, but has slightly smaller dimensions overall.



BEAUTIFUL SYSTEMS  
CYRUS/VIENNA ACOUSTICS





**LEFT:** The gorgeous-looking Vienna Acoustics Beethoven Baby Grand  
**RIGHT:** Top of Cyrus's power amp range is the X300  
**BELOW:** The 24-bit/96kHz-capable Cyrus Stream XP

amps. Exactly the same size to the millimetre as the Stream XP these little silver blocks seek to subvert unwritten rule number two that with high-output power comes large boxes. As the name suggests, each X300 can deliver a claimed 300 watts into loads between four and eight ohms – or to put it more succinctly, the load presented by the bulk of modern loudspeakers.

Don't be fooled into thinking that they make use of the fashionable way of producing big power in a small place either. These are *not* Class D amps, but Class A-B designs running zero feedback.

It is easy to fall into the trap of assuming that because it looks so similar, all Cyrus gear is largely the same. The X300s might be wearing the same uniform as the other power amps, but their internals are anything but ordinary.

### Roll over Beethoven

Partnering this sophisticated trio is the Vienna Acoustics Beethoven Baby Grand. These slim floorstanders are distributed by Cyrus and are an ideal partner for its electronics. The Baby Grands make use of a specially developed thermo plastic called XPP for the midrange and bass drivers. The lower bass drivers are then braced with a 'spiderweb' for maximum stiffness. The result is an immensely light and strong driver, it's claimed. An unbraced XPP driver handles the midrange and a soft-dome tweeter developed with Scanspeak tops things off.

same time, an iPod dock, internet radio, DAC and preamplifier. Where once, you would have had a stack of components to achieve this functionality, here you're down to a single one.

This condensing extends beyond your electronics, too. The Stream XP is one of a few products I have tested over the last year that has helped convince me it is time to rip my CDs and stow them away. Historically a listening room would be host to multiple boxes and a wall of CDs to play on it, the Stream XP will free up space in the room as well as on the rack. It is so gratifyingly easy and satisfying to use, that even the most die-hard disciple of the silver disc will be thumbing through titles on the swish n-remote and thinking about ripping software inside of twenty minutes.

The preamp output of the Stream XP is connected directly to the other part of this space-saving masterclass, a pair of £2,500 Mono X300 power





The result is very much like the electronics. This is an attractive and relatively compact speaker that bristles with innovative technology. They are easy to place and if the sumptuous piano black lacquer isn't to your liking, there are a variety of wood finishes as well. With the Viennas in place, we have five boxes that seem determined to give a two fingered salute to the unwritten rules of hi-fi. Does it deliver?

### In concert

The best way to get a good idea of what this system is about is to play a recording that you know intimately. Not a flavour of the month, but something you have owned for years and always find yourself returning to. For me this is *Every Day* by the Cinematic Orchestra – as magnificent an album as any released this century.

The Cyrus/Vienna combo changes nothing and puts remarkably little of itself between the recording and your ears, but the result is still utterly profound. The detail retrieval and the ease with which this system presents every facet of the recording is something of a revelation. I guarantee that you will be made aware of a detail on the recording that you were previously unaware of. Given that I must have listened to the album in question, nigh on a thousand times, this is no small achievement.

To be clear, this is not some joyless, analytical machine that revels in a warts and all destruction of your favourite material, but an incredibly musical and genuinely satisfying combination that happens to

offer spectacular insight into material it plays. You cannot put this on for background listening as it constantly and effortlessly grabs your attention and holds it. It manages to sound 'right' across a vast swathe of music.

This is partly down to how well it covers the basics – the tonality that this system has is of the very highest order and it produces one of the most tangible soundstages I have experienced. The Viennas are wonderfully composed at all listening levels and are extremely even from top to bottom with no part of the frequency spectrum being accentuated.

This is also a great advert for high-power outputs. At no stage do you feel like this is a very powerful system, simply a very good one that happens to have the headroom to do anything you might want. There is no transient or dynamic swing that this system cannot reproduce with little apparent effort and seemingly no perceivable sense of strain.

Because the Mono X300s are so clean, there is little real sense of just how loud you can drive them. Unless your listening room seats fifty people and also doubles as a testing space for hot air balloons, I can't see you ever coming close to the limits of what these units can achieve. In my more limited listening space I didn't even trip the cooling fans of the X300s. This suggested that I was barely scratching the surface of what was possible. Indeed I'd liked to have pushed harder but the laws of the land wouldn't permit!

As you can use the n-remote to set the Stream XP up to play custom



**DISTRIBUTOR:**  
Cyrus Audio  
**TELEPHONE:**  
01480 410900  
**WEBSITE:**  
cyrusaudio.com

playlists and queue tracks on request, you can set this system the most irrational challenges. You can start with Chopin's *Raindrop Prelude*, move swiftly into Ray LaMontagne's *Till the Sun Turns Black*, make an abrupt turn to The Black Key's *El Camino* and finish up with Orbital's *The Altogether*; without ever leaving your seat.

Not only is this very convenient for the terminally idle amongst us, but it demonstrates the sheer breadth of talent this system possesses. It is as happy with the delicate keystrokes of the opening of Chopin, as it is with the huge electronic wall of sound from Orbital. It times beautifully, but never forces slower material. It can deliver a powerful thump in the thorax yet capture a plucked bass string with real delicacy and conviction. It genuinely is a fabulous all-rounder, in my humble opinion.

Don't be fooled by the modest dimensions; what you see here is one of the boldest and most innovative systems I've ever tested. It's the shape and size that it needs to be, rather what tradition dictates it should be. This means that there are few spaces it could not be fitted in to. The system performs many functions and does them with such *elan*.

Most importantly, it is capable of staggering sonic results with almost every piece of music at almost every volume level. So yes, I hope it shows that I came away most impressed! It's fair to say that the unwritten rules of hi-fi are rarely rewritten overnight, but to my eyes and ears at least, this Cyrus/Vienna Acoustics system has them thoroughly bent out of shape. ●

# Minitest

Get the most from your iPod with this selection of speaker docks. **Richard Black** investigates...

## Arcam rCube

PRICE: £349 CONTACT: 01223 203200  
WEBSITE: ARCAM.CO.UK

**SHAPED AS YOU'D EXPECT** from the name, the rCube measures just 20cm each way and as such may come across as a little more prosaic on a dealer's shelf than some of the competition, but it's certainly very practical. It's quite heavy, thanks not least to the inclusion of a rechargeable battery, but there's also a solidly made case-cum-speaker enclosure. A profusion of drive units hide behind three sides, while the docking connector is underneath a neat flap on the top which, when hinged open, both supports the iPod and gives access to a carrying handle.

The big selling point here is arguably the wireless connectivity provided by the optional extra rWand and rWave devices. The former (£70) plugs into iPods, while the latter connects to a computer's USB sockets, giving in each case simple and high-quality wireless linking to the rCube. For older sources, there's a single 3.5mm line input.

We found the sound of the latest price reduced, firmware updated rCube to be very good, but not perfect. Although nicely full and rich, there's some coloration evident which you get used to soon enough – but there's always the feeling that the sound can't quite get out of the box. It's still impressively detailed and wideband for such a compact device, and stereo imaging is surprisingly good, even some way off axis. Even so, we would have liked just a shade more freedom from the confines of its cabinet.

**VERDICT** NEAT AND PARTICULARLY PRACTICAL, significantly enhanced by wireless add-ons, and with fine overall sound – but still it doesn't project as well as the best of the rest

★★★★



## Bowers & Wilkins Zeppelin Air

PRICE: £500 CONTACT: 0800 232 1513  
WEBSITE: BOWERS-WILKINS.CO.UK



**PERHAPS THE BEST-KNOWN** high-end speaker dock, if only on account of its distinctive shape and catchy name, the Zeppelin now includes Apple's 'AirPlay' wireless technology. This makes for very simple streaming from a computer or iPod/iPad/iPhone, in high quality since AirPlay is a networking technology and doesn't involve data reduction. There are many other useful features built into the Zeppelin, including both USB and Ethernet ports, which allow streaming (via wires, if you aren't AirPlayed-up), in-dock syncing of the iPod with a home computer's copy of iTunes, and setup of the Zeppelin's audio parameters via iPod or home computer. Bass response can be tailored in a limited kind of way, to adjust for positioning. The unit is heavy, and very long at about 66cm end-to-end, but its low profile and taper combine to make it a much less dominating presence than it might be.

We found this overall the most satisfactory of the units tested here, and that's saying something because we were impressed with all of them. It achieves some astonishing things for an all-in-one unit, not least a level of clarity which one simply doesn't expect from £500-worth of audio. This is helped by a highly neutral tonal balance, from bass to high treble, with only a little unevenness in the lowest couple of octaves to criticise. Maximum volume is impressive and there's a delightful rhythmic kick in any music!

**VERDICT** SHOCKINGLY GOOD for the money, ditto for the physical size, with admirable performance in both detail and heft. Flexible, too!

★★★★★

## Monitor Audio iDeck 200

PRICE: £250 CONTACT: 01268 740580  
WEBSITE: MONITORAUDIO.CO.UK

**AS YOU MIGHT EXPECT** from a loudspeaker manufacturer, the technology selling this dock is based in the speakers. Well... sort of. In fact Monitor Audio has managed to incorporate a trick best known for its inclusion in Bang and Olufsen's top models: automatic frequency-response alignment. This accounts for the rather unsettling habit the unit has, when you switch it on at the mains (not from standby), of emitting a few low-frequency buzzes. This is what MA dubs 'Automatic Position Correction' and it's intended to compensate for the unknown inherent in the highly random positions in which any dock is likely to find itself. At the analogue end of things, the speakers use high-tech cone materials. The iDeck is a solidly-built item, quite heavy and a frankly utterly impractical shape. Not exactly portable, and at 55cm wide it needs a bit of space, but the looks should make it a conversation piece!

We reckon the APC feature is a bit of a winner, as this unit certainly has some of the best bass we've heard from a table-top unit. It's not just extended, but also unusually well controlled and detailed, and it quite literally underpins a very assured performance. There's more than a stab at audiophile levels of detail across the range, and while dynamics can sometimes seem a little constrained they aren't far short of the kind of thing one expects from a highly competent budget system. Maximum loudness a very satisfying and is achieved with commendably little sign of distress.

**VERDICT** IT MAY LOOK A LITTLE QUIRKY, but the performance goes a long way towards redefining expectations of single-box, table-top, audio at or near the price

★★★★★



## NAD Viso 1

PRICE: £499 CONTACT: 01279 501111  
WEBSITE: NADELECTRONICS.COM

**LARGE AND IMPOSING**, the Viso 1 features a particularly nice docking section, which clamps down on the top of the iPod for best support and also allows it to be rotated through 90 degrees, if you prefer the screen laid out that way. That's nifty, but the significant distinguishing feature here is the inclusion of Bluetooth wireless technology with APT-X enhanced audio coding, the highest quality audio transmission available via Bluetooth. No, it's not lossless, but it's a lot better than standard Bluetooth and allows wireless connection of all kinds of music-playing phones and tablet computers, not just Apple but Android and Windows too. The Viso 1 is large, particularly in the height direction, and does tend to loom a bit large in any location. It has a single bass reflex port in the left-hand end, while connections include video out and digital (optical) in. The signal from the iPod is extracted in digital form.

There's certainly plenty of volume on offer here, and bass extension is impressive. In fact, we felt it may occasionally be a touch too much of a good thing, becoming a little oppressive in smaller rooms and still noticeably on the heavy side in larger ones. This is less of a problem in pop and rock music, but isn't always so great in classical and other acoustically-recorded styles. The midband is just a little coloured and a little boxy too, restricting detail. All the same, the general enjoyment to be had from this dock is considerable and it has no fear of playing at high sound levels. ●

**VERDICT** MORE OF A PARTY ANIMAL than a subtle hi-fi device, the Viso 1 is a big hitting music maker with oodles of attitude – many will love it for this reason alone

★★★★★



If most of your music collection is low-bit-rate MP3, you won't enjoy any of these at their best. If, on the other hand, you have an absolute minimum of 128kbps AAC files (like those purchased from iTunes)

or higher, or ideally lossless files, your music will be of good enough quality to get decent results from all of these units. Even for the adaptable Monitor Audio and B&W designs, positioning is important,

the laws of physics being what they are. A little care with keeping speaker docks clear of solid objects will pay ample dividends with a flatter response and lack of annoying buzzes and rattles.

# 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.

These pages are a must-read if you're thinking about buying used kit, or if you have kit you want to sell. It's free to place an advertisement – simply submit your ad of up to 30 words, remembering to include your email, phone number and county.

The simplest way to send your ad is via email to: [letters@hi-fichoice.co.uk](mailto:letters@hi-fichoice.co.uk)  
Or mail to: **Reader Classified, Hi-Fi Choice, My Hobby Store Ltd, Hadlow House, 9 High Street, Green Street Green, Orpington, Kent BR6 6BG.**

Please note that this service is open to private advertisers only.

## FOR SALE

**AUDIOLAB** 8000P power amp (silver) and 8000C preamp (black), perfect sound and condition. £495 the pair: **07816 758688 (NE London).**

**PMC** DB1 speakers (oak), excellent condition £200. Monitor Audio Studio 12 speakers (rosewood), excellent condition £250. Buyer collects: **01920 877736** or email: [venessalee@btinternet.com](mailto:venessalee@btinternet.com). (East Herts).

**MONITORAUDIO** BR2 speakers, mint condition, perfect working order, (black) £145 plus postage: **02476467679** or email: [johncléments45@sky.com](mailto:johncléments45@sky.com) (West Midlands).

**MARANTZ** PM6004 integrated amp. 2 months old (£310), £175. Quad 11L Birdseye (maple), excellent condition, £150: **07733428736** or email: [gill@gillbears.plus.com](mailto:gill@gillbears.plus.com) (West Yorkshire).

**MICHELL** Syncro turntable with arm and Ortofon vms 30, £340. Tannoy Cheviot speakers £650. Audiolab

8000a amplifier £160. All in excellent condition: **01708 522788 (Essex).**

**TECHNICS** SL1210 Mk2, very good condition, £249. Garrard 401 plus power supply £1,200: **0207 499 8729 (London).**

**KENWOOD** HD-600 HD compact component system, includes amplifier, tuner, cassette deck and CD player. KEF Coda speakers and IXOS Deadrock stands. Will accept best offer: **07747 864305** or email: [behjat.reza@yahoo.co.uk](mailto:behjat.reza@yahoo.co.uk) (Surrey).

**REGA** 3 full ISOKINETIK upgrades without arm £200, with rRB50 Cardis wired Michell weight upgrades £400; arm alone £200: **01606784767** or email: [peterscott341@tiscali.co.uk](mailto:peterscott341@tiscali.co.uk) (Cheshire).

**KUDOS** R23in speaker stands £55. Target speaker wall stands, spiked £30. Bang & Olufsen Beocord 2400 cassette £50. Technics 8020 24-band graphic equaliser £60: **01708 457691 (Essex).**

**QUAD** II classic integrated amp, light use, 2 months only, boxed, excellent phono MM/MC tape loop (£4,500) £2,900. Buyer collects: **01277 841493 (Essex).**

**AUDION** Premier 2-box valve preamp, mint condition, (£2,500) £900. Audio Research D130 transistor power amp, mint condition, (£2,000) £500: **07767 444488 (Bucks).**

**BOWERS & WILKINS** 684 (light oak), mint, boxed £350 plus £20 carriage: **002476364111** or email: [hodgkinson2@btinternet.com](mailto:hodgkinson2@btinternet.com) (West Midlands).

**KRELL** RFBP 250 watt monoblocks, Audio Research Reference 3 preamp. Gamut L3 speakers with stands, Transparent interconnects and speaker cables. For photos, details, prices: **07899 721899** or email: [yatestherapy@googlemail.com](mailto:yatestherapy@googlemail.com) (London).

**CYRUS** CD XT SE transport (black), with remote, £750. DAC X (black), £750. Both



PMC DB1 loudspeakers are among this month's bargains

in excellent condition and boxed with instructions. **01883 741843 (Surrey/Kent).**

**ROKSAN** Xerxes (black ash finish) with XPS7 power supply. All excellent condition, new belt, TMS3 bearing, RMAT £450. **07972 533063** or email: [g200@gmx.com](mailto:g200@gmx.com) (Cumbria).

**WANTED** Complete fluid damper kit for SME series 1115 tonearm. **01382 644815 (Dundee).**

**LEAK** Trough Line stereo valve tuner in steel case, with Stereo 30 Plus transistor amp in wooden case £80. Also Goldring Lenco turntable £50. **01474 872863 (London).**

**TECHNICS** SL1210 Mk2, very good condition, £249. Garrard 401 plus power supply £1,200. Can post items if needed. **0207 499 8729 (London).**

**BOSEENDORFER** AC1 loudspeakers (black/ivory). Good condition. Boxed. £600. **01926 259022** or email: [davidhardy18@talktalk.net](mailto:davidhardy18@talktalk.net) (Warwickshire).

**GRAHAM SLEE** Novo headphone amplifier, hardly used, boxed with manual £130, Pioneer 505 precision CD player, boxed. **07818 658722 (Warwickshire).**

**BRINKMANN FEIN** phono amp 2006, RCA outputs, volume control, separate power supply (black). Superb finish and build (£1,050) £275. **07411 388152 (Herts).**

**WANTED** Marantz DR-17 digital recorder. **01395 576644** or email: [jmichaelbrittain@yahoo.com](mailto:jmichaelbrittain@yahoo.com) (Devon).

**WANTED** Ultra High Power Amplifier Construction by Nick Sheldon (Babani Press, 1989). **0859 341984** or email: [drzacharysmith64@yahoo.co.uk](mailto:drzacharysmith64@yahoo.co.uk) (Norfolk).

**AVI** Biggatron standmounts (cherry), Partington stands, Bowers and Wilkins 684 floorstanders (cherry), excellent condition £550. **07982 794884 (Essex).**

**DYNAUDIO** Excite X12 loudspeakers (rosewood), full Russ Andrews upgrade, as new, boxed (can demo) £495 (including p&p). **01524 34627 (Lancashire).**

**CHORD COMPANY** Epic Twin speaker cable, factory terminated, £85. **01986 895940 (Suffolk).**

**WANTED** Pink Triangle Anniversary or upgraded (DC motor) PT Too. **01445 781498 (Scotland).**

**EXPOSURE** 2010s CD player, £190. Roksan Radius 5, clear acrylic version with Rega RB600 tonearm and Goldring GX1022 cartridge, £700. **01484427426 (West Yorks).**

**AVI** Reference CD player S2000 MC, used as transport with Audiolab DAX, £550. van den Hul Wind speaker cable (5-metre pair) £120 buyer collects. **020 8590 8530 (Essex).**

**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!



**NAIM** Fraim. Consisting of a base and a standard shelf. Maple with silver upright. Fabulous condition/like new. Only two years old. (£1,680) £1,100. Includes three floor spike protectors. Collection preferred.

020 8372 8376

or email: [gigglesn01@hotmail.com](mailto:gigglesn01@hotmail.com) (London).

**TAG MCLAREN** PA10 preamp (black). Excellent, near mint condition with low usage and original box. Includes MM/MC phono stage built in. (£850) £275. 07854 658 281 (London).

**ATACAMA** Equinox, two hi-fi bases £50 (each) and one AV base £100. Graphite stand and anthracite glass in good condition. 01253 729944 or email: [AtacamaStands@tesco.net](mailto:AtacamaStands@tesco.net) (Lancashire).

**MONITOR AUDIO** (bronze) BR5 speaker package, walnut finish, boxed with instructions and in good condition £650 (pick up only). 07534457859 (West Yorkshire).

**SONY** ST-S311 FM/AM tuner, mint condition (black). Owned from new with original box and instructions, AM loop aerial etc. upgraded power lead. £350. 01766 781211 (Porthmadog).

**BOWERS & WILKINS** 800 Matrix loudspeakers (black), mint condition with Krell bass alignment filter amp, Class A (£15,000 and £1,950) £1,850. Outstanding sound and dynamics. 03531 2014427 or email: [booning4@hotmail.com](mailto:booning4@hotmail.com) 003531 2014427 (Ireland).

**BERNING** EA-230, the perfect valve power amplifier for electrostatic loudspeakers, VGC, very rare and sought after, with circuit diagram. £800, or exchange for DNM PA3 DeltaS power amp. [elsfan@yahoo.com](mailto:elsfan@yahoo.com)

**MARANTZ** PM-11 S1 Premium Series reference integrated amplifier. Boxed and mint (£2,500) £1,295. Marantz SA-11 S1 Premium Series reference CD/SACD player. Boxed and mint. Both in perfect working order. (Cost £2,500) asking £849. 07858 201062

or email: [fullswop@gmail.com](mailto:fullswop@gmail.com) (Northants).

**SONY** TC-K 611 Dolby cassette deck, three motors, power door, fully loaded three heads, adjustable bias, etc. Hardly used, excellent condition (black) £49.

01766 781211 (Porthmadog).

**SPENDOR** S8e speakers, purchased early 2006 (maple) and in superb condition, £900. Buyer collects. Original boxes, packing and instruction manual included. 01305 263069 (West Dorset).

**PLINIUS** integrated amplifier 9200 and CD-101 Anniversary Edition manufactured in 2010. Only 75 pairs in the world. 200 watts per channel into 8 ohms. CD-player with balanced XLR output. Both are used, but are in mint condition and still with limited warranty. (£8,400) £6,000. Buyer collects. Email: [stmchan@gmail.com](mailto:stmchan@gmail.com) (Docklands, London).

**ROTEL** RA-05 amp and RCD-06 CD player with KEF IQ5 floorstanders. All in excellent condition. £200 each or £550 for the system. 01404 891728 or email: [Alanrussell@tiscali.co.uk](mailto:Alanrussell@tiscali.co.uk) (East Devon).

**CYRUS** 7.5 preamp, one Smartpower and PSX-R power supply (black). Good condition £600 ovno 07842 643684 (Tyne & Wear).

**GALE** 401 speaker, fully reconditioned by specialist with stands and boxes; £475. 01825 722936 (Sussex).

**CYRUS** 6 XP amplifier in silver (2010 model). As new £595. 01323 440597 (Eastbourne).

**MARANTZ** CD6002 CD player in mint condition, perfect working order with remote; £150. 02476 467679 (West Midlands).

**PROAC** Future One in ebony, £2,000. Krell KSA50S, boxed and mint open to offers. Linn Karik CD player boxed and mint £280. 07584 838673 (Wigan).

**VIENNA** Schonberg Series speakers (silver) £1,800, Vienna Webern single speaker (silver) £250, Pioneer receiver VSX-AX5i-S £700, Pioneer DVD player

DV-868AVI £300. 01522

868163 (Lincoln).

**WHARFEDALE** 10-6 floorstanders with spikes, instruction manual and boxes. Can be bi-wired. Purchased in 2010, only four hours use, £295 ono.

01278 789432 (Somerset).

**MELODY** M380 valve power amp, mint condition, boxed. Two years old £850. Quad QC Twenty Four, new, boxed £475. Heed Quasar MC phono stage, mint £150. 07729 620621 (Worcs).

**BOWERS & WILKINS** ASW4000 THX subwoofer (satin black), with 15-inch Rohacell driver and 450-watt amp. Not for the faint-hearted, this sub is big at 80kg, with an even bigger sound! Only £600. 07847 501865 or email: [dazzert@hotmail.com](mailto:dazzert@hotmail.com) (West Yorks).

**KEF** Reference 4 monitor speakers. Superb bass and near-electrostatic soundstaging make these involving speakers a bargain. New and pristine (£3,200) £950. 07506 749099 or 01132 843770 (Leeds).

**SUGDEN** A21aL Mk2 integrated amp. Pure Class A without the pain of valves. Silky smooth and bristling with detail. Eight months old, boxed as new finished in graphite. Reluctant sale £1,150 ono 07847 501865 or email: [dazzert@hotmail.com](mailto:dazzert@hotmail.com) (West Yorks).

**CYRUS** 8-POWER

£425 (brushed black). Genuinely mint condition, original packaging with accessories and manual. Purchased in 2010, price for collection, postage at extra cost. 07873 228770 or email: [grant-h74@hotmail.co.uk](mailto:grant-h74@hotmail.co.uk) (Herts).

**ARCAM**, CD93T (black), £275. A85 amp (black), £250. PMC TB2 + speakers, £275. Chord Indigo plus interconnects 1m, as new, £350. All equipment boxed with manuals. 02392 257626 or 07970 012450 or email: [richardsh@sky.com](mailto:richardsh@sky.com) (Portsmouth).

**PRO-JECT** Debut 3 SE with Clearaudio MM cartridge. As new condition and working perfectly. £150. 07722 248001 or email: [doug.taylor@virgin.net](mailto:doug.taylor@virgin.net) (Lincolnshire).

**AUDIO RESEARCH** CD7 CD player, with power supply modification. As new condition with original packaging. (£8,000) £4,200. 01462 670786 or email: [jr812@hotmail.com](mailto:jr812@hotmail.com) (North Herts).

**CYRUS** 8vs integrated amplifier, black, super condition £399. 0115 9288006 (Notts).

**NAKAMICHI** CA-7E control amplifier plus remote. Mint, built-in phono stage (MC/MM). Excellent sound. Fully serviced July 2011 at B&W. £1,000 ono.

Buyer collects. 07908

870023 (Bucks).

**ARCAM** FMJ A18 amplifier, black, excellent condition, Manual. (£600) £300. Arcam FMJ CD17 player, black, excellent condition, manual. (£600) £300. 01606 79032 (Mid Cheshire).

**SUGDEN** Mystro integrated amplifier. Purchased in Feb 2011 and lightly used since. Complete with box and manual and can be posted, £800. 01782 785734 (Staffordshire).

**LEEMAACOUSTICS** Pyxis reference preamp in black. Fully balanced, internal DAC and phono stage with tone controls. Redundancy forces sale, £3,200. 01226 745529 (Barnsley).

**TEAC** D-T1 multi DAC, VRDS T1 CD transport both boxed with manuals. V-8030 cassette deck with remote. Offers to collect. 01977 695385 (W.Yorks).

**CELESTION** A1 speakers in black with stands, £290. Marantz CD63MkII in black, £100. QED Silver Anniversary, 2x4 metre biwire runs £35. 01159 894340 (Notts).

**ARCAM** A85 integrated amp in excellent condition. MM/MC phono stage, box and manual, £195 ono. Linn LP12 armboard in perfect condition £10 plus P&P. 07941 174804 (Heathrow).

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Ed Selley brings you his pick of this month's top hi-fi websites...



## LINN

([linn.co.uk](http://linn.co.uk))

The newly revised Linn website is now more than a means of checking out the latest way the company has creatively used the letter *K* in product names. As well as the obligatory product section, the biggest expansion has been in music. Linn Records is thirty this year, and the site now features an extensive music section that might surprise anyone who assumed that their choice was limited to the polite end of the music spectrum. Much of this catalogue is now available in hi res lossless download form which should appeal to everyone in possession of a streaming system.



This is also a very attractive and well thought out place to point your browser at. I like the guest columns discussing various subjects and the '50 albums 50 words' feature is a good idea, too. Linn ought to be commended for breaking down some of the boundaries between equipment and music and presenting a more homogenous whole.

The site manages to still convey a great deal of information without coming across as an instruction manual which makes for a more pleasant user experience. You don't have to be an audiophile to find some of the articles and features interesting. If you are an audiophile, however, then the site has something to offer here as well.

## HIFI WIGWAM

([hifwigwam.com](http://hifwigwam.com))

A slightly curious name for a forum (the origin stems from a festival and all that it's likely to entail) and indeed a slightly curious forum. The Wigwam warrants a place in your bookmarks for several reasons. Firstly, it is a huge reserve of knowledge and experience. Very few products from budget champions to high-end exotica won't have been owned and used by at least one member and anyone seeking information on long term ownership experience will usually gain some valuable feedback. Secondly, it has a superb classifieds section that often features some interesting and unusual products that are usually competitively

priced. This splits into dealer and private owner sections so as to avoid one group moonlighting as the other.



This is not a forum for the shy and retiring. Language used can be robust and opinions strongly held. Threads that start off discussing one thing can head in multiple directions at once, but this is part of the charm for me. The sense of community that the forum has is its biggest asset and this translates into a very active group of people that meet up regularly at events large and small including the Wigwam HiFi show, which is organised and run entirely in house. A hi-fi forum at its finest.

## TONEARM AND CARTRIDGE RESONANCE FREQUENCY CALCULATOR

([vinylengine.com/cartridge\\_resonance\\_evaluator.php](http://vinylengine.com/cartridge_resonance_evaluator.php))

A useful site for analogue addicts, the frequency calculator is able to estimate the resonance frequencies that will arise as a result of combing a particular arm with a particular cartridge. This is one of several calculations that will have a considerable effect on your vinyl playback and will give you an rough idea if your proposed partnership will be good or bad.

The site has a database of a great many cartridge types, but if you are looking at something newly released you may need to put the manufacturers specs in directly. This will then plot the combination of arm and cartridge on a chart. The site is not designed to be taken as an absolute, and I have heard arm and cartridge combinations that shouldn't work, according to the calculator, but have sounded very good indeed. Still, definitely something to check out if you are looking to upgrade your cartridge any time soon. ●



## HD TRACKS

[hdtracks.com](http://hdtracks.com)

There is still something of a shortage of high-resolution and lossless audio downloads to choose from (at least legally) and owning a high-resolution streamer at the moment can be a slightly disheartening experience, as for the most part they will be used for playing ripped CDs. Therefore, the presence of HD Tracks and its continued efforts to promote high-resolution audio is to be celebrated.

This US-based site offers one of the largest collections of high-resolution material that can be legitimately purchased. Everything on the site is DRM-free and comes complete with album art and notes. The choice of material is varied and should have something for all preferences. There is a leaning towards older material that has been remastered and re-released, rather than brand spanking new albums, but some of these – especially the 24-bit/96kHz version of Nirvana's *Nevermind* – are improvements on older CD quality versions.

Pricing is reasonable enough with hi-res albums costing perhaps 20-25 per cent more than buying the CD online. Ultimately, if as a community we want a greater choice of high-resolution audio, we will need to demonstrate that existing stores are generating the business that justifies the larger players getting involved...



# Are You Buying Pre-Ruined

## The Music Chain

Much is written about music and the musicians who entertain us, and we rightly exalt great musicians. But there is an interlinked chain of participants, two of which are I believe are crucial to our music scene in today's world. For centuries the music chain was a very short one – composers or songwriters, musicians and listeners, and the judgement on quality was immediate. Recording technologies have changed all this exponentially.

Today, we listen to most of our music from a recording and this gives recording engineers the opportunity to avoid poor acoustics, duff notes and off days. This, of course, means the chain has grown to include the recording engineers, the music distribution system (retailers or downloads), hi-fi manufacturers, hi-fi sellers and the hi-fi purchasers, the latter being the listeners. I should start by saying that hi-fi has become an adulterated term that no longer has its original meaning because it's applied to much equipment that certainly should not be termed high-fidelity.

It's said that a chain is only as strong as its weakest link. However, I believe there are two particularly strong links that, if removed from the chain, would seriously damage the quality of recorded music. These are the audiophile, or hi-fi connoisseur, and the specialist hi-fi retailer, the latter in nearly all cases also being the former because it's their interest that has driven them into their particular business. These are the people who most appreciate how exciting and involving music can be and how it can deliver an emotional experience.

## Hi-Fi Connoisseurs

So why is the hi-fi connoisseur so important to the music industry? By their nature, audiophiles are generally avid music lovers who enhance their enjoyment through listening to music at its very best

quality level, which means playing great recordings through hi-end hi-fi to achieve the most outstanding results. Without the audiophile, the main driver for quality would probably be removed from the chain. Let's be honest, over recent years the majority of music listeners now settle for MP3 convenience and, therefore, mediocre sound quality, that is 'pre-ruined' music. If the pendulum ever swings so far that all but a few listen to highly compressed formats such as MP3, music producers will not waste their resources on producing high quality recordings because it would be commercially unnecessary, even if their recording engineers wanted to achieve the best they could. After all, an MP3 or AAC file, the iTunes default format, downloaded at 128 kbps (the most popular download speed), is about one-eleventh the size of a full resolution CD track, 1411 kbps, so the quality is inevitably far inferior. Information is irretrievably lost and the full dynamic range is lacking. Using an iPod while jogging does not really raise a quality issue but playing low-resolution tracks through an iPod docking station that feeds into a decent hi-fi system, is a disaster area. It's rubbish quality made louder. Fortunately, there is still significant demand from audiophiles committed to sound quality to sustain the production of high quality recordings, but it would be a tragedy if there weren't. For example, most classical recordings downloaded as an MP3 or AAC file are a complete waste of time because there is so much information missing that they are reduced to just the essence of a tune.

## Specialist Hi-Fi Retailers

Just as essential a link in the chain as the hi-fi connoisseur is the specialist hi-fi retailer and the two are rightly dependent on each other. Without the specialist retailer the hi-end hi-fi manufacturer would have to rely on the internet and hi-fi magazine reviewers to try and assess the relative merits and performance of their products against that of their competitors –

a notoriously unreliable decision making process. Specialist hi-fi retailers are constantly being offered new products for assessment and potential stocking and, as it is also their hobby as well as their livelihood, they are greatly interested in achieving the best performance and seeking out the most outstanding products and combinations. More than that though is their relationship with audiophiles for, if they are to stay in business, they must satisfy the most discerning customers in the industry. The reality is that audiophiles and specialist hi-fi retailers are essential to each other.

## Future of Recorded Music

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

# Music?



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

## OUR TOP 20 UK HI-FI DEALERS

### SOUTH

#### Ashford, Kent

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

#### Chelmsford

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

#### Colchester

NEW TECHNOLOGY UNLIMITED  
33 Sir Isaac's Walk.  
t: 01206 577682  
www.newtechnologyunlimited.com

#### Kingston-upon-Thames

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

#### Maidenhead

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

#### Rayleigh, Essex

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

#### Southend-on-Sea

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

### LONDON

#### Ealing

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

#### N1

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

#### SW11

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

#### SW20

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

### SOUTH WEST

#### Bath

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

#### Exeter

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

### MIDLANDS

#### Banbury

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

#### Birmingham

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

#### Coventry

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

### Leicester

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

#### Nottingham

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

### NORTH

#### Cheadle

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

#### Chester

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

#### Hull

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

#### York

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

## STAR QUALITIES

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## Mains Cables R Us Squeezebox Touch power supply

**T**he Logitech Squeezebox Touch has been with us for a couple of years now. For those who have yet to stretch to pricey premium streaming units, it has been well received as an excellent-sounding network transport to dabble with. Dixons are currently knocking them out for £200, nearly a third off!

With no new Squeezebox product announcements from Logitech at CES this year, it remains to be seen if they will ever reintroduce a high-end device to follow the much-missed Transporter. But in the meantime, the Squeeze-loving community continue to embrace the stock device, and tweak with both hardware and software mods to their hearts' content. It's an excellent introduction to the world of streamed music, and one that's highly tweakable too.

Before one leaps to these never-ending measures, however, there is one simple change which is reputed to bring an instant night-and-day improvement to the Touch's audio performance. Although the switched-mode power supply which comes with the Touch is better than that of the preceding Squeezebox 3, it is still an inherently cheap and electrically noisy device.

Historically there have been linear replacements available at price points many multiples of the humble Touch's base cost. Now David Brook of Mains Cables R Us has released an ingenious design at an appealing £165 price. His supply is very neatly put together. This stock sample came with one of his No.14 IEC cables. These are £29.50 individually, but a £20 addition if ordered with the power supply. Other tweak-ups are available on ordering from the site such as higher quality IECs and other cabling and socket gear.

It all comes carefully packaged, with the silver DC connector to the Touch covered with a mini ziplock. Similar units are available for other DC devices of varying voltages and connector types. It should be pointed out to anyone still running an SB3, this 5 volt DC supply and its connector will also work for that.

The main features of the design are separated mains-facing and device-facing regulators to ensure linearity, separated by a braided cable. The other run to the device is short in length to minimise impedance, and the DC regulator is a small unobtrusive black box which can be hidden behind the Touch. The other end is larger, slightly bigger than a laptop brick, but can be situated nearer to the wall. There's also a pleasingly unobtrusive blue power LED.

### Sound quality

Testing was done on a stock Touch using FLAC from Logitech Media Server 7.7.1 and the digital output, as this is the most common usage in audiophile applications. The last track auditioned before switching from the stock switched mode wall wart was a 24-bit version of Jill Sobule's *I Kissed a Girl*.

### Switching to it was one of those 'stopped in your tracks' moments... grab it while you can!

The result of the switch to David's product was one of those 'stopped in your tracks' moments, when you can scarcely credit the upwards leap in fidelity which has just happened. The presentation seems less harshly digital, voices seem more real, and the whole picture more interesting. Similar results were experienced with 16-bit/44.1kHz fare from the likes of Leonard Cohen, Nine Inch Nails, Pet Shop Boys and Toto, with all sample tracks coming across as richer and more detailed.

It's clear that the 'ditch the switch-mode' mantra is no waste of time. At current prices you could procure a Touch and one of these supplies for not much more than the original list price for the Touch. Grab it while you can, and then move on to audio tuning software mods to eke out even more performance. **PC**



#### DETAILS

**PRICE:** £165  
**CONTACT:**  
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**WEBSITE:**  
MAINS-CABLES-  
R-US.CO.UK

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Wharfedale Diamond Home cinema pack, ex demo.....	Call
Wharfedale 10.1 ex demo, nr mint boxed.....	149
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Wharfedale Active Diamond 7.1s - rare boxed!.....	119
Wilson Watt/Puppy 3/2, vgc+, crated due in.....	2249

### Special System Deals

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## Furutech ADL Cruise portable headphone amp

**T**he performance credentials of the ADL Cruise are impressive. It features a 96kHz-capable USB input as well as an analogue connection, has an internal battery good for a claimed eighty hours of playback and if you connect the USB input then the battery will charge automatically.

### Sound quality

The good news for anyone for whom the mere presence of a gorgeous carbon fibre chassis isn't enough to guarantee purchase, is that the Furutech sounds impressive as well. Listening to the 24-bit/96kHz download of *So Beautiful Or So What?*, the Cruise will leave a standard laptop headphone output standing. Even relatively inexpensive headphones and earphones benefit from the insight and clarity that the Furutech brings to the performance, while more expensive monitors, like Etymotic ER4s, gain substantially in bass extension and soundstage. The benefits aren't limited to high-resolution music either. Spotify and iTunes files also show a welcome step forward in clarity and detail and these benefits are achieved without the Cruise slaughtering poorer files.

On the move, the Cruise proves equally adept when connected to an iPhone. The only minor gripe I found was that the unit is very susceptible to phone interference, which is a real pain. If the two units are in close company, you can be treated to some background noise and indeed some pops and cracks from time to time. Place the two units on a desk or table (as they would be on a long journey) and this ceases to be a problem and you can show the Furutech off to those around you. Thankfully in this case, it's fair to say that beauty is a great deal more than skin deep. **ES**



#### ► DETAILS

**PRICE:** £465  
**CONTACT:**  
01276 501 392  
**WEBSITE:**  
ADL-AV.COM

#### OUR VERDICT



## Tivoli Audio PAL+ radio

**T**ivoli hasn't exactly rushed into DAB, indeed it has been a decade since the original FM-only PAL (Portable Audio Laboratory) was released! The PAL+ adds DAB and DAB+ functionality (whilst retaining FM) and gives the aesthetics a spruce up. The basic form of the PAL remains unchanged but the PAL+ boasts a large, easy to read display and the tuning and volume controls have been condensed to a single jog dial on the top of the unit.

In an age where radios sport USB connections, Internet access and pause and rewind functionality, the PAL+ looks somewhat sparse. The Tivoli has an auxiliary input, a 3.5mm stereo output and a remote control, but does without Internet radio or timeslip functions. The PAL+ pulls back some perceived value as it is fitted with an internal battery as standard – something that many of the competition charge for.

### Sound quality

Whether connected to the mains or running on battery, the performance of the PAL+ is impressive. Reception is excellent and the Tivoli is able to find stations that many other Digital Radios struggle with. Browsing through stations is quick and easy and the large display is good to behold. The single 2.5inch full-range driver has impressive clarity and tonality is good, too. The Tivoli manages to sound convincing and enjoyable, even with complex pieces of music. Pushed very hard, it will distort, but this will be at levels rather higher than the Tivoli would generally be asked to produce.

In a market where you can do everything including access Facebook with a radio, and the choice of Internet radio stations grows exponentially, the Tivoli can seem a little austere, but what it does do, it does very well. A fine sounding unit with much to recommend. **ES**



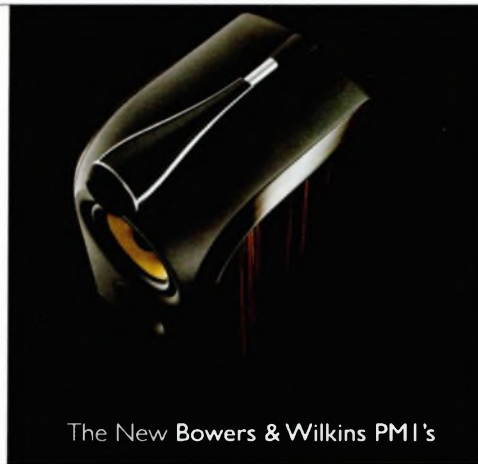
#### ► DETAILS

**PRICE:** £250  
**CONTACT:**  
0880 0470487  
**WEBSITE:**  
TIVOLIAUDIO.  
CO.UK

#### OUR VERDICT



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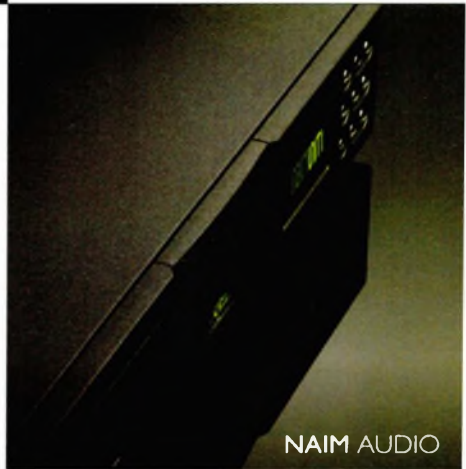
The New Bowers & Wilkins PM1's



REGA RP3



ARCAM CINEMA



NAIM AUDIO

## Tellurium Q Blue loudspeaker cable

**T**ellurium Q is a highly secretive organisation. Understandably perhaps, as it doesn't want to divulge the details of its cables for fear that the rest of the cable spinning fraternity will jump in and copy its discovery. This is not *that* unusual, Coca-Cola has always kept *schtum* about the secret ingredients of Coke and it hasn't done them any harm! Blue is the least expensive TQ cable at £16 a metre unterminated; it was created specifically so that dealers and installers could easily terminate it with the plugs of their choice and there's no reason why end users like ourselves can't do the same. This is, in fact, the only cable that the company supplies in reel form rather than finished pairs. The fact that in all respects apart from colour it resembles TQ Black speaker cable, which is only supplied pre-terminated, does not mean that they are the same under the skin, of course.

TQ's focus is phase integrity and timing. The company claims that other, rival cables are slower to react to impulses and thus less capable of accurately revealing the true character of transient musical notes. It publishes graphs that purport to reveal that phase distortion is lower with its cables than with those from other brands. It doesn't say what those brands are, but rather shows the price range that they represent and goes on to suggest that other cables cause certain frequencies to be delayed and become 'squashed together'.

The company makes a range of five speaker cables, of which Blue is the least expensive and presumably most phase distorting, so the company also sent a sample of Black. Both cables are pretty flat in section with the conductors running side by side, which would reduce capacitance at the expense of increased inductance and resistance to RF. I note that in TQ's more expensive cables the conductors are considerably further apart which means even lower capacitance.

### Sound quality

I initially hooked the TQ Blue up between a TEAC A-H01 integrated and PMC twenty.24 floorstanders and it

worked very well, with an even tonal balance and a clear accent on percussive leading edges. It's a smooth and slightly soft sounding cable, one that will suit some amp/speaker combinations better than others. It also has a most attractive fluidity along with decent dynamics. TQ Blue is not exceptionally transparent in absolute terms however, so I compared it with the best budget speaker cable I know as a yardstick.

DNM Stereo Solid Core is £12.77 per metre unterminated, and also has a low capacitance/high inductance electrical character. I found it did slightly push ahead in terms of leading edge definition, but there was definitely a leaner overall tonal balance that many frankly will not take to. The TQ cable was obviously warmer, richer and more sumptuous – or closer to neutral, depending on your point of view. It was an interesting contrast, I felt.

**A smooth sounding cable, it has a most attractive fluidity along with very decent dynamics...**

I also tried it between a Leema Tucana II integrated amp and Bowers & Wilkins 802 Diamond speakers. This resulted in a smooth balance that brings warmth to the mid-bass combined with a sweet midband and treble. It highlights percussion and brings out the shine in pianos, while letting the timbre of double bass through with plenty of body. Images are effectively projected into the room, which gives the sound more vitality in the context of a well-scaled soundstage. Moving to TQ Black after Blue brings in extra detail resolution and yet more weight and power; it lets you hear quieter elements in the mix and has superior delicacy.

Tellurium Q Blue has a very pleasant presentation with decent musical flow and little sense of the electrical. For those after a mellifluous sound it has a lot to offer, but then again you might still want to double your budget and go for Black, as it's a real step up! **JK**



### DETAILS

**PRICE:** £16  
(1 METRE  
UNTERMINATED)  
**CONTACT:**  
01458 251997  
**WEBSITE:**  
TELLURIUMQ.  
COM

### OUR VERDICT



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## Chord Company USB SilverPlus cable

**N**ow that the computer is becoming a popular source component for music lovers, the cable making fraternity is waking up to the potential for upgrading the standard USB cables made for general computer use. The inclination from those new to the strange world of hi-fi cable is naturally to question whether such things can really make any difference at all? Well, the signals travelling through a USB cable move at very high speed and are very high frequency in nature. Therefore the degree to which they are degraded in the process of getting from computer to DAC will depend on the qualities of the conductor, the dielectric and the shielding.

The USB SilverPlus cable has 26 AWG (American wire gauge) or 0.4mm diameter silver-plated OFC conductors in a twisted pair inside, and these are insulated by a low-loss gas-foamed polyethylene and surrounded by two layers of shielding designed to protect high-frequency signals. The whole thing is encased in a vibration damping outer 'jacket' and terminated in gold-plated plugs of USB A and B varieties.

### Sound quality

Used between a Macbook Air and a Resolution Audio Cantata DAC, the Chord delivers an appealingly open and tactile sound that's strong on timing and revealing of fine detail. I was able to compare a 5m length with a Belkin USB lead of the same size, and the Chord Co. offers far stronger presence and tactility of sound. Timing strengths are obvious even with slow tempo music and good recordings are reproduced with a visceral realism. There is also quite a lot more detail, so this Chord Co cable is clearly a worthwhile upgrade for anyone serious about computer audio. **JK**

#### DETAILS

**PRICE:** £45  
**CONTACT:**  
01980 625700  
**WEBSITE:**  
CHORD.CO.UK

#### OUR VERDICT



## Russ Andrews SE Anniversary PowerBlock H

**R**uss Andrews is celebrating twenty five years of accessories with silver anniversary special editions of two mains extension blocks. There is the Anniversary PowerBlock H and an Anniversary Ultra PurifierBlock H, both of which use Kimber Hyper-pure woven silver cabling and Hyper-pure copper cabling, an upgrade that adds £414 to the price.

The case is in fire-resistant ABS and supports four twin-outlets all of which are treated with DeoxIT cleaner and inverted so that protruding cables don't have to bend up. The PowerBlock doesn't come with a mains cable itself but a Reference Powerkord was supplied with the requisite 16 amp IEC plug for this review, and adds £189 to the package.

### Sound quality

The inverted outlets work well in my system and I also like the effect this extension has on the sound of my ATC SCM150ASL active loudspeakers. It makes the system considerably more open and clean, smoothing out grain and enhancing timing qualities. The next step was to include the Cantata DAC/CD player in the loop and for this I went from an ancient Russ Andrews six-way extension block to the PowerBlock. The result was an increase in bass power and a calmer, more refined overall sound. Switching over to the silver side allowed me to appreciate what individual musicians were doing in the dense live mix – in effect it increased overall clarity. This is certainly an expensive extension block, one which faces very stiff competition, but it's capable of impressive results in a revealing system. **JK**

#### DETAILS

**PRICE:** £899  
**CONTACT:**  
0845 345 1550  
**WEBSITE:**  
RUSSANDREWS.COM

#### OUR VERDICT

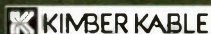


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*Cable shown has part of the covering removed for illustrative purposes only.*

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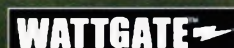
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## Hi-Fi Racks Podium platform

**H**i-Fi Racks from Rutland makes a range of wooden stands and supports that has become a familiar site at hi-fi shows over the last few years. The Podium Platform appealed to me because I needed to put my turntable out of (small child derived) harm's way and the plain, but chunky real wood design is more attractive than most of the alternatives. The Podium Platform is available with three sizes of support from 250x230mm to 500x410mm, but I went for the latter in order to accommodate a range of turntables. I also got the matching ISO Plinth (£99), which offers some levelling potential via four adjustable spikes. I'm not a huge fan of spikes but it's very difficult to get a shelf absolutely level in both planes when bolting it to the wall. The joint between platform and wall bracket doesn't look very strong but, as the company's website reveals, it can support a gymnastic young woman; it's specified to cope with up to 90kg!

### Sound quality

I compared it to a standard equipment rack with metal uprights through MDF shelves, and it proved its worth with both vinyl and silver disc spinning sound sources. A Rega RP3 turntable sounded considerably more dynamic and punchy, as if the contrast had been turned right up. Detail was also enhanced so that you could hear the character of voices and instruments more easily. Doing the same thing with a Rotel RCD-06 CD player wrought an equally dramatic improvement; digital electronics obviously appreciate a low-resonance support as much as analogue ones. Again there was an increase in detail and clarity, with the soundstage expanding widthways. The question is then, where am I going to put another platform? **JK**



#### ► DETAILS

**PRICE:** £99  
**CONTACT:**  
01572 756447  
**WEBSITE:**  
HIFIRACKS.  
CO.UK

#### OUR VERDICT



## DNM HFTN network

**D**NM has been making excellent yet surprisingly affordable solid-core speaker cables for many years. Company founder and gifted engineer Denis Morecroft has now come up with an upgrade for these and other cables which is designed to negate the RF (radio frequency) energy that is generated by the feedback systems used in most amplifiers. The HFTN or high-frequency termination network is a circuit that's said to 'control the RF load presented by the cable to the amplifier', so we decided to give it a try!

### Sound quality

HFTNs are sold as pairs and you can use up to three pairs in a bi-wired system, but one pair is sufficient to make a start. Each HFTN board has two leads which correspond with the positive and negative loudspeaker connections on an amplifier. Using DNM Stereo Solid Core cable, I listened to the effects of a single pair of HFTNs on a Leema Tucana amplifier driving PMC twenty. 24 speakers. This increased the vitality of the sound and improved image focus. Spatial definition is improved and you can hear the effect of reverb more clearly. Adding a second set of HFTNs at the speaker end obviously improves treble definition – you can hear what cymbals sound like more easily and there is greater separation of sounds across the board.

Using HFTNs with Townshend Isolda DCT speaker cable was similarly beneficial with them at the amplifier end, where similar results were achieved, but the same was not true when a second set was connected. This is probably due to the unusually high RF resistance of this particular cable. HFTNs would appear to deliver a result that's commensurate with their price, even if perceived value is not so high. **JK**



#### ► DETAILS

**PRICE:** £192  
**CONTACT:**  
01480 457989  
**WEBSITE:**  
DNM.CO.UK

#### OUR VERDICT



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## Missing Link Link Cryo Ref. cable

**H**igh-end cables come in all shapes, sizes and colours; most are immaculately well finished, beautifully boxed and slickly marketed. Fine as this may be, none of the above applies to Missing Link, a company that doesn't talk the public relations talk or walk the marketing walk. Instead, the lion's share of the price of this product is spent on the product. Its conductors are extruded from laboratory-grade silver bullion, tested for purity by Bradford University's Metallurgy Department. The silver is then drawn into wire on diamond jigs, heat-treated and re-annealed to reduce oxygen desolutions for an improved crystal structure, it's said. The strands are vacuum sealed and a gas-tight Teflon extrusion completed. This is then deep cryogenically treated for three days. The outer sheathing material is supple and un-microphonic; a choice of Silver Eichmann bullet RCA plugs or XLRs is offered at differing prices.

### Sound quality

This cable is exceptionally smooth sounding. It's surprising how bright and crisp rivals sound, whereas the Link Cryo Reference has an inky blackness to its tonality that makes music super smooth, yet in no sense could you call it dull. Instead, through the best ancillaries, you'll hear a vast soundstage, supple rhythms and powerful dynamics – yet a complete lack of grain. It's as if someone's turned the brightness control down a notch or three; letting you hear deeper into the music with reduced glare. It's interesting inasmuch as silver cables often have quite a stark upper midband; this cable is precisely the reverse. There are better cables, but you're talking twice the price to really improve on the magnificent low-level detail, air and space of this wire, making it a bargain. **DP**



#### DETAILS

**PRICE:** £495  
(0.5M)  
**CONTACT:**  
01623 844478  
**WEBSITE:**  
THE-MISSING-  
LINK.NET

#### OUR VERDICT



## Gilabend Bren1 record clamp

**F**or some strange reason, in the UK at least, record clamps have traditionally been treated with a good deal of suspicion. Perhaps it was because the mighty Linn LP12 – the turntable of choice for so many UK audiophiles for so many years – didn't work especially well with a record clamp? Over the pond however, in both the US and Japan, the situation couldn't have been more different, with hundreds of products available back in the nineteen seventies, made from every material imaginable.

Now they're not so common, but one interesting new design is this American made product, hewn from USA certified 6061-T6 CNC machined aluminium. It is 38mm high and weighs 391g, making it a perfect fit for most turntables, and won't stress main bearings or slow down belt-driven decks. Finish is excellent and there's a choice of silver or gold editions, the former being \$5 cheaper. With no UK distributor it's strictly mail order only, but care is taken with the packing and it's sent via US Postal Service International Express mail (tracked and insured).

### Sound quality

The Bren1 clamp proved ideal for the Technics SL1200 non-suspended direct drive I tried it with, and is not so heavy as to weigh down decent sprung subchassis turntables, either. Duly fitted, there was a subtle but obvious improvement to bass grip, a better focused soundstage, a gentle deepening of stage depth, a slightly sweeter and more defined treble and a greater sense of ease to the music. It seemed both tighter and more dynamic yet more natural at the same time. Differences weren't profound, yet they were real all the same, and well worth the money spent. The Bren1 is a fine, affordable vinyl upgrade. **DP**



#### DETAILS

**PRICE:** £67  
(SHIPPED)  
**CONTACT:**  
N/A  
**WEBSITE:**  
BRENIRECORD  
CLAMP.COM

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## Yamp Mark Kiuchi

**T**he trouble with the iTunes App Store is the plethora of useless widgets Apple permits to appear there, but surprisingly it does allow Apple-competitive media players on to the system. There are a host of free VLC media players, all using the power of open-source components like FFmpeg, but it's wise to avoid all of them. Instead, the only free one worth a look is the iPad-only implementation of Yamp by Mark Kiuchi. Designed to be a general music player, it's notable for its FLAC-playing ability, as Apple is unlikely to ever support this emerging standard for audiophile lossless music...

Its advantages include a simple layout, freedb metadata lookup and a help page on the 'i' button. This helpfully makes clear that Yamp *only* caters for CD-resolution 16-bit/44.1kHz FLAC audio. It has to be said the trumpeted inclusion 'in circuit' of the packaged iTunes equalisation settings may be its downfall; a spin of *Snobbery and Decay* by ACT came across as muted where it should be glorious. More work is also needed as the music cuts out as you skip between functions like the player and the playlist editor, I feel.

The one great innovation is the FTP function. If you have a QNAP (or similar) hard drive, enabling the FTP server lets you pull tracks straight onto the iPad. The fact Yamp hasn't changed much recently is a slight problem, as now running on iOS 5.0.1 it has a tendency to crash relatively frequently. As such it can be used for those wishing to try the iPad as a FLAC player, but its limitations will soon have you wanting to shell out for the following... **PC**



PICTURE COURTESY OF APPLE

▶ **DETAILS**  
**PRICE:** £FREE  
**BUILD:** 2.1  
**SIZE:** 0.6MB  
**HANDSET:** IPAD  
**WEBSITE:**  
 ITUNES.APPLE.COM

OUR VERDICT



DOWNLOAD

## FLAC player Dan Leeher

**H**ere's a player that's evidently more tailored for audiophiles. Developer Dan Leeher highlights his mission to ensure sought-after gapless playback. And he emphasises the fact that while his excellent player ably copes with FLAC up to and including 24-bit/192kHz, the hardware constraints of the iPad mean you are listening at an effective resolution of 16/48 maximum.

FLAC player's single biggest advantage is that one app caters for both the iPad and the iPhone/iPod Touch. That said, all the excitement in the audiophile community has been around the iPad version for one reason. As Mr Leeher again helpfully points out, despite that 16/48 player limitation, as a FLAC transport his player is capable of at least 24/96 digitally on an iPad. How is this possible? Well, with the simple addition of the Apple iPad Camera Connection Kit, the iPad (and *only* the iPad) could be persuaded to act as a USB host for certain driverless USB DACs. More precisely we are talking about Class-2 asynchronous USB DACs - the type that got us all excited in the guise of the HRT Technologies Streamer II+.

The base 16/44.1 capabilities of the player surpass Yamp easily, ACT's *Snobbery and Decay* once again attaining its glacial sheen of well-separated orchestral touches. Again I could discern the underlying skittering hi-hats in the chorus, which Yamp all but missed. Even at 16/48 my DVD-Audio rips sounded exquisite too. A musical player, obviously possessed of the right technical underpinnings, if only Mr. Leeher could add something along the lines of Yamp's FTP support, we'd be in wireless loading heaven! **PC**



PICTURE COURTESY OF APPLE

▶ **DETAILS**  
**PRICE:** £FREE  
**BUILD:** 1.2.0  
**SIZE:** 1.9MB  
**HANDSET:** IPAD,  
 IPHONE AND  
 IPOD TOUCH  
**WEBSITE:**  
 ITUNES.APPLE.COM

OUR VERDICT



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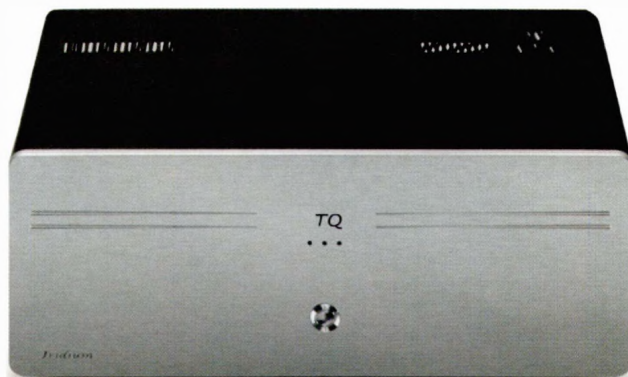
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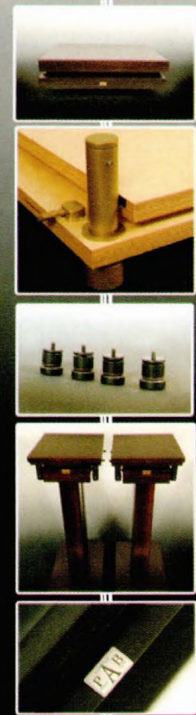
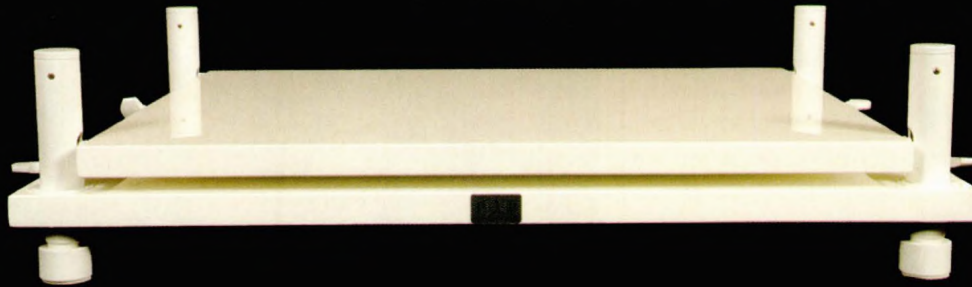
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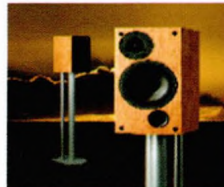
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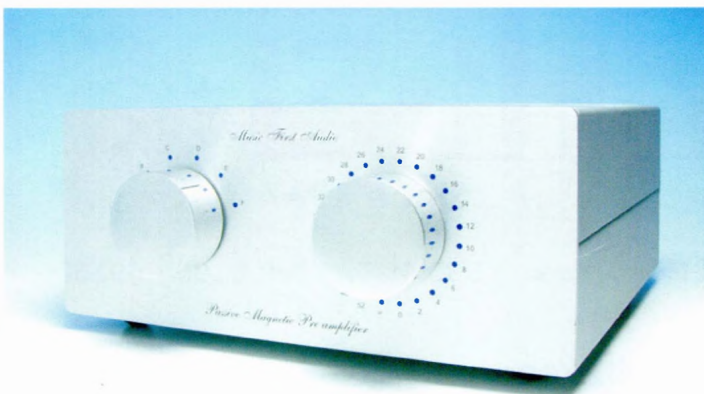
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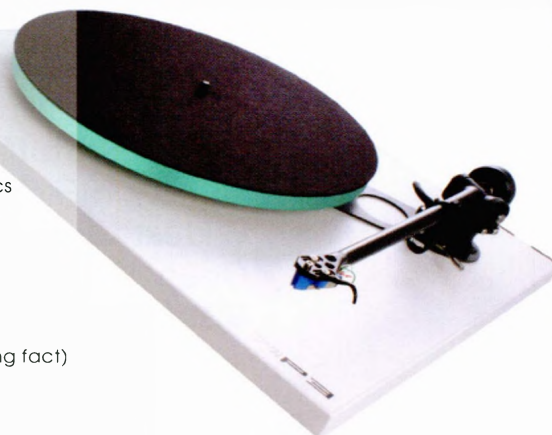
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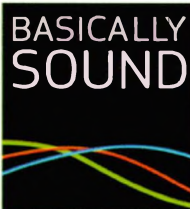
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## WE HEAR...

**RUMOURS HAVE BEEN RIFE** of "something new and exciting" being released by Naim Audio for several months, and now Backchat can tell you precisely what! The NDS is the company's new flagship network music player, launched at the Bristol Sound and Vision Show...

COMING SOON TO A HI-FI SHOP near you, perhaps? Air Audio Distribution is now the UK Distributor for Block Audio products from Germany, a brand that's gone from nothing to the third largest sales turnover for a German audio company. Read all about the brand at audioblock.de, and look out for a review soon!

**WE HEAR THAT A MAJOR UK hi-fi separates manufacturer, which currently wants to remain nameless, is diversifying into headphones. The designs (of which we've seen prototypes) look very professional. In a few months' time buyers should be able to decide for themselves...**

WORD IS THAT Atlas Cables is about to launch new range of mains cables – the Eos 2.0 and Eos 4.0 sport rhodium plating on the contacts and the plug comes with a silver-platted fuse fitted. Prices should be between £160 and £200, on sale from the beginning of March...

**QUESTION: When is a Vita not a Vita? Answer: When it's a Ruark. Respected British loudspeaker company Ruark Audio launched the 'Vita' name on its range of portable radios several years back, and has had much success. Now though, it's rebadging all Vita products as Ruarks with the result that the Vita Audio name disappears. Technically they remain the same. We hear that in a few months they will be new models coming...**

## THROUGH THE PAST, SMARTLY...



### HI-FI CHOICE ISSUE 226 APRIL 2002

This issue featured the Pioneer DV-747A, the first universal DVD player compatible with SACD, CD, DVD-Video and something new fangled called DVD-Audio! Now two-a-penny in your local supermarket, this impressive machine would set you back a cool £900. On a CD roll this month, 10 products vied for winner status in Alvin Gold's bench test and Jason Kennedy guided you through the maze of stereo amplifiers currently on sale, including the Croft Vitali valve pre-power. In other news, a lucky South African paid £15 million for a place aboard a Russian space rocket, while a military coup against Venezuelan President Hugo Chávez failed...



### HI-FI CHOICE ISSUE 105 APRIL 1992

Mickey Mouse ears all round as Disney opened its second theme park outside the US. Nott that the home town of Walt's original 1955 park was celebrating, as riots engulfed Los Angeles after accusations of police brutality. Here at home, audiophiles were enjoying the far more peaceful environment of their hi-fi systems with a special emphasis in this month's HFC on cassette decks. Reviewer Alvin Gold advised readers to check the latest Dolby noise reduction format when purchasing, as well as recommending the best type of tapes for recording, "Dolby HX Pro helps prop up flagging high-frequency dynamics", said Gold. Stunning cover image was the Audio Note Neiro, a 7-watt triode amp!



### HI-FI CHOICE ISSUE 57 APRIL 1988

Five years earlier than the above issue, cassette decks were still the talk of the town. In his intro, HFC Editor Paul Messenger described them as something of a "bastard medium", but argued that such decks were still the "most universal and practical music source around". And, as if to prove the point, reviewer Dan Houston bench tested an incredible 40 examples at a range of prices. No doubt cassette decks were probably being used to supply the music for the World Expo '88 that opened in Brisbane the same month and Celine Dion fans were probably busy warming up their cassette decks with recordings of her Eurovision Song Contest win: *Ne Partez Pas Sans Moi*...

**It's that time of year again!** Word on the street from people who spend more time than is healthy gossiping about such things is that the successor to Apple's iPad 2 is almost with us. The consensus is that it will sport a similar form factor to the iPad 2, but run a faster chip with an improved graphics processing unit and 2,048x1,536 Retina Display, or something similar. No specific news on its audio capabilities yet, and Apple is keeping 'mum'. Perhaps you'll be streaming your top tunes on one within a month from now?



PICTURE COURTESY OF APPLE

## DESERT ISLAND DISCS

Paul Stephenson MD of Naim Audio selects four of his favourite albums



**ERIC BURDON**  
ERIC BURDON WAR  
1970 double album; the stand-out track is an amazing version of *Nights in White Satin*. Eric at his best and the musical interplay of the band is something special.



**BOB DYLAN**  
BLONDE ON BLONDE  
My best track here is *Visions of Johanna*. Featuring Al Kooper on some beautiful sounding keyboards in his own style that you rarely get to hear these days.



**VALERIE CARTER**  
JUST A STONE'S THROW AWAY  
Beautiful recording from a beautiful voice. Produced by Lowell George and features Jeff Pocarro, Jackson Browne and many more.



**TOM BUCKLEY**  
GREETINGS FROM L.A. 1974  
Amazing album from singer songwriter moving from folk into jazz-funk with such intensity. One of the first import albums I ever bought!

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Ken Kessler HiFi News, July 2011

*"This is the best amplifier at its price hands down. Absolutely top notch."* Gunnar Van Vliet Planet Sound

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David Plummer Audio Specialty Co.

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by Neil Gader, The Absolute Sound Magazine.

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### Eloquence 250i Integrated Amp (shown with CDT)

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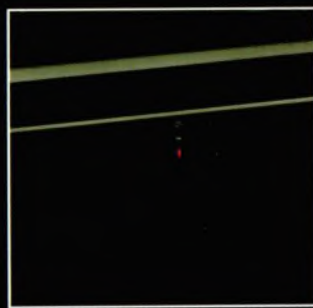
*"The 250i is a thriller in every respect. It has a huge reserve of power to play with, and does so with restraint, never sounding overbearing or dictatorial, but using its authority to the most benign, most musical of effects. Add the admirable build quality, the versatility on offer, and the general commitment to enjoyable audio, and this deserves to be on any discerning audio buyer's shopping list"*

Deon Schoeman

*"If you are missing an amplifier that can tame your woofers, then look no further. It's right here!"*

Mikkel Gige Hifi4All Online Magazine

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